



# INGATE KNOWLEDGE BASE



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**Ingate Knowledge Base - a vast resource for information about all things SIP – including security, VoIP, SIP trunking etc. - just for the reseller community. *Drill down for more info!***

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**The introduction of SIP to a network brings the challenge of protecting the network from an untrusted network, and the opportunity to manage the routing of calls to a degree not possible with traditional telephony. This instalment of our continuing Knowledge Base will review some of the things that can be configured with an Ingate Enterprise Session Border Controller to address both the challenges and opportunities.**

## Connecting to One of Many IP-PBXs

Last week's topic was about the need for service providers (and anyone deploying SIP) to solve Network Address Translation, or NAT, traversal. This week we'll discuss one of the most compelling uses of an Ingate for service providers – building business, *fast*.

Carriers are using SIP trunking as a simplified way to offer their customers VoIP capability. There's a strong demand, too, since their business customers can consolidate bills and eliminate toll telephony costs with SIP trunks.

One of the problems for service providers is interoperability between their telephony switches and the PBX at the customer premise. To be truly effective – and secure – every customer's IP-PBX must work seamlessly with the SIP trunk service. Achieving certification with every vendor is a costly and time-consuming process, but very necessary.

The Solution: utilizing an Enterprise Session Border Controller (E-SBC) at the edge of the network, which serves as a normalization engine – or "universal adapter" -- connecting the PBX to the SIP trunk and supporting requirements for authentication and signaling. With a single E-SBC, the carrier is instantly, truly interoperable with the IP-PBX, offering their customers the reliability of a proven interop solution. Massive interoperability testing is no longer needed, further reducing costs for the service provider.

**The E-SBC also provides other critical functions:**

**Demarcation point** – Many service providers want a clear hand-off point between their network and the end customer. The E-SBC serves this important function, delivering health and quality statistics while establishing a security boundary.

**Security and NAT traversal:** When connecting enterprises to SIP trunks directly *via* the Internet, issues created by the enterprise firewall and the NAT must be resolved while also maintaining security. An enterprise border element provides the necessary functionality to resolve these problems.

**Advanced Security:** In addition to inspecting the SIP signaling and controlling the media ports, the E-SBC can add encryption to signaling and media (using TLS and SRTP), creating greater privacy.

## WANT MORE INFORMATION?

Follow the links to find out more: [What is SIP Trunking.pdf](#)

Please visit the [Ingate SIP Trunking Community](#) to read more about Ingate and our commitment to bringing SIP Trunking to enterprise networks.

For more information, visit the Ingate Knowledge Base online at [www.ingate.com](http://www.ingate.com)

We would like to hear from you. Let us know of any topics you'd like to see addressed in future issues of the Knowledge Base series by writing to [sofia@ingate.com](mailto:sofia@ingate.com) or [steve@ingate.com](mailto:steve@ingate.com).