



Security for Video Telephony and Voice over IP (VoIP)



The challenges of securing VoIP traffic

The expanding adoption of digital telephony and teleconferencing in today's business has launched VoIP technology into the IT mainstream. As IP networks continue to grow with the addition of voice, video and high-bandwidth data applications, greater security and access control becomes critical.

In particular, like all IP traffic, VoIP can be prone to security threats from internal and external attacks and application vulnerabilities. VoIP is particularly susceptible to Denial of Service (DoS), digital eavesdropping, toll fraud and trunk hijacking.

In addition, virtual private networks (VPNs) have become a key component of converged networks because they enable multi-site organizations to design one large private network as opposed to separate networks for each location. Increasingly, users require remote and mobile access to VoIP applications, and securing this access is critical.

Finally, administrators must be able to prioritize allocated bandwidth to VoIP traffic to ensure adequate quality of service (QoS). Underperforming firewalls can potentially degrade VoIP communications with latency, jitter, packet loss and echo.

Accordingly, organizations need a solution that delivers comprehensive security that introduces no latency, secure access to VoIP applications over VPNs and control over QoS prioritization.

Integrating Avaya and Dell SonicWALL solutions

Dell SonicWALL network security and secure remote access solutions seamlessly integrate with Avaya® VoIP telephony solutions to deliver high-performance, multi-function VoIP security, control and access.

Combining high-speed Reassembly-Free Deep Packet Inspection (RFDPI) with robust Unified Threat Management (UTM) security services, SonicWALL firewalls scan and decontaminate all VoIP traffic between Avaya devices in real time. Dell's security-optimized multi-core SonicWALL processor further maximizes throughput, thereby enhancing QoS.

SonicWALL firewalls provide built-in security and bandwidth optimization as well as easy support for VoIP-ready H.323 and SIP devices throughout the network. The appliances also facilitate VoIP over wireless LAN (VoIP over WLAN).

Administrators can easily configure all VoIP traffic between Avaya devices to traverse SonicWALL firewalls via IPsec VPN connections.

Features

The joint Dell SonicWALL/Avaya VoIP solution delivers unparalleled levels of security for the VoIP infrastructure, as well as standards-based compatibility and interoperability with industry-leading VoIP gateway and communications devices. Features include:

- **High-performance real-time VoIP security** — Applies advanced RFDPI and multi-core technologies
- **Comprehensive security** — Includes real-time gateway anti-virus and anti-spyware, intrusion prevention, and anti-spam services
- **Integrated QoS** — Enables prioritization of VoIP and data traffic on the network
- **Application firewall** — Provides additional application level control over bandwidth and prioritization
- **Web Content Filtering Service (CFS)** — Transparently enforces productivity and protection policies and block inappropriate, illegal and dangerous web content
- **VPN support for VoIP** — Available through IPsec VPNs
- **Support VoIP protocol standards** — Supports standards such as H.323 and SIP VoIP for sending voice (audio), video and other media using IP on the public internet.
- **DoS and DDoS protection** — Guards against SYN Flood, Ping of Death and LAND (IP) attacks designed to disable a network or service
- **Availability and call quality through bandwidth management** — Ensures that bandwidth remains available for time-sensitive VoIP traffic and that VoIP devices have available bandwidth for calls (both ingress and egress)

- **Full syntax validation of all VoIP signaling and media packets** — Ensures that malformed packets are not permitted to pass through the firewall and adversely affect their intended targets
- **Support for dynamic set-up and tracking of media streams** — Tracks each VoIP call from the first signaling packet requesting a call set to the end of the call. Dynamic assignment of successfully negotiated media ports thwarts attackers who may be targeting specific ports.
- **IP multicast support** — Addresses the inefficiencies of broadcast traffic by enabling multicast capable equipment to route one-to-many traffic and by providing an “opt-in” model for hosts to receive the multicast traffic
- **Comprehensive monitoring and reporting tools in the Dell SonicWALL SonicOS firmware** — Delivers extensive monitoring and troubleshooting capabilities, including dynamic live reporting of active VoIP calls, audit logs of all VoIP calls, logging of abnormal packets and detailed syslog reports. Dell SonicWALL ViewPoint provides custom reports for VoIP signaling and media streams.
- **Plug-and-protect support** — Automatically handles all VoIP device additions, changes and removals, ensuring all VoIP devices have protection
- **Interoperability with leading VoIP vendors** — Enables organizations to choose between various vendor implementations of telephony and multimedia products across IP-based networks

SonicWALL firewalls

Dell SonicWALL TZ and Network Security Appliance (NSA) appliances are engineered to reduce risk, cost and complexity. They combine automated UTM services for gateway anti-virus, anti-spyware, intrusion prevention, enforced desktop anti-virus, anti-spam, content filtering and application firewall with high-speed RFDPI and integrated VPN features to provide comprehensive protection and maximum performance.

Avaya DevConnect-tested

The Avaya DevConnect Program enables, supports and extends the market reach of application developers and technology companies to offer Avaya customers end-to-end solutions that address their business challenges. DevConnect has tested the Dell SonicWALL VoIP firewall in the following scenarios:

- Avaya Inc.'s Avaya IP telephony infrastructure using Avaya IP Office 4.2 in a converged VoIP and data network
- Avaya DevConnect Compliant Award for successful compliance testing with Avaya Inc.'s Avaya Aura™ Communication Manager 5.2 with Avaya Aura™ SIP Enablement Services 5.2(SSES)
- Avaya DevConnect Compliant Award for successful compliance testing with Avaya Inc.'s Avaya Aura™ Communication Manager Branch 2.0

For more information

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