



Skype for Business Contact Centers: Native vs. Non-Native

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Introduction

With the enormous and growing popularity of Microsoft Skype for Business Server 2015 (and its predecessor Microsoft Lync Server) as a communication platform, many organizations are using it to power business units such as contact centers that depend on complex telephony functions.

Skype for Business Server includes a feature called Response Groups, which provides basic interactive voice response (IVR) functionality and call routing for voice calls to small groups of users. Some small teams or contact centers can meet their needs entirely using Response Groups, but many find that they need a third-party product to meet the specialized business requirements of contact centers, including complex IVRs and call routing logic, advanced reporting, screen pops, CTI integration, call recording, and others.

Two types of products are available to meet these needs. Products of the first type have their own separate telephony infrastructure and media-handling capabilities, and integrate with Skype for Business in a superficial way, allowing calls and possibly presence information to be passed from one system to the other. Products of this type often come from the traditional

telephony world, and they are referred to here as “not native to Skype for Business.”

“Skype-native products are built entirely within the Skype for Business platform...”

The second type of products (“Skype-native” products), rather than simply integrating with Skype for Business, are actually built entirely within the Skype for Business platform, and use the same infrastructure as Skype for Business itself. For organizations that have invested in Skype for Business and hope to maximize the value of these investments, native contact center products have several striking advantages.

This white paper outlines the differences between native and non-native products for Skype for Business, focusing on the contact center as the primary example.

What Makes a Product “Native?”

A Skype-native application is one that uses tools provided by Microsoft to add new capabilities within the Skype for Business platform itself, rather than connecting to it from outside.

“Developers can build components that operate entirely within the Skype for Business infrastructure...”

In creating Skype for Business, Microsoft made substantial investments in research and development to optimize performance, security, bandwidth usage, audio quality, and other important characteristics, and to allow for new capabilities such as integration with the consumer Skype application or with web-based communication applications. In addition, they designed Skype for Business with capabilities such as presence and multi-modal conversations that enhance productivity. The result is a software-based communication and collaboration platform that can not only drastically reduce costs, but also revolutionize the way people interact and find information, producing large efficiency gains.

A sometimes neglected feature of Skype for Business is the powerful set of tools Microsoft created to allow other applications to extend and integrate with Skype for Business. With

these tools, collectively known as the Skype for Business extensibility platform or the Skype for Business APIs (application programming interfaces), developers can build components that operate entirely within the Skype for Business infrastructure. They can leverage capabilities such as call routing, media handling, conferencing, and presence that already exist in Skype for Business, rather than duplicating them in a separate software package or appliance. They can take full advantage of any architecture that is put in place for high availability, security, or quality of service in the Skype for Business deployment.

Rather than simply integrating with Skype for Business, these native applications essentially become a part of the Skype for Business infrastructure. In many cases, they interact with Skype for Business using the same methods employed by Skype for Business itself for its own internal components.

Architecture

Skype-native applications fit in seamlessly with the architecture of a Skype for Business Server environment. This makes them considerably simpler to install and maintain, and allows them to take full advantage of the often complex arrangements that are made for large enterprise environments, with very little additional effort.

Skype for Business Server is composed of a number of software components, known as “server roles,” which provide various parts of the overall functionality of Skype for Business Server. Depending on the architecture chosen, these can be co-located on a single server (Standard Edition) or spread across a number of servers for resiliency and to support higher loads (Enterprise Edition). The structure of and connections between these servers and server roles is known collectively as the Skype for Business “topology.”

The Skype for Business extensibility platform allows servers to be configured to run applications that have a special trust relationship with Skype for Business Server. These servers use certificates to prove their identity to Skype for Business Server, and in exchange the applications running on them (“trusted applications”) can control many elements of Skype for Business Server

functionality. This is an important part of what makes Skype-native applications work more smoothly.

A contact center product that functions as a trusted application can provide contact center services such as interactive voice response (IVR), automatic call distribution (ACD), call recording, and many others by directly controlling Skype for Business Server. **Figure 1** shows a simplified picture of how this interaction works.

Non-native products, in order to offer the same features, need to route calls outside of the Skype for Business infrastructure entirely, and into their own systems, and then route them back into the Skype for Business infrastructure if the calls need to be answered by agents using the Skype for Business client. In addition, each agent’s presence state—the information on whether the agent is available, busy, or away—must be synchronized between the two systems, sometimes leading to confusion or mismatches.

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Figure 2 shows how a non-native contact center system might handle routing calls and synchronizing presence information with Skype for Business. (For simplicity, the individual Skype for Business server roles are not shown.)

This key difference has numerous implications. Once the call is outside of the Skype for Business platform, it is no longer possible to take advantage of many of the inherent capabilities of Skype for Business. Architecture design processes that are done for Skype for Business often need to be repeated for the separate contact center infrastructure. There may be different requirements to support high availability, geo-distributed contact centers, audio quality monitoring, and other important elements of the deployment. Meeting security

needs may become considerably more complex, since contact center calls that leave the Skype for Business environment do not automatically have Skype for Business security and encryption policies applied. In general, the design process becomes significantly more complex.

(See figures on next page.)

SKYPE FOR BUSINESS CONTACT CENTERS: NATIVE VS. NON-NATIVE

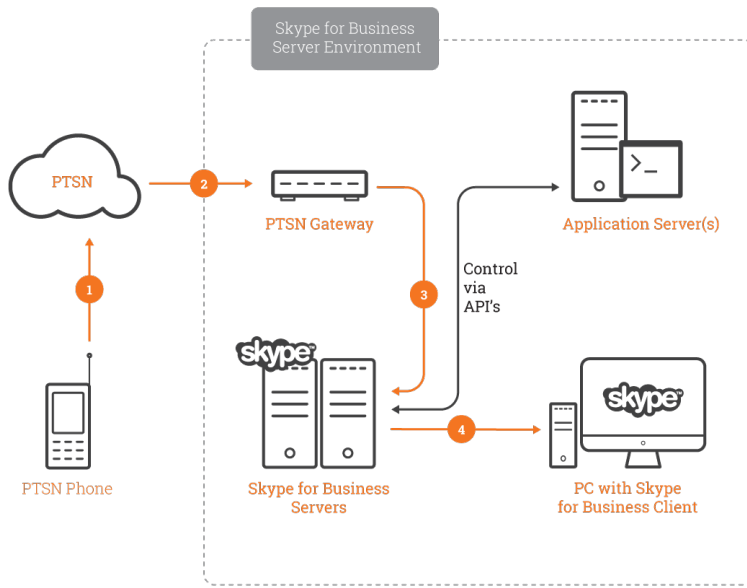


Figure 1:
Native Contact Center
Integration with Skype for
Business Server

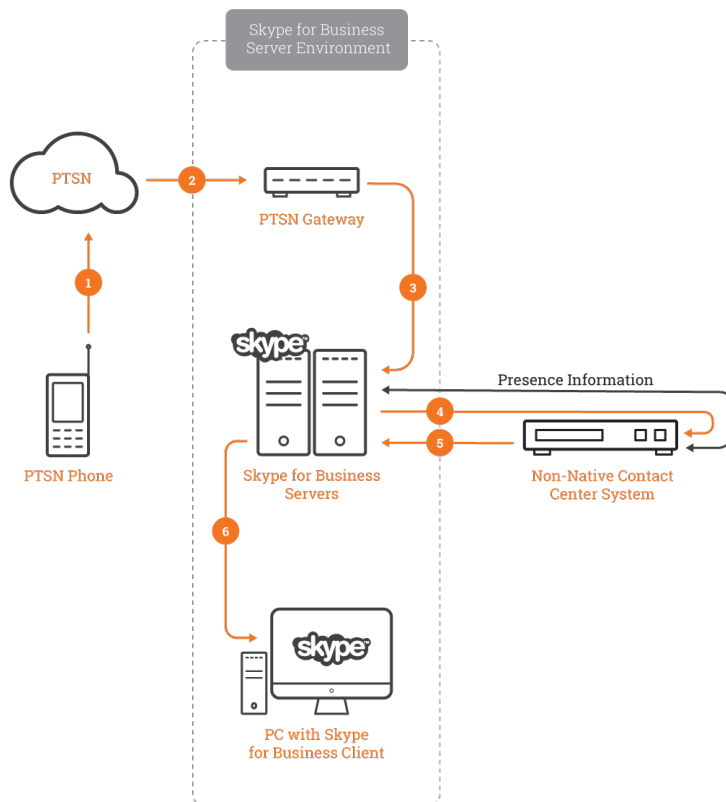


Figure 2:
Non-Native Contact Center
Integration with Skype for
Business Server

Installation & Maintenance

A Skype-native contact center product fits within the Skype for Business environment much like a new Skype for Business server role. Accordingly, installation and maintenance of these applications is familiar to anyone who also installs and maintains Skype for Business Server itself. Information technology staff does not need to learn arcane configuration rules or a separate set of hardware and network requirements in order to support the contact center.

Using a non-native contact center product with Skype for Business requires duplicating large parts of the telephony infrastructure. The end result is duplicate media handling (one supplied by Skype for Business, the other supplied by the contact center system), additional servers with often conflicting system requirements, and fragile integration points between Skype for Business and the external systems, in order to transfer presence information, coordinate screen pops, and so forth.

“Maintaining duplicate infrastructure takes up more time: often valuable and costly time from extremely specialized personnel...”

Supporting these non-native systems can be challenging; any problem that arises may originate in either of two separate and distinct systems. If users report an audio quality issue, for instance, support staff must investigate in two separate media infrastructures. It can

be difficult to clearly delineate which system is causing the problem, and where to go for support. In some cases, interactions between the external contact center system and Skype for Business can break down and cause failures in data integrity.

Maintaining duplicate infrastructure takes up more time: often valuable and costly time from extremely specialized personnel. For larger deployments, it may be necessary to have two groups, one to support the Lync deployment and another to support the non-native contact center platform. Developing custom integration with non-native contact center products can also require hiring expensive consultants to build on the proprietary customization platforms provided by non-native contact center vendors.

Skype-native contact center applications avoid all of these concerns by keeping calls and presence data entirely within the Skype for Business environment, and eliminating duplicate infrastructure. Because software built with the Skype for Business APIs uses well-known development platforms such as .NET and JavaScript, a development team with widely available technical skills can develop custom integration with minimal training and little expense. Skype-native contact center platforms keep costs down by simplifying infrastructure and avoiding unnecessary duplication.

Agent Experience

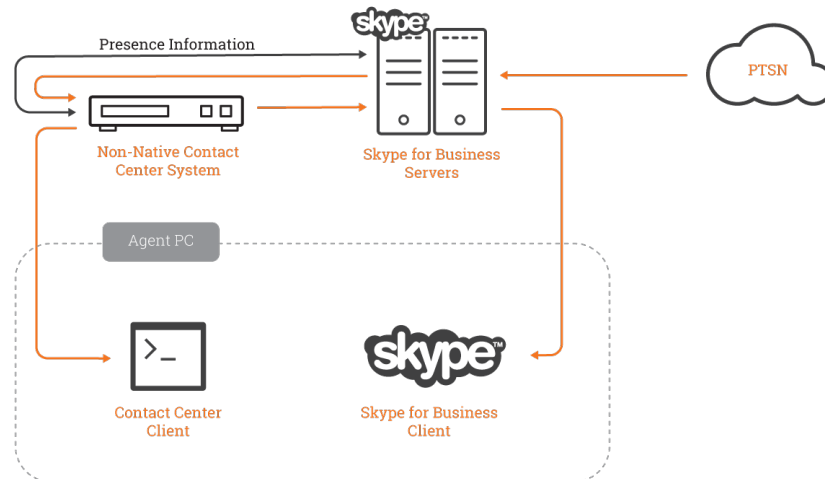
A good contact center product helps to reduce handle time and agent turnover and increase first call resolution by optimizing the agent experience. Skype-native contact centers have an inherent advantage in meeting these goals because they can center the entire agent experience on a single client—the Skype for Business client.

Non-native contact center products generally require agents to use at least two separate client applications on their PCs. The Skype for Business client, in this case, acts only as the channel through which they answer the audio portion of the call; while screen pops, caller information, and other functions are accessed through the separate contact center client.

In some cases, agents must click in two separate places to answer the call: once for the Skype for Business client, and again for the non-native contact center client. **Figure 3** shows this separation of clients.

Skype-native contact center applications, by contrast, can take advantage of the Skype for Business conversation windows extension (CWE) feature to deliver all contact center functionality within the same window as the Skype for Business call. This eliminates the need for agents to switch between windows or click on multiple pop-ups. The resulting reductions in handle time can mean real cost savings for a contact center.

Figure 3:
Separate Clients in Non-Native Contact Center





Conclusion

Skype for Business is fundamentally different in several ways from the previous generation of telephony and communications platforms. Investing in Skype for Business prepares an organization to face the communication needs of the future with better tools and greater efficiency. Many companies purchase Skype for Business for the immediate cost savings in areas such as conferencing, and gradually find more and more ways in which it revolutionizes other operations. Skype-native applications, because they effectively become a part of the Skype for Business topology, can take advantage of these new capabilities without extra integration. Non-native applications are, for the most part, unable to use these capabilities.

Imagine trying to fit an old transmission into a brand new car. This is the kind of experience that often results from trying to use a non-native contact center product with Skype for Business. If you bought a new car, fresh from the production line, and found afterwards that

it had a ten-year-old transmission, you would be rightfully upset at the frequent breakdowns and erratic behavior. Avoid problems like these by using new technology with other new technology, and invest in a Skype-native contact center product.