

TIC from an Industry Perspective

Shawn Carroll
Qwest Government Services, Inc.

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TIC Initiative

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OMB's Trusted Internet Connections (TIC) Initiative (M-08-05)

- Reduce Government's Internet connections
- Improve Government's security posture
- React more effectively to cyber security threats
- Improve incident response capability
- Reduce malicious penetrations
- Reduce theft of critical data
- Secure and seamless environment

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Managed Trusted Internet Protocol Service

Internet Access

- Allows agencies to exchange traffic with Internet and external IP networks
- Connects via Tier 1 Internet Service Providers (ISPs)

EINSTEIN Enclave

- Includes Einstein devices with supporting tools and data storage
- Furnished, maintained, and operated by US-CERT

Security Operations Center (SOC)

- Monitors all information exchanged to protect agency IP traffic
- Supports TIC Portal authorities/analysts
- Identifies security events of interest that may negatively affect portal's environment and Government security infrastructure

MTIPS Transport

- MTIPS transport collection network for TIC Portal connectivity
- Insulates agency's internal network from Internet and other external networks

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MTIPS Security Services - Standard

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- Managed Firewall Service (MFS)
- Anti-Virus Management Service (AVMS)
- Intrusion Detection & Prevention Service (IDPS)
- Email Scanning
- Service Enabling Devices

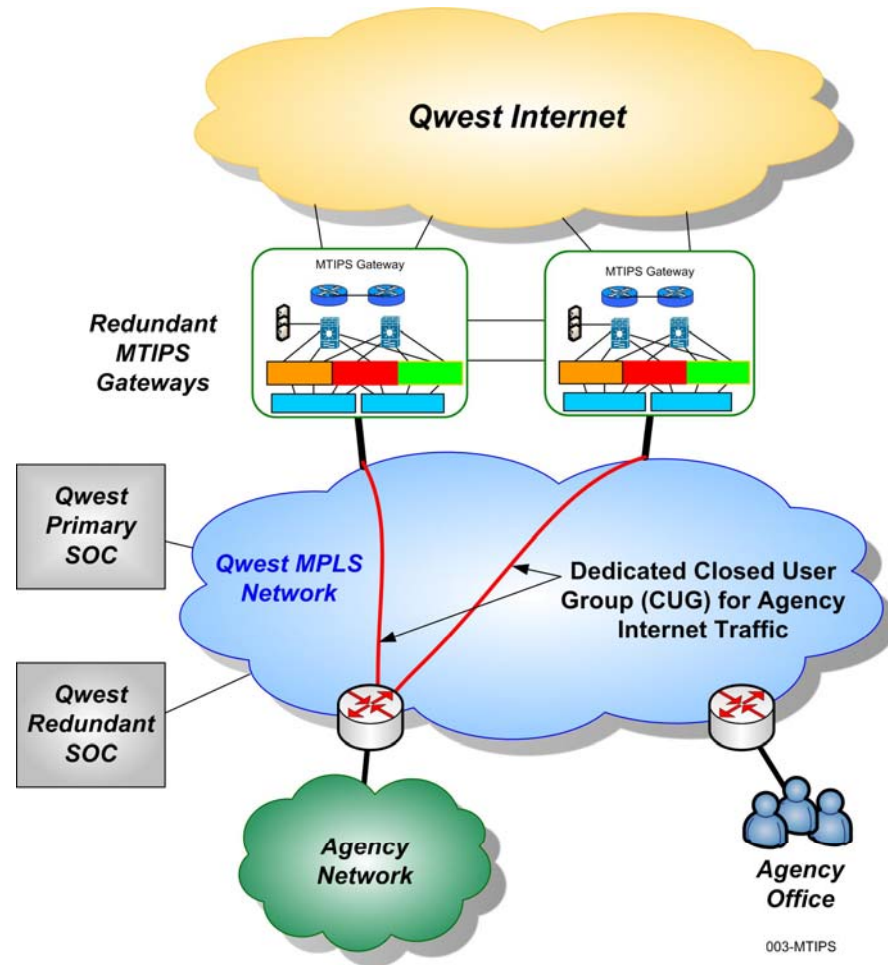
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Qwest Offering

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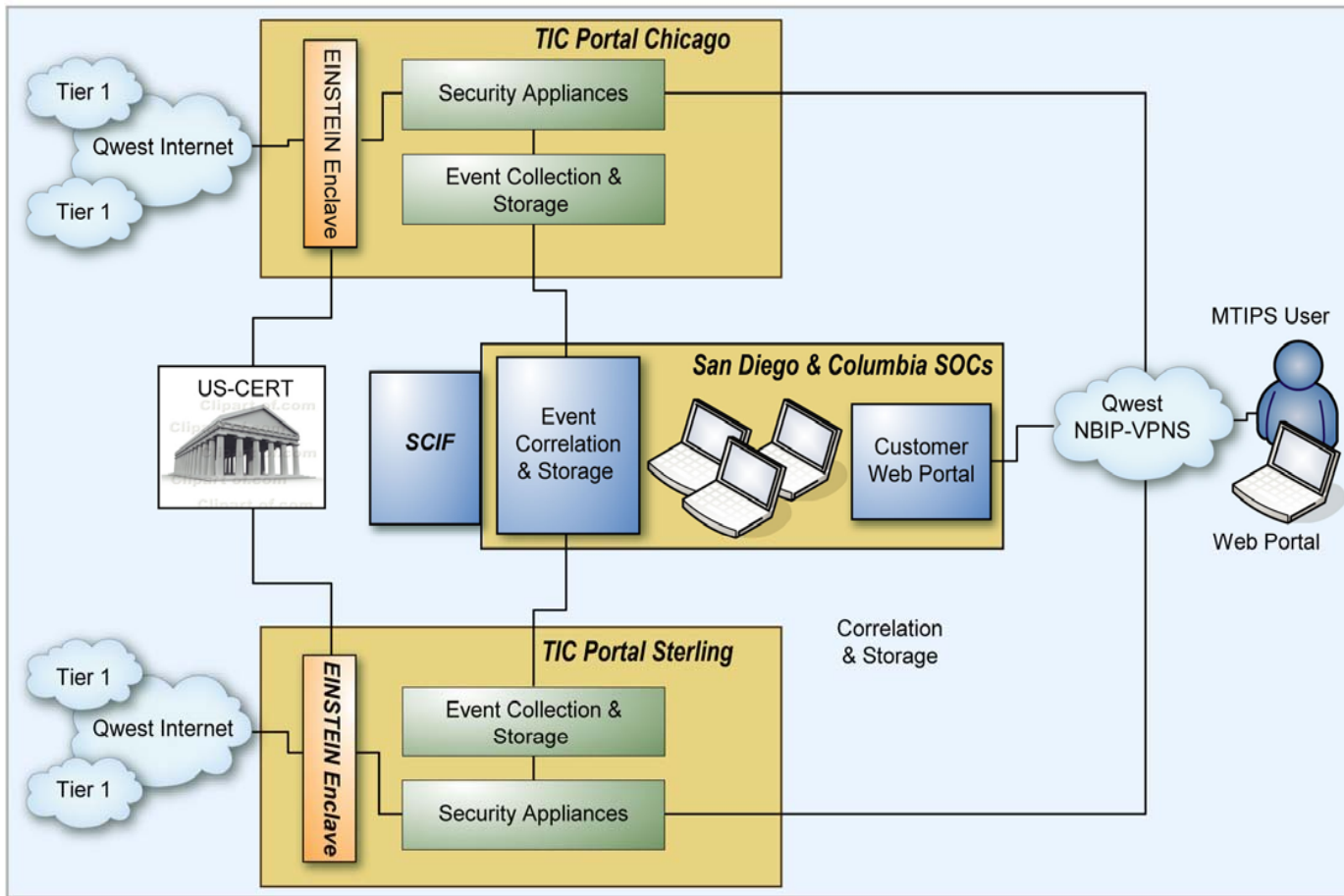
- MTIPS Gateways through two Hosting Centers
- Security appliances for event generation
- Access to NBIP-VPNS based on Multi-Protocol Label Switching (MPLS) to connect to agencies
- Internet Access
- Connectivity to US-CERT and Qwest SOCs



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Architecture Overview

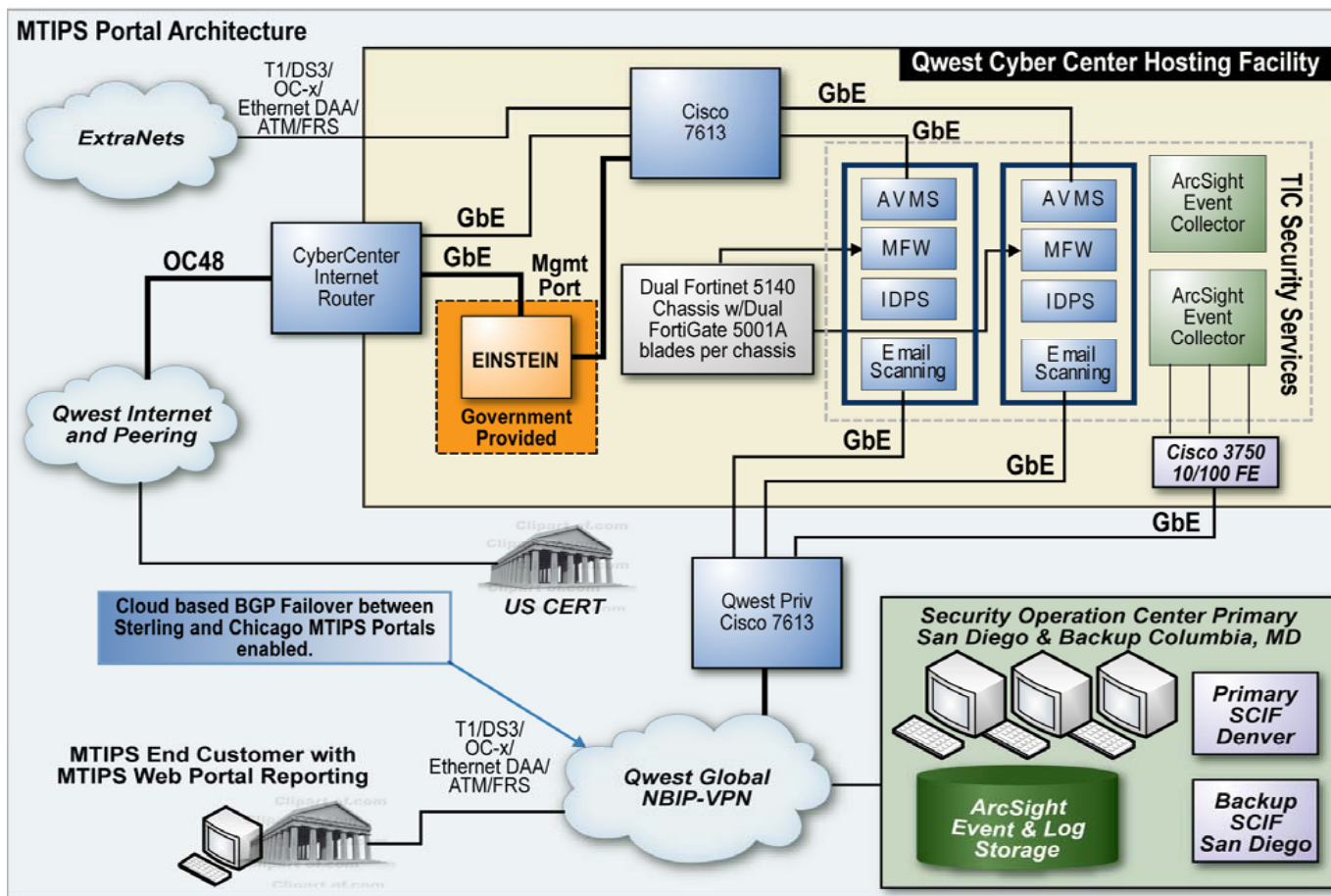


002-MTIPS

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Architecture With Failover Between Portals



001-MTIPS

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Access Methods

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- Dedicated IP – DS0, Tiered T1, Dedicated T1, Tiered T3, T3, OC3, OC12, OC48
- Ethernet – 1Mbps, 10 Mbps, 100 Mbps, 1Gbps, 10Gbps
- ATM Interconnectivity – T1, T3, E1, E3
- FRS – 56Kbps, Tiered T1, T1, Tiered T3, T3, E1, E3

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Options

- Encryption – ICB MRC
- Policy Enforcement – ICB MRC
- Forensic Analysis – ICB MRC
- Custom Reports – ICB MRC
- Agency NOC/SOC Console – ICB NRC
- Custom Certification and Accreditation (C&A) Support – ICB NRC
- External Network Connection – ICB MRC
- Encrypted DMZ – ICB MRC

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Qwest Architecture Details

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FG-5140 Chassis

- Maximum Firewall Throughput 182 Gbps
- Maximum IPSec VPN Throughput 98 Gbps
- Maximum Antivirus Throughput 7 Gbps
- Maximum IPS Throughput 56 Gbps
- Maximum Concurrent Sessions 28 Million
- Chassis Slots 14
- Configured for high availability
- 10 Gbps capable but not currently deployed
- Separation through VDOMs

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R&E Community Discussion Items

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- Large volume traffic flows not specified in GSA Statement of Work
- 40 Gbps, 100 Gbps
- IPv4 and IPv6 – Current Einstein deployment IPv4
- Jumbo Frame Support
- Multicast
- Experimental Protocols
- Lower Layer Interconnects
- Policy Change Control

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Questions / Discussion?

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Shawn Carroll
Director, Engineering
Qwest Government Services, Inc.
shawn.carroll@qwest.com
(703) 363-8805

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