Synergy JOIN Installation and Configuration Guide

Synergy JOIN 5.0

September 2020

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About Synergy JOIN

New technologies have made it possible for enterprise collaboration solutions to work seamlessly together. Today Microsoft Teams (MS Teams) and Skype for Business (Skype4B) users participate in joint meetings with video conferencing users as standard, with high-quality video, audio and content sharing. However. there are still some challenges when it comes to the user experience.

Joining a meeting using desktop client (such as MS Teams or Skype4B) is easy, but the video conference user has to manually dial the meeting address from a video touch pad or a remote control. There may even be confusion as to what to dial from an endpoint if the meeting is hosted in Office365 (Teams or Skype Online). Automating the connection process is therefore of great value to organizations.

Synergy JOIN (JOIN) solves this by automatically connecting video-enabled meeting-rooms to Skype meetings using Cisco One Button To Push (Cisco OBTP) or Polycom One Touch Dial (Polycom OTD). The end-user simply schedules a new meeting in Microsoft Outlook or Google Calendar and adds the required video-enabled meeting-rooms. JOIN manages the connection and brings the Cisco OBTP or Polycom OTD information to the video endpoint. You can also forward video meeting invitations to a video-enabled meeting-room and automatically enable Cisco OBTP or Polycom OTD. JOIN removes the risk of typing errors and ensures that all meetings start on time.

In addition, JOIN can be used to schedule meetings in personal and Dynamic VMRs for Cisco and Pexip environments, sending the Cisco OBTP or Polycom OTD information to the scheduled video endpoints as well as the ability to dial out to endpoints that do not support Cisco OBTP or Polycom OTD.

JOIN is shipped as a Windows installer with a simple setup wizard that enables quick deployment.

The solution supports Microsoft Skype for Business, Microsoft Teams, Cisco WebEx, Pexip Infinity, Cisco Meeting Server (CMS), StarLeaf Cloud environments as well as Microsoft Exchange OnPrem, Office 365 and Google Calendar Platform.

How Synergy JOIN works

All features of JOIN listed below are available for all Microsoft Exchange & Google Calendar integrations:

- Cisco One Button To Push(Cisco OBTP)
- Polycom One Touch Dial (Polycom OTD)
- Scheduling of Personal VMRs
- Scheduling of One-time/Dynamic VMRs
- In-body updates of invites for One-time/Dynamic VMRs

Feature overview

JOIN supports the following feature set:

- Booking Skype4B, MS Teams, WebEx, Zoom or Google Hangouts meetings using Outlook or your current Calendaring system. JOIN creates a URI for the meeting that is sent as Cisco One Button To Push (Cisco OBTP) or Polycom One Touch Dial (Polycom OTD) to all video endpoints scheduled in the same meeting.
- Booking Dynamic VMRs (Cisco and Pexip only):
    - Endpoints receive the URI as Cisco OBTP or Polycom OTD
    - End users receive the URI as a Webrtc link in their calendar
- JOIN can identify patterns in meeting room invitations so that the endpoint can be populated with Cisco OBTP or Polycom OTD information for personal VMRs (e.g. meet.js@example.org).
- JOIN can be configured to dial out to booked endpoints that don't support Cisco OBTP or Polycom OTD at the meeting start time.
- Emails containing the dial-in information for the meeting can automatically be sent to the meeting participants (both internal and external participants).
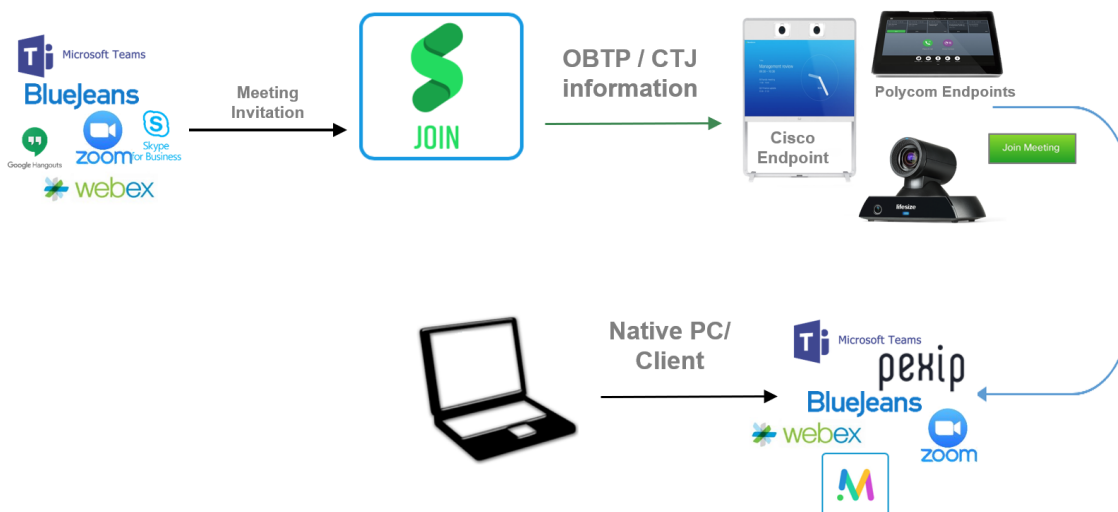
Overall process from install to end user

1. After installation, video admins add the following information into the JOIN configuration tool:
    - **Exchange** or **Google server connection settings**.
    - MCU details (Pexip, Cisco Meeting Server (CMS) Videonor, StarLeaf Cloud [or left blank if no supported MCU]).
    - Exchange Meeting-room resources or Google Hangouts meeting resources.
    - Video endpoint information (Room IP Address, User name and Password are required for Cisco OBTP)

2. Users book a video meeting from Outlook, inviting one or more video-enabled meeting-room resources.
    - Users book a Google meeting from their Google Calendar, inviting one or more video enabled meeting-room resources.

3. JOIN monitors the meeting-room resource at various intervals to check if a meeting invitation has been received.
4. In the below example a Skype4B meeting has been scheduled with a Pexip MCU:
    - Skype invitations sent to meeting-room resources include a URI in this format:
    sip:js@example.org;gruu;hhsbcghdfnopaque=app:conf:focus:id:ABC123456

- JOIN rewrites to a URI the meeting-room endpoint can call eg: *S4B.ABC123456.js@example.org*

The Below example examples are for Dynamic or Ad-Hoc Meetings

- For Ad-Hoc meetings, a numeric 5 or 6 digit number is populated based on a number pool that is configured by the administrator
- For personal VMR meetings, the URI in the invite body is identified as the URI.

5. The URI is sent to the endpoint as Cisco OBTP or Polycom OTD ready for attendees to start the meeting. The user receives a click-able WebRTC link to join the meeting from their computer

6. The call is routed through the gateway and all attendees turn up in the same virtual meeting room, irespective of the medium used to join the meeting

Requirements

Windows Server software

Operating system	Additional features required
Windows Server 2008 R2 64 bit (or newer)	Microsoft .NET 4.8 Framework or newer
	Microsoft Visual C++ Redistributable

Windows Server hardware

Number of video-enabled meeting rooms	CPU	RAM	HDD
0 - 100	4 Cores	8 GB	20 GB
100 - 300	4 Cores	16 GB	50 GB
300 - 900	4 Cores	32 GB	100 GB
900 - 2000	6 Cores	40 GB	150 GB
2500 +	8 Cores	64 GB	250 GB

Network requirements

Source	Destination	Protocol	Port (TCP unless otherwise stated)	Description
Synergy JOIN	Microsoft Exchange	HTTPS	443	Scheduling.
Synergy JOIN	Cisco TMS	HTTP	80	Tracking codecs on DHCP.
		HTTPS	443	
Synergy JOIN	Pexip Management Node	HTTPS	443	Initiating dial-out calls. Provisioning one-time VMRs.
Synergy JOIN	Pexip Conference Node	HTTPS	443	Optional: JOIN requires access to one Pexip conference node for displaying "End of Conference Warnings"
Synergy JOIN	StarLeaf Cloud: https://api.starleaf.com	HTTPS	443	Provisioning gateway call in StarLeaf Cloud.
Synergy JOIN	Cisco CMS	HTTP	80	Initiating dial-out calls.
		HTTPS	443	Provisioning one-time VMRs.
Synergy JOIN	Cisco codecs	HTTP	80	Updating codecs with Cisco OBTP information.
		HTTPS	443	
Synergy JOIN	Polycom codecs	HTTP	80	JOIN should be able to push Polycom OTD updates to the endpooint
		HTTPS	443	
Synergy JOIN	213.239.88.80/28 https://licensing.synergysky.com	HTTP (S)/80,443	TCP	Software upgrades and license management
Synergy JOIN	Internet	HTTP	80	JOIN requires internet access to find the address to the Skype meeting for CMS Office 365 meetings, and for all external Skype invitations that are forwarded.
		HTTPS	443	
Synergy JOIN	Cisco IX, TX and CTS Codecs	HTTP	8081/9501	Updating the IX,TX and CTS Codecs with Cisco OBTP information
Internet/ThingsWeb	Synergy JOIN	HTTP	80	JOIN requires internet access to communicate with ThingsWeb and receive sensor data
		HTTPS	443	

Port forwarding to Cisco endpoints

Cisco video systems that are on external networks can be reached directly over the internet by setting up a port forwarding rule in the firewall to allow direct access to the video system.

Note the following if using port forwarding to Cisco endpoints:

• Ensure the Port Forwarding rule only accepts requests from the specific IP address that JOIN will connect from.

• Ensure the Port Forwarding rule forwards requests to the HTTPS service of the Video System.

• Ensure the Video System's HTTPS service is enabled.

• Ensure the Video System has a strict password set.

• Include the port number after the IP address when configuring the Video System in JOIN (e.g. 213.112.33.179:8081).

Service accounts

Account type	Permissions required
Microsoft Exchange User (with a mailbox)	Read and Write access to Meeting room resource mailboxes (Editor access to user mailboxes required if using in-body update)
Pexip MCU	Admin API account or LDAP API account.
Cisco CMS	Admin API account.
StarLeaf Cloud	You need to have **Allow scheduling external conferences** enabled on your organization's account. See "How to create a StarLeaf Cloud authorization token" on page 138
Cisco codecs	Admin user account.
Polycom codecs	N/A - JOIN does not talk to the codec - the Polycom endpoints get the meetings from Exchange.
Cisco TMS (optional - used to track codecs on DHCP)	Site administrator user account.
Google API Access	API Scopes to allow for calendar access
Google Service Account	Google Super Admin account in GSuite(admin.google.com). Additionally, Enable Domain Wide Delegation on the service account(console.cloud.google.com)
ThingsWeb Administrator	None

Supported Calendar Platforms

Calendaring Platform	Description
Microsoft Exchange	Exchange 2013 and above
Office 365	Microsoft Exchange platforms hosted in Office 365
Google Calendar	Part of Googles G Suite

Supported Sensor Systems

Manufacture	Model	Description
Elsys	ERS	ERS Indoor Sensor using LoRaWAN
N Fuse	IRWGW8-RPI-868	Gateway for all ERS Sensors
Cisco	Webex Room Series	Cisco Webex Room Kit Mini, Plus and Pro endpoints with People Count Technology

Limitations

Cisco Meeting Server

At this time JOIN can not dial out to Skype4B meetings. This means that for Skype4B calls and personal VMR calls when using CMS, the meeting can only be joined via Cisco OBTP/Polycom OTD.

StarLeaf Cloud

At this time JOIN can be used to enable Cisco OBTP/Polycom OTD for the following scheduled meetings:

- Office 365 / Skype4B on-premises
- StarLeaf Cloud

Device Support

Devices that are supported with Synergy Join

Device	Version	Comments
Microsoft Exchange	On Prem and 0ffice 365 (Exchange Online) • 2010 SP2 and later • 2013 all SPs • 2016	
Cisco TMS	12.0 - 15.5	
Pexip MCU	13 - 20	
Cisco CMS	1.8 - 2.4	Must be configured with Dual Homed: The "Lync Simplejoin domain" must be present on the ExpresswayVCS if the endpoints route calls through one. Also, the CMS must have a working Lync outbound rule set up (Trunk type: Lync).
StarLeaf Cloud	N/A	You need to have **Allow scheduling external conferences** enabled on your organization's account. See "How to create a StarLeaf Cloud authorization token" on page 138
Cisco codecs: • C-series • MX-series • SX-series • EX-series • DX-series • IX -series • TX-series • Cisco Spark Room Kit • Cisco Webex Room 55 Single & Dual • Cisco Webex Room 70 G2 • Cisco Webex Room Kit Mini, Room Kit, Room Kit Plus & Room Kit Pro	• TC5.x and newer • CE8.x and newer • RoomOS	
Polycom codecs: • HDX • Group series • Trio	All versions supporting Polycom OTD	The endpoints must be configured to poll calendar data from Exchange using the Polycom Calendaring service: • The Polycom endpoints must be configured to get the meetings from their own room account in Exchange. • JOIN will rewrite the body of these meetings in the Exchange room accounts to embed the URI of the meeting in a Polycom-friendly way. **NOTE:** The Polycom Trio is supported with Polycom One Touch Dial for one- Time-VMRs and regex/static VMRs in Synergy JOIN version 2.6. Microsoft Skype and Teams support is available in JOIN version 3.0. The reason is that the Trio will incorrectly try to call the hidden Skype GRUU if it finds it in the meeting invitation header when there is a different URI in the Polycom VMR token Synergy JOIN generates, even if the Trio is not registered towards a Skype server.

Installing & Upgrading to Synergy JOIN 5.0

We recommend that you read through the Synergy JOIN 5.0 Upgrade Information prior to commencing with your upgrade.

A link to the installation package will be provided by Synergy SKY Representative or Synergy SKY Partner.

The installer package should be named: SynergySKYJoinInstaller.v.5.x.xxx.msi

Prior to installation of Synergy JOIN, confirm server requirements have been met.
https://support.synergysky.com/join/installation/joinreqs.htm

1. Double click to run the installer and follow the install wizard.
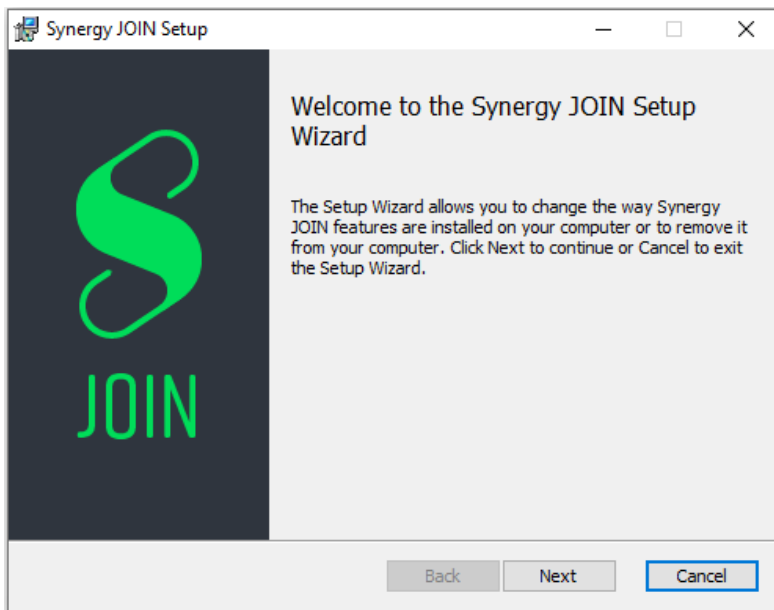
2. Accept the license agreement and click Next.
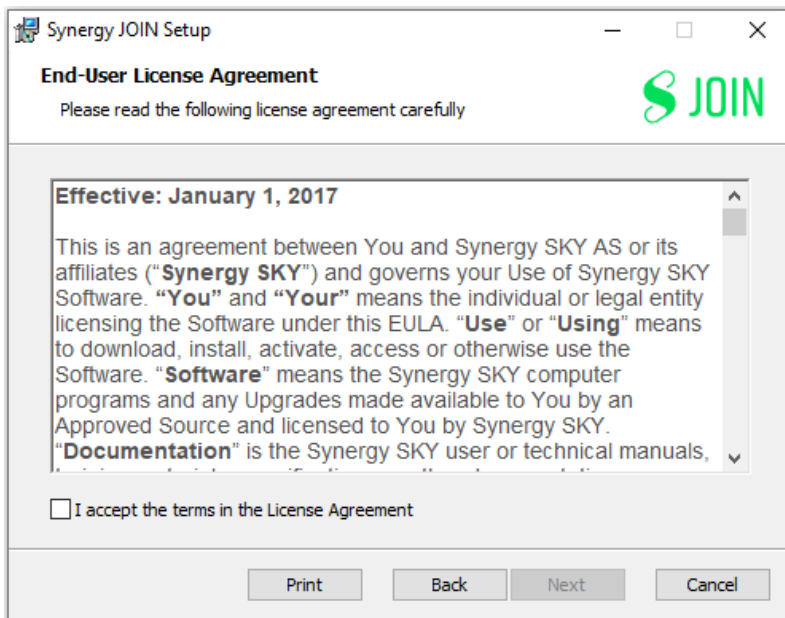
3. Confirm the install location and click Next.
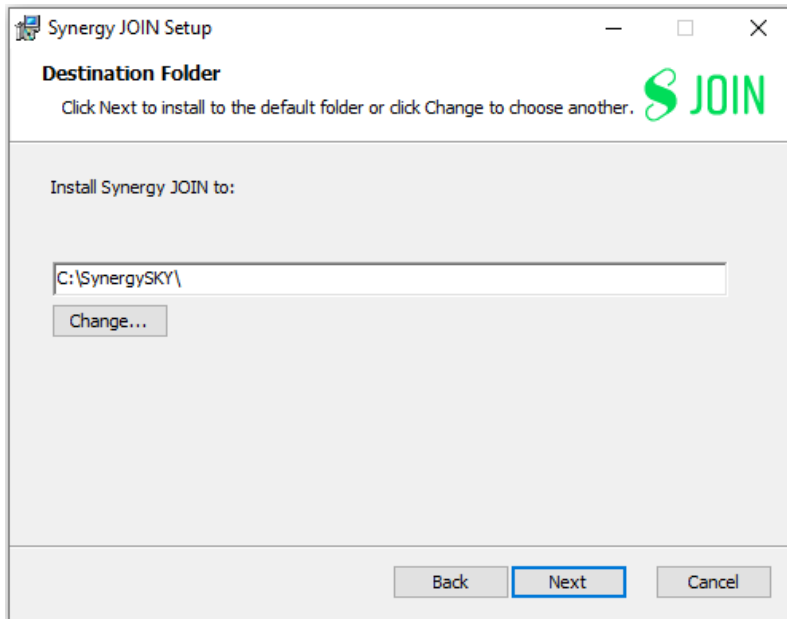
4. Choose whether to deploy the Database using Default (local) or Custom (detached/cluster) settings and click Next.
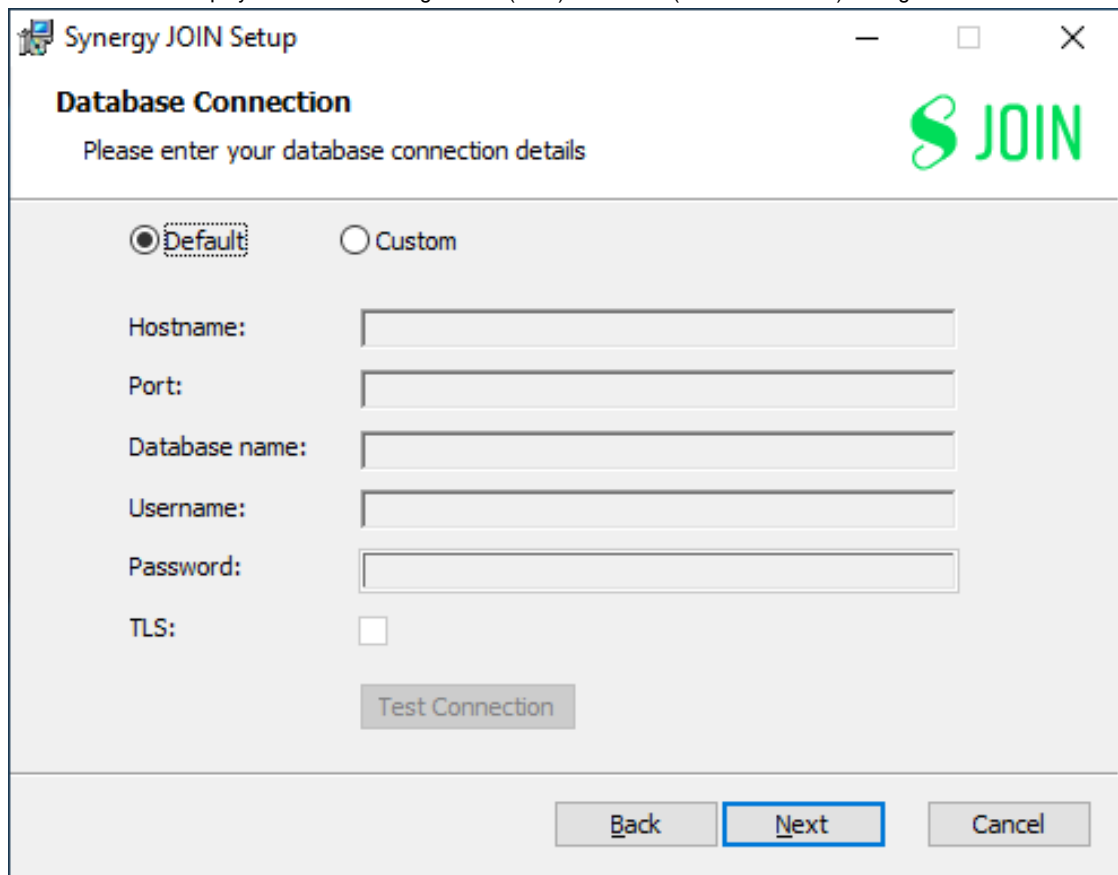
5. Click on Install to commence installation
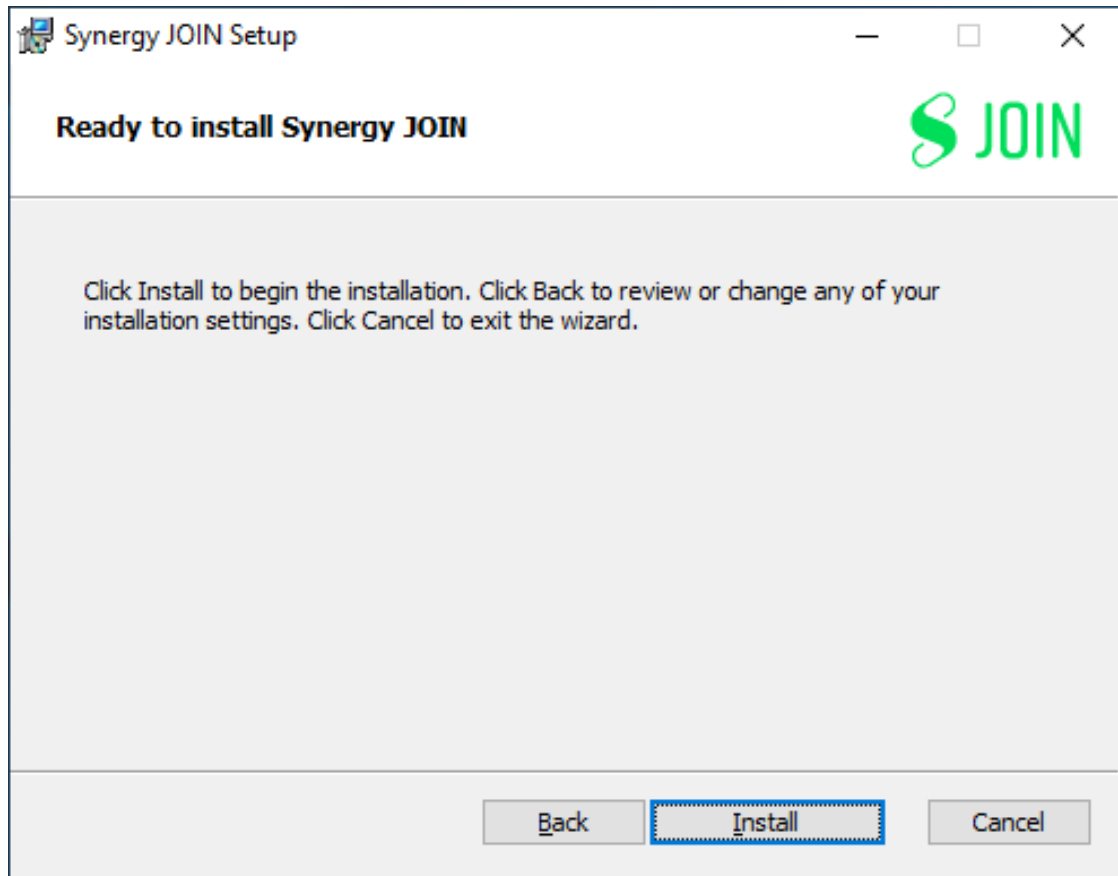
6. Once install has completed, a shortcut on the desktop will be available and a prompt to Finish installation with an option to Open config page.
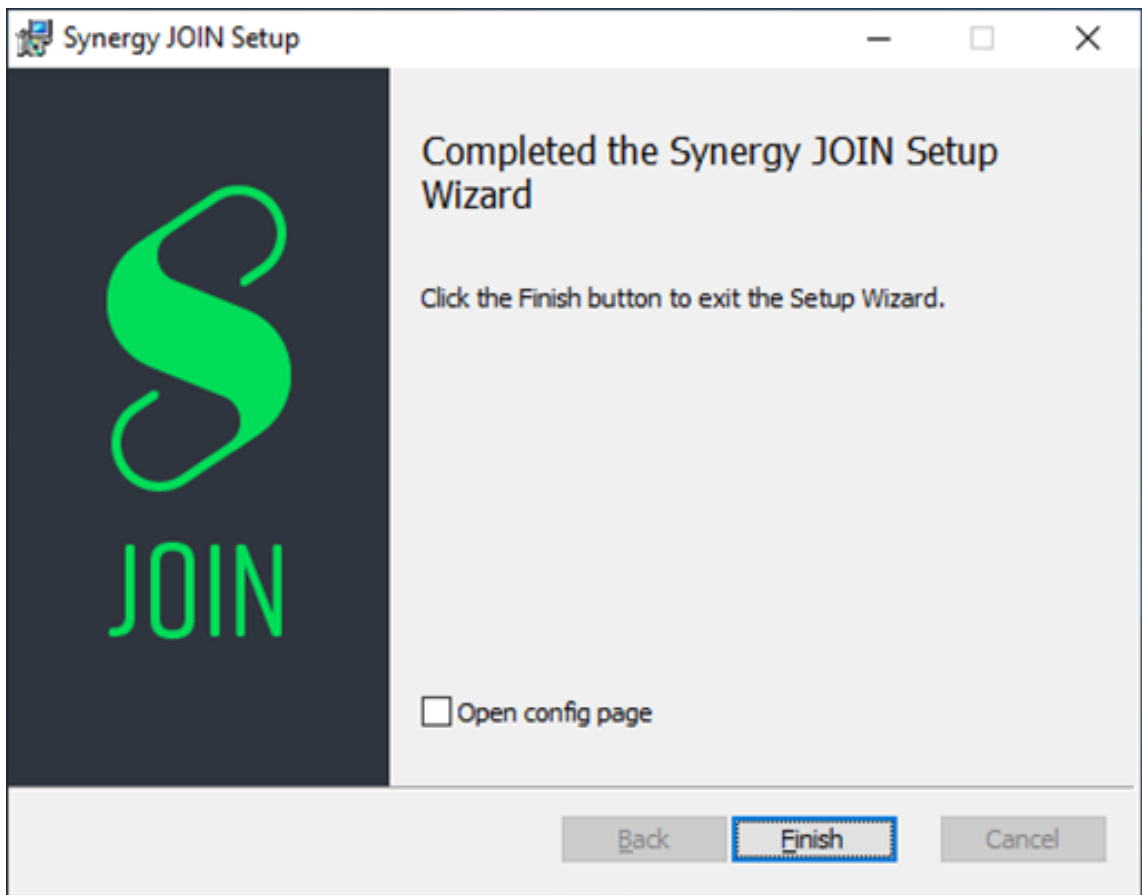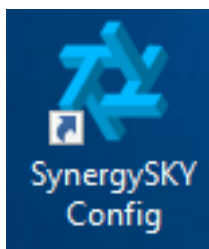
Synergy JOIN 5.0 Database and Services

When installing Synergy JOIN 5.0, a PostGreSQL database server is also installed. Additionally, there are three services that are installed at the same time.

Service Name	Service Operation
Synergy JOIN	Runs the Synergy JOIN threads and process.
SynergyJOINPostgreSQL	Runs the Synergy JOIN PostGreSQL Database
SynergySKY Config	Runs the configuration tool used to configure Synergy JOIN services

Synergy JOIN PostGreSQL connection information:

Username: postgres

Password: postgres

DBName: synergyskydb

Port: 5432

The first time JOIN 5.0 starts, it will create the database and perform a migration of any pre-existing data.

Once the installation is completed, please refer to the "Quick Setup Guide" on page 39 to proceed with configuration.

Configuring Your Calendar Service

Configuring Exchange with EWS

When deploying Synergy JOIN, a service account is required. Additionally, there are some exchange commands that have to be executed in order to allow this behavior. These commands provide the service account that will be configured in JOIN to read the room calendars meeting invitations and process the meetings accordingly.

Overview

- Create a Service account that will be configured in Synergy JOIN
- Provide Mailbox Access to the room(s) Calendar
- Amend Calendar Permissions for the room(s) Calendar

Prerequisites

1. You will require access to the Exchange Admin Center to be able to create meeting rooms and use

2. To simplify tasks, it would be beneficial to have access to the Exchange Management Shell. More information on how to access the Exchange Management Shell can be found here

 Configuring the On-Prem Service Account
The Synergy JOIN service account is the account that will be used for operations performed by JOIN. This account will update users calendars, notify internal and external participants about a meeting status.
You are not required to create a new account. It is possible to use an existing service account that exists in your organization however if you would like to create a new service account, we have steps on how you can achieve this below:

Option 1

1. Log In to Exchange Admin Center

2. Go to **Recipients** > **Shared** and click New +

3. Fill in the Display name & Email address

4. choose **Save**.

Option 2

Alternatively, you can log on to the Exchange Management Shell and use the below command to create a service account that will be used with JOIN

Command:`New-Mailbox -Shared -Name "SynergySKY Meetings" -DisplayName "SynergySKY Meetings" -Alias meetings@company.com`

Once you have created this account, you have to type in the specified alias as the Service Act on Behalf of email address in Synergy JOIN

Now that you have created/selected the service account, copy this alias and paste this in as the **EWS Service Account Username in your JOIN** configuration

Provide the Service Account with access to view the rooms Calendar.
When the Service Account has been created, you have to provide the account with access to the rooms calendar as per the below instructions.

Option 1

1. Log In to Exchange Admin Center

2. Go to **Recipients** > **Resources** and select the room that you would like to provide access to

3. Go to **Mailbox Delegation** and choose the **+** under Full Access

Search for the recently created (or already existing) service account and add this to the Permitted list.

Choose **Save**
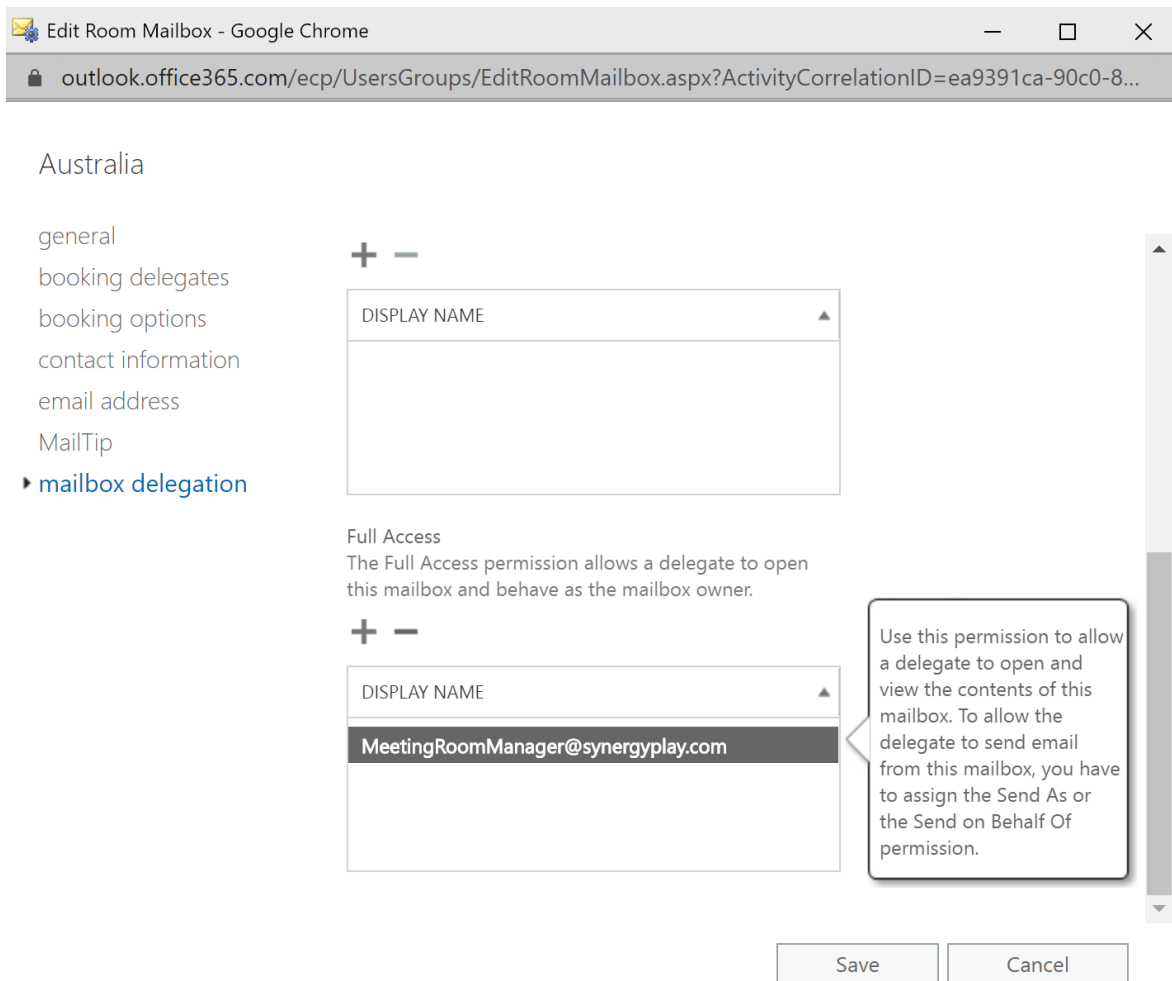
Option 2

Alternatively, you can log on to the Exchange Management Shell and use the below command to provide the service account access to the resource calendar

```
Add-MailboxPermission -Identity australia@synergyplay.com -User meetingmanager@synergyplay.com -AccessRights FullAccess
```

Setting the Calendar Permissions

We recommend running the following scripts with the following permissions on all of the rooms in Microsoft Exchange in order to unlock the full potential of the product:

```
Set-CalendarProcessing australia@synergyplay.com -DeleteComments $false -DeleteSubject $false -
RemovePrivateProperty $false -AddOrganizerToSubject $false -ProcessExternalMeetingMessages $true
```

The embedded test tool in the JOIN Configurator can be used to verify most of these properties, and suggests PowerShell commands to configure the rooms according to our recommendations.

Calendar Permissions properties
The function of the various Exchange resource properties mentioned in the '**Setting the Calendar Permissions**' section are explained in the table below.

Property name	Function in Microsoft Exchange	Function in Synergy JOIN	Recommended Setting	Required
DeleteComments	The **DeleteComments** parameter specifies whether to remove or keep any text in the message body of incoming meeting requests. Valid input for this parameter is *$true* or *$false*. This parameter is used only on resource mailboxes where the **AutomateProcessing** parameter is set to *AutoAccept*.	When set to *$true*, Exchange deletes the body of the meeting invitation when booking rooms. As the matching rules rely on reading content in the body of the email, this stops Regex and the **Skype URI in Body** rule from working in JOIN.	*$false*	Yes, so that your matching rules work correctly.
DeleteSubject	Specifies whether to remove or keep the subject of incoming meeting requests. Valid input for this parameter is *$true* or *$false*. The default value is *$true*. This parameter is used only on resource mailboxes where the **AutomateProcessing** parameter is set to *AutoAccept*.	When set to *$true*, Exchange deletes the subject of the meeting which means JOIN does not display a meeting title on the touch panel of the video system. If you want the subject of the meeting to be hidden, you can select the Private flag when booking the meeting in Outlook, even if this property is set to *$false*. See also **RemovePrivateProperty**.	*$false*	Yes, if you want the meeting title to be displayed on the touch panel.
RemovePrivateProperty	The **RemovePrivateProperty** parameter specifies whether to clear the private flag for incoming meeting requests. Valid input for this parameter is *$true* or *$false*. The default value is *$true*. By default, the private flag for incoming meeting requests is cleared. To ensure the private flag that was sent by the organizer in the original request remains as specified, set this parameter to *$false*.	When set to *$true*, Exchange removes the Private flag when a Room is booked as a resource in a meeting flagged as Private in Outlook. This means that the meeting title is visible to everyone for all meetings. By setting this property to *$false* you can hide the title on meetings that are booked as Private in Outlook, while showing the title of all other meetings.	*$false*	No.
AddOrganizerToSubject	The **AddOrganizerToSubject** parameters specifies whether to add the organizers name toe the subject line. Valid input for this parameter is *$true* or *$false*. The default value is *$true*.	When set to *$true*, Exchange adds the organizers first name and last name to the subject line of the meeting. If you do not want to display the meeting name, at minimum we recommend to set this field to ***$true***	***$false***	Yes, if you want to hide the meeting title on the touch panel.
ProcessExternalMeetingMessages	The **ProcessExternalMeetingMessages** parameter specifies whether to process meeting requests that originate outside the Exchange organization. Valid input for this parameter is *$true* or *$false*. The default value is *$false*. By default, meeting requests that originate outside of the organization are rejected.	When set to *$false*, Exchange will not allow external users to book Rooms resources. However, a room is booked on behalf of the organizer if a user forwards an invite into a room. This setting must therefore be set to *$true* to allow internal users to forward invitations to external Skype meetings into their meeting rooms, so that they can benefit from easy calling into external Skype meetings. **Note**: Administrators can still avoid external users booking their rooms directly by using an internal domain in the room's alias (e.g. *meetingroom@synergysky.local*)	*$true*	Yes, so that forwarding invites from external users works correctly.

Property name	Function in Microsoft Exchange	Function in Synergy JOIN	Recommended Setting	Required
AutomateProcessing	The **AutomateProcessing** parameter enables or disables calendar processing on the mailbox. This parameter takes the following values: • *None* Both the resource booking attendant and the Calendar Attendant are disabled on the mailbox. • *AutoUpdate* Only the Calendar Attendant processes meeting requests and responses. • *AutoAccept* Both the Calendar Attendant and resource booking attendant are enabled on the mailbox. This means that the Calendar Attendant updates the calendar, and then the resource booking assistant accepts the meeting based upon the policies. The default value on a resource mailbox is *AutoAccept*. The default value on a user mailbox is *AutoUpdate*, but you can't change the value on a user mailbox.	Meetings that are booked in Room resources are stored as *Tentative* unless this setting is set to *AutoAccept*. Tentative meetings are not processed by JOIN, as you can book multiple tentative meetings within the same time interval in one resource.	*AutoAccept*	Yes.
AllRequestInPolicy **AllRequestOutOfPolicy** **RequestInPolicy** **RequestOutOfPolicy**	These parameters specify whether to allow users to submit policy requests. Valid input for these parameters are *$true* or *$false*. The default value is *$false*.	Meetings booked in Room resources that are configured with either of these properties that require meetings to be approved by a delegate, will not be processed by JOIN until they are approved. This will lead to a significant delay for the meeting organizers, and is therefore not recommended.	*$false*	Recommended: configure so that approval is not required.

Enabling forwarding of external meeting invitations
Microsoft will only process meeting requests for meetings booked by external users if the settings ProcessExternalMeetingMessages is set to "$true". Enabling this setting potentially exposes your meeting rooms from being booked directly by external users, but can be mitigated in one of two ways:

• Either stop direct emails from external users from ever reaching the room mailboxes; which can be done by a transport rule in the Hub Transport server in Microsoft Exchange. The rule can be set to stop emails from external users from reaching the mailboxes in a specific distribution list like the list of meeting rooms
• Alternatively you can change the alias of the rooms to a domain that is only available internally in the Exchange environment; i.e. changing boardroom@acme.com to boardroom@acme.local. The acme.local domain should not be reachable from the outside, but will be available for internal users.

Either of these changes will enable users to forward invitations they receive from the outside to their meetings rooms, while hindering any external users from booking their meeting rooms directly.

NOTE. Enabling ProcessExternalMeetingMessages does not in any way expose the information of existing meetings to external users.

Configuring Exchange with Graph API (Office 365)

Synergy JOIN Office 365 configuration uses Microsoft Graph API. Basic Authentication for EWS will be decommissioned on October 13th, 2020. These plans apply only to the cloud-based Office 365/Exchange Online products; there are no changes to EWS capabilities of on-premises Exchange products.

In line with this change, Microsoft have created a new authentication method known as Microsoft Graph. Microsoft Graph allows for increased performance towards the Microsoft Cloud. Over time, Microsoft have introduced OAuth 2.0 for authentication and authorization, which is a more secure and reliable than Basic Authentication to access data.

You can find additional information relating to Microsoft Graph here

We have provided instructions on how to set up Microsoft Graph with Synergy JOIN below.
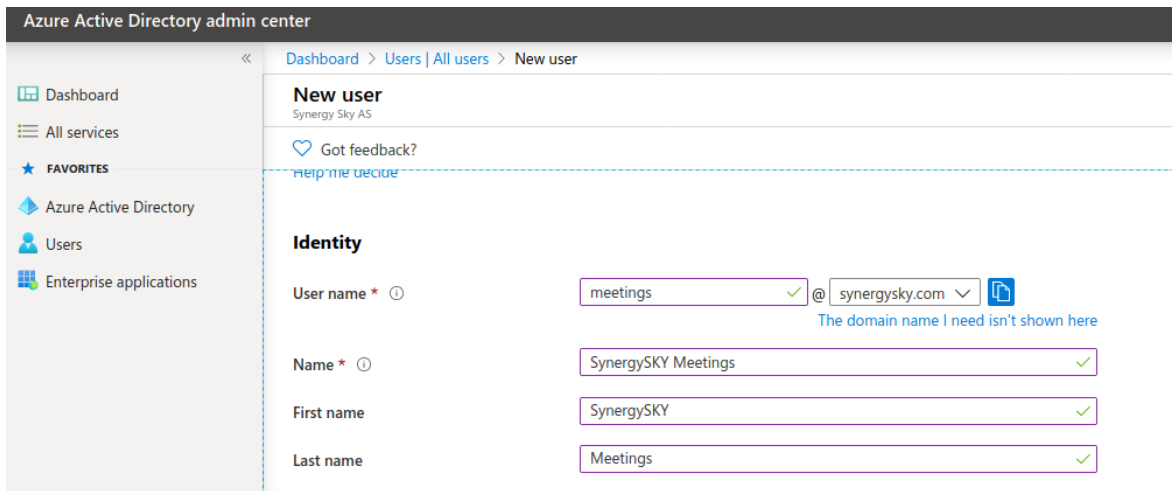
Overview

- Select / Create ActOnBehalfOfEmail
- Amend Calendar Permissions for the room(s) Calendar
- Create an App Registration, Client Certificate & Secret
- Add API Permissions
- Copy the Client ID, Tenant ID and Client Secret to Synergy JOIN

Creating/Selecting the Act on Behalf of email

The Synergy JOIN Act on Behalf of email is the email address that will be used to notify users of their meeting updates and progress. You are not required to create a new email account. It is possible to use an existing service email account that exists in your organization however if you would like to create a new service account, we have steps on how you can achieve this below:

1. Log in to https://portal.azure.com

2. Click on **Azure Active Directory** > **Users**

3. Choose **+ New User.** Type in the Username, Name and verify password settings and choose save.

Setting the Calendar Permissions

We recommend running the following scripts with the following permissions on all of the rooms in Microsoft Exchange in order to unlock the full potential of the product:

```
Set-CalendarProcessing australia@synergyplay.com -DeleteComments $false -DeleteSubject $false -RemovePrivateProperty $false -AddOrganizerToSubject $false -ProcessExternalMeetingMessages $true
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The embedded test tool in the JOIN Configurator can be used to verify most of these properties, and suggests PowerShell commands to configure the rooms according to our recommendations.

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| Property name	Function in Microsoft Exchange	Function in Synergy JOIN	Recommended Setting	Required
DeleteSubject	Specifies whether to remove or keep the subject of incoming meeting requests. Valid input for this parameter is *$true* or *$false*. The default value is *$true*. This parameter is used only on resource mailboxes where the **AutomateProcessing** parameter is set to *AutoAccept*.	When set to *$true*, Exchange deletes the subject of the meeting which means JOIN does not display a meeting title on the touch panel of the video system. If you want the subject of the meeting to be hidden, you can select the Private flag when booking the meeting in Outlook, even if this property is set to *$false*. See also **RemovePrivateProperty**.	*$false*	Yes, if you want the meeting title to be displayed on the touch panel.
RemovePrivateProperty	The **RemovePrivateProperty** parameter specifies whether to clear the private flag for incoming meeting requests. Valid input for this parameter is *$true* or *$false*. The default value is *$true*. By default, the private flag for incoming meeting requests is cleared. To ensure the private flag that was sent by the organizer in the original request remains as specified, set this parameter to *$false*.	When set to *$true*, Exchange removes the Private flag when a Room is booked as a resource in a meeting flagged as Private in Outlook. This means that the meeting title is visible to everyone for all meetings. By setting this property to *$false* you can hide the title on meetings that are booked as Private in Outlook, while showing the title of all other meetings.	*$false*	No.
AddOrganizerToSubject	The AddOrganizerToSubject parametors specifies whether to add the organizers name toe the subject line. Valid input for this parameter is *$true* or *$false*. The default value is *$true*.	When set to *$true*, Exchange adds the organizers first name and last name to the subject line of the meeting. If you do not want to display the meeting name, at minimum we recommend to set this field to **$true**	**$false**	Yes, if you want to hide the meeting title on the touch panel.
ProcessExternalMeetingMessages	The **ProcessExternalMeetingMessages** parameter specifies whether to process meeting requests that originate outside the Exchange organization. Valid input for this parameter is *$true* or *$false*. The default value is *$false*. By default, meeting requests that originate outside of the organization are rejected.	When set to *$false*, Exchange will not allow external users to book Rooms resources. However, a room is booked on behalf of the organizer if a user forwards an invite into a room. This setting must therefore be set to *$true* to allow internal users to forward invitations to external Skype meetings into their meeting rooms, so that they can benefit from easy calling into external Skype meetings. **Note**: Administrators can still avoid external users booking their rooms directly by using an internal domain in the room's alias (e.g. *meetingroom@synergysky.local*)	*$true*	Yes, so that forwarding invites from external users works correctly.
AutomateProcessing	The **AutomateProcessing** parameter enables or disables calendar processing on the mailbox. This parameter takes the following values: • *None* Both the resource booking attendant and the Calendar Attendant are disabled on the mailbox. • *AutoUpdate* Only the Calendar Attendant processes meeting requests and responses. • *AutoAccept* Both the Calendar Attendant and resource booking attendant are enabled on the mailbox. This means that the Calendar Attendant updates the calendar, and then the resource booking assistant accepts the meeting based upon the policies. The default value on a resource mailbox is *AutoAccept*. The default value on a user mailbox is *AutoUpdate*, but you can't change the value on a user mailbox.	Meetings that are booked in Room resources are stored as *Tentative* unless this setting is set to *AutoAccept*. Tentative meetings are not processed by JOIN, as you can book multiple tentative meetings within the same time interval in one resource.	*AutoAccept*	Yes.

Property name	Function in Microsoft Exchange	Function in Synergy JOIN	Recommended Setting	Required
AllRequestInPolicy AllRequestOutOfPolicy RequestInPolicy RequestOutOfPolicy	These parameters specify whether to allow users to submit policy requests. Valid input for these parameters are $true or $false. The default value is $false.	Meetings booked in Room resources that are configured with either of these properties that require meetings to be approved by a delegate, will not be processed by JOIN until they are approved. This will lead to a significant delay for the meeting organizers, and is therefore not recommended.	$false	Recommended: configure so that approval is not required.

Configuring Microsoft Graph API
1. Log In to https://portal.azure.com

2. Click on **Azure Active Directory**

3. Select **App Registrations**
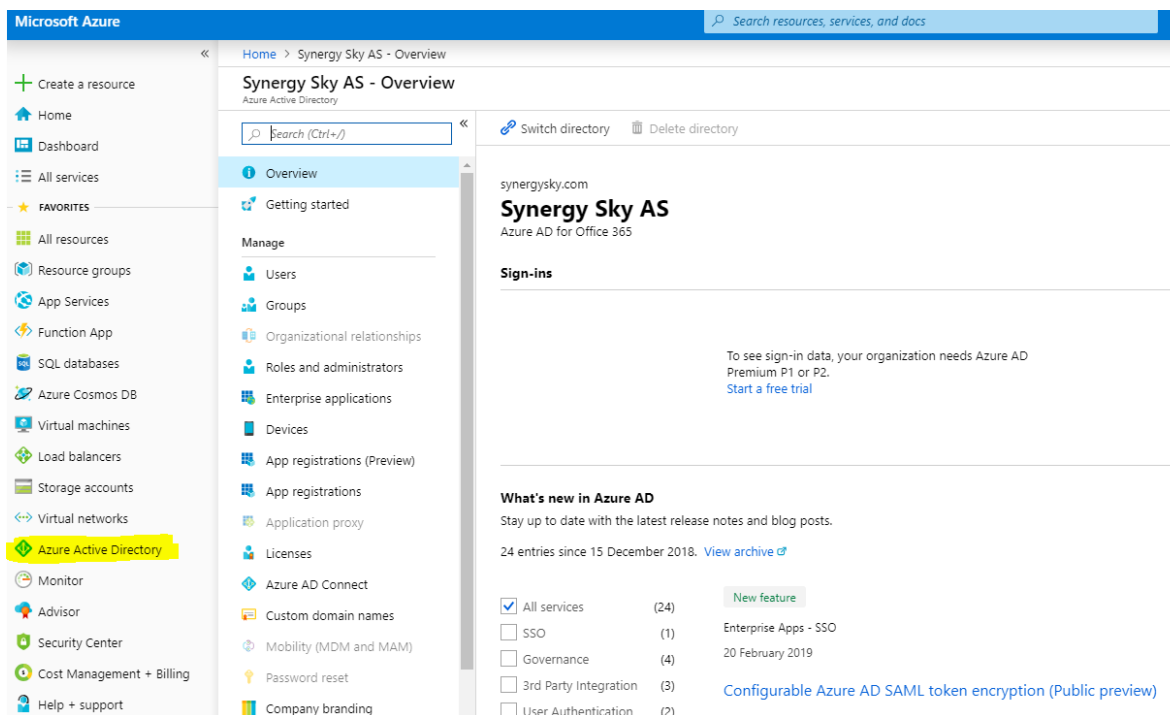
4. Click on **New Registration**

5. Enter a name and click on Register
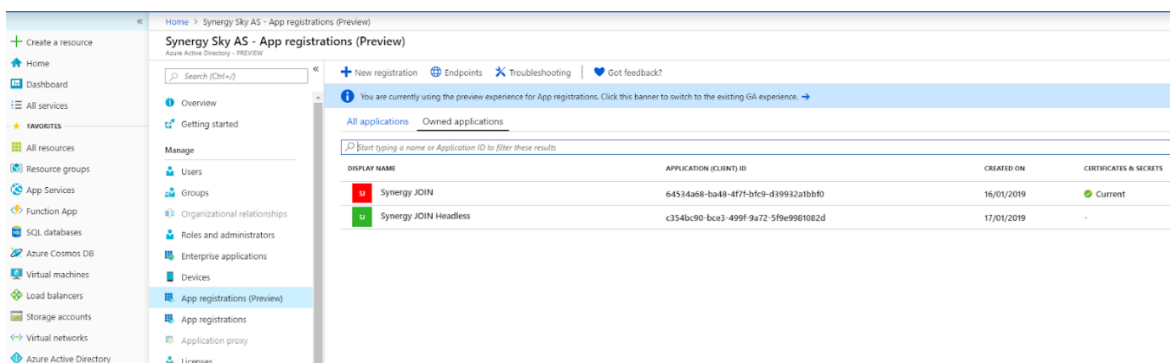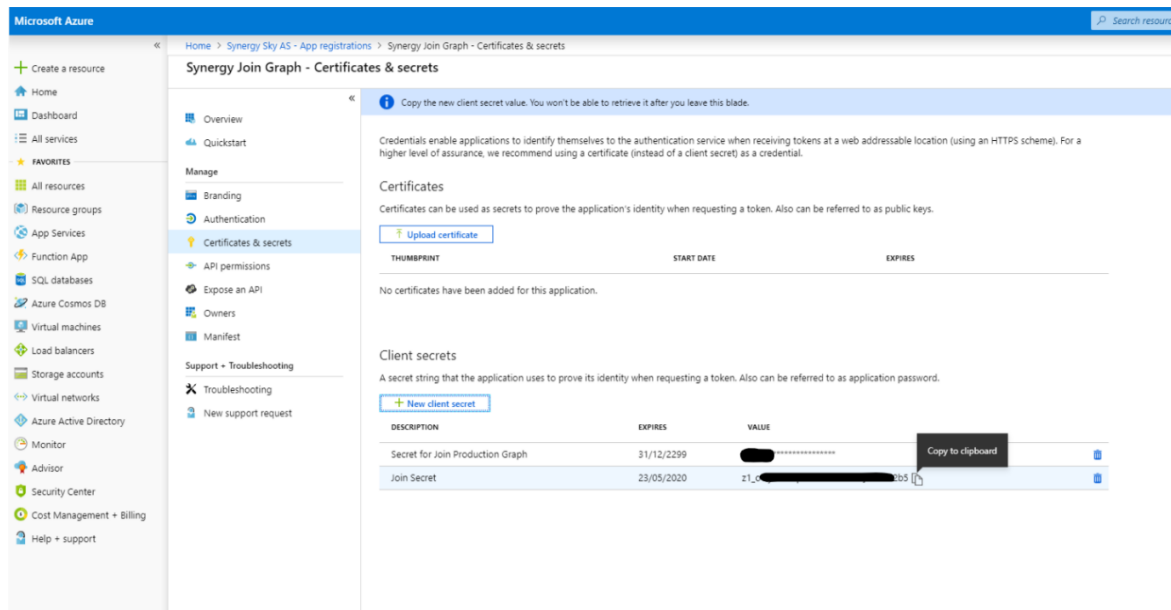

6. Copy the fields Application (client) ID and Directory (tenant) ID

a. These are to be used when configuring Synergy JOIN

7. Click on Certificates & Secrets

8. Click on **New client secret**, then give it a name and set it to never expire. Click on add
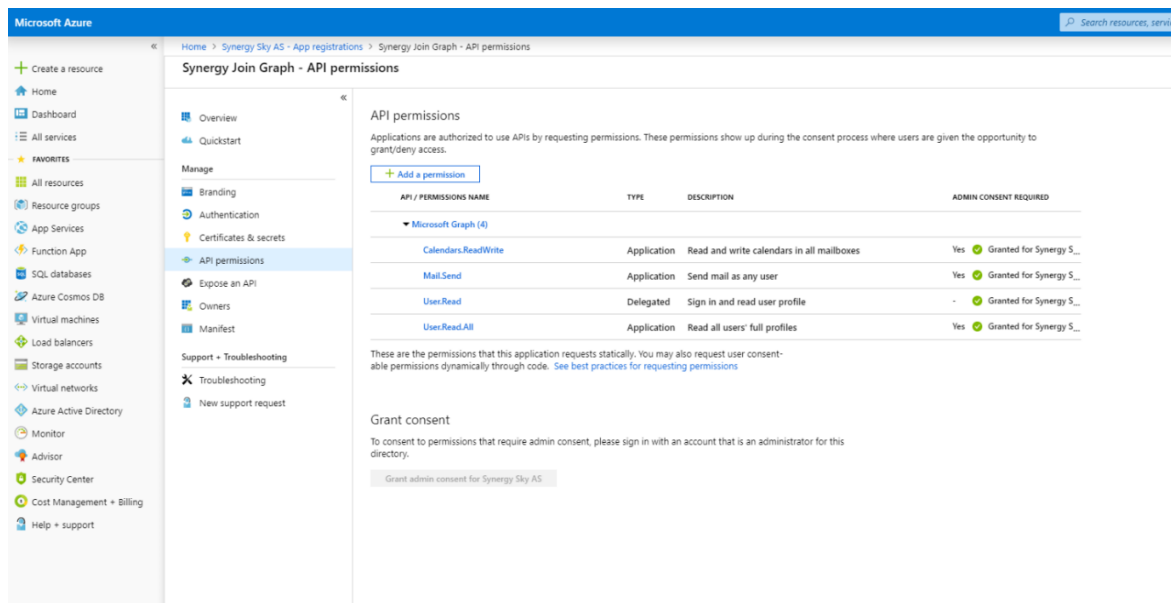
9. Copy the client secret

Note: This secret is to be used when configuring Synergy JOIN

10. Click on **API Permissions**

11. Click on **Add a permission**, Microsoft Graph, Application permissions. Check Calendar.ReadWrite, User.Read.All and Mail.Send, then click the **Add permission**s button

Grant Consent

12. An admin account would need to login and click the "Grant admin consent" button

Configuring Microsoft Graph API in Synergy JOIN
Once you have completed the above setup in the Azure Active Directory, you will have to go to your Synergy JOIN (Integration Settings) and create a Connection and paste in the Client ID, Tenant ID and Client Secret from your above configuration.

Add new connection ✕

CONNECTION CONFIGURATION   Enabled [ON]

Connection type ⓘ

MS Graph API ⌄

OK

Name ⓘ

MS Exchange Connection

OK

GRAPH CONNECTION INFO

Graph Client ID ⓘ

ab123456c-789d-efg1-2h3456i789012

OK

Graph Tenant ID ⓘ

ab123456c-789d-efg1-2h3456i789012

OK

Graph Client Secret ⓘ

12aB3Cd/e4fGhijklmNop]=aBCd+a][abc

OK

Tested

[SAVE]   [CANCEL]   [TEST CONNECTION]

Click on Test Connections to make sure your configuration is correct. Then, add a new API integration and provide the Act on behalf of Email and polling interval. Click Save and Save Changes. Setup is now complete.

Configurable Options for Graph API

Graph API provides the ability to customize how Synergy JOIN is collecting information from your Exchange environment. These values are to be changed manually in the config.json file.

If JOIN has been installed into the default directory, the config.json file can be found in the following location: C:\SynergySKY\SynergySKYEnterpriseScheduling\config\config.json

"CalendarSyncWindowSizeDays": 180, - Specifies how many days in the future Synergy JOIN can collect meeting information

"CalendarSyncWindowRefreshIntervalDays": 30, - Specifies how often Synergy JOIN should re-sync its database with the room calendar

i.e The 'CalendarSyncWindowSizeDays' does not apply to Recurring Meetings. When a recurring meeting is detected by Synergy JOIN, the entire series is synced and provided with OBTP information

Configuring Google Calendar (G Suite)

In order to configure Synergy JOIN with the Google Calendar integration, the G Suite environment must be prepared. This is done through the following 4 steps

Overview

- Create a Google Cloud Platform Project or use an existing project
- Enable three distinct APIs and Services
- Create a service account or use an existing service account. This account must be given correct permissions. A private key must be generated and copied to the JOIN server.
- Appropriate Calendar Access must be given to the Service Account via the G Suite Domain

Configuring the Google Cloud Platform

A Google Cloud Console Project is required in order for JOIN to be able to read calendar resource accounts, user accounts and also have access to APIs that enable the JOIN integration.

Create a Google Cloud Platform Project or use an existing Project. The Project will be used for the API integration as well as for the Service Account.

Logging into the Google Cloud Platform console:

- Browse to the following URL: https://console.cloud.google.com/iam-admin/serviceaccounts
- Log in with your admin user account to manage your Google cloud console.
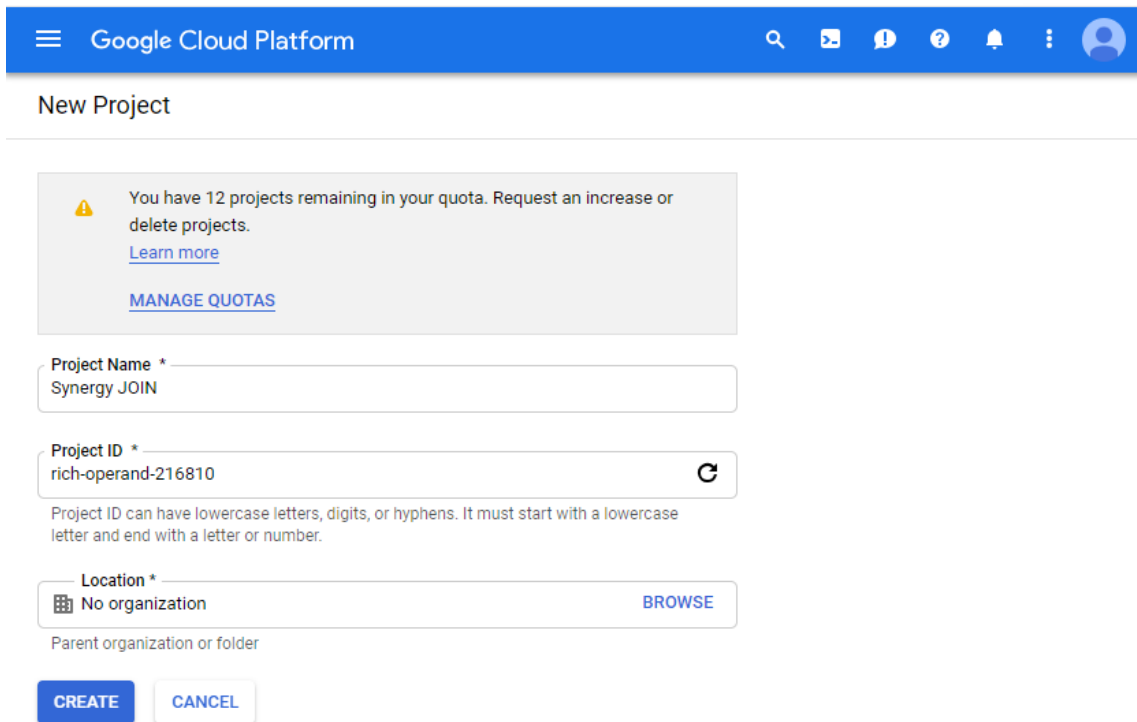
Creating a Project
(Skip this section if you already have a project you want to add this account to)

N.B on some occasions, Google fails to create the project and as such, sometimes you may have to create the project twice
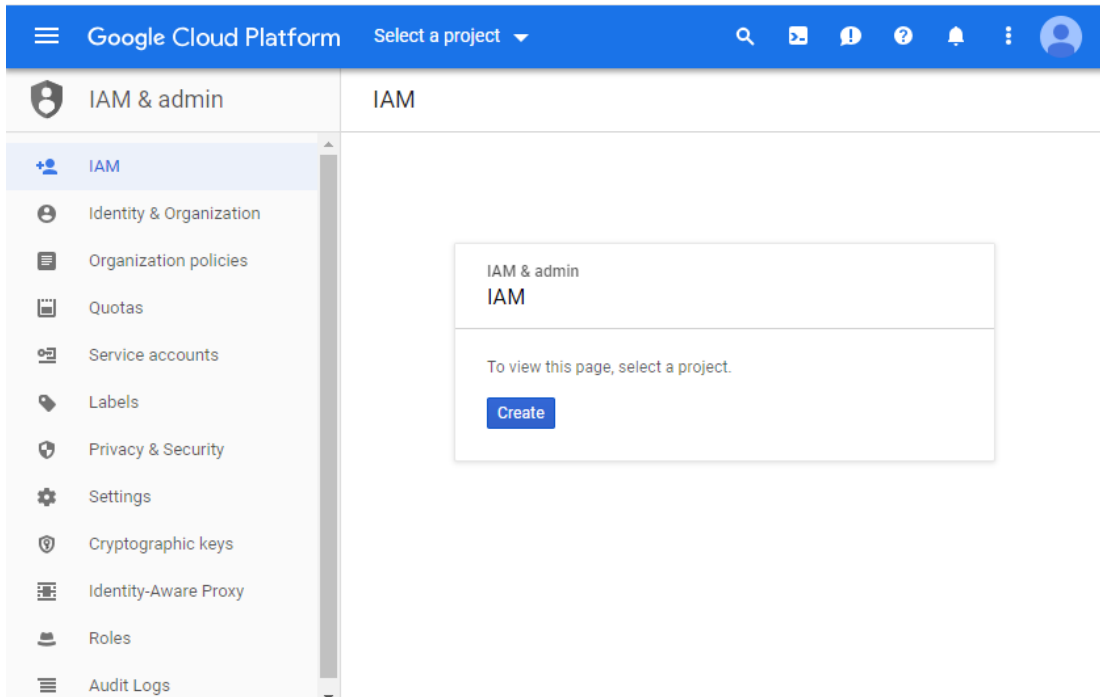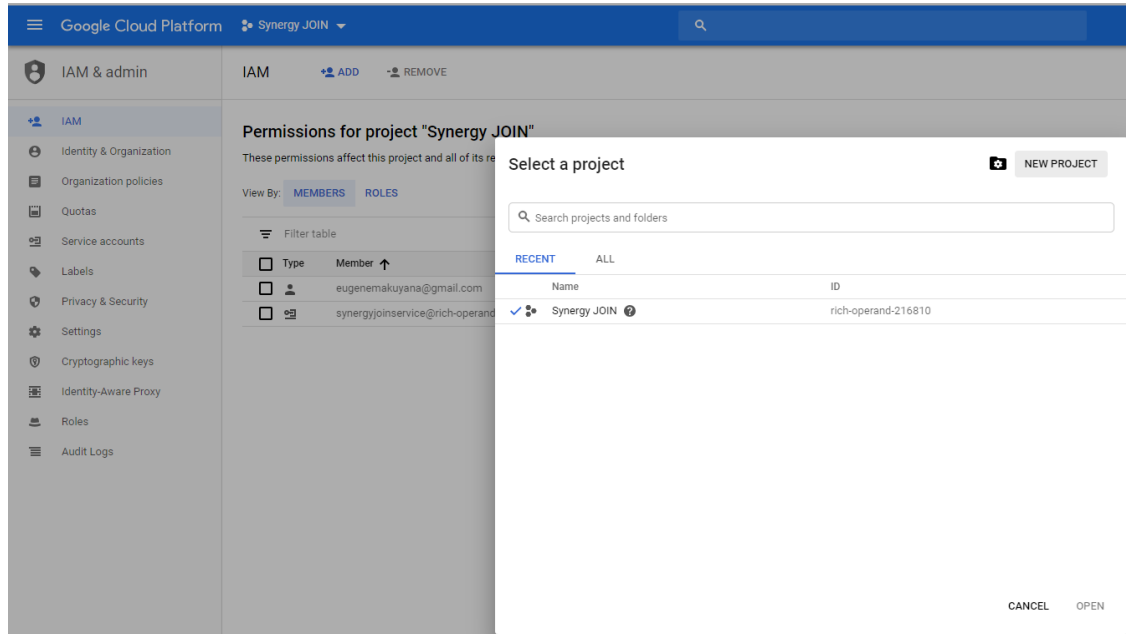
To create new Google Cloud Console project,

- Select IAM & Admin
- Click the 'Create' button.

- Fill in your project name, i.e. 'SynergyJOIN'.
- Select Create

Choosing an Existing Project

Follow these steps if you already have existing projects you would like to use for this project,

- Click on the Project Drop down arrow at the top left corner and you will be presented with the 'Select a Project Window'.
- Select your desired project and click 'Open'

 Enabling API's and Services
You will have to enable API's to work with the project you have created. The API's you will have to enable are Google Calendar API, GMail API & Admin SDK.

- Google Calendar API - To allow reading and updating resource calendars

- GMail API - To allow sending email

- Admin SDK - To allow listing out current available resources from the configuration tool
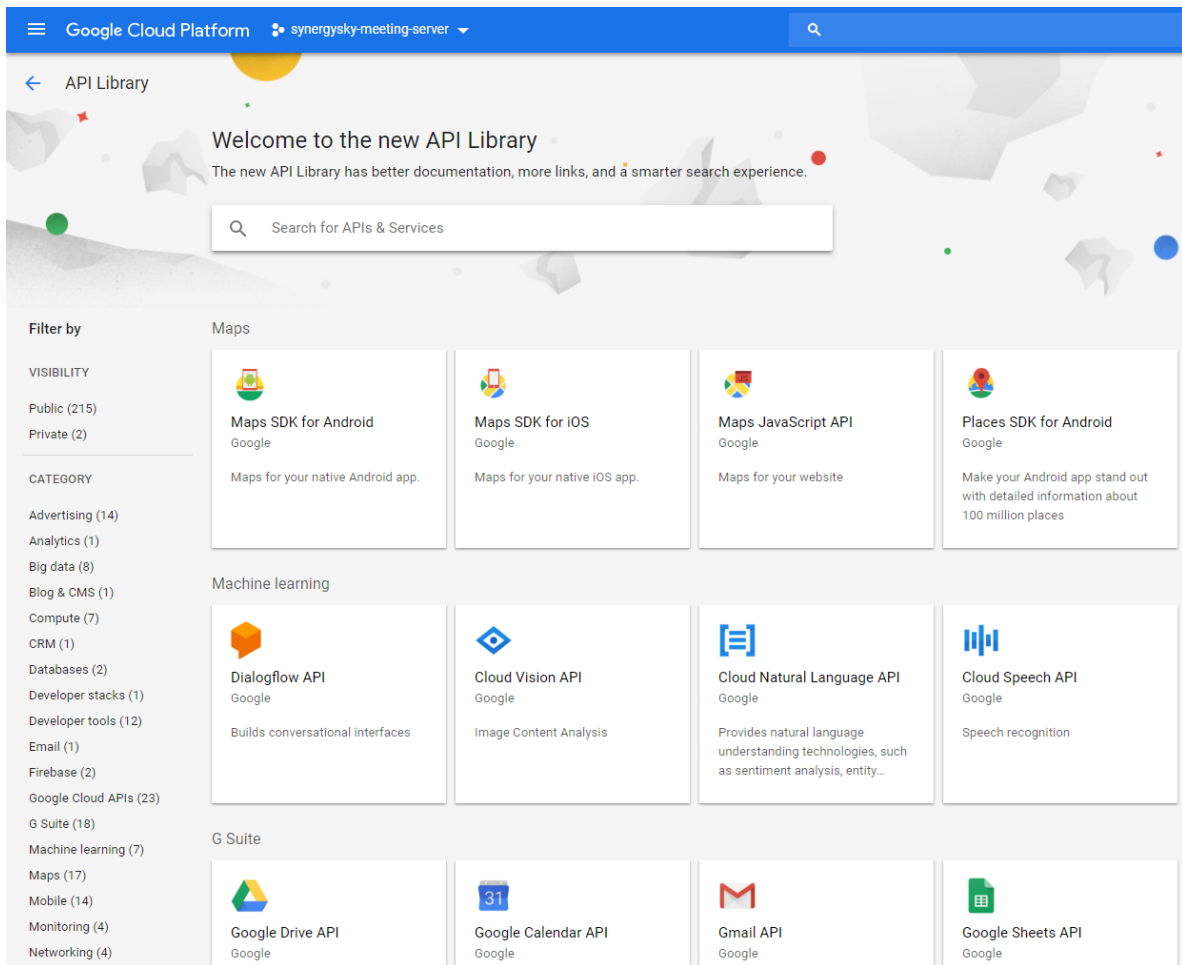
You have to enable one API at a time
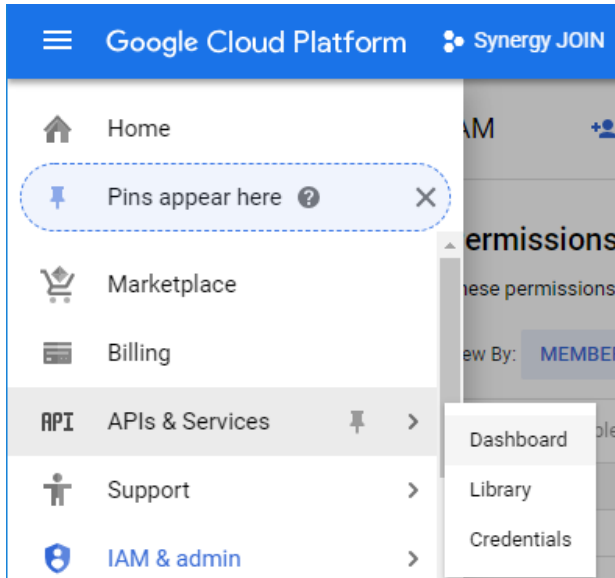
Go to the Menu, Select APIs & Services > Dashboard
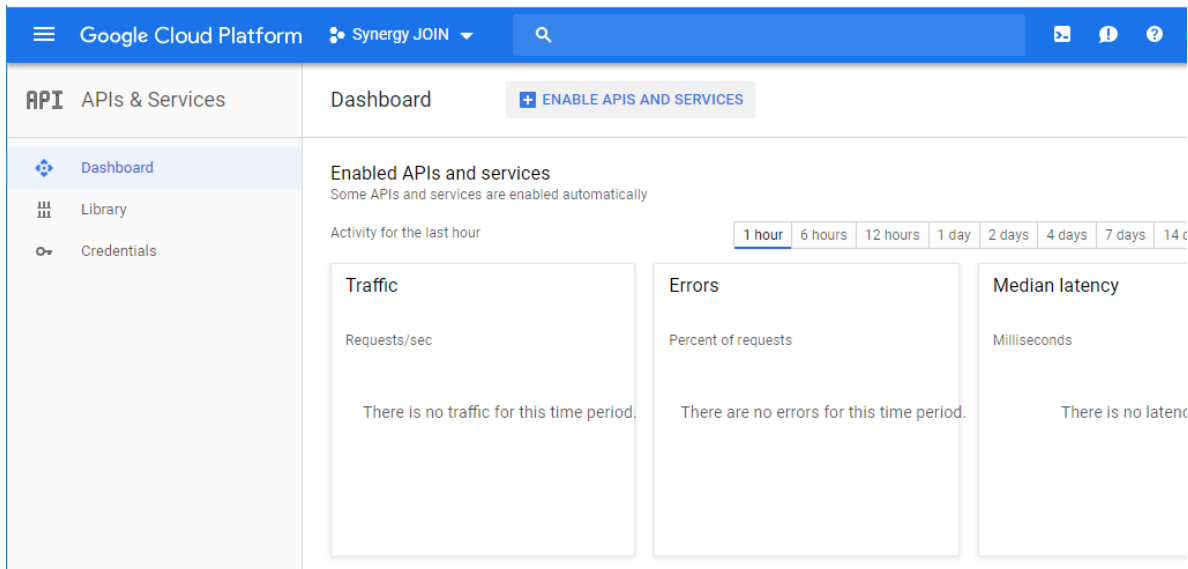
Select 'Enable APIs and Services'

You should now be presented with the API Library.
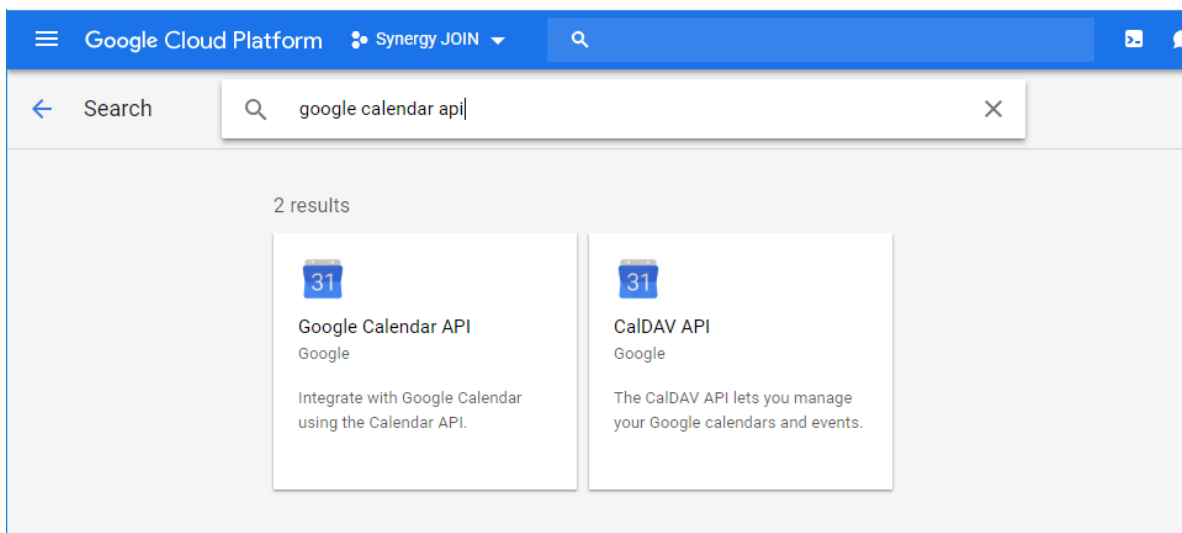
You will have to search for the APIs from this screen.

First, Search for 'Google Calendar API'

Select the 'Google Calendar API.
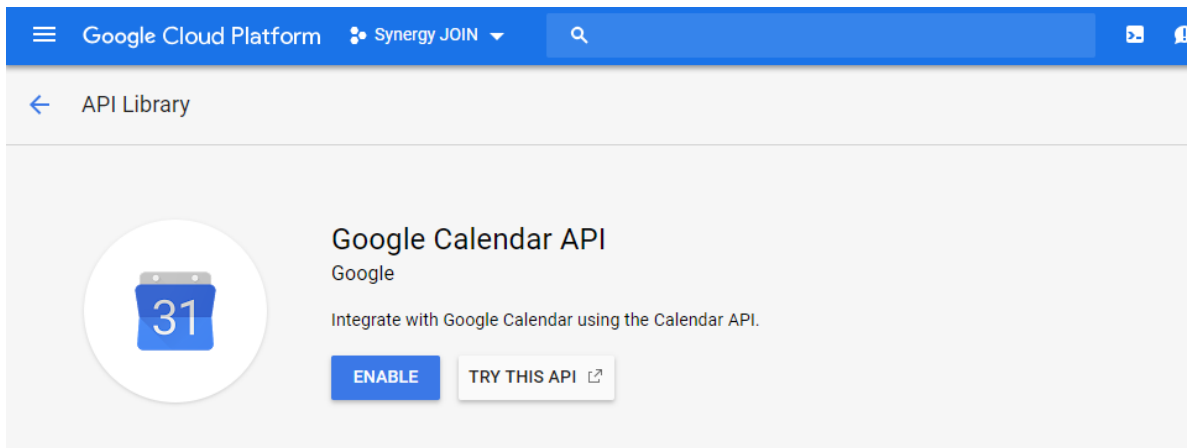
Click Enable
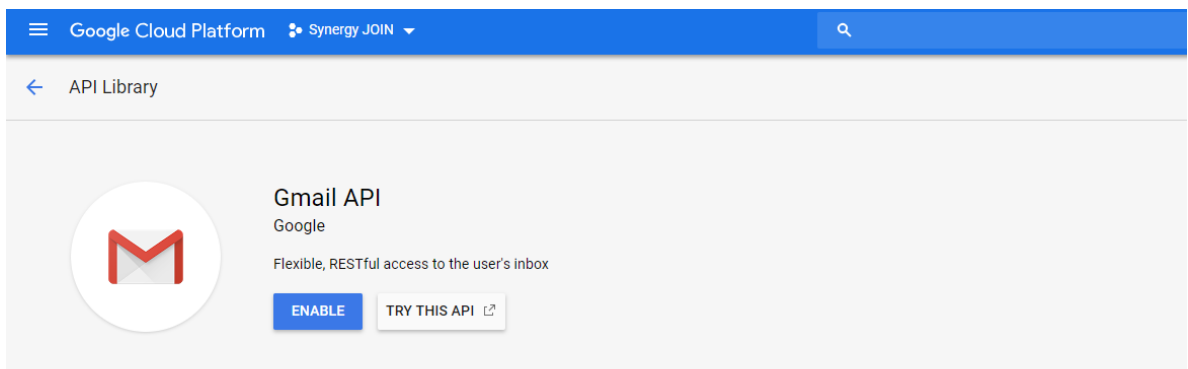
Once you have found this API, you will then have to perform a new search for GMail API

Select Enable for the GMail API
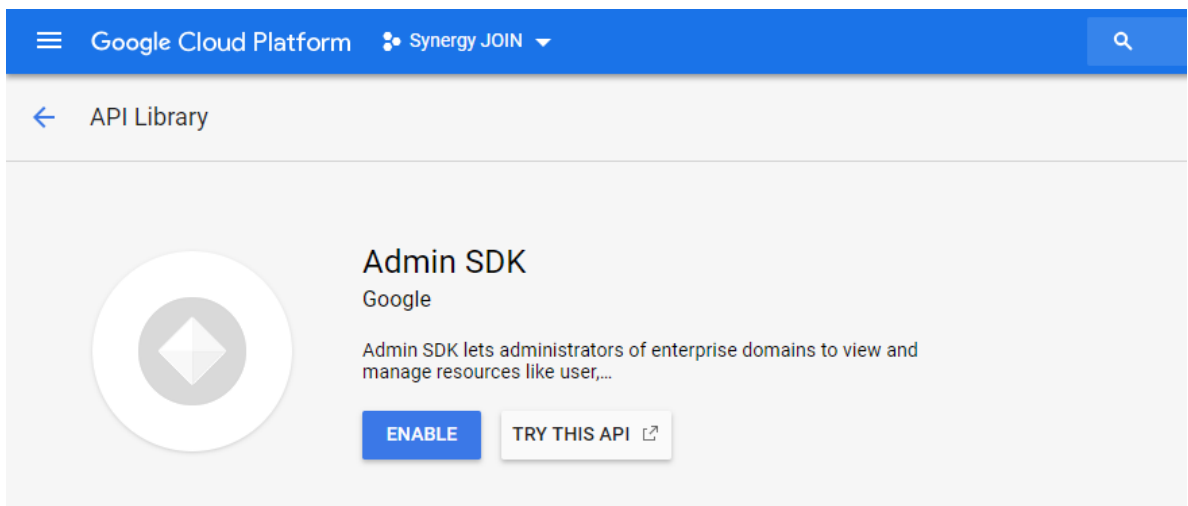
Once you have found this API, you will then have to perform a new search for Admin SDK API

Select Enable for the Admin SDK API

 Creating the Service Account
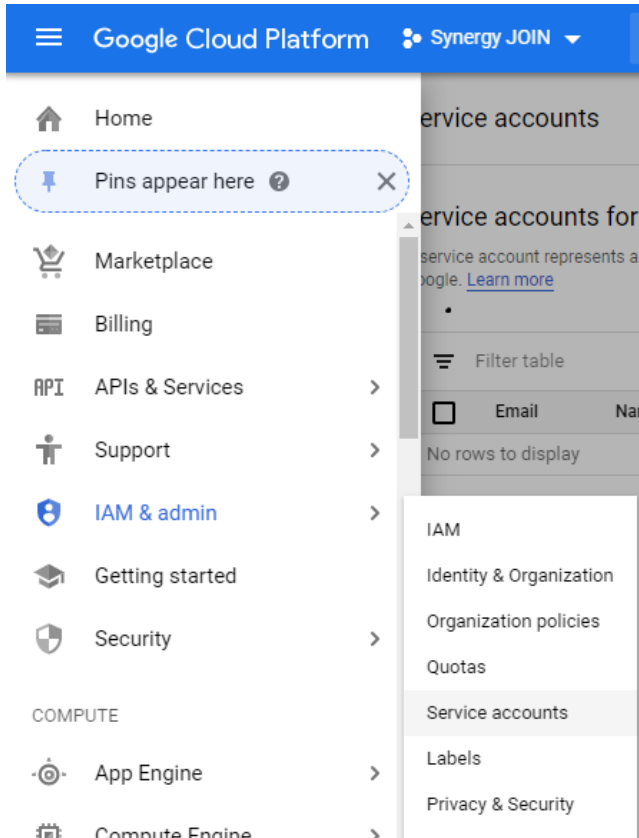
Select IAM & Admin and Choose 'Service Accounts
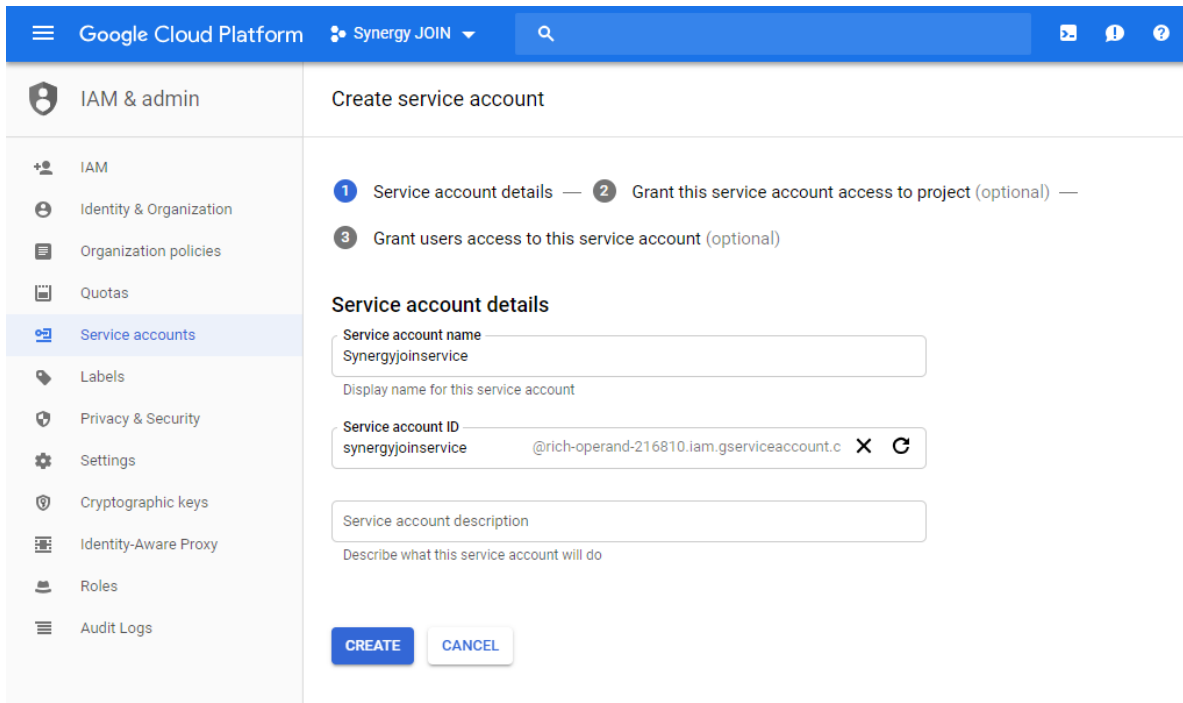
Enter a Service Account Name and select Create
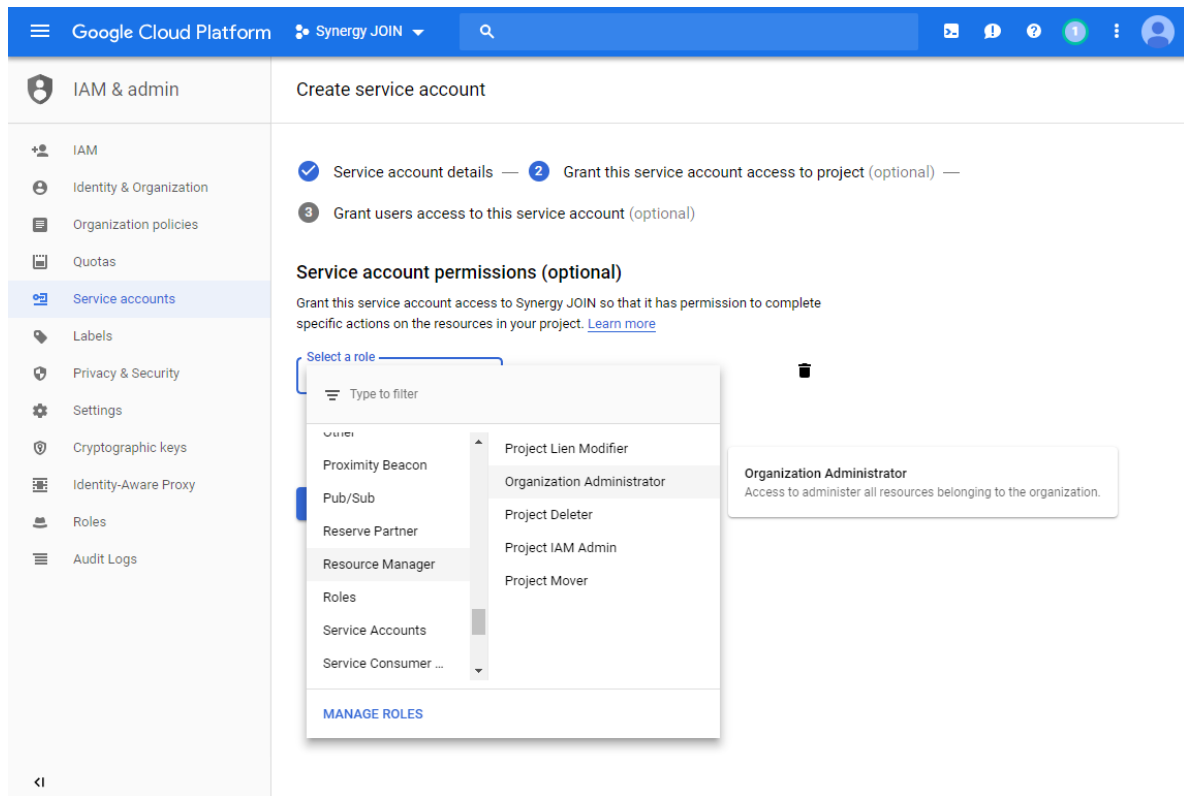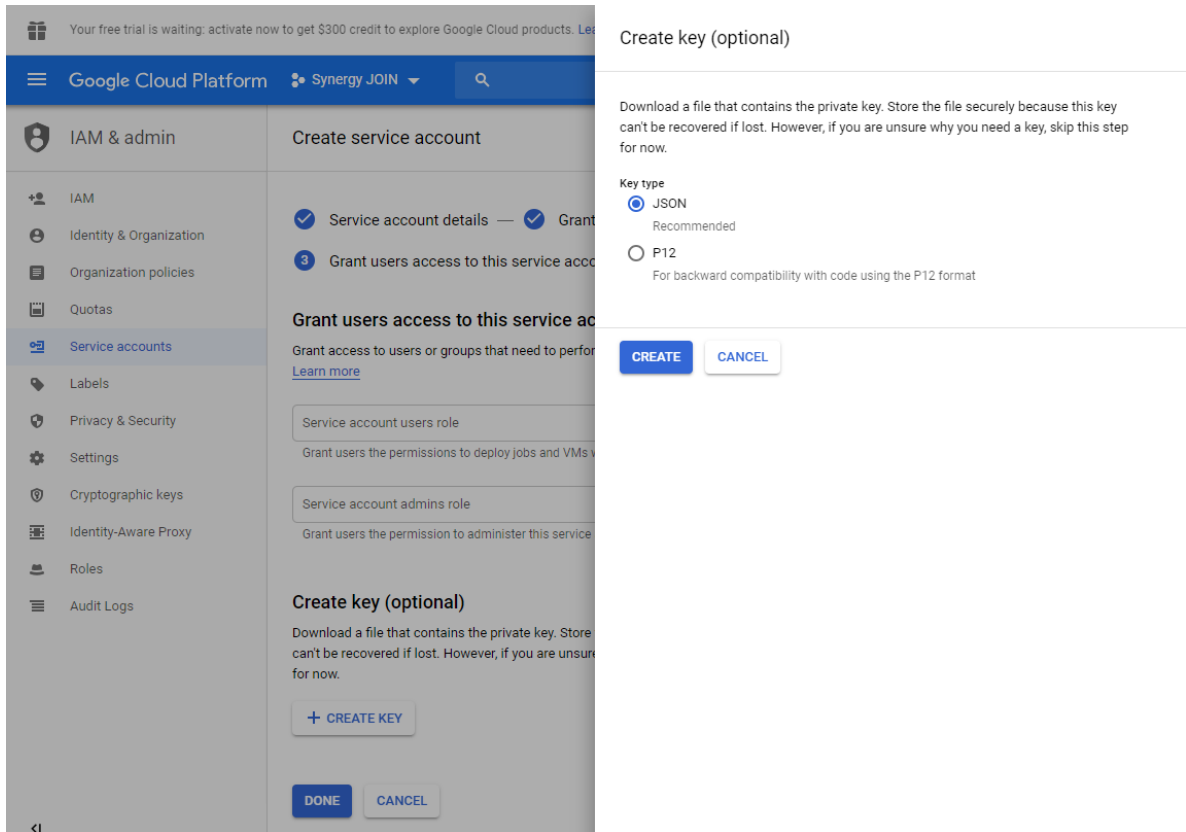
Select the role for this service account. Resource Manager > Organization Administrator.

This will allow the service account to manage the meeting room resources.

Once you have selected the role, Click the 'Create Key' Button.

Create a Private Key for JOIN

On the next screen, choose the JSON radio button and click 'Create'

A file will be downloaded to your disk, this is your authentication information to be used by the JOIN application.

- Copy this file to the same directory as the JOIN application. (i.e. c:\SynergySKY\SynergySKYEnterpriseScheduling).
- Keep a secure copy of this file, as a new service account is required to be created if its lost.

Once you are have moved the file to the same directory as the JOIN application and you click 'Done' you will be presented with a screen similar to the below with your newly created service account visible in the list.
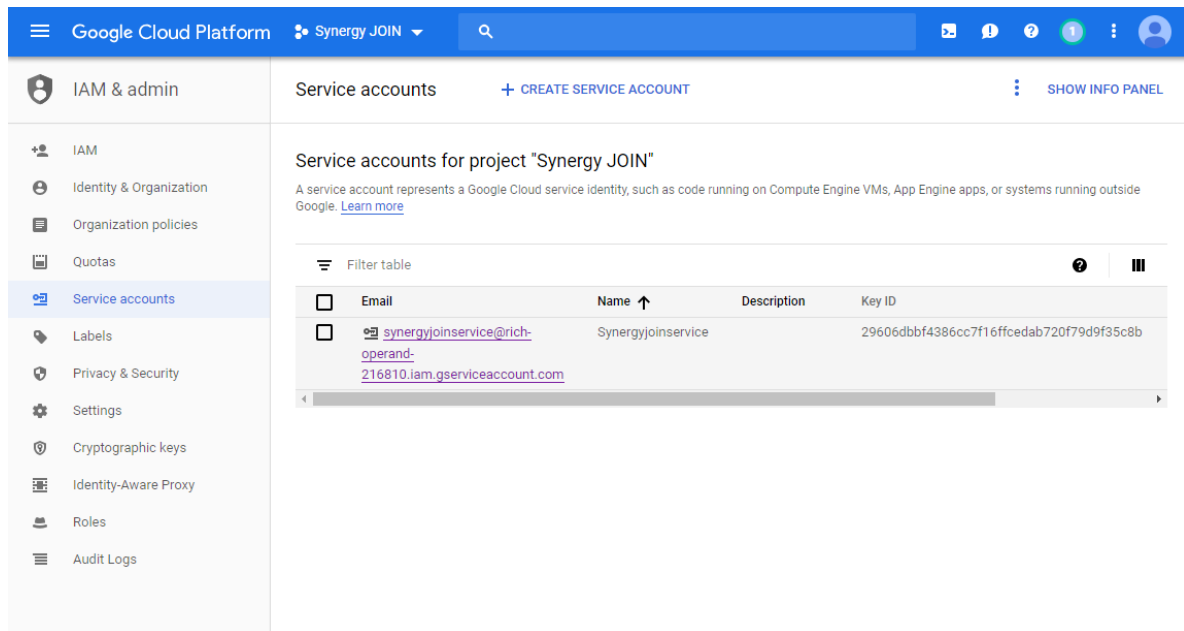
Enable Service accounts to access Calendar Resources
In order to enable Service accounts, find the Service account ID for the service account on https://console.cloud.google.com
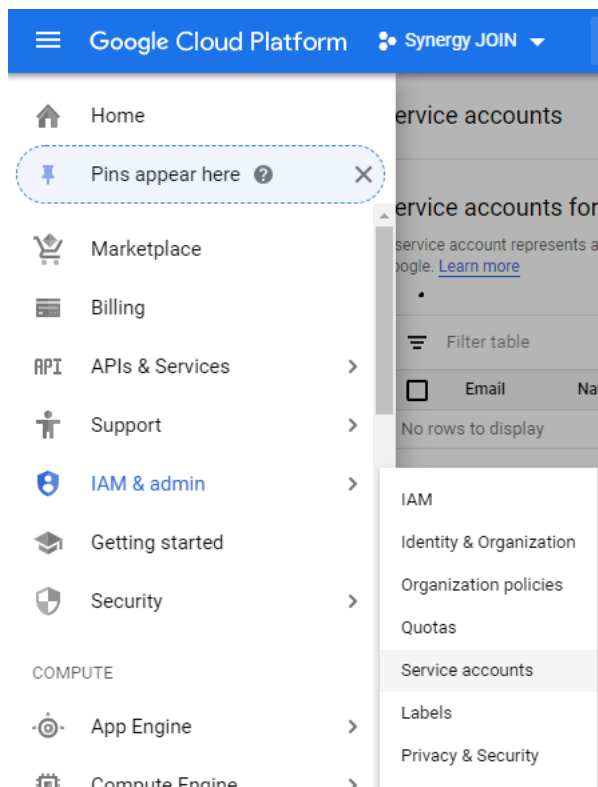
Select IAM & Admin and Choose 'Service Accounts
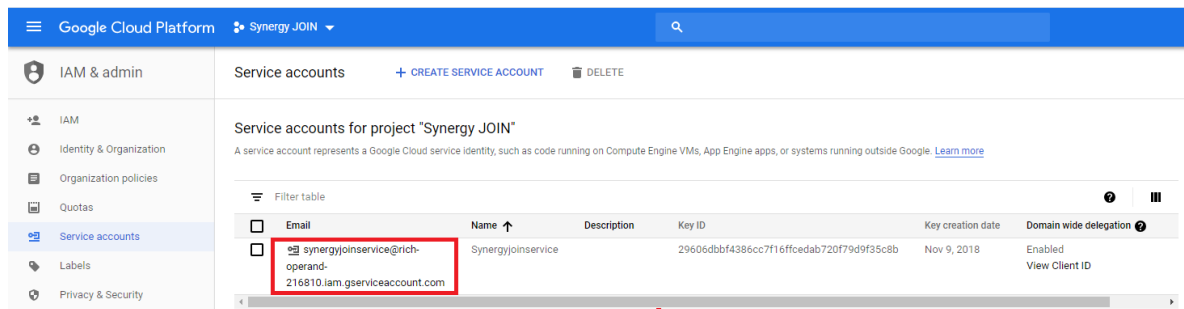
Click into the service account and copy the unique ID on the following Service account details page.

You will need this ID for the next step."

An Administrator of the G Suite domain must complete the next steps

Google Admin Console
Browse to the Google Admin Console https://admin.google.com
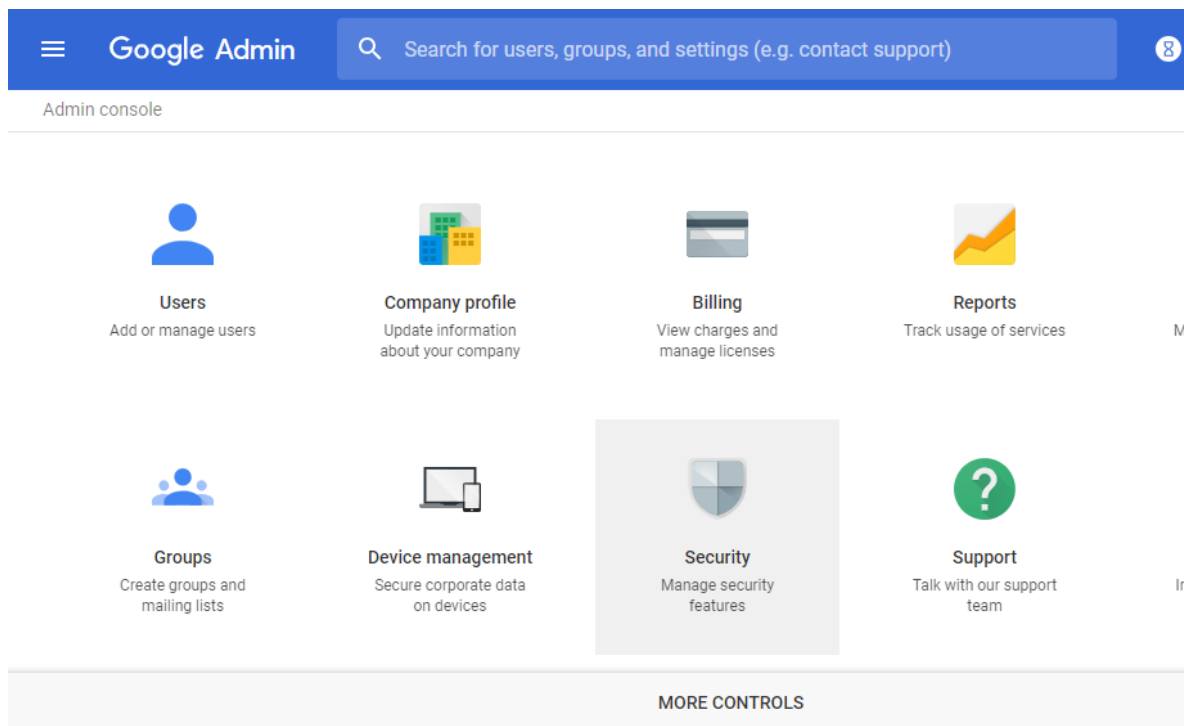
Select Security from the list of controls.

If "Security" is not listed on screen, select MORE CONTROLS" from the grey bar at the bottom of the page to reveal.

N.B If no controls are listed, make sure you're signed in as an administrator for the domain.
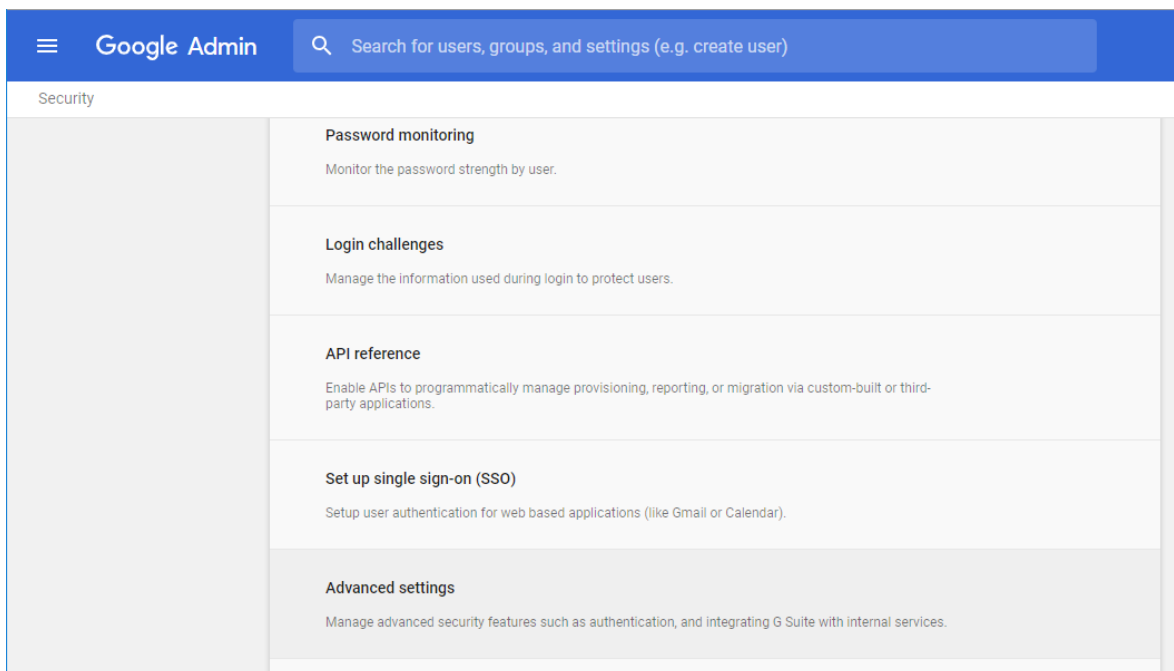
Select Advanced settings from the list of options
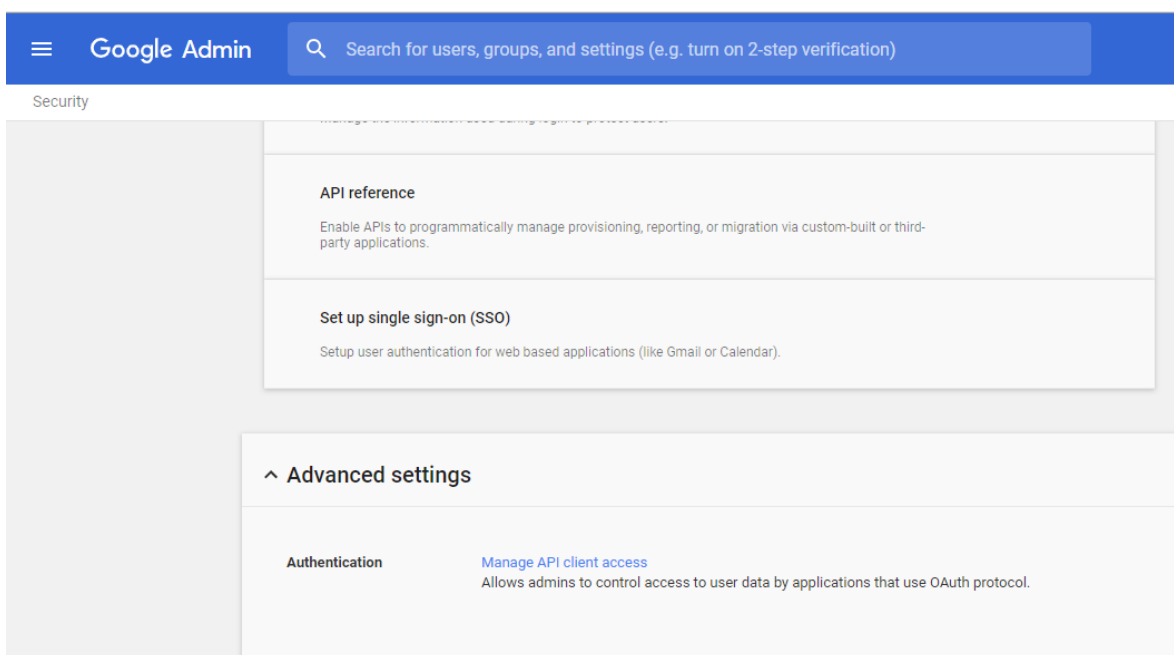
Select 'Manage API client access' in the Authentication section

1. In the Client Name field enter the service account's Client ID or Service account ID (which we copied in the previous step).

In the One or More API Scopes field enter this list of scopes:

https://www.googleapis.com/auth/admin.directory.resource.calendar.readonly
- To populate Available Rooms in the JOIN config tool

https://www.googleapis.com/auth/calendar.readonly
- To allow JOIN to access room calendars enabled in JOIN

https://www.googleapis.com/auth/gmail.send
 - To allow JOIN to send notifications to its administrators as well as dial-in instructions for certain workflows (e.g. one-time VMRs).

https://www.googleapis.com/auth/calendar
 - For workflows requiring calendar invitation updates, such as the green button for Polycom endpoints (if the EWS emulator is not used) or meeting invitation body updates, JOIN also must have a write calendar access for those rooms.

https://www.googleapis.com/auth/calendar.events
 - For workflows requiring calendar invitation updates, such as the green button for Polycom endpoints (if the EWS emulator is not used) or meeting invitation body updates, JOIN also must have a write calendar access for those rooms. If no body updates are required and read-only priviledges ares sufficient, then this API scope can be used as a minimum: https://www.googleapis.com/auth/calendar.events.readonly

Note: All of the scopes are required for the integration of Synergy JOIN with Google G Suite. It is not possible to exclude some of the scopes as this will cause parts of the integration not to work

You can copy and paste the below api scopes as they are into the 'One or More API Scopes' field box

https://www.googleapis.com/auth/admin.directory.resource.calendar.readonly, https://www.googleapis.com/auth/calendar,https://www.googleapis.com/auth/calendar.readonly, https://www.googleapis.com/auth/gmail.send,https://www.googleapis.com/auth/calendar.events

Click Authorize.

The outcome should look like the below example:

Service-act-on-behalf-of Email

Browse to the dashboard and select 'Users'

In the Users section, select the user that you would like to use as the 'service-act-on-behalf-of Email' in Synergy JOIN.

Scroll down to the 'Admin roles and privileges' section and verify that the user you would like to use has the role of 'Super Admin' enabled.

Once you have verified this, copy the email address from this user and paste this into the 'service-act-on-behalf-of email' text button in the 'General Settings' tab in the Synergy JOIN configuration tool.

Quick Setup Guide

Start the configuration tool by double-clicking the SynergySKY Config icon on the desktop.
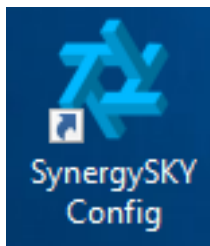
General Settings

Important Note: Whenever you save your changes, these changes will not take effect before you go to **Config Tool ==> Configuration Versions** and select the **'Current'** configuration and click the **'Deploy Configuration'** button.

Adding a License Key

The first thing you will need to do when installing JOIN is to add a product license. Click on the Licenses Tab and enter the API Key provided by Synergy SKY or Synergy SKY Partner and click VALIDATE. If you do not know what your API key or license key is, please see Obtaining and Adding a Product License.
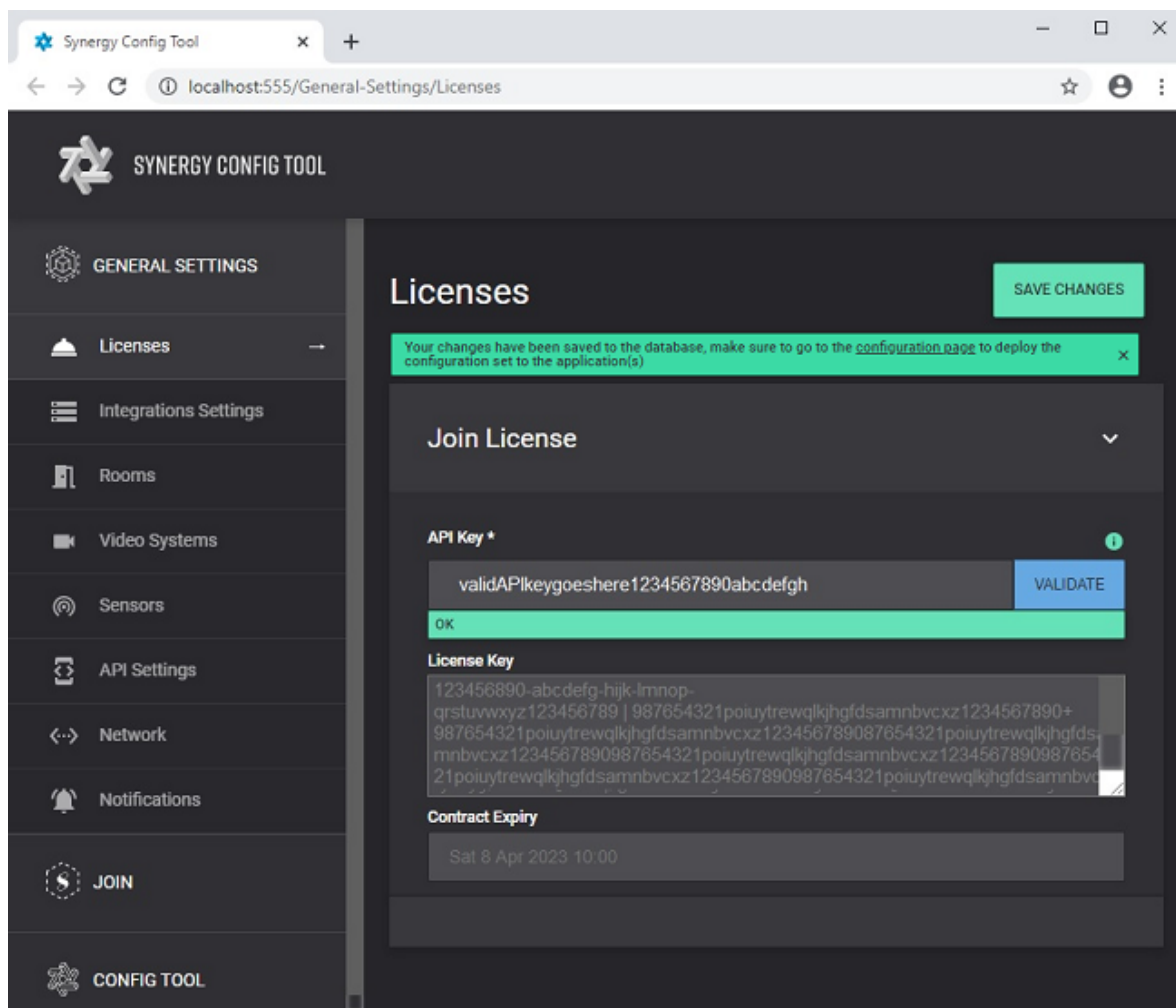
- Once it has returned a green OK, click SAVE CHANGES at the top right of the screen
- A green notification bar will appear asking to make sure configuration changes are deployed. This can be left to the end of initial configuration.
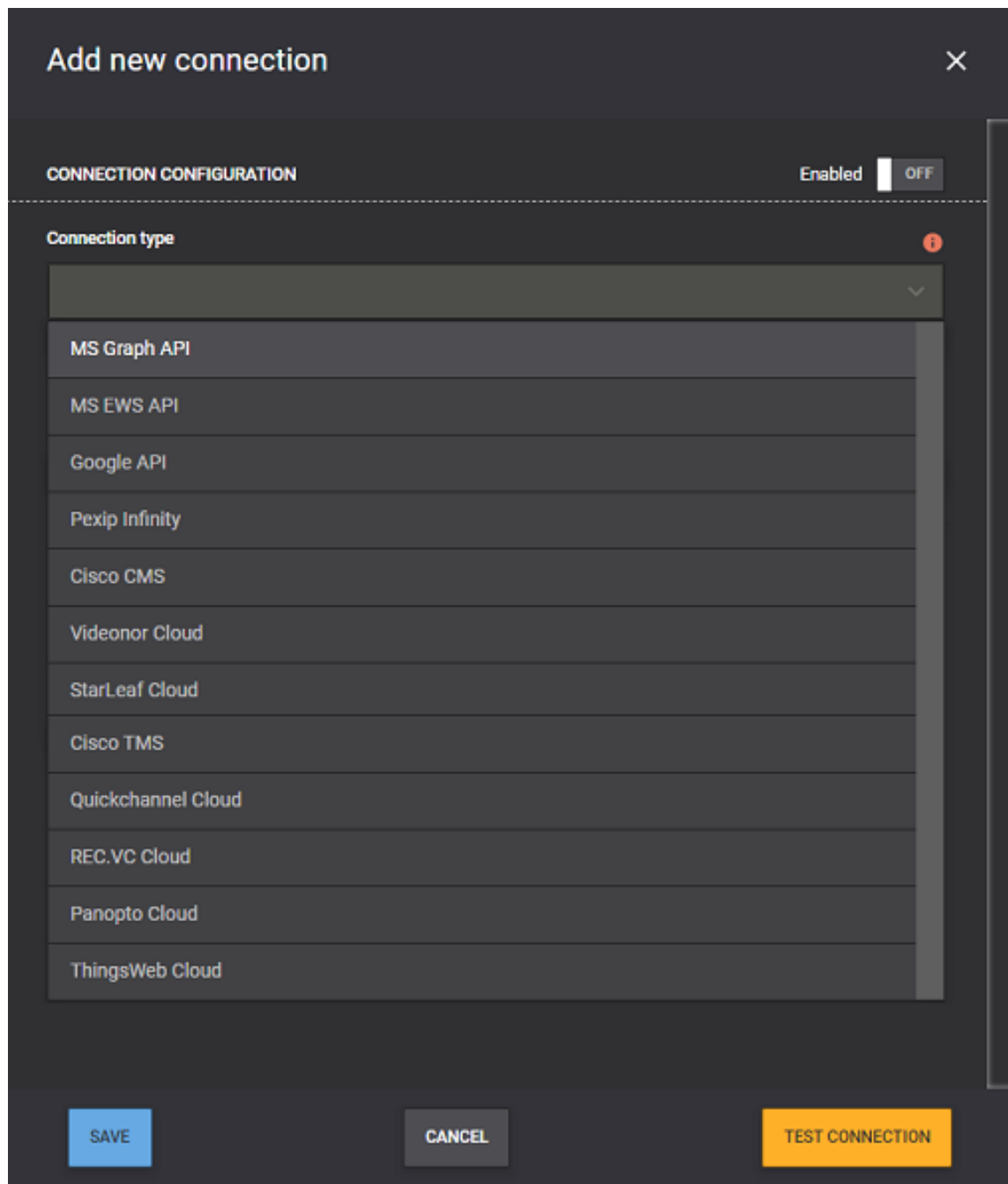
Integrations

In the Integration Settings tab you can add different mandatory and optional integrations like Calendar, MCU Provisioning and CDR pulling, sensors and recording solutions. In the How To section, you can read more about how you configure the integrations.
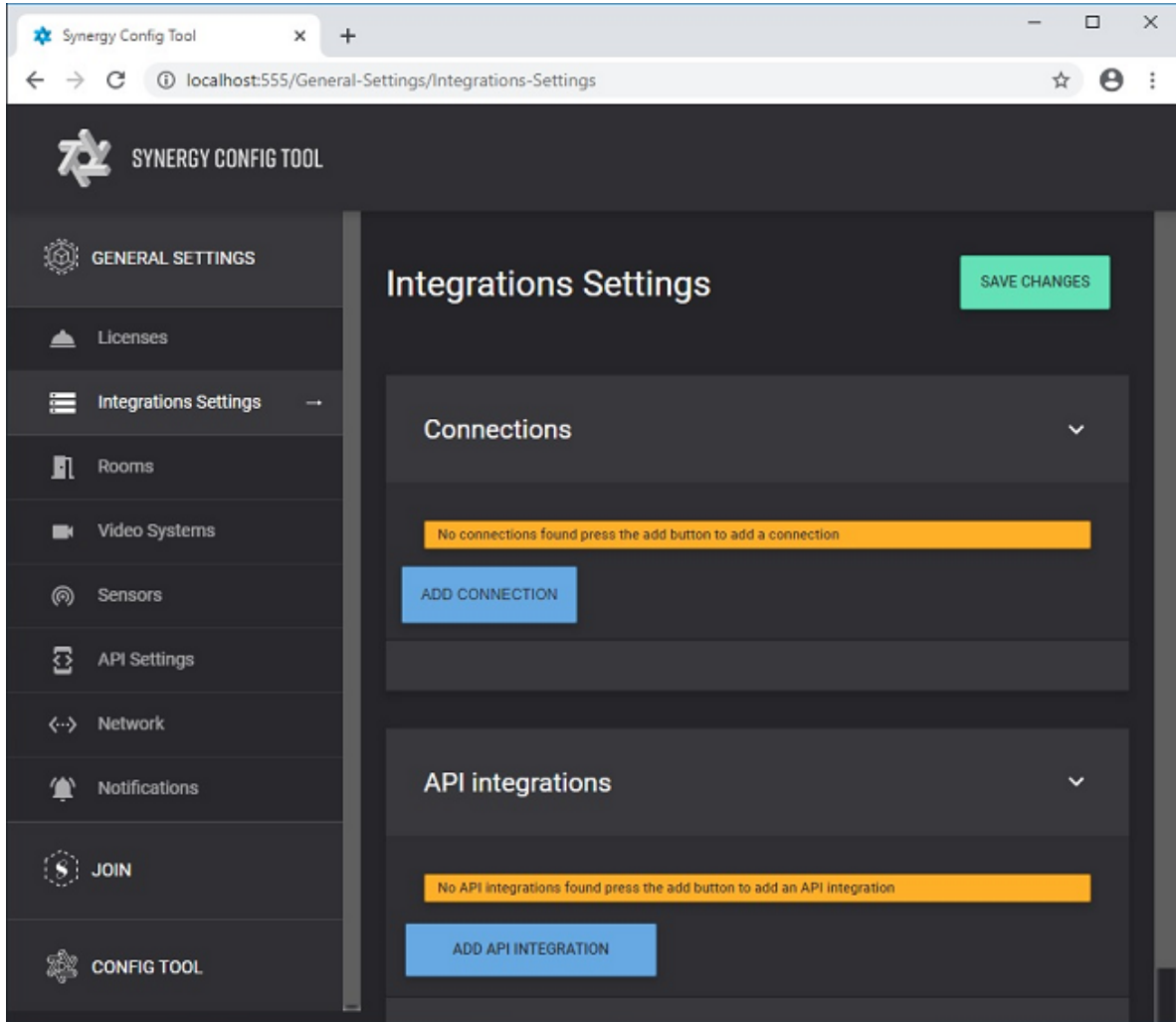
- To begin, click on ADD CONNECTION under the Connections heading and select a calendar integration to connect to under Connection Type

- ○ N.B. For this guide, configuration to Microsoft Exchange O365 using Graph API will be shown. JOIN also supports integration with Microsoft Exchange On-Prem and Google GSuite. Click the links to see more details on how to configure JOIN with the different calendar services.

- Create a name for the Connection and then fill in the required connection information and click SAVE, then SAVE CHANGES on main screen. Testing the connection will fail at this time

- This information should be provided/configured by an Exchange Admin prior to the configuration process of Synergy JOIN.

- Click on ADD API INTEGRATION button

- Select Calendar under the Used for heading and the Name set above should be available under Connection heading
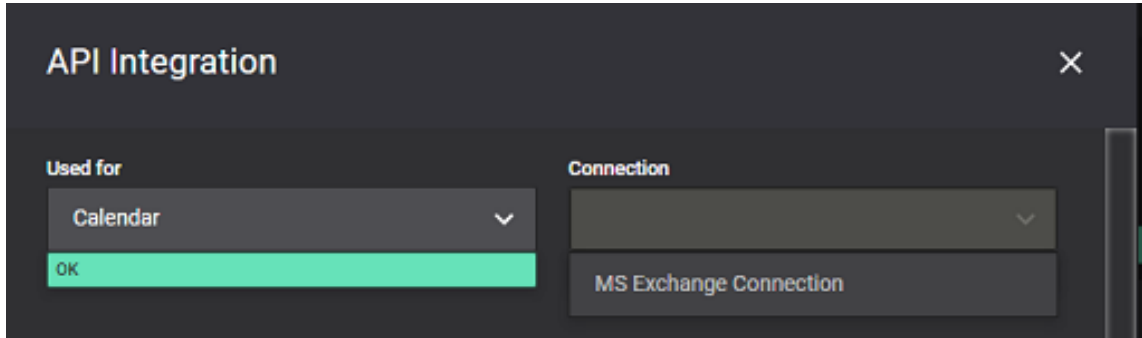
- Once selected, the Connection information configured previously will be displayed with a required section under it for Act on behalf of Email to be updated. Once done click SAVE and then SAVE CHANGES on main screen
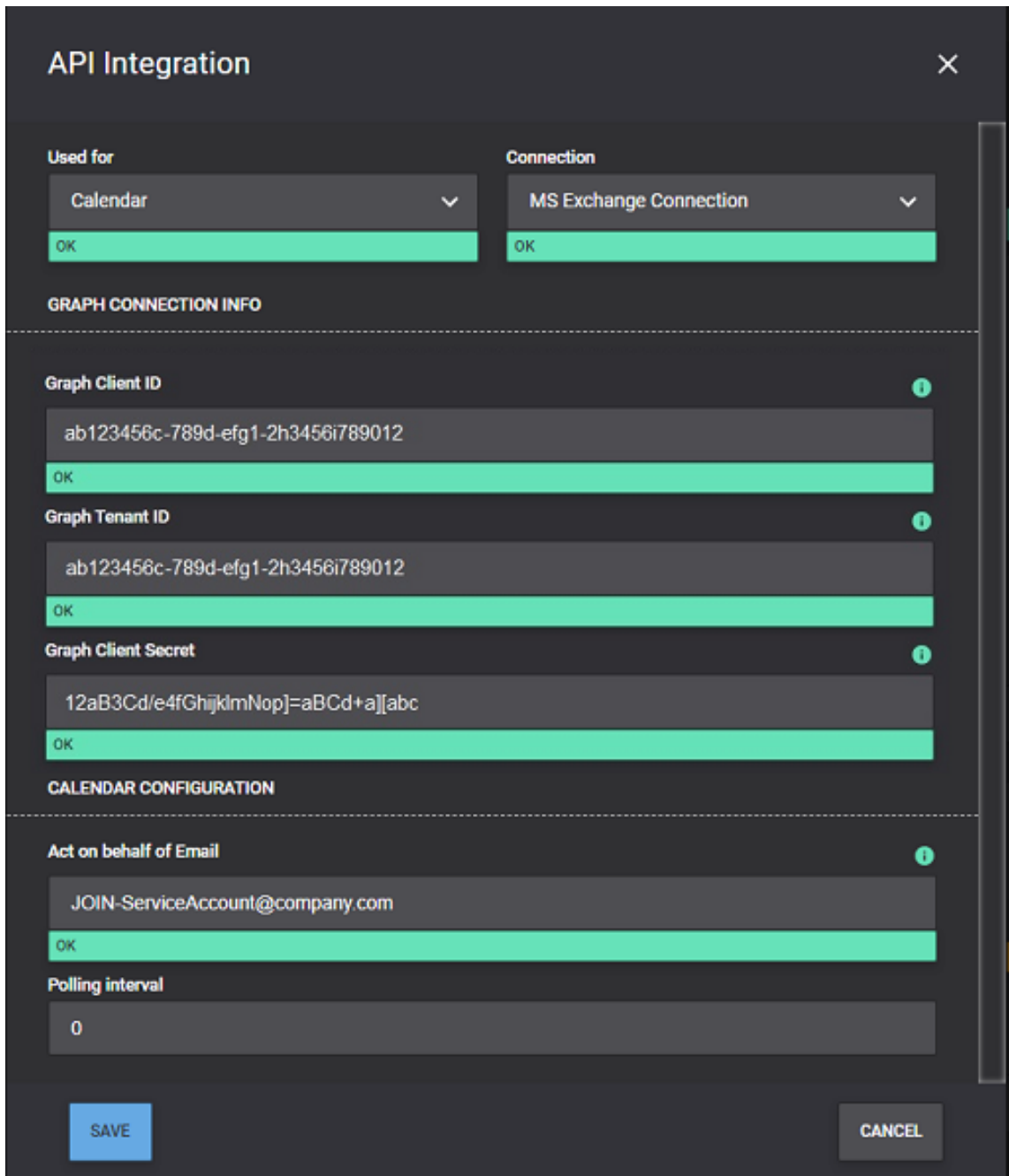
- Click on Edit for the Connection previously configured, toggle Enabled to ON and then click TEST CONNECTION. A green bar with Tested should appear. Click on SAVE and then SAVE CHANGES on the main screen.

Adding Rooms

In the Rooms tab, you can add the meeting room resources that you would like JOIN to monitor.
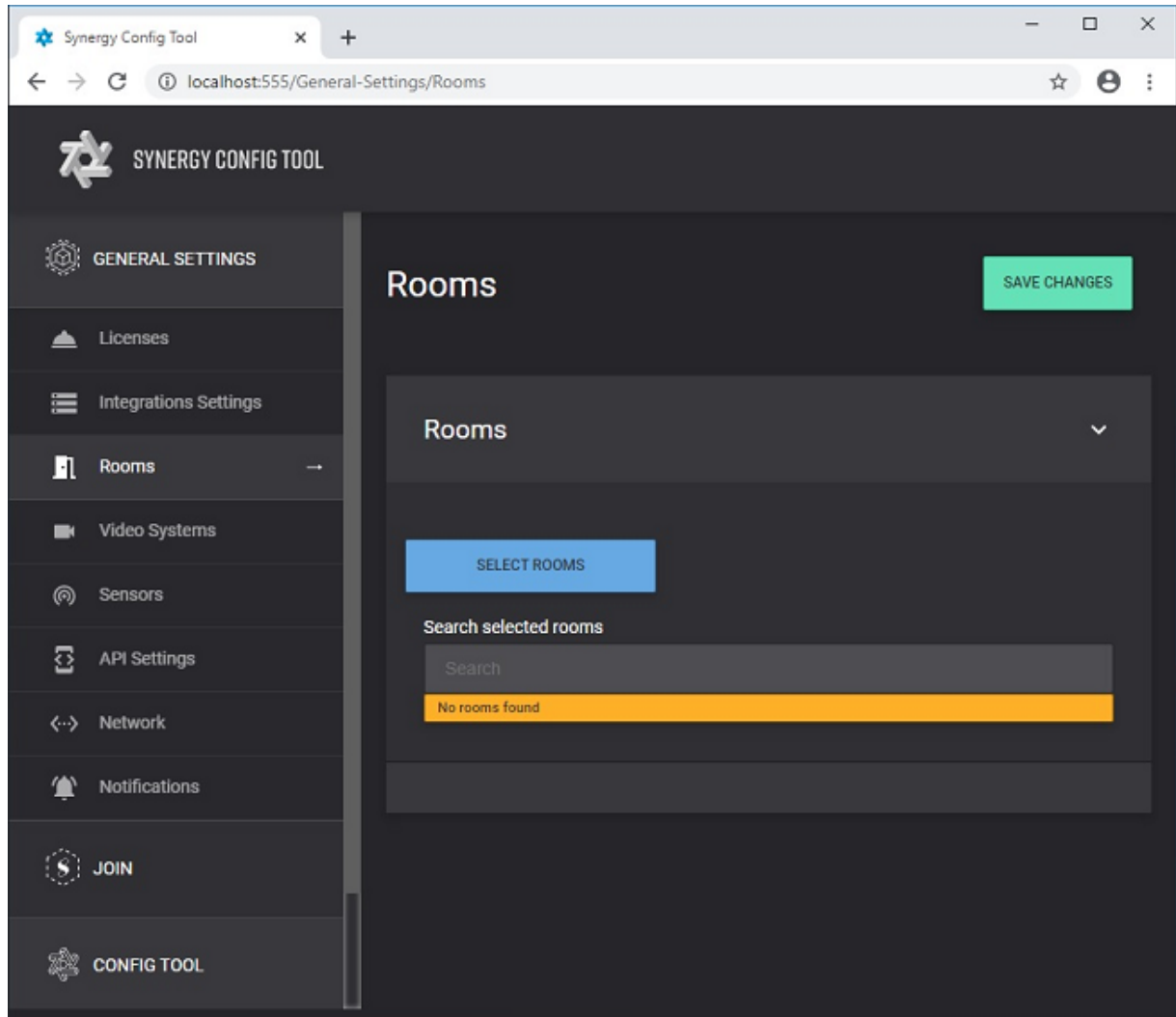
- Click the SELECT ROOMS button and the Room list will be populated by Exchange (or Google if configured for use). Select room(s) to be configured and click ADD SELECTED ROOMS or manually add a room by clicking the ADD ROOM MANUALLY and filling in the Name and Address of the room.

- Once rooms have been selected/added click on SAVE CHANGES in the top right of the main screen

Adding Video Systems

Click on the Video Systems Tab to add video conferencing endpoints and associate them to the meeting rooms added.

- N.B. A Bulk Import of Video Conferencing endpoints can be performed for large deployments. Contact a Synergy SKY Representative or Synergy SKY Partner for assistance with bulk imports.
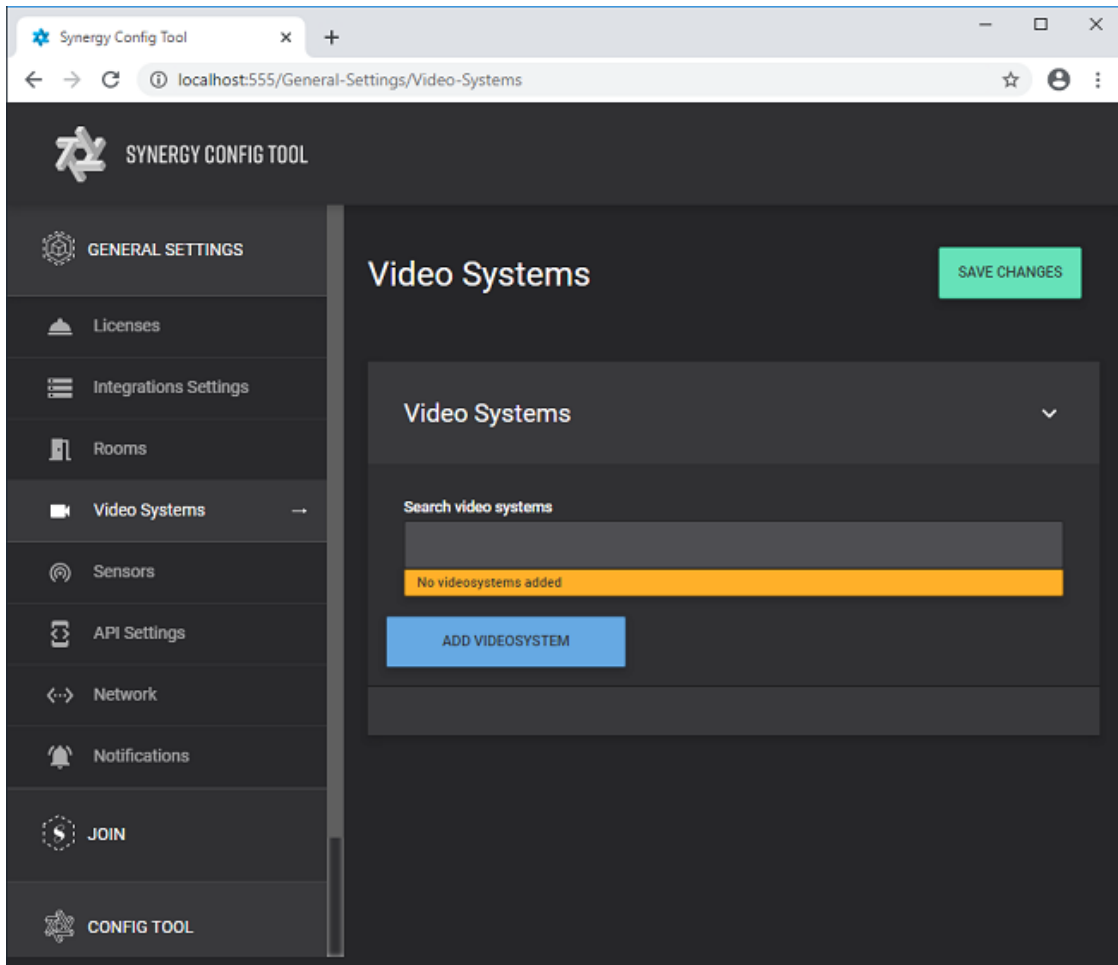
- Click on ADD VIDEOSYSTEM, select the Room to associate it to from the drop down box and fill in the specifics for the Video Conferencing endpoint.
  - N.B. The below example has been configured for a Cisco endpoint. The Serial number will be populated once connected.

Click SAVE and then SAVE CHANGES on the main screen once completed

For more detailed information on adding video systems, please refer to this guide.

Adding Sensors (optional)

JOIN can be integrated with IoT sensors from Things Web for meeting room occupancy detection. If sensors are to be utilized, they can be enabled within the Sensors Tab. For more information relating to sensors please refer to this guide.
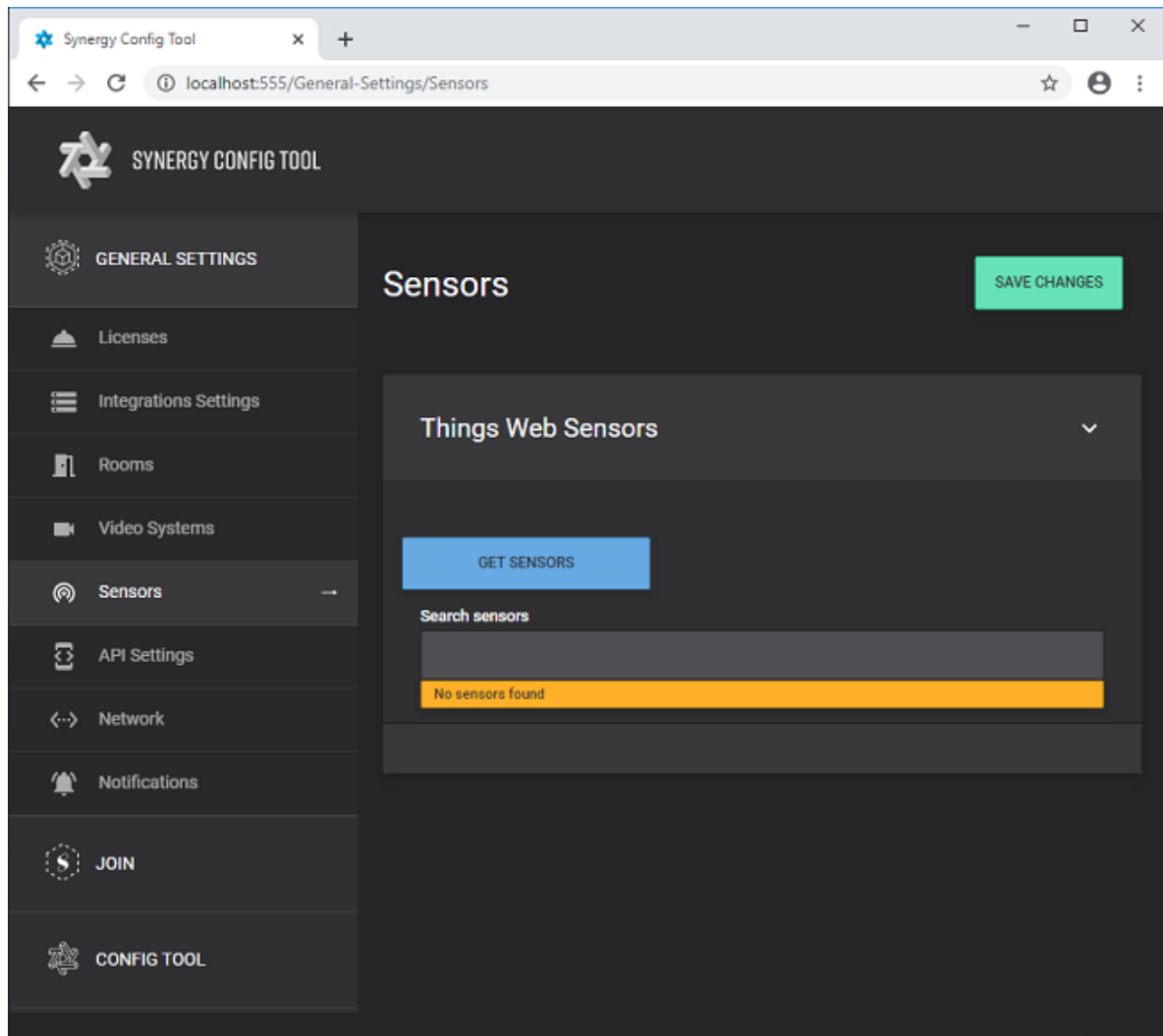
Poly EWS Emulation (optional)

If Poly/Polycom endpoints require, EWS Emulation can be enabled within the API Settings Tab. For more information relating to Poly/Polycom endpoints and EWS Emulation, please follow this guide.
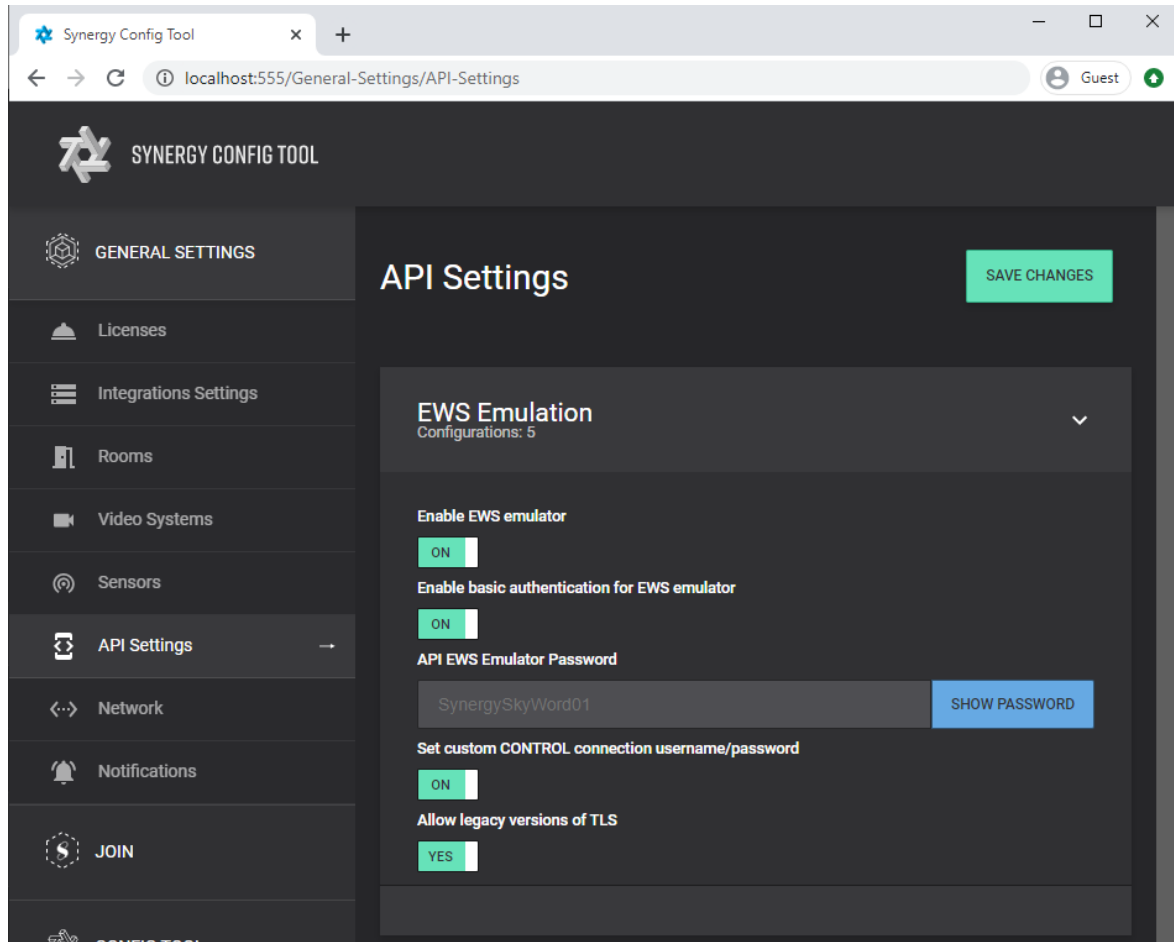
Proxy Settings (optional)

If a proxy services is required for JOIN to communicate with devices or internet, this can be configured within the Network Tab. For more information relating to Network Proxy configuration, please follow this guide.
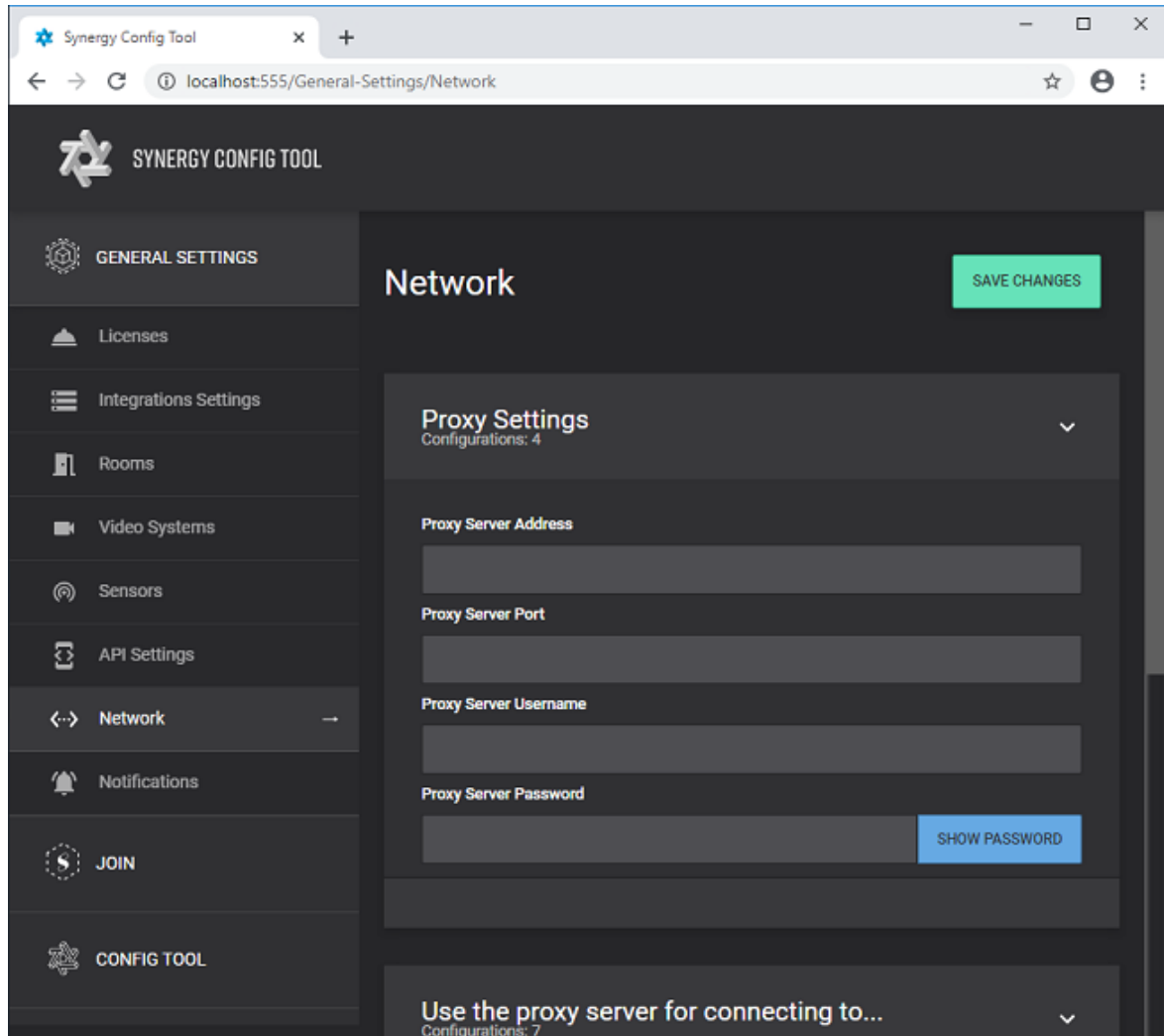
Notifications (optional)

Click on the Notifications Tab to add an Admin Contact Email Address or commaseparated list of email addresses and toggle on or off the notifications to be received.
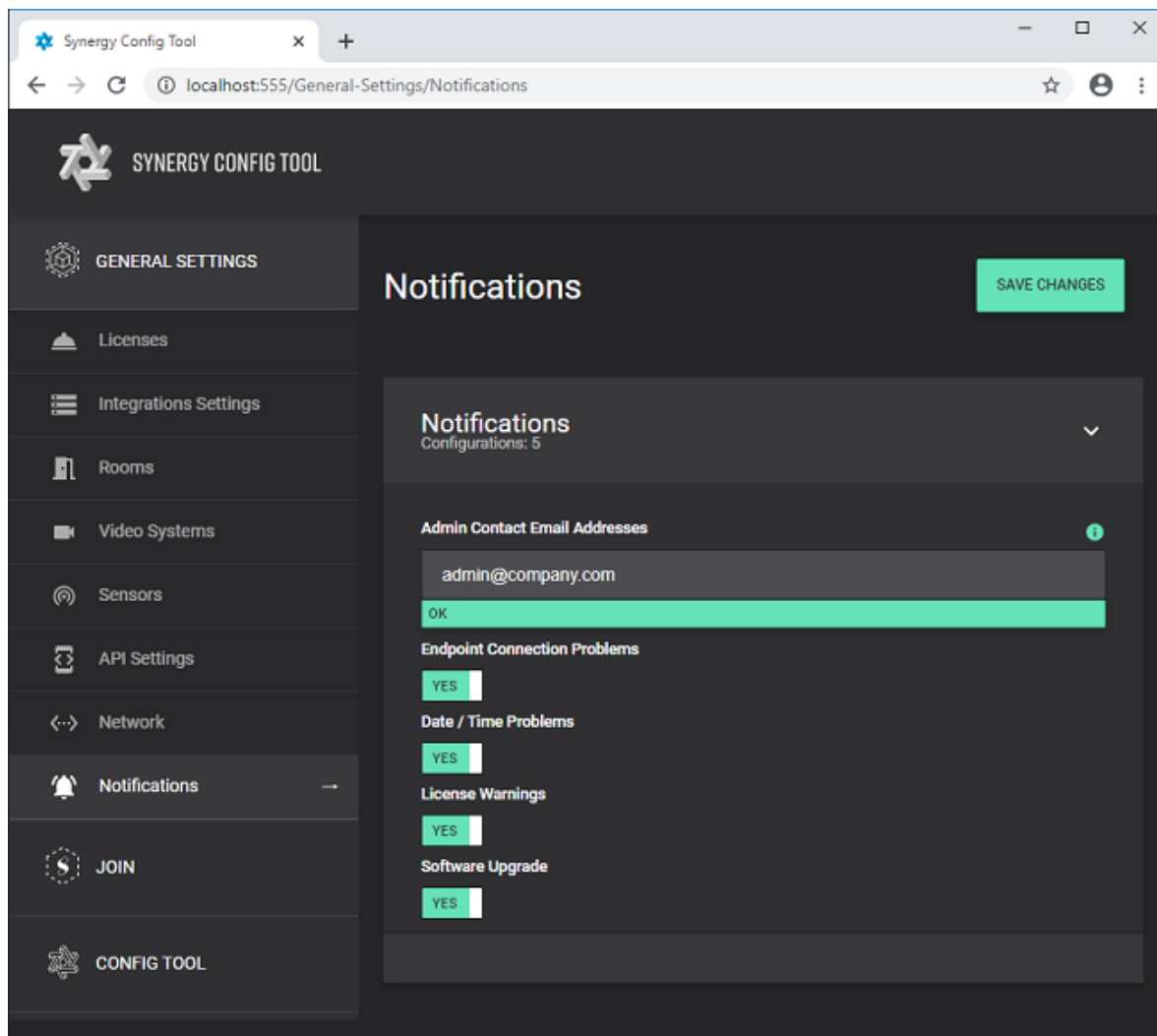
- Click on SAVE CHANGES button on main screen when complete.

Setting Name	Description
Notifications	Contact details for the administrator who should receive notifications of any problems in the platform, for example if JOIN fails to push Cisco OBTP or Polycom OTD information to endpoints.
Admin Contact Email Addresses	The email addresses of administrators who will receive email notifications for the specified events. Use a comma to separate multiple email addresses.
Endpoint Connection Problems	An email alert will be triggered if JOIN has problems connecting to one or multiple endpoints.
Date / Time Problems	An email alert will be triggered if JOIN detects date or time differences between the endpoint and the server time.
License Warnings	An email alert will be triggered if the license is about to expire.

JOIN

Matching Rules

Create matching rules for Cisco One Button to Push (OBTP) or Poly/Polycom One Touch Dial (OTD) by expanding the JOIN heading on the navigation bar and selecting the Matching Rules Tab. The matching rules concept and different examples are discussed more in detail in this guide.
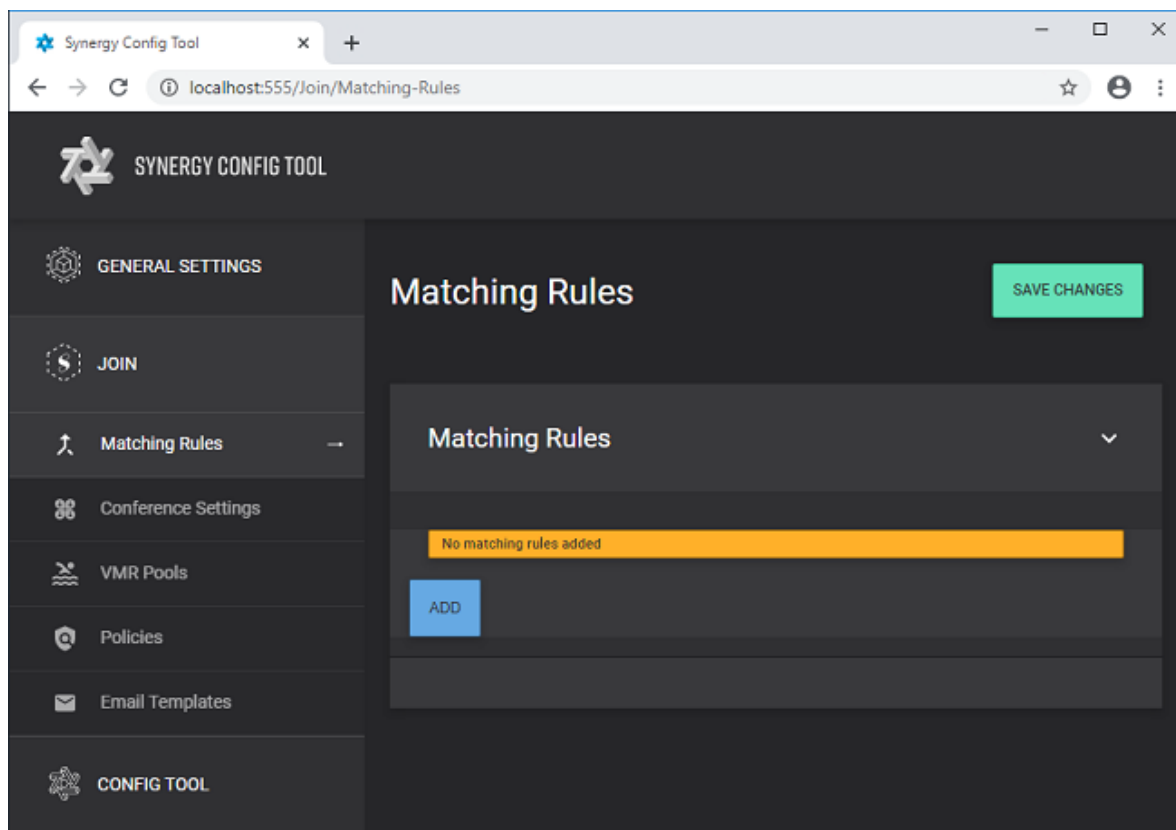
- Click on ADD to create a new Matching Rule.
- Give the Matching Rule a name and select the Rule Type to create.
  - N.B For this example a Regex Rule for Zoom will be created. Matching Values can be manually created, however templates for widely used services exist by pressing the BUILD REGULAR EXPRESSION button.
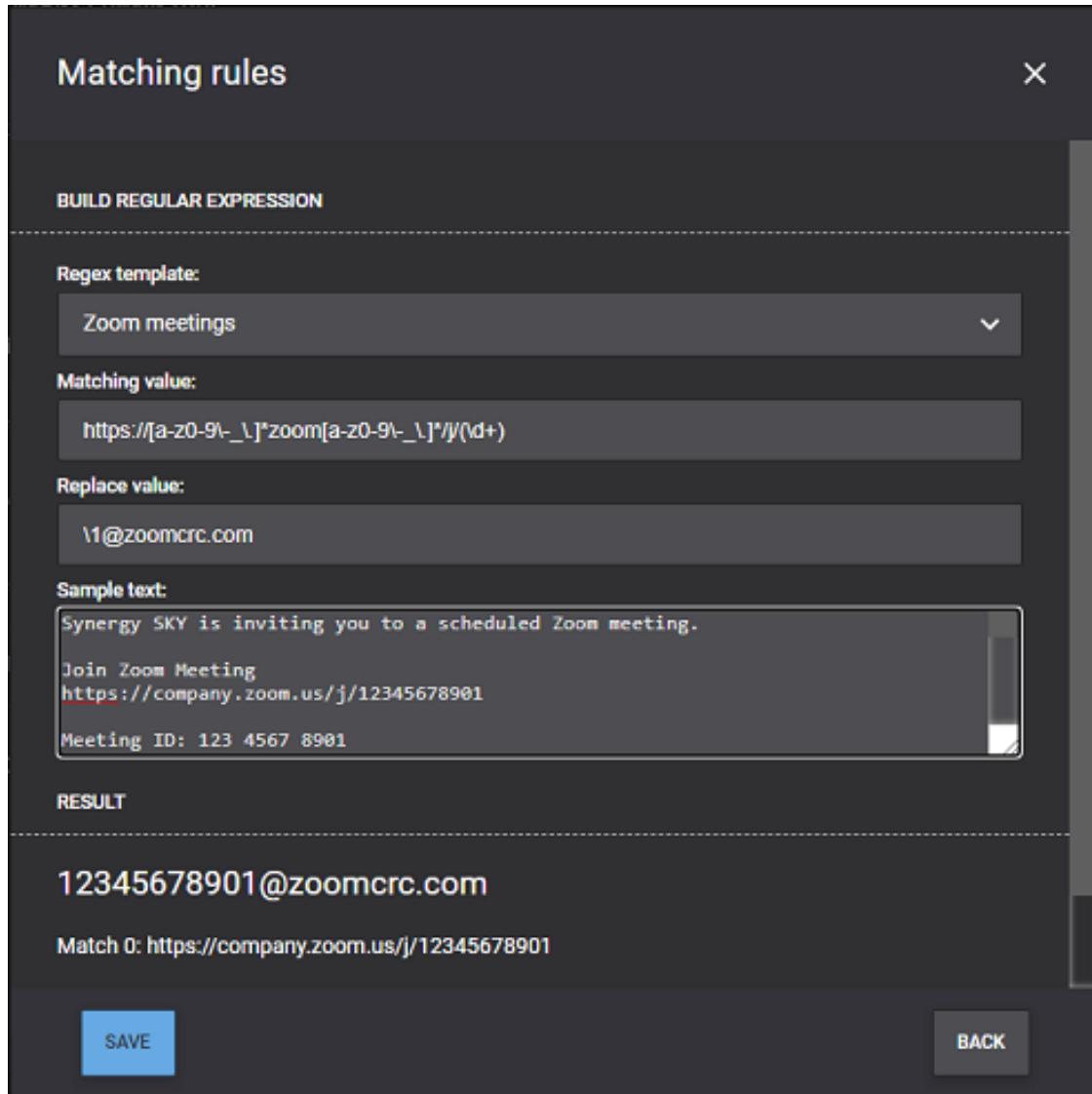
- Click on the BUILD REGULAR EXPRESSION button and select Zoom meetings from the Regex template drop down box. This will populate the Matching Values to get the details from a standard Zoom meeting invite.

- The Matching Rule can be tested by copying an invite into the Sample Text box

- Click SAVE and then SAVE CHANGES on the main screen once completed

Conference Settings

Click on the Conference Settings Tab to define conference configuration, One-time VMR/URI details, Dial-In Information settings and End of Conference warning settings. Follow this guide for further information on how to configure these settings.
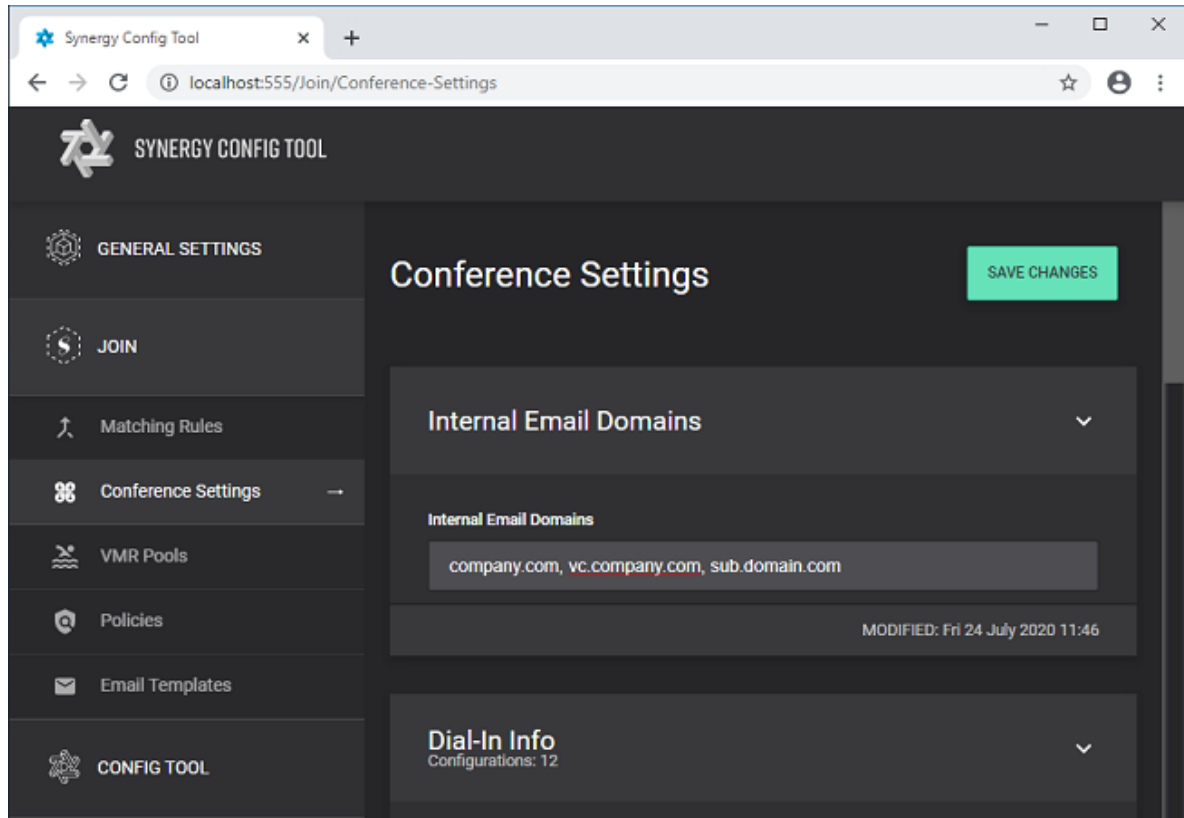
- Add the company's internal email domains separated by comma's if multiple, then click on SAVE CHANGES

VMR Pools (optional)

If an MCU has been configured, VMR pools can be created within the VMR Pools Tab. For further information on VMR Pools section please refer to this guide.
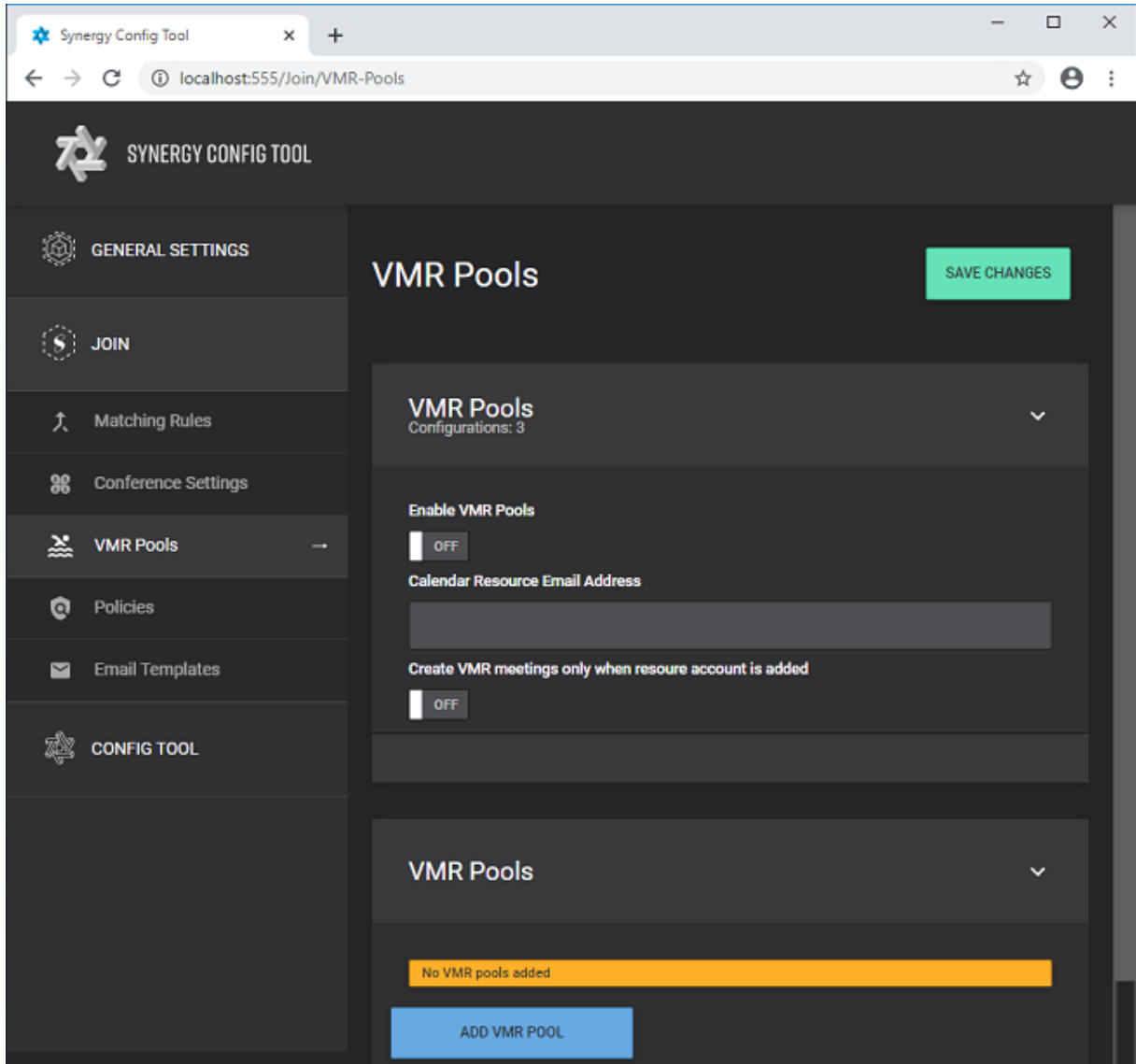
Policies

If Cisco Room Series or Sensors have been deployed in the environment with the intent to auto-release/de-book rooms that have no presence in them during a meeting, the Policies Tab is where to configure this. For more information on Policies configuration please refer to this guide.
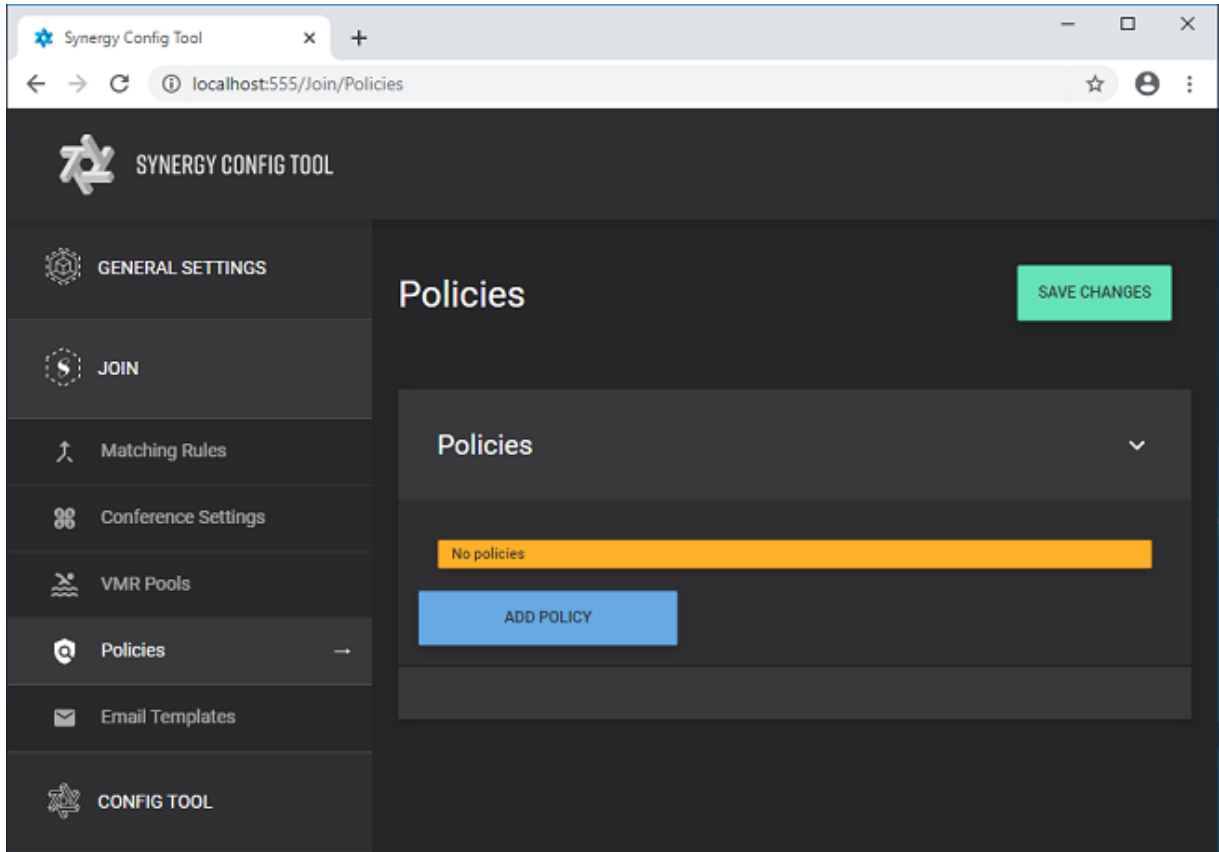
Email Templates

Email templates can be modified and/or customized within the Email Templates Tab. For more information on Email Templates please refer to this guide.
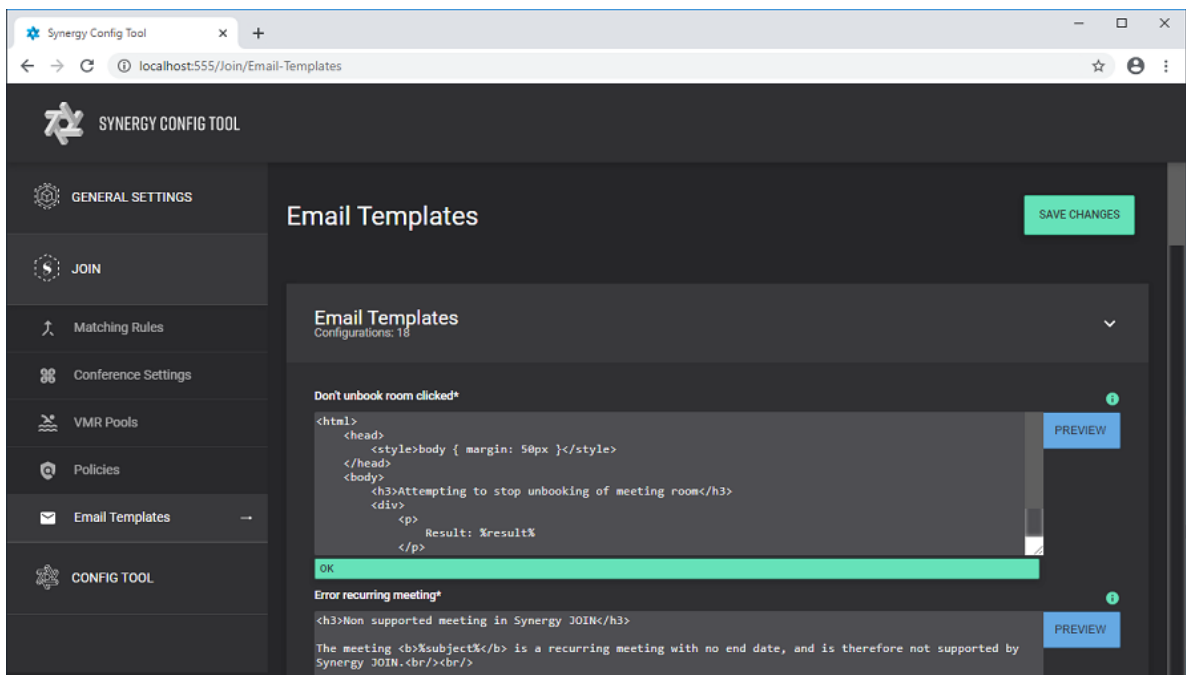
Config Tool

Software Updates

Check for software updates by expanding the CONFIG TOOL on the navigation bar and selecting the Software Updates Tab

- By clicking the UPDATE INFORMATION button new versions of JOIN will be presented to download, if available, as well as Release Notes
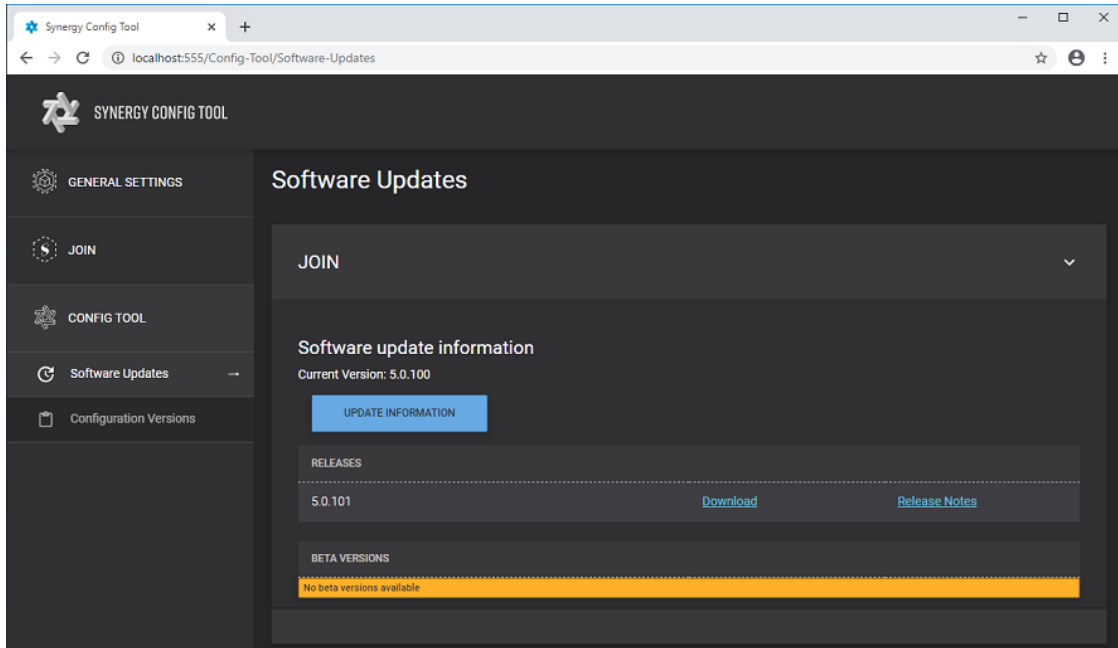
Configuration Versions

To deploy all settings configured within the Synergy Config Tool, select the Configuration Versions Tab

- Tick the box next to Current and click on DEPLOY CONFIGURATION button
  - N.B. It is possible to create a Backup of configuration and revert back to it by using the CREATE CONFIGURATION SET then selecting the Load configurations link next to it
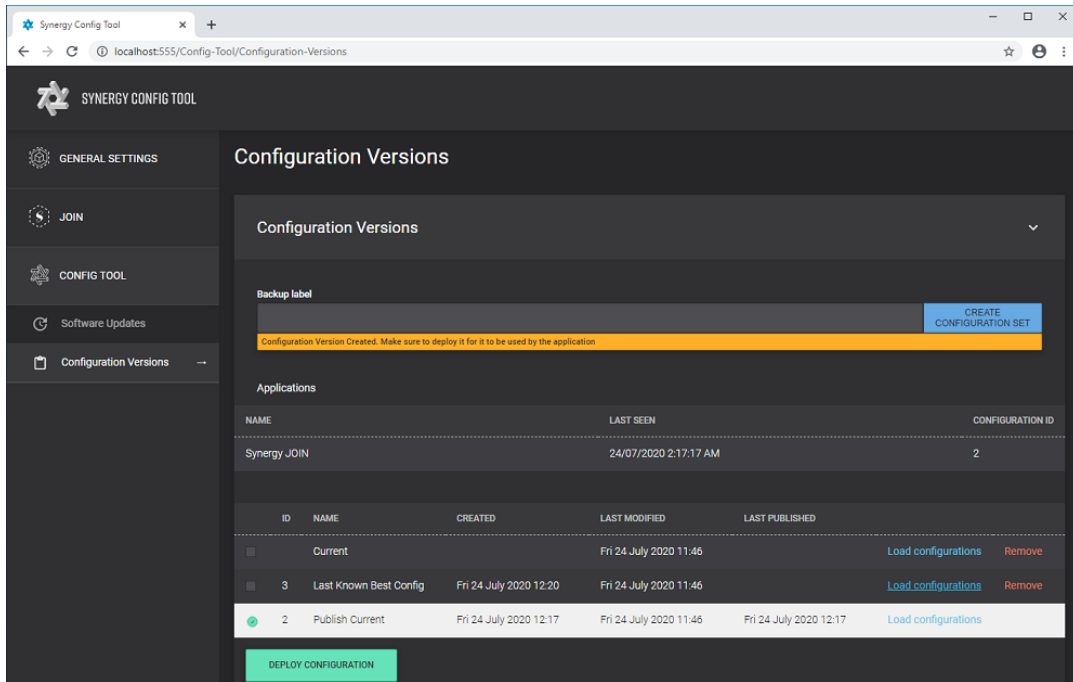
Basic configuration of Synergy JOIN is now complete. For further information on how to configure JOIN to your specific needs, please refer to our How To guides.

Obtaining and Adding a Product License

<< Go back to Quick Setup Guide

All Synergy SKY's customers should have received a license document stating an API key which is unique to the customer. If you do not have this API key, you can contact your Synergy SKY representative or file a support ticket through our support portal https://support.synergysky.com.

API Key

Once you have been provided with an API key, paste this into the General Settings ==> Licenses ==> API Key field and click the **'Validate'** button. The software will fetch the correct license key from the license server, validate it and place it into the License Key section. The license key refreshes itself every 14 days therefore the software requires access to the Internet in order for the license key to stay active.

Offline License Key

If the server on which the Synergy SKY product is installed does not have access to Internet (i.e. Synergy SKY License Server), you may need an offline license key. To obtain an offline license key you will have to get in touch with your Synergy SKY representative or send a request to Synergy SKY Support (support@synergysky.com).

You will have to provide the unique Machine ID of the hosting server. This can be found by running the following PowerShell script `get-wmiobject Win32_ComputerSystemProduct | Select-Object -ExpandProperty UUID`

Once we have the Machine ID, we will provide you with a license key you can paste in to the License Key field.
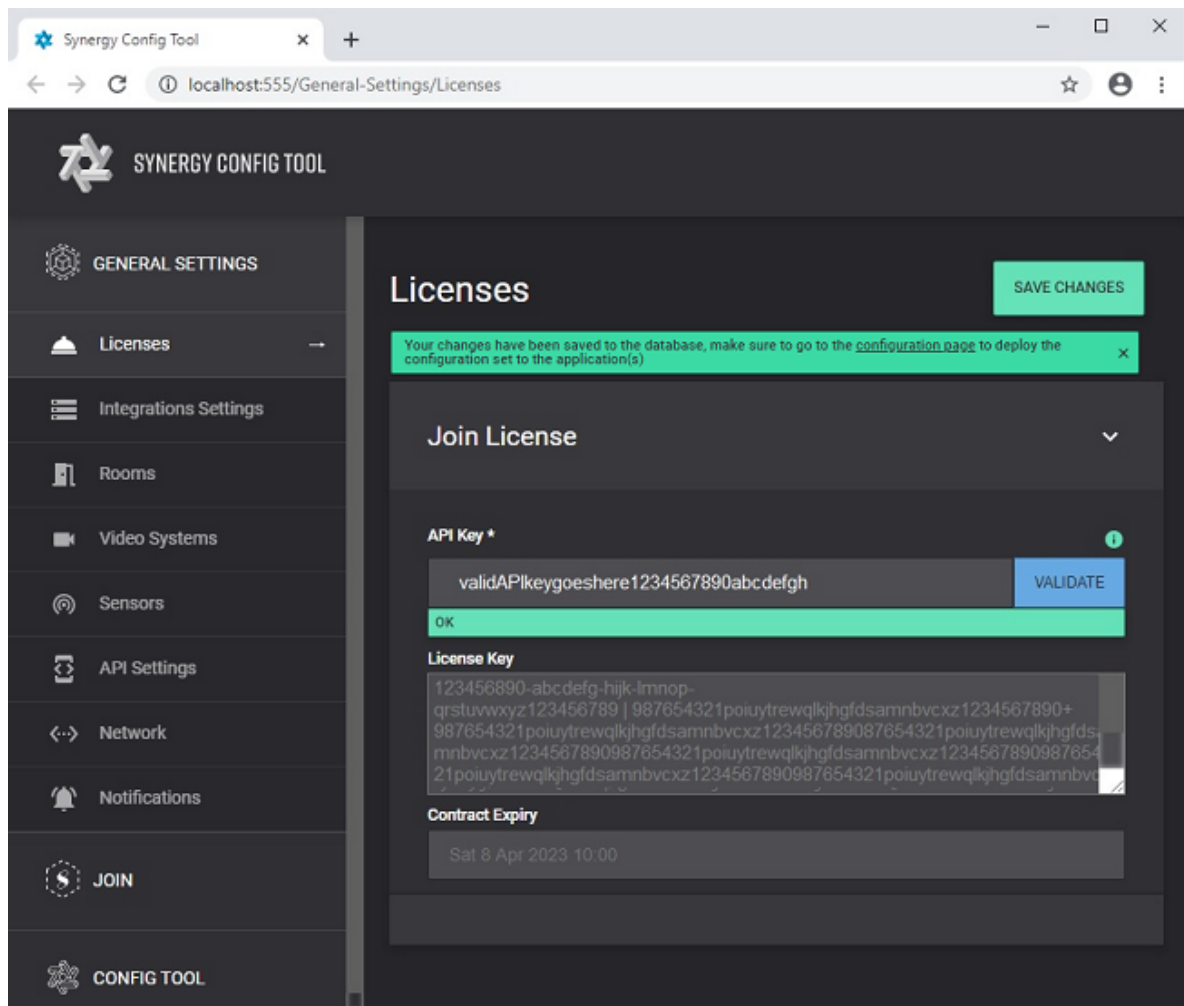
> **Note:** You can choose for administrators to receive email notifications if the license is about to expire, this is configurable on the **Notifications** tab of the configuration tool.

Integration Settings

<< Go back to Quick Setup Guide

The Synergy SKY software supports various integrations. You can add the different integrations based on your needs. Common for all integrations is that you will need to add a Connection first, and then an API integration that uses the connection defined above.

Connections

A connection defines how the software can communicate with various third party systems. This page describes the different connection types and what they are used for.

MS Graph API

In order to integrate with Microsoft Exchange Online (Office 365), you will need to add a MS Graph API connection. Further details on how to configure it can be found in "Configuring Exchange with Graph API (Office 365)" on page 20. You can read more about the Microsoft Graph authentication here.

Setting Name	Description
Graph Client ID	Your Microsoft 365 Client ID.
Graph Tenant ID	Your Microsoft 365 Tenant ID.
Graph Client Secret	Your Microsoft 365 Client Secret.

MS EWS API

If you are integrating with your on-premise Microsoft Exchange server, you will have to add this connection type. Note: You can also use it for Office 365 integration, however Basic Authentication for EWS for Office 365 will be decommissioned as of October 13th, 2020. Further details on how to configure it can be found in "Configuring Exchange with EWS" on page 17.

Setting Name	Description
EWS URL	The Exchange Web Service (EWS) URL. If using Office 365, then you can normally use the default value already populated here: https://outlook.office365.com/EWS/Exchange.asmx
EWS username	The username of the EWS service account. Microsoft Exchange sometimes requires the username to be in the format of "domain\username" and sometimes "username@domain". In the latter cases the domain field is optional.
EWS Service Account Domain	The domain of the EWS service account.
EWS Service Account Password	The password of the EWS service account.

Google API

If you are integrating with your Google GSuite Calendar, you will have to add this connection type. Further details on how to configure it can be found in "Configuring Google Calendar (G Suite) " on page 26.

Setting Name	Description
Service Act On Behalf Of Email	A super administrator in the admin.google.com section of the configuration.
File path	File path to the service account .json file you have downloaded in connection with the creation of the service account (This is the .json file that was copied in the Google Configuration section under 'Create a Private Key for JOIN' in the referenced article above.)

Pexip Infinity

If you are integrating with your on-premise Pexip Infinity MCU, you will have add this connection type. The connection is used for provision One-Time-VMRs, initiate outbound calls, polling CDRs and collecting real-time data from the Pexip Infinity MCU.

Setting Name	Description
Hostname / Address	The hostname or IP address of the Pexip Infinity management node. The address should include https://.
Username	The password of an admin/api account
Password	The password of the admin/api account

Cisco CMS

If you are integrating with your on-premise Cisco Meeting Server (CMS) MCU, you will have add this connection type. The connection is used for provision One-Time-VMRs, initiate outbound calls, polling CDRs and collecting real-time data from the Cisco Meeting Server MCU.

Setting Name	Description
Hostname / Address	The hostname or IP address of the Cisco Meeting Server. The address should include https://.
Username	The password of an admin/api account
Password	The password of the admin/api account

Videonor Cloud

If you are integrating with Videonor Cloud, you will have add this connection type. The connection is used for provision One-Time-VMRs and initiate outbound calls from the Videonor Cloud.

Setting Name	Description
Hostname / Address	The hostname or IP address of the Videonor Cloud. Unless you have other information, this address should be https://core.videonor.net
Username	Add the value *x-auth-token*
Password	The access token you have been provided by Videonor support

StarLeaf Cloud

If you are integrating with StarLeaf Cloud, you will have add this connection type. The connection is used for provision One-Time-VMRs on the StarLeaf Cloud.

Setting Name	Description
Hostname / Address	The hostname or IP address of the StarLeaf Cloud. Unless you have other information, this address should be https://api.starleaf.com
Username	Add the value *X-SL-AUTH-TOKEN*
Password	Enter the access token from the StarLeaf Portal. For more information, refer to "How to create a StarLeaf Cloud authorization token" on page 138

Cisco TMS

Optionally you can add Cisco TMS to your Synergy SKY installation. This is of value if the video systems are configured with dynamic IP addresses (DHCP) in your environment. JOIN will then query TMS for updated IP addresses if it is unable to connect to the video systems. Adding TMS also makes it easier to add video systems, as they can then be selected from a list instead of having to enter their IP addresses manually.

Setting Name	Description
Cisco TMS Address	The hostname or IP address of the TMS server. This could be prefixed with either http:// or https://. JOIN assumes TMS is installed on the default web application named /TMS (e.g. http://tms.company.com/tms).
Username	The username of a Site Administrator in TMS. The username would normally be prefix with the NETBIOS domain (e.g. company\admin).
Password	The password of a Site Administrator in TMS.
Preserve TMS Bookings	Check the checkbox if JOIN should preserve meetings that are pushed to the codec by other booking systems such as Cisco TMS. Enabling this feature will result in more network activity and higher cpu usage on the codec and on JOIN because JOIN will increase the verification rate to ensure the video conferencing system has the correct meetings added. We recommend that you only enable this feature during a trial or migration phase.

*Note that TMS pushes out the meetings later than JOIN and therefore overwrites the meetings that are pushed out by JOIN. Note the following regarding using the Preserve TMS Bookings setting above:

TMS	JOIN without Preserve TMS Bookings	JOIN with Preserve TMS Bookings
Pushes out a list of all meetings to endpoint when a meeting is booked, updated or deleted	Pushes out a list of meetings for the next 24 hours when a meeting is booked, updated or deleted.	Pushes out a list of meetings for the next 24 hours when a meeting is booked, updated or deleted.
	Verifies and overwrites (if necessary) the meeting list on the endpoint every hour with meetings stored in JOIN for the next 24 hours.	Verifies and merges (with TMS meetings if necessary) the meeting list on the endpoint every hour with meetings stored in JOIN for the next 24 hours.
	Verifies and overwrites (if necessary) the meeting list on the endpoint at Conference Start Buffer before every meeting starts (start-up buffer is by default 10 minutes) with meetings stored in JOIN for the next 24 hours.	Verifies and merges (with TMS meetings if necessary) the meeting list on the endpoint at Conference Start Buffer before every meeting starts (start-up buffer is by default 10 minutes) with meetings stored in JOIN for the next 24 hours.
		Verifies and merges (with TMS meetings if necessary) the meeting list on the endpoint continuously while a meeting is in progress with meetings stored in JOIN for the next 24 hours.

Quickchannel Cloud

Quickchannel is a recording service to which JOIN can be integrated for recording purposes. Refer to "How To: Configure Recording" on page 108 for more information.

Setting Name	Description
Quickchannel Username	The integration username provided by Quickchannel.
Quickchannel Password	The password provided by Quickchannel.

REC.VC Cloud

REC.VC is a recording service to which JOIN can be integrated for recording purposes. Refer to "How To: Configure Recording" on page 108 for more information.

Setting Name	Description
Email address matching Rule (RegEx)	The Regex rule to identify parts of the organizer's email address to be used in the replace rule below, e.g.: (.+)@company.com
Email address replace Rule (RegEx)	The Replace value to be used with the Regex rule, e.g.: \1.company@rec.vc

Panopto Cloud

Panopto is a recording service to which JOIN can be integrated for recording purposes. Refer to "How To: Configure Recording" on page 108 for more information.

Setting Name	Description
Panopto server address	This server name can be found in your Panopto profile. Example: acme.cloud.panopto.eu
Panopto Username	The username of the API account you have created for the integration. The integration user needs to have "admin" permissions in your Panopto account.
Panopto Password	The password of the API account.

ThingsWeb Cloud

ThingsWeb is a cloud service delivering sensor technology. JOIN utilizes this sensor technology for occupancy detection. Refer to "How To: Configure an Occupancy Sensor" on page 115 for more information.

Setting Name	Description
Client ID	The Client ID as provided by ThingsWeb.
Secret	The secret as provided by ThingsWeb.

API Integrations

Once the connections are added, they will be available for creating an API integration.

When adding a new API integration, the first thing you will have to decide what this integration is being used for. The valid options are:

- Calendar
- VMR Provisioning
- CDR Pull
- Sensors
- Recording

Once the API integration type is selected, the Connections dropdown list will populate with the connections that are applicable for the selected integration type.

When you select the connection, you will recognize the settings you defined for the connection. In addition, there will appear an extra section at the bottom of the window where you can provide extra configurations that are specific to this API integration. The below tables describes the extra configuration needed for each of the connection types.

MS Graph API (Calendar)

Setting Name	Description
Act on behalf of Email	The Synergy JOIN Act on Behalf of email is the email address that will be used to notify users of their meeting updates and progress.
Polling Interval	The number of minutes between JOIN checking the mailbox. If you notice any issues with your connection to your mailboxes taking longer than expected, we advise to set your Polling interval in minutes to 0.

MS EWS API (Calendar)

Setting Name	Description
Polling Interval	The number of minutes between JOIN checking the mailbox. If you notice any issues with your connection to your mailboxes taking longer than expected, we advise to set your Polling interval in minutes to 0.

Google API (Calendar)

Setting Name	Description
Polling Interval	The number of minutes between JOIN checking the mailbox. If you notice any issues with your connection to your mailboxes taking longer than expected, we advise to set your Polling interval in minutes to 0.

Pexip Infinity (VMR Provisioning)

Setting Name	Description
Pexip reverse proxy	The address of the Pexip Infinity reverse proxy.
Default dialout location	The default location from which the Pexip Infinity should initiate outbound calls from.
Get Locations	Click this button to refresh the Default dialout location dropdown list.
CDR tag	When provisioning One-Time-VMRs, this CDR tag will be added as metadata. This metadata is used for mapping data in third party systems.
Default MCU	Whether or not this is the default MCU.

Cisco CMS (VMR Provisioning)

Setting Name	Description
CDR tag	When provisioning One-Time-VMRs, this CDR tag will be added as metadata. This metadata is used for mapping data in third party systems.
Default MCU	Whether or not this is the default MCU.

Videonor Cloud (VMR Provisioning)

Setting Name	Description
CDR tag	When provisioning One-Time-VMRs, this CDR tag will be added as metadata. This metadata is used for mapping data in third party systems.
Default MCU	Whether or not this is the default MCU.

StarLeaf Cloud (VMR Provisioning)

Setting Name	Description
CDR tag	When provisioning One-Time-VMRs, this CDR tag will be added as metadata. This metadata is used for mapping data in third party systems.
Default MCU	Whether or not this is the default MCU.

Quickchannel Cloud (Recording)

Setting Name	Description
Quickchannel Stream Key	This is the url provided by Quickchannel for your recording account. Refer to "How To: Configure Recording" on page 108 for more information.
Enable dual streams	Check this checkbox if the Quickchannel service should record both the main stream and the content channel
Recording Resource Account	The resource account that will need to be added to the invitation in order to add recording to the meeting.
Pexip recording location	The default location from which the Pexip Infinity should initiate recording calls from. Only applicable for customers running Pexip Infinity MCU.
Preferred VMR pool	The VMR pool that should be used for recording. If other meeting room resources that will activate a One-Time-VMR to be created, the pool with the highest priority will be selected.

REC.VC Cloud (Recording)

Setting Name	Description
Recording Resource Account	The resource account that will need to be added to the invitation in order to add recording to the meeting.
Pexip recording location	The default location from which the Pexip Infinity should initiate recording calls from. Only applicable for customers running Pexip Infinity MCU.
Preferred VMR pool	The VMR pool that should be used for recording. If other meeting room resources that will activate a One-Time-VMR to be created, the pool with the highest priority will be selected

Panopto Cloud (Recording)

Setting Name	Description
Recording Resource Account	The resource account that will need to be added to the invitation in order to add recording to the meeting.
Pexip recording location	The default location from which the Pexip Infinity should initiate recording calls from. Only applicable for customers running Pexip Infinity MCU.
Preferred VMR Pool	The VMR pool that should be used for recording. If other meeting room resources that will activate a One-Time-VMR to be created, the pool with the highest priority will be selected

ThingsWeb Cloud (Sensors)

None.

Rooms

This tab is where you choose which meeting-room resources should be monitored by JOIN. The Microsoft Exchange User service account requires Full Calendar Access to these rooms when you have configured your installation with Exchange. For Google mode, a properly set up Google Service account is required along with correctly set Calendar scopes. For more details see Requirements.

The Room list dropdown contains available room lists in your Exchange or Google environment. You can choose to either add rooms from the selected room list or to add rooms manually by providing the room's name and email address.
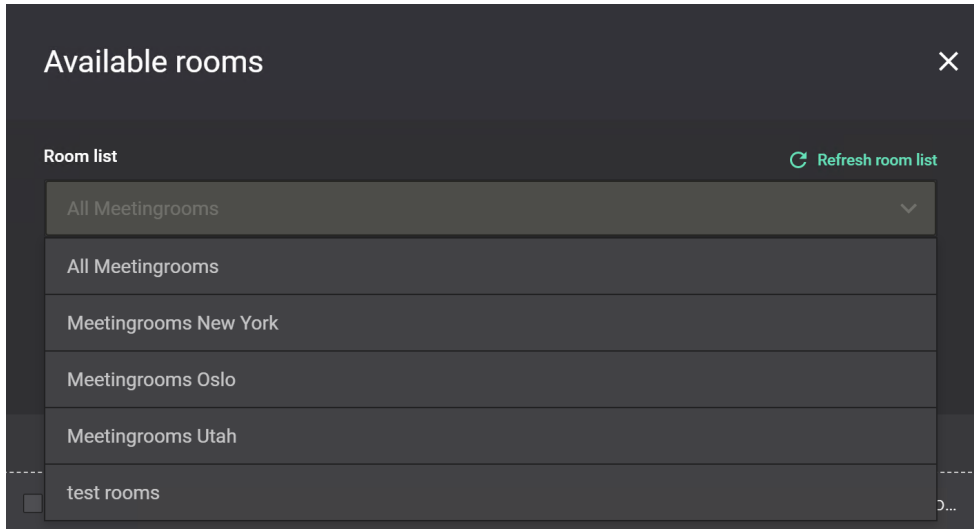
Once you have chosen a room list, the available rooms within the list will be populated and made available to choose.
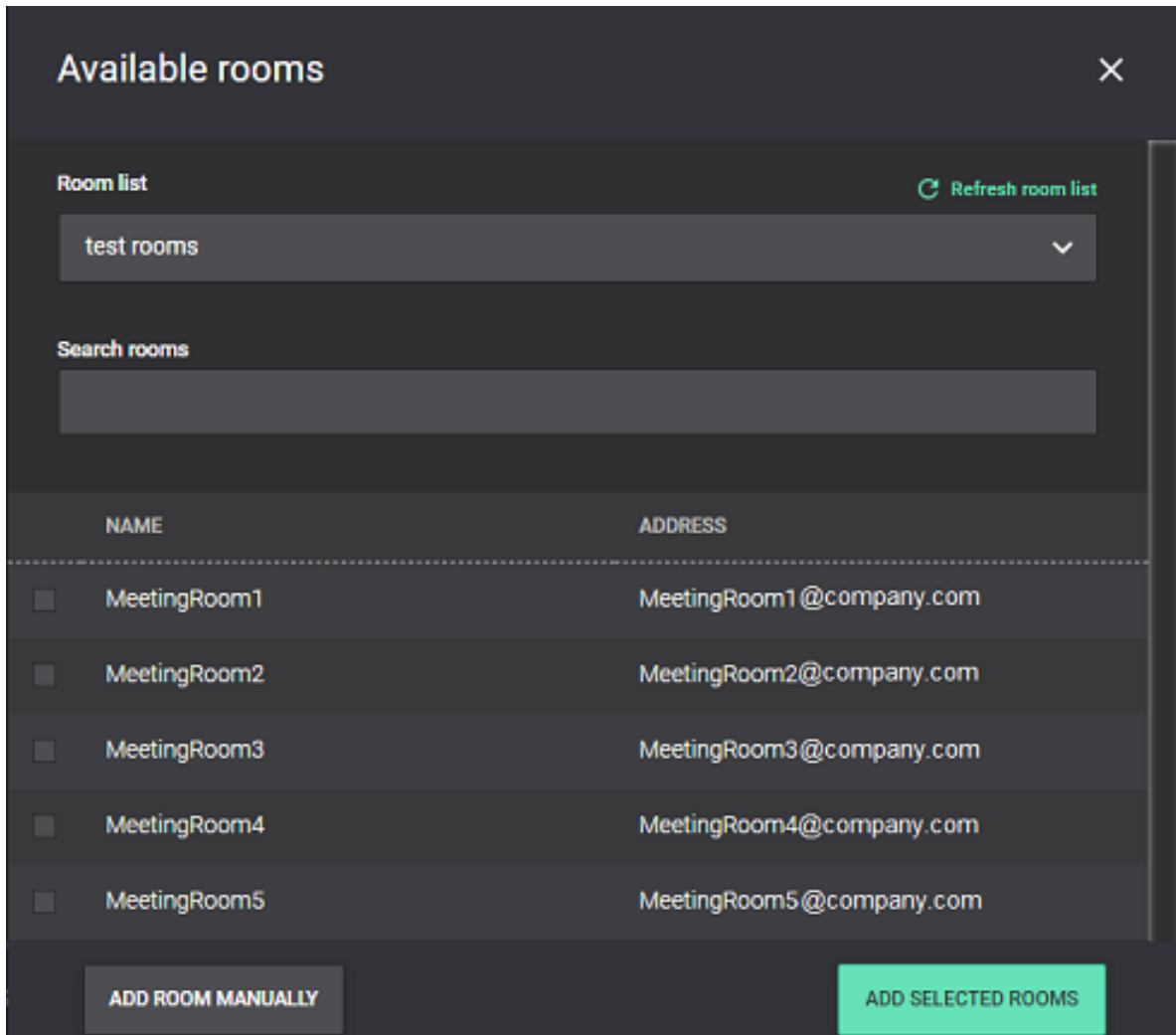
This table explains the fields and buttons on the **Available rooms** window:

Button/Field name	Description
Room List	This list shows a list of **Room Lists** from your Exchange or Google Environment
	Room lists are special address books in Exchange/ Google that only contain room resources.
	If no room lists are shown, ask your administrator to create one for you based on the examples below.
	Once a list of Room Lists is shown, you can select the rooms you would like to add and click the **'Add Selected Rooms'** button in order to add them to the rooms to be monitored.
	Example for creating room lists in the Microsoft Exchange PowerShell tool:
	`$RoomAlias = Get-Mailbox -RecipientTypeDetails RoomMailbox -Filter {Office -eq 'HQ'}	select -ExpandProperty Alias`
	`New-DistributionGroup -RoomList -Name 'HQ Meetingrooms' -Members $RoomAlias`
	`$RoomAlias = Get-Mailbox -RecipientTypeDetails RoomMailbox	select -ExpandProperty Alias`
	`New-DistributionGroup -RoomList -Name 'All Meetingrooms' -Members $RoomAlias`
Search rooms	Search for specific rooms within the selected room list.
Refresh room list	This button is used to refresh the room list dropdown.
	Note: It can take up to 15 minutes before a room list is visible here after adding a room list in Exchange.
Add Exchange room manually	Click this button to add rooms from Exchange manually.
	This is done by providing a display name and an alias for the room.
Add Selected Rooms	Adds the selected rooms to the list of rooms that are to be monitored.

Once the desired rooms have been added, they will appear in the list of selected rooms.
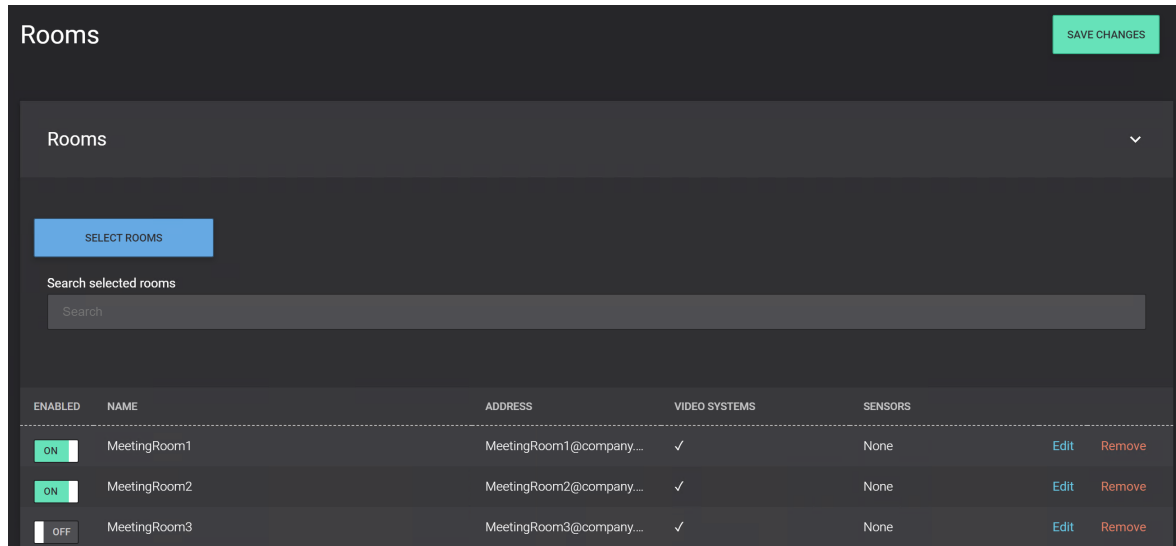
If you would like to postpone the monitoring of certain rooms, you can simply make sure that the Enabled switch is OFF or set the Room status to OFF (refer to the below screenshot).

You can click Edit on a room to provide more details about it.

Edit rooms   ✕

ROOM CONFIGURATION   Room status [ON]

Room name
```
MeetingRoom1
```

Room alias
```
MeetingRoom1@company.com
```

Preferred VMR pool
```
One-Time VMR Pool ⌄
```

SOT debooking policy
```
Default ⌄
```

Attached videosystem
```
meetingroom1@vc.company.com ⌄
```

SENSORS

Add sensor
```
MeetingRoom1 Sensor ⌄
```
[ADD]

[SAVE]   [CANCEL]

This table explains the fields and buttons on the **Available rooms** window:

Field name	Description
Room status	Whether or not to monitor this room resource's calendar.
Preferred VMR Pool	Specifies which VMR Pool that should be used when this room is invited into a meeting. If this room's VMR Pool has a higher priority than the other rooms that have been invited to the same meeting, this VMR Pool will be used. For more information on VMR Pools, refer to this guide.
SOT debooking policy	This is the selected policy that will apply if nobody shows up in the meeting room. You can read more about policies in this guide.
Attached videosystem	If the meeting rooms contains a video endpoint that is already added in the Video Systems tab, the video endpoint can be associated with the meeting room by selecting it from this dropdown.

Field name	Description
Sensors	Available sensors will appear in this list of sensor. Find the correct sensor in the list and click Add to associate the sensor with the meeting room. You can follow this guide to configure the supported sensors.

Video Systems

The Video System tab is where you can view and manage the defined video systems. When adding a new video system, you can associate it with a meeting room or you can add it and associate it with a meeting room later (see Rooms for more information).

Adding a Video System

This table explains the fields and options you have when adding, or editing, a video system:

Section/Field name	Description
Room	This dropdown list contains all available meeting rooms added in the Rooms tab. You can associate the video system directly with a meeting room here, or you can set it to None and associate it later - either from this page or from the Rooms page. Note: If set to None, the video system will be disabled by default.
Manufacturer	In order to communicate correctly with the video system, JOIN will need to know what kind of video system this is. Valid options are Cisco, Poly and Other.
IP Address	The address of the video system on which JOIN can communicate with the endpoint. This field is only applicable for Cisco endpoints.
Username / Password	The username and password JOIN must use to authenticate with the video system. Only applicable for Cisco endpoints.
URI	The video address (URI) of the video system. This information is applicable only if the Connectivity type is set to **'Dial-out'**
Software type	The different video system manufacturers might have different software platforms on their different models. JOIN will try to automatically identify the software type when it connects to the system, but we recommending setting it here regardless.
Serial number	JOIN will automatically retrieve the serial number from the video systems where applicable.
Connectivity type	This settings defines how the video endpoints should be connected into the meeting. The valid options are: **One Button To Push:** The video system will be populated with a Join button by JOIN. When clicking the Join button the video system will dial into the correct meeting. This feature is only available for Cisco and Poly endpoints. **Dial-out:** For video systems not supporting the One Button To Push mechanism, JOIN can initiate the meeting to dial out to the video system. The video system can e.g. be configured with 'auto answer' mode so that it will be automatically connected without any user interaction. The dial-out feature is only supported by on-premise Pexip Infinity and Cisco Meeting Server MCUs. **None:** JOIN will not perform any action towards the endpoints if None is selected.

Note: JOIN performs a nightly check of connectivity and time/date of all Cisco OBTP-enabled endpoints. If configured on the General Settings tab of the config tool, admins are notified of any issues identified during this check. The check takes place between 2am and 3am local server time; this is non-configurable.

Note: If the video system's codec is replaced for any reason, and the video system is not linked to and imported from Cisco TMS, you must re-add the video system.

Maintaining the Video Systems

From the list of video systems, you can disable and enable endpoints, edit information and delete video systems.

Note: If the video system is a Cisco endpoint supporting the People Count feature, you can click the 'Feedback Slots' link to view and register feedback expressions on the endpoint for people count reporting purposes. Please refer to this guide to learn more about how to configure Cisco endpoints as people count and occupancy sensors.
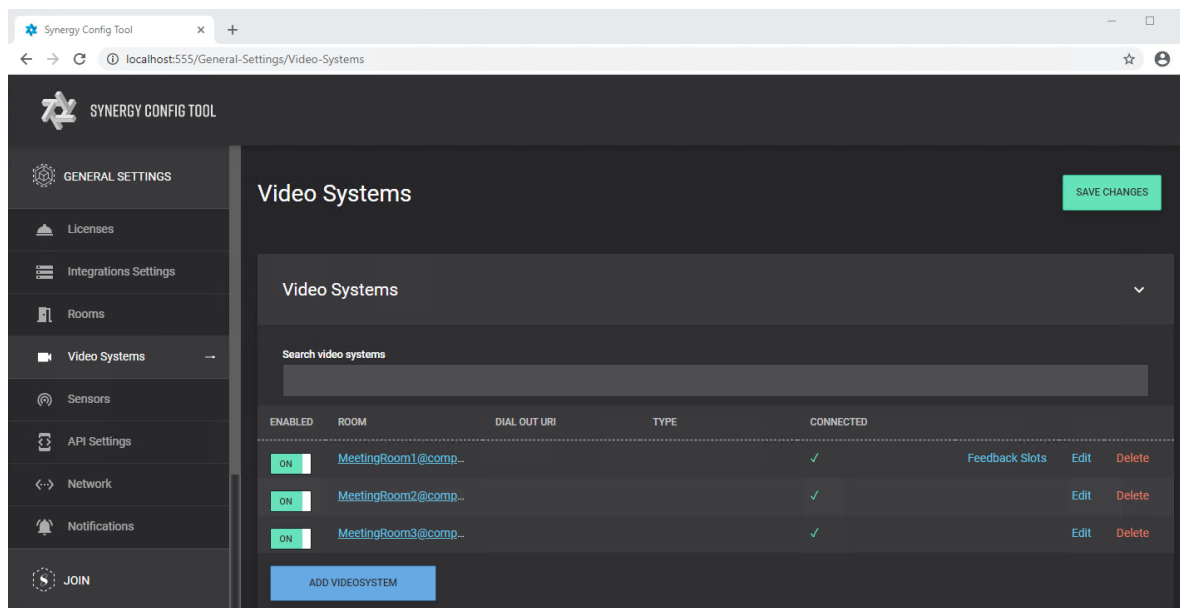
API Settings

The Synergy SKY software supports various inbound integration points. Below is a list of the available APIs Synergy SKY offer and what they are used for.

EWS Emulation

There are instances when the Polycom endpoint is unable to communicate with the Exchange Server and as such, the endpoint is unable to use the built in Polycom One Touch Dial technology. The EWS emulator within Synergy JOIN brings back the ability to utilize the Polycom One Touch Dial technology on your Polycom Endpoint by emulating itself as an Exchange server and providing meeting information to the endpoint thus providing the Polycom devices with their Polycom One Touch Dial buttons.

The EWS Emulator is **compatiblewith the HDX, Group Series and Trio endpoints**. For more information, refer to "How To: Configure Polycom EWS Emulator" on page 105

Setting Name	Description
Enable EWS emulator	Whether or not to enable the EWS emulator.
Enable basic authentication for EWS emulator	Whether or not to use basic authentication. If the box is left unticked, no password is required for the endpoint to connect to JOIN.
API EWS Emulator Password	The API password to use for accessing the API.
Allow legacy versions of TLS	Whether or not to allow for legacy version of TLS. We recommend turning this setting OFF unless the endpoints are using older versions of TLS.

JOIN CONTROL connector

The CONTROL module communicates with JOIN through an internal API. This API will need to be configured on this page, and the settings have to be reflected in the CONTROL configuration, see the CONTROL configuration for further information.

Setting Name	Description
API Listening Address	The listening address for this API. To listen to all addresses, set 0.0.0.0.
API Port	The port number this API runs on.
CONTROL connection username	The username CONTROL needs to use in order to communicate to this API.
CONTROL connection password	The password CONTROL needs to use in order to communicate to this API.

Conference Settings

The Conference Settings tab contains various configuration that affects how end users will experience the meeting workflow, from the meeting invitations to the end of the meeting.

The sections and tables below describes the different settings and what they mean.

Internal Email Domains

As JOIN can process invites from external and internal organizers differently, you will first need to identify which email domains that are considered as internal. In the configuration tool, go to JOIN => Conference Settings => Internal Email Domains:

Setting Name	Description
Internal email domains	Specify a comma separated list of the email domains your organization uses. This list is used to determine whether a meeting room invitation is sent from an internal or external user. It is also used to determine which users are internal and external when sending out connection information emails. (e.g. *synergysky.com, synergysky.eu, synergysky.us*)

Dial-In Info

This section specifies whether the organizer, internal guests and external guests should receive a dial-in information email when meetings are booked.

To edit the email templates, please refer to How to: Configure Email templates.

Note: The email domain list in the Matching Rules tab is used to determine which guest participants are internal/external.

Setting Name	Description
Send dial-in info at start buffer	Whether or not to send out dial-in information to invitees x number of minutes before the meeting starts.
Send dial-in info to internal guests	Whether dial-in information is being sent out to **internal** invitees. Applicable for One-Time-VMR meetings only.
Send dial-in info to internal guests skype	Whether dial-in information is being sent out to **internal** invitees. Applicable for Skype for Business meetings only.
Send dial-in info to internal guests static vmr	Whether dial-in information is being sent out to **internal** invitees. Applicable for Static VMR meetings only.
Send dial-in info to external guests	Whether dial-in information is being sent out to **external** invitees. Applicable for One-Time-VMR meetings only.
Send dial-in info to external guests skype	Whether dial-in information is being sent out to **external** invitees. Applicable for Skype for Business meetings only.
Send dial-in info to external guests static vmr	Whether dial-in information is being sent out to **external** invitees. Applicable for Static VMR meetings only.
Send dial-in info to organizer	Whether dial-in information is being sent out to the **organizer**. Applicable for One-Time-VMR meetings only.
Send dial-in info to organizer skype	Whether dial-in information is being sent out to the **organizer**. Applicable for Skype for Business meetings only.
Send dial-in info to organizer static vmr	Whether dial-in information is being sent out to the **organizer**. Applicable for Static VMR meetings only.
Send dial-in info x minutes before start	The number of minutes before the meeting starts that the dial-in information is being sent out to the organizer and invitees as specified above.
Update sender's calendar	This function will enable Synergy JOIN to log into the calendar of each meeting's organizer to update the calendar invite and send an update to all invitees. This end user experience will allow users to book video meeting directly from their native calendar clients without having any custom plug-ins installed, and still have the dial-in information of the video meeting automatically.
	Note: Remember to define in which cases the body of the meeting invitation should be updated in the settings above; i.e. One-Time-VMR, Skype Meeting, Regex rule meeting.
	Failure to update the calendar will lead to an email being sent to the meeting organizer with the dial-in details, with instructions to update the invite manually. The administrator, defined in the General Settings tab will also be notified about the failure. The notification to the administrator will contain the commands required to fix permissions problems to the organizer's calendar. See Configuring In-Body Update for information on how to set the correct permissions in Microsoft Exchange required for this feature to operate correctly.
	Note: Enabling the generation of Host pins for conferences and adding this to the email template will make the host pin visible to all invitees since the same information is sent out to all participants in the meeting. The host pin should therefore be defined in the 'Host pin' template. See Configuring Email templates for more details.

Connection Details

The Connection Details settings define the behavior of creating (provisioning) and tearing down (deprovisioning) VMRs to be used for the purpose of a specific meeting, One-Time-VMR.

Setting Name	Description
Conference Start Buffer (minutes)	The start buffer defines when VMRs are provisioned and can be dialed into, and it defines when the green button in the Cisco OBTP or Polycom OTD message can be pressed on the video system.
Conference End Buffer (minutes)	The end buffer defines when the VMRs are deprovisioned and the remaining participants are disconnected.
Retry Count On Dial Outs	The retry count controls how many call attempts are made to dial-out video systems if the initial connection attempt fails.
Retry Delay Between Each Attempt	The retry delay controls how long JOIN will wait between the dial out attempts per participant.
Hide Non-Video Meetings From Video Systems	If selected, meetings without dialable URIs will not be visible as Cisco One Button To Push meetings on booked endpoints.
Disconnect Auto-Dialled Participants at conference end	If selected, JOIN will disconnect dial-out calls it has initiated at conference end buffer, or if the meeting is deleted.

End of Conference Warning

Setting Name	Description
Enable end of conference warnings	If ticked, End of Conference Warning notifications will be presented in the video stream X minutes before a conference is about to end. This applies for: • Pexip Infinity personal VMRs • Pexip Infinity One-Time VMRs • CMS One-Time-VMRs End of Conference Warning Notifications do not work for Gateway calls or cloud based conferences.
Conference end warning text	Enter the text you want to appear if Enable End of Conference Warnings is ticked. The placeholder {0} will display the number of minutes left in the meeting, based on the settings you have entered below.
Conference ending text	The text that will appear when the scheduled end time of a conference is reached.
Conference cancelled text	The text that will appear when a conference the conference end buffer has been reached or if the meeting is deleted.
Message display duration (seconds)	The length of time in seconds that End of Conference Warnings should stay on the screen.
Message display mode in video	Define if the messages should be visible in the video stream.
Message display mode in chat	Define if the messages should be visible in the chat (WebRTC chat, Skype chat and Pexip/CMS client chat).
When to show warnings (minutes before end)	Specify when the End of Conference Warning Notifications should be displayed. Multiple entries must be separated by a comma.
End of conference warnings are relative to	• End of booking: durations and other specifications are relative to the end time of the booked conference. • End buffer: durations and other specifications are relative to the conference end buffer.
Meeting manager display name	Define the name of the account that will be visible in the roster list while the end of conference message is being displayed. Note: Only applicable for Pexip Infinity.
Pexip reverse proxy / conference node	Enter the URL for the Pexip reverse proxy / conference node. Note: Only applicable for Pexip Infinity.

Skype IVR

The Skype IVR (Skype Interactive Voice Respons) option in JOIN enables users to join Skype Online (Skype for Business Office 365) meetings by dialing into a specific URI (e.g. ivr@company.com) and entering the numeric Conference Id that is automatically inserted into the meeting invitation when booking a Skype Online meeting. The option also make it easy for users to join the Skype meeting via WebRTC which usually has a higher success rate than the Skype Web app.

Setting Name	Description
Enable IVR Dial-In Into Skype meetings	Whether to enable this feature or not.
Exchange Resource Email Address	The email addresses of the Microsoft Exchange resource account that should be used for trigger the IVR option. The account needs the same permissions and processing parameters as the other room accounts, and should also be set up to allow conflicts so that it may be booked in multiple meetings at the same time. *Set-CalendarProcessing <resourcealias> -DeleteComments $false -RemovePrivateProperty $false -AddOrganizerToSubject $false -DeleteSubject $false -ProcessExternalMeetingMessages $true -AllowConflicts $true*

VMR Pools

<< Go back to Quick Setup Guide

A VMR pool is a defined set of VMRs; either a range or a predefined set of individual VMRs. Currently two types of pools are available:

One-Time-VMR

The One-Time-VMR pool defines a numeric range of URIs that will be used when provisioning Dynamic VMRs on the assigned MCU. Read more about how to configure Dynamic VMRs.

The One-Time-VMR (Dynamic VMR) option in JOIN enables users to easily schedule video meetings without any plug-ins in the email client. The function will create a temporary virtual meeting room on the MCU defined in the General Settings tab, with a URI within the range defined in the Conference Settings tab. Video systems that are included in the meeting invitation will be provisioned with Cisco One Button To Push and Polycom One Touch Dial so that they can join the meeting by a push of a button. All invitees will receive the dial-in information so that they can join from their personal device if they prefer that. The dial-in information can sent as a individual emails to each invitee or included in the calendar invite body.

There are potentially three triggers that can be set up to enable One-Time-VMRs, and all three can be used simultaneously

- Adding a video enabled meeting room to the invite (e.g. boardroom@company.com)
- Adding a specific resource to the invite that allow conflicts (e.g. videomeeting@company.com)
- Adding a specific keyword to the meeting invite (e.g. @video)

Note 1: using a keyword (e.g. @video) to book video meetings require a "Hub Transport Rules" on page 101 to be set up in the Microsoft Exchange environment

Note 2: It is possible to stop the booking confirmation emails from the One-Time-VMR service account to spam the user's mailbox by setting up a "Second transport rule to remove accept confirmations" on page 104

Pre Provisioned VMR

Pre Provisioned VMRs define a set of URIs and associated variables. These will not be provisioned on any MCU, however JOIN assumes that these URIs/VMRs are already provisioned. JOIN will use these and assign them to meeting bookings, making sure they are assigned in a non-overlapping way similar to the one-time VMRs.

To create a Pre Provisioned VMR Pool you will have to configure the following parameters for the Pre Provisioned VMR's you would like Synergy JOIN to detect.

Section/Field name	Description
URI	The given URI of the VMR
Numeric URI	The Numeric URI of the VMR
Host Pin	(If Applicable)The PIN code hosts to use to start the meeting within the VMR, otherwise 0
Guest Pin	(If Applicable)The PIN code guests have to use to join the VMR, otherwise 0

VMR Pool ✕

Name

Immersive Meetings Pool

OK

Description

These are URIs to be used by our immersive system

MCU

MCU ⌄

OK

Default VMR Pool

OFF

Type

Pre Provisioned Vmr ⌄

OK

VMR Pool ID: 174dd9b1-871a-4b2c-afe4-22b46b86cddd

Pre provisioned VMRs ✕

URI	NUMERICURI	HOSTPIN	GUESTPIN		
72500@vc.company.com	72500	1111	2222	Save	Cancel
72501@vc.company.com	72501	0	0	Save	Cancel
72502@vc.company.com	72502	0	0	Save	Cancel
72503@vc.company.com	72503	0	0	Save	Cancel
72504@vc.company.com	72504	0	0	Save	Cancel
72505@vc.company.com	72505	0	0	Save	Cancel

SAVE CANCEL

Creating Matching Rules

In order for Synergy JOIN to identify and process meetings correctly, you will need to define matching rules.

As an example, you can create rules that define that JOIN should do the following:

1. Look for personal VMRs in invites from *internal users*
2. Look for Microsoft Teams or Cisco Webex invites from *all users*
3. Create a One-Time-VMR if neither 1 or 2 apply.

The screenshot below shows a more comprehensive example where there are matching rules for identifying Microsoft Teams (external and internal) meetings, Zoom meetings, Skype for Business meetings, Cisco Webex meetings, Bluejeans meetings and other personal VMRs.
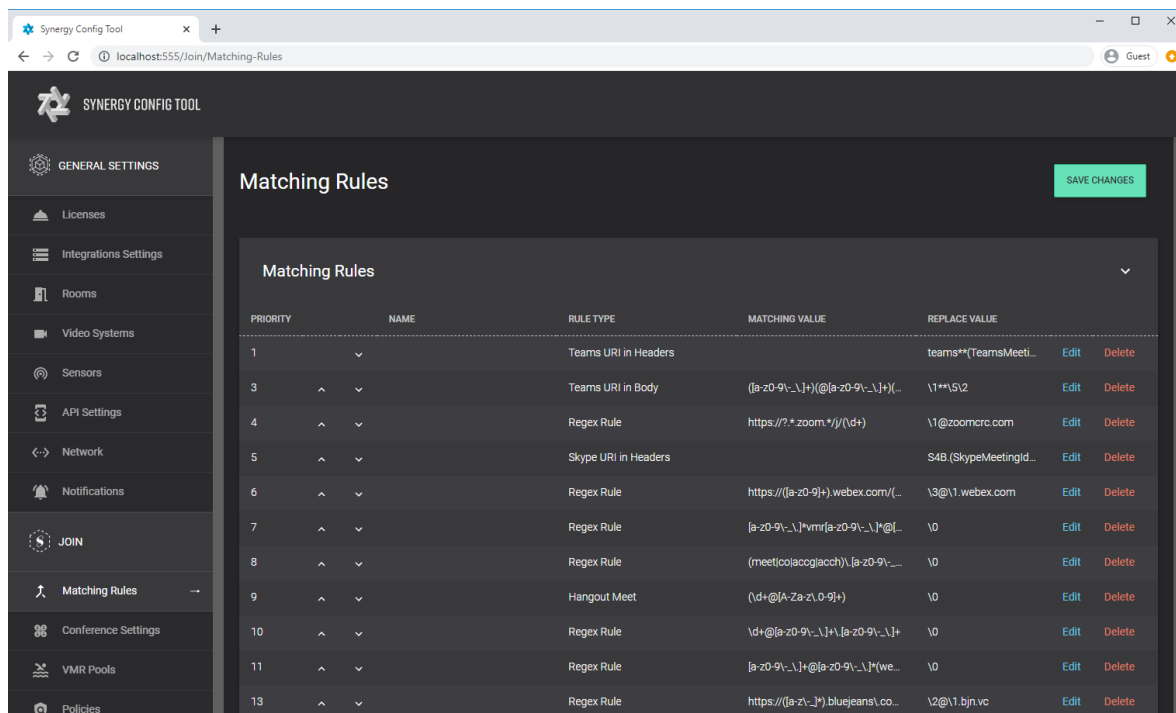
Defining Internal Email Domains

As JOIN can process invites from external and internal organizers differently, you will first need to identify which email domains that are considered as internal. In the configuration tool, go to JOIN => Conference Settings => Internal Email Domains:

Field	Description
Internal email domains	Specify a comma separated list of the email domains your organization uses. This list is used to determine whether a meeting room invitation is sent from an internal or external user. It is also used to determine which users are internal and external when sending out connection information emails. (e.g. *synergysky.com, synergysky.eu, synergysky.us*)

Creating the rules

Once the internal email domains are defined, go to JOIN => Matching Rules. New rules can be added by clicking the **'Add'** button. Below is an overview of the different pre-defined rule types. If you need a rule for identifying other types of meetings, you may use the Regex Rule, which is a generic pattern recognition mechanism that can be utilized in order to identify any text in the invite.

Rule type	Description
Skype URI in Headers	This rule makes JOIN look for Skype invites in hidden text in the invite.
	This will normally work for all Skype meetings when the invitation is sent internally in the organization. The information may however be lost if the email jumps multiple Exchange servers, or when the invite comes from someone outside the organization.
Skype URI in Body	This rule analyzes the Hyperlink in the body of the invitation to find the URI of the Skype meeting. This will work in most environments, both internally and externally, but is slower. It is therefore recommended to use this as a fallback rule with lower priority than the **Skype URI in Headers** rule.
	Note: This function requires Synergy JOIN to have access over HTTPS to the Skype server where the meeting is hosted; either directly or via a proxy server.
Skype URI in Body Limited	This rule is an optimized matching rule from the rule above. This rule limits the search within the invite message and not the entire email invitation. This allows for more accurate detection of the dial string when the Skype URI in Body matching rule is unsuccessful.
Teams URI in Headers	This rule makes JOIN look for Teams invites in hidden text in the invite.
	This will normally work for all Teams meetings when the invitation is sent internally in the organization. The information may however be lost if the email jumps multiple Exchange servers, or when the invite comes from someone outside the organization.
	Note: The Teams rule should be added with a high priority than the Skype rules, since Teams invitations also contains an Skype invitation in the header
Teams URI in Body	This rule makes JOIN look for Teams invites in the meeting body via Regex rule. The rule can be adjusted according to the pattern in your Teams setup.
Teams URI in Body Limited	This rule is an optimized matching rule from the rule above. This rule limits the search within the invite message and not the entire email invitation. This allows for more accurate detection of the dial string when the Teams URI in Body matching rule is unsuccessful.
Regex Rule	This rule enables you to use Regex to define how you want JOIN to work. You can define your own pattern matches, and differentiate between invitations from internal and external organizers.
	You can define both matching patterns and replace patterns to transform the URI when required.
	This rule type can be added multiple times.
Hangout Meet	This rule enables JOIN to look for Google Hangout meetings in the Body of the Google Hangouts Meeting via Regex rule. This rule is prepopulated when you select it

Skype URI in Headers

Configure the remaining fields as follows:

Field	Description
Priority	The priority defines the order in which the rules are applied. The lowest number gives the highest priority. (E.g. 1 is processed before 5).
Applies to	Internal invitations
Matching value	Not applicable

Field	Description
Replace value	**Pexip:**
	`S4B.(SkypeMeetingId).(SkypeUserId)@(UserDomain)`
	where:
	- `SkypeMeetingId` = alphanumeric meeting Id found in every Skype meeting invite
	- `SkyperUserId` = the userpart of the organizer's Skype SIP URI
	- `UserDomain` = the domain in the organizer's Skype SIP URI
	NOTE: For Organizations with a Pexip Gateway hosted by a Service Provider, the recommended pattern would be:
	`S4B.(SkypeMeetingId).(SkypeUserId)_(UserDomain)@serviceProvidersDomain.com`
	This allows the Service Provider to strip away their domain and replace the underscore with @ before sending the call through the Pexip Gateway.
	CMS:
	`(SkypeURL)@CompanyCMSDomain.local`
	where:
	`CompanyCMSDomain.local` = the routing domain that ensures the call is routed to the CMS.
	Note: This domain must also be added as a "Targets Lync Simplejoin" domain on the CMS under **Configuration > Incoming Calls**.
	StarLeaf Cloud:
	This field is disabled as the required value is automatically configured.

Skype URI in Body

Configure the remaining fields as follows:

Field	Description
Priority	The priority defines the order in which the rules are applied. The lowest number gives the highest priority. (E.g. 1 is processed before 5).
Applies to	All invitations
Matching value	Not applicable
Replace value	**Pexip:**
	Use the same format as for Skype URI in Headers.
	CMS:
	Use the same format as for Skype URI in Headers.
	StarLeaf Cloud:
	This field is disabled as the required value is automatically configured.

Teams URI in Headers

Configure the remaining fields as follows:

Field	Description
Priority	The priority defines the order in which the rules are applied. The lowest number gives the highest priority. (E.g. 1 is processed before 5).
Applies to	Internal invitations
Matching value	Not applicable
Replace value	**Pexip:**
	`Teams.(TeamsMeetingId)@company.com`
	where:
	- `TeamsMeetingId` = alphanumeric meeting Id found in the Teams meeting invite
	The URI needs to match the Teams gateway rule in the Pexip configuration. Please refer to the Pexip documentation for more details

Teams URI in Body

Configure the remaining fields as follows:

Field	Description
Priority	The priority defines the order in which the rules are applied. The lowest number gives the highest priority. (E.g. 1 is processed before 5).
Applies to	All invitations
Matching value	Not applicable
Replace value	**Pexip:** Use the same format as for Skype URI in Headers.

Hangout Meet

Configure the remaining fields as follows:

Field	Description
Priority	The priority defines the order in which the rules are applied. The lowest number gives the highest priority. (E.g. 1 is processed before 5).
Applies to	All invitations
Matching value	This field defines the Regex rule for matching data. For example: \d@company.com will match all URIs starting with a number and ending with @company.com) This field is prepopulated to catch all hangout meetings
Replace value	This field defines how the matched data should be transformed before being sent to the endpoint. This field is pre-populated to replace the matching value that has been identified.

Regex Rule

Configure the remaining fields as follows:

Field	Description
Priority	The priority defines the order in which the rules are applied. The lowest number gives the highest priority. (E.g. 1 is processed before 5).
Applies to	All invitations
Matching value	This field defines the Regex rule for matching data . For example: \d@company.com will match all URIs starting with a number and ending with @company.com)
Replace value	This field defines how the matched data should be transformed before being sent to the endpoint. **Pexip:** The value \0 uses the entire matched value, while \1 matches the first pair of parenthesis and so on. Example: **Matching Value**: Id: (\d) **Replace Value**: \1@video.company.com **Email body**: Conference Id: 123456789 URI = 12346789@video.company.com **CMS:** If you have CMS for internal dual-home, you can use a Regex rule to look for "conference id: 123456" from internal meeting organizers.

Testing, editing and deleting rules

The Regular Expression Builder is a useful tool that can help you test your regular expressions. From the matching rules overview, click the **'Build Regular Expression'** button to launch the tool. From the **'Regex template'** dropdown list, you can select from a number of predefined templates. You can tweak these templates to meet your needs, or you can create a completely custom regular expression.

Once you have selected the template and made the necessary changes to it, you can paste in a sample text and make sure that the rule is giving the expected result. **Note:** If the invitation is html formatted, you will need to paste in the html source of the email invitation.
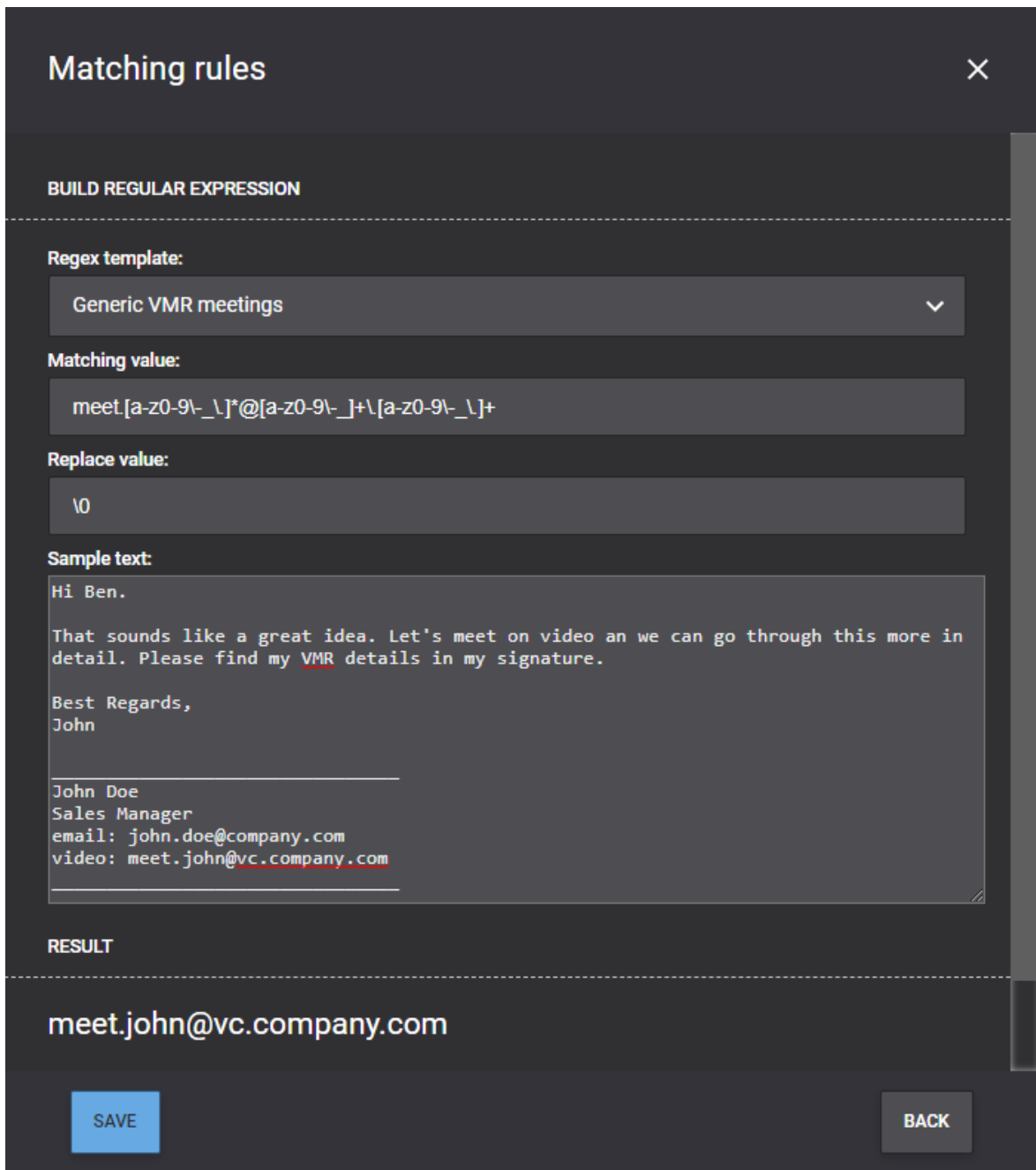
Matching Rules for Skype for Business & Teams Meetings

Synergy JOIN will process calendar invitations for the resources being monitored based upon the matching rules provided and will provide OBTP information to your endpoint.

First, under JOIN => Conference Settings => Internal Email Domains:

Field	Description
Internal email domains	Specify a comma separated list of the email domains your organization uses. This list is used to determine whether a meeting room invitation is sent from an internal or external user. It is also used to determine which users are internal and external when sending out connection information emails. (e.g. *synergysky.com, synergysky.eu, synergysky.us*)

Then, under JOIN => Matching Rules:

Skype for Business Matching Rule	Microsoft Teams Matching Rule
1. Click on the 'Add' button and choose **'Skype URI in Headers'** from the Rule Type dropdown	1. Click on the 'Add' button and choose **'Teams URI in Headers'** from the Rule Type dropdown
2. Enter a name that describes the rule, and choose whether the rule applies to all, internal or external invitations	2. Enter a name that describes the rule, and choose whether the rule applies to all, internal or external invitations
3. Click 'Save'.	3. Click 'Save'.
4. Once the rule is added, you can select its priority by clicking the up or down arrows	4. Once the rule is added, you can select its priority by clicking the up or down arrows
6. Click 'Save Changes'	6. Click 'Save Changes'

NOTE: Normally, header information for Skype for Business and Microsoft Teams is available for internal invitations only. For invitations coming from an external party, the header information is normally removed and you will need to add a "URI in Body" rule in order for JOIN to successfully find the URI.

The "URI in Body" rules require JOIN to have access over HTTPS to the Skype/Teams server where the meeting is hosted; either directly or via a proxy server.

Matching Rules for Hangouts Meetings

Synergy JOIN will process calendar invitations for the resources being monitored based upon the matching rules provided and will provide OBTP information to your endpoint.

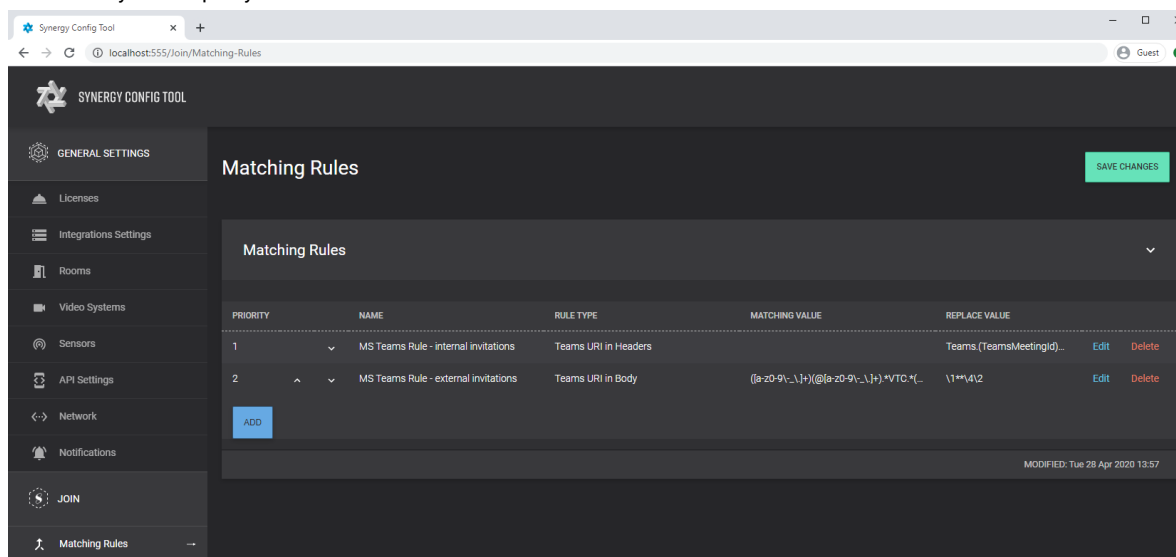First, under JOIN => Conference Settings => Internal Email Domains:

Field	Description
Internal email domains	Specify a comma separated list of the email domains your organization uses. This list is used to determine whether a meeting room invitation is sent from an internal or external user. It is also used to determine which users are internal and external when sending out connection information emails. (e.g. *synergysky.com, synergysky.eu, synergysky.us*)

Then, under JOIN => Matching Rules:

Hangout Meet
1. Click on the 'Add' button and choose **'Hangout Meet'** from the Rule Type dropdown
2. Enter a name that describes the rule, and choose whether the rule applies to all, internal or external invitations
3. Click 'Save'.

4. Once the rule is added, you can select its priority by clicking the up or down arrows

6. Click 'Save Changes'

Matching Rules for WebRTC Meetings

Synergy JOIN will process calendar invitations for the resources being monitored based upon the matching rules provided and will provide OBTP information to your endpoint.

Some meeting types offer a hyperlink the users can click to join the meeting from their computer, in addition to often provide a URI that can be dialed from a video endpoint. By utilizing regular expression search patterns (Regex Rules) JOIN is able to identify such information in email invitations, and populate the video endpoint such dial information.

First, under JOIN => Conference Settings => Internal Email Domains:

Field	Description
Internal email domains	Specify a comma separated list of the email domains your organization uses. This list is used to determine whether a meeting room invitation is sent from an internal or external user. It is also used to determine which users are internal and external when sending out connection information emails. (e.g. *synergysky.com, synergysky.eu, synergysky.us*)

Then, under JOIN => Matching Rules:

Regex Rule
1. Click on the 'Add' button and choose **'Regex Rule'** from the Rule Type dropdown
2. Enter a name that describes the rule, and choose whether the rule applies to all, internal or external invitations

3. If you are familiar with regular expressions, you can enter the 'Matching value' and 'Replace value' directly. Alternatively, you can click the **'Build Regular Expression'** button in order to use a template and test information from an invitation, e.g. a Cisco Webex invitation as shown below:

You may add multiple Regex Rules to identify the same meeting type (like the example below), for a mix of different meeting types or you can mix Regex Rules with Microsoft Teams rules or any other available rule type.
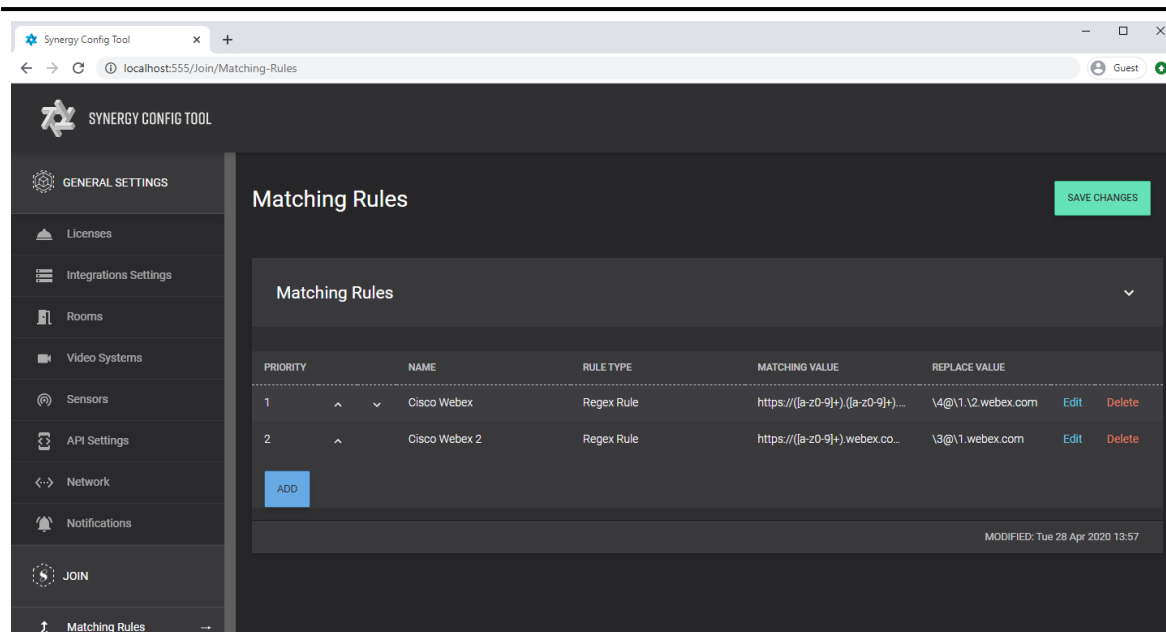
4. Once the desired rules are added, you can select their priority by clicking the up or down arrows

6. Click 'Save Changes'

Synergy JOIN with Dynamic VMR's

Note: This function only works if you have configured an MCU

The One-Time-VMR (Dynamic VMR) option in JOIN enables users to easily schedule video meetings without any plug-ins in the email client. Synergy JOIN will create a temporary virtual meeting room on the MCU defined, with a URI within the range defined in the VMR Pools. The One-Time VMR information will then be sent to all the video systems that are included in the meeting invitation. All invitees will also receive the dial-in information so that they can join from their personal device if they prefer that. The One-Time-VMR will be deprovisioned after the meeting has ended.

Activating Dynamic VMR's

1. Browse to JOIN => VMR Pools

2. Activate the 'Enable VMR Pools'

3. If you would like a specific resource only to trigger a One-Time-VMR to be created, activate the 'Create VMR meetings only when resource account is added' and provide the email address of the resource. Please note that you will need this resource to allow double-bookings

4. If you would like all meeting room resources to trigger a One-Time-VMR to be created, make sure that the 'Create VMR meetings only when resource account is added' is OFF and leave the email address field empty.
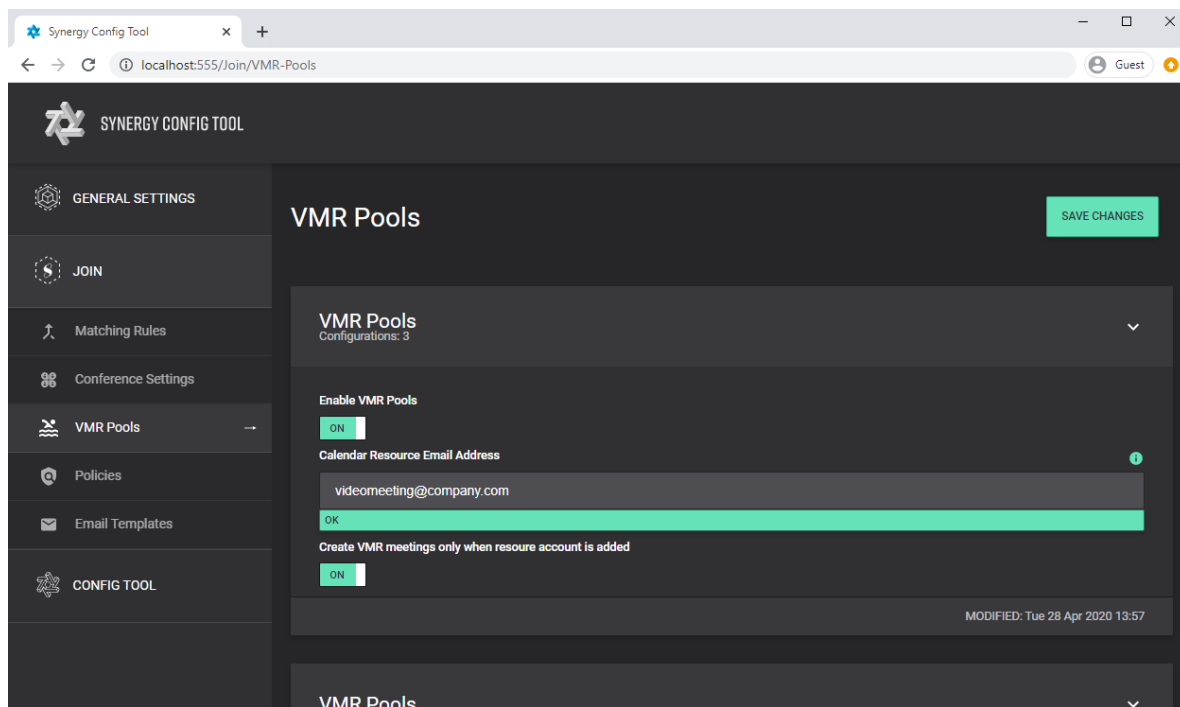
Configuring VMR Pools

In the VMR Pools section click 'Add VMR Pool' or edit an existing one. Fill in the fields as follows:

Section/Field name	Description
MCU	Select the MCU you have added. This MCU will need to support JOIN's Dynamic VMR functionality.
Default VMR Pool	One pool has to be set as default. This pool will be used if there is no preference within the meeting booking itself, or if pools of higher priority have no available URIs/slots left
Type	Select Type 'One Time Vmr'. **Note**: Changing type is not supported after it has been saved
Range Start / Range End	The auto-generated numeric URI will be within this range.
Prefix	If you would like a prefix in front of the numeric URI, you can provide one here. If you choose the prefix to be 'meet', an example URI can be **meet.464324@vc.company.com**.
Generate host pins	Host PINs will be created to identify the host of the meeting. A 4-digit PIN code will be randomly generated for each One-Time VMR for hosts to use to start the meeting. See "Configuring Cisco Meeting Server profiles with Synergy JOIN " on page 139 for controlling the behavior of hosts and guests on Cisco Meeting Server.
Generate guest pins	Guest PINs will be created in order for guests to be admitted to the meeting. A 4-digit pin code will be randomly generated for each One-Time VMR for guests to use to join the meeting
Show participant labels	Whether the participants' names should be visible in the video stream.

Once the VMR Pool is saved, you can select their priority by clicking the up or down arrows and then click 'Save Changes'.

Matching Rules for Static VMR's

Synergy JOIN will process calendar invitations for the resources being monitored based upon the matching rules provided and will provide OBTP information to your endpoint.

Some companies are providing their users with static VMR's meaning that each user - or group of users - have a dedicated virtual meeting room. Users often add the video address in their email signature or providing it in the calendar invitation. By utilizing regular expression search patterns (Regex Rules) JOIN is able to identify such information, and populate the video endpoint such dial information.

First, under JOIN => Conference Settings => Internal Email Domains:

Field	Description
Internal email domains	Specify a comma separated list of the email domains your organization uses. This list is used to determine whether a meeting room invitation is sent from an internal or external user. It is also used to determine which users are internal and external when sending out connection information emails. (e.g. *synergysky.com, synergysky.eu, synergysky.us*)

Then, under JOIN => Matching Rules:

Regex Rule
1. Click on the 'Add' button and choose **'Regex Rule'** from the Rule Type dropdown
2. Enter a name that describes the rule, and choose whether the rule applies to all, internal or external invitations

3. If you are familiar with regular expressions, you can enter the 'Matching value' and 'Replace value' directly. Alternatively, you can click the **'Build Regular Expression'** button in order to use a template and test information from an invitation

Matching rules ✕

BUILD REGULAR EXPRESSION

Regex template:

Generic VMR meetings ⌄

Matching value:

meet.[a-z0-9\-_\]*@[a-z0-9\-_]+\.[a-z0-9\-_\]+

Replace value:

\0

Sample text:

```
Hi Ben.

That sounds like a great idea. Let's meet on video an we can go through this more in
detail. Please find my VMR details in my signature.

Best Regards,
John


_____
John Doe
Sales Manager
email: john.doe@company.com
video: meet.john@vc.company.com
_____
```

RESULT

meet.john@vc.company.com

SAVE   BACK

You may add multiple Regex Rules to identify a mix of different meeting types as shown in the example below:

4. Once the desired rules are added, you can select their priority by clicking the up or down arrows

6. Click 'Save Changes'

How To

We have collected a few guides that provides step by step instructions on how to configure the Synergy SKY products to fit your needs.

You can find the How To guides in the menu structure on the right hand side, or in the menu above.

How To: Download Synergy SKY Software

You can download the latest software from the following link:

https://partner.synergysky.com/Download

Provide your API key and click **'Get Available Software'**. You will then get access to download the Synergy SKY software that is available to you. If you as a customer is eligible for beta software or is part of an EFT program, it will be stated on this page that the software you have access to differs from the general available software version(s).
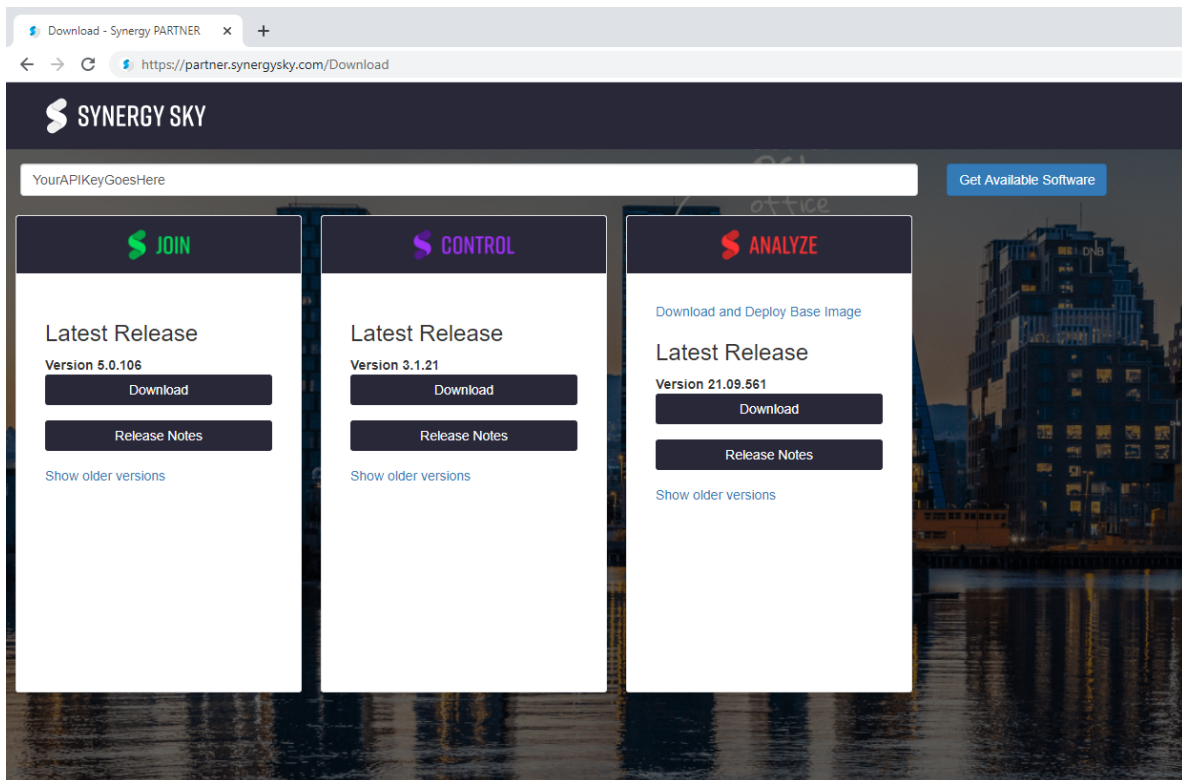
How To: Launch the Configuration Tool

Once Synergy JOIN is installed on the server, an icon 'SynergySKY Config' will appear on the desktop. To launch the web-based configuration tool, you can either double-click this icon:

Or you can open it on the web browser by opening the address http://localhost:555
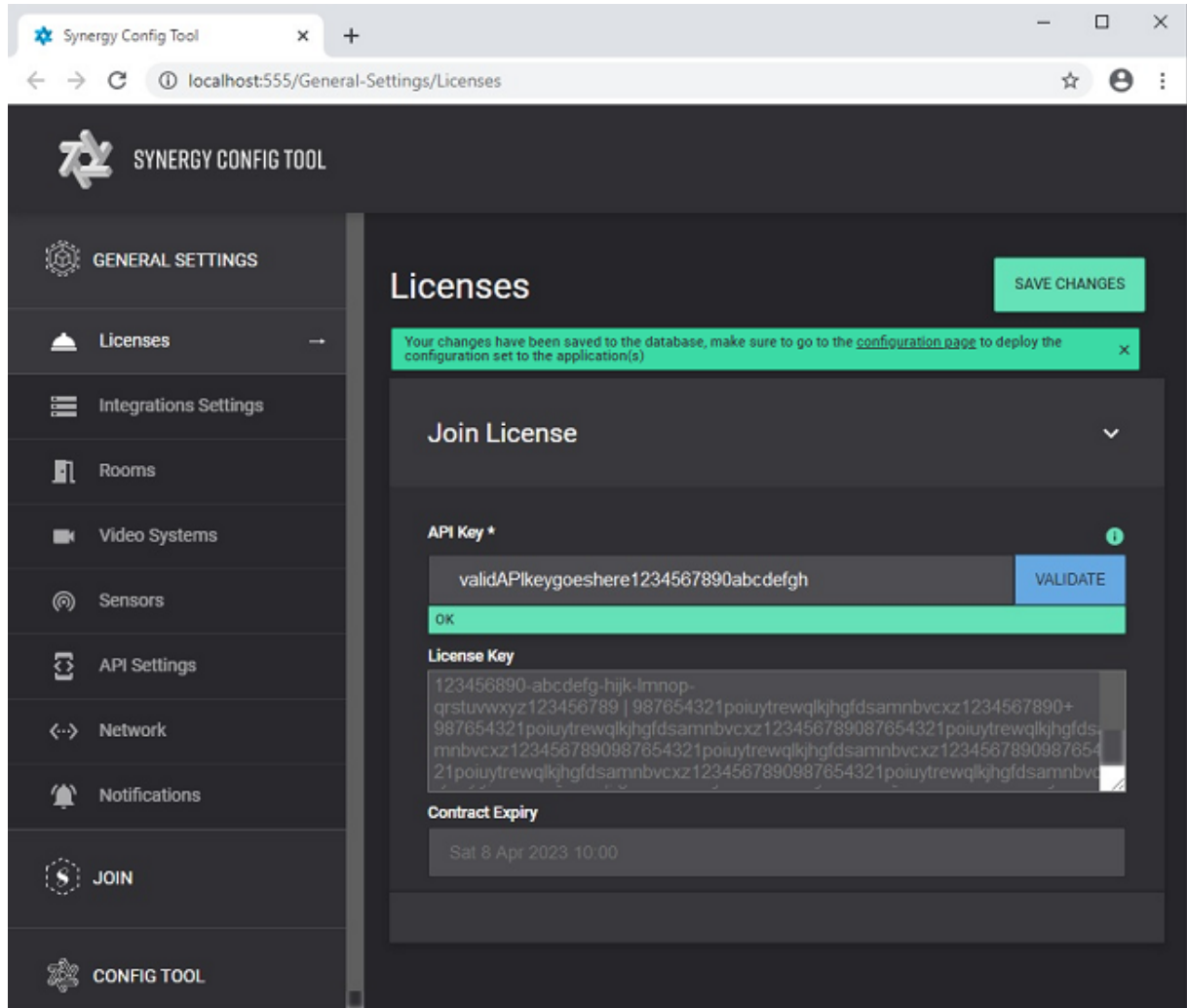
How To: Configure In-Body Update

This How To describes how to activate the In-Body Update feature in your Synergy JOIN installation.

What is In-Body Update?

The "In-Body Update" feature allows for updating the organizer's meeting invitation in their calendar and sending an updated meeting invitation to all invitees, rather than sending a separate email with dial-in information to everyone. This feature requires more permissions in the Microsoft Exchange environment than sending dial-in information emails.

The work flow of this feature involves Synergy JOIN logging into the calendar of the meeting Organizer and updating the appointment with the dial-in information for the meeting based upon the email template specified in "How To: Configure Email Templates" on page 123. The invitation will be re-sent to the invitees with the updated appointment body once successfully updated. An email with the dial-in information will be sent to the meeting organizer if the body could not be updated. The administrator will also be notified when a meeting could not be updated.

Note: JOIN will **not** monitor each user's calendar for changes to meetings, but rather base this on changes to invitations sent to room/ resource accounts.

Overview

- Provide the service account with **send as** permission on the user(s) mailbox
- Provide the service account with **Editor** permission to the user(s) calendar

The following permissions are required for the Calendar Update method to work. It is recommended that these permissions are added to the PowerShell script used when creating new users so that all new users are set up with the right permissions

Providing Send as permission
The Exchange service account needs **"send as"** permissions for each user to send an updated invitation to all recipients in the appointment

Option 1

1. Log In to Exchange Admin Center

2. Go to **Recipients** > **Resources** and select the room that you would like to provide access to

3. Go to **Mailbox Delegation** and choose the ➕ under Send As
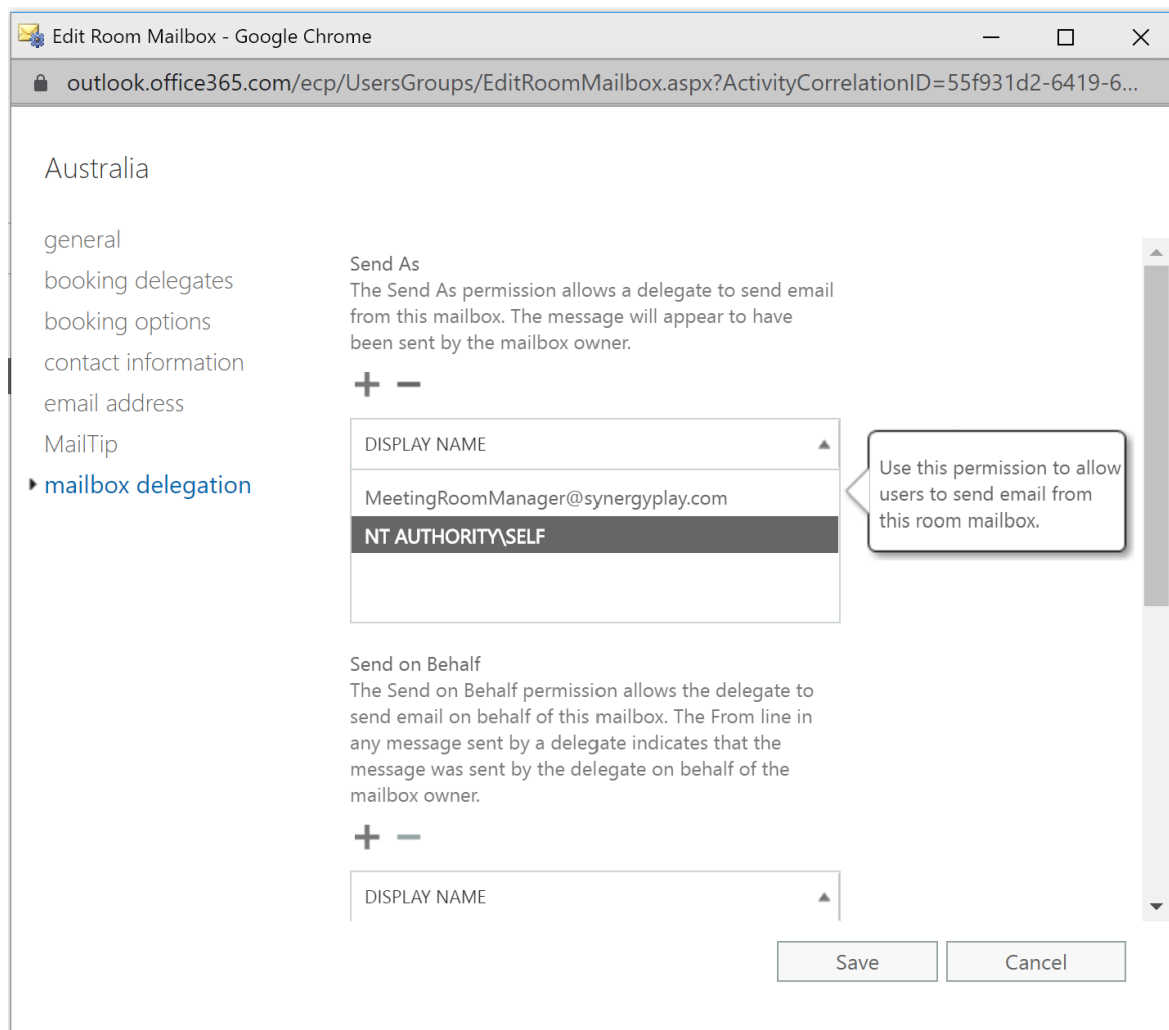
Search for the recently created (or already existing) service account and add this to the Permitted list.

Choose **Save**

Option 2

Alternatively, you can log on to the Exchange Management Shell and use the below command to provide the service account with send as permission on the users mailbox

```
Add-RecipientPermission -Identity jane.smith@company.com -
Trustee meetingroommanager@company.com -AccessRights sendas -
Confirm:$false
```

Note: some Microsoft Exchange environments require the command to be in the following format: `Add-ADPermission -Identity jane.smith@company.com -User meetingroommanager@company.com -AccessRights ExtendedRight -ExtendedRights "Send As"`

Providing Editor permission
The Exchange service account needs "**Editor**" access to the calendar of each user to update the calendar appointment with the dial-in information. This is normally accomplished by running the following command. However the calendar folder name may be something else than "calendar" if the user is not set up with an English mailbox (e.g. Calendrier in French)

Configuration Steps

Log on to the Exchange Management Shell and use the below command to provide the service account with Editor permission to the users calendar

```
Add-MailboxFolderPermission -Identity
```

```
jane.smith@company.com:\Calendar -User
meetingroommanager@company.com -AccessRights Editor
```

Updating calendars in other languages

Note that the script will find the localized name of the calendars in the exchange environment to apply the permissions to the right folder.

The following script can be used to update all existing users in the organization with the right permissions.

The sections that you have to amend are highlighted in red

```
$resourceAccount = 'meetingroommanager@company.com'

foreach($mbx in Get-Mailbox -RecipientTypeDetails usermailbox -ResultSize Unlimited | Select-
Object -ExpandProperty Alias){

$userAccount=$Mbx

$Mbx += ':\' + [string](Get-mailboxfolderstatistics -Identity $Mbx -folderscope calendar | where-
object {$_.FolderType -eq "Calendar"}).Name

$test = Get-MailboxFolderPermission -Identity $mbx -erroraction silentlycontinue

if($test -ne $null)

{

Write-Host "Setting Editor access on $mbx"

Add-MailboxFolderPermission -Identity $mbx -User $resourceAccount -AccessRights Editor

Write-Host "Setting sendas permissions for $userAccount"

Add-RecipientPermission -Identity $userAccount -Trustee $resourceAccount -AccessRights sendas -
Confirm:$false

}

}
```

The following script can be used to update just one user while letting the script figuring out the correct name of the calendar folder:

The sections that you have to ammend are highlighted in red

```
$userAccount = 'jane.smith@company.com'

$resourceAccount = 'meetingroommanager@company.com'

foreach($mbx in Get-Mailbox -RecipientTypeDetails usermailbox -Identity $userAccount -ResultSize
Unlimited | Select-Object -ExpandProperty Alias){

$Mbx += ':\' + [string](Get-mailboxfolderstatistics -Identity $Mbx -folderscope calendar | where-
object {$_.FolderType -eq "Calendar"}).Name

$test = Get-MailboxFolderPermission -Identity $mbx -erroraction silentlycontinue

if($test -ne $null)

{

Write-Host "Setting permissions for $mbx"

Add-MailboxFolderPermission -Identity $mbx -User $resourceAccount -AccessRights Editor

Write-Host "Setting sendas permissions for $userAccount"

Add-RecipientPermission -Identity $userAccount -Trustee $resourceAccount -AccessRights sendas -
Confirm:$false

}

}
```

Private appointments
The scripts above do not allow for updating the invitation body of meetings that are booked as Private in Outlook. The line in the script with **"Add-MailboxFolderPermission"** must be **replaced with the line below** which includes SharingPermissionFlags for

allowing the update of private meetings:

```
Add-MailboxFolderPermission -Identity $mbx -User $resourceAccount -AccessRights Editor -
SharingPermissionFlags delegate,canviewprivateitems -SendNotificationToUser $true
```

How To: Configure Skype IVR with Pexip Infinity

The Skype IVR (Skype Interactive Voice Response) option in JOIN enables users to join Skype Online (Skype for Business Office 365) meetings by dialing into a specific URI (e.g. ivr@company.com) and entering the numeric Conference Id that is automatically inserted into the meeting invitation when booking a Skype Online meeting. The option also make it easy for users to join the Skype meeting via WebRTC which usually has a higher success rate than the Skype Web app. The picture at the end of this chapter shows the work flow of this feature.

Note 1: The Skype IVR option requires the Audio Conferencing option to be enabled in the Skype Online subscription so that the Conference Id is populated in the meeting invitation.

Note 2: The Skype IVR option only works with Pexip, and requires a to be added to the Pexip Management Node

Note 3: It is possible to stop the booking confirmation emails from the IVR service account to spam the user's mailbox by setting up a

Work flow of the JOIN Skype IVR service

HOW IT WORKS

Exchange Requirements

JOIN uses Exchange Web Services (EWS) to access the Exchange Online environment.

For supporting Skype Online IVR meetings, the Exchange administrator needs to check or update the Exchange server with the following:

- JOIN IVR Exchange resource account
- Exchange IVR resource account properties adjustments
- IVR URI in Skype invitation footer
- Hub Transport Rules (optional, but strongly recommended)

Skype requirements

- Skype Online E5 licenses or E1/E3 with Enterprice Voice / Audio Conferencing option for all users booking meeting that will have IVR capabilities

Pexip Requirements

- VMR Licenses equal to or above the number of concurrently running Skype conferences
- Local Policy Script in Pexip "Local Policy Script" on page 140
- Virtual Reception Room under Service Configuration > Virtual Receptions

Configuration steps

Note: All sections that you have to amend are highlighted in red

JOIN IVR Resource Account

Create a JOIN IVR resource account. It is used by JOIN to monitor all calendar invitations for Skype meetings - these invitations are hitting the JOIN IVR resource mailbox due to a specific Hub Transport Rule "Hub Transport Rules" on the next page

- Define this resource account in the 'Conference Settings' tab (or VMR Pools tab if you are using Synergy JOIN 3.2 and above) to allow for dialing conference@domain.com to join the conference directly

- Tick the 'Enable IVR dial-in into Skype Meetings' tick box in the 'Services' tab and specify the Exchange resource email address that you are going to use for the IVR function within your environment.

JOIN IVR Resource Properties Adjustments

REQUIRED:

For the JOIN IVR mailbox, as multiple meetings will be sent there, conflicts must be allowed.

Set-CalendarProcessing <JOIN-ivrAlias> - AllowConflicts $true

OPTIONAL:

If it is desired to keep the Subject of the meeting when provisioning into Pexip (to help fault finding and identifying a specific meeting by title in the Pexip Admin interface).

Set-CalendarProcessing <JOIN-ivrAlias> - AddOrganizerToSubject $false -DeleteSubject $false

IVR URI in Skype Invitation Footer (Skype for Business configuration)

For general user awareness on how to reach the Skype IVR from their video endpoints that is not provisioned by JOIN with OBTP information, please add the following footer for all Skype invitations.

Example:

Join the meeting from a Video Conferencing system by dialing skype@company.com and enter the Conference ID followed by #.

This "skype@company.com" string is also the phrase your Hub Transport Rule will be checking on (see the next chapter).

For a PoC, you can manually add the footer to meetings that should be picked up by the JOIN service, or skip the hub transport rule and add the IVR resource account to the booking, which will make JOIN provision the IVR VMR on the Pexip MCU so that VC systems can dial into the Skype meeting.

Hub Transport Rules

Set up a Hub Transport Rule forwarding all Skype meeting invites to the IVR resource account and consider adding a second transport rule to remove acceptance emails from the IVR, also to avoid the IVR appearing in the participant list in Outlook.

Step-by-step guide

1. Log into the Exchange ECP and click on Mail Flow
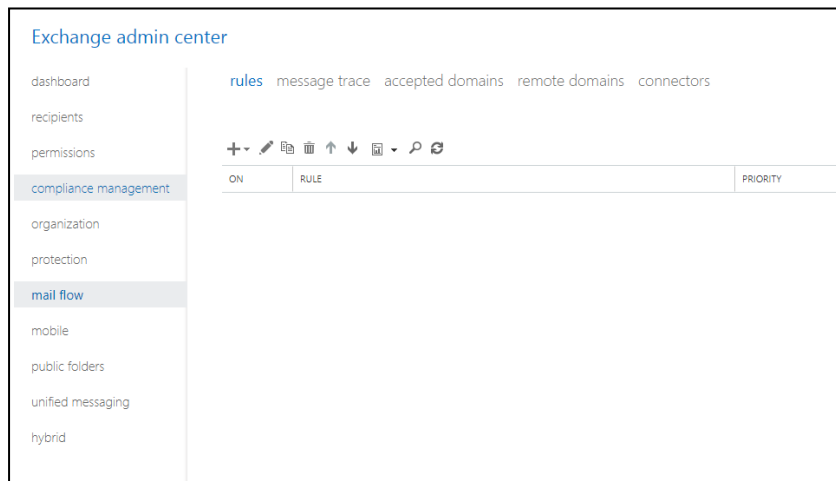
2. Click on the + and Create a new rule

Exchange admin center

dashboard

recipients

permissions

compliance management

organization

protection

mail flow

mobile

public folders

unified messaging

hybrid

rules   message trace   accepted domains   remote domains   connectors

Create a new rule...
Apply Office 365 Message Encryption and rights protection to messages...
Apply disclaimers...
Bypass spam filtering...
Filter messages by size...
Generate an incident report when sensitive information is detected...
Modify messages...
Restrict managers and their direct reports...
Restrict messages by sender or recipient...
Send messages to a moderator...
Send messages and save a copy for review...

3. Give the rule a name and then select the "subject or body includes"

new rule

Name:
IVR

*Apply this rule if...
The subject or body includes...   *Enter words...

Select one
The sender is...
The recipient is...
The sender is located...
The recipient is located...
The sender is a member of...
The recipient is a member of...
The subject or body includes...
The sender address includes...
The recipient address includes...
Any attachment's content includes...
[Apply to all messages]
Test without Policy Tips

4. Now specify a word or phrase to so that the rule can match when it is scanning the mail. We recommend setting this phrase based on the footer string, i.e. skype@company.com as your IVR SIP address.

new rule

Name:
IVR

*Apply this rule if...
The subject or body in

*Do the following...
Select one

Properties of this rule:

☑ Audit this rule with
Not specified ▾

Choose a mode for this
● Enforce
○ Test with Policy Tip
○ Test without Policy

More options...

specify words or phrases   ✕

✎ —

skype@company.com   +

OK   Cancel
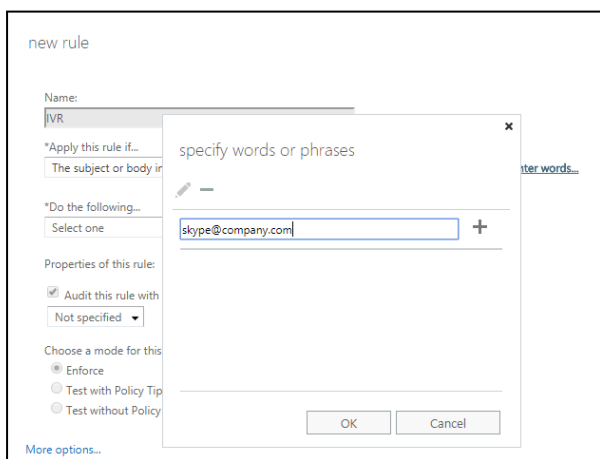
5. Click + and then save
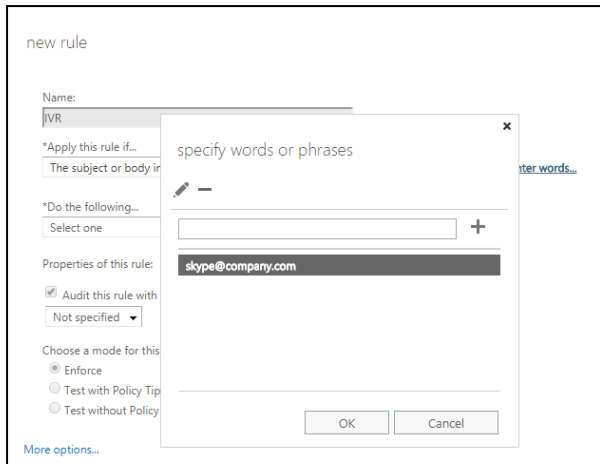
6. Now BCC the message to the Exchange Resource Mailbox that will be used with Synergy Sky
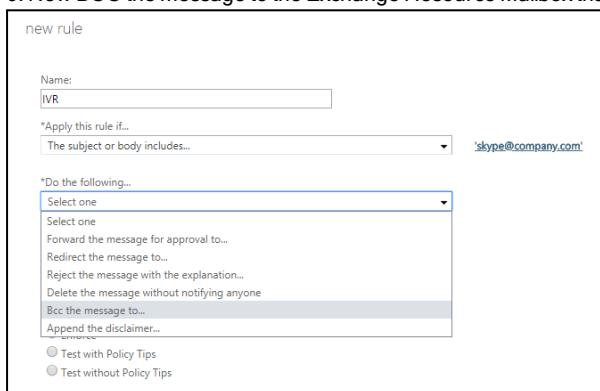
7. Now find the resource mailbox and add this in, and press OK
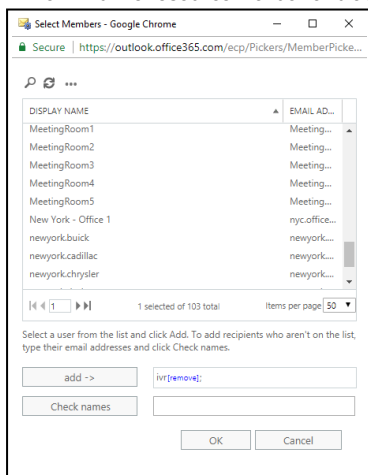
8. Once all this is done, select Save
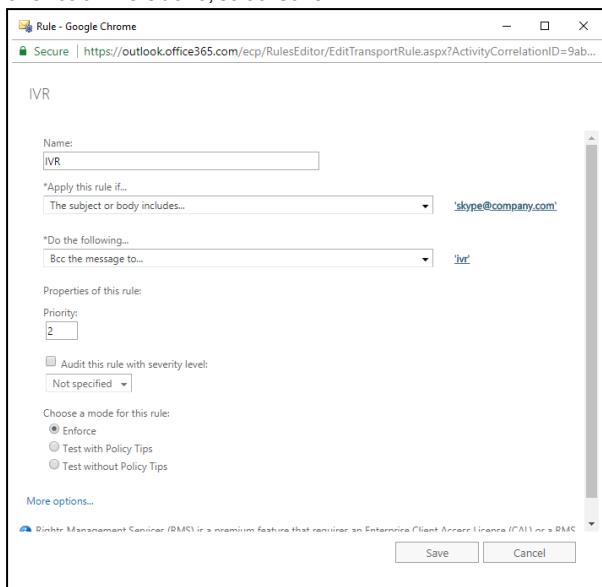
9. You will then see the completed rule in the Exchange Control Panel.

You can now create a Skype Meeting and you can check the Deleted items of the Resource Mailbox to see if the rule has worked. Please, give it a few minutes to ensure it has replicated within Exchange.

Second transport rule to remove accept confirmations

For initial testing it might be useful to get the Accepted message back from this mailbox to confirm the invite was sent there, however when basic functionality is verified, another transport rule should be created to stop messages from the IVR service being sent back to users as illustrated on the following screenshot:
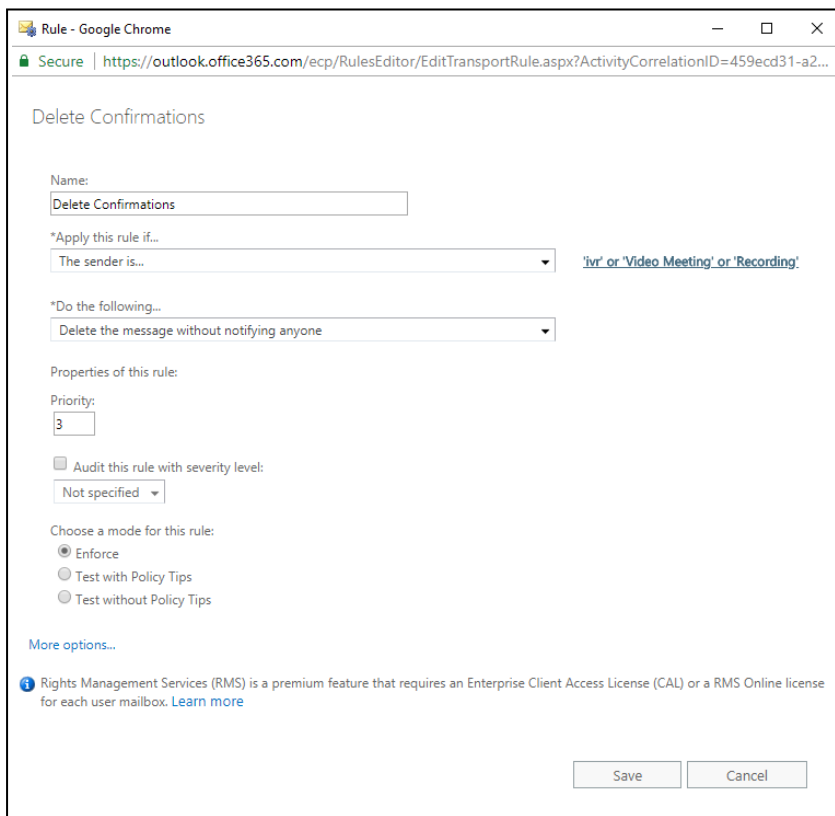
How To: Configure Polycom EWS Emulator

There are instances when the Polycom endpoint is unable to communicate with the Exchange Server and as such, the endpoint is unable to use the built in Polycom One Touch Dial technology. The EWS emulator within Synergy JOIN brings back the ability to utilize the Polycom One Touch Dial technology on your Polycom Endpoint by emulating itself as an Exchange server and providing meeting information to the endpoint thus providing the Polycom devices with their Polycom One Touch Dial buttons.

The EWS Emulator is **compatible with the HDX, Group Series and Trio endpoints**.

The first step in the process is to prepare your Synergy JOIN configuration tool to accept the incoming connections from the Polycom devices.

Configuring Synergy JOIN
The Polycom Exchange Web Service (EWS) Emulator in Synergy JOIN acts as an Exchange Web Server. This means Synergy JOIN will retrieve the calendar information from Exchange or Google Calendar and populate this to the endpoint.
To use this feature, you must enable the EWS Emulator in the API Settings tab of the General Settings.
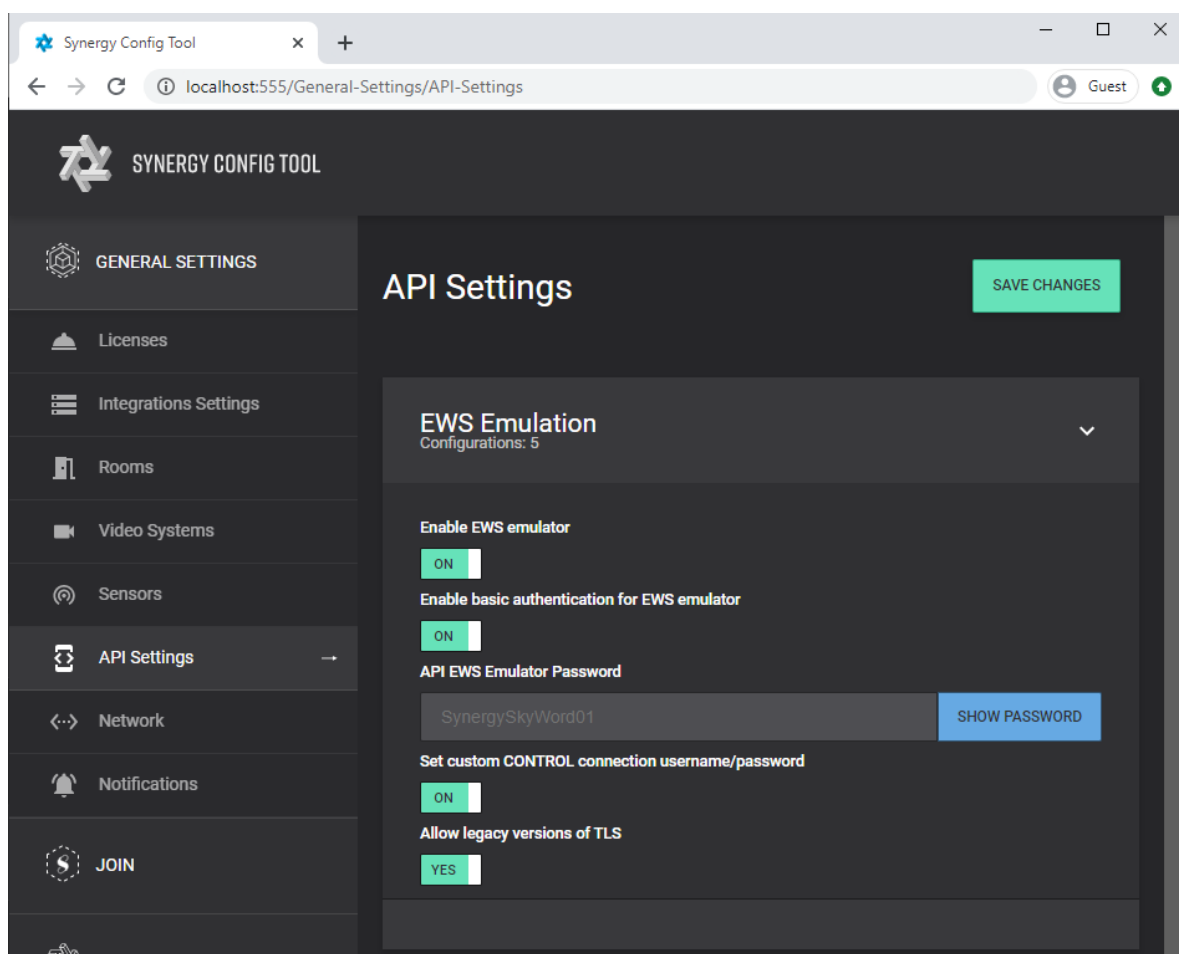
You must then configure your Video System as a Polycom endpoint. Once you do this, Synergy JOIN will know to send the Polycom One Touch Dial Token to that endpoint.

Configuring the HDX and Group Series Polycom Endpoint
When the Registration Status is 'Registered', you can start booking video meetings and start utilizing Polycom One Touch Dial.

The Polycom endpoints must be configured to poll calendar information from the JOIN server which will be acting as an Exchange Web Server.

Instructions on how to configure this on a Polycom Group Series endpoint are below:

1. Navigate to the Calendaring Service configuration section within your Polycom Codec.
2. Tick the 'Enable Calendaring Service' tick box
3. **Email**: This should be the room/ resource email address that you have configured within Synergy JOIN.
4. **Domain:** This field is not always required. If you are unable to register your endpoint to the EWS Emulator with this field blank, you will have to enter your domain
5. **User Name:** This should be the room/ resource email address
6. **Password:** This is the password configured in the 'EWS Emulation' section in the 'Services' tab of Synergy JOIN
7. Microsoft Exchange Server: This is the IP address of the JOIN server

Once you have configured the rest of the settings to your liking, click 'Save'

Configuring the Trio Series Polycom Endpoint
You have to meet the following requirements in order to start using the EWS Emulator with Polycom Trio

- Synergy JOIN build 3.2.163 or above
- 'Enable Basic Authentication for EWS Emulator' within the Services tab in Synergy JOIN
- The Trio has to have a line registered as SIP
- Physical access to the touch panel to set a username & password
- If you are running 5.9 firmware, AD Photo fetch needs to be disabled.
  - ○ `feature.contactPhotoIntegration.enabled = 0`
  - ○ More information about this can be found here - https://documents.polycom.com/bundle/trio-sfb-dg-5-9-0-AA/page/c3189620.html
- Trio, if running 5.9.1.10419 - must upgrade to 5.9.1.11135 and set basic auth to enabled
  - ○ https://community.polycom.com/t5/VoIP-SIP-Phones/Software-Trio-UC-Software-5-9-1-11135-RevAC/m-p/107281
  - ○ `feature.exchange.allowBasicAuth= "1"`

Setting a Polycom Profile
The following setup information has been taken from the Polycom support website. The below configuration is what is required in order for the EWS Emulator to work with the Trio.
The full Polycom documentation can be found here: https://otd.plcm.vc/support/docs/devices/polycom-trio#configure-device-profile

Configure Device Profile

1. Go to the management section of the device. You can get there by entering the IP address of the device into the browser address.

Note: You must log in as an administrator.

2. Select **Simple Setup** from the tab menu.
3. Ensure **Generic** is selected for the Base Profile. The Trio will not function with One Touch Dial service using the other profile options.

Configure Device Calendaring

1. Go to the management section of the device. You can get there by entering the IP address of the device into the browser address. Note: You must log in as an administrator.
   Example: `https://<ip-address-of-trio>/`
2. Select **Settings > Applications > Exchange Applications.**
3. Enter the following fields:
   - **Enable**: Exchange Calendar
   - **Disable**: AutoDiscover
   - **Exchange Server URL**: https://ipaddressofjoin/EWS/Exchange.asmx
     - **NOTE**: Exchange URL is case sensitive
4. Click Save.

Configure Device Credentials

1. Provide calendaring credentials. This must be done on the device itself.
2. On the device touch panel go to **Settings > Basic > Login Credentials.**
3. Enter the following fields:
   - **Domain**: Example OTD
   - **Username**: Example meetingroom1@vc.company.com
     - This is the room alias as it is configured in JOIN
   - **Password**: Example F3kDFyu1bD
     - This is the JOIN EWS Emulator password
4. Click **Save**. The Registration Status should display **Registered** and the calendar should appear in a few seconds.

How To: Configure Recording

The recording option in Synergy JOIN enables users to easily add recording to a meeting. The recording integration requires a recording service by one of the supported providers and a resource account in the calendar system that users add to their invitation when scheduling a meeting. The resource account can even be added to and/or removed from the meeting after the meeting has started to only record a part of the meeting.

Three different recording services are supported: Panopto, Quickchannel and REC.VC.

Common for all three is that you will have to add one Connection and one API integration (refer to "MS Graph API" on page 62 for further details).

Panopto

Panopto delivers a RTMP based recording service which is supported with Pexip Infinity MCU. Recordings are stored in the Panopto cloud service under the account of the meeting organizer with the same title that was defined in the meeting invitation. The recording will be stored in the account of the API user if the organizer did not have a user in Panopto.

The Panopto service returns the URL used to view the meeting when the meeting is booked. This URL can be automatically be embedded into the meeting invitation by referring to the %StreamingPath% variable in the 'Recording footer' template, refer to "How To: Configure Email Templates" on page 123.

The integration user needs to have "admin" permissions in your Panopto account.

Add new connection

Connection type

Panopto Cloud

OK

Name

Panopto

OK

PANOPTO CONFIGURATION

Panopto server address

https://acme.cloud.panopto.eu

OK

Panopto Username

username

OK

Panopto Password

••••••••

OK

SAVE   CANCEL   TEST CONNECTION

Quickchannel

Quickchannel delivers a RTMP based recording service which is supported with Pexip Infinity MCU. Recordings are stored in the Quickchannel service under the account of the meeting organizer with the same title that was defined in the meeting invitation. A new account will be created for the organizer if an existing account was not found.

Add new connection   ✕

Connection type   ⓘ

Quickchannel Cloud   ⌄

OK

Name   ⓘ

QuickChannel

OK

QUICKCHANNEL CONFIGURATION

Quickchannel Username   ⓘ

ag@synergysky.com

OK

Quickchannel Password   ⓘ

••••••••••

OK

SAVE   CANCEL   TEST CONNECTION

Please note the following:

Quickchannel stream key:

This is the url provided by Quickchannel for your recording account. The URL you get may contain more information than should be added here, so everything after the first underscore should be removed (including the underscore)

Example:

The URL may be: rtmp://stream61.abiliteam.com/ability494push/mp4:0x37d175e6984f31aaec87cb376fdd3926_abcdef12345abcdf_cam1

But should be: rtmp://stream61.abiliteam.com/ability494push/mp4:0x37d175e6984f31aaec87cb376fdd3926

Enable dual streams:

Check this checkbox if the Quickchannel service should record both the main stream and the content channel. The streams are stored as individual streams but can be played back synchronized by the Quickchannel video player

REC.VC

REC.VC delivers a SIP based recording service, which is supported with both Pexip Infinity and Cisco Meeting Server. Recordings are stored in the REC.VC under the account of the meeting organizer. The recording requires the organizer to have an account with the REC.VC service, because the call to the service will be connected by a dial-out to a re-written version of the organizer's email address..

Add new connection   ✕

Connection type   ⓘ

REC.VC Cloud   ⌄

OK

Name   ⓘ

REC.VC Recording

OK

RECVC CONFIGURATION

Email address matching Rule (RegEx)   ⓘ

(.+)@company.com

OK

Email address replace Rule (RegEx)   ⓘ

\1.company@rec.vc

OK

SAVE   CANCEL

Please note the following:

Email address matching rule (RegEx):

The Regex rule to identify parts of the organizer's email address to be used in the replace rule below

Example: (.+)@company.com

Email address replace rule (RegEx):

The Replace value to be used with the Regex rule: \1.company@rec.vc

Example: The configuration above will work as follows: jane.smith@company.com schedules a meeting that going to be recorded by REC.VC (inviting the recording@company.com resource). Synergy JOIN will at the start time of the

Note: It is possible to stop the booking confirmation emails from the recording service account to spam the user's mailbox by setting up a

How To: Configure an Occupancy Sensor

Occupancy sensors are used by Synergy JOIN to understand whether there are people present in the meeting rooms or not. Based on the occupancy information, JOIN can make intelligent decisions based on the Policies configured, e.g. release a room that is booked but not being used.
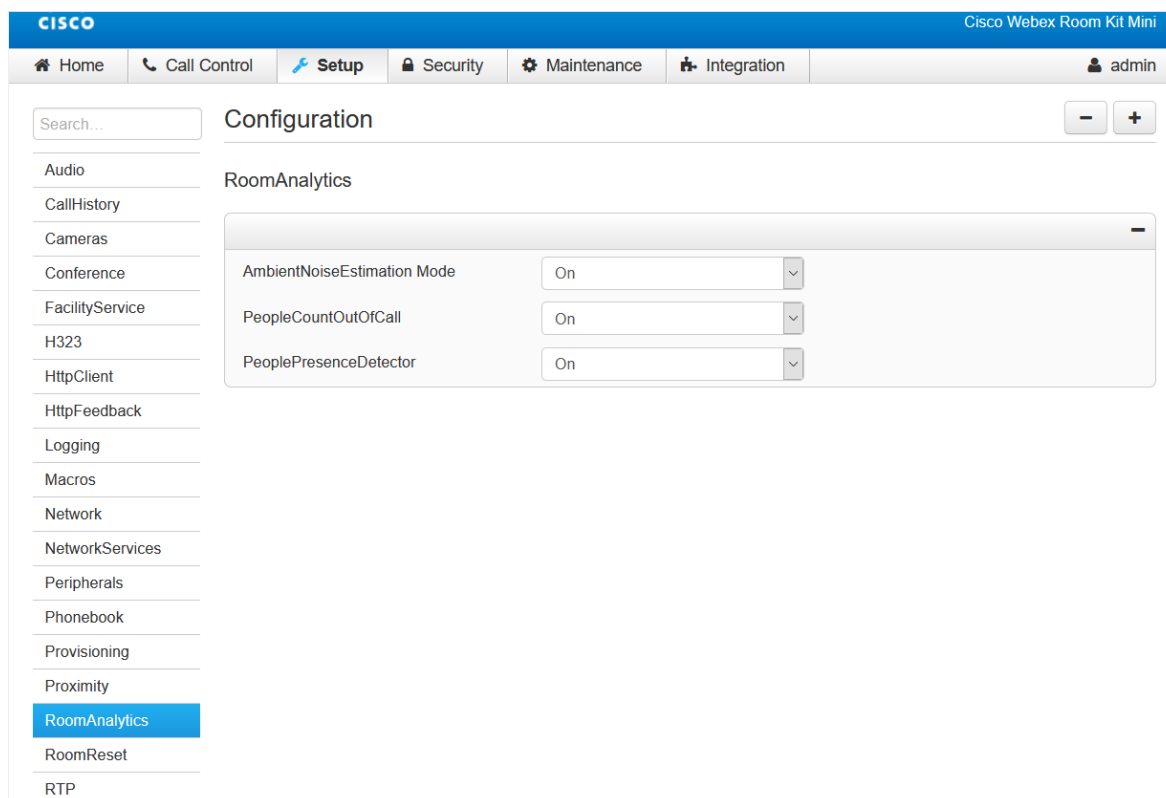
JOIN supports two different occupancy sensors: Cisco Webex Room Series endpoints and ThingsWeb IoT sensors. Below is a guide on how to configure both of them.

Cisco Webex Room Series Endpoints

The great advantage of Cisco Room Series endpoints is that - in addition to act as an occupancy sensor - they can provide JOIN with the number of people in the meeting room using its People Count feature.

In order to enable the endpoint to be used as an occupancy sensor/people counter, you will need to follow these steps:

1. On the endpoint, turn the settings under Configuration ==> RoomAnalytics On

2. Add the endpoint as described in "Video Systems" on page 73.
3. In the Video Systems list, click the **'Feedback Slots'** link and add a new feedback to one of the available slots providing the server address of the JOIN server.
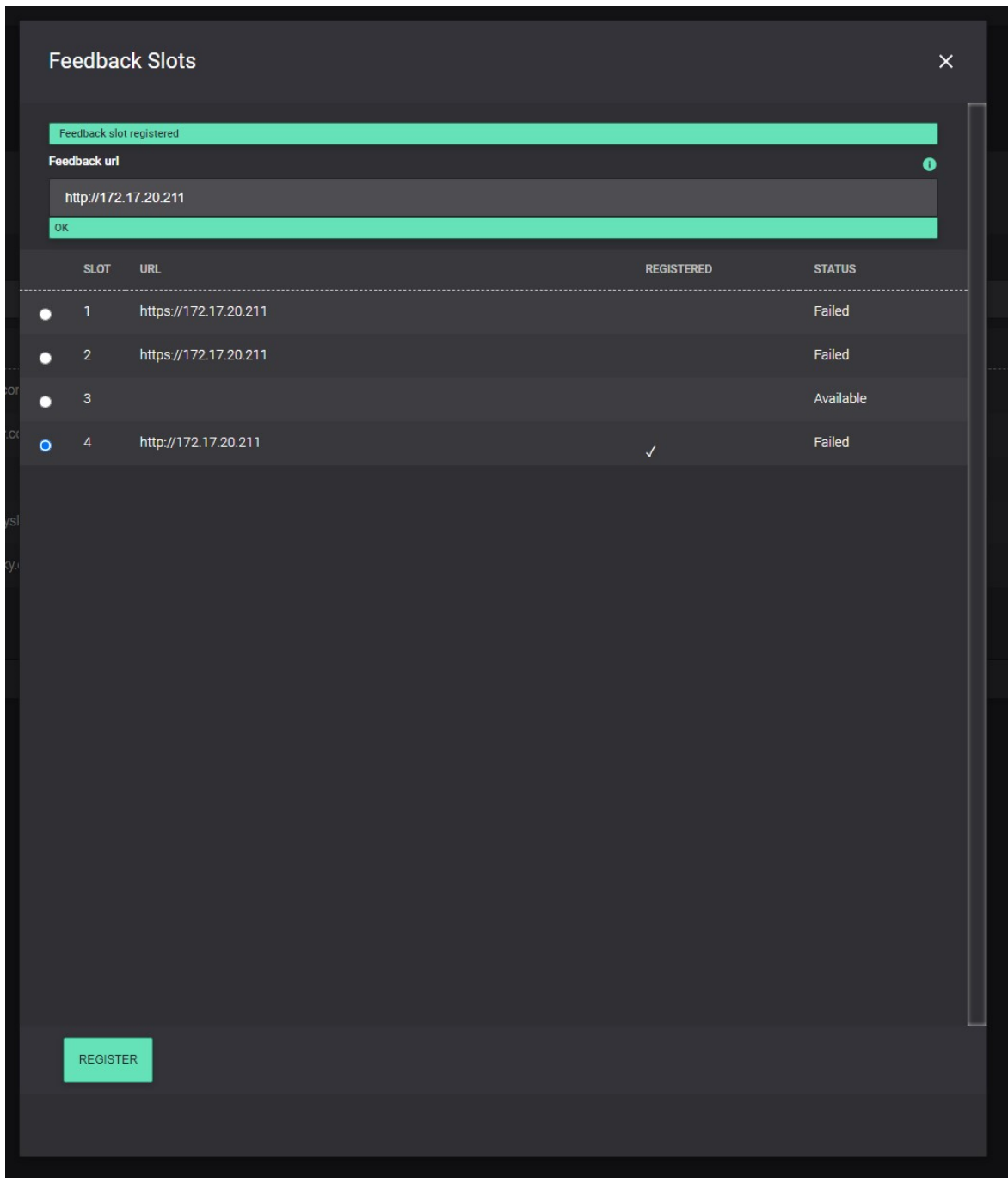
Once completed, the endpoint will start pushing occupancy and people count data from the endpoint to JOIN.

ThingsWeb Sensors

This guide assumes that the sensors have been installed at the physical meeting rooms and provisioned in the ThingsWeb cloud.

1. The next you will need to do is to make sure there already is a ThingsWeb connection and API integration created or create new ones

Edit connection ✕

Connection type ⓘ

ThingsWeb Cloud ⌄

OK

Name ⓘ

Things Web Sensors

OK

SENSOR CREDENTIALS

Client ID * ⓘ

isdflkjsdf98sd9f8sdfljlk79dxgz3e9daSLtCX

OK

Secret * ⓘ

a2rgUto34mq1k7_YcyBJPgGsdKfisdf987sd98fulksdjfoisdf79iosUDiV7HnAF97EzX

OK

SAVE   CANCEL   TEST CONNECTION

2. Then go to the Sensors tab and click 'Get Sensors' (or 'Refresh Sensors') to retrieve the available sensors from your ThingsWeb integration.
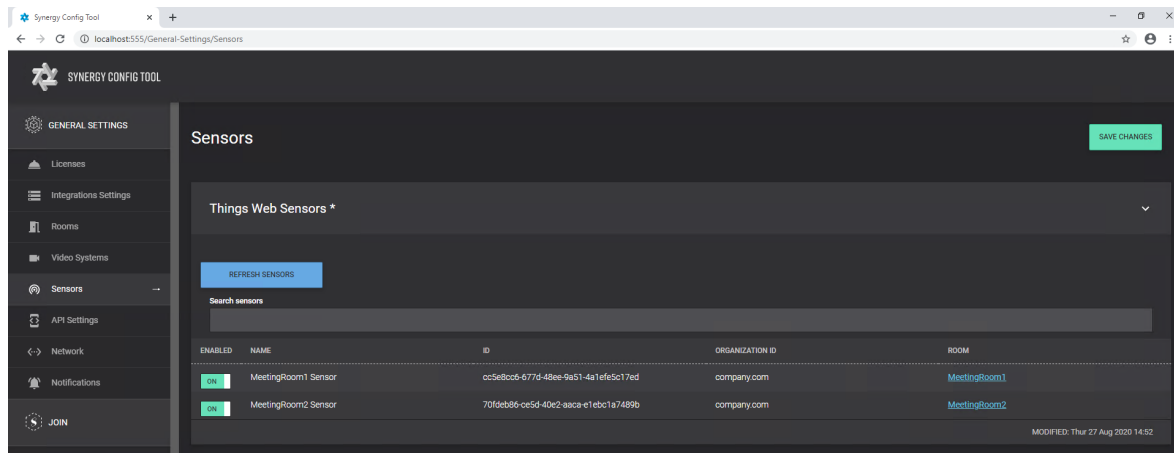
3. Lastly you will have to go to the "Rooms" on page 67 and assign the sensors to the correct rooms.

Edit rooms ✕

ROOM CONFIGURATION   Room status [ON]

Room name   **Room alias**

MeetingRoom1   MeetingRoom1@company.com

Preferred VMR pool   **SOT debooking policy**

One-Time VMR Pool   ⌄   Default   ⌄

Attached videosystem

meetingroom1@vc.company.com   ⌄

SENSORS

Add sensor

MeetingRoom1 Sensor   ⌄   [ADD]

[SAVE]   [CANCEL]

How To: Configure a No-Show/Debooking Policy

Synergy SKY introduces support for IoT and leverages data gathered from calendars, sensors, endpoints and MCUs to improve the overall meeting experience. Synergy software is currently able to utilize presence data from IoT provider ThingsWeb as well as utilize Cisco's People Count technology. More sensor and presence detection systems are being added to the list of supported devices over time.

JOIN is able to detect people presence either by using the any of the supported sensor technologies and based on policies defined the software can make intelligent decisions, e.g. release a room that is booked but not being used.

The No-Show/Debooking Workflow

1. The organizer books a room for his/her meeting, but nobody shows up in this meeting room, i.e. it is left empty during the meeting
2. After a number of minutes into the meeting (the Meeting duration minutes setting), JOIN starts to look at whether there have been occupancy in the room after the meeting started.
3. If there has, JOIN performs an automatic check-in
4. If there has not, JOIN is sending an email to the organizer (if Send unbook warning to organizer setting is enabled) asking whether the organizer would like to keep the room, or whether it should be automatically released so that others can use it. The "How To: Configure Email Templates" on page 123 describes how to customize the email being sent out. At the bottom of this page, you can also see an example of how this email can look like.
5. If the organizer chooses to keep the room, JOIN will take no further action
6. If the organizer chooses to ignore the warning or doesn't choose to keep the room within a time frame (the Wait for reject minutes setting), JOIN will automatically release the room, i.e. remove it from the meeting in the calendar system and make it available for others to book.

Configuring the Policy

In order to configure a complete no-show/debooking policy, please follow these steps:

1. Configure occupancy sensors following this guide. You may also configure the sensors after the policy has been created.
2. In the config tool, go to JOIN ==> Policies and add a new policy. Populate the policy with values that make sense in your organization. Each field comes with a field help that explains what the value is used for.

SOT Debooking ✕

POLICY   Enabled   ON

Label *

SOT Debooking Policy

OK

Default Policy

ON

Wait for reject minutes *

5

OK

How long to wait after we send the email to the organizer
before we do the unbooking

Send unbook warning to organizer

ON

SENSOR SETTINGS

People count window minutes *

3

OK

How long back in time from now should we look at people
count data. We calculate an average over this timespan.

Minimum motion count *

0

We look at this number of motion data points from
Verithing/thingsweb. They must all have happened after
the meeting started, and must all have 0 as the value. The
time in-between each motion count is configured from
Verithings/thingsweb

People count threshold *

0,15

OK

What must the average people count be below for us to
unbook the room. 0.05 equals 30 seconds of people count
1, the rest people count 0 over a 10 minute window

Meeting duration minutes *

10

OK

How long into the meeting before we start looking at
people count data and motion data

SAVE   CANCEL

3. Click **'Save'** and then from the policies page click **'Save Changes'**
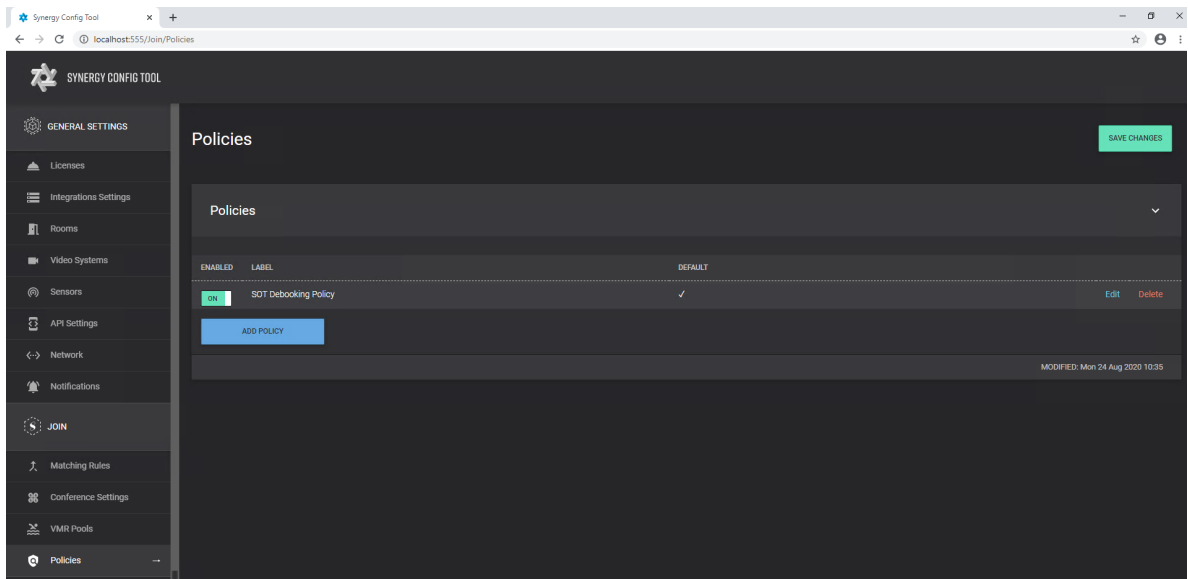
Email Example

There is no occupancy detected in meeting room: BoardRoom

Meeting room	BoardRoom
Meeting Subject	Weekly Support Meeting
Meeting Time	02.04.2020 16:00:00

There has been no occupancy detected in the meeting room **BoardRoom** after the meeting started.
If no action is taken and no occupancy is detected within a few minutes the room will be removed from the meeting.

If you still wish the meeting room to be a part of the meeting,
please click on the link below.

PS. If you wish to re-add the room to the meeting after it has been removed, you can simply
open the meeting in your calendar and save it.

Click here to keep the meeting room!

The parameters that can be used in the email template are listed below:

Parameter	Description
%subject%	The subject line of the meeting (if one is specified)
%starttime%	The start time of the meeting
%invitee%	The name of the room that has been booked
%rejecttoken%	The reject token that links the de-booking to this specific meeting

Adjust the %rejecttoken% URL according to your actual Synergy JOIN location (the default value there is "localhost").

How To: Configure a Proxy Server

You can configure JOIN with a proxy server and specify which components you want to use the proxy server for. Click the Network tab in the config tool.

First, you will need to define the proxy settings (server address, port, username and password) and then you will need to specify which connections the proxy servers is to be used for.
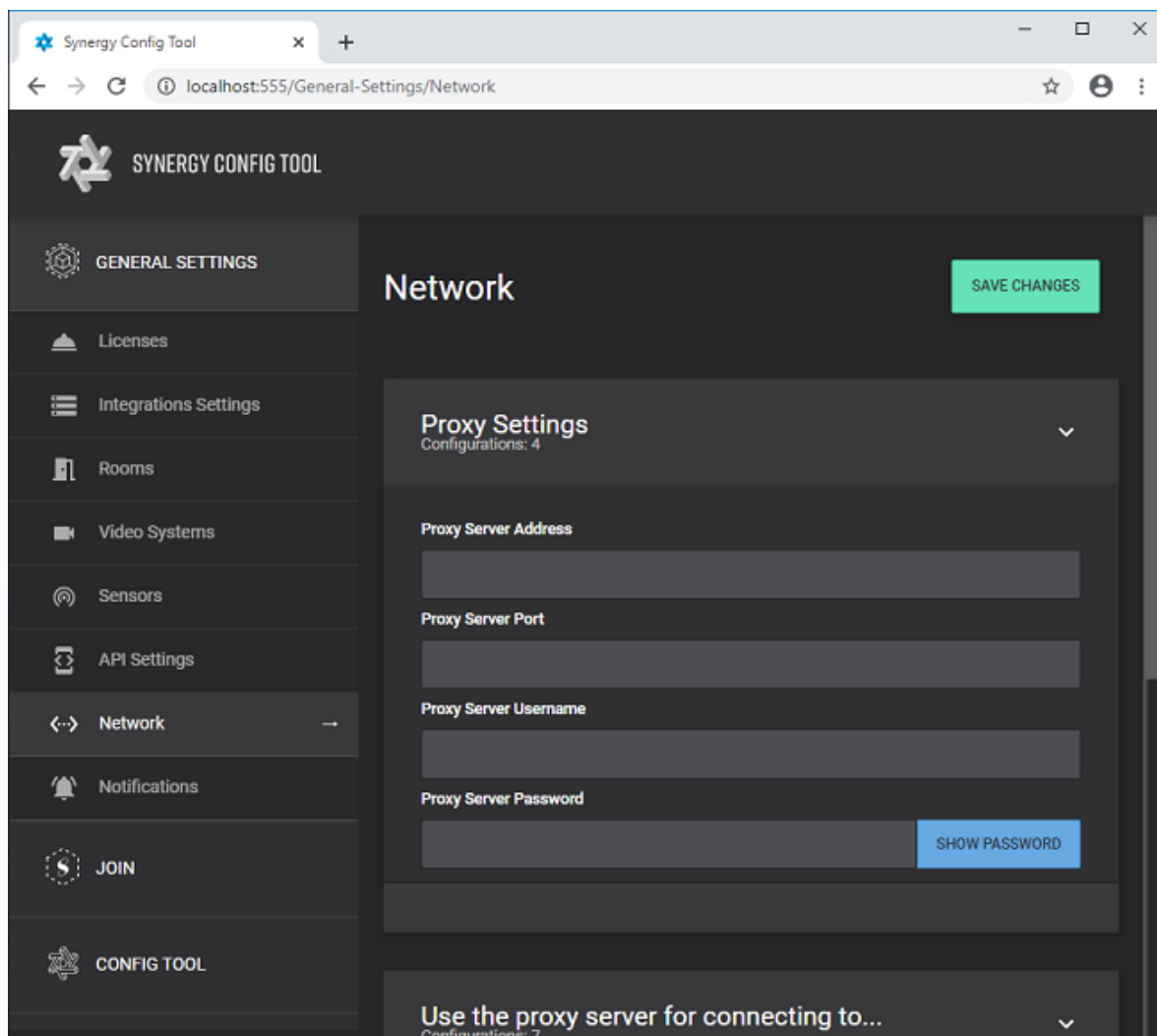
How To: Configure Email Templates

The Synergy SKY software sends out email so users and administrator in different scenarios. All emails being sent out from the systems are based on html templates that can be customized to fit your need and look and feel. The software comes with a predefined set of email templates that are available in the config tool from JOIN ==> Email Templates.
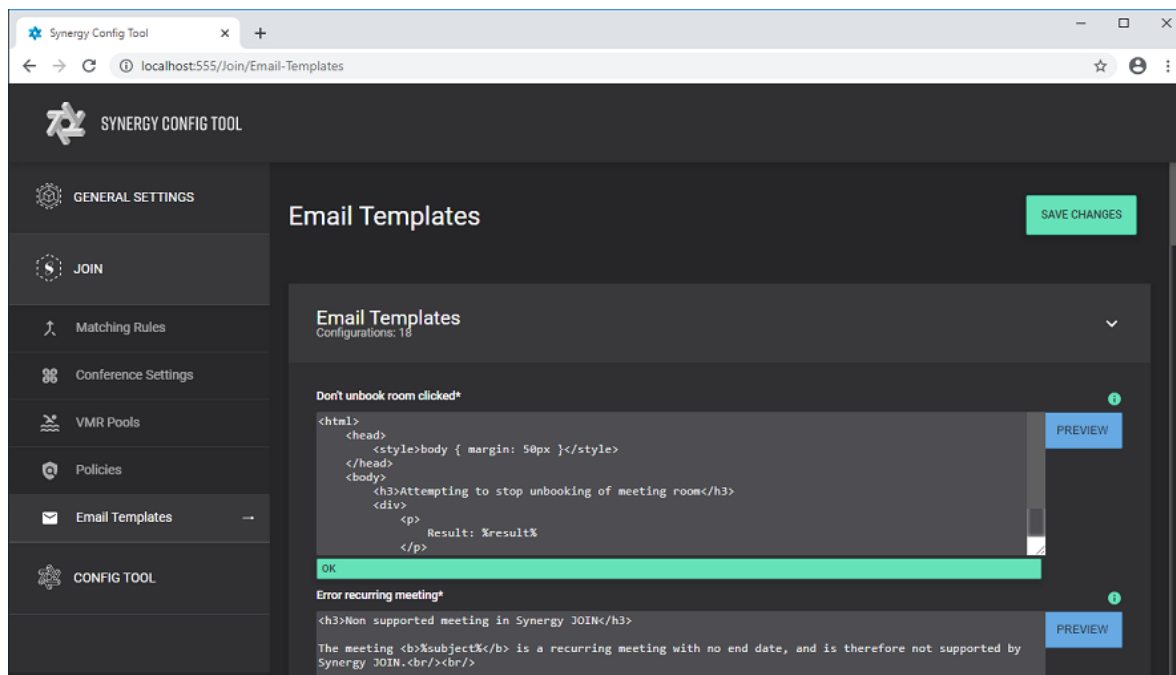
The email templates need to be written using html formatted text. You can edit all text that is not between the % symbols. The *%sometext%* are placeholders, meaning they will be substituted by the software when processing the email. You can remove any % attributes that you do not want to display in your emails. You can click the **'Preview'** button to view to preview the html formatted text in your web browser.

Below is a table of the available email templates and that they are used for:

Template name	Description
Don't unbook room clicked	This text is presented to the organizer when the user has received a no-show warning email, and decides to keep the room and clicks the keep room link.
Error Recurring Meeting	Sent when a recurring meeting is booked with no end date as this is not supported in JOIN.
External Invite	Sent to participants external to your organization when a One-Time-VMR meeting is booked. Includes dial-in information for the meeting.
External Invite Skype	Sent to external participants when a Skype meeting is booked.
External invite static vmr	Sent to the external participants when a Regex rule meeting is booked
Fallback header	If JOIN fails in updating the organizer's calendar, it will send out an email to the organizer containing this information.
Host pin	Enabling the Calendar Update function results in all invitees getting the same information as the organizer since the information is inserted in the calendar body. The Host Pin will therefore be sent to the Organizer as a separate email if Host Pin generation is enabled.
Internal invite	Sent to internal participants when a One-Time-VMR meeting is booked. Includes dial-in information for the meeting.
Internal invite skype	Sent to internal participants when a Skype meeting is booked.
Internal Invite Static	Sent to the internal participants when a Regex rule meeting is booked.
Internal invite static vmr	Sent to the external participants when a Regex rule meeting is booked
Notify organizer about meeting extension	If an administrator extends the meeting, the organizer is being notified with the text defined in this template.
Notify organizer about no-show	If a physical meeting room is booked to a meeting, but nobody shows up in the meeting room within a specific time, this email is being sent out to the organizer where the organizer can choose to keep or release the room.
Organizer invite	Sent to the meeting organizer when a One-Time-VMR meeting is booked. Note: This information will be inserted into the calendar invite and is resent to all invitees when the In-Body Update function is used.
Notify organizer about invitations shared from Synergy CONTROL	If an administrator shares meeting information from CONTROL, the organizer of the meeting will be notified by email. This email template will be used in the email.

Template name	Description
Organizer invite skype	Sent to the meeting organizer when a Skype meeting is booked.
	Note: This information will be inserted into the calendar invite and is resent to all invitees when the In-Body Update function is used.
Organizer invite static vmr	Sent to the meeting organizer when a Regex rule meeting is booked.
	Note: This information will be inserted into the calendar invite and is resent to all invitees when the In-Body Update function is used.
Recording footer	Added to the end of the email invitations if recording is activate for the meeting.
Skype insertion template	For Skype IVR enabled meetings, this template text can be added to the email invitation in order for invitees to easier connect from their video systems.

The following attributes can be used in the templates:

Attribute name	Description	Example
%URI%	The full URI of the meeting	12346578@company.com
%NumericVMRURI%	The numeric part of the meeting	12346578
%HostPin%	The pin code for the host of the meeting	2412
%GuestPin%	The pin code for the guests of the meeting	0211
%starttime%	The start time of the meeting	01.01.2017 10:00
%endtime%	The end time of the meeting	01.01.2017 11:00
%subject%	The subject of the meeting	Board meeting
%invitebody%	The full body of the meeting invitation	...
%organizer_firstname%	The first name of the meeting organizer	Jane
%organizer_lastname%	The last name of the meeting organizer	Smith
%organizer_email%	The email address of the meeting organizer	jane.smith@example.org
%invitee%	The name of the person the meeting invite is sent to.	John Jones
%isPrivate%	A flag indicating if the meeting is booked as Private or not	True
%SkypeConferenceId%	The numeric conference Id found in the invite of Skype invitations that have PSTN dial-in capabilities	87564312
%SkypeGRUU%	The Globally Routable Unique Identifier of Skype meetings	sip:john.smith@example.org;gruu;opaque=app:conf:focus:id:TTC86056
%SkypeURL%	The URL found in the Skype meeting invitation	https://meet.lync.com/company-com/jsmith/6LN9569P
%StreamingPath%	The URL to view the live/on-demand video stream from the meeting. Only applicable for Panopto recording	
%HostSecret%	The secret that need to be in the URL to enable one-click-joining as Host on WebRTC in One-time-VMRs on the Cisco Meeting Server	https://cms.company.com/?secret=%HostSecret%&id=%NumericVMRURI%
%GuestSecret%	The secret that need to be in the URL to enable one-click-joining as Guest on WebRTC in One-time-VMRs on the Cisco Meeting Server	https://cms.company.com/?secret=%GuestSecret%&id=%NumericVMRURI%
%rejecttoken%	Being used by the 'Notify organizer about no-show' template. The reject token links the de-booking to this specific meeting.	

How To: Configure High Availability

The Synergy JOIN High availability method works in a publish and subscribe method. The Primary Server is configured as a publisher to the Secondary Server. The Secondary server is then configured as a subscriber of the content that is being published by the Primary Server.

The below guide provides you with the steps to create the publication from the Primary Server to the Secondary Server for the PostGreSQL database.
The second part of the guide provides the steps you have to follow in case you have to failover from the Primary Server to the Seconday Server.

Only one instance of the JOIN service should be running at any given point in time

• JOIN 4.0.290+ on Primary and Secondary server

• Run backup on Primary server of C:\SynergySky

• JOIN_HA_FilePackage.zip - extracted and placed in folder 'C:\SynergySky (C:\SynergySky\JOIN_HA_FilePackage'

• Network access between Primary and Secondary server on port 5432

• copy config.json from Primary server to Secondary - C:\SynergySKY\SynergySKYEnterpriseScheduling\config

Primary Server Configuration
1. Download and place the contents of folder [JOIN_HA_FilePackage.zip](#) to 'C:\SynergySky (C:\SynergySky\JOIN_HA_ FilePackage'

2. Configure Primary server as allowed Publisher

Browse to the folder: `C:\SynergySKY\SynergySKYEnterpriseScheduling\pgsqldb`
Open the file '`pg_hba.conf`'.

TYPE DATABASE USER ADDRESS METHOD

IPv4 local connections:

host all all <IP Address of Secondary>/32 md5

3. Run MASTER.bat from C:\SynergySky\JOIN_HA_FilePackage

Secondary Server Configuration
4. Browse to the folder: `C:\SynergySKY\SynergySKYEnterpriseScheduling\pgsqldb`
Open the file '`pg_hba.conf`'.

For additional Security, you can create replication user. Alternatively, you can allow 'all' which will allow all PostGreSQL user accounts access to the PostGreSQL for replication

TYPE DATABASE USER ADDRESS METHOD
host all all <PrimaryServerIPRANGE>/24 md5
OR
host all all <PrimaryServerIPADDRESS>/32 md5

5. Run SLAVE.bat under C:\SynergySky\JOIN_HA_FilePackage

Check replication process
6. To check status of the replication, run:

C:\SynergySky\JOIN_HA_FilePackage\Check_replication.bat

7. Launch configuration tool and go to "Manage Meetings" on both servers. When replication is complete, these items will match

How to failover JOIN between Primary and Secondary
On Secondary server

1. Run MASTER.bat under C:\SynergySky\JOIN_HA_FilePackage

On Primary Server (Current Master)

2. Run SLAVE.bat under C:\SynergySky\JOIN_HA_FilePackage

3. If the server is unavailable, you may skip this step

• When available run #1

Check replication

4. To check status of the replication, run:

• C:\SynergySky\JOIN_HA_FilePackage\Check_replication.bat

5. Launch configuration tool and go to "Manage Meetings" on both servers

When replication is complete, the meetings in these two lists will match and you are now ready to start the JOIN service on the Secondary server.

When you are ready to go back to using the Primary Server as the main JOIN Server, repeat the steps above on the nodes.

A simpler backup method that is available would be to run a database export. The database export takes a snapshot of the database and this export can be imported to the Secondary database at any time. The steps to carry out the backup are explained below.

Backing up and Restoring Synergy JOIN Database
Backing up the database .

Synergy JOIN database can be exported to another location to allow for import in case of database corruption or should the primary server go down for any unforeseen circumstances

Run `synergysky_db_export` from `C:\SynergySKY\SynergySKYEnterpriseScheduling\scripts`

This script will export the entire database and will place a file titled 'synergysky_db_export.txt' in the location C:\SynergySKY\SynergySKYEnterpriseScheduling\scripts

Once the database has been backed up, we would advise to store this file in a location different to the server itself.

Restoring the database

To restore the database run **`synergysky_db_import`** from `C:\SynergySKY\SynergySKYEnterpriseScheduling\scripts`

This script will drop all active connections to the database, drop the current database and restore the backup into the Synergy JOIN database.

Following this, you will have to start the Synergy JOIN service in the configuration tool.

Only one instance of the JOIN service should be running at any given point in time

How To: Manually Configure the Postgres Database

Synergy SKY software is utilizing a PostGreSQL database structure. Not only does it improve the performance and reliability of the Synergy SKY products, but it improves the detection & processing of meetings. This database type stores historic meeting information that allows for better post sales support as well as the ability for the family of products from Synergy SKY to communicate together in unison.

By default, PostGreSQL is installed with the following database connection details:

Port: 5432

Username: postgres

password: postgres

Database name: synergyskydb

The database username or password can be changed through the PostGreSQL administration console or any other preferred database management tool. If any of these valued are changed, these will also have to be updated in the config.json file that can be located in the path - C:\SynergySKY\SynergySKYEnterpriseScheduling\config\ of your Synergy JOIN installation.

Allowing Synergy CONTROL & Synergy ANALYZE access to the Synergy JOIN database

Browse to the folder:

`C:\SynergySKY\SynergySKYEnterpriseScheduling\pqsqldb`

Open the file `'postgresql.conf'`

Uncomment and Change the following lines to the below:

Note: *To uncomment a line, you have to remove the '#' at the beginning of that line*

CONNECTIONS AND AUTHENTICATION

```
listen_addresses = '*'
```

This will allow the PostGreSQL to listen for outside connections.

Browse to the folder:

`C:\SynergySKY\SynergySKYEnterpriseScheduling\pgsqldb`

Open the file `'pg_hba.conf'`.

TYPE DATABASE USER ADDRESS METHOD
```
host all all 127.0.0.1/32 scram-sha-256
```

You have to replace 127.0.0.1/32 with the IP Address and IP Address range that your servers reside in.e.g. 192.168.10.0/24.

This will allow the PostGreSQL database to accept connections from addresses within the specified range. For increased security, the IP Address of the CONTROL and ANALYZE servers can be specified here using the following format

```
192.168.10.105/32
```

Synergy JOIN Troubleshooting

This section provides information on how to Troubleshoot JOIN

Common troubleshooting scenarios

Cisco OBTP or Polycom OTD button does not appear on the endpoint touch panel

Symptoms	Probable causes	Actions
When booking a Skype or One-Time-VMR meeting that includes one or more Exchange resource meeting room(s) as a participant, the Cisco OBTP or Polycom OTD button never appears on the meeting room(s) touch panel.	JOIN could not find Skype meeting information or VMR information (based on Regex rules).	Check the log for details, and correct the rules accordingly.
	JOIN failed in reading the booking in Exchange.	Open the Configuration tool and use the **Test Exchange Rooms** button to test that the rooms are correctly configured.
	JOIN cannot contact the endpoint.	Go to the **Video Systems** and press **Connect and save** to verify that JOIN can connect to the endpoint.

One-Time-VMR is not provisioned on the MCU

Symptoms	Probable causes	Actions
Calls to/from One-Time-VMR meetings are failing.	JOIN cannot contact the MCU.	Press the **Test Connections** button in the configuration tool to verify that JOIN can communicate with the MCU.
	VMR licenses are depleted.	Check that you have sufficient VMR licenses on the MCU.
	Conflicting alias on the MCU.	Check the log for details.

One-Time-VMR is not deprovisioned on the MCU

Symptoms	Probable cause	Actions
The VMRs are not disappearing from the MCU after the meeting is finished, which would eat up VMR licenses and potentially stop later one-time-vmr meetings from being provisioned due to conflicting aliases.	JOIN cannot contact the MCU.	- Press the **Test Connections** button in the configuration tool to verify that JOIN can communicate with the MCU. - Check the log for details.

Error in configurator when adding rooms

Symptoms	Probable cause	Actions
Error '401 Unauthorized' when accessing the **Rooms** tab in the configuration tool.	JOIN cannot authenticate to Exchange using the credentials in the configuration tool.	In the JOIN Configurator **General Settings** tab, check the format of the **EWS Service Account Username**. Sometimes Microsoft Exchange requires that the username is entered using one of the following formats: - domain\username - username@domain

Dial-out to meeting room does not happen at meeting start time

Symptoms	Probable cause	Actions
JOIN does not dial out to a meeting room participant at the meeting start time.	- JOIN cannot contact the MCU. - VMR is not correctly provisioned: The MCU location that JOIN is instructing the MCU to dial out from is not correctly configured.	Check JOIN log and MCU log for details.

Dial-out from the video system (Green Cisco OBTP or Polycom OTD button) does not work

Symptoms	Probable cause	Actions
The [[[Undefined variable Join.OBTPShort]]] or Polycom OTD button is disabled and cannot be pushed.	The button becomes activated at the "startup buffer" time, and cannot be pushed before that.	Check the JOIN configuration.
The button is pushed, but call fails to connect.	VMR is not correctly provisioned: The uri is invalid due to incorrect Regex rules.	• Check the JOIN logs and Regex configuration. • Check the call history on the endpoint to see what it tried to call. • Check the "Search History" in the VCS to see if there was a call routing issue.

Recipients do not receive dial-in information emails when meeting is booked

Symptoms	Probable cause	Actions
Specified recipients do not receive any email containing dial-in information when meeting is booked	Error in email template.	Check the syntax of the HTML in your email templates.
	JOIN cannot contact the Exchange server - Invalid configuration.	Check the configurator **General Settings** tab to ensure that the server and credentials are correct and that you are using the correct format for the **EWS Service Account Username**.

Exchange permissions

Invalid permissions in Exchange will lead to unexpected behavior in JOIN.

If the Exchange service account does not have appropriate calendar access, you will see authorization errors in the log.

Here are some common errors with setting exchange permissions:

- Failure to set the "DeleteComments=$false" will remove the body of the invitation, and make it impossible for JOIN to find information in the body.
- Failure to set the "AddOrganizerToSubject=$false" and "DeleteSubject=$false" will remove the subject of the meeting, and make JOIN send the incorrect Cisco OBTP or Polycom OTD information to the video endpoint
- Failure to set "ProcessExternalMeetingMessages=$true" will hinder internal users forwarding invitations to external S4B meetings to the meeting rooms
- Failure to set "RemovePrivateProperty=$false" may make JOIN send the subject of a private meeting as Cisco OBTP or Polycom OTD information to the video endpoint - thereby exposing a sensitive meeting subject on the video system's touch panel
- Failure to set "AutomateProcessing=$true" will stop meetings from being processed, thereby hindering JOIN from seeing the meetings

How the Skype URIs are generated

Skype URIs for JOIN should be based on your company dial plan.

Pexip / Videonor / Videxio

In this example, using a Pexip MCU, our **URI Prefix** is S4B (for Skype for Business). We recommend using a prefix that easily identifies these URIs on your network as Synergy JOIN Skype for Business URIs.

NB. The prefix for Videxio is usually `__sfb__` (two underscores + sfb + two underscores) but should be confirmed on installation.
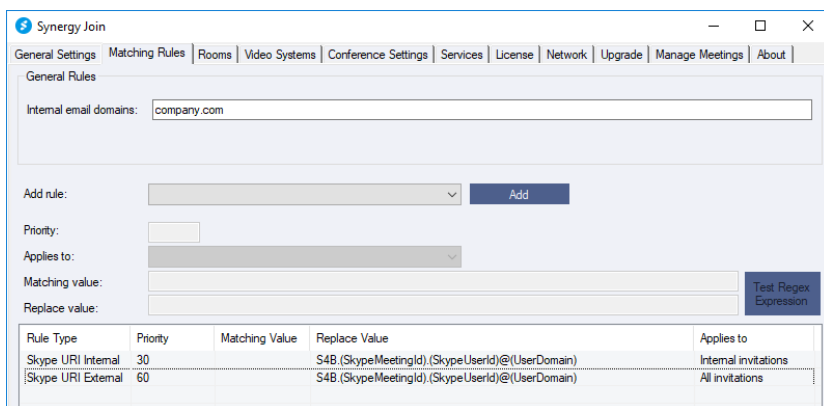

The second part of the URI is the **Skype Meeting ID**, and the last part is the **Skype User ID**.

A URI created from our matching rule pattern looks like this:

URI Prefix	Skype Meeting ID	Skype User ID	Full URI
S4B	TTC86056	js@example.org	S4B.TTC86056.js@example.org

Cisco CMS

With CMS, the format of the replace value is *(SkypeURL)@CompanyCMSDomain.local* where "CompanySkype.com" is the routing domain that ensures the call is routed to the CMS.
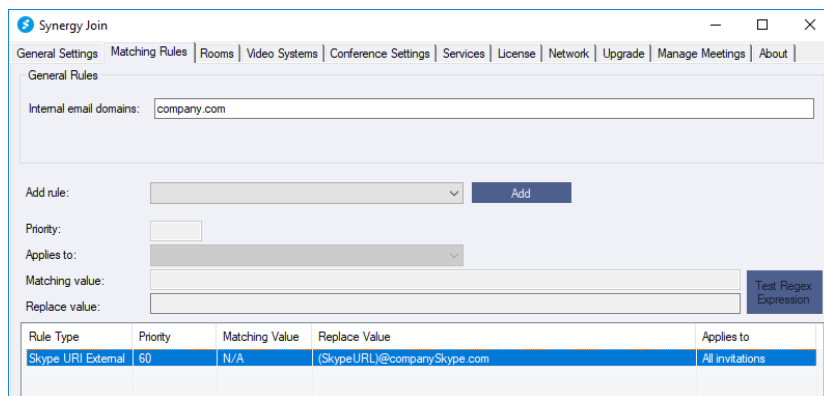
This domain must also be added as a "Targets Lync Simplejoin" domain on the CMS under **Configuration > Incoming Calls**.

Incoming call handling

Call matching

	Domain name	Priority	Targets spaces	Targets users	Targets IVRs	Targets Lync	Targets Lync Simplejoin	Tenant	
☐	synergysky.com	0	yes	yes	no	no	no	no	[edit]
☐	synergyskype.com	0	yes	yes	yes	no	yes	no	[edit]

StarLeaf Cloud

The Skype URI sent to the endpoint is the URI of the gateway call provisioned in the StarLeaf Cloud by JOIN.

This URI is in this format: *numeric@customername.call.sl000000*

How Skype calls are routed

Pexip / Videonor / Videoxio

There must be a **Destination alias match** in a gateway rule on the Pexip that corresponds to the matching rule URI pattern so that when the endpoint dials the skype URI, it is routed correctly.

The protocol for this rule must be MS-SIP.

Destination alias match	Replace string	Protocol
S4B\.([a-zA-Z0-9]+)\.(.+@.+)	\2;gruu;opaque=app:conf:focus:id:\1	Lync (MS-SIP)

See Pexip documentation for more information on creating gateway rules.

Note: If calls go through a Cisco Expressway or VCS, a search rule needs to be created on them to send calls corresponding with the prefix of your URI pattern to Pexip (in our example, S4B).

Cisco Meeting Server

The call is routed through the CMS to Skype for Business using the Dual Home functionality:

1. When a Skype meeting is forwarded to a video-enabled meeting-room that has been added to JOIN, JOIN tells the endpoint to call URL@simplejoindomain.

2. The EXpressway/VCS routes the call to CMS.
3. On CMS, the call hits the inbound "Lync Simplejoin rule" and CMS sets up the call with Skype4B.

Note: The "Lync Simplejoin domain" must be present on the VCS.

StarLeaf Cloud

1. The endpoint calls out to the StarLeaf Cloud using the URI it received from JOIN.
2. The StarLeaf Cloud calls the Skype meeting.

Licenses

JOIN will stop working as soon as the license expires. Administrators configured to receive email notifications about licenses will be notified every 7 days for the months preceding the license expiry date, and for the last 7 days before the license expires.

A license that is expired will stop JOIN from being upgraded.

An expired or invalid license will result in an entry in the log while starting up the JOIN service clearly stating that the license is invalid.

Licenses

Using the logs

JOIN logs all activity.

There are two sets of log files stored in these default locations:

- Service:
  - C:\SynergySKY\SynergySKYEnterpriseScheduling\logs\
- Config Tool:
  - C:\SynergySKY\SynergySKYEnterpriseScheduling\config\logs\

Log levels:

The default log level is INFO, which gives limited information about events and errors. Increasing the log level to DEBUG will provide more information that can be used to troubleshoot errors. The log level is increased by replacing the text "INFO" with "DEBUG" on line 4 in the log.config files. There is one log.config file for the configuration tool and one for the service, and the change of log level only applies the log.config that is updated. It is not recommended to run in DEBUG log level in normal operation due to the increased disk required.

The log.config files are found here:

- Service:
  - C:\SynergySKY\SynergySKYEnterpriseScheduling\log.config
- Config Tool:
  - C:\SynergySKY\SynergySKYEnterpriseScheduling\config\log.config

Log Size:

The logs will be default roll over once they have reached 10MB, and a maximum of 10 log files are kept. You can increase the size of the log files and the log file history by changing the maximumFileSize and maxSizeRollBackups attributes in the log.config files. You can use KB, MB or GB as suffix when specifying the log maximumFileSize.

Here is example output from the service log from a successfully booked Skype meeting including one JOIN meeting room resource:

```
2017-03-17 13:51:40,713 [MeetingSynchronizerThread] INFO  - 0 cancelled meetings found.
2017-03-17 13:51:40,713 [MeetingSynchronizerThread] INFO  - Total meetings in list: 4.
2017-03-17 13:51:40,713 [MeetingSynchronizerThread] INFO  - Sleeping for 6 second(s)
2017-03-17 13:51:49,166 [MeetingSynchronizerThread] INFO  - Getting body for Test Meeting - 17.03.2017 14:30:00 - 17.03.2017 15:00:00. Isrecurring: False
2017-03-17 13:51:49,916 [MeetingSynchronizerThread] INFO  - sip:ph@example.org;gruu;opaque=app:conf:focus:id:05H8BT73
2017-03-17 13:51:49,916 [MeetingSynchronizerThread] INFO  - Found Skype_URI_Internal rule match: S4B.05H8BT73.ph@example.org
2017-03-17 13:51:49,916 [MeetingSynchronizerThread] INFO  - URI of meeting 'Test Meeting' set to 'S4B.05H8BT73.ph@example.org'
2017-03-17 13:51:51,212 [MeetingSynchronizerThread] INFO  - 1 updated meetings found.
2017-03-17 13:51:51,212 [MeetingSynchronizerThread] INFO  - 0 nonSupported meetings found.
2017-03-17 13:51:51,212 [MeetingSynchronizerThread] INFO  - 0 cancelled meetings found.
2017-03-17 13:51:51,212 [MeetingSynchronizerThread] INFO  - Total meetings in list: 5.
2017-03-17 13:51:51,228 [MeetingSynchronizerThread] INFO  - Sleeping for 6 second(s)
2017-03-17 13:51:53,134 [OBTPThread] INFO  - Sending out OBTP information to endpoint meetingroom1@example.org for meeting 'Test Meeting'.
2017-03-17 13:51:53,134 [OBTPThread] INFO  - Updating endpoint meetingroom1@example.org with OBTP information
2017-03-17 13:51:55,540 [OBTPThread] INFO  - Endpoint meetingroom1@example.org successfully updated with OBTP information
2017-03-17 13:52:00,774 [MeetingSynchronizerThread] INFO  - 0 updated meetings found.
2017-03-17 13:52:00,774 [MeetingSynchronizerThread] INFO  - 0 nonSupported meetings found.
2017-03-17 13:52:00,774 [MeetingSynchronizerThread] INFO  - 0 cancelled meetings found.
2017-03-17 13:52:00,774 [MeetingSynchronizerThread] INFO  - Total meetings in list: 5.
```

We recommend using Baretail to monitor the logs while troubleshooting.

Appendix 1: Using Synergy JOIN with AMX/Crestron for Cisco and Polycom endpoints

AMX and Crestron panels are usually custom installations developed to solve a specific issue at a customer site. AV technicians responsible for the custom installation can use the following information to integrate with JOIN:

Cisco One Button To Push

1. Program the AMX/Crestron to listen to changes in the OBTP information (or poll on regular intervals)
2. Register an event listener in the Cisco (C-series and SX-series) CUIL using the following command: `xfeedback register event/bookings`
3. When you see this message `*e Bookings Updated`, get the updated info with this command: `xcommand Bookings List`
   Note that all time/date values returned from the command `xcommand Bookings List` are returned in UTC time, therefore the Crestron/AMX integrator must convert this to localtime for the endpoint before presenting it on the touch panel.
   We also recommend that the button to initiate the call should become enabled at the start buffer (x SECONDS before meeting start time) and that it should remain clickable until the endtimebuffer (y MINUTES after the meeting end time) to make it possible to rejoin a meeting that runs over the scheduled time.

4. It is easier to parse the info if you set up the session to get responses in xml. You can do this when you open the session using this command: `xpreferences outputmode xml`

5. The URI to dial is extracted from the `DialInfo` element in the list of meetings (from point 2). E.g. **Bookings > Booking 1 > DialInfo > Calls > Call 1 > Number:** *meet.someone@synergysky.com*

6. If you want the participant to be presented as the name of the meeting rather than the URI that was dialed, you can use the optional Dial command parameter: `BookingId` which allows you to refer back to the booking when launching the call. `BookingId` is the Id in the booking list.

More information can be found here: Cisco C Series Codec API Guide

Polycom One Touch Dial

1. Program the AMX/Crestron to poll the Polycom video system (HDX and Group Series) on regular intervals over SSH/Telnet
2. Get today's meetings by running this command: `calendarmeetings list today`
3. Use the start time to determine when to show the button and the title of the meeting to indicate which meeting is starting:
   ```
   calendarmeetings list begin
   meeting|45v6eur3f87hof1pl374jdnl0j|2018-09-12:11:30|2018-09-12:13:30|G-Suite booked meeting
   with Synergy JOIN
   meeting|62ts1kjtffdun3jtinrr7qlo9s|2018-09-12:19:30|2018-09-12:20:30|Sales meeting
   calendarmeetings list end
   ```

4. Use the meeting id (e.g. 45v6eur3f87hof1pl374jdnl0j) for the meeting to request the URI that should be dialed when clicking the green button. The command to request the meeting details is `calendarmeetings info <<meetingid>>`

5. The URI to dial is extracted from the `dialingnumber` element in the list of meetings (from point 4). E.g.
   `dialingnumber|video|490055@company.com|sip`

More information can be found here: Integrator's Reference Manual for the Polycom RealPresence® Group Series

Appendix 2: How to create a StarLeaf Cloud authorization token

To allow JOIN to connect to the StarLeaf Cloud:

- you must create an integration for it on the StarLeaf Portal. This will give you the access token that JOIN requires. This is described below.
- contact StarLeaf Support and ask for **Allow scheduling external conferences** to be enabled on your organization's account.

Prerequisite:

1. Log in to the StarLeaf Portal: https://portal.starleaf.com.
2. Go to **Integrations > Add integration**:
   - **Type**: *Custom integration*
   - **Name**: Provide a name for this integration
   - Do not enable **Administrator privileges**

3. Click **Apply**. You will see the access token.
   Note that the image below only shows an example. You must follow this process for the organization that the client will modify.

4. Go to **Synergy SKY server > General Settings**:
   - **MCU address/hostname**: enter *https://api.starleaf.com*
   - **MCU username**: enter *X-SL-AUTH-TOKEN*
   - **MCU password**: enter the **access token** from the StarLeaf Portal
   An example configuration is shown below:

Security

You can regenerate the access token at any time (**Portal > Integrations > Edit integration**). If you do so, you will need to enter the new token as the **MCU password** in **Synergy SKY server > General Settings**.

Appendix 3: Configuring Cisco Meeting Server profiles with Synergy JOIN

Cisco Meeting Server administrators are familiar with the concept of Profile accessMethods used to customize behavior of Virtual Meeting Rooms (VMRs) to fit the requirements of their organization. CMS deployments needing to specify distinct host/guest behavior using Join's one-time-VRM invitation mechanism can be achieved by modifying the host and guest configuration files. These files can be found in the Synergy Sky Join /configuration folder and are called CMSHostprofile.txt and CMSGuestprofile.txt. The file syntax respects the attributes defined in CMS API Reference Guide and follows the accessMethod nomenclature as per the example.

The available attributes for the profiles can be found in the Cisco CMS API Reference Guide

File Examples:

Note that the attributes must be linked together with the & as the examples below show

CMSHostprofile.txt

muteOthersAllowed=true&disconnectOthersAllowed=true&addParticipantAllowed=true&needsActivation=false&endCallAllow
ed=true&videoMuteOthersAllowed=true

CMSGuestprofile.txt

muteOthersAllowed=false&disconnectOthersAllowed=false&addParticipantAllowed=false&needsActivation=true&videoMuteO
thersAllowed=false

Pexip Policy Script for use with Synergy JOIN Skype IVR

Note: All sections that you have to amend are highlighted in red

The Skype IVR (Skype Interactive Voice Respons) option in JOIN requires a Local Policy Script to be present on the Pexip
server so that Pexip will correctly route call coming in through the IVR to the Skype AV MCU.

1. Add dial-out location if required (see info inside the script)
2. Add the script according to these instructions: https://docs.pexip.com/admin/local_policy.htm

Local Policy Script

```
{
{# Defining the name of the GW session to include from name, from uri, gruu uri,

# meeting id and original name, cap at 250 characters.

#}


{% set gwname = (call_info.remote_display_name + " (" + call_info.remote_alias + ") to " +

service_config.description|pex_regex_replace('^(sip:)?(.+@.+);gruu;opaque=app:conf:focus:id:([a-
z0-9A-Z]+)', '\\2 @ \\3') +

" (" + service_config.name + ")")[:250] %}


{#{pex_debug_log("----- call_info ----- ", call_info) }#}

{#{pex_debug_log("----- service_config ----- ", service_config) }#}

{% if service_config %}

"action" : "continue",


{# Only matching if all criterias match:

# Must match an existing conference (meaning it is provisioned by Synergy Meeting Server)

# Must have a service tag that starts with SMS-IVR-GW (if provisioned by Synergy JOIN, it will)

#}


{% if

service_config.service_type == "conference"

and

service_config.service_tag.startswith("SMS-IVR-GW")

%}
```

```
{{pex_debug_log("-----> Has SMS-IVR-GW tag: " + gwname ) }}


{# DMZ (federated to SfB) example with no mssip_proxy_name or location #}

"result" : {{service_config|pex_update({

"name": gwname,

"service_type": "gateway",

"outgoing_protocol": "mssip",

"pin":"",

"guest_pin":"",

"allow_guests" : False,

"local_display_name" : call_info.remote_display_name,

"local_alias": call_info.remote_alias,

# Below line is required for on-premises integration to a FEP.

# "mssip_proxy_name": "Europe SfB Pool 01",

#If theoutbound location to SfB is not the same as in bound location from VC system, amend the
below line

# "outgoing_location_name": "Name of location for outgoing SfB Call",

"remote_alias": service_config.description})

|pex_to_json}}

{% else %}

"result" : {{service_config|pex_to_json}}

{% endif %}

{% else %}

"action" : "reject",

"result" : {}

{% endif %}

}
```

Pexip Virtual Reception for use with Synergy JOIN Skype IVR

The Skype IVR (Skype Interactive Voice Response) option in JOIN requires a a virtual reception to be present on the Pexip
server so that Pexip will correctly route the call coming in through the IVR to the Skype AV MCU.

1. Add new Virtual Reception room. Instructions can be found on the Pexip Support Page

Virtual Reception

1. The Name should be an easily identifiable name

2. The Alias should be the same alias as you specified in the Hub Transport Rules section

Add Virtual Reception

| Name | Skype IVR | * |
| | The name used to refer to this Virtual Reception. Maximum length: 250 characters. | |

| Description | | |
| | A description of the Virtual Reception. Maximum length: 250 characters. | |

| Theme | <use Default theme> ▼ | |
| | The theme for use with this service. If no theme is selected here, files from the theme that has been selected as the default (**Platform configuration > Global settings > Default theme**) will be applied. For more information, see ... | |

Service options

| Virtual Reception type | Regular ▼ | * |
| | The type of this Virtual Reception. Select Lync / Skype for Business if this Virtual Reception is to act as an IVR gateway to scheduled and ad hoc Lync / Skype for Business meetings. Select Google Hangouts Meet if this Virtual ... | |

Advanced options (Show)

Aliases

Alias: #1

| Alias | skype@company.com | * |
| | The dial string used to join this service, in the form that it will be received by Pexip Infinity. This alias must include any domain that is automatically added by the participant's endpoint or call control system, or dialed by the parti... | |

| Description | | |
| | An optional description of the alias. Note that this description may be displayed to end users on registered Infinity Connect clients who are performing a directory search. Maximum length: 250 characters. | |

Add another Alias

Example meeting scenarios

Scenario 1: Booking a Skype meeting with one or more video-enabled meeting-rooms

Description	Requirements	Example rule

• Meeting organizer schedules a Skype meeting using Outlook.
• The invite includes video-enabled endpoints/meeting-rooms.
• JOIN sends the endpoints/meeting-rooms the Skype meeting URI as the One Button to Push (Cisco OBTP) or Click to Join (Polycom OTD) message.
	Skype URI in Headers matching rule	• Pexip:
		  ◦ S4B.(SkypeMeetingId).(SkypeUserId)@(UserDomain)
		• StarLeaf Cloud:
		  ◦ Auto-generated

	Skype URI in Body matching rule	• Pexip:
		  ◦ S4B.(SkypeMeetingId).(SkypeUserId)@(UserDomain)
		• Cisco CMS 2.2 or later + O365 Skype for Business (CMS 2.2 or later):
		  ◦ Matching value: None
		  ◦ Replace value: (SkypeURL)@CompanyCMSDomain.local
		• StarLeaf Cloud:
		  ◦ Auto-generated

	Regex	Cisco CMS + Internal on premises Skype for Business server: • Matching value: id:\s*(\d+) • Replace value: \1@YourInternalVideoDomain.com

Scenario 2: Booking a Personal VMR (Virtual Meeting Room) meeting with one or more video-enabled meeting-rooms

Description	Requirements	Example rule
• Meeting organizer schedules an ordinary Outlook appointment. • The invite includes video-enabled endpoints/meeting-rooms. • The invite email body includes a personal VMR uri, for example in the email signature. • JOIN sends the endpoints/meeting-rooms the personal VMR URI as the Cisco OBTP or Polycom OTD message.	• Regex matching rule • A valid URI included in the email body, for example in the email signature.	(meet|vrm)\.[a-z0-9\-_\.]+@example\.com

Scenario 3: Booking a One-time-VMR with one or more video-enabled meeting-rooms

Description	Requirements	Example rule
• Meeting organizer schedules an ordinary Outlook appointment. • The invite includes video-enabled endpoints/meeting-rooms. • There is no URI anywhere in the body of the invitation that matches any of the Regex matching rules. • JOIN creates a one-time URI on the Pexip MCU and sends the endpoints/meeting-rooms the One-Time-VMR URI as the Cisco OBTP or Polycom OTD message. • An email containing the dial-in information for the One-Time-VMR is sent to the invitees (optional).	• In the JOIN Configurator, **Create VMR** is selected.	N/A

Scenario 4: Forwarding an existing invitation to a video-enabled meeting-room

Description	Requirements	Example rules
- User receives a meeting invite from someone internal or external to their organization and wants to join the meeting from a video-enabled endpoint/meeting-room. - User forwards the invite to the endpoint/meeting-room. - JOIN understands how to process the meeting from the contents of the invite email. - JOIN forwards the appropriate dial string to the meeting-room as the One Button to Push (Cisco OBTP) or Click to Join (Polycom OTD) message. Currently the following meeting types are supported for forwarding in JOIN: - Skype - Teams - Personal VMR - One-time-VMR - BlueJeans - Cisco Webex - Starleaf VMR - StarLeaf Scheduled Meeting - Videonor - Videxio - Univago - Zoom Preprogrammed templates for these rules can be found in the Regex builder in the Matching Rules tab.	- Skype internal/external matching rule - Regex matching rules	**Microsoft Skype:** ○ Pexip: 　○ Matching value: None 　○ Replace value: S4B.(SkypeMeetingId).(SkypeUserId)@(UserDomain) ○ Cisco CMS (Internal and External invitations): 　○ Matching value: None 　○ Replace value: (SkypeURL)@CompanyCMSDomain.local ○ Cisco CMS: (Internal invitations Only) 　○ Matching value: id:\s*(\d+) 　○ Replace value: \1@YourInternalVideoDomain.com ○ Videxio: 　○ Matching value: None 　○ Replace value: __sfb__(SkypeMeetingId).(SkypeUserId)@(UserDomain) ○ Videonor: 　○ Get in touch with Videonor support for for your required Skype matching value and replace value ○ StarLeaf Cloud 　○ No matching rule configuration required **Microsoft Teams:** ○ Pexip: 　○ Matching value: None 　○ Replace value: Teams.(TeamsMeetingId)@company.com **Generic rules:** ○ Personal VMR (uris contains the words: meet or vmr) 　○ Matching value: ([a-z0-9\-_\.]*(meet|vmr)[a-z0-9\-_\.]*)@[a-z0-9\-_\.]+ 　○ Replace value: \0 ○ One-time-VMR (uris in the format: numeric@domain) 　○ Matching value: \d+@[a-z0-9\-_\.]+ 　○ Replace value: \0 **Cloud providers:** ○ BlueJeans 　○ Matching value: https://bluejeans.com/(\d+) 　○ Replace value: \1@sip.bjn.vc ○ Cisco Webex 　○ Matching value: \d+@[a-z0-9\-_\.]*webex[a-z0-9\-_\.]+ 　○ Replace value: \0 ○ Starleaf VMR 　○ Matching value: Meeting ID: ([0-9]+) ([0-9]+) 　○ Replace value: \1\2@synergysky.call.sl ○ Univago 　○ Matching value: [a-z0-9\-_\.]+@univago.com 　○ Replace value: \0 ○ Videonor 　○ Get in touch with Videonor support for for your required matching value and replace value ○ Videxio VMR meetings 　○ Matching value: https://my.videxio.com/meet/(\d+) 　○ Replace value: \1@vmr.vc ○ Zoom 　○ Matching value: https://[a-z0-9\-_\.]*zoom[a-z0-9\-_\.]*/j/(\d+) 　○ Replace value: \1@zoomcrc.com