

**ADDENDUM 5 TO APPENDIX 6 TO SCHEDULE 3.3
TO THE
COMPREHENSIVE INFRASTRUCTURE AGREEMENT
STATEMENT OF TECHNICAL APPROACH**

Statement of Technical Approach for Messaging Services

Northrop Grumman's approach will improve available messaging services, collaboration and workflow by transitioning from today's 40+ individual messaging implementations, based on multiple messaging platforms (Lotus Notes, Novell GroupWise, SendMail, Sun All-In-One, POP3, IMAP, and several versions of Microsoft Exchange) into a single, common platform based on Microsoft Exchange 2003 (except for continued support of SendMail).

Northrop Grumman will, in a phased approach, transition existing services into a centrally managed, secured, and proven architecture. Users will then be transitioned to the new messaging platform on a schedule that will make every effort to minimize disruption to agency and user productivity.

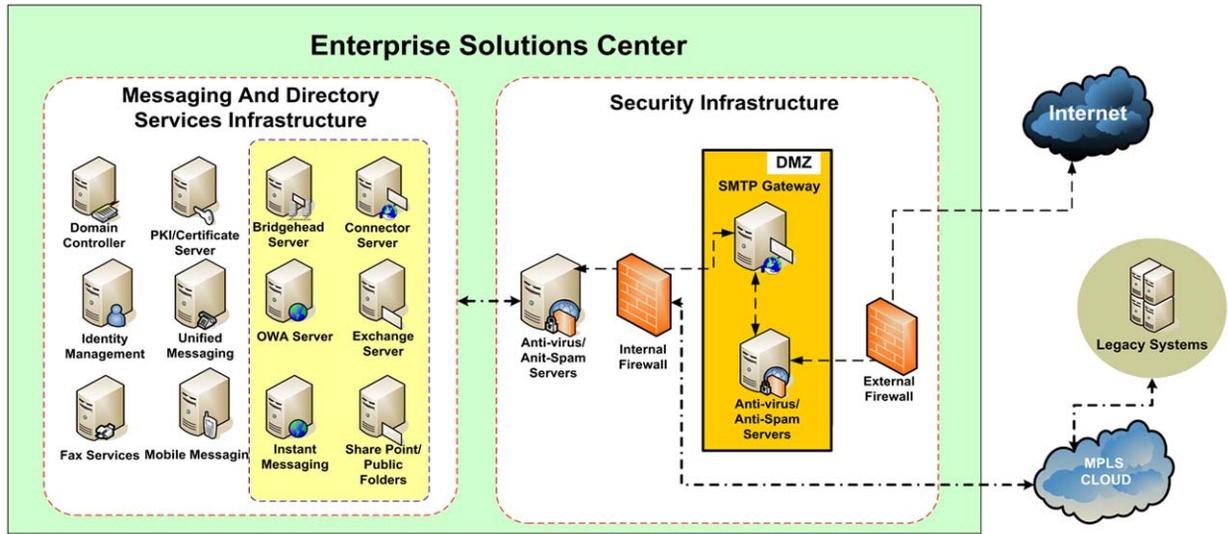
Northrop Grumman's technical approach focuses on the people and business components of transformation, guiding them through this change with as little disruption to their daily activities as possible. Northrop Grumman will publish targeted communications and perform change management activities for both users and employees. Northrop Grumman will deploy communications and organizational change management capabilities. Northrop Grumman's approach for messaging includes developing messaging-specific content for various communications channels (e.g., broadcast e-mail, public website), providing targeted information kits, and conducting agency outreach events.

Detailed Technical Approach for Messaging

Northrop Grumman's enterprise Exchange 2003 solution will collapse the individual islands of e-mail into a single e-mail system. Northrop Grumman will provide customers in the Executive Branch agencies with mailboxes in a single Exchange 2003 organization. The system will be scaled to initially support 67,000 users, based upon the 56,000 mailboxes found during due diligence discovery of 80% of the agencies, and in order to remain consistent with the estimates of other functional areas.

The new messaging architecture integrates wireless Blackberry® personal information devices (PIDs), instant messaging services for all Executive Branch agencies via the secure internal network instant messaging, online meeting service, and fax services. Integrating secure remote access through secure network connectivity, such as virtual private network (VPN) connections, will provide access to individual data and e-mail. Northrop Grumman will implement an internal public key infrastructure (PKI) and certificate services.

Exhibit 1 illustrates the Northrop Grumman approach.



Legend

- SMTP: Simple Mail Transfer Protocol
- PKI: Public Key Infrastructure
- MPLS: Multiprotocol Label Switching
- OWA: Outlook Web Access

VITA 166 r2

Exhibit 1 Enterprise Solutions Center Design

Commonwealth agencies will have messaging services moved to a fault-tolerant tier of systems, providing messaging and collaboration services, including messaging, calendaring and specified access for fax services and wireless access for devices such as Research in Motion (RIM) Blackberry® handhelds.

The design will consist of 4 storage groups and 4 databases per storage group, with a fixed database size of 45 gigabytes (GBs). The fixed database size is a central part of the design, used to help maintain a uniform recovery service level on all the mailbox servers.

Technical Approach Elements

Active Directory Design—The Active Directory design will build upon a single forest/single domain Active Directory design, as illustrated in **Exhibit 2**. The domain architecture approach is to begin with a single domain and add domains, as necessary.

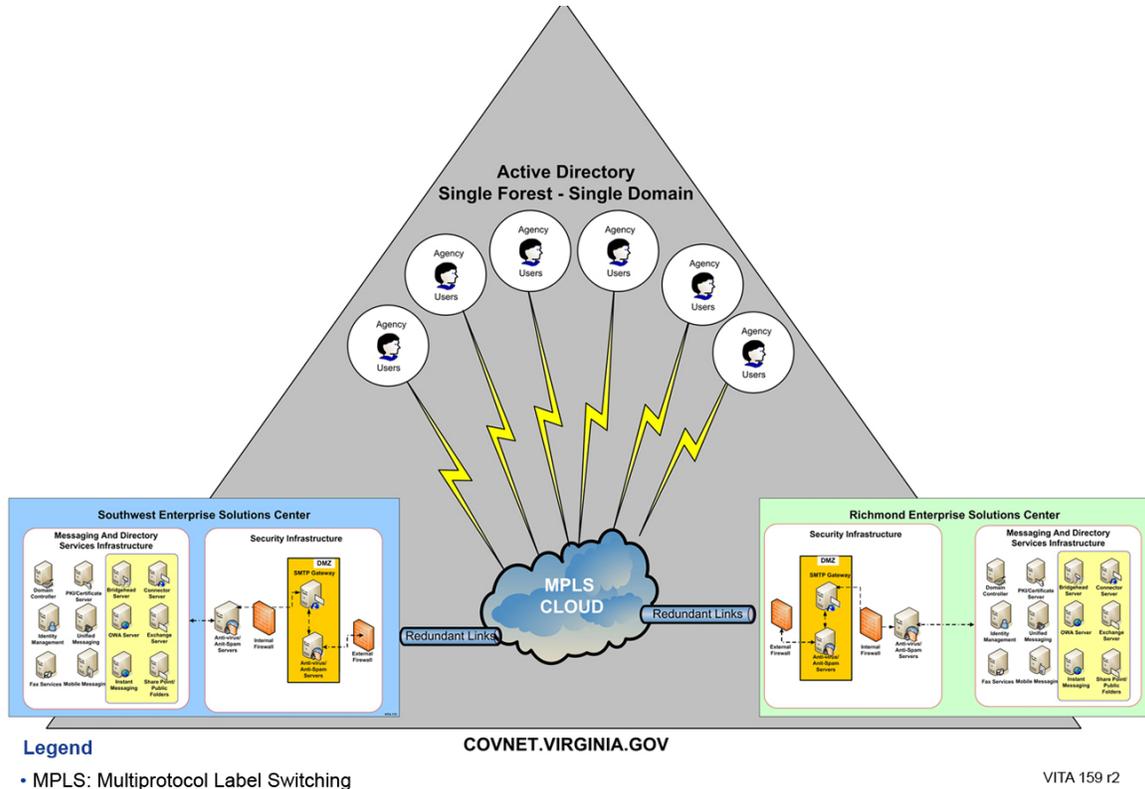


Exhibit 2 VITA Messaging Active Directory Forest Design

To allow legacy Windows domains to access the new mailboxes in the VITA forest, one-way trusts with the legacy Windows domains will be established. This will allow users to access their new mailboxes in the VITA forest transparently, until transformation of the environment is completed. If the user does not have a Windows logon (i.e., a GroupWise user who has an Novell Directory Service (NDS)–only logon or a SendMail user who has a Unix logon, neither of which client machines are a member of an existing Windows domain), their accounts in the VITA forest will be enabled for proper authentication, providing increased security.

DNS Design—As Northrop Grumman implements Windows 2003 Active Directory for the VITA messaging solution, Northrop Grumman will allow the messaging DNS infrastructure to co-exist with the existing DNS infrastructure.

The Active Directory will become the authoritative source for the current mail.cov.virginia.gov DNS zone. To allow availability of the messaging forest, DNS will be integrated into Active Directory. Referrals will be used to forward unresolved DNS lookups to the global virginia.gov DNS servers. The global virginia.gov DNS servers will be reconfigured to forward DNS requests for “covnet.virginia.gov” to the Active Directory integrated DNS servers.

WINS Design—To enable legacy applications to continue working, WINS services will be provided in the messaging Active Directory forest, and resolution will be provided to agency users through a tiered approach. As legacy applications are upgraded, replaced or decommissioned, WINS will be scaled back, reducing administrative support, and possibly eliminated, if there is no longer a use in the environment for it.

Logical Site Design—Active Directory will incorporate four logical sites to distribute authentication and exchange functions:

- Richmond Authentication
- Richmond Exchange
- Lebanon Authentication
- Lebanon Exchange

The exchange logical sites will contain only the exchange servers and their supporting Global Catalog servers. The authentication logical sites will contain all the users and workstations, along with the infrastructure and non-exchange servers.

Remote Access—All remote access will be through a secure VPN.

Security Services—Access from the Internet will be allowed through a security infrastructure layer. The security layer will provide Internet proxy access for external Web clients to access the Exchange servers through an Outlook Web Access (OWA) server, as well as providing antivirus and anti-spam services. **Exhibit 3** shows the security services.

Systems Monitoring—Messaging and related infrastructure will be actively monitored using HP OpenView, and managed using the Quest Management Suite for Active Directory. Northrop Grumman will also utilize automation and migration analysis tools for VITA's Microsoft Active Directory structure from Quest Software. Northrop Grumman will also implement Quest's Management Suite for Active Directory to provide diagnostics, recovery, detailed auditing, group policy management, reporting, self service, role-based delegation, user provisioning, and pre-migration planning to post-migration analysis. Included in the Quest Management Suite for Active Directory is the Active Roles Direct product that will also be leveraged to manage the Exchange Messaging System.

Change Manager for Active Directory will provide comprehensive, tracking of changes to Active Directory and Group Policy, with control over changes to the critical objects and configuration. Change Manager for Active Directory provides a centralized repository of information about who changed what, when, where, and how, including the before and after values.

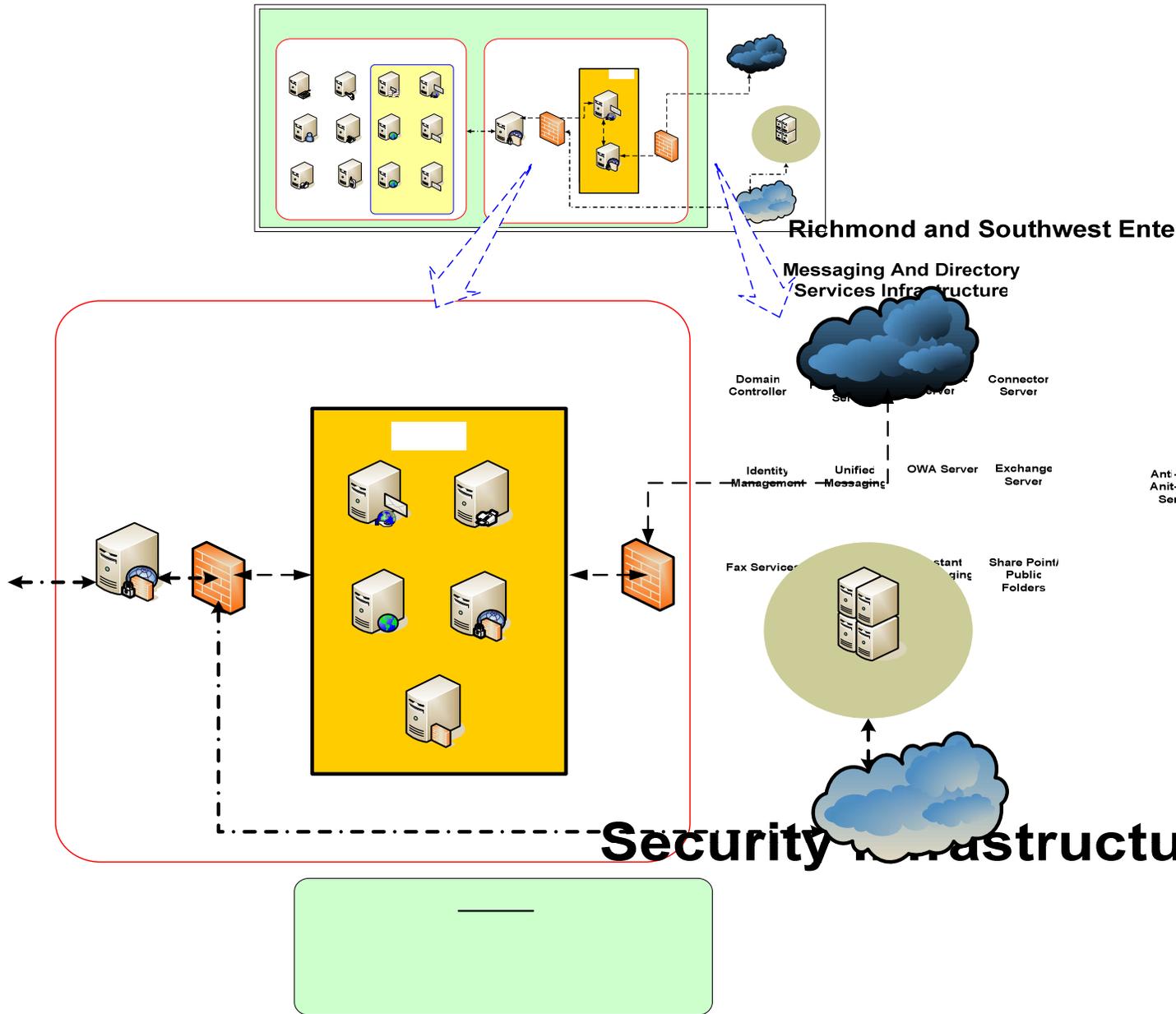


Exhibit 3

Messaging Security Infrastructure Services

DMZ

All messaging, public data, enterprise directory data, and transaction logs will be replicated between the Richmond Enterprise Solutions Center, and the Southwest Enterprise Solutions Center. These data will be maintained, including backup and recovery at both locations, to enable recovery.

Message Archiving—Message archiving is provided through built in features using the Journaling feature of Microsoft Exchange. Mailboxes that require messages to be archived will be flagged in the messaging system and in doing so all incoming and outgoing messages will be archived to a secondary mailbox. 20% of the mailbox storage usable space will be allocated to meet archiving needs.

Anti-virus/Anit-Spam Servers

OWA Server

Anti-virus
 Anti-Spa

Northrop Grumman will validate the design of the messaging infrastructure during the start-up phase. During the transition phase, Northrop Grumman will work closely with VITA personnel and agency personnel to develop and evolve all the process and procedures that will be needed to implement, support, and maintain the new environment. While providing current operations and maintenance, Northrop Grumman will continue to document the existing systems and develop existing documentation to include details of the systems that will be needed to migrate to the new messaging environment. Once development and pilot testing of the new environment is complete, Northrop Grumman will move to the migration phase of the project. During the migration phase Northrop Grumman will work closely with all of its teams to transition to the new environment. Northrop Grumman will also work closely with VITA to complete the change and communications management activities.

The Northrop Grumman Messaging Services team will work closely with its Cross Functional Services Manager to document and implement common processes, procedures and policies across the teams.