Why SBCs are Essential with Skype for Business

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This note discusses why a session border controller (SBC) is essential to evolving UC deployments, with a focus on why an SBC is especially important when deploying Skype for Business.

Unified communications solutions are increasingly becoming hybrid solutions, with organizations either choosing a mix of cloud and premise-based elements or a mix of other suppliers to an existing UC premise-based infrastructure. Microsoft Lync was frequently added as a secondary or primary UC supplier in 2014, and Microsoft rebranded Lync late last year as "Skype for Business," adding Skype features and video support. This note discusses why a session border controller (SBC) is essential to these evolving UC deployments, with a focus on why an SBC is especially important when deploying Skype for Business.

Introducing Skype for Business

Microsoft revealed changes for its Microsoft Lync unified communications (UC) platform last year with a new name, a new user interface, and new features. The 2015 version of Lync has become Skype for Business with a new client experience, new server release and updates to the service in Office 365.

Microsoft Skype for Business redesign includes the addition of familiar Skype icons for calling, adding video and ending a call- while keeping Lync's UC capabilities such as content sharing, standard telephony features including support for SIP trunking, instant messaging and audio calling with Skype users. Skype for Business also adds video calling and integrates the Skype user directory--connecting Lync users with more than 300 million Skype users for messaging, calling and content sharing. Existing Lync Server customers access the new capabilities by updating from Lync Server 2013 to the new Skype for Business Server.

Skype for Business Deployment Models

Microsoft Lync had built considerable momentum as a partner for premise-based and hosted UC systems, and its evolution as Skype for Business has added to that momentum. Organizations have three deployment models when choosing Skype for Business. First, businesses have good reason to deploy a multi-vendor solution, especially when they want to keep their existing IP telephony solution and then layer on Microsoft's applications for the desktop interface. Some businesses may opt for a hybrid solution that includes a premises-based UC platform on for their main location, with remote locations served by a Microsoft 365 cloud-based solution. Finally, as with Microsoft Lync, Skype for Business can also serve as a stand-alone UC platform, replacing traditional phone systems and other suppliers' IP telephony platforms.

The Inescapable Need for an SBC

Regardless of whether the organization uses a standalone Skype for Business platform, a multi-vendor UC solution, or a hybrid cloud solution, a session border controller (SBC) is still a necessity when deploying Skype for Business. SBCs are essential for several reasons, starting with the fact that a Skype for Business platform uses Session Initiation Protocol (SIP) for session control.

Despite the fact that SIP is a widely deployed standard, SIP endpoints may not always be fully interoperable- especially when operating in a multi-vendor environment and the SBC can provide a gateway services to assure interoperability. This interoperability is important when connecting to a network service provider's SIP trunk, when using one vendor for IP telephony and Microsoft's UC platform for the desktop interface, and when deploying SIP-based video as part of the UC system.

The SBC can also solve interoperability issues that arise when bit rates are different on the endpoints by providing transrating, or by providing transcoding when different codecs are used on the same session. Transrating and transcoding are frequently needed to accommodate support for mobile devices or when establishing a session with external endpoints.

While users may find that Microsoft's new user interfaces are more comfortable, the adoption of Skype features and Skype's user base mean more integration work ahead for organizations that have deployed multiple vendors' UC platforms that include Skype for Business. For example, in addition to transcoding and transrating that needs to be negotiated, a multi-vendor environment also needs mediation between different systems to more efficiently manage routing and dial plans that may differ between different systems.

An SBC is useful for monitoring and managing network performance because it sees sessions and device from end-to-end, viewing network parameters such as bandwidth usage, latency, and jitter. The ability to provide homogenized performance and management for deployments is especially important in multivendor environments (or environments where a single vendor provides multiple solutions) that are becoming increasingly commonplace for UC solutions.

Finally, SBCs also perform vital security functions, and Skype for Business needs these layers of security just as much as any other UC deployment. The "border control" function helps protect a UC system from intrusion such as denial of service attacks. SBCs also provide network address translation, deciding if a user should have authorized access, even down to the level of permitting specific features on a per-user basis.

Conclusions

Microsoft's momentum as a preferred solution for some or all UC solutions will continue with the latest iteration of Skype for Business, including the ongoing adoption of its cloud-based Microsoft 365 alternative. Just as with any other UC platform, using Skype for Business either as a sole-source provider or in a hybrid solution, the need for SBCs is required to provide end-to-end session control, performance management, and security.

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