



CENTILE ISTRA MS TEAMS INTEGRATION

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AGENDA

MS Teams market numbers

MS Teams licensing overview

ISTRA MS Teams integration scenarios

MS Teams connectors overview & integration use cases

Integration architecture

Live demo

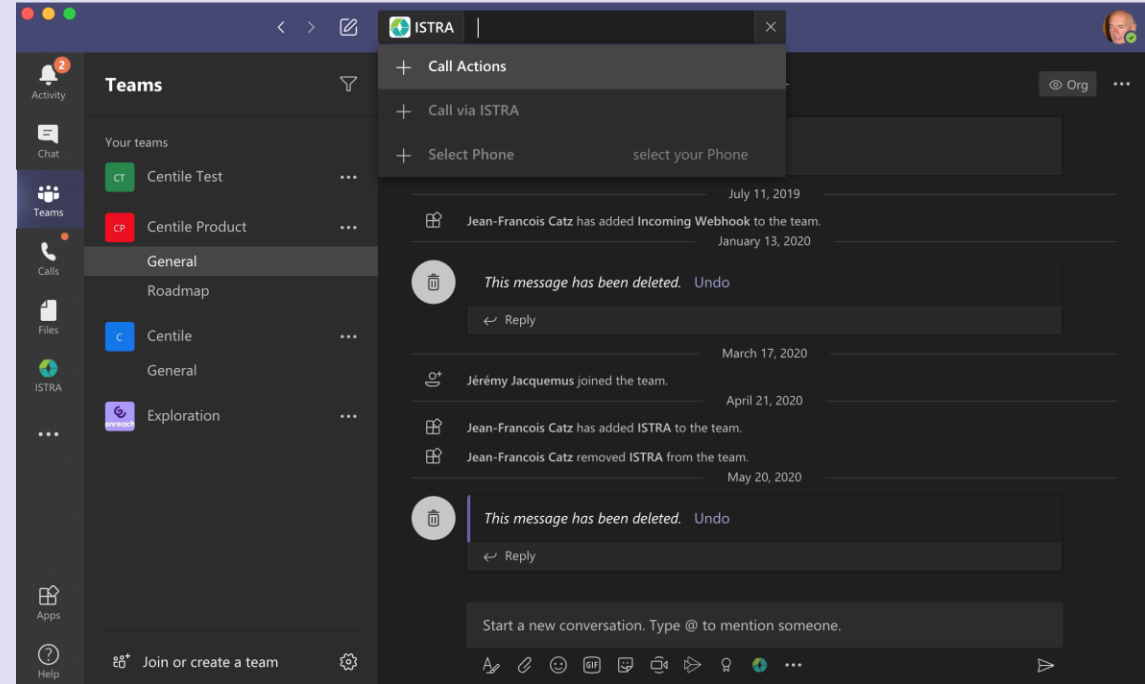
Direct Routing deep dive

Q&A



Purpose

Allow Centile customers to make and receive calls using their Microsoft Teams client, where calls are handled by the ISTRA platform



Numbers

40%

Organizations should use Teams by end of 2020, out of 30% today

258M

Microsoft365 Users
(including Teams)

200+

App integrations

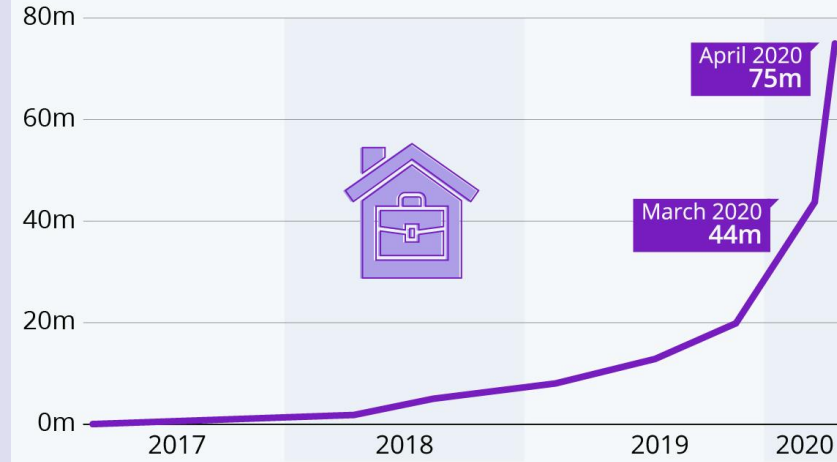
European

Leading Collaboration Platform,
fastest growth since 2017



Microsoft Teams Sees Jump in Usage as Remote Work Surges

Number of daily active users of Microsoft's workplace communication app Teams



Source: Microsoft

Microsoft Teams

Celebrating 2 years of continued growth



500,000+

More than 500,000 organizations use Teams



91%

91 Fortune 100 companies use Teams



44+

In 181 markets with support for 44 languages and growing



10,000+

150 organizations have 10,000 or more active users

MS 365 | PRICING OVERVIEW

MS has 2 license structures for their Office suite: Business and Enterprise (E):

BUSINESS

Tailored for the SOHO/SMB customers up to 300 users. Includes basic office Apps, OneDrive and email

1. Microsoft 365 Business: Apps available for local installation, **excludes MS Teams and Email.**
2. **Business Premium: Apps available for local installation, includes MS Teams and Email**
3. Business Essentials: Apps available in **web-version**, includes MS Teams and Email

ENTERPRISE

Tailored for the Corporate / Enterprise customer. Compared to the Business licenses it adds advanced management and administration / security features and Power BI. Includes basic office Apps, OneDrive, MS Teams and email

1. E1 Apps available in web-version, Includes MS Teams and Email
2. **E3: Apps available for local installation, includes MS Teams and Email. Phone System as add-on**
3. **E5: Apps available for local installation, includes MS Teams, Email and Power BI. Includes Phone System**

Business:

€4.20 user/month (annual commitment) Price does not include VAT.	€10.50 user/month (annual commitment) Price does not include VAT.	€16.90 user/month (annual commitment) Price does not include VAT.
Microsoft 365 Business Basic (formerly Office 365 Business Essentials)	Microsoft 365 Business Standard (formerly Office 365 Business Premium)	Microsoft 365 Business Premium (formerly Microsoft 365 Business)
Office apps included Outlook Word Excel PowerPoint Publisher (PC only) Access (PC only)	Office apps included Outlook Word Excel PowerPoint Publisher (PC only) Access (PC only)	Office apps included (Web and mobile versions only) *
Services included OneDrive	Services included Exchange OneDrive SharePoint Teams	Services included Exchange OneDrive SharePoint Teams

Enterprise:

Office 365 E1 \$8.00 user/month (annual commitment) Buy now Learn more >	Office 365 E3 \$20.00 user/month (annual commitment) Buy now Try for free > Learn more >	Office 365 E5 \$35.00 user/month (annual commitment) Buy now Try for free > Contact sales > Learn more >
<small>Business services—email, file storage and sharing, Office Online, meetings and IM, and more. Office applications not included.</small>	<small>All the features of ProPlus and Office 365 E1 plus security and compliance tools, such as legal hold, data loss prevention, and more.</small>	<small>All the features of Office 365 E3 plus advanced security, analytics, and voice capabilities.</small>
Office applications included (Not included)	Office applications included Outlook Word Excel PowerPoint Access (PC only) Publisher (PC only)	Office applications included Outlook Word Excel PowerPoint Access (PC only) Publisher (PC only)
Services included Exchange OneDrive SharePoint Teams Yammer Stream	Services included Exchange OneDrive SharePoint Teams Yammer Stream	Services included Exchange OneDrive SharePoint Teams Yammer Power BI Stream

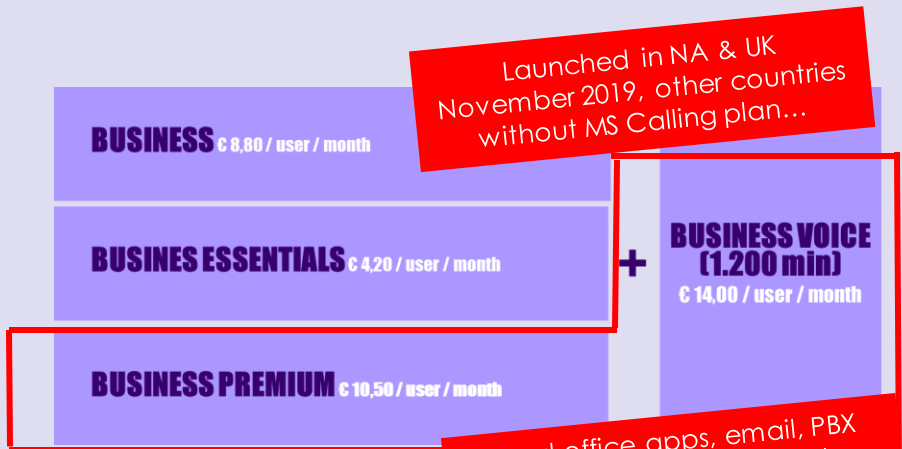


MS 365 | ADDING BUSINESS TELEPHONY

MS offers multiple ways to add business telephony capabilities depending on license-model:

Microsoft licenses

Business - Business Voice:

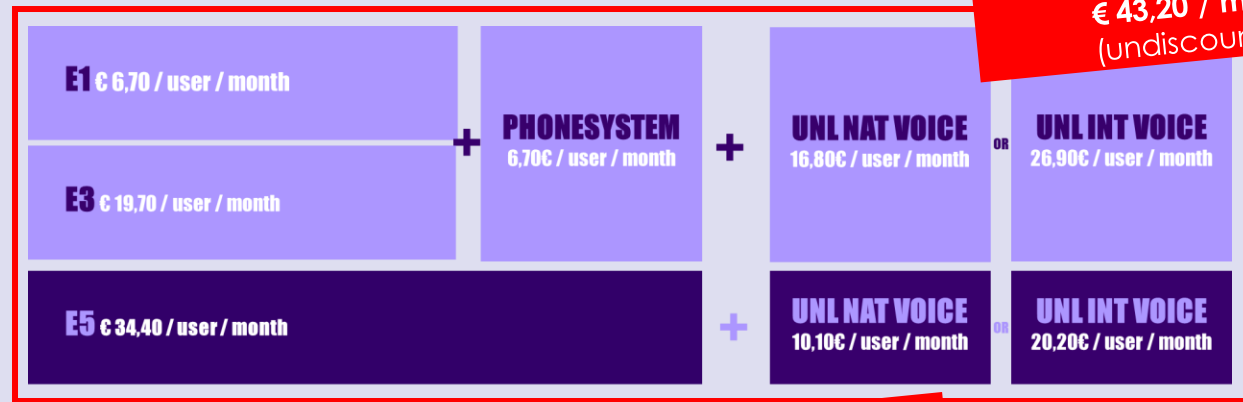


Launched in NA & UK November 2019, other countries without MS Calling plan...

Local office apps, email, PBX with or without 1.200 minutes for:
€ 24,50 / month

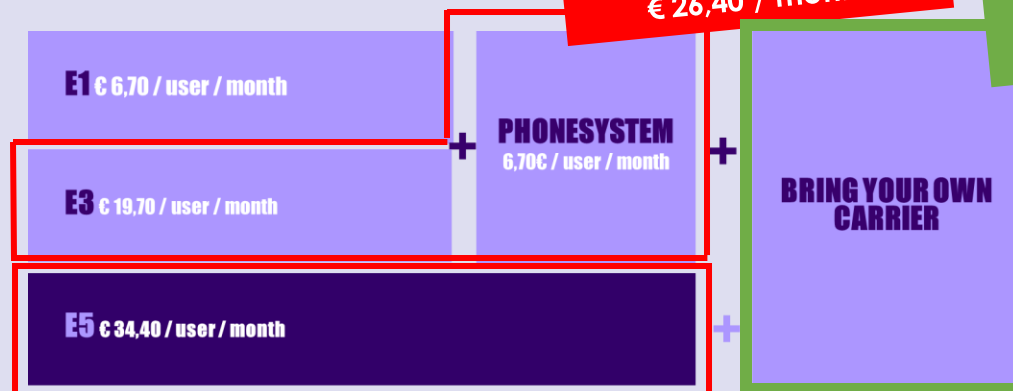
Enterprise

Option 1: Include MS Calling Plan



Local office apps, email, PBX and unlimited minutes for:
€ 43,20 / month (undiscounted)

Option 2: Bring your own carrier



Local office apps, email, PBX without minutes:
€ 26,40 / month

Multi-tenant SBC licenses
Cloud PBX licenses
Minutes



MS TEAMS | 2 setup scenarios

COMPETITIVE CALLING

Light integration

- Uses your existing Telecom infrastructure
- Click to call (prompt your ISTR terminal) from MS Teams
- No specific routing configuration required
- No additional MS license costs (no need for Phone System license)
- No MS Tenant configuration required (no powershell)

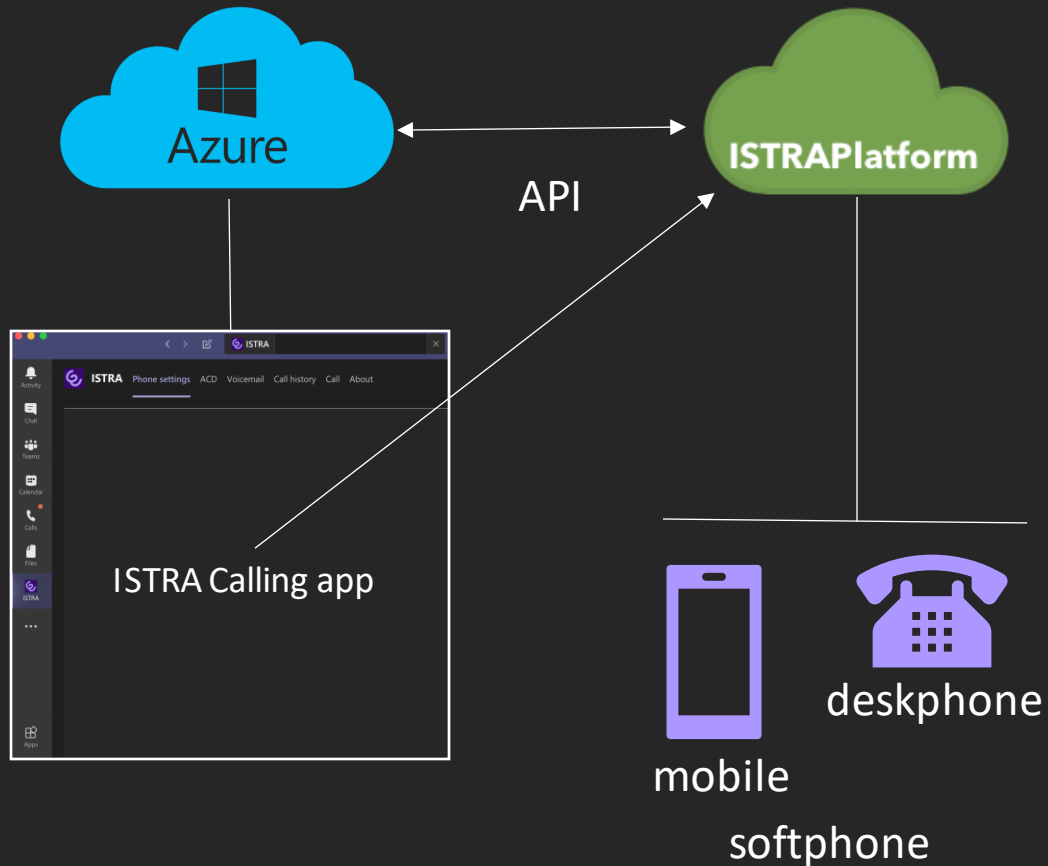
TEAMS CALLING

Native integration

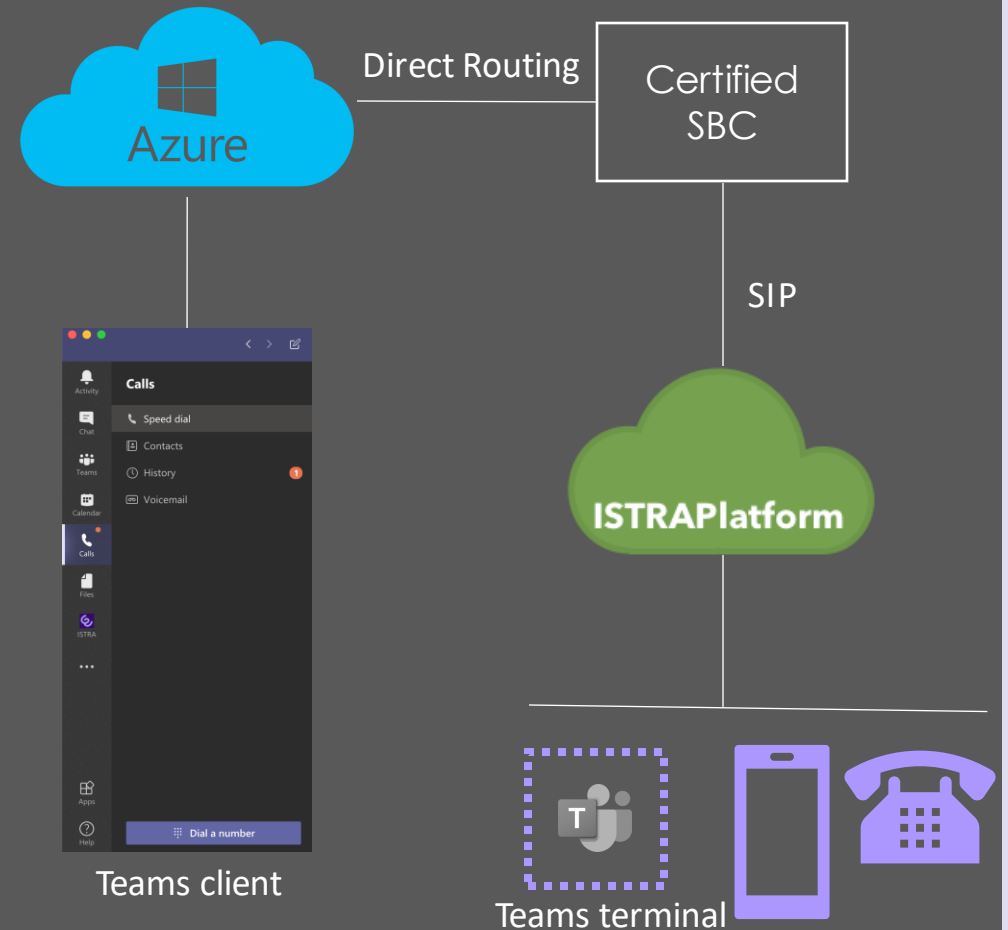
- Requires Phone System license
- Requires Direct Routing configuration via certified SBC
- MS Teams client is managed as an additional ISTR Terminal
- Call short numbers or PSTN from Teams client
- Answer regular calls from your Teams client

MS TEAMS | 2 calling scenarios

COMPETITIVE CALLING

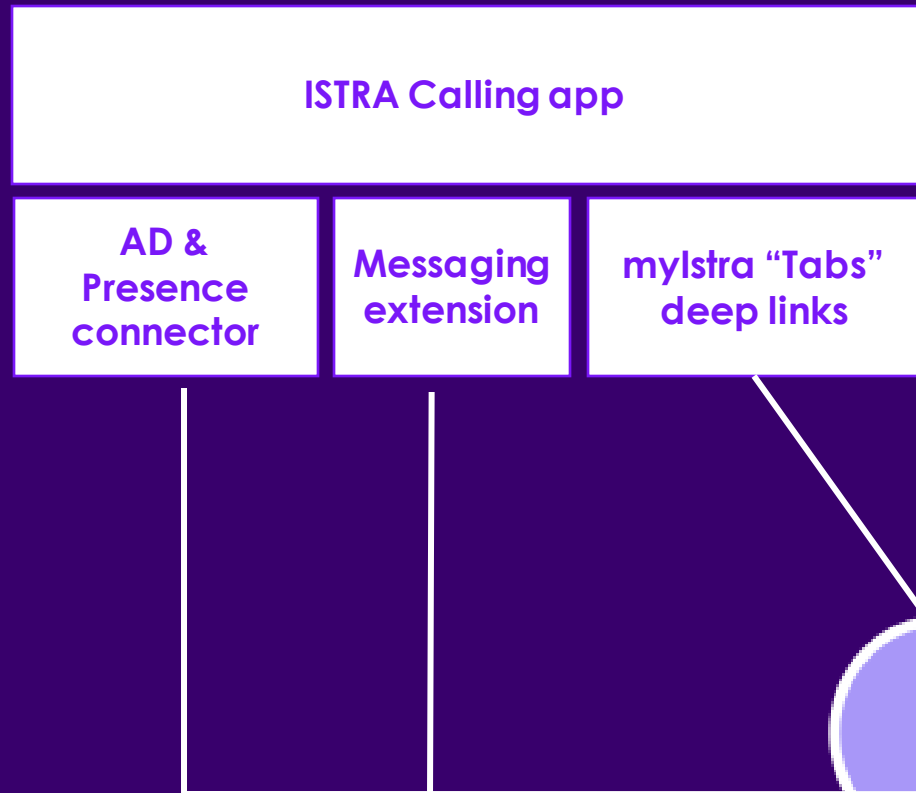


TEAMS CALLING

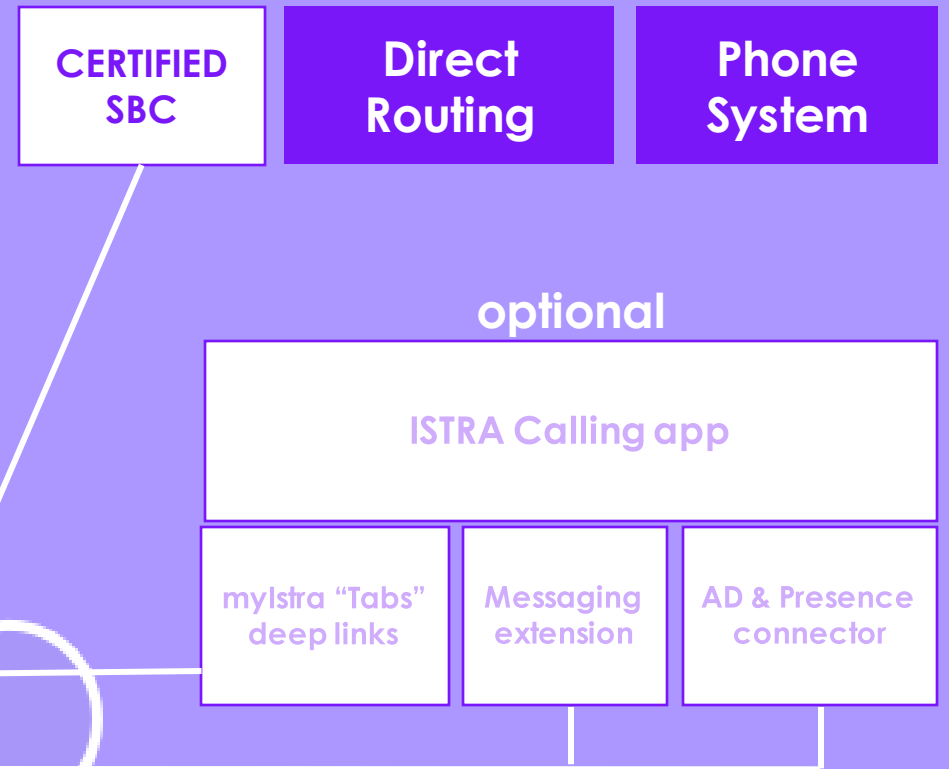


MS TEAMS | scenarios details

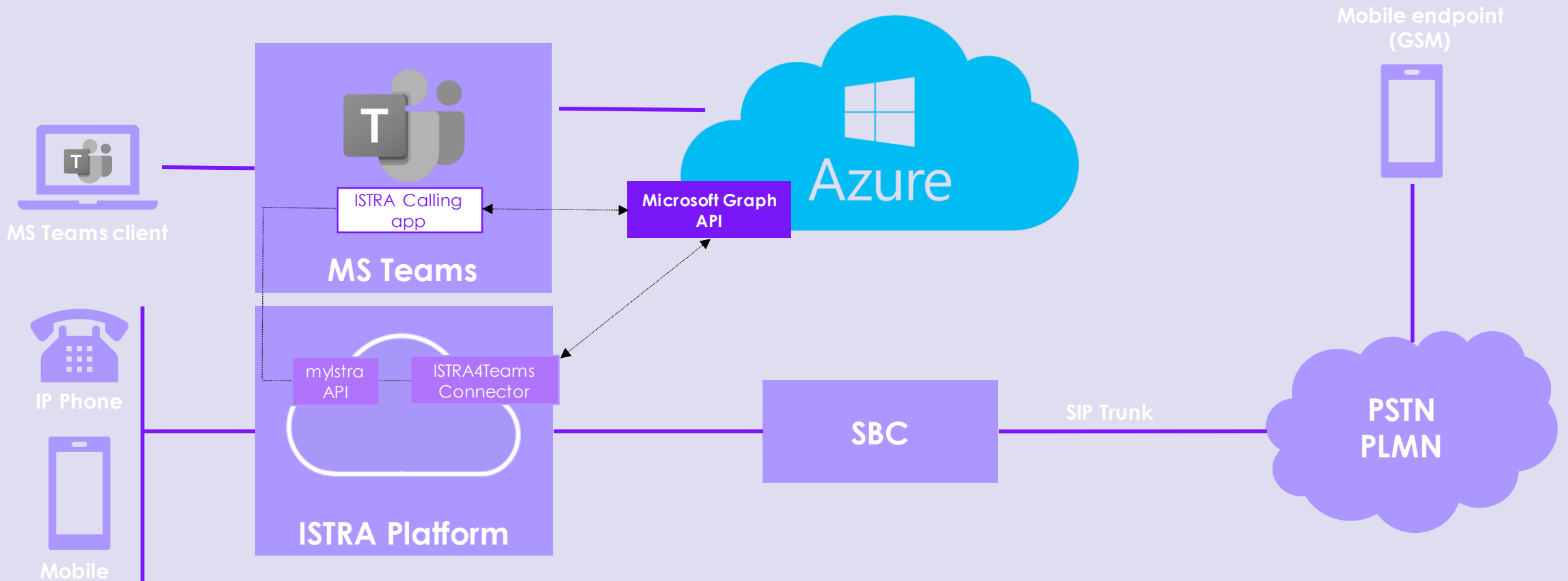
COMPETITIVE CALLING



TEAMS CALLING



COMPETITIVE CALLING ARCHITECTURE

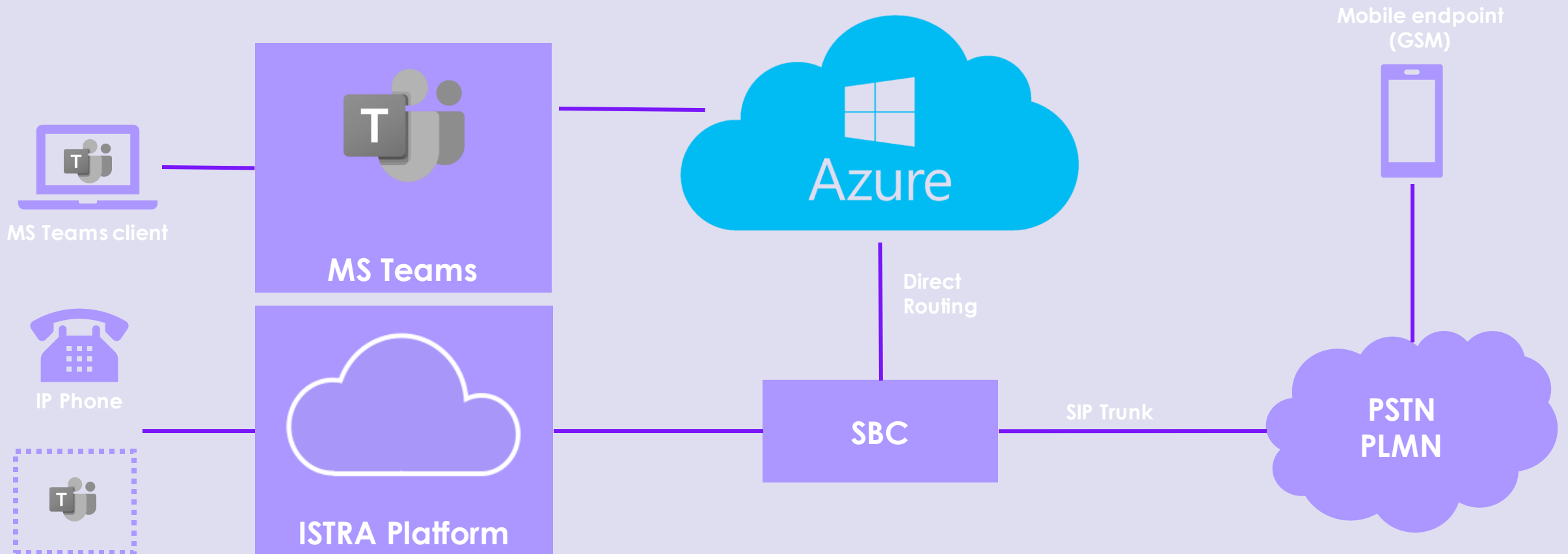


User can initiate a call from Teams client, but Teams client is not seen as an additional phone

Click2call from Teams client can prompt any IP Phone, softphone or mobile attached to user's extension



TEAMS CALLING ARCHITECTURE



Teams client becomes an additional phone

Both Teams client, IP Phone and mobile will be reachable using the same DiD / extension



USE CASES

Number presentation

ISTRA determines what number will be presented on outgoing native mobile calls or calling from a Teams client (fixed number, mobile, no number, ...)

(Simultaneous) ringing

ISTRA determines what endpoints to ring when a user is being called on his fixed or mobile number (native mobile dialer, teams client, sip phone, ...)

FMC Short dialing

End user can dial Teams colleagues using short numbers on mobile phone native dialer

Hunt groups

Mobile phone and Teams clients can be part of hunt groups, call center, forward groups etc

Presence

When end user is in a mobile call, MS Teams is aware and can correctly display presence status to other colleagues in MS Teams client (once available from MS Presence Graph API)

Presence based routing

ISTRA is aware of Teams user presence and activity and can decide to route a call directly to VM if user is in a meeting or sharing his screen or in a Teams call

Recording

Calls made and received via the mobile phone or Teams client can be recorded by ISTRA

Voice Call Continuity

While in a call, user can send call to Teams or send call to GSM or any other phone



MS TEAMS | USE CASES

Office license



MS Teams client



OTT Teams to Teams call

Office license



MS Teams client

Office license



MS Teams client



OTT Teams to Teams call

Office license



Smartphone with Teams app

Office license



ISTRA
Calling app

MS Teams client

Competitive calling

ISTRA4Teams
Connector

ISTRA

PSTN
PLMN



Smartphone, IP phone, Softphone

Office license + Phone System



Teams calling

MS Teams client



Certified
SBC

ISTRA

PSTN
PLMN



Smartphone, IP phone, Softphone



MS Teams Connectors

1. Tabs

- A place to show web content that we host and present to a channel
- Web content can be a landing page or a deep link

2. Conversational Bots

- Allow users to interact with web services using text or interactive cards (rich text formatted markdown or html) in a channel

3. Outgoing Webhooks

- Allow users to send a short command @myCommand directly from a channel to our web services and get a response

4. Incoming Webhooks

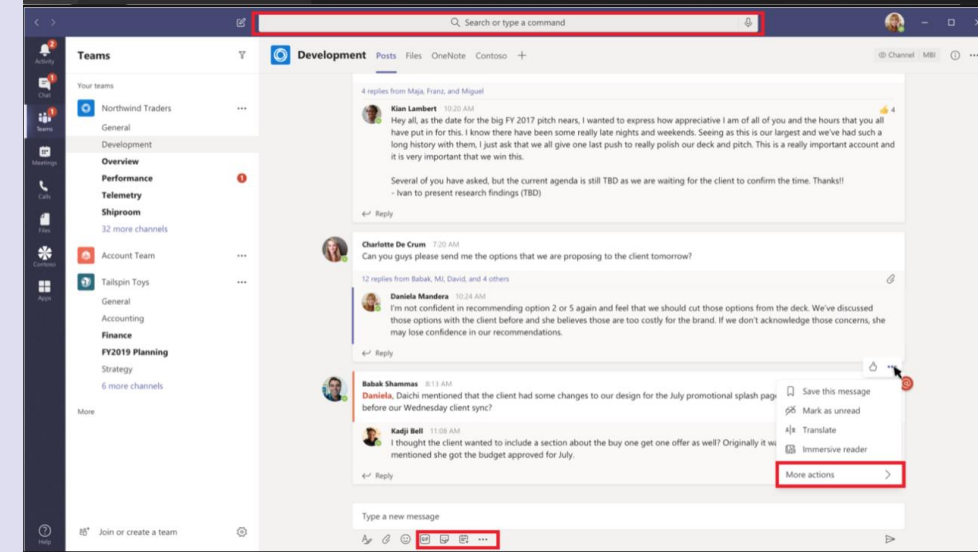
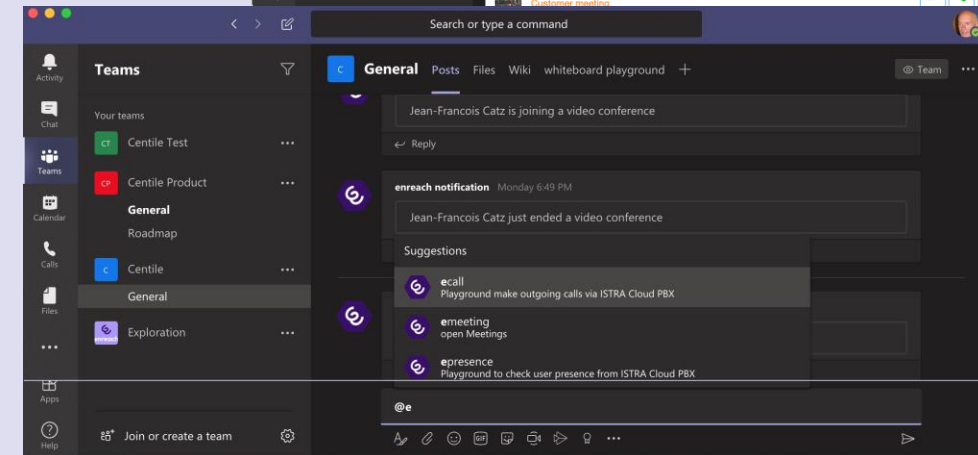
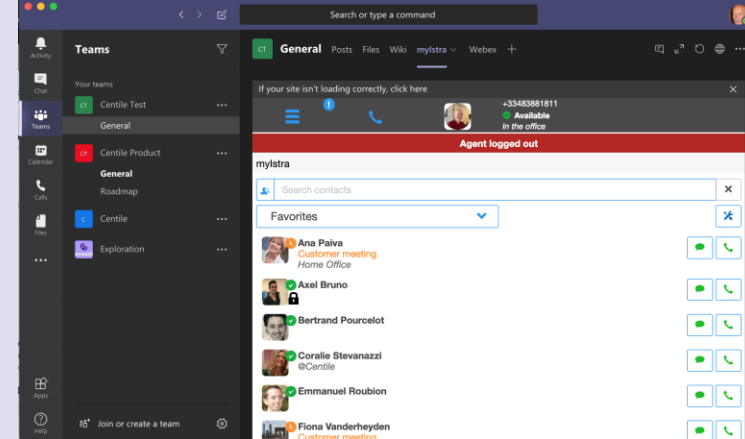
- Allow users to subscribe to receive notifications and messages from our web services

5. Messaging Extensions

- Allow users to interact with our web services thru buttons and forms (e.g. initiate action, search, ...) directly from the message area

6. Microsoft Graph API

1. Access to AD
2. Access to Outlook Calendar
3. Manage Presence (get Teams presence and publish to our platform)
4. Call & Meeting Bots



LIVE DEMO

MS TEAMS | BUSINESS TELEPHONY



**INTERNAL CALLS
TEAMS TO TEAMS**

Microsoft 365

Microsoft
Graph API



Microsoft Teams

PBX & PSTN CALLS

Phone System

Microsoft Calling
Plans (minutes)

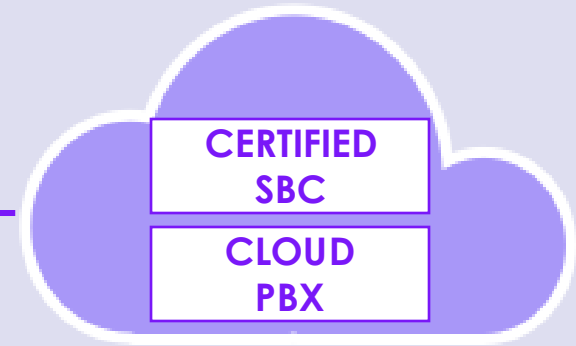
Direct Routing
Bring Your Own Carrier

CERTIFIED
SBC

CLOUD
PBX



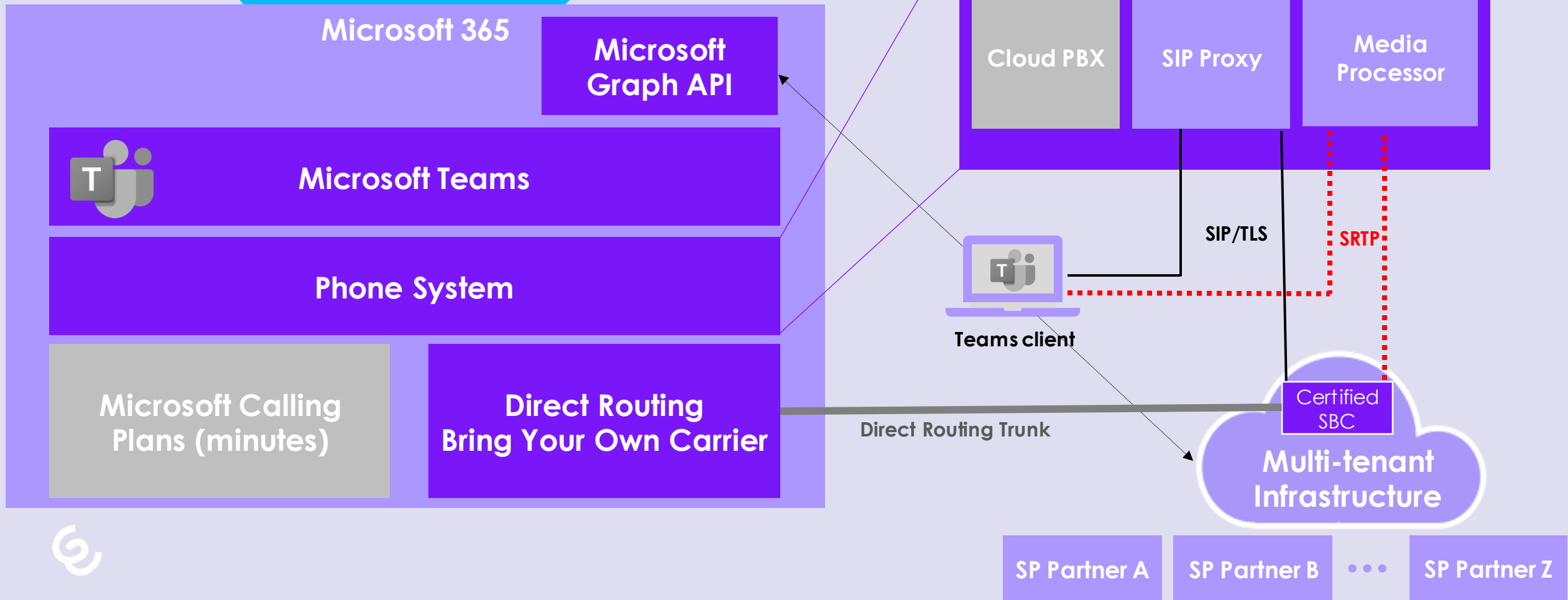
Microsoft
minutes



Carrier's
minutes



MS TEAMS | TELEPHONY ARCHITECTURE



NEW TENANT **DIRECT ROUTING** CONFIGURATION

1

Assign Phone System add-on license to users
(except for Business Voice or E5 users)

2

Configure new tenant's virtual SBC FQDN in SBC
(e.g. contoso.customers.centile.net)

3

Register a sub-domain to customer tenant in MS365 admin center
(e.g. contoso.customers.centile.net)

4

Enable users for Direct Routing

```
Set-CsUser -Identity "bob@contoso.com" -EnterpriseVoiceEnabled $true -HostedVoiceMail $true -  
OnPremLineURI tel:+33488888888
```

5

Create PSTN Usage container

```
Set-CsOnlinePstnUsage -Identity Global -Usage @{Add="Centile-EU"}
```

6

Configure Voice Route

```
New-CsOnlineVoiceRoute -Name "Centile-EU1" -OnlinePstnGatewayList [contoso.customers.centile.net] -  
OnlinePstnUsages [Centile-EU] -Priority "0" -NumberPattern ".*"
```

7

Create Voice Routing Policy

```
New-CsOnlineVoiceRoutingPolicy -Identity "Centile-EU" -OnlinePstnUsages "Centile-EU"
```

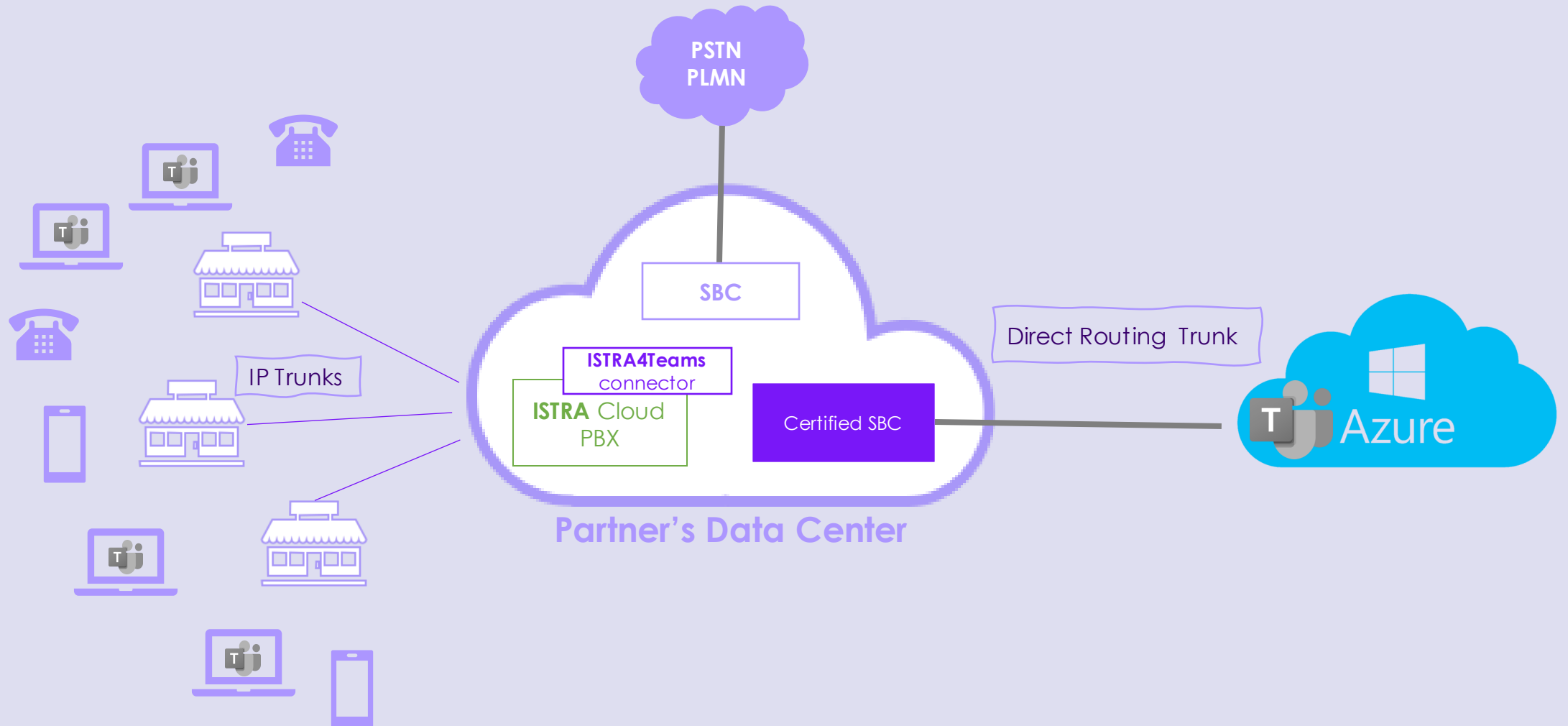
8

Assign Voice Routing Policy to user

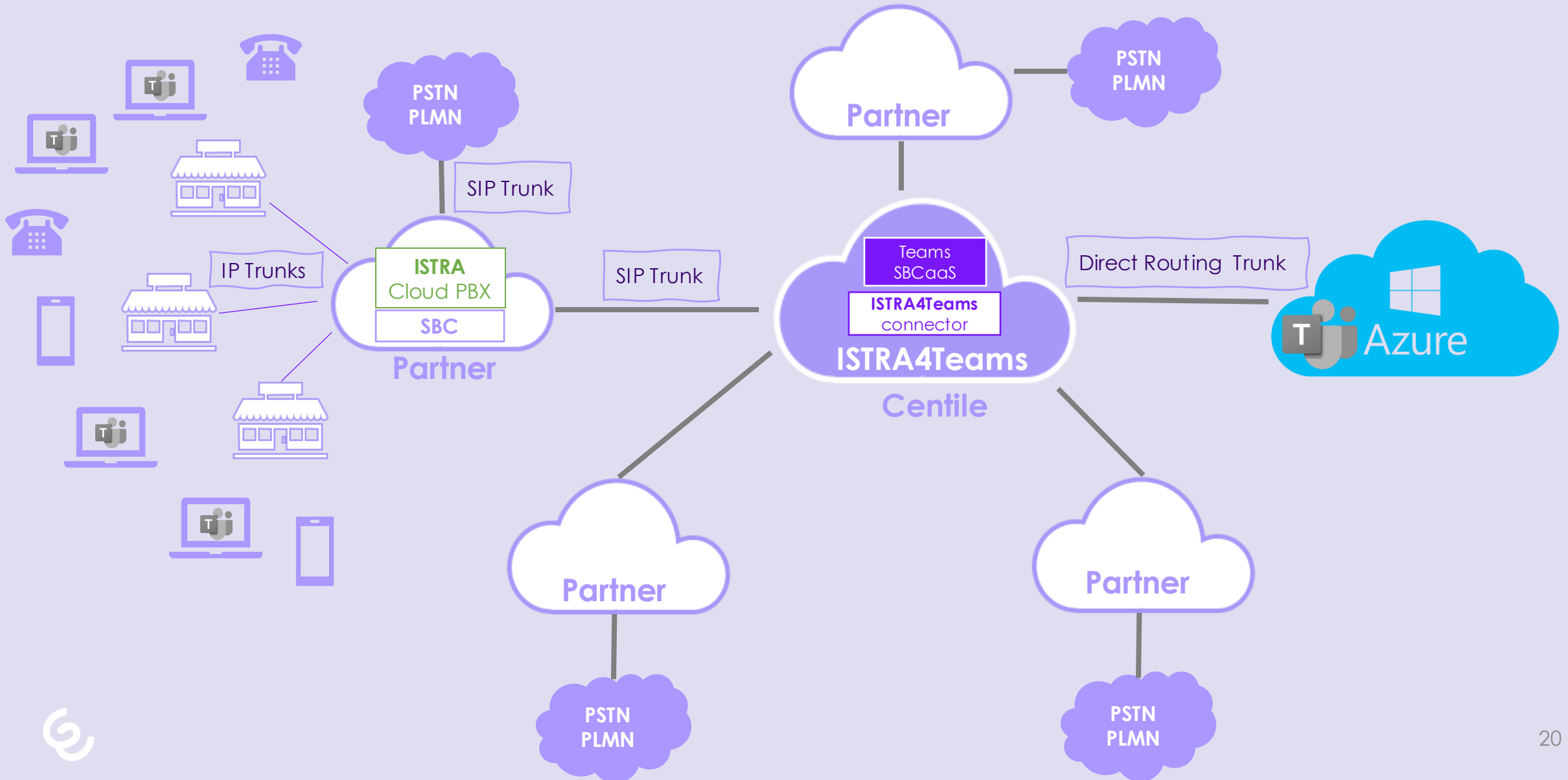
```
Grant-CsOnlineVoiceRoutingPolicy -Identity "bob@contoso.com" -PolicyName "Centile-EU"
```



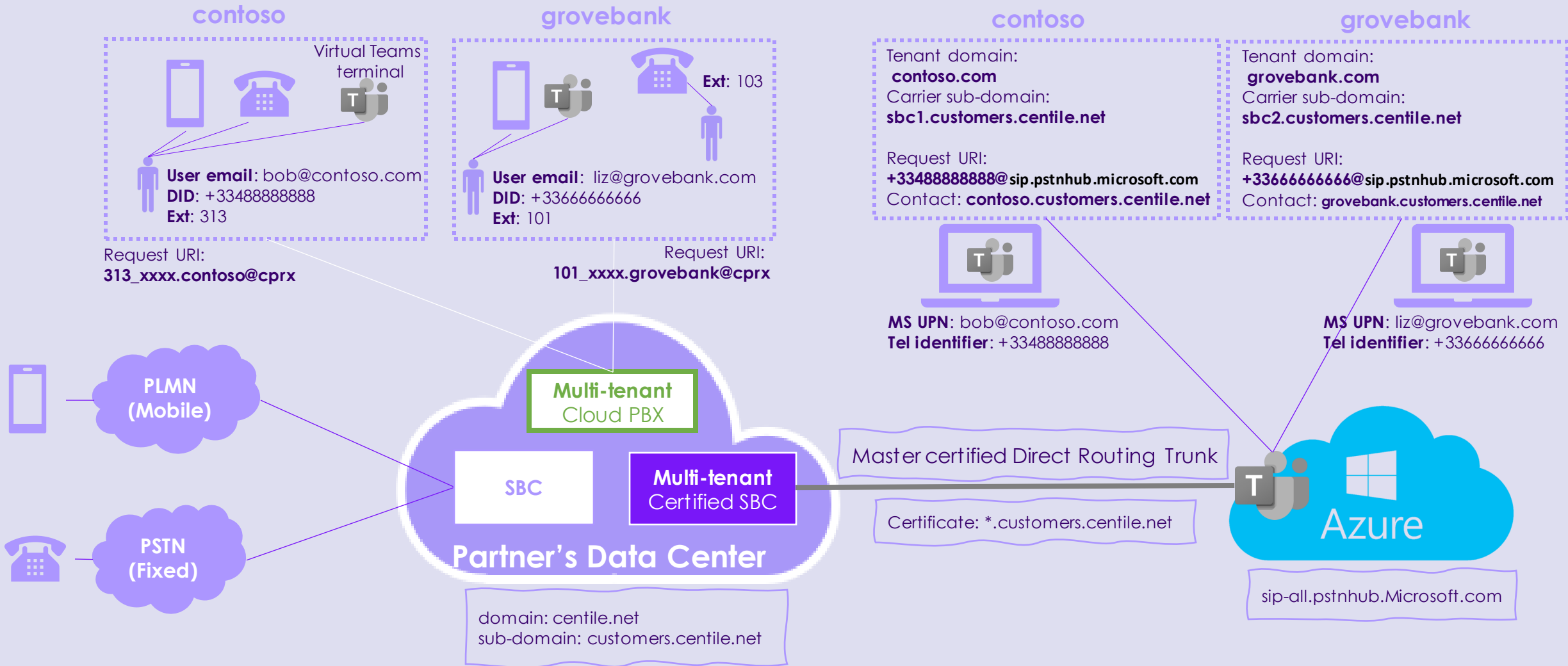
MULTI-TENANT DIRECT ROUTING



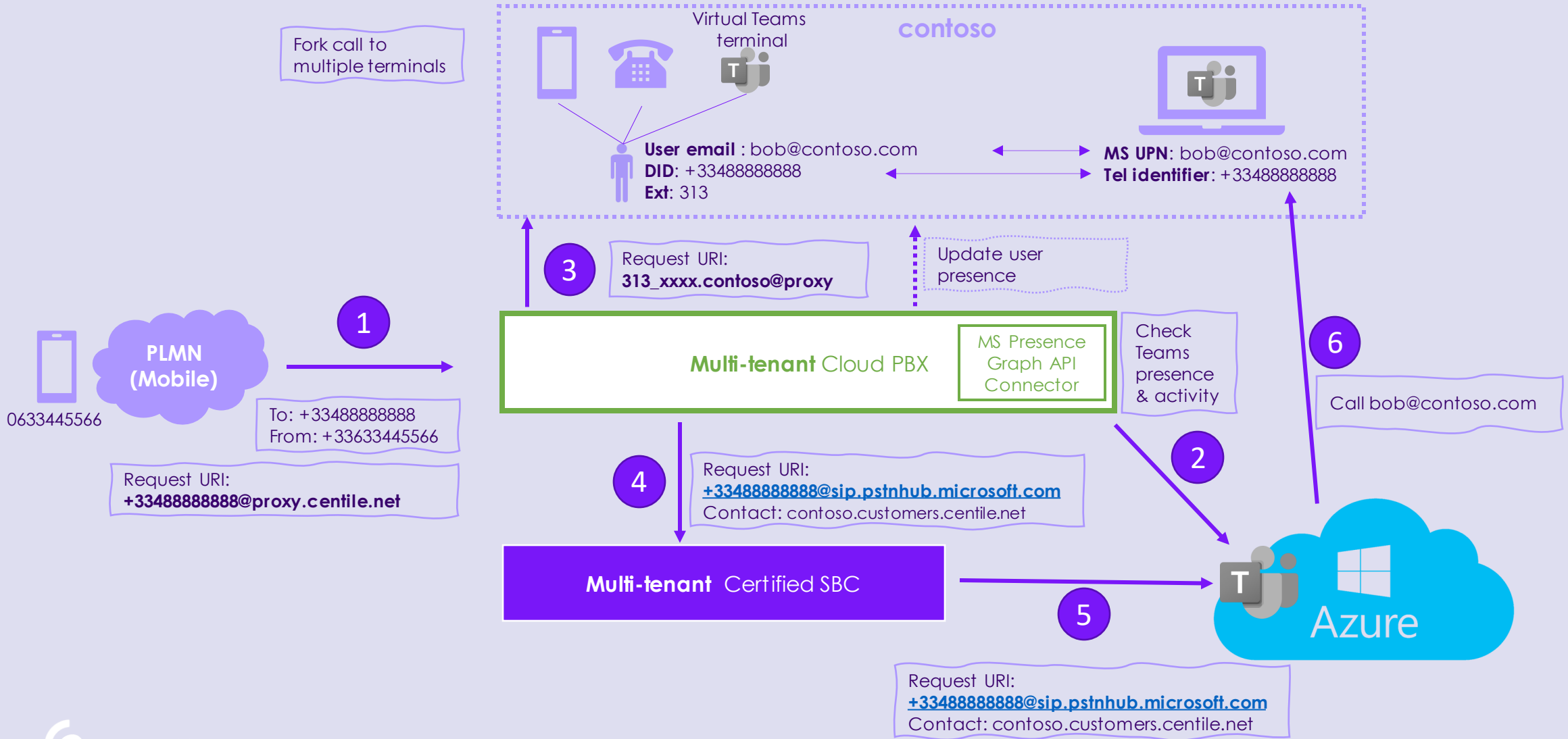
MULTI-TENANT DIRECT ROUTING AS A SERVICE



TEAMS CALLING HOW IT WORKS

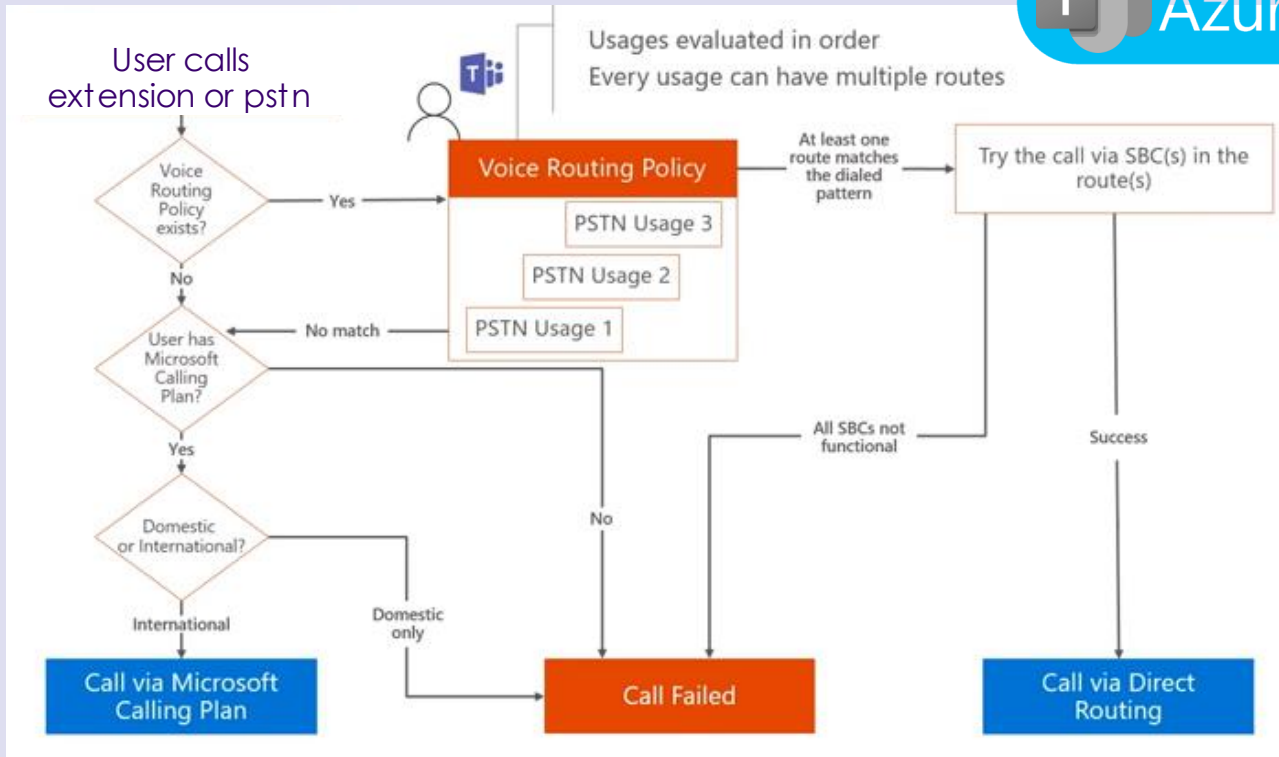
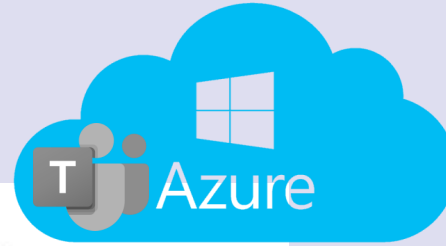


TEAMS CALLING FLOW – INCOMING CALL TO TEAMS



TEAMS CALLING FLOW – OUTGOING CALL FROM TEAMS

MS UPN: bob@contoso.com
Tel identifier: +33488888888



Request URI: : 101@proxy.centile.net
P-ASSERTED-ID: <tel:+33488888888;><sip:bob@contoso.com>



Request URI: : 101@contoso.customers.centile.net
P-ASSERTED-ID: <tel:+33488888888;><sip:bob@contoso.com>



**THANK
YOU**