Software SIParator®/Firewall®
– The Secure Software Enterprise SBC

Adopting global SIP communication is a simple process with the Ingate Software SIParator®/ Firewall® - the solution for enterprises that want to deploy Ingate SBC products on their own hardware platforms. Like all Ingate SBCs the Software SIParator®/ Firewall® makes secure SIP-based communications – including VoIP, SIP trunking and UC – possible. Harness the benefits of Unified Communications while maintaining current investments in security technology with Ingate's cost-effective E-SBCs.

The Software SIParator®/Firewall® is the software version of Ingate's E-SBCs, the Ingate SIParator®/Firewall®. It is an ideal solution for IP-PBX vendors, system integrators and other customers that want to deploy a large number of Ingate products on their own hardware platform. The Software SIParator®/Firewall® is designed to be installed on a virtual machine using one of several hypervisors.

The Software SIParator®/Firewall® is the same software that runs on Ingate's award-winning E-SBC hardware products. The Software SIParator®/Firewall® can handle up to 2,000 Concurrent Call Sessions or simultaneous calls.

Trusted Network Security for VoIP

Ingate's architecture boasts a true SIP proxy controlling the built-in firewall which enables secure firewall NAT traversal of the SIP traffic. Ingate E-SBCs support Transport Layer Security (TLS) for secure SIP signaling. They also support and transcodes to encrypted SRTP (Secure Real-time Transport Protocol), providing a high level of security for live data with advanced encryption, confidentiality, message authentication and replay protection. When combined, these protocols further shield users from eavesdroppers, hackers and spoofers.

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 other security techniques further strengthening security for VoIP, SIP trunking, Unified Communications and other SIP applications.

The Software SIParator®/Firewall® can work hand-in-hand with an existing network firewall to allow SIP traffic to traverse the enterprise edge. It can also be set to alone secure all SIP and data traffic. To learn more about the Software SIParator®/Firewall® and supported hardware, please visit www.ingate.com.

Support for SIP Trunking

More and more Internet Telephony Service Providers (ITSPs) offer SIP trunks. The SIP trunk can be delivered over the public Internet or a dedicated connection and both these models are supported by Ingate's E-SBCs. All Ingate E-SBCs include the Ingate SIP Trunking software, which makes SIP trunking possible by solving Network Address Translation (NAT) traversal, allowing the enterprise to connect to the SIP trunk. They also solve compatibility issues between the IP-PBX and ITSP, ensuring a quick and simple deployment.

Software Modules and Licenses

• **Ingate SIP Trunking** allows enterprises full use of their IP-PBXs and not only communication over IP within the enterprise but also outside the enterprise. Licenses for the number of concurrent calls needed over a particular trunk group are easily added.

• **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 IP-PBX located at the corporate headquarters. One simply adds the number of Remote User SIP Session licenses needed.

• **Ingate Enhanced Security** allows support for TLS and encrypted SRTP.

• **VoIP Survival** allows an enterprise using a centrex or hosted-PBX solution to fail over to the Ingate product, 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.

• **SIP Registrar** user licenses make the Ingate SIParator®/Firewall® the primary registrar server and permits SIP clients to register.

• **Q-TURN** session licenses enable WebRTC to be used with quality on security-restrictive enterprise networks. (product not yet launched - awaiting standards finalization.)

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.
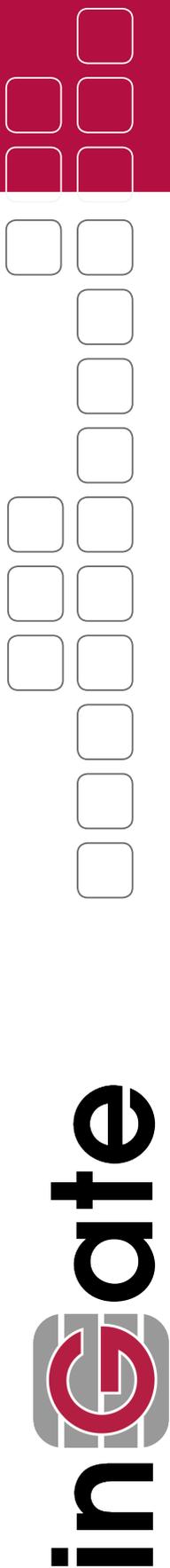
Technical Specifications and Requirements
Software SIParator®/Firewall® on a virtual machine

General

Number of Concurrent Calls Maximum (20 ms G.711 voice packets)	Hardware dependent
SIP Connection set up, max calls/s	Hardware dependent
Management/Configuration options:	Web GUI (HTTP, HTTPS) and CLI (SSH, serial cable)
Software monitoring:	- SNMP V2, V3, - Internal logging to HD, - Logging to PCAP file - Syslog, - E-mail events, - Automatic check for new software releases
External RADIUS server authentication for GUI and SIP	Yes
Support for failover multiple ISPs	Yes
Unlimited data users	Yes

Hardware Requirements

Required hardware for maximum capacity	High performance x86 hardware (>3GHz maximum (turbo) clock speed). IDE or SCSI.
Required hard disk space, minimum	Non-persistent logging: 1 GB. Persistent logging on hard drive: 6 GB.
Required RAM Memory	1 GB for maximum capacity. 512 MB & 256 MB works for smaller solutions.
Required number of CPUs	2
Software Firewall/SIParator® management ethernet interfaces:	Max. 16, min. 2 interfaces.
Supported ethernet card emulation for the virtual machine:	E1000 compatible cards, VMXnet3 for VMware and Virtio for KVM1 Regularly tested on VMware, Microsoft HyperV, Oracle's VirtualBox, Linux KVM

Security

Signaling and media encryption
Stateful deep packet inspection
Access control (Granular)
IDS/IPS

Interoperability

SIP support, standard protocols (including TCP, UDP, FTP & DHCP)
Encryption (transcoding) Interworking
Interoperable with most PBXs and ITSPs, view list at www.ingate.com

SIP Functionality

SIP Proxy
SIP Registrar
SIP Traffic to private IP adresses (NAT/PAT)
Billing and authentication of SIP users from external RADIUS server
B2BUA

Firewall Functionality

Stateful inspection
Packet filtering
DHCP proxy
Proxies for TCP, UDP and FTP
Flexible NAT and PAT

VPN Functionality

X.509 certificate or shared secret
Generation of X.509 certificate for clients
PPTP server
Billing and authentication of SIP users from an external RADIUS server
IPsec (3DES, AES, NULL, MD5 and SHA1)

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Why Ingate?

- Reliable products
- Security focus
- Interoperable with all major PBXs and ITSPs
- Simplified installations
- Cost effective products
- Firewall and NAT traversal
- SIP normalization and repair
- Support for remote workers
- Diagnostics
- Proven reliable since 2001
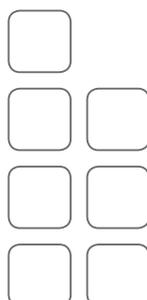
inGate®

Ingate's mission is to enable the best access for telephony, global real-time

and unified person-to-person communication for everyone.