

## Case Study: Air Force Space Command Enterprise Network Management Facility

**Mission Critical** In response to new Air Force Information Technology (IT) directives, Air Force Space Command (AFSPC) initiated an aggressive IT reengineering program to develop an Enterprise Network Management Facility (ENMF) that would consolidate the management of AFSPC data, voice and video networks in a central enterprise-class facility. The new ENMF would support the mission-critical information and communication needs of North American Aerospace Defense Command (NORAD), United States Space Command (USSPACECOM, now part of US Strategic Command – USSTRATCOM), US Northern Command (USNORTHCOM) and AFSPC.

### Securing and Consolidating Network Operations

Prior to developing an Enterprise Network Management Facility (ENMF), AFSPC was faced with the challenges created by a network built on dispersed, stove-piped systems at different locations, running on old operating platforms, that could not be easily managed or maintained. The physical and technical capabilities required to serve the mission-critical needs of various Commands that relied on the network had outstripped the AFSPC's existing Network Operations Security Center (NOSC). With over 100 probes of its network each day, AFSPC required state-of-the-art information security to protect its facilities from intrusions and viruses. Both unclassified and secure communications and data needed to be monitored through one centralized facility.

The transition to the new ENMF needed to be executed without disrupting or compromising the security of the various operational activities and missions supported by the network. In developing and implementing an ENMF, AFSPC had to also accommodate a major organizational change relating to USSPACECOM's integration into USSTRATCOM without jeopardizing its operational structure.

### Serco's Solution

Air Force Space Command selected Serco's Network & Telecom Inside Plant Group to engineer, furnish, and install an enterprise network facility to consolidate the AFSPC's enterprise network operations into one centralized facility.

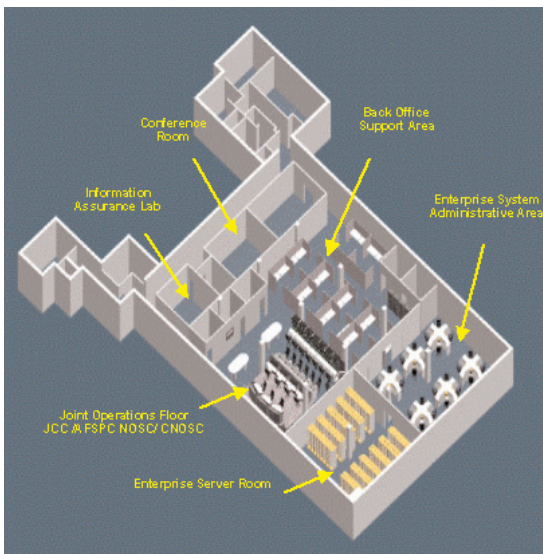
Serco assembled a team of 20 engineers and technicians to design, engineer, implement, operate and maintain this facility for the AFSPC. Serco's team designed the entire facility, including all overhead and underfloor conveyances, the rack-to-rack cabling, and the power system, as well as all active systems. Serco's engineers and technicians established a high quality implementation process, which included testing new systems in an off-site location before implementing them in an operational facility. As a result of careful preparation, meticulous planning and constant communications, Serco was able to effectively accommodate simultaneous changes in AFSPC's mission, including USSPACECOM's integration into USSTRATCOM and the establishment of USNORTHCOM.

## Case Study: Air Force Space Command Enterprise Network Management Facility *(continued)*

### Building a State-Of-The-Art Network Management Facility

In delivering a state-of-the-art facility, Serco's Microsoft Certified System Engineers, engineered and configured AFSPC's new Microsoft Windows 2000 Active Directory and Exchange 2000 servers in a clustered, highly fault tolerant arrangement, as well as two 10 TB Storage Area Networks. To connect the facility to the system's users, the Serco Cisco Certified engineers engineered a robust communications infrastructure that provided secure Gigabit Ethernet connectivity to all the active equipment. Serco transport engineers designed an OC-48 Wide Area Network (WAN) to connect the enterprise facility to several Colorado Front Range Air Force Bases. In addition, they configured and installed large network routers and switches at the remote locations to facilitate the inter-base communications.

To assure redundancy in the result of system failure, SI International engineered and configured a back up location's mirror equipment, providing for a robust failover capability.



### Mission Accomplished

**Serco was able to successfully develop and implement an Enterprise Network Management Facility that consolidated the Commands enterprise management in one facility under a tight time frame and without any disruption in network availability. The new facility consists of:**

- **A 2,500 square feet enterprise server room designed to handle current and projected classified and unclassified application servers, firewalls, plus storage, communications connectivity, and all associated support systems.**
- **A 2,500 square feet administrative area for network management and support functions.**
- **A 6,000 square feet operations area for AFSPC's NOSEC, DISA's CNOSC, and USNORTHCOM's TCCC.**

**This new system provides a redundant, fault tolerant, high availability and secure network environment that supports all email, voice, video and data networks for the AFSPC and the other commands it serves. More than 15,000 AFSPC network users will be supported by e-mail servers at this facility.**

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