



Learn.

Connect.

Explore.





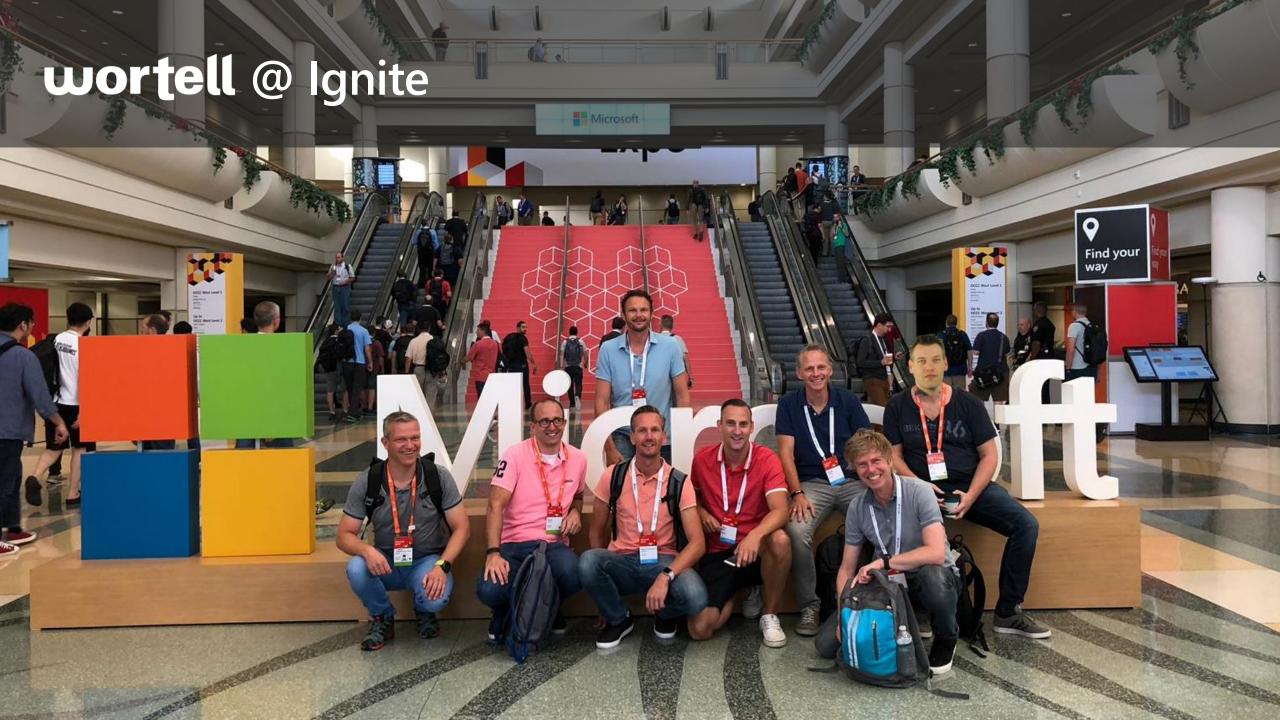
Intelligent Communications Skype for Business / Teams

Michel van Vliet Lauwrensz Bakker











(3)







Your organization is now using Microsoft Teams!



We'll help you find your contacts, meetings and more once you're in the app.

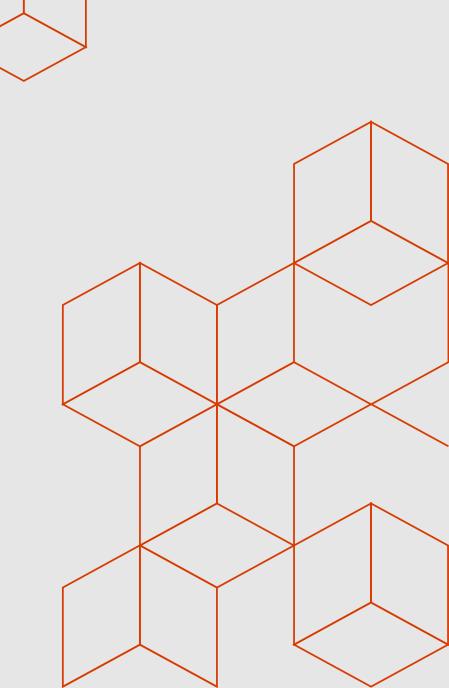
Go to Teams

Questions? Learn More View past conversations, calls, or voicemails

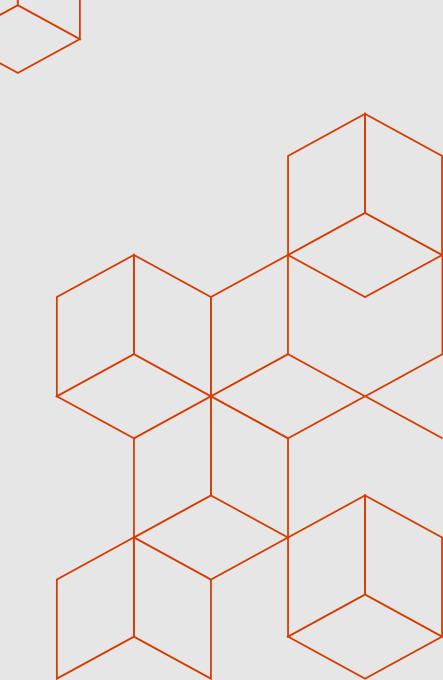


Agenda

- ✓ Skype for Business Server
- ✓ Teams New Features
- ✓ Calling
- ✓ Teams Architecture
- ✓ Migration options SfB to Teams

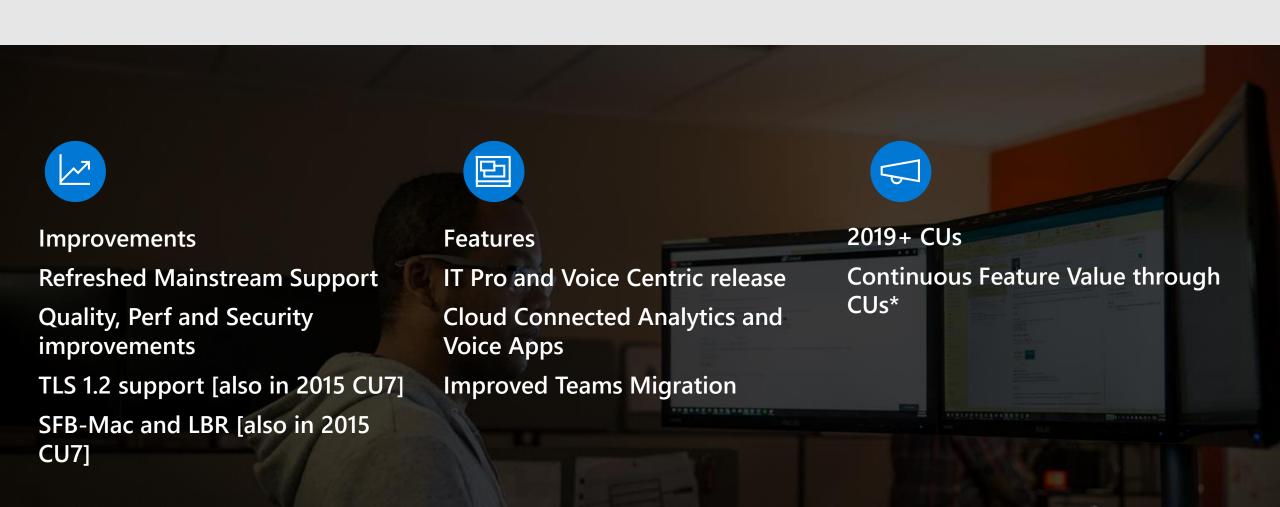


Skype for Business Server



Skype for Business Server 2019

Continuing commitment to on-premises and hybrid customer needs







Cloud Voice Mail



Cloud Org Auto Attendant



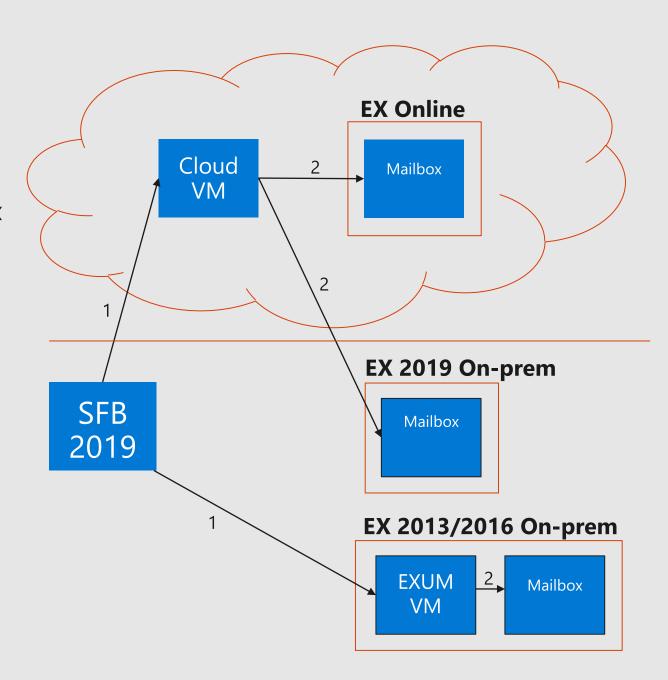
Cloud Call Data Connector



Streamlined Teams Migration

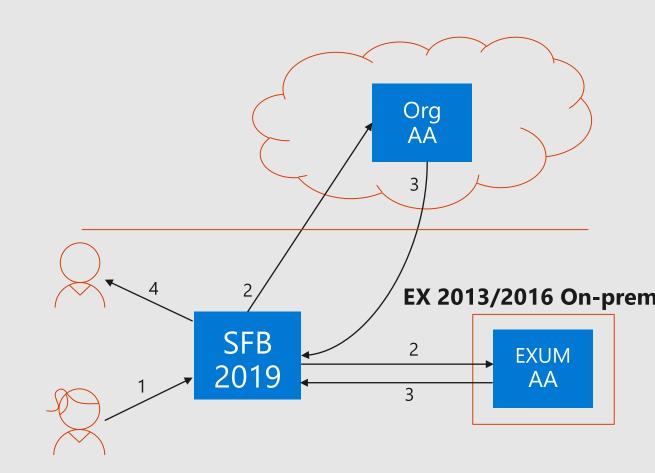
Cloud Voice Mail

- Flow
 - SFB sends call to Cloud VM
 - Cloud VM saves voicemail to user's mailbox
 - Voicemail can be accessed from mailbox
- SFB 2019 will work with Exchange UM for older Exchange versions (Exchange 2013, Exchange 2016)
- Tenants need hybrid config with users syncing to AAD

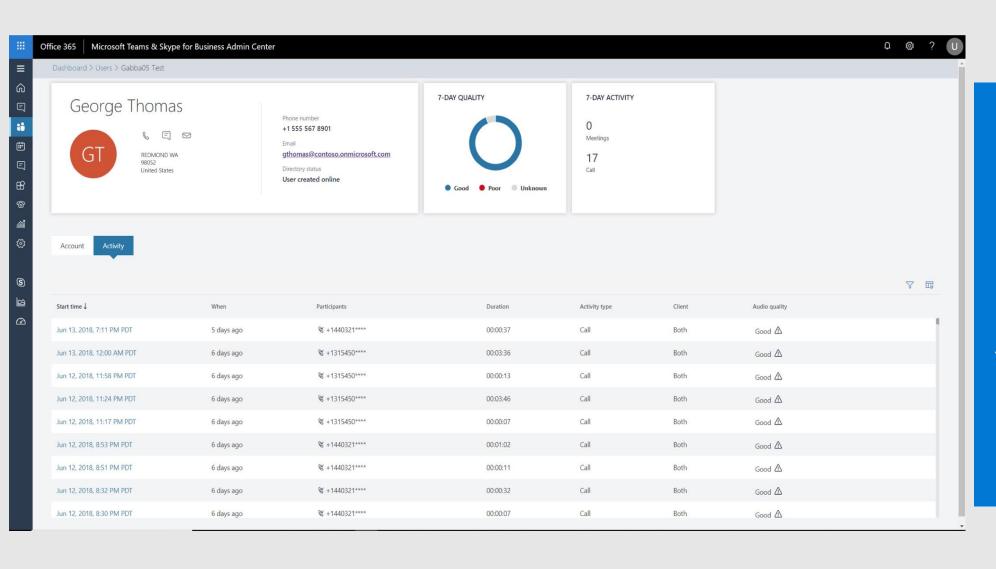


Cloud Org Auto Attendant

- Flow
 - SFB sends call to Cloud Org AA app
 - AA finds appropriate user.
 - Call routed to appropriate user via SfB
- SFB 2019 will work with Exchange UM for older Exchange versions (Exchange 2013, Exchange 2016)
- Support for on-prem number assignment later this year.
- Tenants need hybrid config with users syncing to AAD



Cloud Call Data Connector



Call Analytics now integrated into the Microsoft Teams and Skype for Business Admin Center.

One stop shop for viewing call quality data for SFB server and Teams online data.

Performance & Capacity

- Max user pool capacity increased from 80k active users to 106k
 - Number of FEs in a pool increased from 12 to 16

- Perf Improvement (compared to SfB 2015):
 - CPU usage decreased by ~40% under the same load and user model

	SfB 2015	SfB 2019
Active Users per FE ¹	6,666	6,666
Active Registered Endpoints per FE	12,000	12,000
Max # of FEs per user pool	12	16
Max Active Users per user pool	80,000	106,000
Concurrent Connections per edge server	18000	18000
Concurrent Connections per director server	18000	18000
Max Concurrent Calls per standalone mediation server ²	1500	2000

- 1. Assuming FEs are running SQL Express Edition.
- 2. 2. Assuming hyper-threading is enabled on mediation server.

Feature Changes from SfB 2015

Persistent	
Chat	

XMPP Gateway Survivabile Branch Appliance (SBA) SQL Mirroring In-Place Upgrade

SFB 2019 can interop with SFB 2015 Pchat role.

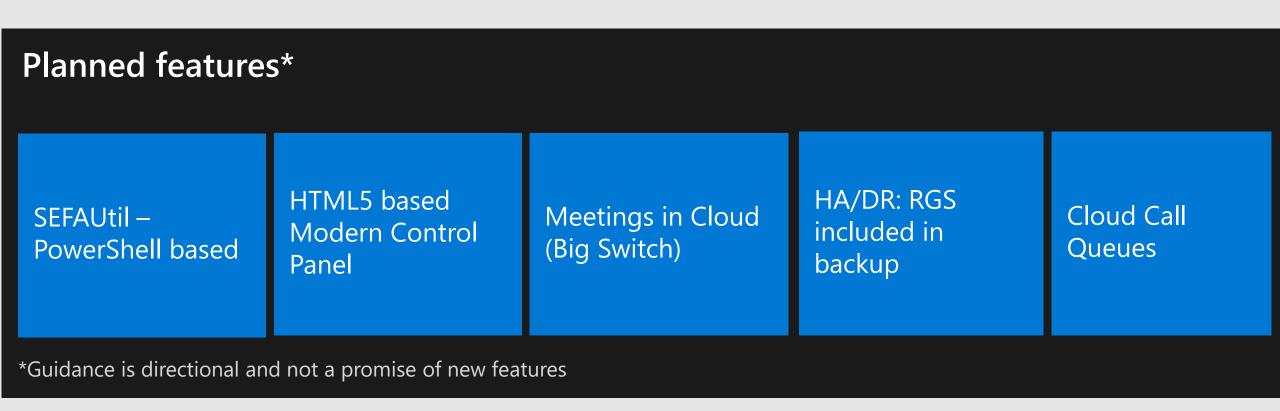
Not supported in SFB 2019. Exploring partner solutions.

SFB 2019 can interop with SBA 2015.

SQL Always On is supported

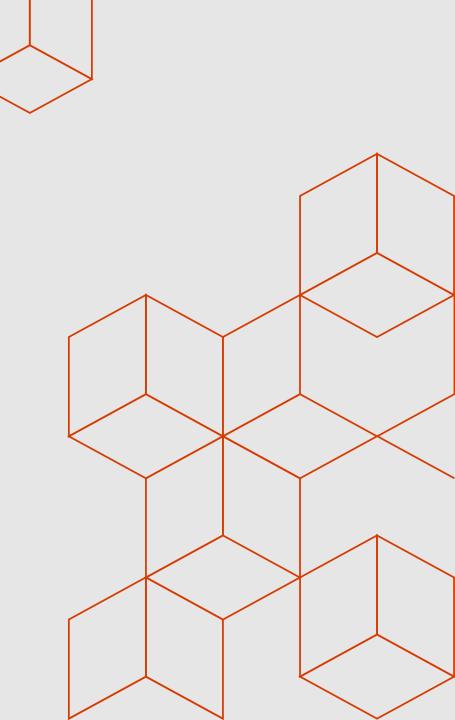
Not supported. Recommended to do side by side upgrades.

SfB Server 2019 CUs



Feature value for 2019 will be delivered through CUs Continued investment in both on-prem and hybrid features

Teams - New Features





Background blur

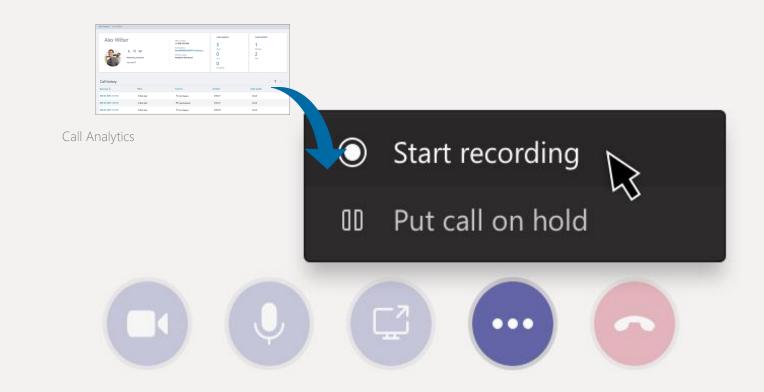
Remove distractions and focus your video on what matters most.



Meeting recording

A single place to manage all of your Microsoft Teams Workloads.

- Using Stream
- Transcription / closed captioning
- Search through meetings



Screen Sharing

Share without starting a meeting

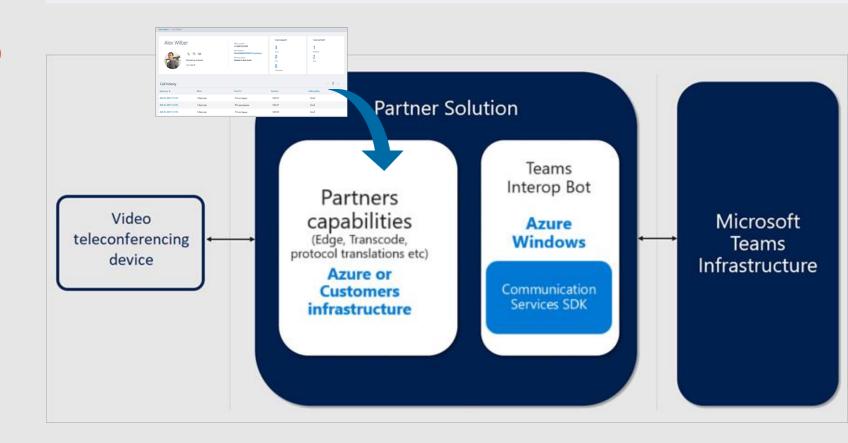
- Full desktop
- Window
- Files (PowerPoint)



Cloud video interop

Bring existing room technology investments into Teams

Through partner offerings from Polycom, BlueJeans and Pexip



One Admin Portal

A single place to manage all of your Microsoft Teams Workloads.

- Call Analytics
- CQD Dashboard (soon)
- LAC Portal
- O365 Admin Portal (Teams)
- Device Management

Per User / Tenant Settings!

Reciprocal capability between website & APIs (PowerShell, Graph, etc.)

https://admin.teams.microsoft.com



New IT Pro Admin Portal

New Admin Roles

Four new Teams Admin Roles

- Teams Service Administrator
- Teams Comm. Administrator
- Teams Comm. Support Engineer
- Teams Comm. Support Specialist



New IT Pro Admin Portal

Work with confidence

Federation



Calling

- ✓ Teams Teams
- ✓ Teams SfB Online
- ✓ Teams SfB OnPrem



Chat

- ✓ Teams Teams
- ✓ Teams SfB Online
- ✓ Teams SfB OnPrem



Presence

- ✓ Teams Teams
- ✓ Teams SfB Online
- ✓ Teams SfB OnPrem (soon)

Federated Calling, Chat, Presence are available everywhere – except Government (GCC) and GoLocals (India, UK, Canada, Japan, Australia)

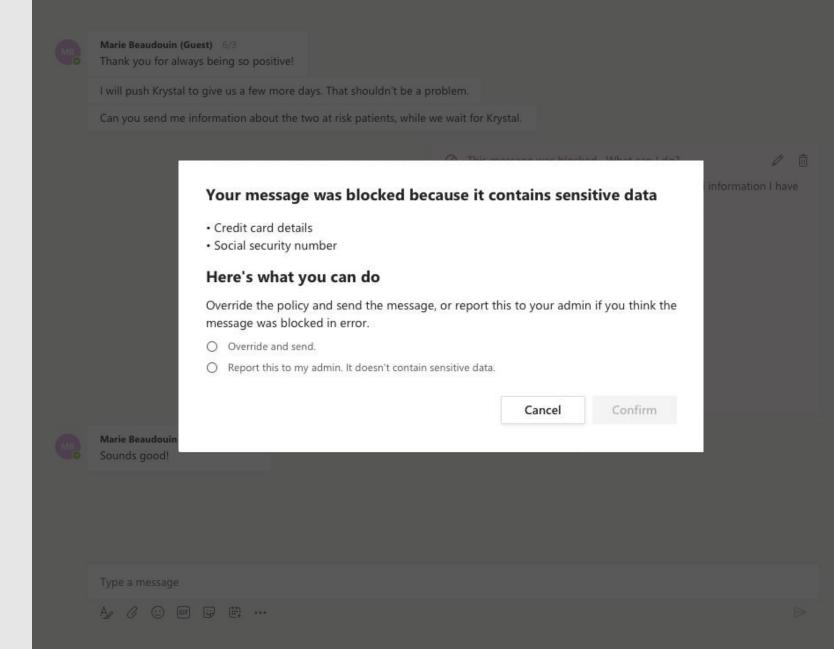
Work with confidence

Data Loss Prevention Coming Soon

DLP automatically monitors communications by your employees to ensure they don't mistakenly share sensitive information.

- Health Records
- Social Security #'s
- Credit Card #s
- Custom definitions
- etc.

APIs available to support 3rd party DLP extensibility.



Work with confidence

Retention

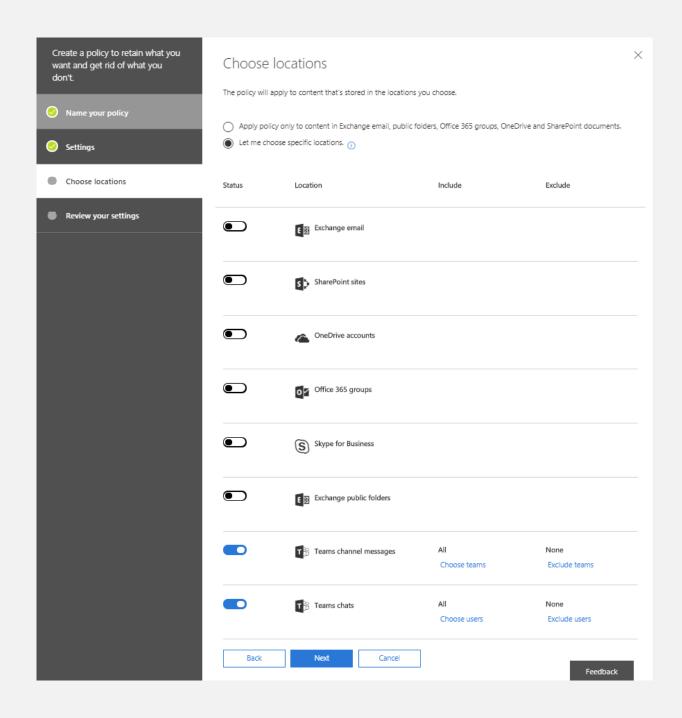
Manage how long chat, teams and channels and file content are retained.

Today:

- Individualized retention policies for teams and channels
- Retention policies for Teams files
- 30+ Day retention windows

Coming Soon:

• 1+ Day retention window



TEAM LIFECYCLE







Team Templates

IT Admins can configure a template file and programmatically apply via Graph API it to create new teams:

- Specify channels
- Pinning
- Settings
- **Permissions**

Dynamic Team Membership

Create a team based on an AAD Dynamic Group. Employee access to a team is determined by their AAD properties.

- City
- Country
- Department
- Job Title

- Postal Codes
- State
- Usage Location
- Etc.

Azure AD Premium P1 licenses Required

TEAM LIFECYCLE







Join by Code

Enables an Team owner to generate a unique code that can be sent around or distributed to people who need to join a team.

- Generate a code in Team Settings
- Send code to users
- Users enter code to join team
- Code can be cancelled / changed

Join by Link

Sends automatic requests to join a team when the user clicks on a link for a message in another team.

- Copy a link to a message in a channel
- Paste it into another team
- Users without permissions who click on it will get an option to join the team.

TEAM LIFECYCLE

ະິກໍາ Create 😅 Join 🔚 Manage





Archive

When a project wraps up you can archive a team to preserve the content. This lets you reactivate it in the future if need be.

- Archive a team
- Marked Read-Only
- Removed from Teams and Channel list
- Can be restored if needed

Expiry

IT policy to set expiration dates on teams. Owners are notified when a team is close to expiration and can renew.

- Set expiration date
- Owners Notified when date approaches
- Owners can renew in Team settings
- "Soft deleted" for 30 days after date
- "Hard deleted" after 30 days

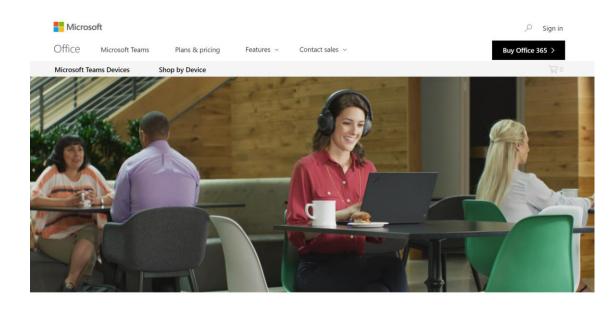
Microsoft Certified Devices



Tested for highest quality audio & video
Supported by Microsoft and our partners
Millions of devices shipping each year
All work with Microsoft Teams



All the benefits of Certified for SfB plus
Closer integration with Microsoft Teams
Integrated Teams notifications and invocation
Optimized for voice skills in Microsoft Teams
Devices coming in CY19



Microsoft Teams devices for intelligent communications

Be seen and heard wherever work takes you. Teams devices offer smarter ways to connect and work together in the ever-changing workplace.

SHOP DEVICES

office.com/teamsdevices

Announcing: Microsoft Teams Device Management



Inventory Management

single portal for managing all Teams devices



Zero-touch Enrollment

enrollment without user intervention



CA Policy Enforcement

user-based and device-based policy enforcement



Software Update Framework

comprehensive pipeline for updating firmware and applications



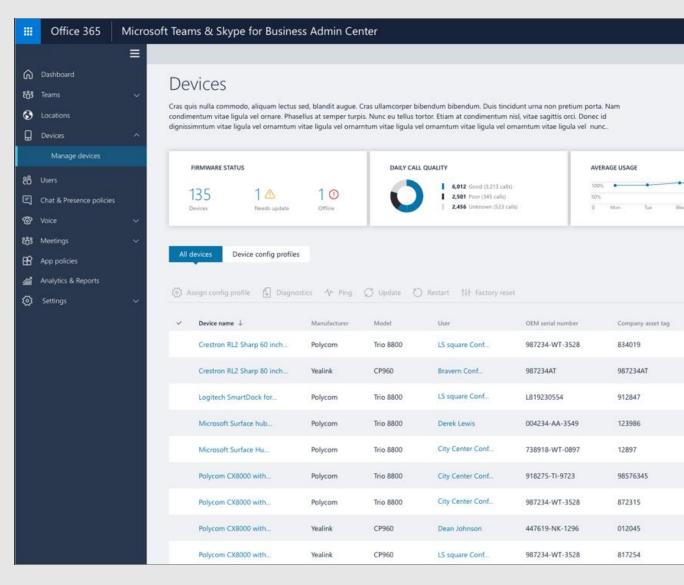
Configuration Management

reusable configuration profiles

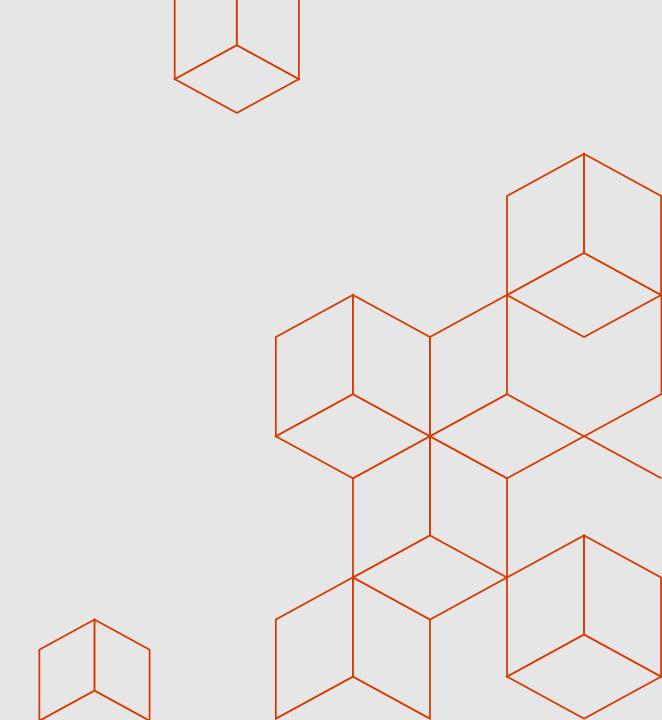


Health Monitoring & Management

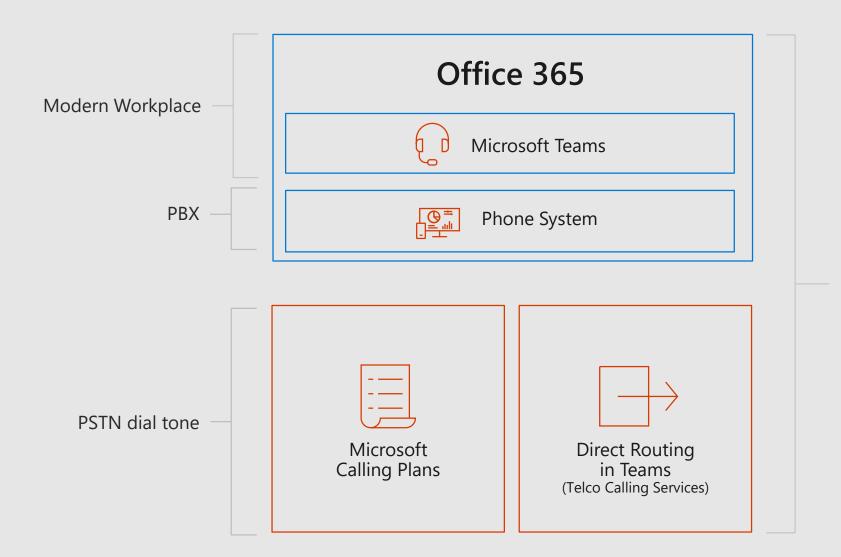
heartbeat, ping, restart and factory reset



Calling



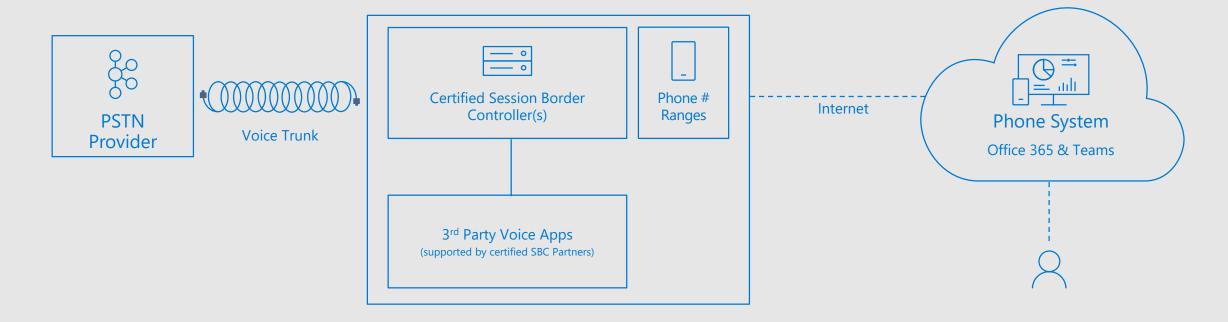
Calling for the Cloud



Phone System, when paired with Microsoft Calling Plans and/or Direct Routing, provides a full business calling experience for Office 365 users in Teams on a global scale

Direct Routing

Bringing PSTN globally to Office 365



Directly Route dial tone to Teams Users

Direct Routing allows customers to connect their SIP trunks directly to Office 365. Customers can work with their local Telecommunications providers to enable Microsoft Teams users to make and receive telephone calls.

Interoperability with 3rd party systems

Direct Routing allows customers with users in the Microsoft cloud to continue using 3rd party systems such as PBXs, Call Center, and Analog Telephony Adaptors (ATA) helping preserve key investments.

What's shipped

Microsoft Teams significantly extends calling to support critical enterprise workflows



Internal

Teams enables calls to be professionally handled while keeping business moving quickly and efficiently.

Delegation Consultative Transfer Distinctive Ringtones Transfer to Cell / Landline Safe Transfer



Collaboration

Microsoft Teams makes calling more efficient and productive by blending calling with collaboration.

Do Not Disturb / Breakthrough Add Participants to a 1:1 Call Call Commanding



Advanced Routing

Teams integrates with Microsoft's cloud-based call queues and IVR capabilities to ensure every call is routed to the right recipient.

Forward Call to Group Call Queue Support Auto-Attendant (IVR)

ammas 00:02 On hold

Delegation & Consultative Transfer

Teams enable assistants to work on behalf of their executives to handle incoming calls.

Manager Initiated
Delegate Managed
Consultative Transfer
Call on Behalf-Of
Forward Calls
Simultaneous Ring









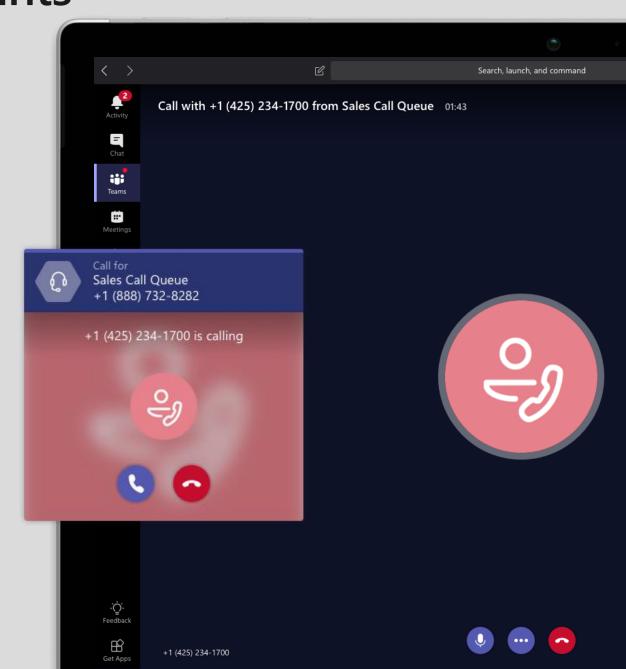




Call Queues and Auto Attendants

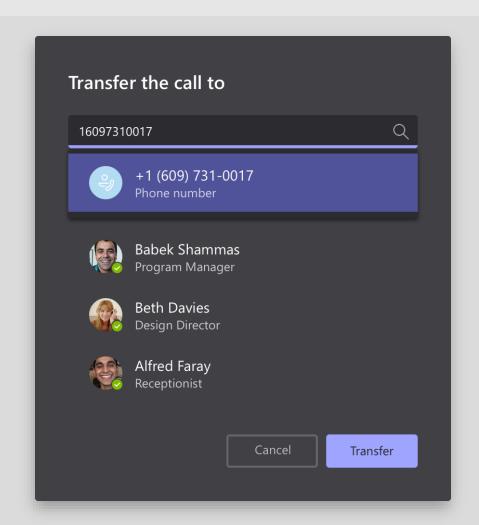
Call Queues and Organizational Auto-Attendants (IVRs) enable companies to automatically route calls to specific Departments, Teams, or people in a company.

Attendant & Serial Distribution
Setting Time Availability
Music on hold
Custom Messaging



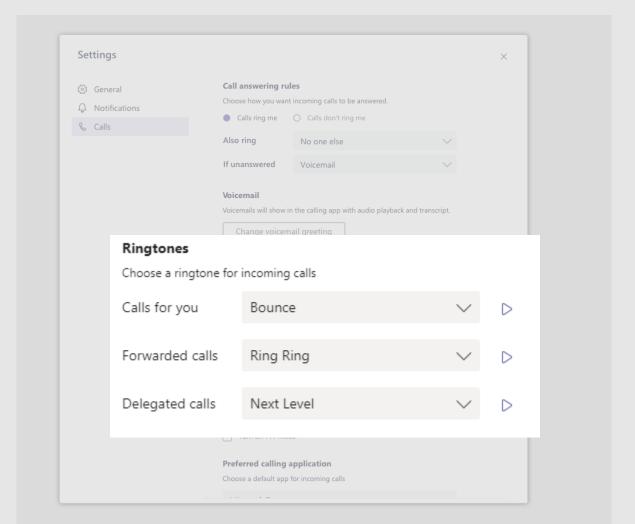
Transfer to PSTN

Transfer calls, regardless of whether the recipient is onsite or on the go.



Distinctive Ringtones

Distinctive ringtones enable you to assign different rings to different types of calls.



What's Coming

Significantly extending calling to support critical enterprise workflows



Internal

Teams enables calls to be professionally handled while keeping business moving quickly and efficiently.

Self-serve number blocking
Personal Contact Caller ID
Operator while leaving a voicemail
VolP Calling for Everyone



Collaboration

Microsoft Teams makes calling more efficient and productive by blending calling with collaboration.

Share Screen from Chat Calling in Chrome



Advanced Routing

Teams integrates with Microsoft's cloudbased Voice Apps to ensure every call is routed and handled correctly.

Call Park (Q4)
LBR (Preview Q4)
Group Call Pickup (Q4)
Shared Line Appearance (Q4)
Media Bypass Support
Expanded SBC Support
Voice and Video Bot APIs

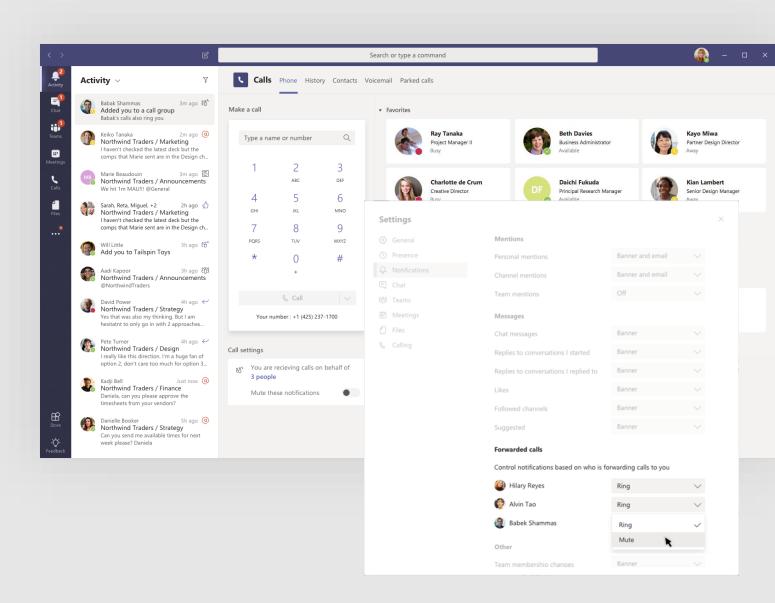
Group Call Pickup

Futures

Teams will allow recipients to change the relationship from push (SimRing) to pull (GCP) by changing how they want to be alerted

Full Invite Flow & Call Management

- User can setup a call group
- Group members get notified
- Full control of the notifications
- Answer calls on behalf of each other
- IT Pro experience to create GCP on behalf of users



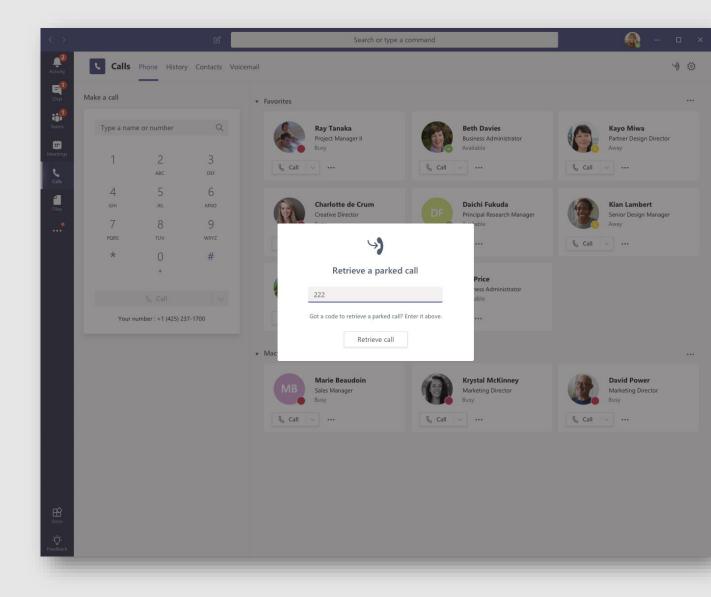
Call Park

Futures

Teams will allow people to park and retrieve calls

Park and Retrieve Calls

- Park a call and get a code
- See all parked calls from Teams Apps
- Use Teams phone or Team's app to retrieve the call



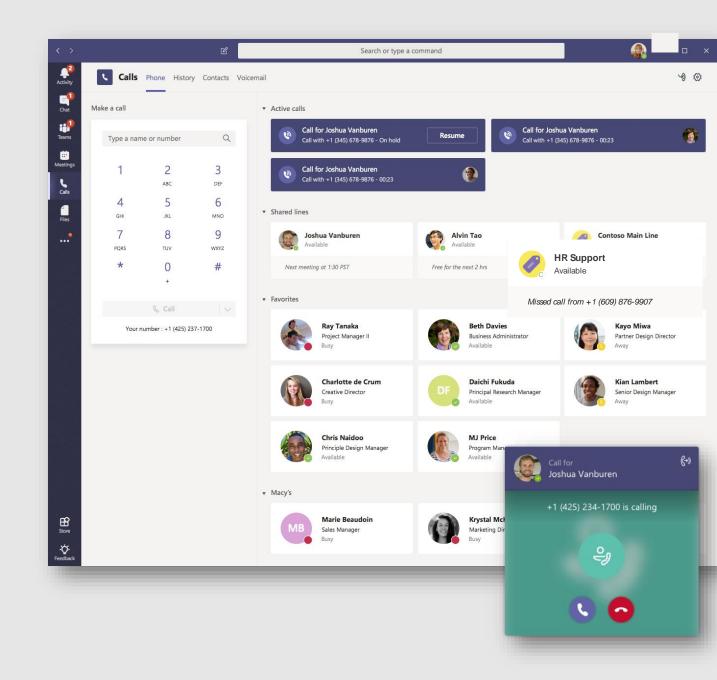
Shared Line Appearance

Futures

Teams will enable people to share their phone line with their delegates

Full Invite Flow & Call Management

- Manager Initiated
- Delegate Managed or Initiated
- See line busy status and active call information
- Resume a call on hold by manager or admin
- Make/receive shared line calls
- IT Pro experience to create on behalf of users

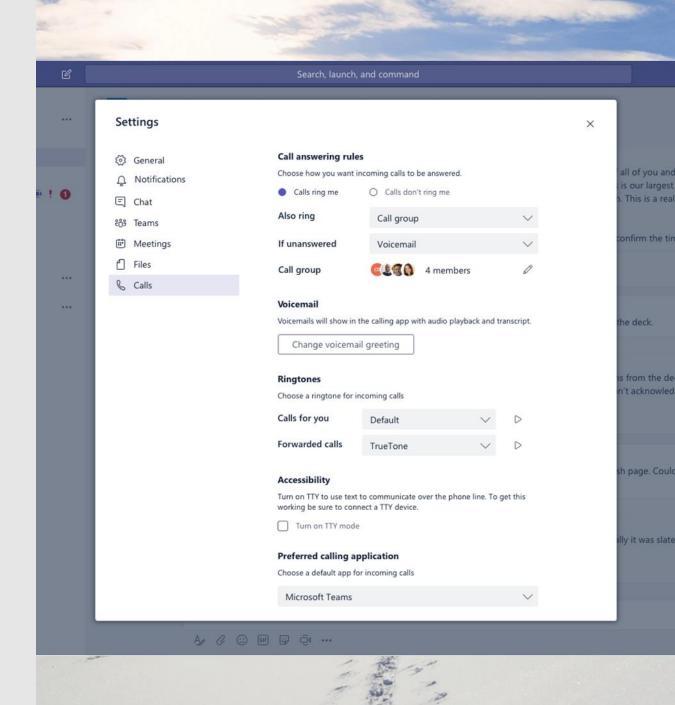


Forward to Group

Futures

Users may opt to forward their calls to one or more people, enabling a group to cover for them when they are unavailable.

Forward to one or more people
Ring in sequence or simultaneously
First to pick up takes call
Settings UX for easy configuration

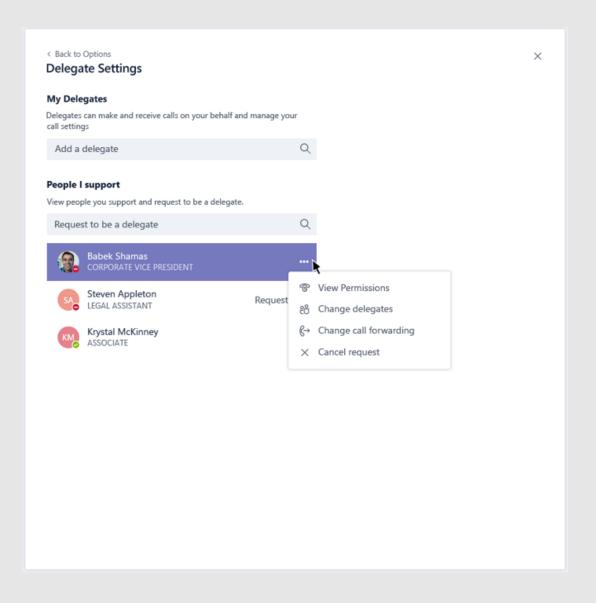


Delegation Enhancements

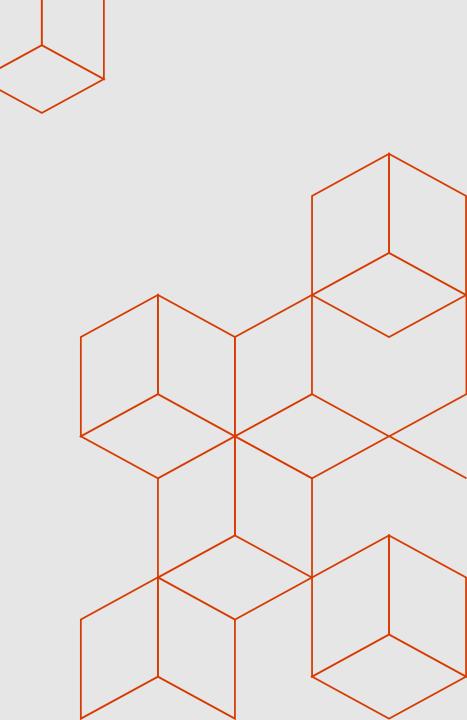
Futures

Teams will enhance the Manager and Admin call setup and handling experience

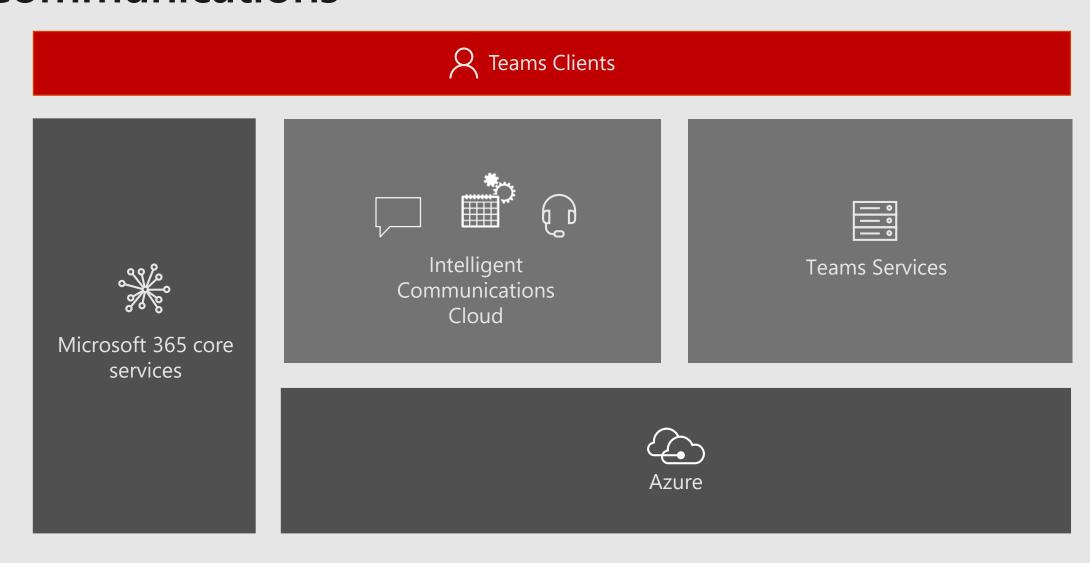
- Mobile app delegation setup capabilities
- Reduce manager's workload with delegateinitiated workflow
- Delegates will be able to manage the manager's settings
- IT Pro experience to set it up on behalf of users



Teams Architecture



Teams brings together Office 365 and Intelligent Communications



Conversation storage

Where are conversations stored?



Chat service

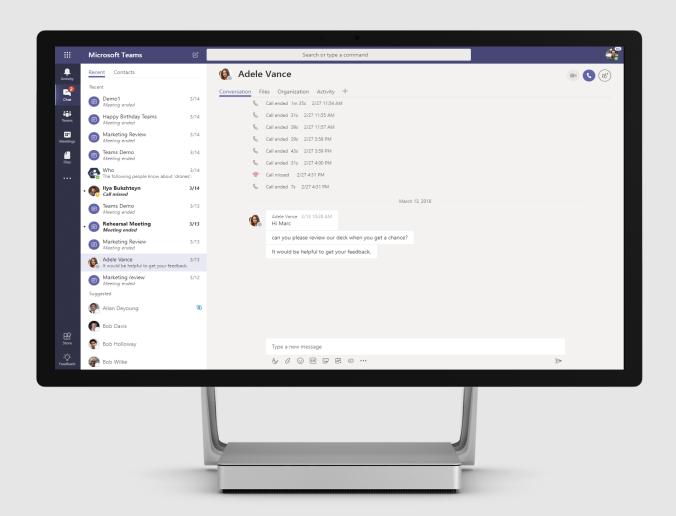
In memory processing for speed Leverages Azure storage (moving to Cosmos DB)

Exchange

Chat and channel messages are also stored in Exchange for information protection

Conversation images & media

Inline Images/Stickers are stored in a media store, Giphys are not stored.



File storage

Where are files stored?



1:N chats

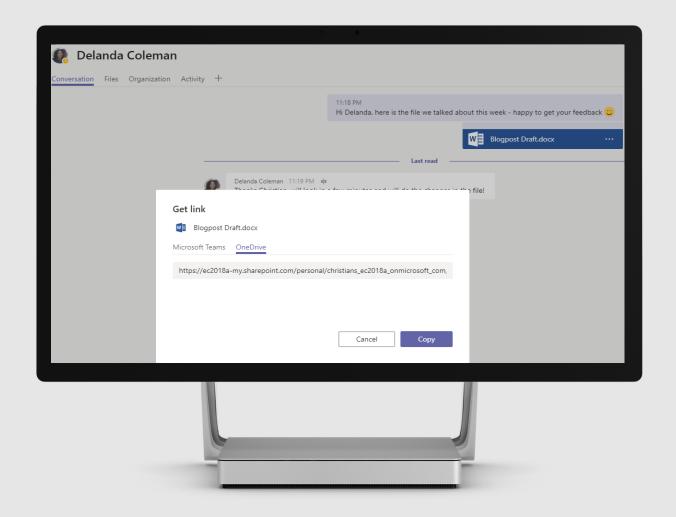
Files are uploaded to **OneDrive for Business** and permissions are set for the members of the chat

Team conversations

Files are uploaded to **SharePoint**. A folder is associated with each channel in the team

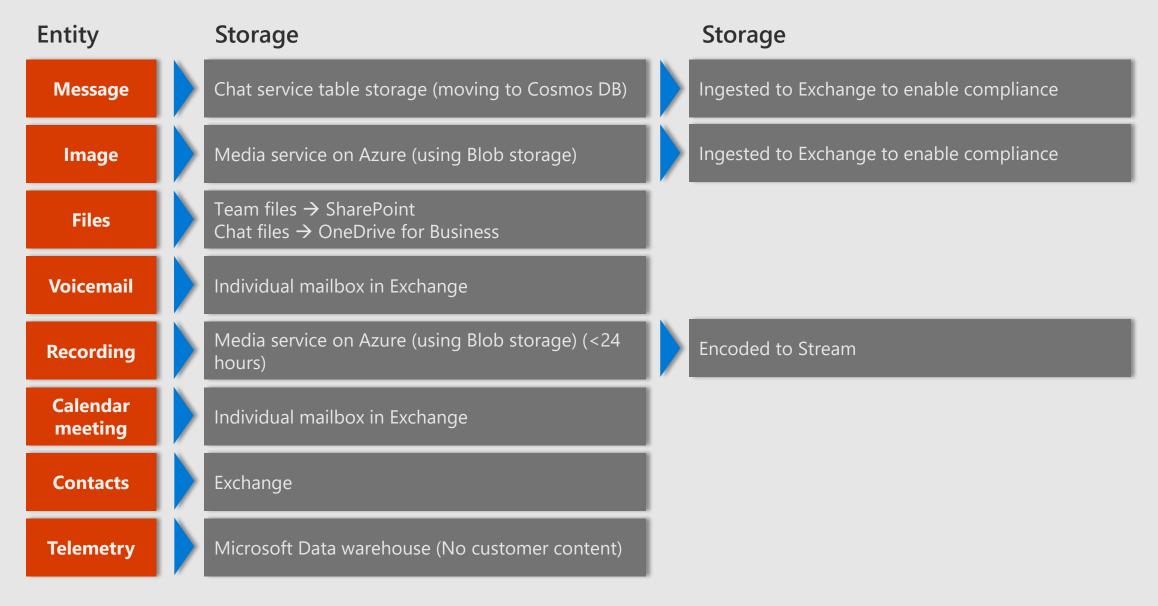
Cloud storage

Dropbox, Box, Citrix ShareFile, Google Drive

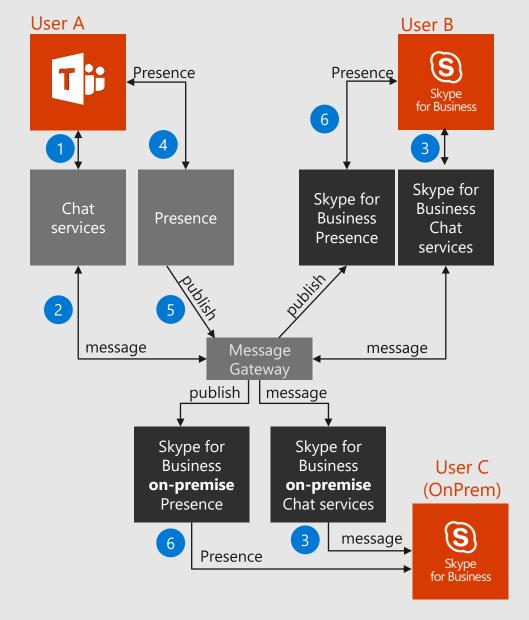


Data Entity Storage

Key data entities and location where data is stored at rest



Messaging and Presence Interop



1:1 chats Text only

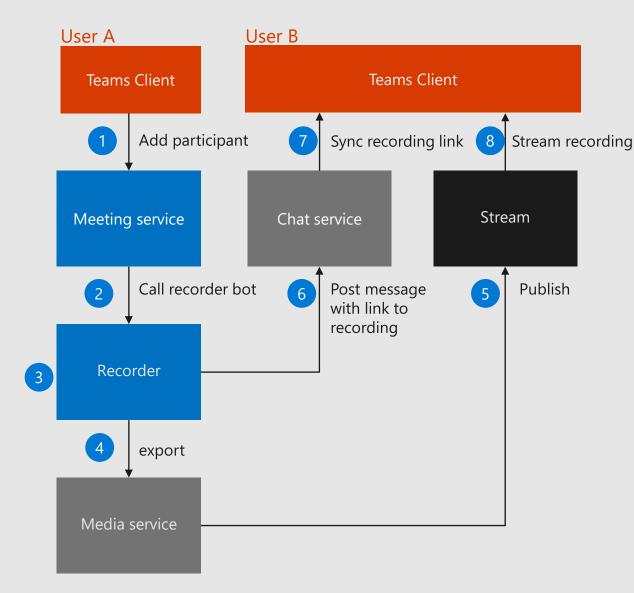
CHAT

- 1 Post a message
- 2 Route message via Message Gateway
- 3 Long poll, sync or Push notification to client

PRESENCE

- 4 Set presence to SfB
- 5 Publish presence to subscribers
- 6 Get Presence

Meeting recording



- 1 User will start recording
- 2 Recorder is added to call
- 3 Recorder (azure service) will record call
- 4 Recorder will send data to media service
- 5 Media service will transcode video and upload to Streams
- 6 Recorder will send message with link to recording
- 7 User will receive message on client
- 8 User streams the recording

Migration options SfB to Teams



Why should you migrate to Teams

Why you should actively consider it now



Features and capabilities

Teams can already do more than Skype for Business Online

Rich Intelligent Communications roadmap and rapid innovation

User experiences

Modern, rich experiences

State-of-the-art cross-platform and mobile experiences

Collaboration, Teams and Channels

Operational performance

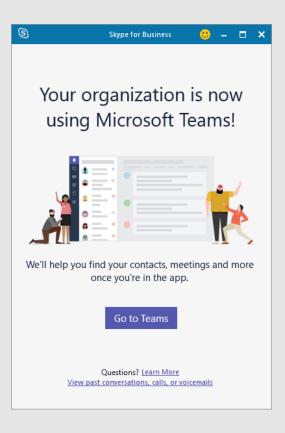
Modern client built on modern infrastructure

Teams can provide improvements in quality and operational metrics

Defention of full upgrade to Teams

Short Story:

"Upgraded User" = "Teams-Only User"



Long Story:

Experience of a Teams-Only user



Chat & Calling

Receives and initiates all chats and calls in Teams Can interop (IM/call) with any SfB user Is redirected to Teams if they try to sign in to SfB



Meetings

Schedules all new meetings in Teams Can join existing SfB Meetings

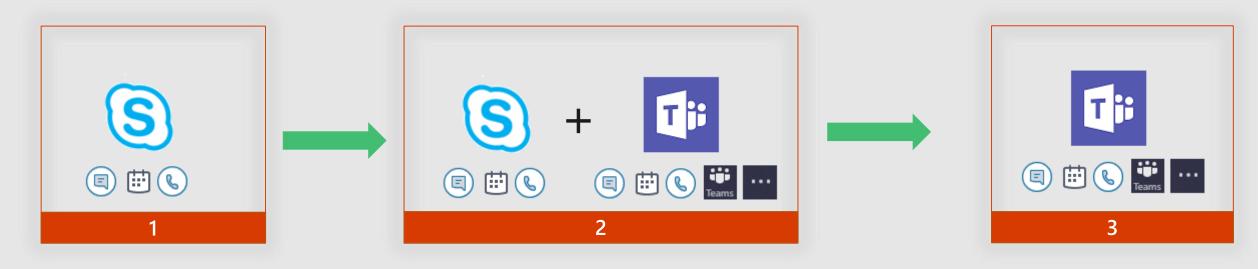


Data that gets migrated

Existing contacts from SfB Existing on-prem meetings

Upgrade path - pure SfB Online Organization

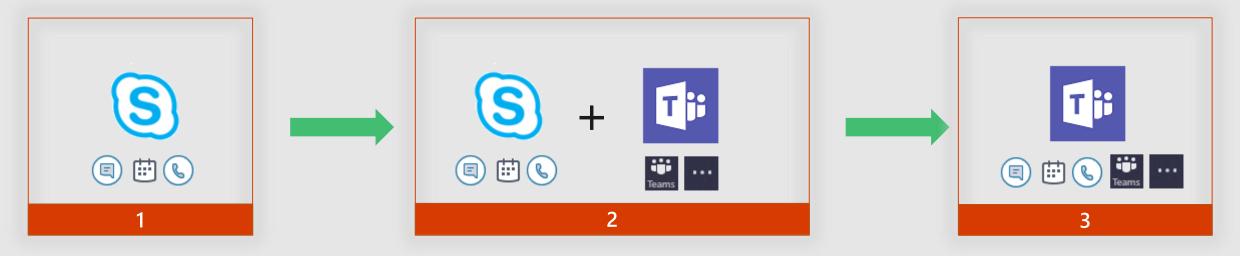
Full Side by Side Approach



- 1. Starting point: User is in SfB with UC functionality
- 2. Enable Teams with full functionality
 - Allow users to experience full benefits of Teams digital transformation soonest
 - All users must run both SfB and Teams clients at all times until they become Teams Only
- 3. Upgrade fully to Teams Only

Upgrade path - more complex Organizations

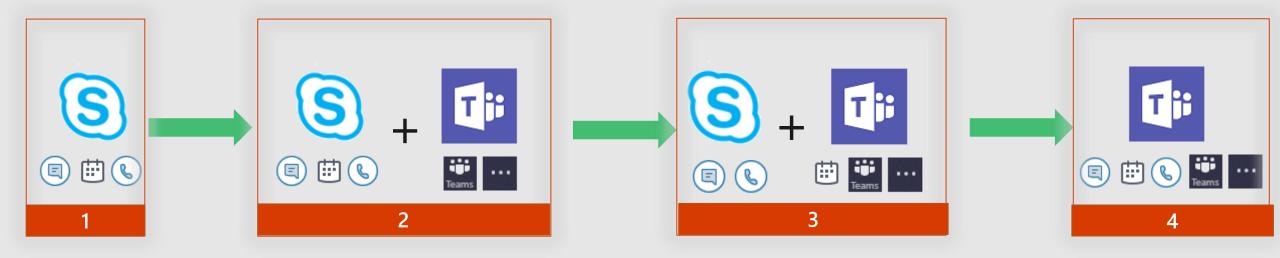
For on on-prem & hybrid orgs, or if end users are confused having two apps with same functionality



- 1. Starting point: User is in SfB with UC functionality
- 2. Introduce Teams to the user, without UC functionality
 - All calls & chat continue to land in and originate from SfB
 - User can explore net new functionality of Teams (Channels/apps/etc)
- 3. Switch UC functionality over to Teams
 - Non-upgraded users and upgraded users rely on interop to communicate

Upgrade path - option: Meetings First

For on on-prem & hybrid orgs, that will move to Meetings First before going Teams Only



- 1. Starting point: User is in SfB with UC functionality
- 2. Introduce Teams to the user, without UC functionality
- 3. Switch Meetings scheduling functionality from SfB to Teams
 Up to this point, all calls and chats initiate from and land in SfB
- 4. Upgrade fully to Teams-Only Teams
 Chat & Calling between Upgraded (Teams-Only) users and all other users relies on interop

Meetings First

Configuration and program to migrate users to Teams meetings first

Keep running Skype for Business Server for chat and calling

Address meetings now, Enterprise Voice and Chat next Simplified, streamlined meetings centric Teams experience

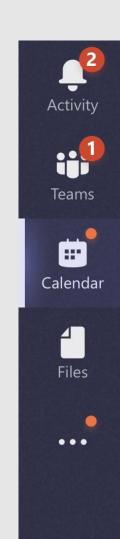
Meet in Teams

Provide best, richest, complete meetings experience Include meeting rooms, devices, services (CVI)

Enjoy harmonious coexistence

Better together scenarios between Teams and Skype for Business

Migrate your meetings from Skype for Business to Teams



TEAMS + CHANNEL NOTIFICATIONS NEW MEETING INVITES

SCHEDULE A MEETING/LIVE-EVENT/MEET-NOW CALENDAR MEETINGS

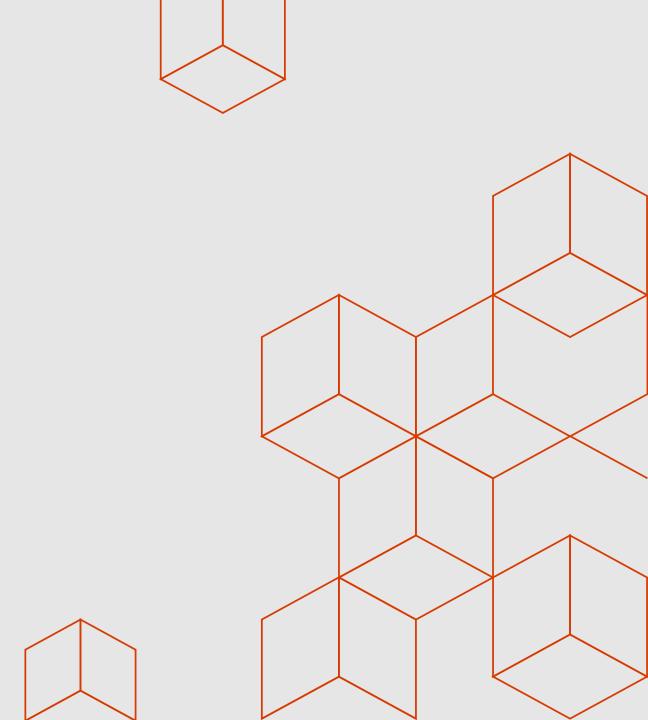
TRIAGE MEETING CHAT
PRE POST MEETING SCENARIOS
FIND LIVE MEETINGS
FIND MEETING RECORDINGS*

Admin: Co-existence Modes

Mode	Calls and Chats	Meeting Scheduling	Teams Channels available?	Recommended Use Case
Teams Only (Requires home in SfB Online)	Teams	Teams	Yes	The final state of being upgraded. Will also be default state for *new* tenants (<500 users) as of 10/1/2018
SfB With Teams Collab And Meetings*	SfB	Teams	Yes	"Meetings First" scenario: Enables on-prem customers to benefit from Teams meeting functionality, if not yet ready to move calling to the cloud.
SfB With Teams Collab*	SfB	SfB	Yes	Recommended starting point for on-prem/hybrid orgs. Also for online orgs that want tighter admin control Calls and chats always routed to only 1 client throughout the migration.
SfB Only*	SfB	SfB	No	Specialized scenario for orgs with strict requirements (e.g. for data control)
Islands	Either	Either	Yes	Recommended for online orgs that can migrate fast Allows a single user to evaluate both clients side by side. Chats and calls can land in either client; Users must continue to run both clients.

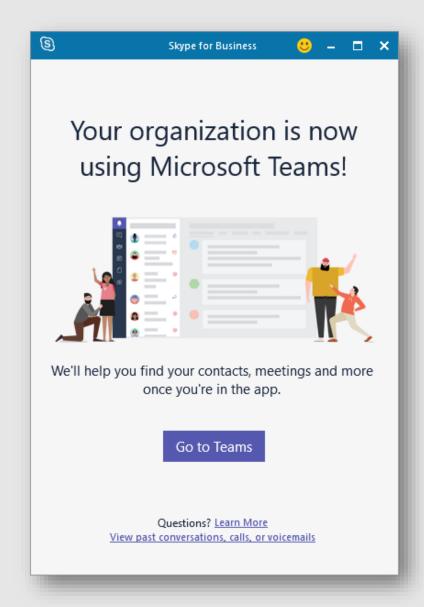
^{*}Aspects of some modes are not yet fully implemented. ETA for preview is Q4 2018

Demo Admin options



What changes when Teams-Only Mode is assigned?

- Routing of all calls and chats to this user will be to Teams, regardless of sender
- SfB Client restricts itself to enable meetings-only
- Meeting scheduling switches to Teams
 - Teams add-in enabled
 - SfB add-in disabled
- User's Teams presence is made available to SfB Users
- Contact migration triggered at next Teams logon
- Outlook People cards invoke Teams functionality for IM/Calling/Presence
- HID preferences for inputs on audio devices updated



Considerations for SfB on-prem orgs

Enabling SfB Hybrid is required to start moving to TeamsOnly

· All msRTCSIP attributes from on-prem must be sync'd to Azure AD

Background: Users with SfB On-prem may use Teams, but:

- They cannot be "TeamsOnly" (Enforced via grant-CsTeamsUpgradePolicy)
- · They have no interop, no federation from their Teams client (must use SfB client for this)
- On-prem users must first be moved to online using Move-CsUser, in order to execute grant-csTeamsUpgradePolicy

2-step vs 1-step migration

- 1 step: use -MoveToTeams switch in Move-CsUser (Requires Server 2019 and CU8 for 2015)
- · 2 steps: use any version of Move-Csuser, then assign TeamsUpgradePolicy mode=TeamsOnly
- · Results are same either way, except Meeting Migration
 - · 1-step migration: mtgs will be moved direct to Teams (upcoming functionality)
 - · 2-step migration: meetings moved to SfB Online

Data Migration

Contacts

Contacts are copied from SfB Online in 2 phases

- · After first logon to Teams, contacts are copied to Teams
- · At next Teams logon after user is Teams-only, contacts are copied to Teams and merged with existing contacts Implications for users homed in SfB on-prem:
- · Contacts are moved to SfB Online as part of Move-CsUser, and then above logic is relied upon
- · No SfB contacts available in Teams until user is Teams-Only

Meetings

If Upgrading from SfB Online: Meetings are not migrated

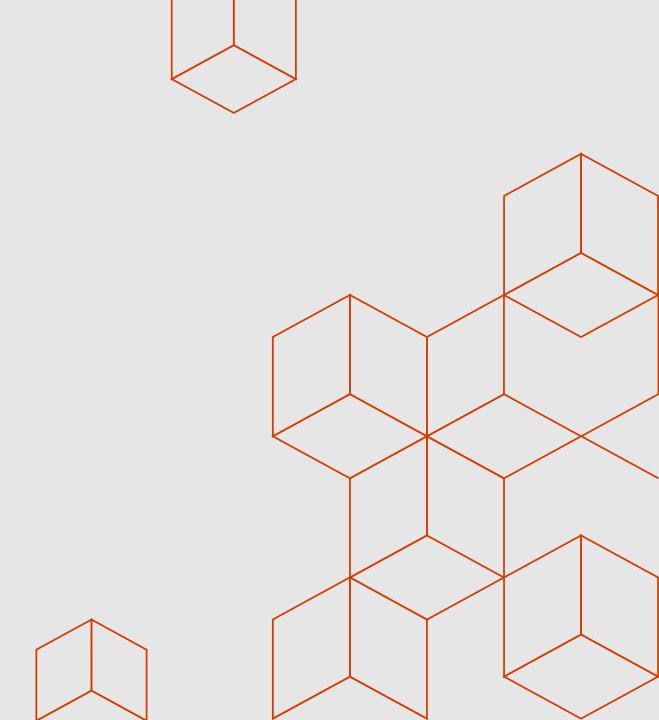
If Upgrading from SfB On-prem: Meetings *are* migrated

Upgrade Tracks

Area	IT Admin Driven	Microsoft-driven automated upgrades
Target customers	Larger pure online orgs Hybrid and on-premises orgs	Smaller pure online orgs Limited IT resources
Scope of upgrade	Per user or per tenant	Per Tenant*
Initiated by	IT Admin	MS
Eligibility	Any org	Based on SfB feature usage and Teams feature availability
Ability to downgrade	Yes	Customer: Yes, prior to MS upgrade MS: Yes, if needed

^{*}Prior to upgrade date, the org can use features of Admin driven track to self migrate on a per user basis. When Microsoft upgrades the tenant, the entire tenant is upgraded at once.

Resources



Microsoft Teams Resource Cheat Sheet



Office 365 Roadmap

- All public feature delivery dates
- Filter by product

https://aka.ms/O365Roadmap



Microsoft Technical Community

- Product forums and blogs
- Driving Adoption forum
- O365 Champion's Corner
- Diversity & Inclusion forum

https://aka.ms/TeamsCommunity



Success with Teams Practical Guidance

- Learn how to plan, deliver, adopt and manage Microsoft Teams
- Skype for Business to Teams transition guidance

https://aka.ms/SuccessWithTeams



Coffee in the Cloud on YouTube

- Short how-to videos for IT Pro's and Champions
- Long form end user & administrator training

https://aka.ms/CoffeeintheCloud

Microsoft Teams sessions at Ignite

See more at https://aka.ms/TeamsAtlgnite

Teams Core Fundamentals

BRK2159: What's new in Microsoft Teams,

BRK2161: Microsoft 365, Built for Teamwork

BRK3118: Microsoft Teams Architecture Update

BRK3120: Troubleshooting Microsoft Teams

BRK3126: What's new in EDU? Updates to Microsoft Teams

BRK3135: Learn more about security and compliance for Teams

BRK3140: Microsoft Teams in the Government Cloud

BRK3231: Collaboration on the Go with the Teams Mobile App

BRK3370: Innovation of Teams built on a foundation of quality

BRK4012: How to manage Microsoft Teams effectively

Upgrading from Skype for Business to Teams

BRK2190: Facilitating a smooth transition from SfB to Teams

BRK3141: Designing your path from SfB to Teams

BRK3142: Planning migration from SfB to Teams for IT Admins

BRK3230: How Microsoft Does IT: The Journey from SfB to Teams

Change Management, Adoption and Success Stories

BRK2160: Scenarios to realize the value of Microsoft

<u>Teams</u>

BRK2189: Success with Teams Customer Panel – Best

practices for large scale enterprise deployments

BRK2366: Find out how one of the biggest retailers in

Europe is using Microsoft Teams

BRK3170: Driving Teams Adoption: Enabling the

modern workplace with O365 & Microsoft Teams

BRK2143: Improving Health Teams Collaboration using

Microsoft Teams

Intelligent Calls, Meetings & Devices

BRK2169: Reaching broader audiences with Microsoft Teams

live events

BRK2188: Intelligent meetings in Microsoft Teams

BRK3168: Intelligent Communications across devices in

Microsoft Teams

BRK3232: Collaborative Calling and Business Voice in Teams

Microsoft Teams sessions at Ignite

See more at https://aka.ms/TeamsAtIgnite

IT Pro Deep Dives

BRK3113: Deep dive into the Administration Portal for Microsoft Teams and Skype for Business

BRK3138: Managing Client Deployments and Updates for Microsoft Teams

BRK4013: Quality in Meetings and Calling in Teams

BRK3169: Understanding calling usage and diagnosing call failures in Teams

BRK2461: How to choose, deploy and manage the right Teams Devices

BRK4014: Deep dive on Office 365 Direct Routing

BRK4016: Understanding Media Flows in Microsoft Teams

BRK3229: Everything you need to know about Skype for Business Server

BRK3124: How Skype for Business on-premises customers can take advantage of Teams meetings

Extending Platform and Apps

BRK2453: Drive Digital Transformation through Apps in Microsoft Teams

BRK3119: Deep Dive into Building Apps for Microsoft Teams

BRK2463: Introduction to programmable voice and video in Microsoft Teams

BRK3122: Connecting Microsoft Teams to third-party meeting room devices with Cloud Video Interop

BRK3136: How to manage secure, custom applications in Microsoft Teams

Q & A

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