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Avaya Secure Router 4134

A unified communications integrated branch solution

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Consolidate branch networking functions with a powerful modular system that converges routing, security and unified communications services in a single, competitively-priced platform.

The Avaya Secure Router 4134 is a modular, multi-service platform that integrates multiple networking functions, including routing, WAN, Ethernet switching, voice media gateway and security into a single device. It also features an embedded server module that can host applications and simplify unified communications deployments. This multi-service integration can reduce the number of devices needed at the branch or regional site, generating substantial operational and capital cost savings for your business.

The Secure Router 4134 offers the performance and connectivity that enable it to not only handle the demands of the integrated branch, but also act as the regional or headquarters router for many enterprises. In doing so, it can cost-effectively and securely concentrate traffic from hundreds of remote sites.

Reliable performance for converged branch applications

The Secure Router 4134 is a dependable solution that can be deployed in a variety of configurations to maximize uptime with no single points of failure. Data, voice, video and other multimedia applications perform more smoothly without the latency, packet loss and jitter encountered with other solutions, resulting in the ability to provide the same enterprise-class service and quality of experience to remote sites and branch offices as is available at corporate headquarters.

Robust routing

Routing services include a full IPv4 and IPv6 protocol set, including BGP-4 and multicast capabilities. A full-function IPv6 implementation also enables deployment into environments that require extended IP addressing with the same routing services — all without any additional system memory requirements.

Voice media gateway services

The Secure Router 4134's voice gateway allows connection to the public switched telephone network (PSTN) as well as support for SIP clients and conventional TDM-based telephony devices. T1/E1, FXS and FXO interfaces are all available for flexible telephony connection. With its integrated media gateway services, the Secure Router 4134 can connect local IP phones, SIP clients as well as analog telephony devices directly to the PSTN, eliminating the need to route voice traffic back to a central site, saving on transmission costs. The Secure Router 4134 voice gateway and survivability services are interoperable with Avaya Aura® Session Manager, Communication Server 1000 (R6.0 and higher) and Communication Server 2100. Gateway services are also compatible with Microsoft OCS R2, as well as other 3rd-party SIP call servers, for flexible branch gateway deployment.

Survivable SIP gateway

The Secure Router 4134 also supports survivable SIP gateway services that provides business continuity for registered SIP devices. If communications is lost to a central UC or VoIP server, SIP users can continue to make/receive calls to the locally-connected PSTN and access common phone features such as hold, transfer and call waiting. When communications to the central server is restored, the Secure Router 4134 automatically re-connects SIP users for resumed access to centralized UC and VoIP services.

Integrated Unified Communications Services for Microsoft and Avaya

The Secure Router 4134 can uniquely host unified communications services on a dedicated co-processor module — allowing UC services to be combined with the Secure Router 4134's voice media gateway, routing, switching and security functions in a single integrated device. This combination can simplify operations and is ideal for enterprises considering deploying UC services to their branch or remote sites. The Secure Router 4134 can host either Microsoft Office Communications Server (OCS) or Avaya Software Communication System (SCS) unified communications software. For Microsoft OCS, the Secure Router 4134 provides OCS mediation services functions, allowing Microsoft OC clients to gateway to the PSTN or to other non-OC clients. For Avaya SCS, the Secure Router 4134 can host call server, unified messaging, conferencing and presence applications while also providing voice media gateway, data and security services to the SCS environment.

Features

Multi-service platform

- Full IPV4/IPV6 routing, IPSec, VLAN and firewall
- Voice media gateway services, including support for digital and analog trunks, analog phones, fax machines and modems
- Wide range of WAN connectivity, including DS3, HSSI, Channelized DS3, T1/E1, ISDN, Serial and ADSL2+
- High-density Ethernet switching with built-in Power over Ethernet (PoE)

Voice Media Gateway

- Range of integrated voice interfaces — including T1/E1 PRI, BRI, FXS/DID and FXO/CAMA — enable connection to the PSTN or analog telephony devices
- SIP survivable gateway ensures business continuity for SIP devices
- Up to 128 simultaneous voice (DSP) channels can handle voice gateway needs of small to large branch sites

Integrated Unified Communications (UC) Services

- Integrated server module allows hosting of UC applications, including Avaya's Software Communication System (SCS) and Microsoft OCS Mediation Services
- All-in-one communications solution that can reduce costs and simplify network operations

Integrated Ethernet switching

Integrated high-density Ethernet switching, including Gigabit, Fast Ethernet and Power over Ethernet (PoE) connectivity, enables flexible connection of local area network (LAN) devices, such as powered services for IP telephony devices. A variety of Ethernet switching modules enables up to 54 Gigabit, 72 Fast Ethernet or 72 PoE ports. The Ethernet switch ports can operate at either Level 2 or Level 3, enabling dynamic connectivity of devices and subnets across your network.

Integrated security

Powerful, fully-integrated security features include VPN and firewalls for increased reliability and user confidence. Capabilities include stateful packet firewall, detection and prevention of more than 60 Distributed Denial of Service (DDoS) attacks, VPN hardware acceleration for hub and spoke deployment over IPSec and VPN tunnels, and IPSec VPN data-encryption services with AES, 3DES, DES, SHA-1, MD-5 and Diffie-Hellman support.

Advanced quality of service

Quality of service goes beyond Layer 3 flow-based support by including Layer 2 class-based queuing. The highest granularity of priorities (eight levels) provides maximum performance with the lowest latency for voice, video and other high-priority traffic while guaranteeing bandwidth among all classes.

Multi-link capabilities

Secure Router 4134 provides best-in-class MLPPP and MFR (FRF.16 and FRF.15) support to allow bonding of T1/E1, T3 and other WAN interfaces to create a single virtual interface capable of transmitting at the maximum bandwidth available. Multi-linking enables hassle-free bandwidth scalability, high-speed video, voice and data transfer while securing connectivity from individual link failures.

Simple to install, simple to scale modular platform

The Secure Router 4134 provides advanced operational features while simplifying, or eliminating, time-consuming and confusing installation tasks. The router's unique chassis has four small module slots and three medium ones to support the dynamic demands of growing businesses. Four small slots support low-density data or voice modules. Medium slots can be used for WAN, Ethernet or voice carrier modules. A voice carrier module also hosts up to four small voice modules (FXS or FXO) in a single medium module slot and can thereby increase total voice port capacity. The modular and flexible Secure Router 4134 can support:

- Up to 72 Power over Ethernet 10/100 Mbps ports
- Up to 58 Gigabit Ethernet switching ports
- Up to 64 FXS or FXO ports
- Microsoft Mediation Services Module
- Up to 3 Clear or Channelized DS3/T3 ports
- Up to 31 T1/E1 ports
- Up to 7 Serial or ISDN BRI/PRI ports
- Up to 3 HSSI ports
- Up to 4 ADSL2+ ports

Management

The Secure Router 4134 employs an industry-aligned command line interface (CLI) that makes it easy to set up and manage. Features include:

- On-Premise, Console and Command Line Interface; Telnet, Events, Syslog
- Remote SSHv2 provides secure communication for configuration and maintenance
- Avaya Unified Communications Management (UCM) provides Secure Router fault management and device reporting

The Secure Router family

The Secure Router 4134, with its modular design, high throughput and reliable performance, is complemented by Avaya's Secure Router 1000, 2330 and 3120 family of products. Deployed in combination with these other Secure Router models, the Secure Router 4134 can connect remote sites and also act as a central-site router for most enterprises.

An easy choice

Secure Router 4134 is a high-performance branch convergence solution that brings together feature-rich VoIP and feature-rich data into a common platform for simplified management, greater cost savings and a high quality of user experience.

Secure Router 4134 Technical Specifications

Features

Internet Routing

- IPv4 and IPv6 support, including IPv4-IPv6 tunnels
- Static routing, RIPv1/2, RIPng for IPv6, OSPFv2 and v3, BGP4/4+
- Policy-based routing
- Inter-VLAN routing
- High availability: VRRP, redundant router connections
- GRE and IP-IP Tunneling

Ethernet LAN

- 10/100 Base-TX
- 10/100/1000 Base-TX
- 1000 Mbps Optical SFP
- IEEE 802.1x port authentication
- IEEE 802.1p
- IEEE 802.1Q
- IEEE 802.3ad LACP
- IEEE 802.1s MSTP
- IEEE 802.3x VLAN
- GVRP
- Port mirroring
- Jumbo frames
- Ethernet Connectivity Fault Management (CFM)

WAN

- T1/E1, including ISDN PRI
- ISDN BRI, both data and voice
- ADSL2+ (Annex A and B)
- High-Speed Serial Interface (HSSI)
- DS3/T3 – Channelized with 28 DS1/T1 (1.544 Mbps) multiplexed circuits
- DS3/T3 – Clear-Channel with sub-rate DS3 support
- Serial (V.35, RS-232/V.28, RS-449/V.11, EIA-530/A and X.21/RS-422)
- Point-to-Point Protocol (PPP), including PPP over Ethernet (PPPoE)
- Frame Relay (including FRF.12 fragmentation)
- HDLC
- Bridge Control Protocol (BCP)
- Multilink PPP (MLPPP)
- Multilink Frame Relay (MFR), including FRF.15 and FRF.16

IP Multicast

- IGMPv1/2/3 for IPv4; MLDv1/2 for IPv6
- IGMP Proxy
- IGMP Snooping
- PIM-SM for IPv4/v6
- DVMRPv3 for IPv4

MPLS Label Edge Routing (LER) services

- Label Distribution Protocol (LDP)
- RSVP-TE, OSPF-TE
- MPLS Fast Reroute
- MPLS Martini Pseudo-wire (Ethernet, PPP, HDLC over MPLS)

Quality of Service/Traffic Management

- RED, WRED, DiffServ, bandwidth guarantee/sharing, flow monitoring, traffic policing
- 8 level Priority Class Based Queuing per IP address/subnets, ports, DSCP and ToS bits, VLAN ID (802.1Q), VLAN Priority (802.1p)
- Frame Relay traffic shaping and policing
- VLAN Classification (port, subnet or protocol-based)

Firewall

- Stateful Packet Inspection Firewall
- 25-zone support (including Corporate, Internet, DMZ)
- Access Control Lists (ACL)
- NAT, including policy-based NAT/PAT
- 60+ Distributed Denial of Service (DDoS) Attack Preventions
- 30+ ALG support (including H.323/SIP)
- Pass through IPSec, L2TP, PPTP

VPN Option

- Optional VPN acceleration hardware
- IPSec VPN
- DES / 3DES, AES, SHA1, MD5
- Avaya VPN Client support
- NAT-Traversal
- 1000 VPN tunnels

Maximum Performance

- IP routing throughput (64 byte): 370,000 pps
- IPSec (3DES) throughput: 470 Mbps

Voice Signaling Support

- T1/E1 ISDN PRI (User side)
- ISDN BRI (User side)
- T1 CAS
- E1 R2 CAS
- Q Signaling (QSIG)
- FXS (Foreign Exchange Station)
- FXO (Foreign Exchange Office)
- Direct Inward Dialing (DID)
- Centralized Automated Message Accounting (CAMA)
- E-911 emergency calling

SIP Survivability Calling Features

- Inbound/outbound PSTN calling
- Intra-branch calling
- Call hold, consultation hold
- Call transfer (attended, unattended)
- 3-way conferencing
- Click to dial
- SIP user registration

Codecs Supported

- G.711 - A-law and u-law
- G.726 - 16, 24, 32 Kbps
- G723.1 - 5.3, 6.3 Kbps
- G.729A - 8 Kbps

Other Voice Gateway Features

- TDM to IP, IP to TDM conversion
- ITU G.168 Echo Canceller
- Voice Activity Detection/Comfort Noise Generation
- DTMF digit detection
- Caller ID generation and detection
- T.38 fax relay / Fax and Modem Pass-through
- Up to 128 DSP channels

"VoIP-Friendly" Features

- Low-latency packet forwarding
- SIP ALG for NAT and Firewall
- Cone NAT (for Avaya UNIStim protocol) with NAT hairpinning
- Frame Relay fragmentation (FRF.12)
- Compressed RTP (cRTP)

Service Provisioning

- Management: Telnet, SSHv2, SFTP, PAP, CHAP, SNMPv2, DHCP, DNS Proxy, SNTP, RADIUS, TACACS+
- Monitoring: Syslog, statistics, RMON, alarm
- Diagnostics: BERT, loopback testing, trace route, packet capture (PCAP)

Physical Specifications

Chassis

- Height x Width x Depth: 3.5" H x 17.3" W x 19.7" D
- Weight with Power Supply: 22 lbs (10.0 kg)
- Chassis Slots:
  - 3 medium module slots
  - 4 small module slots
  - 1 large module slot (combining 2 medium slots)
  - All slots are hot swappable
- 2 x 10/100/1000 Ethernet copper / 2 x GigE SFP Fiber ports
- Management ports:
  - Compact Flash
  - USB
  - Fast Ethernet
  - Auxiliary and Console ports RJ-45

Module Options

- Small Modules
  - 1 and 2-port T1/E1
  - 1 and 2-port Serial
  - 2-port ISDN
  - 2 and 4-port FXO
  - 2 and 4-port FXS
  - 1-port ADSL2+ (Annex A and B)
- Medium Modules
  - 8-port T1/E1
  - 1-port T3/DS3 (channelized and un-channelized)
  - 1-port HSSI module
  - 24-port 10/100 Fast Ethernet (PoE and non-PoE)
  - 10-port 10/100/1000 Gigabit Ethernet
  - 4-slot Carrier module for voice cards
- Server Modules (use a medium module slot)
  - Mediation Services module for Microsoft OCS
  - Server module with Software Communications System (SCS)
- Large Module
  - 44-port 10/100/1000 Gigabit Ethernet

Redundant Power options

- AC Power Supply – 50-60 Hz 90-269 VAC, 250 Watts
- AC Power Supply with PoE – 50-60 Hz 90-269 VAC, 250 Watts; separate +54VDC supply isolated from main AC supply: AC input between 90 and 269 VAC, 410 Watts.
- DC Power Supply – 40 to 72 VDC, 250 Watts

Environmental

- Operating Temperature: 32° to 104°F (0° to 40°C)
- Non-Operating (Storage) Temperature: -4 to 140 F (-20 to 60 C)
- Relative Humidity: 0 to 95% (non-condensing)

Regulatory Approvals

- Safety: CTUVus and GS Certification: UL60950-1, EN60950-1 and IEC60950-1 (International CB Report)
- EMC: Class A Product, FCC Part 15, ICES-003, EN300386, EN550022, EN55024, VCCI
- Telecom : TIA-968-A, CS-03, ETSI TBR 3/4, 12/13, JATE, A-Tick

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About Avaya

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