

Avaya Secure Router 2330

A converged voice/data branch solution

The Avaya Secure Router 2330 is a powerful modular system that converges routing, voice gateway, security and multimedia traffic forwarding in a single cost-effective platform for enterprises. Delivering fast, secure, reliable and scalable wide area network (WAN) access, the Secure Router 2330 is perfect for enterprise sites requiring high-speed IP or Internet access.



Avaya Secure Router 2330

Features

Multi-service platform

- Full IPV4/IPV6 routing, IPSec, VLAN and stateful firewall
- Voice media gateway services, including support for digital and analog trunks, analog phones, fax machines and modems
- Range of WAN connectivity, including T1/E1, ISDN BRI, Serial, Ethernet and ADSL2+

Voice Gateway services

- SIP survivable voice services for up to 100 users compatible with Avaya Aura®, Communication Server 1000 and 2100, as well as third party SIP call servers.
- Range of integrated voice interfaces, including T1/E1 PRI, BRI, FXS/DID and FXO/CAMA – enable connection to the PSTN or analog telephony devices

Robust routing

- Low-latency, high-packet throughput ideal for VoIP and multimedia transport
- IPv4 or IPv6 with BGP-4 and Multicast services (PIM-SM, DVMRP)

Integrated security

- Stateful packet inspection firewall
- VPN hardware acceleration and IPSec VPN services for secure voice and data transport

The Secure Router 2330 combines high performance, robust routing, flexible WAN and voice media gateway connectivity and is targeted at enterprise branch and remote site environments. A rich suite of routing services and advanced WAN functionality makes the Secure Router 2330 ideal for high-speed Internet access, private line WAN connectivity, IP Telephony and multimedia, IPSec VPN, stateful firewall and data applications. Comprehensive, simple-to-use software tools enable sophisticated access and bandwidth management for dependable communications.

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 2330'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 support for up to 100 SIP users or devices. The Secure Router 2330 voice gateway and survivability services are interoperable with Avaya Aura® Session Manager, Communication Server 1000 (R6.0 and higher) and Software Communication Server (SCS). The Secure Router 2330 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 2330 also supports a survivable SIP gateway that provides business continuity (or survivability) 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 (see Figure 1), and access common phone features such as hold, transfer, conferencing and call waiting. When communications to the central server is restored, the Secure Router 2330 automatically re-connects SIP users for resumed access to centralized UC and VoIP services.

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 2330 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 2330 provides advanced operational features while simplifying, or eliminating, time-consuming and confusing installation tasks. The router's chassis has 8 built-in Ethernet and three module slots that can support either data or voice modules to support the dynamic demands of growing businesses. This means that in addition to its 8 Ethernet ports, the SR 2330 can support up to:

- 6 T1/E1, serial or ISDN BRI ports, or
- 12 FXS/FXO ports

Management

The Secure Router 2330 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

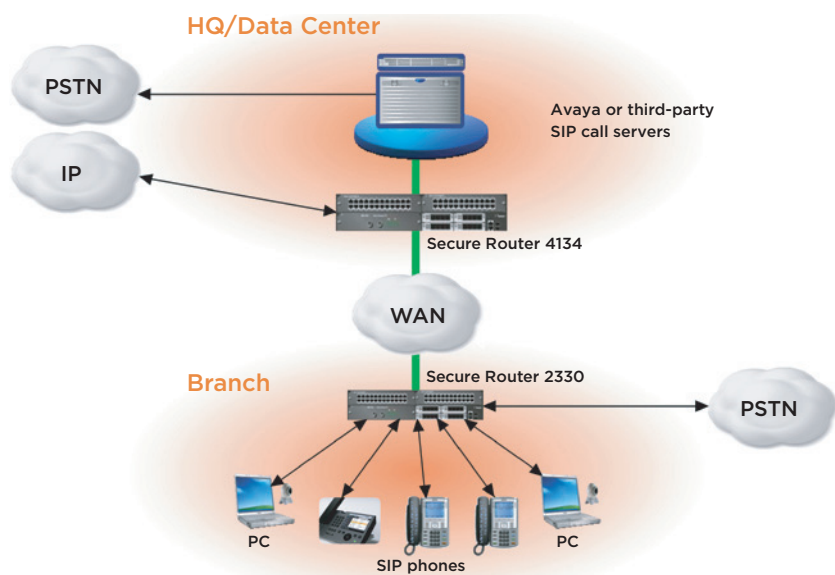


Figure 1. Secure Router 2330 supports both data and IP telephony devices in the branch with survivable SIP voice services even when the WAN link goes down.

- Avaya Unified Communication Management (UCM) provides Secure Router fault management and device reporting

The Secure Router family

The Secure Router 2330, with its modular design, high throughput and reliable performance, is complemented by Avaya's Secure Router 1000, 3120 and 4134 Series. Deployed in combination with other Secure Router models, the Secure Router 2330 not only handles the WAN and LAN requirements of the integrated branch, but can also act as a voice media gateway device for connection to the PSTN.

An easy choice

Secure Router 2330 is a, cost-effective branch convergence solution that brings together feature-rich voice and data services into a common platform for simplified management, greater cost savings and a high quality of user experience.

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)
- 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)
- 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

- IPsec VPN, NAT-Traversal
- DES / 3DES, AES, SHA1, MD5
- Site-to-site and remote access support
- VPN acceleration hardware
- 100 VPN tunnels

Maximum Performance

- IP routing throughput (64 byte): 163,000 pps
- IPSec (3DES) throughput: 250 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 security

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 64 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: 4.4cm x 44.4cm x 29.6cm (1.75in x 17.5in x 11.6in)
- Weight with Power Supply: 3.4 kg (7.5 lbs)

- Chassis Slots:
 - 3 small module slots
 - All slots are hot swappable
- 4 x 10/100 Fast Ethernet Copper
- 2 x 10/100/1000 Ethernet copper
- 2 x GigE SFP Fiber ports
- Management ports:
 - Compact Flash
 - Console port (RJ-45)

Power options

- AC Power Supply – 50-60 Hz, 90-269 VAC, 60 Watts
- 12 VDC Input for optional external redundant power

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

About Avaya

Avaya is a global provider of business collaboration and communications solutions, providing unified communications, contact centers, data solutions and related services to companies of all sizes around the world. For more information please visit www.avaya.com.

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