

INTUITIVE

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5-8 March 2019 • Melbourne, Australia

#CLMEL



Cisco Meeting Server Interop with Microsoft Skype for Business

Sateesh Katukam

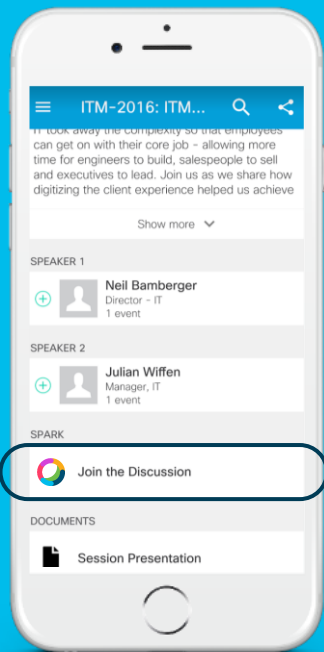
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Cisco Webex Teams

Questions?

Use Cisco Webex Teams (formerly Cisco Spark) to chat with the speaker after the session

How

- 1 Find this session in the Cisco Events Mobile App
- 2 Click “Join the Discussion”
- 3 Install Webex Teams or go directly to the team space
- 4 Enter messages/questions in the team space

KEEP IT
SIMPLE

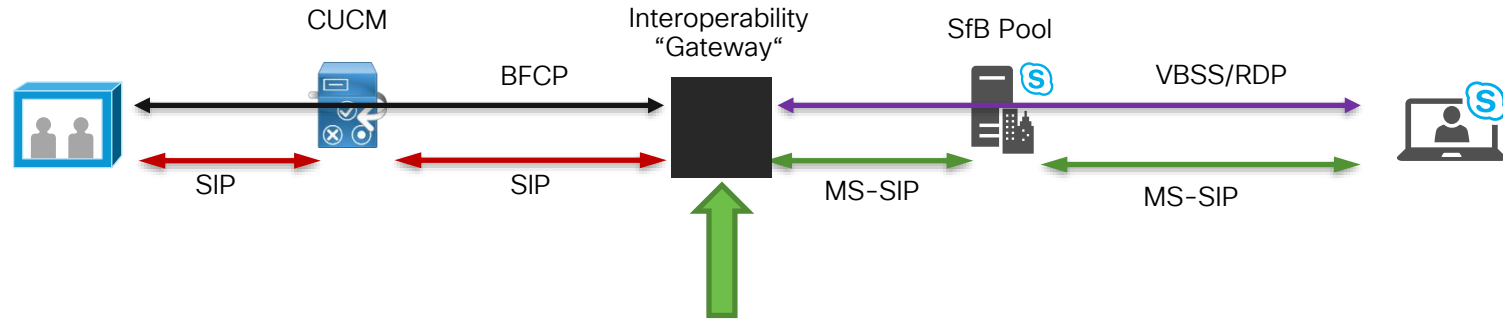
Agenda

- Introduction to Cisco Meeting Server and Skype for Business Architecture
- What's New in Cisco Meeting Server
- Cisco Meeting Server Interop with Skype for Business
- Call Scenarios
 - Intracompany Scenario with SfB on-premise
 - Business to Business with Local Microsoft Environment
 - Business to Business without Local Microsoft Environment
- Conclusion

Introduction to Cisco Meeting Server and Skype for Business Architecture

Video Interoperability with SfB Server & Online (O365)

Video and Content Sharing



- Cisco uses Standard SIP (RFC 3261) for Audio and Video
- Microsoft uses proprietary MS-SIP for Audio and Video
- Cisco uses BFCP for Content Sharing
- Microsoft uses VBSS/RDP for Content Sharing
- A transcoding service is needed to interoperate correctly

Cisco Meeting Server



Video
conferencing

Audio
conferencing

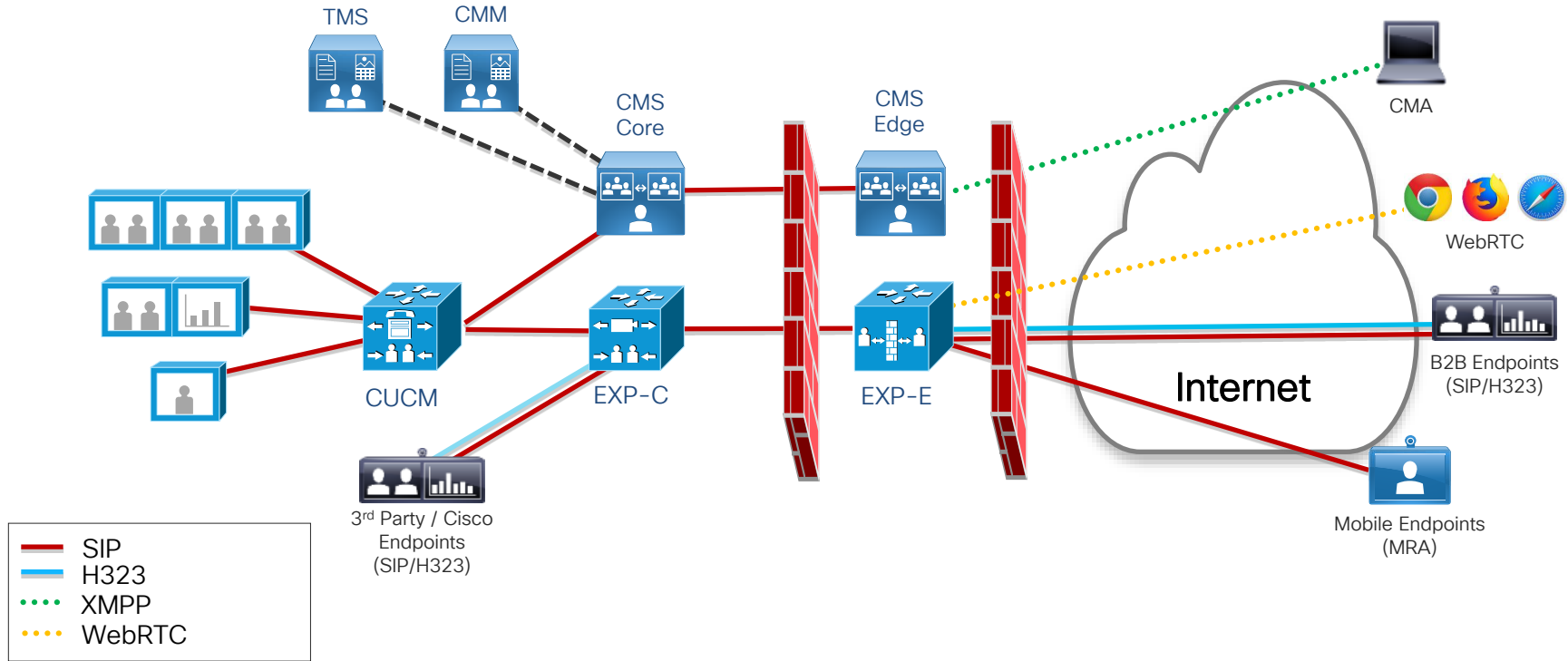
Web
conferencing

Interoperability

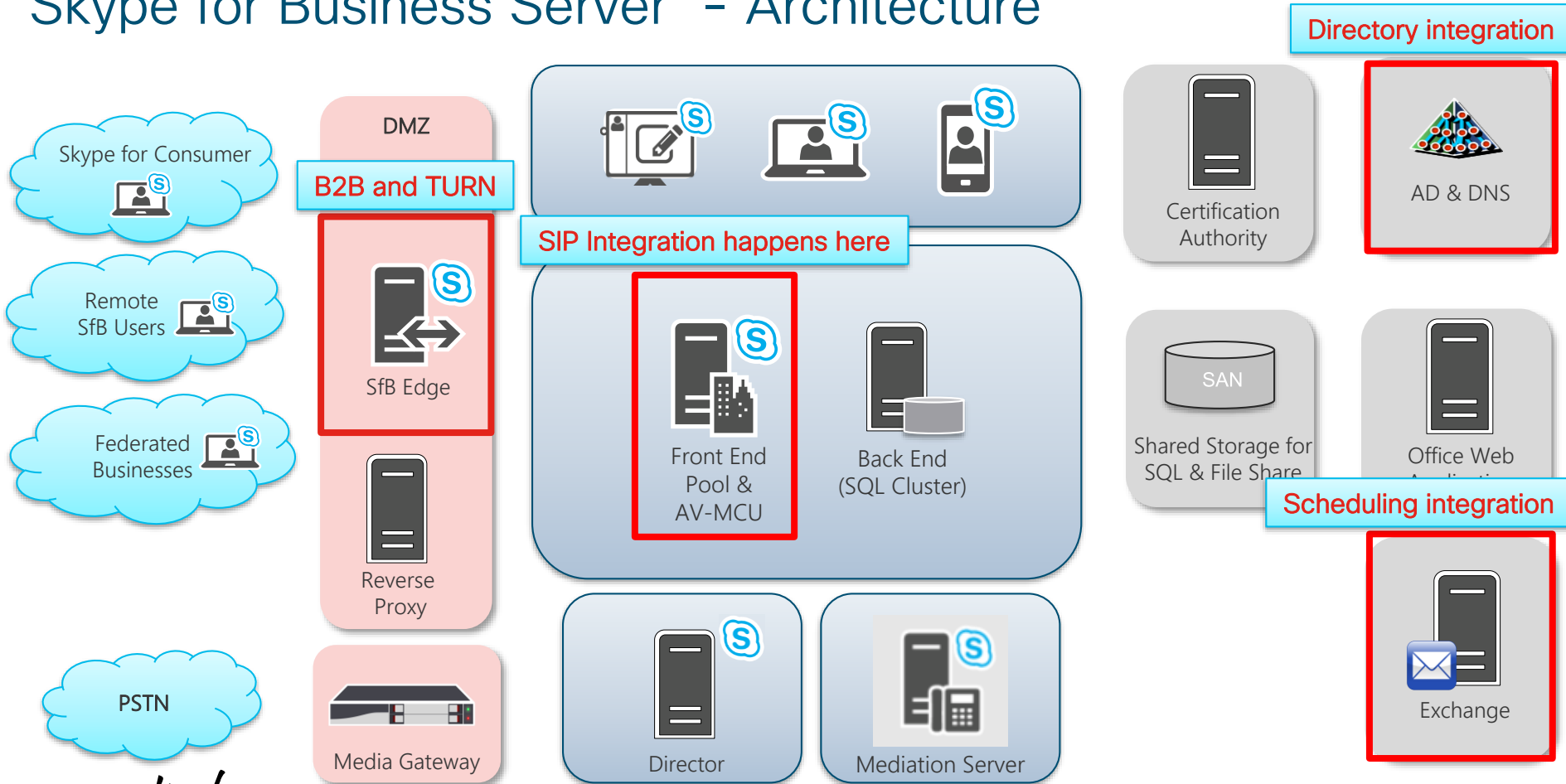
Recording and
streaming

Customization

Cisco Meeting Server Architecture (without Microsoft Interoperability)

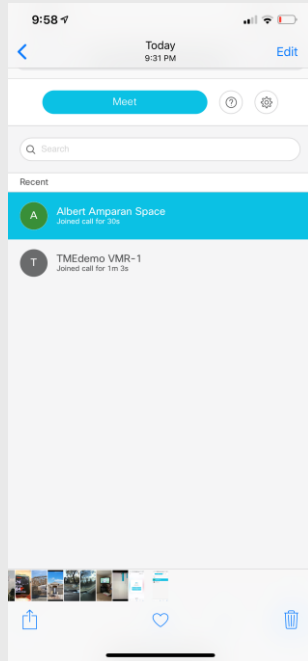


Skype for Business Server - Architecture

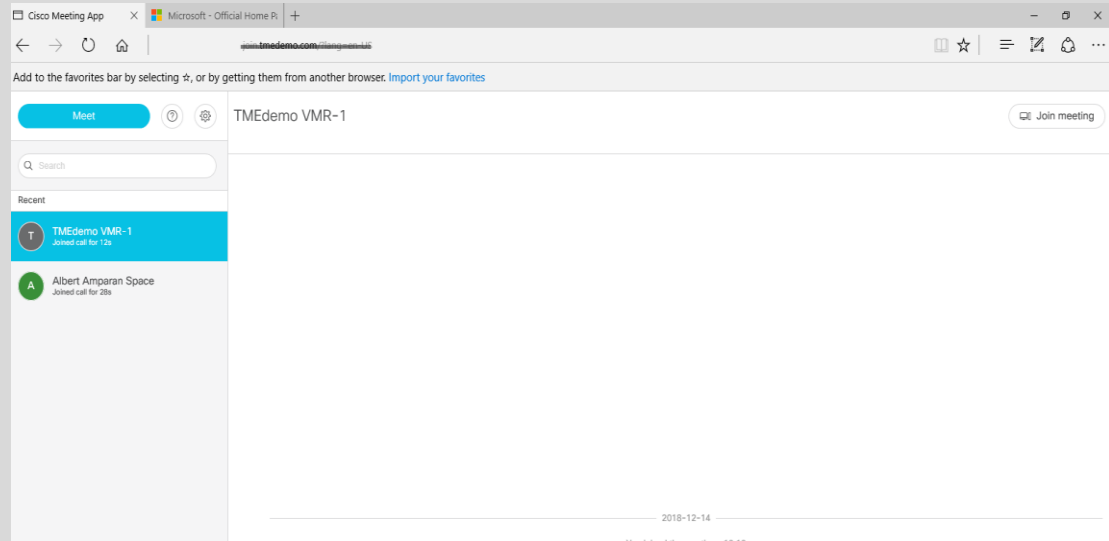


What's New in Cisco Meeting Server

Cisco Meeting Application expanded browser support (CMS 2.5)



WebRTC on Safari iOS



WebRTC on Microsoft Edge

*Beta feature in CMS 2.5

Cisco Meeting Application expanded browser support (CMS 2.5)

WebRTC Application support by browser	As of CMS 2.5	Pre 2.4
Google Chrome	✓	✓
Mozilla Firefox	✓	✓
Apple Safari on macOS	✓	✓
Safari on iOS for iPad	✓	
Safari on iOS for iPhone *	✓	
Microsoft Edge/MS Edge HTML 17*	✓	

*beta feature in CMS 2.5

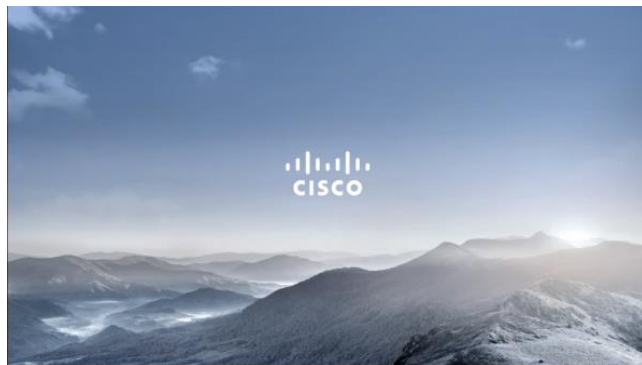
Cisco Meeting Server Branding (CMS 2.4)

Establish your brand

- Choose background image
- Add on screen text
- IVR voice prompts
- Customize invitations
- Localization now included

Tailor the user experience

- Define meeting host and guest role entitlements
- Customize meeting controls

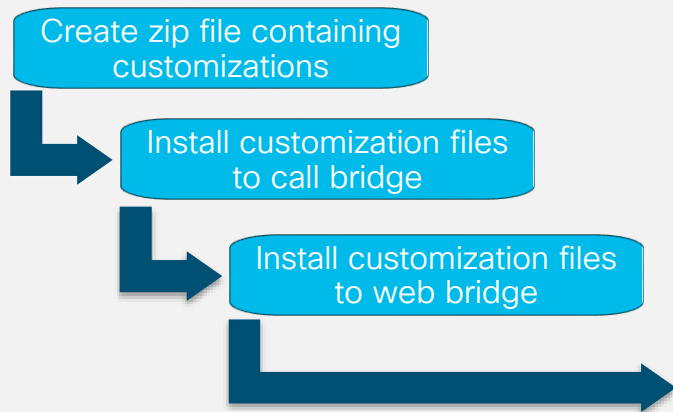
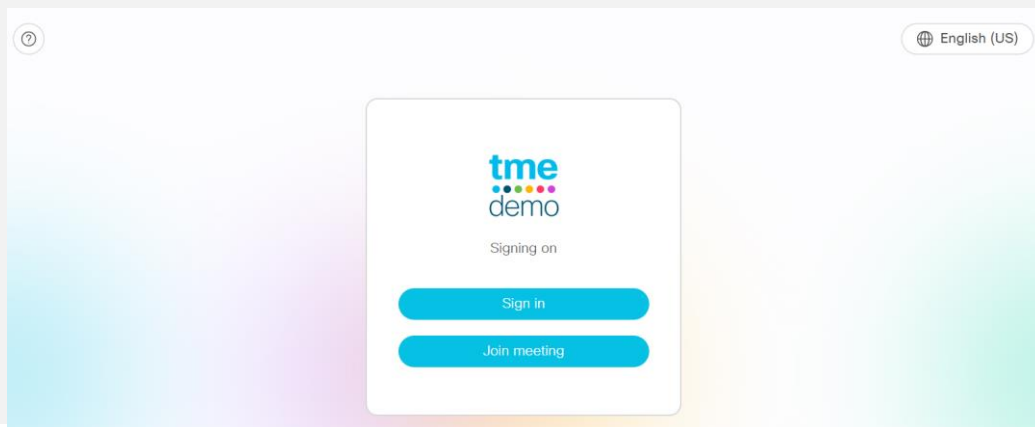


Branding now included with CMS

Cisco Meeting Server Branding (CMS 2.5)

Locally hosted branding

- Eliminates requirement for separate web server to host branding files
- Branding files uploaded to Call Bridge and/or web bridge



Enhanced meeting controls in Dual Home Conferences (CMS 2.5)

- Microsoft clients can mute and un-mute SIP endpoints
- Microsoft clients can mute all and un-mute all (including SIP endpoints)
- SIP endpoints will display an onscreen message that they have been muted / unmuted
- SIP endpoints will display a recording indicator when Microsoft clients start a recording



Expressway - Traffic Classification Introduction

Traffic Classification & Enhanced DNS zone

- Traffic Classification is key to provide B2B with Microsoft, allowing us to route calls accordingly
- Traffic is recognized and classified in “*SIP Variants*”
 - Standard-based
 - All Microsoft Variants
 - Microsoft AV&Share only
 - Microsoft SIP IM&P only
- Exp-E DNS Enhanced zone is now able to lookup for Microsoft SRV Record (*_sipfederationtls._tcp.company.com*)
- For outgoing calls Expressway search for H.323/SIP/MSFT-SIP destinations following the configured priorities

Expressway - Traffic Classification and Search Rules

Create search rule

Configuration

Rule name

Description

Priority

Protocol

SIP variant

Source

Request must be authenticated

Mode

On successful match

Target

State



100

SIP

- All SIP Variants
- All SIP Variants
- Standards-based
- Microsoft Variants
- Microsoft AV & Share
- Microsoft SIP IM&P

Any alias

Continue

Please select

Enabled

Create search rule

Cancel

Cisco Meeting Server Interop with Skype for Business

Skype for Business Interoperability

Supported Features and Capabilities

- “Microsoft” Video Codec Transcoding:
 - H.264UC-SVC (SfB & Lync 2013)
 - RTVideo (Lync 2010 & Lync for Mac 2011)
- Bi-directional RDP Transcoding for Content Sharing
- Multi-party conferencing (Microsoft CCCP protocol support)
 - Drag and Drop escalation from SfB client
 - Scheduled conferences using SfB plugin (including O365)
 - Participant list integration

****Video-based Screen Sharing (VBSS) not supported yet but its in Roadmap**

Support for Skype for Business 2019 is currently targeted for April 2019 – Subject to change

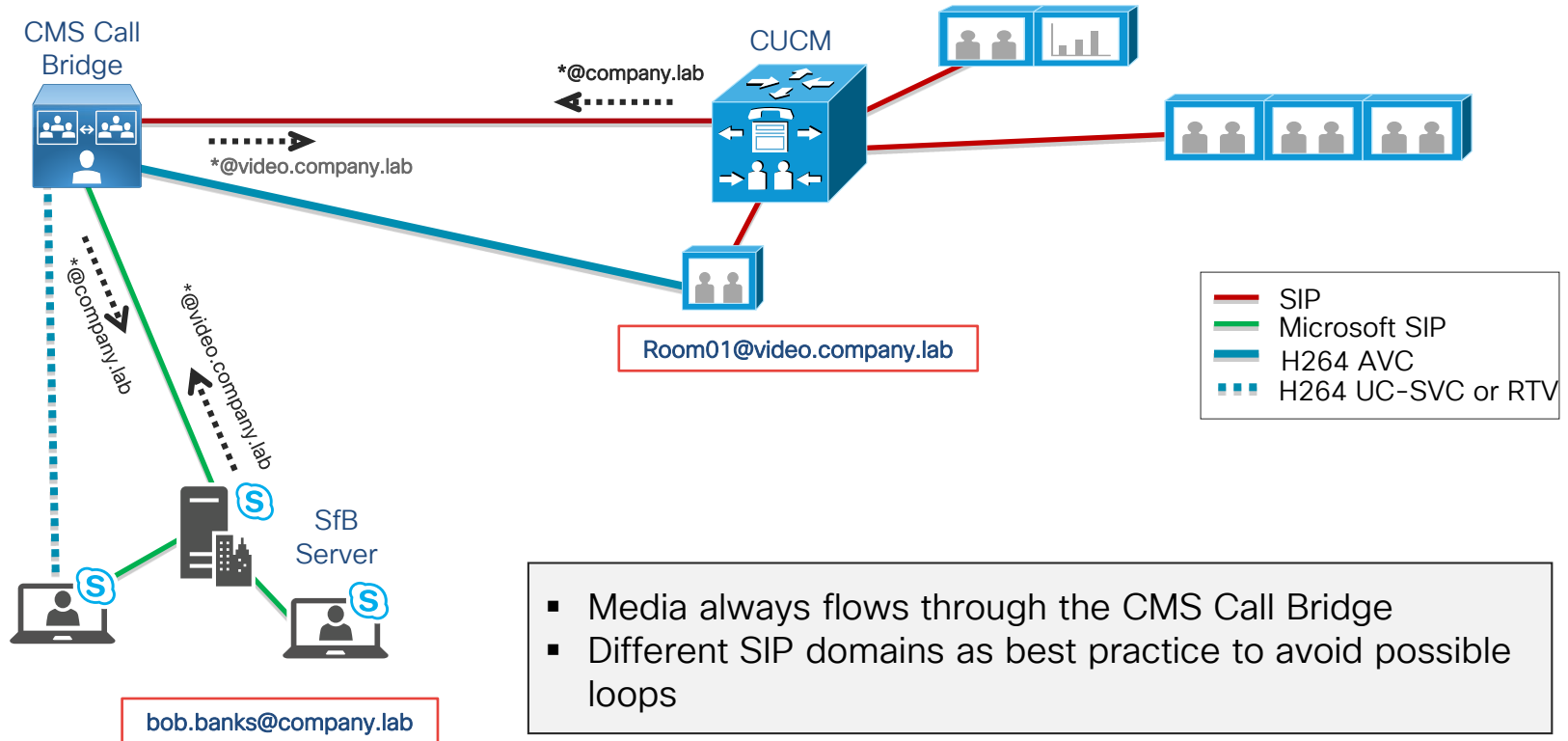
Skype for Business Interoperability

Integration Types

1. **Gateway:** Allows Point to Point calling between Room Endpoints and Lync/Skype for Business users
2. **Spaces:** Room Endpoints and Lync/Skype for Business users **all** connect on Cisco Meeting Server for best experience
3. **Dual Homed Conferencing:** Room Endpoints Meet on Cisco Meeting Server with connection to Lync/Skype for Business meetings as full-featured participants

Integration Type 1 – Gateway

Call Routing – How it works for P2P calls



- Media always flows through the CMS Call Bridge
- Different SIP domains as best practice to avoid possible loops

Call Routing – Gateway calls configuration

Calls to Skype

1) Create/Modify Forwarding rule to route the call using outbound rule

Call forwarding

☐	Domain matching pattern	Priority	Forward	Caller ID	Rewrite domain	Forwarding domain	
☐	company.lab	0	forward	use dial plan	no		[edit]

2) Create/Modify outbound rules to route the call to Lync

Outbound calls

Filter

☐	Domain	SIP proxy to use	Local contact domain	Local from domain	Trunk type	Behavior	Priority	Encryption	Tenant	
☐	company.lab	fe.company.lab	cms1.video.company.lab	cms1.video.company.lab	Lync	Continue	20	Encrypted	no	[edit]

Call Routing – Gateway calls configuration

Calls to SIP endpoint

1) Create/Modify Forwarding rule to route the call using outbound rule

Call forwarding

☐	Domain matching pattern	Priority	Forward	Caller ID	Rewrite domain	Forwarding domain	
☐	video.company.lab	0	forward	use dial plan	no		[edit]

2) Create/Modify outbound rules to route the call to SIP endpoint

Outbound calls

Filter

☐	Domain	SIP proxy to use	Local contact domain	Local from domain	Trunk type	Behavior	Priority	Encryption	Tenant	
☐	video.company.lab	cucm.company.lab		<use local contact domain>	Standard SIP	Stop	30	Auto	no	[edit]

User Experience – Video Layout



Cisco Endpoint
Experience



Lync/S4B Clients
Experience

- Native Experience is preserved for each endpoint
- Best Audio/Video quality for each endpoint is provided (up to HD, 30 fps)

User Experience – Sharing Content



Cisco Endpoint Experience

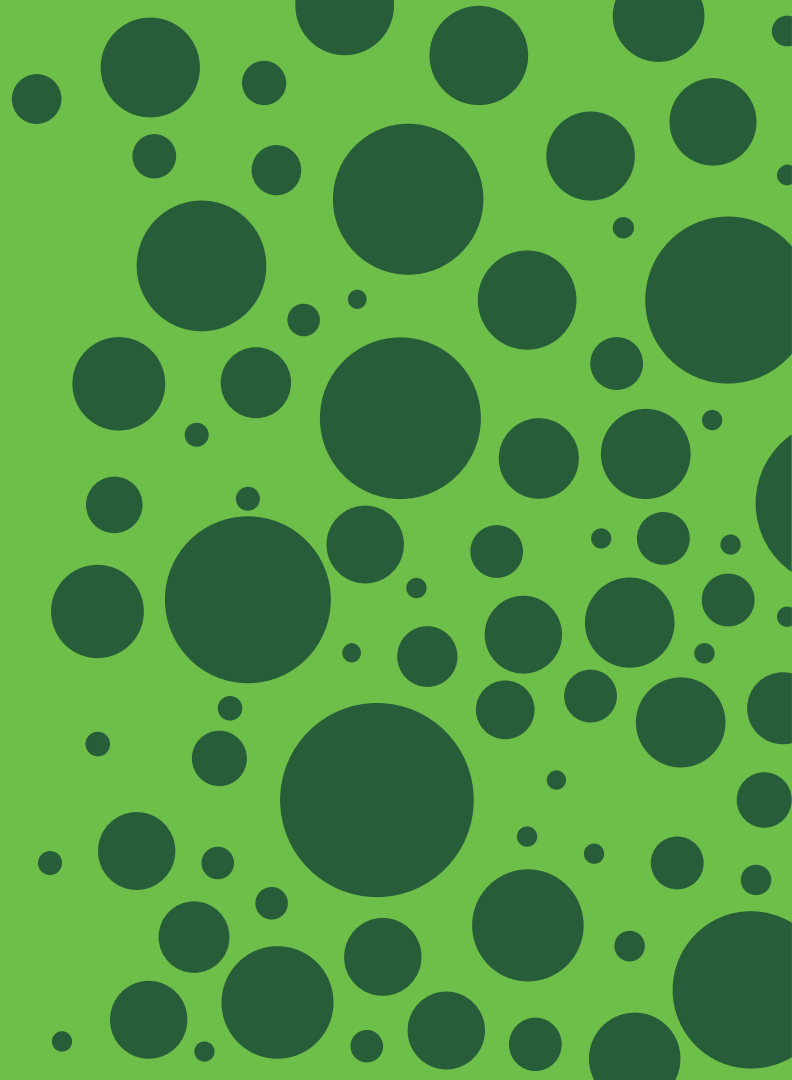


Lync/S4B Clients Experience

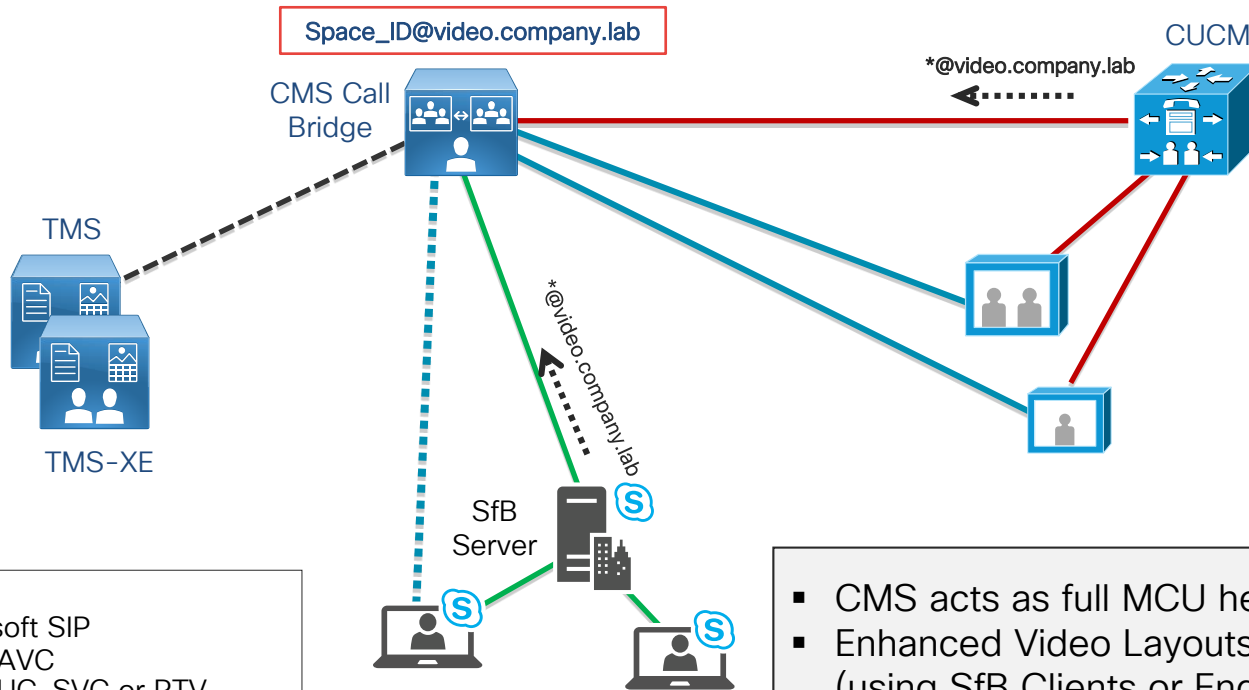
Users share the way they are familiar:

- S4B users select desktop share or app share
- Cisco video users can leverage wireless sharing (Proximity) or plug in the cable
- Dual streams (video + content) supported in both directions

Integration Type 2 - Spaces



Call Routing – How it works for calls to CMS Spaces



- CMS acts as full MCU here
- Enhanced Video Layouts available for everyone (using SfB Clients or Endpoints)
- Space's "Presence" published into SfB clients

Call Routing– Spaces dial-in Configuration

1) Create inbound rule to connect to Spaces

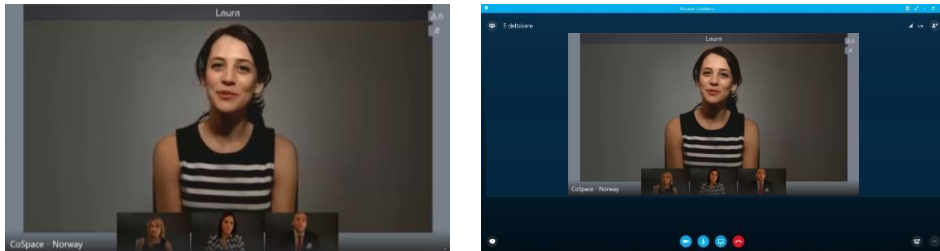
Incoming call handling

Call matching

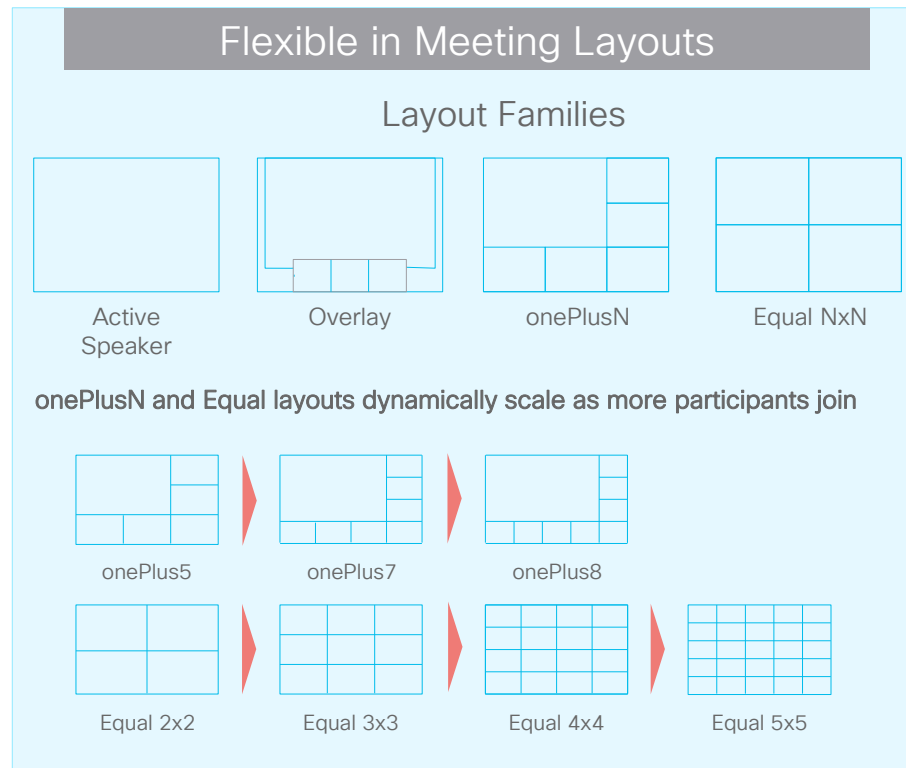
☐	Domain name	Priority	Targets spaces	Targets users	Targets IVRs	Targets Lync	Targets Lync Simplejoin	Tenant	
☐	video.company.lab	20	yes	no	no	no	no	no	[edit]

User Experience – in Meeting (Video Layout)

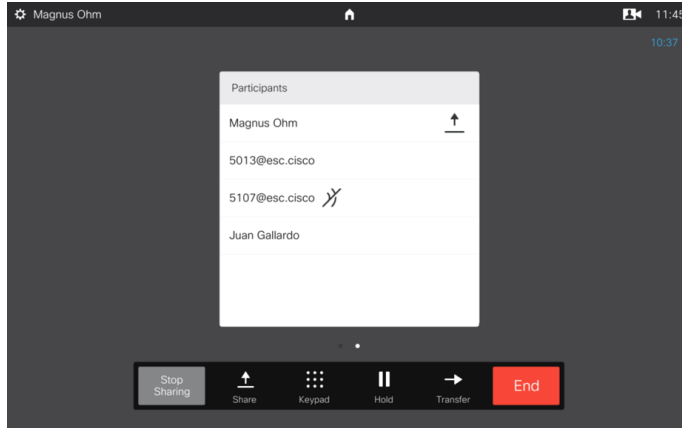
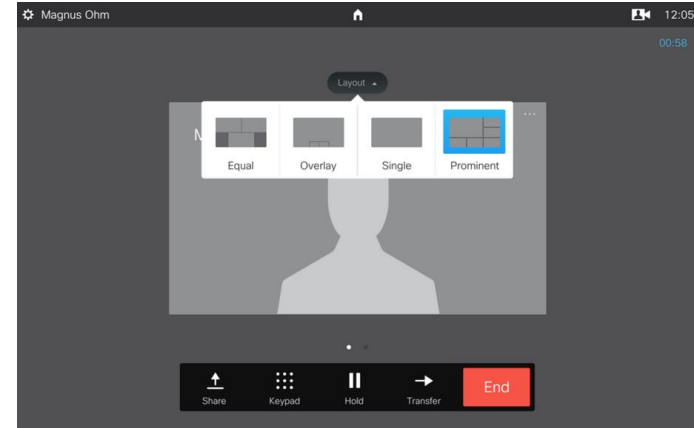
- **Same Layout** for SIP/H323 Endpoints, Microsoft SfB clients, CMA & WebRTC



- Possibility to pre-configure the initial Layout and/or change it on the fly using DTMF/Active-Control (See next slide)



User Experience – in Meeting (Active Control)

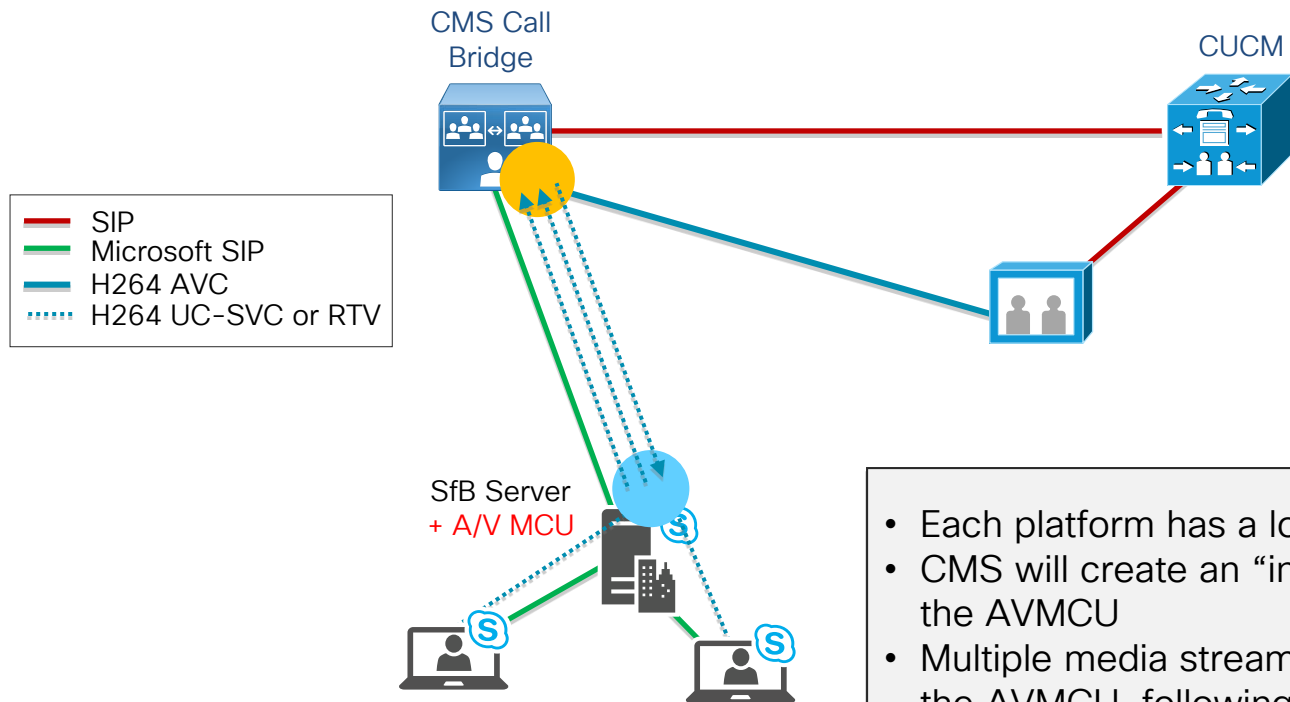


- Provide details of the meeting and perform a few administrative tasks
- Info on who is speaking, sharing & muted, actively drop participants, change layout etc.
- **Participant list** includes Video Endpoints and **SfB** clients

Note : work in progress to improve cross-platform meeting controls & indicators

Integration Type 3 – Dual Homed Conferencing

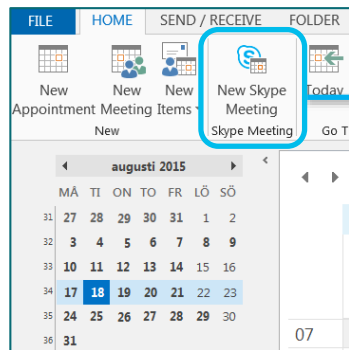
Call Routing – How it works for Dual Homed Conferencing



- Each platform has a local conference active
- CMS will create an “intelligent cascading” towards the AVMCU
- Multiple media streams are sent between CMS and the AVMCU, following Microsoft recommendation

Dual Homed Conferencing Scheduling using Outlook

- For customers using SfB as their primary meeting tool
- Users schedule meetings using the SfB Outlook plug-in (no change to current work flow)
- S4B clients have a click-to-join link
- Join Meeting using OBTP from Cisco video endpoints
- Dial IVR + Conference ID from any Audio or Video endpoint
- It **requires** the **Dial-In** feature activated and configured on the SfB Pool



File Meeting Insert Format Text Review Tell me what you want

i You haven't sent this meeting invitation yet.

To... SX10; sx20; Monica Bellucci; DX80 Monica Bellucci

Subject Test Dual Homing with OBTP

Location Skype Meeting

Start time mercoledì 15/03/2017 18:30 ☐ All day event

End time mercoledì 15/03/2017 19:00

[→ Join Skype Meeting](#)
Trouble Joining? [Try Skype Web App](#)

Join by phone

883999 (Italy) English (US)
883999 (Italy) English (US)

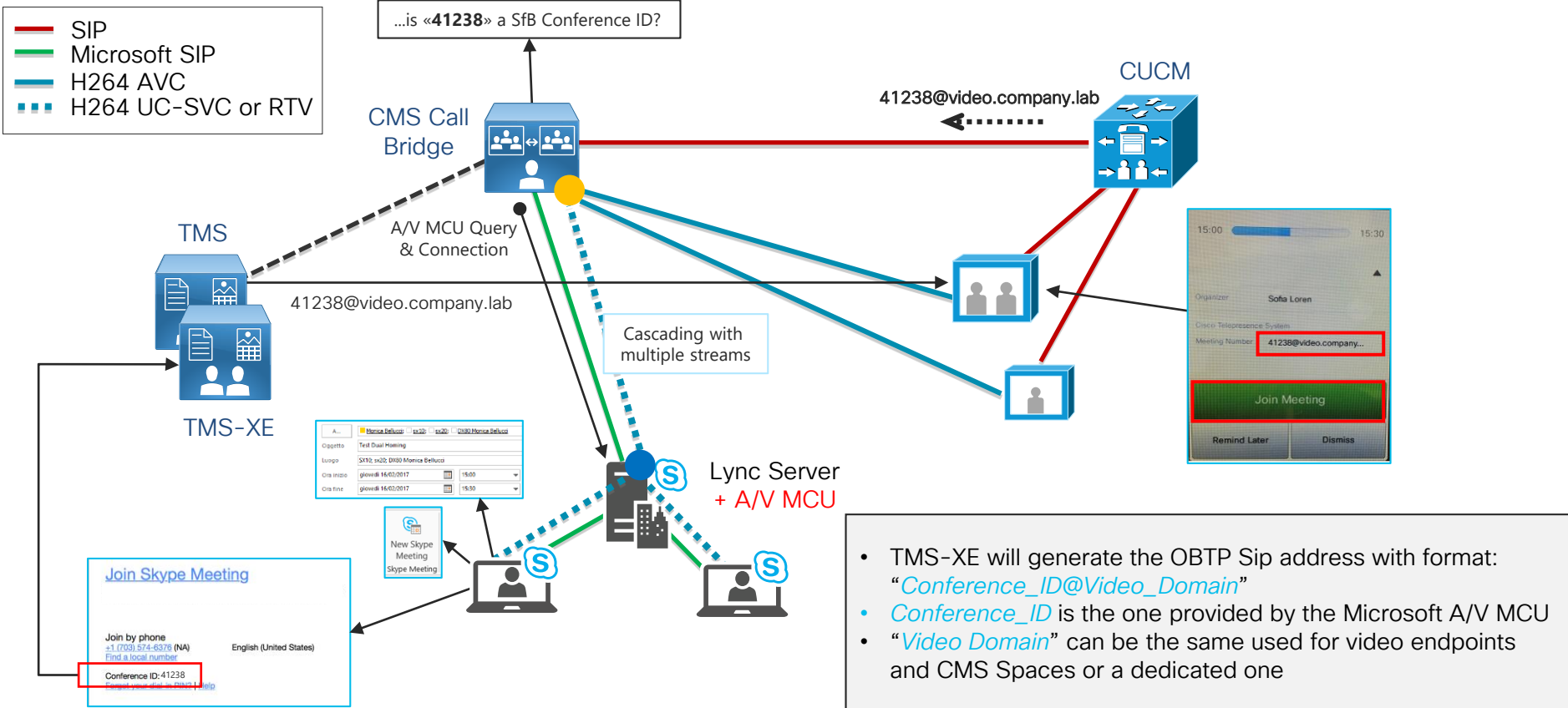
[Find a local number](#)

Conference ID: 26783
[Forgot your dial-in PIN? | Help](#)

CISCO

To join the conference from a Video Endpoint or Jabber please dial ConferenceID@acme.com or call the IVR number 883999 and then use the Conference_ID mentioned before

Scheduling and Joining using One Button to Push (OBTP)



TMS-XE configuration

TMSXE Configuration
CISCO

Cisco TMS | Active Directory Settings | Exchange Web Services | Systems | Scheduling Mailbox | Skype Meetings | Advanced Settings

Enter the details of Cisco Meeting Server for Dual-Home Conferencing to schedule a Skype for Business/Lync Meeting. For guidance on how to configure this section, refer to the deployment guide.

Domain

Skype Support for Multiple Domains

Alphanumeric URI dial strings are used to join Skype meetings held on Office 365 or other domains. It is essential to have a compatible version of Cisco Meeting Server i.e. Cisco Meeting Server 2.2 or later.

☐ Cisco Meeting Server 2.2 or later version is deployed

It must be checked only to enable Dual Homing with Office 365 (Intracompany) and therefore is not needed here

The “Domain” field requires: 1) to be routed internally towards the CMS cluster, 2) To have the “**Target Lync**” flag set on the associated CMS incoming call routing rule

Incoming call handling

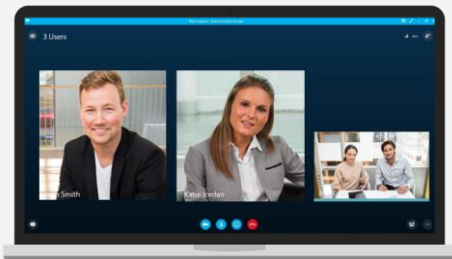
Call matching

	Domain name	Priority	Targets spaces	Targets users	Targets IVRs	Targets Lync	Targets Lync Simplejoin
☐	<input type="text" value="video.company.lab"/>	<input type="text" value="10"/>	<input type="text" value="no"/>	<input type="text" value="no"/>	<input type="text" value="yes"/>	<input type="text" value="yes"/>	<input type="text" value="no"/>

In-Meeting Experience – Video Layout



Cisco Endpoint
Experience



Lync/S4B Clients
Experience

CMS dual-home enables

- Room users to enjoy the benefits of Cisco's large screens, and better use of real estate to see everyone in the meeting, while enabling integration with S4B clients
- S4B users can still join a meeting and keep their **native clients experience**

In-Meeting Experience - Sharing Content



Cisco Endpoint Experience



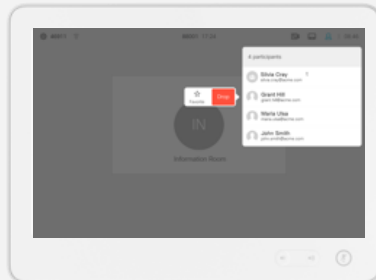
S4B Clients Experience

Users share the way they are familiar:

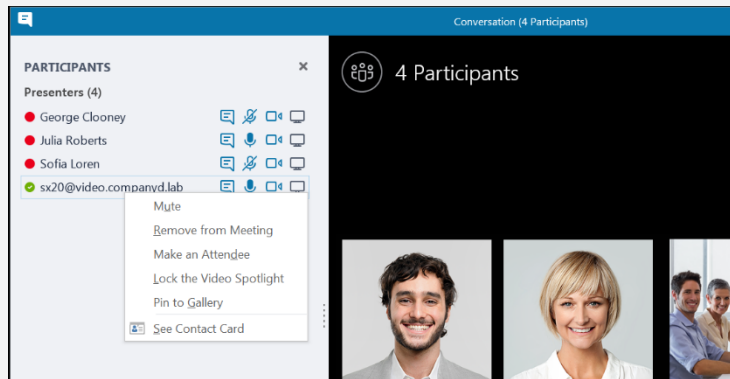
- S4B users select desktop share or app share
- Cisco video users can leverage wireless sharing or plug in the cable
- Bi-directional RDP/BFCP Transcoding for Content Sharing

In-Meeting Experience – Meeting Controls

Cisco Endpoint Experience



S4B Clients Experience



- Flexible Layouts to fit users needs, maintaining native user experience & capabilities
- Participant list (including S4B clients and Room Systems) available on both side
- Continued effort to improve cross-platform meeting controls

Cisco Meeting Server Cluster Interop with Skype for Business

Cisco Meeting Server

Integration Types - Cluster

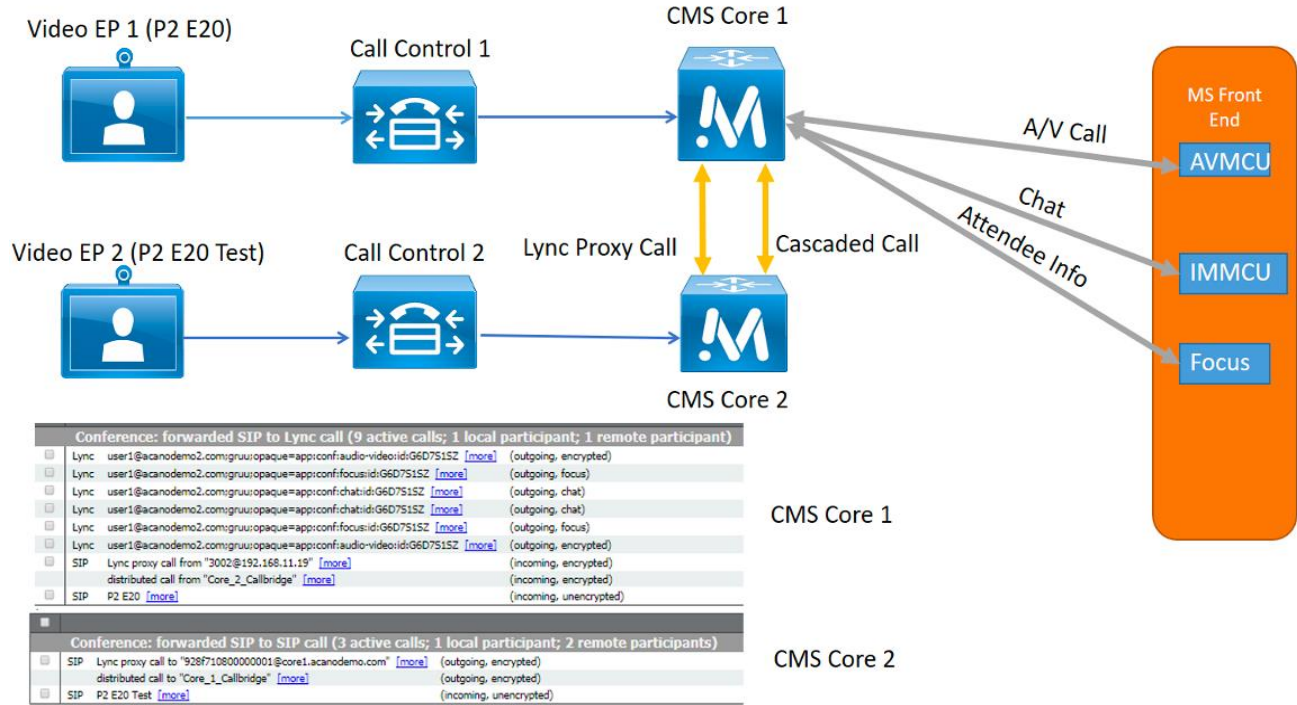
- CMS 2.3 adds configurations that optimize the way CMS clusters interact with the Microsoft AVMCU
- Previous to CMS 2.3 a single call bridge was used as the **host** for SIP participants with the **cascade** to the AVMCU
- CMS 2.3 provides 3 methods for CMS clusters to interact with the AVMCU:
 - Dual Home Cluster mode
 - Dual Home Call bridge mode
 - Gateway mode

Cisco Meeting Server

Integration Types - Dual Home Cluster mode

Call Bridge Mode: Dual Home Cluster

- Dual Home Cluster functions in the same way as Dual Homed conferences in previous versions
- SIP endpoints meet in a space on one or more call bridges. Single cascade link to Skype front end.
- Skype clients meet on the Skype front end.

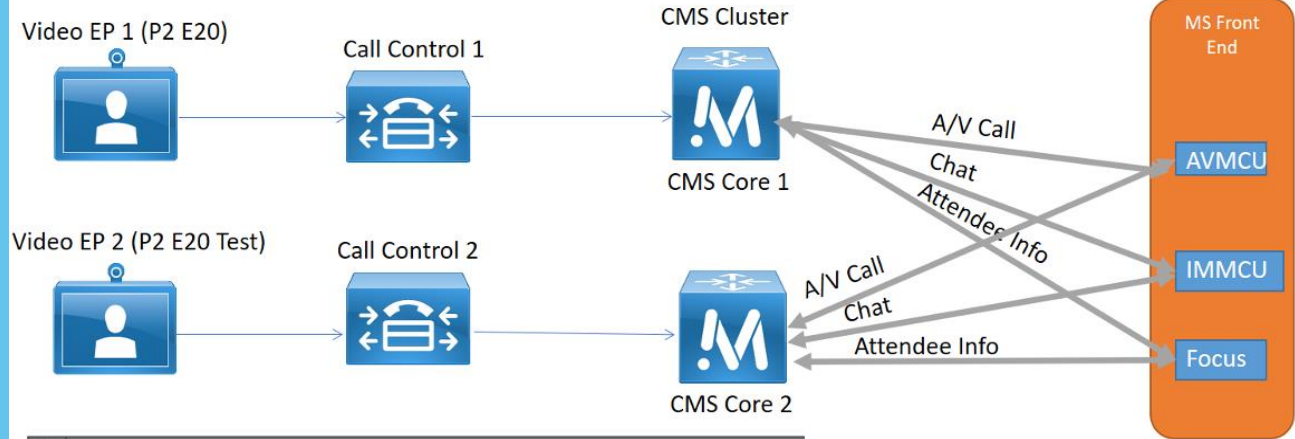


Cisco Meeting Server

Integration Types - Dual Home Call bridge mode

Call Bridge Mode: Dual Home Call Bridge

- SIP endpoints join conference on 1 or more call bridge(s) in single or more locations
- Each call bridge cascades to Skype Front End
- Audio/video mixed on participants native bridge



Conference: forwarded SIP to Lync call (4 active calls)			
Lync	user1@acanodemo2.com:gruu:opaque=app:conf:chatid:G6D7515Z	[more]	(outgoing, chat)
Lync	user1@acanodemo2.com:gruu:opaque=app:conf:audio-video:G6D7515Z	[more]	(outgoing, encrypted)
Lync	user1@acanodemo2.com:gruu:opaque=app:conf:focus:G6D7515Z	[more]	(outgoing, focus)
SIP	P2 E20	[more]	(incoming, unencrypted)

Conference: forwarded SIP to Lync call (4 active calls)			
Lync	user1@acanodemo2.com:gruu:opaque=app:conf:focus:G6D7515Z	[more]	(outgoing, focus)
Lync	user1@acanodemo2.com:gruu:opaque=app:conf:chatid:G6D7515Z	[more]	(outgoing, chat)
Lync	user1@acanodemo2.com:gruu:opaque=app:conf:audio-video:G6D7515Z	[more]	(outgoing, encrypted)
SIP	P2 E20 Test	[more]	(incoming, unencrypted)

CMS Core 1

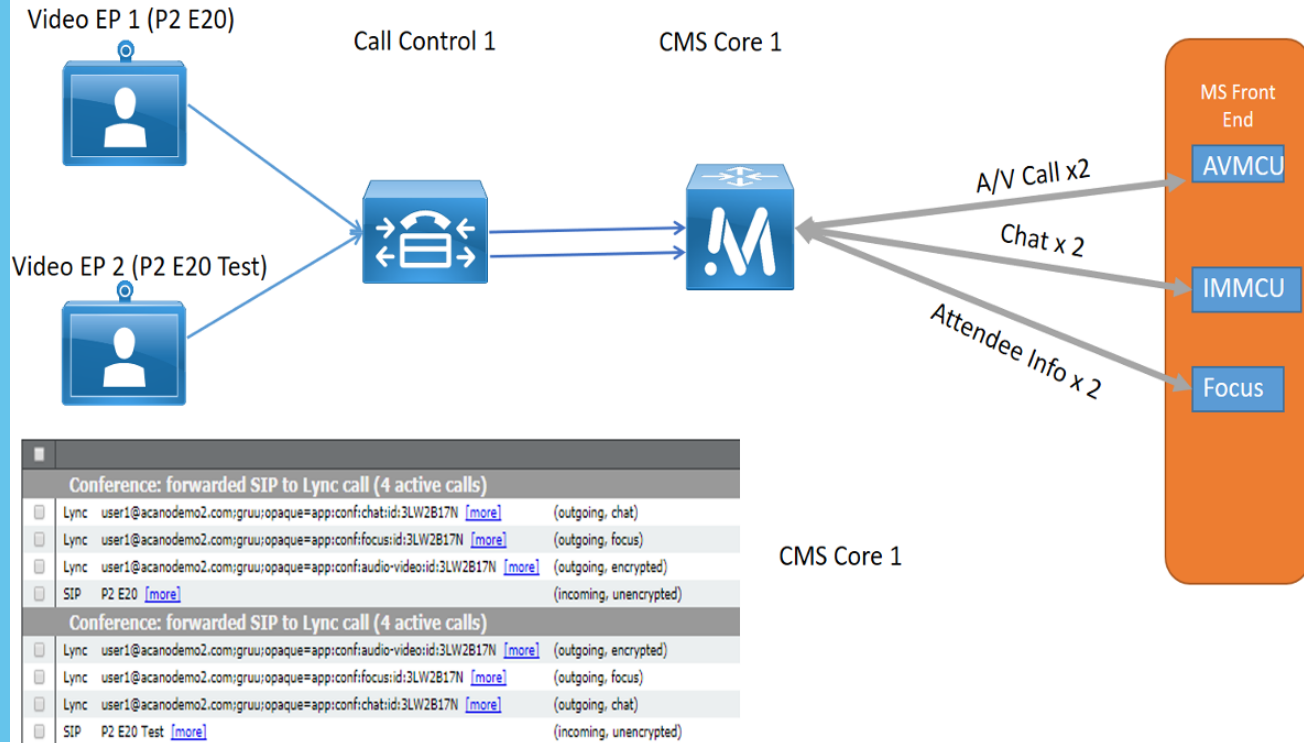
CMS Core 2

Cisco Meeting Server

Integration Types - Gateway mode

Call Bridge Mode: Gateway

- SIP endpoints use IVR to join a Skype conference
- CMS makes call to Skype AVMCU per endpoint
- The Skype AVMCU mixes audio and video for the conference



Cisco Meeting Server

Cluster - configuration

PUT to "/callProfiles/<call profile id>"

Parameter:

lyncConferenceMode

Value:

dualHomeCluster| dualHomeCallBridge| gateway

Certificate requirement for SfB on-premise

Callbridge Certificate:

CN: cmscluster.video.company.lab
SAN 1: cms1.video.company.lab
SAN 2: cms2.video.company.lab

Note: Applies to both Callbridges in the cluster

Additional DNS A Records:

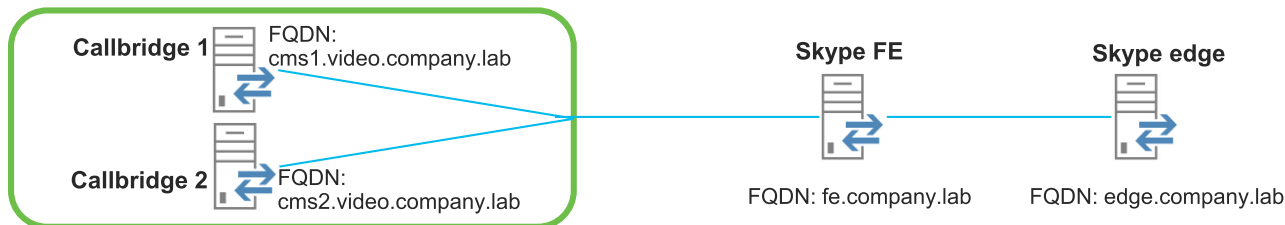
cms1.video.company.lab – 192.168.1.1
cms2.video.company.lab – 192.168.1.2
cmscluster.video.company.lab :
192.168.1.1
192.168.1.2
fe.company.lab – 192.168.1.3

CMS domain: video.company.lab

SfB domain: company.lab

Callbridge Cluster

Cluster FQDN: cmscluster.video.company.lab



Lync FE power shell commands:

Trusted application:

```
New-CsTrustedApplicationPool -Identity cmscluster.video.company.lab -ComputerFqdn cms1.video.company.lab -Registrar fe, fe.company.lab -site 1 -RequiresReplication $false -ThrottleAsServer $true -TreatAsAuthenticated $true
```

***Note: Identity must match Callbridge certificate CN**

```
New-CsTrustedApplicationComputer -Identity cms2.video.company.lab -Pool cmscluster.video.company.lab
```

```
New-CsTrustedApplication -ApplicationId AcanoApplication -TrustedApplicationPoolFqdn cmscluster.video.company.lab -Port 5061
```

Trusted route:

```
$x1=New-CsStaticRoute -TLSSRoute -Destination "cmscluster.video.company.lab" -MatchUri "video.company.lab" -Port 5061 -UseDefaultCertificate $true
```

```
Set-CsStaticRoutingConfiguration -Identity global -Route @{Add=$x1}
```

```
$x2=New-CsStaticRoute -TLSSRoute -Destination "cms1.video.company.lab" -MatchUri "cms1.video.company.lab" -Port 5061 -UseDefaultCertificate $true
```

```
Set-CsStaticRoutingConfiguration -Identity global -Route @{Add=$x2}
```

```
$x3=New-CsStaticRoute -TLSSRoute -Destination "cms2.video.company.lab" -MatchUri "cms2.video.company.lab" -Port 5061 -UseDefaultCertificate $true
```

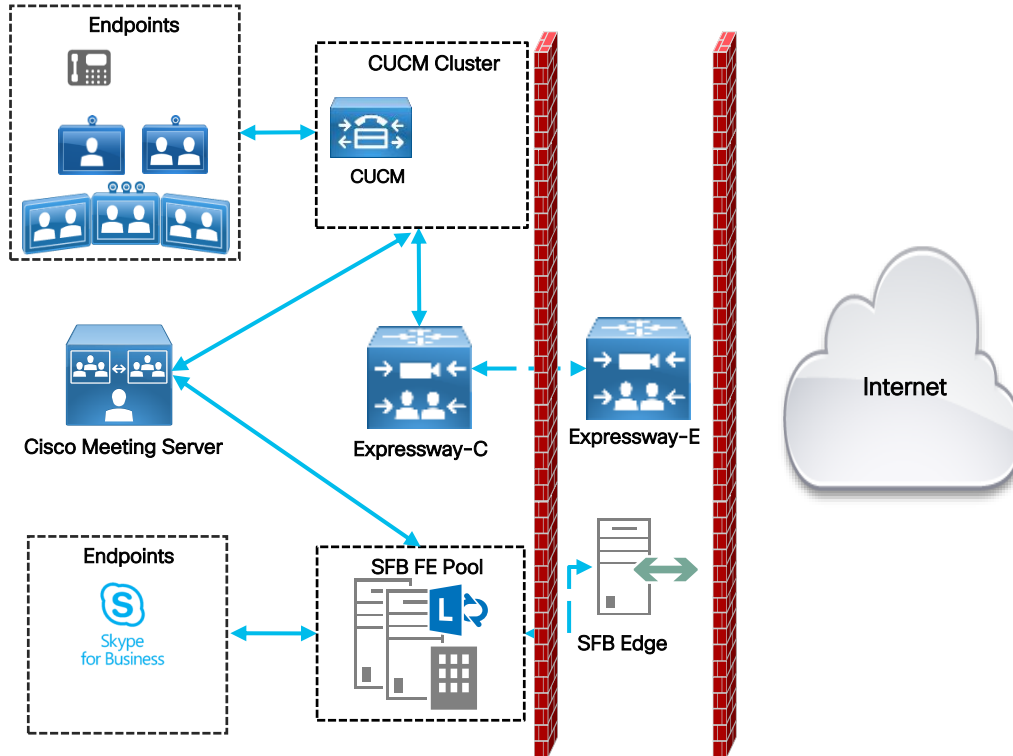
```
Set-CsStaticRoutingConfiguration -Identity global -Route @{Add=$x3}
```

Call scenario's

Intra-company scenario with SfB on-premise

Intra-company scenario with SfB on-premise

Video Only



Intracompany Federation with a **local** Microsoft infrastructure

- It's a federation between users & systems part of the **same** company
- Expressway-C not needed in the path for Video only scenario
Integration is CMS <-> Front End

Intra-company scenario with SfB on-premise

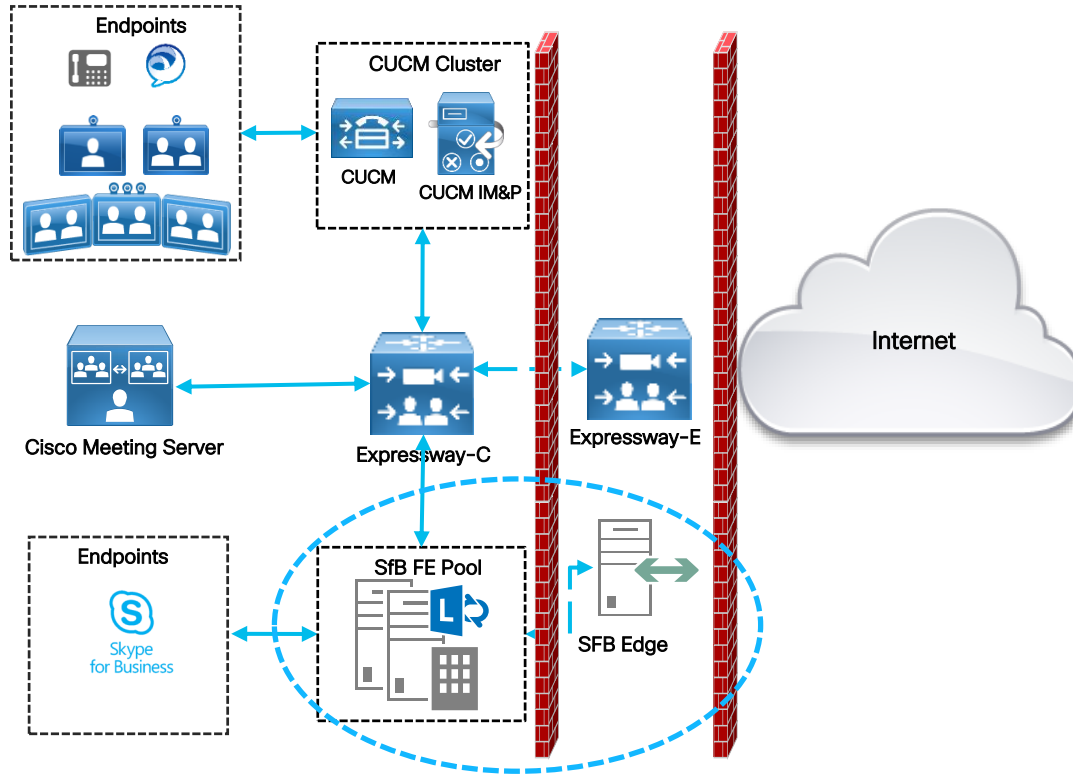
Rich Intracompany Integration - Video and IM&P

In the next example we are now showing a *rich integration* scenario: a company using both Jabber and Lync/S4B for all the payloads. (i.e. typically for migrations)

Please note that, in order to provide Video and IM&P interop at the same time, we need an Expressway-C sitting between CMS and the Front End Server.

Intra-company scenario with SfB on-premise

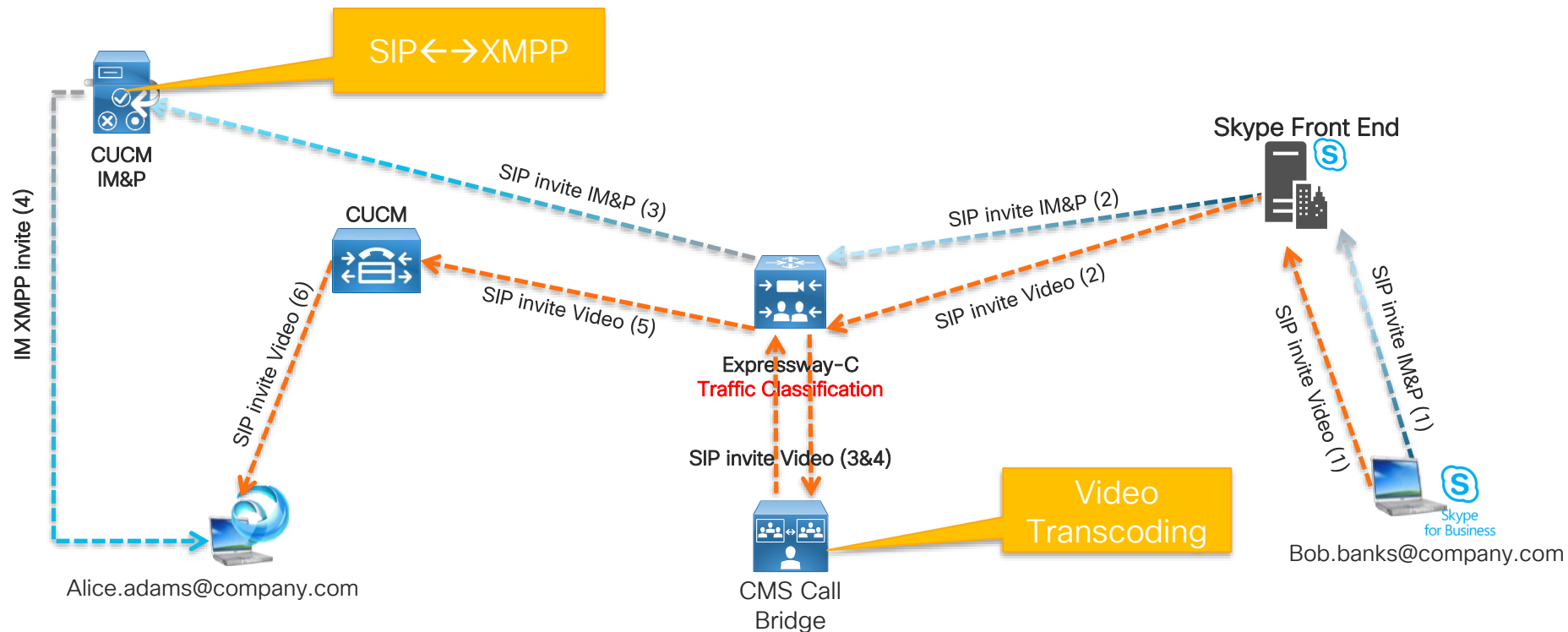
Rich Intracompany Integration - Video and IM&P*



Intracompany Federation with a local Microsoft infrastructure

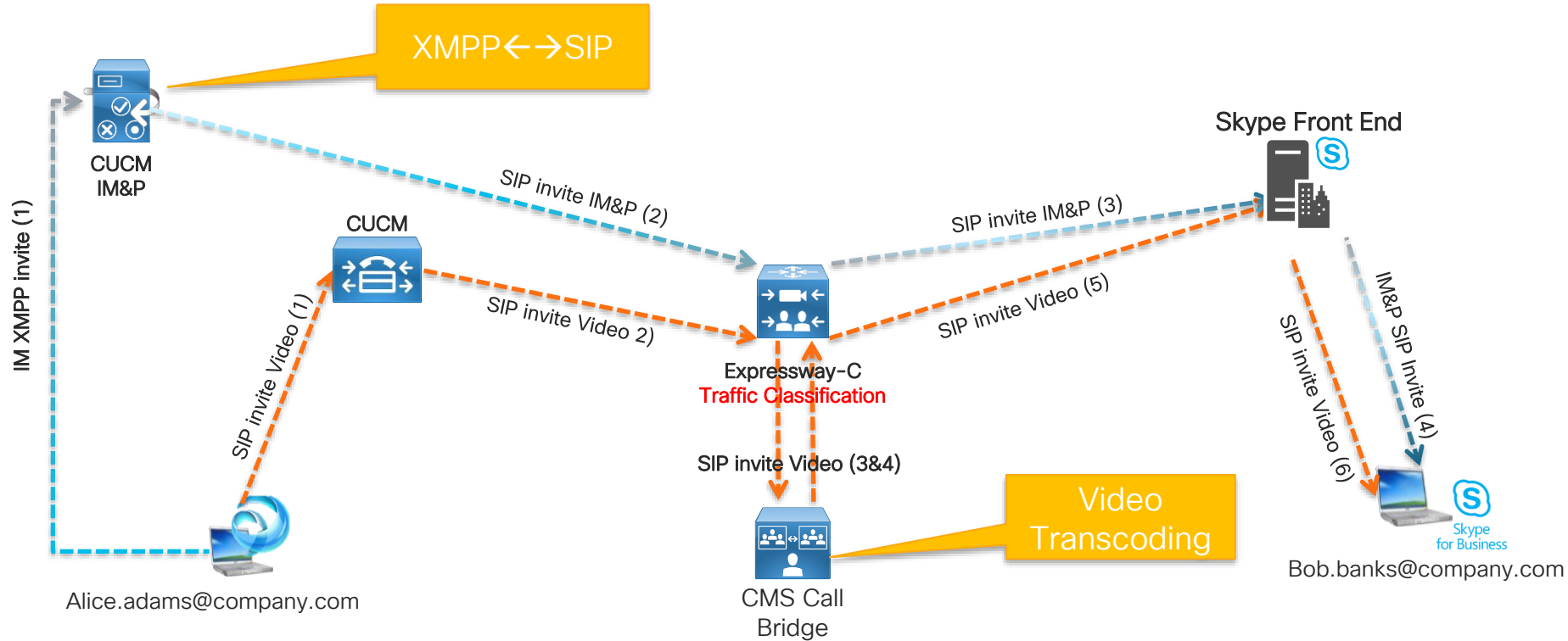
- Expressway-C sits between CMS and the Front End Server. This allows Video and IM&P interop at the same time

Expressway Traffic Classification- Skype to Jabber



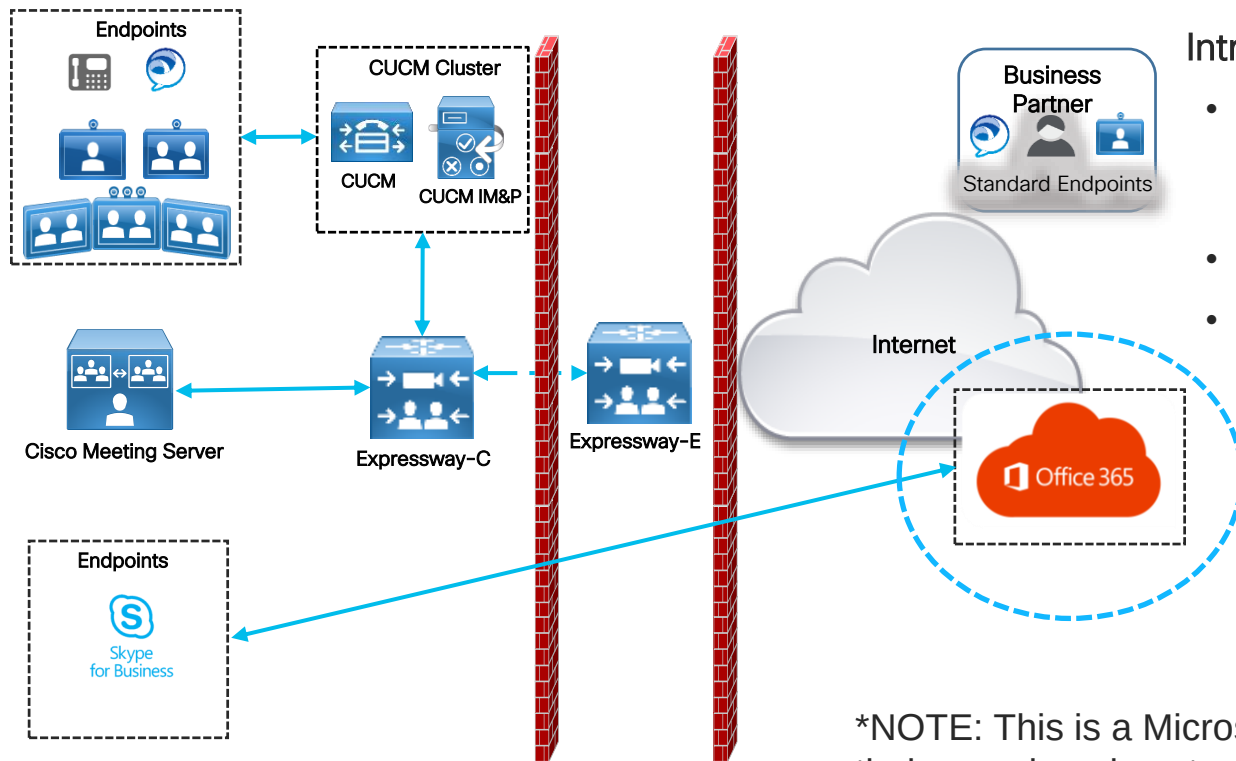
- Skype FE will have a static route pointing to the Expressway-C
- Traffic Flows are symmetric in both directions

Expressway Traffic Classification-Jabber to Skype



Intra-company scenario with SfB on-premise

Office 365



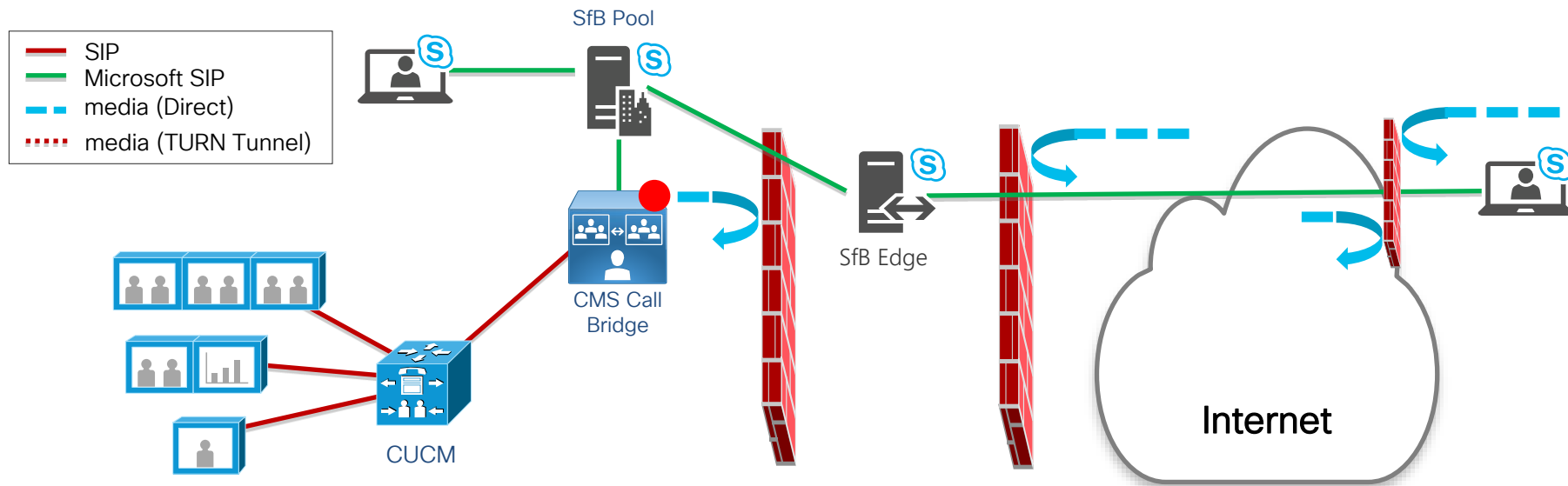
Intracompany Federation with Office 365

- It's a federation between users/systems belonging to the same company
- It relies on B2B architecture
- Federations with Office 365 are **Inter-domain** by nature *

*NOTE: This is a Microsoft limitation, in fact they can't route their own domain externally (i.e. to our Expressway-E)

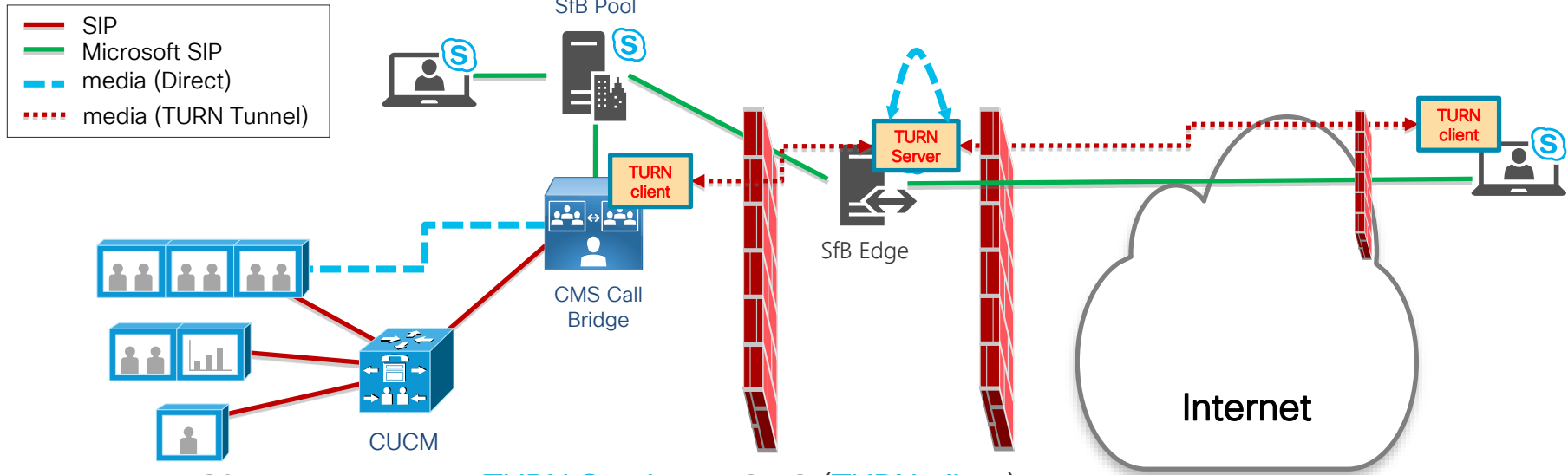
TURN Server considerations

SfB Remote Access support - Background



- SfB clients can register to the Frontend Pool from Internet, through the Microsoft Edge
- Local Firewalls and Multiple NAT are quite common scenario to deal with
- How will be A/V media streams able to traverse all these obstacles?

SfB Remote Access support – Media Flow Example



- SfB Edge provides **TURN Service** to CMS (**TURN client**)
- CMS advertises the SfB Edge's external IP address as «media» candidate into the SDP

In this example the A/V media is flowing through:

1. SfB client <-> TURN Server on the SfB Edge (Encapsulated)
2. TURN Server on the Lync Edge <> Loopback (Direct)
3. TURN server on the Lync Edge <-> CMS (Encapsulated)
4. CMS <-> Video Endpoint (Direct)

SfB Remote Access support – CMS TURN Configuration

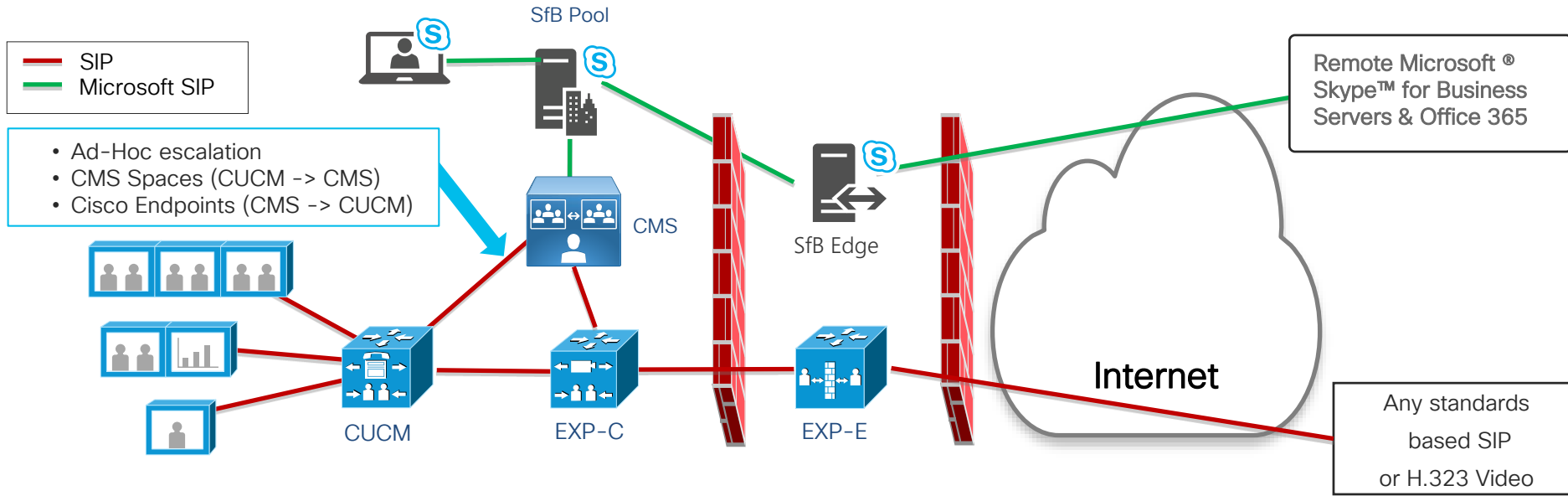
The screenshot shows the 'General configuration' page of the Cisco Live! interface. The 'Lync Edge settings' section is highlighted with a blue box. A red arrow points from this section to a larger, detailed view of the 'Lync Edge settings' on the right. The detailed view shows the following fields:

- Server address: S4BFED01.companyd.lab
- Username: acano.user02@companyd.lab
- Number of registrations: (empty field)

- SfB Edge provides **TURN Service** to CMS (**TURN client**)
- Insert the SfB's Front End Pool address in the **Server address** field (**NOT** the SfB Edge as stated....)
- SfB **«Service»** Users are needed to register CMS to the Front End Pool and ask for **TURN access right**
- Each Service User will be able to allocate **12** concurrent A/V sessions on the TURN servers
 - Create multiple users on the SfB side to scale more
 - Specify the number of users created in the **«Number of registrations»** field
 - Users's name must follow a pre-defined structure

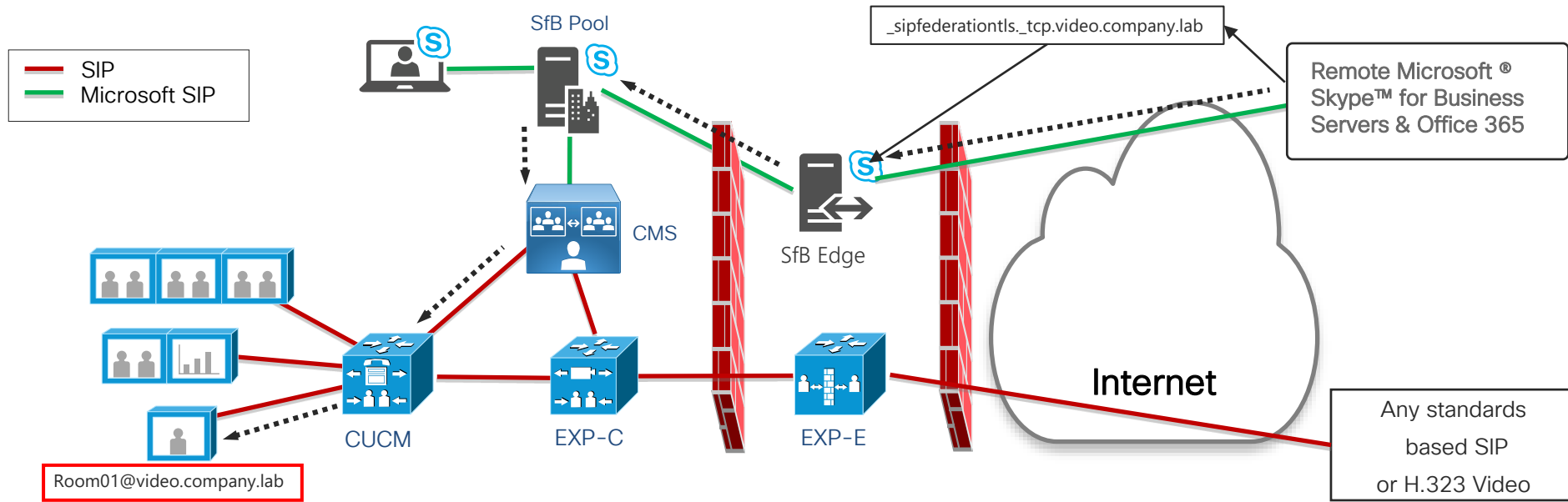
Business to Business with Local Microsoft Infrastructure

B2B Federation - Architecture



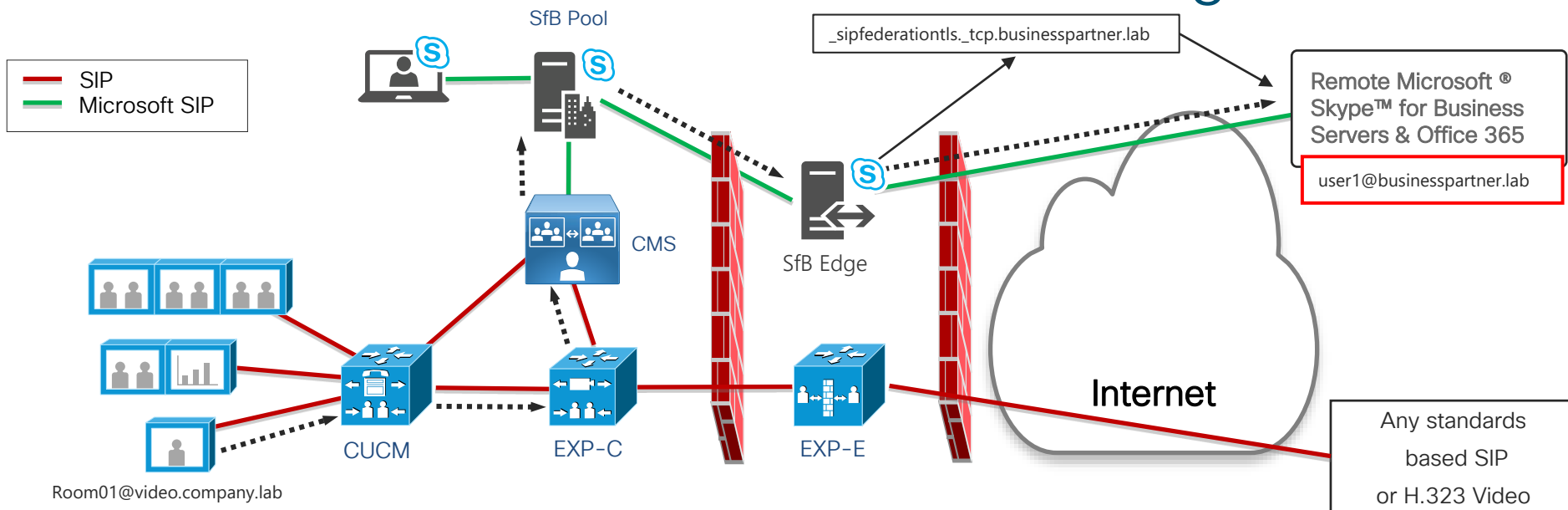
- **Local SfB Edge** is used as B2B Federation Gateway with Microsoft based Peers
- **Expr-C/Exp-E** pair is used as B2B Federation Gateway with Standard based SIP/H323 Peers
- **CMS is needed** for A/V Transcoding, also for P2P calls
- Multiple CMS/CUCM/EXP-C Routing Design are possible based on customer's requirements

B2B Federation – Inbound Call Routing



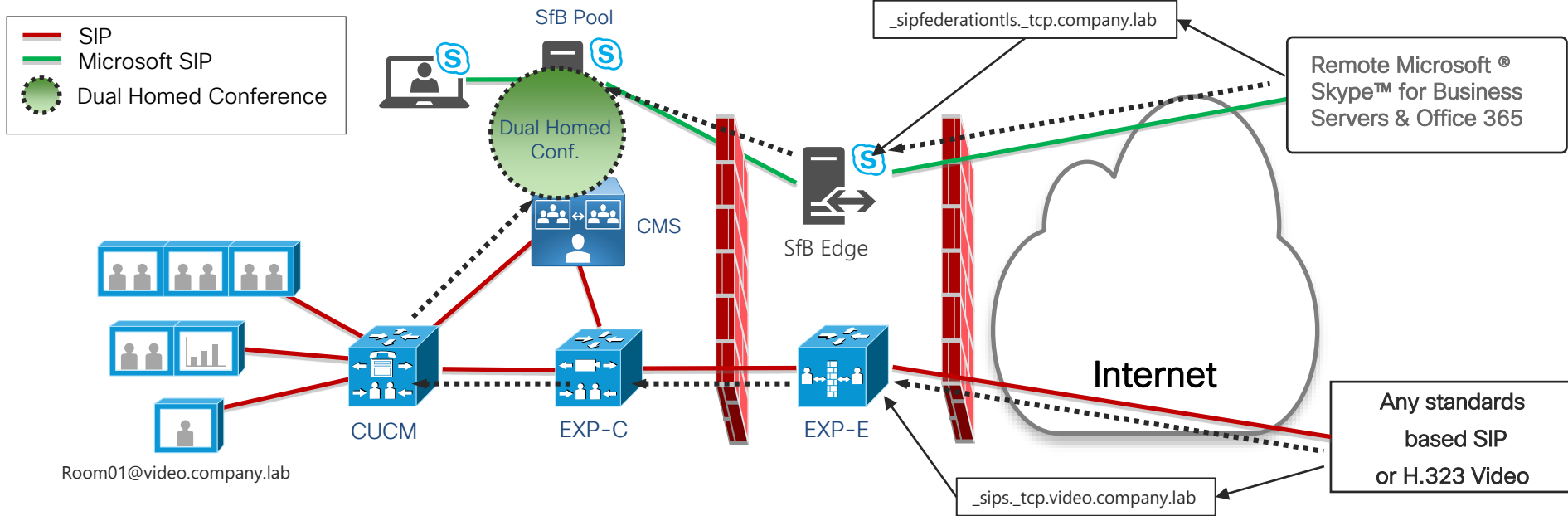
- **Local SfB Edge** is used as B2B Federation Gateway **from** Microsoft based remote peers
- “Microsoft Federation” **DNS SRV** records for the “Video Domains” must be routed to the **SfB Edge**
- Expr-C/Exp-E are not involved in the signaling and media path for this scenario

B2B Federation – Outbound Call Routing



- **Local SfB Edge** is used as B2B Federation Gateway **to** Microsoft based remote peers
- Traffic for external Microsoft SIP domains are routed through CMS and the local Front End Pool
- **Exp-E is not involved** in the signaling and media path for this scenario

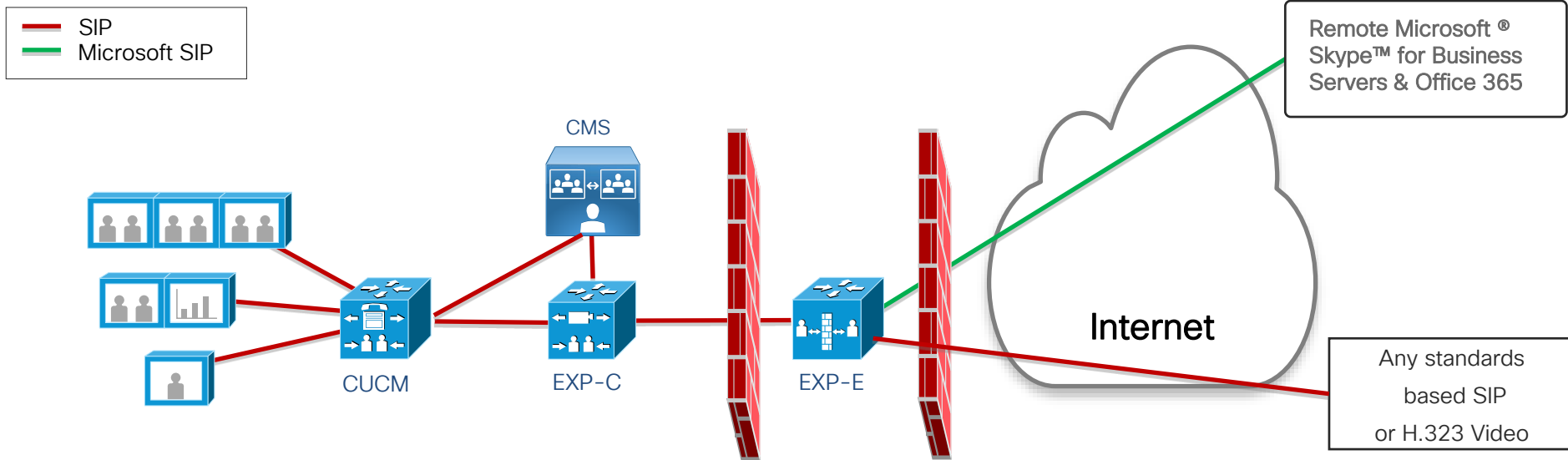
B2B Federation – Scheduled Dual Homed calls



- **B2B SfB users** click on the “[Join Skype Meeting](#)” hyperlink – their SfB backend performs a lookup for the MSFT Federation SRV and the call is routed to the AV/MCU through the SfB Edge Server
- **B2B Video users** dial the “[video address](#)” included in the invite – their SIP/H.323 infrastructure performs a lookup for our SIP/H.323 SRVs and the call is routed to CMS through the Expressway-E

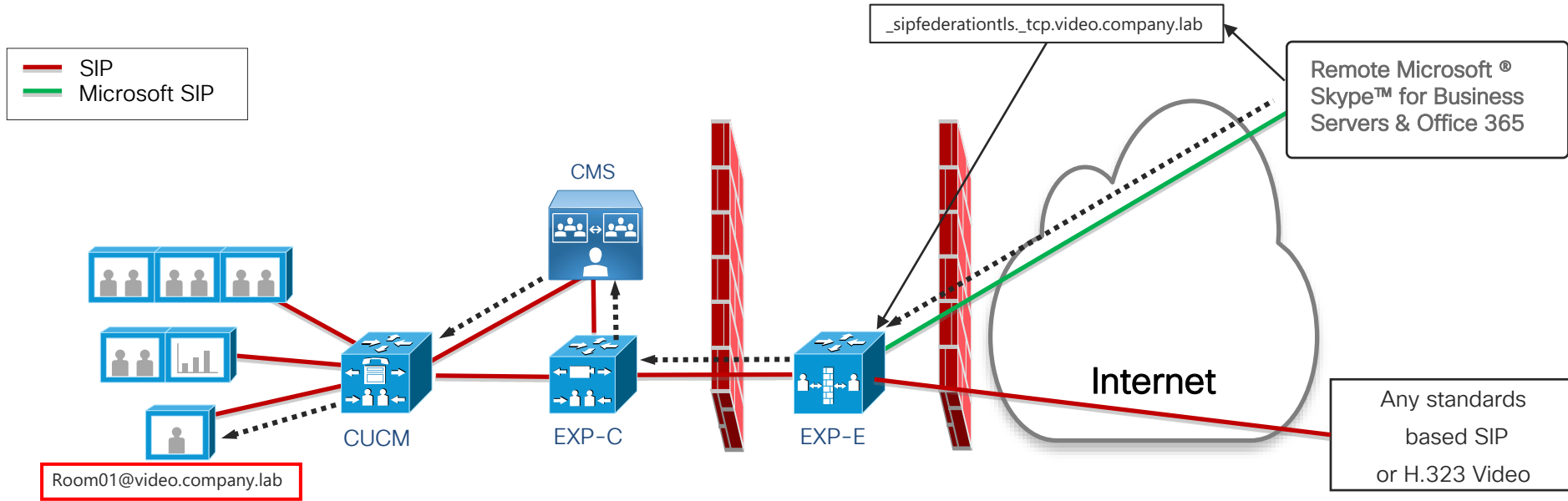
Business to Business without Local Microsoft Infrastructure

Skype for Business B2B Audio/Video Federation



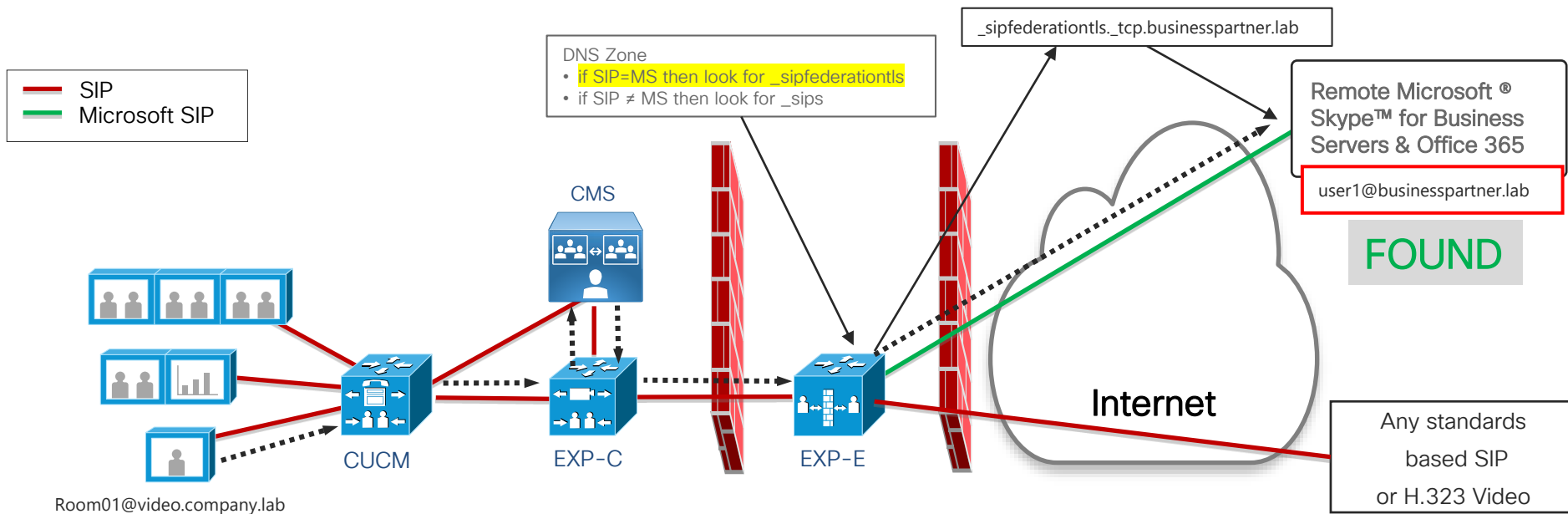
- **Expressway** provides now B2B Federation with Microsoft, when an **On-Premise SfB is not available**
- Microsoft® Office 365, Lync 2013 & S4B Server are supported as remote destinations
- **CMS is needed** for A/V Transcoding, also for P2P calls

B2B Federation – Inbound Call Routing



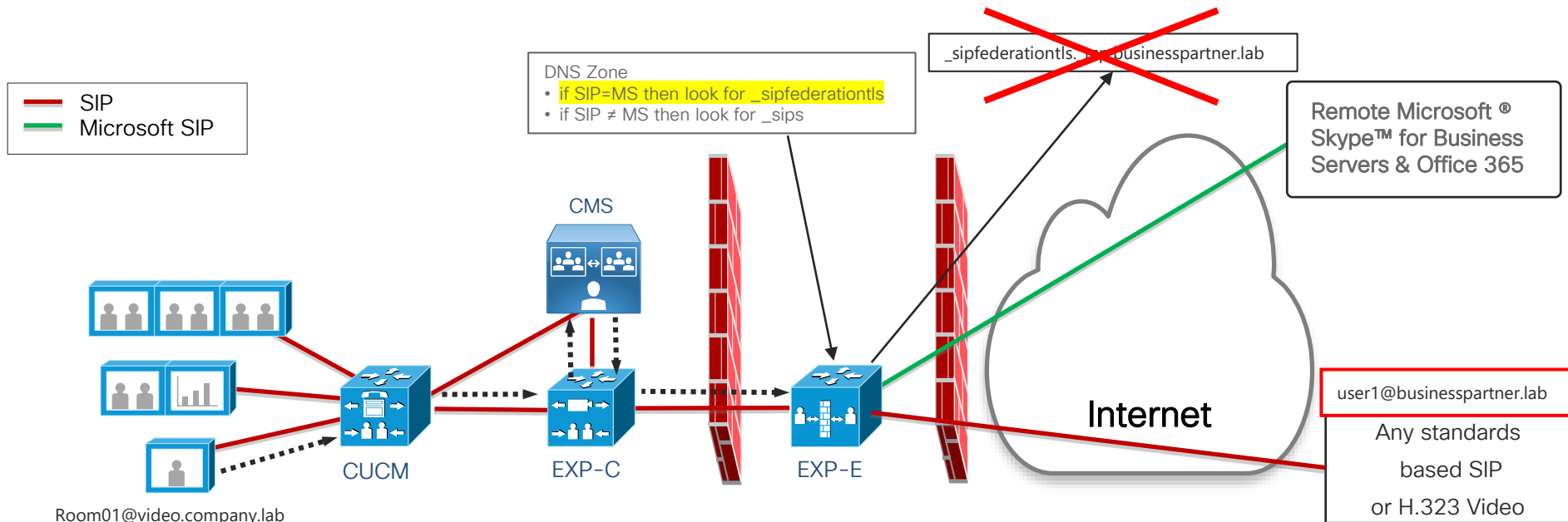
- “Microsoft” SIP Federation **DNS SRV records** for the Video Domains must be routed to the **Exp-E** Interface
- A certificate signed by a Public CA must be assigned to the Exp-E public interface, following the Microsoft requirements for federations

B2B Federation – Outbound Call Routing



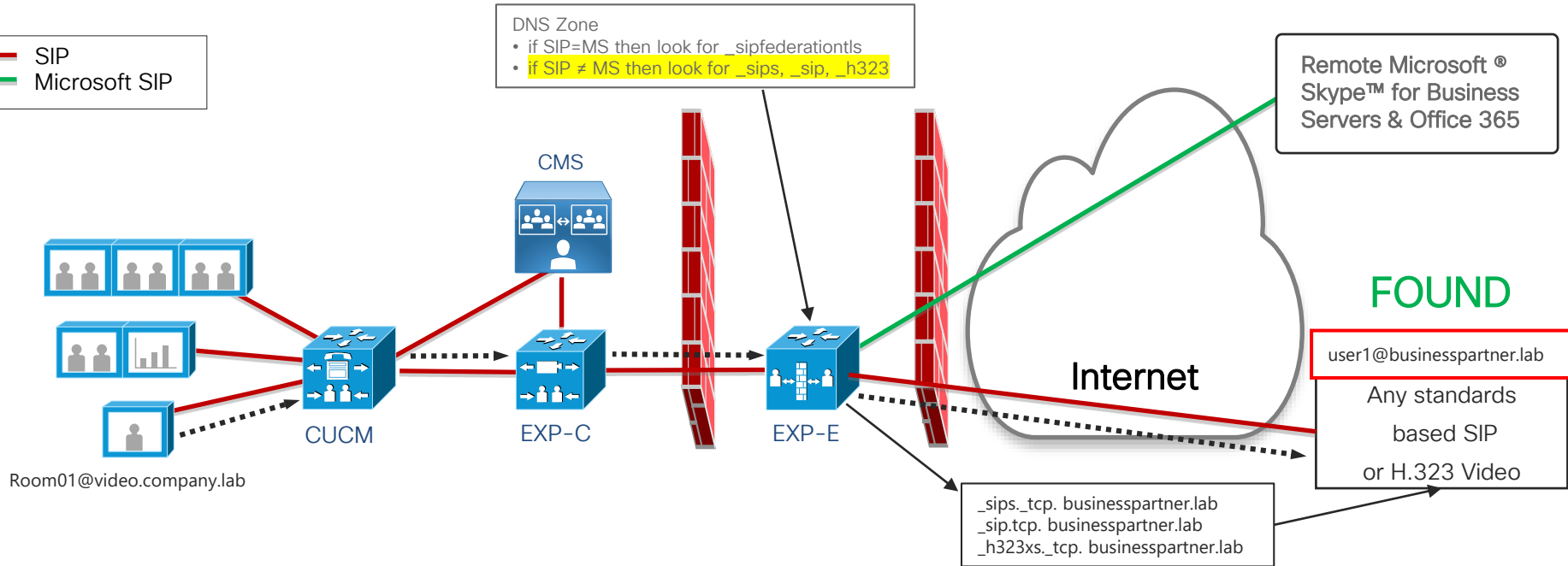
- New “Microsoft” SIP SRV lookup capabilities added to the Exp-E
- Possibility to look for both SIP Standard and Microsoft based destinations (using multiple search rules & different priorities, see next slide)

B2B Federation – The Fallback Mechanism



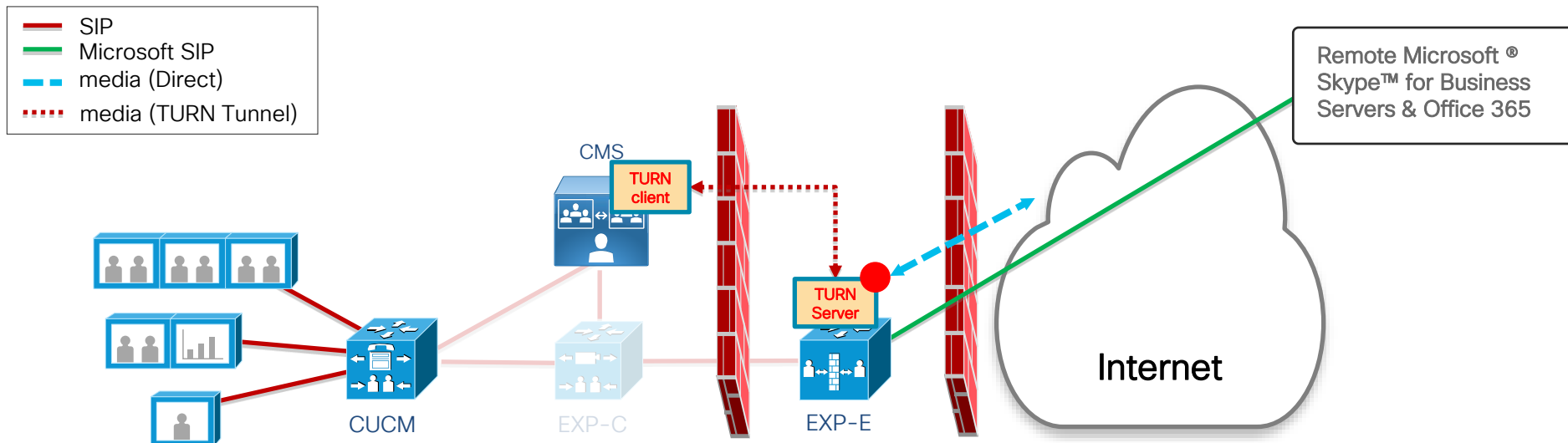
If the Microsoft domain or the specific user are not found then **EXP-C** will **Fallback** to the next search rules, looking for standard based destination

B2B Federation – The Fallback Mechanism



- EXP-C generates a standard based SIP request for the same destination
- EXP-E performs a DNS lookup for all the relevant SIP and H.323 records

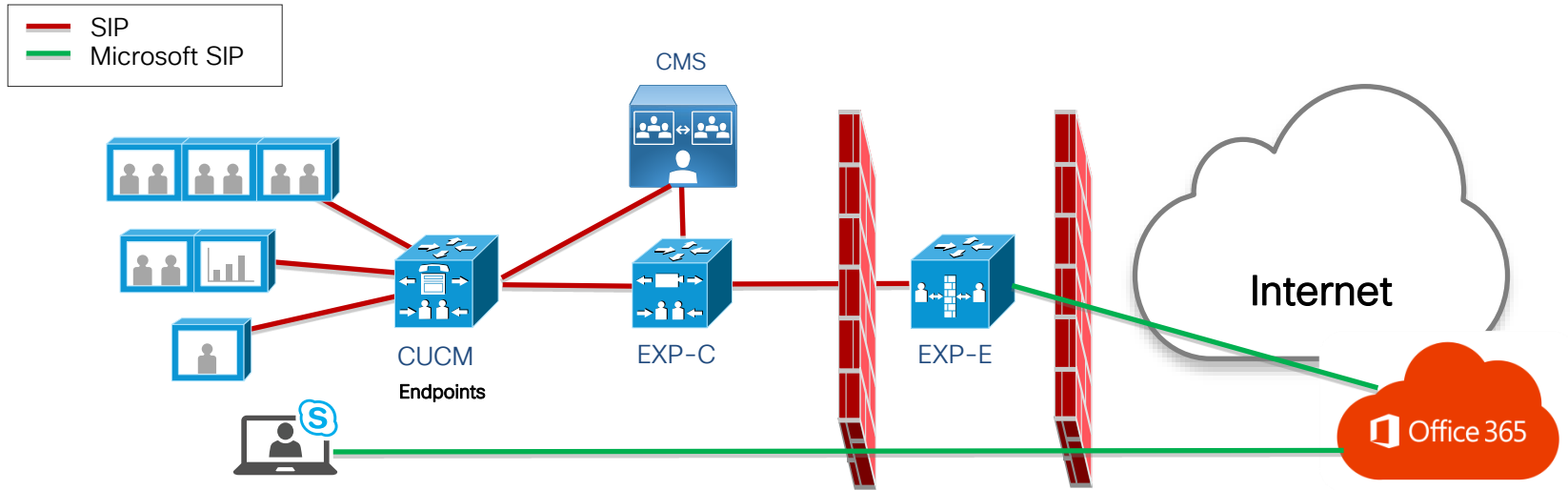
What about the TURN server in this scenario?



- **Expr-E** provides Standard **TURN Service** to CMS (**TURN client**)
- CMS advertises the Exp-E external IP address as «media» candidate into the SDP
- Expr-C (Firewall Traversal chain for Standard B2B) is **not** directly involved in the TURN connection
- **Multiple media paths**, depending on ICE negotiation, are possible as we have seen before

Intra-company Scenario with Office 365

Skype for Business online (Office 365) Intracompany Federation



- It's an **intracompany** scenario because the Office 365 tenant is owned by the customer
- ...but the interoperability solution relies on the **B2B architecture** because the Microsoft backend is reachable only from Internet

User Experience with Dual Homed conference Scheduling using Outlook and TMS-XE

- For customers using SfB (O365) as their primary meeting tool
- Users schedule meetings using the SfB (O365) Outlook plug-in (no change to current work flow)
- S4B clients have a click-to-join link
- Cisco video endpoints Join Meeting using OBTP
 - No alternative method to join (IVR or SIP address to Dial) **
- It **doesn't require** the **Dial-In** feature activated and configured on the Office 365 side

** Dial-In & IVR joining are roadmap items – timeline TBD

File Meeting Insert Format Text Review Tell me what you v

i You haven't sent this meeting invitation yet.

To... SX10; sx20; Monica Bellucci; DX80 Monica Bellucci

Subject Test Dual Homing with OBTP

Location Skype Meeting

Start time mercoledì 15/03/2017 18:30 All day event

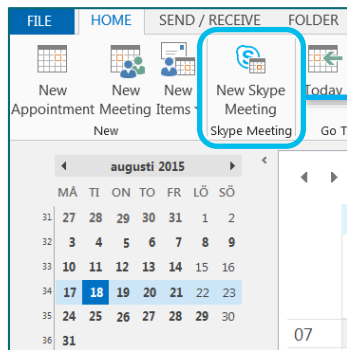
End time mercoledì 15/03/2017 19:00

→ Join Skype Meeting

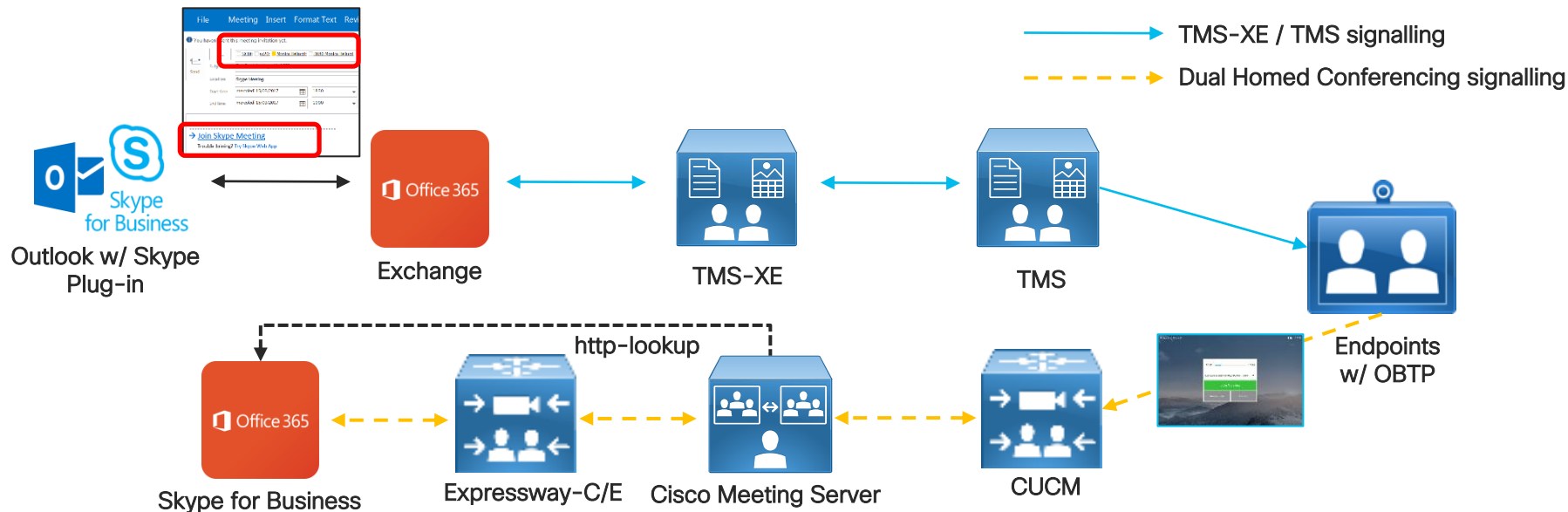
Trouble Joining? Try Skype Web App

Help

No Dial-In info for Video-Only users
→ OBTP Only



Scheduling & Joining using One Button to Push (OBTP)



- TMS-XE will generate the OBTP SIP address with format **“MSFT_Simple_Meet_URL” @Video_Domain**
 - «**MSFT_Simple_Meet_URL**» is the hyperlink provided in the Meeting invite to join from a SfB client
 - “**Video Domain**” can be the same used for Video Endpoints and CMS Spaces or a dedicated one
- CMS recognizes a «**Simple Meet URL**» before the «@», strip it, and does a **http-lookup** to O365 to retrieve the SIP URI to join the AVMCU call

TMS-XE configuration

TMSXE Configuration

Cisco TMS | Active Directory Settings | Exchange Web Services | Systems | Scheduling Mailbox | Skype Meetings | Advanced Settings

Enter the details of Cisco Meeting Server for Dual-Home Conferencing to schedule a Skype for Business/Lync Meeting. For guidance on how to configure this section, refer to the deployment guide.

Domain

Skype Support for Multiple Domains

Alphanumeric URI dial strings are used to join Skype meetings held on Office 365 or other domains. It is essential to have a compatible version of Cisco Meeting Server i.e. Cisco Meeting Server 2.2 or later.

☒ Cisco Meeting Server 2.2 or later version is deployed

It must be checked to enable «SimpleJoin» – Dual Homing with Office 365 (Intracompany)

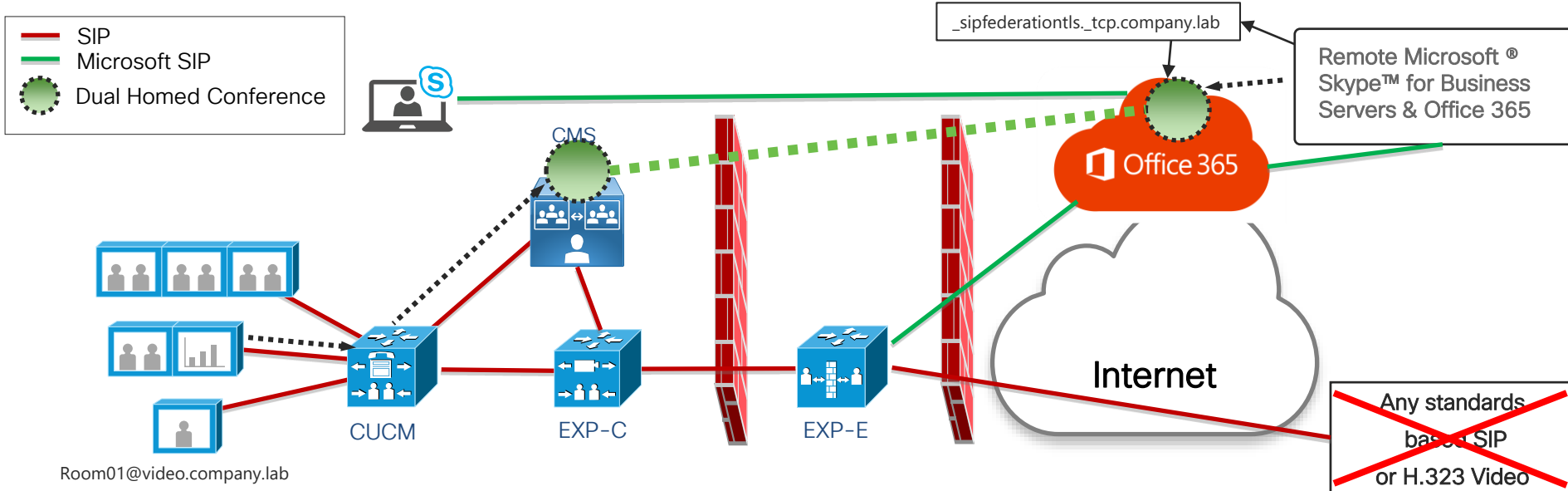
The “Domain” field requires: 1) to be routed internally towards the CMS cluster, 2) To have the “Target Lync SimpleJoin” flag set on the associated CMS incoming call routing rule

Incoming call handling

Call matching

	Domain name	Priority	Targets spaces	Targets users	Targets IVRs	Targets Lync	Targets Lync Simplejoin
☐	video.company.lab	10	no ▼	no ▼	yes ▼	no ▼	yes ▼

B2B Federation – Scheduled Dual Homed calls



- **B2B SfB users** click on the “[Join Skype Meeting](#)” hyperlink – their SfB backend performs a lookup for the MSFT Federation SRV and the call is routed to the AV/MCU hosted on the Office 365 cloud
- **Internal Video users** join using **OBTP** – the call is routed to CMS internally and a Dual Homed conference is initiated towards Office 365
- **B2B Video users** cannot join the conference (roadmap item)

What about Microsoft Teams?

- Microsoft Teams is not based on SIP and the previous Interoperability solution is not working anymore
- During Q4 CY18 Microsoft released «VTC interop Services» provided by few named ecosystem partners and only at that point They opened the «**Team Collaboration API**» to the broader developer community
- Cisco is fully committed to continue to provide an Interoperable solution with Microsoft, as reported in this public blog - <https://blogs.cisco.com/collaboration/cisco-microsoft-integration>
- We are currently working in two directions:
 - Extending the Microsoft Teams User Interface with **plug-in and automated Bot** (available now)
 - Investigating on requirements, architecture and capabilities of the new API with the goal to achieve **native video interoperability** (roadmap, with timeline TBD but targeting 2HCY19)

Conclusion

Video Interoperability with Microsoft

Summary

- There are multiple solutions for interoperability, based on different architectures and covering diverse use cases
- Choose the best scenario to implement considering your environment and the expected User Experience
- Testing and Piloting with real users before going in production is fundamental
- Cisco is fully committed to continue providing Interoperability with Microsoft

Q&A

Visit the Customer Experience booth in the World of Solutions and donate for charity!

Step 1: pick up your token \$\$ at this session or, the Customer Experience Booth in the World of Solutions.



Cash in your banknote for charity!

Cisco Customer Experience

The Cisco Customer Experience group is donating to charity on your behalf!

How to activate your \$10 for charity:

- Step 1: Visit the Cisco Customer Experience showcase in the World of Solutions.
- Step 2: Complete a demo and put this \$10 note into one of the two charity boxes at the showcase.
- Step 3: Cisco Customer Experience will donate the \$10 to the charity of your choice supported during Cisco Live Melbourne 2019: Orange Sky or St Kilda Mums.

OrangeSky — Australia —

St Kilda Mums

Step 2: visit the Customer Experience Booth in the World of Solutions, chat with one of our experts and donate to the charity of your choice.



St Kilda Mums

Learn more about St Kilda Mums



Donate your \$10 token note to the charity of your choice

Brought to you by Cisco Customer Experience



Learn more about Orange Sky



Donate to Charity!



Cisco Customer Experience

Cash in your banknote for charity!

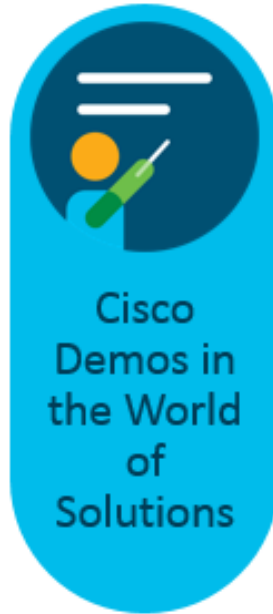
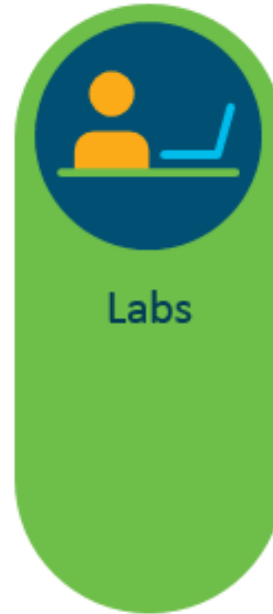
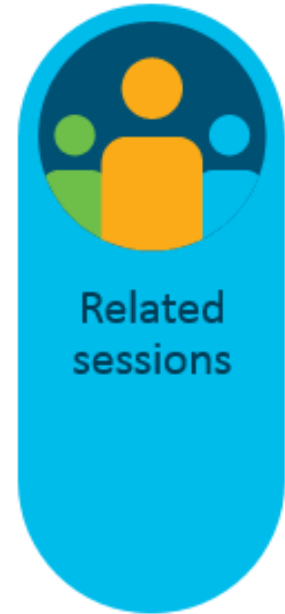
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Thank you



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