

Avaya and Ingate

Enabling SIP-Based Communications

Companies wishing to adopt SIP-based realtime communications face several challenges, including the blockage of traffic by firewalls and Network Address Translators (NATs) traversal issues.

An Innovator-level member in the Avaya DeveloperConnection program, Ingate® Systems helps companies meet these challenges with its Firewalls, SIParators, Remote SIP Connectivity and Voice over IP (VoIP) Survival solutions. Ingate's SIP-aware firewalls and SIParators support security when introducing VoIP into a converged network, solve the NAT traversal issues at the near end into the Local Area Network (LAN), and solve far-end NAT traversal issues to support remote and traveling workers. They also allow users to make an Ingate product a failover device for a hosted Avaya Private Branch Exchange (PBX) serving remote branch offices. Ingate's products offer superior control features and flexibility for implementing VoIP in an enterprise.

The solutions are designed to work with Avaya SIP-based VoIP products. These include:

- **Avaya SIP Enablement Services (SES)** – Create a communication services layer within the Avaya Communications Architecture that mediates between Avaya MultiVantage applications and a wide range of standards-based user agents, Web-based applications and communication devices.
- **Converged Communications Server** – Creates an applications environment that combines the loosely coupled multi-modal services and presence capabilities available via a SIP-based architecture with the open APIs that expose the full breadth of features and functionalities of Avaya Communication Manager.

SIP Issues

One problem for many companies wishing to adopt SIP-based realtime communications applications is the enterprise firewall. Firewalls are required to make the LAN private and not a part of the public Internet. They block unwanted access and generally prohibit inbound traffic. The shortage of IP addresses has also led to the need for NATs that allow the use of many private IP addresses behind a single public IP address. NATs and firewalls (often combined into a single product) both create problems for the SIP protocol. There are two types of problems:

- Normal firewalls will not let SIP-based traffic through, since they do not know which ports to open for the media. For security reasons, a large range of ports cannot be left open at all times.
- The private IP address of the recipient SIP end-point device is unknown.

Products

Ingate Systems has developed a full line of enterprise Firewalls, award-winning SIParators and related products that address these issues. Products include:

- **Ingate Firewalls** – The world's first SIP-capable enterprise firewalls, these bring SIP communications, including presence, IM and conferencing, securely to the enterprise LAN.
- **Ingate SIParator** – The first product of its kind, the SIParator connects to existing firewalls, seamlessly enabling the transmission of SIP-based communications while preserving the customer's previous investment in firewall security.
- **Remote SIP Connectivity** – For businesses that want to connect with home office workers and road warriors, this applications module enables far-flung users to leverage the benefits of VoIP, instant messaging, presence, video conferencing and other forms of communications based on the SIP protocols that are already integrated into the company's network.
- **Ingate VoIP Survival** – This software extension module, available for all Ingate Firewalls and SIParators, adds a whole new dimension to the hosted VoIP service by securing full redundancy in a SIP-based hosted IP-PBX environment all the way out to the customer premise. It can be used with any hosted VoIP service, to serve as a customer premise backup to enhance the reliability and availability of a VoIP application platform. It can also be used to enable a branch office to utilize a centralized Avaya PBX with the knowledge that local calling will continue even if the link to the Avaya PBX is interrupted.

Features

Ingate Firewalls and SIParators include:

- **Full SIP Proxy** – In addition to providing an ALG for NAT traversal, Ingate Firewalls and SIParators are the only products available today that incorporate a full SIP proxy that understands the SIP signaling, controls the firewall and opens the media ports only when they are needed and closes them as soon as the session is finished. This means that the SIP traffic is let through, while the unwanted traffic is still stopped by the firewall.
- **SIP Registrar** – A record-keeper that records the location of every SIP device on the private network, the SIP registrar can direct incoming and outgoing

traffic to the correct device, while still hiding the private IP address from the outside. With the proxy, SIP signaling can even be encrypted using Transport Layer Security (TLS) to hide the signaling and the content of instant messages, a concern for many IT security managers.

that connects to any firewall to make it SIP-capable, instantly, while preserving the investment in the existing firewall.

- **Easy to install and configure** – All products include a straightforward user interface, making installation and configuration quick and easy.

Benefits

The solutions are:

- **Affordable** – Ingate’s Firewalls and SIParators are priced for businesses of any size, on any budget. For the IT administrator who is wary of replacing existing hardware, the Ingate SIParator is a unique device

System Requirements

Ingate supplies its products on optimized hardware. The products are designed for use at the enterprise edge and are configured with 10 / 100 Mbps ports. Ingate’s largest models also have gigabit Ethernet interfaces.

ABOUT INGATE	ABOUT AVAYA	ABOUT DEVCONNECT
<p>Ingate Systems was formed in 2001 to bring SIP-capable security products to the enterprise market. Technology and capital were contributed by two long-standing Swedish companies, Cendio Systems and Intertext Data, and since that time Ingate has attracted strategic investors who are also customers. The company is managed by a team of seasoned professionals led by Olle Westerberg, CEO. Steven J. Johnson serves as President for Ingate’s U.S. operations.</p> <p>Ingate Systems is headquartered in Stockholm, Sweden and its development center is located about 200KM south in Linköping. Ingate Systems Inc., a wholly-owned subsidiary, is located in the United States in Hollis, New Hampshire. The North American technical support center is situated in Dallas, Texas. The company has distributors and resellers throughout North America, Europe, Asia and the Middle East.</p> <p>Ingate was the first security appliance to be certified by MCI for use in their Advantage offering. Ingate has won the Internet Telephony Product of the Year award in 2002, 2003 and 2004 for its unique SIParator product, which adds SIP ALG and proxy capabilities to any existing firewall. Today, Ingate’s products are deployed around the world, protecting the networks of financial institutions, government agencies and others. Many Ingate customers are using SIP to bring the benefits of real-time communications to their employees and other constituents.</p> <p>For more information, visit www.ingate.com.</p>	<p>Avaya enables businesses to achieve superior results by designing, building and managing their communications networks. Over one million businesses worldwide, including more than 90 percent of the FORTUNE 500®, rely on Avaya solutions and services to enhance value, improve productivity and gain competitive advantage.</p> <p>Focused on enterprises large to small, Avaya is a world leader in secure and reliable IP telephony systems, communications software applications and full life-cycle services. Driving the convergence of voice and data communications with business applications — and distinguished by comprehensive worldwide services — Avaya helps customers leverage existing and new networks to unlock value and enhance business performance.</p> <p>For more information about Avaya, visit www.avaya.com.</p>	<p>The Developer<i>Connection</i> Program (DevConnect) is a comprehensive set of innovative sales, support, marketing and services programs through which Avaya works with members to develop and promote their products and solutions that interoperate with Avaya solutions.</p> <p>For more information, visit DevConnect at www.devconnectprogram.com.</p>