Understanding the move to cloud communications with Skype for Business

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What I am covering today

• What is Cloud PBX?
  • What’s on the roadmap
• Skype for Business Deployment Options
• How does PSTN (Phone numbers) work with Cloud PBX
• How does PSTN Conferencing work with Cloud PBX
• Which Deployment Model should I choose?
What is Cloud PBX?
"Cloud PBX" is a Feature of Skype for Business Online (Office 365) not a product

Cloud PBX Always has:
- Cloud Call Control (Registrar)
- Cloud Conferencing (including PSTN)
- Cloud User Administration

Cloud PBX PSTN Connectivity Options:
- Microsoft PSTN Calling in the Cloud
- Bring your own on premises carrier
Cloud PBX: Phones and Clients

- **PC clients**
  - All supported PC & Mac clients in Office 365.

- **Mobile Clients**
  - Skype for Business clients for iOS, Android & Windows Phone.

- **IP Phones**
  - Lync Phone Edition: Polycom CX600, CX3000*; Mitel, HP, etc., w/ latest firmware,
  - Polycom VVX201-VVX600 series with UCS 5.4.0A firmware 5.4.0.10182
  - Yealink working today, certified ~June
Cloud PBX: Administration in the Cloud

Operations

- Office 365 Web Portal
- Tenant Admin with PowerShell
- Call Detail Records
- Call Quality Dashboard

Admin features

- User Creation
- PSTN number assignment
- PSTN Conferencing setup
Cloud PBX: Voicemail

New voicemail service with no configuration required. Exchange **Online (today)** for deposit, compliance & archiving.

**Features Include**

- Personalized Greeting
- Message waiting indicator
- Reply to voicemail with call

[Diagram showing cloud PBX integration between Customer Premises and Office 365]
Cloud PBX: Features Today

Core Knowledge worker features here today:

- Call answer / initiate (by name & number)
- Call hold / retrieve
- Call History
- Call Delegation & Call On-behalf
- Call Transfer (Blind, Consult & Mobile)
- Camp-on
- Caller ID
- Call Waiting
- Call forwarding & simul-ring
- Clients for PC, Mac & Mobile

- Device switching
- Distinctive ringing
- Do-not-disturb routing & call blocking
- Enterprise calendar call routing
- Integrated dial-pad
- Music on Hold
- Qualified IP Desk Phones
- Skype & Federated calling
- Team calling
- Video call monitor
- Voice Mail
Cloud PBX: Futures and Roadmap

Preview this month:

- Call Queues ("hunt groups")
- Auto Attendant ("Welcome to Constso, press 1 for Sales, 2 for accounts")

Development Roadmap:

- Multi-Region Capabilities
- Meeting Migration Service for Skype for Business Online
- Cloud PBX support for Exchange Server
- Polycom Cloud SfBO Video Interop service – join traditional room systems
What are your Skype for Business Deployment Options?
4 Skype for Business Deployment Models

Cloud PBX brings us new deployment options

- 100% On premises Server with your own carrier
- 100% Skype for Business Online with Cloud PBX and Microsoft is your carrier
- 100% Skype for Business Online with Cloud Connector Edition – Bring your own carrier
- Skype for Business Online with Skype for Business Server – Bring your own carrier to the cloud and have some on-prem server users and abilities
100% Skype for Business Server on Premises with your own carrier

Customer Premises

Registrar/Conferencing Bridge

SfB Server

Trusted Applications e.g. Contact Center, Call Recording

Edge Web and Media Services

Mediation and Gateway

Customer Carrier

PSTN

Conferencing Phone Numbers

User Phone Numbers

On Prem User

Office 365
“100% Cloud PBX, nothing on Premises, Microsoft is your carrier.”
Cloud PBX with Cloud Connector Edition – “bring your own carrier to the cloud”
Skype for Business Online hybrid with Skype for Business Server

Registrar/Conferencing Bridge

SfB Online Cloud PBX

Cloud Voicemail Exchange Online Only

SfB Server

Express Route

Internet

Customer Premises

Trusted Applications e.g. Contact Center, Call Recording

Customer Premises

Conferencing Phone Numbers

User Phone Numbers

Mediation and Gateway

Microsoft “PSTN Conferencing” “PSTN Calling”

Mediation and Gateway

Conferencing Phone Numbers

User Phone Numbers

O365 User

O365 User with Prem PSTN Number, MSFT PSTN Conferencing

User Phone Numbers

Customer Carrier

PSTN

O365 User with Prem PSTN Number, MSFT PSTN Conferencing

User Phone Numbers

Mediation and Gateway

Customer Carrier

PSTN

Express Route

Internet
Cloud PBX: PSTN Connectivity Options
**Cloud PBX: 3 ways to get PSTN connectivity**

- **Microsoft PSTN Calling** – Microsoft is your carrier in the Cloud
- **Bring your own Carrier:**
  - Skype for Business Server – connect your carrier via existing server deployment
  - Cloud Connector Edition – connect your carrier via a dedicated server/appliance
Microsoft PSTN Calling (Microsoft Carrier)

- PSTN connectivity provided directly by Microsoft.
- Focused on providing highest level of customer experience across end-user & admin.
- Will meet legal requirements as necessary to participate in market.
- New numbers acquisition designed for maximum simplicity
- Number porting to move existing numbers into Skype for Business
- US and UK today, Additional regions to be added over time.
Microsoft PSTN Calling (Microsoft Carrier)

Calling Plans

PSTN Calling combines with Cloud PBX license

Option 1: Add PSTN Calling Plan license to E5 licensed users (includes Cloud PBX).
Option 2: Add PSTN Calling Plan license + Cloud PBX to Enterprise E3 licensed user.

Two Calling Plans available

Domestic: Calling covers area codes across 50 US States/UK landline and mobile
Domestic: + International: Calling supports 196 countries including landline & mobile

Minutes included in plans are pooled by Tenant

3000 minutes US / 1200 minutes UK for Domestic calling; 600 minutes for International calling. Pooled per plan
Inbound calls count against allowance in US, not in UK
Limits for abuse, fraud and to protect service performance.
Overages charged through pre-paid consumption billing
Bring your own carrier to Cloud PBX:
Via Skype for Business Server
Via Cloud Connected Edition
Bring your own Carrier
On-premises PSTN Connectivity Benefits

- Take advantage of existing comms/carrier infrastructure.
- Retain your carrier contract
- Simpler migration of users from on-premises to cloud.
- Leverage investment in an SfB Server deployment
- Reduce Hardware footprint onsite
- Use SfB Server or CCE as “gateway”
Bring your own Carrier: Leverage Skype for Business Server as gateway

- If SfB Server is already deployed with EV, can be used today globally
- If you have SfB Server deployed, you can’t deploy CCE today
- Benefit of having all the abilities of Server for 3rd party integrations
- Some users can be on Server, some on Cloud PBX, and move back and forward at your own pace
- Range of deployment models/topologies
- More servers and more licensing costs
Bring your own Carrier: Cloud Connector Edition

- Available for download now [http://aka.ms/getCCE](http://aka.ms/getCCE)
- Deployment Checklist: [http://aka.ms/deploycloudconnector](http://aka.ms/deploycloudconnector)
- Hyper-V VM’s on a Dedicated Physical Server (Windows Datacenter Edition)
- AD, CMS, Mediation and Edge, Server lives in the DMZ
- Connects to Carrier via SIP, SBC, IP PBX
- 50 (i7, 32GB) and 500 (12 cores, 64GB) concurrent call hardware models
- Group up to 4 for High Availability (1500 concurrent calls max) in a “site”
- Up to 200 CCE sites per deployment
- Appliance versions coming from Sonus and AudioCodes soon, in early preview now
PSTN Conferencing (often overlooked)
**PSTN Conferencing in Cloud PBX**

**PSTN dial-in and dial out conferencing service provided by Microsoft or a Partner Audio Conferencing Provider (ACP)**

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**Dial-in Conferencing**

Add telephone access to meeting invitations at the time of scheduling for attendees who cannot connect to the internet.

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**Dial-out Conferencing**

Add people to meeting by dialing a phone number, or join meeting audio via phone.

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### Invite by Phone

**Invite by Name or Phone Number**

Choose a contact or type a name or phone number.

- `+1 415 100-2100`

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### Call Me

**Join Meeting Audio**

- Use Lync (full audio and video experience)
- Call me at:
  - `4151002100`
- Don't join audio
PSTN Conferencing for Cloud PBX

Microsoft PSTN Conferencing
• Countries/Locations with dial in numbers
• “Buy countries” – countries where you can buy the service from Microsoft
• These lists are not the same, there are more numbers than buy countries today
• “Buy countries” and Numbers are being added all the time
• Single supplier

ACP (3rd party partner Audio Conferencing Provider) for Office 365 PSTN Conferencing
• PGi, InterCall, BT
• “Buy Countries”: Worldwide; dependent on partner availability
• Dial In number Availability: Worldwide, up to 140 countries
• You can mix and match Microsoft PSTN Conferencing and ACP on a per user basis
How do I choose?
Cloud PBX vs. (or with) On-premises

• Cloud PBX Benefits:
  • “Evergreen”
  • Implementation work and time
  • IT training & skills
  • Configuration and changes
  • Quick deployment time
  • HW costs (Power, cooling and space)
  • SW costs (OS, SQL, server license, backup...)
  • Limited technical upgrade effort
  • Scalability

• Cloud PBX Considerations
  • Limited 3rd Party application integration support today (compliance, contact center)
  • Network dependencies
  • Single global O365 tenant location today – soon unblocked
  • Exchange Online Required for Voicemail today – soon unblocked
  • Feature Availability mapping to business requirements
  • Feature set well suited to knowledge workers today, ever expanding
How to Choose your Cloud PBX Topology:

- If you have SfB Server today:
  - Cloud PBX Hybrid with Server providing PSTN Connectivity

- If you don’t have SfB Server today:
  - Consider your business requirements, timeline and the Cloud roadmap who could you move today
  - Cloud Connector Edition is quicker and easier, start with a £500 “server”!
  - If you need more features/3rd party integrations, Cloud PBX hybrid with SfB Server gives you all the options, so you can move forward without heavy BA analysis.
  - Soon CCE and Server will work side by side making this decision point less important

- Futures:
  - Multi-Region Capabilities
  - Meeting Migration Service for Skype for Business Online
  - Cloud PBX support for Exchange Server
  - Polycom Cloud SfBO Video Interop service – join traditional room systems
  - CCE and SfB Server working side by side, no date yet

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Welcome to the Consortium: