Remote SIP Connectivity

Ingate® Remote SIP Connectivity

For businesses that want to SIP-enable their home office workers and road warriors, Ingate® Systems offers Remote SIP Connectivity, a module that enables far-flung users to fully benefit from VoIP, instant messaging, presence, video conferencing and other forms of communication based on the SIP protocol that already have been integrated into the company's network. With Remote SIP Connectivity, employees can enjoy the efficiency of SIP communications no matter where they are: in the office, at home or on the road.

SIP-based person-to-person communications are expected to be the next evolution of Internet usage after email and the Web, offering businesses rich possibilities for improved communication. SIP-based communication does however not reach users behind firewalls and NATs automatically. These devices were, as a matter of fact, designed in a way that stops SIP.

Enterprises can overcome this limitation and communicate from their private networks (LANs) with the outside SIP world by using SIP-capable firewalls or SIParators® from Ingate. Until all firewalls can handle the SIP protocol, there will however be many situations in which SIP communication like VoIP, will not function. This is often the case of home workers or employees "on the road", simply because most simple firewalls and NAT routers used in homes or WiFi areas stop SIP.

Remote SIP Connectivity is included in all Ingate Firewalls® and SIParators® and they will solve these issues. One simply adds the number of Remote User SIP Session licenses needed. An Ingate installed with Remote User SIP Sessions allows users behind most remote NATs and even simpler firewalls to also fully profit from SIP-based communication. Using a PC-based softphone or a GSM/SIP handset, calls can for example be made and received just as in office! Other SIP applications, e.g. Presence, Instant Messaging and Video, can be used in a similar way and will further improve the communication within an enterprise.

When the employee behind a remote NAT activates his SIP client, e.g. a PC softphone, it will register with (or via) the Ingate back in office. The Remote SIP Connectivity module will then keep a regular communication with the remote NAT in order to keep it open for all incoming SIP messages to this employee.

The solution works for most (even symmetric) remote NATs and for simpler firewalls, not having critical ports shut on the inside (LAN-side).

In order to achieve this, the Ingate Remote SIP Connectivity employs a number of different methods, the choice of which will depend upon the type of NAT. Use of an incorporated STUN server is one these possible methods.

Near-End NAT Traversal and Far-End NAT Traversal (FENT)

Ingate's award-winning products have long included support for Near-End NAT traversal of SIP communication. Instead of exclusively being able to use SIP communication on the own LAN, or perhaps with associated offices via an expensive and sensitive MPLS or VPN network, businesses could start communicating with each other freely over Internet, similarly to how emails are being sent. Telephony costs could be further reduced by replacing existing ISDN telephony connections, e.g. PRIs or BRIs, with a SIP trunk to an Internet Telephony Service Provider. The issue with employees out of office however remained. Although they could have Internet access in their remote location, NATs, for example in ADSL-routers, stopped SIP communication. The Ingate Remote SIP Connectivity was therefore developed to provide Far-End NAT Traversal (FENT) and solve this issue from a centrally located Ingate.

Businesses can thus become Service Providers for their own employees and provide these with the same SIP communication possibilities in a remote location as they would have in office, without the need to purchase any additional equipment for each employee. An easily configurable free of charge softphone is

basically all that is required.

Special applications

Besides the "normal" application of making it possible for employees to receive and make VoIP calls through the office PBX from any remote location where they have Internet access, some other uses of Remote SIP Connectivity can also be noted:

- Service Providers use the Ingate as a full SBC, providing both protection of own network, statistics about every call, registration of users and Far-End NAT Traversal at customer site.
- Oganisations keen to be particularly customer-friendly use the Remote SIP Connectivity to enable their customers to call them free of charge and moreover see the agent with whom they are speaking live, using freely available SIP softphones with support for video.

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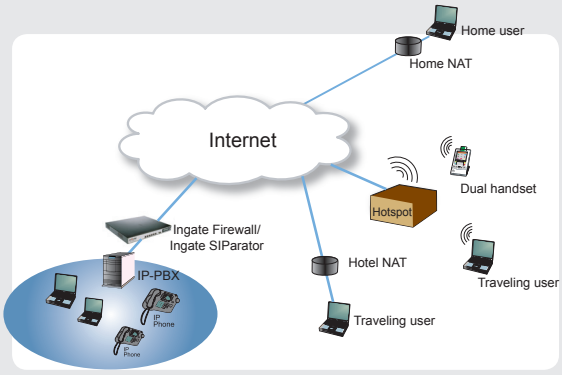
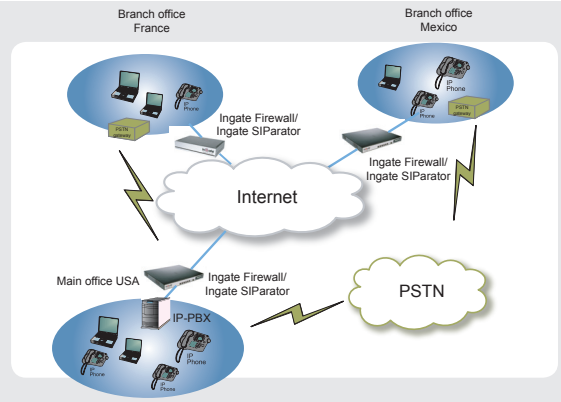
Connecting Remote Users

Ingate's technology enables remote workers to communicate with the IP-PBX installed in the main office. This Far-end NAT traversal functionality thus makes it possible for these employees to be called and to call others, just as if they were in the office. Only one IP-PBX is sufficient for a multi site enterprise and all SIP applications, e.g. VoIP, Presence, Video con-ferencing, can benefit everybody, greatly improving the communication within the enterprise. A decisive step towards inexpensive and efficient trusted Unified Communications!



Connecting Branch Offices

This allows for one communications solution for the entire enterprise as only one IP-PBX, normally in the head office, is needed. The productivity of all employees can benefit from IP-PBX applications like VoIP, Presence as well as video conferencing and it is easy to incorporate new offices into the system.