

### 3.0 NETWORX ARCHITECTURE (L.34.1.3)

*Qwest offers a unique combination of technical vision, true service convergence, and a proven track record of delivering services to federal Agencies.*

Qwest takes a comprehensive view of the role of Networx architecture in delivering high-quality and reliable services for federal Agencies. Qwest's security, operational, and network infrastructures lead the communications industry in most important metrics and embody the converged optical and IP-based technologies strived for by our competitors. While many service providers ask customers to focus on network technology, Qwest believes that customers should also focus on the carrier's ability to deliver services on-time and ensure high quality over time. Telecommunications and information technologies will evolve significantly over the course of the Networx program. Qwest has uniquely proven that we understand how to use our people and processes to deploy state-of-the-art technology in support of high quality and reliable services.

Qwest's entire network focus is based on [REDACTED]

[REDACTED]

Based on a private Multi-Protocol Label Switching (MPLS) core, our architecture already supports all of our IP-based services— [REDACTED]

[REDACTED]



[REDACTED]

Access security also extends to our information systems, as our network management and security and operations support systems are

[REDACTED] and our Risk Management department performs extensive background investigations of Qwest staff to ensure proper responsibility. The Qwest Risk Management group also provides guidance on the implementation of services to ensure that we maintain the required security profile. Qwest employs strict design, testing, and monitoring practices to ensure our infrastructure remains resilient against cyber attacks. The Qwest team has significant experience deploying secure services that meet federal guidelines. This includes Certification and Accreditation of network services, [REDACTED]

[REDACTED]

**Service Quality and Reliability**

While reliability and security of a carrier's infrastructure are critical to deliver Networx services, Qwest focuses on end-to-end service quality. Qwest understands the Government's concern about how we interconnect with other service providers to ensure quality and reliability. Qwest has strict standards for interconnection of [REDACTED]

[REDACTED] This includes access facilities, monitoring, and trouble resolution procedures

needed for reliable operations and standard installation intervals, trouble resolution time, and other technical performance requirements.

Qwest uses proven leading-edge technologies, such as route diverse

[REDACTED], to

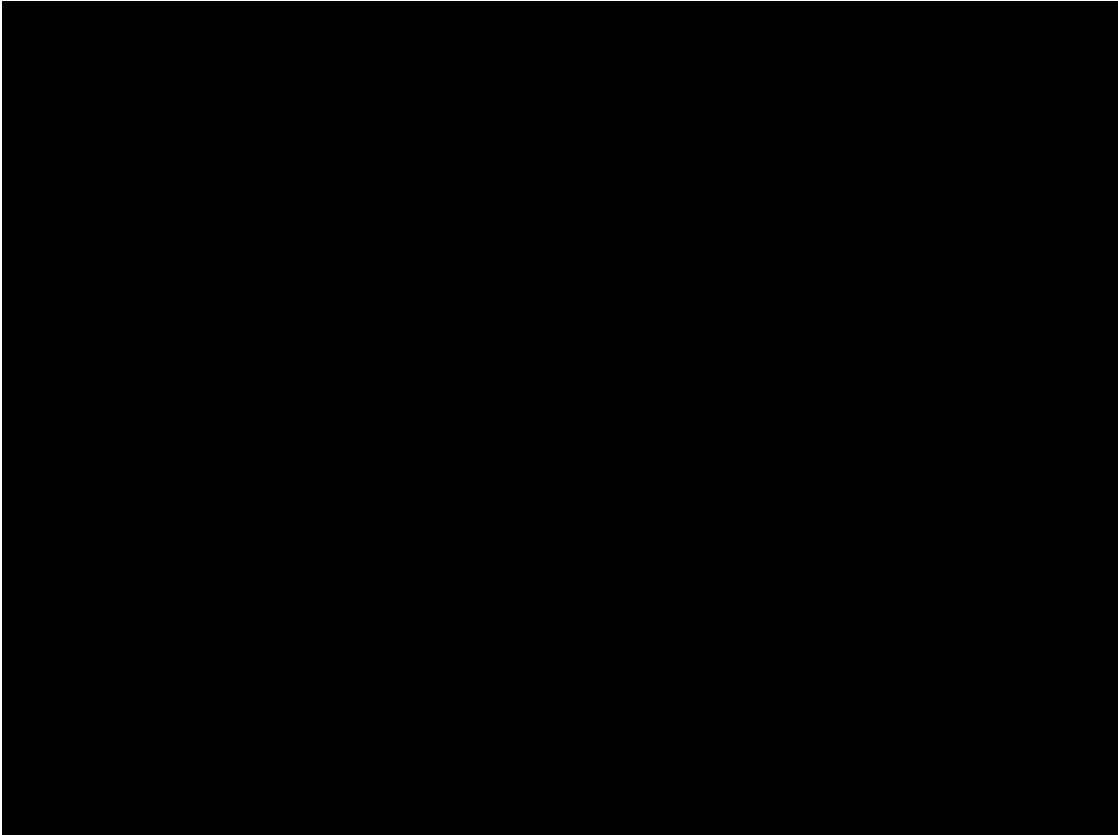
provide a service backbone that has no single points-of-failure. Combined with conservative capacity planning and failure mode analysis, Qwest ensures high performance during heavy network usage—even during rare cases of trunk or router failures.

The Qwest Technology Management organization, under the direction of our Chief Technology Officer, performs [REDACTED] ensure that our services meet industry standards, performance, feature, and reliability requirements. Once in operation, Qwest instruments its service to provide real-time performance information and fault detection. This information is used by our network operations and reviewed by our network planning organization for capacity planning.

**Next Generation Architecture, Convergence, Interoperability, and Evolution**

While security and service reliability are critical elements for Networx services, the program has also embraced convergence, interoperability, and evolution as a means to ensure success over the ten-year life of Networx. Qwest has deployed a next generation network and has demonstrated our ability to introduce leading-edge services. [REDACTED]

[REDACTED] shows some highlights of Qwest’s network technology. In particular, domestically, Qwest has established several “firsts” including:



[Redacted]

[Redacted]

[Redacted]

One of the [Redacted]

[Redacted]

In addition to these firsts, Qwest has valuable experience in providing managed services. Our experience includes enterprise data network services for end-to-end management of customer networks, managed security services such as firewall and IPsec tunnel management, and a full range of managed application hosting services from the operating system to applications. [Redacted]

[Redacted]

Qwest leads the way in providing the services and infrastructure that enable true convergence of services onto a converged architecture. Agencies gain access to a majority of Qwest Networx services through a single IP-based connection—whether [REDACTED]

### **Non-Domestic Services**

As a global provider of communication services, Qwest's international coverage extends [REDACTED]

[REDACTED] This extensive breadth of coverage results from Qwest's strategy to partner with other leading providers in order to satisfy the voice and data connectivity requirements of our global customer base and provide world-class service with a high level of quality and reliability. Key tenets of our global strategy include:

[REDACTED]

Our international approach provides Agencies with global support for best-of-breed service, network connectivity, and a mature operations discipline. These services also include emerging technologies such as [REDACTED]

[REDACTED]

### **National Policy-Based Requirements**

A key complement of our global infrastructure involves Qwest's focus on national policy-based requirements. We are a leading provider of network services in the National Capital Region, where we have a robust network architecture to ensure service continuity in the event of significant facility failures. Qwest already supports, and will continue to engineer, critical

services to meet the requirements of each Agency to eliminate single points of failure for network services.

In addition, Qwest already has an active and fully compliant National Security and Emergency Preparedness (NS/EP) plan. Qwest supports the National Communication System (NCS) with full-time staff at NCS headquarters and participation in several NCS-sponsored programs. Qwest has been providing Telecommunications Service Priority (TSP) services locally and nationally for more [REDACTED] excellent track record of meeting critical emergency requirements. [REDACTED]

[REDACTED]

[REDACTED] Our NS/EP and NCS-related activities enable us to work in coordination with the Federal Government and address our nation's telecommunication needs in times of emergency.

Qwest will comply fully with all mandatory government requirements for service delivery to meet the needs of customers with disabilities. Qwest has experience in developing Section 508-compliant services and applications. We will deliver a 508-compliant Networx Web porta [REDACTED]

[REDACTED]