

# Ingate Firewall<sup>®</sup>

*For enterprises of all sizes, the Ingate<sup>®</sup> Systems Firewalls offer all the features of a robust data firewall, plus complete support for Session Initiation Protocol (SIP) to enable enterprises to adopt VoIP safely and securely. They offer secure, complete support for live IP communications, including VoIP, IM and video. SIP-based live person-to-person communications do not traverse common NATs and firewalls, as they are not specifically designed to accept the SIP protocol. Ingate SIP-capable Firewalls address this issue and enable SIP communication to traverse the NAT/firewall and reach users while maintaining control over the enterprise network. The Ingate Firewalls also solve far-end NAT traversal to extend the SIP capabilities within the corporate network to remote workers.*

## Ingate Firewall

Maintaining the highest level of VoIP security, Ingate's SIP proxy-based Firewalls deliver maximum control over SIP signaling, traffic and network security, creating one truly converged network for both data and VoIP. With Ingate products, enterprises can use VoIP and other live communications on the LAN and globally over the Internet or private IP networks. Ingate Firewalls are available in four different hardware models; 1190, 1450, 1600 and 1900.

All Ingate Firewalls are fully featured, supporting stateful inspection and packet filtering with rules defined and maintained by the network security administrator utilizing the GUI. 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.

## Trusted Security for VoIP and IP Applications

Ingate's SIP proxy architecture grants fully secure traversal of 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 of traffic (both signaling and media) secures privacy when communicating, making call eavesdropping, call hijacking and call spoofing harder to do. Used with voice data, SRTP provides one of the most secure environments for Internet telephony and VoIP applications available. For added protection, Ingate also supports authentication of users and servers.

## Choose the Right Features for Your Network

Ingate offers several add-on software modules that allow you to tailor the Ingate Firewall to meet the specific demands of your business. Ingate Remote SIP Connectivity extends the SIP capabilities of the enterprise to employees working remotely (home office workers, road warriors, etc.).

Remote SIP Connectivity manages the traversal of the remote NAT from a central location and also includes a STUN server. Ingate VoIP Survival adds a whole new dimension to the hosted VoIP service or branch offices using the IP-PBX at the main office by securing full redundancy if the connection to the VoIP service or IP-PBX should fail. It serves as a backup to enhance the reliability and availability of a VoIP application platform.

The Ingate QoS Module allows businesses to prioritize traffic (e.g VoIP) and limit the bandwidth for certain types of traffic. Ingate Advanced SIP Routing provides the ability to fully control and route SIP traffic in an advanced and flexible manner. The module can handle least-cost routing, enabling enterprises to make

global calls for local fees. It also removes all geographic boundaries as calls to i.e. support or customer service teams can be routed to the person who is available at the moment, no matter where he or she is located. Ingate's scalable traversal license system allows for the purchase of as many licenses as necessary to handle the needs of the growing enterprise.

## Add Global VoIP Connectivity to your IP-PBX

Ingate Firewalls open up a world of possibilities and cost savings when used with a SIP-based IP-PBX. Businesses can route telephone calls via IP, not only between branch offices and home workers, but also to offices and other users using SIP based Internet telephony. No longer limited to telephony voice, communication can also include video, instant messaging, presence and more. In addition, the Firewalls make it possible for home workers, road warriors and even branch offices to belong to the same central IP-PBX -- with the highest level of security. Ingate Firewalls also afford the possibility to set up a private VoIP network, if preferred. Typical IP-PBX functions are supported, including call transfer, call hold, and voicemail.

## Support for SIP Trunking

More and more Internet Service Providers offer a SIP trunk - a combined Internet and voice connection. For enterprises with an IP-PBX this is an ideal cost-saving solution as they no longer need local PSTN gateways. However, the SIP traffic, as all other data traffic, needs to traverse the enterprise firewall. Ingate Firewalls handle the firewall and NAT traversal using the built-in SIP proxy.

## Do More with Microsoft LCS 2005

Adding value to Microsoft Live Communications Server (LCS) 2005, Ingate Firewalls allow voice and video applications to work outside the LAN. In addition, Ingate makes LCS available to mobile users through Remote SIP Connectivity. The Firewalls also support Microsoft encrypted media/Microsoft RTP (Realtime Transport Protocol).

## Free Software Upgrades for the First Year

The Ingate Firewall has no data user restrictions. Software upgrades are free for the first year. Thereafter, an annual licensing fee will apply. New software versions can be downloaded quickly and easily online from the Ingate website.

For more information, visit us at [www.ingate.com](http://www.ingate.com) or write to [info@ingate.com](mailto:info@ingate.com).

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## Technical Specifications Ingate Firewalls

Feature	Ingate Firewall 1190	Ingate Firewall 1450 and 1450+	Ingate Firewall 1600	Ingate Firewall 1900
Interfaces (10/100 Mbit/s)	3	4	4	No
Interfaces (10/100/1000 Mbit/s)	No	No	2	6
Interfaces SPF (mini Gbic)	No	No	No	2
Redundant power supply	No	No	No	Yes
Flash disk for system operation	Yes	No	No	Yes
Dimension WxDxH (inch)	9"x5,75"x1.75"	16,87"x11"x1.75"	16,87"x14,17"x1,75"	16,9"x3,46"x19,1"
Certifications	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL	CE, FCC, UL
<b>Performance</b>				
Throughput (Mbit/s) (1500 byte packets)	50	190 and 310	400	2600
Packets per second (46 byte packets)	6300	18000 and 38000	120000	231000
VPN tunnels	25	100 and 200	300	800
3DES (168-bit) (Mbit/s) (1438 byte packets)	10	45 and 54	96	150
AES (128-bit) (Mbit/s) (1438 byte packets)	15	83 and 121	157	350
SIP Connection set up (SIP+RTP), time	0.15 s	0.15 s	0.15 s	<015 s
RTP data delay (10 Mbit/s/100 Mbit/s)	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms	0.19/0.08 ms
Number of concurrent RTP sessions	40	150 and 240	500	1500
Concurrent encrypted RTP sessions (both signaling and media)	20	100 and 150	240	700
<b>Management</b>				
Automatic check for new release	Yes	Yes	Yes	Yes
Web GUI	Yes	Yes	Yes	Yes
DHCP client and PPPoE	Yes	Yes	Yes	Yes
DHCP server	Yes	Yes	Yes	Yes
SNMP	Yes	Yes	Yes	Yes
Max number of VLANs	16	32 and 64	128	256
Internal log to HD	No	Yes	Yes	Yes
Logging to PCAP file	Yes	Yes	Yes	Yes
Syslog	Yes	Yes	Yes	Yes
E-mail events	Yes	Yes	Yes	Yes
Support for failover multiple ISPs	Yes	Yes	Yes	Yes
External RADIUS server authentication for IPsec, GUI and SIP	Yes	Yes	Yes	Yes
Unlimited data users	Yes	Yes	Yes	Yes
Free software upgrades	First year	First year	First year	First year
<b>Firewall functionality</b>				
Stateful inspection	Yes	Yes	Yes	Yes
Packet filtering	Yes	Yes	Yes	Yes
DHCP proxy	Yes	Yes	Yes	Yes
Proxies for TCP, UDP, and FTP	Yes	Yes	Yes	Yes
Flexible NAT and PAT	Yes	Yes	Yes	Yes
<b>VPN functionality</b>				
X.509 certificates or shared secret	Yes	Yes	Yes	Yes
Generating of X.509 certificates for clients	Yes	Yes	Yes	Yes
PPTP server	Yes	Yes	Yes	Yes
IPsec (3DES, AES, NULL, MD5, and SHA1)	Yes	Yes	Yes	Yes
<b>SIP functionality</b>				
SIP proxy	Yes	Yes	Yes	Yes
SIP registrar	Yes	Yes	Yes	Yes
SIP traffic to private IP addresses (NAT/PAT)	Yes	Yes	Yes	Yes
TLS encryption	Yes	Yes	Yes	Yes
SRTP (sdescriptions) and Microsoft encrypted RTP	Yes	Yes	Yes	Yes
RADIUS accounting for SIP users	Yes	Yes	Yes	Yes
SIP Connect compliance	Yes	Yes	Yes	Yes
<b>Add-on modules</b>				
Remote SIP Connectivity (Far-end NAT traversal)	Yes	Yes	Yes	Yes
QoS (bandwidth limitation and priority)	Yes	Yes	Yes	Yes
SIP Trunking	Yes	Yes	Yes	Yes
Advanced SIP Routing (flexible routing functions for SIP traffic)	Yes	Yes	Yes	Yes
VoIP Survival (VoIP redundancy if connections fails)	Yes	Yes	Yes	Yes

Ingate 2006/1/30