



**WHITEPAPER**

All You Need to Know About  
**Cloud Session Border Controllers**  
for Microsoft Teams Voice

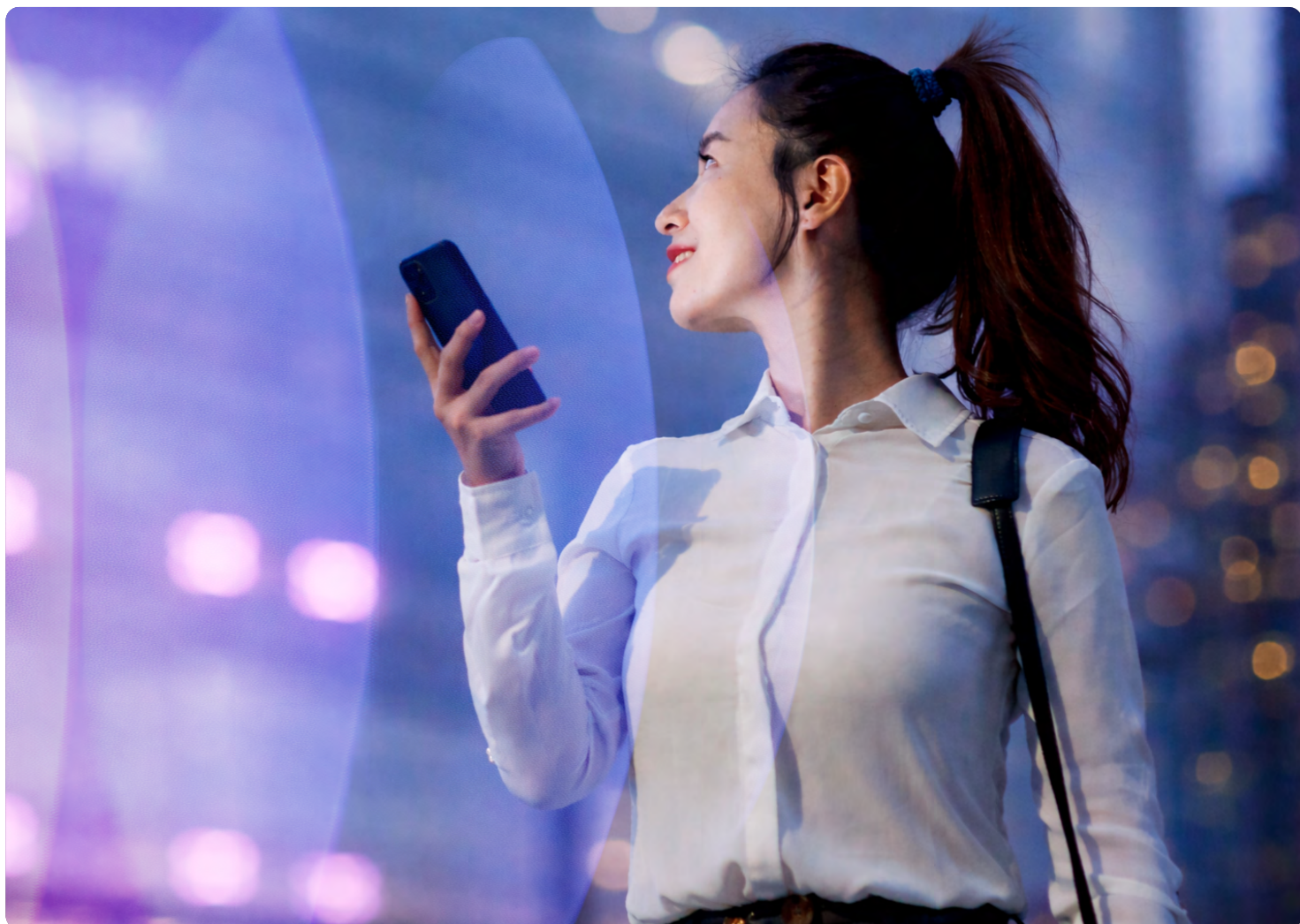
 **audiocodes**

# Introduction

Microsoft Teams is a powerful force in the growing unified communications as-a-service market, and it is easy to see why. After all, its exceptional instant messaging, online collaboration and voice and video calling capabilities place productivity firmly center-stage right from the outset, and are therefore the perfect fit for today's dynamic hybrid workplaces.

But before enterprises can go one step further and connect to Microsoft Teams Phone System for full voice calling functionality, they have some important considerations to weigh up. Should they select [Direct Routing](#) or [Operator Connect](#) for enabling PSTN connectivity? And if they opt for Direct Routing, which requires a Microsoft-certified session border controller (SBC), should they deploy it on-premises or in the cloud?

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# Back to Basics: What Is a Session Border Controller?

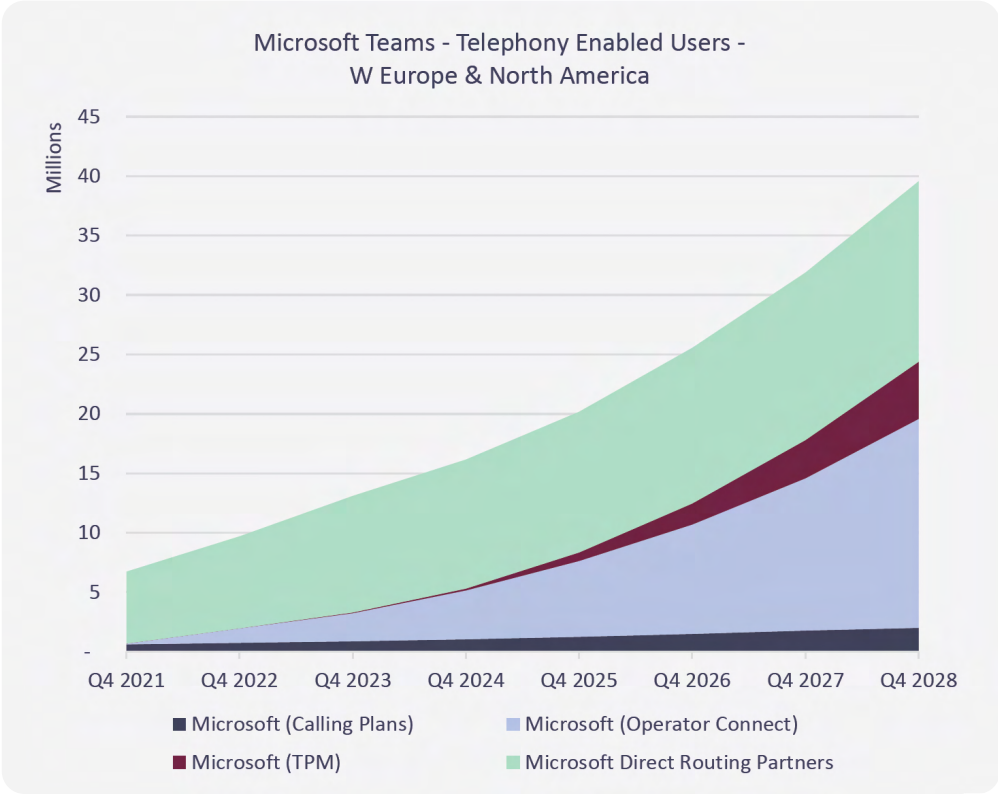
SBCs are a vital element of the overall VoIP network puzzle. Available either as hardware devices or software solutions, they are deployed at the *border* between an enterprise and a service provider, where they *control* the flow of data generated during communications between two different parties, otherwise known as *sessions*.

SBCs also provide seamless connectivity, enhanced security, quality assurance and regulatory compliance, as well as making sure that emergency calls are routed correctly and prioritized above other communications.

## Why Are Session Border Controllers Necessary for Direct Routing?

Microsoft’s Direct Routing requires a certified SBC to connect between the Microsoft Cloud, where the customer’s Microsoft Teams UCaaS solution resides, and the PSTN. This setup allows enterprises to make and receive calls from outside of their organization while still enjoying all the benefits of Microsoft Teams mentioned earlier.

SBCs used in this fashion must be certified by Microsoft as being approved for Direct Routing. Such certification is only awarded to [providers like AudioCodes](#) after their SBCs have undergone and passed a rigorous testing process, whose ultimate aim is to ensure a consistently reliable Microsoft Teams voice calling experience for end users.



Source: Cavell Microsoft for Service Providers Report - 4Q'24

# Direct Routing SBC Deployment Options

When it comes to deploying SBCs for Direct Routing, there are four different options to choose from:



## On-Premises

Here, [Microsoft-certified SBCs](#) are physically deployed on the customer's premises and also managed by them. This option is good for organizations that want to keep control of their infrastructure in their own hands, for example, due to strict security requirements. However, because we are talking about SBCs located physically on-premises, maintenance can be costly in both time and money, and downtime due to equipment failure must also be taken into account.



## Private Cloud-Based

In the case of private cloud deployments, the [Microsoft-certified SBC](#) resides in the customer's own cloud, usually running on a virtual machine, and the customer typically also manages it. In many ways, this is a similar principle to an on-premises SBC deployment (see above), and is a closed garden model where the organization sets its own policies and security requirements. Because this type of deployment is software-based, hardware maintenance is less of an issue and the risk of failure is reduced assuming redundancy is applied.

When it comes to deploying SBCs for Direct Routing, there are four different options to choose from: onpremises, private cloud-based, public cloud-based and SaaS SBC solutions.





## Public Cloud-Based

With public cloud deployments, the [Microsoft-certified SBC](#) is hosted in a public cloud. The main advantage with cloud service is that it helps enterprises to speed up their infrastructure deployment, since there is no hardware involved and therefore no physical presence required, resulting in a resilient and reliable operation. Beyond speed, there are many other advantages to the cloud, including business agility, global reach, scalability, flexibility and disaster recovery.

Azure, for example, is an industry-leading cloud service offering that meets all the above criteria. It provides a wide range of services like infrastructure as a service, analytics and mobile apps, as well as integration with Microsoft products and other applications. Azure is a robust and efficient platform, with high availability, a global footprint and regional fail-over.



## SaaS SBC Solution

This type of deployment is similar to public cloud-based deployments, since the [Microsoft-certified SBC](#) is also hosted in a public cloud. However, in this case the SBC itself is part of a connectivity service that includes UI tools and automations to simplify the service delivery and management.

This deployment option is the ideal choice for organizations that do not want the responsibility of managing the SBC, or do not have the in-house technical expertise to do so. Because everything is managed and maintained by the provider, this type of solution is highly resilient with hardly any risk of downtime and gives true peace of mind to end customers. This model does not always allow the customer to integrate third-party voice solutions if required.



# What You Need to Keep in Mind with SBC as-a-Service

Although SaaS SBC solutions tick a lot of the right boxes, there are nonetheless some concerns that need to be addressed.



## Standalone as a Hybrid

Organizations should opt for a managed cloud that enables easy mobility and builds a strong and reliable platform between the public cloud and on-premises users. Azure, for example, offers a huge range of hybrid-type connections, including virtual private networks, delivery nodes and clear caches, and also provides express route networks to increase performance and usage.



## Analytics Support

Analytics capabilities are essential for monitoring the deployment and delivering a superior voice calling experience.



## Security

This is the most important point to bear in mind, since all organizations need to ensure that their data and service is protected at all times from external threats.



## Unified Delivery Plan

It is important to select an end-to-end solution where the tools for source control, unit testing, delivery, going live and integration testing are all available under one umbrella.



## Stay Current

Organizations should ensure that SBCs are kept updated, or they should work with a trusted partner to manage the entire operation.



## Compliance

Organizations need to make sure that their cloud provider has all the necessary protections in place to prevent the leaking of confidential data, as well as providing them with all the tools they need to comply with regulations like GDPR and HIPAA.

Although SaaS SBC solutions tick a lot of the right boxes, there are nonetheless some concerns that need to be addressed.

# Quick and Easy PSTN Connectivity with AudioCodes Live

At AudioCodes, we want everybody to be able to take advantage of the considerable productivity-boosting powers that Microsoft Teams voice calling brings to the table. We also understand that each enterprise will need to choose their own unique SBC deployment path for Direct Routing, according to their specific capabilities, knowledge and requirements.

AudioCodes' market-leading Microsoft-certified [Mediant SBCs](#) include cloud-native, virtualized and appliance models. They cover all the options listed above, and deliver seamless connectivity, enhanced security and voice quality assurance for any voice communications environment and at any scale.

However, at the same time, we know that many businesses simply do not want to invest in the resources or the technological know-how to manage the migration to Microsoft Teams voice calling themselves, which is exactly why we created [AudioCodes Live for Microsoft Teams](#).

Built on top of our Mediant SBCs, AudioCodes Live is the ultimate voice solution for Microsoft Teams, enabling you to offer both Teams phone and contact center services with unrivalled simplicity and efficiency. Using service automation, you can streamline deployment, onboarding and management of your customers' voice environments, reducing costs and complexity. AudioCodes Live leverages AI and Azure cloud services to enhance the user, agent and customer experience, providing conversational capabilities such as IVR, call recording and meeting analytics.

Our seasoned experts take care of the entire migration project from A to Z, resulting in a seamless, rapid and cost-effective transition to Microsoft Teams for high quality voice and video collaboration. We also have Day 2 covered, managing and monitoring the solution and providing 24/7 support whenever it is needed.

AudioCodes Live is already very well represented in a number of extremely competitive verticals, including banking and finance, insurance, health care and government. So if your organization wants to ensure a fast, smooth and reliable migration to Microsoft Teams voice calling through Direct Routing, a fully managed solution like AudioCodes Live is without doubt the best way to go.

**AudioCodes Live is the ultimate voice solution for Microsoft Teams, enabling you to offer both Teams phone and contact center services with unrivalled simplicity and efficiency.**

# Value-Added Voice and AI Services

AudioCodes Live goes beyond core voice enablement by delivering a comprehensive portfolio of value-added voice and AI-driven services. These include contact centers, [meeting intelligence](#) for both cloud and on-premises environments and [interaction recording](#) with advanced analytics to support regulatory compliance and operational visibility.

In addition, the platform enables seamless connectivity to [voice bots](#) and conversational IVR solutions, along with real-time capabilities such as [translation](#) and agent assist. Leveraging AI and cloud technologies, these services help increase employee productivity while enhancing user and agent experience, enabling organizations to operate more efficiently and effectively.



"Partnering with AudioCodes has been very successful. AudioCodes was the only partner out there that offered a true integration with Microsoft Teams."

**Michael Rapp, IT Director at Berry Global**

## Why AudioCodes?

AudioCodes is a global leader in enterprise voice technology and voice AI with a field-proven track record spanning more than 30 years. Our market-leading SBCs have formed the foundation for thousands of successful UCaaS migration projects worldwide.

<sup>1</sup> Cavell Microsoft for Service Providers Report - 4Q'24



For more information,  
please visit the [AudioCodes Live website](#).

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