What options do service providers have when selling PSTN with Microsoft Teams?

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Microsoft Teams is one of the most widely adopted collaboration platforms in the world and is used by businesses of all sizes. Service providers are embracing Teams calling solutions as an essential part of their unified communications (UC) portfolios.

In this article, we outline the options that are available to service providers that want to sell PSTN services to users of Teams. Our report, *Operators' approaches to Microsoft Teams*, evaluates the best approaches for service providers to take in more detail.

Businesses need to buy three things in order to use PSTN calling for Microsoft Teams:

- Microsoft 365 licensing
- Microsoft Phone System licensing (included as standard in E5 licences)
- a PSTN calling solution (either Microsoft Calling Plans or a solution from a service provider or other UC vendor).

PSTN calling solutions can be provisioned using Microsoft Direct Routing or Microsoft Operator Connect, either directly by the service provider itself or via a third party. Figure 1 outlines the main options for service providers.

Figure 1: Main options for the service provider provision of PSTN for Teams

Solution	Typical use case(s)	Opportunities for differentiation
Microsoft Calling Plans	• Basic cloud voice for small businesses • Branch solution	Minimal because this is a resale-only option
Direct Routing	• Hybrid on-premises integrations for large businesses • Simpler deployments for the mid-market	• Customisation and support for legacy systems • Flexibility in terms of features and pricing
Direct Routing via a third party	PSTN/ISDN replacement for small and medium-sized enterprises (SMEs)	Additional features (though these may be limited to those offered by the third party
Operator Connect	Cloud voice for SMEs and large enterprises	• Provision of additional features • Flexibility in terms of pricing
Operator Connect Accelerator	Cloud voice for SMEs	Additional features (though these may be limited to those offered by the third party)

Source: Analysys Mason

What are Microsoft Calling Plans?

Microsoft Calling Plans were introduced in 2018 and are currently available in 33 countries (local numbering and emergency calling is only available in 17 countries). They are provided directly to businesses by Microsoft in most countries,[1] and are quick to set up via the Teams admin portal. However, there is limited flexibility in terms of features and pricing and these plans have tended to be adopted only by smaller businesses or those with simple voice requirements.

Microsoft Calling Plans are charged per user per month and include 1200 minutes per user of domestic calls (3000 minutes in North America), which can be pooled between users. Some limited international calling plans are also available and Microsoft introduced a pay-as-you-go option in August 2022.

Service providers can resell Microsoft Calling Plans, but the main opportunity for network operators is in wholesale provision of numbering, SIP trunks and other voice services to Microsoft.

What is Direct Routing and what use cases does it address?

Direct Routing was also launched in 2018. With Direct Routing, service providers deploy a Microsoft-certified session border controller (SBC) on behalf of the enterprise, which links the Teams environment to the PSTN via SIP trunks and can also be used to link with on-premises PBX equipment. Solutions based on Direct Routing for Teams are available from most network operators and many other service providers. Very large enterprises occasionally buy Direct Routing directly from Microsoft for use on a DIY basis (in which case they also need to procure a certified SBC and PSTN services). The solution is available in hundreds of countries and can be offered by service providers with very flexible pricing and a rich feature set.

For large enterprises, service providers often deliver custom deployments of Direct Routing with associated professional services support. They may also handle the Teams licensing on behalf of enterprises. Direct Routing is often used to support hybrid on-premises UC deployments or to integrate with legacy analogue equipment. Standardised solutions for the mid-market are also widely available from service providers.

Direct Routing can also be used be other UC vendors to supply PSTN calls to Teams users. For example, RingCentral provides access to its own calling platform and third-party voice network from within Teams via an embedded dial-pad in the Microsoft Teams sidebar. 8x8 reports having more than 200 000 Direct Routing-as-a-service users. Cloud voice services such as these typically provide more flexibility and features than Microsoft's own Calling Plans and may also be of value for businesses with mixed deployments of Teams and other UC-as-a-service (UCaaS) solutions.

Some third parties such as Ribbon Communications use Direct Routing to offer multi-tenant SBC solutions to small service providers and other channel partners. They often bundle additional services, such as management and analytics portals, that can be used by service providers to help support their customers.

What is Operator Connect and what use cases does it address?

Operator Connect enables service providers to peer directly with the Teams environment and provide PSTN access via an SBC that is hosted within their own networks and delivered as-a-service. APIs allow businesses to order and manage these voice services (including numbering and SIP trunks) from the Teams admin portal.

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[1] The exceptions to this are Australia and Japan, where Microsoft Calling Plans are provided by Telstra and SoftBank, respectively.

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Similarly to Direct Routing, enterprises contract separately with their PSTN providers, but the ability to order voice services from within Teams changes the dynamic of that relationship.

Operator Connect was launched in March 2021 and initially had 12 partners. The requirements to become an Operator Connect partner are much more demanding than those to offer Direct Routing, but many service providers see this as an important part of their UC capabilities nonetheless. Indeed, there were more than 30 Operator Connect partners by July 2022 and many other service providers have applied to be added in the coming months.

Operator Connect Accelerator was launched in April 2022 and allows service providers that are not themselves Operator Connect partners to access Operator Connect capabilities via a certified third party. This is particularly valuable for smaller service providers that may lack the scale and capabilities to become partners directly. There are five certified providers of Operator Connect Accelerator as of July 2022, including Azure for Operators.

Operator Connect Mobile is currently only available as a preview and enables native dialling with Teams from mobile networks.

Which provisioning models are most likely to prevail in the future?

There are currently three broad models for provisioning PSTN calling within Teams:

- Microsoft Calling Plans for small businesses that are already using Teams and for those with simple voice requirements
- Direct Routing for large enterprises, especially those migrating from a legacy on-premises UC environment
- Operator Connect for small-to-large businesses or those looking for more flexibility than is available with Microsoft Calling Plans.

It is likely that the use of Microsoft Calling Plans will gradually decline as the number of Operator Connect partners grows and geographic availability increases. Microsoft is not a network carrier and gains little from delivering retail voice services itself; its primary aim appears to be to increase use of the Teams platform. Many service providers' offers using Operator Connect mirror the basic pricing structure of Calling Plans in terms of pricing, but with more flexibility and features.

Solutions based on Direct Routing will have a relatively long shelf-life in order to support hybrid deployments, but we expect that these will also become less popular than solutions based on Operator Connect as businesses migrate towards a pure cloud model. Integrations with other UC vendors' platforms using Direct Routing may also eventually be replaced with other solutions.

It is not clear how many Operator Connect partners there will end up being; it is likely that most Tier-1 and Tier-2 network operators will become certified in time. However, using third-party Operator Connect Accelerator services may be sufficient for smaller service providers and those that are pursuing alternative UC platforms, such as RingCentral or Cisco Webex, for their primary business voice solution.

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