

Getting the Cloud Right: A Practical Guide

Migrating users to Cloud PBX with AudioCodes CloudBond™ 365

Introduction

Recent Microsoft announcements surrounding enterprise voice for Skype for Business in the cloud have caused significant waves in the market. Cloud PBX and PSTN calling will have a dramatic impact on the ecosystem. As real parity between the on-premises Skype for Business Server and the on-line offering will take a few years, it is important that every enterprise evaluates carefully and plans accordingly the users' migration.

If you've already deployed Lync, Skype for Business, or are seriously considering doing so, you may be compelled to start migrating some users who may not need the full feature set of the server to the cloud. The good news is that the migration can be done gradually and AudioCodes can provide the necessary tools for the migration journey. The purpose of this application note is to educate and provide some practical guidance on how the AudioCodes solution set allows for such a migration.

What is Cloud PBX?

If you haven't read the "To Cloud or not to Cloud?" whitepaper ([To Cloud or not to Cloud? A Practical Guide for Embracing the Communications Future](#)), it is important to spend a few words explaining what is the Cloud PBX from Microsoft. In short, it is the set of Call Management features of Skype for Business Online, which is the new version of Lync Online and is the Microsoft hosted version of Skype for Business Server. It is part of Office 365 and is included in selected E-Suite Plans. Cloud PBX includes a subset of the PBX features available in the server edition. It enables outbound and inbound calling through on-premises PSTN Connectivity (using local service providers or local telephony systems) or through a Microsoft provided cloud PSTN (available only in select regions).

Before making any decision, it is wise to check the feature differentiation between the server and the Cloud PBX. As of November 2015, the lack of feature parity between the online and on-premises offerings remains significant. Among the main features not included online are branch survivability, response groups, location based routing, call admission control, 911, analog devices, common area phone, and integration with on-premises PBX. Your first step in the migration process is, therefore, to profile your users and understand which ones will be included in the first migration batch.

The Cloud PBX includes a subset of the PBX features available in the server edition. It enables outbound and inbound calling through on-premises PSTN Connectivity or through a Microsoft provided cloud PSTN.

Practical Considerations in the Transition to Cloud PBX

The issue at hand is to plan the migration in the best way possible. You need to consider a variety of practical considerations in this regard:

1. Which users do you want to migrate to the cloud? How many people really need all the PBX features? How many people outside the office (on the road) can be satisfied by the cloud features?
2. Do you have an existing on-premises telephony infrastructure that you want to co-exist with or gradually migrate away from? (Call center, PBX, IPPBX, etc.)
3. Do you have devices (faxes, video rooms, analog devices) that you want to continue to use?
4. Do you need to maintain local connectivity to the PSTN (existing contracts, or availability, regulatory and Quality of Service reasons for branch offices)?

To facilitate migrations to Cloud PBX, AudioCodes takes a gradual approach and proposes a unique solution that enables the transition of some users to the cloud, but also allows other users to enjoy the full feature-set of Skype for Business server. This approach ensures the following capabilities in a migration strategy:

- **Enablement of real PBX replacement** capabilities today
- **Connectivity to the Cloud:** sync and federate with cloud users
- **Flexibility:** ability to move users between the server and the cloud as the customer sees fit
- **Scalability:** can scale from several dozens to thousands of users
- **Cost effectivity:** gives you the required ROI
- **Enablement of custom applications** such as call centers, fax servers, productivity enhancements and more

AudioCodes CloudBond 365: Tomorrow's UC Today

AudioCodes CloudBond 365 is a modular solution for the data center, customer premises or the branch. It is a versatile all-in-one Skype for Business appliance designed for hybrid environments that combines the best of the Skype for Business server, the cloud-PBX and the service provider's voice services. CloudBond 365 is available as a hardware box (Standard, Pro and Enterprise Box Editions) or as a Virtual Appliance.

CloudBond 365 provides an integrated solution. It has Skype for Business servers built in, including the front end, mediation, monitoring, edge and reverse proxy servers. The appliance also contains an embedded Windows server 2012 R2 and an embedded SQL Server Standard 2012, as well as additional virtual machines for trusted applications. The CloudBond 365 Box Editions have built in gateway and session border controller (SBC) capability as well as a host of specialized tools including Office 365 and Active Directory connectors, a deployment wizard, and IP Phone management software.

CloudBond 365 provides an integrated solution. It has Skype for Business servers built in, including the front end, mediation, monitoring, edge and reverse proxy servers.

CloudBond 365 connects and syncs with Office 365 and the local Active Directory, allowing for voice enablement and an easy setup of voice policies. Skype for Business users can be registered on CloudBond 365's Skype for Business server Front End or in Microsoft's Cloud PBX and can be moved at any time in both directions, providing tremendous flexibility. For users that were migrated to the Cloud PBX, the appliance provides the required mediation, edge and PSTN/SIP trunking connectivity.

CloudBond connects the Cloud PBX users to local PSTN services, allowing for voice enablement and an easy setup of voice policies.

As such, CloudBond 365 is an ideal bridge for a migration to full cloud-based connectivity, allowing companies to migrate at their own pace, moving from a full on-premises PBX infrastructure to a hybrid structure.

¹Standard Edition has both GW and SBC ; Pro and Enterprise Editions have SBC only

CloudBond 365 Comes in Four Configurations:

- Standard Box Edition (SBE): a true all-in-one solution, built on top of the popular Mediant 800B Gateway chassis, providing Skype for Business PBX capabilities for up to 200 users and mediation/connectivity for Cloud PBX users
- Pro Box Edition (PBE): built on a powerful HP server, this appliance provides Skype for Business PBX capabilities and SBC for up to 500 users plus mediation/connectivity for the Cloud PBX users
- Enterprise Box Edition (EBE): the most powerful appliance in the lineup, supporting up to 5,000 local Skype for Business users and additional Cloud PBX users
- Virtualized Edition (VE): software only solution, targeted at service providers

“There is strong market demand for a hybrid solution to integrate with Skype for Business, and we feel that this solution enables our business partners to deliver the Microsoft Unified Communications experience to enterprises worldwide.”

Giovanni Mezgec, General Manager of Applications and Services Marketing at Microsoft, speaking of CloudBond 365

Doing it Right in the Cloud: A Practical Guide

In practical terms, perhaps the most important thing to do is develop a voice migration strategy. Such a strategy would compose of several stages including assessing corporate requirements (typically in the headquarters), building an infrastructure that meets those requirements, migrating relevant users to the cloud and finally, expanding that migration by assessing the needs of branch offices, building a corresponding infrastructure and migrating branch users to the cloud as required. Let’s take a closer look at each of these stages.

Stage One: Assess – Inventory Your Profiles

In this initial state, it is important that the organization understand its requirements. This is the opportunity to pause and analyze what users are doing, what their needs are and which users can stay local and which can be moved to the cloud. Once the requirements are understood, a hybrid strategy can be developed to build the appropriate infrastructure, adopted to the organization’s needs today and its plans for the future. Here are some steps to consider in the Assessment Stage:

- Analyze current infrastructure: existing PBX, analog phones and devices, fax usage, common area phone needs, etc.
- Conduct inventory of video systems and integration requirements
- Note Contact Center, DECT or other specialized communication tools
- Profile users and usage: identify the user community which could live with the current feature set in the Cloud PBX and those need full PBX features
- Understand the need for PSTN access in remote branches

In doing the assessment, the organization will learn which users need to have full PBX features and which can settle for the limited feature set on the cloud. It will know which service contracts it wants to maintain, which equipment is still useful, which analog devices it has and for which it must find a solution, and more. Ultimately, the organization will have a clear view as to its requirements and its migration strategy.

Stage Two: Build a Hybrid Platform and Migrate Information Workers First

With the requirements mapped out, an infrastructure can be built that addresses the needs identified in the assessment stage. AudioCodes' proposed solution is a hybrid platform that is both versatile and flexible, one that can meet not only today's requirements but ensure that the investment made now can be leveraged for the coming years as well.

Once a flexible hybrid platform in place, the users that were profiled in the assessment stage should be reviewed and the first batch of users to be migrated to the cloud should be chosen. CloudBond 365's Management Pack can be leveraged to assign the correct voice policies for online users and easily help move these users to the cloud. The remaining users should have the appropriate policies and rights set to leverage the full voice features of the Skype for Business on-premises server.

During this stage, the following steps should be kept in mind:

- Connect to the existing PBX and phase it out gradually
- Assign information workers (who do not need the full server feature set) to Cloud PBX
- Assign all other users to the Skype for Business Server
- Integrate the inventory of existing communications infrastructure to the Skype for Business Server
- Use local Telco operators' calling services and preserve DID
- Start monitoring usage, user experience and adaptation

Stage Three: Expand Rollout to the Branches

With the platform deployed and the first users moved to the cloud, the organization can begin examining the needs of its remote branches. An assessment similar to the one done in Stage One at HQ may be warranted for the branches as there may be different requirements to consider, including resiliency needs, local regulation and custom applications such as IVR and contact centers. An assessment should be done as to whether a hybrid platform is needed to meet those requirements. Here, too, CloudBond 365 can be ideal as a branch pool appliance.

- For very small branches, assign users to Cloud PBX, unless you have survivability requirements or need Contact Center capabilities
- Deploy Skype for Business connected to Office 365 (you can assign users to Cloud PBX or to the appliance-based CloudBond 365)
- Use local Telco operators' calling services (especially relevant in global locations where Microsoft enterprise voice is not available or local regulations require it)

Common Scenarios

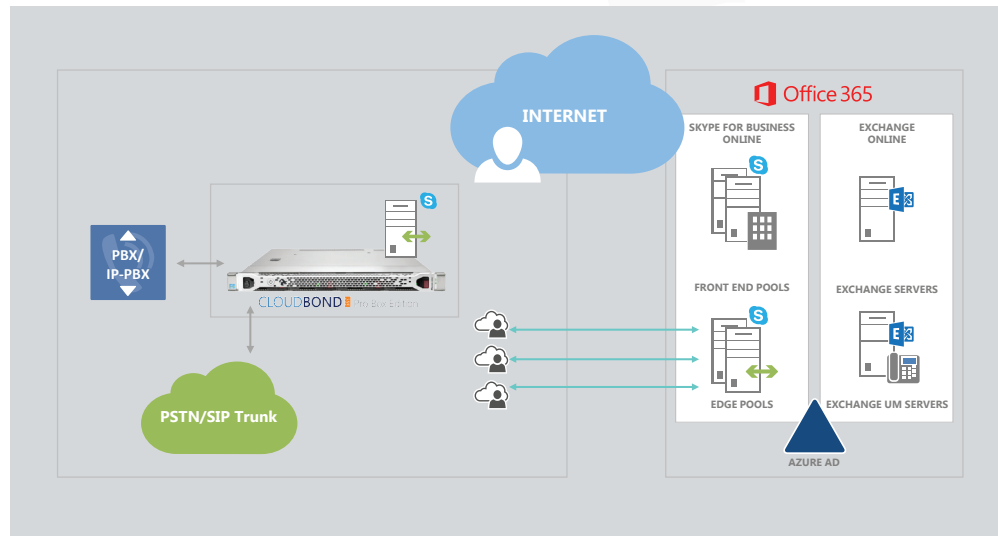
Let's examine the three most common migration use cases for Cloud PBX, leveraging the AudioCodes CloudBond 365 solution.

Scenario 1: No Prior Implementation of Lync Infrastructure (Greenfield)

In this scenario, the customer does not have an existing deployment of Lync or Skype for Business and would like to deploy their first Skype for Business users on the Cloud PBX.

Microsoft's Skype for Business Cloud PBX with the on-premises PSTN deployment model calls for the on-premises Skype for Business server to be connected with Skype for Business Online. This is illustrated in diagram 1.

Diagram 1: Skype for Business Cloud PBX with On-Prem PSTN



The objective in this scenario is to:

- Migrate users from an existing telephony system (IP-PBX or PBX) to Cloud PBX
- Continue to use the existing telephony system for some of the users or keep using the system (such as a Contact center)
- Continue to use local PSTN connectivity

The AudioCodes CloudBond 365 facilitates a simple migration, providing the required infrastructure to enable users with Skype for Business voice policies and then migrate them to the Cloud. Leveraging a hybrid approach, some users can be registered to the Skype for Business server in the appliance for full functionality and the remaining users can be homed in the Cloud PBX.

The CloudBond 365 includes special IT Pro utilities which simplify the On-Prem PSTN deployment, automate the users' policy for Hybrid Voice settings, and allow the IT team an easy way to manage and monitor the deployment and the migration.

CloudBond 365 contains the required Skype for Business server roles (built-in) and provides connectivity to the cloud on the one hand and to the PSTN on the other. IT administrators have the flexibility to move users from on-line to on-premises and vice versa, simply and quickly, offering easy user life-cycle management.

The AudioCodes CloudBond 365 facilitates a simple migration, providing the required infrastructure to enable users with Skype for Business voice policies and then migrate them to the Cloud.

Benefits:

- Migrations can be executed in phases, eventually leading to a complete transition to the cloud
- No other Lync or Skype for Business infrastructure required on-premises
- System can co-exist with existing PBX
- Maintain existing PSTN contracts with local service providers
- Gives time to validate quality, reliability, and the security of the offering
- Analog devices can be registered to the CloudBond 365 which can be accessed by on-line users through which they can also access the PSTN

Scenario 2: Full Cloud for HQ users, Remote/International Branches with On-Premises PSTN

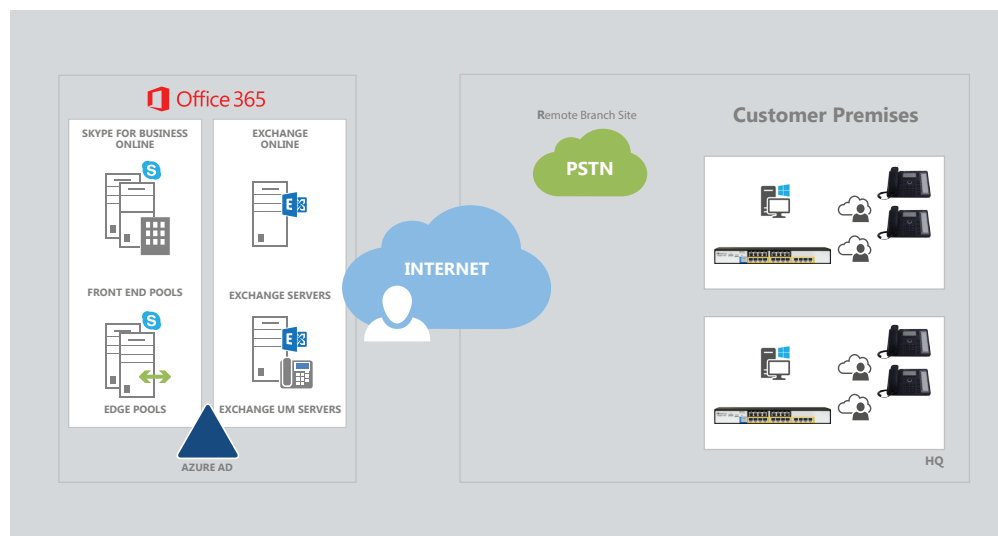
Now let's look at a case in which a company has a main site in a region where Microsoft offers Cloud PBX with Cloud PSTN calling plans (US only in the first phase), while the same functionality is not available in regions where remote sites are located.

Deploying CloudBond 365 in each of the branches allows for users to be homed in the Cloud PBX, but access the local PSTN as required by local regulations or existing PSTN contracts. The same appliance will bring several additional benefits to the branch.

Benefits:

- Online users can call a local PSTN number, at each one of the branches
- Online users can receive a PSTN incoming call
- Calls can be made with analog devices
- Calls can be placed by users on existing telephony systems
- Can install IVR and other custom branch applications for Skype for Business
- Provides survivability for local users
- Can integrate with contact center applications and video systems

Diagram 2: Cloud PBX with On-Prem PSTN and Multi Branches



Scenario 3: Existing Lync or Skype for Business Infrastructure with Remote/International Branches

Now In this scenario, headquarters has deployed on-premises Lync or Skype for Business (which could be previous versions of AudioCodes CloudBond 365). The customer may want to leave office users homed in the on-premises infrastructure for full PSTN and PBX capabilities but may want to start migrating other information workers to Cloud PBX.

Let's distinguish between headquarters and remote branches.

Headquarters:

1. Online users can call a local PSTN number through the CloudBond 365 at each of the branches
2. Online users can receive incoming PSTN calls
3. Calls can be made with analog devices which are registered to the CloudBond 365
4. Calls can be placed by users on existing telephony systems
5. Users that are registered locally enjoy full PBX capabilities
6. 3rd party applications can be hosted locally

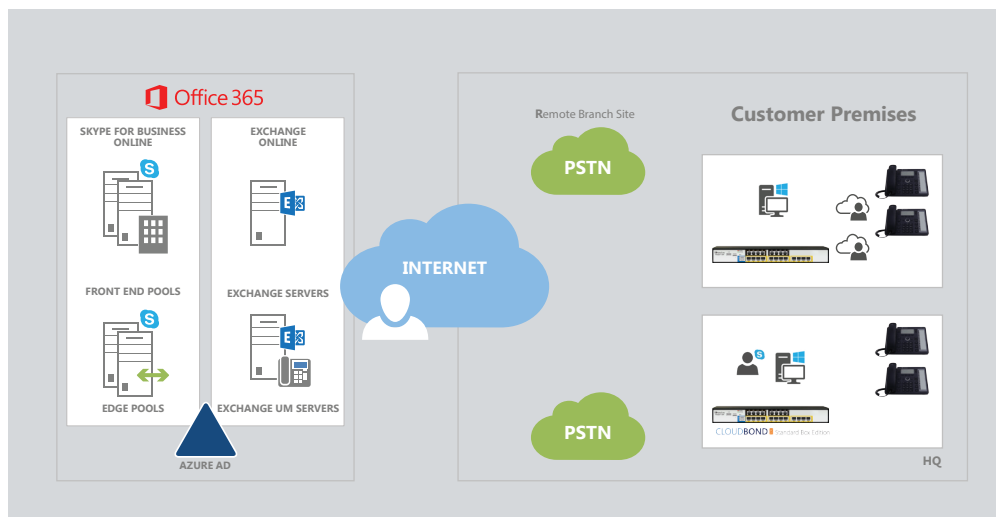
Branches:

You may want to have some users with full PBX capabilities (and maintain integration with local analog devices, fax, video rooms, etc.) as well as have users in the cloud. CloudBond 365 can be deployed in the remote branch, allowing for this hybrid scenario, providing many associated benefits such as local termination, survivability, minimum routing, local management, and local connectivity to an existing systems.

Benefits:

- Online users can call a local PSTN number, at each one of the branches
- Online users can receive incoming PSTN calls
- Calls can be made with analog devices which are registered to the CloudBond 365
- Calls can be placed by users on existing telephony systems Can install IVR and other custom branch applications for Skype for Business
- Users that are registered locally enjoy full PBX capabilities
- 3rd party applications can be hosted locally

Diagram 3: Cloud PBX, Skype for Business Hybrid with On-Prem PSTN



Additional AudioCodes CloudBond 365 Benefits

CloudBond 365 management tools automate user synchronization and user administration, simplifying the user's life cycle management

CloudBond 365 is equipped with special connectors:

- Office 365 Connector
- AD Connector

These connectors automate user synchronization in a hybrid topology and reduce IT operation costs, simplifying user migration from On- Premises to On-Line.

In the Cloud PBX with an On-Premises PSTN scenario, these tools handle most of the synchronization tasks.

Monitoring and Management

In all of the scenarios described above, the AudioCodes CloudBond 365 can be managed and monitored using the AudioCodes Session Experience Manager (SEM) and Element Management System (EMS). Not only can the CloudBond 365 be monitored and managed, but the entire Skype for Business voice network can be as well. Connecting the local infrastructure (PBX or IPBX) to Skype for Business can be done via the CloudBond 365.

Video Room System

Video room systems can register via the CloudBond 365 and Video Integration Server (which can reside in the CloudBond 365) to connect to a Cisco video terminal or video systems.

Voice Recording

Employees who require voice recording can register to the CloudBond 365 on-premises, allowing for the AudioCodes SmartTAP application to record the calls of all on-premises users. In a scenario in which on-line users go through the on-premises CloudBond 365 to access the PSTN, their calls, too, can be recorded.

Survivability

By having the AudioCodes CloudBond 365 in a full deployment on premises, enterprises are provided with full UC resiliency. If users are registered on-premises, even if the WAN connection goes down, CloudBond 365 can still manage the local PSTN connectivity.

CloudBond 365 is Ideal for Hosters and Service Providers

In addition to all the above benefits, CloudBond 365 is also ideal for Hosters and Service Providers implementing the hybrid and Cloud PBX offering:

- Helping Service Providers to keep customer telephony in the Service Provider network. This is true for both the hybrid topology and if the customer wants to use Skype for Business Online.
- Providing a services-oriented interface which simplifies the Skype for Business administration.

Summary

A deployment of Skype for Business which mixes on-line and on-premises functionality will lay the foundation for a smooth transition to the full cloud solution down the line. The best way to protect the enterprise's current investments, ensure a full enterprise voice feature set, guarantee that all company branches around the world are serviced and comply with regulations, is with a hybrid solution which offers the best of both worlds and allows the benefits of Unified Communications today with a secure and smooth migration to voice in the cloud when fully available. The AudioCodes's CloudBond 365 is ideally suited to make that happen.

About AudioCodes

AudioCodes Ltd. (NasdaqGS: AUDC) designs, develops and sells advanced Voice over IP (VoIP) and converged VoIP and Data networking products and applications to Service Providers and Enterprises. AudioCodes is a VoIP technology market leader focused on converged VoIP & data communications and its products are deployed globally in Broadband, Mobile, Enterprise networks and Cable. The company provides a range of innovative, cost-effective products including Media Gateways, Multi-Service Business Routers, Session Border Controllers (SBC), Residential Gateways, IP Phones, Media Servers and Value Added Applications. AudioCodes' underlying technology, VoIPerfectHD™, relies on AudioCodes' leadership in DSP, voice coding and voice processing technologies. AudioCodes High Definition (HD) VoIP technologies and products provide enhanced intelligibility and a better end user communication experience in Voice communications.

International Headquarters

1 Hayarden Street, Airport City
Lod 70151, Israel
Tel: +972-3-976-4000
Fax: +972-3-976-4040

AudioCodes Inc.

27 World's Fair Drive,
Somerset, NJ 08873
Tel:+1-732-469-0880
Fax:+1-732-496-2298

©2016 AudioCodes Ltd. All rights reserved. AudioCodes, AC, HD VoIP, HDVoIP Sounds Better, IPmedia, Mediant, MediaPack, What's Inside Matters, OSN, SmartTAP, VMAS, VoIPerfect, VoIPerfectHD, Your Gateway To VoIP, 3GX, VocaNom, CloudBond and AudioCodes One Voice are trademarks or registered trademarks of AudioCodes Limited All other products or trademarks are property of their respective owners. Product specifications are subject to change without notice.

V.1, 12/15

Contact us: www.audiocodes.com/info
Website: www.audiocodes.com

