

Microsoft Lync Room System (Beta Version)
Deployment Guide

Microsoft Lync Server 2013

V1.0

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Deploying the Lync Room System Client

Microsoft Lync Room System (LRS) edition (Beta version) is a new Microsoft Lync unified communications client that has been optimized for Lync meetings in physical conference rooms. Lync Room System provides:

* A one-touch meeting join experience
* Automatic setup of multi-view video gallery
* Touch-enabled whiteboarding on the screen at the front of the room
* Calendar integration for access to scheduled meetings
* Content sharing and switching

This document guides you through provisioning Lync Room System (Beta version) in Lync Server and Exchange Server. Also refer to the Lync Room System Installation Guide, which guides you through setting up the appliance PC and devices in the meeting room.

Lync Room System Prerequisites

The LRS client was developed from the Lync client using the Lync SDK. The Lync client runs in the background in partial UI suppressed mode. The Lync client controls the video gallery and content stage on the screen at the front of the room. The LRS client provides a console experience on the table top display for controlling the meetings.

Following are the requirements for LRS:

* An Exchange resource mailbox account to facilitate calendar scheduling for the meeting rooms.
* A Lync-enabled LRS account on a Lync Server 2013 pool (Enterprise or Standard Edition).
* An LRS client appliance PC with all required software installed. The appliance PC must be running Windows 7 Embedded Standard operating system. This hardware is provided by OEM partners along with all devices (displays, camera, microphone, speakers).
* If you decide to join the LRS appliance PC to Active Directory Domain Services (AD DS) domain, group policy settings that do not interfere with LRS (section below covers those). Alternatively, you can leave this appliance PC in the Workgroup.
* Appropriate user rights to run the cmdlets specified in this document. The CsMeetingRoom cmdlets are modeled after the CsUser cmdlet. Therefore, all role-based access control (RBAC) roles required to run CsUser cmdlets also apply to CsMeetingRoom cmdlets.

Supported Topologies

The following table indicates LRS client interoperability among various deployments of Lync and Exchange topologies, either on-premises or in the cloud.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Topology** | **Lync** | **Exchange** | **Phone/Mediation Server** | **Notes** |
| **On-Premises** |  |  |  |  |
|  | On-premises | On- premises | On- premises | Supported  |
|   | On- premises | On- premises | None | Supported |
| **Office 365** |  |  |  |  |
|  | Online | Online | None | Supported  |
|  | Online | Online | Enterprise Voice provided by 3rd party provider | Supported  |
| **Hybrid (Split Domain)**  |  |  |  |  |
|  | On- premises | Online | On- premises | Supported  |
|  | Online | Online | N/A | Supported |

The following table indicates LRS client interoperability among various versions of the Lync Server

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Lync Server On-premises** | **Lync Online** | **Lync Server and Lync Online Hybrid** | **BPOS-D** |
| Lync Server 2010\* | LRS client can join public meetings\* | N/A | N/A | Under testing |
| Lync Server 2013 | Fully Supported: LRS is homed,LRS can join meetings | Yes | Yes | Under testing |

\* Previous releases are partially supported. In these scenarios, the LRS client can participate in Lync conferences (those that are scheduled by users homed on Lync Server 2010) as long as the conferences are “public,” meaning, the conferences haven’t been customized for restricted access.

The LRS client cannot be homed a Lync server version earlier than Lync Server 2013. When an LRS cannot connect to Exchange to retrieve calendar settings, for example when there is no Exchange mailbox configured for the LRS account or Exchange is not reachable, Meet-now/Ad hoc conferencing will work but joining a scheduled meeting will not work.

The table below indicates LRS client supportability with versions of Exchange Server.

|  |  |  |  |
| --- | --- | --- | --- |
| Lync\Exchange | On-Prem | Online | Hybrid |
| Exchange 2007 | Yes | N/A | N/A |
| Exchange 2010 | Yes | N/A | N/A |
| Exchange 2013 | Yes | Yes | Yes |

Provisioning the Lync Room System Account On-Premises

Provisioning Exchange Resource Mailbox Account

This section provides an overview of the steps for provisioning the LRS account on Exchange Server and Lync Server.

If you already have a resource mailbox account for the conferencing room, you can use this account. Otherwise you will need to create a new one. You can use either Exchange Management Shell (PowerShell) or Exchange Management Console to create a new resource mailbox account.

To create a new resource mailbox account:

1. Run the following cmdlet:

New-Mailbox –Name ‘cf303027’ –Alias ‘cf303027’ –UserPrincipalName ‘cf303027@contoso.com’ –SamAccountName ‘cf303027’ –FirstName ‘cf303027’ –Initials ‘’ –LastName ‘’ –Room

1. Optional: Configure the account to automatically resolve conflicts by accepting/rejecting meetings. LRS-equipped conference room accounts in Exchange can be managed by individuals, but note that until that individual accepts a meeting it will not appear on the LRS home screen calendar.
2. Ensure that the following flag is not set; otherwise the LRS calendar won’t correctly display the subject:

“Add the organizer’s name to the subject”

1. Ensure that the following flag is not set; otherwise, private meeting subjects will be displayed on the LRS client.

“Remove the private flag on an accepted meeting”

1. Optional: To remind meeting organizers to make the meeting an online Lync Meeting in Outlook, run the following cmdlet to set up a MailTip for the new account:

Set-Mailbox -Identity cf303027@contoso.com -MailTip "This room is equipped with Lync Meeting Room (LRS), please make it a Lync Meeting to take advantage of enhanced meeting experience from LRS”

1. Use the following cmdlets to configure localized strings. If required by your organization, you can also add custom translations.

$Temp = Get-Mailbox  cf303027@ contoso.com

$Temp.MailTipTranslations += "ES:Spanish translation of the message"

Set-Mailbox -Identity  cf303027@contoso.com -MailTipTranslations $Temp.MailTipTranslations

1. Optional: Configure meeting acceptance text that provides users with information about Lync Meeting Room and what to expect when they schedule and join meetings. The following is an example:

**Your request was accepted.**

  \_\_\_\_\_
If your meeting request was **declined:** please disregard the rest of this message. It’s intended to help with using the dogfood technology in this conference room.

If your meeting request was **accepted:** Congratulations, you have scheduled a meeting with a Lync Room System Dogfood meeting room!

Lync Meeting Room (LRS) is a combination of software and hardware that enables rich meeting scenarios, including video conferencing, white boarding, PowerPoint sharing, and more. We are excited to have you try LRS, and we would love to hear your feedback!

**Key Scenarios:
Join Meeting**
If you're reading this mail, you've already scheduled a meeting. Just touch the join button on your scheduled meeting to join it. Don’t see a join button? Make your meeting an online meeting in Outlook:

**Launch Whiteboard**
You can start white boarding, and then invite participants to share the whiteboard. You can also start white boarding from within a meeting.

**PowerPoint Sharing**
You can share your PPT slides with the room. To do this, upload the PPT file into the meeting from your machine (just as in Lync). From the room, you can then watch the PPT presentation, or take control and present.

**Display Modes**
Try using different display modes to see which one best fits your meeting.

If you run into any issues or have any questions, ideas, or feedback for the feature team, please contact us:
LRSfeedback@contoso.com

Thanks!
**Frequently Asked Questions:**

Q: I see my meeting in the room’s calendar but there is no Join button
A: Make sure that your meeting is an Online Meeting (Lync Meeting) in Outlook.

Meeting Invite to Remote LRS

Lync Room System relies on the “Join Lync Meeting” link in the calendar meeting request. The join link is usually found in the body of a meeting request. However, LRS depends on this link to be present in the MAPI properties of the message. When this meeting request is sent to remote organizations (Lync federated partners), by default, the remote organization’s LRS will not show the meeting join link on the calendar. In fact, any Outlook users in the remote organization will be unable join the Lync meeting by right clicking the calendar item or from within the meeting reminder. They must open meeting invite and click meeting join link in the body of the message.

The reason for this limitation is that Outlook and Microsoft Exchange do not use a special method to package information for sending messages across the Internet. This method, referred to as Transport Neutral Encapsulation Format (TNEF), is disabled by default for messages sent externally from an Exchange organization. For meeting join link to appear on a remote LRS, the sending organization must enable TNEF by using the following cmdlet:

* New-RemoteDomain -DomainName Contoso.com -Name Contoso
* Set-RemoteDomain -Identity Contoso -TNEFEnabled $true

After TNEF is enabled for the remote organization, any message sent over the Internet to the organization is sent as an attachment in TNEF format. With TNEF enabled, when a Lync meeting request is sent to the Lync federated partner, LRS will be able to render meeting join link and remote users will be able to join Lync meetings.

Enabling the Resource Mailbox Account in Active Directory

The conference room mailbox account created above by Exchange is a disabled user object in Active Directory. LRS cannot sign-in or authenticate using Kerberos/NTLM authentication if the account is disabled in Active Directory. The LRS client must be able to authenticate against Exchange Web Services to retrieve calendar settings, and must also be able to send email with whiteboard contents.

Therefore, you must enable this account in Active Directory by doing the following:

1. In Active Directory, run the following cmdlet to enable the account in for logon:

Set-ADAccountPassword –Identity ‘cf303027’

Running this cmdlet will prompt you to enter the current password, and then provide the password twice for confirmation.

1. Once the password is set, run the following cmdlet to enable the account:

Enable-ADAccount –Identity cf303027

#### Alternatives to Enabling a Resource Mailbox Account in Active Directory

If for some reason you cannot enable the account in Active Directory, LRS supports the following alternatives to enabling an account in Active Directory for logon:

* If your domain is running at Windows 2008 R2 functionality level, you can create a managed service account (MSA) corresponding to each conference room where you deploy LRS. In this case, LRS will sign in to Lync Server and Exchange Server by using its identity (for example, cf303027@contoso.com) but by using the MSA credentials for authentication.
* If you do not have Windows 2008 R2 Active Directory, you can use a machine account as the authenticating identity, as long as you intend to join the LRS appliance PC to the domain. LRS will continue to sign in using its identity (for example, cf303027@contoso.com) but it will use the machine account credentials for authentication.
* You can create a second user account for a conference room, and then use that account as the authenticating identity, similarly to both of the options above.
* Important:

For all these options, you must delegate to the authenticating identity (MSA, machine account, or another user account) full access to management of the resource mailbox ac account in Exchange. This will allow those identities’ credentials to be used by LRS to obtain calendar data. The following section describes how to use these accounts’ credentials to sign in to Lync server by using LRS.

Enabling LRS Accounts for Lync

This section provides an overview of the steps for Lync-enabling your conference room account, which will be configured on LRS.

After you have created a resource mailbox account for the conferencing rooms, use Lync Management Shell to enable LRS accounts for Lync services.

Note:

The following procedure assumes that you have enabled the LRS account in Active Directory.

1. Run the following command to enable the LRS account on a Lync Server 2013 pool:

Enable-CsMeetingRoom -SipAddress "sip:cf303027@contoso.com" -domaincontroller DC-ND-001.contoso.com -RegistrarPool LYNCPool15.contoso.com -Identity cf303027

1. Optional: Allow this account to make and receive PSTN phone calls by enabling the account for Enterprise Voice. Enterprise Voice is not required for LRS, but if you do not enable it for Enterprise Voice, the LRS client won’t be able to provide PSTN dialing functionality.

Set-CsMeetingRoom cf303027 -domaincontroller DC-ND-001.contoso.com -LineURI "tel:+14257224670;ext=24670"

Set-CsMeetingRoom -domaincontroller DC-ND-001.contoso.com -Identity cf303027 -EnterpriseVoiceEnabled $true

* Important:

If you enable Enterprise Voice for the LRS conference room account, make sure to configure a restricted Voice Policy suitable for your organization. If the Lync Meeting Room is a publicly available resource, anyone could use it to join a meeting, either scheduled or ad hoc. After joining a meeting, the person could dial out to any number. In Lync Server 2013, the dial-out from conferences feature uses the voice policy of the user, in this case LRS account used to join the meeting. In earlier versions of Lync Server, the voice policy of the organizer is used. Therefore, if a user of an earlier version of Lync Server schedules a meeting room and invites the LRS room account, anyone could use the Lync Meeting Room to join the meeting and could dial any national or international phone number, as long as the organizer is allowed to dial those numbers.

Optional: Use a Non-Lync Enabled Account in Active Directory

If for some reason you cannot enable the resource mailbox account in Active Directory and you have used one of the options described in the section “Alternatives to Enabling Resource Mailbox Account in Active Directory,” you must provide the OriginatorSID while running Enable-CsMeetingRoom cmdlet, as shown below:

Enable-CsMeetingRoom -Identity cf303027 -RegistrarPool LyncPool15.contoso.com -SipAddressType SamAccountName -SipDomain contoso.com -OriginatorSid S-1-5-21-2831376166-2963252556-2165051629-1221

The OriginatorSid is taken from any of the authenticating identities (MSA, machine account, or any other enabled user account), because in the above case, cf30327 is not enabled in Active Directory for log on. Therefore, in the LRS client, you must provide the Sign-In name, for example cf303027@contoso.com, but the username and password will be the MSA, machine account, or other enabled user account.

Move the LRS Account Between Pools (Lync Server 2013)

If you need to move the LRS account from one Lync Server 2013 pool to another Lync Server 2013 pool (for example, during upgrades), use the following cmdlet to move the LRS account pool:

Move-CsMeetingRoom -Identity "cf303027" -Target "LYNCPool15-2.contoso.com”

Disable the LRS Account for Lync Services

If you need to disable an existing LRS account from Lync services on a Lync Server 2013 pool, use the following cmdlet to disable the account:

Disable-CsMeetingRoom cf303027 -domaincontroller DC-ND-001.contoso.com

### Optional: Create an LRS Administrator Group in Active Directory

Each LRS client that joins the domain can be fully managed by a domain user with local administrator rights on the LRS appliance PC. Therefore, you can create a dedicated administrators’ group in Active Directory and give this group administrative rights during set up of the new LRS machine.

Conferencing Policy for the LRS Account

The conferencing policy assigned to the LRS account must have certain characteristics. Most of the time, the LRS client joins a scheduled meeting, and therefore the conferencing policy of the meeting organizer will affect the conference. However, in Lync Server 2013, certain capabilities depend on the participant’s configuration. For example, if the participant’s policy allows a maximum video resolution of 1080p, the participants will experience this higher resolution video capability in the conference even if the organizer’s policy doesn’t allow it. The following table describes several such settings which you should be aware of when setting up conferencing policies for LRS accounts in your organization.

|  |  |  |
| --- | --- | --- |
| **Feature** | **Value** | **Comment** |
| AllowIPAudio | **TRUE** | Must be true for LRS audio  |
| AllowIPVideo | **TRUE** | Must be true for LRS audio to work in Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowMultiView | **TRUE** | Allows LRS to render multi-view, multiple video streams |
| AllowParticipantControl | **TRUE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowAnnotations | **TRUE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| DisablePowerPointAnnotations | **FALSE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowUserToScheduleMeetingsWithAppSharing | **TRUE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowNonEnterpriseVoiceUsersToDialOut | **FALSE** | Depends on whether the account is Enterprise Voice (EV) enabled (see the “Enabling LRS Accounts for Lync” section) |
| AllowAnonymousUsersToDialOut | **FALSE** | Depends on whether the account is Enterprise Voice (EV) enabled |
| AllowAnonymousParticipantsInMeetings | **TRUE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowExternalUsersToSaveContent | **TRUE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowExternalUserControl | **FALSE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowExternalUsersToRecordMeeting | **FALSE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowPolls | **TRUE** | N/A in Meet Now (ad hoc) meetings, but LRS can respond to polls on the screen at the front of room |
| AllowSharedNotes | **TRUE** | N/A in Meet Now (ad hoc) meetings, but LRS can respond to polls on the screen at the front of room |
| EnableDialInConferencing | **TRUE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| EnableAppDesktopSharing | **Desktop** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AllowConferenceRecording | **FALSE** | N/A for LRS. If TRUE, a remote party could record |
| EnableP2PRecording | **FALSE** | N/A for LRS. If TRUE, a remote party could record |
| EnableFileTransfer | **TRUE** | N/A |
| EnableP2PFileTransfer | **TRUE** | N/A |
| EnableP2PVideo | **TRUE** | Enables the LRS client to participate in peer-to-peer video sessions |
| AllowLargeMeetings | **FALSE** | N/A |
| EnableDataCollaboration | **TRUE** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| MaxVideoConferenceResolution | **VGA** | Ignored by Lync 2013, LRS uses HD1080 |
| MaxMeetingSize | **250** | Affects Meet Now (ad hoc) whiteboard sessions in LRS |
| AudioBitRateKb | **200** | See note at the end of the table\* |
| VideoBitRateKb | **5000** | This is the maximum outbound video bit rate allowed. LRS can send one 1080 stream along with pano (if RoundTable is used) at this bit rate. \* |
| AppSharingBitRateKb | **5000** | See note at the end of the table\* |
| FileTransferBitRateKb | **5000** | N/A  |
| TotalReceiveVideoBitRateKb | **20000** | We recommend that you set this as high as possible. The effective bandwidth depends on network conditions at the time of conferences.\*  |
| EnableMultiViewJoin | **TRUE** | Must be TRUE for LRS to ensure multi-view video streams |

\* For information about bandwidth planning, see Network Bandwidth Requirements for Media Traffic at [http://technet.microsoft.com/en-us/library/jj688118(v=ocs.15).aspx](http://technet.microsoft.com/en-us/library/jj688118%28v%3Docs.15%29.aspx).

Note:

If the LRS client tries to join a scheduled meeting organized by a user who is homed on a Lync Server 2010 pool, the meeting organizer’s conferencing policy could prevent the LRS client from performing collaboration.

Meeting Authentication

LRS prompts users for authentication when they use the meeting join link to join a restricted meeting, for example a meeting for which meeting lobby options have been configured in Outlook. This setting is always on for customized meetings, and users are always prompted. However, for unrestricted meetings, users can join the meeting without authentication.

The following cmdlet enables administrators to require authentication for all meetings, including unrestricted meetings:

Set-CsMeetingConfiguration –RequireRoomSystemsAuthorization TRUE

By default, RequireRoomSystemsAuthorization is FALSE.

Trusted Domains

The Lync client displays a dialog box that allows users accept the certificate from the Lync server if the SIP domain of the user account signing in is different from the name presented in the Subject or Subject Alt Name on the certificate. If the certificate configured for Lync Server in your organization does not have SIP domain name of LRS account in Subject or Subject Alt Name, you must configure those domains presented on the certificate under the Trusted Domains registry key on the LRS console machine. Your LRS manufacturer-provided LRS admin guide explains how and where to add trusted domains in the Lync client.

For example, assume the certificates configured on Lync Server have a Subject /Subject Alt Name of “CONTOSO.LOCAL” and one of the SIP domains assigned to a user for the LRS sign-in address is “confrm1@contoso.net.” Because contoso.net is not in the certificate, on the LRS machine, you will need to configure “contoso.local” as a trusted domain in the registry, as explained in your LRS manufacturer-provided LRS admin guide.

## Migration Considerations

This section provides guidance if you are deploying LRS in a multi-pool environment that includes Lync Server 2010 or Office Communications Server 2007 R2.

The User Replicator (UR) component in Lync Server gets user objects from Active Directory and places them into the Lync Server back-end SQL Server database. Only the UR in Lync Server 2013 is aware of LRS objects. The UR in previous versions of Lync Server and Office Communications Server do not detect the Active Directory attributes that designate LRS objects, and therefore was not aware of them.



If an LRS account tries to sign in to Lync, and performs autodiscovery based on SRV record or DNS A record look up, and if those accounts point to a previous version of Lync Server or Office Communications Server, LRS will receive a “404 Not Found” response from the legacy pool. The legacy pool will not be able to redirect LRS to its Lync Server 2013 home pool.

You can address this problem with the following options:

* Point your autodiscover SRV record (\_sipinternaltls.\_tcp.contoso.com) to Lync Server 2013 pool
* If the first option isn’t possible, you must manually configure LRS and provide the Lync Server 2013 pool address by directly configuring it in the LRS console application.
* If LRS is deployed outside the corporate network, and a Lync Edge server has been deployed and configured to point to a legacy pool or director, a secondary Edge server site is required, which points to the Lync Server 2013 pool. Refer to the Lync Edge server deployment documentation for more information about deploying a secondary Edge server.

#### Lync Room System Interoperability with a Lync Server 2010 Pool

During migration, if a user who is homed on a Lync Server 2010 pool schedules a meeting and invites the LRS account, the LRS client will have limited functionality while attending the meeting.

When the LRS client joins a scheduled conference call that has been organized by a user homed on Lync Server 2010, LRS has the following in-meeting limitations:

* LRS cannot show the multi-view video gallery.
* If the LRS client is the presenter, it cannot apply video lock on participants.
* LRS cannot show 1080p video resolution (inbound or outbound), even if the Lync Server 2013 conferencing policy allows it, because of the following:
	+ Lync Server 2010 doesn’t support 1080p resolution.
	+ LRS is always limited by the organizer’s conferencing policy for video resolution. Therefore, even if the Lync 2010 pool supports 720p resolution, LRS will not be able to take advantage of 720p resolution as long as organizer’s policy doesn’t support it.
* Lync 2013 clients detect LRS presence in the meeting room, and they auto-mute themselves to avoid echo in the physical meeting room. This feature does not work in meetings hosted on Lync Server 2010.
* There are limitations on desktop sharing performance for meetings hosted on Lync Server 2010.
* Users won’t be able to join private (restricted) meetings that are hosted on Lync 2010 with LRS.

### Domain Joining Considerations

You can join the LRS appliance PC to the Active Directory domain or leave it in a Workgroup. Consider the following points before making this decision.

* Domain-joining the LRS appliance PC helps in importing your organization’s private root certificate chain automatically.
* Domain-joining the LRS appliance PC enables you to grant domain users and groups administrative rights. By doing so, you will not have to remember the local machine level administrator account password.
* When you join an LRS appliance PC to the domain, we highly recommend that you create a separate Organizational Unit (OU), so that you can provide Group Policy Object (GPO) exclusions to the OU where all the LRS machine objects reside. When you do this, create machine objects in the OU before joining the LRS appliance PC to the domain.
* Many organizations have the following GPOs, which affect LRS appliance PC functions. Ensure that you override or block the inheritance of these GPOs in the LRS OU:
	+ Timeout of logon sessions (auto lockout)
	+ Power management related policies
	+ Requiring additional authentication steps
	+ Denying access to local drives
	+ Prompting users for slow network connections
	+ Start a certain program at logon
	+ Create another domain user account on all domain-joined machines.
* Alternatively, you might decide to leave the appliance PC in the workgroup. As with the desktop Lync client, this requires you to manually import the root certificate chain on the LRS appliance PC. You’re not required to import the root certificate chain if your Lync deployment is using a public certificate (for example, Entrust, VeriSign, etc.).

If you plan to join LRS machines to the domain, to avoid joining LRS machine inadvertently to an unintended OU, which may not be free from GPOs, ensure you join by using the following cmdlet from the LRS machine. This will ensure that the LRS machine joins in the correct OU and does not receive GPOs that might block LRS functionality.

$username = "contso.local\cf303027"
$password = ConvertTo-SecureString "password123” -AsPlainText -Force
$myCred = New-Object System.Management.Automation.PSCredential $username, $password

Add-Computer -DomainName contoso.local -Credential $mycred –OUPath “OU=LyncRoomSystem,OU=Resources,DC=CONTOSO,DC=LOCAL”

Even if you create a separate OU and block inheritance, there are some policies which are could cause issues at a higher level. A Group Policy with **No Override** setting beats an OU with a **Block Policy Inheritance** setting. For more information, see the article “No Override as Compared to Block Policy Inheritance” in the Group Policy documentation at <http://technet.microsoft.com/en-us/library/cc978255.aspx>

You may have multiple approaches to solving these problems. We advise you to consult with your Active Directory experts to ensure you are provided with an OU that is free of GPO settings, or at least an OU in which the above described policies do not exist.

Provisioning Lync Room System Accounts in Office 365

The following section covers LRS account provisioning steps for an Office 365 tenant.

Office 365 Prerequisites

Your online tenant must meet the following requirements.

* The Office 365 plan must include Lync Online Plan 2 or higher.
* The Lync Online Plan 2 must support conferencing capability.
* Lync Online Plan 3 is required for Enterprise Voice (PSTN Telephony) via telephony service providers.
* Users in your tenant must have Exchange Mailboxes
* The Lync Room System account requires a Lync Online Plan 2 or Lync Online Plan 3 license. It does not require an Exchange Online license.
* Tenant Admin Remote must have the following PowerShell access:
	+ Exchange Remote PowerShell access
	+ Lync Online Remote PowerShell access
	+ Windows Azure Active Directory Module to access Office 365 Directory access

Provisioning Overview

The diagram below provides an overview of the LRS account provisioning flow in Office 365.



Identifying a New Conference Room

You may already have a resource room mailbox in Exchange that provides the scheduling feature, or you may be creating a resource mailbox for the first time to facilitate LRS deployment. In any case, you must identify a room account to be used in your tenant. The sections below provide guidance for both kinds of accounts. For example, let’s say you have the following two rooms, and you would like to deploy LRS for both of them:

* Existing Resource Mailbox Account: confrm1@contoso.onmicrosoft.com
* New Resource Mailbox Account: confrm2@contoso.onmicrosoft.com

### Exchange Online Provisioning

First, start a tenant administrator remote PowerShell session as follows:

PS C:\Windows\system32> Set-ExecutionPolicy Unrestricted

PS C:\Windows\system32> $org='contoso.onmicrosoft.com'

PS C:\Windows\system32> $cred=Get-Credential admin@$org

PS C:\Windows\system32> $sess=New-PSSession –ConfigurationName microsoft.exchange -Credential $cred -AllowRedirection -Authentication basic -ConnectionUri <https://ps.outlook.com/powershell>

PS C:\Windows\system32> Import-PSSession $sess

These cmdlets create a new PowerShell session for your Office 365 Exchange Online deployment, and then import that session to allow you to run Exchange cmdlets against Exchange Online.

To set an existing resource room mailbox account for LRS, run the following cmdlet:

PS C:\Windows\system32> $rm="confrm1@$org"

PS C:\Windows\system32> $newpass='pass@word1'

PS C:\Windows\system32> Set-Mailbox -MicrosoftOnlineServicesID $rm -room -Name "Conf Room 1" -RoomMailboxPassword (ConvertTo-SecureString newpass -AsPlainText -Force) -EnableRoomMailboxAccount $true

To create a new Exchange resource mailbox account for LRS, run the following cmdlet:

PS C:\Windows\system32> $rm="confrm2@$org"

PS C:\Windows\system32> $newpass='pass@word1'

PS C:\Windows\system32> New-Mailbox -MicrosoftOnlineServicesID $rm -room -Name "Conf Room 2" -RoomMailboxPassword (ConvertTo-SecureString newpass -AsPlainText -Force) -EnableRoomMailboxAccount $true

The above cmdlet sets up or creates a new Exchange resource mailbox account for LRS usage by enabling the account. The following properties must be set on the new resource mailbox account to ensure that the LRS console functions properly:

1. Set the account to auto-accept meetings. Alternatively, you can provide a delegate to manage the room account, however, the delegate will have to accept meetings before they will appear on the LRS calendar.
2. Set the account to not hide the subject for accepted meetings. This will ensure that when users walk into the meeting room, they will be able to see the subject of any non-private meeting.

PS C:\Windows\system32> Set-CalendarProcessing -Identity confrm1 -DeleteSubject $false -AutomateProcessing AutoAccept

### Lync Online Provisioning

After a resource room mailbox account has been created and enabled as shown above, the account will synchronize from the Exchange Online forest to Lync Online forest using the Windows Azure Active Directory forest. The following steps are required to provision the LRS account in the Lync Online pool. These steps are the same for both an existing resource mailbox account or a newly created account (confrm1 or confrm2), because once they are enabled in Exchange Online, both of these accounts will be synchronized to Lync Online in the same way.

1. Create a Remote PowerShell session. Note that you will need a target server address, which is provided by the customer service support team, who enables remote PowerShell access.

PS C:\Windows\system32> Import-Module LyncOnlineConnector

PS C:\Windows\system32> $cssess=New-CsOnlineSession -TargetServer admin0A.online.lync.com -Credential $cred

PS C:\Windows\system32> Import-PSSession $cssess

1. To enable an LRS account for Lync, run the following cmdlet:

PS C:\Windows\system32> Enable-CsMeetingRoom -Identity $rm -RegistrarPool "sippoolbl20a04.infra.lync.com" -SipAddressTyp

e EmailAddress

You can obtain the RegistrarPool address where your Lync users are homed from one of your existing accounts by using the following cmdlet to returns this property (among others):

PS C:\Windows\system32> Get-CsOnlineUser -Identity ‘alice@contoso.onmicrosoft.com’

1. If you would like to enable Enterprise Voice features for the Lync Room System account, and you have Lync Online Plan 3 licenses available, you can assign an available line URI by using the following command:

PS C:\Windows\system32> Set-CsMeetingRoom confrm1 -LineURI "tel:+14245231111"

1. You can choose a telephony provider for this account by using the Lync Online Control panel.

### Assigning Lync Online License

After you enable an LRS account in Lync, you can assign a Lync Online Plan 2 or Lync Online Plan 3 license by using the Office 365 administrative portal. You can also use Windows Azure Active Directory PowerShell cmdlets to assign a license. Go to Users and Groups, select the LRS account, and assign a license as follows:





After you assign a license for Lync Online, you will be able to log into this account by using any Lync client. You can perform a validation by using a Lync client.

### Password Expiration

In Office 365, the default password expiration policy for all of your user accounts is 90 days unless you configure a different password expiration policy. For Lync Room Systems accounts, you can select the “Password never expires” setting with the following steps.

1. Create a Windows Azure Active Directory session by using your tenant global administrator credentials.

PS C:\Windows\system32> $cred=Get-Credential admin@$org

PS C:\Windows\system32> Connect-MsolService -Credential $cred

1. Set the “Password never expires” setting for the LRS room account created above by using the following cmdlet:

PS C:\Windows\system32> Set-MsolUser -UserPrincipalName confrm1@skypelrs.onmicrosoft.com -PasswordNeverExpires $true

For more information please see the Lync Server Management Shell documentation at <http://go.microsoft.com/fwlink/?LinkID=213040>.

Provisioning Lync Room System Accounts in Split Domain

 As indicated by the following table, in a hybrid deployment you can move an LRS account from on-premises to online with the following caveats:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Topology** | **Lync** | **Exchange** | **Phone/Mediation Server** | **Notes** |
| **Hybrid (Split Domain)**  |  |  |  |  |
|  | On-premises | Online | On-premises | Supported  |
|  | Online | Online | N/A | Supported |

* You can move the account if the Exchange resource room mailbox is on Exchange Online.
* After you move the LRS account from on-premise to online, you cannot enable this account for Enterprise Voice, because this is not supported in split domain deployments.

The LRS accounts are synchronized with DirSync from the on-premises directory to the online directory in Office 365 Windows Azure Active Directory. Therefore, to move an LRS account, you simply disable the account in the on-premises Lync pool and enable it in the Lync Online pool. Note that the Move-CsMeetingRoom **cmdlet does not work** for moving an on-premises account to an online pool.

The Exchange resource mailbox account being moved from on-premises to online should already be enabled in the on-premises Active Directory.

1. Run the following cmdlet on an account in on-premises Lync pool:

PS C:\Windows\system32> Disable-CsMeetingRoom –Identity confrm1

1. Enable this account in the Lync Online pool as explained above under “Lync Online Provisioning” section in the “Provisioning Lync Room System Accounts in Office 365” section.