Polycom® Workflow Server

Easy Schedule App for Microsoft® Outlook™

CONTENTS

REVISION HISTORY

Revision	*Date*	*Author*	*Details*
1.6.3.112140	January 03, 2018	christian.davis@polycom.com	Update document to include instructions for enabling support for reoccurring meetings. Update document to state support for Microsoft Windows Server 2016. Update document to exclude support for Polycom DMA release 9.0.0.
1.6.2.79564	November 03, 2017	christian.davis@polycom.com	Update document to include instructions for adding SAN to certificate signing requests for deployments using Exchange OWA with Google Chrome web browser. Update documentation to include the <AGENDA/> templates attribute introduced in release 1.6.2.61900. Update documentation to include support for Random VMR range feature introduced in release 1.6.2.79564. Update documentation to include changing the admin UI password introduced in release 1.6.2.79564. Update documentation versioning number to align with associated Workflow Server build number.
1.1	July 01, 2017	christian.davis@polycom.com	Update document to include instructions / requirements for Outlook 2010 shim installation.

Revision	Date	Author	Details
1.0	March 01, 2017	christian.davis@polycom.com	First release.

INFORMATION ELEMENTS

Polycom guides may contain the following icons to alert you to important information.

Name	Icon	Description
Note		The Note icon highlights information of interest or important information needed to be successful in accomplishing a procedure or to understand a concept.
User Tip		The User Tip icon highlights techniques, shortcuts, or productivity related tips for users.
Caution		The Caution icon highlights information you need to know to avoid a hazard that could potentially impact device performance, App functionality, or successful feature configuration.
Warning		The Warning icon highlights an action you must perform (or avoid) to prevent issues which may cause you to lose information or your configuration setup, and/or affect phone, video, or network performance.
Web Info		The Web Info icon highlights supplementary information available online such as documents or downloads on support.Polycom.com or other locations.
Troubleshooting		The Troubleshooting icon highlights information which may help you solve a relevant problem or to refer you to other relevant troubleshooting resources.
Settings/Decision Required		The Settings icon highlights settings you may need to choose for a specific behavior, to enable a specific feature, or to access customization options.
Polycom Best Practices		Polycom icon references recommendations for best practices.

BEFORE YOU BEGIN

This solution deployment guide details how to deploy Polycom® Workflow Server and Easy Schedule App for Microsoft® Outlook™ in conjunction with Polycom® RealPresence Platform conferencing solution.

With Polycom® Easy Schedule App, users do not have to change their scheduling workflow or learn a new process to create conferences hosted on the Polycom RealPresence platform conferencing solution. The meeting organizer simply schedules the meeting via Microsoft Outlook and the integrated solution automatically sets up the call in the background.   Users may join meetings via H.323/SIP compatible videoconferencing/telepresence devices, browser, Skype for Business/Lync clients, or telephone.

The purpose of this guide is to explain the steps and configuration necessary for deployment, an architecture overview, and constraints, enabling unified communications architects to determine the optimum deployment model for a given environment.

REQUIRED SKILLS

Deploying Polycom Workflow Server and Easy Schedule App requires planning and knowledge of videoconferencing and Microsoft expertise. Note that this guide does not provide full administration or maintenance procedures for Microsoft Exchange or Office 365 email and calendaring, for full administrative procedures, consult Microsoft documentation.
This document assumes administrators have knowledge of the following systems, that these systems are already deployed, and that Microsoft administrators are available to assist administrators of the Polycom UC solution:

- Microsoft Active Directory
- Microsoft Exchange Server
- Domain Name Servers
- Public/Private Key Infrastructure and certificate services
- Desktop software deployment tools such as Microsoft System Center
- Polycom DMA

HARDWARE, SOFTWARE AND NETWORK DEPENDENCIES

Deployment of Polycom Workflow Server and Easy Schedule App requires the following components:

- Microsoft Exchange Server (2007 or higher) or Office 365 email/calendaring service
  - o Exchange 2013 or higher for auto provisioning of Outlook add-in to PC or Apple Mac Outlook clients
  - o Exchange 2007 or 2010 require installation of Polycom plug-in application (shim) on each PC with Outlook 2010 or later client. Apple Mac not supported

- Microsoft Outlook 2010 or higher PC client or Outlook 2016 for Apple Mac
  - o PC Outlook 2013 version 15.0.4779.1000 or higher for automatic retrieval of add-in from Exchange or O365 https://support.microsoft.com/en-us/kb/3114349
  - o Apple Mac Outlook 2016 or higher for automatic retrieval of add-in from Exchange or O365
  - o PC Outlook 2010 or 2013 versions prior to 15.0.4779.1000 require installation of Polycom plug-in application (shim)

- Outlook 2013 Web Application (OWA) or later for OWA Easy Schedule add-in support

- Active Directory service account with read permissions for the domain/forest for use by Workflow Server Easy Schedule App

- Above AD service account enabled with Microsoft Exchange user mailbox

- Polycom DMA appliance or virtual addition release 6.4.x release
  - o Active Directory integration
  - o Easy Schedule App Active Directory account assigned DMA Provisioner role for VMR retrieval and DMA scheduled conference creation
  - o DMA version 9.0.0 releases are not supported

- Windows Server 2012 R2 or Windows Server 2016 for hosting the Workflow Server Easy Schedule App
  - o 2 CPU's or better
  - o 8GB RAM or better
  - o Google Chrome web browser

- DNS Requirements
  - o A or CNAME record resolvable to Windows Server hosting the Workflow Server Easy Schedule App by Outlook clients and Exchange OWA. Split brain DNS is supported where record resolves internally to Windows Server hosting the Workflow Server Easy Schedule App and externally to Polycom RealPresence Access Director (RPAD)
  - o FQDN of Active Directory domain controller used by Easy Schedule App for client authentication
  - o FQDN of Exchange Server CAS/CAS Array hosting Exchange Web Services (EWS)
  - o FQDN of DMA / DMA Super cluster (optional)

- Public/Private Key Infrastructure (PKI) Certificate Requirements
    - Workflow Server Easy Schedule App Public Key signed for Server Authentication by certificate authority trusted by internal PC clients. For deployments where support for Bring Your Own Device (BYOD) a commercial certificate authority must be used
    - RealPresence Access Director Public Key signed for Server Authentication by a commercial certificate authority for split-brain DNS deployments (optional)

- Network Access
    - Routed HTTPS (TCP/443) access to the workflow server from Outlook clients attached to the internal network
    - Routed LDAP (TCP/389) or LDAPS (TCP/636) access from the Windows Server hosting the Workflow Server Easy Schedule App to domain controllers for client authentication
    - Routed HTTPS (TCP/8443) access from the Windows Server hosting the Workflow Server Easy Schedule App to DMA for VMR retrieval and/or DMA scheduled conference creation
    - Routed HTTPS (TCP/443) access from the Windows Server hosting the Workflow Server Easy Schedule App to the Exchange CAS/CAS Array providing EWS. For Office 365 deployments HTTPS (TCP/443) access to both outlook.office365.com and the organizations Active Directory Federation Services (ADFS). domain controllers for client authentication
    - Routed Remote Desktop Protocol RDP (TCP/3389) access to the Windows Server hosting the Workflow Server Easy Schedule App for performing the installation
    - Routed HTTPS (TCP/443) access to the workflow server from the Polycom RealPresence Access Director (RPAD) for split brain DNS deployments (optional)

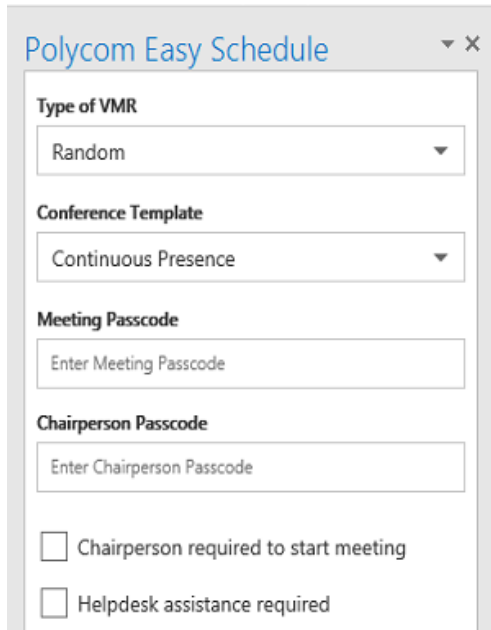EASY SCHEDULE MICROSOFT OUTLOOK SCHEDULING OVERVIEW

With Polycom® Easy Schedule users schedule meetings via the Polycom Easy Schedule button added to the calendar ribbon of the Microsoft Outlook PC application or Outlook Web Application (OWA).
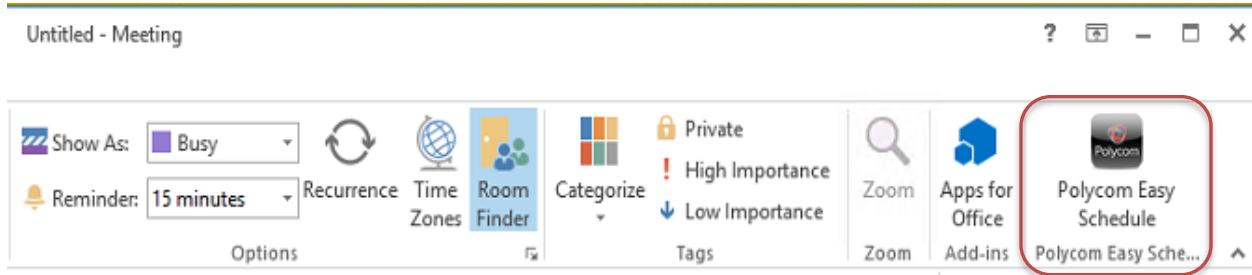
Easy Schedule may be configured to enable the meeting organizer to choose the *Type of VMR*, providing options to create a unique conference ID and/or use their personal Polycom DMA Virtual Meeting Room (VMR).
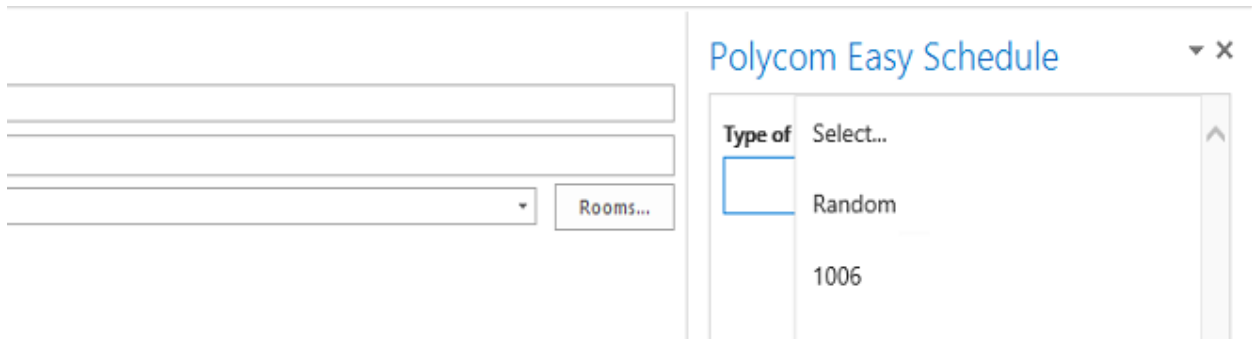
Easy Schedule may be configured to provide the user with several options for personalizing their meeting.

Conference Template enables the user to choose their preferred in-call experience. The administrator may create separate DMA conferences templates for video layouts such as continuous presence, voice activated or presenter layout.

Meeting and/or Chairperson Passcodes may be enabled and configured to generate automatically, or enable the organizer to choose whether to enable by providing an entry field.

The Chairperson required option may be configured to enable the organizer to choose whether attendees are able to communicate with each other before the organizer / chairperson joins the conference.

The Helpdesk assistance button may be added to enable users to choose whether technical assistance will be required for their meeting. Selecting will add the designated helpdesk email address to the attendee list.

Easy Schedule populates the comments section of the meeting invitation with join instructions for the participants.

Easy Schedule uses templates to populate the comments section of the meeting invitation. These templates may be edited/customized to align with language requirements and any corporate branding requirements.

ONE TOUCH DIAL APP / CLICK-TO-JOIN OVERVIEW (OPTIONAL)

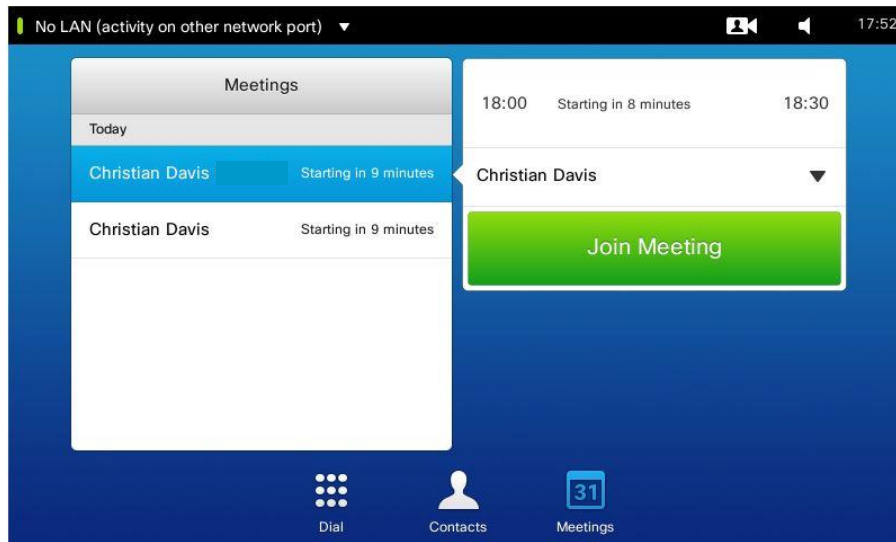The Polycom Workflow Server One Touch Dial (OTD) App may be purchased and used in conjunction with Easy Schedule to provide a click-to-join experience from the conference room for compatible Polycom and Cisco videoconferencing/telepresence devices.

Polycom Group Series Example
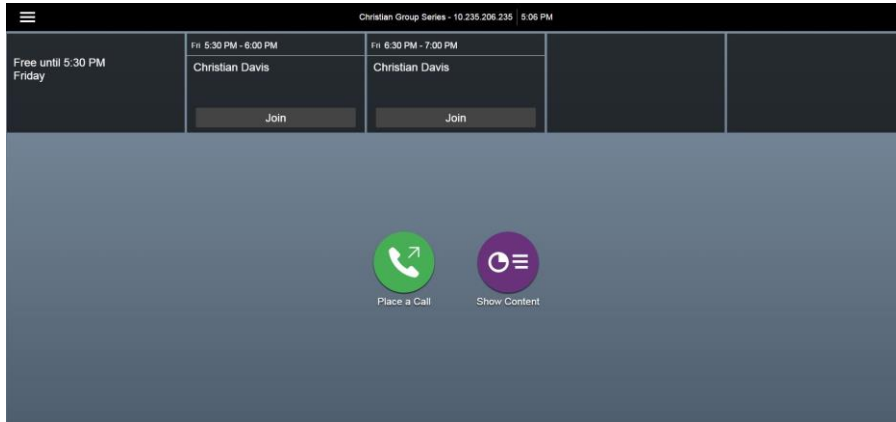
Cisco EX Series Example

> *Note: The Workflow Server OTD App functionality must be purchased separately. Please refer to the OTD App documentation for configuration of click-to-join functionality.*

EASY SCHEDULE FUNCTIONAL OVERVIEW

Polycom Workflow Server Easy Schedule App is a client server architecture, enabling users to schedule audio and videoconferences on the Polycom RealPresence platform. The solution comprises of a client calendar ribbon add-in for the Microsoft Outlook and/or Outlook Web Application (OWA), and a server providing authentication, retrieval of user attributes from Active Directory, retrieval and/or conference scheduling on the Polycom RealPresence Platform.

The Easy Schedule add-in for Microsoft Outlook is made available for automatic or manual retrieval to client PC's via Microsoft Exchange Control Panel (ECP) add-ins, as long as:

- The Exchange version is 2013 or later, or Office365

- The Microsoft Outlook version is Outlook 2013 version 15.0.4779.1000 or higher, Outlook 2016 or higher for Apple Mac automatic retrieval of add-in from Exchange or O365 Exchange Online

Retrieval of the Easy Schedule add-in from Exchange or Office 365 Exchange Online is via a HTTPS session from the client PC or Apple Mac.

For Exchange 2007 or 2010 deployments, and/or earlier versions of Outlook 2013 or 2010, the add-in must be installed on the PC with a Polycom plug-in (shim). Typically the installation will be performed using software deployment tools/solutions such as Microsoft System Center.

The Easy Schedule add-in for Microsoft OWA requires Exchange 2013 or later, or Office365.

> ⚠️ *Caution. Apple Mac requires Outlook 2016 in conjunction with Exchange 2013 or later, or Office365. All other combinations of Outlook and Exchange are not supported.*

The Polycom Workflow Server requires a Windows Server 2012 R2 with a minimum of 8GB of RAM and 2 CPU's to host the application. The server must be resolvable via a DNS 'A' or CNAME record by PC/Mac clients connected to the internal network.

An Active Directory (AD) user account with read permissions for the domain is required to enable the Workflow Server to retrieve user object attributes from AD via LDAP or LDAPS queries.

An AD account is also used by the Workflow Server for interacting with the Polycom RealPresence Platform DMA for retrieval of a given users Virtual Meeting Room (VMR) and/or creating scheduled conferences. The AD account must be assigned the DMA Provisioner role.

> ⚪Polycom *Polycom recommendation. The same AD account may be used by Workflow Server for retrieval of AD user objects and Polycom DMA interactions.*

The Easy Schedule App add-in for Outlook and/or OWA establishes an HTTPS session from the client PC/Mac to the Polycom Workflow Server. The Workflow Server Private/Public Key Infrastructure (PKI) requires a public key signed by a Certificate Authority (CA) trusted by client PC/Mac.

> ⚠️ *Caution. For deployments requiring support for Bring Your Own Device (BYOD), the public key must be signed by a commercial CA to prevent browser warning errors.*

The Workflow Server performs an NTLMv2 authentication challenge over the HTTPS session established by the client. A domain joined PC/Mac performs Single Sign on (SSO), non-domain devices prompt for the user credentials. The Workflow server establishes an LDAP or LDAPS session to a domain controller and proxies the authentication request.

> ⚠️ *Caution. For SSO the FQDN of the Workflow Server or a wildcard encompassing the Workflow Server must be defined within Internet Explorer security options as a trusted intranet site. Failure to do so will prevent the add-in from performing authentication on domain joined devices.*

Upon successful authentication the Workflow Server establishes an HTTPS session to the Polycom DMA and retrieves details of any DMA VMR's assigned to the user. The list is returned to the Easy Schedule App add-in.

The Sketch below illustrates the authentication and VMR retrieval interactions.
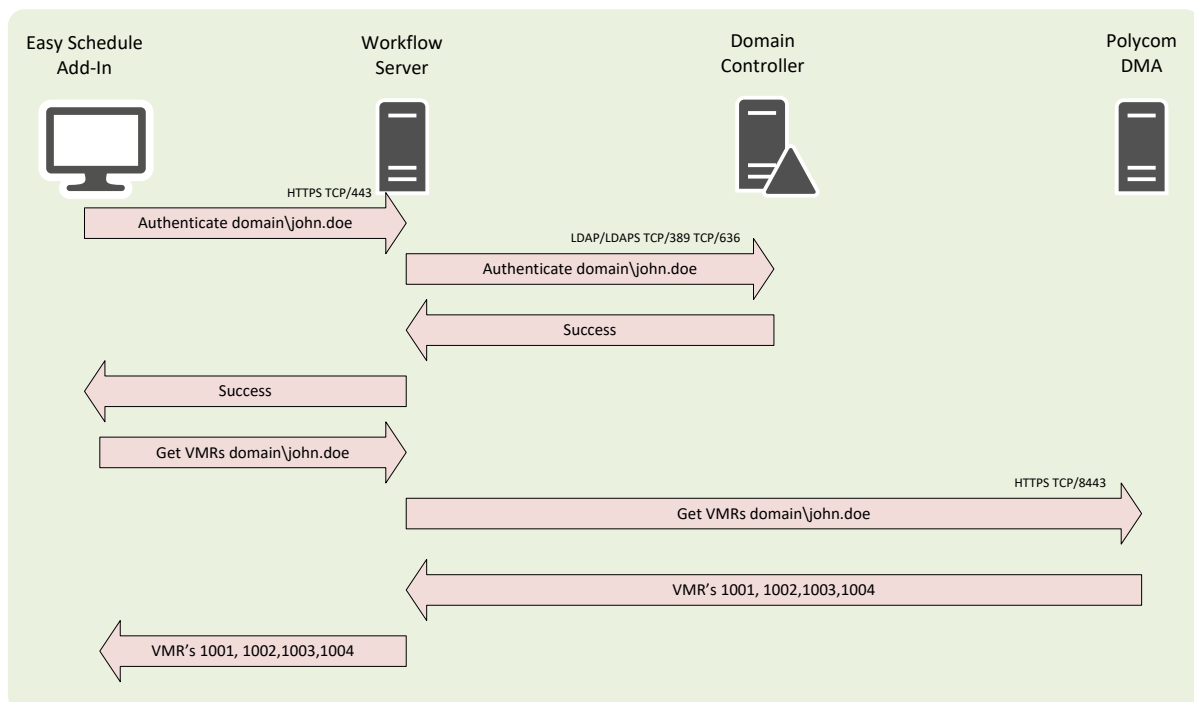
The Easy Schedule App add-in may be configured to enable the user to choose between creating a unique (random) conference ID for the meeting or using their personal VMR.

For personal VMRs the Workflow Server returns the conference ID, any assigned conference and/or chairperson passcodes and the join instructions.

For random ID's the Workflow Server creates a DMA scheduled conference. The workflow server may be configured with the following options:

- Conference and/or chairperson passcodes, not available, user assigned or automatically assigned
- Conference requires chairperson option
- Conference template selection
- Helpdesk assistance required option
- DMA regional MCU Pool order selection based upon the users AD country attribute

The Easy Schedule App add-in sends the conference ID type, date and time, Outlook language and appointment text format (HTML, Rich Text or Plain Text). The Workflow Server returns to the add-in the conference ID, options, join instructions and language plus text format specific template for populating the comments section of the invite.

The Sketch below illustrates the interactions.
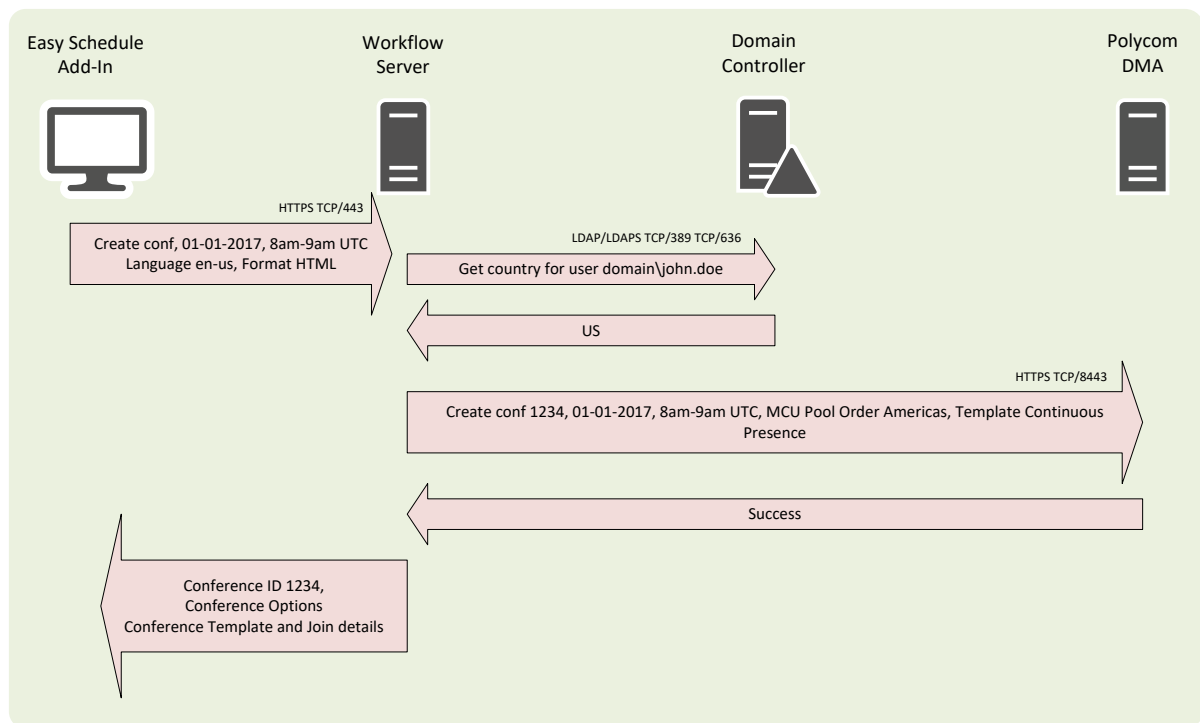
> Note. Configuration options are detailed in the corresponding sections of this document.

The Microsoft Outlook / OWA API does not provide support for detecting the setting of reoccurring meetings. Easy Schedule therefore enables support for reoccurring meetings via a monitored mailbox

added to the attendee list. The Easy Schedule Workflow server polls Exchange Web Service at the configured interval for meeting invitations sent to the monitored mailbox with a start and/or end date 24 hours prior, or up to 7 days after the current date and time. For reoccurring meetings, the scheduled end date is updated as the date of the last occurrence. If no scheduled end date is set for the series, Workflow server compares the scheduled end date with the current date and time. If the end date is less than 2 months in the future, Workflow Server changes the current end date and time to be 1 year from the current date and time.

WORKFLOW SERVER INSTALLATION

The Polycom Workflow Server must be installed on a Windows Server 2102 R2 or Windows Server 2016 operating system. The Windows Server must be allocated the following resources or better:

- 2 vCPUs 4Ghz Reservation
- 8GB RAM allocation
- 40GB HDD

> ⚠️ *Caution. Windows Server Internet Information Services (IIS) role is not a requirement of Workflow Server. Installation of IIS may prevent the Workflow server from listening for HTTPS connections.*

The Workflow Server is packed as an MSI. The installation wizard prompts the user to select the path for installation of the software. Upon completion of the installation, it is necessary to import the Workflow Server self-signed certificate in the local machine trusted root CA container:

- Browse to C:\ProgramData\Polycom\WorkflowServer\ssl
- Right click PolycomWorkflowServerRootCertificate, and choose install certificate
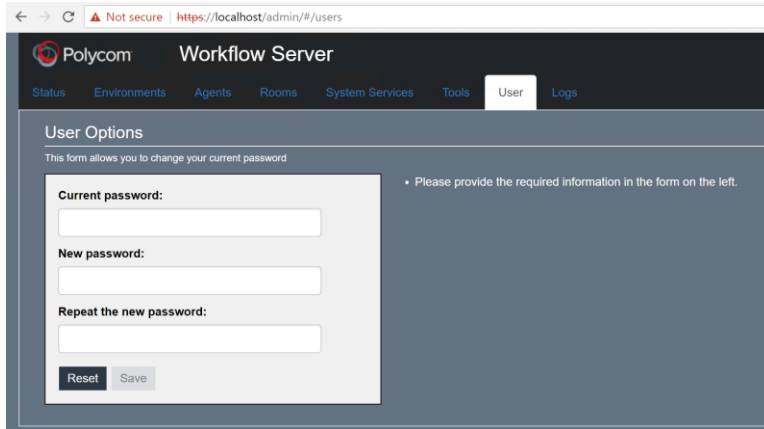- Select Local Machine, Place all certificates in the following store, Trusted Root Certification Authorities

Configuration of Workflow Server is performed via Google Chrome web browser, via the URL https://localhost/admin. Login with the default username and password ***admin***.

> ⚠️ *Caution. Configuration must be performed using Google Chrome web browser, installed locally on the Windows Server.*

WORKFLOW SERVER CHANGE ADMIN USER PASSWORD

The User tab enables changing of the signed in user's password.

To change the password assigned to the admin account, enter admin in the current password field, and the new password to be assigned to the admin account in the new password and repeat new password fields. Select Save to apply the change.

Environments define the interactions between the Easy Schedule App add-in for Microsoft Outlook, Active Directory for authentication, and the Polycom RealPresence platform DMA for VMR retrieval and/or scheduled conference creation.
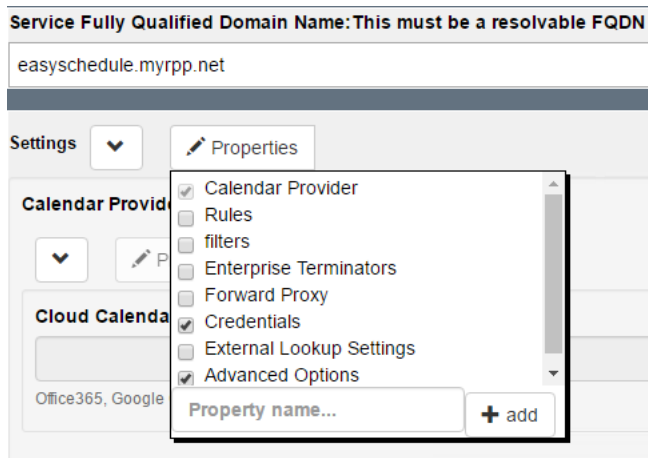
Service FQDN
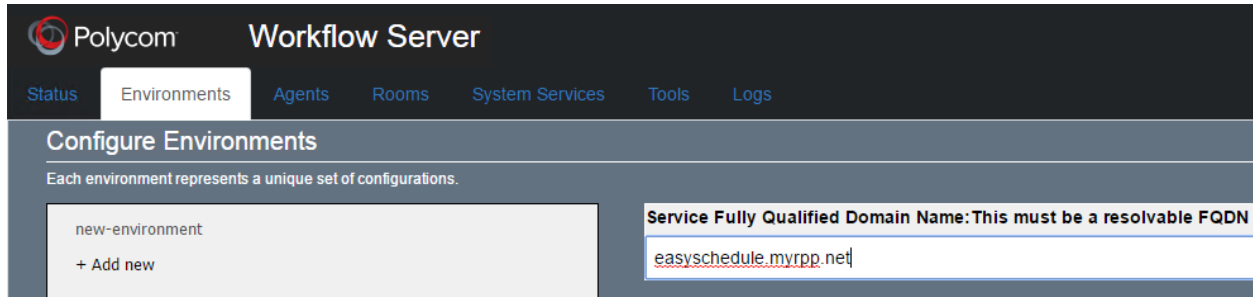
The service FQDN field is used to instruct the Workflow Server as to the target FQDN to be used by the Easy Schedule App add-in for Outlook for accessing the Workflow Server.

Settings

Settings are used to define the Workflow Server interactions with Active Directory and the Polycom DMA.

Select the Settings Properties button. Check Credentials and Advanced Options. Select Properties a second time to minimize the list. Select Save to store the selection.

Calendar Provider

Calendar Provider defines the interactions between Workflow Server and Exchange or Office365.
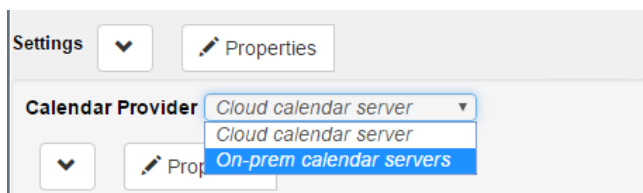

The drop down enables selection of On-premise calendar servers, or Cloud calendar server. On premise should be selected for Exchange deployments, and Cloud for Office365. The calendaring selection defines whether a text

entry field appears for on premise calendaring services or a drop down for choosing the cloud calendaring service.

For Office365 deployments the Cloud Calendar Service O365 option should be selected.
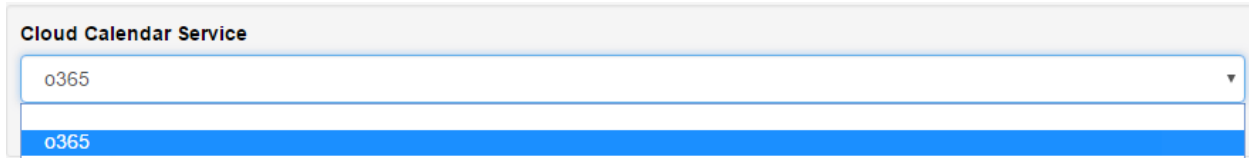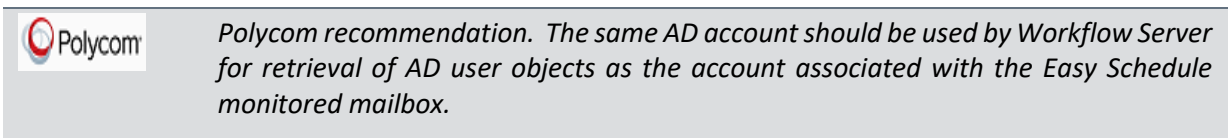

For Exchange deployments the Calendar Server 1 field should be populated with the FQDN of the Exchange CAS.
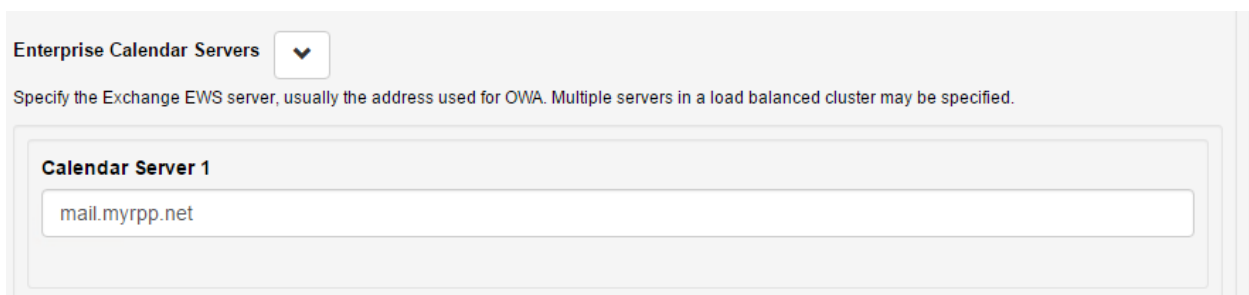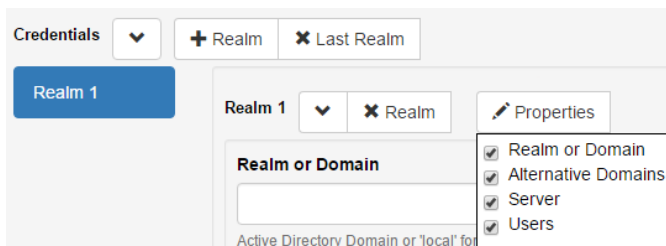

Once the calendar server type has been defined, select save to store the configuration.

Credentials

Credentials are used to retrieve the monitored mailbox, authenticate Easy Schedule App users via Active Directory, retrieve users Active Directory Country attribute for DMA regional MCU pool order selection, and email domains for internal versus external template selection.

Polycom recommendation. The same AD account should be used by Workflow Server for retrieval of AD user objects as the account associated with the Easy Schedule monitored mailbox.
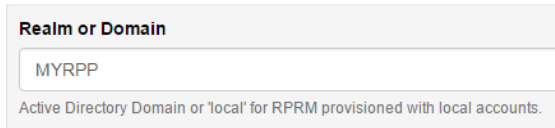
For each Active Directory domain a realm or domain is required.
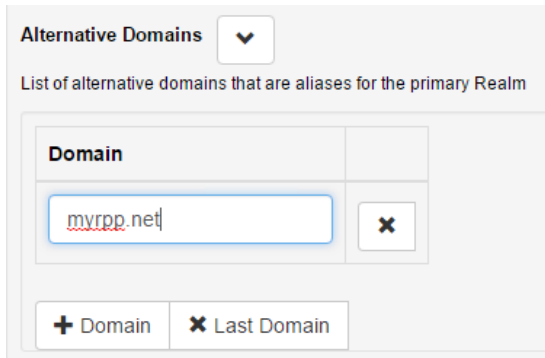

Select the Realm Properties button. Check the Realm or Domain, Alternative Domains, Server and User checkboxes. Select Properties a second time to minimize the drop down menu. Select Save to store the selections.

The Realm or Domain field is populated with the Active Directory NETBIOS domain name.
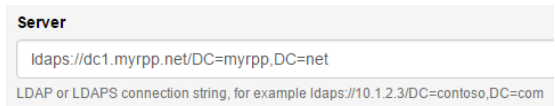

The name is used to match NTLMv2 authentication requests from the Easy Schedule App add-in for Microsoft Outlook. Select Save to store the configuration.

Alternative Domains may be used to define additional NETBIOS domains.

Alternative Domains may also be used to define the internal email domains. The email domains are used by the Easy Schedule App for selection of the internal versus external meeting templates. Select Save to store the configuration.
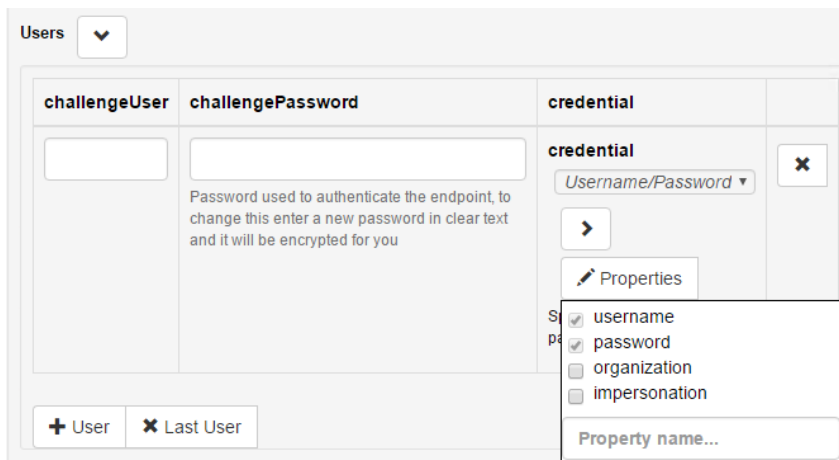
Server defines the FQDN of the Active Directory domain controller.

The domain controller is defined as an LDAP or LDAPS connection. The path may be used to limit usage to user objects within a given container. The domain controller is used to perform NTLMv2 authentication and retrieval of the authenticated users Active Directory Country attribute. Select Save to store the configuration.

Users is used to define the Workflow Server Active Directory service account for retrieval of a given users Country attribute.

The + User option is selected to add a user to the configuration.

The challenge User and Challenge Password fields are left blank.

The credentials Properties option is selected. Username and Password are checked. Properties is selected a second time to minimize the drop down menu.

The credentials section is populated with the Workflow Server Active Directory Service Account.

The username field is populated as NETBIOS domain name \ Username for Exchange on premise deployments, or as a UPN for O365 Exchange Online deployments.

The password for the associated account is entered in the password field. The Workflow server will display an asterisk for each character entered.

Select Save to store the configuration.

Advanced Options

Advanced options define the interactions between the Workflow Server and the Polycom RealPresence platform DMA, the Workflow Server Easy Schedule monitored mailbox, and the options and information returned to the Easy Schedule App add-in for Microsoft Outlook.

Select Advanced Options, Properties button. Uncheck all options except DMA Lookup Settings, dmaLookAhead and Easy Schedule Monitored Mailbox. Select Properties a second time to minimize the drop down menu. Select Save to store the configuration.

Easy Schedule Monitored Mailbox

The Easy Schedule monitored mailbox will be added as an invited attendee to the 'To' field during creation/modification of a meeting invitation by the Easy Schedule add-in for Outlook / Outlook Web Application.

Email is the primary SMTP of the Easy Schedule monitored mailbox.

Domain is the Active Directory NETBIOS domain name as entered under realm or domain.

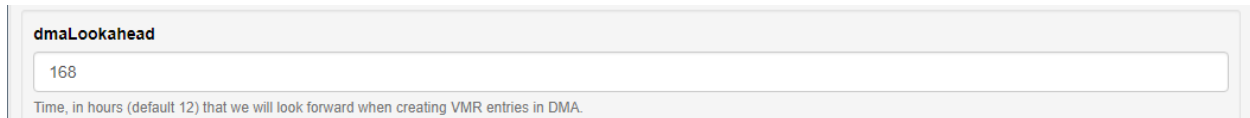Username is the AD username associated with the monitored mailbox.

Password is password associated with the AD username.

Poll Frequency is the polling interval at which the Workflow Server Easy Schedule app checks the monitored mailbox for meeting invitations.

Workflow server polls Exchange for Easy Schedule meeting invitations sent to the monitored mailbox with a start and/or end date 24 hours prior, or up to 7 days after the current date and time.

DMA Lookahead

The Easy Schedule monitored mailbox is used in conjunction with the DMA Lookahead attribute to define when meetings should be updated on DMA. The attribute defaults to 12 hours and should be changed to 168 hours (7 days) for the Easy Schedule environment.

dmaLookahead

168

Time, in hours (default 12) that we will look forward when creating VMR entries in DMA.

The scheduled start and end date and time of single occurrence meetings or first occurrence for reoccurring meetings that fall within the DMA look ahead are compared with the meeting created on DMA by the Easy Schedule add-in. If the date and or time differs the meeting is updated. This functionality enables users to move the scheduled start date for meetings forward by any amount, or move back by up to 7 days without the need to reselect the Easy Schedule button prior to sending the update.

Note: Support for moving meetings back beyond 7 days from the previous scheduled start time will be added in a later release.

For reoccurring meetings, the scheduled end date is updated as the date of the last occurrence. If no scheduled end date is set for the series, Workflow server compares the scheduled end date with the current date and time. If the end date is less than 2 months in the future, Workflow Server changes the current end date and time to be 1 year from the current date and time.

DMA Lookup Settings

The DMA Lookup Settings is used to add a Polycom RealPresence Platform DMA for conferencing and defines the options and information returned to the Easy Schedule App add-in for Microsoft Outlook.
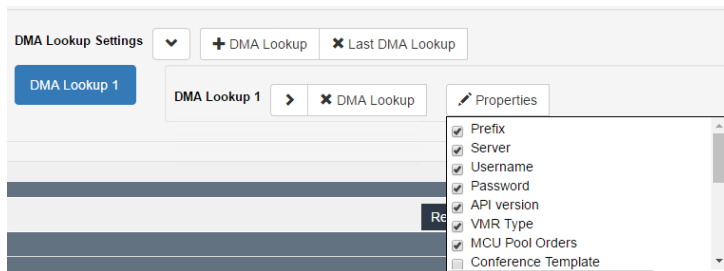
Select + DMA Lookup. Select DMA Lookup 1, Properties and check all options except Signaling prefix, Conference Template and Video Connection Information. Select Properties a second time to minimize the drop down menu. Select Save to store the configuration.

Decision Required. All attributes have been selected for this deployment example for the purpose of describing each. Once you have reviewed the documentation selected only the attributes needed for your deployment.

The Server field is used to define the protocol, address, and TCP port for connecting to the Polycom RealPresence Platform DMA.

Server

https://dma.myrpp.net:8443

The DMA may be defined as an FQDN or IP Address.

The Username field is used to define the user account to be used by the Workflow Server for VMR retrieval and/or scheduled conference creation.

Username

MYRPP\workflow.server

User used by the server to access with DMA, this should be in the provisioner role.

The DMA must be integrated with Active Directory and an Active Directory account must be used by Workflow Server. The account must be assigned the Provisioner role on DMA.

⚠️ *Caution. The DMA domain is case sensitive, therefore the NETBIOS name must be defined in upper case.*

The Password field is used to define the password corresponding to the Workflow Server active Directory account.

Password

••••••••••

Password used by the server to authenticate with DMA, to change this enter a new password in clear text and it will be encrypted for you

As the password characters are entered, asterisks will appear.

The API version instructs Workflow Server as to the DMA API version.

API version

3.4.0   ▾

Version 3.4.0 corresponds to DMA software releases 6.4.0, and 2.6.0 to DMA 6.2.0.

📝 *Note. DMA does not require an API license for management by Workflow Server.*

VMR Type defines the conference choices available to the Easy Schedule App add-in for Outlook user.

VMR Type ⌄   ✎ Properties

☑ Static

☑ Random

Static enables retrieval of the users personal Virtual Meeting Rooms (VMR) from DMA. Random enables the user to create scheduled DMA conferences. When random is selected within the Easy Schedule App add-in for Outlook a random number will be generated and assigned as the conference ID.

The Early Join and Late Finish attributes are used in conjunction with Random DMA scheduled conferences.

When Random is selected within the Easy Schedule App add-in for Outlook, the App generates a random number for assignment as the conference ID. The conference is scheduled on DMA for the designated start and end date and time. The Early Join and Late Finish attribute extend the start and end time by the number of minutes defined.

> *Note. DMA does not end the conference and disconnect participants at the designated end date and time. Once the end time is reached participants are no longer able to join the ongoing conference. The conference does not end until the last participant disconnects.*

MCU Pool Orders enable the Country attribute of Active Directory user objects to be associated with a DMA MCU Pool Order.

This feature enables selection of a Polycom RMX or RPCS in the same region as the meeting organizer. If the country attribute does not match, the DMA Conference Manager Default MCU pool order is selected.

VMR Options enable/disable features available within the Easy Schedule App add-in for Outlook.

Selecting Meeting Passcode enables the organizer to assign a participant pin to random conferences, by providing a Meeting Passcode entry field. If the field is left empty a passcode is not assigned. If the Meeting passcode number field is added and populated a random passcode is automatically generated and assigned to every conference.

The Chairperson Passcode and Chairperson Passcode number field also function as above.

The Chairperson required to start meeting option enables the organizer to place attendees in the Polycom RMX/RPCS lobby until the chairperson joins. The attendees will hear hold music.

Selecting VMR Range and the VMR number range options enables the Administrator to define the number range used for generation of Easy Schedule random conference ID's. If this feature is not enabled, an ID will be generated from the range 9999 – 1000000.

> **Settings.** If the Chairperson required to start meeting option is selected the Chairperson Passcode option should also be selected.

Endpoint Access is used to populate the hyperlinks within the invite for joining conferences.

Browser is used for deployments equipped with Polycom WebSuite browser conferencing solution. The URL contains the FQDN of the WebSuite MEA server appended with either /{conferenceRoomIdentifier} which inserts the DMA VMR / scheduled conference ID, or /{dialInNumber} which inserts the DMA conference prefix plus VMR / scheduled conference ID.

Video is used for deployments with Lync/Skype for Business integration with a static route and match URI for joining DMA hosted conferences, and/or deployments with RealPresence Desktop/Mobile. The URL is typically populated with the protocol (sip:, h323:, tel:) {conferenceRoomIdentifier} or {dialInNumber} @ DMA/RPAD call server domain.

The Easy Schedule App template files support auto population of up to two telephone numbers. Additional and/or regional telephone numbers may be added by manually editing the templates.

In additional to the Endpoint Access hyperlinks, the Workflow Server Easy Schedule App templates use several other attributes for populating data.

Prefix

88|

Prefix is used to include the DMA prefix in the Meeting ID:, Internal and external videoconferencing room join instructions.

Signaling postfix

@vc.myrpp.net

Signaling postfix is used to include the RPAD domain suffix for external videoconferencing room join instructions.

External IP

1.2.3.4

External IP is used to include the RPAD IPv4 address for external videoconferencing room join instructions.

Helpdesk email account is used to define the email address to be added to the attendee list.

Helpdesk email account

conferencing.support@myrpp.net

The email address is added/removed from the attendee address by selecting the Helpdesk assistance required checkbox within the Easy Schedule App add-in for Outlook.

When a user of Easy Schedule App add-in for Outlook or OWA connects to the workflow server it attempts to match the Outlook or Browser language to the corresponding named Workflow Server Easy Schedule App templates.

Default template language

en-US

If a match is not found the Easy Schedule App will default to use the English US (en-US) template files. The default template language may be overridden by defining an alternate language.

DOWNLOAD THE EASY SCHEDULE APP FOR OUTLOOK ADD-IN MANIFEST

Each add-in for Microsoft Exchange and Outlook 2013 or later is described by an XML manifest, a document that provides information about the add-in, and identifies the location of the add-in user interface HTML file. The manifest is obtained by browsing to https://environmentFQDN/outlook2013sp1manifest

The resulting XML is displayed with the browser. Right click the page, select save as, and save the file as type XML.

DOWNLOAD AND DEPLOY THE EASY SCHEDULE SHIM FOR OUTLOOK 2010 (OPTIONAL)

Outlook 2010 and/or Exchange 2010 does not natively support add-ins, therefore a shim is required to enable the add-in to be used as com plug-in. Outlook 32-bit and Outlook 64-bit versions of the shim can be downloaded on the workflow server by browsing to the following URLs:

https://localhost/admin/resources/PolycomEasyScheduleClientSetup.zip

https://localhost/admin/resources/PolycomEasyScheduleClientSetup_64bits.zip

The shim requires Microsoft .NET 4.5 or later framework. The shim installer is packaged as a .MSI file and performs a silent installation in the folder c:\program files (x86)\polycom\easySchedule\ for 32-bit deployments, or c:\program files\polycom\easySchedule\ for 64-bit. Upon completion of the installation the manifest file must be copied to the above directory. The manifest must be named outlook2013sp1manifest.xml.

The above process may be automated using software deployment tools.

CREATE AND INSTALL WORKFLOW SERVER PUBLIC AND PRIVATE KEYS INFRASTRUCTURE (PKI)

To enable the Easy Schedule App add-in for Outlook and OWA to function correctly, the Workflow Server environment requires a public key (certificate) signed by a certificate authority trusted by the PC's. For deployments where the PC's are all domain joined an internal certificate authority may be used. For deployments where users may use their own devices a commercial certificate authority must be used.

The example contained within this section details the process for creating and exporting a private key and public key signed by Active Directory certificate services. Active Directory's default webserver template does not permit exporting the private key, therefore a new template must be created.

On the server hosting active directory certificate services open the Certificate template snap in via start > search > certtmpl.msc. Select the Web Server template, right click and select duplicate template. Select the General Tab and rename Web Server Exportable Private Key and check Publish certificate in

Active Directory. Select the Request Handling tab and check allow private key to be exported. Select Ok.
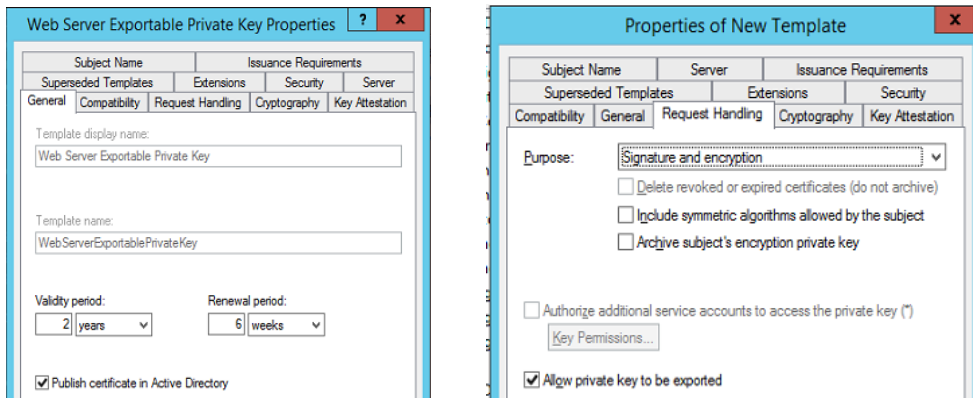
Open Server manager > tools > certificate authority. Select the certificate templates folder, right click and select new certificate template to issue.
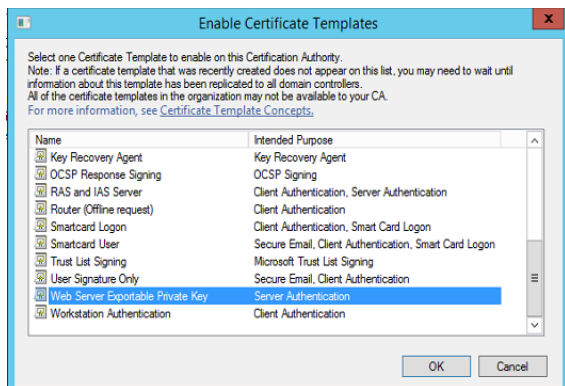
Select the template created in the previous step and select ok to publish. The template should appear in the list of templates.

For deployments using Microsoft Exchange OWA in conjunction with Google Chrome web browser, the certificate must include the environment FQDN in the Subject Alternate Name (SAN), otherwise a browser warning will appear. Enable support for requesting SANs via Active Directory Certificate Services requires executing the following Windows PowerShell cmdlet on the Windows CA server:

```
certutil -setreg policy\EditFlags +EDITF_ATTRIBUTESUBJECTALTNAME2
```

Info. The following Microsoft TechNet article provides additional information on enablement of SANs. https://technet.microsoft.com/en-us/library/ff625722(ws.10).aspx

To generate the certificate, browse to activate directory certificate services on the certificate authority server. Select Request a certificate, advanced certificate request, create and submit a request to this CA.

Select Web Server Exportable Private key as the certificate template type.

Enter the FQDN of the environment in the name field.

Populate the country/region as appropriate.

Select create new key set.

Select Mark keys as exportable.

Select PKCS10

In the attributes field enter san:dns= appended with the Easy Schedule environment FQDN. Additional SAN entries can be added by appending with &dns=.

For example san:dns=easyschedule.myrpp.net&dns=easyschedule

Select submit.

Select install this certificate.

Select start > search > mmc. Add the certificates snap-in for type current user. Browse to the personal > certificates container and find the certificate created. Right click, select all tasks > export. Choose to export the private key, and include all certificates in the path. Export as type PKCS#12 (PFX). Assign a password and choose a file location.

Download a tool such as the Digi Cert Utility for exporting from the PFX the public and private keys
https://www.digicert.com/util/.

Launch the applicate from the same location as the PFX.
Highlight the PFX, select export and check the key file
option.   Save the files to an appropriate location.

Copy the .crt and .key file to workflow server
c:\programdata\polycom\WorkflowServer\ssl folder.

Restart the workflow server windows service to apply the
certificates.

The Easy Schedule App add-in for Microsoft Outlook supports the following languages:

Locale Code	Windows Language
EN-US	English (USA)
FR-FR	French (France)
FR-BE	French (Belgium)
FR-CA	French (Canadian)
FR-CH	French (Switzerland)
FR-001	French (World)
DE-DE	German (Germany)
DE-AT	German (Austria)
DE-CH	German (Switzerland)
ES-ES	Spanish (Spain)
EX-MX	Spanish (Mexico)
ES-HN	Spanish (Honduras)
ES-AR	Spanish (Argentina)
CS-CZ	Czech (Czech Republic)

The Easy Schedule App add-in attempts to match the operating system language. If the locale matches the list above the corresponding language is used for the Easy Schedule user interface. If the locale does not produce a match the Easy Schedule App uses the default language defined against the Environment > Advanced Options > DMA Lookup > default Language attribute. If no language is set the language defaults to EN-US.

The Easy Schedule App retrieves from Workflow Server the templates for populating the comments (body) of the meeting invitation. The App attempts to match the locale and text format; HTML, RTF or TXT against a template name and type. If the attendee list includes external email domain(s) Workflow Server attempts to locate a template appended with –External.

The templates should be copied to a folder named templates in c:\programdata\Polycom\WorkflowServer\. Polycom provides the 6 default EN-US files which customers may edit and/or use as a template for other supported languages. The templates contain a number of XML attributes that are replaced by the Easy Schedule App. The table below describes each attribute.

XML Attribute	Function
<AGENDA/>	Instructs Easy Schedule where to insert any text entered within the body/comments of the invitation prior to selectign the Easy Schedule button
<DIALIN_PREFIX/>	Is the Environment > Advanced Options > DMA Lookup > Prefix attribute. Is typically populated with the DMA prefix
<VMR_NUMBER/>	Is the VMR or Schedule DMA conference ID
<MEETING_PASSWORD/>	Is the DMA conference passcode

<AUDIO_NUMBER1/>	Is the first telephone number defined within the Environment > Advanced Options > DMA Lookup >Endpoint Access list
<AUDIO_NUMBER2/>	Is the second telephone number defined within the Environment > Advanced Options > DMA Lookup >Endpoint Access list
<VIDEO_NUMBER/>	Is the video entry defined within the Environment > Advanced Options > DMA Lookup >Endpoint Access list
<MOL/>	Is the video entry defined within the Environment > Advanced Options > DMA Lookup >Endpoint Access list
<SIGNALING_PREFIX/>	Is the Environment > Advanced Options > DMA Lookup > Signaling Prefix attribute. This is typically not used
<SIGNALING_POSTFIX/>	Is the Environment > Advanced Options > DMA Lookup > Signaling Postfix attribute. This is typically the SIP and H.323 domain suffix that resolves to the RPAD
<EXTERNAL_IP/>	Is the Environment > Advanced Options > DMA Lookup > External IP attribute. This is typically the Internet routable IP address of the RPAD

> ⚠️ *Caution. The Workflow Server reads the templates on startup of the service, therefore if the templates are replaced or modified the service must be restarted.*

INSTALL EASY SCHEDULE APP MANIFEST VIA EXCHANGE CONTROL PANEL (ECP)

The Easy Schedule App add-in for Outlook is distributed to Outlook 2013 or later clients and the Exchange 2013 or later OWA via the Exchange Control Panel (ECP). Browse and login to ECP. Select organization > add-ins, add from file. Select the manifest file and the preferred user defaults.

For deployments where the add-in is not added automatically to Outlook, select File, manage add-ins and deploy via OWA.

Web Info. For further information on deploying add-ins consult the Microsoft Support site. https://support.office.com/en-us/article/Deploy-Office-Add-ins-in-the-Office-365-Admin-Center-737e8c86-be63-44d7-bf02-492fa7cd9c3f?ui=en-US&rs=en-US&ad=US

CONFIGURE PC BROWSER LOCAL INTRANET SITES

The Easy Schedule App add-in for Outlook and Office 365 Single Sign On (SSO) requires the Workflow Server environment FQDN to be defined under Internet Explorer Local Intranet sites. The FQDN may be added as individual FQDN or encompassed by a wildcard e.g. https://*.myrpp.net encompasses easyschedule.myrpp.net.

ASSIGN WORKFLOW SERVER AD ACCOUNT DMA PROVISIONER ROLE

Login to DMA with an Active Directory user account assigned the admin role. Select User > Users. Uncheck local users only, enter the name of the account in the search field and select search. Highlight the Workflow Server Activity Directory user and select Edit. Select the associated roles tab and assign the Provisioner role. Select Ok.