Ingate E-SBC

Ingate Firewall 1510/1560/1660

Ingate Firewalls 1510, 1560 and 1660 represent the midrange firewalls in the Ingate Firewall® family from Ingate® Systems. They are powerful tools for enterprises and organizations looking for a complete data firewall with full support for Voice-over-IP (VoIP) and other forms of realtime communications based on SIP (Session Initiation Protocol).

The Firewalls solve the Network Address Translation (NAT) traversal issues with SIP. They enable enterprises to connect their IP-PBX to SIP trunks offered by ITSPs and to extend the VoIP capabilities within the corporate network to remote workers and branch offices. With Ingate Firewalls, businesses can benefit from reduced communications expenses by connecting to other VoIP-enabled enterprises without having to utilize the PSTN.

Ingate's SIP proxy-based solution delivers maximum control over SIP signaling, traffic, and network security. With Ingate products, enterprises can use VoIP and other live communications on the LAN and globally over the Internet or private IP networks.

Ingate Firewall 1510/1560/1660
The midrange Ingate Firewalls 1510, 1560 and 1660 can handle from150 up to 800 concurrent RTP sessions (VoIP calls). The software upgrade module available for the Ingate Firewall 1510 and the Ingate Firewall 1560 gives enterprises the flexibility to buy only as much capacity as needed.

Included with the Ingate Firewalls 1510, 1560 and 1660 are five SIP session licenses, allowing up to five calls to traverse the firewall at the same time. Additional session licenses can be purchased at any time as well.

All Ingate Firewalls are fully featured, supporting stateful inspection and packet filtering with rules defined and maintained by the network security administrator. Ingate Firewalls include an encrypted Virtual Private Network (VPN) termination module. In addition to complete SIP support, Ingate Firewalls have a proxy for all standard protocols, including TCP, UDP, FTP and DHCP.

The management interface for the products is the same Web-based Graphical User Interface (GUI) that has been cited by Ingate customers and the media for ease-of-use. All models are in compliance with the European Union's Restriction of Hazardous Substances (RoHS) directive.

Trusted Network Security for VoIP
Ingate's SIP proxy architecture grants fully secure traversal of the SIP traffic. The ports for the media streams are only opened between the specific parties of a call and only for the duration of the call. The SIP proxy inspects the SIP packets before sending them on. TLS and SRTP encryption ensures privacy, making call eavesdropping, call hijacking and call spoofing harder to do. Ingate also supports authentication of users and servers.

Intrusion Detection System/Intrusion Prevention System (IDS/IPS) has become a crucial security measure for enterprise deployments of SIP. IDS/IPS works in tandem with Ingate's existing security technologies, further strengthening security for VoIP, SIP trunking, Unified Communications and other SIP applications.

Support for SIP Trunking
More and more Internet Service Providers offer a SIP trunk – a combined Internet and voice connection. For enterprises using an IP-PBX, SIP trunks are an ideal cost-saving solution as they no longer need local PSTN gateways or costly PRIs/BRIs. The service provider provides the PSTN connection. However, in order for SIP trunks to be successful, SIP traffic must be able to traverse the enterprise firewall. Ingate's SIP Trunking software module, available for Ingate Firewalls, enables firewall and NAT traversal using the built-in SIP proxy, allowing the enterprise to connect to the SIP trunk.

In addition, Ingate Firewalls and the Ingate SIP proxy deliver advanced security for all SIP communications, including those via a SIP trunk. Ingate products also help ease compatibility issues between the IP-PBX and Internet telephony service provider.

Choose the Right Features for Your Network
Ingate's add-on software modules allow you to tailor the Ingate Firewalls to meet the specific demands of your business:

- Ingate Remote SIP Connectivity allows remote and mobile workers to work from behind a NATing device at home, a hotel or wireless hotspot and make and receive calls using the PBX located at the corporate headquarters.

- Ingate Enhanced Security allows support for Transport Layer Security (TLS) and encrypted SRTP (Secure Realtime Transport Protocol).

- VoIP Survival allows an enterprise using a CENTREX or hosted PBX solution to fail over to the Ingate, to enable internal calls and redirect outside calls to a local PSTN gateway.

- Quality of Service (QoS) ensures excellent voice quality by setting priorities and allocating bandwidth properly.

The Ingate Advantage
Ingate's standards-based solutions are interoperable with most major suppliers of SIP products. Ingate supports SIPconnect, allowing the enterprise to successfully connect to SIPconnect-compliant SIP trunking service providers quickly, easily and securely.

Why Ingate?

- For secure SIP trunks, secure VoIP, secure network
- SIP normalization: resolving interoperability issues between IP-PBX and ITSP, for simplified installations
- Secure NAT traversal
- Proven, reliable

Technical Specifications Ingate Firewall

Feature	Ingate Firewall 1210	Ingate Firewall 1510	Ingate Firewall 1560	Ingate Firewall 1660	Ingate Firewall 2950	Ingate Firewall 2960
Interfaces (10/100/1000 Mbit/s)	4	4	4	4	6	6
Redundant power supply	No	No	No	No	Yes	Yes
Type of disk	Compact Flash	HDD	HDD	HDD	RAID 1	RAID 1
Dimension WxDxH (mm)	300x145x44	426x365x44	426x365x44	426x365x44	772x426x43	772x426x43
Certifications	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL
Power consumption (typical)	25W	100W	100W	100W	200W	200W
Power supply 100 – 240 VAC, 50-60 Hz	External	Internal	Internal	Internal	Internal	Internal
Performance						
Throughput (Mbit/s) (1500 byte packets)	200	500	700	1000	4 500	4 500
Packets per second (46 byte packets)	10 000	28 500	50 000	90 000	300 000	300 000
VPN tunnels	30	100	200	400	1600	1600
3DES (168) (Mbit/s) (1438 byte packets)	20	45	55	65	130	130
AES (128-bit) (Mbit) (1438 byte packets)	30	60	80	85	270	270
SIP Connection set up (SIP + RTP), max calls/s	15	30	30	30	50	50
RTP data delay (10Mbit/s/100 Mbit/s)	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms
Number of concurrent calls (20 ms voice packets)	50	150	400	1000	1800	3000
Secure VoIP sessions (TLS + SRTP)	50	150	400	700	1300	1300
Automatic check for new releases	Yes	Yes	Yes	Yes	Yes	Yes
Management/Configuration options: Web GUI (HTTP, HTTPS) and CLI (SHH, serial cable)	Yes	Yes	Yes	Yes	Yes	Yes
DHCP client and PPPoE	Yes	Yes	Yes	Yes	Yes	Yes
DHCP server	Yes	Yes	Yes	Yes	Yes	Yes
SNMP V2, V3	Yes	Yes	Yes	Yes	Yes	Yes
Max number of VLANs (802.1q compliant)	16	32	64	128	512	512
Internal log to HD	No	Yes	Yes	Yes	Yes	Yes
Logging to PCAP file	Yes	Yes	Yes	Yes	Yes	Yes
Syslog	Yes	Yes	Yes	Yes	Yes	Yes
E-mail events	Yes	Yes	Yes	Yes	Yes	Yes
Support for failover multiple ISPs	Yes	Yes	Yes	Yes	Yes	Yes
External RADIUS server authentication for IPsec, GUI and SIP	Yes	Yes	Yes	Yes	Yes	Yes
Unlimited data users	Yes	Yes	Yes	Yes	Yes	Yes
Free software upgrades	First year	First year	First year	First year	First year	First year
Firewall functionality						
Stateful inspection	Yes	Yes	Yes	Yes	Yes	Yes
Packet filtering	Yes	Yes	Yes	Yes	Yes	Yes
DHCP proxy	Yes	Yes	Yes	Yes	Yes	Yes
Proxies for TCP, UDP and FTP	Yes	Yes	Yes	Yes	Yes	Yes
Flexible NAT and PAT	Yes	Yes	Yes	Yes	Yes	Yes
VPN functionality						
X.509 certificate or shared secret	Yes	Yes	Yes	Yes	Yes	Yes
Generating of X.509 certificates for clients	Yes	Yes	Yes	Yes	Yes	Yes
PPTP server	Yes	Yes	Yes	Yes	Yes	Yes
IPsec (3DES, AES, NULL, MD5 and SHA1)	Yes	Yes	Yes	Yes	Yes	Yes
SIP Functionality						
SIP proxy	Yes	Yes	Yes	Yes	Yes	Yes
SIP registrar	Yes	Yes	Yes	Yes	Yes	Yes
SIP traffic to private IP addresses (NAT/PAT)	Yes	Yes	Yes	Yes	Yes	Yes
Billing and authentication of SIP users from an external RADIUS server	Yes	Yes	Yes	Yes	Yes	Yes
SIP Connect compliance	Yes	Yes	Yes	Yes	Yes	Yes
Add-on modules						
SIP Trunking (connecting an IP-PBX to an ITSPs SIP-trunk)	Yes	Yes	Yes	Yes	Yes	Yes
Remote SIP Connectivity (Far-end NAT Traversal incl STUN-server)	Yes	Yes	Yes	Yes	Yes	Yes
QoS (bandwidth limitation and prioritization)	Yes	Yes	Yes	Yes	Yes	Yes
Enhanced Security (SRTP and TLS)	Yes	Yes	Yes	Yes	Yes	Yes
VoIP Survival (VoIP redundance if Internet connection fails)	Yes	Yes	Yes	Yes	Yes	Yes
SIP Registrar (Ingate is used as the primary SIP registrar)	Yes	Yes	Yes	Yes	Yes	Yes