Ingate Advanced SIP Routing

VoIP (Voice over IP) based on SIP (Session Initiation Protocol) is going mainstream as enterprises realize the opportunities for cost savings and increased efficiency that it affords. Using the Internet as the primary medium for communications, SIP-enabling Ingate Firewall® and Ingate SIParator® products from Ingate® Systems work in tandem with Ingate's software innovations to allow voice and data (including IM, video etc.) to be accessed by all employees – not just those working in the office, but by remote workers as well. Whether based at home, a satellite office, in a hotel room or even a broadband-enabled airport, all employees can leverage the benefits of their corporate IP-PBX to reach out to their co-workers, or even customers and partners. In essence, the workplace has been extended to any location: calls will no longer be missed or be left unanswered since all communications can be routed anywhere.

The implementation of VoIP and other realtime communications tools makes high security demands on the IT environment and the firewall protecting the LAN/WAN from the unknown Internet. For instance, the enterprise firewall must differentiate between incoming SIP traffic and unwanted traffic, and translate the public IP address to the private IP addresses on the inside since most firewalls include NAT (Network Address Translation). The bottom line: as the environment becomes more complex the demands on the firewall increase as the firewall needs to keep track of where to route communications.

Advanced SIP Routing

Ingate's Advanced SIP Routing software module delivers a unique solution, offering great flexibility for advanced and detailed routing functions, both for incoming and outgoing communications. Ingate Advanced SIP Routing is available for all Ingate Firewalls. It is also available for all Ingate SIParators, which are devices that connect to an existing network firewall to seamlessly enable the traversal of SIP communications.

Ingate Advanced SIP Routing allows the IT administrator to define rules that regulate how SIP traffic should be routed in a very detailed and flexible way, making almost any scenario possible. Features of Ingate Advanced SIP Routing include

Least-Cost Routing

Eliminating international calling costs, Ingate Advanced SIP Routing can direct international calls to national, or local, PSTN lines within the country being called. For example, calls to the United States from Sweden can be routed to a VoIP gateway or PSTN line within the U.S., so callers based in Stockholm dial a local number when reaching out to colleagues in, say, Dallas. This is an ideal scenario for any business looking to ease the way for customers, partners, etc. located anywhere in the world to reach their enterprise. With only a national phone number to call, Ingate Advanced SIP Routing eliminates the need to pay international calling costs to reach the enterprise.

ENUM Lookup

ENUM (Electronic Numbering) is supported in Ingate Advanced SIP Routing. ENUM is a standardized address translation technology adopted by the Internet Engineering Task Force using DNS (Domain Name System) to link a phone number to a specific SIP address.

Using this functionality, Ingate Advanced SIP Routing automatically looks up phone numbers in ENUM and, if they match a known SIP address, the call is completed by routing to that address (not necessarily transferring it out to PSTN). With this functionality, the Internet is used as the medium for communications rather than traditional telephone lines. This provides an additional means of cost-savings for businesses looking to merge the benefits of IP communications technology with existing telephone infrastructure.

Support for Emergency Calls

This module also includes support for emergency calls as it always allows emergency calls to be routed through to the emergency services center, even if all traversal licenses are in use at that time.

Advanced Security and Traffic Routing Possibilities

For added control and security, Advanced SIP Routing can be set to match SIP messages on the From headers (both user name and domain) as well as on Request URI (both user name and domain). When a request URI is forwarded it can be rewritten to map to certain requirements like changed user name and domain. This gives the ability to specify which SIP traffic should be allowed and to filter out unwanted traffic based on where the traffic came from: using either the originating domain or even IP address.

Black list/white list functions allow for stopping known unwanted traffic like SPIT (Spam over Internet Telephony).

The advanced user routing in the module allows the administrator to define rules for call forwarding. For instance, calls can be forwarded in sequences; meaning, a call can first be routed to one person's phone, then routed to another line (and eventually to voicemail) if there's no answer.

Calls can also be forwarded in parallel: sent to several people at once then delivered to the one who picks up the call first. This flexibility offers any enterprise choices in the way they set up their communication environment to guarantee that all calls will be handled in the best possible way and not left unanswered.

Transcoding of Transport Protocols

Ingate Advanced SIP Routing can also handle transcoding of transport protocols like TCP, UDP and TLS. This means that incoming and outgoing communication using a certain protocol can be transcoded to another protocol such as TLS to better control and secure the communication.

Regular Expressions

For even greater flexibility, the Advanced SIP Routing Module supports Regular Expressions, a text string for describing a search pattern or matching strings, to set up rules for complex scenarios with several options and features involved.

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