Information Technology Telecommunications Network Services Contract

between

The Virginia Information Technologies Agency

on behalf of

The Commonwealth of Virginia

And

CENTURYLINK COMMUNICATIONS, LLC

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MODIFICATION #2
TO
CONTRACT #VA-151028-CTL
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
CENTURYLINK COMMUNICATIONS, LLC

This Modification #2 is an agreement between the Virginia Information Technologies Agency (VITA) and on behalf of the Commonwealth of Virginia (hereinafter referred to as "VITA"), and CenturyLink Communications, LLC ("Supplier"). This Modification is hereby incorporated into and made an integral part of Contract #VA-151028-CTL (the Contract).

The purpose of this Modification is to document both parties' agreement to modify the Contract as follows:

Reference Contract Exhibit A – Service Fees – Appendix A:

Delete and replace *the CenturyLink iQ Networking - Internet Port Pricing for Ethernet interface Internet Ports as follows:*

Flat Rate Internet Port	Install NRC	Net Rate MRC
Ethernet	$1,000.00	$77.00
Fast Ethernet	$1,500.00	$312.00
Gigabit Ethernet	$4,000.00	$750.00

Tiered Ethernet 10 Mbps Internet Port	Install NRC	Net Rate MRC
1 Mbps	$1,000.00	$62.00
2 Mbps	$1,000.00	$64.00
3Mbps	$1,000.00	$66.00
4 Mbps	$,1000.00	$68.00
5 Mbps	$1,000.00	$69.00
6 Mbps	$1,000.00	$70.00
7 Mbps	$1,000.00	$71.00
8 Mbps	$1,000.00	$72.00
9 Mbps	$1,000.00	$74.00
10 Mbps	$1,000.00	$77.00

Tiered Fast Ethernet 100 Mbps Internet Port	Install NRC	Net Rate MRC
10 Mbps	$1,500.00	$76.80
15 Mbps	$1,500.00	$96.00
20 Mbps	$1,500.00	$115.00
30 Mbps	$1,500.00	$144.00

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Tiered Fast Ethernet 100 Mbps Internet Port	Install NRC	Net Rate MRC
40 Mbps	$1,500.00	$173.00
50 Mbps	$1,500.00	$201.00
60 Mbps	$1,500.00	$230.00
70 Mbps	$1,500.00	$250.00
80 Mbps	$1,500.00	$269.00
90 Mbps	$1,500.00	$288.00
100 Mbps	$1,500.00	$312.00

Tiered Gigabit Ethernet (1000 Mbps) Internet Port	Install NRC	Net Rate MRC
100 Mbps	$4,000.00	$293.00
200 Mbps	$4,000.00	$306.00
300 Mbps	$4,000.00	$342.00
400 Mbps	$4,000.00	$396.00
500 Mbps	$4,000.00	$450.00
600 Mbps	$4,000.00	$517.50
700 Mbps	$4,000.00	$588.00
800 Mbps	$4,000.00	$664.00
900 Mbps	$4,000.00	$738.00
1000 Mbps	$4,000.00	$750.00

The foregoing is the complete and final expression of the parties' agreement to modify Contract #VA-151028-CTL and cannot be modified, except by a writing signed by duly authorized representatives of both parties.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

PERSONS SIGNING THIS MODIFICATION ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THE CONTRACT.

CenturyLink Communications, LLC

DocuSigned by:
BY: Steve Arneson
96E1E3400D60481...

NAME: Steve Arneson

TITLE: Manager - Offer Management

DATE: 8/21/2018

VITA

DocuSigned by:
BY: Doug Leslie
689D7E59CEEE479...

NAME: Doug Leslie

TITLE: Strategic Sourcing Consultant

DATE: 8/21/2018

DocuSign Envelope ID: 07F6E589-D8AD-42E9-B7B6-BDB6A0BB3B36

MODIFICATION #1
TO
CONTRACT #VA-151028-CTL
BETWEEN THE
COMMONWEALTH OF VIRGINIA
AND
CENTURYLINK COMMUNICATIONS, LLC

This Modification #1 is an agreement between the Virginia Information Technologies Agency (VITA) and on behalf of the Commonwealth of Virginia (hereinafter referred to as "VITA"), and CenturyLink Communications, LLC ("Supplier"). This Modification is hereby incorporated into and made an integral part of Contract #VA-151028-CTL (the Contract).

The purpose of this Modification is to document both parties' agreement to modify the Contract as follows:

Reference Contract Exhibit A - Service Fees - Appendix A of the Agreement:

Add

PIC Change. CenturyLink will provide a billing credit to VITA for the NRC charge billed by the LEC in changing PIC codes to CenturyLink to provide Long Distance Voice Services. The credits would be applied to VITA's account upon receipt of Bills containing said charges.

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The foregoing is the complete and final expression of the parties' agreement to modify Contract #VA-151028-CTL and cannot be modified, except by a writing signed by duly authorized representatives of both parties.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

PERSONS SIGNING THIS CONTRACT ARE AUTHORIZED REPRESENTATIVES OF EACH PARTY TO THIS CONTRACT AND ACKNOWLEDGE THAT EACH PARTY AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THE CONTRACT.

CenturyLink Communications, LLC	**VITA**
BY: DocuSigned by: Stephen Arneson C9E6AAC7647E486...	BY: Doug Leslie Digitally signed by Doug Leslie Date: 2017.03.06 09:08:04 -05'00'
NAME: Stephen Arneson	NAME: Doug Leslie
TITLE: Manager - Offer Management	TITLE: Strategic Sourcing Consultant
DATE: 1/27/2017	DATE: 3/6/2017

INFORMATION TECHNOLOGY TELECOMMUNICATIONS NETWORK SERVICES CONTRACT

TABLE OF CONTENTS

1. PURPOSE AND SCOPE 5
2. DEFINITIONS 5
   A. Acceptance 5
   B. Agent 5
   C. Authorized Users 5
   D. Confidential Information 5
   E. Direct Service Plan (DSP) 5
   F. DSP Participant 5
   G. E-rate 5
   H. Eligible Entity 6
   I. Eligible Services 6
   J. Party 6
   K. Requirements 6
   L. Service 6
   M. Subscriber 6
   N. Supplier 6
   O. "Supplier Owned Technology" 6
   P. Telecommunications Service Order (TSO) 6
3. TERM AND TERMINATION 6
   A. Contract Term 6
   B. Termination for Convenience 7
   C. Termination for Breach or Default 7
   D. Termination for Non-Appropriation of Funds 7
   E. Effect of Termination 7
   F. Transition Assistance 8
   G. Contract Kick-Off Meeting 8
   H. Contract Closeout 8
4. SERVICES 8
   A. Nature of Services and Engagement 8
   B. Availability of Supplier's Services 9
   C. Substitution of Services 9
   D. Services that Include Software 9
   E. Service Delivery Intervals 9
   F. Installation 9
   G. Installation of Service Responsibility 10
   H. Missed Date Notification 10
   I. Testing and Inspection 10
   K. Consistent or Recurring Service Level Failures 10
5. ACCEPTANCE AND CURE 11
   A. Acceptance and Cure of Implementation 11
   B. Acceptance and Cure of Individual Installations and Services 11
6. NEW TECHNOLOGY 11
   A. Access to New Technology 11
   B. New Service Offerings Not Available from the Supplier 11
7. SUPPLIER PERSONNEL 12
   A. Selection and Management of Supplier Personnel 12
   B. Supplier Personnel Supervision 12
8. GENERAL WARRANTY 12
   A. Ownership 13
   B. Supplier's Viability 13
   C. Supplier's Past Experience 13

D. Performance 13
E. Malicious Code 13
F. Remedial Action in the Event of a Virus Infection 13
9. TRAINING AND DOCUMENTATION 13
10. RATES, ORDERS AND COMPENSATION 14
A. Non-Exclusivity 14
B. Fixed Pricing 14
C. Direct Service Plan (DSP) 14
D. Telecommunications Service Orders. 14
E. Direct Service Plan. 14
F. E-rate 15
G. Orders with Federal Funding 15
H. Ordering Authority 15
I. VITA Approval and Contracting Authority 15
J. Ordering Officer(s) 15
K. Purchase Price and Price Protection 15
L. Regulatory Fees and Other Surcharges 16
M. Waiver of One-Time Charges for Transport Services 16
N. Late Payment Charges 16
11. INVOICE PROCEDURES 16
A. Invoice Submission 16
B. Disputed Charges 16
C. Overpayment 17
D. Delayed Billing/Billing Guarantee 17
E. Purchase Payment Terms 17
12. COOPERATION WITH AGENTS 17
13. REPORTING 17
14. ANNUAL COMPETITIVE REVIEW PROCESS 17
15. CONFIDENTIALITY 18
A. Treatment and Protection 18
B. Exclusions 18
C. Return or Destruction 18
D. Confidentiality Statement 19
16. INDEMNIFICATION AND LIABILITY 19
A. Indemnification 19
B. Liability 19
17. SECURITY COMPLIANCE 20
18. IMPORT/EXPORT 21
19. INVENTIONS AND COPYRIGHTS 21
20. ACCEPTABLE USE POLICIES 21
21. GENERAL PROVISIONS 21
A. Relationship Between VITA, Authorized Users and Subscribers; and Supplier 21
B. Incorporated Contractual Provisions 21
C. Compliance with the Federal Lobbying Act 22
D. Licenses and Permits 22
E. Governing Law 22
F. Dispute Resolution 22
G. Taxes 22
H. Advertising and Use of Proprietary Marks 23
I. Notices 23
J. No Waiver 23
K. Assignment 23
L. Captions 23
M. Severability 23
N. Survival 23
O. Force Majeure 24

P. Remedies **24**
Q. Right to Audit **24**
R. Unauthorized Sales **24**
S. Contract Administration **24**
T. Order of Precedence **24**
U. Entire Contract **25**

INFORMATION TECHNOLOGY TELECOMMUNICATION NETWORK SERVICES CONTRACT

THIS INFORMATION TECHNOLOGY TELECOMMUNICATION SERVICES CONTRACT ("Contract") is entered into by and between the Virginia Information Technologies Agency (VITA) pursuant to §2.2-2012 of the Code of Virginia and on behalf of the Commonwealth of Virginia (hereinafter referred to as "VITA"), and CenturyLink Communications, LLC ("Supplier"), a limited liability company, formerly Qwest Communications Company LLC, headquartered at 100 CenturyLink Drive Monroe, Louisiana 71203 to be effective as of October 28, 2015 ("Effective Date").

1. PURPOSE AND SCOPE

This Contract sets forth the terms and conditions under which Supplier shall provide telecommunications network and related services as defined in § 2(L)) to VITA and any public body as defined by §2.2-4301 and referenced by §2.2-4304 of the Code of Virginia who is authorized by VITA as a Direct Service Plan (DSP) Participant.

2. DEFINITIONS

A. Acceptance

Acceptance shall take the form of successful performance of the Services at the designated location, or completed Acceptance testing to validate conformance with the Requirements of the Contract and the applicable order, provided, however, Acceptance shall be deemed to occur within five (5) business days after Supplier notifies the Authorized User that it has either attained successful performance of the Services at the designated location or completed testing to validate conformance with the Requirements of the Contract and the applicable order.

B. Agent

Any third party independent agent of any Authorized User.

C. Authorized Users

VITA and DSP Participants.

D. Confidential Information

Any confidential or proprietary information of a Party that is disclosed in any manner, including oral or written, graphic, machine readable or other tangible form, to any other Party in connection with the Services provided by Supplier under this Contract or as a result of discussions related to this Contract or any order issued hereunder, and which at the time of disclosure either (i) is marked as being "Confidential" or "Proprietary", (ii) is otherwise reasonably identifiable as the confidential or proprietary information of the disclosing Party, (iii) under the circumstances of disclosure should reasonably be considered as confidential or proprietary information of the disclosing Party or (iv) is protected by statute or other law applicable to the Party that actually accesses such information.

E. Direct Service Plan (DSP)

The direct service plan provided by Supplier under this Contract as described in Exhibit B, "Service Requirements."

F. DSP Participant

Any public body, as defined by §2.2-4301 and referenced by §2.2-4304 of the Code of Virginia, who VITA prequalifies and grants written authority to participate in the DSP.

G. E-rate

The universal service "Schools and Libraries Program" administered by the Universal Service Administrative Company (USAC) under the oversight of the Federal Communications Commission (FCC), or successor program.

H. Eligible Entity

Any school or library meeting the USAC definition of an "Eligible Entity" under the universal Schools and Libraries Program.

I. Eligible Services

Products and services that are eligible for E-rate support.

J. Party

Supplier, VITA, or any Authorized User.

K. Requirements

The functional, performance, operational, compatibility, Acceptance testing criteria and other parameters and characteristics of the Service(s) as set forth in Exhibit A, "Service Fees" and Exhibit B, "Service Requirements" and the applicable order and such other parameters, characteristics, or performance standards that may be agreed upon in writing by the Parties.

L. Service

Any work performed or service provided by Supplier under this Contract for the benefit of the Commonwealth or other public body on whose behalf an Authorized User has placed an order with Supplier. For details about the work and services to be provided by Supplier under this Contract, see Exhibit A "Service Fees", Exhibit B, "Service Requirements" and Exhibit F, "Service Exhibits".

M. Subscriber

All public bodies, including VITA, as defined by §2.2-4301 and referenced by §2.2-4304 of the Code of Virginia who are end users of the Services of this Contract.

N. Supplier

Means the Supplier and any of its Affiliates (i.e., an entity that controls, is controlled by, or is under common control with Supplier).

O. "Supplier Owned Technology"

means the proprietary technology of Supplier including services, software tools, hardware designs, algorithms, software (in source and object forms), user interface designs, architecture, class libraries, report formats, objects and documentation (both printed and electronic), network designs, know-how, trade secrets and any related intellectual property rights throughout the world and also including any derivatives, improvements, enhancements or extensions of Supplier Owned Technology conceived, reduced to practice, or developed during the term of the Contract.

P. Telecommunications Service Order (TSO)

An order for telecommunications services issued by VITA to a supplier of telecommunications services. For purposes of this Contract, a TSO shall refer to an order for Services, in substantially the form of Exhibit C to this Contract, issued by VITA to Supplier. Any TSO shall constitute an order.

3. TERM AND TERMINATION

A. Contract Term

This Contract is effective and legally binding as of the Effective Date and, unless terminated as provided for in this section, shall continue to be effective and legally binding for a period of five (5) years. VITA, in its sole discretion, may renew this Contract for up to five (5) additional one (1) year periods after the expiration of the initial five (5) year period. VITA will issue a written notification to the Supplier stating the renewal period, not less than thirty (30) days prior to the expiration of any current term. All terms and conditions and rates and charges shall continue to apply during any renewal period selected.

Performance of an order issued during the term of this Contract may survive the expiration of the term of this Contract, in which case all terms and conditions required for the operation of such order shall remain in full force and effect until Services pursuant to such order have met the final Acceptance criteria of the applicable Authorized User.

B. Termination for Convenience

VITA may terminate this Contract, in whole or in part, or any order issued hereunder, in whole or in part, or an Authorized User may terminate an order, in whole or in part, upon not less than thirty (30) days prior written notice at any time for any reason.

C. Termination for Breach or Default

VITA shall have the right to terminate this Contract, in whole or in part, or any order issued hereunder, in whole or in part, or an Authorized User may terminate an order, in whole or in part, for breach and/or default of Supplier. Supplier shall be deemed in breach and/or default in the event that Supplier fails to meet any material obligation set forth in this Contract or in any order issued hereunder.

If VITA deems the Supplier to be in breach and/or default, VITA shall provide Supplier with notice of breach and/or default and allow Supplier thirty (30) days to cure the breach and/or default. If Supplier fails to cure the breach as noted, VITA may immediately terminate this Contract or any order issued hereunder, in whole or in part.

If an Authorized User deems the Supplier to be in breach and/or default of an order, such Authorized User shall provide Supplier with notice of breach and/or default and allow Supplier thirty (30) days to cure the breach and/or default. If Supplier fails to cure the breach and/or default as noted, such Authorized User may immediately terminate its order, in whole or in part. Any such termination shall be deemed a Termination for Breach or a Termination for Default of an order. An Authorized User shall also have the right to terminate an affected Service as provided under any termination rights included in the applicable service level agreement.

In addition, if Supplier is found by a court of competent jurisdiction to be in violation of or to have violated 31 USC 1352 or if Supplier becomes a party excluded from Federal Procurement and Nonprocurement Programs, VITA may immediately terminate this Contract, in whole or in part, for breach. VITA shall provide written notice to Supplier of such termination and Supplier shall provide written notice to VITA if Supplier is charged with violation of 31 USC 1352 or if federal debarment proceedings are instituted against Supplier.

D. Termination for Non-Appropriation of Funds

All payment obligations under this Contract are subject to the availability of legislative appropriations at the federal, state, or local level, for this purpose. In the event of non-appropriation of funds, irrespective of the source of funds, for the items under this Contract, VITA may terminate any order, in whole or in part, or an Authorized User may terminate its order, in whole or in part, for those goods or services for which funds have not been appropriated. Written notice will be provided to the Supplier as soon as possible after legislative action is completed. For each fiscal period each Authorized User agrees: (a) to include in its budget request appropriations sufficient to cover its obligations under this Agreement; and (b) that it will not use non-appropriations as a means of terminating this Agreement in order to acquire functionally equivalent products or services from a third party.

E. Effect of Termination

Upon termination, neither the Commonwealth, nor VITA, nor any Authorized User shall have any future liability except for Services rendered by Supplier and accepted by the Authorized User prior to the termination date, construction charges, and Transition Assistance provided at VITA's request (and under the associated pricing and terms) during the transition period. Applicable Cancellation Charges may apply for individual Services terminated prior to completion of its minimum service, if any, as provided in Exhibit F, "Service Exhibits".

In the event of a Termination for Breach or Termination for Default, all costs of de-installation and return or disconnection of Services shall be borne by Supplier.

In the event of a Termination for Breach or Termination for Default, VITA may immediately procure services from another source. Once VITA has effected a purchase from an alternate source, the parties agree that Authorized Users may charge-back Supplier, in which case Supplier agrees to reimburse Authorized Users, subject to the Damage Cap defined below, for any difference in cost between the original Contract price and cost to Authorized Users to cover from the alternate source, as measured over a 12 month period. In no event shall Authorized Users be held to pay Supplier any costs incurred by Supplier, including but not limited to ordering, marketing, manufacturing, or delivering the item(s) which are subject of notice of default by VITA. This remedy is in addition to and not in lieu of any other remedy VITA may have under this Contract or at law or in equity.

F. Transition Assistance

The Supplier must provide adequate information and reasonable assistance as necessary to enable VITA to conduct a smooth transition of services and functions being performed by the Supplier to an alternative Supplier upon expiration or termination of the Contract. Upon VITA's request in writing, the Supplier will continue to provide Services for up to 24 months following the expiration or termination date of the Contract. All rates, service level agreements, and terms and conditions of the Contract will apply during that period. The Supplier agrees that no material decrease in the Supplier's level of performance and support will occur during the transition period.

G. Contract Kick-Off Meeting

Within 30 days of Contract award, Supplier may be required to attend a contract orientation meeting, along with the VITA contract manager/administrator, the VITA and/or other CoVa Agency project manager(s) or authorized representative(s), technical leads, VITA representatives for SWaM and any other significant stakeholders who have a part in the successful performance of this Contract. The purpose of this meeting will be to review all contractual obligations for both parties, all administrative and reporting requirements, and to discuss any other relationship, responsibility, communication and performance criteria set forth in the Contract. The Supplier may be required to have its assigned account manager as specified in Exhibit B, "Service Requirements," and a representative from its contracts department in attendance. The time and location of this meeting will be coordinated with Supplier and other meeting participants by the VITA contract manager.

H. Contract Closeout

Prior to the contract's expiration date, Supplier may be provided contract close out documentation and shall complete, sign and return to VITA Supply Chain Management within 30 days of receipt. This documentation may include, but not be limited to: Patent/Royalty Certificate, Tangible Property/Asset Certificate, Escrow Certificate, SWaM Reports Completion Certificate and Final Payment Certificate. Supplier is required to process these as requested to ensure completion of close-out administration and to maintain a positive performance reputation with the Commonwealth of Virginia. Any closeout documentation not received within 30 days of Supplier's receipt of our request will be documented in the contract file as Supplier non-compliance. Supplier's non-compliance may affect any pending payments due the Supplier, including final payment, until the documentation is returned.

4. SERVICES

A. Nature of Services and Engagement

This Contract is non-exclusive and the Commonwealth may, at its sole discretion, receive benefits from third party suppliers of services similar to, or in competition with, services provided by Supplier. Supplier is an independent contractor engaged to perform certain Services (see section 2(L)), including but not limited to providing telecommunications services and installation and/or support activities as described in Exhibit B, "Service Requirements" and Exhibit A, "Service Fees." The Commonwealth reserves the right to order any of Supplier's Services at any time during the term of this Contract or any extension thereto.

B. Availability of Supplier's Services

Supplier shall continue to offer all Services and service components identified in Exhibit A, "Service Fees" and Exhibit B, "Service Requirements," without exception, for the entire term of the Contract, including extension years and any period of Transition Assistance.

C. Substitution of Services

During the term of this Contract, the Supplier is not authorized to substitute for any Service identified in Exhibit A, "Service Fees," a service not identified in Exhibit A, "Service Fees." Supplier is not authorized to substitute for any Service identified in Exhibit A, "Service Fees," any other Service identified in Exhibit A, "Service Fees," without the written permission of VITA.

D. Services that Include Software

Supplier grants a royalty-free, worldwide, non-exclusive and irrevocable (for the term of the Contract, including any period of termination assistance) license to the Subscriber to use any Supplier Owned Technology necessary for use of the services provided by Supplier. To the extent that Supplier utilizes third-party software in the provision of the Services, Supplier shall provide a sub-license to the Subscriber to the extent the third-party software vendor allows such sublicense. Subscriber acknowledges that such sub-license to third-party software shall terminate upon the termination of the Contract. Terms and conditions that concern or purport to govern any software and that are presented at any time in a "click-through" or "click-wrap" agreement or web site shall not be deemed to have been agreed to by Authorized Users and Subscribers and shall not bind Authorized Users and Subscribers.

Supplier warrants that any Supplier Owned Technology provided by Supplier under this Contract will not contain any device, code, or function intended to disrupt or disable the Service (sometimes referred to as "time bombs", "time locks", or "drop dead" devices) upon the occurrence of any event, including but not limited to, the elapsing of a period of time, exceeding the number of users, or non-payment.

Authorized Users and Subscribers shall be entitled to make copies of any software and documentation provided by Supplier for the permitted use of the Supplier Owned Technology and for archival and disaster recovery purposes. Authorized Users and Subscribers may copy any documentation and incorporate it into its processes, procedures and testing plans.

E. Service Delivery Intervals

The Supplier shall begin delivery of Services in accordance with Exhibit B, "Service Requirements" herein or on the date requested by the Authorized User and agreed to by the Supplier in an order. Supplier's failure to comply with such time frames shall be deemed a default, and VITA may, at its sole discretion and in addition to all other available remedies, exercise its rights pursuant to the Term and Termination section of this Contract. Supplier shall not be deemed in default if its failure to comply is the result of a failure of the Subscriber which is to receive Supplier's Services to provide any necessary access or support as identified in the applicable order.

The Authorized User may delay the Service delivery date by notifying the Supplier at least ten (10) days before the scheduled Service delivery date. Such delay shall not exceed thirty (30) days beyond the scheduled delivery date unless agreed upon in writing by Authorized User and Supplier.

The Commonwealth requires that Supplier provide delivery equal to or better than that provided its commercial and retail customers.

F. Installation

Unless otherwise authorized in writing by the Authorized User, Supplier shall not, in performing installation Services, interfere with the current operational telephone system and/or telecommunications cabling system of the Subscriber in a manner that causes operational outages. Notwithstanding the foregoing, in the event that temporary modifications to the existing telephone and/or cabling systems become necessary to complete the installation of the new service, the Supplier shall notify the on-site point of contact for the Subscriber of such need and shall schedule a mutually agreeable time for such modifications to be completed. Authorized User will reasonably cooperate with Supplier or its agents to install, maintain, and repair Services.

Authorized User will provide or secure at its expense appropriate space and power; and rights or licenses if Supplier must access the building of Authorized User's premises to install, operate, or maintain Service or associated Supplier equipment. Supplier may refuse to install, maintain, or repair Services if any condition on Authorized User's premises is unsafe or likely to cause injury.

G. Installation of Service Responsibility

Except for specific limitations expressly stated in this Contract, Supplier shall be responsible for completing and providing all components, terminals, wiring, labeling and all other items necessary for installation and commencement of each ordered Service, including, without limitation, installation of any necessary access lines and switching.

H. Missed Date Notification

Supplier will notify Authorized User in writing of a due date that may be missed, along with the reason, as soon as the Supplier realizes the potential failure of meeting an installation date. Upon request by Authorized User, such orders will be expedited at no charge.

I. Testing and Inspection

The Commonwealth reserves the right to conduct any test/inspection it may deem advisable to assure Services conform to the Requirements. Unless Authorized User has notified Supplier to the contrary in writing, Acceptance shall be deemed to occur within five (5) business days after Supplier notifies the Authorized User in writing that it has either attained successful performance of the Services at the designated location or completed testing to validate conformance with the Requirements of the Contract and the applicable order ("Start of Service Date").

The Supplier shall provide the Services identified in each order in accordance with the Requirements set forth herein and on the applicable order and with all applicable standards of performance established by RFP 2013-08, the Virginia State Corporation Commission, and the Federal Communications Commission. The Supplier's Services shall meet and maintain the quality (grade of services) for each type of Service as specified herein.

J. Availability and Service Levels

Supplier Services shall be ready for use 24 hours per day 7 days per week. Supplier shall provide a technical or customer support center for the reporting by Authorized Users of technical service problems encountered by Subscribers while using the Services.

Exhibit B, "Service Requirements" provides Service Level Agreements and remedies applicable to this Contract and individual orders issued under the Contract. Credits and rebates for failing to meet Service Levels are remedies available to Authorized Users in addition to, and not in lieu of, any other remedies available pursuant to this Contract or at law or in equity.

Authorized User is responsible for any repairs to any non-Supplier facility or equipment on Authorized User's side of the demarcation point. Authorized User may request a technician dispatch for Service problems. . Supplier will assess a dispatch fee set forth in Exhibit A, "Service Fees" if it reasonably determines the problem is caused by non-Supplier facilities or equipment on Authorized User's side of the demarcation point.

K. Consistent or Recurring Service Level Failures

Without limitation as to the contractual implications of any single failure, Supplier's consistent or recurring failure to meet the agreed-upon service levels will be a material breach of the Contract as described in "Termination for Breach or Default".

L. Usage. Unless an Authorized User notifies Supplier in writing and the parties expressly agree to a modification to a particular Service Exhibit, Authorized User is ordering a telecommunication service as a jurisdictionally interstate service subject to Federal Communications Commission regulations and orders (i.e. more than 10% of the Authorized User's traffic transmitted through the Service is destine for interstate locations or the Internet, including transmission through other facilities and systems connected to the Service).

5. ACCEPTANCE AND CURE

A. Acceptance and Cure of Implementation

In addition to Supplier's Implementation Plan Guarantees set forth in Exhibit B, "Service Requirements" if any are offered by Supplier, after the Supplier initiates a specific Service to VITA (e.g., domestic voice, MPLS service), VITA has a period of 90 days from Supplier's ready notice during which VITA reviews the Service quality to determine if the Service materially conforms with the Requirements of the Contract, including, but not limited to, installation intervals, performance, availability, network throughput and delay, reliability, accuracy of management information reports, and billing. Within the 90-day timeframe, if VITA neither informs Supplier about Service failure nor accepts the Implementation, then the Implementation will be deemed accepted. If the specific Service (e.g., domestic voice, MPLS service) fails to materially conform with the Requirements, VITA will notify Supplier and Supplier will have 30 days in which to make the Service conform to the Requirements. If Supplier cannot correct the failures within 30-days, VITA may terminate the Service without liability and, in addition to all remedies or credits obligated by Supplier in Supplier's Implementation Plan Guarantees if any are offered by Supplier and subject to the Damage Cap, Supplier agrees to pay VITA "cover" in an amount equal to the difference between what VITA pays for substitute service from Supplier or another vendor and the charges VITA would have paid Supplier had the service been provided in accordance with the specifications, as measured over a twelve (12)-month period. In addition, VITA may exercise the remedies provided in "Termination for Breach or Default," in addition to and not in lieu of any other remedies available at law or in equity. Should a Termination for Breach or Default be exercised, the remedies and credits described above shall not be waived and will be in addition to those described in "Effect of Termination."

B. Acceptance and Cure of Individual Installations and Services

All installations and Services shall meet the Requirements and written criteria set forth herein and in the individual order.

Upon the installation of a Service, the Supplier shall ensure that it performs properly and promptly inform the Authorized User that it is available for use.

Authorized User shall have 5 business days to accept such Service commencing on the date Supplier notifies the Authorized User in writing that it has either attained successful performance of the Services at the designated location or completed testing to validate conformance with the Requirements of the Contract and the applicable order. If, prior to Acceptance, Supplier becomes aware of or otherwise establishes that the installation and Services do not perform properly, or if Authorized User notifies Supplier of the same in writing, Supplier will promptly correct the problem(s), with time being of the essence. Supplier shall have five (5) business days to cure all deficiencies and non-conformities such that the installation and Services meet the Requirements and written criteria set forth herein and in the applicable order. Once the cure has been satisfied, Authorized User shall have 5 business days to accept such Service. The remedies for failure to meet the service levels provided in Exhibit B, "Service Requirements" will be in effect as of the first day of the second month after initial installation of Services. Charges will commence within five days of the Start of Service Date.

In the event that Supplier fails to cure the deficiencies or non-conformities to meet the Requirements and written criteria set forth herein and in the individual order within the 5-day cure period, Authorized User may exercise the remedies provided in "Termination for Breach or Default," in addition to and not in lieu of any other remedies available at law or in equity.

6. NEW TECHNOLOGY

A. Access to New Technology

Supplier will bring to VITA's attention any new services that it believes will be of interest to VITA and will work to develop proposals for the provision of any such services as VITA requests.

B. New Service Offerings Not Available from the Supplier

If new or replacement service offerings become available to VITA, and cannot be competitively provided by the Supplier, VITA may purchase the services from a third party, and Supplier will

reasonably assist VITA to migrate to such services, if VITA elects to use such new or replacement service offerings.

7. SUPPLIER PERSONNEL

A. Selection and Management of Supplier Personnel

Supplier shall take such steps as may be necessary to ensure that all Supplier personnel performing Services under this Contract are competent and knowledgeable of the contractual arrangements and the applicable Services herein. Supplier shall be solely responsible for the conduct of its employees, agents, and subcontractors, including all acts and omissions of such employees, agents, and subcontractors, and shall ensure that such employees and subcontractors comply with the appropriate Authorized User's site security, information security and personnel conduct rules, as well as applicable federal, state and local laws, including export regulations. Authorized User reserves the right to require the immediate removal from such Authorized User's premises of any employee, subcontractor or agent of Supplier whom such Authorized User believes has failed to comply or whose conduct or behavior is unacceptable or unprofessional or results in a security or safety breach.

B. Supplier Personnel Supervision

Supplier acknowledges that the Commonwealth is not the employer of any Supplier personnel, including any of Supplier's agents, contractors, or subcontractors. As between Supplier and the Commonwealth, Supplier shall have sole responsibility for all employment-related functions, including, without limitation, to supervise, counsel, discipline, review, evaluate, set the pay rates of, and terminate the employment of such Supplier personnel.

Subcontractors

If an order issued pursuant to this Contract is supported in whole or in part with federal funds, Supplier shall not subcontract any Services pursuant to such order to any subcontractor that is a party excluded from Federal Procurement and Nonprocurement Programs. In no event shall Supplier subcontract any Services to any subcontractor which is debarred by the Commonwealth of Virginia or which owes back taxes to the Commonwealth and has not made arrangements with the Commonwealth for payment of such back taxes.

The Supplier will (i) be responsible for all work performed by subcontractors, (ii) be responsible for its (and their) compliance with the Contract, and (iii) guarantee the performance of any services provided by the Supplier's subcontractors (including, but not limited to, paying service credits associated with outages, liability for all subcontractors working in support of the Contract's requirements and those of any order placed thereunder, and adherence with all technical and operational specifications). The Supplier will be responsible for payment of its subcontractors and will indemnify the Commonwealth's Indemnified Parties against any claims resulting from Supplier's failure to pay, including discharging (at Supplier's expense) any liens obtained by the subcontractor.

8. GENERAL WARRANTY

THE OBLIGATIONS OF SUPPLIER UNDER THIS GENERAL WARRANTY SECTION ARE MATERIAL. SUPPLIER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY CONCERNING MERCHANTABILITY OR FITNESS FOR ANY OTHER PARTICULAR PURPOSE.

All Services purchased under this Contract remain under warranty for the time period commencing after acceptance by Authorized User and continuing through expiration of the Contract or termination of the Services at the discretion of VITA, or termination by the Authorized User for an individual order.

With respect to the Services provided by Supplier, Supplier represents and warrants the following:

A. Ownership

Supplier has the right to provide the Services without violating or infringing any law, rule, regulation, copyright, patent, trade secret or other proprietary right of any third party.

B. Supplier's Viability

Supplier warrants that it has the financial capacity to perform and continue to perform its obligations under this Contract; that Supplier has no constructive or actual knowledge of an actual or potential legal proceeding being brought against Supplier that could materially adversely affect performance of this Contract; and that entering into this Contract is not prohibited by any contract, or any order by any court of competent jurisdiction.

C. Supplier's Past Experience

Supplier warrants that the Services have been successfully performed on a similar scale for a non-related third-party without significant problems due to the Services or Supplier.

D. Performance

i). All Services shall be performed with care, skill and diligence, consistent with or above applicable professional standards currently recognized in its profession, and Supplier shall be responsible for the professional quality, technical accuracy, completeness and coordination of all plans, information, specifications, and Services furnished under this Contract;

ii). Services are pursuant to a particular Request for Proposal ("RFP") and shall be fit for the particular purposes specified by VITA in the RFP and in this Contract, and Supplier is possessed of superior knowledge with respect to the Services and is aware that all Authorized Users are relying on Supplier's skill and judgment in providing the Services;

iii). The documentation which Supplier is required to provide under this Contract shall be sufficient in detail and content to allow a properly trained user to understand and fully utilize the Services without reference to any other materials or information.

E. Malicious Code

Supplier has used its best efforts through quality assurance procedures to ensure that there are no computer viruses or undocumented features in any of the media, equipment, systems, software or other means used to deliver, provide or maintain the Services. Supplier has used the best available means to scan any media provided to the Authorized User. The Supplier shall use current releases of appropriate virus detection software as a precaution against any software virus affecting the equipment or services.

F. Remedial Action in the Event of a Virus Infection

If a software virus is contained in or affects any systems or software provided or maintained by or for the Supplier as part of the services, the Supplier will promptly notify VITA and shall take all reasonable steps to remedy the problem and to prevent a reoccurrence thereof.

If this problem did not arise as a direct result of an act or omission of any Authorized User then the Supplier shall be solely responsible for any costs incurred in remedying the problem.

9. TRAINING AND DOCUMENTATION

Any training or documentation necessary for the recipient of the Service to have full benefit of such Service shall be deemed included in the scope of the order at no cost, unless expressly excluded.

Supplier shall be responsible for providing hands-on training on the use of the Service(s) for all end users. Supplier shall coordinate scheduling for all training directly with the Subscriber. In conjunction with verbal explanations of the system features and configuration, Supplier shall supply documentation including operations manuals, instruction cards, and other materials as necessary for each Service.

10. RATES, ORDERS AND COMPENSATION

A. Non-Exclusivity

Supplier agrees that no pricing or service contained in this Contract is based upon "exclusivity" or any required percentage of the Commonwealth's or Authorized User's overall or service-specific spend or volume.

B. Fixed Pricing

Except for the process described in the "Annual Competitive Review Process" section of this Contract, all prices, terms, warranties and benefits granted by the Supplier in their proposal and this Contract are fixed and stabilized for the term of the Contract, including any extension years.

C. Direct Service Plan (DSP)

VITA may, at its sole discretion, qualify and grant to one or more public bodies the authority to participate in the DSP. VITA will notify Supplier in writing of the qualified public bodies ("DSP participants"), the Services they are authorized to order. DSP participants shall have the right to place orders to Supplier pursuant to this Contract and shall be billed directly by Supplier.

Should VITA partially or entirely revoke or otherwise suspend any public body's participation in the DSP, the suspension or termination of ordering privileges will be considered effective upon written notice to Supplier and the affected public body. Direct billing for Services may continue unless otherwise revoked. VITA will give Supplier sixty (60) days advance written notice of any complete suspension or termination of DSP participation. During this period, VITA and Supplier will take appropriate action to transfer ordering and billing functions back to VITA.

Should VITA at any time cancel the DSP, with respect to this Contract, in whole or in part, VITA will provide Supplier sixty (60) days advance written notice of such cancellation, and VITA and Supplier will take appropriate action to transfer ordering and/or billing functions back to VITA.

D. Telecommunications Service Orders.

To order Services VITA will, and any other Authorized User (i.e., DSP participant) may, issue a written Telecommunications Service Order (TSO) to the Supplier for any Service(s) identified herein. A valid TSO should (i) reference the Contract number; (ii) be signed by an ordering officer authorized to contractually bind the Authorized User; and (iii) identify the Service(s) to be acquired, the price for each Service (in accordance with this Contract, including Exhibit A, "Service Fees"), the required Service delivery date for each Service, and, as applicable, the location(s) where each Service shall be performed. In no event shall a TSO include a request for any service not identified in this Contract. Supplier is responsible for ensuring a TSO is complete and valid before processing it. Should any TSO be incomplete or considered not valid by Supplier, Supplier agrees to promptly notify and work with the Authorized User to make the incomplete or invalid TSO complete and valid.

Upon receipt of a written, complete and valid TSO, the Supplier shall process such TSO and return a Service Order containing the following information in no more than two (2) business days or other timeframe as provided in Exhibit B, "Service Requirements:"

i). Verification that the TSO is technically correct;

ii). Estimated Date Services will commence;

iii). Verification of the charge for each item (Service) to be provided; and

iv). Other applicable administrative information necessary to deliver the Services requested on the TSO.

The standard TSO template is provided as Exhibit C.

E. Direct Service Plan.

Supplier is required to accept any order placed by a DSP participant through the following means:

i). Purchase Order (PO): An official PO form issued by a DSP participant.

ii). Any other order/payment charge or credit card process, such as AMEX, MASTERCARD, or VISA under contract for use by a DSP participant.

iii). An order substantially in the form of a TSO.

This ordering authority is limited to issuing and canceling specific orders for the Services available under this Contract. Under no circumstances shall any DSP participant have the authority to modify this Contract. Any order placed pursuant to this Contract must reference the Contract number and identify the Service(s) to be performed, the price for each Service (in accordance with Exhibit A, "Service Fees"), and the required Service commencement date for each Service.

ALL CONTRACTUAL OBLIGATIONS UNDER THIS CONTRACT IN CONNECTION WITH AN ORDER PLACED BY ANY DSP PARTICIPANT ARE THE SOLE OBLIGATION OF SUCH DSP PARTICIPANT AND NOT THE RESPONSIBILITY OF VITA.

F. E-rate

Supplier agrees to make available all E-rate Eligible Services as listed and priced herein to any DSP Participant which is an Eligible Entity. Supplier agrees to provide the Services directly to the Eligible Entity, and to bill each Eligible Entity directly. Supplier agrees and understands that the responsibility for collection of all charges incurred, and the responsibility for resolving all Service problems as well as administration of this Contract for E-rate participation shall be the sole responsibility of Supplier.

Supplier warrants that it is qualified under applicable Federal Communications Commission and Virginia State Corporation Commission rules to apply for and receive Universal Service Fund allocations/disbursements for services provided pursuant to this Contract to Eligible Entities on behalf, and for the benefit, of those Eligible Entities. The Supplier also agrees to maintain those qualifications, and to assist Eligible Entities in applying for and receiving these allocations/disbursements.

G. Orders with Federal Funding

Supplier shall not accept any order issued pursuant to this Contract if such order is to be funded, in whole or in part by federal funds and if, at the time the order is placed, Supplier is not eligible to be the recipient of federal funds as may be noted on any of the Lists of Parties Excluded from Federal Procurement and Nonprocurement Programs.

H. Ordering Authority

The TSO and DSP Orders provisions above designate the process for the placement of new Service orders and installations with the Supplier. The process will be the only authorized way to place orders with the Supplier. The Supplier will implement provisioning processes to ensure that orders are not accepted outside of the process, and orders placed and billed outside of these procedures will not be the financial responsibility of the Commonwealth or any Authorized Users of the Commonwealth. VITA reserves the right to subsequently change its processes, including designating additional individuals or organizations that will be authorized to place orders.

I. VITA Approval and Contracting Authority

The Supplier recognizes that VITA, by statute, reviews and approves purchases of telecommunications Services for agencies and institutions of the Commonwealth. The Supplier agrees that the Supplier will not provide such Services unless VITA has given its advance, written approval, either individually or by category of Service or Subscriber.

J. Ordering Officer(s)

Authorized Users will designate in writing any individual authorized (Ordering Officer) to issue orders for the Services. Notwithstanding anything to the contrary, the Authorized User will make payment only pursuant to a valid order executed by an Ordering Officer. VITA's authorized Ordering Officers for this Contract are listed in Exhibit E, which may change from time to time.

K. Purchase Price and Price Protection

Exhibit A, "Service Fees," sets forth the fees and the applicable discounts. Authorized Users shall not be required to pay any additional costs above those costs provided for in Exhibit A, "Service Fees."

At all times during the term of this Contract and any extensions thereto, Supplier's prices on Exhibit A, "Service Fees," shall at all times comply with §§ 56-234 et seq. of the Code of Virginia. Supplier's failure to comply with the aforereferenced statute shall be grounds for termination of

the Contract or any order issued hereunder for default and/or breach; and VITA may pursue any remedies available at law or in equity with regard to such failure to comply.

Most Favored Customer

Supplier agrees and warrants that for all Services priced pursuant to this Contract, the prices are, and will continue to be at or below Supplier's (or any agent thereof) lowest price offered to any Virginia county, city or local government, school district, special service district, any educational institution or any subdivision /agency thereof.

For any occurrence whereby VITA believes the Supplier (or any agent thereof) is charging any entity listed above, less than as is identified in this Contract VITA shall notify Supplier and the Supplier shall immediately lower the prices in this Contract to a level equal to or below that charged such other entity after validating that Supplier is charging any such entity less than as is identified in this Contract.

L. Regulatory Fees and Other Surcharges

For any regulatory surcharges, accurately reflect the amounts that the Supplier is required to pay to government agencies or others, and only for the services on which such obligations are actually applicable

No regulatory charges will be applied retroactively, whether as a result of a change in Supplier's policy or some other event.

M. Waiver of One-Time Charges for Transport Services

Non-recurring charges for transport services installed or modified under the Contract will be waived as set forth in Appendix A. Any waivers specified in Appendix A are available throughout the term of the Contract and will apply to applicable non-recurring charges (NRCs), whether related to initial implementation, normal operations, or normal growth. These NRC waivers will not require any minimum in-service periods for circuits or services.

N. Late Payment Charges

Supplier agrees to waive all late payment charges associated with invoices for Services provided under this Contract, except to the extent such late payment charges are required by law.

11. INVOICE PROCEDURES

A. Invoice Submission

Accurate bills for each calendar month, in both hard copy and electronic format(s), shall be delivered to each Authorized User at the billing address identified in the applicable Order.

Upon certification by VITA that a public body is eligible to receive direct billing, Supplier will provide separate billing directly to that public body.

No invoice may include any costs other than those identified in this Contract.

B. Disputed Charges

If, Authorized User makes timely payment of all undisputed charges when due and provides Supplier with a written explanation of the reasons for Authorized User's dispute of the charge, Authorized User will have the right to withhold payment of the disputed amount until the dispute is settled or finally resolved. Supplier shall respond in writing to Authorized User's notification of a disputed charge acknowledging its receipt within five (5) business days. If an Authorized User disputes an invoiced charge, such disputed charges will be resolved (whether by credit or explanation of the charge to the Authorized User's satisfaction) in the Authorized User's required format within two (2) billing cycles (60 days) following Authorized User's written notification. In the absence of the Supplier's written evidence identifying the merit of the disputed amounts, Authorized User may not pay the disputed amounts and may consider the matter concerning the specific identified amounts closed. Authorized User will not pay any disputed amounts that remain unresolved after 120 days. If a disputed charge is reversed, Supplier shall reverse all associated surcharges, regulatory charges and taxes.

C. Overpayment

If Authorized User notifies the Supplier in writing of a disputed charge, any credit(s) issued to Authorized User shall include all associated surcharges, regulatory charges and taxes.

If Authorized User has overpaid the Supplier because of a billing error, the time within which Authorized User may seek credits for overcharges (including associated surcharges, regulatory charges and taxes) will be governed by applicable law.

D. Delayed Billing/Billing Guarantee

Except in the event of amounts initially disputed by Authorized User which are re-billed by the Supplier, Authorized User will not pay charges for services more than 90 days after the close of the billing period in which the charges were incurred. This requirement applies to all charges, including without limitation, Moves, Adds, Changes, Disconnections (MACD) charges, recurring charges, usage-based charges and non-recurring charges, as well as fees, surcharges, regulatory charges and taxes.

E. Purchase Payment Terms

Supplier is responsible for the accuracy of its billing information. Supplier agrees not to issue invoices hereunder until Services and installations have met Acceptance criteria, and the effective date for any recurring or partial month charges shall not precede Acceptance. Charges for Services accepted more than ninety (90) days prior to receipt of a valid invoice may not be paid, except in accordance with a milestone payment schedule.

All payment terms are net 45 days after receipt of proper invoice.

12. COOPERATION WITH AGENTS

Supplier agrees to cooperate with and take instructions from any Agent under contract with an Authorized User. The third party provider's responsibilities may include, for example, procuring Services from Supplier on behalf of Authorized User, liaising with Supplier with respect to service faults or failures, and reviewing, authorizing and paying Supplier invoices.

The Supplier must fully cooperate, at no additional charge, with the Agent in all areas that Authorized User requires. If an Agent is used for processing Supplier's invoices, Supplier must agree to send billing detail directly to the Authorized User and the Agent, at no additional cost to the Authorized User.

Supplier will not require any such Agent to execute a Non-Disclosure Agreement (NDA) as long as such Agent is under NDA with VITA or the Authorized User.

13. REPORTING

In addition to all reports identified in the Requirements, Supplier is required to submit to VITA the following monthly reports:

Small Business Subcontracting Report

These reports must be submitted using the instructions found at the following URL: http://www.vita.virginia.gov/scm/default.aspx?id=97

Failure to comply with all reporting requirements may result in default of the Contract.

Suppliers are encouraged to review the site periodically for updates on Supplier reporting.

14. ANNUAL COMPETITIVE REVIEW PROCESS

Upon VITA's written request, starting no earlier than 90 days before the end of each year of the Contract term except the final one, VITA and the Supplier will conduct a review of the overall competitiveness of the services provided under the Contract for pricing, terms and conditions, performance and service level metrics. The purpose of the review is to maintain VITA's relative position in the market for service arrangements involving substantially equivalent services.

Within 30 days of such request, both the Supplier and VITA will propose market-based reductions to rates and charges (which cannot be less than 0%) for the aggregate volume and mix of services provided to VITA. The proposed aggregate adjustment may be based on

industry benchmark information or other relevant data. Both parties will negotiate in good faith to determine whether an aggregate percentage change is required.

Within 15 days of an adjustment being agreed upon by the parties , the Supplier shall prepare the necessary revisions to the Contract, to be effective at Supplier's earliest opportunity, but in no event later than the second full billing cycle following the effective date of the amendment to the Contract as agreed upon by the parties and reflected in writing.

15. CONFIDENTIALITY

A. Treatment and Protection

Each Party shall (i) hold in strict confidence all Confidential Information of any other Party, (ii) use the Confidential Information solely to perform or to exercise its rights under this Contract, and (iii) not transfer, display, convey or otherwise disclose or make available all or any part of such Confidential Information to any third-party. However, VITA or an Authorized User may disclose the Confidential Information as delivered by Supplier to subcontractors, contractors, advisors or agents of such Authorized User that are bound by non-disclosure contracts with such Authorized User. Each Party shall take the same measures to protect against the disclosure or use of the Confidential Information as it takes to protect its own proprietary or confidential information (but in no event shall such measures be less than reasonable care).

Supplier agrees that all information that relates to the quantity, technical configuration, type, destination, location and amount of use of a service under the contract obtained by Supplier as a result of providing service pursuant to this Contract will be considered confidential to VITA and the ordering Authorized User and not to Supplier. This includes all such information included in reports and other deliverables prepared by Supplier.

All Supplier documents now or later comprising the Contract may be released in their entirety under the Virginia Freedom of Information Act, and Supplier agrees that any confidentiality or similar stamps or legends that are attached to any future documents or information may be ignored to the extent they claim confidentiality beyond that permitted herein.

B. Exclusions

The term "Confidential Information" shall not include information that is:

i). in the public domain through no fault of the receiving Party or of any other person or entity that is similarly contractually or otherwise obligated;

ii). obtained independently from a third-party without an obligation of confidentiality to the disclosing Party and without breach of this Contract;

iii). developed independently by the receiving Party without reference to the Confidential Information of the other Party; or

iv). required to be disclosed by law, including the Virginia Freedom of Information Act (§§ 2.2-3700 *et seq.* of the Code of Virginia) or a court order.

C. Return or Destruction

Upon the termination or expiration of this Contract or upon the earlier request of the disclosing Authorized User, Supplier shall (i) at its own expense, (a) promptly return to the disclosing Authorized User all tangible Confidential Information (and all copies thereof, except to the extent any record is required by law to be retained) of the disclosing Authorized User, or (b) upon written request from the disclosing Authorized User, destroy such Confidential Information and provide the disclosing Authorized User with written certification of such destruction, and (ii) cease all further use of the Authorized User's Confidential Information, whether in tangible or intangible form.

VITA or the Authorized User shall retain and dispose of Supplier's Confidential Information in accordance with the Commonwealth of Virginia's records retention policies or, if Authorized User is not subject to such policies, in accordance with such Authorized User's own records retention policies.

D. Confidentiality Statement

All Supplier personnel, contractors, agents, and subcontractors performing Services pursuant to this Contract may be required to sign a confidentiality statement or non-disclosure agreement. Any violation of such statement or agreement shall be deemed a breach of this Contract.

16. INDEMNIFICATION AND LIABILITY

A. Indemnification

Supplier agrees to indemnify, defend and hold harmless the Commonwealth, VITA, any Authorized User, Subscribers, their officers, directors, agents and employees (collectively, "Commonwealth's Indemnified Parties") from and against any and all losses, damages, claims, demands, proceedings, suits and actions, including any related liabilities, obligations, losses, damages, assessments, fines, penalties (whether criminal or civil), judgments, settlements, expenses (including attorneys' and accountants' fees and disbursements) and costs (each, a "Claim" and collectively, "Claims"), incurred by, borne by or asserted against any of Commonwealth's Indemnified Parties to the extent such Claims in any way relate to, arise out of or result from: (i) any intentional or willful conduct or gross negligence of any employee, agent, or subcontractor of Supplier, (ii) material breach of any representation, warranty or covenant of Supplier contained herein, or (iii) subject to the below, any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Services. Selection and approval of counsel and approval of any settlement shall be accomplished in accordance with all applicable laws, rules and regulations. For state agencies the applicable laws include §§ 2.2-510 and 2.2-514 of the Code of Virginia. In all cases the selection and approval of counsel and approval of any settlement shall be satisfactory to the Commonwealth.

In the event that a Claim is commenced against any of Commonwealth's Indemnified Parties alleging that the provision of Services under this Contract infringes any third party's intellectual property rights and Supplier is of the opinion that the allegations in such Claim in whole or in part are not covered by this indemnification provision, Supplier shall immediately notify VITA and the affected Authorized User(s) in writing, via certified mail, specifying to what extent Supplier believes it is obligated to defend and indemnify under the terms and conditions of this Contract. Supplier shall in such event protect the interests of the Commonwealth's Indemnified Parties and, will cooperate with VITA to secure a continuance to permit VITA and the affected Authorized User(s) to appear and defend their interests in cooperation with Supplier as is appropriate, including any jurisdictional defenses VITA or the affected Authorized User(s) may have.

In the event of a Claim pursuant to any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Services, and in addition to all other obligations of Supplier in this Section, Supplier shall at its expense, either (a) procure for all Authorized Users the right to continue use of such infringing Services; or (b) replace or modify such infringing Services with non-infringing services satisfactory to VITA. If Supplier cannot accomplish any of the foregoing within a reasonable time and at commercially reasonable rates, then Supplier shall terminate the infringing Services, along with any other Services combined with, supported by or dependent upon the infringing Services.

Supplier's obligation to defend such an infringement claim will not apply to third party provider systems, services, equipment or software not provided by Supplier, including any local exchange carrier or other service provider, notwithstanding that such provider is engaged on VITA's behalf by Supplier. Such systems, services, equipment or software are subject to the provider's terms of service or warranties. This subsection does not apply to any CPE supplied by Supplier or its affiliates or to Services for which VITA both provided and controlled the design of such Service. THIS SUBSECTION SETS FORTH THE SOLE AND EXCLUSIVE REMEDY OF VITA, AND THE ENTIRE OBLIGATION AND LIABILITY OF SUPPLIER, AS TO ANY CLAIMS OF INFRINGEMENT OR MISAPPROPRIATION OF THIRD PARTY PROPRIETARY RIGHTS IN CONNECTION WITH ANY SERVICES PROVIDED HEREUNDER.

B. Liability

Except for liability with respect to (i) any intentional or willful misconduct or gross negligence of any employee, agent, or subcontractor of Supplier, (ii) claims for bodily injury, including death,

and real and tangible property damage, and (iii) Supplier's confidentiality obligations, Supplier's aggregate liability over the Contract term shall be limited to: (a) during the first 24 months of the Contract term, $5 million if VITA awards contracts to multiple suppliers or $20 million if VITA awards a single contract only to Supplier and (b) after the first 24 months of the Contract term, two times the aggregate total MRCs and usage charges paid by VITA and Authorized Users to Supplier under the Agreement through the date of the event giving rise to the claim ("Damage Cap"). Supplier agrees that it is fully responsible for all acts and omissions of its employees, agents, and subcontractors, acting within the scope of their employment or engagement.

NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES UNDER THIS CONTRACT, INCLUDING (WITHOUT LIMITATION) LOSS OF PROFIT, INCOME OR SAVINGS, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

17. SECURITY COMPLIANCE

Supplier does not require or intend to access and possess VITA's or the applicable Authorized User's data (the "VITA Data") in its performance of the Services included in this Agreement. Any exposure by Supplier to the VITA Data will be infrequent and incidental to Supplier's provision of the Services. Supplier agrees that it will not, except as is strictly necessary to perform the Services, access, alter, use, copy, retain, store, transmit, publish, destroy, or transfer to any third party VITA Data. If Supplier accesses VITA Data, Supplier shall treat such VITA Data actually accessed as VITA confidential information. Supplier shall not be deemed to have possessed, accessed, used, received or obtained VITA Data or VITA confidential information solely by virtue of the fact that VITA or the applicable Authorized User transmits such information through its use of Supplier's Services. Supplier shall establish and maintain safeguards against the destruction, loss, misuse or alteration of VITA Data actually accessed by Supplier that are no less rigorous than those set forth in the then-current Commonwealth of Virginia security procedures, published by the Virginia Information Technologies Agency (VITA) and which may be found at (http://www.vita.virginia.gov/library/default.aspx?id=537#securityPSGs) or a successor URL(s), as are pertinent to Supplier's operation. Supplier further agrees to comply with all provisions of the relevant Subscriber's then-current security procedures as are consistent with Supplier's operation and which have been supplied to Supplier by such Subscriber and as are otherwise required by Privacy Laws applicable to Supplier as the provider of the Service. Supplier shall also comply with all applicable federal, state and local laws and regulations applicable to Supplier as the provider of the Service. Supplier will limit access and configuration capability to personnel in the Supplier NOC that will take first call on trouble tickets on the VITA Juniper equipment. Supplier will use commercially reasonable efforts to cause all employees that will have access and configuration capability on the VITA Juniper equipment to be subject to the finger-print background check. If employees refuse and Supplier is unable to staff the support of VITA with employees that have had the check performed, Supplier will negotiate in good faith with VITA to resolve the issue. Supplier does not anticipate that this background check will be refused by the group of employees targeted to support the VITA account. VITA and/or Subscriber has in effect and will maintain (i) reasonable security measures appropriate for the protection of its own computing infrastructure and VITA Data, (ii) measures as required by Privacy Laws applicable to VITA and/or Subscriber as the user of a Service, (iii) VITA's and/or Subscriber's own network security policy (including applicable firewall and NAT policies) and security response procedures, and (iv) reasonable information security safeguards or mechanisms appropriate for VITA Data that VITA and/or Subscriber will transmit through its use of Supplier's Services. Without limiting Supplier's express obligations as set forth in the Agreement, VITA acknowledges that encryption services or ongoing security services specific to VITA's or Subscriber's Services (such as managed security services or intrusion detection services) are not inherent in the Services included in this Agreement, except as set forth in Exhibit B "Service Requirements."

Supplier shall notify VITA, Authorized User and/or Subscriber, if applicable, of any confirmed Breach of Unencrypted and Unredacted Personal Information, as those terms are defined in

Virginia Code 18.2-186.6, and other personal identifying information, such as insurance data or date of birth, provided by VITA, Authorized User or Subscriber to Supplier in accordance with Supplier processes. Supplier shall provide VITA the opportunity to participate in the investigation of the Breach and Supplier shall reasonably cooperate with VITA, Authorized User or Subscriber over reporting the unauthorized disclosure, to the extent permitted by law.

18. IMPORT/EXPORT

In addition to compliance by Supplier with all export laws and regulations, VITA requires that any data deemed "restricted" or "sensitive" by either federal or state authorities that will be accessed by Supplier in its provision of Services, must only be collected, developed, analyzed, or otherwise used or obtained by persons or entities working within the boundaries of the United States, unless approved in advance by VITA. Vita must provide Supplier sufficient advance notice of information it deems "restricted" or "sensitive".

19. INVENTIONS AND COPYRIGHTS

Supplier grants Authorized Users the right to use, copy, modify, transmit, and distribute for their benefit, for government use and purposes, including internal and third-party information processing, all papers, reports, forms, or other goods or materials developed under the term of this Contract and delivered to the Commonwealth during the term of this Contract.

20. ACCEPTABLE USE POLICIES

Supplier's Acceptable Use Policies will not apply to Services purchased under the Contract. Supplier will not be permitted to suspend or terminate service without notice, except that Supplier will be permitted to act immediately and without notice to suspend or terminate Internet service in response to a court order or government directive that certain conduct must be stopped, or when a violation: (i) exposes Supplier to sanctions or prosecution; (ii) is likely to cause material harm to or materially interfere with the integrity, operations or security of Supplier's network or interfere with another customer's use of Supplier's services; or (iii) or otherwise presents imminent risk of harm to Supplier or Supplier's customers or their respective employees.

21. GENERAL PROVISIONS

A. Relationship Between VITA, Authorized Users and Subscribers; and Supplier

Supplier has no authority to contract for VITA or any Authorized User or Subscriber or in any way to bind, to commit VITA or any Authorized User or Subscriber to any agreement of any kind, or to assume any liabilities of any nature in the name of or on behalf of VITA or any Authorized User or Subscriber. Under no circumstances shall Supplier, or any of its employees, hold itself out as or be considered an agent or an employee of VITA or any Authorized User or Subscriber, and neither VITA nor any Authorized User or Subscriber shall have any duty to provide or maintain any insurance or other employee benefits on behalf of Supplier or its employees. Supplier represents and warrants that it is an independent contractor for purposes of federal, state and local employment taxes and agrees that neither VITA nor any Authorized User or Subscriber is responsible to collect or withhold any federal, state or local employment taxes, including, but not limited to, income tax withholding and social security contributions, for Supplier. Any and all taxes, interest or penalties, including, but not limited to, any federal, state or local withholding or employment taxes, imposed, assessed or levied as a result of this Contract shall be paid or withheld by Supplier or, if assessed against and paid by VITA or any Authorized User or Subscriber, shall be reimbursed by Supplier upon demand by VITA or such Authorized User or Subscriber.

B. Incorporated Contractual Provisions

The then-current contractual provisions at the following URL are mandatory contractual provisions, required by law or by VITA, and are hereby incorporated by reference: http://www.vita.virginia.gov/uploadedFiles/SCM/StatutorilyMandatedTsandCs.pdf

The contractual claims provision §2.2-4363 of the Code of Virginia and the required eVA provisions at http://www.vita.virginia.gov/uploadedFiles/SCM/eVATsandCs.pdf are also incorporated by reference.

The then-current terms and conditions in documents posted to the afore referenced URLs are subject to change pursuant to action by the legislature of the Commonwealth of Virginia, change in VITA policy, or the adoption of revised eVA business requirements. If a change is made to the terms and conditions, a new effective date will be noted in the document title. Supplier is advised to check the URLs periodically.

C. Compliance with the Federal Lobbying Act

Supplier's signed certification of compliance with 31 USC 1352 (entitled "Limitation on use of appropriated funds to influence certain Federal Contracting and financial transactions") or by the regulations issued from time to time thereunder (together, the "Lobbying Act") is incorporated as Exhibit D hereto.

D. Licenses and Permits

Supplier shall be responsible for obtaining all rights-of-way, licenses, and/or permits required by applicable authorities in order to perform installation Services at the location(s) specified in any order issued pursuant to this Contract.

E. Governing Law

This Contract shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia without regard to that body of law controlling choice of law. Any and all litigation shall be brought in the circuit courts of the Commonwealth of Virginia. The English language version of this Contract prevails when interpreting this Contract. The United Nations Convention on Contracts for the International Sale of Goods and all other laws and international treaties or conventions relating to the sale of goods are expressly disclaimed. UCITA shall apply to this Contract only to the extent required by §59.1-501.15 of the Code of Virginia.

F. Dispute Resolution

In accordance with §2.2-4363 of the Code of Virginia, Contractual claims, whether for money or other relief, shall be submitted in writing to the public body from whom the relief is sought no later than sixty (60) days after final payment; however, written notice of the Supplier's intention to file such claim must be given to such public body at the time of the occurrence or beginning of the work upon which the claim is based. Pendency of claims shall not delay payment of amounts agreed due in the final payment. The relevant public body shall render a final decision in writing within thirty (30) days after its receipt of the Supplier's written claim.

The Supplier may not invoke any available administrative procedure under §2.2-4365 of the Code of Virginia nor institute legal action prior to receipt of the decision of the relevant public body on the claim, unless that public body fails to render its decision within thirty (30) days. The decision of the relevant public body shall be final and conclusive unless the Supplier, within six (6) months of the date of the final decision on the claim, invokes appropriate action under §2.2-4364, Code of Virginia or the administrative procedure authorized by §2.2-4365, Code of Virginia.

Upon request from the public body from whom the relief is sought, Supplier agrees to submit any and all contractual disputes arising from this Contract to such public body's alternative dispute resolution (ADR) procedures, if any. Supplier may invoke such public body's ADR procedures at any time and concurrently with any other statutory remedies prescribed by the Code of Virginia.

In the event of any breach by a public body, Supplier's remedies shall be limited to claims for damages and Prompt Payment Act interest and, if available and warranted, equitable relief, all such claims to be processed pursuant to this Section. In no event shall Supplier's remedies include the right to terminate any Services hereunder.

G. Taxes

The Commonwealth of Virginia is exempt from Federal excise and all State and Local taxes. Such taxes shall not be included in Contract prices. Tax certificates of exemption, Form ST-12 can be obtained from Authorized Users upon request. Deliveries against this Contract shall be

free of Federal excise and transportation taxes. The Commonwealth's excise tax exemption registration number is 54-73-0076K. The Commonwealth is also exempt from paying E-911 charges.

H. Advertising and Use of Proprietary Marks

Supplier shall not use the name of VITA or any Authorized User or Subscriber or refer to VITA or any Authorized User or Subscriber, directly or indirectly, in any press release or formal advertisement without receiving prior written consent of VITA or such Authorized User or Subscriber. In no event may Supplier use a proprietary mark of VITA or an Authorized User or Subscriber without receiving the prior written consent of VITA or the Authorized User or Subscriber.

I. Notices

Any notice required or permitted to be given under this Contract shall be in writing and shall be deemed to have been sufficiently given if delivered in person, or if deposited in the U.S. mails, postage prepaid, for mailing by registered, certified mail, or overnight courier service addressed to:

i). VITA and Supplier, if Supplier is incorporated in the Commonwealth of Virginia, at the addresses shown on the signature page.

ii). Supplier, if Supplier is incorporated outside the Commonwealth of Virginia, to the Registered Agent registered with the Virginia State Corporation Commission.

Pursuant to Title13.1 of the Code of Virginia, VITA or Supplier may change its address for notice purposes by giving the other notice of such change in accordance with this Section.

Administrative contract renewals, modifications or non-claim related notices are excluded from the above requirement. Such written and/or executed contract administration actions may be processed by the assigned VITA and Supplier points of contact for this Contract and may be given in person, via U.S. mail, courier service or electronically.

J. No Waiver

Any failure to enforce any terms of this Contract shall not constitute a waiver.

K. Assignment

This Contract shall be binding upon and shall inure to the benefit of the permitted successors and assigns of VITA and Supplier. Supplier may not assign, delegate or otherwise convey this Contract, or any of its rights and obligations hereunder, to any entity without the prior written consent of VITA, and any such attempted assignment without consent shall be void. VITA may assign this Contract to any entity, so long as the assignee agrees in writing to be bound by all the terms and conditions of this Contract.

If any law limits the right of VITA or Supplier to prohibit assignment or nonconsensual assignments, the effective date of the assignment shall be thirty (30) days after the Supplier gives VITA prompt written notice of the assignment, signed by authorized representatives of both the Supplier and the assignee. Any payments made prior to receipt of such notification shall not be covered by this assignment.

L. Captions

The captions are for convenience and in no way define, limit or enlarge the scope of this Contract or any of its Sections.

M. Severability

Invalidity of any term of this Contract, in whole or in part, shall not affect the validity of any other term. VITA and Supplier further agree that in the event such provision is an essential part of this Contract, they shall immediately begin negotiations for a suitable replacement provision.

N. Survival

The provisions of this Contract regarding License, Warranty, Confidentiality, Liability and Indemnification, and the General Provisions shall survive the expiration or termination of this Contract.

O. Force Majeure

No Party shall be responsible for failure to meet its obligations under this Contract if the failure arises from causes beyond the control and without the fault or negligence of the non-performing Party. If any performance date under this Contract is postponed or extended pursuant to this section for longer than thirty (30) calendar days, VITA, by written notice given during the postponement or extension, may terminate Supplier's right to render further performance after the effective date of termination without liability for that termination, and in addition an Authorized User may terminate any order affected by such postponement or delay.

P. Remedies

The remedies set forth in this Contract are intended to be cumulative. In addition to any specific remedy, VITA and all Authorized Users and Subscribers reserve any and all other remedies that may be available at law or in equity.

Q. Right to Audit

VITA reserves the right to audit those Supplier records that relate to the Services rendered or the amounts due Supplier for such Services under this Contract. VITA's right to audit shall be limited as follows:

i). Five (5) years from Service performance date;

ii). Performed at Supplier's premises, during normal business hours at mutually agreed upon times; and

iii). Excludes access to Supplier cost information.

The Supplier shall not have the right to audit, or require to have audited, VITA or any Authorized User.

R. Unauthorized Sales

Supplier agrees that it is not engaging, and shall not engage, during the term of the Contract (including any renewal period or period of Transition Assistance), in activities that conflict with the interests of VITA (for example, by attempting to sell services to individual public bodies, locations or business units outside the Contract or not in compliance with the processes set forth in the Contract). Should a potential conflict arise, the Supplier shall promptly notify VITA, rectify such conflict, fully compensate VITA for any volume credits or rebates to which it would have been entitled should the conflict not have occurred, reimburse VITA for all revenue not collected from the public body by VITA as a result of such conflict, and take steps to prevent its recurrence. In the example given above, the Supplier's correction would take the form of bringing all services under the Contract and refunding any charges paid by the public body in excess of those contained in the Contract; as well as providing VITA with credits in the amount of any service charges VITA would otherwise have collected from the public body, and any credits and rebates that would otherwise have been given to VITA by Supplier had the unauthorized sale(s) not occurred.

S. Contract Administration

Supplier agrees that at all times during the term of this Contract an account executive, at Supplier's senior management level, shall be assigned and available to VITA. Supplier reserves the right to change such account executive upon reasonable advance written notice to VITA.

T. Order of Precedence

In the event of a conflict, the following order of precedence shall apply: this Contract document, Exhibit B, Exhibit A, Exhibit F, then any specific order. In the event of a conflict or inconsistency between the negotiated terms of this Contract and any provision incorporated by reference into the Contract (e.g., a section of an Acceptable Use Policy), the negotiated terms of this Contract shall take precedence. For purposes of this section, a "conflict" exists with respect to a subject that has been comprehensively addressed in the Contract when supplementary terms contained in a provision incorporated by reference would alter the rights and obligations of the parties set forth in the Contract.

U. Entire Contract

The following Exhibits, including all subparts thereof, are attached to this Contract and are made a part of this Contract for all purposes:

i). Exhibit A Service Fees

ii). Exhibit B Service Requirements

iii). Exhibit C TSO Template

iv). Exhibit D Certification Regarding Lobbying

v). Exhibit E Individuals Authorized to Order Services (VITA Ordering Officers)

vi). Exhibit F Service Exhibits

This Contract, its Exhibits, and any prior non-disclosure agreement constitute the entire agreement between VITA and Supplier and supersede any and all previous representations, understandings, discussions or agreements between VITA and Supplier as to the subject matter hereof. Any and all terms and conditions contained in, incorporated into, or referenced by the Supplier's Proposal shall be deemed invalid. The provisions of the Virginia Department of General Services, Division of Purchases and Supply Vendor's Manual shall not apply to this Contract or any order issued hereunder. This Contract may only be amended by an instrument in writing signed by VITA and Supplier.

To the extent that any order issued hereunder includes any terms and conditions inconsistent with the terms and conditions of this Contract, such terms and conditions shall be of no force or effect.

VITA and Supplier each acknowledge that it has had the opportunity to review this Contract and to obtain appropriate legal review if it so chose.

Executed as of the last date set forth below by the undersigned authorized representatives of VITA and Supplier.

CENTURYLINK COMMUNICATIONS, LLC

By: _____
(Signature)

Name: Richard Fernandez
(Print)

Title: Director Offer Mgmt

Date: 10/27/15

Address for Notice:

930 15th St - 3rd Fl
Denver, CO
80202

Attention: Richard Fernandez

VITA

By: Nelson P. Moe
(Signature)

Name: Nelson P. Moe
(Print)

Title: Chief Information Officer

Date: 10/28/15

Address for Notice:

CESC – VITA Supply Chain Management
11751 Meadowville Ln.
Chester, VA 23836

Attention: Contract Administrator

EXHIBIT A

SERVICE FEES

See attached Excel file.

Detailed Description of Proposed Solution(s)

Submitted to:
Virginia Information Technology Agency
Supply Chain Management (SCM)
Doug Leslie, Strategic Sourcing Specialist
11751 Meadowville Lane
Chester, VA 23836
Email: doug.leslie@vita.virginia.gov

Submitted by:
Qwest Government Services, Inc.
dba CenturyLink QGS
William Turanchik, Premier Account Manager
4250 North Fairfax Drive
Arlington, VA 22203
Email: william.turanchik@centurylink.com

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TABLE OF CONTENTS

A. ACCESS CIRCUITS 1
1. Proactive Access Circuit Monitoring 1
2. Underlying Access Channel Infrastructure 2
3. Ethernet Access Types and Availability 3
4. Supplier-Owned Access Infrastructure 5
5. Demarc Extensions 5

B. ALTERNATIVE WAN TRANSPORT 6
1. Rigorous Service Levels Required For All Services Proposed 6
2. Statewide Availability 7

C. MPLS NETWORK SERVICES 7
1. Core MPLS Network Description 7
2. MPLS VPN Topology 13
3. MPLS Protocols 15
4. MPLS Multicasting 15
5 MPLS Access Technology 16
6. Logical Access (Layer 2) 17
7. MPLS Product Structure 18
8. Classes of Service (CoS) 21
9. MPLS Network Security 24
10. Internet VPN MPLS Access 25
11. MPLS Connection to the Internet 26
12. MPLS Service Level Agreements 27
13. MPLS Reporting 28
14. Enhanced and Future MPLS Services 31
15. Statewide Availability 36

D. INTERNET SERVICES 36
1. Internet Service Capabilities and Supplier Classification 36
2. Points of Presence 39
3. Backbone Topology 41
4. Fixed and Burstable Dedicated Internet Service 42
5. Internet Security 45
6. Internet Usage Reporting 46
7. Internet Usage Reports Provided 47
8. Statewide Availability 48

E. PRIVATE LINES 48
1. Supplier Private Line Services 48
2. Back-Up Service Options 51
3. Statewide Availability 52

F. LONG DISTANCE VOICE SERVICES 53
1. Inbound Toll-Free Service 53
2. Outbound Long Distance Service 66
3. Voice Access 71
4. Statewide Availability 71

G. INTERNET-BASED VPN MANAGED SERVICES TAKEOVER 71
1. Direct Managed Takeover 73
2. Non-Disclosure Agreement for All Personnel 75
3. Criminal Background Check 76
4. Timing of the Direct Managed Takeover 76
5. Statewide Availability 76

H. MANAGED SERVICES AND OTHER SUPPORT SERVICES 77
1. Break/Fix Maintenance Services 77
2. Management Services to be Provided or Supported 78
3. Problem Management 83
4. Preventative Maintenance 84

5. Configuration Management 84
6. Moves, Adds, Changes, and Disconnections (MACDs) 85
7. Documentation Management 87
8 Equipment Installation and Testing 89
9. Managed Services Tools 93
10 Managed Router and Other Managed Services 96
11. Statewide Availability 98
J. HOSTED IP TELEPHONY 98
1. Offer Description and Components 99
2. Design/Deployment Description 104
3. Local Calling Capability Throughout the Commonwealth 105
4. Features and Capabilities 108
5. Service Management 111
6. Implementation and Operational Management 112
7. Technology Roadmap 115
8. IPT Pricing 115
9. Service Levels 115
K. SIP TRUNKING VOICE SERVICES 116
1. Supplier's SIP Trunking Voice Service Offering 116
2. Underlying Transport Options 117
3. SIPconnect Standard Compliance 120
4. Manufacturer Support 121
5. Call Compression 121
6. Statewide Availability 122
L. IMPLEMENTATION 129
1. Supplier Bears All Costs of Implementation 130
2. Description and Methodology 130
3. Implementation Planning Phase 155
4. Ordering Phase 158
5. Installation Phase 158
6. Implementation Project Management 161
7. Implementation Plan Guarantees 165
8. Proof of Concept 166
9. Post-Implementation Project Review 166
10. Billing Implementation 166
M. SERVICE AND SUPPORT MANAGEMENT 167
1. Account Team 167
2. Customer Support Network Operations Center (NOC) 173
3. Network Transport Provisioning Requirements 175
4. Training 178
N. THE DIRECT SERVICE PLAN (DSP) 178
1. Provisions of the Direct Service Plan 179
O. BILLING REQUIREMENTS 179
1. Billing Structure 179
2. Centralized Billing 180
3. Invoice Timing 181
4. Billing Detail 181
5. De-Installation Orders 182
6. Billing Dispute Resolution 182
7. Credits 183
8. Disputed Amounts 184
9. Delayed Billing / Billing Guarantee 184
10. Administrative Billing Changes 184
11. Designated Billing Specialist 185
12. Rate Verification 185
P. VALUE ADDS 185

A. Access Circuits

In general, the Supplier is expected to provide access circuits to reach the Supplier's closest Point of Presence for data and voice connectivity, or to the Point of Presence that supports the network service in question provided by that Supplier. In some cases VITA may supply its own Customer-provided access. However, Supplier-provided access is generally delineated in the services and locations presented in Appendix A. This Section of the RFP provides VITA's requirements for those Supplier-provided access circuits. Separate circuits may be needed for different services at the same site (*e.g.,* MPLS services, inbound and outbound voice services). Both traditional TDM and Ethernet circuits are required.

1. Proactive Access Circuit Monitoring

VITA desires proactive access circuit monitoring, whether or not VITA purchases a managed solution. Do you provide capability to monitor access circuits and initiate circuit maintenance and repair proactively?

Comply (Yes/No)	***Explanation/Description (1. Proactive Access Circuit Monitoring)***
Yes	CenturyLink's NOC performs round-the-clock proactive surveillance of the network. CenturyLink monitors and manages optical, switching, SS7 (signaling), DCCS and Intelligent Network (IN), Frame Relay, ATM, IP and VoIP network elements. They investigate alarm conditions and coordinate restoration activity with CenturyLink field sites, CAPs, LECs and OCCs. CenturyLink does proactively monitor, repair, and upgrade its backbone network as necessary. CenturyLink does not proactively monitor down to the customer level DS-1 circuits for our Private Line or long distance services. CenturyLink maintains a proactive monitoring and notification objective of ten minutes of receipt of a customer circuit physical outage event for data services. CenturyLink employs platform-specific alarm thresholds to identify service impairments. CenturyLink's internal systems correlate network alarms to customers; generating a trouble ticket for automatic customer notification. Automatic notification is limited to customers who subscribe to ATM, Frame or IP-based services (proactive notification on Ethernet services is not guaranteed) and comes in the form of e-mail or text page. Physical circuit outage events are generated as follows: SNMP traps are generated from CenturyLink edge routers and directed to CenturyLink's NerveCenter management servers The NerveCenter management server uses behavior models to filter out actual physical outage (includes bouncing circuits) events Outage events are generated into the NetCool application The Alarm Rule Service and Ticket Rule Service then correlate the event to active events and routes valid events for notification to the Proactive Notification tool for automatic dispatch of notification. Ethernet services can be supported via Network Management Services. CenturyLink Network Management Service (NMS) is a comprehensive network monitoring and management service. It includes 24x7 monitoring of customer premises equipment and transport links, complete fault and performance management, complete network analysis, configuration backup, online reports and total customer agency. The central part of this service is the in-band monitoring and management tools that provide the customer with the ability to continuously monitor and manage network

Comply (Yes/No)	Explanation/Description (1. Proactive Access Circuit Monitoring)
	performance. Network Management Services works with any provider on virtually any technology. It has one of the broadest and deepest portfolios of devices certified for management in the industry, and all devices undergo a thorough certification process. CenturyLink Network Management Services is available in the following service levels: Monitor & Notification, Select and Comprehensive: **Monitor & Notification** Continuous network monitoring – 24x7x365 proactive network monitoring to identify issues with monitored devices Real-time notification – your designated maintenance personnel contacted to resolve issues Network operations center – available 24x7x365 **Select** Includes all of the features of Monitor & Notification plus: Fault management to isolate and correct any troubles. Configuration management services include: design, provisioning, backup, comparison and restoration. Online reports document network performance. Network inventory and topology map. In-band monitoring of customer devices and CenturyLink data transport 24/7. Web-based portal for access to ticketing system, reports, inventory and topology maps and change request. **Comprehensive** Includes all of the features of Network Management Services–Select, plus: Total customer agency for resolving issues with non-CenturyLink transport Total customer agency for repair issues with customer premises equipment (CPE) non-CenturyLink maintenance providers (e.g. maintenance directly with SMARTnet, ADTRAN, Juniper, etc) Configuration of site-to-site virtual private network (VPN) connectivity. Firewall internetwork operating system (IOS) policies to secure hardware. Monitoring of site-to-site VPN connectivity.

2. Underlying Access Channel Infrastructure

Do you take advantage of the opportunity to employ underlying access facilities from the best available option at each location, including:

- The Incumbent Local Exchange Carrier (ILEC) at that location
- Any Competitive Local Exchange Carriers (CLECs) at that location
- “Consumer”-oriented broadband providers that reach that location, e.g., cable broadband, DSL, fiber-to-the-premises

Comply (Yes/No)	Explanation/Description (2. Underlying Access Channel Infrastructure)
Yes	CenturyLink Local Access is part of an end-to-end customer solution that includes products such as Domestic Private Line, CenturyLink IQ

Comply (Yes/No)	*Explanation/Description (2. Underlying Access Channel Infrastructure)*
	Networking (including Internet Port, Private Port and Enhanced Port) ATM, Frame Relay, Ethernet Private Line, E-Line, Optical Wavelength Service and Dedicated Voice. CenturyLink offers different local access transport protocols including time division multiplexing (TDM), synchronous optical network (SONET), Ethernet, Wavelength, Frame Relay and ATM. CenturyLink maintains contractual relationships with LECs, CLECs and Competitive Local Access Providers to provide local access circuits between the customer premises and the CenturyLink Point of Presence (Pop). In addition, CenturyLink can utilize its own fiber to build on-net network facilities to the customer location. CenturyLink has a formal process to review and approve local access providers to take advantage of regional carriers that have unique capabilities in a particular area.

3. Ethernet Access Types and Availability

Describe the forms of Ethernet access available within the State of Virginia and clearly describe the differences in capability between each. Please include relevant information on maximum circuit bandwidths, type of interface (single-mode fiber, copper coax, etc.), service and implementation constraints and factors affecting transition between speeds. Provide a map or listing indicating geographic areas where Ethernet access capabilities would be available.

Comply (Yes/No)	*Explanation/Description (3. Ethernet Access Types and Availability)*
Yes	CenturyLink Ethernet Local Access (ELA) provides connectivity between the customer location to the CenturyLink network by ordering and coordinating the Ethernet connection with a local provider. Three versions of CenturyLink-provided ELA are available: ELA native (Basic) ELA native (Premier) ELA over SONET **ELA-Native (Basic) Description** CenturyLink establishes a network-to-network interface ([NNI] Ethernet port (1000 Mbps or greater) in the CenturyLink point-of-presence (POP) and installs a user-to-network Interface (UNI) port (100 Mbps or 1000 Mbps) at the customer's location. CenturyLink provisions Ethernet virtual circuits (EVCs) that connect the customer UNI ports to the CenturyLink POP. CenturyLink orders all elements of the service and fully maintains the circuit end-to-end. **Service Features** Provides Layer 2 switched native Ethernet connection Allows for quick bandwidth scalability Provides speeds from 1 Mbps scaling up to 1000 Mbps (1Gbps) Interface types include Fast-Ethernet (up to 100Mbps) on copper handoff, Gigabit Ethernet (up to 1000Mbps) on copper or fiber (single-mode or multi-mode) **ELA-Native (Premier) Description**

Comply (Yes/No)	*Explanation/Description (3. Ethernet Access Types and Availability)*
	CenturyLink orders a switched Layer 2 Ethernet point-to-point loop from an incumbent local exchange carrier (ILEC)/CLEC on behalf of the customer or uses its own on-net facilities. ELA native (Premier) provides an Ethernet connection between the customer location and the CenturyLink point-of-presence (POP) using a dedicated network infrastructure. In addition, CenturyLink orders the highest grade Metro Ethernet from the local access provider and delivers the service via a non-oversubscribed interconnect to the CenturyLink national network. This enables IQ™ Networking quality of service (QoS) mappings to seamlessly traverse the local service connection to the customer. CenturyLink establishes a network-to-network interface ([NNI] with no oversubscription) Ethernet port (1000 Mbps or greater) in the CenturyLink POP and installs a user-to-network Interface (UNI) port (100 Mbps or 1000 Mbps) at the customer's location. CenturyLink provisions Ethernet virtual circuits (EVCs) that connect the customer UNI ports to the CenturyLink POP. CenturyLink orders the highest grade Metro Ethernet from the local access service provider, providing seamless end-to-end service, and fully maintains the circuit end-to-end. **Service Features** Provides Layer 2 switched native Ethernet connection Allows for quick bandwidth scalability Provides speeds from 1 Mbps scaling up to 1000 Mbps (1Gbps) Interface types include Fast-Ethernet (up to 100Mbps) on copper handoff, Gigabit Ethernet (up to 1000Mbps) on copper or fiber (single-mode or multi-mode). **ELA over SONET Description** CenturyLink orders a Layer 1 Ethernet over SONET point-to-point loop from an ILEC/CLEC on behalf of the customer or uses its own on-net facilities. ELA over SONET provides an Ethernet connection between the customer location and the CenturyLink POP using a dedicated, SONET based network infrastructure to the CenturyLink network. CenturyLink establishes a dedicated SONET ring system (that is carded for Ethernet) from the CenturyLink POP to the ILEC/CLEC Central Office (CO). CenturyLink orders the access providers Ethernet over SONET product to the customer premise. CenturyLink orders all elements for the service and fully maintains the circuit end-to-end **Service Features** Delivers service via a Layer 1 point-to-point dedicated Ethernet access solution utilizing SONET technology Provides speeds from 50 Mbps scaling up to 1000 Mbps (1Gbps) Interface types include Fast-Ethernet (up to 100Mbps) on copper handoff, Gigabit Ethernet (up to 1000Mbps) on copper or fiber (single-mode or multi-mode). **Service Benefits** Dedicated, SONET-based Ethernet connection from the customer premises to the CenturyLink national network Great solution for customers with voice applications that transport real-

Comply (Yes/No)	Explanation/Description (3. Ethernet Access Types and Availability)
	time sensitive traffic (or requiring QoS) because this loop type provides bandwidth that is solely dedicated to an individual customer and maintains the integrity of the intended traffic.

4. Supplier-Owned Access Infrastructure

Identify any specific VITA locations included in Appendix A, which either are already, or can be, physically connected to a Supplier-owned access facility within the next 12 months (fiber, SONET or SDH-based, etc.).

Comply (Yes/No)	Explanation/Description (4. Supplier-Owned Access Infrastructure)
Yes	CenturyLink has researched all the locations in Appendix A and at the present time there are no locations that are physically connected to the CenturyLink on-net local broad band network. CenturyLink has a formal process known as the adaptive fiber build process which provides for the construction and installation of fiber into a customer premises to establish on-net metro local access. We are willing to work with the Commonwealth to identify any locations to initiate an adaptive fiber build analysis.

5. Demarc Extensions

The Supplier will provide demarc extensions from the local access minimum point of penetration to the access router/device. Existing VITA locations use extension wiring that may have been placed by the local access provider or may have been contracted to another communication wiring vendor. We expect the Supplier to extend the demarcs which are not regulated by tariff and will become the agency's responsibility after the warranty expires. Explain how demarc extensions are priced.

Comply (Yes/No)	Explanation/Description (5. Demarc Extensions)
Yes	CenturyLink can provide the extension of local access loops if the customer demarcation point is not in the same location as the LECs demarcation point. Extended wiring will need to be requested at the time of ordering to avoid installation delays. The pricing of local loop demarcation extensions is based on the type, speed and physical circuit distance limitations. Details regarding pricing can be found in Appendix A. Depending on the scope of work for TDM circuits, special construction charges may apply and will be discovered during the provisioning process. Ethernet circuit demark extensions are priced on an individual case basis. Local access providers will deliver Ethernet services to the building Minimum Point of Entry (MPOE) which is typically a common area shared by multiple users. If the customer demarc is not the same as the MPOE, there will be additional LEC charges to install Ethernet equipment at the customer demarc point. CenturyLink can provide pricing for inside wiring to extend Ethernet circuits beyond the MPOE. Pricing is on an individual case basis and is based on a Scope of Work. Charges associated with extending circuit demarcs will be passed through to the customer.

B. Alternative WAN Transport

Connectivity for many of VITA's WAN locations is currently provided by legacy packet data network elements (Frame Relay and ATM ports and PVCs, including PVCs connecting to the Internet for ISP access). In this RFP, many of these locations are presented as end-points in a potential MPLS solution, while other locations are presented as requiring Internet access, particularly in the case of a managed IP-VPN solution for the Virginia State Police.

Supplier is asked to provide a proposal for the MPLS network locations presented in Appendix A of this RFP. However, VITA is also interested in understanding other leading-edge WAN services that Supplier can provide. Therefore, in addition to the MPLS service requirements described in the next section, Supplier is encouraged to propose alternative solutions that provide value and are cost-effective for agencies, localities, and schools in the Commonwealth of Virginia. Examples of these solutions include (but are not limited to) CPE- or network-based IP VPNs, wide area virtual private LAN-type services, and private wide-area Ethernet services aggregating smaller agency locations into larger hubs.

If Supplier chooses this additional option in submitting a proposal in response to this RFP, provide technical details and descriptions of Supplier's proposed alternative WAN solution, including:

- Proposed design/traffic flow diagram
- Solution components/elements
- Available bandwidths
- Limitations and constraints
- Pricing model (for example, by site, port, circuit, etc.)

Comply (Yes/No)	***Explanation/Description (B. Alternative WAN Transport)***
Yes	CenturyLink is not proposing any alternative WAN transport options.

1. Rigorous Service Levels Required For All Services Proposed

Although VITA will consider a range of WAN services, it requires a consistent level of provisioning and network performance guarantees. Appendix B contains service level requirements for services that are considered to be the minimum expectation, especially MPLS. Supplier may or may not find that the WAN services it propose fall exactly within the service level metrics specified in Appendix B. If they do not, Supplier should submit a similar set of provisioning and network performance guarantees that meet an analogous level of performance as that set out for MPLS. VITA's flexibility is in the range of WAN solutions that it will consider, not in the service levels that it expects Supplier to maintain.

Comply (Yes/No)	***Explanation/Description (1. Rigorous Service Levels Required For All Services Proposed)***
Yes	CenturyLink™ Enhanced Ethernet Service offers superior network performance and quality. This SLA serves as our commitment to our customers for 99.9% network availability guarantee. CenturyLink™ Ethernet Service provides standards of reliability for the related CenturyLink-owned equipment ("Equipment") and the methodology to measure the percentage of time access to CenturyLink™ Ethernet Services or Equipment is available for Customer's use. If the standards set forth below are not met this SLA authorizes a Service Credit to be applied to Customer's regulated account.

2. Statewide Availability

If such a service is proposed, confirm that the Supplier's alternative WAN transport solution is available statewide. If there are any locations in the Appendix A "Alternative WAN Transport" worksheet to which Supplier has not proposed to provide its alternative WAN transport solution, list such locations/exceptions.

Comply (Yes/No)	*Explanation/Description (2. Statewide Availability)*
Yes	Available statewide.

C. MPLS Network Services

1. Core MPLS Network Description

a. Standards-Compliant MPLS

Confirm that the Supplier's MPLS service described in its response is RFC 4364bis-compliant MPLS.

Comply (Yes/No)	*Explanation/Description (a. Standards-Compliant MPLS)*
Yes	The CenturyLink MPLS VPN service is implemented using RFC 4364 (formerly RFC 2547*bis*). RFC 4364 defines a method to provide separate routing tables per VPN and to propagate these private routes using MP-BGP4 (RFC 2858). MPLS itself is described in RFCs 3031 and 3032. Under RFC 4364, customer premises routers that connect to the carrier MPLS VPN service are called CE (Customer Edge) routers. The routers to which they connect on the carrier side are called Provider Edge (PE) routers and the carrier's backbone routers are called Provider (P) routers. Resource Reservation Protocol (RSVP – RFC 2205) is used for end-to-end signaling among PEs to establish MPLS LSPs. RSVP Traffic Engineering extensions (RSVP-TE: RFC 3209) are used to provide Fast Reroute (FRR, RFC 4090) protection as described in the following section. See below. **Fast ReRoute** MPLS uses tunnels to provide a variety of traffic engineering-related services in an IP network. RSVP-TE describes methods for rerouting traffic when a tunnel fails. CenturyLink uses the Detour style of FRR. FRR pre-builds backup detours around every intermediate router and link in a tunnel from the origin to the destination. This means that as soon as any router in the path discovers a failure of the downstream router or link, it already has a backup path bypassing that failed router or link and can switch traffic on the order of 100 milliseconds (continental U.S.). While the traffic is on this non-optimal but operational backup path around the failed router or link, a message is sent back up to the origin router. Once the origin router receives this message, it creates a new, optimized tunnel through the network. The failover performance of this technology is equal to, and in some cases better than, the SONET-based and APS-based approaches. In cases where there is a fiber cut or a device failure somewhere in the middle of the circuit, SONET wraps to a backup path within 50 milliseconds and the routers at each end never know. With MPLS, a failure in the middle triggers the fast reroute sequence, with the upstream router switching to a backup tunnel in about the same amount of time as APS. In the case of a

Comply (Yes/No)	*Explanation/Description (a. Standards-Compliant MPLS)*
	router, fiber, or ADM line card failure within a POP, however, IP over APS can fall short. The APS switchover occurs very quickly—within about 50 milliseconds. However, since the APS switches to a completely new interface and/or router, full IP restoration takes approximately 30 seconds because the IGP routing protocol needs to recognize the new adjacency and push traffic onto the new circuit. With MPLS, a router failure triggers the fast reroute sequence instead of the routing convergence process, allowing overall restoration for any line, link, or card failure on the order of 100 milliseconds.

b. MPLS Network Architecture

Describe the Supplier's MPLS network physical and logical architecture including the following information:

- The core (P-router) and edge (PE-router) network equipment manufacturer and model (*e.g.,* Cisco GSR, ESR or Route Processor Modules (RPMs) within a multiservice switch).
- Whether its architecture allows MPLS traffic to be transported over the same P-router (core router) that also supports Public Internet traffic. State whether your architecture allows MPLS traffic to be transported over the same edge router that also supports Public Internet traffic.
- Whether inter-AS MPLS/VPN is supported (for unicast and/or multicast), and if so what arrangements Supplier has with other providers?

Comply (Yes/No)	*Explanation/Description (b. MPLS Network Architecture)*
Yes	CenturyLink is a facilities-based network services provider. The network is on CenturyLink built and owned fiber network. All POP locations are housed in environmentally secure, physically secure, security card-access mandated facilities. We own and operate our own network and do not purchase transit in lieu of peering. **CenturyLink MPLS VPN Infrastructure** The MPLS VPN product rides on the CenturyLink IP backbone. The backbone is composed of Juniper routers deployed in TeraPOPs across the U.S. and parts of Europe and Asia. Each TeraPOP has at least two connections, typically at OC-192 speed, connected to TeraPOPs in at least two different cities for redundancy. IP backbone connections use Packet over SONET interfaces. Provider Edge (PE) routers are deployed singly in smaller sites or in redundant clusters. OC-48 or OC-12 uplinks are used, with each PE having two uplinks. **Backbone routers** Juniper MX960 Juniper M320 Juniper T640 **PE routers (Private Edge)** Juniper M40 Cisco 7613 The CenturyLink IP/MPLS backbone uses a fully redundant architecture with primary and backup transport circuits. Every core

Comply (Yes/No)	Explanation/Description (b. MPLS Network Architecture)
	router connects with redundant, diverse circuits. All circuits are protected by MPLS fast reroute for restoration. VPN and NGS traffic paths are also fully protected with MPLS FRR from edge to edge. All backbone traffic is transported through MPLS LSPs with primary and back up paths. In the case a transit node fails, LSPs will divert traffic as determined by IGP protocols. Since every link is used as primary and back up, each is upgraded before 50% capacity is reached. Transport redundancy is introduced by splitting the backbone circuits into different transport physical systems (rails). Every IP POP has redundant two or more core routers. Every core and edge router has full processor and power redundancy. All edge routers have dual uplinks to core routers. Every peer has at least two geographically diverse circuits for redundancy On the virtual and system level, all CenturyLink data, network management systems, facilities, and configurations are protected via multi-layered access authentication systems, and internal/external system and software “firewalls” designed to prohibit unauthorized access. **Private IP Backbone** CenturyLink uses a secure, private IP core to transport data for all IP products. Routers comprising the Private Core are not reachable from the Internet, greatly reducing risk and vulnerability to Internet-based attacks. Private Core routers run integrated IS-IS as the Interior Gateway Protocol (IGP) to provide for internal network IP reachability. BGP is not run by Private Core routers. Private Core routers have routes only to other CenturyLink routers. Core routers forward customer IP traffic purely by means of MPLS tunnels, as defined in RFCs 3031, 3209, and associated RFCs. MPLS enables the CenturyLink Core to: Support logically separate overlay networks termed “Security Domains” Ensure deterministic packet transport Minimize jitter Guarantee in-order packet delivery Provide rapid recovery from network failures. The Core routers support MPLS via the RSVP-TE protocol (RFC 3209). RSVP-TE is used to establish MPLS tunnels with the Fast Reroute resiliency enhancement (RFC 4090). Fast Reroute provides hop-by-hop detours around network failures in sub-100 ms (within the continental US). The separate domains use the same IP core, with disjoint MPLS meshes providing isolation. Currently, there are three separate security domains: Public Internet network, Private IP MPLS VPN network, and a dedicated VoIP network. The VoIP network converts and transports a large amount of conventional long-distance voice traffic nationwide, with more than four billion minutes carried in an average month. Security Domains use separate MPLS meshes for data transport and incorporate dedicated sets of edge devices and

Comply (Yes/No)	Explanation/Description (b. MPLS Network Architecture)
	BGP Route Reflectors per Security Domain. These design features isolate the Security Domains and minimize their ability to negatively impact each other. CenturyLink uses Inter-AS partnerships with our international network partners to expand our global network reach.

c. IP Addressing

Are there any IP addressing restrictions for the PE-CE numbering (unnumbered, SP Address space, Customer Address space, RFC1918)?

Are there any IP address blocks used by the provider that may conflict with our addressing, which is a combination of VITA's public registered IP addresses 166.67.0.0/16 & 165.176.0.0/16 and all private RFC 1918 addresses, that we should be aware of (for management purposes for instance)?

Comply (Yes/No)	Explanation/Description (c. IP Addressing)
Yes	There are no conflicts or restrictions on VITA's public registered, provider independent IP addresses. The only limitation being that the block of IP addresses must be a /24 or greater (shorter prefix) CIDR block in order for CenturyLink to announce those to peers. CenturyLink will assign a unique CIDR/30 IP subnet to each customer access line.

d. IPv6 Compliance

Indicate if the Supplier's MPLS service (i.e., at the PE router for the applicable VITA locations) is compliant and can support the IPv6 addressing standard. If the Supplier is not currently IPv6 compliant, explain when it will be compliant.

Comply (Yes/No)	Explanation/Description (d. IPv6 Compliance)
Yes	CenturyLink has over 250 installed IPv6 customer circuits encompassing nearly 150 unique customers. All of our IP POPs are IPv6-enabled and all circuit speeds are supported on both Internet and Private Port. CenturyLink offers native dual-stack IPv6 Internet connections to new and existing customers. CenturyLink has obtained a Sub-TLA /32 assignment from ARIN for v6 services and customer assignment.

e. MPLS Nodes

Complete the following table (Present Commonwealth of Virginia (CoVA) MPLS POP Information) identifying where the Supplier provides the locations of its MPLS POPs. Supplier should not include 3rd party provider MPLS POPs. In the table, provide the following information concerning Supplier's MPLS Points of Presence (POPs). For the purposes of specifying the location of POPs, VITA defines a single MPLS POP as a separate facility or building which has a unique street address:

- Indicate which MPLS POPs, if any, have non-redundant PE-routers installed and where they are located by city, state (if applicable), country;
- Types or categories of MPLS POPs including the maximum port bandwidth capacities for each MPLS POP type, quantities of ports available and the core fiber bandwidth (e.g., OC-xxx) with which the POP is interconnected;
- Any difference in services offered at different POPs;

- A list (do not provide maps) indicating where each MPLS POP is located by city. If there are two MPLS POPs in the same city, make a note as such.

Present Commonwealth of Virginia (CoVA) MPLS POP Information				
(Supplier to complete table below adding rows as required)				
MPLS POP City, State	Type of POP (*e.g.,* Tier 1)	Any non-redundant PE-Routers installed? (Y/N)	Maximum POP Bandwidth Available at POP	Is POP dual-homed to other POPs?
Richmond, VA	Backbone Access POP	No	10Gb/Nx10Gb	Yes
Chesapeake, VA	Backbone Access POP	No	10Gb/Nx10Gb	Yes
Fredericksburg, VA	Backbone Access POP	No	10Gb/Nx10Gb	Yes
Washington, DC	Tera-POP Core Router Site	No	10Gb/Nx10Gb	Yes

f. Third Party Infrastructure

Identify those segments or POPs in Supplier's edge and core network infrastructure within the CoVA footprint where a third party telecom provider (*e.g.,* wholesale telecom provider, Autonomous System (AS) Border interconnects, resold services or NNI arrangements) is used instead of the Supplier's own infrastructure.

Comply (Yes/No)	***Explanation/Description (f. Third Party Infrastructure)***
Yes	CenturyLink is a facilities-based network services provider. The network is on CenturyLink built and owned fiber network. All POP locations are housed in environmentally secure, physically secure, security card-access mandated facilities. We own and operate our own network and do not purchase transit in lieu of peering.

g. MPLS Port Diversity

Describe in detail how Supplier plans to minimize aggregation of VITA locations into a single Frame Relay or MPLS access node. VITA requires the Supplier to minimize the risk of multiple site outages due to a single chassis or PE router failure. Indicate in your response to Appendix A any additional pricing for these diversity requirements.

Comply (Yes/No)	***Explanation/Description (g. MPLS Port Diversity)***
Yes	The CenturyLink OC-192 network backbone is engineered with multiple bandwidth paths that are multi-threaded to ensure comprehensive network backbone diversity, availability, and integrity at all times. CenturyLink fiber routes have diverse, redundant fiber paths available for restoral in the event of an outage. All CenturyLink POPs have multiple diverse paths ensuring diverse/protected routes for the delivery of customer transmissions and traffic. In addition, CenturyLink provides additional Standard Diversity Offerings (subject to available facilities and technical feasibility) to ensure that connection into the IQ network meets customer diversity needs: **Terminating POP Diversity**: The diversely routed circuit(s) originates and/or terminates in a physically separate CenturyLink POP from the originating and/or terminating CenturyLink POP that provides the customer's primary on-net circuit. Service is provided to the CenturyLink-designated demarcation point. **Route Diversity**: The diversely routed circuit(s) is provisioned over a

Comply (Yes/No)	*Explanation/Description (g. MPLS Port Diversity)*
	geographically and physically separate transmission path from the primary circuit's transmission path on the CenturyLink domestic network and shares no common network elements or buildings between the originating and terminating CenturyLink POPs. Circuits may or may not originate and/or terminate in a common CenturyLink POP, subject to available facilities. **Ring Diversity:** The diversely routed circuit(s) is provisioned over a separate transmission path from the primary circuit's transmission path on the CenturyLink domestic network. The customer's data transmissions will be transmitted over distinct Synchronous Optical Network (SONET) rings, employing separate transport transmission systems, either throughout the entire route between the two CenturyLink POPs, or over a partial route between two CenturyLink POPs. CenturyLink Local Access Diversity is a defined relationship maintained between the primary circuit and the diversely routed circuit(s). Custom-engineered by CenturyLink based upon available facilities, the paths are identified and maintained in CenturyLink database systems as diversely related circuits. Diversity is offered for DS-1, DS-3, OC-3, OC-3c, OC-12, OC-12c, OC-48 and OC-48c transmission rates. Local Access Diversity is not offered for DS-0 and fractional DS-1 transmission rates.

h. Route Diversity

Indicate which segments in the Supplier's edge and core networks do not have alternative paths to route around failed fiber segments or MPLS POP facilities due to significant events such as Hurricane Isabel in September 2003 and the Fairfax County central office outages due to the "Derecho" storm of June 29, 2012. Provide your definition of route diversity and how Supplier maintains diversity over time.

Comply (Yes/No)	*Explanation/Description (h. Route Diversity)*
Yes	The CenturyLink OC-192 network backbone is engineered with multiple bandwidth paths that are multi-threaded to ensure comprehensive network backbone diversity, availability, and integrity at all times. CenturyLink fiber routes have diverse, redundant fiber paths available for restoral in the event of an outage. All CenturyLink POPs have multiple diverse paths ensuring diverse/protected routes for the delivery of customer transmissions and traffic. Route Diversity is defined as a diversely routed circuit or circuits that is provisioned over a geographically and physically separate transmission path from the primary circuit's transmission path on the CenturyLink domestic network and shares no common network elements or buildings between the originating and terminating CenturyLink POPs. Circuits may or may not originate and/or terminate in a common CenturyLink POP, subject to available facilities. Once the diversity solution is defined, CenturyLink maintains the diversity by identifying the circuit or port as Diverse in our inventory database. This identifies the relationship in our provisioning and inventory systems which allow the diverse circuit to be identified in the event of a circuit groom or network optimization project.

i. MPLS Network Diversity and Fast Reroute

Describe the Supplier's ability to provide and maintain diversity of VITA's MPLS traffic across access switches and core routers in the network. Also describe the Supplier's capability to detect failed PE-router or core (P-router) facilities and to route around these failed devices within 50-msec. This is particularly important for support of VoIP.

Has the Supplier implemented the "Fast Reroute" protocol to provide sub-50 msec re-route to an alternate Label Switched Path? If the Supplier has not implemented the Fast Reroute protocol, describe the mechanism it employs to ensure a sub-50 msec re-route.

Comply (Yes/No)	***Explanation/Description (i. MPLS Network Diversity and Fast Reroute)***
Yes	The CenturyLink IP/MPLS backbone uses a fully redundant architecture with primary and backup transport circuits. Every core router connects with redundant, diverse circuits. All circuits are protected by MPLS fast reroute for restoration. VPN and NGS traffic paths are also fully protected with MPLS FRR from edge to edge. All backbone traffic is transported through MPLS LSPs with primary and back up paths. In the case a transit node fails, LSPs will divert traffic as determined by IGP protocols. The Core routers support MPLS via the RSVP-TE protocol (RFC 3209). RSVP-TE is used to establish MPLS tunnels with the Fast Reroute resiliency enhancement (RFC 4090). Fast Reroute provides hop-by-hop detours around network failures in sub-100 ms (within the continental US).

2. MPLS VPN Topology

a. Logical Separation of VRFs

Explain how the Supplier's MPLS solution would enable certain locations within VITA's MPLS network to be segregated into separate, logical MPLS VPNs. Sites within the same VPN require any-to-any connectivity. Confirm that a packet from a location in one VPN is unable to terminate to any of the other logically separate VPNs.

Describe Supplier's ability to support this capability including any CE-router configuration requirements.

Comply (Yes/No)	***Explanation/Description (a. Logical Separation of VRFs)***
Yes	CenturyLink uses the RFC 4364 (formerly RFC 2547bis) standard to deliver an IP VPN service over MPLS. An RFC 4364 MPLS VPN network service uses specialized edge routers connected to a service provider MPLS core network. The specialized edge routers are commonly referred to as provider edge (PE) routers. The PE routers contain VPN routing and forwarding (VRF) tables containing routing information for each customer served by the PE router ports. The VRFs provide a secure, segregated, private routing domain for each customer. VRFs isolate the IP addresses and IP forwarding rules used by each customer. The entire private routing domain joining PE router VRF tables for a customer is referred to a customer VPN. CenturyLink can support multiple VPNs within our Private Port MPLS service. CenturyLink calls VPNs 'Closed User Groups' (CUGs) and can build VPNs/CUGs to support locations, users, applications, and other services that require more than a single VPN connection between two locations on the CenturyLink network. As a standard offering, CenturyLink provides up to 10 VRF/CUGs. Additional CUGs beyond 10 require a custom configuration review and are supported up to the maximum

Comply (Yes/No)	Explanation/Description (a. Logical Separation of VRFs)
	allowed by the manufacturer's equipment.

b. Class of Service Treatment with Multiple VPNs

Describe how Class of Service is implemented at sites with multiple VPNs. For example, CoS based upon the VPN bandwidth or the port bandwidth; different CoS applies for each VPN or virtual COS across VPNs; etc.

Comply (Yes/No)	Explanation/Description (b. Class of Service Treatment with Multiple VPNs)
Yes	CenturyLink can support multiple VPNs within our Private Port MPLS service. CenturyLink calls VPNs 'Closed User Groups' (CUGs) and can build VPNs/CUGs to support locations, users, applications, and other services that require more than a single VPN connection between two locations on the CenturyLink network. Our standard offering supports up to 10 VPNs/CUGs for any one customer network on our MPLS service. Additional CUGs beyond 10 require a custom configuration review and are supported up to the maximum allowed by the manufacturer's equipment. Quality of Service is implemented on a per VPN basis. Each VPN requires a distinct attachment circuit, VLAN or PVC, and rate limiting and class of service is assigned on a per VLAN basis. The sum of the bandwidth cannot exceed the subscriber port speed.

c. Backup Default Routes

Is Supplier able to support a backup default gateway should the primary default head-end/gateway path become unavailable? Describe how this is accomplished given the Supplier's proposed MPLS platform (*e.g.,* assign a BGP Weight using the BGP extended community to deterministically route to VITA's primary versus secondary default gateways).

State whether there are any site exceptions to the Supplier's compliance based on the specific VITA location and port bandwidths shown in Appendix A.

Comply (Yes/No)	Explanation/Description (c. Backup Default Routes)
Yes	CenturyLink supports a design solution that uses BGP routing in a resilient central site design to provide disaster recovery in the event of the primary path is unavailable. The CenturyLink Private Edge router will forward traffic towards the customer site over the link configured with a preferred BGP community attribute applied to the customer's allocated IP prefixes and failover to the secondary link if the primary line goes down. Any loss of the active BGP adjacency over the primary link will direct traffic over the remaining link.

d. Intranet and Extranet VPN

How would Supplier architect an intranet VPN (only VITA sites) versus extranet VPN (for Business partners)? What are the options for interconnecting the 2 types of VPN?

Comply (Yes/No)	Explanation/Description (d. Intranet and Extranet VPN)
Yes	CenturyLink provides VPN Extensions that provide the capability for a remote site with Internet access to reach the MPLS network by utilizing an IP SEC tunnel. In these cases, customers may supply their own Internet access using any type of Internet service so long as they can obtain a

Comply (Yes/No)	Explanation/Description (d. Intranet and Extranet VPN)
	static IP address that is a dial-up, DSL, Cable, TDM, or other type of physical connection. There are two primary requirements for this service: The customer has a CE device that can support IP SEC tunnels The customer has obtained a static IP address from their Internet provider.

3. MPLS Protocols

Describe which CE-to-PE routing protocols are supported by the Supplier's MPLS service. The minimum support level is BGPv4 routing protocol between the CE and PE and provide full routing tables to each location.

Comply (Yes/No)	Explanation/Description (3. MPLS Protocols)
Yes	CenturyLink supports static routing or external BGP (eBGP) customer edge–provider edge (CE-PE) routing capabilities. Implementation is based on the multi-protocol label switching (MPLS) Layer 3 virtual private network (VPN) service on the RFC2547 BGP/MPLS VPNs standard. This standard specifies use of multi-protocol border gateway protocol (MP-BGP) for carrying VPN-v4 routing information between PE routers. The CE-PE routing protocol is independently defined and can include your interior gateway protocol (IGP) directly extended to the PE router. The CenturyLink MPLS VPN service is implemented using RFC 4364 (formerly RFC 2547bis). RFC 4364 defines a method to provide separate routing tables per VPN and to propagate these private routes using MP-BGP4 (RFC 2858). MPLS itself is described in RFCs 3031 and 3032. Under RFC 4364, customer premises routers that connect to the carrier MPLS VPN service are called CE (Customer Edge) routers. The routers to which they connect on the carrier side are called Provider Edge (PE) routers and the carrier's backbone routers are called Provider (P) routers. Resource Reservation Protocol (RSVP – RFC 2205) is used for end-to-end signaling among PEs to establish MPLS LSPs. RSVP Traffic Engineering extensions (RSVP-TE: RFC 3209) are used to provide Fast Reroute (FRR, RFC 4090) protection.

4. MPLS Multicasting

Does the Supplier support multicast routing within its MPLS network? What mode is used (*e.g.,* Protocol Independent Multicast (PIM) Sparse Mode, Source-Specific Mode, Dense Mode, etc.).

Comply (Yes/No)	Explanation/Description (4. MPLS Multicasting)
Yes	MPLS VPNs (RFC4364) do not natively support multicast. This is not unique CenturyLink's implementation of RFC4364 rather it is a shortcoming of the technology that was designed to offer efficient and reliable private transport of IP unicast for multiple customers. To overcome this deficiency, CenturyLink has implemented an IETF draft, known as Draft-Rosen (http://tools.ietf.org/html/draft-rosen-vpn-mcast-08), to their MPLS VPN platform which offers support for IP multicast traffic. This architecture is referred to as Multicast VPN (MVPN) and the technology permits CenturyLink to transparently tunnel and replicate

Comply (Yes/No)	Explanation/Description (4. MPLS Multicasting)
	customer's multicast traffic across our backbone on a per-VPN basis. MVPN reuses many of the elements of an MPLS VPN between the CE and PE, however, it differs with the protocols used for tunneling and, secondly, the backbone P routers are involved with per-VPN state. Draft-Rosen describes a set of specifications for MVPN that provide the Provider Edge (PE) router an alternative routing and data plane for IP multicast traffic, opposed to that used by IP unicast traffic of the BGP/MPLS VPN. Protocol Independent Multicast (PIM) protocol is used for multicast routing and multipoint-GRE tunnels transport the multicast traffic. This PIM/GRE multicast-enabled VPN privately transports a customer's IP multicast traffic, while their IP unicast traffic continues to use BGP routing and MPLS label switched paths (LSPs) across the CenturyLink MPLS VPN backbone. CenturyLink MVPN implements the following industry standard building blocks for MVPN: Multicast VRF (MVRF): the unicast VRF enabled with multicast routing Multicast Domain (MD): constitutes the multicast-enabled VPN; it is the collection of MVRFs that can send and receive multicast traffic, among all participating PE routers Multicast Tunnel Interfaces (MTI): multi-access LAN-like interfaces that provides PE-to-PE PIM adjacency. This is the tunnel interface for a VPN customer’s multicast packets. Multicast Distribution Tree (MDT): native multicast distribution tree in CenturyLink’s backbone to tunnel customer's multicast packets. There are two instances of multicast routing protocol, PIM, and PIM adjacencies are deployed: PIM C-instance: PIM adjacency between a customer's Customer Edge (CE) router and their VRF on the PE router. PIM P-Instance: PIM adjacency between PE router and backbone P router. Customers are not aware of and do not interact directly with the P-instance. The CenturyLink Provider Edge (PE) routers are the interface between these two instances of PIM. From the customer's perspective, the MVPN appears to be a multi-access network, a network-based hub interconnecting all their VRFs on a single LAN segment. Their multicast traffic flows between CE routers and are not aware of the multipoint GRE in the CenturyLink backbone. The CenturyLink backbone provides multicast forwarding and replication across the backbone, in addition to privacy and traffic separation from any other multicast VPN customer. CenturyLink requires that customer’s implement PIM - Source Specific Multicast (PIM-SSM). CenturyLink PE routers are configured for PIM SSM. The actual routing protocol is PIM SM with additional configurations for SSM operational mode. PIM SSM requires that customer interfaces are configured with group membership protocol IGMPv3.

5 MPLS Access Technology

Discuss the access technologies that MPLS services are currently generally available on (non-ICB). Describe the service offering in terms of availability and service features as well as technologies employed, *i.e.,* MLPPP, NxT1, etc.

Comply (Yes/No)	*Explanation/Description (5. MPLS Access Technology)*
Yes	CenturyLink IQ Networking universal accessibility provides the flexibility to integrate Private Line, Frame Relay, ATM, Ethernet and other access options. The service bridges the technology gaps, while maximizing current network investments, by offering the following access options: Dedicated IP – special access, local loop connection from customer premises to CenturyLink IP POP, terminating on Cisco®/Juniper® CenturyLink IQ Networking infrastructure Ethernet Local Access – an Ethernet local loop connection from customer premises to the CenturyLink public or private IP POP, terminating on Ethernet interconnection switch and then interconnected to Cisco/Juniper CenturyLink IQ Networking infrastructure (customer premises must reside on a fiber network operated by CenturyLink or one if its partners) Collocation access – interconnection between collocated CPE and CenturyLink IQ Networking infrastructure at CenturyLink facility via a cross-connect. MPLS Access Options

IP Access	Ethernet
DS-1	Ethernet - Up to 10 Mbps
NxDS-1	Fast Ethernet – Up to 100Mb
DS-3	Gigabit Ethernet – Up to 1000Mb
Oc-n	10Gigabit Ethernet – Up to 10,000Mbps

6. Logical Access (Layer 2)

Describe any Frame Relay, ATM, or other Layer 2 access used between Supplier's Access POPs serving the state of Virginia and the MPLS PE-router. Ensure that any Layer 2 access solution described below supports at least four (4) Classes of Service.

Logical Access (Layer 2)						
Frame Relay Encapsulation (Y/N?)	**PPP (Y/N)?**	**MLPPP (Y/N)?**	**Ethernet (Y/N)?**	**DSL Access direct (Y/N)?**	**Wireless Access (Cell, WiMax) (Y/N)?**	**FRF 16 (Y/N)?**
Yes	**Yes**	**Yes**	**Yes**	**No**	**No**	**Yes**

If the Supplier uses a PVC or PVC-like Layer 2 Frame Relay or ATM protocol to provide the Layer 2 protocol for the MPLS connection, describe whether packets will be eligible or tagged as discard eligible. In addition, if they can or will be tagged as discard eligible, is there any bursting control used for these PVCs or PVC-like connections?

Comply (Yes/No)	*Explanation/Description (6. Logical Access (Layer 2))*
Yes	A point-to-point synchronous line provisioning method for Frame Relay or ATM encapsulation is available when using the IQ Networking Dedicated IP connection type. The CenturyLink Lucent based. Frame Relay or ATM network Lucent switches will not be used for transport, which is referred to as Dedicated FR or Dedicated ATM connection type, respectively. The customer access line will be a point-to-

Comply (Yes/No)	Explanation/Description (6. Logical Access (Layer 2))
	point synchronous line with Frame Relay or ATM encapsulation applied instead of HDLC/PPP. No ATM switch is present and no CIR/SCR policy is applied. The Dedicated IP connection type with Frame Relay or ATM encapsulation is suitable for converged access to multiple customer MPLS VPNs only, for example what is often referred to as a multi-VRF implementation. With regards to IP QoS, CenturyLink's default configuration is to apply layer 3 policies on a per PVC basis where the bandwidth of each PVC is rate limited and an IP QoS template performs class-based queuing and scheduling relative to the assigned bandwidth. The sum of the bandwidth from each PVC cannot exceed the subscriber port size. CenturyLink has a product policy which limits the maximum number of PVCs per subscriber port to 10.

7. MPLS Product Structure

a. Port and Class of Service Bandwidths

Provide the following information:

- A comprehensive list of available port speeds and individual Class of Service speeds
- Does the Supplier offer a "burstable" MPLS port, *i.e.,* could VITA specify a maximum port speed, but have different charges depending on the actual usage that would vary from month to month?
- Are ports priced separately from Classes of Service?
- Are separate Classes of Service priced separately?
- Does the Supplier offer a range of different port types that each provides a different class of service mix?
- Itemize and detail your capabilities and the availability of all Port and COS speeds for the MPLS proposed solution as priced in Appendix A.

Comply (Yes/No)	Explanation/Description (a. Port and Class of Service Bandwidths)
Yes	**Available Port Speeds** CenturyLink offers MPLS Private Port service in the following port speed and bandwidth options: DS-1: 56 Kbps, 64 Kbps, 128 Kbps, 192 Kbps, 256 Kbps, 256 Kbps, 384 Kbps, 512 Kbps, 768 Kbps, 1024 Kbps, 1.544 Mbps DS-3: 3 Mbps, 6 Mbps, 9 Mbps, 12 Mbps, 15 Mbps, 18 Mbps, 21 Mbps, 24 Mbps, 27 Mbps, 30 Mbps, 33 Mbps, 36 Mbps, 39 Mbps, 42 Mbps, 45 Mbps OC-3: 35 Mbps, 45 Mbps, 55 Mbps, 65 Mbps, 75 Mbps, 85 Mbps, 95 Mbps, 105 Mbps, 115 Mbps, 125 Mbps, 135 Mbps, 145 Mbps, 155

Comply (Yes/No)	*Explanation/Description (a. Port and Class of Service Bandwidths)*
	Mbps OC-12: 90 Mbps, 135 Mbps, 180 Mbps, 225 Mbps, 270 Mbps, 315 Mbps, 360 Mbps, 405 Mbps, 495 Mbps, 540 Mbps, 585 Mbps, 622 Mbps OC-48: 270 Mbps, 500 Mbps, 730 Mbps, 960 Mbps, 1190 Mbps, 1420 Mbps, 1650 Mbps, 1880 Mbps, 2110 Mbps, 2340 Mbps, 2488 Mbps Ethernet: 2 Mbps, 4 Mbps, 6 Mbps, 8 Mbps, 10 Mbps Fast Ethernet: 10Mbps, 15 Mbps, 20 Mbps, 30 Mbps, 40 Mbps, 50 Mbps, 60 Mbps, 70 Mbps, 80 Mbps, 90 Mbps, 100Mbps Gigabit Ethernet: 100 Mbps, 200 Mbps, 300 Mbps, 400 Mbps, 500Mbps, 600 Mbps, 700 Mbps, 800 Mbps, 900 Mbps, 1000Mbps 10 Gigabit Ethernet: 1000 Mbps, 2000 Mbps, 3000 Mbps, 4000 Mbps, 5000 Mbps, 6000 Mbps, 7000 Mbps, 8000 Mbps, 9000 Mbps, 10000 Mbps **Burstable Service** The Precise Burstable billing method is a usage based model depicting the peak usage the customer used during a given month. Usage samples are taken every five minutes throughout the monthly billing cycle. Only one sample is captured for each five-minute period, even though there are actually two samples taken; one for inbound utilization and one for outbound utilization. The higher of these two figures is retained. At the end of the billing period, the samples are ordered from highest to lowest. The result is a database of over 8,000 samples. The top 5% of the samples (representing the top 5% of usage levels) are discarded. The remaining sample is used to calculate the usage level. This is the 95th percentile of peak usage. For each Precise Burstable Port ordered, the customer is billed a Monthly Recurring Charge (MRC) calculated by multiplying the 95th percentile of peak usage in a given month by the applicable MRC per Mbps. Within each Precise Burstable Port classification (e.g., DS1, DS3, 10M, 100M), the customer will be subject to the minimum usage amount. The customer will be billed the minimum port charge or the actual charges based upon its 95th percentile of peak usage. Precise Burstable Billing is available in the following port speeds:

Comply (Yes/No)	Explanation/Description (a. Port and Class of Service Bandwidths)
	2xDS-1 (3 Mbps) 3xDS-1 (4.5 Mbps) 4xDS-1 (6 Mbps) 5xDS-1 (7.5 Mbps) 6xDS-1 (9 Mbps) 7xDS-1 (10.5 Mbps) 8xDS-1 (12 Mbps) DS-3 OC-3 OC-12 OC-48 Ethernet Fast Ethernet Gigabit Ethernet 10 Gigabit Ethernet **Quality of Service (QoS)** ■ CenturyLink MPLS Private Port service includes the ability to prioritize traffic (Quality of Service) at no additional cost. ■ CenturyLink offers four, six and eight priority queues and no additional cost CenturyLink QoS is available across all available port types and speeds

b. Changing Port and Class of Service Bandwidths

VITA expects that Supplier provide an automated method to increase, decrease or modify Port and Class of Service speeds (assuming the local access bandwidth supports the change) via the Supplier's web-based portal. Describe the Supplier's capability to re-provision Port and/or Class of Service bandwidth at a specific location (*e.g.,* within hours or a few days). Identify any differences in capabilities for port speeds of T1 and below, NxT1, and 45Mb and above.

Describe Supplier's provisioning practices for upgrading port bandwidth for port speeds of T1 and below, NxT1, and 45M and greater. Specifically, if a port speed is to be changed, state under what circumstances, if any, Supplier installs all new facilities for the new speed, followed by disconnect of the old port and access, as opposed to installing any necessary incremental new facilities and performing a software upgrade for the existing port. In addition, confirm that no cost will be incurred resulting from port and access overlap due to delayed de-installations where new facilities have been required.

Also describe how and when the billing of re-provisioned bandwidth is synchronized with the actual service change. For example, if VITA changes the Port bandwidth in the middle of the month, will the Supplier's invoice reflect a pro-rata charge for this mid-month change? If new facilities are installed for port upgrades followed by disconnect of the old port, confirm that billing for the old port and access will not overlap billing of the new port and access.

Comply (Yes/No)	Explanation/Description (b. Changing Port and Class of Service Bandwidths)
Yes	The CenturyLink Control Center is a secure, self service, web portal that provides access to critical tools to enable easy, safe and fast management of invoices, network configuration and statistics, and trouble reporting. All that is needed is a PC with Internet access, a certified browser, user name, and a password. The IQ Networking module provides comprehensive view, analysis, and management tools for all CenturyLink iQ Networking products in one place. Some of the features available include access to inventory, request and view reports, configuration status, create and monitor repair tickets, access to network maps and configuration changes.

	Available configuration changes include IP Addressing, DNS, Routing, Closed User Groups and Quality of Service (QoS) changes. Changes to QoS include Queuing methodology and priority. The user completes and submits the request in Control Center and request will be processed within 48 hours. In many instances, port speed upgrades require engineering design and capacity analysis to ensure sufficient capacity is available to support the new port speed. CenturyLink recommends the Commonwealth contact the account team to initiate the port speed upgrade. In the event of a port speed upgrade that requires a new port to be installed, CenturyLink will issue a disconnect order against the existing circuit and issue an install order for a new circuit and will synchronize the billing end date of the old circuit with the start billing date of the new circuit. This will ensure there is no billing overlap. The only instance when billing overlap could occur is when the Commonwealth wishes to run parallel service where both the existing circuit and the new circuit remain active for a period of time until the Commonwealth wishes the old circuit to be disconnected. CenturyLink will work closely with the Commonwealth to coordinate the disconnect of the old circuit to minimize billing overlap.

8. Classes of Service (CoS)

VITA expects that data traffic will be separated into four or more Classes of Service. VITA is generally seeking to segregate its traffic into non-business and store-and-forward applications such as e-mail, mission-critical business applications, internal video/audio-conferencing and Voice over IP (VoIP).

VITA is willing to consider various Class of Service schemes under MPLS, provided it is understood that the each application should be assigned into the appropriate Class of Service. For example, for MPLS services implemented with four Classes of Service, VITA may choose the lowest two classes if those classes meet the business and service level requirements.

Confirm that Supplier provides a minimum of four Classes of Service.

Comply (Yes/No)	***Explanation/Description (8. Classes of Service (CoS))***
Yes	CenturyLink supports four, six, or eight-class QoS options on the MPLS network. CenturyLink QoS provides egress edge prioritization; there is no policing of any class at ingress ports. Customers are responsible for marking IP packets and managing the MPLS VPN-bound traffic [to the Provider Edge (PE) router] at the egress port of the Customer Edge (CE) router. CenturyLink's QoS options rely on IETF-defined IP Precedence (IPP) values for four-class QoS, and differentiated services code point (DSCP) classifications for six- and eight-class QoS. A variety of templates is available for each class option. The six- and eight-class templates use queuing method C, which designates Low Latency Queuing (LLQ) scheduler. With LLQ, CenturyLink polices the P1 queue (EF) to the maximum bandwidth guarantee and tail drops excess traffic; this is consistent with a conventional strict priority queue when used with LLQ. CenturyLink does not remark the customer's originating IP Precedence or DSCP values in the Type of Service (ToS) field. The remaining queues are configured as Class-based Weighted Fair Queuing. They are permitted to

Comply (Yes/No)	*Explanation/Description (8. Classes of Service (CoS))*
	burst to port speed provided there are resources available. If all queues are saturated they will tail drop excess traffic that cannot be buffered.

a. Classes of Service Description

Detail in the table below each of the Classes of Service that can be offered to VITA, including the differences between them and what traffic types are best supported for each Class of Service. Include the Supplier's name for each Class of Service and the Differentiated Services Code Point (DSCP) that VITA is required to use in their CE-router to which it corresponds. Describe also how customer traffic is shaped or policed at the ingress PE-router as well as the egress PE-router for each different Class of Service offered by the Supplier.

IETF Designation	Supplier Name for the Class of Service	Supplier IETF Designation	DSCP (specify in decimal)
EF	See table below	See table below	See table below
AF4x	See table below	See table below	See table below
AF3x	See table below	See table below	See table below
AF2x	See table below	See table below	See table below
AF1x	See table below	See table below	See table below
BE	See table below	See table below	See table below

Comply (Yes/No)	*Explanation/Description (a. Classes of Service Description)*
Yes	CenturyLink QoS provides egress edge prioritization; there is no policing of any class at ingress ports. Customers are responsible for marking IP packets and managing the MPLS VPN-bound traffic [to the Provider Edge (PE) router] at the egress port of the Customer Edge (CE) router. CenturyLink's QoS options rely on IETF-defined IP Precedence (IPP) values for four-class QoS, and differentiated services code point (DSCP) classifications for six- and eight-class QoS. A variety of templates is available for each class option. The six- and eight-class templates use queuing method C, which designates Low Latency Queuing (LLQ) scheduler. With LLQ, CenturyLink polices the P1 queue (EF) to the maximum bandwidth guarantee and tail drops excess traffic; this is consistent with a conventional strict priority queue when used with LLQ. CenturyLink does not remark the customer's originating IP Precedence or DSCP values in the Type of Service (ToS) field. The remaining queues are configured as Class-based Weighted Fair Queuing. They are permitted to burst to port speed provided there are resources available. If all queues are saturated they will tail drop excess traffic that cannot be buffered.

4 Queue Thresholds

Queue	Minimum Allocation	Maximum Allocation	IPP values
P1	10%	80%	5
P2	10%	80%	4,6,7
P3	0%	70%	2,3
P4	10%	80%	0,1

6 Queue Thresholds

Comply (Yes/No)	Explanation/Description (a. Classes of Service Description)

Queue	Minimum Allocation	Maximum Allocation	DSCP, Code Selector, & Decimal Values
P1	5%	80%	ef cs5 41, 42, 43, 44, 45, 47
P3	5%	80%	af41, af42, af43 cs4, cs6, cs7 33, 35, 37, 39 49 50, 51, 52, 53, 54, 55, 57, 58, 59 60, 61, 62, 63
P5	5%	80%	af31, af32, af33 cs3 25, 27, 29, 31
P6	5%	80%	af21, af22, af23 cs2 17, 19, 21, 23
P7	0%	75%	af11, af12, af13 cs1 9, 11, 13, 15
P8	5%	80%	default 1, 2, 3, 4, 5, 6, 7

8 Queue Thresholds

Queue	Minimum Allocation	Maximum Allocation	DSCP, Code Selector, & Decimal Values
P1	5%	70%	ef cs5 41, 42, 43, 44, 45, 47
P2	5%	70%	AF41, AF42, AF43 CS4 32, 34, 36, 38
P3	5%	70%	CS7 56
P4	5%	70%	CS6 48
P5	5%	70%	af31, af32, af33 cs3 25, 27, 29, 31
P6	5%	70%	af21, af22, af23 cs2 17, 19, 21, 23
P7	0%	65%	af11, af12, af13 cs1 9, 11, 13, 15
P8	5%	70%	default 1, 2, 3, 4, 5, 6, 7

b. Use of Port Bandwidth

Can each Class of Service use bandwidth allocated to another Class of Service in the event that the bandwidth is unused for a period of time? How is traffic specifically re-prioritized based on whether it is conforming (at or below provisioned Class of Service bandwidth) or non-conforming (bursting above provisioned Class of Service bandwidth)? Provide Supplier's traffic bursting policies.

Comply (Yes/No)	Explanation/Description (b. Use of Port Bandwidth)

Comply (Yes/No)	*Explanation/Description (b. Use of Port Bandwidth)*
Yes	CenturyLink's QoS options rely on IETF-defined IP Precedence (IPP) values for four-class QoS, and differentiated services code point (DSCP) classifications for six- and eight-class QoS. A variety of templates is available for each class option. The six- and eight-class templates use queuing method C, which designates Low Latency Queuing (LLQ) scheduler. With LLQ, CenturyLink polices the P1 queue (EF) to the maximum bandwidth guarantee and tail drops excess traffic; this is consistent with a conventional strict priority queue when used with LLQ. CenturyLink does not remark the customer's originating IP Precedence or DSCP values in the Type of Service (ToS) field. The remaining queues are configured as Class-based Weighted Fair Queuing. They are permitted to burst to port speed provided there are resources available. If all queues are saturated they will tail drop excess traffic that cannot be buffered.

9. MPLS Network Security

Describe how Supplier maintains both physical and logical separation of enterprise customers' MPLS traffic and Public Internet traffic if the Supplier's MPLS core (P-routers) is shared by both MPLS and Public Internet traffic.

Comply (Yes/No)	*Explanation/Description (9. MPLS Network Security)*
Yes	CenturyLink IQ Networking maintains separate security domains for Internet, MPLS, and CenturyLink-provided VoIP services. MPLS services have the following features: Separate dedicated edge routers Separate Control Planes No signaling from Internet routers is used or can be forwarded to VPN routers No signaling from Internet or VPN network, customers, or peers, is used on the Private Core Each Security Domain has its own BGP process Separate Forwarding Label-Switched Paths (LSPs) No forwarding path exists from Internet routers to VPN routers No IP forwarding in the Core, strictly MPLS LSPs between non-core routers No direct connections between the Security Domains.

a. Common Backbone Security

Describe how Supplier maintains both physical and logical separation of enterprise customers' MPLS traffic and Public Internet traffic if the Supplier's MPLS core (P-routers) is shared by both MPLS and Public Internet traffic.

Comply (Yes/No)	*Explanation/Description (a. Common Backbone Security)*
Yes	CenturyLink IQ Networking maintains separate security domains for Internet, MPLS, and CenturyLink-provided VoIP services. MPLS services have the following features: Separate dedicated edge routers Separate Control Planes

Comply (Yes/No)	*Explanation/Description (a. Common Backbone Security)*
	No signaling from Internet routers is used or can be forwarded to VPN routers No signaling from Internet or VPN network, customers, or peers, is used on the Private Core Each Security Domain has its own BGP process Separate Forwarding Label-Switched Paths (LSPs) No forwarding path exists from Internet routers to VPN routers No IP forwarding in the Core, strictly MPLS LSPs between non-core routers No direct connections between the Security Domains.

10. Internet VPN MPLS Access

Provide technical details and descriptions of Supplier's capability to provide access to the MPLS network via the following fixed line and wireless broadband services providing access to the public Internet:

- xDSL (including ADSL, IDSL, SDSL and other forms of xDSL);
- Cable Internet service (if available as an equivalent service to DSL);
- Broadband wireless services (such as LTE, EV-DO, HSDPA).

Certain agencies may require an Internet-based broadband solution to provide low cost, secure, persistent connectivity with sufficient response and throughput capabilities to support a number of business applications or to provide a VPN back-up connection to a primary MPLS port.

List your available speeds and geographic coverage for any or all of the following broadband technologies: xDSL, Cable Internet, and Broadband Wireless,

Comply (Yes/No)	*Explanation/Description (10. Internet VPN MPLS Access)*
Yes – VPN extension	CenturyLink provides VPN Extensions that provide the capability for a remote site with Internet access to reach the MPLS network by utilizing an IP SEC tunnel. In these cases, customers may supply their own Internet access using any type of Internet service so long as they can obtain a static IP address that is a dial-up, DSL, Cable, TDM, or other type of physical connection. There are two primary requirements for this service: The customer has a CE device that can support IP SEC tunnels The customer has obtained a static IP address from their Internet provider. List your available speeds and geographic coverage for any or all of the following broadband technologies: xDSL, Cable Internet, and Broadband Wireless. Available speeds are based on distance from the Central Office. Fast – 768k, 1.6Mbps, 3Mbps Faster – 7Mbps, 10Mbps, 12Mbps Fastest – 20Mbps, 26Mbps, 40Mbps

a. Static IP Addresses

VITA has the need for utilizing static IP addressing. Describe the Supplier's ability to provision service using static IP addresses.

Comply (Yes/No)	*Explanation/Description (a. Static IP Addresses)*
Yes	CenturyLink supports static routing or external BGP (eBGP) customer edge–provider edge (CE-PE) routing capabilities. CenturyLink will assign the IP network addresses on the customer-edge to provider-edge (CE/PE) links using non-Internet-routed public IP space owned by CenturyLink. Networks behind the CE/PE link may be numbered using public or private IP addresses as provided below: Layer 2 network services are completely IP addressing transparent, CenturyLink will have no knowledge of the IP addressing scheme you use Multi-protocol label switching(MPLS)-based VPNs use logically separated routing instances that operates independently of one another IP addressing used by one customer has no impact on other customers so you are free to use any IP addressing scheme on your network Use of private (RFC 1918) address blocks is encouraged for networks that are not connected to the Internet.

b. IPSec Tunnels

The Supplier's solution should permit VITA to establish and maintain IPSec VPN tunnels between its remote location and the Supplier's regional MPLS gateway. Describe how the IPSec tunnel termination on the MPLS gateway operates when the remote location provides its own broadband connection (own Internet Service provider) instead of the Supplier providing the remote location broadband connection. Specifically, what are the routing protocol requirements (i.e., static IP) and pricing implications when the remote provides its own broadband connection?

Comply (Yes/No)	*Explanation/Description (b. IPSec Tunnels)*
Yes	CenturyLink provides VPN Extensions that provide the capability for a remote site with Internet access to reach the MPLS network by utilizing an IP SEC tunnel. In these cases, customers may supply their own Internet access using any type of Internet service so long as they can obtain a static IP address that is a dial-up, DSL, Cable, TDM, or other type of physical connection. There are two primary requirements for this service: The customer has a CE device that can support IP SEC tunnels The customer has obtained a static IP address from their Internet provider.

11. MPLS Connection to the Internet

In order to support agencies with unique requirements, VITA's current legacy packet network employs separate PVC elements that provide connectivity to the Internet using the same frame relay port used with traditional PVC connections. As VITA transitions to a newer, IP-based WAN service, it is very interested in understanding the Supplier's capability to replicate this connectivity.

Does the Supplier provide such functionality? If so, provide technical details and descriptions of Supplier's capability to provide Internet connections from its MPLS network, including:

- Proposed design/traffic flow diagram
- Solution components/elements
- Available bandwidths
- Limitations and constraints

- Pricing model

Comply (Yes/No)	*Explanation/Description (11. MPLS Connection to the Internet)*
Yes	CenturyLink Enhanced Port with Secure IP Gateway (SIG) includes both a Private Port and an Internet Port on the same local loop. It includes all the functionality of a Private Port combined with the ability to access the Public Internet over one loop and port. Adding the SIG functionality adds an Internet firewall to every port and is supported on any available connection type. Secure IP Gateway (SIG) allows customers the ability to allocate traffic to locations on the CenturyLink private MPLS network and the Internet via a distributed network-based firewall. Customers have the option to have custom NAT and firewall rule sets. CenturyLink requires all end-points in closed user group (CUG) to have SIG activated on each Enhanced Port or no ports can have SIG activated.

12. MPLS Service Level Agreements

Describe Supplier's SLAs for its MPLS offer by completing the relevant parts of Appendix B. VITA expects that higher Classes of Service will provide higher and more comprehensive SLAs (e.g. covering items such as jitter). SLAs with end-to-end coverage (NTU to NTU) are highly preferred.

Service credits are expected in the event that SLAs are not met. Detail the service credits that would be provided in the event that individual service levels are not met by completing the relevant parts of Appendix B. Describe explicitly any limitations, caps, or exclusions applicable to service credits.

Comply (Yes/No)	*Explanation/Description (12. MPLS Service Level Agreements)*
Yes	Please refer to Appendix B for details.

a. Service Level Exceptions

Detail any exceptions to the Supplier's service levels for Data Delivery Ratio, Round Trip Delay, or Jitter metrics (even at locations where the total contracted Class of Service bandwidth is a low percentage of the port speed (*e.g.,* total Class of Service bandwidth is 64K and port speed is T1).

Comply (Yes/No)	*Explanation/Description (a. Service Level Exceptions)*
Yes/No	**No. Data Delivery Ratio**: 99.90% (measured on an ongoing basis every five minutes to determine a consistent average monthly performance level for packets actually delivered between the POP's. **No. Round Trip Delay**: 42 ms (measured via roundtrip pings on an ongoing basis every five minutes to determine a consistent average monthly performance level for latency at all the POP's within the region. **Yes. Jitter**: 2 ms (measurement of the interpacket delay variance and packet loss in the CenturyLink IP network, which is measured by generating synthetic user datagram protocol (UDP) traffic.

b. Service Level Compliance with Third Party MPLS Partners

Confirm that Supplier has no third party MPLS partner exclusions associated with its response to Appendix B. For example, Supplier confirms that its responses for Round Trip Delay, Data Delivery Ratio and Jitter support all VITA sites shown in Appendix A.

Disclose any SLA exclusions by site where third party MPLS partners are used by the Supplier.

Comply (Yes/No)	*Explanation/Description (b. Service Level Compliance with Third Party MPLS Partners)*
Yes	CenturyLink will not be using any third party partners.

13. MPLS Reporting

a. Network Inventory

Describe the ability of Supplier to provide and maintain, via a web Internet portal, a database of standard local access circuit and service documentation in electronic, importable format including the following:

- Site ID (VITA site identifier)
- Address
- Central Office
- Circuit ID
- VRFs implementation by Site ID
- Port Speed
- CoS bandwidth information
- Access type

Comply (Yes/No)	*Explanation/Description (a. Network Inventory)*
Yes	The CenturyLink web-based Data Network Monitoring Application (DNMA) called Control Center is a secure, self-service web portal that provides access to critical tools to enable easy, safe and fast management of invoices, network configuration and statistics, and trouble reporting. It includes: CenturyLink iQ ® Networking, SIP Trunk, Nationwide ATM and Frame Relay, Managed Firewall VPN, Dedicated Hosting, Remote Access, Long Distance, VoIP, Network Management Service, Toll Free, QCC Domestic Private Line, QCC Metro Private Line, QCC Ethernet Private Line, QCC Metro Ethernet Private Line, QCC Optical Wavelength Services (metro and long haul), International Private Line, and QC Metro Ethernet. Control Center allows customers to access a wide variety of network management, billing and reporting tools via a secure web site. For a user to manage their communications with Control Center, all they need is a PC with Internet access, a certified browser, user name, and a password. Control Center provides a comprehensive set of communications management tools, including: **eBilling Manager** – Centralized local and national billing information for all CenturyLink service offerings, including detailed reporting and analytics tools. Pay CenturyLink invoices online in a single transaction with Auto-pay, EFT/ACH, or a credit card. Scheduled delivery and format options are also available. **Bill Analyzer** – Customers can transform billing data into business intelligence quickly and comprehensively with Control Center's Bill

Comply (Yes/No)	*Explanation/Description (a. Network Inventory)*
	Analyzer. Bill Analyzer is a bill reporting and analytics web application that helps transform complex bills into simple sources of actionable information, enabling proactive problem solving and saving countless hours in lost productivity. **Toll Free Manager** – View inventory, generate usage reports, track and report repair tickets, and reserve additional telephone numbers. Toll Free Manager also allows you to setup and manage toll free numbers; change terminations, and add/modify routing plans or features in near real time. **iQ® Networking** – Comprehensive view, analysis, and management tools for all CenturyLink iQ Networking products in one place. Some of the features available include access to inventory, request and view reports, configuration status, create and monitor repair tickets, and access to network maps. **Repair Manager** – Create and track status of trouble tickets. **Interactive Map** – Interactive map detailing the customer's network and open trouble ticket status, in a centralized location. **Inventory Manager** – View inventory and make configuration changes. **Statistics Manager** – View historical and real-time network statistics and create detailed reports. **Status Manager** – Stay informed of network status and performance. **Administration Manager** – Enterprise users can create and manage secure profiles.

b. Strict Segregation of Agency Data

Supplier is expected to ensure that each agency has access only to its own inventory and performance reporting data on its Web Internet portal. Describe how Supplier provides credentials and other processes to ensure such strict segregation, while still enabling VITA to view inventory and performance metrics across the entire network.

Comply (Yes/No)	*Explanation/Description (b. Strict Segregation of Agency Data)*
Yes	Each agency will only have access to its own inventory and reporting data in CenturyLink's web portal, Control Center. The CenturyLink account team will segregate accounts and circuits as requested by VITA. The Control Center system administrator will then be able to create and manage secure profiles for VITA's users.

c. Performance Reporting

VITA's performance reporting requirements are stated below. The metrics contained in the table below are to be measured and reported to VITA on a calendar month basis via web portal access as noted below. Reporting is to be at the agency level, with adequate security implemented limiting a specific agency's view to its own data only.

Metric to be Measured and Reported (Monthly)	**Reported via Real-Time Customer Web Portal Access**	**Reported to VITA via Monthly Historical Report (via Web Portal or Electronic Document)**
MPLS Port Utilization by Site ID (95th percentile)	Required	Required
MPLS Port Utilization by Site ID (99th percentile)	Required	Required
MPLS COS Utilization by Site ID - both Ingress and Egress directions	Required	Required

Include the following additional requirements when pricing and stating Supplier's compliance to this section:

- Collection of port utilization statistics by polling Router interfaces every 5 minutes.
- Storing the collected statistics in a database making the information available near real-time.
- Retention by the Supplier of historical statistics for 12 consecutive months.
- Notify VITA at the end of each month which MPLS ports have utilization exceeding 70% of port capacity as measured at the 95th percentile.
- Notify VITA at the end of each month which router interfaces are not collecting data.

Comply (Yes/No)	***Explanation/Description (c. Performance Reporting)***
No	CenturyLink complies with two exceptions: CenturyLink's web portal, Control Center, reports on the 95th percentile, not the 99th percentile, in near real time. Additionally, CenturyLink's reporting is at the port level, not down to the individual queue (QOR or COS).

d. Performance Reporting Delivery

All performance reporting will be provided to VITA within 21 calendar days from the prior calendar month.

Comply (Yes/No)	***Explanation/Description (d. Performance Reporting Delivery)***
Yes	Reporting will be available in near-real time via CenturyLink's Control Center portal. Any ad hoc reports will be delivered by CenturyLink's service manager within 21 calendar days from the prior month.

e. Capacity Management (Optimization) Information

Describe Supplier's capability to provide to VITA, on an annual basis, an MPLS Service Optimization Report. The delivery timeline is:

- Initial report – approximately twelve (12) months after the effective date of the contract
- Subsequent reports – annually

Confirm that this report will show high-level usage statistics, performance trends and recommendations for reduction in cost and improvements in performance. VITA expects the Optimization Report to have charts, graphs and tables to support the recommendations.

Supplier may choose to waive or bundle this cost in its Appendix A pricing.

Comply (Yes/No)	***Explanation/Description (e. Capacity Management (Optimization) Information)***
Yes	CenturyLink's assigned service manager will compile and provide these reports, as requested by VITA.

f. Other MPLS Reporting

Describe any additional reporting provided as part of the standard offering or as additional value add services.

Comply (Yes/No)	***Explanation/Description (f. Other MPLS Reporting)***

Yes	Reports also available in the Control Center portal include metrics for:: utilization, packet/frame, bytes, and discards.

14. Enhanced and Future MPLS Services

a. Enhanced Technology Services

Describe the enhanced MPLS Services currently offered by Supplier, including, but not limited to:

- Network-based firewalls and proxy servers
- Intrusion Detection Systems (IDS)
- Internet Data Centers or Virtual Data Centers
- Network Based Internet Access

Comply (Yes/No)	*Explanation/Description (a. Enhanced Technology Services)*
Yes	**Virtual Firewall Enhanced Service** Virtual Firewall Enhanced Service provides a single instance of a "virtualized," high-availability firewall device residing in the Virtual Services Hosting facilities at Savvis. The Service includes a managed firewall service, hardware, software, installation, 24/7 monitoring, and support. There is no limit on the Customer's reasonable firewall rule change requests, but Customer's firewall policy must not exceed 500 firewall rules. **Common Service Description** Common service elements including the description of installation, configuration, Service inclusions and exclusions, monitoring and other service details common across presented Services are defined here. These service elements are in addition to specific Service details provided within the body of each SSG offering. Included in Service A single instance of a "virtualized," high-availability firewall device residing in the Virtual Services Hosting facilities at Savvis. Firewall policy not to exceed 500 firewall rules. Unlimited number of firewall rule change requests. **Network Intrusion Detection Service** Network Intrusion Detection Service (NIDS) is the core technology of a full set of Savvis security detection tools that give customers the ability to see security threats as they are en route to a host. Savvis provides NIDS service for installation in customer networks, both at Savvis data centers and on the customer premises. Savvis configures monitors and maintains the NIDS sensors to detect attacks against the target network. Detailed monitoring identifies malicious traffic, determines whether it has passed through the firewall, and traces the attackers originating computer. There are two NIDS service options: Fully-Managed NIDS: This is a complete solution that includes installation and management of Savvis-provided software and hardware NIDS Care: This service includes installation, configuration and management of NIDS solutions that use customer-provided hardware and

Comply (Yes/No)	Explanation/Description (a. Enhanced Technology Services)
	software. **Internet Data Centers or Virtual Data Centers** Savvis, A CenturyLink Company, is an industry leading provider of managed computing and network infrastructure for IT applications. By outsourcing to Savvis, enterprises can focus on their core business while Savvis focuses on the quality of their IT infrastructure. Leading IT organizations around the world have selected Savvis to help them improve their service levels, reduce capital expense and deal with the rising costs of bandwidth, energy, real estate, staff and expertise. As a pioneer in utility computing, Savvis understands and harnesses the latest advances in technology such as virtualization, cloud computing and support process automation. **Key Metrics** Six hosting data centers located within the Commonwealth Nearly 2,500 unique business and government clients, including more than 30 of the top 100 companies in the Fortune 500 More than 2,500 employees with deep expertise in technical operations, customer support, engineering and consulting. IQ Networking Enhanced Port with Secure Internet Gateway provides all the functionality of a Private Port and includes the ability to access the Public Internet over one loop and port. Secure IP Gateway allows customers to allocate traffic to locations on the CenturyLink private MPLS network and the Internet via a distributed network-based firewall. Customers have the option to have custom NAT and firewall rule sets.

b. Network Feature Roadmap

Provide your plans for addressing growth over the next 1 to 2 years. Use diagrams showing future footprint. What is your roadmap for the following technologies?

- MPLS-TE
- IPv6
- VPLS
- AToM
- Carrier Serving Carrier (CSC)
- BFD
- Cellular & WiFi Services

Comply (Yes/No)	Explanation/Description (b. Network Feature Roadmap)
Yes	**CenturyLink Roadmap for MPLS and Networking Services** CenturyLink will maintain its current roadmap design philosophy for 2013 and beyond. We will continue to invest in our service-enabling network to connect people, places, and applications in ways that exceed expectations. Market research indicates bandwidth demands increases of 30% with budgets remaining flat to slightly declining. CenturyLink is building solutions to meet those objectives.

Comply (Yes/No)	*Explanation/Description (b. Network Feature Roadmap)*
	Network Growth Accommodating network growth continues to be a top priority. CenturyLink added 1.5 Tbps of capacity in 2009, 933 Gbps in 2010, and over 3 Tbps in 2011. We will continue to add capacity when link utilization levels approach 50% of saturation for foreseeable future. In addition, in 2012, we added over 200 Gbps of peering capacity to improve the quality of Internetworking with other providers. Private networking currently consists of 157 edges in 63 markets. 2012 expansion included new markets and expanded Ethernet coverage, including new “Ethernet over Copper” in our local region. Additional sites will be added in the U.S. and internationally. At higher speeds, we have been successfully bonding Nx10GigE service where necessary to meet customer requirements. We are current evaluating new switch architectures as we move towards 100 Gbps in the backbone. **New Features** The number of queues supported was increased from four to six/eight for Private and Enhanced Port customers. This includes standard and custom template extensions that support DSCP and address WRED concerns. Since CenturyLink operates a multi-vendor network of Alcatel Lucent, Juniper, and Cisco equipment, all routers have been updated to support these new capabilities. Improvements are currently in development to backbone prioritization capabilities, which will allow CenturyLink to offer a premium private network service to customers looking for extra assurance that their traffic would be prioritized in the event of catastrophic network failures or security events. CenturyLink offers a Virtual Private LAN Service (VPLS) which is built upon the same infrastructure as MPLS VPN service. VPLS is a VPN that supports multiple sites in a single bridged domain over an MPLS network to create an emulated LAN segment. Instead of a serial interface, customers use an Ethernet interface delivering a Layer 2 broadcast domain that is capable of learning and forwarding Ethernet MAC addresses. The decision to choose a VPLS Private Port over a MPLS Private Port will depend on how much control customers wants to have over their routing. When customers decide to implement a VPLS Private Port, CenturyLink does not retain a record of customer routes; therefore, customers are keeping their routes private. CenturyLink has end-to-end reporting tools including the ability to analyze statistics on multiple queues. Previously, metrics were conservatively reported using the best effort queue. The general network statistics portal was completely redone and now exists at www.centurylink.com/ipstats. This is a more interactive site, which allows per-region metrics and sub-topology views of customer networks for analysis. IPv6 single and dual stack is now available at all speeds. In 2011, we added support at lower speeds including DS1, which had not previously been available. While CenturyLink does have a pool of IPv4 addresses for assignment to new customers, we introduced a number of IPv6-oriented programs to further assist customer migrating to Version 6.

c. Network Service Roadmap

Describe the major upgrades or enhancements planned for your network within the next 2-3 years. What is the projected timetable for these projects and what benefit will these upgrades offer VITA?

How will these upgrades improve service to VITA? What impact (negative or positive) will the changes affect your services to VITA? How will these upgrades minimize service disruption?

Recognizing that investments in network infrastructure tend to be continuous rather than periodic, and that system expansions and network upgrades are key to reliable service; describe your reinvestment strategy for the previous year as well as your plans for the next three years in terms of capital investment.

Comply (Yes/No)	***Explanation/Description (c. Network Service Roadmap)***
Yes	Accommodating network growth continues to be a top priority. CenturyLink added 1.5 Tbps of capacity in 2009, 933 Gbps in 2010, and over 3 Tbps in 2011. We will continue to add capacity when link utilization levels approach 50% of saturation for foreseeable future. In addition, in 2012, we added over 200 Gbps of peering capacity to improve the quality of Internetworking with other providers. Private networking currently consists of 157 edges in 63 markets. 2012 expansion included new markets and expanded Ethernet coverage, including new “Ethernet over Copper” in our local region. Additional sites will be added in the U.S. and internationally. At higher speeds, we have been successfully bonding Nx10GigE service where necessary to meet customer requirements. We are current evaluating new switch architectures as we move towards 100 Gbps in the backbone. **New Products in Development** CenturyLink continues to develop a roadmap matching the following criteria: Deliver aggressive pricing with broad reach Expand Ethernet options (speed, QoS, access) Customer experience that exceeds expectations One size need not fit all Include critical features at no charge Migrate without hassle or duplicate expense Make smart roadmap investments Offer performance transparency. The following new or expanded product options are consistent with those guidelines. **Delta Port** The CenturyLink Delta Port offer provides customers with a cost-effective way to connect to our MPLS private network or public Internet network with CenturyLink provided local access. Bandwidth speeds options from DS1 to 5xDS1 (7.5 Mbps). **Support Options** 8 am to 5 pm M-F Custom 9-Hour Window

Comply (Yes/No)	*Explanation/Description (c. Network Service Roadmap)*
	Escalation Options 1 per site per month Pool of escalations **Reliable** Enterprise-class network **Optional Security** IP Sec Tunneling **Control Center** Web Service Portal **Next Generation Multicast** Developed to support the CenturyLink PrismTV offering. Enterprise customers can benefit from implementation of next generation multicast services. **Application Performance Monitoring** In addition to metrics on latency, packet delivery, jitter, and availability, new statistics are being made available on individual queues for improvement of network controls and as feedback to establish the most effective QoS policies. Backbone MOS scores are planned for 2012 to provide a monthly metric on overall suitability of the CenturyLink network for IP voice communications. **Public QoS/VoIP Readiness** Not every customer buys VoIP services from their network provider, which ultimately means that some portion of IP voice communications might occur over a public backbone. CenturyLink is developing QoS features for the public network to complement existing capabilities for private networking customers. In addition to QoS improvements, other new options are being added to make CenturyLink a more attractive choice for running VoIP services. This includes, but is not limited to, ongoing MOS score calculations and QoS tuning capabilities. **Dual Primary Customer MPLS Networks**. Today, almost all MPLS networks are provided via a single network provider with redundancy or backup capabilities potentially provided by a secondary service provider. CenturyLink is engineering options that would allow a customer with an existing MPLS network to add new sites via IQ Networking and have it participate transparently as part of the original network while taking advantage of additional features available to CenturyLink customers. **Cloud Enhancements** With the acquisition of Savvis networks, CenturyLink has greatly expanded portfolio of cloud security, storage, business continuity, and other hosting services for a wide range of customers from small-mid-size businesses through Fortune 50.

15. Statewide Availability

Confirm that the Supplier's MPLS network as proposed is available statewide. If there are any locations in the Appendix A "MPLS Transport" worksheet to which Supplier has not proposed to provide its MPLS network service, list such locations/exceptions.

Comply (Yes/No)	*Explanation/Description (15. Statewide Availability)*
Yes	Available statewide.

D. Internet Services

1. Internet Service Capabilities and Supplier Classification

Detail Supplier's IP network capabilities with respect to:

- Supplier's global Internet network design, peering arrangements and if you own the network or have agreements with local ISPs.
- Whether the network is a Tier-1 ISP network and, if not, then which portions are not Tier-1 networks.
- Any agreements with local ISPs in detail and how they are managed.
- The number and type of public and private peering arrangements, listing partners, quantities, locations and overall percentage of private vs. public peering.

Comply (Yes/No)	*Explanation/Description (1. Internet Service Capabilities and Supplier Classification)*
Yes	CenturyLink meets all definitions of a Tier 1 Internet Service Provider. CenturyLink ranks in the top 5 of carriers that carry a certain % of Internet traffic. CenturyLink is a facilities-based network services provider. The network is on CenturyLink built and owned fiber network. We own and operate our own network and we do not purchase or lease transit in lieu of peering. The IQ Networking Internet Port service rides on the CenturyLink IP backbone. We have a fully meshed, Coast-to-Coast 10GigE/Nx10GigE backbone. The backbone is composed of Juniper routers deployed in TeraPOPs across the U.S. and parts of Europe and Asia. Each TeraPOP has at least two connections, typically at OC-192 speed, connected to TeraPOPs in at least two different cities for redundancy. IP backbone connections use Packet over SONET interfaces. Provider Edge (PE) routers are deployed singly in smaller sites or in redundant clusters. OC-48 or OC-12 uplinks are used, with each PE having two uplinks. There are over 400 Access POPs and over 100 IP Router locations (Including Backbone PoP's, IP AccessPoP's, Layer 3 Facilities and CyberCenters). CenturyLink provides tools for the public to view the performance of the CenturyLink IP/MPLS network. Since the CenturyLink Internet Port service is based on the performance of its backbone, we publicly post network performance statistics. To view the performance of the CenturyLink Network, use our network tool at http://centurylink.com/ipstats The CenturyLink IP/MPLS backbone utilizes a fully redundant architecture with primary and backup transport circuits. Every core router connects with redundant, diverse circuits. All circuits are protected by MPLS fast reroute for restoration. VPN and NGS traffic paths are also fully protected with MPLS Fast Reroute (FRR) from edge to edge. All backbone traffic is transported through MPLS Label Switch Protocol (LSPs) with primary and

Comply (Yes/No)	*Explanation/Description (1. Internet Service Capabilities and Supplier Classification)*
	back up paths. In the case a transit node fails, LSPs will divert traffic as determined by Interior Gateway Protocol (IGP) protocols. Since every link is used as primary and back up, each is upgraded before 50% capacity is reached. Transport redundancy is introduced by splitting the backbone circuits into different transport physical systems (rails). Every IP POP has redundant two or more core routers. Every core and edge router has full processor and power redundancy. All edge routers have dual uplinks to core routers. Every peer has at least two geographically diverse circuits for redundancy CenturyLink's overall peering capacity provides a key differentiation when compared to other providers. The CenturyLink network is interconnected with every peer in a minimum of two geographically diverse locations. Usage reports are gathered for all peering circuits and reviewed weekly. The CenturyLink network upgrade policy states that when a trunk in the network triggers 40% utilization, upgrade procedures commence to ensure the network is always running efficiently and sufficient capacity exists on parallel trunks or alternate paths should failure occur. Since peering is a bi-lateral agreement between two providers, each peering agreement may have additional language or criteria that trigger a circuit upgrade. As a matter of Policy, CenturyLink attempts to initiate peering circuit upgrades at 50% utilization. One of the largest and best-performing IP networks in the world, the CenturyLink network features over 2 TeraBps aggregate peering capacity. **Peering Capacity:** US-based Private Installed Peering: 2,188.0 Gbps US-based Public Installed Peering: 0 Gbps US-based Domestic Peer Capacity: 1,487.0 Gbps US-based International Peer Capacity: 701.0 Gbps International-based Peer Capacity: 37.2 Gbps **Peer List:** AboveNet, ATT, ATT Asia, BCE Nexxia, Bharti Airtel, BT, Cable Wireless, China Telecom, China Netcom, Cogent, COLT, DTAG, Equinix-Hong Kong, ESNet, France Telecom, Global Crossing, HKIX, Inteliquent, Internet Initiative Japan, Internode, Interoute, ISC, Japan Telecom, KDDI, KPN, Level 3, LG U-Plus (DACOM), LINX, NASA, NTT Verio, Optus, PACNET, PCCW, PIPE, Reach, Reliance Globalcom, Savvis, SingTel, SoftBank (Japan Telecom), Sprint, Starhub, SwissCom, Tata (Teleglobe, VSNL), Telecom Italia, Telefonica, Telenor, TeliaSonera, Telus, (Tiscali), TM Net, TW Telecom, UPC Broadband, Verisign, Verizon (UUNet), XO **Peering By Location:** Atlanta: 136.0 Gbps Chicago: 307.0 Gbps Dallas: 237.0 Gbps

Comply (Yes/No)	*Explanation/Description (1. Internet Service Capabilities and Supplier Classification)*
	Denver: 70.0 Gbps Los Angeles Metro: 307.0 Gbps Miami: 50.0 Gbps New York/NJ Metro: 245.0 Gbps SF Bay Area Metro: 321.0 Gbps Seattle: 182.0 Gbps Washington DC Metro: 333.0 Gbps Tokyo: 5.0 Gbps Hong Kong: 3.2 Gbps Singapore: 7.0 Gbps Sydney: 5.0 Gbps London: 9.0 Gbps Frankfurt: 8.0 Gbps **IPv6 Peering:** ASN | Peer Name 6461 | Abovenet 7018 | AT&T Communications 1273 | Cable & Wireless 174 | Cogent Public | DE-CIX Internet Exchange 668 | DREN 5511 | France Telecom 3549 | Global Crossing 6939 | Hurricane Electric 2497 | IIJ 4739 | Internode 1280 | ISC 4725 | Japan Telecom Public | JPIX 2516 | KDDI 286 | KPN 3356 | Level 3 Public | LINX 2914 | NTT Verio 10026 | Pacnet 3491 | PCCW 4637 | Reach 15412 | Reliance Globalcom 3561 | SAVVIS 7473 | SingTel 1239 | Sprint 3303 | Swisscom 6453 | Tata 6762 | Telecom Italia

Comply (Yes/No)	*Explanation/Description (1. Internet Service Capabilities and Supplier Classification)*
	12956 | Telefonica 1299 | Telia 1299 | TeliaSonera 852 | TELUS 3257 | Tinet (Tiscali) 6762 | TIS 3257 | Tiscali 4323 | TWTC 6830 | UPC 701 | Verizon 2828 | XO Dual stack

2. Points of Presence

Provide a list of Internet POPs in Virginia. Note any VITA locations where there is no POP within 20 miles.

Describe how these POPs are managed and how a high level of availability for connections to these POPs is measured and maintained.

<table>
<tr><th>Comply (Yes/No)</th><th>Explanation/Description (2. Points of Presence)</th></tr>
<tr><td>Yes</td><td>
<table>
<tr><th>MPLS POP City, State</th><th>Type of POP (e.g., Tier 1)</th><th>Any non-redundant PE-Routers installed? (Y/N)</th><th>Maximum POP Bandwidth Available at POP</th><th>Is POP dual-homed to other POPs?</th></tr>
<tr><td>Richmond VA</td><td>Backbone Access POP</td><td>No</td><td>10Gb/Nx10Gb</td><td>Yes</td></tr>
<tr><td>Chesapeake VA</td><td>Backbone Access POP</td><td>No</td><td>10Gb/Nx10Gb</td><td>Yes</td></tr>
<tr><td>Fredericksburg VA</td><td>Backbone Access POP</td><td>No</td><td>10Gb/Nx10Gb</td><td>Yes</td></tr>
<tr><td>Washington DC</td><td>TeraPOP Core Router Site</td><td>No</td><td>10Gb/Nx10Gb</td><td>Yes</td></tr>
</table>
The CenturyLink fiber optic backbone has been installed with multiple fiber routes from north to south and east to west across North America. This design allows us to establish network services that offer city-to-city and POP-to-POP diversity. We have the capability to statically or dynamically, depending upon the capabilities of the service protocol, select appropriate routes between ingress and egress points across our backbone network.
There are two logical Layer 1 networks on top of the fiber infrastructure that are the basis for all the services CenturyLink provides to its customers. One is a Ciena® dense wavelength division multiplexing (DWDM) network is composed of a few large fiber rings that cover most of the U.S. The Ciena equipment provides about 80 lambdas per fiber pair. All-lambda amplifiers are typically deployed at 60 mile intervals, with regeneration after each five amplification stages.
The CenturyLink Ultra Long Haul (ULH) project will enhance signal quality on many of the domestic fiber routes so that costly regeneration within the continental U.S. will essentially be eliminated (regeneration interval lengthened to 1000 mi). The other is a Nortel® SONET-over-DWDM network that also is amplified at 60 miles intervals similar amplification
</td></tr>
</table>

Comply (Yes/No)	Explanation/Description (2. Points of Presence)
	needs. The DWDM network is used to provide native wavelength services to customers and is used to provide transport to the CenturyLink IP/MPLS and ATM networks. The SONET-over-DWDM network also provides trunking for the CenturyLink ATM network as well as the CenturyLink voice network and SONET-based private line services. The CenturyLink OC-192 SONET backbone network is designed with four-fiber Bi-directional Line Switched Ring (BLSR) architecture to provide excellent survivability and increase the transport network availability, specified on Bellcore GR-1230-CORE: SONET BLSR Equipment Generic Requirement. The four-fiber BLSR architecture provides excellent survivability (99.999%) against multiple concurrent faults since it supports both ring and span switching. Four-fiber BLSR span switching provides flexibility when performing routine maintenance activities. Though a multi-node BLSR system is more complex to design and maintain than a Unidirectional Path Switched Ring (UPSR) system, it has the advantage of maximizing bandwidth utilization and has a higher capacity. CenturyLink has concentrated Layer 2/3 core nodes in TeraPOPs across the country. All IP, ATM, and Frame Relay core switching is concentrated into these TeraPOPs. IP, ATM, and Frame Relay access equipment is located in these TeraPOPs and in other access POPs around the country. Concentrating core switching into TeraPOPs and using consistent platforms throughout helps us deliver a network that optimizes both cost and performance. The network is economical to deploy, manage and upgrade. Concentrated switching points also reduce the number of hops, which reduces latency in the network. The CenturyLink IP backbone currently operates at OC-192 (10 Gbps) speeds using point-to-point links between the IP Core routers. IP services are provided on industry leading equipment from Cisco Systems and Juniper Networks. The CenturyLink ATM and Frame Relay Network employs Lucent GX-550 and CBX-500 switches. The CenturyLink voice network consists of Nortel DMS 250 switches for domestic circuit switched traffic, DMS 300 switches for international circuit switched traffic and Sonus GSX switches for domestic packetized voice traffic. CenturyLink's IP platform employs multiple complementary levels of protection to prevent node and switch failures. Protection begins at the switching component level with state-of-the art, low power technology. At the system level, protection options include full control and switching redundancy, power supply redundancy, interface redundancy and automatic path rerouting. All CenturyLink network routes have diverse, redundant fiber paths available for immediate restoration in the event of an outage. **Nationwide IP/MPLS Network** The IP network is given lambdas at each IP POP. These lambdas are then connected through the network to provide direct TeraPOP to TeraPOP connectivity. Note that this design eliminates the underlying SONET infrastructure inherent in earlier architectures. The router interfaces utilize POS (Packet over SONET) for the OSI Layer 1 protocol, but the SONET is strictly to provide line coding and timing functionality on point-to-point links. Without SONET protection in the network, the intelligence moved out of the transport network and into the IP network. This means the IP network was now responsible for its own recovery in case of a fiber cut or other failure. It

Comply (Yes/No)	Explanation/Description (2. Points of Presence)
	now relied on Layer 3 restoration instead of Layer 2. Using point-to-point wavelengths significantly simplified the transport network, while decreasing the cost and provisioning complexity of the transport part of the IP network. SONET equipment was not required on the ends to provide the ADM and APS functions. This reduced the overall cost per mile of lambda-based OC-192s to less than half that required for IP over SONET. Using MPLS Fast Reroute, recovery times for network failure have actually been significantly improved over that provided by SONET Automatic Protection Switching. CenturyLink IQ Internet Port sets a new standard for Internet connectivity, with one of the most advanced networks available, best-in-class SLAs and some of the highest customer access speeds in the industry today. CenturyLink was the first NSP to offer an off-net SLA guaranteeing 95 ms between the top five networks. CenturyLink IQ Internet Port customers can utilize their connections to use e-mail, file transfers, and e-commerce applications to expand their reach and collapse physical boundaries. Mileage identifying the distance from the Internet POPs in Virginia to VITA locations is located in ***Attachment 6*** to the proposal as an Excel file.

3. Backbone Topology

Describe the available capacity over the Supplier's IP network backbone. Also describe the Supplier's growth/investment plans for increasing this capacity over the next 12 months.

Identify those segments in the Supplier's distribution and core networks where a third party telecom provider (*e.g.,* wholesale telecom provider) is used instead of the Supplier's own infrastructure. In addition, indicate which segments in the Supplier's distribution and core networks do not have alternative paths to route around failed infrastructure.

Comply (Yes/No)	Explanation/Description (3. Backbone Topology)
Yes	The CenturyLink network is a fully meshed, Coast-to-Coast 10GigE/Nx10GigE backbone. Our network spans North America, Europe and Asia-Pac utilizing Trans-Pacific and Trans-Atlantic undersea cable routes at current capacity of NxSTM-16's. Current backbone utilization averages between 22-27% depending on the link. CenturyLink closely and continuously monitors its backbone network links and has an aggressive upgrade policy to minimize any affects of congestion on customer traffic flows. The CenturyLink network upgrade policy states that when a trunk in the network triggers 40% utilization, upgrade procedures commence to ensure the network is always running efficiently and sufficient capacity exists on parallel trunks or alternate paths should failure occur. Since peering is a bi-lateral agreement between two providers, each peering agreement may have additional language or criteria that trigger a circuit upgrade. As a matter of Policy, CenturyLink attempts to initiate peering circuit upgrades at 50% utilization. Growth and network upgrade plans are difficult to estimate due to the non-linear curve tracking growth patterns. However, based on recent trends, as well as CenturyLink's aggressive upgrade policies, we do not see our capacity being exhausted anytime in the foreseeable future. The CenturyLink IP/MPLS backbone utilizes a fully redundant architecture with primary and backup transport circuits. Every core router connects with redundant, diverse circuits. All circuits are protected by MPLS fast reroute

Comply (Yes/No)	*Explanation/Description (3. Backbone Topology)*
	for restoration. VPN and National Grid Service (NGS) traffic paths are also fully protected with MPLS FRR from edge to edge. All backbone traffic is transported through MPLS LSPs with primary and back up paths. In the case a transit node fails, LSPs will divert traffic as determined by IGP protocols. Since every link is used as primary and back up, each is upgraded before 50% capacity is reached. Transport redundancy is introduced by splitting the backbone circuits into different transport physical systems (rails). Every IP POP has redundant two or more core routers. Every core and edge router has full processor and power redundancy. All edge routers have dual uplinks to core routers. Every peer has at least two geographically diverse circuits for redundancy. CenturyLink is a facilities-based network services provider. The network is on CenturyLink built and owned fiber network. The network is on CenturyLink built and owned fiber network. We own and operate our own network and we do not purchase or lease transit in lieu of peering.

4. Fixed and Burstable Dedicated Internet Service

Provide a list of the fixed bandwidth and burstable port speeds available, up to and including 1Gbps. What are the available methodologies for computing and billing burstable usage?

Comply (Yes/No)	*Explanation/Description (4. Fixed and Burstable Dedicated Internet Service)*
Yes	CenturyLink offers Internet service in the following billing options: **Flat Rate Pricing** The Flat Rate pricing methodology bills the customer a specified Monthly Recurring Charge (MRC) for a given port speed. Flat rate pricing is available in the following port speeds: DS-1 2xDS-1 (3 Mbps) 3xDS-1 (4.5 Mbps) 4xDS-1 (6 Mbps) 5xDS-1 (7.5 Mbps) 6xDS-1 (9 Mbps) 7xDS-1 (10.5 Mbps) 8xDS-1 (12 Mbps) DS-3 OC-3 OC-12 OC-48 Ethernet Fast Ethernet Gigabit Ethernet 10 Gigabit Ethernet **Tiered Pricing** The Tiered pricing methodology caps a customer's bandwidth at a tier specified by the customer and bills the customer a fixed MRC based on that bandwidth tier. The customer may change their specific bandwidth tier once per month (e.g., 20 Mbps to 30 Mbps) within the applicable port classification. Tiered pricing is available in the following speeds: DS-1: 56 Kbps, 64 Kbps, 128 Kbps, 192 Kbps, 256 Kbps, 256 Kbps, 384 Kbps, 512 Kbps, 768 Kbps, 1024 Kbps, 1.544 Mbps DS-3: 3 Mbps, 6 Mbps, 9 Mbps, 12 Mbps, 15 Mbps, 18 Mbps, 21 Mbps, 24 Mbps, 27 Mbps, 30 Mbps, 33 Mbps, 36 Mbps, 39 Mbps, 42 Mbps, 45 Mbps OC-3: 35 Mbps, 45 Mbps, 55 Mbps, 65 Mbps, 75 Mbps, 85 Mbps, 95 Mbps, 105 Mbps, 115 Mbps, 125 Mbps, 135 Mbps, 145 Mbps, 155 Mbps OC-12: 90 Mbps, 135 Mbps, 180 Mbps, 225 Mbps, 270 Mbps, 315 Mbps, 360 Mbps, 405 Mbps, 495 Mbps, 540 Mbps, 585 Mbps, 622 Mbps OC-48

Comply (Yes/No)	*Explanation/Description (4. Fixed and Burstable Dedicated Internet Service)*
	270 Mbps, 500 Mbps, 730 Mbps, 960 Mbps, 1190 Mbps, 1420 Mbps, 1650 Mbps, 1880 Mbps, 2110 Mbps, 2340 Mbps, 2488 Mbps Ethernet 2 Mbps, 4 Mbps, 6 Mbps, 8 Mbps, 10 Mbps Fast Ethernet 10Mbps, 15 Mbps, 20 Mbps, 30 Mbps, 40 Mbps, 50 Mbps, 60 Mbps, 70 Mbps, 80 Mbps, 90 Mbps, 100Mbps Gigabit Ethernet 100 Mbps, 200 Mbps, 300 Mbps, 400 Mbps, 500Mbps, 600 Mbps, 700 Mbps, 800 Mbps, 900 Mbps, 1000Mbps 10 Gigabit Ethernet 1000 Mbps, 2000 Mbps, 3000 Mbps, 4000 Mbps, 5000 Mbps, 6000 Mbps, 7000 Mbps, 8000 Mbps, 9000 Mbps, 10000 Mbps **Precise Burstable Billing** The Precise Burstable billing method is a usage based model depicting the peak usage the customer used during a given month. Usage samples are taken every five minutes throughout the monthly billing cycle. Only one sample is captured for each five-minute period, even though there are actually two samples taken; one for inbound utilization and one for outbound utilization. The higher of these two figures is retained. At the end of the billing period, the samples are ordered from highest to lowest. The result is a database of over 8,000 samples. The top 5% of the samples (representing the top 5% of usage levels) are discarded. The remaining sample is used to calculate the usage level. This is the 95th percentile of peak usage. For each Precise Burstable Port ordered, the customer is billed a Monthly Recurring Charge (MRC) calculated by multiplying the 95th percentile of peak usage in a given month by the applicable MRC per Mbps. Within each Precise Burstable Port classification (e.g., DS1, DS3, 10M, 100M), the customer will be subject to the minimum usage amount. The customer will be billed the minimum port charge or the actual charges based upon its 95th percentile of peak usage. Precise Burstable Billing is available in the following port speeds: 2xDS-1 (3 Mbps) — OC-3 3xDS-1 (4.5 Mbps) — OC-12 4xDS-1 (6 Mbps) — OC-48 5xDS-1 (7.5 Mbps) — Ethernet 6xDS-1 (9 Mbps) — Fast Ethernet 7xDS-1 (10.5 Mbps) — Gigabit Ethernet 8xDS-1 (12 Mbps) — 10 Gigabit Ethernet DS-3

5. Internet Security

Describe how and to what extent Supplier will support VITA in Trap and Trace assistance when VITA is experiencing a network attack or fraud that is affecting Internet service performance including, but not limited to, the following attacks:

- Denial Of Service and Directed DOS
- IP spoofing
- Illegal and VITA-policy-defined unacceptable use of VITA's ISP connection.

Comply (Yes/No)	*Explanation/Description (5. Internet Security)*
Yes	Customers may contact the CenturyLink Customer Support team to report a security incident, such as an Acceptable Use Policy (AUP) violation, or request subscriber information in order to fulfill a legal demand. In all cases, the CenturyLink customer support representative may classify the issue as a subscriber information request or AUP violation. In the event a customer is under a Denial of Service (DOS) or Distributed Denial of Service (DDOS) attack, the customer should call the NOC and state they are under a Denial of Service attack and ask to have the ticket immediately escalated. For BGP customers, rather than calling the CenturyLink Customer Support Center (CSC)/NOC when they are under a DoS/DDoS attack, CenturyLink provides customers with the ability to mitigate and reduce the effects of these attacks. Black Hole Filtering (BHF) allows customers to quickly drop all traffic destined to an under-attack IP address inside the CenturyLink network. This will minimize the effects that an attack will have on customer WAN bandwidth consumption and to other hosts on the same customer network thereby saving the customers time and money. The customer does not have to call the CSC/NOC to black hole traffic once they are properly configured. The customer has complete control through the use of route announcements using the 209:0 community. All traffic destined to the 209:0 tagged CIDR block/specific IP, including legitimate traffic, will be dropped in the CenturyLink network following convergence and propagation of the new announcement. The device under attack will usually have to have its IP address changed and re-announced in DNS in order to return normal traffic to the host or customers can simply wait for the attack traffic to subside before removing the BHF. The smallest CIDR block possible should be used in the route announcement tagged with the 209:0 community. For a single IP address, this is a /32 CIDR block. In giving customers control over this, they should be careful not to tag larger non-attack CIDR blocks as they may accidentally black hole a significant portion of their network. The customer can withdraw the announcement at any time by removing the 209:0 tag and all traffic will resume to the customers network following convergence and propagation of the new announcement. Static routed customers should continue to call into the CSC at 877-886-6515 to mitigate DoS/DDoS attacks as before. CenturyLink has implemented a feature called ―Unicast Reverse Path Forwarding‖ (uRPF) on all customer interfaces. The uRPF feature helps to mitigate problems that are caused by the introduction of malformed or forged (spoofed) IP source addresses into a network by discarding IP packets that lack a verifiable IP source address. For example: a number of

Comply (Yes/No)	Explanation/Description (5. Internet Security)
	common types of denial-of-service (DoS) attacks, including Smurf and Tribe Flood Network (TFN), can take advantage of forged or rapidly changing source IP addresses to allow attackers to thwart efforts to locate or filter the attacks. For Internet service providers (ISPs) that provide public access, uRPF deflects such attacks by forwarding only packets that have source addresses that are valid and consistent with the IP routing table. This action protects the network of the ISP, its customer, and the rest of the Internet. uRPF ensures that the source address of a packet is from a route advertised by another router on the specific interface. Validating that the IP source address of the packet was from the receiving interface helps to mitigate IP source address spoofing at the receiving interface. Although this doesn't mean that a valid address could not be the source of an attack, it does allow administrators to trace the origin of an attack. Wide implementation of uRPF throughout the Internet would aid in tracing the source of denial-of-service (DoS) and distributed denial-of-service (DDoS) attacks. When uRPF is enabled on an interface, the router examines all packets received as input on that interface to make sure that the source address and source interface appear in the routing table and match the interface on which the packet was received. If the packet was received from one of the best reverse path routes, the packet is forwarded as normal. If there is no reverse path route on the same interface from which the packet was received, it might mean that the source address was modified or forged. If uRPF does not find a reverse path for the packet, the packet is dropped.

6. Internet Usage Reporting

VITA is interested in understanding Supplier's Internet usage reporting capabilities. Supplier should respond to the following requirements in order to present the capabilities of its internet service in this area. VITA does not expect to incur any additional charges for the Internet usage reporting that Supplier would provide.

Comply (Yes/No)	Explanation/Description (6. Internet Usage Reporting)
Yes	The CenturyLink web-based Data Network Monitoring Application (DNMA) called Control Center is a secure, self-service web portal that provides access to critical tools to enable easy, safe and fast management of invoices, network configuration and statistics, and trouble reporting. It includes: CenturyLink iQ ® Networking, SIP Trunk, Nationwide ATM and Frame Relay, Managed Firewall VPN, Dedicated Hosting, Remote Access, Long Distance, VoIP, Network Management Service, Toll Free, QCC Domestic Private Line, QCC Metro Private Line, QCC Ethernet Private Line, QCC Metro Ethernet Private line, QCC Optical Wavelength Services (metro and long haul), International Private Line, and QC Metro Ethernet. Control Center allows customers to access a wide variety of network management, billing and reporting tools via a secure web site. For a user to manage their communications with Control Center, all they need is a PC with Internet access, a certified browser, user name, and a password. Control Center is provided at no cost to the customer. CenturyLink will work with the Commonwealth to set up Control Center with a master account/sub-account configuration to allow for the administration and management of multiple agencies.

Comply (Yes/No)	*Explanation/Description (6. Internet Usage Reporting)*
	Control Center provides a comprehensive set of communications management tools, including: **eBilling Manager** – Centralized local and national billing information for all CenturyLink service offerings, including detailed reporting and analytics tools. Pay CenturyLink invoices online in a single transaction with Auto-pay, EFT/ACH, or a credit card. Scheduled delivery and format options are also available. **Bill Analyzer** – Customers can transform billing data into business intelligence quickly and comprehensively with Control Center's Bill Analyzer. Bill Analyzer is a bill reporting and analytics web application that helps transform complex bills into simple sources of actionable information, enabling proactive problem solving and saving countless hours in lost productivity. **Toll Free Manager** – View inventory, generate usage reports, track and report repair tickets, and reserve additional telephone numbers. Toll Free Manager also allows you to setup and manage toll free numbers; change terminations, and add/modify routing plans or features in near real time. **iQ® Networking** – Comprehensive view, analysis, and management tools for all CenturyLink iQ Networking products in one place. Some of the features available include access to inventory, request and view reports, configuration status, create and monitor repair tickets, and access to network maps. **Repair Manager** – Create and track status of trouble tickets. **Interactive Map** – Interactive map detailing the customer's network and open trouble ticket status, in a centralized location. **Inventory Manager** – View inventory and make configuration changes. **Statistics Manager** – View historical and real-time network statistics and create detailed reports. **Status Manager** – Stay informed of network status and performance. **Administration Manager** – Enterprise users can create and manage secure profiles.

7. Internet Usage Reports Provided

VITA would like the Supplier to provide the following Internet usage reports:

- Summary and detailed automated web based (exportable) Internet usage reports that meet requirements (*i.e.,* USERID, port, protocol, source IP address, destination site and IP address, number of visits, date and time).
- An efficient, cost-effective, flexible, centralized, enterprise level data collection and reporting tool with historical search capabilities for tracking Internet usage and access traffic patterns.
- Real-time Internet usage reporting.

Provide sample detailed and summary reports with pictures or snapshots.

Comply (Yes/No)	*Explanation/Description (7. Internet Usage Reports Provided)*
No	The CenturyLink web-based Data Network Monitoring Application (DNMA) called Control Center is a secure, self-service web portal that provides access to critical tools to enable easy, safe and fast management of invoices, network configuration and statistics, and trouble reporting. It

Comply (Yes/No)	Explanation/Description (7. Internet Usage Reports Provided)
	includes: CenturyLink iQ ® Networking, SIP Trunk, Nationwide ATM and Frame Relay, Managed Firewall VPN, Dedicated Hosting, Remote Access, Long Distance, VoIP, Network Management Service, Toll Free, QCC Domestic Private Line, QCC Metro Private Line, QCC Ethernet Private Line, QCC Metro Ethernet Private Line, QCC Optical Wavelength Services (metro and long haul), International Private Line, and QC Metro Ethernet. Control Center allows customers to access a wide variety of network management, billing and reporting tools via a secure web site. For a user to manage their communications with Control Center, all they need is a PC with Internet access, a certified browser, user name, and a password. Control Center is a rich tool that provides customers a wide array of web-based, exportable reports, at no cost to the customer. The Control Center portal does not offer users the ability to pull reports based on source and destination IP addresses, USERID, port, protocol, destination site, number of visits and date and time. These measurements are typically provided by firewall appliances with access control software capabilities.

8. Statewide Availability

Confirm that the Supplier's Internet services as proposed are available statewide. If there are any locations in the Appendix A "Dedicated Internet" or "NetworkVirginia" worksheets to which Supplier has not proposed to provide its Internet services, list such locations/exceptions.

Comply (Yes/No)	Explanation/Description (8. Statewide Availability)
Yes	Available statewide.

E. Private Lines

VITA currently employs point-to-point private line services for certain applications. Refer to Appendix A for the private line inventory.

1. Supplier Private Line Services

Provide the following information in connection with its private line offer (both interexchange and local/metropolitan):

- Digital and analog capabilities;
- A comprehensive list of bandwidths available, including OCx and wide-area Ethernet speeds;
- Redundancy and diversity options;
- Current capacity and available bandwidth over the Supplier's private line backbone, as well as plans to increase this capacity over the next 12 months;
- Pricing methodologies (VITA desires flat-rate by speed versus mileage-sensitive).

Any variation in the Supplier's capabilities by geography should be clearly stated.

Comply (Yes/No)	Explanation/Description (1. Supplier Private Line Services)
Yes	**Domestic Private Line** CenturyLink Domestic Private Line Service is a point-to-point Inter-LATA

Comply (Yes/No)	Explanation/Description (1. Supplier Private Line Services)
	private line service. The service is a dedicated non-switched electrical and/or optical data transmission path over a physical circuit between two customer end point locations. Local access can be provided on-net or through a leased local access circuit. The service provides a fixed capacity of bandwidth for transport of the customer's digital communications traffic, utilizing and conforming to Synchronous Optical Network (SONET) standards which originates and terminates a physical connection at a CenturyLink-specified demarcation point located in the CenturyLink POP. The service is offered at DS-1 (1.544 Mbps), DS-3 (45 Mbps), OC-3 (155 Mbps), OC-12 (622 Mbps), and OC-48 (2488 Mbps) transmission rates. The service shall extend to and include the equipment maintained by CenturyLink that is necessary to connect the service to the customer's interconnection facilities at the CenturyLink specified network interface points ("Demarcation Point"). Interconnection, collocation, and/or Local Access services are not included as part of the Domestic Private Line Service, but may be only ordered in conjunction therewith either through CenturyLink or other telecommunications providers. Services are also offered at DS-0 (64 Kbps), fractional DS-1 (128 Kbps through 512 Kbps) line speeds. Domestic Private Line services utilize digital local loops to ensure a highly reliable, 100 percent digital connection. Digital local loops are provided through third party local access providers or through CenturyLink on-net facilities (where available). **Features** Robust SLAs—99.999 percent network availability. All links are protected with redundant fiber and self-healing ring technology. Private Line supports voice, video and Internet. CenturyLink Passport Multi-Connect. Four-fiber, BLSR technology is the gold standard in the SONET world. Circuits are switched automatically from the working side to the protect side of the ring within 50 ms. Multiplexing (muxing) is available at DS-1, DS-3, and OC-N circuit levels, depending on customer-selected options and restrictions. It provides flexibility to connect multiple signals and/or locations (e.g., point-to-multipoint applications are easily accommodated). Network monitoring and management assists in achieving high levels of performance. Domestic Network Diversity service enhancement—On request and subject to availability, CenturyLink provides a point-to-point transmission between two CenturyLink POPs that is provisioned and maintained as a distinct circuit from your primary on-net circuit. Diversity service is available as follows: Ring diversity Route diversity Single-circuit diversity 24 x 7 x 365 customer support.

Comply (Yes/No)	*Explanation/Description (1. Supplier Private Line Services)*
	Benefits Reliable transport service – Scalable, low latency, supports multiple applications (e.g., data, IP, ATM, voice, video, etc.) and flexible (allows you to build network configurations). Cost efficient – Allows you to combine multiple incongruent services over one line and aggregate slower speed services on to high-bandwidth trunks. Security – The telecommunications facility is dedicated for your use, protecting the confidentiality of your information and making this one of the most secure services available. Performance – SLA includes circuit availability objective of 99.999 percent end-to-end. Continuity of operations – Enhanced Diversity routing assists in planning for disaster recovery. Minimal delay - Private Line accommodates even the most delay-sensitive applications. Integrated services – A single channelized interface on your local access facility provides access to different voice and data services. Enables cost-effective access to CenturyLink's voice, Private Line and Internet services over one interface. **Diversity Service Enhancement** CenturyLink offers a Diversity Enhancement as an additional service on an individual case basis. At the customer's request and subject to availability, CenturyLink will provide a point-to-point transmission between two CenturyLink POPs that is provisioned and maintained as a distinct circuit from the customer's primary On-Net Circuit. CenturyLink Diversity Enhancement is (i) a defined relationship maintained between the primary circuit and the diversely routed circuit(s), (ii) custom-engineered by CenturyLink based upon available CenturyLink facilities, (iii) provisioned as a distinct transmission path from the primary circuit, and (iv) identified and maintained in the CenturyLink database systems as related primary and diversely routed circuits. The Diversity Enhancement is offered in DS-1, DS-3, OC-3, OC-12 and OC-48 transmission rates on existing CenturyLink facilities. Diversity is not offered at DS-0 and fractional DS-1 transmission rates. CenturyLink Diversity Services are offered at an additional charge to the customer. **Local Access** If the circuit required involves local access loops, we coordinate complete end-to-end provisioning. Local access options include CenturyLink metro network or local exchange carriers (LECs), competitive access providers (CAPs) and alternative access providers (AAVs). Local access possibilities are covered by the following categories: CenturyLink on-net local access CenturyLink leased local access

Comply (Yes/No)	*Explanation/Description (1. Supplier Private Line Services)*
	State-of-the-art SONET Technology Network Features Advanced network photonics enable transmit speeds up to 1Gbps (1 billion bits per second), plus an alternate 1Gbps protection channel for immediate service restoration Leading-edge fiber optics Enables network configurations with route diversity, self-healing rings, and end-to-end survivability , preventing the distress and expense caused by service interruptions Flexible OC-N bandwidth management supports line management to the STS-1 level, eliminating stranded capacity in fiber spans and wasted tributary ports Unidirectional drop-and-continue routing of individual STS-1 channels is an ideal bandwidth management feature for video broadcast/multimedia applications such as video and distance learning Advanced synchronization features provide the latest synchronization technology for optimum service quality and robustness; for example, through synchronization messaging, timing references can be automatically redistributed in response to a timing fault at any service node (if nodes are impaired, a built-in Stratum 3 (±0.37-ppm) oscillator maintains full service quality until the problem is corrected) Clocking systems support both single-source (synchronous) and multiple-source (plesiochronous) clocks, providing intra and inter-network solutions the flexibility and assurance that traffic will get to its destination error free CenturyLink network management monitors the network 24/7/365 to identify and resolve problems quickly; often before service is affected (required service changes are handled efficiently, preventing one bad connection from reaching all network elements) If an outage occurs, electronic or fiber cut ring protection automatically restore the service with a time target for electronic failure is four hours and for fiber cut is eight hours.

2. Back-Up Service Options

Provide specifics regarding restoration options (protection capability for both Private Line IOC and access) in the event of a circuit outage.

Comply (Yes/No)	*Explanation/Description (2. Back-Up Service Options)*
Yes	CenturyLink Domestic Private Line, Ethernet Private Line, Optical Wave Service and E-Line Service provide the following backup and restoration options. **Domestic Private Line** **Features** All links are protected with redundant fiber and self-healing ring technology. Four-fiber, BLSR technology is the gold standard in the SONET world. Circuits are switched automatically from the working side to the protect side of the ring within 50 ms. Domestic Network Diversity service enhancement—On request and

Comply (Yes/No)	Explanation/Description (2. Back-Up Service Options)
	subject to availability, CenturyLink provides a point-to-point transmission between two CenturyLink POPs that is provisioned and maintained as a distinct circuit from your primary on-net circuit. Diversity service is available as follows: Ring diversity Route diversity Single-circuit diversity **Diversity Service Enhancement** CenturyLink offers a Diversity Enhancement as an additional service on an individual case basis. At the customer's request and subject to availability, CenturyLink will provide a point-to-point transmission between two CenturyLink POPs that is provisioned and maintained as a distinct circuit from the customer's primary On-Net Circuit. CenturyLink Diversity Enhancement is (i) a defined relationship maintained between the primary circuit and the diversely routed circuit(s), (ii) custom-engineered by CenturyLink based upon available CenturyLink facilities, (iii) provisioned as a distinct transmission path from the primary circuit, and (iv) identified and maintained in the CenturyLink database systems as related primary and diversely routed circuits. The Diversity Enhancement is offered in DS-1, DS-3, OC-3, OC-12 and OC-48 transmission rates on existing CenturyLink facilities. Diversity is not offered at DS-0 and fractional DS-1 transmission rates. CenturyLink Diversity Services are offered at an additional charge to the customer and include the following charges: • Diversity Enhancement Fee – Flat fee based on circuit bandwidth, please see Diversity Enhancement Fee pricing Diversity Backhaul Fee – Diversity Backhaul Pricing (if applicable) - The IOC mileage for a diverse circuit may be different than the primary circuit. **State-of-the-art SONET technology network features** Advanced network photonics enable transmit speeds up to 1Gbps (1 billion bits per second), plus an alternate 1Gbps protection channel for immediate service restoration Leading-edge fiber optics Enables network configurations with route diversity, self-healing rings, and end-to-end survivability , preventing the distress and expense caused by service interruptions If an outage occurs, electronic or fiber cut ring protection automatically restore the service with a time target for electronic failure is four hours and for fiber cut is eight hours.

3. Statewide Availability

Confirm that the Supplier's Private Line services as proposed are available statewide. If there are any locations in the Appendix A "Private Line" worksheet to which Supplier has not proposed to provide its Private Line services, list such locations/exceptions.

Comply (Yes/No)	Explanation/Description (3. Statewide Availability)
Yes	Available statewide.

F. Long Distance Voice Services

VITA currently supports approximately 131 million minutes of toll-free and outbound dedicated and switched long distance services each year to support communications for its variety of operations.

Larger sites use dedicated T1 facilities, often multiple circuits for a single location, to access the virtual voice and toll-free networks. These sites frequently use the same facilities for both outbound and toll-free services. VITA requires the ability to have multiple T1 facilities in combinations of several trunk groups.

Many of the dedicated access lines are employed for shared dedicated access to Centrex. They are also likely to be employed for SIP Trunking if VITA moves in that direction.

1. Inbound Toll-Free Service

VITA currently generates approximately 50 million minutes of inbound toll-free services each year. The demand set for these services is detailed in Appendix A.

The Supplier should briefly describe its toll-free transport service capabilities, including:

- Terminating access methods
- Overflow to other toll-free trunk subgroups
- Call-by-call selection / ISDN Primary Rate Interface
- Automatic number identification (ANI)
- Dialed number identification service (DNIS)
- Routing on terminating busy signal or no answer to another toll-free dedicated or switched access location

Comply (Yes/No)	*Explanation/Description (1. Inbound Toll-Free Service)*
Yes	• ***Terminating Access Methods*** **Switched Toll Free:** A switched toll free call originates and terminates over LECs. CenturyLink transports the call between LATAs and provides any enhanced services required for the toll free number. **Dedicated Toll Free** Dedicated toll free calls differ originate in the same way as a switched call -- the caller's LEC identifies CenturyLink as the carrier for the toll free number and routes the call to our network. The dedicated toll free number terminates to a dedicated trunk group assigned to VITA. • ***Overflow to other toll-free trunk subgroups*** **In-Switch Overflow** Will allow VITA to overflow calls to multiple trunk groups that are located in the same CenturyLink switch if the initial location trunk capacity is fully utilized. The overflow routing can be defined with multiple dedicated route choices with the ability to route to a final switched terminating location (Switched Overflow). **Direct Termination Overflow (DTO)** Will allow VITA to overflow calls to multiple trunk groups that are located among different CenturyLink switches if the initial location trunk capacity is fully utilized. The overflow routing can be defined with multiple dedicated

Comply (Yes/No)	*Explanation/Description (1. Inbound Toll-Free Service)*
	route choices with the ability to route to a final switched terminating location (Switched Overflow). **Super Trunk Overflow** Allows VITA's toll-free calls to overflow to multiple trunk groups in a single CenturyLink switch if the initial location trunk capacity is fully utilized. Calls are routed to a pre-determined group of physical trunk groups in a Super Trunk in a repeating, round-robin distribution until the call is answered. • ***Call-by-call selection/ISDN Primary Rate Interface*** For larger location voice services, CenturyLink offers a range of ISDN solutions that speed the flow of information in your business without the expense of dedicated lines, modems, and special cabling. ISDN PRI: Primary Rate Interface • ***Automatic number identification (ANI)*** *Real-Time Automatic Number Identification (ANI):* CenturyLink identifies the originating number for the toll free call and passes the digits through to VITA's premise equipment and in the call record stream. • ***Dialed number identification service (DNIS)*** DNIS is used when VITA has multiple Toll Free numbers terminating in the same dedicated trunk group (location). CenturyLink will send predefined the DNIS digits with the call stream that will allow VITA to route the call to the desired answering station or ACD Queue at their location (via their PBX or phone system). • ***Routing on terminating busy signal or no answer to another toll-free dedicated or switched access location*** Busy Ring-No-Answer (BRNA) allows VITA to define alternate locations to terminate toll-free calls for busy or no-answer conditions. Up to four terminating destinations can be defined for BRNA. The terminating addresses can be either dedicated or switched in any order, but there must be at least one dedicated termination to allow the use of BRNA.

a. Toll-Free Routing Capabilities

List and briefly describe all routing features available with the Supplier's toll-free service offering, including but not limited to:

- Routing by percentage allocation between locations
- Routing by time-of-day or day-of-week
- Routing by area code, exchange, or individual 10-digit number (ANI)
- The ability to block calls based on area code, exchange or individual 10-digit number (ANI)
- The ability to share a single termination point across multiple toll-free numbers, and to make changes to the termination that will automatically apply to every toll-free number associated with it
- Pre-defined, selectable routing plans that can be defined to operate on multiple toll-free numbers as a group

- The ability to define a set of terminations, which will be attempted in sequence if the preceding termination is busy, until the call can be successfully terminated (routing to next available termination)
- The ability to build, modify or delete each of the above routing specifications in real time

Comply (Yes/No)	*Explanation/Description (a. Toll-Free Routing Capabilities)*
Yes	• ***Routing by percentage allocation between locations*** Percentage allocation routing allows VITA to route calls to a toll free number to different terminating locations based on pre-defined percentages defined by VITA. Termination for percent allocation routing can be switched or dedicated. • ***Routing by time-of-day and day-of-week*** Time-of-day/Day-of-week routing allows VITA to automatically route toll-free calls to different terminating locations based on the time of day or the day of week that a call is placed. In addition, CenturyLink offers day-of-year (holiday) routing that will allow VITA to automatically route toll-free calls to different terminating locations based on the day of the year that the call is placed. Day-of-year routing can include 21 standard holidays and predetermined days of the year specific to VITA. • ***Routing by area code, exchange, or individual 10-digit number (ANI)*** Geographic routing(GEO Routing) automatically routes calls to VITA's chosen location based on the originating location of the caller. We offer Basic Geo Routing and GeoPlus®. Basic Geo Routing is defined by NPA, NPA/NXX, state, LATA or ANI GeoPlus can be defined by zip code, cities, congressional districts, etc • ***The ability to block calls based on area code, exchange or individual 10-digit number (ANI)*** Tailored call coverage (TCC) routing allows toll free calls to be blocked from one or more specific originating areas, defined by LATA, NPA, NPA/NXX, 10-digit ANI or state. • ***The ability to share a single termination point across multiple toll-free numbers, and to make changes to the termination that will automatically apply to every toll-free number associated with it*** Group Call Plan in Control Center allows a customer to make changes to one number of the group that will cause the same change in routing to all the 8xx numbers in the group. Upon award, CenturyLink will work with VITA to identify additional details outlining exactly what VITA is requesting. At that time, a specific plan can be developed. • ***Pre-defined, selectable routing plans that can be defined to operate on multiple toll-free numbers as a group*** EZ Route does have pre-defined routing plans that VITA can choose from. • ***The ability to define a set of terminations, which will be attempted in sequence if the preceding termination is busy, until the call can be***

Comply (Yes/No)	*Explanation/Description (a. Toll-Free Routing Capabilities)*
	successfully terminated (routing to next available termination) **In-Switch Overflow** Will allow VITA to overflow calls to multiple trunk groups that are located in the same CenturyLink switch if the initial location trunk capacity is fully utilized. The overflow routing can be defined with multiple dedicated route choices with the ability to route to a final switched terminating location (Switched Overflow). **Direct Termination Overflow (DTO)** Will allow VITA to overflow calls to multiple trunk groups that are located among different CenturyLink switches if the initial location trunk capacity is fully utilized. The overflow routing can be defined with multiple dedicated route choices with the ability to route to a final switched terminating location (Switched Overflow). **Super Trunk Overflow** Allows VITA's toll-free calls to overflow to multiple trunk groups in a single CenturyLink switch if the initial location trunk capacity is fully utilized. Calls are routed to a pre-determined group of physical trunk groups in a Super Trunk in a repeating, round-robin distribution until the call is answered. • ***The ability to build, modify or delete each of the above routing specifications in real time*** The EZ Route product comes with a GUI interface to write menu-based applications. VITA can: Design and modify call flows Assign routing numbers Manage percent allocation across multiple destination numbers Perform time of day and day of week routing Configure general settings such as timeout messages Upload and download the customer entered digit information routing database and voice files for announcements "Zero – Nine and Yes or No" menu-based speech recognition. These changes are not real time but will take effect in several minutes from when they are built.

b. Toll-Free Announcement Capabilities

List and briefly describe all announcement features available with the Supplier's toll-free service offering, including but not limited to:

- Menu-based announcements and routing with caller prompted for touchtone digits
- Menu-based announcements and routing with caller prompted for spoken digits
- En-route announcements
- The ability to share the same network announcement across different toll-free numbers and have a single announcement storage charge
- Terminating network announcements (courtesy announcement), for both redirecting callers, as well as for an out-of-service toll-free number

- The ability of a caller to return to the beginning of a menu prompt sequence at any time during a call
- The ability for VITA to select the same voice for all VITA announcements
- The ability for VITA to supply pre-recorded announcements to be loaded into Supplier's network, including supported formats and media
- The ability for VITA to securely dial into Supplier's network and record announcements for real-time loading into the network

Comply (Yes/No)	***Explanation/Description (b. Toll-Free Announcement Capabilities)***
Yes	CenturyLink EZ Route is a hosted, network integrated, voice menu routing platform. As part of the CenturyLink Toll Free service suite, EZ Route has all of the advantages of a cloud based solution including operation on a highly available and scalable platform with geographic redundancy, 24x7x365 support and no upfront capital expenditure. • ***Menu-based announcements and routing with caller prompted for touchtone digits*** Toll-free menu routing feature provides 9 x 9 menus for wide range of selections, transfer options and messages. Based on your customized application design, the call is answered via touchtone or speech-recognition menu. The caller inputs a menu choice or provides ANI or DNIS information that is then matched to the EZ Route application. • ***Menu-based announcements and routing with caller prompted for spoken digits*** Based on your customized application design, the call is answered via touchtone or speech-recognition menu • ***En-route announcements*** EZ Route Menu Routing allows VITA to develop voice menus using an intuitive GUI that includes options for press or say prompting and call routing to live agents, premise systems, or other hosted Contact Center applications. Toll-free menu routing provides 9 x 9 menus for a wide range of selections, transfer options and messages. VITA can assign and change transfer-to numbers for routing, upload professionally recorded audio files, or record their own announcements using the phone. EZ Route is a superior option for customers who need to build multiple applications and publish changes quickly to their production environment. • ***The ability to share the same network announcement across different toll-free numbers and have a single announcement storage charge*** Using the CenturyLink EZ Route platform will allow VITA to share network announcements across different toll free numbers. Upon award, CenturyLink will work with VITA to identify additional details outlining exactly what VITA is requesting. At that time, a specific plan can be developed. CenturyLink does not charge announcement storage charges.

Comply (Yes/No)	Explanation/Description (b. Toll-Free Announcement Capabilities)
	• ***Terminating network announcements (courtesy announcement), for both redirecting callers, as well as for an out-of-service toll-free number*** CenturyLink supports courtesy responses to be answered with a recorded message within our network without terminating to the called location via our EZ Route platform. EZ Route is a hosted, network integrated, voice menu routing platform. EZ Route allows the VITA to develop voice menus using an intuitive GUI that includes options for 'press or say' prompting and call routing to live agents, premise systems, or for this requirement will provide a recorded message for the calling party that will stay on the CenturyLink network. VITA can also assign and change transfer-to numbers for routing, upload professionally recorded audio files, or record their own announcements using the phone. EZ Route is a superior option for VITA customers who need to build multiple applications and publish changes quickly to their production environment. • ***The ability of a caller to return to the beginning of a menu prompt sequence at any time during a call*** CenturyLink EZ Route gives the user the ability to return to the beginning of the menu at any time during a call. • ***The ability for VITA to select the same voice for all VITA announcements*** Text to Speech is the default method to communicate menu announcements and transfer messages to your callers. Each announcement is entered in text format to the EZ Route Call Plan. The text is then translated into a voice message for callers. The ability to choose a male or female voice will provide VITA with a consistent voice for all announcements. • ***The ability for VITA to supply pre-recorded announcements to be loaded into Supplier's network, including supported formats and media*** VITA can store and manage pre-recorded announcements and voice files within EZ Route, for use in the Menu Routing. The recorded messages are stored as .VOX files. There are a number of software products that can be used to convert human analog voice into .VOX files. One of these products is GoldWave, http://www.goldwave.com/. The format for recording should be as follows: • .VOX format (also known as telephony format) • m-LAW (MU-LAW) 8kHz (8,000 Hz) • Maximum size 1Mbps (approximately 128 seconds) • Maximum of 50 recordings (up to 1Mbps each) CenturyLink will provide the conversion of customer provided .WAV files to the .VOX format for the initial configuration and set up of EZRoute applications at no charge. • ***The ability for VITA to securely dial into Supplier's network and record announcements for real-time loading into the network*** EZ Route provides a tool that will allow VITA to dial into their EZ Route

Comply (Yes/No)	Explanation/Description (b. Toll-Free Announcement Capabilities)
	platform to record an announcement with real-time network loading.

c. Call Redirection During Service Disruption or Missed Installation

In the event that a VITA toll-free service location experiences a toll-free outage or busy condition, a non-network-related problem such as extreme weather that interferes with normal operation, or a disruption because a service installation date is not met, what capabilities does the Supplier offer VITA to re-terminate the traffic? Indicate what procedures and timeframes are required to accomplish this change.

Comply (Yes/No)	Explanation/Description (c. Call Redirection During Service Disruption or Missed Installation)
Yes	EZ Route Alternate Call Routing allows VITA to have toll-free call routing plans provisioned and available for activation at any time within the EZ Route platform. VITA can have multiple alternate call plans per toll-free number, ranging from a simple switched plan and/or dedicated route plan with multiple linking features. Each Alternate Call Route plan is a distinct and independent plan. Each plan can have different features and terminating addresses.

d. Call Transfer Capability

Briefly describe capabilities to redirect a toll free call, after it has been answered by VITA's Contact Center, in the following ways:

1. Send the caller to a target party (without remaining on the call).
2. Put the call on hold, and conduct a transfer to another target party, with the ability to hear call progress tones (*e.g.,* ringing), then being disconnected from the call once the call is re-terminated at the target party.
3. Conference with the original caller, and the target party, prior to call transfer.

Confirm that each of the above transfer types can be accomplished for the following types of target numbers:

- Another VITA toll-free number.
- Another customer's toll-free number on Supplier's network.
- Any dialable long distance number, potentially outside of Supplier's network.

Detail whether the caller can be returned to the original menu if the call transfers in items 1 and 2 above are unsuccessful.

VITA prefers that the caller being transferred does not hear any audible tones associated with the transfer. State whether Supplier's call transfer solution provides this capability.

VITA prefers to have the ability for a transferred call to pass information to the new termination point that was available during the original call, including ANI and any menu routing digit information. The Supplier should provide a detailed description of information that can be transferred along with a call.

VITA is interested in a speed dial option with the call transfer capability. The Supplier should describe how its speed dial option is used.

Comply (Yes/No)	Explanation/Description (d. Call Transfer Capability)
Yes	**Bidder's Product Description:**

Comply (Yes/No)	*Explanation/Description (d. Call Transfer Capability)*
	CenturyLink can provide VITA with our Transfer and Release (TnR) feature. TnR is a network-based, toll-free feature that allows callers to be transferred to other locations during the same call. By initiating TnR, the 8XX call is transferred to another location or agent. The called party has three options to transfer the call to another party. 1. **Blind**—allows Agent A to transfer the call to Agent B without an announcement 2. **Consult**—allows Agent A to consult with Agent B prior to transferring the calling party (during the consult mode, the calling party stays on hold) 3. **Conference**—allows all parties (A, B and calling) to conference prior to transferring the calling party to Termination/Agent B Music on hold (MOH) option is provided to prevent caller from hearing audible tones associated with the transfer. For MOH during transfers VITA may select: 1. CenturyLink-provided MOH 2. Voice recording (e.g., Please hold while your call is transferred) 3. MOH provided by VITA **Benefits of TnR:** Increases efficiency by quickly transferring the calling party to the appropriate agent or location Seamless transfer of information through 2- or 3-way conferencing TnR provides ANI and DNIS pass through delivery for service continuity Reduced transport costs through released lines and reduced port usage If a call transfer is unsuccessful, additional transfers may be attempted to a maximum of 20 transfer attempts are allowed per call Callers can be transferred to any nationally-approved, toll-free switched or dedicated termination Callers can be transferred to CenturyLink, national 8XX numbers. Speed dialing is available within the TnR dialing plan. These dialing plans define the termination for each transfer “dialed number” for a specific toll free number. The dialing plan includes routing to specific trunk groups with DNIS or an ANI for switched termination. A range can be built into the TnR Dialing Plan such that any number dialed within the range will represent the desired transfer destination and will be routed to that specific destination

e. Intelligent Call Processing

VITA does not currently use Intelligent Call Processing, meaning the ability to route calls to different centers based on real-time interaction between the toll-free network and VITA’s call management equipment. An example of this type of service works with the Cisco Intelligent Call Manager (formerly Geotel) system. However, VITA may decide to use this capability in the future. Briefly describe Supplier’s capability to provide this service and which call management systems are supported.

Comply (Yes/No)	*Explanation/Description (e. Intelligent Call Processing)*

Yes	Intelligent Call Routing allows VITA to provide pre-routing instructions from their Cisco ICM intelligent call processing to CenturyLink carried toll-free calls. Contrary to using hard coded toll-free routing for a toll free number in the CenturyLink SCP, IPR allows VITA to provide routing (through an inquiry to their Cisco ICM) for the initial termination of their toll free calls. This service requires VITA have a Cisco ICM (GeoTel) intelligent call processor and send "labels" which can be interpreted as routing instructions by the CenturyLink voice network for toll free calls.

f. Toll Fraud Detection

As part of the toll-free service, Supplier should provide an advanced plan or service to provide proactive fraud control and monitoring of VITA's toll-free usage, and share in any losses caused by toll fraud. The Supplier should specify:

- What types of fraud control management and reporting are available to VITA
- How VITA will be notified of the potential fraud
- The maximum liability that VITA would incur for toll fraud
- Any required precautions that VITA must implement to be eligible for coverage
- Any exclusions to coverage

Comply (Yes/No)	***Explanation/Description (f. Toll Fraud Detection)***
Yes	• ***What types of fraud control management and reporting are available to VITA*** CenturyLink operates a 7x24x365 fraud operational center staffed with analysts that are trained to detect suspected fraud or abuse on services interconnected to CenturyLink facilities. This could include voice services (one-plus, dedicated outbound, dedicated inbound, toll free, international toll free, calling card, wireless, and Voice over IP (VoIP). CenturyLink fraud services include continuous real time call analysis based on unique rules and thresholds designed to identify fraud or abuse. CenturyLink fraud systems offer call pattern analysis for international, Caribbean, toll free, domestic, call suspense, and unbilled toll to identity and review with VITA possible usage anomalies or trends that may indicate fraud or abuse requiring action by VITA. • ***How VITA will be notified of the potential fraud*** CenturyLink, at the direction of VITA, will establish special handling procedures in notifying VITA of suspected fraudulent use. This includes after hours, weekends, and holidays. CenturyLink will attempt to verify with VITA certain calling activity prior to taking any action. CenturyLink blocks or restriction of international termination associated with fraudulent calling is performed on the applicable originating billing entity. (i.e., telephone number or originating dedicated trunk group) While VITA is in the best position to advise the CenturyLink Fraud Management Center if a particular calling pattern is fraudulent or suspected fraudulent, CenturyLink may implement these restrictions based on specific, prearranged instructions by the customer if no response is provided to CenturyLink. These arrangements can be further developed prior to

Comply (Yes/No)	Explanation/Description (f. Toll Fraud Detection)
	the customer's activation of services. There could be many different scenarios of fraud detection and suspected fraud, but our process is a simultaneous notification of the customer and placing network restrictions on products and services (if technically possible) if no response or delayed response to prevent further abuse. • ***The maximum liability that VITA would incur for toll fraud*** CenturyLink's goal is to quickly identify potential fraud. We will use best efforts to apply blocks to restrict calls to international locations that have been identified as suspected fraud. Please Note: CenturyLink blocks or restriction of international termination associated with fraudulent calling is performed on the applicable originating billing entity. (i.e., telephone number or originating dedicated trunk group). Once the block or restriction is placed on the applicable telephone number or originating dedicated trunk group, further calls to the associated international termination will be blocked and VITA's liability will be limited to the fraudulent calls made up to the time when the block or restriction was applied. • ***Any required precautions that VITA must implement to be eligible for coverage*** VITA may need to make necessary changes or corrections within their premise equipment to safeguard against fraud. CenturyLink will partner with VITA, to implement necessary network solutions that will address any fraud exposure. • ***Any exclusions to coverage*** CenturyLink Fraud detection is available for switched one-plus dialing, dedicated outbound, dedicated inbound, toll free, international toll free, calling card, wireless, and VOIP.

g. Toll-Free Routing and Reporting Tool

VITA would like to have an interactive tool that can provide toll-free call detail information in near real time. This information should include:

- Call date, time and duration
- Caller ANI
- Toll-free number dialed
- Whether the call completed or did not complete in the network or at VITA's location
- Trunk group on which the call terminated
- Whether network routing menu announcements were used and the selections that were made

A caller to a VITA toll-free number should perceive a single call, even though it may be transferred using the call transfer capability. VITA would like the ability to use the reporting tool to track customer calls through all transfers and terminations that are associated with a call. This capability ensures that the caller experience meets VITA's customer service standards. VITA would like Supplier to provide this information on a daily basis for calls handled the previous day.

VITA would also like the Supplier to provide the following capabilities:

- Trend analysis
- The ability to change toll-free call routing parameters in real-time
- An inventory of all toll-free numbers (routing plan(s) structure, terminating information, cross-reference to circuit information), regardless of whether or not the number had usage
- A view into trunk group performance
- The ability to create schedules to automatically run reports
- Ad hoc reporting capability
- Access to at least 100 days of traffic
- The ability to download all information so that VITA can retain it as long as necessary

Describe in detail how Supplier can support these requirements and any other capabilities its tool offers that would be of interest to VITA. Also describe the form of access provided to customers for the tool(s) (e.g. Web-based, secure VPN, etc.).

It is critical that the Toll-Free Routing and Reporting Tool provide Master Access to VITA for all traffic statistics, but preclude each agency from being able see one another's traffic statistics. Confirm that Supplier will work directly with VITA to establish login credentials for VITA to provide this functionality while additional login credentials for certain individual agencies will strictly segregate traffic.

Confirm that subscribing to the tool will not preclude VITA from contacting Supplier service centers by telephone to implement real-time routing changes.

Comply (Yes/No)	***Explanation/Description (g. Toll-Free Routing and Reporting Tool)***
Yes	VITA would like to have an interactive tool that can provide toll-free call detail information in near real time. This information should include: Call date, time and duration EZ Route Standard report shows call detail record which includes call date, time and duration of call. Caller ANI EZ Route Standard report shows the caller ANI detail. Toll-free number dialed EZ Route Standard report shows toll-free number dialed detail. Whether the call completed or did not complete in the network or at VITA's location EZ Route Application report provides a summary of incoming calls, broken out by toll-free number into 60 minute increments. This information assists in the evaluation of call activity and the duration of the call. Trunk group on which the call terminated EZ Route Standard reporting provides the details on which trunk group the call was terminated on. Whether network routing menu announcements were used and the selections that were made.

Comply (Yes/No)	Explanation/Description (g. Toll-Free Routing and Reporting Tool)
	EZ Route Enhanced reporting provides additional reports that enable VITA to obtain detailed information on call volumes, durations and the caller's telephone number in standard report format. Enhanced reporting also provides information on the choices callers make within the EZ Route applications. This optional reporting feature collects information from EZ Route applications on nodes chosen by callers and the volume for each node. Using this information, VITA can analyze whether your IVR application is performing the functions you intended; and you can make adjustments to achieve greater effectiveness. VITA would also like the Supplier to provide the following capabilities: • ***Trend analysis*** EZ Route Enhanced reporting provides additional reports that enable VITA to obtain detailed information on call volumes, durations and the caller's telephone number in standard report format. Enhanced reporting also provides information on the choices callers make within the EZ Route applications. This optional reporting feature collects information from EZ Route applications on nodes chosen by callers and the volume for each node. Using this information, VITA can analyze whether your IVR application is performing the functions you intended; and you can make adjustments to achieve greater effectiveness. • ***The ability to change toll-free call routing parameters in real-time*** EZ Route is an online management tool that enables you to develop, manage and maintain toll-free caller announcement, prompt and call routing features. You can create and modify these features in real-time to address various changes that may be occurring within your business environment. • ***An inventory of all toll-free numbers (routing plan(s) structure, terminating information, cross-reference to circuit information), regardless of whether or not the number had usage*** EZ Route is an online management tool that enables allows you to manage and view toll-free and transfer numbers assigned to your EZ Route account. The Statistics function shows detailed activity information for your EZ Route voice applications call volume statistics. Historical data can be viewed, printed or downloaded to a comma-separated values (CSV) format file. • ***A view into trunk group performance*** EZ Route online tool allows VITA to run reports trunk group performance. • ***The ability to create schedules to automatically run reports*** EZ Route online tool allows VITA to create and schedule reports to run automatically. • ***Ad hoc reporting capability*** EZ Route online tool gives the VITA the ability to run ad hoc reports. • ***Access to at least 100 days of traffic*** EZ Route Reporting Tool stores traffic data for 120 days. EZRoute

Comply (Yes/No)	Explanation/Description (g. Toll-Free Routing and Reporting Tool)
	Enhanced Reporting Manager provides data for 12 months. • ***The ability to download all information so that VITA can retain it as long as necessary*** EZ Route online tool allows VITA to filter reports by hour, day, week, month or by a customized date range. VITA can download reports in CSV (comma-separated values) format for access by desktop applications like Microsoft Excel. Once the data has been downloaded to an application, you can modify the data and present it in a customized format. • ***Describe in detail how Supplier can support these requirements and any other capabilities its tool offers that would be of interest to VITA. Also describe the form of access provided to customers for the tool(s) (e.g. Web-based, secure VPN, etc.).*** CenturyLink EZ Route is a hosted, network integrated, voice menu routing platform. As part of the CenturyLink Toll Free service suite, EZ Route has all of the advantages of a cloud based solution including operation on a highly available and scalable platform with geographic redundancy, 24x7 support and no upfront capital expenditure. EZ Route allows VITA to develop voice menus using an intuitive, graphical user interface (GUI) that includes options for press or say prompting and call routing to live agents, premise systems, or other hosted Contact Center applications. VITA can also assign and change transfer-to numbers for routing, upload professionally recorded audio files, or record their own announcements using the phone. EZ Route is a great option for VITA if they need to build multiple applications and publish changes quickly to their production environment.

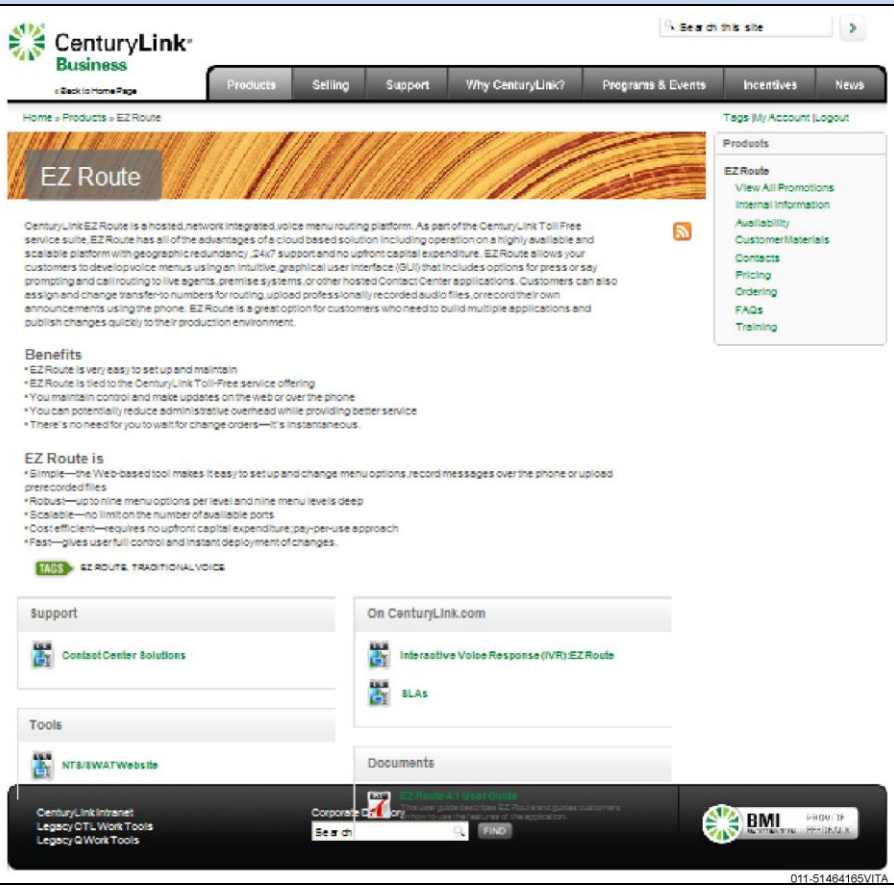
h. Historical Toll-Free Routing and Reporting

VITA would like to receive monthly reports that can provide usage and toll-free platform information. The reports should include:

- An inventory of all toll-free numbers (routing plan(s) structure, terminating information, cross-reference to circuit information), regardless of whether or not the number had usage
- Volumes of usage per 800 number monthly
- Call level detail, including call date, time and duration and routing information
- Volumes of features used, and number of active stored announcements
- Ad hoc reporting capability
- Access to the monthly data for at least 12 months

Describe the media (CD or Portal), or reporting platform that is available for monthly reporting.

Comply (Yes/No)	Explanation/Description (h. Historical Toll-Free Routing and Reporting)
Yes	EZ Route Enhanced Reporting are accessed by using a Web browser link from CenturyLink's Toll Free customer management Web site by the user. This allows VITA to create daily/weekly/monthly reports that they would like to see on the toll-free platform.

Comply (Yes/No)	*Explanation/Description (h. Historical Toll-Free Routing and Reporting)*
	

2. Outbound Long Distance Service

VITA currently generates approximately 81 million minutes of outbound dedicated and switched voice traffic each year in support of communications for its strategic business operations. Approximately 35% of outbound usage originates and/or terminates over dedicated access. The demand set for this service is detailed in Appendix A.

a. Long Distance Virtual Voice Network

The Supplier should briefly describe its virtual voice network features, including:

- Overflow to switched access on terminating busy signal
- Switched digital data capability
- Capability to redirect and transfer network calling (do not offer)

Comply (Yes/No)	*Explanation/Description (a. Long Distance Virtual Voice Network)*
Yes	**Outbound Long Distance Service** Long Distance calling is a combination of digital switching and touch-tone signaling, making it simple to introduce direct dialing of Long Distance and international calls. Completion is made practical by powerful computers that can track and record changing relationships between telephone companies and their customers. Most Long Distance calls are switched between carriers to complete the call, but in some cases, calls are “dedicated” on-net by connecting on the interexchange carrier (IXC) rather

Comply (Yes/No)	*Explanation/Description (a. Long Distance Virtual Voice Network)*
	than through a local exchange carrier (LEC). A Long Distance call is when the call destination is outside the service area of the originating local calling area (rate center area). The CenturyLink advanced intelligent network platform includes the following features: The switches include Nortel DMS 250 and SONUS Softswitch for domestic traffic and Nortel DMS 300 for the international gateway. These, along with all other digital telephone switches (e.g., those used by the local exchange carrier (LEC)), are referred to as signaling switching points (SSPs). The SSPs are connected to all other SSPs with at least two diverse Time Division Multiplexing (TDM) Inter-Machine Trunks (IMTs), and the SONUS Softswitches utilize the CenturyLink MPLS backbone for VoIP backbone Voice transmission. The primary transmission routing is flat (SSP to SSP), but the network is built with a hierarchical backup routing structure that uses multiple switches to complete calls when necessary. Signal transfer points (STPs) act as the connection for the Signaling System 7 (SS7) network. CenturyLink uses Nortel broadband digital switch STPs for call processing. SS7 is a method of out-of-band signaling allowing optimization of the CenturyLink network and decreased set-up time for call processing. A circuit-switched SS7 network platform carries the outbound voice traffic and supports out-of-band switching and various advanced intelligent network applications. **Long Distance Virtual Voice Network** CenturyLink offers Virtual Network Services (VNS), the premier service for long-distance and international calling. VNS is a customized, software-defined virtual private network service that provides customers unified communication and management features for their multiple locations. As part of CenturyLink's pricing plans, VNS benefits from cross-service integration of pricing, billing, reporting, features, and support. VNS is built on a platform based on DSC Communications equipment. VNS users and call routing instructions are provisioned in the SCP (Service Control Point) Database, where each VNS customer is assigned a "Subscriber (or Network) ID." Individual VNS users are then defined in the SCP Database, with the ability to customize each user's respective call types. The VNS platform is accessed through various cost-effective solutions, including: Dial-1 access; DAL (Dedicated Access Lines), which includes digital, ISDN PRI, and Analog; and VNS card access, which has worldwide access with the flexibility of a calling card at low VNS rates. The following are standard CenturyLink VNS features: Customer defined seven and/or 10-digit dial plans DAL termination Switched termination Dial-1 access for remote locations Direct Termination Overflow Forced On-Net or DAL termination Universal (Pre-defined) range privileges.

Comply (Yes/No)	Explanation/Description (a. Long Distance Virtual Voice Network)
	The following Enhanced VNS features are also available: VNS Card with Private Dialing Plans provides VITA employees' remote, mobile access to the private network. In addition, range privileges can be assigned per card to manage available call types; and the VNS card has speed dialing capability allowing the user to program nine frequently dialed numbers. The VNS card does not presently support Project Account Codes. Remote 8xx Access to VNS allows the Network ID to be assigned to one remote toll-free number. Remote 8xx access provides access to the private dial plan and offers excellent fraud/cost controls. Project Account Codes are available for Remote 8xx Access Error Announcements International Private Dial Plans provide the ability to provision international numbers as part of the private dial plan, and effectively provides "Forced On-Net" features for an international number. Customized Range Privileges will define valid call types for a given Network ID by NPA and/or country/city codes. Applications of this feature might include only allowing international calls to Paris, France; allowing international calls to everywhere except England; or allowing all calls within the NANP except calls to Canada. • ***Overflow to switched access on terminating busy signal*** A VNS private dial plan Will allow VITA to overflow calls to multiple trunk groups with the ability to route to a final switched terminating location • ***Switched digital data capability*** Switched Digital Service provides digital connections in 64 Kbps increments of bandwidth via the public switched telephone network. Customer can access the Service via the following configurations:, LEC-provided Basic Rate Interface ("BRI"), and LEC-provided Primary Rate Interface ("PRI"): **BRI**, being a form of Integrated Services Digital Network ("ISDN"), offers the ability to use the same line for voice or data on a call-by-call basis. A BRI is a single line connection, the wiring for which is usually an ordinary twisted copper pair. However, BRI provides more functionality than an ordinary phone line or even SW 56 or switched 64 kbps service. In addition to voice and data capability, BRI offers two 64 kbps "bearer" (or "B") channels to support the applications of VITA, while call set-up and signaling are performed on a separate "out-of-band" channel called the "D" channel. This arrangement is often called 2B + D. Depending on VITA's CPE, the B channels can be combined to provide 128 kbps for a single application, or they can be used to support two different applications simultaneously, each one running at 64 kbps. As with SW 56, Customer can aggregate as many "B" channels as it needs to provide bandwidth-on-demand functionality. **PRI**, being another form of ISDN, provides call-by-call capability and uses 64 kbps B channels and out-of-band signaling channels. It differs from BRI, however, in that it is provisioned over a T1, typically with 23 B channels, while the 24th is a D channel to support signaling on the other 23. This arrangement is often called 23B + D.

Comply (Yes/No)	Explanation/Description (a. Long Distance Virtual Voice Network)
	• ***Capability to redirect and transfer network calling*** Redirect and transfer is not a function of the CenturyLink Virtual Voice Network.

b. Outbound Features

List and briefly describe all major features not listed above that are available with the outbound virtual voice network service offering.

Comply (Yes/No)	Explanation/Description (b. Outbound Features)
Yes	All features available for CenturyLink Virtual Voice Network are listed above.

c. PIC Freeze

Commit to placing preferred inter-exchange carrier (PIC) freezes on all of VITA's switched access lines to prevent inappropriate changes in long distance carrier services on these lines. VITA, not the Supplier, will be identified as the party that can rescind the freeze or modify the carrier choice.

Comply (Yes/No)	Explanation/Description (c. PIC Freeze)
Yes	After verification that the switched access line is correctly assigned to the CenturyLink PIC code, and upon the receipt of a Letter of Authorization from VITA, CenturyLink will work with the appropriate LECs to place PIC freezes on all outbound lines to prevent unauthorized PIC changes.

d. Toll Fraud Detection

As part of the basic outbound service, Supplier should provide, at no additional cost, international call blocking services where requested by VITA, premium number call blocking, and "dial-around" long distance service blocking for all numbers.

The Supplier should have an advanced plan or service to provide proactive fraud control and monitoring of VITA's long distance usage. The Supplier should specify:

- What types of fraud control management and reporting are available to VITA
- How VITA will be notified of the potential fraud
- The maximum liability that VITA would incur for toll fraud
- Any required precautions VITA must implement to be eligible for coverage
- Any exclusions to coverage

Comply (Yes/No)	Explanation/Description (d. Toll Fraud Detection)
Yes	• ***What types of fraud control management and reporting are available to VITA*** CenturyLink operates a 7x24x365 fraud operational center staffed with analysts that are trained to detect suspected fraud or abuse on services interconnected to CenturyLink facilities. This could include voice services (one-plus, dedicated outbound, dedicated inbound, toll free, international toll free, calling card, wireless, and Voice over IP (VoIP).

Comply (Yes/No)	Explanation/Description (d. Toll Fraud Detection)
	CenturyLink fraud services include continuous real time call analysis based on unique rules and thresholds designed to identify fraud or abuse. CenturyLink fraud systems offer call pattern analysis for international, Caribbean, toll free, domestic, call suspense, and unbilled toll to identity and review with VITA possible usage anomalies or trends that may indicate fraud or abuse requiring action by VITA. • ***How VITA will be notified of the potential fraud*** CenturyLink, at the direction of VITA, will establish special handling procedures in notifying VITA of suspected fraudulent use. This includes after hours, weekends, and holidays. CenturyLink will attempt to verify with VITA certain calling activity prior to taking any action. CenturyLink blocks or restriction of international termination associated with fraudulent calling is performed on the applicable originating billing entity. (i.e., telephone number or originating dedicated trunk group) While VITA is in the best position to advise the CenturyLink Fraud Management Center if a particular calling pattern is fraudulent or suspected fraudulent, CenturyLink may implement these restrictions based on specific, prearranged instructions by the customer if no response is provided to CenturyLink. These arrangements can be further developed prior to the customer's activation of services. There could be many different scenarios of fraud detection and suspected fraud, but our process is a simultaneous notification of the customer and placing network restrictions on products and services (if technically possible) if no response or delayed response to prevent further abuse. • ***The maximum liability that VITA would incur for toll fraud*** CenturyLink's goal is to quickly identify potential fraud. We will use best efforts to apply blocks to restrict calls to international locations that have been identified as suspected fraud. Please Note: CenturyLink blocks or restriction of international termination associated with fraudulent calling is performed on the applicable originating billing entity. (i.e., telephone number or originating dedicated trunk group). Once the block or restriction is placed on the applicable telephone number or originating dedicated trunk group, further calls to the associated international termination will be blocked and VITA's liability will be limited to the fraudulent calls made up to the time when the block or restriction was applied. • ***Any required precautions that VITA must implement to be eligible for coverage*** VITA may need to make necessary changes or corrections within their premise equipment to safeguard against fraud. CenturyLink will partner with VITA, to implement necessary network solutions that will address any fraud exposure. • ***Any exclusions to coverage*** CenturyLink Fraud detection is available for switched one-plus dialing, dedicated outbound, dedicated inbound, toll free, international toll free, calling card, wireless, and VOIP.

3. Voice Access

Detail the telephony interfaces that the Supplier supports (e.g., SIP, T-1, ISDN, CAS, etc.). VITA is specifically interested in the Supplier's ability to support IP Trunking.

Comply (Yes/No)	*Explanation/Description (3. Voice Access)*
Yes	CenturyLink supports Session initiation protocol (SIP) for advanced Voice over IP services. Services include SIP Trunk, IP Long Distance and IP Toll Free. The following CODECs are supported: G.711 ulaw, G.711 alaw, G.729A, G.729AB. CenturyLink supports Channel Associated Signaling (CAS) and Non-Facility Associated Signaling (NFAS) for multiple T1s on the CTL LD network for dedicated access. A single D channel can support multiple T1s of B channels in a single trunk group. While the physical limit of T1s is larger (CTL order process limits T1s in a single ISDN trunk group to "7"), CTL recommends that no more than 4 T1s be built in an NFAS ISDN signaled trunk group. It is further recommended that there be a backup D channel for trunk groups using NFAS ISDN signaling with more than 3 T1s. The normal recommended configuration for CTL NFAS ISDN signaling arrangements is 94 B+D (primary D on channel 24 (channel 24 of 1st T1) and backup D on channel 48 (channel 24 of 2nd T1) of the trunk group). CenturyLink supports ISDN PRI signaling with predominantly NI1 Standards based protocols. Four NI1 protocols are supported (Nortel (recommended for all PBX), 5ESS, 4 ESS and AT&T Customer (for older AT&T PBXs)). If the customer has equipment that cannot function with NI1 standards, CTL can make a special exception and provision the dedicated access on an Sonus NGS LD switch for NI2 ISDN protocol.

4. Statewide Availability

Confirm that the Supplier's Long Distance Voice services as proposed are available statewide. If there are any locations in the Appendix A "Access-Voice" worksheet to which Supplier has not proposed to provide its Voice Access services, or any locations in Virginia where Supplier's Long Distance Voice services are not available, list such locations/exceptions.

Comply (Yes/No)	*Explanation/Description (4. Statewide Availability)*
Yes	Available statewide.

G. Internet-Based VPN Managed Services Takeover

One of VITA's most important current applications is a managed network required for state agencies, localities, schools, and Federal Agencies to access the Criminal Justice Information System. This network is referred to as the Virginia State Police Managed IP-VPN, or the "VSP Managed IP-VPN." The network enables law enforcement and public safety agencies throughout the Commonwealth to continually supply, update, and access the Criminal Justice Information System in accordance with their daily law enforcement activities.

In the current environment, the state agencies, localities, schools, and Federal Agencies on the network own the customer premises VPN switches, but VITA's incumbent provider manages all of this CPE. This current environment includes management of Juniper VPN firewalls and Nortel Contivity VPN switches. The Virginia State Police is in the process of transitioning the Nortel Contivity switches to the Juniper SRX Series Services Gateways

acting as VPN switches. However, at the time of expiration of the current contract in 2013, this transition process will still be ongoing, and is expected to extend into 2014.

These VPN switches are located at VITA, the Virginia Department of Transportation, the Virginia State Police, and other Executive Branch agencies. A large number of law enforcement and public safety agencies, plus numerous other entities with reason to require access to law enforcement and criminal justice information, act as remote sites on the network.

Many of the remote sites access the network via an Internet connection established over the current provider's frame relay service. In these cases, transport is based on Internet access over a separate Internet PVC emanating from a frame relay port, and requires a 56K or T1 access connection. Many other remote sites access the network not over the current provider's frame relay service, but rather over a cable, DSL or other broadband connection. They obtain this connection under one of a set of Broadband Contracts that public bodies within the Commonwealth hold with broadband services providers. Typically these result in Ethernet-based WAN connections from the remote site into the VPN network.

Even where a given site does not utilize the current provider's *transport* service, the existing provider does provide on-site maintenance on the Juniper and Nortel VPN equipment in use at the remote users' sites. Following the transition off the Nortel equipment described above, the incumbent provider will be providing maintenance throughout the Juniper-based network.

At the same time, many of the sites that are explicitly Division or Area headquarters of the Virginia State Police, as well as sites with closely related State Police functions such as Narcotics Task Forces, are being transitioned to a separate management structure under Northrop Grumman, and will no longer receive either transport or maintenance services from the current provider.

With all this in mind, the Supplier will perform a transparent, managed takeover of the current VPN network. The Supplier will:

- Manage equipment for all sites on the IP-VPN once they have converted to the Juniper IP-VPN equipment, other than those supported by Northrop Grumman, and
- Provide the associated dedicated transport for those sites where the transport is currently provided by the incumbent provider.

In the Appendix A workbook, under the **VSP Managed IP-VPN** tab, all of the sites requiring maintenance are listed with the level of Required Maintenance Coverage, typically covering either business day or 24x7. Also listed are the interface types required for the Juniper equipment at the site – typically TDM at either 56K or T1, or Ethernet – depending principally on whether the site in question is using the current transport provider's frame relay Internet gateway or is utilizing one of the Broadband Contracts. This site listing includes all sites on the VSP IP-VPN except those being transitioned to Northrop Grumman.

Additionally, under the **Dedicated Internet** tab, transport requirements – access and port sizes – for the VSP IP-VPN are listed for those sites that do employ the current managed equipment provider's transport service. The transport connectivity supporting this application is specified as Dedicated Internet Ports, in recognition of the fact that suppliers do not generally, or any longer, assign PVCs over frame relay for this purpose, and additionally in recognition of the fact that frame relay and ATM in the current environment for other applications is being presented in Appendix A generally as another service – MPLS.

In the Appendix A workbook, under the **VSP Managed IP-VPN** tab, all of the sites requiring management (and maintenance) are listed with the level of Required Maintenance Coverage, typically covering either business day or 24x7.

In general, the managed equipment services requirements for this application are equivalent to those detailed in the following Section H, Managed Services and Other Support Services.

However, as a starting point, VITA needs to specifically understand the Supplier's approach to achieving the takeover of the VSP Managed IP-VPN as transparently as possible.

1. Direct Managed Takeover

Can the Supplier perform a transparent, managed takeover of the current IP-VPN network based on the equipment described above and employing Dedicated Internet connections?

Comply (Yes/No)	*Explanation/Description (1. Direct Managed Takeover)*
Yes	CenturyLink is uniquely positioned to provide a complete managed solution to the Virginia State Police Managed IP-VPN network. A key value-proposition of our solution is that we can combine Internet network services, Network Management Services and CPE maintenance services to provide an end-to-end solution from one company. In addition to our Internet service (described in section D), our proposal meets all the requirements with the following services: 1) Network Management Service (Comprehensive Service Level) 2) CPE Maintenance **Network Management Service** CenturyLink Network Management Service (NMS) is a comprehensive, integrated package of products and services for building and managing networks. It includes 24 x 7 monitoring of equipment and transport links, complete fault and performance management, complete network analysis, configuration backup, online reports and total customer agency. NMS is offered in 3 service tiers, which vary by service features. This solution proposes **NMS – Comprehensive** the highest service tier, where IPsec Tunnel Management is a significant support feature. The central part of this service is in-band monitoring/management tools that allows for the continuous monitoring and management of network performance. Network Management Services works with any provider on virtually any technology. It has one of the broadest and deepest portfolios of devices certified for management in the industry, and all devices undergo a thorough certification process. CenturyLink Network Management Services is available in the following three service levels. To support the requirements of the VSP IP-VPN network, we propose **NMS – Comprehensive** service level which includes the following: • Continuous network monitoring – 24 x 7 x 365 proactive network monitoring to identify issues with monitored devices • Real-time notification – your designated maintenance personnel contacted to resolve issues • Network operations center – available 24 x 7 x 365. • Fault management to isolate and correct any troubles. • Configuration management services include: design, provisioning, backup, comparison and restoration. • Online reports document network performance. • Network inventory and topology map. • In-band monitoring of customer devices and CenturyLink data

Comply (Yes/No)	Explanation/Description (1. Direct Managed Takeover)
	transport 24/7. • Web-based portal for access to ticketing system, reports, inventory and topology maps and change request. • Total customer agency for resolving issues with non-CenturyLink transport • Total customer agency for repair issues with customer premises equipment (CPE) non-CenturyLink maintenance providers (e.g. maintenance directly with ADTRAN, Juniper, etc) • Configuration of site-to-site virtual private network (VPN) connectivity. • Firewall internetwork operating system (IOS) policies to secure hardware. • Monitoring of site-to-site VPN connectivity. **CPE Maintenance Service** CenturyLink is proposing Juniper Networks Maintenance Services which include the following support services: • **JTAC Access** With Juniper Networks Technical Assistance Center (JTAC) support, CenturyLink and VITA will have unlimited access to JTAC engineers by phone and online 24/7/365. As a single point of contact for all support needs, JTAC engineers have extensive experience in supporting large-scale networks and will help diagnose system problems, configure, troubleshoot, and provide work-around solutions where necessary. To ensure that JTAC responds as quickly as possible, automatic escalation alerts to senior management are triggered on all priority issues. • **Software Releases** During the term of the Juniper Networks Service Contract, Juniper Networks shall make available the Supported Updates (as defined below) to CenturyLink and VITA for support of the End User's Support Services Specialist-Maintained Juniper Networks Product, subject to the terms and conditions set forth below. • **Online Tools** During the term of the SSSA, Juniper Networks provides CenturyLink and VITA with self-service access to the Juniper Networks Partner Center and Customer Service Center (CSC) online portals that provide information, answers, tools, and service options for use in supporting its End User customers' products. Offerings include, but are not limited to software downloads, technical alerts and bulletins, Return Materials Authorization (RMA) requests, and the Juniper Networks Knowledge Base. • **8 x 5 Next Business Day Maintenance** CenturyLink will work with Juniper Networks to deliver replacements at the Ship-To Address in advance of receiving returned defective hardware on the next Business Day, if the RMA is issued by 3 p.m. (local JTAC time) on a Business Day. • **Same-Day Onsite Maintenance**

Comply (Yes/No)	*Explanation/Description (1. Direct Managed Takeover)*
	CenturyLink will work with Juniper Networks to dispatch a trained service technician to the affected site and will deliver replacements to the Ship-To Address, 24 hours a day, 7 days a week, within 4 hours of issuance of RMA in advance of receipt of defective hardware. **On-Site Installation of Juniper SRX-210HE (New locations)** **Scope of Work** • Customer ships Juniper SRX210HE to CenturyLink specified staging location. • CenturyLink programs Juniper SRX210HE with appropriate configuration for specific location including IPSec Tunnels to primary, backup and NMS sites. • CenturyLink technician dispatches to customer location (any location within the Commonwealth of Virginia) during regular business hours, Monday – Friday. **During Installation, the onsite technician performs the following tasks:** • Unpack the product and any accessories necessary for installation • Rack-mount the product in a rack or wiring closet using the rack-mounting hardware included with the chassis (if available). • Physically connect the hardware to the network and to the customer-provided LAN connections • Completes configuration of device • Performs testing and acceptance with customer and CenturyLink Network Operations Center.

a. Experience with Juniper Equipment

Does the Supplier have experience managing the Juniper equipment in question, including the SRX Service Services Gateways that are becoming increasingly critical to the application?

Comply (Yes/No)	*Explanation/Description (a. Experience with Juniper Equipment)*
Yes	CenturyLink has been an Elite Juniper Partner since the inception of the program in 2004. We resell the complete line of Juniper Networks data products for enterprise customers. Juniper security products, such as the SRX series, have earned a spot in the upper right quadrant of the Gardner Magic Quadrant. Further, multiple Juniper models are maintained on the Network Management Service (NMS) list of certified CPE that qualifies for support. Certification ensures that products, process, and people are aligned to provide reliable, repeatable services. A complete certification, involves interoperability testing with NMS tools and systems which report faults and performance of this specific feature. Personnel skills and training of operations engineers is part of the overall certification process.

2. Non-Disclosure Agreement for All Personnel

All Supplier personnel that have configuration access to the Juniper VPN devices will be required to sign a Non-Disclosure Agreement with the Virginia State Police.

Comply (Yes/No)	*Explanation/Description (2. Non-Disclosure Agreement for All Personnel)*
Yes	CenturyLink will cause all employees that will have access and configuration capability on the VITA Juniper equipment to sign a mutually agreed upon Non-Disclosure Agreement.

3. Criminal Background Check

All Supplier personnel that have configuration access to the Juniper VPN devices will be required to submit to a fingerprint-based national criminal background check. This is a one-time requirement.

Comply (Yes/No)	*Explanation/Description (3. Criminal Background Check)*
Yes	CenturyLink will use commercially reasonable efforts to cause all employees that will have access and configuration capability on the VITA Juniper equipment to be subject to the finger-print background check. If employees refuse and CenturyLink is unable to staff the support of VITA with employees that have had the check performed, CenturyLink will negotiate in good faith with VITA to resolve the issue. CenturyLink does not anticipate that this background check will be refused by the group of employees targeted to support the VITA account. CenturyLink will limit access and configuration capability to personnel in the CenturyLink NOC that will take first call on trouble tickets.

4. Timing of the Direct Managed Takeover

VITA has the right to decide whether the implementation of the Managed Takeover will be concurrent with the implementation of all other services presented in the demand set of this RFP, or will begin only upon the conversion of all of the Nortel Contivity sites to Juniper by the incumbent provider.

Comply (Yes/No)	*Explanation/Description (4. Timing of the Direct Managed Takeover)*
Yes	CenturyLink has read, understands and will comply.

a. Nortel Spares Pool

The Virginia State Police will maintain a Nortel spares pool with equipment recovered from other sites that were converted to Juniper equipment. If VITA decides to begin the implementation of the Managed Takeover before all of the sites have converted to Juniper equipment, it will provide access to the Nortel equipment for those sites that have not converted to Juniper. However, as delineated in the following section, the Supplier is expected to meet specified service levels for all of the Juniper sites by storing Juniper spares at the Supplier's own sites, or at the sites of subcontractors or other partners.

Comply (Yes/No)	*Explanation/Description (a. Nortel Spares Pool)*
Yes	CenturyLink has read, understands and will comply.

5. Statewide Availability

Confirm that the Supplier's Managed IP-VPN services as proposed for the VSP Managed IP-VPN takeover are available statewide. If there are any locations in the Appendix A "VSP Managed IP-VPN" worksheet to which Supplier has not proposed to provide its Managed IP-VPN services, list such locations/exceptions.

Comply (Yes/No)	*Explanation/Description (5. Statewide Availability)*
yes	Available statewide.

H. Managed Services and Other Support Services

The majority of agency WAN end-points in the existing Commonwealth of Virginia network are self-managed. However, the Internet-based Managed IP VPN for the Virginia State Police and other public bodies described in Section 5.G preceding is a critical application, and as described require a completely transparent takeover or a very similar solution. In addition, while VITA currently utilizes only small quantities of managed router services in its network overall, individual end-user agencies may have increasing future needs for managed router and other managed equipment solutions.

To meet these potential needs, VITA requires Supplier to provide information regarding maintenance services, management services and other services associated with managed equipment solutions as described in this Section.

1. Break/Fix Maintenance Services

This section sets out the break/fix maintenance services that VITA requires for managed VPN equipment. Maintenance is defined as break/fix of a repair, replacement or resolution (*e.g.,* through re-boot of a device) of a failed part, device or equipment software and the subsequent testing to confirm operation of the repaired/replaced device. Maintenance includes all necessary spare parts and all remote and on-site repair activities.

a. Overview of Supplier's Maintenance Service

Provide an overview of your maintenance services including what aspects of its service are provided by sub-contractors, and what sub-contractors Supplier would use. Explain any differences in your maintenance services as applicable to different equipment types and manufacturers.

Comply (Yes/No)	*Explanation/Description (a. Overview of Supplier's Maintenance Service)*
Yes	CenturyLink ProMET is a portfolio of the design, assessment, implementation and maintenance services needed to deploy and manage a dynamic network infrastructure. Recognizing it takes reliable partnerships to be successful in a dynamic business environment, we have developed an extensive manufacturer reseller portfolio via a national network of certified providers. ProMET benefits from alliances with industry-leading manufacturers such as ADTRAN®, Ciena®, Cisco®, Juniper® Networks and Nortel®, and you receive the experience needed to meet the most challenging technical issues. **Features** Implementation features: Design engineering and consulting CenturyLink Voice over Internet Protocol (VoIP) Readiness Assessment Multi-manufacturer implementation capabilities CenturyLink national network of certified providers **Maintenance features:** 24/7/365 access to CenturyLink customer service centers 6 service levels available, ranging from premium on-site coverage (24/7/365 with 4-hour response time) to next business day remote coverage

	Multi-manufacturer coverage including technician and sparing.

b. Spare Locations

Supplier is expected to meet specified service levels without reliance on storing spares at individual network locations. Confirm that Supplier can meet service levels for provisioning, repair, and network performance by storing spares at its own sites, the sites of subcontractors or other partners, or other channel arrangements.

Comply (Yes/No)	***Explanation/Description (b. Spare Locations)***
Yes	CenturyLink determines the level of service supported (7x24x4hr, 8x5xNBD(next business day), etc) by the distance from the service location to the regional Customer Service Center. CenturyLink will ensure that sufficient spare equipment is available at the Customer Service Center to meet the supported maintenance service level.

c. Field Technicians

Describe how Supplier will ascertain/determine the need to provide dedicated field technicians versus off-site technicians in order to meet VITA's service level requirements. Describe where Supplier intends (*e.g.*, by site type) to deploy dedicated field technicians.

Comply (Yes/No)	***Explanation/Description (c. Field Technicians)***
Yes	CenturyLink determines the level of technical support by the distance from the service location to the regional Customer Service Center. The Customer Service Centers in Virginia are located in Herndon and Virginia Beach.

2. Management Services to be Provided or Supported

This section sets out the management services and other support services that VITA requires Supplier to either perform or support for managed services generally, and explicitly for the IP-VPN "Managed Takeover" or equivalent solution for the Virginia State Police network as described in Section 5.G.

The Supplier is asked to provide pricing for management services in its response to Appendix A that corresponds to the requirements in this Section and to Supplier's response to these requirements. The required network management processes and functions include:

- Incident Management;
- Problem Management;
- Preventative Maintenance;
- Configuration Management;
- Change Management;
- Documentation Management;

The remainder of this Section provides additional details and requirements for each of these functions. Supplier should note that these management services will also apply to all network services and cabling that are connected to equipment under management.

a. Incident Management

Incident Management is defined as the set of processes, people and tools that provides monitoring, fault detection and classification and fault resolution for all in-scope equipment,

software and network services. It is done real-time to ensure that user services are available. Incident Management is a continuous process whereby incidents (also referred to as faults) are logged, tracked, expedited, and resolved.

b. Incident Notification and Escalation

Detail the Supplier's process to notify VITA of outage/disruption events, including:

- Required status updates for faults, including updates relating to fault diagnosis and resolution;
- Coordination of fault resolution efforts among all necessary parties (*e.g.*, onsite Supplier technicians, third party vendors, service providers, etc.);
- Coordination of dispatch, escalation, access, and tech support for Supplier's field technicians or third party technicians;
- Direct escalation when required to the equipment vendor's technical assistance resources/experts for fault resolution (see Fault Diagnosis below).

Comply (Yes/No)	***Explanation/Description (b. Incident Notification and Escalation)***
Yes	If an alarm is generated, a ticket is created and a CenturyLink network engineer is assigned to the ticket. The customer will be informed of the ticket and an engineer will work the ticket to closure. Depending on the severity level of the alarm, we will apply the appropriate policy to remedy the situation. The table below displays the specifications for response and target resolution for varying levels of severity.

Table 1: Severity Categories

Event Type	Error Conditions	Severity Level	Notification	Response Time	Resolution Time
Critical events	Device or link outage	High	Phone and email	10 minutes	3 hours
Major events	Degraded performance	Medium	Email	15 minutes	6 hours
Normal events	Non-service affecting errors	Low	Email	30 minutes	24 hours
Project events	None	MACD	Email	30 minutes	48 hours

Table 2: Technical Escalations

Escalation Tier	Critical Events	Major Events
NMS Internet Engineer	20 minutes from initial event	20 minutes from initial event
NMS Lead Internet Engineer	60 minutes from Tier 2 handoff; 80 minutes from initial event	90 minutes from Tier 2 handoff; 110 minutes from initial event
IM Lead Internet Engineer and IM NOC Supervisor	90 minutes from Tier 3 handoff; 150 minutes from initial event	120 minutes from Tier 3 handoff; 210 minutes from initial event

Table 3: Management Escalations

Escalation Tier	Critical Events	Major Events
Engineer	2 hours	4 hours
IM NOC Manager	4 hours	12 hours
Director	6 hours	24 hours

NMS-Comprehensive includes Total Customer Agency for non-CenturyLink

Comply (Yes/No)	*Explanation/Description (b. Incident Notification and Escalation)*
	transport and third-party CPE maintenance. With Total Customer Agency, CenturyLink acts as the customer's single expert agent in managing the resolution of all service and transport faults. In support of third-party CPE maintenance, CenturyLink will manage vendors to the vendor time in the Mean Time to Resolution (MTTR) Service Level. At times, this could require vendor escalation & NMS will perform Vendor escalations according to the following table:

Table 4: Vendor Management Escalations

Escalation Tier	Critical Events	Major Events
First Level Escalation	1 hours from initial event	1.5 hour from initial event
Second Level Escalation	2 hours from initial event	3 hours from initial event
Third Level Escalation	4 hours from initial event	6 hours from initial event

Table 5: Vendor Technical Escalations

Escalation Tier	Critical Events	Major Events
NMS Internet Engineer	20 minutes from initial event	20 minutes from initial event
NMS Lead Internet Engineer	60 minutes from Tier 2 handoff; 80 minutes from initial event	90 minutes from Tier 2 handoff; 110 minutes from initial event
IM Lead Internet Engineer and IM NOC Supervisor	90 minutes from Tier 3 handoff; 150 minutes from initial event	120 minutes from Tier 3 handoff; 210 minutes from initial event

c. Proactive Monitoring, Fault Diagnosis, and Fault Dispatch

Describe Supplier's capabilities to perform fault diagnosis and notification to VITA including automated event correlation to resolve the fault to meet or exceed the service level requirements in Appendix B. Supplier should demonstrate willingness to collaborate with VITA's designated support personnel and/or the equipment manufacturer (if and when required) to troubleshoot and resolve a fault. However, the Supplier is the responsible and empowered entity to meet or exceed the service level requirements shown in Appendix B.

In addition, can the Supplier provide 24x7 proactive monitoring for IP-VPN equipment that would potentially be under management? Proactive monitoring is needed to enable event detection and fault prevention over fault correction (*i.e.,* to identify degradation in performance and correct it before an actual outage occurs). Describe Supplier's capabilities in this area.

Once the Fault has been diagnosed, describe the process by which Supplier determines whether to resolve the fault remotely or dispatch a field technician in order to meet or exceed the service level requirements shown in Appendix B. Supplier responsibilities include:

- If required, dispatch an on-site field technician to resolve the fault;
- Repair and/or replacement of hardware and/or reloading of software and its configuration covered under contract;
- Provide fault status updates;

- Service all faults immediately (deferrals by permission of VITA authorized personnel only).

Note: Proactive monitoring is **NOT** required for the VSP Managed IP-VPN.

Comply (Yes/No)	***Explanation/Description*** (***c. Proactive Monitoring, Fault Diagnosis, and Fault Dispatch)***
Yes	Fault management is the first and most important service feature of NMS. Fault Management includes the following: Problem identification Problem resolution Problem prevention. Triggers for action include the following: Monitoring: ICMP Availability, SNMP Polls or Traps CenturyLink Proactive Notification Customer Notification: Phone, E-Mail, Web Ticketing. CenturyLink performs daily device backups and in the event a device is replaced, we will perform restoration of initial, and subsequent, device configurations. CenturyLink uses a proprietary tool set to proactively monitor devices 24/7 to identify connectivity issues quickly. ICMP pings are used to check for a response from each device in 5 minute intervals to detect when a device is unreachable. When not cleared in 10 minutes, alarms are triggered and a trouble ticket is generated. Tickets can be generated by proactive alarms monitored by CenturyLink, the customer entering tickets into Control Center or the customer calling the Tier 1 help desk. Network management data is collected by SNMP polling. When a device does not respond to the polls or when the values returned by their devices exceed predefined thresholds, a fault condition is assumed. The result is an alarm and a trouble ticket is generated. **Table 1: NMS Alarm Rules**

Event Name	Frequency Threshold
Device Contact Lost - The loss of IP Connectivity to the device.	3 occurrences in 15 minutes
Cold and Warm Starts - The device rebooted due to crash.	1 occurrence
Cold and Warm Starts – The device rebooted do to power cycle	1 occurrence
Module Down - A module in the managed devices has failed.	1 occurrence
Link Down (WAN Interface) - A WAN interface on the device is operationally down.	3 occurrences in 15 minutes
Link Down (LAN Interface) - A LAN interface on the device is operationally down.	3 occurrences in 15 minutes
Excessive Error Rate – An interface on the device has exceeded the threshold for errors and is Service impacting	2 occurrences in 15 minutes
Error Rate – An interface on the device has exceeded the threshold for errors. Not service impacting	2 occurrences in 15 minutes
CPU Utilization – the device CPU is over 80%	1 occurrence

Comply (Yes/No)	Explanation/Description (c. Proactive Monitoring, Fault Diagnosis, and Fault Dispatch)
	Bandwidth – exceeds 80% of configured bandwidth | 1 occurrence NMS-Comprehensive includes Total Customer Agency for non-CenturyLink transport and third party CPE maintenance. With Total Customer Agency–CenturyLink acts as the customer's single expert agent in managing the resolution of all service and transport faults. In support of third party CPE maintenance, CenturyLink will manage vendors to the vendor time in the Mean Time to Resolution (MTTR) Service Level. At times, this could require vendor escalation & NMS will perform Vendor escalations according to the following table: **Table 4: Vendor Management Escalations** Escalation Tier | Critical Events | Major Events First Level Escalation | 1 hours from initial event | 1.5 hour from initial event Second Level Escalation | 2 hours from initial event | 3 hours from initial event Third Level Escalation | 4 hours from initial event | 6 hours from initial event

d. Incident Resolution

Once the Supplier has determined whether remote or on-site dispatch is required, and once the Supplier has determined the cause of the outage or service degradation, it will immediately begin the resolution of the fault. In the process of troubleshooting, a Supplier cannot create a service outage without explicit approval from an authorized VITA representative.

Comply (Yes/No)	Explanation/Description (d. Incident Resolution)
Yes	CenturyLink has read, understands and will comply.

e. Incident Closure

Once the Incident has been successfully resolved (*e.g.,* the failed device or software fault has been successfully repaired or replaced), VITA expects that Supplier will do acceptance testing prior to closing the ticket and notify VITA accordingly. When Supplier replaces redundant hardware, testing of failover or resiliency is required prior to ticket closure.

Confirm Supplier's ability to provide the following upon resolution of the Incident:

- The description of the Incident and details of the action taken to resolve the fault are accurate, related to the fault, and readable;
- Classification is complete and accurate according to root cause;
- Resolution/Action is agreed to by VITA and documented electronically;

Comply (Yes/No)	Explanation/Description (e. Incident Closure)
Yes	Once an incident has been resolved, the root cause and remedies of the outage will be completed via the Reason For Outage (RFO) process. The RFO report provides information such as the duration of the outage, root cause and remedies performed to resolve the outage.

3. Problem Management

VITA requires a sound Problem Management process that minimizes the adverse impact of Incidents and Problems on the agency and prevents the undue recurrence of Incidents. Where Incident Management's aim is rapid restoration of service, Problem Management's aim is diagnosis of the underlying cause and prevention/reduction of future Incidents. Detail the Supplier's definition of what constitutes a "Problem" for areas of network services. Detail the Supplier's ability and experience in providing such a process. Such experience should include working and coordinating with the equipment manufacturer to assist in:

- Tracking and reporting problems
- Resolving problems
- Recognizing trends
- Making recommendations to VITA

Describe Supplier's system or tool that provides a suitable repository for the historical Incident information – typically based on an integrated Service Management tool which can capture the information at logging or first-analysis stage of the Incident handling process.

Comply (Yes/No)	***Explanation/Description (3. Problem Management)***
Yes	CenturyLink Network Management Services (NMS) recognizes Problem Management as the process responsible for managing the lifecycle of all problems. The Problem Management process is designed to prevent problems and resulting incidents from happening, to eliminate recurring incidents, and to minimize the impact of incidents that cannot be prevented. CenturyLink NMS tools and reporting empower the VITA technical support teams with sufficient information to recognize trends and make plans to resolve problems. CenturyLink NMS does not implement unauthorized changes, only change requests submitted by and approved by the customer. It is not common but when an NMS Engineer detects a recurring issue and reveals an underlying cause, this issue will be brought ti the customer's attention for consideration and a decision to take potential action(s), for example implement an IOS patch or upgrade the IOS to enable a licensed service feature.. The Performance Management component of Network Management Service utilizes the following management and monitoring tools to collect network performance metrics to identify trends for reliability and capacity planning: **Computer Associates eHealth (E2E Console 6.1)** serves as the infrastructure for your management strategy by integrating real-time fault management with a historical network performance data. **IBM Netcool** proactively monitors network health and alerts the network manager if events occur. Netcool also decreases Mean Time To Repair by prioritizing critical alarms. **IBM Precision**, a topology based tool for isolating root causes of failure **IBM Netcool Omnibus** - the central collection point for alarms, performing prioritization and filtering. **Visionael Network Resource Manager** system discovers and inventories your physical network elements. Visionael delivers and accurate current view of your network resources, customer contact information, and circuit

Comply (Yes/No)	Explanation/Description (3. Problem Management)
	IDs. **Remedy and Clarify** is a comprehensive trouble ticketing system that alerts on key database parameters that would indicate problems. **Hewlett Packard Network Automation** automates configuration and ensures network compliance by truing up network design with implementation.

4. Preventative Maintenance

Describe how Supplier performs all manufacturers' recommended preventative maintenance including implementing recommended software updates and patches according to each equipment manufacturer's recommendation for good operational practice. For purposes of responding to this RFP, VITA defines a software update or patch as a bug fix (for security issues), a change in OS release version (within the same feature set) or when the OEM of the software provides the update, upgrade or patch software at no cost to VITA (including via any maintenance agreements that VITA has) or at no cost to Supplier.

VITA requires that the software be maintained in its most up-to-date release that is considered stable, secure, and compatible with already deployed equipment and only with VITA's approval and in accordance with VITA's existing Change Management Process requirements. Also describe how Supplier performs testing following the installation of an update, patch or an upgrade to confirm the equipment is functioning in accordance with the manufacturer's specifications. Confirm that testing will be done in accordance with mutually agreed upon test plans.

Confirm that Supplier has not included the costs of software upgrades in its Appendix A maintenance pricing. An "upgrade" is defined as an increase of features or capabilities to the existing equipment software and is not an update or patch of the existing equipment software.

Comply (Yes/No)	Explanation/Description (4. Preventative Maintenance)
Yes	CenturyLink CPE maintenance includes software updates to take advantage of new features, functions and fixes. We will work with the Commonwealth to assist in the deployment of any software upgrades and the development of mutually agreeable test plans. CenturyLink has read, understands and confirms that the maintenance pricing provided in Appendix A does not include costs for upgrading the existing software on the device.

5. Configuration Management

Configuration Management is defined as the development and maintenance of VITA's logical and physical inventory and detailed configurations of all in-scope equipment and network infrastructure. VITA will review and approve all device configurations.

Comply (Yes/No)	Explanation/Description (5. Configuration Management)
Yes	The Configuration Management feature of NMS provides backup and restoration of initial, and subsequent, device configurations by monitoring, detecting and storing any incremental configuration changes.

a. Configuration Management Database

Confirm Supplier's ability to develop and maintain a Configuration Management Database (CMDB) that includes defining and maintaining configuration items including equipment

hardware and software configuration details by site address. A configuration item (CI), in the context of this RFP, is equipment (*e.g.,* a Cisco 7206VXR router), a card within a device (*e.g.*, supervisor card), the software on the equipment (*e.g.,* IOS), a network POP, or a local access circuit. Describe the available additional CIs that Supplier's CMDB is able to include. VITA requires "View Only" access capability to the Supplier's CMDB.

Comply (Yes/No)	***Explanation/Description (a. Configuration Management Database)***
Yes	CenturyLink provides configuration backup and restoration of the initial, and subsequent, device configurations by monitoring, detecting and storing any incremental configuration changes. 1) HP NA connects to a device and pulls the most current configuration using a system task called a snapshot 2) A snapshot of all of or devices daily or whenever a change is detected by the system 3) Once HP NA retrieves the most current configuration, it will compare it to what it has stored on file 4) If these two are different then the new configuration is added to the list of configurations already existing on the system 5) NMS maintains back up configurations up to 1 year 6) The configurations are stored in an NMS configuration management database. This database is configured for high availability. CenturyLink permits shared root level access to devices under management. We comply with VITA's request for "view only" access

6. Moves, Adds, Changes, and Disconnections (MACDs)

The selected Supplier is expected to have a rigorous process for implementing VITA's orders for Moves, Adds, Changes, and Disconnections (MACDs). Provide a description of the resources available to the Supplier throughout the Commonwealth of Virginia for both physical ("truck rolls") and remote MACDs.

Comply (Yes/No)	***Explanation/Description (6. Moves, Adds, Changes, and Disconnections (MACDs)***
	MACD Process • NMS Select customers will receive 12 configuration changes per device per year • NMS Comprehensive customers will receive 24 configuration changes per device per year. The following items describe the use and expiration of change points: Configuration changes can be applied to any device under CenturyLink NMS management in the customer's network. CenturyLink NMS allotted changes not utilized are not refundable and do not accrue. Changes have no redeemable value. Those requests not listed on the "NMS MAC List.doc" will be priced based upon the Statement of Work (SOW) developed with the customer and their assigned CenturyLink Sales Account representative. SOWs will not count toward customer's annual change management allotment.

a. Change Management Processes

Change Management is the process of assessing, controlling and managing changes to VITA's Supplier-managed equipment, or any aspect of the services related to the managed equipment. The primary goal of this process is to ensure that changes are properly planned for, communicated, and approved. Describe Supplier's proposed Change Management Process, and provide documentation of Supplier's change management procedures and auditing practices.

Comply (Yes/No)	***Explanation/Description (a. Change Management Processes)***
Yes	The CenturyLink Customer Notification Group (CNG) proactively notifies customers of scheduled network maintenance that will impact service with a greater than 50-millisecond switch hit. Notification of standard maintenance will be e-mailed to customers 10 business days prior to the maintenance occurring. CenturyLink's standard maintenance window is 11 p.m. to 5 a.m. local time to the site where the maintenance is taking place. Qualification for maintenance notification is having a completed Customer Profile on file with CNG. Occasionally, maintenance request are received by the CNG that do not fall within the standard notification guidelines: Jeopardy/Demand maintenance, which is required to ensure the integrity of the service. Emergency Maintenance, which is required to restore the integrity of the service. Carrier Maintenance, which is requested by outside service providers. In each of these instances, the CNG will work on a case-by-case basis to provide prompt notification to our customers, which will be accompanied by a valid reason for the short notice. Any notifications shorter than 24 hours will be followed up with a phone call to the number listed in the Customer Profile.

b. MACD Service Level Requirements

Equipment and MACD Type (Notes 1&2)	Coverage (Note 3)	VITA Requirement	Service Credit (Note 4)
Data Remote Emergency	24x7	4 hours	100% of MACD NRC
Data Remote Simple	8x5	1 business day	100% of MACD NRC
Data Remote Complex	8x5	2 business days	100% of MACD NRC
Data On-site Simple	8x5	3 business days	100% of MACD NRC
Data On-Site Complex	8x5	5 business Days	100% of MACD NRC
Data Device De-installation	8x5	15 business days	100% of MACD NRC
Telephony Remote Emergency	24x7	4 hours	100% of MACD NRC

Notes:

1. "Remote" is defined as a MACD performed remotely by the Supplier – for example, from the Supplier's Network Operations Center – and requires no truck roll to the site. "On-site" is defined as a MACD which requires the Supplier to visit a site with a truck roll even if no hardware is replaced or added.
2. There are three MACD types: A Simple MACD is one that requires limited effort from the Supplier's personnel to accomplish with a few steps. A Complex MACD is one that requires more effort than a Simple MACD with multiple steps to complete the MACD. An Emergency MACD is defined as an emergency change required to prevent an outage from occurring.

3. Coverage time of 8x5 is defined as 8 a.m. to 5 p.m. Eastern Time, excluding VITA holidays. For MACD requests requested by 4:30 p.m., the start day will be considered to start on that day for the Supplier. For example, if VITA requests a Data Remote Simple request on a Tuesday at 4:20 p.m., the Supplier will complete it no later than Wednesday, close of business, 5 p.m.

4. Service credits are calculated based on the Non-Recurring Charge (NRC) or unit charge for the applicable MACD service request. Supplier will provide a service credit equal to the NRC for the applicable MACD should it miss the interval for a specific service request. If the Supplier is required to redo or re-work a MACD service request, due to a Supplier error in performing the initial MACD, then the MACD interval "clock" will stop once the re-worked MACD has been completed correctly by the Supplier.

Comply (Yes/No)	***Explanation/Description (b. MACD Service Level Requirements)***
Yes	**MACD Process** • NMS Select customers will receive 12 configuration changes per device per year • NMS Comprehensive customers will receive 24 configuration changes per device per year. The following items describe the use and expiration of change points: Configuration changes can be applied to any device under CenturyLink NMS management in the customer's network. CenturyLink NMS allotted changes not utilized are not refundable and do not accrue. Changes have no redeemable value. Those requests not listed on the "NMS MAC List.doc" will be priced based upon the Statement of Work (SOW) developed with the customer and their assigned CenturyLink Sales Account representative. SOWs will not count toward customer's annual change management allotment.

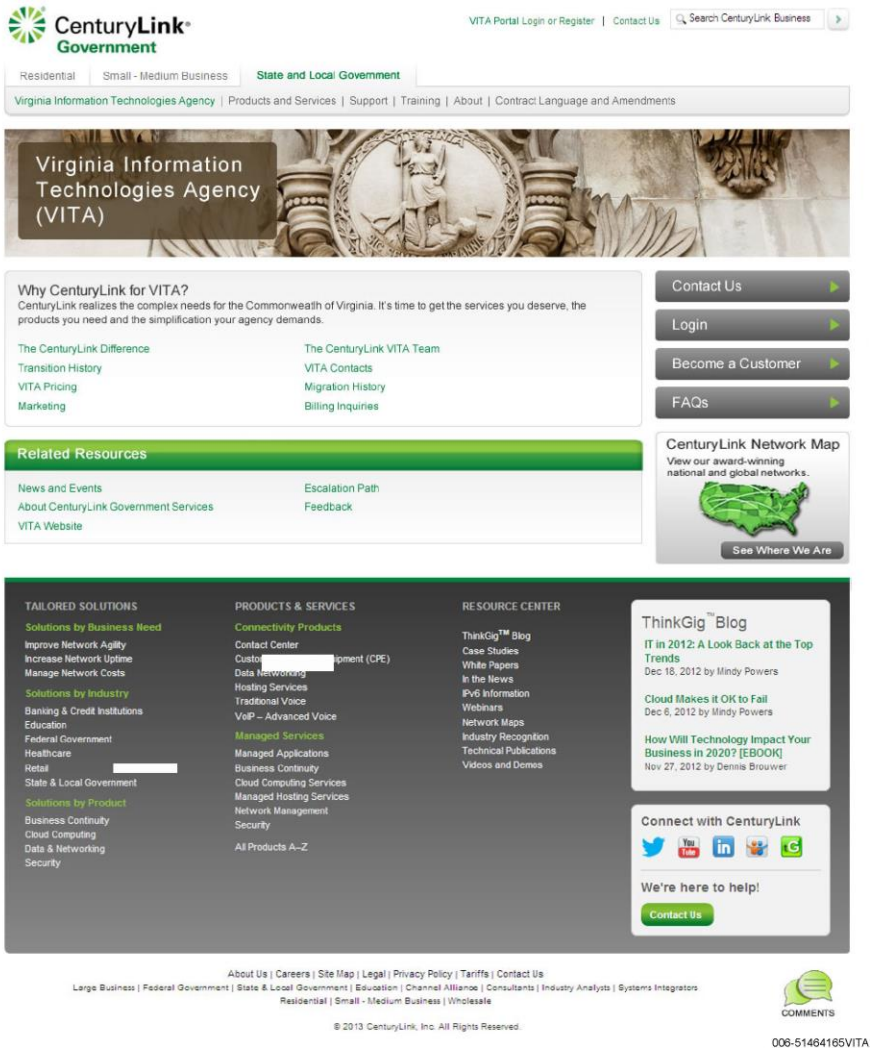
7. Documentation Management

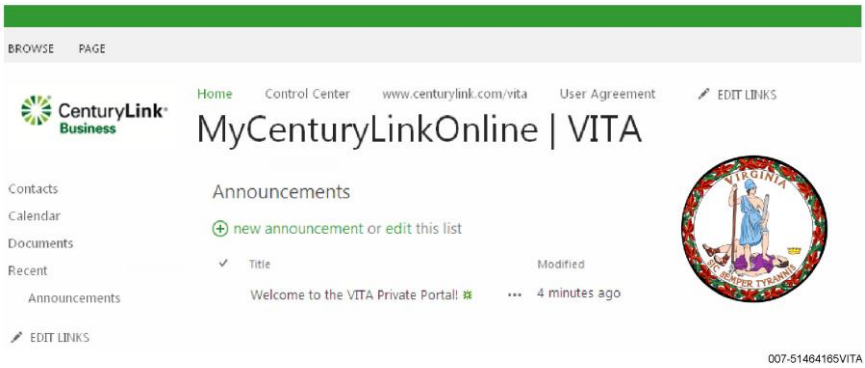
Describe Supplier's procedures to maintain, efficiently organize and update all documentation related to the managed services. Documents included in the documentation management provided by the Supplier could include the following: operations and procedures manual, reports, site documentation information, communication memorandums, password files and contract documents with up-to-date amendments.

Confirm if Supplier would allow VITA to access the above-listed documents, including downloading documents via a web portal, in their original format during the contract term and any extension years. Also indicate if there are any pricing implications related to the use of VITA-provided document repositories rather than Supplier-provided document repositories, and ensure that any such implications are clearly explained and reflected in Appendix A, Pricing.

Comply (Yes/No)	***Explanation/Description (7. Documentation Management)***
Yes	CenturyLink will provide a public website (www.centurylink.com/VITA), making VITA information widely available to Commonwealth agencies and local government entities. In addition, CenturyLink will provide a secure private portal (https://MyCenturyLinkOnline.net/VITA), for VITA's oversight team and any authorized users. To ensure that both sites have the latest information, CenturyLink's Program Management Organization (PMO) will manage the sites' design and content. The PMO will update the content, working together with VITA, to develop a timeline and processes that include updates and modifications with a formal approval process.

Comply (Yes/No)	*Explanation/Description (7. Documentation Management)*

	
	Sample screen shot of the proposed VITA website with Quick Links across the top bar for easy access and navigation.
	
	VITA Public Portal
	
	The proposed content for the public website will include:
	• Products and services catalog with descriptions, availability, and billing identifier
	• Support
	  • Control Center Access for Billing
	  • Customer Ordering Instructions
	  • Inventory Management
	  • Transition Management
	  • Frequently Asked Questions
	• Training
	  • Course Descriptions
	  • Training Schedule and Registration
	• About

Comply (Yes/No)	*Explanation/Description (7. Documentation Management)*
	• Program Management Office • Contract Pricing • End-user Escalation Process • Contract Language and Amendments • Quick Link (example) – VITA private secured website https://mycenturylinkonline.net/VITA **VITA Private Portal for Contract Management** The CenturyLink VITA private portal will meet the needs of Virginia Information Technology Agency (VITA) to support contractual and administrative capabilities. The private site will be accessible only by authorized VITA or State personnel who are authenticated with a unique user ID and password. The CenturyLink site administrator will manage site access and permissions, working in coordination with VITA. The VITA PMO will work with VITA to develop a site access request process and to maintain an active user ID list, to be reviewed monthly. Below, a sample of the expected Welcome Screen into the VITA Private Portal.  **Sample Screen Shot of the Proposed VITA Private Portal with Quick Links on the Left for Easy Access and Easy Navigation** The proposed content for the private portal will include: • Method and Procedures documentation & manuals • Oversight reporting • Site documentation information • Portal User Profile information • CenturyLink/VITA communication memorandums.

8 Equipment Installation and Testing

This section sets out the installation and testing services that VITA may require Supplier to perform from time to time (as specifically described in the requirements within this Section) in relation to any equipment under management by the Supplier.

a. Equipment Installation Process

Most commonly in the current environment, where managed services are employed, the customer premises equipment is initially provided by the vendor to state agencies, localities and schools, although those state agencies, localities and schools ultimately own the equipment. Going forward, and especially for prospective managed networks other than the

Virginia State Police Managed IP-VPN, VITA anticipates that it may buy its own equipment directly from the manufacturer.

Taking into account either scenario, Supplier's Network Operations Center is responsible for configuring the equipment to a standard specification and, typically, sending the device to a local subcontractor for installation at the end-user agency.

With these options in mind, provide a description of Supplier's own staging, configuration and installation process for new IP VPN data equipment installations. Also describe how this process changes for expedite orders. Ensure that the description adequately describes complete system or device installations, as well as individual cards as part of a MACD (Moves, Adds, Changes, De-Installation) process.

Comply (Yes/No)	***Explanation/Description (a. Equipment Installation Process)***
Yes	CenturyLink CPE Installation Services ensures that your Network transport services and data equipment work together. We will test, recommend, and supply products from industry leaders without bias or proprietary interest. We will configure stage and turn up equipment from multiple vendors. **CenturyLink Staging** Staging services are performed at a CenturyLink location to minimize the time spent on the customer premises. Staging services ensure that equipment is operable and interfaces properly with other components. At this point, software is tested for most current release as well as interoperability with detailed (Scope of Work) network requirements. **CenturyLink Onsite Installation Services** At the customer premises, a CenturyLink technician will install new components as well as ensure connectivity and interoperability with network. CenturyLink performs CPE installation services for sites in the United States utilizing CenturyLink Field Technicians or contracted Service Providers. The Service Providers meet CenturyLink's technical, educational, contractual, financial, installation and maintenance support requirements. Installations are performed from 8:00 a.m. to 5:00 p.m. local time, Monday through Friday, excluding locally observed holidays. Ten working days advance notice prior to the planned installation date is required for all installations. Installation pricing is based upon activity during normal business hours. CenturyLink will contact the customer prior to installation to confirm hardware delivery/arrival and site readiness. For after hours installations, additional charges apply. During installation, the onsite installer performs the following tasks: 1. Unpack the product and product accessories necessary for installation. 2. Rack-mount the product in a rack or wiring closet using the rack-mounting hardware included with the chassis. 3. Physically connect the hardware to the network and to the customer-provided LAN and WAN connections. 4. Attach a customer-supplied modem for remote diagnostics, Out-of-band Access and validation of network serial link status. (Optional) 5. Connect console and auxiliary cables (if available as required).

Comply (Yes/No)	Explanation/Description (a. Equipment Installation Process)
	6. Configure device: Configure node name, node password and virtual terminal configuration and passwords. Configure up to two WAN IP interfaces and up to two LAN IP interfaces. Configure a default or a static route. Balance of configuration will be responsibility of customer. If customer requires CenturyLink to complete additional configurations, it will be billed at agreed upon T&M (Time and Material) rates and must be submitted to CenturyLink at the time of schedule (10 business days prior to site installation). 7. Verify the following: System power up Fan or blower operation Operation of network interfaces, status reports of these interfaces, and LED status. Ping test to next available hop.

b. Equipment Staging and Configuration

As part of the equipment procurement process, describe Supplier's procedures for staging the equipment prior to installation. VITA defines equipment staging as those Supplier activities performed prior to the actual installation and test of the device at the VITA site. Confirm that the following equipment staging tasks will be performed:

- Pre-assemble equipment including any modules;
- Implement the Supplier engineered and VITA-approved configuration on the specific device including loading all necessary VITA approved OS and software;
- Burn-in and test of equipment in accordance with manufacturer's and Supplier's recommended best practices. Describe Supplier's ability to be responsible for validating the functionality and device-specific configuration during burn-in and test.

Comply (Yes/No)	Explanation/Description (b. Equipment Staging and Configuration)
Yes	Staging services are performed at a CenturyLink location to minimize the time spent on the customer premises. Staging services ensure that equipment is operable and interfaces properly with other components. At this point, software is tested for most current release as well as interoperability with detailed (Scope of Work) network requirements. CenturyLink performs CPE installation services for sites in the United States utilizing CenturyLink Field Technicians or contracted Service Providers. The Service Providers meet CenturyLink's technical, educational, contractual, financial, installation and maintenance support requirements. Installations are performed from 8:00 a.m. to 5:00 p.m. local time, Monday through Friday, excluding locally observed holidays. Ten working days advance notice prior to the planned installation date is required for all installations. Installation pricing is based upon activity during normal business hours. CenturyLink will contact the customer prior to installation to confirm hardware delivery/arrival and site readiness.

Comply (Yes/No)	*Explanation/Description (b. Equipment Staging and Configuration)*
	For after hours installations, additional charges apply. **CenturyLink Responsibilities** During installation, the onsite installer performs the following tasks: 1. Unpack the product and product accessories necessary for installation. 2. Rack-mount the product in a rack or wiring closet using the rack-mounting hardware included with the chassis. 3. Physically connect the hardware to the network and to the customer-provided LAN and WAN connections. 4. Attach a customer-supplied modem for remote diagnostics, Out-of-band Access and validation of network serial link status. (Optional) 5. Connect console and auxiliary cables (if available as required). 6. Configure device: – Configure node name, node password and virtual terminal configuration and passwords. – Configure up to two WAN IP interfaces and up to two LAN IP interfaces. – Configure a default or a static route. – Balance of configuration will be responsibility of customer. If customer requires CenturyLink to complete additional configurations, it will be billed at agreed upon T&M (Time and Material) rates and must be submitted to CenturyLink at the time of schedule (10 business days prior to site installation). 7. Verify the following: – System power up – Fan or blower operation – Operation of network interfaces, status reports of these interfaces, and LED status. – Ping test to next available hop.

c. Manufacturer Certification

Supplier acknowledges that all personnel that perform the installation and test of new equipment are certified by the manufacturer to perform installation and test for the applicable equipment. Confirm that Supplier's Appendix A pricing takes this into account for all installations without exception.

Comply (Yes/No)	*Explanation/Description (c. Manufacturer Certification)*
Yes	CenturyLink has read, understands and complies.

d. Installation Windows

Confirm that Supplier will be available 24x7 to support VITA's installation during the term of the Contract. The Supplier will install and test equipment in a manner that is least disruptive to VITA's business operations, including performing installations during non-business hours in accordance with VITA installation and maintenance policies.

Comply (Yes/No)	Explanation/Description (d. Installation Windows)
Yes	CenturyLink has read, understands and complies.

e. Supplier Installation Requirements

After staging and configuration, describe how Supplier will install new equipment or upgrades to existing equipment in accordance to the Supplier developed design and configuration documentation and the implementation project plan. Confirm that Supplier will perform the following equipment installation and testing tasks:

- Call the site contact to confirm the scheduled installation date and time window.
- Unpack, inspect, accept, inventory, and check against equipment purchase list and site design information.
- Install and implement the final equipment configuration and OS software at the agreed location, according to the solution design.
- Power up equipment and check proper operation.
- Verify all data equipment software is loaded and configured properly to support end-user configuration standards (*e.g.,* quality of service, VLANs, hunting/forwarding paths, station and call routing programming, etc.).
- If not done during staging, perform any mutually required patching for current, known security and functionality issues specific to the equipment refresh.
- Provide any required extension of local access circuits to the office space where the equipment will be installed.
- Verify the proper functionality of the configuration of the equipment.
- Connect equipment to existing premises and carrier network infrastructure as applicable.

Comply (Yes/No)	Explanation/Description (e. Supplier Installation Requirements)
Yes	CenturyLink has read, understands and complies.

f. Testing and Acceptance

VITA expects the Supplier to be responsible for testing the new equipment prior to its cutover into VITA's production environment. Confirm that Supplier will perform any end-to-end testing to ensure the new equipment is interoperable with connected equipment or transport services.

Testing should cover the installation procedures, back-out procedures and the functional integrity of the resultant system. There should be a sign-off for each stage of testing. Final acceptance and sign-off for the new equipment to go into the live environment should come from the Agency.

Comply (Yes/No)	Explanation/Description (f. Testing and Acceptance)
Yes	CenturyLink has read, understands and complies.

9. Managed Services Tools

Provide a description of Supplier's currently deployed service management tools and systems that will be used to support the management services described in all the previous sub-sections of this Section 5.H. VITA realizes that not all ITIL processes are best served by

employing an automated tool, with some processes requiring human interaction or a manual implementation.

Confirm that no additional charges apply for any of the tools described in Supplier's response to this requirement.

In addition, describe:

- How Supplier's service management tools support the ITIL framework and guidelines;
- How Supplier will communicate to VITA its new processes and procedures when a new tool is introduced or an existing tool is significantly upgraded;
- How Supplier's service management tools are maintained (patches, lifecycles, testing, audits, personnel training);
- The security capabilities of Supplier's service management tools specifically addressing how (i) the systems are segmented; (ii) communications are protected with encryption; (iii) personnel access to service management tools is restricted; (iv) NOC personnel is screened; (v) auditable and investigable records of actions are generated and maintained; (vi) access from customers is secured; and (vii) periodic audits are performed.

Comply (Yes/No)	***Explanation/Description (9. Managed Services Tools)***
Yes	The Performance Management component of Network Management Service utilizes the following management and monitoring tools to collect network performance metrics to identify trends for reliability and capacity planning: **Computer Associates eHealth (E2E Console 6.1)** serves as the infrastructure for your management strategy by integrating real-time fault management with a historical network performance data. **IBM Netcool** proactively monitors network health and alerts the network manager if events occur. Netcool also decreases Mean Time To Repair by prioritizing critical alarms. **IBM Precision**, a topology based tool for isolating root causes of failure **IBM Netcool Omnibus,** the central collection point for alarms, performing prioritization and filtering. **Visionael Network Resource Manager** system discovers and inventories your physical network elements. Visionael delivers and accurate current view of your network resources, customer contact information, and circuit IDs. **Remedy and Clarify** is a comprehensive trouble ticketing system that alerts on key database parameters that would indicate problems. **Hewlett Packard Network Automation** automates configuration and ensures network compliance by truing up network design with implementation. The following description provides a reference for CenturyLink policies and procedures that are security, system management, and business continuity related. **System Access Control** CenturyLink provides access to all information systems and resources on a need-to-know, "least privilege" basis. Access to system/network element management and configuration is controlled using user IDs and strong

Comply (Yes/No)	Explanation/Description (9. Managed Services Tools)
	passwords that identify the specific individual that is attempting access. All CenturyLink passwords are required to meet corporate standards that ensure the password is of sufficient length and complexity to prevent guessing or simple “brute-force” attacks on the account. CenturyLink passwords must also be changed on a regular basis. CenturyLink periodically audits system accesses and stores audit logs at a remote site. Inactive personnel are disallowed access promptly following their departure. CenturyLink maintains policies on user ID and passwords standards and minimum security configurations for all Unix and Microsoft operating systems. **System Development and Maintenance** CenturyLink operating systems configurations used are hardened in accordance with implemented standards. In support of these standards, a change management tool providing oversight to system and network changes is used to monitor all modifications. **Physical and Environmental Security** Various access controls and physical security systems are designed to protect CenturyLink Network facilities. The vast majority of doors into CenturyLink facilities are locked at all times and require company-issued and controlled access cards to gain entrance. Security guards and/or CenturyLink access control personnel protect unlocked entrances. In addition, facilities are monitored by video cameras; these also record to tape for review. CenturyLink Network facilities identified as being critical to providing service have environmental systems which are redundant (power, HVAC, network) and employ the latest technology in fire detection and suppression **Compliance** CenturyLink Worldwide & IP Networks personnel are required to go through annual Code of Conduct review, which includes security issues. **Personnel Security** CenturyLink Worldwide & IP Networks follow a well-defined security policy based on CenturyLink’s Corporate Security Policy. This Policy is regularly audited and modified, as needed, in order to maintain the high CenturyLink standards. CenturyLink – issued ID badges are required for access to Worldwide & IP Networks facilities. Badges are issued to employees and customers only on an as-needed basis. All Employees and visitors must display their CenturyLink – issued badges at all times while on company premises. **Security Organization** CenturyLink’s Corporate Security organization works closely with CenturyLink Worldwide & IP Networks to develop and maintain the high CenturyLink standards of security for both physical and network access. **Computer & Network Management** Customers’ and network connectivity is centrally monitored using HP’s OpenView tool for customer equipment monitoring and multiple network monitoring tools to maintain a goal of 99.99% uptime. CenturyLink has an IP Security organization dedicated to mitigating threats to network

Comply (Yes/No)	Explanation/Description (9. Managed Services Tools)
	security. All CenturyLink and customer information is considered classified and is handled as such.

10 Managed Router and Other Managed Services

The Supplier should detail its capability to provide Managed Equipment services to VITA locations. These include not only Managed Router services but also managed security offerings (*e.g.,* managed firewalls) and managed LAN switching equipment. Pricing for these managed services may be addressed utilizing the Managed Services tab contained in Appendix A. Cover the following areas in your proposal response:

- Break-fix maintenance.
- Device management including fault identification/isolation/resolution and device configuration.
- MACD process.
- Equipment Rental or Lease.

Comply (Yes/No)	Explanation/Description (10 Managed Router and Other Managed Services)
Yes	**Break-Fix Maintenance** CenturyLink ProMET is a portfolio of the design, assessment, implementation and maintenance services needed to deploy and manage a dynamic network infrastructure. Recognizing it takes reliable partnerships to be successful in a dynamic business environment, we have developed an extensive manufacturer reseller portfolio via a national network of certified providers. ProMET benefits from alliances with industry-leading manufacturers such as ADTRAN®, Ciena®, Cisco®, Juniper® Networks and Nortel®, and you receive the experience needed to meet the most challenging technical issues. **Features** Implementation features: Design engineering and consulting CenturyLink Voice over Internet Protocol (VoIP) Readiness Assessment Multi-manufacturer implementation capabilities CenturyLink national network of certified providers Maintenance features: 24/7/365 access to CenturyLink customer service centers 6 service levels available, ranging from premium on-site coverage (24/7/365 with 4-hour response time) to next business day remote coverage Multi-manufacturer coverage including technician and sparing. **Network Management Service** CenturyLink Network Management Service (NMS) is a comprehensive, integrated package of products and services for building and managing networks. It includes 24 x 7 monitoring of equipment and transport links, complete fault and performance management, complete network analysis, configuration backup, online reports and total customer agency. The central part of this service is in-band monitoring/management tools that

Comply (Yes/No)	Explanation/Description (10 Managed Router and Other Managed Services)
	allow you to continuously monitor and manage network performance. Network Management Services works with any provider on virtually any technology. It has one of the broadest and deepest portfolios of devices certified for management in the industry, and all devices undergo a thorough certification process. CenturyLink Network Management Services is available to business customers throughout the U.S. and internationally. **Monitor & Notification** Continuous network monitoring – 24x7x365 proactive network monitoring to identify issues with monitored devices Real-time notification – your designated maintenance personnel contacted to resolve issues Network operations center – available 24x7x365 **Select** Includes all of the features of Monitor & Notification plus: Fault management to isolate and correct any troubles. Configuration management services include: design, provisioning, backup, comparison and restoration. Online reports document network performance. Network inventory and topology map. In-band monitoring of customer devices and CenturyLink data transport 24/7. Web-based portal for access to ticketing system, reports, inventory and topology maps and change request. **Network Management Services–Comprehensive** Includes all of the features of Network Management Services–Select, plus: Total customer agency for resolving issues with non-CenturyLink transport Total customer agency for repair issues with customer premises equipment (CPE) non-CenturyLink maintenance providers (e.g. maintenance directly with SMARTnet, ADTRAN, Juniper, etc) Configuration of site-to-site virtual private network (VPN) connectivity. Firewall internetwork operating system (IOS) policies to secure hardware. Monitoring of site-to-site VPN connectivity. **MACD Process** NMS customers will receive the following configuration changes per device per year: • Select Service Tier – 12 configurations changes per device per year • Comprehensive Service Tier – 24 configuration changes per device per year The following items describe the use and expiration of change points: Configuration changes can be applied to any device under CenturyLink NMS management in the customer's network.

Comply (Yes/No)	*Explanation/Description (10 Managed Router and Other Managed Services)*
	CenturyLink NMS allotted changes not utilized are not refundable and do not accrue. Changes have no redeemable value. Those requests not listed on the "NMS MAC List.doc" will be priced based upon the Statement of Work (SOW) developed with the customer and their assigned CenturyLink Sales Account representative. SOWs will not count toward customer's annual change management allotment. **Equipment Billing Options** **CPE Direct Purchase** CPE equipment, installation and maintenance is purchased outright. VITA takes ownership of the equipment. **CPE Lease** CPE Leasing provides financing for the acquisition of hardware, software, maintenance and Implementation into one easy monthly payment. Depending on the terms of the lease, at lease expiration, the lessee has the following options: purchase the equipment for either its Fair Market Value or $1.00 buyout, renew the lease or to return the equipment. **CPE Rental** The CenturyLink CPE rental program provides an equipment rental option in addition to the current lease program. With CPE rentals, the equipment is billed on a monthly basis on the same bill as the network service, however the equipment is billed on a separate line item. CPE rental offers flexible pricing options, and turnkey bundles providing a single order, single bill, single network provider solution

11. Statewide Availability

Confirm that the Supplier's Managed Services and Other Support Services as proposed are available statewide. If there are any locations in Virginia where Supplier's Managed Services and Other Support Services are not available, list such locations/exceptions.

Comply (Yes/No)	*Explanation/Description (11. Statewide Availability)*
Yes	Available statewide.

J. Hosted IP Telephony

VITA anticipates that the legacy voice equipment environment will likely change. Particularly in the case of Centrex, VITA anticipates that a replacement solution would likely be the functional equivalent of Centrex for the VoIP environment – Hosted IP Telephony. In addition, while the current legacy (PBX/Centrex) voice equipment environment continues to serve COVA well, because of limited resources, COVA is always seeking more effective and economical solutions such as this form of hosted, cloud-based telephony.

COVA is interested in the supplier's fully-managed hosted IP Telephony utility (shared platform/cloud model) service including any required remote site equipment such as voice gateways and IP handsets and softphones. The hosted service will be maintained by the supplier and include redundant server equipment, full management and maintenance of the shared hardware and software and MACD support. The service will also support future agency needs for Unified Communications and Collaboration (UC&C).

Suppliers should note that, while potential IPT solutions may eventually replace the functionality of the current legacy voice equipment environment (which includes PBX, Electronic Key Telephone Systems (EKTS) and/or Centrex services), COVA does not have site-specific requirements at this time. In terms of possible opportunities, the legacy sites represent a total of more than 33,500 active Centrex lines. There are also approximately 13,500 voice mailboxes, 7,900 of which are associated with traditional ILEC TDM local services, and are also provided through the expiring IXC contract. COVA is interested in the Supplier's ability to deliver a robust voice mail solution with features such as unified messaging (voice mail to email integration) and automated attendant service.

1. Offer Description and Components

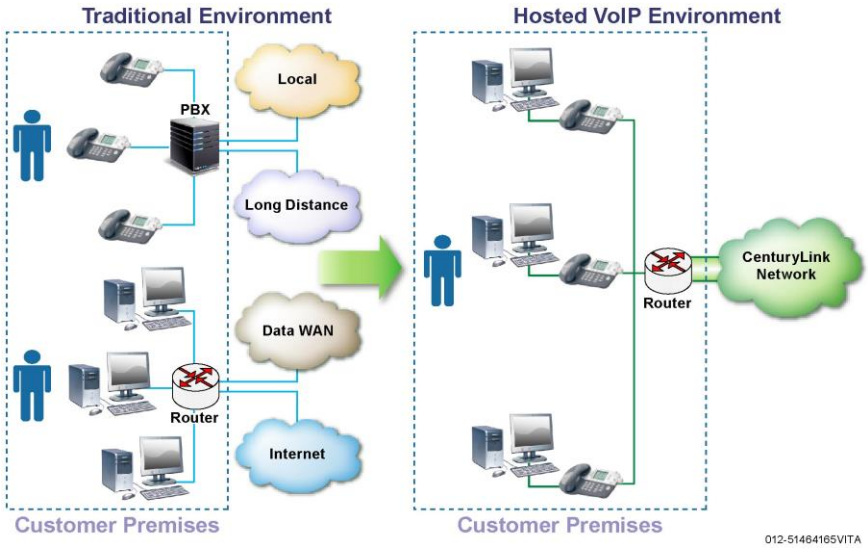
The typical scope of services that could comprise individual COVA Hosted IPT service opportunities include:

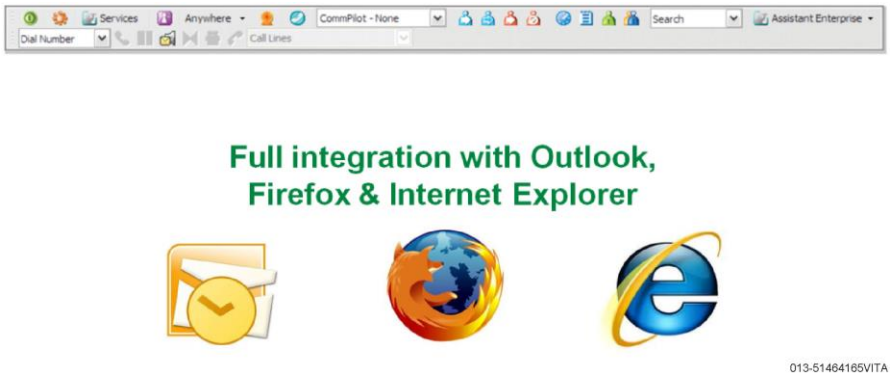
- Centralized shared IPT server platform:
  - Assignment of the required IPT equipment and software (or when required, installation of additional equipment/software) needed to implement a Hosted IPT service solution (including for voicemail services).
  - On-going maintenance and management of the equipment and software.
- Interface with existing IP handsets (or installation of new IP handsets) at COVA agency locations in order to implement the solution.
  - Ongoing management of the handsets.
  - On an exception basis Supplier may also be required to install, maintain and manage media gateways at certain COVA locations.
- If desired by VITA, on-going maintenance and management of telephony CPE and related software that remains in place at the remote locations following the conversion to the Hosted IPT Solution.
- End to End call processing and routing.

Describe the Supplier's shared utility/cloud-based Hosted IPT service in terms of architecture, technology, hardware/software at the central platform site (and at individual remote sites if required), conformance to standards, and ability to meet standard SLAs. Describe the specific component "building blocks" deployed in support of the service, specifying the underlying OEM (Avaya, Cisco, etc.). Explain how these components would provide the required functionality and meet the Supplier's offered performance levels and service level requirements.

Comply (Yes/No)	*Explanation/Description (1. Offer Description and Components)*
	CenturyLink Hosted VoIP Service CenturyLink Hosted VoIP service is a SIP-based telephony and voice messaging application that provides real-time, two-way voice capability using Internet Protocol (IP) over a secure broadband connection. CenturyLink Hosted VoIP has an extensive, standard set of features, as well as Unified Messaging Voice Mail, Three-Way Calling, Video Calling, Fixed to Mobile Convergence, and PC-based administration tools. There is also a suite of browser-based applications that provide control of business communications, including find-me/follow-me controls, and Microsoft Outlook® integration with click-to-call functionality and call logs. The Hosted VoIP service is available for locations with a small number of seats to locations with as many as 10,000 seats. There is no limit to the number of seats.

Comply (Yes/No)	Explanation/Description (1. Offer Description and Components)
	The components that make up the Hosted VoIP service include: Voicemail Only, Basic, Standard, Premium, and Receptionist seats CenturyLink IQ Network Private and Enhanced MPLS Port options Local Access (local loop) with QoS for VoIP traffic Equipment Rental: Router, Switches, IP Handsets (local power or Power over Ethernet) 24x7x365 1-number telephone support 24x7x365 4-hour replacement for routers/switches (where service is available) 8x5 next business day (NBD) replacement for handsets Office Administrator Portal and end-user training Proactive network monitoring and notification. With CenturyLink's Hosted VoIP service, the VITA team will be relieved from managing and monitoring equipment – and your budget no longer requires capital for premise-based equipment. CenturyLink's Hosted VoIP streamlines the way users work, manage, and connect. It is available in three packages: Basic, Standard and Premium as well as a Receptionist Add-on feature for Premium seats. The Receptionist Add-on feature includes a web-based Receptionist Console. All seat types include access to an online portal that allows for easy configuration of settings and features. The Basic Hosted VoIP service is a cost-effective, convenient combination of some of the most popular features like call waiting, call park/pickup and calling line ID. This seat is designed for common phones and does not include voice mail. The Standard Hosted VoIP seat provides additional features like voice mail, unified messaging, call forwarding, simultaneous ringing (SIM), n-way calling, and an easy-to-use toolbar that integrates with Microsoft® Outlook®. For more advanced business needs, the Premium Hosted VoIP service provides the entire Standard package features plus Anywhere and Remote Office, which allows users to seamlessly integrate their work phone with their mobile devices. As long as a VoIP call stays on the CenturyLink VoIP platform and does not pass through one of our PSTN Gateways, the calls between the two stations will not incur additional costs. CenturyLink does not provide free off net calling. CenturyLink Hosted VoIP is ideal for customers who do not want to purchase or support a premises-based phone system, but who are looking for advanced call management features. CenturyLink Hosted VoIP will improve customer service and increase office efficiency and maximize ROI on communications spending. CenturyLink Hosted VoIP service will also simplify the State's communications environment by reducing the complexities typically associated with disparate infrastructures used for voice and data networking. Traditionally, these networks are often provided and maintained by multiple service providers or internal IT groups, each requiring separate monitoring and maintenance and support contracts. The network problem troubleshooting process is more complicated because of

Comply (Yes/No)	Explanation/Description (1. Offer Description and Components)
	working with multiple service organizations who often engage in "finger-pointing." This delays problem resolution and restoring service to end users and customers. CenturyLink's Hosted VoIP service simplifies network infrastructure by converging voice and data networks into a scalable and efficient network design that is easier to manage and maintain. With Hosted VoIP, there is a single broadband connection for voice and data traffic—no need for separate access lines for voice and data. Voice traffic is logically separated from data traffic using VLAN (Virtual Local Area Network) technology. Delay-sensitive voice traffic is marked and classified as high priority for transmission ahead of data traffic. This allows the delay-sensitive voice applications to achieve a quality of service that traditional PSTN voice users have come to expect. Internal wiring is simplified with Hosted VoIP since there can be a single Ethernet connection from the wire closet to the desktop over which the converged voice and data traffic travel. Power over Ethernet technology simplifies infrastructure wiring and reduces desktop power outlet requirements by delivering DC power to the IP phone directly from the Ethernet switch port as shown in ***Figure J-1***, below.  **Figure J-1. Hosted VoIP simplifies the customers' voice infrastructure and speeds calls to the users.** CenturyLink Hosted VoIP provides users with Anytime, Virtually Anywhere management of their communications service. The service provides a rich set of call management features that enable simplified communications between campus, remote, and mobile workers: Unified Messaging—Voicemail to email service. Users receive voice messages right to their in-box, ensuring instant access to important messages whether in the office or on the road. Remote Office—Users working off-site can make calls that appear on caller ID as though they are at the office. Simultaneous Ring—Multiple phones can ring when calls are made to office numbers enabling mobile workers to always be reachable. Callers only need to dial one number to reach you at your preferred device, anytime and

Comply (Yes/No)	Explanation/Description (1. Offer Description and Components)
	anywhere. Intuitive User Toolbar—Hosted VoIP users can easily access and manage their phone features directly from their computer desktop using an intuitive toolbar in Microsoft Outlook or a familiar browser interface (Internet Explorer and FireFox).  **Figure J-2. Microsoft Outlook and other web interfaces provide users easy access to VoIP phone features.** CenturyLink understands the business-critical nature of migrating communication services from legacy Time Division Multiplexing (TDM) voice services to VoIP. As a provider with a strong local presence of sales, engineering and technical staff, we have the resources to migrate in a carefully planned, systematic manner. We have migrated thousands of clients to new technologies over the years and our experienced field, provisioning, and support staff make the difference in providing a smooth transition. CenturyLink has a dedicated and skilled support staff that will ensure a successful migration to Hosted VoIP and provide ongoing business continuity: Dedicated sales reps will work with VITA stakeholders to assess their needs and describe how CenturyLink can best meet VITA requirements Local technicians will maintain a close relationship with you and implement fast, accurate changes Seasoned engineering teams will design a solution based on the State of California's business needs Project management teams will formalize a migration plan and work with you every step of the way. CenturyLink has many years of experience assisting customers with their technology choices and migrating from legacy voice and data services. With CenturyLink Hosted VoIP, we simplify the technology through our complete business readiness assessment process, service ordering, LAN/WAN assessment, deployment, user and administrative training, and day-to-day management of services as shown in ***Fiqure J-3***, below.

Comply (Yes/No)	Explanation/Description (1. Offer Description and Components)

Figure J-3. CenturyLink's proven migration process ensures a smooth transition to our Hosted VoIP solution.

CenturyLink offers an easy-to-use web-based portal for user and administrative functions. Users and the administrator of Hosted VoIP Basic, Standard and Premium seat packages are provided with an easy-to-use web-based portal that simplifies the provisioning and configuration of phones and voicemail service.

The Administrator Portal allows the administrator to easily provision and configure services, such as reconfiguring user phone softkeys, access call detail records, and export Call Detail Reporting (CDR) data for reporting, and control subscriber feature authorization. ***Figure J-4*** User Profile

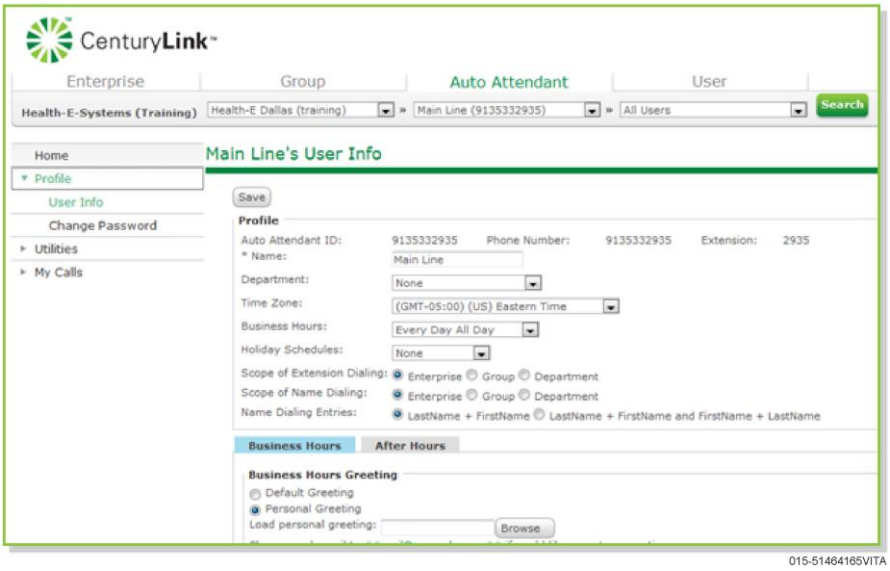
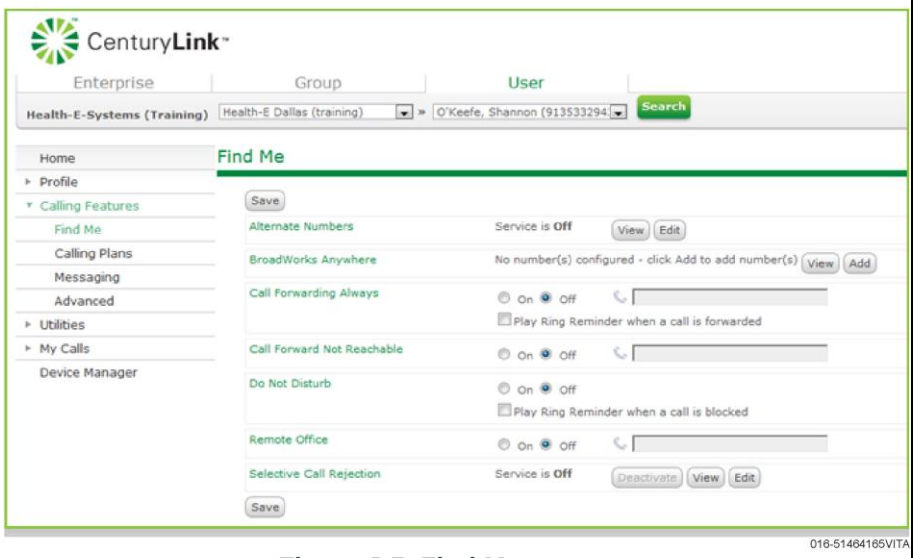


Figure J-4. User Profile.

The web-based User Portal permits the phone and messaging user to configure any device to serve as the default device. Simultaneous Ring service can be configured to ring up to 10 unique phones when a call is placed to the user's primary phone number. Accessing voice mail and

Comply (Yes/No)	Explanation/Description (1. Offer Description and Components)
	managing recorded greetings is easily performed using the intuitive interface. Also, the user can set their status and configure their user group status to remain active in hunt groups, call center queues, group calls and conferences—even when out of the office as shown in ***Figure J-5***.  **Figure J-5. Find Me screen.**

2. Design/Deployment Description

Provide a description of a typical Hosted IPT service deployment/design, including underlying data requirements and normal assumptions, including:

- Data center environment/capabilities at the host site (Tier 1, Tier 2 standards, etc.).
- How redundancy is achieved.
- Solution scalability for increases or decreases in supported endpoints (both specific core components the entire system). How many disparate sites (PBXs, locations, branches) can be supported by the core routing elements?
- Solution for call set-up and routing for on-net calls between Customer's on-net locations, including route table management, determination of originating and terminating call data that traverse the WAN vs. hand-off to the PSTN.
- Interoperability with both private and public network dial plans.
- Solution dependencies on the underlying wide area network.
- The ability to integrate and operate with existing COVA hardware and systems.
- Approach to security.
- E911 considerations – how the solutions meets all industry and legal E911 requirements globally.

Comply (Yes/No)	Explanation/Description (2. Design/Deployment Description)
Yes	Please see number 1, above for details.

3. Local Calling Capability Throughout the Commonwealth

Do you have a hybrid solution to ensure that local calling is available throughout entire Commonwealth even where the hosted IP telephony does not natively provide this capability in certain geographies? This would likely encompass alternatives to establishing rate centers for the purpose of rating local calls. If the Supplier does not have such a solution, describe how much of the Commonwealth can be covered through hosted IP telephony.

Comply (Yes/No)	***Explanation/Description (3. Local Calling Capability Throughout the Commonwealth)***
Yes	Centurylink Hosted IPT is currently available in the following rate centers:

ARCOLA	VA	ARCOLA	236
BRADDOCK	VA	BRADDOCK	236
DALE CITY	VA	DALE CITY	236
DULLES	VA	DULLES	236
DULLESMTRO	VA	DULLESMTRO	236
ENGLESIDE	VA	ENGLESIDE	236
HAYMARKET	VA	HAYMARKET	236
HERNDON	VA	HERNDON	236
INDENDNTHL	VA	INDENDNTHL	236
LORTON	VA	LORTON	236
MANASSAS	VA	MANASSAS	236
NOKESVILLE	VA	NOKESVILLE	236
OCCOQUAN	VA	OCCOQUAN	236
STAFFORD	VA	STAFFORD	236
TRIANGLE	VA	MRCRSBSQNC	236
TRIANGLE	VA	QUANTICO	236
TRIANGLE	VA	TRIANGLE	236
WSNGTNZN08	VA	ALEXANDRIA	236
WSNGTNZN08	VA	ARLINGTON	236
WSNGTNZN08	VA	WSNGTNZN08	236
WSNGTNZN17	VA	FLS CHURCH	236
WSNGTNZN17	VA	MCLEAN	236
WSNGTNZN17	VA	WSNGTNZN17	236
WSNGTNZN19	VA	FAIRFAX	236
WSNGTNZN19	VA	GREATFALLS	236
WSNGTNZN19	VA	WSNGTNZN19	236
WSNGTNZN19	VA	VIENNA	236
APPALACHIA	VA	APPALACHIA	244
ARARAT	VA	ARARAT	244
BEDFORD	VA	THAXTON	244
BEDFORD	VA	BEDFORD	244
BLACKSBURG	VA	BLACKSBURG	244
BUENAVISTA	VA	BUENAVISTA	244
BURNTCHMNY	VA	BURNTCHMNY	244
CHRISTISBG	VA	CHRISTISBG	244
COEBURN	VA	COEBURN	244
COLLINSVL	VA	COLLINSVL	244
DUBLIN	VA	DUBLIN	244
FERRUM	VA	FERRUM	244
HONAKER	VA	HONAKER	244
HONAKER	VA	SWORDS CRK	244
LEBANON	VA	LEBANON	244
LEBANON	VA	DICKENSNVL	244
LEXINGTON	VA	LEXINGTON	244
MARTINSVL	VA	MARTINSVL	244
NARROWS	VA	NARROWS	244

Comply (Yes/No)	Explanation/Description (3. Local Calling Capability Throughout the Commonwealth)			
	NATURALBDG	VA	NATURALBDG	244
	NORTON	VA	NORTON	244
	PEARISBURG	VA	PEARISBURG	244
	PENINGTNGP	VA	PENINGTNGP	244
	PULASKI	VA	PULASKI	244
	ROANOKE	VA	ROANOKE	244
	ROCKYMOUNT	VA	ROCKYMOUNT	244
	SALEM	VA	SALEM	244
	STAUNTON	VA	STAUNTON	244
	STUART	VA	STUART	244
	WOOLWINE	VA	WOOLWINE	244
	CATOCTIN	VA	HILLSBORO	246
	CATOCTIN	VA	WATERFORD	246
	CATOCTIN	VA	LOVETTSVL	246
	CATOCTIN	VA	CATOCTIN	246
	CHANCELLOR	VA	CHANCELLOR	246
	CULPEPER	VA	LIGNUM	246
	CULPEPER	VA	CULPEPER	246
	DAHLGREN	VA	DAHLGREN	246
	FREDECKSBG	VA	FREDECKSBG	246
	FRONTROYAL	VA	FRONTROYAL	246
	KINGGEORGE	VA	KINGGEORGE	246
	LEESBURG	VA	LEESBURG	246
	LEESBURG	VA	ASHBURN	246
	LOUISA	VA	LOUISA	246
	LURAY	VA	LURAY	246
	MARSHALL	VA	MARSHALL	246
	MT GILEAD	VA	PURCELLVL	246
	MT GILEAD	VA	MT GILEAD	246
	SHENANDHPK	VA	SHENANDHPK	246
	UNIONVILLE	VA	UNIONVILLE	246
	WARRENTON	VA	WARRENTON	246
	WASHINGTON	VA	WASHINGTON	246
	WINCHESTER	VA	WINCHESTER	246
	ALBERTA	VA	ALBERTA	248
	BLACKSTONE	VA	BLACKSTONE	248
	BOWLNGGREN	VA	BOWLNGGREN	248
	BOYDTON	VA	BOYDTON	248
	BRODNAX	VA	BRODNAX	248
	BURKEVILLE	VA	BURKEVILLE	248
	CAPRON	VA	CAPRON	248
	CHASE CITY	VA	CHASE CITY	248
	CHESTER	VA	CHESTER	248
	CLARKSVL	VA	CLARKSVL	248
	COLONILBCH	VA	COLONILBCH	248
	CUMBERLAND	VA	CUMBERLAND	248
	DANVILLE	VA	DANVILLE	248
	DISPUTANTA	VA	DISPUTANTA	248
	DOSWELL	VA	DOSWELL	248
	EMPORIA	VA	EMPORIA	248
	ENON	VA	ENON	248
	FIFE	VA	FIFE	248
	FRONTROYAL	VA	FRONTROYAL	248
	HAYES	VA	HAYES	248
	HOPEWELL	VA	HOPEWELL	248

Comply (Yes/No)	Explanation/Description (3. Local Calling Capability Throughout the Commonwealth)			
	JARRATT	VA	JARRATT	248
	KILMARNOCK	VA	KILMARNOCK	248
	KINGGEORGE	VA	KINGGEORGE	248
	KINGWILLIM	VA	KINGWILLIM	248
	LA CROSSE	VA	LA CROSSE	248
	LADYSMITH	VA	LADYSMITH	248
	LAWRENCEVL	VA	LAWRENCEVL	248
	MANAKIN	VA	MANAKIN	248
	MATHEWS	VA	MATHEWS	248
	MECHANCSVL	VA	MECHANCSVL	248
	MIDLOTHIAN	VA	MIDLOTHIAN	248
	PETERSBURG	VA	PETERSBURG	248
	PETERSBURG	VA	FORT LEE	248
	PORT ROYAL	VA	PORT ROYAL	248
	RICHMOND	VA	GLEN ALLEN	248
	RICHMOND	VA	RICHMOND	248
	SALUDA	VA	SALUDA	248
	SANDSTON	VA	SANDSTON	248
	SOUTH HILL	VA	SOUTH HILL	248
	TAPPAHNNCK	VA	TAPPAHNNCK	248
	VICTORIA	VA	VICTORIA	248
	WARSAW	VA	WARSAW	248
	APPOMATTOX	VA	APPOMATTOX	250
	BIG ISLAND	VA	BIG ISLAND	250
	BROOKNEAL	VA	BROOKNEAL	250
	CONCORD	VA	CONCORD	250
	DANVILLE	VA	RINGGOLD	250
	DANVILLE	VA	DANVILLE	250
	FARMVILLE	VA	FARMVILLE	250
	HALIFAX	VA	HALIFAX	250
	LYNCHBURG	VA	LYNCHBURG	250
	PROSPECT	VA	PROSPECT	250
	SO BOSTON	VA	SO BOSTON	250
	VOLENS	VA	VOLENS	250
	BELLEHAVEN	VA	BELLEHAVEN	252
	BELLEHAVEN	VA	PAINTER	252
	BOYKINS	VA	BOYKINS	252
	CAPECHARLS	VA	CAPECHARLS	252
	COURTLAND	VA	COURTLAND	252
	CRITTENDEN	VA	CRITTENDEN	252
	FRANKLIN	VA	FRANKLIN	252
	HOLLAND	VA	HOLLAND	252
	NRFOLKZON1	VA	CHESAPEAKE	252
	NRFOLKZON1	VA	GREAT BDG	252
	NRFOLKZON1	VA	NRFOLKZON1	252
	NRFOLKZON2	VA	NRFOLKZON2	252
	NRFOLKZON2	VA	SO NORFOLK	252
	NRFOLKZON2	VA	VIRGINIBCH	252
	NRFOLKZON3	VA	NRFOLKZON3	252
	NRFOLKZON3	VA	PORTSMOUTH	252
	NRFOLKZON4	VA	NRFOLKZON4	252
	NRFOLKZON4	VA	PRINCEANNE	252
	NRFOLKZON4	VA	PUNGO	252
	NWPTNWSZN1	VA	NWPTNWSZN1	252
	NWPTNWSZN1	VA	NEWPT NEWS	252

Comply (Yes/No)	Explanation/Description (3. Local Calling Capability Throughout the Commonwealth)
	NWPTNWSZN2 VA NWPTNWSZN2 252 NWPTNWSZN2 VA HAMPTON 252 NWPTNWSZN3 VA PENINSULA 252 NWPTNWSZN3 VA NWPTNWSZN3 252 NWPTNWSZN3 VA LEE HALL 252 NWPTNWSZN3 VA DENBIGH 252 NWPTNWSZN4 VA POQUOSON 252 NWPTNWSZN4 VA NWPTNWSZN4 252 PARKSLEY VA PARKSLEY 252 SMITHFIELD VA SMITHFIELD 252 SUFFOLK VA SUFFOLK 252 TOANO VA TOANO 252 WHALEYVL VA WHALEYVL 252 WILLIAMSBG VA WILLIAMSBG 252 ELKTON VA ELKTON 927 HARRISONBG VA HARRISONBG 927 FORK UNION VA FORK UNION 928 PALMYRA VA PALMYRA 928 RICHLANDS VA RICHLANDS 932 ABINGDON VA ABINGDON 956 BRISTOL VA BRISTOL 956 CANA VA CANA 956 CERES VA CERES 956 CHILHOWIE VA CHILHOWIE 956 GALAX VA GALAX 956 GATE CITY VA GATE CITY 956 HILLSVILLE VA HILLSVILLE 956 HONAKER VA HONAKER 956 MARION VA MARION 956 MAXMEADOWS VA MAXMEADOWS 956 MEADOWVIEW VA MEADOWVIEW 956 MOUTHWILSN VA MOUTHWILSN 956 RURALRTRET VA RURALRTRET 956 Additional rate centers are added as traffic and demand dictate.

4. Features and Capabilities

Describe the various calling features and capabilities contained in the Supplier's Hosted IPT service. Ideally the features should be available in a reasonable mix of a standard basic package, additional packages, and a la carte features.

Feature	Description (4. Features and Capabilities)
Authentication of IP Phone registration	Security enhancement to challenge all SIP calls with username and password
Call Tracing	Call Tracing:
Call Waiting	Call Waiting allows you to receive another call while you are on the phone. You can turn it on or off for all calls and then selectively turn it back on or off using the feature access codes.

Feature	Description (4. Features and Capabilities)
Follow Me / Anywhere (permits users to link fixed and mobile phones to his/her account and setup ringing rules)	Configure the fixed and mobile phones you would like to link to this account.
Flexible queuing and routing mechanisms	Hunt Groups allow for inbound call to hunt a list of users. Call queuing is a Call Center function. Call Center is on the product roadmap for 2014
Personal Web Portal (allows users to activate and customize services)	End user portal and admin portal are both available with CenturyLink's Hosted VoIP product.
Local Extension Dialing	Extension dialing 4, 5, and 6 digit
Last Number Redial	Call the last number that you dialed.
Music On Hold – by location	Play audio (music) or video when the remote party is held or parked.
2/3-Way Calling	3-Way Calling with Consultation. N-Way allows 16 simultaneous
Shared Call Appearance	Share lines across multiple devices
Simultaneous Ring	Simultaneous Ring Personal allows you to list up to 10 phone numbers or SIP-URI addresses you would like to ring in addition to your primary phone when you receive a call. This feature is helpful when you are not at your phone but you would like your cell phone to ring when you get a call. You can also turn off simultaneous ring when you are at your desk on a call. The criteria for each Simultaneous Ring entry can be a list of up to 12 phone numbers or digit patterns, a specified time schedule, and a specified holiday schedule. All criteria for an entry must be satisfied for the call to enter Simultaneous Ring (phone number and day of week and time of day). If the criteria do not match, the call continues as if this service was not turned on. Warning: if your cell phone or other phone has voice mail that picks up before your office voice messaging picks up, your voice mails could be on your cell phone messaging system!
Speed Dialing	Dial a pre-defined number by dialing a Speed Dial 100 prefix and two digits.
Auto Attendant	Auto Answering service with menu choices up to three menus deep
Call Park	Ability to park a call on a user telephone number
Call Pickup	Pickup calls that ring in a configured group
ACD/Hunt Groups	Inbound call that hunt a list of users

Feature	Description (4. Features and Capabilities)
Multiple Call Arrangement	Enables a user to make and receive multiple calls simultaneously on their different shared call appearance (SCA) locations. This feature provides improved support for the manager/administrative assistant scenario by presenting incoming calls to all locations, regardless of ongoing call activity. Also, enables all end-point locations to originate a call even if another location is busy. This feature is an overlay to the Shared Call Appearance feature.
Auto Echo Cancellation	Built into the Polycom Handsets
Automated Call-by-Call Bandwidth Selection	Automated call-by-call bandwidth selection is currently being researched for this product.
Automated Endpoint Installation Configuration	All devices come plug and play. The location premise router needs to be set-up with the proper DHCP tables. This allows the phones to auto pull down TFTP settings.
Call Forwarding (Off Premise, Ring/No Answer, Self-Directed)	**Call Forward Always** – Automatically forward all your incoming calls to a different phone number. **Call Forward Busy** – Automatically forward your calls to a different phone number when your phone is busy. **Call Forward No Answer** – Automatically forward your calls to a different phone number when you do not answer your phone after a certain number of rings. **Call Forward Not Reachable** – Automatically forward your calls to a different phone number when your phone is unreachable. **Call Forward Selective** – Automatically forward your incoming calls to a different phone number when pre-defined criteria, such as the phone number, time of day or day of week, are met.
Call Hold/Release	Phones have hold and release capabilities.
Call Transfer	Call Transfer allows you to transfer a call to another phone using your phone or the CommPilot Call Manager.
Calling Line ID Line and Name	The **Calling Name Delivery** service, when enabled, displays the names of callers. The **Calling Number Delivery** service, when enabled, displays the number of callers.
Direct Inward Dialing	Every seat will have the capability of receiving direct inward dialed calls. Every seat must have a dedicated DID number.
Direct Outward Dialing (DOD)	Every seat will have the capability of placing direct outward dialed calls.

Feature	Description (4. Features and Capabilities)
Event Logging and Reports	Call detail and utilization reports are available through control center.
Distinctive Ringing (Internal vs. External Call)	Called Priority Alert in BW or TAGs on phones
Call detail recording and reporting	Call detail and utilization reports are available through control center.
General reporting capabilities including tools, applications and user interface	General Reporting Capabililities including tools, applications and user interface Will be available via Control Center.
Voice Mail Services	Enables users to record messages for incoming calls that are not answered within a specified number of rings, receive busy treatment, or are transferred directly to voice mail. Incoming callers are given the options to review and change their message and get a warning tone if their message is about to reach the maximum configured length. Users can configure the service via their personal web portal or by calling into their voice portal from any phone. The personal web portal enables users to control whether their voice mail messages are to be delivered to their e-mail account as .wav attachments and/or to the voice messaging system repository for retrieval from a phone. Users can also set their password and elect to give callers the option of connecting to an attendant by pressing 0. By accessing the voice portal from any phone, users can listen to, save, and delete each message, as well as move to the previous or next message. During the playback of a message, users have the option of skipping forward, skipping back, or pausing. Replies to message senders can be sent, and messages can be forwarded with an introductory message to one or more group members, or to the entire group. Messages can also be composed and sent to one or more users in the group, or the entire group. Users have the option of marking a message as urgent or confidential. Users can also pre-configure lists of users to whom voice messages can be sent. The voice portal also enables users to record their name and multiple personal greetings for busy and unavailable. Users also have the option to enter a feature access code on their phone to clear their message waiting indicator (MWI).
Message Waiting Indication (MWI)	The phones are equipped with message waiting indicators. Our unified messaging allows message waiting indicators via e-mail as well.

5. Service Management

COVA requires the Supplier's Hosted IPT service to be a fully managed service offering. Describe the comprehensive service management support included in the offer, addressing the following broad requirements:

- Maintenance of the shared central infrastructure and remote devices including media gateways and (if required) handsets,
- Preventative maintenance activities,
- Platform monitoring,
- Trouble reporting,
- Fault isolation and resolution,
- Management of hardware and software, including the latest OEM software versioning/upgrades based upon the underlying infrastructure (Cisco UCM, etc.),
- Performance management,
- MACD activities, including what changes can be made by COVA end users/local site administrators using web tools.

With respect to software management, what capabilities and 'upgrades' are included in the Supplier's hosted service and when would COVA expect to be able to use the capabilities of next release?

Comply (Yes/No)	***Explanation/Description (5. Service Management)***
Yes	Please see number 1 above.

6. Implementation and Operational Management

Describe the Supplier's capabilities to install and support the Hosted IPT service in alignment with the following criteria:

- The overall approach to implementing a shared service model for Hosted IPT service including typical project phases and activities.
- Project management support
- Installation
- Testing and acceptance

Comply (Yes/No)	***Explanation/Description (6. Implementation and Operational Management)***
Yes	CenturyLink has developed a standard approach for the installation of Hosted IP Telephony; utilizing corporate standard project management methodology, our staff will design and coordinate a implementation plan with the VITA staff that ensures all facets of the installation are identified, analyzed and executed according to the agreed upon final plan. The plan outlined below illustrates the equipment handling, the installer's responsibilities, telephone number porting and a general timeline with estimated task duration and an expected start and completion date. The emerging final plan will be developed after our staff has completed a complete review of the Commonwealth's requirements, conducted site surveys and coordinated with the VITA staff to ensure the plan is complete and satisfies the end customers' requirements and meets or exceeds the expected delivery timeframes. **CENTURYLINK HOSTED IP TELEPHONY (VoIP) IMPLEMENTATION PROCEDURES*** Follow standard procedure to install local loop. There are multiple CenturyLink orders to track per site.

Comply (Yes/No)	Explanation/Description (6. Implementation and Operational Management)

CenturyLink role in the installation of the equipment.

EQUIPMENT

The equipment is shipped from CenturyLink Staging to the customer's site(s)

CenturyLink is scheduled to go to the customer's site to do the installation

(CPE) RESPONSIBILITIES

Technician Site visit is scheduled for one visit only.

Technician(s) will install the router

Technician(s) will test the router and transport

Technician(s) will add the new TN numbers

Technician(s) will test the phones and ensure they are configured

Technician(s) will train the office admin on the Hosted Voip OA Portal. This training consists of 1 to 2 hours of review and detail on the portal and its functionality. As part of the training the technician(s) will set up two to three handsets at the site.

(Additional training is on the CenturyLink portal for which access will be given)

After training the admin should be able to:

Set up remaining handsets

Create auto attendants

Submit trouble tickets via the portal

The office admin will hand out user ids and passwords to his/her employees.

PORTING OF TN'S

It is recommended that the customer use the newly installed phone system for at least one week or until they are comfortable with the phones before scheduling porting. The trained admin will arrange port dates with the CenturyLink Project Manager. The customer admin will work with CenturyLink's Voice Implementation Team (VIT) to do the porting.

INSTALLATION TIMELINE EXAMPLE

#	Task	Duration	Start	Finish	Resource
	1 Pre-Order Activities				
1	Identify sites	N/A	N/A	N/A	Customer
2	Identify circuit/equipment requirements	N/A	N/A	N/A	Customer
3	Identify billing requirements	N/A	N/A	N/A	Customer
4	Pre-implementation meeting	1 day	N/A	N/A	CenturyLink/ Customer
	2 Order Activities				
5	Prepare orders	1 day	07/08/13	07/08/13	CenturyLink Account Team
	a. For dedicated access circuits		07/08/13	07/08/13	
	b. For CPE		07/08/13	07/08/13	
	c. For CenturyLink		07/08/13	07/08/13	

Comply (Yes/No)	Explanation/Description (6. Implementation and Operational Management)					
		service				
		d. Audit TNs for portability		07/08/13	07/08/13	
	6	Review & validate order request	3 days	07/09/13	07/11/13	CenturyLink Sales Engineer
	7	Verify site information (i.e., address & local contact)	1 day	07/12/13	07/12/13	CenturyLink/ Customer
	8	Submit order requests to order entry	1 day	07/15/13	07/15/13	CenturyLink Account Executive
	9	Orders entered into system	1 day	07/16/13	07/16/13	CenturyLink Order Entry
	10	Provisioning reviews & accepts orders	1 day	07/17/13	07/17/13	CenturyLink Provisioning
	11	Engineering Order numbers provided	1 day	07/18/13	07/18/13	OE/Provisioning to CenturyLink Project Manager; then to Customer
	12	Engineering confirms CPE has been delivered to CenturyLink Staging Center	1 day	07/24/13	07/24/13	
	13	Training Preparation - customer completes online training and identifies specific questions for training session at CPE install appt	5 days	07/19/13	07/19/13	Customer
	14	Routes reserved; Access Service Requests (ASR's) sent to LEC	2 days	07/22/13	07/23/13	Provisioning
	15	Send Letter of Authorization/Channel Facility Assignment (LOA/CFA) request (if required)	2 days	07/24/13	07/25/13	Provisioning
	16	Firm Order Commitment (FOC) received from LEC	5 days	07/26/13	08/01/13	Provisioning
	17	Due date jeopardizes are handled by CenturyLink External Escalations (EEG)		N/A	N/A	Provisioning
	18	CenturyLink receives Design Layout Record (DLR) from LEC	3 days	08/02/13	08/06/13	Provisioning
	19	CenturyLink completes wiring/cross-connects	2 days	08/07/13	08/08/13	Provisioning/Pop Technicians
	20	LEC installs local loop/extends demarc	7 days	08/02/13	08/12/13	LEC
	21	CenturyLink tests and accepts local loop with LEC	1 day	08/12/13	08/12/13	CenturyLink/ LEC
	22	Engineer schedules CPE installation	1 day	08/13/13	08/13/13	CenturyLink/ CPE/LEC
	23	CPE Coordination	1 day	08/14/13	08/14/13	CenturyLink/ Customer
		a. CPE is installed and tested onsite	1 day	08/14/13	08/14/13	CenturyLink/ Customer
		b. Data is tested	1 day	08/14/13	08/14/13	CenturyLink/ Customer
		c. New TNs are tested	1 day	08/14/13	08/14/13	CenturyLink/ Customer
		d. CPE tech conducts user training onsite	1 day	08/14/13	08/14/13	CenturyLink/ Customer

Comply (Yes/No)	Explanation/Description (6. Implementation and Operational Management)					
		1. Office admin trained on HVOIP OA Portal	1 hour	08/14/13	08/14/13	CenturyLink/ Customer
		2. CPE tech sets up two or three handsets	1 hour	08/14/13	08/14/13	CenturyLink/ Customer
	24	End to end testing from CenturyLink to customer premise	1 day	08/13/13	08/13/13	CenturyLink/ CPE/LEC
	25	Customer uses new TNs and portal	7 days	08/15/13	08/26/13	CenturyLink/ Customer
	26	TNs are ported	1 day	08/27/13	08/27/13	CenturyLink/ Customer
	27	Circuit activate/Customer accepts service	1 day	08/27/13	08/27/13	CenturyLink/ Customer
	28	Orders closed	2 days	08/27/13	08/27/13	CenturyLink
	29	Post install follow-up	5 days	08/28/13	09/04/13	CenturyLink PM & AC
	30	First invoice review	30 days	09/11/13	09/11/13	CenturyLink Account Executive

7. Technology Roadmap

Describe how the Hosted IPT service will provide COVA with a future proofed path to deploying additional IP Telephony and Unified Communications solutions and installations. Include references to architecture, scalability and call routing (including call control and bandwidth management).

Comply (Yes/No)	Explanation/Description (7. Technology Roadmap)
Yes	Please see number 1, above.

8. IPT Pricing

Based upon the above requirements, the Supplier should provide pricing for its standard hosted IPT solution (using an appropriate worksheet format of its choice) as an addendum to the pricing workbook. In doing so, break out any potential UC capabilities/feature package pricing separately from the standard hosted IP dial tone/voice mail capabilities. To reiterate, be aware that COVA does not have agency-specific IPT requirement opportunities at this time.

Comply (Yes/No)	Explanation/Description (8. IPT Pricing)
Yes	Please see Appendix A for details.

9. Service Levels

Provide a copy of the Supplier's standard Service Level Agreement covering availability, network performance, change intervals, and other items that are generally associated with the Supplier's Hosted IPT service.

Comply (Yes/No)	Explanation/Description (9. Service Levels)
Yes	Please see CenturyLink's Managed VOIP SLA as Attachment number 3 – Managed VoIP SLA 030113 V7.

K. SIP Trunking Voice Services

1. Supplier's SIP Trunking Voice Service Offering

Where agencies, localities, schools and other public bodies employ their own PBXs, individual locations throughout the Commonwealth are increasingly likely to have IP PBXs at their sites. Because of the predominance of SIP Trunking in new offers from local carriers (whether those offers are explicitly identified as running over SIP Trunking or not) which typically connect up to a wide range of smaller IP PBXs via the SIPconnect 1.0 or 1.1 standards, personnel at these locations are likely to be encountering the concept of "Voice over IP" in a rigorous fashion for business locations.

VITA believes that it stands to achieve benefits by migrating a combination of local voice and interexchange voice facilities to SIP Trunking in the near to intermediate term. VITA also believes that incorporating SIP Trunking services into the mix of telecommunications services that are provided to the Commonwealth of Virginia will enhance its ability to attract a wider range of telecommunications Suppliers to contracting opportunities with the Commonwealth.

Provide a summary of the Supplier's SIP Trunking service offering. Also provide Supplier's proposed pricing using the SIP Trunk Service tab in Appendix A.

Comply (Yes/No)	*Explanation/Description (1. Supplier's SIP Trunking Voice Service Offering)*
Yes	CenturyLink SIP Trunk service is designed for customers who have an IP-PBX or IP-based network equipment with SIP functionality but who need a form of IP transport and local services to complete their telephony solution. SIP Trunk enables the customer to place and receive local, long-distance and toll-free calls across a single broadband connection with access speeds from DS-1 (1.544 Mbps) to Gigabit Ethernet (1,000 Mbps). To accomplish this, SIP signaling interfaces are enabled between the CenturyLink network and the customer's SIP-enabled CPE. SIP signaling interfaces are transported on CenturyLink IQ™ Networking that supports Quality of Service. SIP Trunk is designed to work in conjunction with CenturyLink's IQ™ Public or Private Networking, which includes a secure, managed, fully-interoperable and scalable suite of wide area network (WAN) services. CenturyLink's networking services are comprised of advanced IP-centric, MPLS-based solutions. **CenturyLink SIP Trunk Product Features:** Unlimited Inbound/Outbound Local Calling Dedicated Rate Domestic and International Long Distance and Toll Free Service* **Free on-net calling between CenturyLink VoIP locations** – Calls between other CenturyLink SIP Trunk, Managed VoIP, Analog and Digital VoIP, Integrated Access, and CenturyLink Broadband Phone Service locations are considered on-net **Multiple Call Types** – On-net to Off-net calls, Domestic and International calls, Operator and N11 Services, Directory Assistance and Directory Listings **RDID** – Remote Direct Inward Dialing for local dialing for customers in remote markets **Caller ID** – Local Provider and equipment dependent **Emergency 911 Calling** – Enhanced 911 features and Virtual 911 support for nomadic users **Dedicated VoIP Interconnect*** – MPLS VPN security with dedicated

Comply (Yes/No)	*Explanation/Description (1. Supplier's SIP Trunking Voice Service Offering)*
	VLAN supports private addressing of IP telephones across the WAN **Scalability** – Up to 2500 calls per trunk group; up to 25 trunk groups with 250,000 numbers per service instance with load sharing across trunk groups **Centralized or Distributed Deployment Types** – SIP Trunk service for branch locations can be centralized at HQ SIP Trunk location or maintained at each location **Switch Diversity*** – Customer's SIP Trunk sessions can be split and load-leveled across multiple network elements for inbound call resiliency **Enterprise Session Pooling*** – Pooling SIP sessions for multiple locations at the enterprise level reduces design complexity and total number of voice trunks required **Control Center Customer Web Portal** – Free self-service web portal to manage your SIP Trunk and IQ™ network services, access reporting and repair tools, manage your DID number inventory, dial plan and trunk group and session pool allocation **Local Number Portability** – Transfer your existing telephone numbers to CenturyLink SIP Trunk service **Faxing** – T.38 Fax over IP and G.711 Fallback. *Off-net Long Distance, Domestic and International Toll Free, Switch Diversity, Session Pooling and Dedicated VoIP Interconnect are available as options.

2. Underlying Transport Options

Describe the underlying network services over which Supplier can offer SIP Trunks (*e.g.,* MPLS circuits, dedicated Internet circuits, DSL circuits) and any restrictions applicable to the different options, *e.g.:*

- Real-time MPLS class of service requirements;
- Relationship between maximum number of concurrent calls and underlying transport bandwidth.

Comply (Yes/No)	*Explanation/Description (2. Underlying Transport Options)*
Yes	CenturyLink SIP Trunk service is available with Centurylink IQ™ Networking port types MPLS Private and Enhanced and Public Internet. Port access options are Dedicated IP, Ethernet Local Access (ELA) with Premier QoS and Ethernet over SONET. Ethernet options are Metro Ethernet, Native Ethernet and Ethernet over SONET (EoS), depending on local market availability. The following tables list the supported SIP Trunk access speeds by IQ™ Networking port type. **Supported SIP Trunk Port Types and Access Speeds**

Port Type	Connection Type	Access	Speed (Mbits)
Internet	Dedicated IP	DS1	1.536
		2xDS1	3.072

Comply (Yes/No)	Explanation/Description (2. Underlying Transport Options)

		3xDS1	4.608
		4xDS1	6.144
		5xDS1	7.680
		6xDS1	9.216
		7xDS1	10.752
		8xDS1	12.288

Port Type	Connection Type	Access	Speed (Mbits)
Private	Dedicated IP	DS1	1.536
		2xDS1	3.072
		3xDS1	4.608
		4xDS1	6.144
		5xDS1	7.680
		6xDS1	9.216
		7xDS1	10.752
		8xDS1	12.288
	Dedicated IP	DS3	3.072
			6.144
			9.216
			12.288
			15.36
			18.432
			21.504
			24.576
			27.648
			30.72
			33.792
			36.864
			39.936
			43.008
			44.736
	Dedicated IP	OC-3	35
			45
			55
			65
			75
			85
			95
			105
			115
			125
			135
			145
			155.52
	Dedicated IP	OC-12	90
			135
			180
			225
			270
			315
			360
			405
			495

Comply (Yes/No)	Explanation/Description (2. Underlying Transport Options)

			540
			585
			622.08
	ELA Premier	All Supported ELA Premier Access	
	Ethernet ELA-EoS	1G	100
			200
			300
			400
			500
			600
			700
			800
			900
			1000

Port Type	Connection Type	Access	Speed (Mbits)
Enhanced	Dedicated IP	DS1	1.536
		2xDS1	3.072
		3xDS1	4.608
		4xDS1	6.144
		5xDS1	7.680
		6xDS1	9.216
		7xDS1	10.752
		8xDS1	12.288
	Dedicated IP	DS3	3.072
			6.144
			9.216
			12.288
			15.36
			18.432
			21.504
			24.576
			27.648
			30.72
			33.792
			36.864
			39.936
			43.008
			44.736
	Dedicated IP	OC-3	35
			45
			55
			65
			75
			85
			95
			105
			115
			125
			135
			145
			155.52

Comply (Yes/No)	Explanation/Description (2. Underlying Transport Options)

	Dedicated IP	OC-12	90
			135
			180
			225
			270
			315
			360
			405
			495
			540
			585
			622.08
	ELA Premier	All Supported ELA Premier Access	
	Ethernet ELS-EoS	1G	100
			200
			300
			400
			500
			600
			700
			800
			900
			1000

Real-time MPLS CoS Requirements

The customer's CPE may classify and mark VoIP signaling and media packets as high priority traffic (P1 Priority Queue). CenturyLink will transport the customer's VoIP traffic across its MPLS-based WAN without rewriting the customer packets' Prioritization bits. Priority queuing occurs on the PE-CE egress port based on the QoS template selected by the customer. This scheme insures proper quality of service to VoIP traffic end-to-end.

Relationship between MCC and Transport Bandwidth

The relationship between the maximum number of concurrent calls and the underlying transport bandwidth is a combination several factors:

Peak concurrent calls multiplied by each call codec type

VoIP Payload sample size

Layer 2 encapsulation

Percentage of CenturyLink network node bandwidth allocated to Priority Queue

Access bandwidth.

CenturyLink Engineering will specify the proper access circuit bandwidth based on customer peak call volume data and networking needs to insure a successful implementation.

3. SIPconnect Standard Compliance

State whether Supplier supports the SIPconnect standard for its service, and whether the compliance is to SIPconnect version 1.0 or version 1.1.

Comply (Yes/No)	*Explanation/Description (3. SIPconnect Standard Compliance)*
No	CenturyLink does not support SIPconnect version 1.0 or 1.1, which is typically used for direct connection of the customer's IP PBX to the SIP Trunk service provider. CenturyLink strongly recommends the use of a Session Border Controller as the interface between the IP PBX and the WAN. In addition to "hiding" the customer's VoIP infrastructure from the public network and functioning as a VoIP-aware firewall, the SBC's software features can be used to mitigate the protocol and implementation variances between the IP PBX and the SIP Trunk service to insure interoperability. CenturyLink SIP Trunk service is RFC3261 compliant for SIP Trunking.

4. Manufacturer Support

State which IP-PBX and Session Border Controller (SBC) manufacturers have been specifically tested and verified as supporting the Supplier's SIP Trunking service. Include SBC functionality primarily provided via dedicated hardware and that provided via a separate software load, such as the Cisco Unified Border Element (CUBE). Do not include simply coincidental compliance with the same version of SIPconnect as indicating "support." List only IP-PBX and SBC manufacturers that have been individually tested over the Supplier's network for call quality and feature transparency.

Comply (Yes/No)	*Explanation/Description (4. Manufacturer Support)*
Yes	CenturyLink does not recommend any specific SBC or combination of SBC and IP PBX for use with its service. However, CenturyLink has verified the compatibility of the CPE combinations below.

Vendor	Model/Name
Adtran	7100s, 924e IAD A4.03
Avaya	CM 5.2.1
Avaya	CM 5.2.1, SES 5.2.1 (No SBC)
Avaya	CM 6.0.1, AA-SBC
Avaya	CM 6.0.1, ACME SBC
Avaya	CM 5.2.1 SM 6.1, System Manager 6.1, AA-SBC 6.0
Avaya	BCM R6.0, IP Office 5.0.8
Cisco	UC520/UC560 7.0.3
Cisco UCM	CM 8.0.3 w/CUBE 1.3
Ingate Separator	IGS-0019-00
ShoreTel	SBE90 10.X
Siemens	HiPath 3000
Microsoft	Lync Server 2010 with ACME 3820

5. Call Compression

List all of the call compression codecs that the Supplier can support, which should include at a minimum G.711 and G.729 (*e.g.,* G.729a, G.729b and G.729ab).

Comply (Yes/No)	*Explanation/Description (5. Call Compression)*
Yes	CenturyLink SIP Trunk service supports codecs G.711u, G.711A, G.729a, G.729ab and T.38.

6. Statewide Availability

Confirm that the Supplier's SIP Trunking Voice Services as proposed are available statewide. If there are any locations in Virginia where Supplier's SIP Trunking Voice Services are not available, list such locations/exceptions.

Comply (Yes/No)	*Explanation/Description (6. Statewide Availability)*
No	CenturyLink SIP Trunk service availability is determined by the rate center of the service location. The following is a list of the rate centers where service is available. In addition, please refer to the attached map which shows all the rate centers in the Commonwealth of Virginia. The shaded areas represent the rate centers where SIP Trunk service is available.

Rate Center	State	Rate Center Name	SIP Available
NRFOLKZON2	VA	NORFOLK ZONE 2	Yes
CAPECHARLS	VA	CAPE CHARLES	Yes
EASTVILLE	VA	EASTVILLE	No
STAUNTON	VA	STAUNTON	Yes
DEERFIELD	VA	DEERFIELD	No
AUSTINVL	VA	AUSTINVILLE	No
HILLSVILLE	VA	HILLSVILLE	Yes
PULASKI	VA	PULASKI	Yes
WYTHEVILLE	VA	WYTHEVILLE	No
MAXMEADOWS	VA	MAX MEADOWS	Yes
MIDLOTHIAN	VA	MIDLOTHIAN	Yes
NWPTNWSZN4	VA	NEWPORT NEWS ZONE 4	Yes
WSNGTNZN08	VA	WASHINGTON ZONE 8	Yes
DULLESMTRO	VA	DULLES METRO	Yes
CUMBERLDGP	VA	CUMBERLAND GAP	No
DRAKESBRCH	VA	DRAKES BRANCH	No
FARMVILLE	VA	FARMVILLE	Yes
VICTORIA	VA	VICTORIA	Yes
SHENANDOAH	VA	SHENANDOAH	No
LURAY	VA	LURAY	Yes
SANDYLEVEL	VA	SANDY LEVEL	No
CHATHAM	VA	CHATHAM	No
BACHESHALL	VA	BACHELORS HALL	No
WHITMELL	VA	WHITMELL	No
UNION HALL	VA	UNION HALL	No
WARSAW	VA	WARSAW	Yes
COLONILBCH	VA	COLONIAL BEACH	Yes
FARNHAM	VA	FARNHAM	No
MARION	VA	MARION	Yes
RICHVALLEY	VA	RICH VALLEY	No
GRETNA	VA	GRETNA	No
RENAN	VA	RENAN	No
AMELIACTHS	VA	AMELIA COURT HOUSE	No
APPOMATTOX	VA	APPOMATTOX	Yes
ARARAT	VA	ARARAT	Yes
ARVONIA	VA	ARVONIA	No
BUCKINGHAM	VA	BUCKINGHAM	No
BIG PRATER	VA	BIG PRATER	No
BIG ROCK	VA	BIG ROCK	No

Comply (Yes/No)	Explanation/Description (6. Statewide Availability)			
	BERGTON	VA	BERGTON	No
	BLUEFIELD	VA	BLUEFIELD	No
	BLAND	VA	BLAND	No
	BURKESGRDN	VA	BURKES GARDEN	No
	BARNESVL	VA	BARNESVILLE	No
	CALLAO	VA	CALLAO	No
	CLINCHPORT	VA	CLINCHPORT	No
	CLINTWOOD	VA	CLINTWOOD	No
	CHINCOTEGU	VA	CHINCOTEAGUE	No
	CARTERSVL	VA	CARTERSVILLE	No
	DILLWYN	VA	DILLWYN	No
	DUNGANNON	VA	DUNGANNON	No
	DISPUTANTA	VA	DISPUTANTA	Yes
	DELTAVILLE	VA	DELTAVILLE	No
	DAVENPORT	VA	DAVENPORT	No
	DWIGHT	VA	DWIGHT	No
	FORK UNION	VA	FORK UNION	Yes
	FRIES	VA	FRIES	No
	FT BLACKMR	VA	FORT BLACKMORE	No
	FORT VLY	VA	FORT VALLEY	No
	GRUNDY	VA	GRUNDY	No
	HAGUE	VA	HAGUE	No
	HAMPDESDNY	VA	HAMPDEN-SYDNEY	No
	HONAKER	VA	HONAKER	Yes
	HURLEY	VA	HURLEY	No
	HOTSPRINGS	VA	HOT SPRINGS	No
	HEATHSVL	VA	HEATHSVILLE	No
	HAYSI	VA	HAYSI	No
	JONESVILLE	VA	JONESVILLE	No
	JEWELL RDG	VA	JEWELL RIDGE	No
	KNGANDQUEN	VA	KING AND QUEEN	No
	KEYSVILLE	VA	KEYSVILLE	No
	LEBANON	VA	LEBANON	Yes
	LAURELFORK	VA	LAUREL FORK	No
	LOVINGSTON	VA	LOVINGSTON	No
	MAXIE	VA	MAXIE	No
	MCKENNEY	VA	MCKENNEY	No
	MADISON	VA	MADISON	No
	MONTROSS	VA	MONTROSS	No
	MOUNTANGRV	VA	MOUNTAIN GROVE	No
	EDOM	VA	EDOM	No
	BRIDGEWTR	VA	BRIDGEWATER	No
	HINTON	VA	HINTON	No
	HARRISONBG	VA	HARRISONBURG	Yes
	FERRUM	VA	FERRUM	Yes
	SPERRYVL	VA	SPERRYVILLE	No
	CULPEPER	VA	CULPEPER	Yes
	FRONTROYAL	VA	FRONT ROYAL	Yes
	MATHEWS	VA	MATHEWS	Yes

Comply (Yes/No)	Explanation/Description (6. Statewide Availability)			
	MONTEREY	VA	MONTEREY	No
	MOUTHWILSN	VA	MOUTH OF WILSON	Yes
	NARROWS	VA	NARROWS	Yes
	OAKWOOD	VA	OAKWOOD	No
	POCAHONTAS	VA	POCAHONTAS	No
	PALMYRA	VA	PALMYRA	Yes
	PENINGTNGP	VA	PENNINGTON GAP	Yes
	PEARISBURG	VA	PEARISBURG	Yes
	PROSPECT	VA	PROSPECT	Yes
	ROCKY GAP	VA	ROCKY GAP	No
	RAPHINE	VA	RAPHINE	No
	SALUDA	VA	SALUDA	Yes
	SUGARGROVE	VA	SUGAR GROVE	No
	ST CHARLES	VA	ST CHARLES	No
	STANLEY	VA	STANLEY	No
	SYLVATUS	VA	SYLVATUS	No
	TAPPAHNNCK	VA	TAPPAHANNOCK	Yes
	TAZEWELL	VA	TAZEWELL	No
	VIRGILINA	VA	VIRGILINA	No
	WAKEFIELD	VA	WAKEFIELD	No
	WOOLWINE	VA	WOOLWINE	Yes
	WEST POINT	VA	WEST POINT	No
	STANARDSVL	VA	STANARDSVILLE	No
	BEAVERDAM	VA	BEAVERDAM	No
	NWPTNWSZN2	VA	NEWPORT NEWS ZONE 2	Yes
	CROZET	VA	CROZET	No
	WASHINGTON	VA	WASHINGTON (RAPPAHANNOCK)	Yes
	DOSWELL	VA	DOSWELL	Yes
	DAWN	VA	DAWN	No
	HANOVER	VA	HANOVER	No
	NWPTNWSZN3	VA	NEWPORT NEWS ZONE 3	Yes
	MEADOWSDAN	VA	MEADOWS OF DAN	No
	DANTE	VA	DANTE	No
	MCDOWELL	VA	MCDOWELL	No
	PAINT BANK	VA	PAINT BANK	No
	SALEM	VA	SALEM	Yes
	NEW CASTLE	VA	NEW CASTLE	No
	MONTVALE	VA	MONTVALE	No
	ST PAUL	VA	ST PAUL	No
	CRIGLERSVL	VA	CRIGLERSVILLE	No
	WILLIAMSVL	VA	WILLIAMSVILLE	No
	BLUE GRASS	VA	BLUE GRASS	No
	MILL GAP	VA	MILL GAP	No
	MCCLUNG	VA	MCCLUNG	No
	BROWNSBURG	VA	BROWNSBURG	No
	WILLIAMSML	VA	WILLIAMS MILL	No
	NICKELSVL	VA	NICKELSVILLE	No
	GATE CITY	VA	GATE CITY	Yes
	MORRISONCY	VA	MORRISON CITY	No

Comply (Yes/No)	Explanation/Description (6. Statewide Availability)			
	APPALACHIA	VA	APPALACHIA	Yes
	DUFFIELD	VA	DUFFIELD	No
	PEMBROKE	VA	PEMBROKE	No
	CHILHOWIE	VA	CHILHOWIE	Yes
	DANVILLE	VA	DANVILLE	Yes
	WAYNESBORO	VA	WAYNESBORO	No
	MOUNTSOLON	VA	MOUNT SOLON	No
	CLOVER	VA	CLOVER	No
	REEDVILLE	VA	REEDVILLE	No
	CLINCHCO	VA	CLINCHCO	No
	RICHLANDS	VA	RICHLANDS	Yes
	HURT	VA	HURT	No
	BASYE	VA	BASYE	No
	SOBRUNSWIK	VA	SOUTH BRUNSWICK	No
	BEDFORD	VA	BEDFORD	Yes
	NEWPORT	VA	NEWPORT	No
	BLACKSTONE	VA	BLACKSTONE	Yes
	CREWE	VA	CREWE	No
	LADYSMITH	VA	LADYSMITH	Yes
	BOYDTON	VA	BOYDTON	Yes
	COEBURN	VA	COEBURN	Yes
	COURTLAND	VA	COURTLAND	Yes
	BOYKINS	VA	BOYKINS	Yes
	FRANKLIN	VA	FRANKLIN	Yes
	SOUTH HILL	VA	SOUTH HILL	Yes
	CHASE CITY	VA	CHASE CITY	Yes
	CROWSHMTIT	VA	CROWS HEMATITE	No
	COVINGTON	VA	COVINGTON	No
	DAHLGREN	VA	DAHLGREN	Yes
	KINGGEORGE	VA	KING GEORGE	Yes
	DAMASCUS	VA	DAMASCUS	No
	DINWIDDIE	VA	DINWIDDIE	No
	EDINBURG	VA	EDINBURG	No
	ELKTON	VA	ELKTON	Yes
	BELLEHAVEN	VA	BELLE HAVEN	Yes
	GALAX	VA	GALAX	Yes
	GLADYS	VA	GLADYS	No
	GORE	VA	GORE	No
	GAINESBORO	VA	GAINESBORO	No
	GORDONSVL	VA	GORDONSVILLE	No
	STONE MT	VA	STONE MOUNTAIN	No
	HAYES	VA	HAYES	Yes
	HOLLAND	VA	HOLLAND	Yes
	IRVINGTON	VA	IRVINGTON	No
	LIVELY	VA	LIVELY	No
	NATURALBDG	VA	NATURAL BRIDGE	Yes
	LYNCHBURG	VA	LYNCHBURG	Yes
	CERES	VA	CERES	Yes
	NEW MARKET	VA	NEW MARKET	No

Comply (Yes/No)	Explanation/Description (6. Statewide Availability)			
	PINEYRIVER	VA	PINEY RIVER	No
	ALLWOOD	VA	ALLWOOD	No
	POUND	VA	POUND	No
	TEMPERNCVL	VA	TEMPERANCEVILLE	No
	PARKSLEY	VA	PARKSLEY	Yes
	RADFORD	VA	RADFORD	No
	DUBLIN	VA	DUBLIN	Yes
	RIDGEWAY	VA	RIDGEWAY	No
	SMITHFIELD	VA	SMITHFIELD	Yes
	FIELDALE	VA	FIELDALE	No
	STUART	VA	STUART	Yes
	SPENCER	VA	SPENCER	No
	WOODSTOCK	VA	WOODSTOCK	No
	BALLARD	VA	BALLARD	No
	WILLIS	VA	WILLIS	No
	DENDRON	VA	DENDRON	No
	PETERSBURG	VA	PETERSBURG	Yes
	SUFFOLK	VA	SUFFOLK	Yes
	CRITTENDEN	VA	CRITTENDEN	Yes
	NRFOLKZON4	VA	NORFOLK ZONE 4	Yes
	RICHMOND	VA	RICHMOND	Yes
	CHANCELLOR	VA	CHANCELLOR	Yes
	ASHLAND	VA	ASHLAND	No
	OLD CHURCH	VA	OLD CHURCH	No
	CHRISTISBG	VA	CHRISTIANSBURG	Yes
	SHAWSVILLE	VA	SHAWSVILLE	No
	LOCUST GRV	VA	LOCUST GROVE	No
	ROANOKE	VA	ROANOKE	Yes
	CAPRON	VA	CAPRON	Yes
	NRFOLKZON1	VA	NORFOLK ZONE 1	Yes
	GREENWOOD	VA	GREENWOOD	No
	GOOCHLAND	VA	GOOCHLAND	No
	MANAKIN	VA	MANAKIN	Yes
	KINGWILLIM	VA	KING WILLIAM	Yes
	CHARLES CY	VA	CHARLES CITY	No
	TOANO	VA	TOANO	Yes
	WILLIAMSBG	VA	WILLIAMSBURG	Yes
	CUMBERLAND	VA	CUMBERLAND	Yes
	VARINA	VA	VARINA	No
	MONTPELIER	VA	MONTPELIER	No
	ROCKVILLE	VA	ROCKVILLE	No
	BENT MT	VA	BENT MOUNTAIN	No
	NWPTNWSZN1	VA	NEWPORT NEWS ZONE 1	Yes
	CHESTER	VA	CHESTER	Yes
	MCGAHEYSVL	VA	MCGAHEYSVILLE	No
	KEEZLETOWN	VA	KEEZLETOWN	No
	DAYTON	VA	DAYTON	No
	CONCORD	VA	CONCORD	Yes
	EMPORIA	VA	EMPORIA	Yes

Comply (Yes/No)	Explanation/Description (6. Statewide Availability)			
	ALBERTA	VA	ALBERTA	Yes
	TANGIER	VA	TANGIER	No
	BURNTCHMNY	VA	BURNT CHIMNEY	Yes
	TURBEVILLE	VA	TURBEVILLE	No
	CRAIGSVL	VA	CRAIGSVILLE	No
	NEW HOPE	VA	NEW HOPE	No
	GLASGOW	VA	GLASGOW	No
	BUENAVISTA	VA	BUENA VISTA	Yes
	LEXINGTON	VA	LEXINGTON	Yes
	BIG ISLAND	VA	BIG ISLAND	Yes
	BURKEVILLE	VA	BURKEVILLE	Yes
	HALIFAX	VA	HALIFAX	Yes
	COLLINSVL	VA	COLLINSVILLE	Yes
	BOWLNGGREN	VA	BOWLING GREEN	Yes
	BROKENBURG	VA	BROKENBURG	No
	SPOTSYLVAN	VA	SPOTSYLVANIA	No
	FREDECKSBG	VA	FREDERICKSBURG	Yes
	BEECHWOOD	VA	BEECHWOOD	No
	NORTON	VA	NORTON	Yes
	WISE	VA	WISE	No
	BIGSTONEGP	VA	BIG STONE GAP	No
	WINDSOR	VA	WINDSOR	No
	KENBRIDGE	VA	KENBRIDGE	No
	EPPES FORK	VA	EPPES FORK	No
	PORT ROYAL	VA	PORT ROYAL	Yes
	BRISTOL	VA	BRISTOL	Yes
	ABINGDON	VA	ABINGDON	Yes
	CANA	VA	CANA	Yes
	ALTAVISTA	VA	ALTAVISTA	No
	GLOUCESTER	VA	GLOUCESTER	No
	SCOTTSVL	VA	SCOTTSVILLE	No
	SCHUYLER	VA	SCHUYLER	No
	RUSTBURG	VA	RUSTBURG	No
	JARRATT	VA	JARRATT	Yes
	LOUISA	VA	LOUISA	Yes
	KONNAROCK	VA	KONNAROCK	No
	INDEPNDNCE	VA	INDEPENDENCE	No
	MT JACKSON	VA	MOUNT JACKSON	No
	GLADSTONE	VA	GLADSTONE	No
	AMHERST	VA	AMHERST	No
	SURRY	VA	SURRY	No
	AXTON	VA	AXTON	No
	MARTINSVL	VA	MARTINSVILLE	Yes
	STRASBURG	VA	STRASBURG	No
	TOMS BROOK	VA	TOMS BROOK	No
	SO BOSTON	VA	SOUTH BOSTON	Yes
	CLARKSVL	VA	CLARKSVILLE	Yes
	FLOYD	VA	FLOYD	No
	ALUM RIDGE	VA	ALUM RIDGE	No

Comply (Yes/No)	Explanation/Description (6. Statewide Availability)			
	ENON	VA	ENON	Yes
	NRFOLKZON3	VA	NORFOLK ZONE 3	Yes
	CHUCKATUCK	VA	CHUCKATUCK	No
	GUM TREE	VA	GUM TREE	No
	PROVICFORG	VA	PROVIDENCE FORGE	No
	MECHANCSVL	VA	MECHANICSVILLE	Yes
	BLACKSBURG	VA	BLACKSBURG	Yes
	NRFOLKZON6	VA	NORFOLK ZONE 6	No
	UNIONVILLE	VA	UNIONVILLE	Yes
	MINERAL	VA	MINERAL	No
	FIFE	VA	FIFE	Yes
	POWHATAN	VA	POWHATAN	No
	SANDSTON	VA	SANDSTON	Yes
	STEPHENSCY	VA	STEPHENS CITY	No
	WINCHESTER	VA	WINCHESTER	Yes
	WEYERSCAVE	VA	WEYERS CAVE	No
	GROTTOES	VA	GROTTOES	No
	LAWRENCEVL	VA	LAWRENCEVILLE	Yes
	ONANCOCK	VA	ONANCOCK	No
	BOONESMILL	VA	BOONES MILL	No
	ROCKYMOUNT	VA	ROCKY MOUNT	Yes
	VOLENS	VA	VOLENS	Yes
	WHALEYVL	VA	WHALEYVILLE	Yes
	LA CROSSE	VA	LA CROSSE	Yes
	BRODNAX	VA	BRODNAX	Yes
	BLACKRIDGE	VA	BLACKRIDGE	No
	POTTSCREEK	VA	POTTS CREEK	No
	GLADE SPG	VA	GLADE SPRING	No
	SALTVILLE	VA	SALTVILLE	No
	MEADOWVIEW	VA	MEADOWVIEW	Yes
	HOPEWELL	VA	HOPEWELL	Yes
	STONYCREEK	VA	STONY CREEK	No
	WAVERLY	VA	WAVERLY	No
	CLAREMONT	VA	CLAREMONT	No
	CHARLOTSVL	VA	CHARLOTTESVILLE	Yes
	BETHIA	VA	BETHIA	No
	BASSETT	VA	BASSETT	No
	IVOR	VA	IVOR	No
	ORISKANY	VA	ORISKANY	No
	CLIFTNFORG	VA	CLIFTON FORGE	No
	EAGLE ROCK	VA	EAGLE ROCK	No
	BUCHANAN	VA	BUCHANAN	No
	FINCASTLE	VA	FINCASTLE	No
	TROUTVILLE	VA	TROUTVILLE	No
	CRIPPLECRK	VA	CRIPPLE CREEK	No
	RURALRTRET	VA	RURAL RETREAT	Yes
	CMSRKELCRK	VA	COMERS ROCK ELK CREEK	No
	ORANGE	VA	ORANGE	No
	KILMARNOCK	VA	KILMARNOCK	Yes

Comply (Yes/No)	Explanation/Description (6. Statewide Availability)			
	BROADWAY	VA	BROADWAY	No
	BERRYVILLE	VA	BERRYVILLE	No
	BROOKNEAL	VA	BROOKNEAL	Yes
	CHRLTTCTHS	VA	CHARLOTTE COURT HOUSE	No
	PAMPLIN	VA	PAMPLIN	No
	MIDDLEBURG	VA	MIDDLEBURG	No
	MT GILEAD	VA	MOUNT GILEAD	Yes
	MANASSAS	VA	MANASSAS	Yes
	HERNDON	VA	HERNDON	Yes
	DALE CITY	VA	DALE CITY	Yes
	OCCOQUAN	VA	OCCOQUAN	Yes
	INDENDNTHL	VA	INDEPENDENT HILL	Yes
	DULLES	VA	DULLES	Yes
	ARCOLA	VA	ARCOLA	Yes
	ENGLESIDE	VA	ENGLESIDE	Yes
	CATOCTIN	VA	CATOCTIN	Yes
	NOKESVILLE	VA	NOKESVILLE	Yes
	TRIANGLE	VA	TRIANGLE	Yes
	BOYCE	VA	BOYCE	No
	UPPERVILLE	VA	UPPERVILLE	No
	BLUEMONT	VA	BLUEMONT	No
	WSNGTNZN17	VA	WASHINGTON ZONE 17	Yes
	STAFFORD	VA	STAFFORD	Yes
	BRADDOCK	VA	BRADDOCK	Yes
	WSNGTNZN19	VA	WASHINGTON ZONE 19	Yes
	LORTONMTRO	VA	LORTON METRO	No
	LORTON	VA	LORTON	Yes
	HAYMARKET	VA	HAYMARKET	Yes
	LEESBURG	VA	LEESBURG	Yes
	MARSHALL	VA	MARSHALL	Yes
	WARRENTON	VA	WARRENTON	Yes
	HARTWOOD	VA	HARTWOOD	No
	CALVERTON	VA	CALVERTON	No
	REMINGTON	VA	REMINGTON	No
	THE PLAINS	VA	THE PLAINS	No

L. Implementation

As indicated in Section 1 of this RFP, the Commonwealth of Virginia, localities, schools, and other public bodies contract for telecommunications services with numerous telecommunications providers. Additionally, both the current Contract that VITA holds with its incumbent telecommunications provider and any Contract(s) resulting from this RFP are not mandatory sources for localities and other non-state public bodies, meaning that many public bodies have the option to purchase their own services under their own contracts.

Because individual localities, K-12 schools, and other non-State Government public bodies have the ability to decide whether or not to purchase services under the Contract, rigorous implementation of the telecommunications services provided under the Contract is particularly critical. Professional implementation of critical telecommunications services will lessen the anxiety of migrating to new services and/or new suppliers. In particular, it is in both the Commonwealth of Virginia's and the Supplier's interest to forestall a tendency

among users to avoid migration to new and more advanced services (including situations where telecommunications providers may be in the process of retiring older, legacy services) due to concerns over implementation.

Supplier understands that assurance of smooth and timely implementation is a needed, given the prospective competition with other contracting vehicles that are available to all public bodies within the Commonwealth of Virginia.

Comply (Yes/No)	***Explanation/Description*** (***L. Implementation)***
Yes	CenturyLink fully understands and agrees that a smooth and timely implementation of services is critical to the overall success of the contract. Demonstrating to both the Commonwealth and various localities, schools, and public bodies that CenturyLink provides a well executed, controlled, and safe implementation process will assuage concerns over the potential loss of services that is all too common in telecommunications service conversions. The development of a specific all-encompassing implementation plan that is uniquely adapted to meet each customer's requirements will demonstrate that CenturyLink fully understands each customer's unique requirements and that we can provide a technical solution that fully meets them. Given the development of a solid implementation plan, plan execution is still the most critical issue. To that end, CenturyLink employs a professional project management team, as well as the equally critical engineering and technical support staff, to flawlessly execute our implementation plans.

1. Supplier Bears All Costs of Implementation

Supplier should understand that all costs of transition from existing services to a new Supplier, or from one service on the COVANET Contract to analogous services on the Contract resulting from this RFP, will be the responsibility of the Supplier, including project management, communications with end-user Agencies and any subcontractors, and technical support.

Comply (Yes/No)	***Explanation/Description (1. Supplier Bears All Costs of Implementation)***
No	CenturyLink will make every effort to accommodate costs of transition, however the scope of transition costs will be limited to the waivers CenturyLink has provided in Appendix A, in conjunction with other assistance such as Project Management, which CenturyLink has outlined its proposal response. CenturyLink holds VITA responsible for any internal costs incurred such as cancellation charges with another vendor or other technical requirements not specifically outlined in this request for proposal, and not agreed to by CenturyLink.

2. Description and Methodology

Clearly describe the Supplier's overall approach and plans to implement VITA's services. VITA believes a phased implementation plan with appropriate overlap of activities for different services will enable migration at a manageable risk level.

Comply (Yes/No)	***Explanation/Description (2. Description and Methodology)***
Yes	CenturyLink will organize a Project Management Office (PMO) to manage the implementation of VITA's network. The charter of the CenturyLink PMO is to lead CenturyLink's commitment to contract compliance and service delivery during the implementation phase of VITA's network. The Enterprise Project Manager (EPM) essentially serves as a "general

Comply (Yes/No)	Explanation/Description (2. Description and Methodology)
	contractor" of the CenturyLink infrastructure and any 3rd party vendors, and as the single point of contact for service delivery. To achieve the mission, the CenturyLink EPM works to achieve the following objectives: Provide high quality services to the customer through efficient, resourceful, and responsive project management of network implementation and service management Ensure compliance with the terms of the contract Increase customer retention by improving customer satisfaction Track and report on performance to ensure that the project meets all schedule and technical requirements Manage closely all external suppliers, vendors, and 3rd party contributors to the project Allow for a rapid response through change/configuration management. **Network Implementation** In alignment with our roles and responsibilities, the CenturyLink PMO will interact with all internal and external organizations to successfully complete the implementation and meet our service level agreements from implementation through to steady-state operations. We accomplish that through the following phases of the project: **1. Pre-implementation Coordination** During the pre-implementation phase, the CenturyLink team will identify and coordinate with our internal resources to gain support for the final design and implementation of the VITA network. The team will orchestrate a series of pre-implementation meetings between VITA and our internal resources to outline roles, responsibilities, and deliverables. The EPM will document the results of this coordination as part of a comprehensive implementation plan, which will be disseminated to all members of the project team. A comprehensive project schedule will be developed using an industry-standard project management tool (e.g., MS Project), which will outline the specific tasks and lead times for completing each task. **2. Implementation Management** CenturyLink s PMO will be responsible for the overall implementation of VITA's network. The Enterprise Project Manager will ensure that internal organizations and 3rd party vendors work in harmony to implement VITA's network according to contract specifications. To ensure that the implementation is meeting requirements, the Enterprise Project Manager will track all activities against a baseline schedule and project implementation plan. **Contract Compliance** The PMO is responsible for compliance with contractual commitments during the implementation and for conducting a detailed audit prior to declaring the implementation complete. At the completion of each installation, CenturyLink will perform acceptance testing and obtain approval from a customer representative either at the site or from the

Comply (Yes/No)	Explanation/Description (2. Description and Methodology)
	VITA-designated project representative. When implementation is completed, the account team will lead a comprehensive review of all contractual requirements and compliance with them. This review will also ensure that the billing process is working to the mutual satisfaction of CenturyLink and VITA. The PMO will document any variances and develop plans of action to bring them into compliance. **Customer Satisfaction** The Enterprise Project Manager and Account Team solely responsible for customer satisfaction during the implementation of the services provided. The PMO is in continual contact with VITA to understand their needs. Through regular project reviews, VITA interacts with the PMO to discuss project status, upcoming plans, and potential issues. Should issues or problems materialize, the PMO is the single point of contact for the customer. At the completion of major milestones in the project, the PMO will solicit formal feedback from the customer. **Performance Tracking and Reporting** The PMO will track project metrics daily. The project baseline schedule will be maintained in a secure, web-based, project portal (MS SharePoint) that will be updated with actual completion dates as respective functional groups complete their tasks. CenturyLink's and VITA's project teams will have access to view these updates to measure on-time performance rates. **Supplier Management** When 3rd party vendors or suppliers are required to help complete the project, CenturyLink will ensure that their performance meets or exceeds the specifications of the contract, just as we do for internal members of the project team. If required by the contract, CenturyLink will solicit bids, encouraging competition to get the best price, while also considering past performance to ensure the best value. Once CenturyLink has selected a vendor, service level agreements will be developed outlining contract requirements. CenturyLink will also require regular vendor reports, both written and verbal, both to monitor performance and to enable proactive improvement of processes and procedures driving performance. **Change/Configuration Management** If a customer-requested change is made, CenturyLink's PMO responds by following an established disciplined process to review the request and redirect the project to comply with the new scope. First and foremost, the PMO works to understand VITA's needs. VITA should identify sites that are critical to operations, and must be moved with minimal downtime, such as the headquarters, or a payroll processing center that has time sensitive operations. The CenturyLink PMO, with VITA's input, prioritizes sites to be moved and schedules them to minimize impact to the end users. While CenturyLink's Implementation Engineering experts are assessing the technical impact of any changes, the PMO will modify the project plan/schedule to determine any new impacts to critical path and cost. The PMO then proposes the new project plan to the Change Control Board (CCB) for approval. A formal agreement by both parties to the schedule is sought. The PMO investigates all opportunities to shorten the schedule and reduce costs while maintaining technical integrity. Once the new project plan is approved, the CenturyLink PMO must

Comply (Yes/No)	*Explanation/Description (2. Description and Methodology)*
	communicate the new direction and objectives to the entire project team and to VITA, particularly to representatives at each affected location, so all affected parties are aware of planned activities. The PMO holds regular status updates with the project team and VITA to measure performance against the approved plan. The PMO reports performance metrics in regular management reports to ensure that CenturyLink is tracking activity proactively to foresee potential slips or other issues, that we are modifying while the plan accordingly. Finally, the PMO puts the project plan into tight change controls to ensure that changes are proposed, analyzed and assessed, formally approved, and properly communicated to the project team.

a. Draft Implementation Plan

Submit a draft Implementation Plan as part of the Supplier's proposal to demonstrate your understanding of the issues raised by a migration of VITA's services. In the Implementation Plan, clearly identify tasks that the Supplier expects VITA to undertake and VITA's obligations and the timeline that Supplier believes is appropriate for the implementation (measured from the effective date of the Contract). The Implementation Plan should detail major milestones, dependencies, critical path and the activities required to implement the services identified in this RFP. Indicate the skill levels required to accomplish each milestone and which Key Personnel are associated with each skill level.

As appropriate, the Implementation Plan should separately detail the migration of different services (*e.g.*, data network transport services, voice transport services, managed data network services, managed telephony services, managed video services, etc.).

State the estimated time to implement all of VITA's locations from Contract signature (measured from the effective date of the Contract) were all of the Supplier's proposed services to be awarded.

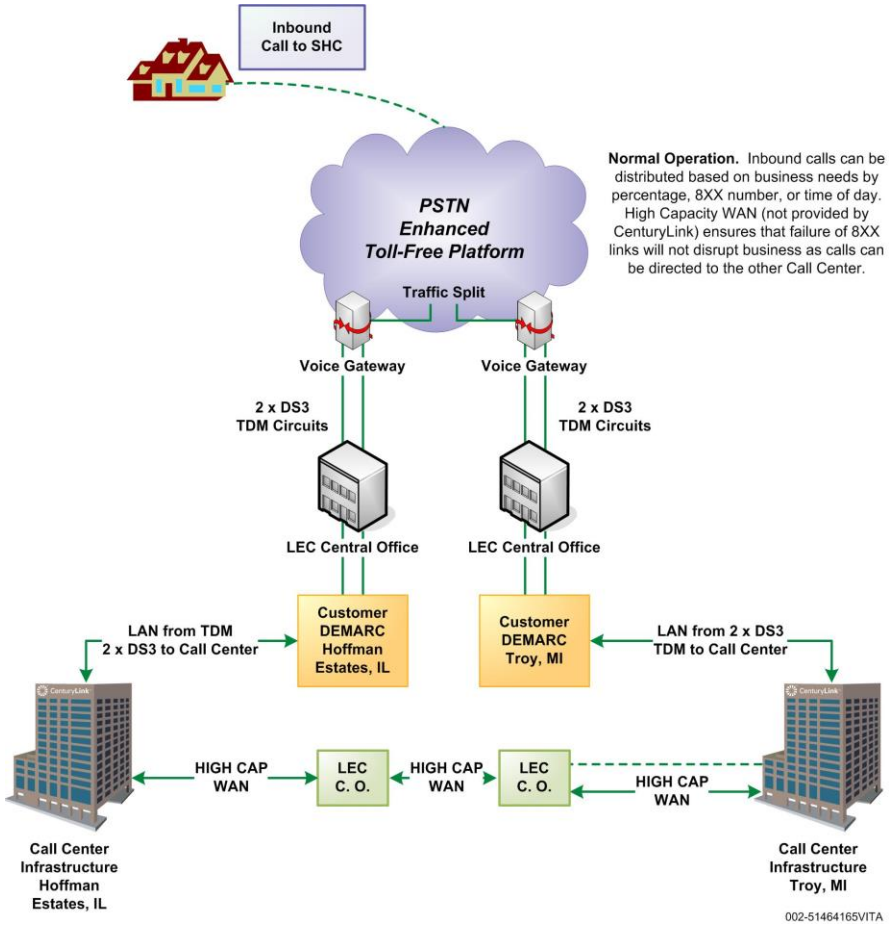
At a minimum, include the following items in the draft plan:

- Identification of the Supplier's project management team and resources;
- Identification of information or resources that VITA will be required to provide the Supplier for completion of the implementation;
- Verification of the current status of equipment and services prior to commencing implementation (baseline current state both physically and operationally);
- Lead times and task dependencies for equipment and services to be implemented by location and region;
- Description of the Supplier's implementation processes and implementation criteria for acceptance;
- NOC support during implementation;
- Description of procedures for joint development with VITA of transition time frames and priorities, tools for publishing and tracking transition performance against agreed plans, and processes for informing and managing VITA site personnel of transition activities;
- Description of the Supplier's automated tools that will be available during the implementation and what processes and procedures will be implemented by the Supplier to ensure that VITA's IT service management platforms are kept up to date during the implementation.

- Description of the Supplier's processes and tools used during the implementation to support ongoing MACD activities and maintain configuration control and up-to-date device configuration information in databases;
- Description of the Supplier's processes and policies for coordinating with third parties;
- Restrictions and flexibility regarding support for transition performance outside of normal business hours;
- Processes for implementing requested or required changes.

Comply (Yes/No)	*Explanation/Description (a. Draft Implementation Plan)*
Yes	**Initiating and Planning** **Project Scope:** The intent of the Implementation Plan is to clarify all work included in this project and to avoid any miscommunication or misinterpreted expectations between VITA and CenturyLink. The PMO will update the Implementation Plan for all major scope changes. A formal, comprehensive scope statement will be prepared after award from VITA. Location-specific information such as: address, site contact, hours of operation, port speed, floor/room, carrier specific/diversity requirements, and known- in-advance facilities information will be provided by the customer and/or CenturyLink Account team and will be documented by the PMO via a separate Excel spreadsheet. This document will be provided to the PM and the Order Entry Center, and will be verified by the Implementation Engineers making any corrections as deemed necessary to ensure the document is accurate before any service orders can/will be issued. CenturyLink will coordinate all aspects of planning, provisioning, and installation of the services ordered. **Project Assumptions:** Detailed assumptions will be input by CenturyLink following award from VITA. Below is the Design Document for this project: A more detailed design will be created by CenturyLink following award from VITA. **Design Document:**

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)



CenturyLink Stakeholders

Name	Title	Email	Phone #'s
Will Turanchik	Account Manager	William.Turanchik@CenturyLink.com	202-741-9387
Tom Kraft	Project Manager	Tom.Kraft@CenturyLink.com	615-942-7760
Paul Matsikas	Sales Engineer Senior	Paul.Matsikas@CenturyLink.com	860-404-0546
Cathie Kendrick	Account Consultant	Cathie.Kendrick@CenturyLink.com	402-998-6038
Cheryle Fox	Program Management	Cheryle.Fox@Centurylink.com	916-463-6609
Chris Boulbol	Service Manager	Chris.Boulbol@CenturyLink.com	603-498-6835

Installation Intervals:

Narrow band Circuits (DS1):

Standard implementation intervals for Narrowband circuits are between 30 and 45 calendar days.

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)
	Broadband Circuits (DS3 and above):

Standard implementation intervals for Ethernet circuits are between 60 and 120 calendar days. *** Standard implementation intervals for DS3 circuits are between 45 and 60 calendar days.*** Critical path activities and standard intervals required to implement DS3 service are included below as a point of reference. Orders for CenturyLink services should be submitted early enough to meet the target completion date. Additionally, delays in any deliverable outlined below could result in a delay to the overall timeline. Expedited installations for broadband circuits, if accepted by a LEC, are expensive and very often fail.

****If LEC construction is required this could add significant time to the delivery interval and may also delay the project.*

#	DS3 Ordering Tasks	Resource	Duration
	Information Gathering Activities		
1	Identify sites	VITA	1 day
2	Identify circuit/equipment requirements	VITA	1 day
3	Identify billing requirements	VITA	1 day
4	Pre-implementation meeting (assign 8xx LOA)	CenturyLink/VITA	1 day
	Pre-Order Entry Activities		
5	Prepare orders a. For dedicated access circuits b. For CPE c. For CenturyLink service	CenturyLink Project Manager (PM) and Account Consultant (AC)	1 day
6	Review and validate order request	CenturyLink Sales Engineer	1 day
7	Verify site information (i.e., address and local contact)	CenturyLink Account Consultant/VITA	1 day
8	Submit order requests to CenturyLink OEC (order entry)	CenturyLink Account Consultant	1 day
9	Orders entered into system	CenturyLink Order Entry	1 day
10	Provisioning reviews and accepts orders	CenturyLink Provisioning	1 day
11	Order Numbers provided	OE/Provisioning to CenturyLink Project Manager; then to VITA	1 day
12	Routes reserved; ASRs sent to LEC	CenturyLink Provisioning	2 days
13	Send LOA/CFA request (if required)	CenturyLink Provisioning	2 days
14	Firm Order Commitment received from LEC/CPE vendor	CenturyLink Provisioning	5 days
15	Due date jeopardizes are handled by CenturyLink external escalations	CenturyLink Provisioning	
16	CenturyLink receives Design Layout Record from LEC	CenturyLink Provisioning	3 days
17	CenturyLink completes wiring/cross-connects	CenturyLink Provisioning/Broadband Installation Group (BBIG)	2 days
18	LEC installs the local loop and extends demarc	LEC	7 days
19	CenturyLink tests and accepts local loop with LEC	CenturyLink Broadband Installation Group	1 day

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)			
			(BBIG)	
	20	End-to-end testing from CenturyLink to customer premises	CenturyLink Broadband Installation Group (BBIG)	1 day
	21	CenturyLink declares circuit to be network- ready, triggers billing	Minimum weekly status reports to VITA from CenturyLink PM	5 days
		Pre-Cutover Activities		
	22	Contacts LCON to coordinate install	VITA PM/ CenturyLink PM	1 day
	23	CPE (Customer provided/Leased)	VITA PM	1 day
	24	Circuit activate/Customer accepts service	VITA PM	1 day
	25	Orders closed	CenturyLink Activations Team	1 day
	26	Post install follow-up	CenturyLink PM	7 days
	27	First invoice review	CenturyLink Account Consultant	30 days

Installation Strategy

CenturyLink's dedicated access facilities will be ordered as instructed by VITA. CenturyLink will terminate the circuits at the VITA MPOE unless otherwise specified. VITA is responsible for extending the circuit from the MPOE to the designated circuit termination point unless otherwise specified. Upon request CenturyLink may assist VITA to complete the demarc extension. If the terminating customer equipment can handle an 'extra circuit' install, dual networks will run for a period of time. Otherwise, the cutover will be handled as a hot cut. In all cases equipment will be disconnected from the existing circuit and reconnected to the new CenturyLink circuit(s).

In support of the implementation of the services, VITA will be responsible for the following tasks:

Provide point(s) of contact for coordination of site visits and/or data gathering

Prepare each site in accordance with CenturyLink -supplied environmental specifications, if applicable

Participate in periodic status review meetings throughout the implementation

VITA will work with CenturyLink in determining the install requirements for each site (e.g., access type, bandwidth requirement, and logical links).

Extended wiring from demarc to VITA termination equipment. CenturyLink can coordinate this component if desired by VITA.

Toll Free Services

For 8xx orders VITA is requested to follow this process:

<u>Dedicated Port</u>

1. Toll Free order is keyed with the 8xx and dedicated routing information. The 8xx Resporg ID is keyed with the incumbent Resporg ID and the signed letter of agency (LOA) form is attached.
2. The Toll Free Provisioning (TFP) team receives the order and validates the order requirements.

Comply (Yes/No)	*Explanation/Description (a. Draft Implementation Plan)*
	3. TFP faxes the LOA to the incumbent Resporg. a. The incumbent Resporg has 2 business days to respond to the port request. b. The data from the signed LOA is validated against their database for authenticity. c. If the data matches, the 8xx is ported using the SMS/800 database (National database shared by all Resporgs). d. If the data does not match or the customer has an outstanding balance, the port request is rejected and new LOAs and bill copies will need to be submitted. 4. After the number successfully ports over, CenturyLink routing is built 'on hold' in the SMS/800 call plan. 5. The dedicated translations are built on the CenturyLink network. 6. The SMS/800 record is released from hold, rerouting traffic to the CenturyLink network automatically. **Switched Port** 1. Toll Free order is keyed with a switched termination. 2. The LOA is faxed to the switched Resporg team where it is logged and tracked. 3. The LOA is submitted to the incumbent carrier: a. The incumbent Resporg has 2 business days to respond to the port request. b. The data from the signed LOA is validated against their database for authenticity. c. If the data matches, the 8xx is ported using the SMS/800 database (National database shared by all Resporgs). d. If the data does not match or the customer has an outstanding balance, the port request is rejected and new LOAs and bill copies need to be submitted. 4. After the number ports over, a CenturyLink automation picks up the transaction and activates the routing in SMS/800. **Resporg – Responsible Organization Port Procedure CenturyLink submits the blanket LOA and spreadsheet to Sprint (or other carrier) Sprint changes the Resporg in SMS from Sprint to CenturyLink's Resporg ID (LGT01) CenturyLink *leaves 8xx numbers on Sprint's routing until time for activation over* CenturyLink *(so customer is never out of service)* If VITA wants a coordinated turn up, it must be so marked on the order form and keyed on the initial order request • CenturyLink will ask for the time and date VITA wants to turn up; we will schedule the turn up and provide a dial-in number for the turn up.

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)
	• At time of turn up the switch tech will work with VITA to ensure customer equipment is ready to receive 8xx traffic. If all tests are good, the CenturyLink switch tech will then activate the 8xx numbers over the CenturyLink network Customer is up and running over CenturyLink and free to disconnect Sprint equipment (as needed) **Long Distance Dedicated Order Process** VITA submits order request to their CenturyLink account team. This request includes but is not limited to: Address Primary Contact Name/Number Site Contact Name/Number Site Phone Number CPE – CenturyLink or Customer provided? Demarc Location: MPOE or will they need EW? Should the Telco extend demarc? If yes, to where: Building, Floor, Suite/ Room? Access into the building, Telco Room or Office? Customer to pre-plan for the LEC. Line coding, framing and signaling Misc. Details, E.g., Does circuit need PRI built on it; is circuit ISDN? Will there be toll free numbers? Are they to be ported or are new ones to be issued? If TFNs will need LOA, list of features required per TFN, etc. The Sales team, including the Sales Engineer and the Account Consultant, will then complete the necessary paperwork and submit to Customer for final review, approval and signature. Once signature is received and the order is submitted, it is keyed into the CenturyLink system. Once order numbers are issued, the EPM receives a notification per each site. A CenturyLink Provisioner receives and reviews the sales order to ensure that all applicable information has been included and then proceeds with creating an engineering order to begin the provisioning process. ***Please note:*** *During the entire implementation process, CenturyLink will maintain an updated database outlining all the order and circuit numbers, as well as pertinent dates, and will provide weekly status via emails and/or scheduled conference calls as predetermined by VITA and CenturyLink*. The Provisioner reserves circuit routes in the CenturyLink F&E database. This includes facilities, equipment, bandwidth, and connectivity to Telco. An Access Service Request (ASR) is then created and sent to the LEC to order the local loop for the circuit. The LEC sends CenturyLink a Firm Order Commitment (FOC) after an ASR is received. The interval between receipt of ASR and issuing of a FOC by the LEC varies from 5 to10 days, depending on the LEC. A FOC consists of a LEC order number, LEC Circuit ID, LEC Planned Test Date (PTD), and LEC Due Date (DD). A Design Layout Record (DLR) is sent by the LEC after the FOC is sent and must be received by CenturyLink prior to the PTD. The EPM will contact the Customer POC to inform of FOC receipt, and the

Comply (Yes/No)	*Explanation/Description (a. Draft Implementation Plan)*
	POC will in turn contact the LCON at the site to ensure that someone will be available to show the local phone company where to install the circuit on the install date. CenturyLink Provisioning and the Project Implementation Manager (PPM) will work together to track the order(s) to ensure that all timelines are being met. Escalation procedures are utilized, as needed, to meet the customer's desired due date. The Provisioner then sends the internal circuit layout report (CLR) to the CenturyLink POP(s) in order for the CenturyLink on-network provisioning to be completed, including virtual POP-to-POP wiring. The LEC installs the local loop to the customer premise DSX panel and then contacts a CenturyLink technician to test for quality. Once the test results are positive, the CenturyLink Tech accepts the local loop. The PPM notifies the Customer and re-verifies that the demarc was extended (if requested). If it is discovered that the LEC did not do the extension, the PPM requests the Provisioner to either re-send the ASR to the LEC, or to schedule demarc extension with an outside CenturyLink contractor (e.g., Telesource). It is important for CenturyLink to closely monitor this in order to ensure that billing is not activated before the circuit can be accepted (billing for circuits begins five days after the loop is accepted by the CenturyLink tech). Once the circuit is verified as being in the correct location, the Customer is asked to schedule the test and acceptance of the circuit. The PPM works with VITA and their equipment vendors to determine the circuit cutover date. If this includes fully managed CPE ordered through CenturyLink, the CPE install, test, and acceptance will include the CenturyLink technician. This info is then entered into the Scheduler and Core order tracking system. On the date and time of the cutover, all involved parties will call into the CenturyLink Install Management Group for testing. During this call the circuit(s) is tested to ensure its error-free; after which the Customer is expected to formally accept the new circuit. The CenturyLink Account Consultant conducts first bill review with the customer to ensure billing accuracy. The Account Team follows up with the Customer to ensure that the circuit is operating as expected. If there are service issues, the Customer will contact Repair and open a trouble ticket. Please note that the CenturyLink PM closely monitors the entire implementation process, and serves as the main point of contact for the Customer. As a general rule, it takes 30-45 calendar days to complete the installation of Long Distance Dedicated Circuits from the time the signed paperwork is received from the Customer. **The following is an example of a detailed check list for planning and ordering d MPLS service and required hot-cut deployment of MPLS for Narrowband Circuits.** **CenturyLink IQ Networking Implementation Order Check List** Confirm billing structure/hierarchy Confirm final site listing Plan for customer DS3 Private Port Determine sites for phased install Complete physical address for site to include suite numbers, if applicable Site contact

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)
	Site phone number Property management company and phone number, if applicable Technical information Host locations Local Loop details: repurpose or new Link Protocol Port Speed QoS CE-PE Routing LAN IP Addresses. **Writing/Placing Orders (Days 1-5)** Prepare orders with above information Obtain Customer signature on a master order form Obtain completed signed orders and contracts Submit orders/contracts to Order Entry Center (OEC). **Phase 1 DS3 Private Port Engineering/Provisioning (Days 6-35)** Order Management Group (OMG) contacts sites to verify the site information (Day 6-7) OMG creates engineering order (Day 7) Route circuit within CenturyLink systems (Days 8-9) New Local Loop Access Service Request (ASR) sent to LEC for local loop, for those sites requiring a new local loop (day 10) Receive Firm Order Commitment (FOC) from LEC (day 18) Receive Design Layout Record (DLR) from LEC (day 26) Wire circuit on CenturyLink network (day 28) Test local loop with LEC (day 30) Build the IQ Networking Private Port (day 32) IP Assignment (IPAA) establishes customer serial IP address block IPAA configures PE routing for proper CE-to-PE relationship IPAA configures QoS, if applicable IPAA tests for edge to edge routing Final testing/Circuit is ready (day 35) Test customer access link Verify customer IP block Verify IP addresses Billing begins 5 days after circuit is ready Schedule turn-up. **Activation/Cut Over** Vendor and Customer local contact (LCON), and if applicable, facility personnel, arrive on site CPE vendor connects equipment to the demarc and has equipment configured

Comply (Yes/No)	*Explanation/Description (a. Draft Implementation Plan)*
	Customer, CPE Vendor, CenturyLink PAA Engineer, and CenturyLink PM call into conference bridge CenturyLink PAA confirms connectivity on CenturyLink Private Edge Router Customer HQ makes necessary changes on the host router interfaces CenturyLink and Customer HQ confirms connectivity through the CenturyLink Network Customer site confirms systems are operational – predefined application testing Customer accepts service CenturyLink activates alarm/monitoring and closes order. Note: The following tasks typically experience the same durations as above. Some Phase 2 sites may re-use local loops. **Phase 2 Select Sites: DS1 Private Port Engineering/Provisioning** Order Management Group (OMG) contacts sites to verify the site information (Day 6-7) OMG creates engineering order (Day 7) Route circuit within CenturyLink systems (Days 8-9) New Local Loop Access Service Request (ASR) sent to LEC for local loop for those sites requiring a new local loop (day 10) Receive Firm Order Commitment (FOC) from LEC (day 18) Receive Design Layout Record (DLR) from LEC (day 26) Wire circuit on CenturyLink network (day 28) Test local loop with LEC (day 30) Build the IQ Networking Private Port (day 32) IP Assignment group (IPAA) establishes customer serial IP address block IPAA configures PE routing for proper CE-to-PE relationship IPAA configures QoS, if applicable IPAA tests for edge-to-edge routing Re-purpose Local Loop Comments inserted to Sales & Engineering Orders indicating loop re-use ▪ Existing Circuit ID Validated ▪ Disconnect Order Validated ▪ Copy loop over from old circuit to new circuit and route to private port ▪ Send records-only Access Service Request (ASR) ▪ IP Assignment (IPAA) request to pre-wire circuit for Upgrade ▪ Customer schedules upgrade maintenance window ▪ Perform loop change ▪ CenturyLink tests for proper operation ▪ Customer tests for proper operation

Comply (Yes/No)	*Explanation/Description (a. Draft Implementation Plan)*
	Final testing/circuit is ready ▪ Test customer access link ▪ Verify customer IP block ▪ Verify IP addresses ▪ Customer tests for site-to-site connectivity Billing begins 5 days after circuit is ready Schedule turn-up **Activation/Cut Over** Vendor and Customer local contact (LCON), and if applicable, facility personnel, arrive on site CPE vendor connects equipment to the demarc and has equipment configured Customer, CPE Vendor, CenturyLink IPAA Engineer, and CenturyLink PPM call into conference bridge CenturyLink IPAA confirms connectivity on CenturyLink Private Edge Router Customer HQ makes necessary changes on the host router interfaces CenturyLink and Customer HQ confirm connectivity through the CenturyLink Network Customer site confirms systems are operational – predefined application testing Customer accepts service CenturyLink activates alarm/monitoring and closes order. **Phase 1 and 2** – Customer completes site-to-site internetworking tests **Phase 1 and 2** – Customer Phase 2 sites start existing carrier disconnects Interval for network monitoring for proper operation (for example, 7 days) Repeat job steps above for all phases **Project Closure** Account transition to Operations Support Team (OST) and IQ NOC **Broadband (Ethernet) MPLS with SIP Trunk Services** 1. VITA prepares order requests and submits them to CenturyLink 2. CenturyLink Account Team acknowledges receipt of every order and reviews each request for accuracy. a. If there are MISTAKES/EDITS needed then CenturyLink kicks it back to VITA b. If there are NO MISTAKES/EDITS then CenturyLink proceeds to process the order request. 3. MPLS/SIP orders are sent to Order Entry Center (OEC). a. OEC completes order entry work and issues CENTURYLINK-internal tracking documentation. b. CenturyLink PPM returns order ‘receipt’ to VITA

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)
	4. Toll Free (8xx) orders are sent to OEC. (Refer to 8xx activation/porting process above) a. OEC completes order entry work. b. CenturyLink PPM returns order 'receipt' to VITA 5. CenturyLink Provisioning creates the ENG orders for MPLS, SIP (dedicated circuits) and 8xx a. CenturyLink Circuit 'IDs are created b. CenturyLink completes IPAA/IPA2 jobstep adhering to requested PE diversity request c. CenturyLink Provisioning sends access wiring order to field ops (on-net circuits) d. CenturyLink Field Ops works order and confirms demarc 6. CenturyLink PMO tracks all ENG orders via SharePoint 7. CenturyLink Broadband Install Mgmt (BBIG) declares circuit order 'Network Ready' for turn-up for MPLS orders after final end-to-end testing is successfully completed; 8. VITA performs Test/Turn-Up Activities for MPLS orders a. CenturyLink PPM notifies VITA when each circuit order is 'Network Ready' b. VITA notifies CenturyLink at least one week in advance of requested turn-up date c. CenturyLink PPM validate request and if PPM agree the order is network ready, CenturyLink PPM notify the CenturyLink Data Implementation Team (DIT) to 'admin up' the port d. DIT processes the request and notifies CenturyLink PPM that ports are ready for turn-up e. VITA vendor (if applicable) completes truck roll to location i. If there are no issues at turn-up VITA accepts service ii. If there are issues at turn-up DIT team begins troubleshooting until issue resolution; activation may be rescheduled if necessary f. DIT marks each circuit order as 'accepted by VITA' and transitioned to the NOC for on-going maintenance after the initial 48 hour waiting period expires. (For any service issues during first 48 hours please contact DIT, after that period please contact the NOC) g. CenturyLink Account Team performs first invoice review to ensure billing accuracy **FREQUENTLY USED TERMS/PROCESSES:** <u>Document and Order Submission</u> VITA will provide the CenturyLink account team with detailed order information The account team reviews and verifies the order information and notifies

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)
	VITA of any problems with any aspect of an order in question. This activity verifies such items as points of contact, building locations, site access requirements, etc. Accurate information helps to ensure timely delivery. At times it may be necessary for CenturyLink or VITA to change site or contact information. In this event, VITA will be notified if this activity would cause any delay in provisioning of service. A CenturyLink account team representative will send the order to the OEC who enters the orders into CORE and submits the order to provisioning once ACD approval from VITA is received. <u>Engineering Order Created/Circuit design</u> The order is reviewed by Provisioning and an engineering order is created so processing of the order can begin. The Provisioner will then build the circuit design within the CenturyLink facility systems based upon the circuit order. <u>ASR (Access Service Request) Sent</u> The Provisioner will order the local loop(s) from the LEC/CLEC for connectivity from CenturyLink to the individual VITA locations. <u>FOC (Firm Order Commitment) (AKA: Due Date) Received</u> The FOC is the date the LEC/CLEC has scheduled delivery of the local access loop <u>Local Loop Install and Testing</u> The local loop provider completes wiring and testing of the loop and contacts CenturyLink for test and acceptance. CenturyLink tests the circuit through the CenturyLink network to the VITA location (smart jack/VITA premises) including the local loop and accepts the loop. <u>Circuit Ready for Activation</u> The circuit is tested end-to-end and deemed ready for activation. The project manager will be notified so activation can be scheduled with VITA. <u>Billing Initiated</u> Once the circuit has been tested end-to-end, billing is triggered. The actual billing start date is 5 days after billing is triggered. Activation can be scheduled at any time. <u>Activate Service at the Site</u> Upon scheduling activation, VITA will contact the implementation group at the pre-determined time to activate and accept service. At this point installation of the service is considered complete, billing will have commenced, and after 48 hours service management is transitioned to CenturyLink's NOC. **Executing Communication, Tracking and Escalation Plan:** CenturyLink has assigned Tom Kraft to be the Project Manager for this project. He has overall responsibility for the success of this project. In general, any project questions, concerns, or issues should be directed to him. The communication plan to monitor project progress will include:

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)

A project status report that will be sent to VITA on a weekly basis via email. This status report will also be posted on the web portal along with meeting agendas and minutes.

A weekly conference call to review project status will take place: (Meeting information agenda will vary)

Project web portal (see Section H.7-Documentation Management for more information).

If the assigned PM is unavailable due to illness, vacation, etc., VITA will be assigned an interim PPM. Should VITA be dissatisfied with the performance of the CenturyLink PPM, they can escalate their concerns to the Supervisor of the assigned PPM:

Joseph Karabinus, Manager, CenturyLink Project Management
614-215-2199 (Office)
Joseph.Karabinus@CenturyLink.com

Monitoring and Controlling

Change Control:

The CenturyLink Account Team and the VITA Team will negotiate any changes to the original project scope. If VITA needs to change an element of the project scope, the CenturyLink PMO responds by following a disciplined process to redirect project compliance within the new scope. Major scope changes may affect the project due dates as well as the overall project completion date. A Change Control Board will be formed to approve, reject or mediate changes to the project scope and/or baseline. Both VITA and CenturyLink will appoint members to this board. The board may initially consist of:

Member	Company	Title
Tom Kraft	CenturyLink	Project Manager
Paul Matsikas	CenturyLink	Sales Engineer
TBD	VITA	Project Manager

Risk Management Plan

CenturyLink will identify, analyze, and respond to all of the possible risks to ensure that service delivery is not interrupted. During the planning phase of the project, the PMO will review each step of the project to establish if it presents an “at risk” situation that may delay the project or create unreasonable downtime for VITA. As risks are identified throughout the life cycle of the project, the PMO will develop a mitigation or contingency plan to ensure a successful transition of all contracted data services. The following section lists some of the potential risks.

Potential Risks and Avoidance Measures

(Below are known risks that may affect the execution and schedule of the project. Each risk identified is associated with a mitigation and contingency plan.)

Risk Assessment and Avoidance				
Area of Risk	***Level of Risk***	***Responsible Parties***	***Impact***	***Avoidance Measures***

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)				
	Equipment Delays	**Low**	CenturyLink and Equipment Providers	Delays in equipment delivery could push out the overall timeline on the project	Ensure equipment is procured and ordered in a timely manner If a delay is projected CenturyLink would escalate with the equipment provider for a resolution
	Construction/ Permit Delays	**Low** When no initial construction is required and CenturyLink is ordering access to VITA's premises **High** Site surveys are not timely or are incomplete.	CenturyLink, and (possibly) VITA	The impact will depend on the severity of issues discovered at time of construction or in the amount of time permits are delayed	Complete site surveys in a timely manner to ensure the inclusion of all construction elements in permit packages.
	Access Build-out to building is required	**High** (When VITA's location is new or expanding)	Access Provider, CenturyLink, and (possibly) VITA	If VITA's building is new construction, it is likely a build-out will be needed to place new facilities Depending on the VITA location, VITA may be asked to provide conduit, space, power, grounding, mux, etc., to accommodate new facilities If VITA is tasked to provide resources, access work will not continue until VITA's premises has the requested items	Expedite order Engage CenturyLink's External Escalation Group Renegotiate Project Schedule
	Change of Scope	**High**	CenturyLink, and VITA	Targeted completion date is not met	Team will define and agree on scope early in the planning phase
	Order submission delays	**Avoidable**	CenturyLink, and VITA	Installation interval is not met	Prioritize sites and stagger order submission in relation to target install dates
	Changes in orders, dates, key contacts	**Avoidable**	CenturyLink, and VITA	Circuit installation will be delayed. Rescheduling cutovers will depend on resource	Inform key contacts of the project change and timelines Gather accurate order info from the site contacts early in the order process

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)

			availability.	
Communication Breakdown	**Avoidable**	CenturyLink, and VITA	Confusion is created in the order process and during implementation	Set up project communication mechanisms and guidelines
Lack of resources	**Medium Risk**	CenturyLink, and VITA	Implementation schedule is not met Resources will be overworked	All parties need to be involved in the planning stage

Pre-Cutover Procedures: CenturyLink Project Implementation Manager (PIM) Responsibilities:

Confirm that all CenturyLink and VITA activities are completed.

Negotiate and document the test and turn up date with VITA.

Provide post installation repair and escalation instructions to VITA. Include telephone number and timeframes of the post installation support options.

Set up conference bridge number, if appropriate, and communicate it to the project team.

Verify that the appropriate resources are assigned for the test and turn up.

Hold a meeting with all participants to ensure test and turn up readiness and review procedures, including other vendors if appropriate.

Pre-Cutover Procedures: VITA PM Responsibilities:

Review and approve test and turn up procedures including the list of circuits and the turn up order.

Arrange for all vendor activities (all work to be done behind demarcation point).

Verify that all vendor work is complete and correct.

Schedule vendor technicians for test and turn up time, if appropriate.

The circuit will not be considered turned up and complete until the CenturyLink tester gets the ‘OK’ from the VITA representative (i.e., Service Accepted by VITA “SABC”).

Pre-Cutover Conference Call:

If necessary, approximately one week prior to each circuit turn-up, the CenturyLink PM may conduct a pre-cutover conference call. The LCON/site coordinator will be contacted at least one week prior to the call in order to schedule the date and receive the call-in bridge number. The call is expected to last between 30 minutes and 1 hour. The following people will be requested to attend the call:

CenturyLink Project Implementation Manager

CenturyLink Account Consultant

CenturyLink Implementation Systems Engineer

VITA’s LCON/site Coordinator

CenturyLink Sales Engineer

CenturyLink Premier Account Manager.

Comply (Yes/No)	*Explanation/Description (a. Draft Implementation Plan)*
	During the conference call, the group will review the site's current status, confirm the cutover configuration, and review the cutover procedures. The conference bridge number to be used at cutover will also be provided/confirmed. **Night (or Day) of Cutover:** The CenturyLink PIM is the controller of the network transition and will orchestrate the events between all participating parties at cutover, including VITA/vendor/LEC technicians and CenturyLink's internal organizations On or before the scheduled test time, all parties will dial into the conference bridge. The conference call will remain up for the duration of the cutover With everyone's agreement, VITA's technician will disconnect the equipment from the existing circuit and connect to the CenturyLink circuit The VITA technician will ensure that there is connectivity between the circuit and the equipment and that the circuit is operational. VITA will confirm that voice/dial tone is passed successfully by performing end-to-end tests. The CenturyLink PIM will verify with VITA that all network services are operating to their satisfaction. The CenturyLink PIM will release all participants at cutover completion.

Area of Risk	Chance of Risk at time of Cutover	Area of Responsibility	Avoidance Measures (prior to cutover)	Recovery Actions (during cutover)
Carrier Access Span has a trouble	Minimal	CenturyLink, LEC	1. Test of access prior to acceptance from LEC 2. VITA to contact CenturyLink SE 48 hours prior to cut to request loop stress test	1. Switch technician to isolate network trouble and resolve or delegate to the proper fix agency. Resolution window is 0 – 2 hrs. After 2 hours, CenturyLink SE to decide if original circuit should be reconnected or if resolution process should continue 2. If LEC issue, CenturyLink Program Manager to contact LEC Project Manager, if one is assigned
Equipment problems	Major Risk	VITA	If new equipment will be provided, CenturyLink technician to perform end-to-end testing 48 hours prior to cutover	VITA to resolve issue. resolution window 0 - 2 hrs After 2 hours, VITA to decide if original circuit should be reconnected or if resolution process should continue.
Network Routing errors	Avoidable	CenturyLink, VITA	Review pre-install cutover check sheet one week prior to cutover to ensure routing loaded properly in the CenturyLink switch.	CenturyLink and VITA to resolve.

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)

Closing

Project Closure:

Upon installation completion and VITA's acceptance of the network, the PIM will hold a formal closure meeting with the appropriate VITA personnel. This will ensure that VITA has a clear understanding of CenturyLink's trouble handling process and procedures, as well as a contact list with current phone numbers in case of emergency. In addition, the following tasks will be completed to close out the project.

Project closure tasks include:

Negotiate and close out all changes with VITA. Review the scope of work and individual site results to ensure that all VITA expectations have been met

Archive all relevant project documents on the SharePoint site for historical preservation

The PIM will prepare lessons learned by conducting a CenturyLink meeting to review the results of the project

Transition to post install/support team. Re-introduce VITA to the VITA CenturyLink Account Team for subsequent order activity, service concerns, and any billing issues that may arise.

Request that a representative from VITA consent to complete a short online project manager feedback survey that will be given to CenturyLink management. This short survey is used for performance management and aids us in continuous improvement.

Sample timelines based on product:

iQ Networking

Task Name	Resource Names	Start	Finish	Duration (Calendar Days)
Submit documentation on current state of each site	Customer	5/1/13	5/21/13	20
Develop and publish a detailed project plan	Project Implementation Manager/Customer	5/1/13	5/21/13	20
Submit Orders to CenturyLink Account Team	Customer	5/18/13	5/19/13	1
Submit Orders to Order Entry Center for keying	CenturyLink Account Team	5/19/13	5/22/13	3
ACD sent for customer approval	Order Entry/Customer	5/24/13	5/24/13	0
Submit Orders to Provisioning (Loop and Port)	Order Entry	5/25/13	5/29/13	4
Verify accuracy and create engineering orders	Order Management Group	5/29/13	6/1/13	3
Circuit designed on the CenturyLink network	Order Management Group	6/1/13	6/2/13	1

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)

ASR sent to order local loop from the LEC	Order Management Group	6/2/13	6/6/13	4
FOC received from LEC with confirmation of install date	Order Management Group	6/6/13	6/7/13	1
Network Wiring	Data Implementation, Field Ops	6/19/13	6/22/13	3
Loop installed and tested	CenturyLink and LECs	6/16/13	6/23/13	7
Circuit Ready for Activation	CenturyLink and LECs	6/17/13	6/25/13	8
Billing initiated (billing begins 5 days after installation)	Data Implementation	6/25/13	6/25/13	0
Activate service at the site	Data Implementation/ Customer/VITAI	6/19/13	6/29/13	10

iQ Networking with Equipment

Task Name	Resource Names	Start	Finish	Duration (Calendar Days)
Submit documentation on current state of each site	Customer	5/1/13	5/21/13	20
Develop and Publish a detailed project plan	Project Implementation Manager/ Customer	5/1/13	5/21/13	20
Submit Orders to CenturyLink Account Team	Customer	5/18/13	5/19/13	1
Order Customer Premise Equipment	Account Team (SEs)	5/19/13	5/22/13	3
Submit Orders to Order Entry Center for keying	CenturyLink Account Team	5/19/13	5/22/13	3
ACD sent for customer approval	Order Entry / Customer	5/25/13	5/25/13	0
Submit Orders to Provisioning (Loop and Port)	Order Entry	5/26/13	5/30/13	4
Verify accuracy and create engineering orders	Order Management Group	5/30/13	6/2/13	3
Circuit designed on the CenturyLink network	Order Management Group	6/1/13	6/3/13	2
ASR sent to order local loop from the LEC	Order Management Group	6/3/13	6/7/13	4
Configure Customer Premise Equipment	Network Ops and Engineering	6/7/13	6/14/13	7
FOC received from LEC with confirmation of install date	Order Management Group	6/7/13	6/14/13	7
Ship Customer Premise Equipment	Network Ops and Engineering	6/14/13	6/21/13	7
Network Wiring	Data Implementation,	6/21/13	6/23/13	2

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)

	Field Ops			
Loop installed and tested	CenturyLink & LECs	6/16/13	6/23/13	7
Circuit Ready for Activation	CenturyLink & LECs	6/23/13	6/25/13	2
Install Customer Premise Equipment and activate service	Data Implementation and Field Tech's	6/25/13	7/3/13	8
Billing initiated (billing begins 5 days after installation)	Data Implementation	6/30/13	6/30/13	0

Integrated Access (IA) Voice Over IP (VOIP)

Task Name	Resource Names	Start	Finish	Duration (Calendar Days)
Submit documentation on current state of each site	Customer	5/1/13	5/21/13	20
Develop and publish a detailed project plan	Project Implementation Manager/Customer	5/1/13	5/21/13	20
Submit Orders to CenturyLink Account Team	Customer	5/18/13	5/19/13	1
Order Customer Premise Equipment	Account Team (SEs)	5/19/13	5/22/13	3
Submit Orders to Order Entry Center for keying	CenturyLink Account Team	5/22/13	5/25/13	3
ACD sent for customer approval	Order Entry/ Customer	5/27/13	5/27/13	0
Submit Orders to Provisioning (Loop and Port)	Order Entry	5/28/13	6/1/13	4
Verify accuracy and create engineering orders	Order Management Group	6/1/13	6/5/13	4
Circuit designed on the CenturyLink network	Order Management Group	6/5/13	6/8/13	3
ASR sent to order local loop from the LEC	Order Management Group	6/9/13	6/13/13	4
Configure Customer Premise Equipment	Network Ops and Engineering	6/11/13	6/13/13	2
FOC received from LEC with confirmation of install date	Order Management Group	6/13/13	6/14/13	1
Ship Customer Premise Equipment	Network Ops and Engineering	6/12/13	6/18/13	6
Network Wiring	Data Implementation, Field Ops	6/14/13	6/16/13	2
Loop installed and tested	CenturyLink and LECs	6/16/13	6/23/13	7
Circuit Ready for Activation	CenturyLink and LECs	6/23/13	6/29/13	6
Install Customer Premise Equipment & activate service	Data Implementation and Field Techs	6/19/13	6/28/13	9

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)

Billing initiated (billing begins 5 days after initiation)	Data Implementation	6/28/13	6/28/13	0
Submit porting request to port telephone numbers	Order Management Group	6/28/13	6/29/13	1
Port date confirmed and confirm w/ customer's vendor	Order Management Group/Customer	7/4/13	7/10/13	6
Complete porting and test all numbers	VOIP Implementation/On site vendor	7/10/13	7/13/13	3

SIP Trunk Service

Task Name	Resource Names	Start	Finish	Duration (Calendar Days)
Submit documentation on current state of each site	Customer	5/1/13	5/21/13	20
Develop and publish a detailed project plan	Project Implementation Manager / Customer	5/1/13	5/21/13	20
Submit Orders to CenturyLink Account Team	Customer	5/18/13	5/19/13	1
Order Customer Premise Equipment (if Q provided)	Account Team (SEs)	5/19/13	5/22/13	3
Submit Orders to Order Entry Center for keying	CenturyLink Account Team	5/22/13	5/25/13	3
Submit Orders to Provisioning (Loop and Port)	Order Entry	5/26/13	5/30/13	4
Verify accuracy and create engineering orders	Order Management Group	5/30/13	6/3/13	4
Circuit designed on the CenturyLink network	Order Management Group	6/3/13	6/6/13	3
ASR sent to order local loop from the LEC	Order Management Group	6/7/13	6/11/13	4
SIP trunks provisioned	Voice Implementation	6/11/13	6/15/13	4
Configure Customer Premise Equipment (if CenturyLink provided)	Network Ops and Engineering	6/11/13	6/13/13	2
FOC received from LEC with confirmation of install date	Order Management Group	6/13/13	6/14/13	1
Ship Customer Premise Equipment (if CenturyLink provided)	Network Ops and Engineering	6/12/13	6/18/13	6
Network Wiring, Local Loops installed and tested	CenturyLink and LECs	6/14/13	6/21/13	7
Circuit(s) and Trunk(s) Ready for Activation	CenturyLink and LECs	6/21/13	6/27/13	6
Install Customer Premise Equipment and activate service	Data Implementation & Field Tech's	6/15/13	6/24/13	9

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)

Billing initiated (billing begins 5 days after initiation)	Data Implementation	6/26/13	6/26/13	0
Submit porting request to port telephone numbers**	Order Management Group	6/26/13	6/27/13	1
Port date confirmed and confirm w/ customer's vendor	Order Management Group/Customer	7/2/13	7/8/13	6
Complete porting and test all numbers	VOIP Implementation/On site vendor	7/8/13	7/11/13	3

** may have multiple instances of this if porting numbers from different locations and if porting toll free numbers (TFNs)

Voice Services

Task Name	Resource Names	Start	Finish	Duration (Calendar Days)
Submit documentation on current state of each site	Customer	5/1/13	5/21/13	20
Develop and publish a detailed project plan	Project Implementation Manager/Customer	5/1/13	5/21/13	20
Submit Orders to CenturyLink Account Team	Customer	5/18/13	5/19/13	1
Submit Orders to Order Entry Center for keying	CenturyLink Account Team	5/19/13	5/22/13	3
Submit Orders to Provisioning	Order Entry	5/25/13	5/29/13	4
Verify accuracy and create engineering orders	Order Management Group	5/29/13	6/1/13	3
Circuit designed on the CenturyLink network	Order Management Group	6/1/13	6/3/13	2
ASR sent to order local loop from the LEC	Order Management Group	6/3/13	6/7/13	4
FOC received from LEC with confirmation of install date	Order Management Group	6/7/13	6/12/13	5
Network Wiring	Voice Implementation, Field Ops	6/12/13	6/17/13	5
Loop installed and tested	CenturyLink and LECs	6/22/13	6/24/13	2
Trunk groups built and 8xx orders worked (if applicable)	Voice Implementation	6/24/13	7/1/13	7
Circuit Ready for Activation	CenturyLink and LECs	7/1/13	7/2/13	1
Billing initiated (billing begins 5 days after installation)	Voice Implementation	7/7/13	7/7/13	0
Activate service at the site	Voice Implementation / Customer	7/2/13	7/5/13	3

Comply (Yes/No)	Explanation/Description (a. Draft Implementation Plan)
	Ethernet Local Access (ELA)

Task Name	Resource Names	Start	Finish	Duration (Calendar Days)
Submit documentation on current state of each site	Customer	5/1/13	5/21/13	20
Develop and publish a detailed project plan	Project Manager/Customer	5/1/13	5/21/13	20
Submit Order(s) to CenturyLink Account Team	Customer	5/18/13	5/19/13	1
Submit Order(s) to Order Entry Center for keying	CenturyLink Account Team	5/19/13	5/22/13	3
ACD sent for customer approval	Order Entry/Customer	5/24/13	5/25/13	1
Submit Orders to Provisioning (Loop & VC)	Order Entry	5/25/13	5/29/13	4
Verify accuracy and create engineering orders	Order Management Group	5/29/13	6/1/13	3
Circuit designed on the CenturyLink network	Order Management Group	6/1/13	6/4/13	3
ASR sent to order local loop from the LEC	Order Management Group	6/3/13	6/7/13	4
FOC received from LEC with confirmation of install date	Order Management Group	6/7/13	8/6/13	60
Network Wiring	Data Implementation, Field Ops	7/27/13	8/1/13	5
Loop installed and tested	CenturyLink and LECs	8/7/13	8/10/13	3
Circuit Ready for Activation	CenturyLink and LECs	8/10/13	8/13/13	3
Billing initiated (billing begins 5 days after installation	Data Implementation	8/13/13	8/18/13	5
Activate service at the site	Data Implementation/Customer	8/13/13	8/27/13	14

3. Implementation Planning Phase

a. Implementation Project Kickoff

Within 7 calendar days of the effective date of the Contract, will your implementation project team meet with VITA's implementation team in order to establish an understanding of project deliverables, timelines, and individual team member roles and responsibilities?

Comply (Yes/No)	Explanation/Description (a. Implementation Project Kickoff)

Yes	Upon the effective date of contract award, CenturyLink will schedule an onsite meeting within 5 business days of the effective contract start date with VITA's implementation team. The meeting objectives will be to: establish a firm understanding of all contract deliverables, establish timelines for meeting all contract deliverables, and determine both VITA' s and CenturyLink's team member roles and responsibilities.

b. Implementation Plan

Within 14 calendar days after the effective date of the Contract, provide a detailed draft Implementation Plan that sets out the implementation timing, milestones, activities/tasks, dependencies, process and individual implementation steps required to implement the services on a site-by-site, circuit-by-circuit, and service component-by-service component basis.

In the Implementation Plan, factor in dependencies such as lead times for circuit installation and local business requirements, and include the following:

- The dates by which VITA must provide Supplier with complete orders;
- Supplier's proposed readiness date for completing the implementation process for each service component;
- Supplier's access and back-up circuit order submission dates;
- Circuit due dates;
- Supplier's site survey completion date;
- Customer premises equipment (CPE) delivery dates;
- Planned service installation date;
- Service acceptance testing date;
- Interdependencies between different implementation project workstreams;
- Ramp-down of incumbent services/providers.

The detailed Implementation Plan is a validation of the solution that is to be implemented for each specific location. It should cover elements including, but not limited to, equipment, data network circuits, monitoring access circuits to be implemented, NOC support tools and processes to be implemented, Supplier versus VITA personnel responsibilities and the like. VITA will review the detailed draft Implementation Plan and provide input and required updates to Supplier.

Once VITA has validated the final detailed Implementation Plan, implementation of service will commence.

Comply (Yes/No)	***Explanation/Description (b. Implementation Plan)***
Yes	CenturyLink has built its entire business on the principle of effective planning. This core value is exercised on each and every project CenturyLink undertakes. To that end, CenturyLink will provide VITA with a draft Implementation Plan within 14 days after the effective date of the contract. The draft plan will fully define CenturyLink's methodology of establishing implementation timing with the customer, establishment of project milestones, the development of a Work Breakdown Structure (WBS) that clearly establishes and defines all necessary activities and tasks, and will also establish all task dependencies required to successfully complete the project. The draft project plan (Implementation

Comply (Yes/No)	Explanation/Description (b. Implementation Plan)
	Plan) will also define and outline all processes to be utilized with any given project, uniquely outlining all individual implementation steps required to successfully complete the many varied tasks of the specific project being undertaken. CenturyLink's project managers will adapt our draft project Implementation Plan to meet the customer's unique requirements and working environment, as required to implement services site by site, addressing circuit-by-circuit implementation and service-by-service components required to complete the overall implementation.

c. Changes to the Implementation Plan

Once the final detailed Implementation Plan has been agreed in writing, it may only be changed by written agreement of Supplier and VITA. It is noted that the detailed implementation plan is expected to be a working document and will continue to be updated and refined throughout the implementation project.

Comply (Yes/No)	Explanation/Description (c. Changes to the Implementation Plan)
Yes	CenturyLink understands that the 'final' detailed Implementation Plan is a baseline document that will need to be modified to meet specific VITA requirements and unique customer issues as they are encountered. CenturyLink will work with VITA to identify any/all required changes to the plan and will only make changes to the 'final' Implementation Plan after receiving written approval from VITA.

d. Service Cutover Scheduling

Fixed implementation dates for individual sites should be provided 10 business days prior to the actual date of implementation. The fixed implementation dates should be scheduled in accordance with the agreed detailed implementation plan. The Supplier should not deliver services to sites prior to the fixed implementation date as given to VITA.

Comply (Yes/No)	Explanation/Description (d. Service Cutover Scheduling)
Yes	At minimum, CenturyLink will provide individual sites with a 10 business day notification for the fixed implementation date of pending service cutover to CenturyLink services. The fixed implementation date will only be provided when it has been finalized in the agreed upon detailed Implementation Plan. Under no circumstances will CenturyLink attempt to deliver services prior to the fixed implementation date established in the detailed Implementation Plan.

e. Maintenance of Implementation Plan

A project management tool should be employed to take responsibility for all development, updates and maintenance of the Implementation Plan. VITA's preference is for the Supplier to use Microsoft Project software as its project management tool.

Comply (Yes/No)	Explanation/Description (e. Maintenance of Implementation Plan)
Yes	The CenturyLink established Project Management Tool is Microsoft Project. All of our Project Managers are required to use this tool and have received and successfully completed standardized corporate training on the tool set.

4. Ordering Phase

Once the implementation planning phase is complete, VITA will initiate the ordering for individual service components in accordance with the Implementation Plan.

Once VITA places reasonably complete and accurate orders with Supplier, Supplier will initiate the physical ordering (*e.g.,* leased lines, Supplier-owned/leased CPE, purchased equipment, management services) and the logical orders (*e.g.,* virtual circuits, Supplier's Network Operations Center ("NOC") actions) for the service components.

Supplier will pre-populate all orders based on the information it has already received from VITA or that it has already determined.

Comply (Yes/No)	***Explanation/Description (4. Ordering Phase)***
Yes	Service components required to complete a subject installation will only be ordered in accordance with the approved detailed Implementation Plan. Further, CenturyLink will pre-populate required orders with information provided by VITA or information collected in site surveys.

5. Installation Phase

a. Out-of-Hours Implementation Activities

Although VITA understands that some implementation activities that are non-service-affecting would be carried out during business hours, VITA anticipates that a significant amount of implementation work, particularly service cutovers and any other service-affecting work, will need to be performed outside of a location's local business hours, including weekends. VITA does not expect to incur additional charges for such out-of-hours work, nor expects the Supplier to apply any constraints upon such out-of-hours work.

Comply (Yes/No)	***Explanation/Description (a. Out-of-Hours Implementation Activities)***
Yes	CenturyLink will make every reasonable effort to complete service-affecting work within the normal location business hours. However, some of the work may be service disrupting and will be required outside normal working hours. In the event service-affecting work needs to be performed outside normal working hours, CenturyLink will not bill for any additional charges. Further, beyond allowing CenturyLink access to subject site locations during the agreed upon timeframes, VITA will not experience any out of-hours constraints.

b. VITA's Installation Responsibilities

State what responsibilities VITA would have during the installation phase at individual sites. For example: Would Supplier have engineers on-site for service cutover, or would VITA be expected to perform certain cutover and other installation responsibilities itself?

Comply (Yes/No)	***Explanation/Description (b. VITA's Installation Responsibilities)***
Yes	CenturyLink will perform the bulk of the 'heavy lifting' required to complete the installation. However, there are specific tasks VITA will be required to complete, some of the VITA tasks include: Review and approve test and turn up procedures including the lists of circuits and the turn up order. Arrange for all vendor activities (all behind the demarcation point). Verify that all vendor work is complete and correct.

Comply (Yes/No)	Explanation/Description (b. VITA's Installation Responsibilities)
	Schedule vendor technicians for time of test and turn up (if appropriate) Final circuit turn up acceptance. The table presented below outlines the division of labor: **Installation Checklist** The following items should be reviewed by the assigned parties prior to completing each task.

Activity	Responsibility	Required By	Completed On
Order Activities			
Provide all information needed to process orders	VITA		
Issue CenturyLink internal orders	CenturyLink		
Issue access service requests to Local Exchange Carrier/Alternate Access Vendors (LEC/AAV)	CenturyLink		
Receive Firm Order Commitment (FOC) from Local Exchange Carriers/Alternate Access Vendors	CenturyLink		
Advise Site Coordinator of Firm Order Commitment (FOC) and finalized cutover dates (using order tracking spreadsheet)	CenturyLink		
Weekly Status Call for order updates	CenturyLink		
Provide Order Status to VITA via tracking log (Excel)	CenturyLink		
Pre-Cutover Activities			
Local Exchange Carrier/Alternate Access Vendor (LEC/AAV) delivers local loop from CenturyLink POP to VITA MPOE. VITA to provide building access. Test local loop from CenturyLink to VITA demarc. Accept LEC/AAV circuits.	LEC, CenturyLink, VITA		
Install inside wiring for new dedicated facilities	VITA		
Verify router configurations. Is upgrade needed?	VITA		
Coordinate a pre-cutover meeting with VITA and CenturyLink	CenturyLink PM		
Hold pre-cutover meeting and review cutover requirements	CenturyLink, VITA		
Cutover Activities			
Dial into cutover conference bridge at scheduled date/time	VITA, CenturyLink		
Connect router to CenturyLink circuit Perform testing to verify continuity	VITA, CenturyLink		
Post-Cutover Activities			
Review trouble reporting procedures and ensure that VITA has copy of procedures	CenturyLink		
Account team review initial invoice with VITA at predetermined time. Gain VITA concurrence of accurate bill.	CenturyLink, VITA		

c. Supplier Acceptance Testing

Describe the acceptance testing that Supplier will perform for different types of service components (*e.g.,* data network services, voice services, managed network services).

Comply (Yes/No)	*Explanation/Description (c. Supplier Acceptance Testing)*
Yes	As implementation of each site progresses, the CenturyLink Transition Manager will work with VITA to define individual site turn-up goals and refine the schedule as necessary. The CenturyLink Transition Manager (Project Manager) will document the schedule and provide VITA weekly status (via the semi-weekly status calls) to allow ample time to plan and execute activities at each site. As each site reaches the activation stage, the CenturyLink Transition Manager will coordinate and monitor activities with the CenturyLink installation teams via conference calls scheduled on a per-activation basis. Prior to handover to VITA, CenturyLink will fully test each component of the service to ensure operability. To ensure that VITA receives only fully operable services, CenturyLink will conduct this testing at time of turn-up, with no activation considered complete until VITA personnel verify site operability and connectivity. This is the final phase of the transition process and includes completion reports and inputs to Weekly Transition Planning Reports and Weekly Transition Execution Reports. The final phase of transition activates CenturyLink SLA service compliance activities, as well as the initializing service maintenance and monitoring. Most important during this phase, CenturyLink documents lessons learned and efficiencies gained and provides feedback as necessary to Transition Teams and the Transition Coordinator to improve the overall Transition process.

d. Service Handover

Once Supplier has completed its acceptance testing, Supplier will provide VITA the documented acceptance test results and notify VITA in writing that the circuit/service is activated.

Confirm that VITA will not be required to pay for any service components that, although accepted, it cannot practically use because of some other Supplier dependency (for example, VITA's Data Center circuits have not yet been installed and accepted by VITA).

Comply (Yes/No)	*Explanation/Description (d. Service Handover)*
Yes	After CenturyLink tests and verifies each circuit, and VITA accepts each circuit, the CenturyLink Program Management Team will issue a Service Order Completion Notification (SOCN) to the key stakeholders within this Program. The SOCN includes: Circuit identifier, service completion date, service location and VITA Support information reminders. In addition to these SOCNs, the Transition Manager will provide a weekly completion and exception report to VITA during regular status briefings. Should a site fail to successfully complete activation, CenturyLink will generate an exception notification and send it to the stakeholders. This exception notification will contain: service location, circuit identifier, reason for exception, and proposed reschedule date and time. CenturyLink will provide all service documentation for the Initial Phase through Full Implementation and post-cutover activities utilizing MS Project Schedules, survey results, services architecture, test plans, test results and overall site results. CenturyLink will provide the results of weekly and monthly transition status meetings from face-to-face interaction between VITA and CenturyLink.

Comply (Yes/No)	*Explanation/Description (d. Service Handover)*
	CenturyLink will also provide progress reports to VITA. The typical progress report package will include a status report, an issue summary with detailed open issue reports, and a change control summary with detailed change control reports. Status reports to VITA will include: 1. Progress of work performed, describing status by project phase of each major task in the work plan, milestones attained, and deliverables associated with that task 2. Problems encountered and corrective action taken, defining the resources required, and any impacts to the project 3. Project work plan updates, incorporating agreed changes and defining the implications for resources and schedules 4. A monthly, high-level objectives schedule for the next month, defining the major tasks, milestones, and deliverables that will begin or end during the month The CenturyLink Project Manager (PM) will maintain a deviation log and provide a weekly report to the CenturyLink project manager responsible for each VITA site implementation. The Transition Manager will consolidate the reports from the PM and provide a bi-weekly report to VITA. Post-Transition Service documentation includes documenting and incorporating lessons-learned, invoice audit and validation, customer satisfaction results, results of performance testing, and acceptance certification.

6. Implementation Project Management

VITA needs to have the Supplier provide an Implementation Team for the initial contract conversion of major services from the current provider, such as Internet and MPLS (or other proposed data networking solution), including the Managed Takeover of the critical law enforcement application involving the Virginia State Police and other agencies.

Describe the Supplier's planned implementation team below. This implementation team is in addition to the Supplier's Account Team. Based on prior experiences for an implementation of this magnitude and complexity, the Supplier should specify the quantity of resources. (Add rows for any Supplier roles in addition to the ones mentioned below.)

Supplier Proposed Implementation Team		
Title	Quantity	Role
Enterprise Project Manager	1	Overall Transition Program Management responsibility and serves as the single point of contact for CenturyLink with the authority to resolve all issues and commit required CenturyLink resources
Project Implementation Managers	1	Individually assigned for each major project to be transitioned and has specific product expertise to effectively manage the transition
Implementation Engineers	1	Individually assigned per product transition with specific product expertise
NOC Support Engineers	1	One dedicated engineer with a team of product specific NOC engineers/technicians per service

Supplier Proposed Implementation Team		
Title	Quantity	Role
		transitioned
Inventory and Asset Management Specialist	1	Provides overall program asset management
Change Management Specialist	1	Provides change management control records and is responsible for providing up-to-date configuration management documentation and diagrams
Financial Management / Billing Specialist	1	Serves as the single point of contact for assisting in billing initiation and resolving all billing issues.
Contract Specialist	1	Acts as the single point of contact got all contract issues that may occur during the transition.
Field Technicians	1	Individually assigned per project to provide location support

The parties agree that each member of the Implementation Team will be reasonably acceptable to VITA.

Comply (Yes/No)	***Explanation/Description (6. Implementation Project Management)***
Yes	CenturyLink will provide a dedicated transition team that will consist of subject matter experts. CenturyLink will consult with the VITA leadership on the makeup of the team and will remove any person from the transition team that is not reasonably acceptable to the Commonwealth.

a. Project Implementation Managers

The Supplier will provide dedicated project implementation managers at no additional cost. These resources would work under the supervision of the overall Enterprise Project Manager. The Enterprise Project Manager will be the primary contact for the selected Supplier, and will have responsibility for service implementation for all the Supplier's services during the implementation period. VITA will be allowed to interview and approve project management team members and would expect that the assigned resources be designated to support the project through completion of the implementation period. Changes to the project team should be subject to consultation with VITA.

Comply (Yes/No)	***Explanation/Description (a. Project Implementation Managers)***
Yes	CenturyLink will provide transition implementation managers for each service to be transitioned to CenturyLink. The CenturyLink Implementation managers while retaining responsibility for the implementation of their respective assigned service, they will remain under the overall responsibility of the CenturyLink Enterprise Program Manger. Should VITA express the desire to interview any/all of the assigned implementation managers, CenturyLink will ensure that they will be made available for said interview. Given the geographical dispersion of our implementation project managers, it may be more efficient for both VITA and CenturyLink to have some/all of the interviews conducted telephonically. Should any implementation manager be deemed unacceptable by VITA, CenturyLink will replace that individual upon receipt of a formal request from the VITA program manager.

b. Project Management Methodologies

For all services, identify the project management methodologies that will be used in migrating existing services onto its service in a cost-effective and timely manner, minimizing business disruption and risk to VITA.

Comply (Yes/No)	*Explanation/Description (b. Project Management Methodologies)*
Yes	CenturyLink s PMO is staffed with many PMI-certified professionals. CenturyLink's PMO adheres to PMI standards that are meant to guide project activity to produce desired, planned results. PMI teaches that the temporary nature of projects indicates a definite beginning and end. Effective project management is accomplished through appropriate application and integration of the five (5) PMI Process Groups. The sample project plan below was written to follow the framework set forth by PMI. 1. Initiating 2. Planning 3. Executing 4. Monitoring and Controlling 5. Closing

Process Groups	Items to Review and Execute in Developing An Implementation Plan For VITA.
1. Initiating	• Engage/assign Project Manager • Define initial scope from Project Charter (PM Request Form) • Develop a clear description of project objectives, deliverables, and resources • Establish goals and expectations with stakeholder's input and approval • Review site information and requirements • Discuss a phased ordering, provisioning and implementation/migration approach • Identify primary constraints (key elements that could restrict/delay project) such as: • Demarc locations, conduit/cable pair facilities, space/electrical limitations and requirements, new construction, permitting for digging in the street and manhole access, customer or LEC build outs, and hours of availability/operation
2. Planning	• Establish the total scope of the project • Define and redefine project objectives (develop course of action to attain those objectives) • Explore all aspects of: scope, time, procurement, communication, and risk identification and mitigation strategy development • Redefinition of project scope (if required) • Assemble project team and hold kick-off meeting • Create project timeline to define and sequence activities, estimate activity resources and durations and develop a workable schedule • Establish project deliverables, set quality objectives to document project compliance, determine project stakeholder information, and define how risk management analysis/responses will be carried out.
3. Executing	• Hold weekly status meetings • Carry out the project plan • Coordinate team resources • Lead the various CenturyLink teams and partner with customer resources • Distribute project information to project stakeholders

Comply (Yes/No)	Explanation/Description (b. Project Management Methodologies)
			• Manage stakeholder expectations • Trigger change requests that, if approved, may modify the project plan and possibly require a different project end date.
	4. Monitoring and Controlling	• Track, review ,and regulate project progress and performance • Observe and measure project performance • Identify areas in which changes to the Plan are required and initiate corresponding changes • Evaluate and control project changes, reschedule if necessary.
	5. Closing	• Finalize all activities and formally acknowledge scope achievement • Obtain acceptance by customer or sponsor • Archive all relevant project documents on the SharePoint site for historical preservation • Transition day-to-day activities back to CenturyLink account team, and ask client for performance feedback.

c. Progress Reports

Be prepared to submit progress and status reports every week during the implementation period showing the following:

Status of planned activities for the period

Status of activities actually underway for the period

Issues and resolutions

Review of schedule and milestones

Comply (Yes/No)	Explanation/Description (c. Progress Reports)
Yes	As part of CenturyLink's teaming strategy, our project managers are required to provide our customers with weekly written status reports. Further, we strive to schedule and hold weekly project status meetings with our customers; this allows all stake holders to see and hear the latest project status, provide input, and address individual concerns. At a minimum, our status reports include a current status on all planned activities, status on all activities currently ongoing, a color coded description (Red, Yellow, Green) of all identified issues with a detailed explanation of proposed issue resolution. Our weekly reports include a review of the up-to-date project plan that graphically will show all scheduled tasks and milestones with percent completion depictions for each.

d. Project Review Meetings

During the implementation period, be prepared to conduct Project Review Meetings on a regular basis at a mutually agreed time interval that will be at least once per week and held at a VITA-designated location. At a minimum, the Supplier's Enterprise Project Manager, one or more implementation engineers, and the appropriate project implementation managers will attend the review meetings with VITA-appointed representatives. The Project Review Meetings will:

Summarize the progress of the project;

Review the detailed project plan;

Discuss and review required changes to the project plan;

Identify and review current or new problems, and establish action plans for their resolution to meet committed timelines;

Coordinate the activities between Supplier and VITA.

Comply (Yes/No)	*Explanation/Description (d. Project Review Meetings)*
Yes	CenturyLink provides weekly project review meeting for all stake holders. In addition, CenturyLink will schedule and conduct management level project review meetings to summarize the overall project status, providing VITA management with a current copy of the Microsoft Project Plan and discussing in detail all current and projected activities. Should the need arise, changes to the project plan schedule will be provided for management review and approval. All issue will be color coded (Red, Yellow, Green); items identified as yellow or red will be discussed in detail and an action plan will be created with task owners assigned; due dates will be provided. Any/all activities that need to be coordinated between the VITA staff and CenturyLink will be clearly identified and discussed as required.

7. Implementation Plan Guarantees

For those services that VITA will be implementing as part of the initial contract conversion, provide a guarantee that Supplier will implement VITA's services in a smooth and timely manner. The guarantee should entitle VITA to a range of remedies, from increasing monetary credits up to and including partial or total termination of the Contract, if the Supplier fails to complete its implementation activities in accordance with the implementation plan, or fails to meet service levels during the implementation period.

Detail the remedies Supplier will make available in the table below (with respect to the scope of services Supplier is offering) by describing each migration milestone it has proposed and assigning a time for completion based on the number of business days after contract execution. Add or delete rows in the table if necessary.

Note that VITA will not hold Supplier accountable for VITA's own failure to meet its responsibilities in respect of the implementation.

Implementation Milestone Guarantees			
Milestone	Milestone Description – Network Services (Voice, MPLS, Other Data, etc.)	Business Days After Contract Signing Date	Monetary Credit If Milestone Is Missed
I.			
II.			
III.			
IV.			
V.			
VI.			
VII.			
VIII.			
IX.			
X.	Final VITA site migrated per agreed-upon date		

Comply (Yes/No)	*Explanation/Description (7. Implementation Plan Guarantees)*
No	CenturyLink will make a best effort to meet all implementation commitments and will offer SLA credits against service implementation pursuant to Appendix B of this proposal.

8. Proof of Concept

If required by VITA for a specific service or group of services, be prepared to conduct a Proof of Concept for a limited group of pilot locations selected by VITA. The Proof of Concept may include some or all services that Supplier is proposing to provide to VITA.

Comply (Yes/No)	*Explanation/Description (8. Proof of Concept)*
Yes	CenturyLink welcomes the opportunity to provide a Proof of Concept demonstration of our capabilities and will work with VITA to set up and execute Proof of Concept demonstrations for VITA.

9. Post-Implementation Project Review

The selected Supplier will conduct a formal post-implementation review between 3 and 6 months after the service implementation is under way. VITA is responsible for initiating the first post-implementation review.

Comply (Yes/No)	*Explanation/Description (9. Post-Implementation Project Review)*
Yes	CenturyLink will provide formal post-implementation reviews at the specified 3 and 6 month intervals. The post-implementation reviews will include description of the services provided, identification of any/all issues encountered during the implementation and post implementation periods, descriptions of any/all service issues encountered since service implementation, all remedies applied, action plans for any identified service modifications required and a “lessons learned” segment to identify areas for improvement.

10. Billing Implementation

Propose how the Supplier will participate in and provide resources for a comprehensive design of billing account structure. Be prepared to make billing system experts available at the Commonwealth Enterprise Solutions Center (CESC) in Chester, Virginia, so that VITA’s financial staff can efficiently utilize the billing system capabilities to meet VITA’s payment and reporting requirements.

Comply (Yes/No)	*Explanation/Description (10. Billing Implementation)*
Yes	CenturyLink will work closely with VITA to provide a billing account structure to meet your needs. Our billing system will support hierarchy billing user options such as an invoice group, discount group, Executive Summary, and product accounts that will allow VITA to establish billing by account, service, location, etc. CenturyLink will assign a dedicated Account Consultant that will be available to VITA in Chester, VA, and who will assist the financial staff in efficiently utilizing the capabilities of our billing system for payment and reporting requirements.

M. Service and Support Management

1. Account Team

Provide a list of assigned personnel, and a statement of its Account Team's qualifications to perform the proposed work, and each team member's relevant experience and tenure with the Supplier, including a summary of the Account Team members' prior involvement in similar previous accounts, including customer names, dates, and types of services supported.

Confirm that VITA will be able to provide input to the Supplier's creation of the Account Team staff, both organizationally and with individual personnel.

Comply (Yes/No)	*Explanation/Description (1. Account Team)*
Yes	CenturyLink's commitment to the spirit of service is reflected in the exceptionally qualified account team that will support VITA and the Commonwealth of Virginia. With an average of 22 years of industry experience and an average 10 years working for CenturyLink, your CenturyLink Account Team is well equipped to support the demands and expectations of large government customers. Please see the organizational chart below for a detailed delineation of the Account team and the management structure. **RESUMES** **Cathie Kendrick** ***Current CenturyLink Position***: Account Consultant, 25 years of service. ***Responsibilities:*** Post-sales support and service delivery of complex communication solutions The Account Consultant acts as an advocate for the customer, ensures that orders are issued and due dates are met, escalates billing tickets, oversees accuracy of ordered items, handles customer inquiries and concerns, and is the single point-of-contact for the customer. ***Experience:*** • 25 years industry experience (1988 – 2013) 14 years experience in state government support 10 years experience State of North Carolina Toll Free contract Additional State and Education contract experience: State of Tennessee Voice contract (Switched & Dedicated Long Distance, Toll Free, Calling Cards) State of Florida MPLS Network State of Arkansas Ethernet Network Quilt Consortium for Research & Education High bandwidth Internet **Commonwealth of Virginia PRI Redundancy for UCaaS project Positions:** Sales, Sales Management, Trainer, Manager of Support, and Account Consultant **Christopher G. Boulbol** ***Current CenturyLink Position***: Account Service Manager with 14 years dedicated to customer support of medium-to-large businesses. Chris is an experienced manager and coordinator of switched and dedicated service installation. He has a strong record of proactive problem solving, process

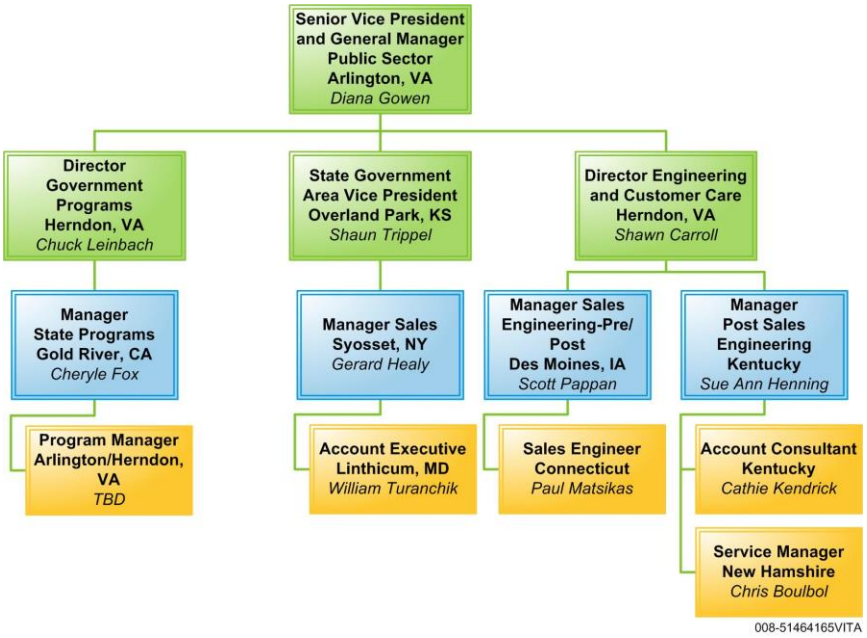
Comply (Yes/No)	Explanation/Description (1. Account Team)
	development, and revenue retention and growth. ***Experience**:* August 1995 to present at CenturyLink ***Positions**:* All of the personnel listed below have long and successful experience with all relevant departments and functions, both internal and external to CenturyLink. Service Manager, Government & Education Solutions (GES) Support all post-implementation technical issues. Primary point of escalation for trouble issues. Assist in management of complex installations. Liaison between customers and various engineering organizations within CenturyLink. Create reports on circuit utilization, trouble ticket summaries, etc. Manager, Major Accounts Support Team Premier Services Supervisor Senior Premier Account Consultant Premier Account Consultant **Paul Matsikas** ***Current CenturyLink Position:*** Sales Engineering at CenturyLink (1998 to present) ***Responsibilities**:* Provide pre-sales technical support to Government & Education accounts. Primary responsibilities include providing technical analysis, technical sales support, product expertise, pricing, and design. Address all technical needs and issues associated with complex products and solutions. Provide input and assist in the preparation of technical proposals and presentations for customers, to include customer requests-for-proposals (RFPs). Provide engineering support for the Internet2 research network. ***Experience:*** 32 years of industry experience with CenturyLink, MCI WorldCom, and the U.S. Army Communications Electronics Installation Agency **Positions:** Technical Consultant Supervisor III Technical Specialist III Switch Specialist II Technical Specialist I Installation Team Chief Communications Specialist **William Turanchik** ***Current CenturyLink Position:*** Senior Executive/Premier Account Manager ***Responsibilities**:* Manage a high performing team of Account Consultants and Sales Engineers supporting government clients in the Capital & Mid-Atlantic Region.

Comply (Yes/No)	Explanation/Description (1. Account Team)
	Experience: CenturyLink, 2009 to present 16 years industry experience, previously AT&T Additional State contract experience: District of Columbia High Bandwidth Internet Commonwealth of Virginia ILEC Services State of Maryland Broadband Network State of Ohio Wireless Data, Voice State of Michigan Wireless Data, Voice State of Minnesota Wireless Data, Voice ***Positions****:* Regional Sales Director/Global Account Manager, Strategic Accounts Manager, Large Accounts Manager, and Sales Assurance Manager

a. Account Team Organization

Provide an organizational chart that includes the names of the Account Team members, their titles and reporting relationships. As part of the organizational chart description, describe the staff's responsibilities and locations, especially if outside the Richmond, Virginia, metropolitan area. The organizational chart should also detail upper-level management support.

Comply (Yes/No)	Explanation/Description (a. Account Team Organization)
Yes	Heading up the Government and Education Services (GES) organization under Diana Gowen is Area Vice President Shaun Trippel. Shaun is a seasoned IT/Telecommunications leader with a commitment to excellence, and through his leadership this commitment is shared throughout his organization. Shaun's management style enables his leadership staff to successfully design and deliver high-quality services in an efficient manner, striving for the best possible GES customer experiences, and creating positive long-term CenturyLink customer relationships. The CenturyLink GES management team supporting the Commonwealth of Virginia has over 50 years of combined experience and strong working relationships with both State and local officials who will utilize VITA as their procurement vehicle to meet ever-increasing telecommunications demands. William Turanchik, the Senior Executive/Premier Account Manager is located in the Arlington, Virginia office has a long history of leading teams that have successfully designed, developed, and deployed telecommunications solutions for state and local government agencies throughout the Commonwealth of Virginia. For over16 years, Mr. Turanchik has worked closely with a wide variety of key decision makers in both the public and private sectors in successfully creating relationships that merit respect from customers and teaming partners. Under the local leadership of Mr. Turanchik, CenturyLink welcomes the opportunity to work in the VITA environment lead to more customer choices, competitive prices, and rapid deployment of new technology and innovative solutions that will improve State service delivery to the Commonwealth of Virginia citizens. CenturyLink's account team will ensure that all VITA projects are effectively bid, designed, implemented, and supported over the life of the contract. CenturyLink achieves great resource efficiency in providing telecommunications services and transition environments. As an

Comply (Yes/No)	Explanation/Description (a. Account Team Organization)
	integrated telecommunications solutions provider, we have the ability to implement appropriate shared resources from our networking, technology, IT, and operations organizations. Mr. Turanchik will use this efficiency in support of VITA by calling on and actively managing the resources from our internal corporate organizations to ensure all VITA program objectives are achieved. Individuals from these organizations (will be directly accountable to our fully-empowered Program Manager to fulfill all VITA requirements. The VITA Organizational Chart shows the experienced management team that will support VITA tasking and contractual requirements. Our organizational and management structure has proven very effective at supporting the full spectrum of telecommunications products and services on-time and within budget. The CenturyLink organization is designed to allow open communications at all levels of the organization both within CenturyLink and between CenturyLink and VITA users. 

b. Account Team Deployment

The Supplier will provide Account Team and local operational support to VITA in Richmond, Virginia. Account Team members outside of Richmond should be located within a reasonable distance from Richmond.

Comply (Yes/No)	Explanation/Description (b. Account Team Deployment)
Yes	CenturyLink will provide both Account Team and local operational support within reasonable distance from Richmond to support VITA.

c. Key Personnel

The following positions will be considered as the Supplier's personnel vital to the Account Team and will be provided as part of the Account Team for the duration of the Contract and any extensions thereto ("Key Personnel").

- Senior Account Executive
- Product Managers and Specialists (including technical resources)
- Billing System or other "back-office" System Specialists
- Designated Billing Specialist

Indicate the percentage of the Account Team's time, including each of the Key Personnel, that will be devoted to VITA support work, and whether the Account Team will be designated or dedicated to VITA during the term of the Contract. The Supplier may not replace or transfer any Key Personnel as long as they are satisfactory to VITA, except at the impetus of the individual employee/sub-contractor. In such an event, the Supplier should be prepared to provide written notification to VITA and a minimum 60-day overlap period for the departing Key Personnel to train and orient their replacements with respect to this Contract, VITA's related processes and interfaces, and all associated services, projects and ongoing operations in which it is engaged. When Key Personnel are changed for any reason, the new staff assignment will be subject to VITA's approval, and at VITA's request, the Supplier will make a change in key personnel based on unsatisfactory performance.

Comply (Yes/No)	***Explanation/Description (c. Key Personnel)***
No	The following CenturyLink key personnel will be provided as part of the Account Team for the duration of the Contract and any extensions thereto ("Key Personnel"). The CenturyLink key personnel will be dedicated to VITA in that CenturyLink will make sure VITA has all the attention it needs for full support of the account across each of these functions. <u>Senior Account Executive</u> Percent of Time designated to VITA: Fully designated, no limit to the time spent on VITA Dedicated Senior Account Executive to VITA <u>Product Managers and Specialists (including technical resources)</u> Percent of Time designated to VITA: Fully designated, no limit to the time spent on VITA Designated Product Manager and Specialist <u>Billing System or other "back-office" System Specialists</u> Percent of Time designated to VITA: Fully designated, no limit to the time spent on VITA Designated Billing Specialist <u>Designated Billing Specialist</u> Percent of Time designated to VITA: Fully designated, no limit to the time spent on VITA Designated Billing Specialist Key Personnel are under the sole control of CenturyLink. Any assignment, re-assignment, replacement or transfer of Key Personnel will not be contingent on Customer's approval or review. CenturyLink will inform Customer of any changes in Key Personnel and whether a

Comply (Yes/No)	Explanation/Description (c. Key Personnel)
	replacement or substitution is needed.

d. Account Team Accessibility

Key Personnel will be reachable within a 2-hour period during normal business hours. In addition, the Senior Account Executive will be reachable at all times or will have a designated backup available.

Comply (Yes/No)	Explanation/Description (d. Account Team Accessibility)
Yes	Key personnel will be reachable within a 2-hour period during normal business hours. Mr. Will Turanchik, Senior Account Executive for CenturyLink will be reachable at all times or will have a designated backup available.

e. Status Meetings

The Account Team will be prepared to conduct monthly stewardship meetings with VITA to provide a broad review of all services, projects and ongoing operations.

Comply (Yes/No)	Explanation/Description (e. Status Meetings)
Yes	The CenturyLink Account Team will be prepared to conduct monthly stewardship meetings in person or via conference call with VITA to provide a broad review of all services, projects and ongoing operations.

f. Contract Reporting

Supplier will work collaboratively with VITA within the first 60 days after contract execution to develop reporting to be used to support contract administration, management and customer satisfaction initiatives. These reports may include detailed data related to customers, contract spend, services types and quantities purchased, as well as current market data to support Commonwealth efforts to control costs and ensure that the Contract and services remain relevant and aligned with the telecommunications market environment.

Supplier will agree to allocate the appropriate internal resources to provide detailed reporting within an agreed-upon timeframe for the Contract term and any extensions, and to provide a primary point-of-contact for VITA to coordinate reporting and support of other administrative programs needed to support the Contract. The frequency of the reporting will be mutually agreed upon.

Comply (Yes/No)	Explanation/Description (f. Contract Reporting)
Yes	The CenturyLink Account Team will work collaboratively with VITA within the first 60 days after contract execution to discuss available reporting from CenturyLink to be used in support of contract administration, management and customer satisfaction initiatives for VITA. These reports may include detailed data related to customers, contract spend, services types and quantities purchased, as well as current market data to support Commonwealth efforts to control costs and ensure that the Contract and services remain relevant and aligned with the telecommunications market environment. CenturyLink agrees to allocate the appropriate internal resources to provide detailed reporting within an agreed-upon timeframe for the contract term and any extensions and to provide the name of the primary

Comply (Yes/No)	Explanation/Description (f. Contract Reporting)
	point of contact for VITA to meet the requirements of this RFP.

2. Customer Support Network Operations Center (NOC)

a. NOC Support

Supplier will provide a detailed explanation of its technical and management customer support organization for its network operations center ("NOC") and how the NOC will support VITA for each of the services set forth in this RFP (please list by service). Provide any information concerning Supplier's support organizations if these organizations provide additional or unique capabilities needed to support complex or unique services. Identify each unique NOC with which VITA will be required to interact. VITA's preference is to have a centralized NOC.

Comply (Yes/No)	Explanation/Description (a. NOC Support)
Yes	The CenturyLink NOC will be available to VITA 24 hours day, 7 days week, 365 days a year. 24x7x365. A dedicated toll free number will be provided upon contract award. Customers may call in to the CenturyLink NOC at any time to open a trouble ticket or to inquire about ticket status Additionally, The CenturyLink Service Manager is the primary contact point on the account team for all post-implementation technical issues. Immediately following circuit installation, the Service Manger will provide each site with a CenturyLink Service Manual. The Service Manual is a brief document that contains customer account information, circuit ID's, trouble reporting procedures, and escalation contact lists. **Trouble Reporting and Escalations** Upon receiving the initial trouble call, a CenturyLink Tier 1 technician will immediately open a trouble ticket and begin the trouble shooting process while the customer is still on the line. If the Tier 1 tech cannot resolve the issue while on line with the end user, the ticket will be reassigned to a Tier 2 technician. Tickets are opened with appropriately assigned priority levels, based on the severity of the situation. The three priority levels, which have become industry standard are: Priority Level 1: Customer is experiencing total service outage or service degradation is present to an advanced degree. Priority Level 2: Customer's service is impaired, but the customer can still conduct business. Priority Level 3: customer is experiencing intermittent impairment resulting in moderate service degradation. After a trouble ticket is opened, CenturyLink will be responsible for coordinating all efforts to correct the trouble and will provide regular updates to the customer contact. Once the trouble has been isolated and resolved, the CenturyLink technician will provide a verbal report to the customer, and will only close out the ticket when approval for closure has been granted by the customer contact. CenturyLink encourages and empowers customers to escalate issues as they deem necessary. CenturyLink's standard escalation guidelines are

Comply (Yes/No)	Explanation/Description (a. NOC Support)
	centered on the progress made toward resolution and are not strictly time-based. A timed escalation can be delayed if consistent progress is being made toward resolution of the trouble. Escalation guidelines are based on the priority assigned to the trouble ticket at the time of entry. Escalations can be made on a 24/7/365 basis. Customer-requested escalations may be requested directly with the NOC, or with the CenturyLink Service Manager, Chris Boulbol.

b. NOC Capabilities

As part of Supplier's description of the primary NOC's capabilities, please provide the following information:

- The geographic location of the proposed NOC/NOCs.
- The approximate number of NOC technical staff that are on-duty during normal business hours and those that are on-duty during evenings and weekends. Specify whether any of the NOC staff are dedicated to a particular account or, if shared, the percentage shared across accounts.
- Describe whether the NOC will be supporting Level 2 through Level 3 trouble tickets, or whether the trouble ticket will be routed to other Supplier NOC locations if escalation is required. If trouble tickets are routed to other NOCs, describe where these other NOCs are located and the escalation procedures.

Comply (Yes/No)	Explanation/Description (b. NOC Capabilities)
Yes	CenturyLink maintains force to load models that align the number of staff to the workload. The force to load models are based on a number of factors; including the number of customer-facing ports, to determine the appropriate number of Staff at given days of the week and hours of the day. The IP NOC is based in Minneapolis, MN and Wake Forest, NC. The NROC (Network Repair Operations Center) is based in Littleton, CO and provides Support for voice (traditional and VoIP), broadband and narrowband private line services. Both NOC's support through Level 3 tickets and are supported by a LEC (local exchange carrier) Management team that is based in Arlington, VA and Littleton, CO. They are also supported by a Core Network group that is based in Minneapolis, MN and Arlington VA. The NOC does collaborate with these groups and engage specialized service assurance support frequently. Systems are integrated and allow trouble tickets to be shared and/or integrated in a way that provides a full view to repair activities, even if the repair is in another organization.

c. Staffing and Hours of Operation

Please specify the number of NOC staff that will be specifically assigned to VITA. A primary and secondary point-of-contact will be designated who will be most familiar with VITA's Services. State if the NOC staff assigned to VITA are "designated" or "dedicated" to the account.

The NOC will be available for trouble resolution and testing, customer service, and technical support, 24 hours per day, 7 days per week, 365 days per year.

Comply (Yes/No)	Explanation/ Description (c. Staffing and Hours of Operation)
Yes	The NOC will be available for trouble resolution and testing, customer service, and technical support, 24 hours per day, 7 days per week, 365 days per year.

3. Network Transport Provisioning Requirements

The following requirements apply to both voice and data transport services.

a. Provisioning Performance Reports

Supplier will provide monthly and year-to-date reporting of installation activity, showing number of installations, average time to install, percent completed on time, Service Level compliance, and a breakdown of the reasons for the failure to complete any installation on time.

Comply (Yes/No)	Explanation/Description (a. Provisioning Performance Reports)
Yes	CenturyLink will provide a monthly and year-to-date Provisioning Performance Report including all installation activity from the previous month. In order to meet the Commonwealth's provisioning objectives and Service Level compliance, the performance report will also reflect significant benchmarks, including number of installations, average time to install services, percent completion on time, Service Level compliance, percentage of completion for install activity, and detailed reasons for failure to complete any installation on time.

b. Provisioning Management

Supplier will establish a central inquiry center for the provisioning status of order activity, and provide VITA with the status of pending order activity upon request.

Comply (Yes/No)	Explanation/Description (b. Provisioning Management)
Yes	CenturyLink's Account Team will be the single point of contact for provisioning status inquiries from VITA end users. The Account Team will play an active role in the submission and monitoring of the contract's order activity. At agreed upon benchmarks, they will provide VITA with regular status updates via email, conference calls and/or through the utilization of a custom web-based portal designed specifically for VITA. In the event that provisioning status is required outside of normally scheduled updates, VITA may request pending order activity status from CenturyLink's Account Team.

c. Consistency of Service Levels and Response Times

VITA understands that changes in the provisioning process or levels of resources may take place during the life of the contract owing to procedural changes, technology refreshes, and organization changes (including mergers and acquisitions) at the Supplier. Nevertheless, Supplier agrees to maintain agreed-upon service levels and response times regardless of changes in the provisioning process or resources, changes in Supplier ownership, and the like.

Comply (Yes/No)	Explanation/Description (c. Consistency of Service Levels and Response Times)
Yes	CenturyLink will maintain the service level agreements and response times regardless of the various changes that may occur during the lifetime

Comply (Yes/No)	Explanation/Description (c. Consistency of Service Levels and Response Times)
	of a contract. CenturyLink will continue to provide the highest level of service by communicating all procedural changes, technology refreshes, and organizational changes to VITA either directly or through documentation publication via a web portal.

d. Order Management

Provide a high level description of the Supplier's order process, expedite process, and jeopardy process for each service.

Comply (Yes/No)	Explanation/Description (d. Order Management)
Yes	CenturyLink will provide an email address designated for only VITA orders. This email box will be monitored by members of the account team or designated back up personnel at all times. Upon receipt of the order from VITA, CenturyLink will confirm receipt of order and verify that all necessary information needed to complete the order has been included. CenturyLink will notify VITA upon successful submission and receipt of each order and will establish an estimated due date for completion of the order. Depending on the service ordered, CenturyLink will communicate completion or significant benchmarks within the order process. Information communicated to VITA will include circuit identification for new service, Firm Order Commitment dates for onsite installations, IP addresses, etc. If service requires a coordinated installation, prior to the due date for installation, CenturyLink will timely communicate the agreed upon date and time for test and turn up of the new service. If a VITA order requests service delivery sooner than the established interval, CenturyLink will request an expedited early due date. If approved, the expedite confirmation is submitted with the order so that the shorter interval is communicated to the service supplier on day 1 of the order process. CenturyLink will make every effort to meet the expedited due date. Customer- requested expedites will incur an expedite fee per the pricing attachment included with this proposal (Attachment A). Any order jeopardy situations that occur during the order process will be communicated immediately to VITA and will include the reason for jeopardy, our plan to resolve the jeopardy, and any effect this may have on service delivery.

e. On-Line Provisioning

While VITA is not equipped to use online provisioning today, and may not be in the foreseeable future, if the Supplier has an electronic order process, describe the system, its access and capabilities with respect to tracking orders in progress, and any advantages that VITA would have in using Supplier's electronic order process.

Comply (Yes/No)	Explanation/Description (e. On-Line Provisioning)
Yes	The CenturyLink Control Center Web Portal has ordering functionality currently available for the following services: • SIP Trunk - Moves, Adds, Changes and Disconnects (MACDs) to

Comply (Yes/No)	Explanation/Description (e. On-Line Provisioning)
	existing SIP Trunk service. The ability to purchase individual sessions enables the capability to quickly adjust capacity according to customer needs. • Toll Free Manager – Reserve additional Toll Free numbers. In addition, Toll Free Manager allows you to setup and manage all toll free features including day of week, time of day, percent allocation and geographical routing. • Hosted VoIP Web Portal – Moves, Adds, Changes and Disconnects (MACDs) to existing Hosted VoIP service. The ability to purchase individual sessions enables the capability to quickly adjust capacity according to customer needs. To initiate all other service, orders are still required to be emailed, faxed, or submitted via normal ordering processes. The web-based ordering functionality, at this time, only applies to changing existing services.

f. Expedites

Describe the Supplier's rules and procedures for those orders in which VITA requests and may need expedited provisioning. Specify how many expedites are included in the Supplier's offer at no additional charge.

Comply (Yes/No)	Explanation/Description (f. Expedites)
Yes	CenturyLink will work with closely with VITA to evaluate the need for and to accommodate a request to expedite provisioning of a service. In situations where a shorter interval is required and VITA is ready to accept service, CenturyLink will offer ASAP provisioning at no cost to VITA. This will allow CenturyLink to complete all necessary provisioning steps outside of standard intervals and deliver the service at the earliest possible date. If VITA requires a specific date for an expedite provisioning, the Account Consultant will submit the expedite request for approval with a detailed explanation of why the expedite is being requested. Upon approval for the expedite, the order is submitted with the approved expedite date and every effort will be made to accommodate the expedited due date. Requests for specific expedited dates will incur an expedite fee per the pricing attachment included with this proposal. CenturyLink provides Fast TRAAC support for high volume & complex toll free customers. Upon acceptance to the Fast TRAAC customer base, all toll free orders are automatically expedited and 24x7x365 support is available at no charge to customer. Acceptance to Fast TRAAC is described in the Value-add section, Section III, P. Value-Add.

g. Cancellation of Orders

Describe the Supplier's cancellation policy, by service, in terms of the latest date that VITA may cancel a service installation request and not be assessed a penalty.

Comply (Yes/No)	Explanation/Description (g. Cancellation of Orders)
Yes	Upon reasonable justification for cancellation of a service installation request, most installations can be cancelled at any time prior to accepting the service without penalty. This would include dedicated and switched

Comply (Yes/No)	Explanation/Description (g. Cancellation of Orders)
	long distance, toll free, and related features. VITA will be responsible for all costs incurred at time of cancellation, which may include special construction. In the case where a complex statement of work (SOW) has been issued, and if due to factors beyond the reasonable control of CenturyLink, the Customer stops development and/or implementation of the solution described in the SOW and does not resume within forty-five (45) days, full payment for all milestones completed and for the percentage of completion for deliverables in progress shall become immediately due and payable unless otherwise agreed to by both parties. In such an event, CenturyLink will promptly document in detail the status of the work in progress to accurately calculate the amount due.

4. Training

Supplier will provide training to VITA on the Supplier's products and services at no additional cost. Describe the training that the Supplier will provide to end-users (as applicable), telecom and IT management personnel, and VITA's team.

Comply (Yes/No)	Explanation/Description (4. Training)
Yes	CenturyLink will provide an instructive and content-rich training series for VITA's program management team, telecom and IT management personnel, and as applicable, VITA end-users. CenturyLink training will encompass a series of courses including, but not limited to the following: Orientation of CenturyLink Service, Support, and Products Account Team and Key Personnel Network Operations Center Support Product and Service Offerings Initial Training Management and end-user systems and tools Web portal Centralized billing and invoice media Ordering and Provisioning Trouble Ticket and Reporting In conjunction with VITA program management, and based on business need, ongoing and additional training may be provided for new services, specialized technical training, and operational changes as circumstances arise. For participants who are unable to attend in-person training or prefer web-based instruction, CenturyLink can provide either instructor-led or self-paced web-based training. Course curriculum and course material will be provided to participants prior to instruction.

N. The Direct Service Plan (DSP)

The Direct Service Plan (DSP) allows authorized entities within the Commonwealth to use the current Contract with VITA's telecommunications provider in a flexible and distributed fashion without compromising VITA's role and responsibility for ensuring effective and efficient use of

Commonwealth telecommunications resources. VITA qualifies and grants specific public bodies (*e.g.*, agencies, institutions and other political subdivisions) permission to participate in the DSP. In granting an entity permission to participate in the DSP, VITA grants full or partial access to some or all network service types (*e.g.,* voice but not data services, or vice-versa).

1. Provisions of the Direct Service Plan

Supplier will support the following processes of the DSP program. The Supplier will receive and fulfill service requests directly from each VITA-approved public body enrolled in the DSP program ("DSP Participant"). The Supplier will work directly with each DSP Participant for ordering, provisioning, and billing, and to resolve all service-related issues according to the terms and conditions of the Contract. Supplier acknowledges that each DSP Participant is solely responsible for meeting its financial obligations for services it orders through the DSP. At the option of the DSP participant, Supplier will provide billing information in a variety of electronic formats. Supplier will also provide VITA with the DSP Participants' billing information in VITA's desired electronic format.

Comply (Yes/No)	***Explanation/Description (1. Provisions of the Direct Service Plan)***
Yes	CenturyLink will support DSP Program.

O. Billing Requirements

1. Billing Structure

In the current environment, certain services may be billed to certain agencies directly by the incumbent service provider (the Direct Service Plan) at VITA's sole discretion while many services are billed through VITA itself providing an invoice to agency locations (VITA Billed). In addition, VITA utilizes a combination of location-specific, region-specific and statewide billing, and VITA desires an invoice structure that supports this hierarchy as VITA's needs dictate and in VITA's defined billing format. Each invoice may need to contain a combination of accounts, services and locations. Invoices should include total charges by office location and service type. These charges should also appear within the Contract-wide summary reports received monthly at VITA's headquarters.

Comply (Yes/No)	***Explanation/Description (1. Billing Structure)***
Yes	For VITA billed services, our billing system will provide VITA with the required hierarchy relationships using options such as an invoice or discount group, an Executive Summary, and product accounts. These can be defined to fit VITA's requirements for account, location and region specific designation. In addition to providing the necessary billing hierarchy on your paper invoice, all billing hierarchy and data will be available within our Control Center Bill Analyzer portal and will provide flexible and customizable reporting for VITA rebilling purposes. These same billing and account options will be available to all VITA DSP. Both VITA and the Direct Service Plan (DSP) will have access to the separate billing file within Control Center. CenturyLink will provide VITA with an Executive Summary Report that will provide a comprehensive summary of all charges by DSP account, location and service as established on the DSP bill format. This will be mailed USPS each month upon the completion of the billing period for all VITA DSPs.

2. Centralized Billing

Supplier will supply VITA (at its headquarters or other designated location) a consolidated monthly report and a summary statement for all charges billed for services obtained pursuant to this Contract.

Comply (Yes/No)	*Explanation/Description (2. Centralized Billing)*
Yes	Using our Executive Summary Report, CenturyLink will provide a monthly summary statement for all charges billed by account, location and service type to any VITA or DSP billed service.

a. Bill Media

Supplier will provide VITA's bill electronically via Secure FTP. The data format or electronic media cannot be changed without notification to VITA 120 days in advance. In addition, Supplier will provide a Summary Invoice via paper hard copy.

Comply (Yes/No)	*Explanation/Description (a. Bill Media)*
Yes	CenturyLink has the capability to provide an electronic bill to VITA via secure FTP via Control Center's Bill Analyzer. During the course of the contract, if the file format needs to change, VITA will be notified of all changes 120 days in advance of the change. In addition to the electronic file that VITA will receive each month, CenturyLink will provide a paper hardcopy monthly to VITA.

b. Additional Bill Media

Detail the bill media options that Supplier will make available to VITA (e.g., paper invoicing, electronic invoicing via CD-ROM or via a billing portal). Be prepared to provide multiple bills (CD-ROM or web-based portal and hard copy) and delivery to multiple addresses and individuals as requested by VITA. This refers to all scenarios including the Direct Service Plan.

Comply (Yes/No)	*Explanation/Description (b. Additional Bill Media)*
Yes	CenturyLink offers billing via paper format and on-line with Control Center's Billing Module. Monthly Call Detail Records are available in comma delimited .txt (CSV) file and in a Daily Extraction file or online utilizing Control Center's Usage Analyzer tool, which provides near real time and pre-billing data. **Bill Analyzer (BA)** – The bill reporting and analytics Web application in Control Center provides VITA a comprehensive solution to better understand their bills and conduct sophisticated analyses and cost allocations. Control Center Bill Analyzer helps transform complex bills into sources of virtual business intelligence. **Usage Analyzer (UA)** is a comprehensive proactive analysis tool for call usage and is designed to provide VITA with insight into their communications billing and call detail usage. By viewing your usage online and running simple reports, you can easily analyze all of your call usage to help run your business more efficiently. VITA can monitor calling patterns, automate budgeting and reporting, and mine your call data with ease through this tool. In order be environmentally conscious, CenturyLink recommends VITA manage services and access its invoices online using the paperless

Comply (Yes/No)	Explanation/Description (b. Additional Bill Media)
	invoice feature available at our CenturyLink Control Center Web portal. Should VITA opt to have invoices printed, additional costs would apply.

c. Network Invoice Portal

Supplier will provide a web-based view of billing information for review and management purposes. Describe Supplier's on-line billing reporting capabilities. The on-line version of any billing information should be consistent with the information in any paper-based or electronic media or online-based invoices. It is also critical that agencies be precluded from seeing one another's billing. Confirm that Supplier will work directly with VITA to establish login credentials for agencies that will strictly segregate billing information.

Comply (Yes/No)	Explanation/Description (c. Network Invoice Portal)
Yes	CenturyLink will provide VITA and their agencies access to CenturyLink Control Center, our robust billing and management reporting portal. Control Center is a secure self-service web portal that provides access to critical tools which enable easy, safe, and fast management of invoices, network configuration, statistics, and trouble reporting. The Control Center web-based invoice contains all data provided in the paper-based invoice. CenturyLink will work closely with VITA to establish the appropriate access and login credentials for agencies in order to secure and segregate billing information.

3. Invoice Timing

Accurate bills for each calendar month will be produced no later than 10 days after the end of the month for which the service has been provided. VITA's preferred bill date is the 28th of each month. All recurring charges will bill in advance.

Comply (Yes/No)	Explanation/Description (3. Invoice Timing)
Yes	CenturyLink has established bill cycles in 4 day intervals. A bill cycle for the 27th of the month is available to VITA. All recurring charges will bill for the current bill cycle or one month in advance.

4. Billing Detail

Supplier will send the following information to VITA as part of all invoices as applicable:

- Federal Identification Number (FIN)
- Full call detail (date, time, duration, originating and terminating number, rate schedule, geography, call type, and disposition);
- Itemized toll-free advanced feature charges (to allow calculation of individual feature use);
- Circuit identifier, date of installation, master contract number, circuit location/address (A-end and B-end as applicable);
- Individual Telecommunications Service Order (TSO) number for each item billed
- Service Type/Description
- Charge for each Service, including recurring charges at the element level (including, as applicable, miles, rating, discounts, geographic information, port charges, bandwidth or subscription charge, Class of Service, Access Channel);

- Service Level credits;
- Discounts, including type, description, percentage and applicable amount;
- Adjustments and credits (description, date(s), amount);
- All surcharges, regulatory charges and taxes itemized by the type of charge or tax, and the basis for the amount of the charge or tax.

No invoice may include any costs other than those identified in this Contract.

Comply (Yes/No)	*Explanation/Description (4. Billing Detail)*
Yes	CenturyLink complies.

5. De-Installation Orders

De-installation notices for a device or service element will be considered to be received by the Supplier, and the interval for disconnect begun, when an order is submitted to the Account Team. Service will not be de-installed or otherwise disabled prior to the requested de-installation date. If an order is for de-installation in less than 12 business days, the Supplier should not charge for more than 12 business days past the date of notification. For de-install orders placed with greater than 12 business days' notice, charges will be discontinued as of the requested de-install date. In cases where services are billed one month in advance, Supplier will credit a pro-rated portion of any advance payments upon de-installation of such services.

Comply (Yes/No)	*Explanation/Description (5. De-Installation Orders)*
Yes	CenturyLink complies.

6. Billing Dispute Resolution

All billing disputes will be resolved within 60 days and, to the extent practicable, will be cleared at the end of the fiscal year (each June 30).

Comply (Yes/No)	*Explanation/Description (6. Billing Dispute Resolution)*
Yes	CenturyLink complies. CenturyLink will resolve all billing disputes to the extent practical within 60 days of dispute notification and will make every effort to resolve all open billing disputes before the end of VITA's fiscal year.

a. Billing Dispute Aging Report

Supplier will provide a custom monthly report giving the number of disputed charges submitted and resolved with dates, amounts, invoice numbers and status.

Comply (Yes/No)	*Explanation/Description (a. Billing Dispute Aging Report)*
Yes	CenturyLink complies. The billing dispute aging report is available via the VITA Account Team and will contain resolution date, amounts, invoice numbers and status. An option for retrieving this report on a private VITA portal may also be used for sharing this information.

7. Credits

a. Credit Timing

Credits owed to VITA (*e.g.,* for refund of overcharges or Service Level failures) will be applied in the billing months agreed to by VITA and the Supplier. If VITA and the Supplier have not agreed to a particular billing month, then the credit should be applied no later than the second billing cycle after VITA becomes eligible for the credit.

Comply (Yes/No)	***Explanation/Description (a. Credit Timing)***
Yes	CenturyLink complies. CenturyLink will reconcile VITA's credit application to specific billing months for invoice payment purposes. All credit adjustments will be applied against the total balance due on the account, rather than to an open invoice.

b. Credit Application

Any credits owed to VITA will be applied to the particular billing account(s) selected by VITA. The Supplier should state if there are any limitations on the number of accounts to which credits can be applied.

Comply (Yes/No)	***Explanation/Description (b. Credit Application)***
Yes	CenturyLink complies. The number of accounts to which credits can be applied is only limited by the number of VITA accounts.

c. Credit Notes

All credit notes provided by Supplier should include the following information:

- The original invoice to which the credit corresponds;
- The reason for the credit;
- The credit amount.

Comply (Yes/No)	***Explanation/Description (c. Credit Notes)***
Yes	CenturyLink complies and will provide the original invoice to which the credit corresponds, the reason for the credit and the credit amount to VITA .

d. SLA Service Credits

Supplier will identify and calculate all credits due for outages, performance failures or failure to meet a service level. Ensure that all credits due VITA are provided automatically without requiring VITA to submit a claim or request, and clearly identified on the credit note to which they are posted (including specifically identifying on the credit note the outage or failure to which the service credit applies). Service credits will be issued no later than the second billing period following VITA's eligibility for them.

Comply (Yes/No)	***Explanation/Description (d. SLA Service Credits)***
Yes	CenturyLink will process the credits for standard service outage within the prescribed billing period. Please refer to the Appendix B SLA's for details.

8. Disputed Amounts

If VITA disputes an invoiced charge, Supplier will resolve such disputed charge (whether by credit or explanation of the charge to VITA's satisfaction) in VITA's required format within two billing cycles (60 days) following VITA's written notification. VITA will not pay any disputed amounts that remain unresolved after 120 days.

If a disputed charge is reversed, Supplier will reverse all associated surcharges, regulatory charges and taxes.

Comply (Yes/No)	***Explanation/Description (8. Disputed Amounts)***
Yes	CenturyLink will resolve the dispute, whether with a credit or with an explanation, within two billing cycles following the date with which the dispute was submitted by VITA. If VITA was charged in error, CenturyLink agrees to reverse all charges associated with the dispute including all taxes and any regulatory charges that may have been applied.

9. Delayed Billing / Billing Guarantee

Except in the event of amounts initially disputed by VITA which are re-billed by the Supplier, VITA will not pay charges for services more than 90 days after the close of the billing period in which the charges were incurred. This requirement applies to all charges, including without limitation, MACD charges, recurring charges, usage-based charges, and non-recurring charges, as well as fees, surcharges, regulatory charges and taxes.

Comply (Yes/No)	***Explanation/Description (9. Delayed Billing / Billing Guarantee)***
Yes	VITA will not be responsible for payment of services more than 90 days after the cycle in which the charge occurred. If a charge is unable to be invoiced in a timely manner, VITA's Account Consultant, who acts on VITA"s behalf as their billing specialist, will identify and remove the charge during the pre-bill audit process prior to the end of the billing cycle. If the charge was not able to be preemptively removed by VITA's Account Consultant, VITA can dispute the charge and the charge, and any associated taxes and fees, will be credited.

10. Administrative Billing Changes

If VITA requests an administrative billing change (*e.g.,* to move a service to a new billing account) at least 10 calendar days prior to the invoice date, Supplier will complete the change for inclusion on the next invoice.

At VITA's option, billing change information may be emailed to the designated billing specialist instead of requiring VITA to enter the information in a Supplier standard format, *e.g.,* a web portal.

At VITA's option, extensive billing changes may be grouped together and treated as a project. The designated billing specialist will manage the project and ensure that all changes are made as requested.

Comply (Yes/No)	***Explanation/Description (10. Administrative Billing Changes)***
Yes	Any administrative changes that VITA requires, that are submitted at least 10 calendar days prior to invoice date, will be included on the following invoice. If VITA chooses to send an email rather than submit an order in the standard format, the Account Consultant will have responsibility for the

Comply (Yes/No)	Explanation/Description (10. Administrative Billing Changes)
	change and assuring they are made in a timely manner. VITA can submit multiple administrative changes in the form of a project to their Account Consultant. The Account Consultant, who acts as VITA's billing specialist as well as their advocate, will have responsibility for the changes and that the changes are made as requested.

11. Designated Billing Specialist

Supplier will appoint a designated billing specialist, at no additional cost, who is highly familiar with VITA's services and invoice structure. This individual will be VITA's advocate in the timely investigation and resolution of billing errors, and should have the ability to make billing changes and corrections on-line in real time to the Supplier's invoicing systems.

Comply (Yes/No)	Explanation/Description (11. Designated Billing Specialist)
Yes	The Account Consultant assigned to the VITA contract serves as a billing specialist at no additional cost to VITA. The Account Consultant is dedicated to VITA; the contract, services and invoice structure. VITA's Account Consultant will be an advocate for all billing inquiries, investigation and resolution and will be able to submit orders, when necessary, for changes and corrections in real time.

12. Rate Verification

To ensure that VITA achieves the full benefit of the pricing in the Contract, Supplier will carry out rate verification for all services prior to issuance of the third invoice after the effective date of Contract. Be prepared to report the verification results to VITA as a review of the implementation of the Contract. Rate verification should be performed periodically throughout the Contract term.

Comply (Yes/No)	Explanation/Description (12. Rate Verification)
Yes	VITA will receive a comprehensive rate verification and invoice review no later than the third invoice after the effective date that the contract is awarded to CenturyLink. The results will be provided to VITA within the contract implementation review as required. Additional contract rate verifications will be performed at agreed upon intervals throughout the life of the contract.

P. Value Adds

If Supplier is offering any additional telecommunications services or directly-related services that it believes will offer some additional value to the Commonwealth (*e.g.,* "legacy" type services such as dial-up Internet access; virtual contact center functionality), they are described in detail here and pricing is provided in the "Value Adds" section of Appendix A.

Comply (Yes/No)	Explanation/Description (P. Value Adds)
Yes	**INTRODUCTION** As the basis for our Marketing value-add to VITA, CenturyLink would like of offer the following products and strategies to promote the comprehensive set of telecommunications network services and benefits to the VITA/CenturyLink relationship to the Commonwealth of Virginia for use by all agencies, localities, schools and other public bodies throughout the

Comply (Yes/No)	Explanation/Description (P. Value Adds)
	state. 1.0 Sales and Marketing Promotional Strategies 2.0 Customer Premises Equipment 2.1 Adtran 2.2 Alcatel-Lucent 2.3 Cisco 2.4 Ciena 2.5 Juniper 2.6 ShoreTel 3.0 Security/Savvis Products 3.1 SAVVIS Product Portfolio 3.2 Managed Security Services 3.3 Managed DDOS Mitigation Services 3.4 DDOS Protection Services 3.5 PCI Audit Services 3.6 Threat Management 4.0 Cloud Services 4.1 Contact Center 4.2 Interaction Routing 4.3 Notify 5.0 CenturyLink Network 5.1 TSP 6.0 Conferencing and Calling Card 6.1 Audio Conferencing 6.2 Web Conferencing 6.3 Worldcard Calling Card 7.0 CenturyLink Data Bundles 8.0 Fast TRAAC
	1.0 VALUE ADD – SALES AND MARKETING PROMOTIONAL STRATEGIES **VITA Program Promotional Strategies.** CenturyLink Sales and Marketing will employ 8 different strategies to promote the benefits of VITA.

Strategies	Benefits
VITA Press Release	A press release will be issued upon contract award, and sent to Government and business trade publications. The release will be pre-approved by VITA and will contain quotes from VITA and CenturyLink.
VITA Brochure	CenturyLink will design and produce a VITA brochure, in hardcopy and electronic format. The brochure will contain a VITA overview, scope and expiration date, a list of services available to end-users, a diagram of the procurement process, and points of contact, including a reference http://www.centurylink.com/vita.
VITA Presentation	A pre-approved, standardized VITA capabilities presentation will be developed and made available to CenturyLink employees via the CenturyLink intranet.
VITA Print Advertising	CenturyLink will spotlight VITA in our advertisements in Government trade magazines and special VITA publications, where applicable. The ad(s) will include our VITA web portal http://www.CenturyLink.com/vita
VITA Web Advertising	To complement and reinforce print advertising, CenturyLink will include VITA-focused Web advertising in Government trade Web sites and http://www.CenturyLink.com/vita
VITA Radio Advertising	CenturyLink will include VITA-focused radio advertising at Washington, D.C. drive-time radio stations. The call-to-action statement will include a reference to 1-877-592-2692 and http://www.CenturyLink.com/vita.

Comply (Yes/No)	Explanation/Description (P. Value Adds)
	VITA Information on CenturyLink.com/ Government: VITA will be added to the left-hand navigation at http://www.CenturyLink.com/government under the Contracts header. The VITA page will contain sections on services, customer care, a redacted contract, a list of contacts with a hyperlink to http://www.CenturyLink.com/vita, and a downloadable VITA brochure in locked .PDF format. VITA Promotion at Events: VITA will be heavily promoted at all events attended by CenturyLink, including those hosted by ACUTA, eRepublic, MiCTA, NASCIO, and NASTD
	5.0 VALUE ADD – CENTURYLINK NETWORK **5.1 TELECOMMUNICATIONS SERVICE PRIORITY (TSP)** Telecommunications Service Priority provides priority restoration and installation for use during a disaster or catastrophic failure of the telecom infrastructure. **5.1.1 TSP Product Description** ***TSP is a federally mandated service that carriers must provide to authorized Customers.*** The TSP Program is a Federal Communications Commission (FCC) mandate for prioritizing service requests by identifying those services critical to NS/EP. A telecommunications service with a TSP assignment is assured of receiving full attention by the service vendor before a non-TSP service. Organizations wishing to apply for TSP must apply with the Federal government to be granted authority to receive this priority treatment. CenturyLink cannot grant authority. Potential customers of this service are generally law enforcement organizations, emergency service providers, hospitals, intelligence agencies or those involved with delivering national security or emergency preparedness (NS/EP). A TSP service user is any individual or organization supported by a telecommunications service for which a TSP assignment has been requested or assigned. NS/EP telecommunications services within the Federal, State, local, or foreign governments, as well as private industry, are eligible for TSP. Federal users do not require a sponsor, but generally have a centralized Point of Contact (POC) that routinely interacts with the Office of Priority Telecommunications (OPT). Non-Federal users (e.g., State, local, foreign governments) require a sponsor. The service is ordered from CenturyLink in conjunction with the transport service being ordered. It cannot be ordered by itself. The service is provided on an end-to-end basis so that the entire circuit provided by CenturyLink (the interexchange portion and CenturyLink provided local access) are included in the TSP designation. CenturyLink will not provide TSP on a portion of the circuit. It can be ordered with Private Line services (e.g. PL, EPL, QWave), iQ services, Frame Relay, ATM and voice services.

Comply (Yes/No)	Explanation/Description (P. Value Adds)
	CenturyLink incurs costs from local access providers for this service and therefore charges for the service. The service requires a separate QTA service exhibit, Telecommunications Service Priority.
	6.0 VALUE ADD – AUDIO AND WEB CONFERENCING Our conferencing services include Audio Conferencing and Web Conferencing. CenturyLink partners with PGi to provide conferencing services because of its conferencing expertise, global reach, award winning products, VoIP infrastructure, and shared work ethic. PGi provides leading-edge conferencing services while CenturyLink manages the reliable and robust network, customer service, billing, and account management support. **6.1 AUDIO CONFERENCING PRODUCT DESCRIPTION** **Audio Conferencing** Reservationless (automated) conferencing No operator is needed to schedule Reservationless conference calls The moderator emails a call-in number and passcode to participants and can meet at any time Reservationless (automated) GlobalMeet conferencing No operator is needed to schedule Reservationless conference calls The moderator emails call-in numbers and a passcode to participants and can meet at any time The call-in numbers provide international toll-free and local access around the globe Passcode Conferencing Scheduled online or through an operator The moderator emails a one-time use call-in number and passcode to participants who meet at the scheduled time Reserved (operator assisted) Conferencing Operator Assisted, small calls with an operator introducing participants Event Auditorium, small to large calls, with a passcode entry and dedicated operator during the call Event, small to large calls, with entry through a live operator, a dedicated operator to introduce speakers and manage the entire call. **6.2 WEB CONFERENCING** Includes five different offers, you pick the one that integrates with your system and meets your needs: CenturyLink Web Conferencing, Cisco WebEx™, Microsoft® Office Live Meeting (Event and Event Auditorium only), Adobe® Connect™ and ON24 Webcasting. **Audio Conferencing details** Our world-class Audio Conferencing solutions include a full-suite of

Comply (Yes/No)	Explanation/Description (P. Value Adds)
	traditional and VoIP- services to accommodate small to large events and less formal meetings. Audio Conferencing includes Reservationless (automated) conferencing and Reserved calls with global connectivity from approximately 90 local access points. **CenturyLink Web Conferencing Security** CenturyLink Web Conferencing uses third party verified, 128-bit SSL encrypted tunnels to ensure security is maintained and vital information remains confidential. Security protocol includes: Https for secure access to the Conference Control Center as well as optional SSL protection for your web conference Inter-server communications are encrypted to protect your meeting content Our equipment is protected by intrusion-detection software and 24x7x365 server monitoring Co-location facilities feature real-time, 24x7x365 video surveillance, key-card access, alarm/key monitoring and an access control list. **6.2.1 Benefit to Commonwealth** **Account Management** The Commonwealth will have a global transition/project team to plan, execute and monitor your migration to our Conferencing services. Our migration services have been developed to ensure zero impact to your business as you move to CenturyLink Conferencing. After the migration is completed, you will have a regional account management and operations team. The dedicated project team members for VITA includes: Account Executive – you will meet at the initial presentation of the service and will coordinate efforts between you and other members of our team Sales Engineer – provides strategic direction, guidance and integration of products or solutions Client Manager – provides internal and external project resource coordination, supervision of each project through implementation, production and transition to Customer Care at the end of the project.
	7.0 VALUE ADD – CENTURYLINK DATA BUNDLES From basic Internet to router management, CenturyLink's Data Bundle can support VITA customer's current and future demands to keep business running smoothly. The Data Bundle combines CenturyLink IQ Network Access, Local Access, CPE and Network Management all in one simple monthly rate, with simple plug and play installation. **7.1 PRODUCT DESCRIPTION** ***CenturyLink Managed Data Bundle – simple, reliable and cost effective!*** ♦ Simple plug and play installation ♦ Complete package in one monthly MRC ♦ Flexible and Scalable

Comply (Yes/No)	*Explanation/Description (P. Value Adds)*
	♦ Proactive network monitoring & management ♦ Preconfigured CPE included The Managed Data Bundle is a high performance, dedicated solution for Internet or private data networking. It is a fully configured, flexible and compatible solution that works with the existing internal networks used by the Commonwealth. With a wide array of bandwidth capacities, and 24/7/365 support from our award-winning account and service teams, the Managed Data Bundle is the ultimate solution that leaves network management to CenturyLink and allows the Commonwealth to maintain full control of the network environment, while Network Management Services proactively monitor and manage the Commonwealth's routers and reports its activities. Key features of this product include: Available port types: include Internet Port, Private Port (multi-protocol label switching (MPLS)) and Enhanced Port (a single port that offers a cloud-based firewall, Internet access and private data networking). This solution is available in a range of bandwidth speeds to ensure that performance is kept at an optimum level. CPE options include ADTRAN or Cisco routers. The router is shipped directly to the customer ready for install and operation, preconfigured to match the customer requirement with the CenturyLink network, so the solution is plug and play. Onsite maintenance is available for the CPE. Data protection is provided at your premises, with firewalls configured to the specific business needs of the customer. Unlimited IPSec tunnel configurations (up to hardware maximum) Customized advanced routing configuration – including QoS/border gateway protocol (BGP), generic routing encapsulation (GRE), open shortest path first (OSPF), available over GRE tunnels with CPE configuration Network address translation (NAT)/port address translation (PAT) and Demilitarized Zone (DMZ) security configurations Multi-port Ethernet switch and router included with 1.5 and 3Mbps CPE Managed Data Bundles offer 2 levels of service to support specific customer needs: **Select** – This level is ideal for MPLS networks with static routing. Includes proactive monitoring and management, 24/7/365, with proactive notification of faults. Reporting – customer dashboard is available for viewing real-time reporting and trouble tickets. Performance-based Service Level Agreements (SLA's) **Comprehensive** – This level is ideal for secure Internet or complex routing requirements. Data Protection – firewall management and configuration VPN Tunnel – IPSec VPN tunnel management Supports complex routing configurations, such as BGP, EIGRP, OSPF For customers who prefer a bundled solution without using CenturyLink to proactively manage may consider the Standard or Pro Data Bundle solutions.

Comply (Yes/No)	Explanation/Description (P. Value Adds)
	7.1.2 Data bundle Benefit to Commonwealth CenturyLink Data Bundle offers the Commonwealth a powerful, extremely reliable data networking bundle that is incredibly easy to install. When the preconfigured router arrives, it's as simple as plug and play. This simple setup process is easily repeatable for multiple locations, so this solution is ideal for 1 location or 100 locations. Since the CPE cost is built into the monthly MRC rate, there is no need to spend capital budget on CPE. Later on, the Commonwealth may choose to buy out the CPE after the contract term. There are also options to upgrade or relocate services during the contract term, which maximizes flexibility. **7.1.3 Data Bundle Pricing Description** The pricing for the Data Bundle is a monthly MRC for the specified contract duration. There is no NRC, as the CPE cost is built into the monthly MRC. Pricing is based on the bandwidth required, the CPE selected, the service level (Select or Comprehensive), the port type and the cost of the local loop.
	8.0 VALUE ADD – FAST TRAAC The CenturyLink Fast TRAAC team is a team within the Switched Provisioning division in National Network Services. This team of highly skilled toll free specialists is available to support the toll-free provisioning needs of high volume and/or complex toll free customers at CenturyLink. Acceptance to the Fast TRAAC customer base is subject to approval. Upon acceptance to our Fast TRAAC customer base, VITA will have toll free support around the clock. The Fast TRAAC customer base is offered personalized customer service, improved provisioning intervals, and 24x7x365 availability for disaster recovery needs, as pre-established with Fast TRAAC Management Team Toll Free Disaster Recovery provides CenturyLink Fast TRAAC customers direct 24x7 access to a CenturyLink Toll Free Subject Matter Expert, who specializes in performing complex 8xx functions that the customer can't otherwise do themselves via Control Center for Toll Free. Disaster Recovery is available on up to 25 toll free numbers per customer. Requests to implement Disaster Recovery can be made with a phone call and follow-up e-mail sent (for documentation purposes) to Fast TRAAC, and can include the following: General functions of the Fast TRAAC team include: Automatically expedite provisioning of all possible toll free orders DNIS changes Perform test calls, upon request, after routing changes are in place. Provide personalized notification status to customers, upon request. Other functions listed below are currently available through Control Center for Toll Free services. In the event a Fast TRAAC customer' is not able to utilize Control Center, Fast TRAAC can also assist with: Invoking Alternate Call Plan Changing Percent Allocation values Time of Day, Day of Week, and Day of Year routing changes.

Comply (Yes/No)	***Explanation/Description*** (***P. Value Adds***)
	Geographical Routing changes

Appendix B – Service Level Agreements (SLAs)

Appendix B covers Service Level Agreements for Data Network and Voice Network provisioning and network performance, and for billing. For all tables except billing, complete each line of the table by specifying a number in conformance with, or in distinction from, the given VITA requirement.

1. General Provisions

Each of the following General Provisions apply to all of the SLA Tables beginning with MPLS Network Transport Service Levels.

a. Credits for Failures to Meet Service Levels

Supplier will provide VITA with credits specified in all agreed-upon Service Level Agreements according to the actual performance of the services provided by the Supplier.

Comply (Yes/No)	*Explanation/Description (a. Credits for Failures to Meet Service Levels)*
Yes	CenturyLink follows aggressive SLA's (service level agreements) and provides credits when those SLA's are not met.

b. Measurement of Outage Time and Service Request Intervals

Note that an outage or incident "clock" will start based on the date and timestamp of the alarm or event captured in the trouble ticket. For service requests, such as MACD requests, the clock starts when the Supplier receives the service request from VITA. Incident tickets can be closed once Supplier determines that the outage or incident is resolved and the service performs in accordance with the applicable service levels. Service Request tickets can be closed once Supplier completes the service request as requested and specified by VITA.

The period of time during which VITA conducts acceptance testing of repaired or restored service or equipment, once deemed Ready For Use (RFU) by Supplier, will not count as outage time.

Comply (Yes/No)	*Explanation/Description (b. Measurement of Outage Time and Service Request Intervals)*
Yes	CenturyLink has read, understands, and complies.

c. Source Data

Supplier will make available to VITA the actual source data used to calculate service level compliance.

Comply (Yes/No)	*Explanation/Description (c. Source Data)*
Yes	CenturyLink has read, understands, and complies.

d. Exceptions

List all exceptions that the Supplier would make to its service level commitments, *i.e.,* circumstances or events that would relieve Supplier from its obligation to meet a particular service level commitment.

Comply (Yes/No)	***Explanation/Description (d. Exceptions)***
Yes	This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts of omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonable required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

e. Service Level Compliance and Credit Report

Supplier will provide a monthly Service Level Compliance and Credit Report for those service levels proposed by the Supplier. The report should detail the actual performance for each service level metric versus the service level metric guaranteed by the Supplier. The Report should reflect any credits due VITA based on actual performance versus the metric, the amount of the credit, date when the credit will post and the number of the account to which the credit will be applied.

Comply (Yes/No)	***Explanation/Description (e. Service Level Compliance and Credit Report)***
Yes	CenturyLink has read, understands, and complies.

2. Options for Presentation of Alternative WAN Solutions SLAs

As described in Section 5.B of this RFP, Supplier is asked to provide a proposal for the MPLS network locations presented in Appendix A of this RFP, but VITA is also interested in understanding other leading-edge WAN services that Supplier can provide. VITA believes that in most cases, WAN solutions other than MPLS should provide equivalent or better network performance and provisioning ability. Supplier should determine whether any alternative WAN solution that it proposes has equivalent metrics to the "MPLS and Other WAN Solutions Network Transport Service Levels" presented below in Section 3 of Appendix B. If it does, Supplier should complete the charts in Section 3. If the service is substantially different such that the nature of the measurements changes, it should submit separate tables for its proposed alternative WAN solution.

3. MPLS and Other WAN Solutions Network Transport Service Levels

a. MPLS and Other WAN Solutions Provisioning Service Level Requirements

State the Supplier's committed service levels compared to VITA's objectives.

Service Level Description	VITA Requirement (in business days)	Supplier Proposed Commitment (in business days) (Supplier to specify a number; not "Yes" or "No")
New or existing location (Local Access and Port) and MACD Order: Interval to approve or reject Order from Customer (if approved, then the install/MACD interval clock begins)	2	2
Interval to install a Dedicated US T1 Access Circuit	20	22
Interval to install a Dedicated US T3 Access Circuit	40	33
Provide a notification of the actual installation date prior to the planned installation date to ensure site is ready for Supplier	10	10
Change an existing Port's speed (assumes no change to local access speed)	5	8
Add, Change or Delete a COS speed or profile on an existing Port	5	8
Add, Change, Delete Communities of Interest for Inter-Enterprise/Multiple VPNs (includes VRF Table changes)	7	8
Service Credit for Missing any of the above Provisioning or MACD interval Service Level Commitments	100% of Supplier's Installation or MACD Charge (credit applies even if charge is waived)	Each failure to meet the installation goals qualifies the customer for a credit of one day's charges pro-rated from the MUC for each day beyond the applicable goal until the CenturyLink provided access is installed, for a maximum of 15 days' charges.

b. MPLS and Other WAN Solutions Network Performance Service Level Requirements

State the Supplier's committed service levels compared to VITA's objectives. All metrics are calculated over a calendar month. In addition, all metrics provided should be measured and reported to VITA on an end-to-end basis inclusive of Supplier-provided and invoiced service components such as local access circuits, NTUs or CSU/DSUs, if provided by the Supplier as part of the service, unless otherwise indicated in the "Service Level Description" column below. If Supplier is proposing an alternative WAN solution to MPLS, provide analogous service level metrics, and feel free to add additional lines to this table to define such metrics as appropriate to the alternative WAN solution. As an additional option, Supplier may consider providing its own comprehensive service level table as a replacement for the below.

Service Level Description	VITA Requirement	Supplier Proposed Commitment (Supplier to specify a number; not "Yes" or "No")
Site Availability Single Connection (for a single dedicated local loop and MPLS Port) (measurement includes the uptime of the local access and is a monthly calculation and calculated per site)	99.9%	100%
Site Availability Dual Connections (for a site with dedicated local access and MPLS Port as its primary connection and a backup connection such as Internet VPN or local loop with MPLS Port) (measurement includes the uptime of primary or backup combined and is a monthly calculation and calculated per site)	99.99%	100%
Time to Restore Service (see Note 1)	4 hours (24x7 coverage)	4 hour (24x7 coverage)
Data Delivery Ratio (measured PE router-to-PE router using AF COS)	99.95%	99.90% (measured on an ongoing basis every five minutes to determine a consistent average monthly performance level for packets actually delivered between the POP's.
Round-trip Network Delay between sites within the network; (see Note 2)	US: ≤ 90ms	42 ms (measured via roundtrip pings on an ongoing basis every five minutes to determine a consistent average monthly performance level for latency at all the POP's within the region.
Jitter (for real-time Class of Service only; measured PE router-to-PE router for any location)		2 ms (measurement of the interpacket delay variance and packet loss in the CenturyLink IP network, which is measured by generating synthetic user datagram protocol (UDP) traffic.
Service Credit for Missing any of the above Performance Service Level Commitments	20% of the applicable Monthly Recurring Charges including the MRCs for local access for the RTD and Site Availability metric	Please see attached CenturyLink's IQ Networking Service Level Agreement (SLA).

Note 1: Time to Restore Service is defined as a maximum threshold per incident in any calendar month. The service level metric applies to failure of an individual service component, even if back-up service components are maintaining access to the network. This includes all locations.

Note 2: Round-trip Network Delay is measured CE router-to-CE router excluding the CE router but including the local access circuit; assume a 64-byte ping packet used to measure in 10-15 min. intervals during normal operations).

4. Voice Network Transport Service Levels

a. Voice Provisioning Service Level Requirements

Service Level Description	VITA Requirement (in business days)	Supplier Proposed Commitment (in business days) (Supplier to specify a number; not "Yes" or "No")
New Location or Existing (Local Access) Order: Interval to approve or reject Order from Customer (if approved, then the install interval clock begins)	2	2 business days or less
Interval to install a Dedicated US T1 Voice Access Circuit	20	20 business days or less
Interval to install a Dedicated US T3 Voice Access Circuit	40	40 business days or less
Interval to install a US ISDN PRI Circuit	20	20 business days or less
Interval to install a US ISDN BRI Circuit	15	15 business days or less This is an IXC RFP, ISDN BRI would be provided by the LEC and we would only carry data usage
Interval to install or Modify a Trunk Group (Existing T1/E1 Access)	6	6 business days or less
Interval to install a New Toll-Free Number on Existing Trunk Group	6	6 business days or less
Interval to install a Toll-Free Routing Feature	5	5 business days or less
Interval to install a Toll-Free Announcement	10	10 business days or less
Interval to Re-record or Modify a Toll-Free Announcement Feature	10	10 business days or less
Interval to install an Outbound Feature	10	10 business days or less
Interval to install a Switched Access Location	5	5 business days or less This is an IXC RFP, switched access location would be provided by the LEC and we would carry long distance usage
Service Credit for Missing any of the above Provisioning Service Level Commitments	100% of Supplier's Installation, activation or change Charge (credit applies even if charge is waived).	CenturyLink proposes a service level credit of 100% of any Installation, activation or change Charges actually charged and not waived. These service level credits will only apply against the effected service.

b. Voice Network Performance Service Level Requirements

Service Level Description	VITA Requirement	Supplier Proposed Commitment (Supplier to specify a number; not "Yes" or "No")
Voice Circuit Availability - for a single dedicated local loop) (measurement includes the uptime of the local access and is a monthly calculation and calculated per site)	99.9%	99.95%

Service Level Description	VITA Requirement	Supplier Proposed Commitment (Supplier to specify a number; not "Yes" or "No")
Time to Restore Service (see Note 1 above)	4 hours (24x7 coverage)	4 hours (24x7)
Service Credit for Missing any of the above Performance Service Level Commitments (Service Credits will be calculated by the Supplier and will apply for all the above metrics after the reporting month. In other words, there will be no "cure period" after missing the service level requirement the prior calendar month)	50% of the applicable voice Monthly Recurring Charges and Supplier-provided device MRCs (if separately charged for NTUs and CSU/DSUs)	Please see attached CenturyLink's Domestic Outbound Long Distance and Domestic Toll Free Service SLA.

5. Dedicated Internet Port Service Level Requirements

State the Supplier's committed service levels compared to VITA's objectives. All metrics are calculated over a calendar month. In addition, all metrics provided should be measured and reported to VITA on an end-to-end basis inclusive of Supplier-provided and invoiced service components such as local access circuits, NTU's or CSU/DSUs, if provided by the Supplier as part of the service, unless otherwise indicated in the "Service Level Description" column below.

As an additional option, Supplier may consider providing its own comprehensive service level table as a replacement for the below.

Service Level Description	VITA Requirement	Supplier Proposed Commitment (Supplier to specify a number; not "Yes" or "No")
Site Availability Single Connection (for a single dedicated local loop and Internet Port) (measurement includes the uptime of the local access and is a monthly calculation and calculated per site)	99.0%	100%
Time to Restore Service (see Note 1)	4 hours (24x7 coverage)	4 hour (24x7 coverage)
Data Deliver Ratio (measured see Note 3)	99.00%	99.90% (measured on an ongoing basis every five minutes to determine a consistent average monthly performance level for packets actually delivered between the POP's.
Round-trip Network Delay (see Note 2)	≤ 90ms	42 ms (measured via roundtrip pings on an ongoing basis every five minutes to determine a consistent average monthly performance level for latency at all the POP's within the region.
Notification time to VITA for Severity 1 Incidents (Severity 1 is defined as a site outage) (time interval measured when Supplier first detects outage)	15 minutes	10 minutes.

Service Level Description	VITA Requirement	Supplier Proposed Commitment (Supplier to specify a number; not "Yes" or "No")
Service Credit for Missing any of the above Performance Service Level Commitments	20% of the applicable Monthly Recurring Charges including the MRCs for local access for the RTD and Site Availability metric	Please see attached CenturyLink's IQ Networking Service Level Agreement (SLA).

Note 1: Time to Restore Service is defined as a maximum threshold per incident in any calendar month. The service level metric applies to failure of an individual service component, even if back-up service components are maintaining access to the network. This includes all locations.

Note 2: Round-trip Network Delay is measured CE router-to-PE router (far end) excluding the CE router but including the local access circuit; assume a 64-byte ping packet used to measure in 10-15 min. intervals during normal operations).

Note 3: Data Delivery Ratio is the ratio of test packets received by the egress router to test packets sent from the CE router to the PE ingress router to the PE egress router.

6. Managed VPN Device Service Level Requirements

State the Supplier's committed service levels compared to VITA's objectives. All metrics are calculated over a calendar month. In addition, all metrics provided should be measured and reported to VITA on an end-to-end basis inclusive of Supplier-provided and invoiced service components such as VPN edge device/appliances, NTU's or CSU/DSUs, if provided by the Supplier as part of the service, unless otherwise indicated in the "Service Level Description" column below.

As an additional option, Supplier may consider providing its own comprehensive service level table as a replacement for the below.

Service Level Description	VITA Requirement	Supplier Proposed Commitment (Supplier to specify a number; not "Yes" or "No")
Time to Restore Service: 24x7 coverage (see Note 2)	4 hours	With CenturyLink's On-Site Premium Service, the response is 4 hours, for all sites within 25 miles of service centers located in the following locations: Richmond, Sterling, Herndon, Virginia Beach, Alexandria, Manassas, Norfolk, and Roanoke.
Time to Restore Service: 8x5 coverage (see Note 2)	Next Business Day (outages occurring before 5:00pm local time must be repaired the same business day)	With CenturyLink's On-Site Standard Service, the response is next business day, for all sites within 25 miles of service centers located in the following locations: Richmond, Sterling, Herndon, Virginia Beach, Alexandria, Manassas, Norfolk, and Roanoke.

Service Level Description	VITA Requirement	Supplier Proposed Commitment (Supplier to specify a number; not "Yes" or "No")
Notification time to VITA for Severity 1 Incidents (Severity 1 is defined as a site outage) (time interval measured when Supplier first detects outage)	15 minutes	10 minutes (under CenturyLink's attached Network Management Services SLA).
Service Credit for Missing any of the above Performance Service Level Commitments	20% of all applicable Monthly Recurring Charges for the site including circuit and CPE MRCs	One month's Service charge (for CPE maintenance) of the Covered Product. Please see the attached SLA's for On-Site Premium Service and On-Site Standard Service. Credits for circuit charges are covered under CenturyLink's IQ SLA and Domestic Voice SLA.

Note 1: The demarcation point for the table above is end-to-end and includes the maintenance and management of the VITA VPN edge device.

Note 2: Site Time to Restore is defined as a maximum threshold per incident in any calendar month.

7. Billing Service Levels

VITA's preferred service level commitments for billing are listed below. All metrics are measured and calculated over a calendar month period. In order to allow the Supplier to have an initial ramp-up period, the billing service credits will go into effect beginning with the fourth monthly invoice. However, the measurement and tracking of the service levels should begin in the first month. State the Supplier's compliance with these metrics in the Comply (Yes/No) box below the table and note any exceptions.

Service Level Description	Metric	Service Credit
Number of days after the 28th day of the calendar month that invoice is received by VITA	Average of 21 calendar days or less for all invoice submittals	$500 per day late
Percent of billing change orders implemented on next invoice as long as VITA requests change at least 10 calendar days prior to the invoice date	99.0%	$1,000 credit
Percent of billing inquiries responded to within 5 business days	99.0%	$1,000 credit
Percent of new services/equipment billed to correct VITA account on invoices	99.0%	$1,000 credit
Percent of new services billed at correct price on invoices	99.0%	Credit of 5% of the amount net overbilled

Comply (Yes/No)	***Explanation/Description (7. Billing Service Levels)***
No	CenturyLink makes every effort to bill accurately and in accordance with customer requirements, however no service level credits are offered against these efforts. VITA's dedicated billing specialist will serve as a direct point of contact and will resolve any issues expeditiously and accurately.

8. Other Service Levels

The following Service Level requirements are provided for Customer Service/Network Operations Center (NOC) responsiveness. All metrics are measured and calculated over a calendar month period. State the Supplier's compliance with these metrics in the Comply (Yes/No) box below the table and note any exceptions.

Service Level Description	Coverage	VITA Requirement	Service Credit
Response time for a) acknowledgement of service interruption/restoration requests after notification from an Authorized User and b) providing a status report. The status report must include a description of the failure and an estimated time to restore services	24 x 7 x365	Response within 1 hour for 95% of the requests	0.5% of the total Monthly Recurring Charge (MRC) for all VITA sites monitored by the NOC
Time-to-Restore after notification of an interruption/restoration request by an Authorized User for services not specified in Sections 1-5 above (remote or on-site)	24 x 7 x365	4 hours	20% of the applicable Monthly Recurring Charges including the MRCs for local access

Comply (Yes/No)	***Explanation/Description (8. Other Service Levels)***
No	Although the majority of calls into CenturyLink's NOC's are answered within 20 seconds, there is no credit available for missed response times. Time-to-Restore credits are covered under "network availability" in the attached SLA's.

SLA ATTACHMENT TO EXHIBIT B, "SERVICE REQUIREMENTS"
CENTURYLINK DOMESTIC OUTBOUND LONG DISTANCE AND DOMESTIC TOLL FREE SERVICES ("Services")
SERVICE LEVEL AGREEMENT ("SLA")
(not applicable to services offered under the CenturyLink Wholesale and Enhanced Services Agreements)

This SLA applies to domestic outbound long distance and domestic toll free services (together "Service") ordered by CenturyLink customers ("Customer") pursuant to a signed agreement ("Agreement") with Qwest Communications Company, LLC d/b/a CenturyLink QCC ("CenturyLink"). Capitalized terms not defined in this SLA are defined in the Agreement. This SLA does not provide performance objectives and related remedies for any local access services provided by CenturyLink to Customer under a separate agreement.

1. Definitions

The definitions applied to the following capitalized terms will control for purposes of this document only.

(a) "Calendar Month" means the period beginning at 12:00 midnight on the first day of a month and ending at 11:59PM on the last day of that month.
(b) "CenturyLink Circuit Switch Network" will refer to the circuit switch network located within those areas in the United States Mainland where CenturyLink is legally permitted to provide the Service to Customer and is comprised only of CenturyLink On-Net Facilities. The CenturyLink Circuit Switch Network will not include any access facilities to that network, local access circuits, or tail circuits provided by any carrier or local access provider or any Customer premises equipment.
(c) "CenturyLink On-Net Facilities" will refer to physical media, including switches, circuits, and/or ports that are owned and operated by: (i) CenturyLink; or (ii) a wholly or partially owned subsidiary of CenturyLink. CenturyLink On-Net Facilities will not include any access facilities, local access circuits, or tail circuits provided by any other carrier or local access provider.
(d) "United States Mainland" will refer to the District of Columbia and the 48 contiguous United States of America.

2. CenturyLink Inbound and Outbound Voice Network Availability Guarantee For Domestic Services

In the event that the CenturyLink Circuit Switch Network supporting the Service to be provided to Customer by CenturyLink in accordance with the agreement is subject to an interruption, (other than as noted in the Exclusions or a network busy condition,) which completely disallows CenturyLink from originating or terminating calls to such location ("Network Non-Availability"), Customer will be compensated by receiving credits in accordance with the network availability provisions set forth in this section.

For all Service provided to Customer, CenturyLink will ensure that, on average, such Service is available on the CenturyLink Circuit Switch Network for Customer's use 99.95% of each Calendar Month ("Average Monthly Network Availability"). For purposes of this document, Average Monthly Network Availability will be determined in accordance with the following calculation:

Average Monthly Network Availability =

(1 - [Total minutes of Network Non-Availability per "Impacted Service" (as hereinafter defined) per Calendar Month / {(number of days in the Calendar Month) x (24 hours) x (60 minutes)}]) x 100%

In the event that, for a particular Calendar Month, Average Monthly Network Availability will fall below 99.95% for a particular Impacted Service, Customer will receive a credit ("Performance Credit") for such month in accordance with the following schedule ("Performance Credit Schedule"), the amount of which Performance Credit will be equal to the designated percentage, (as set forth in the Performance Credit Schedule) multiplied by Customer's United States Mainland voice charges for usage of the Impacted Service for that Calendar Month, (after such usage has been reduced by both: (i) all applicable taxes and tax related surcharges; and (ii) all applicable discounts and credits) ("Eligible Voice Charges").

For purposes of this document, the Service will be considered available to Customer until the date/time of: (i) CenturyLink's receipt from Customer of notice of the unavailability of such Service and the prompt issuance of a CenturyLink trouble ticket; or (ii) CenturyLink's detection of an outage and prompt issuance of a trouble ticket ("Service Non-Availability Notice"). A period of Network Non-Availability will commence upon the Service Non-Availability Notice and conclude upon the date/time of "Service Restoration." "Service Restoration" is defined as the Service's capability to be working within applicable industry standards.

Performance Credit Schedule	
Average Monthly Network Availability	Amount of Performance Credit (as a percentage of Customer's Eligible Voice Charges of a particular Impacted Service)
100.00% to 99.95%	0%
99.949% to 99.800%	5%
99.799% to 99.600%	10%
99.599% to 99.500%	15%
99.499% to 98.00	20%
Below 98.00%	25%

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As used herein, "Impacted Service" will be defined as a particular trunk or unique working telephone number ("WTN") or Toll-Free number for which the Service is unavailable; provided, however, that a particular trunk, WTN or Toll-Free number will not be deemed an "Impacted Service" in the event that the Service is unavailable to such trunk, WTN or Toll-Free number due to any event deemed an "Exclusion" (as hereinafter defined) or due to a network busy condition. Only failures on the CenturyLink Circuit Switch Network will be eligible for credits set forth in this section. Failures outside the CenturyLink Circuit Switch Network will not be deemed a period of network Non-Availability.

3. Domestic U.S. Dedicated Access Facilities Availability Guarantee

In the event that the Domestic U.S. Dedicated access facilities, if any, provided by CenturyLink to Customer to connect the premises of Customer to the CenturyLink Circuit Switch Network are subject to an interruption (other than as noted herein) which prevents Customer from originating and terminating calls to such a location via the access facility ("Access Facility Non-Availability"), Customer will be compensated by receiving credits in accordance with the provisions set forth in this section. CenturyLink will ensure that, on average, such CenturyLink provided access facilities are available for Customer's use 99.50% of each Calendar Month ("Average Access Facility Availability"). For purposes of this document, Average Monthly Access Facility Availability will be determined in accordance with the following calculation:

Average Monthly Access Facility Availability =

(1 - [Total minutes of Access Facility Non-Availability per CenturyLink provided access facility per Calendar Month) / {(number of days in the Calendar Month) x (24 hours) x (60 minutes)}]) x 100%

Subject to the Exclusions set forth herein, in the event that, for a particular Calendar Month, Average Monthly Access Facility Availability will fall below the percentage shown in the credit schedule included in this section, Customer will receive a credit equal to the lesser of: (i) the designated percentage, (as set forth in the schedule included in this section,) multiplied by Customer's United States Mainland voice charges for usage on the affected access facility for that Calendar Month (after such usage has been reduced by both: (a) all applicable taxes and tax related surcharges; and (b) all applicable discounts and credits, ("Eligible Usage Charges"); or (ii) $1,000 for an access facility with a rate of DS-1 and $2,500 for an access facility with a rate of DS-3 or above.

For purposes of this document, an access facility will be considered available to Customer until the date/time of: (i) CenturyLink's receipt from Customer of notice of the unavailability of such access facility and the prompt issuance of a CenturyLink trouble ticket; or (ii) CenturyLink's detection of an outage and prompt issuance of a trouble ticket ("Access Facility Non-Availability Notice"). A period of Access Facility Non-Availability will commence upon the Access Facility Non-Availability Notice and conclude upon the date/time of "Access Facility Restoration." "Access Facility Restoration " is defined as the access facility's capability to be working within applicable industry standards.

Credit Schedule for DS-1 and DS-3 or greater Access Facility Availability		
Upper Level	Lower Level	Amount of Credit (as a % of the Eligible Usage Charges for the affected access facility)
100.00%	99.50%	0%
99.49%	99.01%	5%
99.00%	98.51%	5%
98.50%	98.01%	10%
98.00%	97.51%	10%
97.50%	97.01%	15%
97.00%	96.51%	15%
96.50%	96.01%	20%
96.00%	0.00%	20%

4. Re-route of Inbound Circuit Switch Voice Service

If a Toll-Free line provided by CenturyLink to Customer is subject to a "Service Disruption," CenturyLink will, within 15 minutes of the exact time of completion of the Confirmation Process, (as hereinafter defined), reroute traffic from the Affected Toll-Free Line, (as hereinafter defined) to any working number: (i) terminating in the United States Mainland; and (ii) which is provided by CenturyLink to Customer ("Alternate Termination Location"). If CenturyLink fails to reroute such traffic within 15 minutes after completion of the Confirmation Process ("Toll-Free Line Outage"), CenturyLink will credit to Customer's account an amount equivalent to the lesser of: (i) 100% of the usage for the Affected Toll-Free Line for the entire Calendar Month in which the Toll-Free Line Outage occurred; or (ii) 110% of the usage for the Affected Toll-Free Line in the Calendar Month prior to the Calendar Month in which the Toll-Free Line Outage occurs. Such credits will be calculated after application of discounts and credits.

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"Service Disruption" is defined as a degradation in the performance of a toll-free line provided by CenturyLink to Customer ("Affected Toll-Free Line") which completely disallows CenturyLink from terminating calls to such Affected Toll-Free Line.

The "Confirmation Process" is defined as: (i) Customer's telephonic notification to a CenturyLink Customer Service Representative of a Service Disruption and the furnishing by Customer of certain information (including Customer's name and address, Customer's CenturyLink account number and the Affected Toll-Free Line, the ANI and/or Dedicated Circuit Identification of the Alternate Termination Location subscribed to by Customer and the approximate time the Service Disruption began); and (ii) acknowledgment from such CenturyLink Customer Service Representative that traffic to the Affected Toll-Free Line will, in accordance with the terms of this guarantee in this section, be rerouted within 15 minutes of the conclusion of Customer's telephone call to CenturyLink.

The credit will be applied within 60 days of the Service Disruption. The credit will be calculated based on all calls to the Affected Toll-Free Line(s) and applied to Customer's interstate usage.

CenturyLink is guaranteeing only that calls will be rerouted within 15 minutes upon completion of the Confirmation Process, not that service will be restored to the main location in that timeframe. This guarantee does not apply and a Service Disruption will not be deemed to have occurred in the event calls are not originated or terminated due to network busy conditions.

A maximum of 5 affected toll free numbers per Customer, per occurrence will be covered under the guarantee in this section.

In order to be eligible for a credit or the re-route of such service, Customer is required to designate and provide to CenturyLink an Alternate Termination Location with enough capacity to adequately handle or terminate the rerouted traffic. Other than as set forth herein, CenturyLink will not be responsible or liable for uncompleted calls due to problems with the Alternate Termination Location or insufficient capacity or number of lines at the Alternate Termination Location designated by Customer. Customer understands that CenturyLink will bill for such redirected calls in accordance the terms set forth in the applicable tariff or agreement under which CenturyLink is providing the service to Customer and the service termination method of such re-routed calls.

This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts of omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonable required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

6. General Terms and Conditions

Service is regulated as explained in Customer's Agreement with CenturyLink.

Cumulative credits for all performance objectives included in this document for the Services for any Calendar Month must exceed $25.00 to be processed.

The objectives and related remedies set forth in this document will not apply to CenturyLink services other than the Services.

7. Exclusions and Restrictions

This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts of omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonable required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

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SLA ATTACHMENT TO EXHIBIT B, "SERVICE REQUIREMENTS"
CENTURYLINK DOMESTIC IP OUTBOUND LONG DISTANCE AND DOMESTIC IP INBOUND TOLL FREE SERVICES
RETAIL SERVICE LEVEL AGREEMENT
(not applicable to services offered under the CenturyLink Wholesale and Enhanced Services Agreements)

This SLA applies to Service ordered by CenturyLink's customer ("Customer") pursuant to a signed agreement ("Agreement") with Qwest Communications Company, LLC d/b/a CenturyLink QCC ("CenturyLink'). Capitalized terms not defined in this SLA are defined in the Agreement. This SLA does not provide performance objectives and related remedies for Internet access provided by CenturyLink or any other Internet service provider.

1. Definitions. The following definitions will control for purposes of this SLA:

(e) "Calendar Month" means the period beginning at 12:00 midnight on the first day of a month and ending at 11:59 PM on the last day of that month.
(f) "Impacted Service" means a particular IPLD trunk group, IPTF trunk group, or IPTF number for which the Service is unavailable; but a particular trunk group, or IPTF number will not be deemed an Impacted Service if the Service is unavailable to such trunk group or IPTF number due to any event deemed an "Exclusion" (as listed out in Section 6 of this SLA) or due to a network-busy condition.
(g) "Network Non-Availability"" means an interruption (other than as noted in the Exclusions section of this SLA or a network-busy condition) that completely disallows CenturyLink from originating or terminating calls to that location
(h) "CenturyLink On-Net Network" will refer to physical media, including switches, session border controllers, VoIP gateways, circuits, and/or ports that are owned and operated by: (i) CenturyLink; or (ii) a wholly or partially owned subsidiary of CenturyLink. CenturyLink On-Net Network will not include any access facilities, local access circuits, or tail circuits provided by any carrier or local access provider.
(i) "CenturyLink Voice Network" will refer to the Voice network located within those areas in the United States Mainland where CenturyLink is legally permitted to provide the Service to Customer and is comprised only of the CenturyLink On-Net Network. The CenturyLink Voice Network will not include any access facilities to that network, local access circuits, or tail circuits provided by any other carrier or local access provider or any Customer premises equipment.
(j) "Service" means Domestic IP Outbound Long Distance ("IPLD") and Domestic IP Inbound Toll Free ("IPTF") Services
(k) "Service Disruption" is defined as a degradation in the performance of an IPTF trunk group provided by CenturyLink to Customer ("Affected IPTF Trunk Group") which completely disallows CenturyLink from terminating calls to such Affected IPTF Trunk Group.
(l) "Service Restoration" means as the Service's capability to be working within applicable industry standards.
(m) "United States Mainland" will refer to the District of Columbia and the 48 contiguous United States of America.
(n) "SMS" means National Service Management System.
(o) "VoIP" means Voice over Internet Protocol.

2. IPTF and IPLD Network Availability SLA.

If the CenturyLink Voice Network supporting the Service to be provided to Customer by CenturyLink in accordance with the Agreement is subject to Network Non-Availability, CenturyLink will compensate Customer with in accordance with the network availability provisions set forth in this section. Only failures on the CenturyLink Voice Network will be eligible for credits set forth in this section. Failures outside of the CenturyLink Voice Network will not be deemed a period of network Non-Availability.

For Service provided to Customer, CenturyLink's objective is for Service, on average, to be available on the CenturyLink Voice Network for Customer's use 99.95% of each Calendar Month ("Average Monthly Network Availability"). For purposes of this SLA, Average Monthly Network Availability will be determined in accordance with the following calculation:

Average Monthly Network Availability =

(1 - [Total minutes of Network Non-Availability per "Impacted Service" (as later defined in this SLA) per Calendar Month / {(number of days in the Calendar Month) x (24 hours) x (60 minutes)}]) x 100%

If, for a particular Calendar Month, the Average Monthly Network Availability falls below 99.95% for a particular Impacted Service, Customer will receive a credit ("Performance Credit") for that month in accordance with the following schedule ("Performance Credit Schedule"). The amount of the Performance Credit will be equal to the designated percentage (as set forth in the Performance Credit Schedule) multiplied by Customer's United States Mainland voice charges for usage of the Impacted Service for that Calendar Month, (after such usage has been reduced by: (i) all applicable taxes and tax-related surcharges; and (ii) all applicable discounts and credits) ("Eligible Voice Charges").

For purposes of this SLA, the Service will be considered available to Customer until the time of: (i) CenturyLink's receipt from Customer of notice of the unavailability of the Service and the prompt issuance of a CenturyLink trouble ticket; or (ii) CenturyLink's detection of an outage and prompt issuance of a trouble ticket ("Service Non-Availability Notice"). A period of Network Non-Availability will commence upon the Service Non-Availability Notice and conclude upon the time of Service Restoration.

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Performance Credit Schedule	
Average Monthly Network Availability	Amount of Performance Credit (as a percentage of Customer's Eligible Voice Charges of a particular Impacted Service)
100.00% to 99.95%	0%
99.949% to 99.800%	5%
99.799% to 99.600%	10%
99.599% to 99.500%	15%
99.499% to 98.00	20%
Below 98.00%	25%

3. Re-route of IPTF.

"Confirmation Process" in this section means: (i) Customer's telephonic notification to a CenturyLink Customer Service representative of a Service Disruption and the furnishing by Customer of certain information (including Customer's name and address, Customer's CenturyLink account number and the affected IPTF number, IPTF trunk group name, VoIP circuit ID, the ANI, and/or dedicated circuit identification of the Alternate Termination Location subscribed to by Customer and the approximate time the Service Disruption began); and (ii) acknowledgment from that CenturyLink Customer Service representative that traffic to the Affected IPTF Trunk Group will, in accordance with the terms of the SLA in this section, be rerouted within 15 minutes of the conclusion of Customer's telephone call to CenturyLink.

If an IPTF number routing to an out of service IPTF trunk group provided by CenturyLink to Customer is subject to a Service Disruption, CenturyLink will, within 15 minutes of the exact time of completion of the Confirmation Process, reroute traffic from the Affected IPTF Trunk Group to: (a) a PSTN local number: (i) terminating in the United States Mainland; and (ii) which is provided by CenturyLink to Customer ("Alternate Termination Location"), (b) any working CenturyLink provided IP Trunk Group, or (c) a CenturyLink Dedicated trunk group. If CenturyLink fails to reroute that traffic within 15 minutes after completion of the Confirmation Process ("IPTF number Outage"), CenturyLink will credit to Customer's account an amount equivalent to the lesser of: (i) 100% of the usage for the affected IPTF number for the entire Calendar Month in which the IPTF number Outage occurred; or (ii) 110% of the usage for the affected IPTF number in the Calendar Month prior to the Calendar Month in which the IPTF trunk group Outage occurs. Such credits will be calculated after application of discounts and credits. A maximum of five affected IPTF numbers per Customer, per occurrence will be covered under the SLA in this section.

The credit will be applied within 60 days of the Service Disruption. The credit will be calculated based on all calls to the affected IPTF number and applied to Customer's interstate usage.

Calls will be rerouted within 15 minutes upon completion of the Confirmation Process. This does not mean that Service will be restored to the main location in that timeframe.

To be eligible for a credit or the re-route of Service, Customer must designate and provide to CenturyLink an Alternate Termination Location with enough capacity to adequately handle or terminate the rerouted traffic. Other than as set forth in this SLA, CenturyLink will not be responsible or liable for uncompleted calls due to problems with the Alternate Termination Location or insufficient capacity or number of lines at the Alternate Termination Location designated by Customer. Customer understands that CenturyLink will bill for the redirected calls in accordance with the terms set forth in the applicable tariff or Agreement and the service termination method of the re-routed calls.

4. General Terms and Conditions.

Service is regulated as explained in Customer's Agreement with CenturyLink.

Cumulative credits for all performance objectives included in this SLA for the Service for any Calendar Month must exceed $25.00 to be processed.

The objectives and related remedies set forth in this SLA will not apply to CenturyLink services other than the Service.

5. Exclusions and Restrictions.

This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts of omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonable required to restore the Service; (g)

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Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

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SLA ATTACHMENT TO EXHIBIT B, "SERVICE REQUIREMENTS"
CENTURYLINK ON-NET LOCAL ACCESS
SERVICE LEVEL AGREEMENT
(not applicable to services offered under the CenturyLink Wholesale and Enhanced Services Agreements)

This Service Level Agreement ("SLA") applies to the On-Net Local Access circuits provided solely on CenturyLink owned and operated facilities ("Service") ordered by CenturyLink's customer ("Customer") pursuant to a signed agreement ("Agreement") with CenturyLink Communications, LLC f/k/a Qwest Communications Company, LLC d/b/a CenturyLink QCC ("CenturyLink"). On April 1, 2014, Qwest Communications Company, LLC completed a name change to CenturyLink Communications, LLC. References in supporting agreements or other documents, to Qwest Communications Company, LLC or its predecessors are replaced with "CenturyLink Communications, LLC." Service is available in DS-1, DS-3, OC-3, OC-12 and OC-48 circuit types. Service terminates at the Service Address's common telecommunications facility or meet-me point. This SLA does not apply to local access circuits that are provided by another carrier.

1. Definitions

"Calendar Month" refers to the period beginning at 12:00 midnight on the first day of a month and ending at 11:59 PM on the last day of that month.

"Customer" is a customer that orders the Service from CenturyLink pursuant to an agreement.

"CenturyLink Domestic Network" is the network located within those areas in the 48 contiguous United States of America and District of Columbia where CenturyLink is legally permitted to provide the Service to Customer and is comprised only of CenturyLink Facilities.

"Service Address" is the building where Customer receives the On-Net Local Access Service. Only a building that is classified by CenturyLink as a business address can be a Service Address.

2. Availability Objective

Customer will, subject to the terms, exclusions, and restrictions described in this SLA, be entitled to receive from CenturyLink a credit if the availability ("Circuit Availability") of a particular Circuit for any Calendar Month falls below the percentage shown in the applicable credit schedule included in this section. CenturyLink guarantees the Circuit Availability only to the point to which CenturyLink can perform remote loop back testing, even if the demarcation point extends past such point. The Service will for purposes of this document be deemed to be unavailable to Customer only if the Circuit ("Affected Circuit") is subject to an interruption (other than as noted in this SLA) that results in the total disruption of the Service ("Outage").

The credit ("Outage Credit") to which Customer may be entitled under this section will be equal to the applicable credit percentage identified in the table below of Customer's monthly recurring charges ("MRCs") for the Affected Circuit after application of any credits or discounts ("Eligible Circuit Charges"). The Outage Credit will not include credits on any other MRCs charged to Customer for any other service.

Circuit Availability Percentage is calculated as follows:

$$\left[\frac{\text{(Applicable Days in Calendar Month x 24 x 60) - (Minutes of Outage on Affected Circuit in Calendar Month)}}{\text{(Applicable Days in Calendar Month x 24 x 60)}}\right] \text{x } 100$$

For purposes of measuring Customer's Circuit Availability, the CenturyLink Trouble Management System determines the number of minutes of an Outage. An Outage will be deemed to commence upon verifiable notification thereof by Customer to the CenturyLink Trouble Management System, and CenturyLink's issuance of a trouble ticket. An Outage will conclude upon the restoration of the Affected Circuit as evidenced by the appropriate network tests conducted by CenturyLink.

Credit Schedule for On-Net Local Access Service		
Circuit Availability		Amount of Credit (as a % of the Eligible Circuit Charges for the Affected Circuit)
Upper Level	Lower Level	
100%	99.999%	0%
< 99.999%	99.99%	5%
< 99.99%	99.9%	10%
< 99.9%	99.5%	25%
< 99.5%	0%	50%

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3. Terms and Conditions

CenturyLink is offering the Service in accordance with the applicable CenturyLink agreement. In the event of a conflict between the terms of this document and the Rate and Services Schedule or applicable CenturyLink agreement, the terms of the agreement will control.

CenturyLink will determine the Outage Credits provided to Customer by totaling the eligible Outage minutes throughout the Calendar Month on an Affected Circuit, subject to the restrictions and exclusions in this SLA. Outage Credits for any Calendar Month must exceed $25.00 to be processed. In no case will CenturyLink provide credit to Customer for an Affected Circuit that exceeds the monthly recurring charge or the stated applicable maximum credit percentage. Customer may receive Outage Credits for a particular Affected Circuit for a maximum of four months in any 12 month period.

CenturyLink will give notice to Customer of any scheduled maintenance as early as is practicable and a scheduled outage will under no circumstances be viewed as an Outage hereunder.

If Customer receives an Outage Credit, Customer is not entitled to receive any other credit that may be available under the local access service provided or ordered by CenturyLink on behalf of Customer for the Affected Circuit in that Calendar Month.

Except as provided in this SLA for certain local access service, the objectives and related remedies set forth in this document will not apply to CenturyLink services other than the On-Net Local Access Service.

4. Restrictions and Exclusions

This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts of omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonable required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

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SLA ATTACHMENT TO EXHIBIT B, "SERVICE REQUIREMENTS"
CENTURYLINK IQ® NETWORKING
RETAIL SERVICE LEVEL AGREEMENT
(not applicable to services offered under the CenturyLink Wholesale and Enhanced Services Agreements)

"Service" includes the applicable components of CenturyLink IQ Networking Service and Dedicated Hosting Collocation Service. This SLA applies to Service ordered by CenturyLink's customer pursuant to an agreement ("Agreement") with CenturyLink Communications, LLC f/k/a Qwest Communications Company, LLC d/b/a CenturyLink QCC ("CenturyLink"). On April 1, 2014, Qwest Communications Company, LLC completed a name change to CenturyLink Communications, LLC. References in supporting agreements or other documents, to Qwest Communications Company, LLC or its predecessors are replaced with "CenturyLink Communications, LLC."

1. Network and Port Components.

1.1 Components. The SLA Goal measurement includes: (a) all network components of the CenturyLink IP network; (b) all network components of the CenturyLink ATM and Frame Relay networks as incorporated into the Service; and (c) CenturyLink Provided Access for the domestic Network Availability and Installation goals only. The CenturyLink IP, ATM, and Frame Relay networks include routers, switches, fiber and any other facilities that are owned by CenturyLink or other providers specifically designated by CenturyLink for international IP service ("International Service Providers"). As defined in this SLA, a "POP" means a CenturyLink point of presence location, as determined by CenturyLink, that represents the provider edge of the CenturyLink IP, ATM or Frame Relay network or an International Service Provider POP. "CenturyLink Provided Access" means local backbone access circuits in the continental U.S. (a) ordered and leased by CenturyLink from another carrier on Customer's behalf; or (b) provided solely on CenturyLink owned and operated facilities. This includes Special Access, Ethernet Local Access, Frame Partner Access, and ATM Partner Access technologies, as defined in the Local Access Service Exhibit. "Affected Service" means the particular CenturyLink IQ Networking Port that fails to meet the applicable Goal.

1.2 Regions. A list of international regions (including Customer Service Center support information) and corresponding Tiers is appended to this SLA as Attachment 1, located at http://www.centurylink.com/legal.

Domestic Regions	**SLA Components:**
Intra U.S.	The CenturyLink IP network within the 48 contiguous U.S. states
Hawaii to U.S. West Coast ("Hawaii")	CenturyLink Trans-Hawaii IP network to the continental U.S. CenturyLink IP network in the Los Angeles Metro Area
Alaska to U.S. Pacific Northwest ("Alaska")	CenturyLink Trans-Alaska IP network to the continental U.S. CenturyLink IP network in the Seattle Metro Area

2. Goals.

2.1 Domestic Network and Port-Related Goals. The following domestic service level goals ("Goals") apply to Internet Ports, Private Ports, and Enhanced Ports (collectively, "CenturyLink IQ Networking Ports") purchased from CenturyLink pursuant to an agreement. If a Bandwidth Tier applies, Goals for CenturyLink IQ Networking Ports only apply to the portion of traffic that is within the contracted Bandwidth Tier and will not apply to the CenturyLink IQ Networking Port bandwidth usage that exceeds the Bandwidth Tier. The Goals associated with Latency, Packet Delivery, Jitter, and Black Hole Filtering are measured using monthly averages from the CenturyLink IP network and apply in the listed regions after the ports have been accepted for use. Individual circuit outages of MLPPP (NxDS1) bundles are not subject to the Network Availability or Reporting Goals. International Goals for Availability, Latency, Packet Delivery, and Jitter are appended to this SLA in Attachment 1.

(a) Network Availability. The availability of the Service ("Network Availability") is measured by "Network Downtime," which exists when a particular CenturyLink IQ Networking Port of Customer is unable to transmit and receive data. Network Downtime is measured from the time a trouble ticket is opened by CenturyLink in the CenturyLink trouble management system to the time the affected CenturyLink IQ Networking Port is again able to transmit and receive data. Network Availability for ports with Frame Partner Access or ATM Partner Access is only applicable if Customer provides ready access to associated routers for monitoring purposes.

Region	**Goal**	**Remedy (Credit is applied to MRC of the Affected Service)***
Intra U.S. Hawaii Alaska	100%	Each cumulative hour of Network Downtime qualifies Customer for a credit of one day's charges pro-rated from the MRC.

(b) Latency. The average network transit delay ("Latency") will be measured via roundtrip pings on an ongoing basis every five minutes to determine a consistent average monthly performance level for Latency at all the POPs within the region. Latency is calculated as follows:

$$\frac{\Sigma \text{ (Roundtrip Delay for POP-POP trunks)}}{\text{Total Number of POP-POP trunks}} = \text{Latency}$$

Region	**Goal**	**Remedy (Credit is applied as a % of the MRC for the Affected Service)***		
North America				
Intra U.S.	42 ms	43 – 60 ms = 10%	61 – 80 ms = 25%	Greater than 80 ms = 50%
Hawaii Alaska	75 ms	76 – 95 ms = 10%	96 - 120 ms = 25%	Greater than 120 ms = 50%

*subject to requirements and limitations in Section 4

(c) Packet Delivery. Packet Delivery will be measured on an ongoing basis every five minutes to determine a consistent average monthly performance level for packets actually delivered between the POPs.

Region	**Goal**	**Remedy (Credit is applied as a % of the MRC for the Affected Service)***		
Intra U.S. Hawaii	99.90%	99.01 % - 99.89% = 10%	90% - 99% = 25%	Less than 90% = 50%

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Alaska				

(d) Jitter. Jitter is a measurement of the interpacket delay variance and packet loss in the CenturyLink IP network, which is measured by generating synthetic user datagram protocol (UDP) traffic. This Goal does not apply if the Internet Port is used in conjunction with DDoS Mitigation Service.

Region	Goal	Remedy (Credit is applied as a % of the MRC for the Affected Service)*		
Intra U.S.	2 ms	2.1 – 3 ms = 10%	3.1 – 4 ms = 25%	Greater than 4 ms = 50%
Hawaii Alaska	4 ms	4.1 – 5 ms = 10%	5.1 – 6 ms = 25%	Greater than 6 ms = 50%

(e) Reporting. The Reporting Goal is measured from the time a Network Downtime trouble ticket is opened to the time CenturyLink reports the Network Downtime to Customer by the agreed upon notification method. This Goal does not apply to Ports that use Ethernet Local Access.

Region	Goal	Remedy (Credit is applied to MRC of the Affected Service)*
Intra U.S. Hawaii Alaska	10 minutes	Each failure to meet the Goal qualifies Customer for a credit of one day's charges pro-rated from the MRC, at a maximum of one such credit accrued per day.

(f) Installation. The Installation Goal measures the installation times for CenturyLink Provided Access ordered in conjunction with CenturyLink IQ Networking Ports only. The Installation Goal only applies if there are existing CenturyLink facilities in the location that supports the Affected Service. Installation is measured from the date CenturyLink Engineering accepts the CenturyLink Provided Access order. If Customer has a designated Key Port, the applicable Installation Goal shown below will apply to that Key Port, and the installation of related non-Key Ports will occur the later of: (i) within 10 business days after that Key Port's Start of Service Date; or (ii) within the normal Installation Goal for that Port, as measured from the date CenturyLink Engineering accepts the order. If no Key Port is designated, CenturyLink will follow normal installation intervals without special sequencing.

Region	Goal		Remedy (Credit is applied to MRC of the Affected Service)*
Intra U.S.	DS-1	22 business days	Each failure to meet the Goal qualifies Customer for a credit of one day's charges pro-rated from the MRC for each day beyond the applicable Goal until the CenturyLink Provided Access is installed, for a maximum of 15 days' charges.
	DS-3 OC-3 OC-12	33 business days	
	Ethernet 10 – 1000 Mbps	66 business days	
Hawaii Alaska	DS-1	22 business days	Each failure to meet the Goal qualifies Customer for a credit of one day's charges pro-rated from the MRC for each day beyond the applicable Goal until the CenturyLink Provided Access is installed, for a maximum of 15 days' charges.
	DS-3 OC-3 OC-12	43 business days	

(g) Black Hole Filtering. Once a suspected Distributed Denial of Service ("D/DoS") attack is determined to be valid, the Black Hole Filtering Goal is measured from the time CenturyLink receives permission and all necessary information from Customer to implement a null-route and the actual placement of a null-route on the affected destination IP address. The Black Hole Filtering Goal is only applicable to Internet Ports and the Internet Port portion of Enhanced Ports.

Region	Goal	Remedy (Credit is applied to MRC of the Affected Service)*
Intra U.S. Hawaii Alaska	15 minutes	Failure to implement a null routing within the Goal qualifies Customer for one day's charges pro-rated from the MRC of the Port of the Affected Service, up to a maximum of one such credit accrued per day.

3. Maintenance.

3.1 Network Normal Maintenance. "Normal Maintenance" means upgrades of hardware or software or upgrades to increase capacity. Normal Maintenance may temporarily degrade the quality of the Service, including possible outages. "Local Time" means the local time in the time zone in which an Affected Service is located. CenturyLink may change the maintenance window times upon posting to the website or other notice to Customer. CenturyLink will undertake Normal Maintenance during the hours and upon the prior notice time period stated below. International Maintenance hours are located in Attachment 1 to this SLA.

Region	Normal Maintenance Hours	Prior Notice
Intra U.S. Hawaii Alaska	Sunday, Tuesday, and Thursday mornings between the hours of 12:00 AM and 6:00 AM Local Time	10 business days

3.2 Network Urgent Maintenance. "Urgent Maintenance" means efforts to correct network conditions that are likely to cause a material Service outage and that require immediate action. Urgent Maintenance may degrade the quality of the Services, including possible outages. Such effects related to Urgent Maintenance will entitle Customer to service credits as set forth in this SLA. CenturyLink may undertake Urgent Maintenance at any time deemed necessary and will provide notice of Urgent Maintenance to Customer as soon as is commercially practicable under the circumstances.

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*subject to requirements and limitations in Section 4

4. General.

4.1 Remedies. CenturyLink will determine the credits provided to Customer by applying the applicable remedies set forth in this SLA. The credits will apply to the MRCs of the Affected Service after application of all discounts and do not apply to MRCs of other services, including but not limited to CenturyLink Provided Access. The maximum service credits for CenturyLink IQ Networking Service or Dedicated Hosting Collocation Service issued in any one calendar month will not exceed: (a) for Goals related to Network Availability, Reporting, Installation, and Black Hole Filtering, seven days' charges pro-rated from the MRC of the Affected Service; or (b) for Goals not listed in (a), 50% of the MRCs of the Affected Service less any credits calculated under (a). In no event will the total credit, in the aggregate for all credits issued in one month for CenturyLink IQ Networking Service or Dedicated Hosting Collocation Service exceed the equivalent of 50% of the relevant MRCs for the Affected Service. Cumulative credits in any one month must exceed $25.00 to be processed.

4.2 Limitations. This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts or omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonably required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

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SLA ATTACHMENT TO EXHIBIT B, "SERVICE REQUIREMENTS"
CENTURYLINK DOMESTIC PRIVATE LINE
SERVICE LEVEL AGREEMENT
(not applicable to services offered under the CenturyLink Wholesale and Enhanced Services Agreements)

The following Service Level Agreement ("SLA") applies to CenturyLink Domestic Private Line Service in accordance with the terms and conditions described in this SLA.

CENTURYLINK Domestic Private Line Service is a point-to-point, InterLata, dedicated non-switched electrical and/or optical data transmission, physical link between two CenturyLink Points of Presence located on the CenturyLink Domestic Network ("Service" or "Circuit"). The Service provides a fixed capacity of bandwidth for transport of Customer's digital communications traffic, utilizing and conforming to Synchronous Optical Network (SONET) standards that originate and terminate a physical connection at a specified CenturyLink demarcation point located in the CenturyLink POP. Service extends to and includes the network equipment maintained by CenturyLink at the CenturyLink network interface points located in the CenturyLink POP. Domestic Private Line Service is offered at DS-1, DS-3, OC-3, .OC-3c, OC-12, OC-12c, OC-48, and OC-48c transmission rates. For purposes of this SLA, Service: (a) does not include DS-0 or Fractional DS-1 service; but (b) includes On-Net local access service provided by CenturyLink that is attached to Domestic Private Line Service.

CenturyLink Private Line SONET Service is available to CenturyLink business customers in the domestic U.S. subject to facilities availability. SONET equipment or routers needed to terminate circuits. Installation, expedite, local access, and extended wiring charges may apply.

2. Definitions

"Calendar Month" refers to the period beginning at 12:00 midnight on the first day of a month and ending at 11:59PM on the last day of that month.

"Customer" is a customer that orders the Service from CenturyLink pursuant to an agreement.

"End to End" means Service between two Customer facilities in which the Circuit is on: (a) the CenturyLink Domestic Network; and (b) Leased Local Access. End to End Service extends to and includes network termination points at the applicable Customer premises but does not include premise equipment and inside wiring.

"Leased Local Access" means CenturyLink-provided local access circuits ordered and leased from another carrier (specific carrier chosen is at the discretion of CenturyLink), facilitated and managed by CenturyLink on behalf of Customer.

"On-Net Local Access" means local access circuits provided solely on CenturyLink Facilities.

"POP" means a CenturyLink designated point of presence at a location where direct interconnection between the CenturyLink Domestic Network and the network of another carrier is possible.

"POP to POP" means Service provided to Customer between two POPs on the CenturyLink Domestic Network and includes On-Net Local Access Service.

"CenturyLink Domestic Network" is the network located within those areas in the 48 contiguous United States of America and District of Columbia where CenturyLink is legally permitted to provide the Service to Customer and is comprised only of CenturyLink Facilities.

"CenturyLink Facilities" means: (a) physical media, including, circuits and/or ports that are owned and operated by: (a) CenturyLink; or (b) a wholly or partially owned subsidiary of CenturyLink; or (b) interexchange circuits that are owned and operated by an interexchange carrier other than CenturyLink, but secured by CenturyLink to provide the Service. CenturyLink Facilities do not include Leased Local Access or any Customer premise equipment or circuits provided by Customer.

2. Availability Objective

CenturyLink offers the following SLA for Domestic Private Line Service.

Customer will, subject to the terms, exclusions and restrictions described herein, be entitled to receive from CenturyLink a credit if the availability ("Circuit Availability") of a particular Circuit for any Calendar Month falls below the percentage shown in the applicable credit schedule included in this section. The Service will for purposes of this document be deemed to be unavailable to Customer only if the Circuit ("Affected Circuit") is subject to an interruption (other than as noted herein) that results in the total disruption of the Service ("Outage").

The credit ("Outage Credit") to which Customer may be entitled under this section will be equal to the applicable credit percentage identified in the table below of Customer's monthly recurring charges ("MRCs") for the Affected Circuit after application of any credits or discounts ("Eligible Circuit Charges"). The Outage Credit will not include credits on any other MRCs charged to Customer for any other service, with the exception of On-Net or Leased Local Access Service associated with the Affected Circuit.

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Circuit Availability Percentage is calculated as follows:

$$\left[\frac{(\text{Applicable Days in Calendar Month} \times 24 \times 60) - (\text{Minutes of Outage on Affected Circuit in Calendar Month})}{(\text{Applicable Days in Calendar Month} \times 24 \times 60)} \times 100\right]$$

For purposes of measuring Customer's Circuit Availability, the CenturyLink Trouble Management System determines the number of minutes of an Outage. An Outage will be deemed to commence upon verifiable notification thereof by Customer to the CenturyLink Trouble Management System, and CenturyLink's issuance of a trouble ticket. An Outage will conclude upon the restoration of the Affected Circuit as evidenced by the appropriate network tests conducted by CenturyLink.

Credit Schedule for POP-to-POP Service		
Circuit Availability		Amount of Credit (as a % of the Eligible Circuit Charges for the Affected Circuit)
Upper Level	Lower Level	
100%	99.999%	0%
< 99.999%	99.99%	5%
< 99.99%	99.9%	10%
< 99.9%	99.5%	25%
< 99.5%	0%	50%

Credit Schedule for End to End Service		
Circuit Availability		Amount of Credit (as a % of the Eligible Circuit Charges for the Affected Circuit)
Upper Level	Lower Level	
100%	99.999%	0%
< 99.999%	99.99%	5%
< 99.99%	99.9%	10%
< 99.9%	99.5%	25%
< 99.5%	0%	50%

3. Terms and Conditions

CenturyLink will determine the Outage Credits provided to Customer by totaling the eligible Outage minutes throughout the Calendar Month on an Affected Circuit, subject to the restrictions and exclusions herein. Outage Credits for any Calendar Month must exceed $25.00 to be processed. In no case will CenturyLink provide credit to Customer for an Affected Circuit that exceeds the monthly recurring charge or the stated applicable maximum credit percentage. Customer may receive Outage Credits for a particular Affected Circuit for a maximum of four months in any 12 month period.

CenturyLink will give notice to Customer of any scheduled maintenance as early as is practicable and a scheduled outage will under no circumstances be viewed as an Outage hereunder.

If Customer receives an Outage Credit under this SLA that covers the On-Net Local Access associated with the Affected Service, Customer is not entitled to receive a credit that may be available under the On-Net Local Access SLA.

Except as provided herein for certain local access service, the objectives and related remedies set forth in this document will not apply to CenturyLink services other than the Domestic Private Line Service.

4. Restrictions and Exclusions

This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts of omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its

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International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonable required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

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SLA ATTACHMENT TO EXHIBIT B, "SERVICE REQUIREMENTS"
NETWORK MANAGEMENT SERVICE ("NMS" or "Service")
SERVICE LEVEL AGREEMENT ("SLA")
(not applicable to services offered under the CenturyLink Wholesale and Enhanced Services Agreements)

This SLA applies to NMS ordered by customers pursuant to an agreement between a specific customer ("Customer") and Qwest Communications Company, LLC d/b/a CenturyLink QCC ("CenturyLink") ("Agreement"). Capitalized terms not defined in this SLA are defined in the Agreement.

1. Definitions.

"ICMP" means Internet Control Message Protocol and is the protocol used to "ping" a monitored device to verify if it is alive.

"Network Incident" means device and network performance issues that are recognized by the NMS NOC as being potentially harmful to Customer's network.

"SLO" means service level objective. An SLO differs from an SLA in that it does not provide for remedies.

"SNMP" means Simple Network Management Protocol and is the primary protocol used for monitoring and extracting device health information for use of management and reporting.

"UDP" means User Datagram Protocol and is the underlying protocol used by SNMP to monitor device health.

2. SLA Effective Date. This SLA becomes effective when the deployment process has been completed, the device has been set to "live," and support and management of the device has been successfully transitioned to the NOC. The SLA remedies are available provided Customer meets its obligations as defined in this SLA.

2.1 SLA. The SLA described below comprises the measured metrics for delivery of the Service. Unless explicitly stated below, no additional SLAs of any kind will apply to Services delivered under this SLA. This SLA only applies in cases where the incident is not the result of circuit or CPE failures, as those incidents will be covered by their respective SLAs.

a. NOC Availability Commitments. The NOC is staffed 24x7x365 days a year, subject to the Scheduled Emergency and Portal Maintenance and SLA Exclusions and Stipulations section that prevent staffing or uptime of the NOC.

b. Incident Identification SLA. CenturyLink will classify all incidents by severity based on event data received by the NOC. The following definitions apply to all incidents:

High –An incident in which a device or devices is unreachable. The impact of this incident is widespread and may affect the functioning of many locations also.

Medium –An incident in which customer devices report degraded performance. The impact of this incident is limited to a group of users, limited to a location. An example of this type is intermittent circuit errors or packet loss.

Low –An incident affecting an individual device in the Customer's network will be classified as Low. Incidents and errors which are not immediately service affecting.

MACD – A scheduled change/project or a ticket that is informational in nature.

Table – Incident Response and Resolution Times

Severity	Notification Time	Resolution Time
High	10 minutes	3 hours
Medium	15 minutes	6 hours
Low	30 minutes	24 hours
MACD	30 minutes	48 hours

c. Incident Response SLA (applies to all service levels).
(1) Network Monitoring and Reporting Services. CenturyLink will respond to all identified incidents according to the table above, after ticket generation. Customer's designated incident contact will be notified via e-mail for all incidents. Incidents will be posted to the Service portal near real time upon identification.
(2) NMS. CenturyLink will respond to all identified incidents according to the table above, after ticket generation. Customer's designated incident contact will be notified by telephone and email for High severity incidents and via e-mail for Severity Medium, Low and MACD incidents. During a High severity incident escalation, CenturyLink will contact the designated Customer contact until all escalation contacts have been exhausted. Incidents will be posted to the Service portal near real time upon identification. Operational activities related to incidents and responses are documented and time-stamped within the CenturyLink trouble ticketing system, which will be used as the sole authoritative information source for purposes of this SLA.
d. Policy change request acknowledgement SLA. CenturyLink will acknowledge receipt of Customer's policy change request within two hours of receipt by CenturyLink. This SLA is only available for policy change requests submitted by one designated contact in accordance with the provided procedures.

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e. Customer service request implementation SLA.
(1) CenturyLink will provide the Move, Add, Change, Delete ("MACD") service events to Customer based on the following material baselines. The baselines will be measured on a weighted average across the install base of the in scope devices of the Statement Of Work.

(2) The following table lists the maximum number of MACD events per device and target execution time. Note that target criteria for execution time is a target that 95% of all monthly MACD requests will be satisfied in the stated execution time.

Table: MACD for Network devices

Standard MACD	Execution Time
Major	2 Business Days
Medium	1 Business Day
Minor	1 Business Day

f. Emergency Change Request Implementation SLA. CenturyLink will implement Customer emergency policy change requests after the issue is categorized by the NMS NOC, complexity is assessed and resolution time is mutually agreed to by Customer and CenturyLink's NMS NOC engineer. All emergency policy requests will be documented via a change submission through the service portal following notification by telephone.
(1) This SLA is only available for policy change requests submitted by a valid customer contact in accordance with established procedures.
(2) CenturyLink will promptly notify Customer upon implementation of a change request by telephone, e-mail, pager, or electronic response via the Service portal
(3) A ticket will be generated per request and made visible via the service portal. The ticket will contain detail on the request.

Table – SLA Summary

Service Level Agreements	Remedies for NMS Customer (all service levels)
NOC Availability	NMS Customer may obtain no more than one credit for each SLA per incident per device managed by CenturyLink, not to exceed a total of 100% of the equivalent MRC in local currency for a given device, in a given calendar month.
Incident identification SLA	
Incident response SLA	
Policy change request acknowledgement SLA	
Policy change request implementation SLA	
Emergency change request implementation SLA (Premium level only)	
Proactive system monitoring SLA	

2.2 SLA Remedies.
a. A credit is calculated as: credit = 2 x daily prorated MRC
b. A credit will be issued to customer for failure to meet any of the SLAs described in the section entitled "SLA," during any given calendar month. Customer may obtain no more than one credit for each SLA per incident per device managed by CenturyLink, not to exceed a total of 100% of the equivalent MRC in local currency for a given device, in a given calendar month.
(1) NOC availability, incident identification, incident response, policy change request acknowledgement, policy change request implementation, emergency change request implementation, proactive system monitoring and remedies – If CenturyLink fails to meet any of these SLAs, a credit will be issued for the applicable charges for two days of the monthly monitoring fee for the affected device.

Table - SLAs and Remedies Summary

Service Level Agreements	Remedies for NMS Customer (all service levels)
NOC Availability	NMS Customer may obtain no more than one credit for each SLA per day per device managed by CenturyLink, not to exceed a total of 100% of the equivalent MRC in local currency for a given device, in a given calendar month.
Incident identification SLA	
Incident response SLA	
Policy change request acknowledgement SLA	
Policy change request implementation SLA	
Emergency change request implementation SLA (Premium level only)	
Proactive system monitoring SLA	

2.3 Scheduled and Emergency Portal Maintenance. Scheduled maintenance will mean any maintenance:
a. of which Customer is notified at least five days in advance; or
b. that is performed during the standard monthly maintenance window on the second Tuesday of every month from 11 pm to 6 am. Central Time. Notice of scheduled maintenance will be provided to the designated Customer contact. No statement in the section entitled "SLA" will prevent CenturyLink from conducting emergency maintenance on an "as needed" basis. During such emergency

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maintenance, the affected Customer's primary point of contact will receive notification within 30 minutes of initialization of the emergency maintenance and within 30 minutes of the completion of any emergency maintenance.

2.4 SLA Stipulations.

a. Customer Contact Information. Multiple SLAs require CenturyLink to provide notification to the designated Customer contact after certain events occur. In the case of such an event, Customer is solely responsible for providing CenturyLink with accurate and current contact information for the designated contact(s). The current contact information on record is available to authorized contacts through the Service portal.

b. Customer Network/Server Change Notifications. Customer is responsible for providing CenturyLink advance notice regarding any network or server changes to the firewall environment. If the event advance notice cannot be provided, Customer is required to provide CenturyLink with notification of changes within seven business days of said network or server changes. Notification is completed by the submission or update of a critical server ticket through the Service portal.

c.

Network Traffic Applicable to SLAs. Certain SLAs focus on the prevention, identification, and escalation of security incidents. These SLAs assume that traffic has successfully reached the firewall and therefore the firewall has the ability to process the traffic against the installed policy and generate a logged event. Traffic that does not pass through a firewall, or that does not generate a logged event, is not covered under these SLAs.

d. SLA Compliance and Reporting. SLA compliance and the associated remedies are based on fully functional network environments, Internet, and circuit connectivity, firewalls, and properly configured servers. CenturyLink will provide SLA compliance reporting through the Service portal.

e. Testing of Monitoring and Response Capabilities. Customer may test CenturyLink monitoring and response capabilities by staging simulated or actual reconnaissance activity, system or network attacks, and/or system compromises. These activities may be initiated directly by Customer or by a contracted third party with no advance notice to CenturyLink.

2.5 SLA Exclusions. This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts of omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonable required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

3. SLOs. The following establish nonbinding objectives for the provision of certain features of the Service. The SLOs become effective when the deployment process has been completed, the device has been set to "live," and support and management of the device have been successfully transitioned to the NOC.

a. Service Portal. CenturyLink will provide a 99.9% accessibility objective for the Service portal outside of the times detailed in the section entitled "Scheduled and Emergency Portal Maintenance".

b. Internet Emergency. In the event CenturyLink declares an Internet emergency, it is CenturyLink's objective to notify Customer's specified points of contact via e-mail within 15 minutes of emergency declaration. This notification will include an incident tracking number. During declared Internet emergencies, CenturyLink will provide a summarized e-mail designed to Customer. Situation briefings following the onset of an Internet emergency will supersede any requirement for CenturyLink to provide Customer-specific escalations for events directly related to the declared Internet emergency. Standard escalation practices will resume upon conclusion of the stated Internet emergency.

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SLA ATTACHMENT TO EXHIBIT B, "SERVICE REQUIREMENTS"
SIP TRUNK RETAIL SERVICE LEVEL AGREEMENT
(not applicable to services offered under CenturyLink Wholesale and Enhanced Services Agreements)

This SLA applies to SIP Trunk Service ordered by CenturyLink's customer ("Customer") pursuant to a signed agreement ("Agreement") with Qwest Communications Company, LLC, d/b/a CenturyLink QCC ("CenturyLink"). Capitalized terms not defined n this SLA are defined n the Agreement. This SLA will not apply to Approved Connectivity.

VOICE AVAILABILITY:

Voice Availability is based on "Voice Platform Downtime," which exists when a particular SIP Trunk Session is unable to transmit inbound and/or outbound voice calls. Such failure is recorded in the CenturyLink IP Network trouble ticket system. Voice Platform Downtime is measured from the time a master trouble ticket is opened in the CenturyLink trouble management system to the time the Affected Service is able to transmit inbound and outbound voice calls. In order to qualify for credits, the outage must be deemed a "Major Service Outage," which is defined as a service outage network condition causing major service disruption to the customer base relative to a network segment for which a master trouble ticket is opened, and which impacts more than one customer or Authorized User. This Voice Availability SLA does not apply to call quality. Subject to the foregoing limitations, each time Voice Availability is less than CenturyLink's 100% availability goal, Customer qualifies for a percentage credit as shown in the table below, prorated from the Session and TN MRC of the Affected Service, up to the maximums indicated in the Remedies section

Goal	Voice Platform Downtime	Amount of Monthly Bill Credit
100%	10 to 30 minutes	1 day's credit
	31 to 60 minutes	2 days' credit
	61 to 120 minutes	4 days' credit
	121 to 240 minutes	6 days' credit
	Over 241 minutes	10 days' credit

NETWORK AVAILABILITY

Network Availability is based on "Network Downtime," which exists when an individual customer's SIP Trunk Sessions are unable to transmit inbound and/or outbound voice calls as a result of a CenturyLink network event. Such failure is recorded in the CenturyLink VoIP Network trouble ticket system. Network Downtime is measured from the time the trouble ticket is opened in the CenturyLink trouble management system to the time the affected SIP Trunk Sessions service is again able to transmit inbound and/or outbound calls. This SLA does not cover anything on the Customer's side of the external demarcation point (e.g. Customer's data network, CPE (including CPE purchased, leased or rented from CenturyLink), extended wiring, and inside wiring).

Goal	Remedy
100%	Each cumulative hour of Network Availability less than 100% qualifies Customer for one day's charges pro-rated from the Session and TN MRCs of the Affected Service.

Remedies. "Affected Service" refers to the particular SIP Trunk Session that fails to meet the Voice Availability or Network Availability goal. The total in the aggregate of all credits issued in one month will not exceed the equivalent of 100% of the relevant MRCs for the Affected Service. The maximum credits given for a specific outage will not exceed ten (10) days' credit.

Service Credit Exceptions. This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts of omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonable required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

Maintenance Window Definition. Maintenance will be classified as one of the following two types:

Normal Maintenance. "Normal Maintenance" refers to upgrades of hardware or software or upgrades to increase capacity. Normal Maintenance may temporarily degrade the quality of the Service, including possible outages. Such effects related to Normal Maintenance will not give rise to service credits under this SLA. Normal Maintenance will be undertaken between the hours of 11:00 PM and 6:00 AM Local Time. For purposes of this SLA, "Local Time" means the local time in the time zone in which an Affected Service is located.

Urgent Maintenance. "Urgent Maintenance" refers to efforts to correct network conditions that are likely to cause a material Service outage and that require immediate action. Urgent Maintenance may degrade the quality of the Service, including possible outages. Such effects related to Urgent Maintenance will entitle Customer to service credits as set forth in this SLA. CenturyLink may undertake Urgent Maintenance at any time deemed necessary and will provide notice of Urgent Maintenance to Customer as soon as is commercially practicable under the circumstances.

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SLA ATTACHMENT TO EXHIBIT B, "SERVICE REQUIREMENTS"
CENTURYLINK® HOSTED VOIP SERVICE LEVEL AGREEMENT
(not applicable to services offered under CenturyLink Wholesale and Enhanced Services Agreements)

This Service Level Agreement ("SLA") applies to CenturyLink Hosted VoIP Service ordered by CenturyLink's customer ("Customer") pursuant to a signed agreement with CenturyLink. This SLA does not provide remedies for Voice Platform Downtime due to failure of Approved Connectivity and associated CPE.

VOICE AVAILABILITY:

Voice Availability is based on "Voice Platform Downtime," which exists when one or more Hosted VoIP seats are unable to transmit inbound and/or outbound voice calls. Such failure is recorded in the CenturyLink trouble ticket system. Voice Platform Downtime is measured from the time the customer opens a trouble ticket with CenturyLink to the time the Affected Service is able to transmit inbound and outbound voice calls. Voice platform does not include technology that is outside of CenturyLink's voice network (e.g., a Wi-Fi or wireless network or device connectivity issue). In order to qualify for credits, the outage must be deemed a "Critical Impact" or "Major Impact".

Critical Impact is defined as when a Customer is unable to make calls **and** receive voice calls by multiple users at one or more service locations.

Major Impact is defined as when a Customer is unable to make calls **or** receive voice calls by multiple users at one or more service locations.

This Voice Availability SLA does not apply to call quality or the behavior of Service features. Subject to the foregoing limitations, each time Voice Availability is less than CenturyLink's 100% availability goal, Customer qualifies for a percentage credit as shown on the table below, prorated from the seat MRC of the Affected Service, up to the maximums indicated in the Remedies section.

Voice Platform Downtime	Amount of Monthly Bill Credit
10-30 minutes	1 day's credit
31 to 60 minutes	2 days' credit
61 to 120 minutes	4 days' credit
121 to 240 minutes	6 days' credit
Over 241 minutes	10 days' credit

Remedies. "Affected Service" refers to the particular Hosted VoIP seat that fails to meet the Voice Availability goal. The maximum credits for a specific outage will not exceed ten (10) days' credit. In no event will the total credit, in the aggregate for all credits issued in one month exceed the equivalent of 100% of the relevant MRCs for the Hosted VoIP seats.

Service Credit Exceptions. Service credits will not be issued where the SLA is not met as a result of: (a) the acts or omissions of Customer, its employees, contractors or agents or its End Users; (b) the failure or malfunction of equipment, applications, or systems not owned by CenturyLink; (c) Force Majeure Events, (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) Customer's failure to use Approved Connectivity or Approved CPE, and Customer's failure to provide CenturyLink with remote and/or on-site access to approved CPE upon request, including CPE logon IDs and passwords.

Maintenance Window Definition. Maintenance will be classified as one of the following two types:

Normal Maintenance. "Normal Maintenance" refers to upgrades of hardware or software or upgrades to increase capacity. Normal Maintenance may temporarily degrade the quality of the Service, including possible outages. Such effects related to Normal Maintenance will not give rise to service credits under this SLA. Normal Maintenance will be undertaken between the hours of 11 PM to 6:00 AM Local Time. For purpose of this SLA, "Local Time" means the local time in the time zone in which an Affected Service is located.

Urgent Maintenance. "Urgent Maintenance" refers to efforts to correct network conditions that are likely to cause a material Service outage and that require immediate action. Urgent Maintenance may degrade the quality of the Service, including possible outages. Such effects related to Urgent Maintenance will entitle Customer to service credits as set forth in this SLA. CenturyLink may undertake Urgent Maintenance at any time deemed necessary and will provide notice of Urgent Maintenance to Customer as soon as is commercially practicable under the circumstances.

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EXHIBIT C – TELECOMMUNICATIONS SERVICE ORDER (TSO) TEMPLATE

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PRINTED FROM VTA-SOS ON 20070423 AT 15:34:43.6 BY MISMAM 704805-999-VTA

                    VIRGINIA INFORMATION TECHNOLOGIES AGENCY
                 110 SOUTH 7TH STREET, RICHMOND,  VA  23219

                    TELECOMMUNICATIONS SERVICE ORDER
          *** OC&C SERVICE ONLY - NO FACILITY DETAIL SHEETS ATTACHED ***

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
* VTA ORDER NO : 704805-999-VTA                    PROJECT: MAM-0423        *
* ACCOUNT NO.  : VTA999                   REQUESTED DUE DATE: 20070502       *
* VTA CONTACT  : MARGARET A. MORAN                                           *
* TELEPHONE    : 804/371-8534                                                *
* COPY TO      :                                                             *
*                                                                            *
* VTA APPROVAL : ____________________________________  DATE: ____________   *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
  ACTIVITY CODE: 0136000                AGENCY LOG NO:
  AGENCY       : VA INFORMATION TECHNOLOGIES AGY
  COORDINATOR  : PAUL HOPPES, ALVIN SEAY
  ADDRESS      : 110 SOUTH 7TH ST.
  CITY         : RICHMOND
  STATE:       : VA                                ZIP: 23219
  TELEPHONE    : 804/371-5580
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
* VENDOR       : VIRGINIA INFORMATION TECHNOLOGIES AGENCY                    *
* ADDRESS      : 110 SOUTH 7TH STREET                                        *
* CITY         : RICHMOND                                                    *
* STATE        : VA                                ZIP: 23219                *
* REMARKS TO VENDOR:                                                         *
*                                                                            *
*                                                                            *
*                                                                            *
*                                                                            *
*                                                                            *
* SERVICE REP: ____________________________________________________          *
*                                                                            *
* TELEPHONE  : ____________ DUE DATE: ________                               *
*                                                                            *
* S.O. NOS   : ____________ ____________ ____________ ____________           *
*                                                                            *
* REMARKS FROM VENDOR:                                                       *
*                                                                            *
*    ____________________________________________________________________    *
*                                                                            *
*    ____________________________________________________________________    *
*                                                                            *
*    ____________________________________________________________________    *
*                                                                            *
*    ____________________________________________________________________    *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
  SERVICE ORDER GENERAL DESCRIPTION:          DESCRIPTION PAGE  1 OF   2

                          XYZ COMPANY

  CONTACT:          JANE DOE
  SERVICE ADDRESS:  110 S. 7TH ST.
                    RICHMOND, VA  23219
```

EXHIBIT D – CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

i). No Federal appropriated funds have been paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee or an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

ii). If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

iii). The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and Contracts under grants, loans and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature: _____

Printed Name: Constantine N Gartelos

Organization: Manager Offer Management

Date: 10/16/2015

N53072

EXHIBIT E – INDIVIDUALS AUTHORIZED TO ORDER SERVICES

VITA's authorized Ordering Officers for this Contract are as follows:

Linda Brown

Margaret A. Moran

Pamela Wood-Henry

INFORMATION TECHNOLOGY TELECOMMUNICATIONS NETWORK SERVICES CONTRACT
EXHIBIT F, "SERVICE EXHIBITS"
DOMESTIC VOICE SERVICE EXHIBIT

1. Service.

1.1 Description. The service description in this Service Exhibit for domestic Voice Service supplements the information for the Service in the Contract document and Exhibit B, "Service Requirements" for Supplier's domestic Voice Service. In the event of any conflict between this Service Exhibit and the information for the Service in the Contract document and Exhibit B, "Service Requirements," the order of precedence in Section 21.U of the Contract applies. Supplier will provide the following voice services: domestic Long Distance, domestic Toll Free (including features), domestic Virtual Network Service ("VNS"), and domestic Directory Assistance (each, a Service). Supplier is required by the FCC to state in this Service Exhibit that Authorized User is prohibited from using any Toll Free telephone number, or other telephone number advertised or widely understood to be Toll Free, in a manner that would violate FCC rule 47 CFR 64.1504. Directory Assistance offers one rate to Voice Service customers domestically.

1.2 Domestic IP Voice. Domestic IP Voice Service consists of IP intrastate and interstate dedicated Long Distance and IP dedicated Toll Free. Domestic IP Voice accepts intrastate and interstate dedicated Long Distance traffic in IP format and converts such traffic for transmission across the telecommunications network. Domestic IP Voice also accepts domestic Toll Free traffic and converts it into VoIP format for transmission to Authorized User. The pricing for Domestic IP Voice services is the same as for non-IP intrastate and interstate dedicated Long Distance and non-IP dedicated Toll Free. Domestic IP Voice does not support local services, 911, E911, V911, operator services, local number portability, or directory listings.

1.3 Non-Completed Calls. "Non-completed Call Percentage Threshold" means 30% of all attempted calls, both completed and non-completed. If the percentage of Authorized User's calls that do not complete (out of all attempted calls) meets or exceeds the Non-completed Call Percentage Threshold for any given monthly billing cycle, Supplier may, upon 30 calendar days notice to Authorized User, disconnect any and all circuit(s) providing Service on which the Non-completed Call Percentage Threshold was exceeded. Supplier may assess a Non-Completed Call Surcharge for Service if the percentage of Authorized User's calls that do not complete (out of attempted calls) meets or exceeds the Non-completed Call Percentage Threshold for any given monthly billing cycle. "Toll Free Non-completed Call Surcharge" is $0.01 per non-completed call. Supplier may assess the Non-completed Call Surcharge associated for all circuit(s) providing Service on which the Non-completed Call Percentage Threshold was exceeded. The Non-completed Call Surcharge will be assessed per call for all non-completed calls in excess of the Non-completed Call Percentage Threshold in Authorized User's monthly billing cycle for all Services on account. "Long Distance (1+) Non-completed Call Surcharge" is $0.005 per non-completed call.

1.4 Toll Free Number Utilization. Using Toll Free numbers in a manner that violates applicable pay-per-call, anti hoarding, brokering, or industry number administration laws or regulations, or acquiring or seeking to acquire any Toll Free number for the primary purpose of selling, or releasing for consideration, the Toll Free number to another party is prohibited. Upon notice to the Authorized User, Supplier may recover any Toll Free number that is not placed in actual and substantial use.

2. Charges. Authorized User is responsible for all metered usage charges and per call charges that occur from the point Service is available for Authorized User use. Domestic Long Distance calls crossing state boundaries, within the same LATA, will be billed at the interstate rate. The rates do not include costs associated with local access or CPE.

3. SLA. The domestic outbound Long Distance and domestic Toll Free service are subject to the Domestic Outbound Long Distance and Domestic Toll Free Services Service Level Agreement attached to Exhibit B, "Service Requirements". The domestic IP outbound Long Distance and domestic IP inbound Toll Free services are subject to the Domestic IP Outbound Long Distance and Domestic IP Inbound Toll Free Services Service Level Agreement attached to Exhibit B, "Service Requirements".

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1. Service.

1.1 Description. The service description in this Service Exhibit for international Voice Service supplements the information for the Service in the Contract document and Exhibit B, "Service Requirements" for Supplier's international Voice Service. In the event of any conflict between this Service Exhibit and the information for the Service in the Contract document and Exhibit B, "Service Requirements," the order of precedence in Section 21.U of the Contract applies. Supplier will provide the following voice services: International Outbound Long Distance and International Toll Free. Except where specified otherwise, for international outbound voice service, the rates specified in Exhibit A, "Service Fees" (or in the ISS or RSS if not in Exhibit A, "Service Fees") will only apply to international outbound voice service originating in the U.S. (subject to availability) and terminating internationally using land-line facilities and will not apply to international outbound voice service terminating internationally using cellular facilities or, for international inbound voice service, the rates will only apply to international inbound voice service originating internationally using land-line and cellular facilities. However, airtime is charged for mobile calls. The rates in CenturyLink's Information Services Schedule ("ISS") at http://www.centurylink.com/tariffs/qcc_info_services.pdf and CenturyLink's Rates and Services Schedules ("RSS") at http://www.centurylink.com/tariffs/fcc_qcc_ixc_rss_no_2.pdf apply only if a rate does not appear in Exhibit A, "Service Fees". No other portion of the ISS or RSS applies to Authorized User's use of Service. The rates do not include costs associated with local access or CPE.

1.2 International IP Voice. International IP Voice Service consists of IP international Long Distance and IP dedicated international Toll Free. International IP Voice accepts international dedicated Long Distance traffic in IP format and converts such traffic for transmission across the telecommunications network. International IP Voice also accepts dedicated international Toll Free traffic and converts it into VoIP format for transmission to Authorized User. The pricing for International IP Voice services is the same as for non-IP dedicated international Long Distance and Toll Free. International IP Voice does not support local services, 911, E911, V911, operator services, local number portability, or directory listings.

1.3 Non-Completed Calls. "Non-completed Call Percentage Threshold" means 30% of all attempted calls, both completed and non-completed. If the percentage of Authorized User's calls that do not complete (out of all attempted calls) meets or exceeds the Non-completed Call Percentage Threshold for any given monthly billing cycle, Supplier may, upon 30 calendar days notice to Authorized User, disconnect any and all circuit(s) providing Service on which the Non-completed Call Percentage Threshold was exceeded.

1.4 Toll Free Number Utilization. Using Toll Free numbers in a manner that violates applicable pay-per-call, anti hoarding, brokering, or industry number administration laws or regulations, or acquiring or seeking to acquire any Toll Free number for the primary purpose of selling, or releasing for consideration, the Toll Free number to another party is prohibited. Upon notice to the Authorized User, Supplier may recover any Toll Free number that is not placed in actual and substantial use.

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1. Service Description and Availability.

1.1 Description. The service description in this Service Exhibit for Local Access supplements the information for the Service in the Contract document and Exhibit B, "Service Requirements" for Supplier's Access Circuits. In the event of any conflict between this Service Exhibit and the information for the Service in the Contract document and Exhibit B, "Service Requirements," the order of precedence in Section 21.U of the Contract applies. Service provides the physical connection between the Service Address and the Supplier Domestic Network. Service includes any entrance cable or drop wire to, and equipment maintained by Supplier at the Demarcation Point, but does not include CPE, Extended Wiring, inside wiring, or other equipment not maintained by Supplier. Authorized User is responsible for any additional terminations beyond the Demarcation Point. All equipment owned by Supplier remains property of Supplier. Authorized User disclaims any interest in any equipment, property or licenses used by Supplier to provide Service. Unless otherwise agreed upon by the parties in writing on an individual case basis, Supplier will not provide Service to a residential location even if business is conducted at that location. Service is not a standalone service and Authorized User must purchase the Service in connection with another Supplier service for which a local loop is required.

1.2 Types of Service Technologies. Supplier uses the following different technologies to provide Service. Some technologies or speeds may not be available in all areas or with certain types of Service.

(a) Special Access. "Special Access" means Service using digital signal bandwidths DS0, DS1 and DS3 or Optical Carrier signal bandwidths OC3, OC12, OC48 and OC192.

(b) Ethernet Local Access ("ELA"). ELA is available as described in Exhibit B, "Service Requirements". Authorized User may experience delayed installation intervals due to construction requirements and available bandwidths may be limited due to distance and available Ethernet-supported facilities from the local access provider.

(c) Wavelength Local Access. "Wavelength Local Access" means Service using wave division multiplexing technology. Wavelength Local Access is available at bandwidths of 1 GbE, 10 GbE LAN PHY, 2.5 G (OC48), 10 GbE WAN PHY (OC192), 40G, OTU1, OTU2, OTU3, 1G, 2G, 4G and 10G.

(d) DSL Local Access. "DSL Local Access" means Leased Access using digital subscriber line ("DSL") technology. DSL Local Access is available at bandwidths varying from 128 kbps/64 kbps to 15000 Mbps/1000 Mbps. Authorized User may experience delayed installation intervals due to Construction requirements and available bandwidths may be limited due to distance and available DSL-supported facilities from the local access provider.

1.3 Types of Service. Supplier offers the following three types of Service: CenturyLink Provided Access, Authorized User Provided Access or Cross-Connect Access.

1.3.1 Supplier Provided Access. "CenturyLink Provided Access" or "CLPA" means either On-Net Access or Leased Access.

(a) On-Net Access. For On-Net Access, Authorized User must be located in a Supplier designated building in which On-Net Access is generally available. On-Net Access is generally available as Special Access (except at the DS0 bandwidth), ELA, and Wavelength Local Access. Depending on the Service Address, On-Net Access may be provided through an existing CPOP, newly built CPOP, existing intra-building local loop facilities, or connections to a third party provider where Supplier coordinates the connectivity between Supplier facilities and facilities of a service provider with whom Supplier is interconnected. On-Net Access is subject to the On-Net Service Level Agreement attached to Exhibit B, "Service Requirements".

(b) Leased Access. Leased Access is generally available as Special Access, ELA, Wavelength Local Access and DSL Local Access at the bandwidths described in this Service Exhibit for those access types. Authorized User may request a specific local access provider for Leased Access from a list of available providers with whom Supplier has interconnect contracts. Supplier will attempt to use the Authorized User requested provider, but both final routing and the provider actually used will be chosen by Supplier. Where available for Special Access, ELA and Wavelength Local Access, Authorized User may request Supplier to provide a separate fiber facility path for a protection system between the local access provider's serving wire center and the Service Address ("Protect Route"). Protect Route uses backup electronics and two physically separate facility paths in the provisioning of Service. If the working facility or electronics fail, or the Service performance becomes impaired, the facility is designed to automatically switch to the Service protect path in order to maintain a near-continuous flow of information between locations. Special Access and ELA are also generally available as a central office meet point at a local access provider central office to which Authorized User has a dedicated connection.

1.3.2 Authorized User Provided Access. "Customer Provided Access" or "CPA" means a local loop that Authorized User orders from a local access provider to connect Authorized User's premises to the Supplier Domestic Network at a connection point specified by Supplier. Supplier will provide Authorized User with a limited letter of agency ("LOA") authorizing Authorized User to act as Supplier's agent so that Authorized User's local access provider will connect Authorized User's premises to the Supplier Domestic Network. Authorized User will also need to execute a CPA-DAR Addendum for CPA POP with ELA or Wavelength Local Access. Authorized User will pay a CPA charge to Supplier when Authorized User uses the following: (a) Special Access CPA dedicated facilities or ELA CPA virtual local area network ("VLAN"), both of which are dedicated entrance facilities Supplier leases from a local access provider and that carry traffic only from Supplier; or (b) ELA CPA POP, which requires Supplier to provide space and power for the local access

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provider to install Ethernet equipment; or (c) Wavelength Local Access. Authorized User will pay a CPA charge to Supplier when Authorized User uses Special Access CPA non-dedicated facilities owned by local access providers and that carry traffic from multiple carriers, including Supplier, if the provider charges Supplier for those facilities. CPA ELA VLAN is an access type where Supplier will provision and assign an Ethernet virtual circuit from a Supplier POP to an Authorized User designated Ethernet facility leased from a common Ethernet service provider. This access will be used to connect to a Supplier VLAN assignment on a Supplier IQ Networking Internet or Private Port or E-Line. Supplier will not bill Authorized User a CPA charge for an IP layer 3 expansion site because Authorized User, not Supplier, is responsible for ordering a cross-connect from the IP layer 3 expansion site manager to meet Supplier in the IP layer 3 expansion site's meet-me-room. CPA is the responsibility of Authorized User and Supplier will not pay for or troubleshoot components of CPA.

1.3.3 Cross-Connect Access. "Cross-Connect Access" or "XCA" means: (a) an intra-POP connection between certain Authorized User facilities with direct access to the Supplier Domestic Network and the Supplier backbone access point (either (i) located within Supplier's transport area where Supplier allows Authorized User to bring its own fiber directly to the Supplier fiber under an executed Direct Connect Contract ("Direct Connect") or (ii) in an area where Authorized User has leased space in a CPOP, a remote collocation site, or a collocation hotel under a Telecommunications Collocation License Agreement or (b) a connection between a CenturyLink TS data center and a CenturyLink IQ Networking Port, Optical Wavelength Service ("OWS"), or E-Line ("CTS Access") under an executed CenturyLink TS Service Exhibit with a CenturyLink IQ Networking, OWS or E-Line Service Exhibit. CTS Access is available in bandwidths of 100 Mbps, 1G, and 10G (CenturyLink IQ Networking and OWS only). Direct Connect requires splicing of Authorized User and Supplier fibers and cross-connection of individual circuits.

2. Charges. Authorized User will pay the rates set forth in the Exhibit A, "Service Fees", including all applicable ancillary service charges. Supplier invoices MRCs in advance and NRCs in arrears. If the Start of Service Date for any Service falls on any day other than the first day of the month, the first invoice to Authorized User will consist of: (a) the pro-rata portion of the applicable MRC covering the period from the Start of Service Date to the first day of the subsequent month; and (b) the MRC for the following month.

2.1 Ancillary Charges. Ancillary charges applicable to Service include but are not limited to those ancillary services set forth in this section. If an ancillary charge applies in connection with provisioning a particular Service, Supplier will notify Authorized User of the ancillary charge to be billed to Authorized User. Authorized User may either approve or disapprove Supplier providing the ancillary service.

(a) Expedite. A local loop expedite charge applies to orders where Authorized User requests the delivery of Service one or more days before the installation due date in accordance with the Contract. Authorized User may only request to expedite CLPA of Special Access and ELA orders (where underlying local access provider allows Supplier to order an expedited service.)

(b) Extended Wiring. "Extended Wiring" means additional wiring required for orders where the Authorized User requested termination point for Service is not located in the same location as the Demarcation Point. The Demarcation Point is typically located at a suitable location in the basement or on the first floor of a Service Address where provision is made for termination of Supplier's outside distribution network facilities.

(c) Construction. Construction charges apply if special construction is required to extend Service to a Demarcation Point not covered by Extended Wiring or other activities that may cause Supplier to incur expenses for provisioning the Service (e.g., special arrangements of LEC facilities or equipment required to activate the Service) ("Construction"). If Authorized User does not approve of the Construction charges after Supplier notifies Authorized User of the charges, the Service ordered will be deemed cancelled.

(d) Multiplexing. Authorized User may request multiplexing for Special Access where available. Supplier will multiplex lower level local loop into a higher local loop, or vice-versa, for an additional charge. Supplier offers multiplexing at a CPOP, at an On-Net Access building or at an ILEC/CLEC facility providing the Leased Access. For multiplexing at a Supplier On-Net Access building, Supplier provides multiplexed circuit handoffs to Authorized User at the same On-Net Access Service Address. For multiplexing at ILEC/CLEC facility, Supplier facilitates the delivery of multiplexed circuit handoffs to Authorized User at a single Service Address or at multiple Service Addresses per Authorized User's request. Multiplexing is generally available at DS1 and OCn circuit levels. Pricing for multiplexing at an ILEC/CLEC facility is on an individual case basis.

(e) Changes. Ancillary change charge applies where Authorized User requests Supplier to change a local loop to a different Service Address that is within the same Authorized User serving wire center as the existing local loop.

2.2 PRE-SUBSCRIBED INTEREXCHANGE CARRIER CHARGE WAIVER. CenturyLink will waive one hundred percent (100%) of the per line MRC for the Pre-subscribed Interexchange Carrier Charge ("PICC") (also known as the Access Line Charge) ("PICC Waiver").

3. Cancellation. Upon cancellation of a Service, Authorized User will remain liable for charges as provided in the Contract (including accrued but unpaid approved Construction charges).

(a) Authorized User Provided Access—Cancellation of Connectivity after Start of Service Date. To cancel CPA, Authorized User must provide Supplier with a written disconnect firm order confirmation ("DFOC") notice from Authorized User's CPA provider

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along with notice to cancel the CPA. If Authorized User fails to provide Supplier with the DFOC notice within 30 calendar days after Supplier's receipt of the notice to cancel the CPA, or if Supplier disconnects CPA for Cause, then Supplier may disconnect the CPA or require the CPA provider to do so. Authorized User will remain liable for charges for the connectivity to CPA (even if Authorized User cannot use the CPA) until: (i) Authorized User furnishes the required DFOC to Supplier; or (ii) either party cancels the associated CPA with the CPA provider.

4. Grooming. If Supplier plans to groom a circuit on which Service is provided, Supplier will provide a grooming notice to Authorized User. For CPA dedicated facilities grooming, Authorized User will provide a signed LOA to Supplier so that Supplier can order the necessary changes. Within 20 calendar days after receipt of that notice, Authorized User will: (a) notify Supplier of its approval, which may not be unreasonably withheld; (b) state its reason for refusing; or (c) request that Supplier provide Authorized User with an LOA so Authorized User can order the necessary changes. Authorized User's failure to respond within the 20-day period will constitute approval of the groom. If the groom results in Authorized User incurring additional NRCs from its local access provider and Authorized User provides sufficient proof of the local access provider charge, Supplier will issue a credit to Authorized User equal to the local access provider NRC for each groomed circuit. If Authorized User refuses the groom for On-Net Access, Supplier will, upon 20 calendar days' prior written notice, cancel the Service on that circuit. When Authorized User does not respond to a CPA dedicated facilities grooming notice or refuses a CPA dedicated facilities groom, Authorized User must either: (a) provide Supplier with a LOA/CFA so that Supplier can have the local access provider cancel the circuit; or (b) work directly with the local access provider to cancel the circuit. If Authorized User does neither of these things, Supplier will pass through to Authorized User any costs incurred by Supplier from the local access provider as a result of the circuit remaining in place. "CFA" means circuit facility assignment of the Supplier facility, as identified by Supplier, to which Authorized User must order a local loop for connection to the Supplier Domestic Network.

5. Definitions. Capitalized terms not defined in this Service Exhibit are defined in the Contract.

"Supplier Domestic Network" means the Supplier network located within the contiguous U.S. states and Hawaii, which is comprised only of physical media, including switches, circuits, and ports that are operated by Supplier.

"CPOP" means a Supplier-owned physical point of presence that lies directly on the Supplier Domestic Network where direct interconnection between the Supplier Domestic Network and a local access provider's network is possible.

"Demarcation Point" means: (a) the physical interface between the Supplier Domestic Network and Authorized User's telecommunications equipment or (b) the physical interface between a local access provider connecting the Supplier Domestic Network to Authorized User's telecommunications equipment.

"Leased Access" means local backbone access circuits ordered and leased by Supplier from a local access provider chosen by Supplier.

"On-Net Access" means local backbone access circuits provided solely on Supplier owned and operated facilities.

"Service Address" means the business building where Authorized User receives the Service.

"Start of Service Date" for each circuit is the date Authorized User accepts the circuit in accordance with Section 5 (Acceptance and Cure) of the Contract.

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INFORMATION TECHNOLOGY TELECOMMUNICATIONS NETWORK SERVICES CONTRACT
EXHIBIT F, "SERVICE EXHIBITS"
CPA - DEDICATED ACCESS RESOURCES (DAR)
ADDENDUM TO THE LOCAL ACCESS SERVICE EXHIBIT

This addendum ("Addendum") hereby amends and is added to the Local Access Service Exhibit under the Information Technology Telecommunications Network Services Contract by and between CenturyLink Communications, LLC ("Supplier") and VITA (the "Contract"). Except as set forth in this Addendum, capitalized terms will have the definitions assigned to them in the Local Access Service Exhibit and Contract.

1. Dedicated Access Resources. Authorized User will employ Supplier transmission services exclusively in connection with the Customer Provided Access-Dedicated Access Resources ("CPA–DAR") as described herein. Authorized User will not connect to any facilities other than Supplier facilities to the extent that Supplier facilities and capacity are available. Supplier agrees to allow the use or placement of CPA-DAR at the POP premises ("Premises") set forth in the CPA-DAR Quote/Order Form in order to connect to the Supplier approved third party access provider ("Third Party Provider"). CPA-DAR includes the interconnection of dedicated access for provider's fiber or the placement of dedicated access equipment or hardware by the Third Party Provider in a designated Supplier fiber distribution panel or space at the Supplier Premises ("Equipment Space"). Supplier may, upon written notice to Authorized User, move the CPA-DAR to a solution using Supplier equipment or facilities. The Third Party Provider must have a separate agreement for services and collocation with Supplier at the Premises, which shall control as between Supplier and the Third Party Provider ("Provider Collocation Agreement"). Authorized User may only request moves, adds, or changes to CPA-DAR pursuant to the CPA-DAR Quote/Order Form provided to Authorized User by Supplier. Future requests for use of fiber pairs or space and power to support CPA-DAR are subject to availability and technical feasibility and priced on an individual case basis.

2. Responsibility for CPA-DAR. Authorized User will notify Supplier through notice to their assigned Supplier sales person and sales engineer prior to: (a) installing, interconnecting, adding, upgrading, altering, or decommissioning any equipment owned by Authorized User or a third-party in the Equipment Space; or (b) performing any activity that could increase any cost to Supplier, or otherwise affect the use of the Premises. Authorized User and the Third Party Provider are responsible for their monitoring, maintenance and repair of the CPA-DAR, and not Supplier. Installation, maintenance, and monitoring of the CPA-DAR will be provided or fulfilled by the Third Party Provider as part of its agreement between Authorized User and the Third Party Provider. Supplier is not a party to such agreement and will under no circumstances be liable for the Third Party Provider's performance. Supplier will not have the ability to monitor or perform proactive troubleshooting for the Third Party Provider connections. Authorized User is responsible for notifying Supplier of any trouble isolation. Supplier will test to the Supplier demarcation point into the Equipment Space. Supplier will use commercially reasonable response time on mean time to respond on a notified trouble isolation requests.

3. Emergency Suspension. Supplier may suspend the CPA-DAR upon notice to Authorized User if: (a) in Supplier's reasonable discretion, Authorized User or its CPA-DAR has created an emergency situation endangering the Premises, equipment or personnel, related to Supplier's operation or maintenance of the Premises or with one or more of its other Authorized Users' use thereof ("Emergency Situation"), and Authorized User fails to cure such situation after one hour of being notified; or (b) in Supplier's reasonable discretion, Authorized User or its fiber connection has the potential to cause an Emergency Situation, and Authorized User fails to cure or avoid such situation after 48 hours of being notified. If Supplier suspends the CPA-DAR pursuant to this Section, Supplier will resume the discontinued CPA-DAR within 24 hours after Supplier is reasonably satisfied Authorized User has cured the condition that gave rise to Supplier's right to suspend the CPA-DAR.

4. Relocation or Removal of Equipment. Within 45 calendar days after the expiration or termination of this Addendum or any associated CPA-DAR order, Supplier and the Authorized User will remove the fiber connection, alterations, additions and improvements from the Equipment Space, and Authorized User will restore the Premises to as good of condition as when Authorized User accepted the Equipment Space, with the exception of reasonable wear and tear. On not less than 60 calendar days prior notice to Authorized User, Supplier may, relocate all or any portion of the Equipment Space designated for the CPA-DAR. Following receipt of such notice, Authorized User will cooperate with Supplier in relocating Authorized User's CPA-DAR (such cooperation to be provided at Authorized User's cost) to the new Premises or Equipment Space.

5. No Warranty. CPA-DAR AND THE RELATED EQUIPMENT SPACE ARE PROVIDED "AS IS" AND "WITH ALL FAULTS" WITH NO WARRANTY OR SLA OF ANY KIND PROVIDED BY SUPPLIER. AUTHORIZED USER EXPRESSLY ACKNOWLEDGES THAT SUPPLIER INTENDS TO ALLOW OTHER AUTHORIZED USERS TO INSTALL EQUIPMENT AND HANDOFF FIBER IN THE PREMISES.

6. Sublicensing. Authorized User expressly disclaims any right, title, or interest to any of Supplier's equipment or property, or in that of any of Supplier's affiliates, customers, or agents, whether located in the Premises or the Equipment Space, or elsewhere. Authorized User will not rent, lease, sell, resell, assign, or otherwise convey a right to use for any of the CPA-DAR Authorized User will not through the CPA-DAR arrangement request cross connects to any alternate third party within the Premises.

7. Charges. Supplier will charge for the Authorized User's CPA and placement of the CPA-DAR at the rates agreed upon by the parties on any individual cases basis and set forth in Exhibit A, "Service Fees".

8. Term. In no event will Authorized User be allowed to maintain the CPA-DAR within the Premises beyond the termination date of the Contract between Supplier and Authorized User that is applicable to Authorized User's use of such Premises. If the Contract between Supplier and Authorized User terminates for any reason, this Addendum will also terminate at such time.

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9. Cancellation. To cancel CPA, Authorized User must provide Supplier with a written Disconnect Firm Order Confirmation ("DFOC") notice from Authorized User's CPA provider along with notice to cancel the CPA. If Authorized User fails to provide Supplier with the DFOC notice within 30 calendar days of Supplier's receipt of the notice to cancel the CPA, then Supplier may disconnect the CPA or require the CPA provider to do so. Authorized User will remain liable for all applicable MRCs and charges for the connectivity to CPA (even if Authorized User cannot use the CPA) until: (i) Authorized User furnishes the required DFOC to Supplier; or (ii) either party cancels the associated CPA with the CPA provider. Upon termination of any CPA-DAR under this Addendum for any reason whatsoever, Authorized User will not have any right of access to, or interest in, any associated Supplier-provided equipment, Equipment Space or to the Supplier telecommunications network or Premises. Supplier will perform any cable pulling, splice cutting and cross connect removals to disconnect the interconnection of the facilities.

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1. Service.

1.1 Description. The service description in this Service Exhibit for CenturyLink IQ Networking Service supplements the information for the Service in the Contract document and Exhibit B, "Service Requirements" for Supplier's MPLS, MPLS VPN and Internet Access Services. In the event of any conflict between this Service Exhibit and the information for the Service in the Contract document and Exhibit B, "Service Requirements," the order of precedence in Section 21.U of the Contract applies. Service is a data and IP solution that is designed for connectivity between Authorized User's sites or public Internet connectivity. Service includes ports ("Ports") and features. The rate of data transmission and features vary based on the type of Port ordered. Service does not include local access, customer premises equipment ("CPE"), IDS, or NMS which may be separately purchased from Supplier.

1.2 Ports. Supplier offers Service in a variety of speeds and in the following three Port types:
(a) Internet Port. Internet Ports provide public Internet connectivity.
(b) Private Port. Private Ports provide WAN connectivity between Authorized User sites. Quality of service ("QoS") traffic prioritization can be used with Private Ports. Ethernet Private Ports with real-time traffic that require QoS are subject to local access limitations.
(c) Enhanced Port. Enhanced Ports provide the functionality of both an Internet Port and a Private Port in a consolidated solution.

1.3 End-to-End Performance Reporting. End-to-End Performance Reporting is a feature included with Private Ports and the Private Port functionality of Enhanced Ports, except for Ports with VPLS. Authorized User must include Supplier as a member of each closed user group. The feature includes a report based on data collected from Authorized User's traffic within its closed user groups and measures availability, jitter, latency, and packet delivery between Authorized User's edge routers, between Supplier's routers, and between Authorized User's edge routers and Supplier's routers. The data contained in the report is measured differently than the goals contained in the SLA applicable to the Service and is for informational purposes only. Authorized User may access the report in the Control Center portal.

1.4 Multicast. Multicast is an optional feature for Private Ports and the Private Port functionality of Enhanced Ports. The feature enables IP multicast on the Supplier IP network. Authorized User must configure its edge devices with Supplier designated multicast protocol specifications and use the Supplier designated IP address range for Authorized User's multicast applications. The standard feature allows up to ten sources of multicast traffic per Authorized User, but Supplier may permit a limited number of additional sources.

1.5 Secure IP Gateway. Secure IP Gateway ("SIG") is an optional feature for Enhanced Ports. SIG adds a network based firewall feature to an Enhanced Port and supports Authorized User defined network address translation policies and firewall rule sets.

1.6 VPLS. Layer 2 virtual private LAN service ("VPLS") is optional feature for Private Ports. Private Ports with VPLS are supported on Supplier-certified Cisco equipment and are limited to the following connection and encapsulation methods: Ethernet 10 Mbps, 100 Mbps, 1000 Mbps with Ethernet encapsulation; DS1 and DS3 with Frame Relay encapsulation, and OC3 with ATM encapsulation. The following features are not available with Private Ports with VPLS: (a) usage reports; (b) the Precise Burstable or Data Transfer pricing methodologies; (c) the SLA's Reporting Goal; (d) VPN Extensions and (e) End-to-End Performance Reporting.

1.7 VPN Extensions. A VPN Extension is an optional feature for layer 3 multi protocol label switching ("MPLS") Private Ports and Enhanced Ports that allows Authorized User to extend its Layer 3 MPLS closed user groups to Authorized User locations that are not served by Supplier's MPLS network ("Remote Location"). Authorized User can establish a tunnel through the Internet between the Authorized User's CPE at the Remote Location (separately purchased and managed by Authorized User) and the Supplier network device. Authorized User will cooperate with Supplier in setting the initial configuration for the Remote Location CPE interface with the VPN Extension Service. Authorized User is responsible for the installation, operation, maintenance, use and compatibility of the Remote Location CPE. Authorized User must use IP connectivity at the Remote Location that includes a static public IP address. Supplier will not debug problems on, or configure any internal or external hosts or networks (e.g., routers, DNS servers, mail servers, www servers, and FTP servers). All communication regarding the VPN Extension must be between Supplier and an Authorized User approved site contact that has relevant experience and expertise in Authorized User's network operations. The following features are not available with VPN Extensions: (i) End-to-end Performance Reporting; (ii) QoS; (iii) VPLS; and (iv) Multicast. VPN Extensions are not subject to the SLA.

1.8 Backbone Prioritization. Backbone Prioritization is an optional feature available with individual domestic Private Ports. When this feature is configured on a Private Port, traffic originating from that Port will be designated at a higher class of service to the Supplier IP network than traffic originating from Private Ports without the feature or Internet Ports. If Authorized User desires Backbone Prioritization for traffic between two or more Private Ports, the feature must be ordered for each Private Port. The benefit from Backbone Prioritization is realized during periods of high network congestion. Backbone Prioritization may not be available at all locations or with Multicast in certain circumstances.

2. Ordering. The parties will document a Service order in an architecture confirmation document ("ACD") in connection with submitting a Service TSO. Supplier must approve each Order Form and Authorized User must send it via e-mail, fax, or other Supplier-approved electronic process to Supplier. Subject to availability, Supplier will assign /29 Internet address space for Authorized User during the use of a Port. Neither Authorized User nor any End Users will own or route these addresses. Upon termination of Service, Authorized User's access to the IP addresses will cease. If Authorized User requests special sequencing for Port installation, Authorized User must designate a Key Port. A "Key Port" is a Port that must be available on the network before adding additional Port locations. The

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installation of the Key Port will determine the timelines for the installation of other domestic Ports. Authorized User may designate one Key Port within its CenturyLink IQ Networking network topology by notifying Supplier in writing of that request.

3. Pricing Methodologies. Authorized User may order multiple Ports with multiple pricing methodologies in accordance with the pricing methodologies set forth below. Authorized User may change the pricing methodology (e.g., from Flat Rate to Precise Burstable) of a Port. The End to End Performance Reporting, VPN Extension, SIG and Multicast features are provided on a month-to-month basis.

(a) Flat Rate. The Flat Rate pricing methodology bills Authorized User a specified MRC for a given Port speed regardless of Authorized User's actual bandwidth utilization.
(b) Tiered. The Tiered pricing methodology caps Authorized User's bandwidth at the tier specified on a TSO and bills the Authorized User a fixed MRC based on that bandwidth tier regardless of Authorized User's actual bandwidth utilization. No more than once per month, Authorized User may change its specific bandwidth tier (e.g., 2 Mbps to10 Mbps) within the applicable Port classification (e.g., Ethernet, Fast Ethernet). Authorized User may not change its bandwidth from one Port classification to another.
(c) Precise Burstable. Authorized User will be billed for Precise Burstable Minimum as described in Exhibit B, "Service Requirements".

4. SLA. Service is subject to the CenturyLink IQ Networking service level agreement attached to, and described in, Exhibit B, "Service Requirements".

5. Delta Port. A "Nationwide Delta Port" is a CenturyLink IQ® Networking DS1, 2xDS1, 3xDS1 4xDS1, or 5xDS1 Internet Port or Private Port with the following restrictions:

(a) Authorized user support hours for Nationwide Delta Ports are limited to nine consecutive hours per day, five days per week, excluding holidays: Monday – Friday, 8:00 am to 5:00 pm ET.
(b) The associated Local Access Service (which is ordered separately) must be Special Access and cannot be Customer Provided Access, a Cross Connect, or a CO Meet Point;
(c) Nationwide Delta Ports are not eligible for any service credits set forth in an SLA.
(d) NMS is available with a Nationwide Delta Port if Customer requests NMS for the Nationwide Delta Port. Supplier will apply the MRC that applies to devices that are not associated with a CenturyLink IQ Networking Port; and
(e) QoS will not apply to Nationwide Delta Ports.

Supplier may modify the underlying Delta Port with new or different technology with the same or improved functionality as the existing technology if such new or different technology becomes commercially available by Supplier.

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1. Inter-LATA Private Line Service.

1.1 Description. The service description in this Service Exhibit for domestic Private Line supplements the information for the Service in the Contract document and Exhibit B, "Service Requirements" for Supplier's interLATA domestic Private Line Service. In the event of any conflict between this Service Exhibit and the information for the Service in the Contract document and Exhibit B, "Service Requirements," the order of precedence in Section 21.U of the Contract applies. Service is over a physical circuit between two Supplier SONET points of presence ("POPs") located on Supplier operated facilities located within the 48 contiguous states that consist of transport POPs, physical media, switches, circuits, and/or ports that are operated solely by Supplier. Service extends to and includes the network equipment maintained by Supplier at the Supplier network interface points located in the Supplier POP. The Service does not include Local Access. Construction charges may apply if special construction for provisioning the Service. If Authorized User does not approve of the construction charges after Supplier notifies Authorized User of the charges, the Service ordered will be deemed cancelled.

1.2 Echo Cancellers. Echo Cancellers are an optional feature on DS-0, DS-1, and DS-3 Service only. Echo Cancellers eliminate undesired signals (i.e., echoes) from a digital voice transmission. Echo Cancellers are offered on long haul circuits that may experience echoes as a result of their distance (generally 500 miles or longer) and used exclusively to support voice transmissions. Where available and for an additional individual case basis charge, Supplier will install Echo Cancellers network equipment at the Supplier POPs to eliminate echoes on specified circuits as requested by Authorized User.

1.3 Multiplexing. Multiplexing is an optional feature combining multiple lower-level signals (or circuits) into a single, more complex signal. Multiplexing is not available in fractional circuits. Multiplexing equipment is used on both ends of a multiplexed circuit to combine and recover the multiplexed information. Supplier-provided equipment will reside in the Supplier POP. Authorized User-provided equipment is required at the Authorized User's POP.

2. Cancellation. Upon cancellation of a Service, Authorized User will remain liable for charges as provided in the Contract (including accrued but unpaid approved construction charges).

3. Charges. When Authorized User orders Multiplexing, the Supplier-provided equipment in the Supplier POP is included in the Multiplexing MRC. Authorized User will receive the rates for Service as shown on in Exhibit A, "Service Fees" regardless of whether an NPA/NXX split or overlay occurs.

4. SLA. Domestic Private Line Service is subject to the Domestic Private Line SLA attached to Exhibit B, "Service Requirements".

5. Other Private Line Services. The parties agree that as of the Effective Date of the Contract, the parties has agreed to rates and a Service Exhibit only for interLATA domestic Private Line Service. If VITA or an Authorized User desire to purchase any other Supplier service described in the Private Lines section of Exhibit B, "Service Requirements", the parties will enter into good faith negotiations to modify the Contract for those services.

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The Managed Services described in Exhibit A, "Service Fees" are subject to the following terms.

1. Term. Authorized User must agree to use all the Managed Services for 36 months ("Service Term"). Each Managed Service will have its own Service Term, beginning on the Start of Service Date. Upon completion of the Service Term, the applicable Managed Services will continue at the same rates until canceled by either party with 60 days' notice. If a Managed Service is canceled by Authorized User for any reason other than for cause or by Supplier for cause before the Service Term is completed, then Authorized User must pay Supplier the following Cancellation Charges: 100% of the applicable Managed Service's MRC multiplied by the number of months remaining to complete the Service Term. In the event Authorized User cancels a Managed Service and downgrades to a new Managed Service, Authorized User and Supplier may negotiate on an individual case basis a reduction to the Cancellation Charge for the cancelled Managed Service.

2. Maintenance and Support. The Managed Service includes the following maintenance and support described in Exhibit A, "Service Fees".

3. Rental CPE.

3.1 Delivery and Return. CPE will be delivered to Authorized User's location as identified, in writing, by Authorized User. Delivery will be made by personal delivery by Supplier. CPE will be installed as designated herein, or as otherwise agreed upon by the parties. Upon termination of Service, or when Authorized User replaces CPE with upgraded models, Authorized User must return terminated or replaced CPE at its own expense within 15 calendar days of termination or replacement. Supplier will provide Authorized User with return instructions. Authorized User will deliver CPE to Supplier in the same condition it was when first delivered, normal wear and tear excepted, and give Supplier written notice of such return. If CPE is not returned within 15 calendar days of termination, Authorized User will become owner of and bear all responsibility for the terminated or replaced CPE and Supplier may invoice Authorized User the then-current value of the applicable CPE model ("Replacement Cost").

3.2 Ownership and Use. Except as provided herein, CPE is the personal property of Supplier, its designee or a third party provider, notwithstanding that the CPE, or any part thereof, may be affixed or attached to Authorized User's real property or any improvements thereon. Authorized User has no right or interest to the CPE other than as provided herein and will hold the CPE subject and subordinate to the rights of Supplier. Authorized User will: (a) at its own expense, keep the CPE free and clear of any claims, liens, and encumbrances of any kind; and (b) make no alterations or affix any additions or attachments to the CPE, except as approved by Supplier in writing. Authorized User will not remove, alter or destroy any labels on the CPE and will allow Supplier the inspection of the CPE at any time. As between Supplier and Authorized User, Authorized User will bear the entire risk of loss, theft, casualty, destruction or damage to the CPE following delivery from any cause whatsoever (collectively, "Loss"), until returned to Supplier. Authorized User agrees to advise Supplier in writing within five business days of any such Loss. In no event will such Loss relieve Authorized User of the obligation to pay Supplier any amounts due hereunder.

3.3 Software. Software licensor has retained title to the software. To the extent possible, Supplier grants Authorized User a software license or sublicense in the software according to the licensing Contract accompanying such software, which extends only to Authorized User's own internal business use of such software and only on or with the designated CPE. Software must be held in confidence and may not be reproduced unless specifically authorized by the software licensor. Authorized User is prohibited from reverse engineering, decompiling or disassembling the CPE or otherwise attempting to derive the source code of the software. All CPE is subject to the terms and conditions set forth in the manufacturer's or publisher's warranty or end-user license.

3.4 Insurance. Authorized User will, provide and maintain, at Authorized User's own expense, at all times following delivery of the CPE, either (i) the following insurance: (a) "All-Risk" property insurance covering the CPE for the full replacement value, naming Supplier or a third party provider designated by Supplier as a loss payee; and (b) commercial general liability insurance with limits of not less than $1,000,000 per occurrence and aggregate and naming Supplier as an additional insured to the extent allowed by law or (ii) self insure the types and amounts of insurance listed above, provided, however, that such self insurance shall be subject to Authorized User's program of self insurance providing protections to Supplier at no less than those set forth above to the extent allowed by law. Any insurance will be placed with insurers who have a minimum "Best's" rating of A- VII (A- 7). Upon request, Authorized User will deliver to Supplier insurance certificates evidencing such insurance if it has purchased insurance.

3.5 CPE Replacement Recovery Charge. Where CPE rented from Supplier is replaced due to loss or damage not covered by maintenance (for example, damage from accident, misuse or abuse), Authorized User will pay: (a) the Replacement Cost for the damaged CPE, and (b) a one-time charge to cover Supplier's cost to ship the new CPE. If Authorized User requires on-site assistance from Supplier to install the replacement CPE, an additional dispatch charge will apply. Supplier will quote the charges in advance, obtain Authorized User's approval, and invoice the charges within 60 days. Authorized User is responsible for any claim for reimbursement from its insurance carrier. Replacement CPE may or may not be the same model.

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INFORMATION TECHNOLOGY TELECOMMUNICATIONS NETWORK SERVICES CONTRACT
EXHIBIT F, "SERVICE EXHIBITS"
NETWORK MANAGEMENT SERVICE EXHIBIT

1. Service Description. The service description in this Service Exhibit for Network Management Service ("NMS") supplements the information for the Service in the Contract document and Exhibit B, "Service Requirements" for Supplier's support of Internet-Based VPN Managed Services Takeover and other network management services. In the event of any conflict between this Service Exhibit and the information for the Service in the Contract document and Exhibit B, "Service Requirements," the order of precedence in Section 21.U of the Contract applies. NMS provides performance reporting, change management, configuration management, fault monitoring, management and notification of customer premises equipment ("CPE") and network related issues. NMS does not include transport or Local Access, which may be separately purchased from Supplier.

(a) Select Management. Select Management ticketing is via NMS online portal for devices supported by Supplier. Authorized User may submit change management requests via Control Center at https://controlcenter.centurylink.com. Select Management only supports basic routing functions. Please reference the NMS Supported Device List to determine which devices qualify for NMS Select. NMS does not include new CPE initial configuration, lab testing, lab modeling, or on-site work of CPE.

(b) Comprehensive Management. Supplier acts as the Authorized User's single point of contact in managing the resolution of all service, device, and transport faults covered by Comprehensive Management and will work with any third party hardware and/or transport providers the Authorized User has under contract until all network issues are successfully resolved. With Internet security protocol ("IPSec"), Supplier can configure full mesh, partial mesh, or hub-and-spoke topologies with secure tunnels for remote communication between Authorized User locations. IPSec is only available on approved Juniper, Cisco and Adtran devices. IPSec opportunities greater than 25 devices or with other manufacturer's devices require Supplier approval before submitting an order.

(c) Monitor and Notification. Monitor and Notification does not include any of the Select Management or Comprehensive Management features.

(d) Supplier Responsibilities. Supplier will provide Authorized User with a non-exclusive service engineer team, which will maintain an Authorized User profile for the portion of the Authorized User's network where the Supplier-managed devices reside. Supplier will work with the Authorized User to facilitate resolution of service-affecting issues as long as Authorized User chooses either Select Management or Comprehensive Management.

(e) Authorized User Responsibilities.

(i) Authorized User must provide all information and perform all actions reasonably requested by Supplier in order to facilitate installation of Service. For Out-of-Band management related to fault isolation/resolution, Authorized User will provide and maintain a POTS line(s) for each managed device. "Out-of-Band" means a connection between two devices that relies on a non-standard network connection, such as an analog dial modem, which must be a Supplier certified 56k external modem. Additionally, Authorized User will provide a dedicated modem for each managed device. It is not mandatory that Authorized User have a POTS line but Authorized User must understand that Supplier will not be able to troubleshoot issues if the device under management cannot be reached.

(ii) For Comprehensive Management, Authorized User must execute the attached Limited Letter of Agency (Attachment 1) to authorize Supplier to act as Authorized User's agent solely for the purpose of accessing Authorized User's transport services.

(iii) Depending on transport type, Authorized User's managed devices must comply with the following set of access requirements: (a) for Service delivered via IP connectivity with CenturyLink IQ® Networking Internet Port or other public Internet service, devices must contain an appropriate version of OS capable of establishing IPsec VPNs; (b) for Service delivered with CenturyLink IQ Networking Private Port, Supplier will configure a virtual circuit to access Authorized User device at no additional charge. Supplier will add the Supplier NMS network operations center to the Authorized User user group to manage the devices within the customer's network. With CenturyLink IQ Networking Private Port, the Authorized User device does not need to be IPSec-capable unless customer is requesting an added layer of security; (c) for Private Line, both A and Z locations must be under management and accessible via a valid routable IP address.

(iv) Authorized User must provide: A routable valid IP address to establish the Service connection. Authorized User's primary technical interface person must be available during the remote installation process in order to facilitate installation of the Service. The response times for which the Authorized User contract with its CPE maintenance provider will affect Supplier's timing for resolution of problems involving Authorized User-provided devices. The performance of the CPE maintenance provider is Authorized User's responsibility and CenturyLink will only request a dispatch of CPE maintenance provider repair personnel under the Limited Letter of Agency after obtaining Authorized User's approval at the time the fault is detected.

2. SLA. NMS is subject to the Network Management Service SLA attached to Exhibit B, "Service Requirements".

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ATTACHMENT 1

COMPREHENSIVE MANAGEMENT

LIMITED LETTER OF AGENCY
between
("Authorized User")
and
CenturyLink Communications, LLC ("Supplier")

This limited letter of agency ("LOA") hereby authorizes Supplier to act as the Authorized User's Agent for the limited purpose of contacting Authorized User's designated Local Exchange Carrier ("LEC"), Interexchange Carrier ("IXC"), Internet Service Provider ("ISP"), or customer premises equipment ("CPE") maintenance provider in conjunction with Supplier Network Management Service. Network Management Service activities will consist of working with Authorized User's LEC, IXC, ISP, and/or CPE maintenance provider for the purpose of: (a) extracting information concerning transmission data elements carried over Authorized User's network connection; (b) identifying Authorized User's links or data link connection identifiers ("DLCIs"); (c) opening, tracking, and closing trouble tickets with the LEC, IXC, ISP, or CPE maintenance provider on Authorized User's transport links or CPE when an alarm or fault has been detected; (d) as authorized by Authorized User, dispatching CPE repair personnel on behalf of Authorized User to CPE for which a fault has been detected; and (e) discussing fault information with the LEC, IXC or CPE maintenance provider on behalf of Authorized User to facilitate resolution of the problem.

Supplier does not assume any of Authorized User's liabilities associated with any of the services the Authorized User may use.

The term of this LOA will commence on the date of execution below and will continue in full force and effect until terminated with 30 days written notice by one party to the other or until the expiration or termination of the Network Management Service.

A copy of this LOA will, upon presentation to LEC, IXC, ISP, and/or CPE maintenance provider, as applicable, be deemed authorization for Supplier to proceed on Authorized User's behalf.

_____
Authorized User Company Name

_____
Authorized Signature of Authorized User

_____
Print or Type Name

_____
Title

_____
Date

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1. Service.

1.1 Description. The service description in this Service Exhibit for SIP Trunk Service supplements the information for the Service in the Contract document and Exhibit B, "Service Requirements" for Supplier's SIP Trunking Voice Services. In the event of any conflict between this Service Exhibit and the information for the Service in the Contract document and Exhibit B, "Service Requirements," the order of precedence in Section 21.U of the Contract applies. Service provides the delivery of origination and termination of local, including 911, voice traffic and optionally long-distance, toll-free and remote direct inward dial ("Remote DID") traffic via a session initiation protocol ("SIP") signaling interface enabled to the customer premises equipment ("CPE"). All voice traffic will be delivered in an Internet protocol ("IP") format over separately purchased Approved Connectivity.

1.2 Local, 8XX and On-Net Calls. Local calls, 8XX outbound calls, and On-Net calls are included in the Service MRC. The local calling service area that applies to a Service location is based on the area code and prefix assigned to the numbers for that location and does not depend on Authorized User's physical location. "On-Net Calls" means calls between the Service and any of the following Supplier services: SIP Trunk, Managed VoIP, Hosted VoIP, Analog VoIP, Digital VoIP, or Integrated Access, and that are transmitted through the Service entirely over the Supplier IP network and not the PSTN or another carrier's IP network.

1.3 Optional Services. The following optional services are available for the additional charges shown in Exhibit A, "Service Fees" or other pricing document identified below.

(a) Directory Assistance. A flat per call charge applies to directory assistance.

(b) IP Diversity. Authorized User may order more than one CenturyLink IQ Networking port for the purpose of maintaining diverse IP access to the Service. Redundant CenturyLink IQ Networking ports will be purchased separately under Exhibit B, "Service Requirements" for an additional charge set forth in Exhibit A, "Service Fees". In order for Authorized User to use CenturyLink IQ Networking port diversity with the Service Supplier must configure the Service to make use of the diverse ports. An IP Diversity NRC will apply for such configuration.

(c) Directory Listings. An additional MRC applies to each basic business white page or blue page listing of a telephone number. White page listings are not supported for Remote DIDs.

(d) Off-Net Calls: Off-Net Calls are available at the per minute rates for domestic long distance in Exhibit A, "Service Fees" and for international service in Exhibit A, "Service Fees" or in CenturyLink's Information Services Schedule ("ISS") at http://www.centurylink.com/tariffs/qcc_info_services.pdf if not Exhibit A, "Service Fees". No other portion of the ISS applies to Authorized User's use of Service. "Off-Net Calls" means any calls that are not (a) local calls, (b) 8xx outbound calls, or (c) On-Net Calls. Off-Net Calls include Remote DID calls. Additional per minute charges may apply to each Off-Net Call leg of a conference call. Off-Net Call charges are quoted in full minutes. Each domestic Off-Net Call is measured and billed for an initial 18 seconds and rounded up to the next 6 second increment after the first 18 seconds. Domestic Off-Net Calls are also subject to a 30 second minimum average time requirement ("MATR") per call. If the MATR is not met in a particular month, Supplier may add $0.01 to the per minute charge for all domestic Off-Net Calls during that month. Each international Off-Net Call (except to Mexico) is measured and billed for an initial 30 seconds and rounded up to the next 6 second increment after the first 30 seconds. Each International Off-Net Call to Mexico is measured and billed for an initial one minute and rounded up to the next minute after the first minute.

(e) Usage-Based Trunk Groups. Authorized User may direct long distance calls to a usage-based group of single unit of simultaneous call capacity ("Sessions") used for local or usage-based voice services ("Trunk Group"). Long distance Off-Net Calls directed to a usage-based Trunk Group will incur usage charges, but will not be charged a per Session charge. Long distance usage-based trunks are not intended to be used for placing local calls, including 911 calls. Since Supplier cannot always capture and provide the correct end user location for 911 calls when made over long distance usage-based trunks, 911 calls placed over those trunks may not route to the proper PSAP. In those circumstances, Supplier may need to route the 911 call to a default national emergency call routing center, and additional third-party charges may apply. If Supplier incurs such additional third-party charges, Supplier may bill Authorized User for such charges. If Authorized Users sends local calls down a usage-based Trunk Group, those calls will incur charges at the long distance Off-Net Call rate. To avoid incremental long distance charges on local calls, Authorized User must configure its PBX to send all local calls to a Session-based Trunk Group.

(f) Operator Services. Available for calling or credit card billed calls only. No collect or third party billing calls are supported. Pricing for Operator Services is located in the FCC Operator Services Informational Tariff posted at: http://www.centurylink.com/tariffs/fcc_qcc_ops_t.pdf.

(g) Dedicated VoIP Interconnect. Dedicated VoIP Interconnect provides Authorized Users using CenturyLink IQ Networking Private Ports or CenturyLink IQ Networking Enhanced Ports with completely separate VPN access to the first network element of the Service. Standard Service (i.e., without the Dedicated VoIP Interconnect option) provides customers using CenturyLink IQ Networking Private Ports or CenturyLink IQ Networking Enhanced Ports with shared VPN access to the same elements at no additional cost.

(h) Remote DID. Authorized User may have a Remote DID telephone number ("TN") in a rate center where the Authorized User may not have a physical presence. These telephone numbers are for inbound use only and do not support outbound calling, including

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emergency services. Remote DID service is a usage billed service that provides Authorized User with a Remote DID TN in any rate center covered by the Service for inbound calling only. Remote DID TNs do not support outbound calling, including emergency services (911) calls, and Authorized User is strictly prohibited from using any Remote DIDs in connection with any outbound calls on the Supplier network or any other network, or from reconfiguring Service or any Remote DIDs to support such use, either by originating calls via the Remote DID or by using the Remote DID as an identifier for any outbound calls. If Authorized User fails to comply with the terms of this Section, Supplier will charge Authorized User an additional $0.04 per minute of use for all Remote DID service provided to Authorized User from and after the date of any violation of this Section. Any charges owing by Authorized User to Supplier, its affiliates or third party vendors under this Section will be in addition to any and all other charges that may be due and owing under the Contract.

(i) SIP REFER. SIP REFER allows Authorized User to transfer a call using a specific network protocol that causes the network to complete the call transfer rather than CPE.

(j) Enterprise Diversity. Authorized User may purchase optional Enterprise Diversity with the Service. Enterprise Diversity provides a standby Enterprise Session Pool that is only accessible by Authorized User when the network switch where the pool is built is out of service. The standby pool is a mirrored copy of the primary pool. Enterprise Diversity may provide diverse physical access to the Service. Enterprise Session Pooling is required to enable Enterprise Diversity. Enterprise Diversity applies to all pools within the Enterprise. "Enterprise" means company-wide across all Authorized User locations.

(k) Site/Switch Diversity. Authorized User may purchase optional Site/Switch Diversity with Enterprise Diversity Service. Site/Switch Diversity provides a second SIP Trunk Group that homes to a different network facility in the Supplier network than the primary Trunk Group. Site/Switch Diversity does not provide diverse physical access to the Service. Enterprise Diversity is required to enable Site/Switch Diversity at a site level.

(l) Enterprise Session Pooling. Authorized User may purchase optional Enterprise Session Pooling with the Service. Enterprise Session Pooling enables Authorized User to share SIP Trunk Sessions among SIP Trunk termination locations. Supplier provides the first Flat Session Pool at no charge. Additional Flat Session Pools after the first one will be charged as shown in the Pricing Attachment. Authorized User may also order Usage Pools so long as Authorized User has purchased Flat Pools. The number of Usage Pools cannot exceed the number of Flat Pools. There is no charge for Usage Pools.

(m) Toll-Free: Supplier is required by the FCC to state in this Service Exhibit that Authorized User is prohibited from using any Toll Free TN, or other TN advertised or widely understood to be Toll Free, in a manner that would violate FCC rule 47 CFR 64.1504.

1.4 Service Conditions. The following conditions apply to the Service:

(a) Site Conditions. Authorized User is responsible for ensuring that its Authorized User data network/equipment and premises environment is fully prepared for the convergence of voice and data services. Authorized User is responsible for fully understanding how changes in its data network will affect voice quality and reliability of the Service. The addition of new data network applications, increased usage, movement of Authorized User personnel, and equipment failures can all have an impact on Service using that network.

(b) Non-Completed Calls. "Non-completed Call Percentage Threshold" means 30% of all attempted calls, both completed and non-completed. Authorized User's calls that do not complete (out of all attempted calls) may not exceed the Non-completed Call Percentage Threshold for any given monthly billing cycle.

(c) International Toll Free. International Toll Free Service "ITFS"/Universal International Freephone Number "UIFN" billing increments:

ITFS/UIFN	**Initial Billing Period**	**Incremental Billing Period**
Inbound International (excluding Mexico) to US	30 seconds	6 seconds
Inbound Canada to US	30 seconds	6 seconds
Inbound US to Canada	30 seconds	6 seconds
Inbound Mexico to US	60 seconds	60 seconds

ITFS/UIFN In certain countries, the following applications are not permitted for ITFS/UIFN: calling card, VRU (Voice Response Unit), operator services, third-country termination, dial tone, dial up access, dead air or any other response the individual carrier deems inappropriate to ITFS. Originating carriers treat all carriers equally regarding these restrictions. Restrictions on usage are imposed on all other carriers, including Supplier, by the originating carriers. ITFS service orders violating the restrictive guidelines of the originating carrier will not be processed by Supplier's ITFS/UIFN implementation group. Toll-free originating carriers finding usage in violation of their guidelines can, and will, block toll-free numbers on the originating side of the call without notice or appeal. Carriers may change their restrictions to be more restrictive without notice to Supplier. Information regarding which country has this type of limitation is available upon request from Supplier in a "ITFS/UIFN Availability Matrix".

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Supplier cannot guarantee that all new ITFS/UIFN numbers are tested due to random voluntary testing of ITFS/UIFN numbers by the foreign PTTs. ITFS/UIFN numbers may be disconnected by foreign PTTs without advanced notification due to Authorized User fraudulent use or no usage. Authorized User agrees to maintain minimum usage for each number on a regular basis and adhere to the restricted application guideline (as stated in ITFS/UIFN Availability Matrix). In situations when an ITFS/UIFN is disconnected by a foreign PTT, it is the Authorized User's responsibility to submit an order for a new number. Supplier does not guarantee that the same number can be re-instated. All PTT's reserve the right to decline, cancel, or change international services at any time with or without notice.

UIFN is a service which allocates 1 toll free number to be used in multiple foreign countries to call the United States and bill to the number in the United States. Countries which are currently available for UIFN are: Argentina, Australia, Belgium, Brazil, China, Denmark, Finland, France, Germany, Hong Kong, Hungary, Ireland, Israel, Italy, Japan, South Korea, Luxembourg, Macau, Malaysia, Netherlands, New Zealand, Norway, Philippines, Portugal, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, and United Kingdom. There is an NRC and an MRC, which are applicable per number, regardless of the number of countries in which the number is active. The per minute rates using the UIFN number are the same as the ITFS rates. The UIFN nonrecurring charge and monthly rate applies to any Supplier product where the customer subscribes to UIFN(s).

(d) Connectivity. Service may only be used with separately purchased CenturyLink IQ® Networking Private Port, CenturyLink IQ Networking Enhanced Port with Secure IP Gateway or CenturyLink IQ Networking Internet Port ("Approved Connectivity"). All Approved Connectivity used with Service must support quality of service ("QoS"). If Authorized User selects an Ethernet Local Access (ELA) type that does not provide guaranteed end-to-end QoS the Service Levels will not apply. Supplier is not responsible for Service deficiencies or interruptions caused by Authorized User, its employees, contractors or agents, or end users reconfiguring or misconfiguring the Approved Connectivity.

(e) Unsupported Calls. The Service does not support collect or third party billing. The Service may not support 311, 511 and/or other x11 services (other than 911, 711 and 411 dialing) in all service areas. The Service does not support remote bridged line appearances ("Remote BLAs"). Authorized User is specifically instructed not to enable Remote BLAs on its IP devices used with the Service. Additional information regarding potential issues with Remote BLAs is found in the "911 Emergency Service" section of this Service Exhibit.

(f) Area of Use. The Service is intended to be used only at one location given by the Authorized User as the Primary Place of Use for a particular TN, Remote DID or 8xx TN ("PPU") in the United States (not including U.S. territories). Additionally, Authorized User may not use IP enabled stationary devices that are assigned to, designated for, or configured for use at one PPU location in any other location, unless Authorized User has requested a temporary change of its 911 location, and has received approval and the 911 Update Confirmation from Supplier as set forth in subpart (g) below. 911 emergency calls automatically route to the appropriate 911 center based upon the Authorized User's current 911 location that is displayed on the Supplier Control Center portal (https://controlcenter.centurylink.com), which may be the 911 location of a customer PPU, or an updated temporary location that Supplier has previously approved ("Supplier-Approved 911 Location"). Service may only be used at a Supplier-Approved 911 Location. If Authorized User or an end user tries to use the Service (i) at a location other than a Supplier-Approved 911 Location (including without limitation, using IP enabled devices assigned to, designated for, or configured for use at one location in a different location) or (ii) outside of the United States (including in any U.S. territories), they do so at their own risk (*including without limitation, the risk that Authorized User will not have access to 911 emergency services* and/or such activity violates local laws in the jurisdiction where Authorized User or an end user tries to use the Service).

(g) Use of Service at a Temporary Location. Authorized User may temporarily use the Service at a location other than the Authorized User PPU location only after obtaining Supplier's approval either (i) by contacting Supplier at 1-877-878-7543 or (ii) by submitting a 911 location change request through the Supplier Control Center portal. Authorized User must submit a 911 location change request both before using Service at the temporary location and before returning to the Authorized User PPU location. Failure to obtain Supplier's approval is prohibited and constitutes a misuse of the Service. Such misuse will result in 911 calls being routed to the incorrect 911 operator based on incorrect address information. Use of Service at a temporary location may not exceed six months in duration. Upon submission of Authorized User's 911 location change request, Supplier will reject the request, or accept and begin processing the request. Authorized User is responsible for checking the Supplier Control Center portal to confirm if the request was rejected or accepted. Authorized User will be notified of the 911 Update Interval at the time the request is accepted via the Supplier Control Center portal. Upon completion of the 911 location change and the 911 Update Interval, an e-mail will be sent to Authorized User's e-mail address notifying Authorized User that 911 service has been successfully moved and is ready for use ("911 Update Confirmation"). In the event Authorized User does not receive such confirmation by expiration of the 911 Update Interval, Authorized User agrees to contact Supplier at 1-877-878-7543. Any 911 calls placed prior to receiving the 911 Update Confirmation will be routed according to the last Supplier-Approved 911 Location. If, upon submission of a 911 location change request, Supplier rejects the change request, Authorized User understands that Supplier has not approved using the Service at that new location and, as such, Authorized User is prohibited from using the Service there.

(h) Authorized Use. Authorized User and its end users are responsible for maintaining the confidentiality of passwords used by Authorized User and its end users.

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(i) Power Outages; Network Connectivity, Authorized User Data Network and CPE Failures; Maintenance Work; Moving Equipment. The Service will not operate (*including, without limitation, end users will be unable to access emergency 911 services*) if any of the following items fail: (i) power used with the Service; (ii) the Approved Connectivity used with the Service (including without limitation, failures caused by suspension or termination of the Approved Connectivity under the terms of that service); (iii) the Authorized User environment; (iv) the Approved Connectivity router; (v) Authorized User premises routers and switches; (vi) the IP enabled devices used with the Service; or (vii) customer's SIP signaling interface. Additionally, the Service will not operate (*including, without limitation, end users will be unable to access emergency 911 services*) while maintenance work is being performed. If Authorized User has requested a temporary change of its 911 location, and has received approval and the 911 Update Confirmation from Supplier as set forth in subpart (g) above, Authorized User may move the IP handset only.

(j) Telephone Numbers. Authorized User must provision at least one TN for use with the Service. The TNs may be new TNs or Ported TNs. If Authorized User requests ported TNs, Authorized User authorizes Supplier to process its order for Service and notify Authorized User's current carrier of Authorized User's decision to switch its local and local toll services to the Service. Authorized User will be responsible to promptly provide Supplier with its Customer Service Record (CSR) from Authorized Users's current carrier to facilitate porting of numbers. Supplier's approved porting window is 7:00 a.m. to 7:00 p.m. ET. If Authorized User does not order new TNs from Supplier, and ported TNs are not ported within 60 days of the Start of Service Date for a specific location, Supplier reserves the right to terminate Service at that location upon notice to Authorized User. Additionally, the Start of Service Date and commencement of billing will not depend on completion of porting. If Authorized User requests cancellation of Service, it is Authorized User's sole responsibility to arrange porting of any telephone numbers Authorized User wants to retain. If porting of numbers is not completed within 30 days following Authorized User's request for Service cancellation, Supplier may terminate Service upon notice to Authorized User and Authorized User will lose all telephone numbers. There may be limitations to number porting between providers. Due to the portability of VoIP services, for example, providers may allow non-geographic numbers to be used in connection with their service. Supplier will deny a request to port a TN to a location that is not within the rate center where the Service will be used. Other limitations might also apply and can be addressed on an individual basis.

(k) Usage-Based Trunk Group Utilization. Authorized User must maintain a peak utilization of usage-based Trunk Groups to support usage-based services of 60 percent or higher. "Peak utilization" means the maximum utilization for a usage-based Trunk Group reached at any point during the month. Each month, Supplier will calculate the peak utilization over Authorized User's usage-based Trunk Groups. If peak utilization is less than 60% for three consecutive months, Supplier reserves the right to reduce the number of Sessions in the affected usage-based Trunk Group such that the peak utilization of the Trunk Group is at least 75%. An MRC will not apply to Sessions assigned to usage-based Trunk Groups.

(l) Third Party Billed Services. The Service does not support billing for third party services such as online subscription services, equipment leases and wireless services. Authorized User will be responsible for payment of all such charges directly to the third party provider.

(m) Local Origination. Authorized User agrees that the header used to support PSTN redirecting services such as call forwarding (or SIP Diversion Header), *automatic number identification* (or ANI) and originating party's telephone number as displayed on caller ID (or Calling Party Number) delivered with each outbound call will accurately reflect the location of the originating party so that appropriate long distance charges may be applied for each call, where applicable. For example, Authorized User may not utilize tail end hop off routing to route long distance calls across a private WAN VoIP network and drop off the long distance calls to the PSTN as local calls at a remote gateway.

1.5 SLA. Service is subject to the Supplier SIP Trunk Service Level Agreement attached to Exhibit B, "Service Requirements". Approved Connectivity (purchased separately) is subject to the CenturyLink IQ Networking SLA, and not to the SIP Trunk SLA. All other services, facilities, and components relating to the SIP Trunk Service, including without limitation any CPE, the Authorized User environment, the Authorized User SIP signaling interface, Authorized User premise switches and routers, devices used with the Service, another carrier's IP network, and the PSTN are not included in the SLA measurement.

2. Cancellation. If a Service ordered hereunder is cancelled for any reason other than a termination right in the SLA or for Supplier's breach under the Agreement, the cancellation charge if applicable, will include a pro rata portion of the amount of any install NRCs that Supplier discounted or waived if such cancellation occurs during the first 12 months following its installation.

3. Tax Location. Service will remain taxed based on the PPU locations where Authorized User utilizes Service, and not on a temporary Supplier-Approved 911 Location.

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4. 911 Emergency Service. *By VITA signing the Contract or an Authorized User issuing a TSO, Authorized User acknowledges that Supplier has advised it of the 911 limitations set forth in this Service Exhibit, that Authorized User understands this information, and that Authorized User accepts the Service with these limitations.*

WARNING **POTENTIALLY HAZARDOUS SITUATION WHICH IF NOT AVOIDED COULD RESULT IN DEATH OR SERIOUS INJURY. PLEASE READ CAREFULLY.**

4.1 ***Required Federal Communications Commission ("FCC") Warning.*** *The FCC requires that Supplier inform Authorized User of potential limitations to 911 services using SIP Trunk Service and bundles or packages that include SIP Trunk Service. The Service provides access to 911 emergency service only on stationary devices (and not mobile devices). The Service does not support any outgoing calls, including calls to 911 emergency service from a mobile device. 911 emergency services will not be available or may not function properly (e.g., they may not route to the correct public safety answering point or "PSAP") under the following circumstances: (i) if the Service is used at a location other than a Supplier-Approved 911 Location in the United States (not including U.S. territories), or if an IP-enabled stationary device is moved within the Supplier-Approved 911 Location and not reconfigured; (ii) if Authorized User selects a telephone number that is not associated with the geographic area of the installed service (e.g., if Authorized User chooses a California number for use in a Colorado location); (iii) for initial installation of Service - on average 5 days, but for as long as 30 days after installation of Service due to time required to update 911 databases with customer information; (iv) for use of Service at a temporary location – until Supplier has completed the 911 Update Interval and sent the 911 Update Confirmation to Authorized User's e-mail address of record. "911 Update Interval" is approximately 15 minutes, unless further address verification is required, in which case the 911 Update Interval could be up to 72 hours (**Important:** Authorized User and end users should always check for the 911 Update Confirmation before using 911 service after a temporary move); (v) if the Service fails or degrades for any reason, such as failures resulting from power outages, CPE failure (e.g., Internet connectivity routers, Authorized User's data network and equipment, Authorized User premises switches and routers, phones, handsets, and other IP-enabled devices), cable cuts, or any Service or broadband outage or degradation (including without limitation, failures caused by suspension or termination of the Service); (vi) while maintenance work is being performed; or (vii) if Authorized User's area does not have 911 emergency service. Additionally, Supplier does not support Remote BLAs on IP devices used with the Service. If a Remote BLA is enabled, and Authorized User or an end user make a 911 call from the Remote BLA line, the 911 call will incorrectly route to the PSAP associated with the 911 location of the telephone number assigned to the Remote BLA, and not to the 911 location of the calling party. For example, if an end user has a Remote BLA for a colleague in Chicago on a phone located in San Francisco, and end user in San Francisco places a 911 call on the Remote BLA line, emergency services will be routed to the 911 location in Chicago associated with the phone number of the Remote BLA, not to the 911 location in San Francisco.*

4.2 ***Additional Information Regarding the Limitations of 911 Services.*** *When dialing 911 with the Service, end users should always state the nature of the emergency, and include end user location and number. The default PSAP may not be able to call the end user back if the call is not completed, is dropped or is disconnected, or if end user is unable to tell the PSAP their number and physical location. The PSAP to which the call is directed will be based on the street address and calling party number for the Supplier-Approved 911 Location. The 911 emergency service provided is Enhanced 911 emergency service in that the calling party number will be delivered to the PSAP with the 911 call and the PSAP will have the Supplier-Approved 911 Location associated with that calling party number. End user's Supplier-Approved 911 Location may not sufficiently pinpoint the specific location of the emergency; therefore, End users must immediately tell the dispatcher the specific location of the emergency so the PSAP can locate the end user and assist with the emergency.* ***SUPPLIER RECOMMENDS THAT AUTHORIZED USER AND END USERS ALWAYS HAVE AN ALTERNATIVE MEANS OF ACCESSING TRADITIONAL 911 SERVICES.***

4.3 ***No Privacy Rights.*** *Authorized User acknowledges that there is no right of privacy with respect to the transmission of number, name, or address when the Service is used to access 911 or other numbers used in conjunction with 911 or similar emergency services, either by Authorized User or end users.*

4.4 ***Use of SIP Diversion Headers on 911 Calls.*** *Authorized User may only use SIP Diversion Headers when using the Call Forwarding feature with Service. Authorized User shall not send SIP Diversion Headers on all calls, and in particular shall never send SIP Diversion Headers on 911 calls. Sending SIP Diversion Headers on a 911 call may cause the call to route to the incorrect PSAP, or to the correct PSAP but without the correct Authorized User phone number and location information.*

4.5 ***Authorized User Must Notify End Users of 911 Limits.*** *Authorized User will notify all end users (i) of the limitations on access to 911 emergency service described in the Contract and this Service Exhibit; and (ii) that access to 911 emergency service and an appropriate PSAP is only available at the Supplier-Approved 911 Location and is not available using an IP enabled mobile device. Supplier will provide labels that will indicate that 911 service has limited availability and functionality when used with SIP Trunk, and Supplier recommends that the labels be placed on or near the equipment associated with the Services. Supplier expressly retains the right to assert any immunity defenses and other defenses available to it against any party bringing a claim associated with lack of access to 911 emergency service, including without limitation those defenses under Va. Code Ann §56-484.24 and 47 USC §615a.*

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1. Service.

1.1 Description. The service description in this Service Exhibit for Hosted VoIP Service supplements the information for the Service in the Contract document and Exhibit B, "Service Requirements" for Supplier's Hosted VoIP Service. In the event of any conflict between this Service Exhibit and the information for the Service in the Contract document and Exhibit B, "Service Requirements," the order of precedence in Section 21.U of the Contract applies. Standard, Premium, Conference Room, Receptionist, Voice Mail Only and Basic options on a per seat basis. Except for Voice Mail Only Seats, the monthly recurring charge ("MRC") for Seats includes rental of one IP-enabled station sets, expansion modules and handsets approved by Supplier for use with the Service ("IP Device"). All Seats also include one telephone number ("TN"), plus the specific features identified below based on seat type. Additional charges apply for optional features listed below. Subject to Approved Connectivity and Approved CPE limits, Authorized User may order up to a maximum of 10,000 seats/TNs per location.

(a) Basic Seats. Basic Seats are designed for a lobby, break room, cafeteria or shop area that is not assigned to a specific end user. Basic Seats include: the ability to make On-Net and Off-Net Calls**,** an end user portal, an administrator portal, call waiting, and call forwarding, as well as other features, some dependant on IP handset model or soft phone software. Basic Seats do not include voice mail. The end user portal provides access to call logs, click-to-call and other features. The administrator portal enables administrator functionality, including the ability to set up end users, implement some moves, adds, changes, and deletions, and implement calling restrictions. "On-Net Calls" means calls between the Service and any of the following Supplier services: Hosted VoIP, Managed Office, Managed Office Essentials, SIP Trunk, Managed VoIP, Analog VoIP, Digital VoIP, or Integrated Access, and that are transmitted through the Service entirely over the Supplier IP network and not the PSTN or another carrier's IP network. "Off-Net Calls" means any calls that are not (a) local calls, (b) 8xx outbound calls, or (c) On-Net Calls.

(b) Standard Seats. Standard Seats are designed to address standard calling practices that do not require an advanced feature set. Standard Seats include the features listed for Basic Seats above, plus a standard feature package and voicemail.

(c) Conference Room Seats. Conference Room seats are tailored for the purpose of attaching a Conference Room phone, which often is a speaker phone model. Unless Authorized User separately purchases Supplier approved conference phones for use with Conference Room seats, Authorized User may not order more than one Conference Room seat for every 24 other Hosted VoIP seats at any given Authorized User location. Conference Room Seats include the same features as Basic Seats and do not include voice mail.

(d) Premium Seats. Premium Seats are designed to fit the needs of the majority of professional employees. Premium Seats provide end users with advanced IP phone features as well as premium phone and soft client access. Premium Seats include the features listed for Basic and Standard Seats above, plus an advanced feature package and Microsoft® Outlook® integration. Authorized User can also select the optional Anywhere feature (find me, follow me capability) with Premium Seats.

(e) Receptionist Seats. Receptionist Seats are intended for use by end users who handle multiple calls and redirect those calls to other end users within their group. Receptionist Seats may either use IP phones with a side car modules to expand the call appearance capacity, or a receptionist web console software for an additional charge. The receptionist web console window is integrated with the call manager feature, enabling functions such as click-to-transfer or click-to-dial. The receptionist web console graphically displays end users' status as well as detailed call information.

(f) Voice Mail Only Seats. Voice mail only seats are featureless seats that allow inbound callers to leave a voice mail message. Outbound calls and 911 calls cannot be made from a voice mail only seat.

(g) Virtual Seats. A virtual seat does not include a physical device. A TN associated with a virtual seat can be used as a line appearance on a phone, but cannot be used as the primary TN. Virtual seats have the same features as Premium Seats, except for the associated physical device.

(h) Local, 8XX and On-Net Calls. Local calls, 8XX outbound calls, and On-Net Calls are included in the Standard, Premium, Conference Room, Receptionist and Basic seat MRCs. The local calling service area for a seat number is based on the area code and prefix assigned to the seat and does not depend on Authorized User's physical location.

(i) Optional Services. Authorized User may purchase the following optional services for additional charges in Exhibit A, "Service Fees" or referenced below.

(1) Off-Net Calls. Additional per minute charges apply to international Off-Net Calls listed in Exhibit A, "Service Fees". Additional per minute charges also apply to domestic Off-Net calls in excess of the quantity of waived minutes shown in the "Hosted VoIP Service Domestic Outbound Off-Net LD and Domestic Inbound 8XX Pricing" section in Exhibit A, "Service Fees". Additional per minute charges apply to each Off-Net Call leg of a conference call. Off-Net Call charges are quoted in full minutes. Each domestic Off-Net Call is measured and billed for an initial 18 seconds and rounded up to the next 6 second increment after the first 18 seconds. Domestic Off-Net Calls are also subject to a 30 second minimum average time requirement ("MATR") per call. If the MATR is not met in a particular month, Supplier may add $0.01 to the per minute charge for all domestic Off-Net Calls during that month. Each international Off-Net Call (except to Mexico) is measured and billed for an initial 30 seconds and rounded up to the next 6 second increment after the first 30

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seconds. Each International Off-Net Call to Mexico is measured and billed for an initial one minute and rounded up to the next minute after the first minute.

(2) Directory Assistance. A flat per call charge applies to directory assistance.

(3) Hunt Groups. An additional MRC and non-recurring charge ("NRC") apply for each hunt group. An additional MRC will also apply if Authorized User orders a voice mail box for a hunt group

(4) Auto Attendant. An additional MRC and NRC apply for each auto attendant.

(5) Receptionist Web Console. An additional MRC applies for each receptionist web console.

(6) Available TNs. An available number is an unallocated number Authorized User retains in a pool for later use. An additional MRC applies for each available TN.

(7) Desktop/Mobile Soft Phones. Desktop and mobile soft phones are Internet-based software that allow end users to utilize the calling features of the Service on a Windows/PC, Apple/Mac, Android, or iOS device using available Internet access. Voice quality and the ability to utilize the soft phones may be impacted by the availability of Internet access, Internet capacity and associated hardware limitations. Soft Phones can only be purchased in conjunction with Standard or Premium Seats.

(8) PAC/VPAC. PAC/VPAC are optional product account authorization codes available with the Service. These authorization codes restrict access to outbound long distance dialing. End users attempting to call long distance outside the authorized group are prompted to enter a code prior to placing the long distance call. Calls are not connected unless a valid code is entered.

(j) Domestic Long Distance Off-Net and Domestic Inbound 8XX Calls. Domestic long distance and domestic inbound toll free pricing for Service is shown in the "Domestic Outbound Off-Net LD and Domestic Inbound 8XX Pricing" section in Exhibit A, "Service Fees". Supplier's domestic 8XX inbound service under the Contract is available for use with this Service for the charges for that service. International inbound 8XX calls are not provided or priced as an optional service under this Service Exhibit.

1.2 Service Conditions.

(a) Site Conditions. The Authorized User data network/equipment and premises environment must meet certain performance specifications designated by Supplier to use the Service. Authorized User is responsible for ensuring that environment is fully prepared for the convergence of voice and data services, and continuing to meet specifications designated by Supplier. Authorized User is responsible for fully understanding how changes in its data network will affect voice quality and reliability of the Service. The addition of new data network applications, increased usage, movement of personnel, and equipment failures can all have an impact on Service using that network. A Supplier representative will assist Authorized User in a technical interview to determine if the environment meets the specifications. Authorized User is responsible for providing all the necessary information to complete the technical interview. Any extended wiring will be provided at the rates in Exhibit A, "Service Fees".

(b) Service Provisioning. The installation NRC covers either a single site visit by a Supplier technician where Service is added to existing Approved Connectivity, or a maximum of two site visits where installation of the Service includes new Approved Connectivity. If additional site visits are required, time and material charges will apply at Supplier's then current rates. Assistance from Authorized User's current voice and/or data vendors or other skilled equivalent is required in the initial stages to complete installation of Service on Authorized User's side of the SNI (e.g., additional Authorized User inside wiring, configuration of PBX, computers and phones, etc.). Such vendor or skilled equivalent must be able to perform the actions listed on the Customer Vendor Support Checklist provided to Authorized User by Supplier. Failure to correctly perform such actions may cause a Service outage. Authorized User will be responsible for coordination with such vendors, and for any charges billed by such vendors.

(c) Approved Connectivity and CPE. Service may only be used with (i) Supplier IQ® Networking port or Data Bundle Solution. ("Approved Connectivity") and (ii) Internet connectivity routers, customer premises switches and routers, and IP enabled devices (e.g. handsets) and intangible computer code contained therein designated by Supplier ("Approved CPE"). Authorized User must separately obtain Approved Connectivity and Approved CPE other than the IP Device included the Seat MRC. All Approved Connectivity used with Service must support quality of service ("QoS"). If Authorized User selects an Ethernet Local Access (ELA) type that does not provide guaranteed end-to-end QoS the Service Levels will not apply. Supplier is not responsible for Service deficiencies or interruptions caused by Authorized User, its employees, contractors or agents, or end users reconfiguring or misconfiguring the Approved Connectivity or Approved CPE. Authorized Users using Supplier IQ Networking Private or Enhanced Ports for Approved Connectivity are strongly encouraged to select Queuing Method ("QM") C, if available. If unavailable, Authorized Users are strongly encouraged to select QM B. If Authorized User instead selects QM A or QM D, Authorized User may experience call quality and/or call set-up problems under normal usage patterns. If that occurs, Supplier's first troubleshooting step will be to implement QM C or QM B. Supplier will thereafter only engage in further troubleshooting if implementing QM C or QM B does not resolve the problem. If changing the QM resolves the call quality and/or set-up problems, Authorized User agrees to continue using the QM implemented by Supplier to resolve the issue. All CPE used with the Service must: (i) be on Supplier's Approved CPE list; (ii) include an operating system that complies with Supplier's minimum requirements; and (iii) be re-imaged or programmed by Supplier to work with the Service.

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Notwithstanding subpart (iii), Supplier will not re-image, program or adjust settings on Authorized User-owned LAN switches unless Authorized User separately purchases network management service from Supplier. Unless Authorized User purchases CPE maintenance from Supplier, Supplier will not maintain the Authorized User provided CPE. Supplier will also not install or maintain operating system software on Authorized User provided CPE. Except where Authorized User has purchased CPE maintenance from Supplier on an Authorized User provided CPE, Authorized User will not be entitled to SLA remedies if Service fails to meet a Supplier SLA due to a failure or malfunction of that CPE.

(d) Unsupported Calls. The Service does not support operator services, collect, third party billing or calling card calls. The Service may not support 311, 511 and/or other x11 services (other than 911, 711 and 411 dialing) in all service areas. The Service does not support any outgoing calls from Standard, Premium, Conference Room, Receptionist and Basic seats that are not associated with an IP handset or soft phone (i.e., from Voice Mail Only Seats), unless another telephony device from which the call can be originated via the end user portal is used. The Service does not support remote shared call appearances ("Remote SCAs"). Authorized User is specifically instructed not to enable Remote SCAs on its IP devices used with the Service.

(e) Area of use. The Service is intended to be used only at one location given by the Authorized User as the Primary Place of Use for a particular TN or 8xx TN ("PPU") in the United States (not including U.S. territories). Additionally, Authorized User may not use IP enabled stationary devices that are assigned to, designated for, or configured for use at one PPU location in any other location, unless Authorized User has requested a temporary change of its 911 location, and has received approval and the 911 update confirmation from Supplier as set forth in the "Use of Service at a Temporary Location" section below. 911 emergency calls automatically route to the appropriate 911 center based upon the Authorized User's current 911 location that is displayed on the My 911 Location page of the MyAccount: VoIP portal, which may be the 911 location of a PPU, or an updated temporary location that Supplier has previously approved ("Supplier-Approved 911 Location"). If Authorized User or an end user tries to use the Service (i) at a location other than a Supplier-Approved 911 Location (including without limitation, using IP enabled devices assigned to, designated for, or configured for use at one location in a different location) or (ii) outside of the United States (including in any U.S. territories), they do so at their own risk (*including without limitation, the risk that Authorized User will not have access to 911 emergency services* and/or such activity violates local laws in the jurisdiction where Authorized User or an end user tries to use the Service).

(f) Use of Service at a Temporary Location. Authorized User may temporarily use the Service at a location other than the PPU location only after obtaining Supplier's approval either (i) by contacting Supplier at 1-877-878-7543 or (ii) by submitting a 911 location change request through the MyAccount: VoIP portal. Authorized User must submit a 911 location change request both before using Service at the temporary location and before returning to the PPU location. Failure to obtain Supplier's approval is prohibited and such misuse will result in 911 calls being routed to the incorrect 911 operator based on incorrect address information. Use of Service at a temporary location may not exceed six months in duration. Upon submission of Authorized User's 911 location change request, Supplier will reject the request, or accept and begin processing the request. Authorized User is responsible for checking the My 911 Location page of the portal to confirm if the request was rejected or accepted. Authorized User will be notified of the 911 update interval at the time the request is accepted via the *My 911 Location* page of the portal. Upon completion of the 911 location change and the 911 update interval, an e-mail will be sent to Authorized User's e-mail address of record notifying Authorized User that 911 service has been successfully moved and is ready for use ("911 Update Confirmation"). In the event Authorized User does not receive such confirmation by expiration of the 911 update interval, Authorized User agrees to contact Supplier at 1-877-878-7543. Any 911 calls placed prior to receiving the 911 Update Confirmation will be routed according to the last Supplier-Approved 911 Location. If, upon submission of a 911 location change request, Supplier rejects the change request, Authorized User understands that Supplier has not approved using the Service at that new location and, as such, Authorized User is prohibited from using the Service there. To ensure proper routing of calls to 911, Authorized User and its end users must not install or use IP handsets or Soft Phones with the Service to dial 911 at another address without following the above address change process.

(g) Authorized Use. Authorized User and its end users are responsible for maintaining the confidentiality of passwords used by Authorized User and its end users. Authorized User is responsible for unauthorized use of the Service.

(h) Power Outages; Internet Connectivity, Authorized User Data Network and CPE Failures; Maintenance Work; Moving Equipment. The Service will not operate (*including, without limitation, end users will be unable to access emergency 911 services*) if any of the following items fail: (i) power used with the Service; (ii) the Internet connectivity used with the Service (including without limitation, failures caused by suspension or termination of the Internet connectivity under the terms of that service); (iii) the Authorized User environment; (iv) the Approved Connectivity router; (v) Authorized User premises routers and switches; or (vi) the IP enabled devices used with the Service. Additionally, the Service will not operate (*including, without limitation, end users will be unable to access emergency 911 services*) (vii) while maintenance work is being performed, (viii) if the SIP signaling interface fails; or (ix) if equipment used with the Service is moved from the PPU location (equipment is assigned to, designated for, or configured for use at one location and <u>may not</u> be used in any other location including without limitation to another location where Supplier installed Service). If Authorized User has requested a temporary change of its 911 location, and has received approval and the 911 Update Confirmation from Supplier as set forth in the "Use of Service at a Temporary Location" section above, Authorized User may move the IP stationary device (handset) or soft phone only.

(i) Local Number Portability. If Authorized User is not utilizing a new number for Service, but rather is transferring an existing TN, which currently is subscribed to a carrier other than Supplier for local, local toll and/or long distances telecommunications services, then Authorized User authorizes Supplier to process its order for Service and to notify Authorized User's local telephone company of

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Authorized User's decision to switch its local, local toll and long distance services to the Service. Supplier will perform porting during the hours of 7:00 a.m. to 7:00 p.m. eastern time. If Authorized User requests cancellation of Service, it is Authorized User's sole responsibility to arrange porting of any TNs Authorized User wants to retain. If porting of numbers is not completed within 30 days following Authorized User's request for Service cancellation, Supplier may terminate Service and Authorized User will lose all telephone numbers. There may be limitations to number porting between providers. Due to the portability of VoIP services, for example, providers may allow non-geographic numbers to be used in connection with their service. Supplier will deny a request to port a TN to a location that is not within the rate center where the Service will be used.

(j) Third Party Billed Services. The Service does not support billing for third party services such as online subscription services, equipment leases and wireless services. Authorized User will be responsible for payment of all such charges directly to the third party provider.

(k) If Authorized User or its end users use the third-party software with Supplier's Hosted VoIP Service, the Service will support 911 calling with the software, provided Authorized User and its end users expressly follow the instructions for 911 calling found in this Service Exhibit and in the 911 advisory for the Service. In part, those instructions state that an end user must not use the third-party software client to dial 911 except from that end user's registered physical location. Use at a location other than the registered physical location may route 911 calls to an incorrect 911 dispatch center, potentially delaying emergency services.

(l) Authorized User's Use of Third-Party Content. Authorized User is responsible for all content it uses in the music on hold feature of the Service. Authorized User agrees that it has rights from third parties to use any content belonging to others and will not use any content that is unlawful or violates any copyright, trademark or other laws protecting intellectual property.

2. Service Upgrades/MACDs.

2.1 Addition of Seats During Term. Authorized User may add additional seats to existing Service at an Authorized User location at any time (an "Upgrade"). If Authorized User adds more seats per site than can be accommodated by the routers used with the Service, Authorized User will be responsible for obtaining additional or replacement routers on the Supplier Approved CPE list to accommodate the additional seats.

2.2 MACDs. Authorized User may also at any time request moves, additions, changes or disconnects ("MACD") to its Service including those requiring configuration management such as adding telephone numbers. The charge for remote configuration support and on-site configuration are shown in the Service Upgrades/MACD Pricing table in Exhibit A, "Service Fees".

3. Rental IP Device.

3.1 Delivery; Return. Delivery of the IP Device will be made by personal delivery by Supplier to the Authorized User location as identified in writing by Authorized User. Upon termination of Service, or when Authorized User replaces an IP Device with upgraded models, Authorized User must return terminated or replaced IP Device at its own expense within 15 calendar days of termination or replacement. Supplier will provide Authorized User with return instructions. Authorized User will deliver IP Device to Supplier in the same condition it was on the date provided, normal wear and tear excepted, and give Supplier written notice of such return. If the IP Device is not returned within 15 calendar days, Authorized User will become owner of and bear all responsibility for the terminated or replaced IP Device and Supplier may invoice Authorized User the then-current value of the applicable CPE model.

3.2 Ownership and Use. Except as provided in the "Delivery; Return" section, IP Devices are the personal property of Supplier, its designee or a third party provider, even if attached to Authorized User's real property or any improvements, and are held by Authorized User subordinate to the rights of Supplier. Authorized User will at its own expense, keep the IP Devices free of any encumbrances; and not alter or affix anything to the IP Devices, except as approved by Supplier in writing. Supplier may inspect the IP Devices at any time. Following delivery, Authorized User bears the entire risk of loss or damage to the IP Device from any cause, until returned to Supplier. Authorized User will advise Supplier in writing within five business days of any such loss. A loss will not relieve Authorized User of its payments obligations.

3.3 Insurance. At its own expense, after delivery of the IP Devices, Authorized User will either (a) maintain the following insurance: (i) "All-Risk" property insurance covering the IP Devices for full replacement value, naming Supplier or a Supplier-designated third-party provider as a loss payee; and (ii) commercial general liability insurance with limits of not less than $1,000,000 per occurrence and aggregate, naming Supplier by endorsement as an additional insured to the extent allowed by law. Such insurance will be placed with insurers who have a minimum "Best's" rating of A-VII (A-7) or (b) self insure the types and amounts of insurance listed above, provided, however, that such self insurance shall be subject to Authorized User's program of self insurance providing protections to Supplier at no less than those set forth above to the extent allowed by law. Upon request, Authorized User will provide insurance certificates evidencing such insurance if it has purchased insurance.

3.4 CPE Replacement Recovery Charge. Where an IP Device rented from Supplier is replaced due to loss or damage not covered by maintenance under this exhibit (for example, damage from accident, misuse or abuse), Authorized User will pay: (A) the Replacement Cost for the damaged IP Device, and (B) a one-time charge to cover Supplier's cost to ship the new IP Device. If Authorized User requires on-site assistance from Supplier to install the replacement IP Device, an additional dispatch charge will apply. Supplier will quote the charges in advance, obtain Authorized User's approval, and invoice the charges within 60 days. Authorized User is responsible for any claim for reimbursement from its insurance carrier. Replacement IP Devices may or may not be the same model.

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3.5 Maintenance and Configuration Changes. In some cases, Supplier may use repackaged IP Devices, or substitute IP Devices with another CPE device. IP Device maintenance is provided under Supplier's Pro-MET® Remote Standard maintenance and covers 8x5 next business day ("NBD") remote maintenance. Maintenance included with Service does not apply to routers, switches or other devices provided with Approved Connectivity.

3.6 Spare IP Devices. If Authorized User wishes to rent spare IP handsets or other IP Devices, additional MRCs and NRCs will be agreed upon by the parties on an individual case basis.

4. Term; Cancellation. Service at an Authorized User location will commence on the Start of Service Date for that location, and continue for the initial term in Exhibit A, "Service Fees" chosen by the Authorized User for that location ("Initial Term"). The Start of Service Date (as defined in Section 4.I of the Contract) and commencement of billing for Service will not depend on completion of telephone number porting. Upon the expiration of the Initial Term, Service will automatically renew on a month to month basis, unless Authorized User elects to cancel Service by providing written notice thereof at least 60 days prior to the conclusion of the then current Service term. Authorized User will remain liable for charges accrued but unpaid as of the cancellation date of Service, including charges for Service used by Authorized User or its end users if cancellation has been delayed for any reason, such as delays for porting Authorized User TNs to another carrier. If during the Initial Term, Service is canceled by Authorized User for reasons other than cause, or by Supplier for cause, such that the number of seats installed at the end of a month is 25% less than the number of seats installed the immediately preceding month, Authorized User will also pay to Supplier a "Cancellation Charge" equal to: (a) the amount of any NRC discount or waiver that Supplier granted to Authorized User for the canceled Service if the cancellation occurs before the end of the Initial Term; (b) 100% of the balance of the MRCs of the canceled Service that otherwise would have become due for the unexpired portion of the first six months after the Start of Service Date; and (c) 35% of the balance of the MRCs of the canceled Service that otherwise would have become due for the unexpired portion of the Initial Term other than during the first six months after the Start of Service Date.

5. Charges. Charges for the Service are as set forth in the Exhibit A, "Service Fees". Service will remain taxed based on the PPU locations where Authorized User utilizes Service, and not on a temporary Supplier-Approved 911 Location.

6. SLA. Service is subject to the Supplier Hosted VoIP Service Level Agreement attached to Exhibit B, "Service Requirements". All other services, facilities, and components relating to the Hosted VoIP Service, including without limitation any CPE, the Authorized User environment, routers, customer premise switches and routers, devices used with the Service, another carrier's IP network, and the PSTN are not included in the SLA measurement.

7. 911 Emergency Service. *By VITA signing the Contract or an Authorized User issuing a TSO, Authorized User acknowledges that Supplier has advised it of the 911 limitations set forth in this Service Exhibit, that Authorized User understands this information, and that Authorized User accepts the Service with these limitations.*

WARNING **POTENTIALLY HAZARDOUS SITUATION WHICH IF NOT AVOIDED COULD RESULT IN DEATH OR SERIOUS INJURY. PLEASE READ CAREFULLY.**

7.1 ***Required Federal Communications Commission ("FCC") Warning.*** *The FCC requires that Supplier inform Authorized User of potential limitations to 911 services using Hosted VoIP Service. The Service provides access to 911 emergency service only on stationary devices (and not mobile devices). The Service does not support any outgoing calls, including calls to 911 emergency service from Hosted VoIP seats that are not associated to a stationary IP enabled device (e.g, from Voice Mail Only Seats), unless another telephony device from which the call can be originated via the end user Portal is used. 911 emergency services will not be available or may not function properly (e.g., they may not route to the correct public safety answering point or "PSAP") under the following circumstances: (a) if the Service is used at a location other than a Supplier-Approved 911 Location in the United States (not including U.S. territories), or if an IP-enabled stationary device is moved within the Supplier-Approved 911 Location and not reconfigured; (b) if Authorized User selects a telephone number that is not associated with the geographic area of the installed service (e.g., if Authorized User chooses a California number for use in a Colorado location); (c) for initial installation of Service – on average 5 days, but for as long as 30 days after installation of Service due to time required to update 911 databases with customer information; (d) for use of Service at a temporary location – until Supplier has completed the 911 Update Interval and sent the 911 Update Confirmation to Authorized User's e-mail address of record. "911 Update Interval" is approximately 15 minutes, unless further address verification is required, in which case the 911 Update Interval could be up to 72 hours (**Important:** Authorized User and end users should always check for the 911 Update Confirmation before using 911 service after a temporary move); (e) if the Service fails or degrades for any reason, such as failures resulting from power outages, CPE failure (e.g., Internet connectivity routers, Authorized User's data network and equipment, Authorized User premises switches and routers, phones, handsets, Soft Phones, and other IP-enabled devices), cable cuts, or any Service or broadband outage or degradation (including without limitation, failures caused by suspension or termination of the Service); (f) while maintenance work is being performed; or (g) if Authorized User's area does not have 911 emergency service. Additionally, Supplier does not support Remote SCAs on IP devices used with the Service. If a Remote SCA is enabled, and Authorized User or an end user make a 911 call from the Remote SCA line, the 911 call will incorrectly route to the PSAP associated with the 911 location of the telephone number assigned to the Remote SCA, and not to the 911 location of the calling party. For example, if an end user has a Remote SCA for a colleague in Chicago on a phone located in San Francisco, and end user in San Francisco places a 911 call on the Remote SCA line, emergency services will be routed to the 911 location in Chicago associated with the phone number of the Remote SCA, not to the 911 location in San Francisco.*

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7.2 ***Additional Information Regarding the Limitations of 911 Services.*** *When dialing 911 with the Service, end users should always state the nature of the emergency, and include end user location and number. The default PSAP may not be able to call the end user back if the call is not completed, is dropped or is disconnected, or if end user is unable to tell the PSAP their number and physical location. The PSAP to which the call is directed will be based on the street address and calling party number for the Supplier-Approved 911 Location. The 911 emergency service provided is Enhanced 911 emergency service in that the calling party number will be delivered to the PSAP with the 911 call and the PSAP will have the Supplier-Approved 911 Location associated with that calling party number. End user's Supplier-Approved 911 Location may not sufficiently pinpoint the specific location of the emergency; therefore, end users must immediately tell the dispatcher the specific location of the emergency so the PSAP can locate the end user and assist with the emergency.*

CENTURYLINK RECOMMENDS THAT CUSTOMER AND END USERS ALWAYS HAVE AN ALTERNATIVE MEANS OF ACCESSING TRADITIONAL 911 SERVICES.

7.3 ***No Privacy Rights.*** *Authorized User acknowledges that there is no right of privacy with respect to the transmission of number, name, or address when the Service is used to access 911 or other numbers used in conjunction with 911 or similar emergency services, either by Authorized User or end users.*

7.4 ***Authorized User Must Notify end users of 911 Limits.*** *Authorized User will notify all end users (a) of the limitations on access to 911 emergency service described in this Service Exhibit; and (b) that access to 911 emergency service and an appropriate PSAP is only available at the Supplier-Approved 911 Location and is not available using an IP enabled mobile device. Supplier will provide labels that will indicate that 911 service has limited availability and functionality when used with Hosted VoIP, and Supplier recommends that the labels be placed on or near the equipment associated with the Services. Additionally, when Authorized User end users use a soft phone with Supplier-provided VoIP services, a 911 warning will appear on the soft phone device. The end user will need to click on the display to acknowledge the warning. Authorized User should direct its end users to the following URL to review these 911 Emergency Service limitations: http://www.centurylink.com/legal/hostedvoip/911advisory.pdf.* Supplier expressly retains the right to assert any immunity defenses and other defenses available to it against any party bringing a claim associated with lack of access to 911 emergency service, including without limitation those defenses under Va. Code Ann §56-484.24 and 47 USC §615a.

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1. Service.

1.1 Description. This Service enables Authorized Users to conduct telephone conferences with multiple parties in multiple locations. Service includes Reservationless, Passcode, Operator Assisted, Event, and CenturyLink Web Conferencing. Authorized User has access to Supplier's Service and support 24 hours a day 7 days a week. Supplier provides Service both domestically and internationally from select equipment locations.

1.2 Types.

(a) Reservationless. On-demand audio conferencing product that is available to moderators and participants 24 hours a day, 7 days a week, 365 days a year, without a reservation. Moderators are provided a dedicated dial-in number and passcodes. Moderators open and close their own calls. Reservationless service is limited to 300 participant lines.

(b) Reservationless GlobalMeet Audio. For international moderators or domestic calls with international participants requiring Reservationless services that include local access numbers (LDD) and international toll free (ITF) numbers in countries around the globe. GlobalMeet Reservationless service is limited to 300 participant lines. LoCall numbers are non-geographic numbers within a country. LoCall numbers can be dialed from any location within a country, including fixed and mobile lines.

(c) CenturyLink Web Conferencing. An online meeting service that enables real-time interaction and sharing of data over the Web by moderators and participants during a conference. CenturyLink Web Conferencing is integrated with Reservationless Audio, and can also be used as a stand-alone product. CenturyLink Web Conferencing is limited to 125 participant lines.

(d) Passcode. A moderator must reserve a Passcode audio conference. The call is opened automatically when the moderator enters the passcode. Passcode service is limited to 300 participant lines.

(e) Operator Assisted. A moderator must reserve an Operator Assisted audio conference. The call is opened by an operator. The operator then leaves the conference and is available upon request by touch tone command. Recommended capacity is up to 50 lines. Larger capacity is possible, though not recommended because all lines in conference are live/not muted.

(f) Event Auditorium. An audio call that must be reserved and requires passcode entry. After passcode is entered, the participant is placed into conference. The call is monitored by an operator who attends the entire conference. All participant lines are muted. Audio Q&A is available and managed by the operator. Event Auditorium is limited to 4,000 participants.

(g) Event. An audio call that must be reserved. Participants are answered by a live operator. The call is monitored by an operator who attends the entire conference. Call capacity may be thousands of participants. All participant lines are muted. Audio Q&A is available and managed by the operator.

(h) Bridge. Equipment that mixes multiple audio inputs and feeds back composite audio to each station after removing the individual station's input. This equipment may also be called a mix-minus audio system.

(i) Transport. The long distance portion of the call.

1.3 Access Descriptions. Supplier provides a number of domestic and international access arrangements to bridging services. Access to/from bridging equipment located in the 48 contiguous U.S. Access locations include U.S. and territories and Canada.

(a) Toll – A moderator or participant may access any call by dialing the assigned toll number. The moderator or participant will incur any applicable transport charges.

(b) Toll-free - A moderator or participant may access a call where toll-free access is available. The moderator will incur the applicable toll-free charges. Toll-free access is available from the U.S., the U.S. territories, and Canada.

(c) Local Access - In-Country Local Access is a non-North American toll number assigned to a specific country and bridge intended to provide local access to participants within the specific country. Some countries may not accept new orders and some may not accept portability orders.

(d) ITFS - A toll-free number dialed from a particular country, and terminating in the U.S.. Each country uses a unique number. ITFS is available in international locations. Some countries may not accept new orders and some may not accept portability orders.

(e) Dial-out - An operator or the moderator dials a moderator or participant from the bridge. The moderator will be charged appropriate domestic or international dial-out rates.

(f) Dial-me - A moderator or participant dials himself or herself from CenturyLink Web Conferencing. The moderator will be charged the appropriate domestic or international dial-out rates.

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(g) VoIP (Softphone) – A moderator or participant has the conference bridge call their computer rather than land line.

1.4 Optional Features. Optional Features are available on request and require an additional fee set forth in Exhibit A, "Service Fees".

(a) Reservationless, GlobalMeet and Passcode Optional Features:

(i) Audio Recording – The moderator presses touchtone telephone commands to begin recording the call. The moderator presses touchtone commands again to stop recording the call. Additional line in conference per minute charge applies. The recording is provided as a .wav or mp3 file that can be downloaded and hosted by Authorized User or as a CD sent via normal delivery (U.S. mail) to mailing address for the account holder.

(ii) Remote Replay – The digital audio recording of a conference can be made available for playback 24 hours a day, 7 days a week, for as long as scheduled. Playback results in a per minute charge for each participant that accesses the recording.

(iii) Transcription - Conferences can be transcribed for participants in written format and delivered via email or CD.

(iv) Custom Greetings - Custom recordings in lieu of the generic greeting that participants hear when connecting to the conferencing service. Custom recordings may include but not limited to the company name or custom prompts. Available on Reservationless but not GlobalMeet.

(v) Dedicated Toll & Toll Free Access Numbers – Toll and toll free access numbers that are dedicated to Authorized User, and not shared with other companies. Dedicated numbers are available on Reservationless but not on GlobalMeet.

(b) Web Conferencing Optional Features:

(i) Web Recording – A synchronized presentation with audio, public chat, Web tours, application sharing, and annotations included. Web Recording is provided as a Windows Media or Real Audio format file that can be downloaded and hosted by Authorized User or as a CD sent via normal delivery (U.S. mail) to mailing address for the account holder.

(ii) Archive Hosting of Replay – Hosted Replay for 30 days; unlimited playbacks allowed. Can be viewed from within the account and have a forward option and password protection option.

(iii) Hosting Renewal Option – Archive hosting may be extended for an additional 30, 60, 90, 180, or 360 days.

(c) Operator Assisted Optional Features:

(i) Audio Recording – The operator records the call. Additional line in conference, per minute charge applies. The recording is provided as a .wav or mp3 file that can be downloaded and hosted by Authorized User or as a CD sent via normal delivery (U.S. mail) to mailing address for the account holder.

(ii) Remote Replay – The digital audio recording of a conference can be made available for playback, 24 hours a day, 7 days a week, for as long as required. Playback results in a per minute charge for each participant that accesses the recording.

(iii) No Show Fee – A per-line charge for lines that were reserved but not used. Allows for leeway of 10% of total reserved ports/ "no-shows" per call. No Shows are calculated as follows: Reserved Ports (minus) Maximum Concurrent Participant Ports (minus) Contracted Leeway (i.e.; free unused ports) = Billable Unused Participant Ports ("No Shows").

(iv) Participant List – A list of the names of the participants that attended the conference call.

(v) Operator Dial-out – Allows the operator to access an outside line to call a new participant and either place the participant into the conference or disconnect the participant.

(d) Event Optional Features include the Operator Assisted Optional Features in addition to the following:

(i) Event Auditorium:

(A) Click and Join – Online entry into Auditorium conferencing (captures participant list).

(B) Remote Replay Custom IVR – The set up charge for the first menu on an interactive voice response system for a participant to hear a replay. There are additional charges for additional menus.

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(C) Communication Line – An additional operator is on a private line with a representative of the moderator. The operator and representative can communicate about the number of participants, what participants to let in the call, and other details of the call. Additional Communication Lines may be added as required.

(D) Host Controls - Web based moderator controls that allow the moderator to:

1. Send private instructions to the operator or other support team members.

2. View who has joined the audio portion of an event call.

3. Screen and prioritize the queue during question and answer sessions.

4. View immediate tabulations of surveys conducted during the call.

(E) Basic RSVP Set Up (Web-based) - The set up of a web system that allows participants to register for Event and Investor Relations calls asking a standard set of questions. It includes creation of participant confirmation emails, and question ordering and the use of Authorized User logo on the website.

(F) Basic RSVP (up to 10 questions) - The use of the Basic RSVP system when a participant registers for an Event or Investor Relations call.

(G) Enhanced RSVP (up to 20 questions) - The use of the Enhanced or Custom RSVP system when a participant registers for an Event or Investor Relations call

(H) Phone RSVP support (in addition to Basic or Enhanced) - The ability for a participant to register for an Event or Investor Relations call using the telephone. Must be used in conjunction with Basic or Enhanced RSVP per-use fee.

(I) RSVP Reports (Supplier provided) - A report containing the registration information of participants using RSVP services

(J) Real Time RSVP Reporting (Web-based) - A web system to view the registration information of participants using RSVP services

(K) Broadcast E-Mail – The ability to email participants before or after the call

(L) Broadcast Fax – The ability to fax participants before or after the call.

(M) Broadcast Voice – The ability to call participants with a recorded message before or after the call.

(N) Dedicated Dial-in Numbers – Toll and toll free access numbers that are dedicated to Authorized User, and not shared with other companies.

(O) Polling Merge Report (Supplier provided) - Merging responses from a polling session during the Event or Investor Relations call with the participant information

(P) File Hosting – Unlimited downloads of the Polling Merge and / or Real Time RSVP reports

(Q) Translations – Conference can be translated into most foreign languages with 24-hour advance notice

(R) Transcription - Conferences can be transcribed for participants in written format and delivered via email or CD.

(S) Operator Stand-by - An additional operator who provides assistance for lost callers and/or participant assistance for callers entering incorrect passcodes.

(T) Presentation Management - Specialist coordinates rehearsals and provides presentation coaching and feedback.

(U) A la Carte Event Production Services – Any additional training or rehearsal sessions needed in conjunction with preparation for an Event Call.

(V) Creative Services - To design physical collateral for Authorized Users to enhance an Event call.

(W) Product Fulfillment - A per packet charge for producing a collection of presentation materials associated with a conference Event.

(X) Assembly/Modification - A per page charge for the collating and altering of the fulfillment packet associated with a conference Event.

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(Y) Event Basic Reports - Basic Event Reports is the pricing for a basic utilization report that captures all of the participants that dial into the replay.

(Z) Event Production

Event Content – Event consultants assist with materials that will be utilized as part of an event conference.
Expedite Fee – a fee charged for Event Production orders provided outside of the 15 days notice to schedule
After-hours Support - Weekdays After 9 pm and before 9 am ET, weekends & holidays
Event Reschedule Before Rehearsal – an Authorized User charge if the event is rescheduled prior to the rehearsal.
Event Reschedule After Rehearsal - an Authorized User charge if the event is rescheduled after the rehearsal.
Event Cancel Before Rehearsal – an Authorized User charge if the event is cancelled prior to the rehearsal.
Event Cancel After Rehearsal - an Authorized User charge if the event is cancelled after the rehearsal.
Event Recording Support – a scheduled session with Authorized User participants and speakers intended to record a session for future use. Includes assembly of the call, editing and coordination with Audio Production.

(ii) Event Audio Optional Features include Event Auditorium Optional Features in addition to the following:

(A) Pre-Recording Session – A call may be recorded ahead of time and then be played into the live conference for participants. Speakers may attend the live call to answer questions during Q&A.

(B) Custom Hold Music – Authorized User may choose music to be heard by the participants while they wait on hold for the conference to begin.

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CENTURYLINK IQ® DATA BUNDLE SOLUTIONS OFFER ATTACHMENT

This CenturyLink IQ® Data Bundle Solutions offer attachment ("Attachment") is subject in all respects to the domestic CenturyLink IQ® Networking Service Exhibit, the Local Access Service Exhibit, and the Contract.

1. CenturyLink IQ Data Bundle Solutions Descriptions. Different features are available with each Data Bundle type (collectively, "Data Bundle Solutions").

"Data Bundle Standard" is a combination of a CenturyLink IQ® Networking Internet, Private or Enhanced Port, Local Access Service, and eligible pre-configured Rental CPE with 8x5 or 24x7 maintenance. Data Bundle Standard includes 10 Rental CPE configuration changes per year.

"Data Bundle Pro" includes all Services and components offered in Data Bundle Standard, plus VPN Tunnel configuration, complex routing protocol configuration, NAT, PAT and DMZ configuration, and a 24 port or 8 port Ethernet switch with DS1 and 2xDS1 capacities.

2. Scope. The purpose of this Attachment is to offer bundle pricing ("Data Bundle Pricing") for the Services shown below. All other rate elements not specifically set forth in this Attachment are as stated in the Contract and Exhibits.

3. Eligibility and Restrictions. Authorized User must order all the applicable Service elements at the same time. Data Bundle Pricing will apply only if the Rental CPE is configured and installed specifically for use with the CenturyLink IQ Networking Port. Eligible Rental CPE is listed in the Rental CPE Section below. Data Bundle Pricing applies to CenturyLink IQ Networking Internet Ports, Private Ports, and Enhanced Ports at the following bandwidths: DS1 through 8xDS1, DS3, and Ethernet 5 Mbps and 10 Mbps through 100 Mbps in 10 Mbps increments ("Data Bundle Ports"). Ethernet Data Bundle Ports are only available with Data Bundle Pro and must use Ethernet Local Access ("ELA"). After the Service Term for each Data Bundle Solution is completed, the Services will continue on a month to month basis at the same rates.

4. Term. Authorized User must agree to use all the Services under each Data Bundle Solution for the minimum number of months associated with the Data Bundle Pricing selected ("Service Term"). Each Data Bundle Solution will have its own Service Term beginning on the Start of Service Date. Upon completion of the Service Term, the applicable Data Bundle Solution will continue until canceled by either party with 60 days' notice. If a Data Bundle Solution is canceled by Authorized User for any reason other than for cause or by Supplier for cause before the Service Term is completed, then Authorized User must pay Supplier the following Cancellation Charges: (a) 100% of the applicable Data Bundle Port's MRC multiplied by the number of months remaining in the first 12 months of the Service Term, if any; plus (b) 75% of the applicable Data Bundle Port's MRC multiplied by the number of months remaining to complete 24 months of the Service Term, if any; plus, if applicable, (c) 50% of the applicable Data Bundle Port's MRC multiplied by the number of months remaining to complete 36 months of the Service Term. In the event Authorized User cancels a Data Bundle and downgrades to a new Data Bundle, Authorized User and Supplier may negotiate on an individual case basis a reduction to the Cancellation Charge for the cancelled Data Bundle.

5. Upgrades.

5.1 Pro Upgrade; Managed Upgrade.

"Pro Upgrade" means Authorized User is eligible to upgrade from a Data Bundle Standard to a Data Bundle Pro at the same bandwidth level at any time during the Service Term.

"Managed Upgrade" means that subject to availability, Authorized User is eligible to migrate a Data Bundle Solution to a Managed Data Bundle, which is available under a separate offer, as a Bandwidth Upgrade.

For purposes of this Section, Pro Upgrades, and Managed Upgrades are collectively referred to as "Upgrades." Upgrades must begin a new 24 or 36 month Service Term at the time of the Upgrade. All Upgrades are subject to the Upgrade NRC, must occur during the Service Term, must keep the same hardware type (i.e., Upgrades cannot switch between ADTRAN and Cisco brands), and have the same or longer Service Term. Supplier will waive the Data Bundle Port Cancellation Charges if the Data Bundle Solution remains at the same Service Address (as defined in the Local Access Service Exhibit) and the Upgrade solution does not use ELA for Local Access. Authorized User cannot upgrade an ELA solution to an NxDS1 or DS3 speed. If necessary, Authorized User's existing Rental CPE may be replaced to support the higher bandwidth level or a different bundle type (e.g., Standard to Pro). If there is a replacement, the existing Rental CPE associated with Authorized User's initial Data Bundle Solution must be returned within 15 calendar days after the new Rental CPE installation. The NRC below will be charged in addition to the new MRC associated with the upgraded Data Bundle Solution.

5.2 Maintenance Upgrade. Authorized User may upgrade a Data Bundle Solution with 8x5 Maintenance to a Data Bundle Solution with 24x7 on-site maintenance (Pro-MET® On-Site Premium Service) without restarting a new Service Term, provided that: (a) Authorized User's location and Rental CPE device qualifies; (b) Authorized User keeps the same bundle type and the same bandwidth; (c) Authorized User pays the Upgrade NRC; and (d) Authorized User pays the MRCs for the applicable Data Bundle Solution with 24x7 on-site maintenance going forward.

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5.3 Upgrade NRC.

Description	Promo code	NRC
Upgrade NRC	iQBundleUPGR	$275.00

6. Moves and Relocation.

6.1 Moves. Authorized User may move a Data Bundle Solution to a different Service Address within the same wire center ("Move") (also referred to as a "Local Loop change" in the Local Access Service Exhibit) without restarting the Service Term and without incurring a Cancellation Charge if Authorized User keeps the same bundle type and the same bandwidth at the new Service Address. Authorized User must submit notice to Supplier at least 30 days before the requested Move date so that Supplier can update the maintenance service address associated with the Move. Local Access ancillary charges may apply.

6.2 Relocation. Authorized User may relocate a Data Bundle Solution to a Service Address outside of the existing Local Access circuit's wire center ("Relocation"), (also referred to as a "Local Loop Move" in the Local Access Service Exhibit) if: (a) the new Service Address is within the United States; (b) the Data Bundle Solution has been installed at the original Service Address for a minimum of 12 months; (c) Authorized User submits the order for Service at the new Service Address and the disconnect order for Service at the old Service Address at the same time; (d) Authorized User orders a Bandwidth Upgrade, a Pro Upgrade, or the same Data Bundle Solution as the pre-Relocation Data Bundle Solution; (e) Authorized User restarts a Service Term at the new Service Address with a Service Term that is at least as long as the original Service Term at the old Service Address; and (f) Authorized User pays the Upgrade fee and follows the standard Upgrade processes set forth in the Upgrades Section above, if applicable. Local Access ancillary charges may apply. If the pre-Relocation Data Bundle Solution had 24x7 on-site maintenance (Pro-MET® On-Site Premium Service), Authorized User must verify if 24x7 on-site maintenance is available at the new Service Address. If 24x7on-site maintenance is not available at the new Service Address, Authorized User may order a Data Bundle Solution with standard 8x5 next business day maintenance at the new Service Address. Supplier may require Authorized User to continue using the original Rental CPE device at Authorized User's new Service Address if Supplier determines that new or different Rental CPE is not necessary. If Authorized User requires on-site assistance from Supplier to install the Rental CPE at the new Service Address, an additional dispatch fee will apply.

(a) Relocation Cancellation Charges. Supplier will waive the Data Bundle Port Cancellation Charges for qualified Relocation orders.

7. Pricing and Services.

7.1 Data Bundle Pricing. Data Bundle Solution pricing tables are located in Exhibit A, "Service Fees". The Data Bundle Port MRC includes the MRCs for the Data Bundle Port and Rental CPE.

7.2 CenturyLink IQ Networking Service.

(a) End-to-End Performance Reporting. If Authorized User orders a new Private Port or Enhanced Port Bundle Solution, Supplier will provide CenturyLink IQ Networking End-to-End Performance Reporting for new and existing Private Port or Enhanced Port Data Bundle Solutions. Supplier will waive End-to-End Performance Reporting MRCs.

7.3 Rental CPE. In some cases, Supplier may use repackaged Rental CPE, or substitute the Rental CPE shown below with another CPE device at Supplier's discretion. Rental CPE maintenance is provided under the terms and conditions of the applicable Detailed Description: 8x5 NBD maintenance uses Pro-MET® Remote Standard Service; and 24x7on-site maintenance uses Pro-MET® On-Site Premium Service. Authorized User's location must qualify for Data Bundle Solutions with Pro-MET® On-Site Premium Service. Authorized User may request password access for Rental CPE. If Supplier grants password access to Authorized User, Authorized User waives any claim against Supplier or the manufacturer for maintenance, configuration support, repair, loss, or damage to the Rental CPE device if a problem is caused by Authorized User's acquisition of the password. Supplier will no longer provide any CPE configuration assistance and any Authorized User requests for CPE configuration assistance after obtaining password access will be at Supplier's then-current time and material rates. Authorized User will not be entitled to any SLA service credits. Upon completion of the Service Term, Authorized User may purchase the applicable Rental CPE devices at the fair market value. If Authorized User chooses to purchase the Rental CPE devices, Authorized User must notify Supplier of its intention to purchase the Rental CPE devices at least 60 days before the end of the Service Term, and Authorized User must purchase the Rental CPE devices on an "as-is and where-is" basis, with no representations or warranties of any kind, including no warranties of merchantability or fitness for a particular purpose. Title and responsibility of the applicable Rental CPE devices will immediately transfer to Authorized User upon Supplier's receipt of payment. Once Authorized User assumes ownership of the applicable Rental CPE device (the "Purchased CPE"), Supplier will no longer provide maintenance support or any configuration changes. Authorized User will be responsible for purchasing or providing any separate maintenance for all Purchased CPE. Authorized User is also responsible for proper disposal of all Purchased CPE, and hereby releases Supplier from all and any liability relating in any way to the Purchased CPE. The following table shows the eligible Rental CPE that may be used with each Port speed and Data Bundle Solution type.

Eligible Rental CPE available with all Data Bundle Port Types (Internet, Private and Enhanced)							
	DS1	2xDS1	3xDS1	5xDS1	With ELA:		With ELA:

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Bundle Types			**4xDS1**	**6xDS1 7xDS1 8xDS1**	**5 Mbps and 10 – 50 Mbps***	**DS3**	**60 - 100 Mbps***
Data Bundle Standard	ADTRAN 3430	ADTRAN 3430	ADTRAN 3450	ADTRAN 4430	N/A	ADTRAN NV5305	NA
Data Bundle Pro	ADTRAN 3448	ADTRAN 3458	ADTRAN 4430	ADTRAN 4430	ADTRAN 3430	ADTRAN NV5305	ADTRAN NV3450
Data Bundle Standard	Cisco 1941	Cisco 1941	Cisco 2911	Cisco 2921	N/A	Cisco 2951	NA
Data Bundle Pro	Cisco 2901	Cisco 2901	Cisco 2911	Cisco 2921	Cisco 891	Cisco 2951	Cisco 1921

*Bandwidths increase in10 Mbps increments.

7.3.1 Delivery and Return. CPE will be delivered to Authorized User's location as identified, in writing, by Authorized User. Delivery will be made by personal delivery by Supplier. CPE will be installed as designated herein, or as otherwise agreed upon by the parties. Upon termination of Service, or when Authorized User replaces CPE with upgraded models, Authorized User must return terminated or replaced CPE at its own expense within 15 calendar days of termination or replacement. Supplier will provide Authorized User with return instructions. Authorized User will deliver CPE to Supplier in the same condition it was when first delivered, normal wear and tear excepted, and give Supplier written notice of such return. If CPE is not returned within 15 calendar days of termination, Authorized User will become owner of and bear all responsibility for the terminated or replaced CPE and Supplier may invoice Authorized User the then-current value of the applicable CPE model ("Replacement Cost").

7.3.2 Ownership and Use. Except as provided herein, CPE is the personal property of Supplier, its designee or a third party provider, notwithstanding that the CPE, or any part thereof, may be affixed or attached to Authorized User's real property or any improvements thereon. Authorized User has no right or interest to the CPE other than as provided herein and will hold the CPE subject and subordinate to the rights of Supplier. Authorized User will: (a) at its own expense, keep the CPE free and clear of any claims, liens, and encumbrances of any kind; and (b) make no alterations or affix any additions or attachments to the CPE, except as approved by Supplier in writing. Authorized User will not remove, alter or destroy any labels on the CPE and will allow Supplier the inspection of the CPE at any time. As between Supplier and Authorized User, Authorized User will bear the entire risk of loss, theft, casualty, destruction or damage to the CPE following delivery from any cause whatsoever (collectively, "Loss"), until returned to Supplier. Authorized User agrees to advise Supplier in writing within five business days of any such Loss. In no event will such Loss relieve Authorized User of the obligation to pay Supplier any amounts due hereunder.

7.3.3 Software. Software licensor has retained title to the software. To the extent possible, Supplier grants Authorized User a software license or sublicense in the software according to the licensing Contract accompanying such software, which extends only to Authorized User's own internal business use of such software and only on or with the designated CPE. Software must be held in confidence and may not be reproduced unless specifically authorized by the software licensor. Authorized User is prohibited from reverse engineering, decompiling or disassembling the CPE or otherwise attempting to derive the source code of the software. All CPE is subject to the terms and conditions set forth in the manufacturer's or publisher's warranty or end-user license.

7.3.4 Insurance. Authorized User will, provide and maintain, at Authorized User's own expense, at all times following delivery of the CPE, either (i) the following insurance: (a) "All-Risk" property insurance covering the CPE for the full replacement value, naming Supplier or a third party provider designated by Supplier as a loss payee; and (b) commercial general liability insurance with limits of not less than $1,000,000 per occurrence and aggregate and naming Supplier as an additional insured to the extent allowed by law or (ii) or (b) self insure the types and amounts of insurance listed above, provided, however, that such self insurance shall be subject to Authorized User's program of self insurance providing protections to Supplier at no less than those set forth above to the extent allowed by law. Any insurance will be placed with insurers who have a minimum "Best's" rating of A- VII (A- 7). Upon request, Authorized User will deliver to Supplier insurance certificates evidencing such insurance if it has purchased insurance.

7.3.5 CPE Replacement Recovery Charge. Where CPE rented from Supplier is replaced due to loss or damage not covered by maintenance (for example, damage from accident, misuse or abuse), Authorized User will pay: (a) the Replacement Cost for the damaged CPE, and (b) a one-time charge to cover Supplier's cost to ship the new CPE. If Authorized User requires on-site assistance from Supplier to install the replacement CPE, an additional dispatch charge will apply. Supplier will quote the charges in advance, obtain Authorized User's approval, and invoice the charges within 60 days. Authorized User is responsible for any claim for reimbursement from its insurance carrier. Replacement CPE may or may not be the same model.

7.4 Local Access Service. Local Access MRCs are set forth in Exhibit A, "Service Fees" in the Local Access portions of that exhibit. Local Access Service options include CenturyLink Provided Special Access or ELA circuits, Cross Connect Special Access or ELA circuits, or Authorized User Provided Access ("CPA") Special Access or ELA circuits. If Authorized User uses CPA Special or Ethernet Local Access or Cross Connect Special or Ethernet Local Access, Authorized User must ensure that the CPA or Cross Connect Access is compatible with Supplier's existing networking infrastructure and equipment, including the Data Bundle Solution router. Supplier will waive the Local Access installation NRC. Supplier will not waive any special construction fees or other ancillary fees.

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8. Add-On Connection. Authorized User may add optional, Supplier-approved CPE cards as shown below ("Add-On Connection Cards") to certain Rental CPE devices if the following conditions are met: (a) the Rental CPE is associated with Data Bundle Pro; (b) there is an available slot in the Rental CPE; (c) Authorized User purchases the Add-On Connection Card through Supplier; and (d) the Add-On Connection Card is from the same manufacturer as the Rental CPE. Authorized User must purchase Add-On Connection Cards through a separate Supplier Service Exhibit and with separate charges. Authorized User may purchase Add-On Connection Cards at the same time as the initial order for Data Bundle Pro or at anytime during the Service Term. Authorized User understands that Add-On Connection Cards are not covered under Rental CPE maintenance SLAs. Supplier will drop-ship Add-On Connection Cards to Authorized User. Authorized User may choose to receive on-site installation through Supplier (under a separate Service Exhibit and with separate charges), or Authorized User may choose to install the Add-On Connection Cards. If Authorized User installs any Add-On Connection Cards, Authorized User must follow Supplier-provided directions on how to install the Add-On Connection Cards, including turning down all power on the Rental CPE while inserting the Add-On Connection Card and then power-cycling back up, and Authorized User waives any claim against Supplier or the Add-On Connection Card's manufacturer for maintenance, repair, loss, or damage to the Rental CPE. Supplier will support additional configurations for Add-On Connection Cards as part of the 10 configuration changes per year associated with the Rental CPE. If Rental CPE is returned for any reason, Authorized User must remove the Add-On Connection Card from the original Rental CPE device before shipping the Rental CPE back to Supplier and/or Supplier associated vendor. Supplier is not responsible for the loss of any Add-On Connection Cards, including but not limited to instances where Authorized User leaves an Add-On Connection Card in the original Rental CPE device and ships it to Supplier.

CenturyLink IQ Data Bundle Pro Rental CPE Routers that Support Add-On Connection Cards	
Router	**CenturyLink IQ Data Bundle Bandwidth**
Cisco 2901	DS1
Cisco 2901	2xDS1
Adtran 3450 and Cisco 2911	3xDS1 and 4xDS1
Adtran 4430 and Cisco 2921	5xDS1 through 8xDS1
Adtran 3430	5 Mbps, and 10 Mbps through 50 Mbps ELA in 10 Mbps increments
Adtran 5305 and Cisco 2951	DS3
Adtran 3450 and Cisco 1921	60 Mbps through 100 Mbps ELA in 10 Mbps increments

Supplier-approved Add-On Connection Cards	
Cisco	**ADTRAN**
WIC-DS1-T1-V2	T1 NIM
VWIC2-2MFT-T1/E1	Dual T1 NIM
NM-1 T3/E3	Octal T1 Wide Mod
HWIC-D-9ESW	DS3 Wide Mod

(a) Replacement Program. Supplier offers an optional replacement program for Add-On Connection Cards where Supplier will replace a defective Add-On Connection Card within 15 business days after Supplier and Authorized User mutually determine that the Add-On Connection Card should be replaced. The replacement program will no longer apply if Authorized User purchases the Rental CPE device. The NRC for the replacement program is set forth below.

Description	**NRC**
Add-On Connection Card Replacement Program	$50 per Add-On Connection Card

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This Managed Data Bundle offer attachment ("Attachment") is subject in all respects to the domestic CenturyLink IQ® Networking Service Exhibit, the Local Access Service Exhibit, the NMS Service Exhibit and the Contract.

1. Definitions.

"Managed Data Bundle" is a combination of a CenturyLink IQ® Networking Internet, Private or Enhanced Port, Local Access Service, Eligible Rental CPE (ADTRAN® or Cisco®), and Network Management Service ("NMS") Select Management or Comprehensive Management. NMS Select Management and Comprehensive Management provide Rental CPE configuration changes, 24x7 real-time monitoring, pro-active notification of problems or potential problems, and online reporting of the Rental CPE.

2. Scope. The purpose of this Attachment is to offer bundle pricing ("Managed Data Bundle Pricing") for the Services shown below. All other rate elements not specifically set forth in this Attachment are as stated in the Contract and Service Exhibits.

3. Eligibility and Restrictions. Authorized User must order all the applicable Service elements and Rental CPE in the bundles shown below at the same time. Managed Data Bundle Pricing will apply only if the Rental CPE is configured and installed specifically for use with the CenturyLink IQ Networking Port. Eligible Rental CPE is listed in the Rental CPE Section below. Eligible Rental CPE must be remotely managed by Supplier using NMS. Managed Data Bundle Pricing applies to CenturyLink IQ Networking Internet Ports, Private Ports, and Enhanced Ports at the following bandwidths: DS1 through 8xDS1, DS3, and Ethernet 5 Mbps and 10 Mbps through 100 Mbps in 10 Mbps increments ("Managed Data Ports"). Ethernet Managed Data Ports must use Ethernet Local Access ("ELA"). After the Service Term for each Service bundle is completed, the Services will continue on a month to month basis at the same rates.

4. Term. Authorized User must agree to use all the Services under each Managed Data Bundle for the minimum number of months associated with the Managed Data Bundle Pricing selected ("Service Term"). Each bundle will have its own Service Term, beginning on the Start of Service Date. Upon completion of the Service Term, the applicable Managed Data Bundle solution will continue until canceled by either party with 60 days' notice. If a Managed Data Bundle solution is canceled by Authorized User for any reason other than for cause or by Supplier for cause before the Service Term is completed, then Authorized User must pay Supplier the following Cancellation Charges: (a) 100% of the applicable Managed Data Port's MRC multiplied by the number of months remaining in the first 12 months of the Service Term, if any; plus (b) 75% of the applicable Managed Data Port's MRC multiplied by the number of months remaining to complete 24 months of the Service Term, if any; plus, if applicable, (c) 50% of the applicable Managed Data Port's MRC multiplied by the number of months remaining to complete 36 months of the Service Term. In the event Authorized User cancels a Managed Data Bundle and downgrades to a new Managed Data Bundle or Data Bundle, Authorized User and Supplier may negotiate on an individual case basis a reduction to the Cancellation Charge for the cancelled Managed Data Bundle.

5. Upgrades.

"Managed Upgrade" means Authorized User may upgrade an existing Data Bundle Standard or a Data Bundle Pro to a Managed Data Bundle at the same bandwidth level or as a Bandwidth Upgrade. Authorized User may upgrade from an existing Data Bundle Pro to a Managed Data Bundle at the same bandwidth without restarting a new Service Term for the upgraded Managed Data Bundle.

5.1 For purposes of this Section, and Managed Upgrades are referred to as "Upgrades." Upgrades must begin a new 24 or 36 month Service Term at the time of the Upgrade, except for Managed Upgrades from a Data Bundle Pro to a Managed Data Bundle. All Upgrades are subject to the Upgrade NRC, must occur during the Service Period, must keep the same hardware type (i.e., Upgrades cannot switch between ADTRAN and Cisco brands), and have the same or longer Service Term. Supplier will waive the Managed Data Port (or Data Bundle Port, if applicable) if the Managed Data Bundle remains at the same Service Address (as defined in the Local Access Service Exhibit) and the Upgrade solution does not use ELA for Local Access. Authorized User cannot upgrade an ELA solution to a NxDS1or DS3 speed. If necessary, Authorized User's existing Rental CPE may be replaced to support the higher bandwidth level. If there is a replacement, the existing Rental CPE associated with Authorized User's initial Managed Data Bundle must be returned within 15 calendar days after the new Rental CPE installation. The NRC below will be charged in addition to the new MRC associated with the upgraded Managed Data Bundle.

5.2 Authorized User may upgrade a Managed Data Bundle with 8x5 NBD Maintenance to a Managed Data Bundle with 24x7 on-site maintenance (Pro-MET® On-Site Premium Service) without restarting a new Service Term, provided that: (a) Authorized User's location and Rental CPE device qualifies; (b) Authorized User keeps the same bundle type and the same bandwidth; (c) Authorized User pays the Upgrade NRC; and (d) Authorized User pays the MRCs specified in the applicable Managed Data Bundle with 24x7 on-site maintenance going forward.

5.3 Upgrade NRC.

Description	Promo code	NRC
Upgrade NRC	iQBundleUPGR	$275.00

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6. Moves and Relocation.

6.1 Moves. Authorized User may move a Managed Data Bundle to a different Service Address within the same wire center ("Move") (also referred to as a "Local Loop change" in the Local Access Service Exhibit) without restarting the Service Term and without incurring a Cancellation Charge if Authorized User keeps the same bundle type and the same bandwidth at the new Service Address. Authorized User must submit notice to Supplier at least 30 days before the requested Move date so that Supplier can update the maintenance service address associated with the Move. Local Access ancillary charges may apply.

6.2 Relocation. Authorized User may relocate a Managed Data Bundle to a Service Address outside of the existing Local Access circuit's wire center ("Relocation"), (also referred to as a "Local Loop Move" in the Local Access Service Exhibit) if: (a) the new Service Address is within the United States; (b) the Managed Data Bundle has been installed at the original Service Address for a minimum of 12 months; (c) Authorized User submits the order for Service at the new Service Address and the disconnect order for Service at the old Service Address at the same time; (d) Authorized User orders a Bandwidth Upgrade, or the same Managed Data Bundle solution as the pre-Relocation Managed Data Bundle; (e) Authorized User restarts a Service Term at the new Service Address with a Service Term that is at least as long as the original Service Term at the old Service Address; and (f) Authorized User pays the Upgrade fee and follows the standard Upgrade processes set forth in the Upgrades Section, if applicable. Local Access ancillary charges may apply. If the pre-Relocation Managed Data Bundle had 24x7 on-site maintenance (Pro-MET® On-Site Premium Service), Authorized User must verify if 24x7 on-site maintenance is available at the new Service Address. If 24x7on-site maintenance is not available at the new Service Address, then Authorized User may order a Managed Data Bundle with standard 8x5 next business day maintenance at the new Service Address. Supplier may require Authorized User to continue using the original Rental CPE device at Authorized User's new Service Address if Supplier determines that new or different Rental CPE is not necessary. If Authorized User requires on-site assistance from Supplier to install the Rental CPE at the new Service Address, an additional dispatch fee will apply.

(a) Relocation Cancellation Charges. Supplier will waive the Managed Data Port Cancellation Charges for qualified Relocation orders. Supplier will waive Local Access Cancellation Charges for Relocations of DS1 through 8xDS1 Managed Data Bundles only if Authorized User's Managed Data Bundle has been installed for 12 months or longer. Supplier will not waive Local Access Cancellation charges for Relocations of DS3 or Ethernet Managed Data Bundles.

7. Pricing and Services.

7.1 Managed Data Bundle Pricing. Managed Data Bundle pricing tables are located in Exhibit A, "Service Fees". The Managed Data Port MRC includes MRCs for Managed Data Ports, Rental CPE, and NMS Select Management or Comprehensive Management.

7.2 CenturyLink IQ Networking Service.

(a) End to End Performance Reporting. If Authorized User orders a new Private Port or Enhanced Port Managed Data Bundle, Supplier will provide CenturyLink IQ Networking End-to-End Performance Reporting for new and existing Private Port or Enhanced Port Managed Data Bundles. Supplier will waive End-to-End Performance Reporting MRCs.

7.3 Rental CPE. Authorized User may request up to 12 or 24 configuration changes per year, depending on whether Authorized User orders NMS Select Management or Comprehensive Management. In some cases, Supplier may use repackaged Rental CPE, or substitute the Rental CPE shown below with another CPE device at Supplier's discretion. Rental CPE maintenance is provided under the terms and conditions of the applicable Detailed Description: 8x5 NBD maintenance uses Pro-MET® Remote Standard Service; and 24x7on-site maintenance uses Pro-MET® On-Site Premium Service. Authorized User's location must qualify for Managed Data Bundle with Pro-MET® On-Site Premium Service. Upon completion of the Service Term, Authorized User may purchase the applicable Rental CPE devices at the fair market value. If Authorized User chooses to purchase the Rental CPE devices, Authorized User must notify Supplier of its intention to purchase the Rental CPE devices at least 60 days before the end of the Service Term, and Authorized User must purchase the Rental CPE device(s) on an "as-is and where-is" basis, with no representations or warranties of any kind, including no warranties of merchantability or fitness for a particular purpose. Title and responsibility of the applicable Rental CPE devices will immediately transfer to Authorized User upon Supplier's receipt of payment. Once Authorized User assumes ownership of the applicable Rental CPE device(s) (the "Purchased CPE"), Supplier will no longer provide maintenance support. NMS will continue on the Purchased CPE as part of the Managed Data Bundle package only if Authorized User purchases separate maintenance for all Purchased CPE. Authorized User is also responsible for proper disposal of all Purchased CPE, and hereby releases Supplier from all and any liability relating in any way to the Purchased CPE. The following table shows the eligible Rental CPE that may be used with each Port speed.

Eligible Rental CPE							
	DS1	**2xDS1**	**3xDS1** **4xDS1**	**5xDS1** **6xDS1** **7xDS1** **8xDS1**	**With ELA:** **5 Mbps and** **10 – 50 Mbps***	**DS3**	**With ELA:** **60 - 100** **Mbps***
Managed Data Bundle (ADTRAN)	ADTRAN 3448	ADTRAN 3458	ADTRAN 4430	ADTRAN 4430	ADTRAN 3430	ADTRAN NV5305	ADTRAN NV3450

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Managed Data Bundle (Cisco)	Cisco 2901	Cisco 2901	Cisco 2911	Cisco 2921	Cisco 891	Cisco 2951	Cisco 1921

*Bandwidths increase in10 Mbps increments.

7.3.1 Delivery and Return. CPE will be delivered to Authorized User's location as identified, in writing, by Authorized User. Delivery will be made by personal delivery by Supplier. CPE will be installed as designated herein, or as otherwise agreed upon by the parties. Upon termination of Service, or when Authorized User replaces CPE with upgraded models, Authorized User must return terminated or replaced CPE at its own expense within 15 calendar days of termination or replacement. Supplier will provide Authorized User with return instructions. Authorized User will deliver CPE to Supplier in the same condition it was when first delivered, normal wear and tear excepted, and give Supplier written notice of such return. If CPE is not returned within 15 calendar days of termination, Authorized User will become owner of and bear all responsibility for the terminated or replaced CPE and Supplier may invoice Authorized User the then-current value of the applicable CPE model ("Replacement Cost").

7.3.2 Ownership and Use. Except as provided herein, CPE is the personal property of Supplier, its designee or a third party provider, notwithstanding that the CPE, or any part thereof, may be affixed or attached to Authorized User's real property or any improvements thereon. Authorized User has no right or interest to the CPE other than as provided herein and will hold the CPE subject and subordinate to the rights of Supplier. Authorized User will: (a) at its own expense, keep the CPE free and clear of any claims, liens, and encumbrances of any kind; and (b) make no alterations or affix any additions or attachments to the CPE, except as approved by Supplier in writing. Authorized User will not remove, alter or destroy any labels on the CPE and will allow Supplier the inspection of the CPE at any time. As between Supplier and Authorized User, Authorized User will bear the entire risk of loss, theft, casualty, destruction or damage to the CPE following delivery from any cause whatsoever (collectively, "Loss"), until returned to Supplier. Authorized User agrees to advise Supplier in writing within five business days of any such Loss. In no event will such Loss relieve Authorized User of the obligation to pay Supplier any amounts due hereunder.

7.3.3 Software. Software licensor has retained title to the software. To the extent possible, Supplier grants Authorized User a software license or sublicense in the software according to the licensing Contract accompanying such software, which extends only to Authorized User's own internal business use of such software and only on or with the designated CPE. Software must be held in confidence and may not be reproduced unless specifically authorized by the software licensor. Authorized User is prohibited from reverse engineering, decompiling or disassembling the CPE or otherwise attempting to derive the source code of the software. All CPE is subject to the terms and conditions set forth in the manufacturer's or publisher's warranty or end-user license.

7.3.4 Insurance. Authorized User will, provide and maintain, at Authorized User's own expense, at all times following delivery of the CPE, either (i) the following insurance: (a) "All-Risk" property insurance covering the CPE for the full replacement value, naming Supplier or a third party provider designated by Supplier as a loss payee; and (b) commercial general liability insurance with limits of not less than $1,000,000 per occurrence and aggregate and naming Supplier as an additional insured to the extent allowed by law or (ii) self insure the types and amounts of insurance listed above, provided, however, that such self insurance shall be subject to Authorized User's program of self insurance providing protections to Supplier at no less than those set forth above to the extent allowed by law. Any insurance will be placed with insurers who have a minimum "Best's" rating of A- VII (A- 7). Upon request, Authorized User will deliver to Supplier insurance certificates evidencing such insurance if it has purchased insurance.

7.3.5 CPE Replacement Recovery Charge. Where CPE rented from Supplier is replaced due to loss or damage not covered by maintenance (for example, damage from accident, misuse or abuse), Authorized User will pay: (a) the Replacement Cost for the damaged CPE, and (b) a one-time charge to cover Supplier's cost to ship the new CPE. If Authorized User requires on-site assistance from Supplier to install the replacement CPE, an additional dispatch charge will apply. Supplier will quote the charges in advance, obtain Authorized User's approval, and invoice the charges within 60 days. Authorized User is responsible for any claim for reimbursement from its insurance carrier. Replacement CPE may or may not be the same model.

7.4 Network Management Service. Network Management Service includes NMS Select Management or Comprehensive Management.

7.5 Local Access Service. Local Access MRCs are set forth in Exhibit A, "Service Fees" in the Local Access portions of that exhibit. Local Access Service options include CenturyLink Provided Special Access or ELA circuits, Cross Connect Special Access or ELA circuits, or Authorized User Provided Access ("CPA") Special Access or ELA circuits. If Authorized User uses CPA Special or Ethernet Local Access or Cross Connect Special or Ethernet Local Access, Authorized User must ensure that the CPA or Cross Connect Access is compatible with Supplier's existing networking infrastructure and equipment, including the Managed Data Bundle router. Supplier will waive the Local Access installation NRC. Supplier will not waive any special Construction fees or other ancillary fees.

8. Add-On Connection. Authorized User may add optional, Supplier-approved CPE cards as shown below ("Add-On Connection Cards") to certain Rental CPE devices if the following conditions are met: (a) the Rental CPE is associated with the Managed Data Bundle; (b) there is an available slot in the Rental CPE; (c) Authorized User purchases the Add-On Connection Card through Supplier; and (d) the Add-On Connection Card is from the same manufacturer as the Rental CPE. Authorized User must purchase Add-On Connection Cards through a separate Supplier Service Exhibit and with separate charges. Authorized User may purchase Add-On Connection Cards at the same time as the initial order for a Managed Data Bundle or at anytime during the Service Term. Authorized User understands that Add-On Connection Cards are not covered under Rental CPE maintenance SLAs. Supplier will drop-ship Add-

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On Connection Cards to Authorized User. Authorized User may choose to receive on-site installation through Supplier (under a separate Service and with separate charges), or Authorized User may choose to install the Add-On Connection Cards. If Authorized User installs any Add-On Connection Cards, Authorized User must follow Supplier-provided directions on how to install the Add-On Connection Cards, including turning down all power on the Rental CPE while inserting the Add-On Connection Card and then power-cycling back up, and Authorized User waives any claim against Supplier or the Add-On Card's manufacturer for maintenance, repair, loss, or damage to the Rental CPE. Supplier will support additional configurations for Add-On Connection Cards as part of the 12 or 24 configuration changes per year associated with the Rental CPE. If Rental CPE is returned for any reason, Authorized User must remove the Add-On Connection Card from the original Rental CPE device before shipping the Rental CPE back to Supplier and/or Supplier associated vendor. Supplier is not responsible for the loss of any Add-On Connection Cards, including but not limited to instances where Authorized User leaves an Add-On Connection Card in the original Rental CPE device and ships it to Supplier. Pricing for the Add-On Connection Cards is separate and is not included in this Attachment.

Rental CPE Routers that Support Add-On Connection Cards	
Router	**Managed Data Bundle Bandwidth**
Cisco 2901	DS1
Cisco 2901	2xDS1
Adtran 4350and Cisco 2911	3xDS1 and 4xDS1
Adtran 4430 and Cisco 2921	5xDS1 through 8xDS1
Adtran 3430	5 Mbps, and 10 Mbps through 50 Mbps ELA in 10 Mbps increments
Adtran 5305 and Cisco 2951	DS3
Adtran 3450 and 1921	60 Mbps through 100 Mbps ELA in 10 Mbps increments

Supplier-approved Add-On Connection Cards	
Cisco	**ADTRAN**
WIC-DS1-T1-V2	T1 NIM
VWIC2-2MFT-T1/E1	Dual T1 NIM
NM-1 T3/E3	Octal T1 Wide Mod
HWIC-D-9ESW	DS3 Wide Mod

8.1 Replacement Program. Supplier offers an optional replacement program for Add-On Connection Cards where Supplier will replace a defective Add-On Connection Card within 15 business days after Supplier and Authorized User mutually determine that the Add-On Connection Card should be replaced. The replacement program will no longer apply if Authorized User purchases the Rental CPE device. The NRC for the replacement program is set forth below.

Description	**NRC**
Add-On Connection Card Replacement Program	$50 per Add-On Connection Card

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TELECOMMUNICATIONS SERVICE PRIORITY SERVICE EXHIBIT

1. Service. Telecommunications Service Priority allows Supplier to provision and restore Authorized User's telecommunications services which are used to maintain a state of readiness or to respond to and manage any event or crisis as set forth in 47 CFR Part 64, Appendix A with TSP Authorization Codes before services without such assignments. "TSP Authorization Code" means a 12-digit alphanumeric code issued by Office of Priority Telecommunications ("OPT") with the TSP control identifier and the TSP priority levels that identify the provisioning and restoration priority-level assignment for a particular circuit TSP Service is available on Supplier services that have a unique and identifiable circuit identification number. The Service is only provided per-circuit on an end-to-end basis where the entire circuit is provided by Supplier (i.e., Supplier provides both the interexchange service and the local access) so that the entire circuit is included in the TSP designation. The underlying NS/EP telecommunications service is offered pursuant to the terms and conditions of the Contract applicable to the service.

2. Ordering. Supplier will provide the Service in accordance with 47 CFR Part 64, Appendix A and if: (a) Authorized User provides Supplier with a valid TSP Authorization code issued by the OPT for each circuit, via a TSO; and (b) the TSO is accepted by Supplier. Supplier will not accept TSP assignments or orders without an assigned TSP Authorization Code. TSP restoration priorities must be requested and assigned via an TSO before a service outage occurs in order to have priority restoration.

3. Term; Cancellation. The Service will become effective upon Supplier's acceptance of an order form and will terminate upon Authorized User's written notice of termination to Supplier or OPT's revocation of the TSP Authorization Code. Service will automatically expire should Authorized User terminate the circuit. In the event Authorized User cancels Service, Authorized User will pay for the Service provided through the effective date of the cancellation.

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