

# **Dell™ One Identity Quick Connect for Active Directory 5.5**

Administrator Guide



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#### Legend

 **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

 **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.

 **IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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# Installing One Identity Quick Connect Express for Active Directory

Before installing One Identity Quick Connect Express for Active Directory make sure that your system meets the system requirements provided in the *One Identity Quick Connect Express for Active Directory Release Notes*.

## To install the product by using the Setup Wizard

- 1 Do one of the following:
  - In a 32-bit edition of Windows, run the **QuickConnectExpressForAD\_x86.msi** file supplied with the One Identity Quick Connect Express for Active Directory installation package.
  - In a 64-bit edition of Windows, run the **QuickConnectExpressForAD\_x64.msi** file supplied with the One Identity Quick Connect Express for Active Directory installation package.
- 2 Follow the steps in the Setup Wizard until you are on the Completion page.
- 3 Select the **Restart Quick Connect service now for changes to take effect** check box.
- 4 Click **Finish** to close the wizard.

## To perform a silent installation

- On a 32-bit system, enter the following command at a command prompt:

```
msiexec /i "<Path to QuickConnectExpressForAD_x86.msi>"  
RESTART_QCSERVICE=<Value> /qb /l*v  
"<Path to file that will store the Setup log>"
```

- On a 64-bit system, enter the following command at a command prompt:

```
msiexec /i "<Path to QuickConnectExpressForAD_x64.msi>"  
RESTART_QCSERVICE=<Value> /qb /l*v  
"<Path to file that will store the Setup log>"
```

In the above syntax:

**Table 1. Arguments**

Argument	Description
RESTART_QCSERVICE	<p>Specifies whether or not to restart the Quick Connect Service. The changes made by the Setup program may not take effect until you restart the Quick Connect Service.</p> <p>This argument can take one of the following values:</p> <ul style="list-style-type: none"><li>• <b>0.</b> Specifies not to restart the Quick Connect Service. This value is used when the RESTART_QCSERVICE argument is omitted.</li><li>• <b>1.</b> Specifies to restart the Quick Connect Service.</li></ul>

For instructions on how to configure connections to supported data systems, see the following sections in this guide:

- [Working with Active Directory](#)
- [Working with an AD LDS \(ADAM\) instance](#)
- [Working with Lync Server](#)
- [Working with Exchange Server](#)

# Working with Active Directory

This section describes how to create or modify a connection to Active Directory so that One Identity Quick Connect Express for Active Directory could work with data in that data system.

To create a connection to Active Directory domain, you need to use One Identity Quick Connect Sync Engine in conjunction with a special connector called *Active Directory Connector*. This connector is included in the One Identity Quick Connect Express for Active Directory package.

The Active Directory Connector supports the following features:

**Table 2. Supported features**

Feature	Supported
<b>Bidirectional synchronization</b> Allows you to read and write data in the connected data system.	Yes
<b>Delta processing mode</b> Allows you to process only the data that has changed in the connected data system since the last synchronization operation, thereby reducing the overall synchronization operation time.	Yes
<b>Password synchronization</b> Allows you to synchronize user passwords from an Active Directory domain to the connected data system.	Yes

The Active Directory Connector supports linked attributes existing in the Active Directory schema. Linked attributes allow you to establish associations between two objects.

Linked attributes exist in pairs, as follows:

- **Forward link attribute.** This is a linked attribute that exists on a source object (example: the **member** attribute on the Group object). Forward link attributes can be single-valued or multivalued.
- **Back link attribute.** This is a linked attribute that can be specified on a target object (example: the **memberOf** attribute on the User object). Back link attributes are multivalued and they must have a corresponding forward link attribute. Back link attributes are not stored in Active Directory. Rather, they are calculated based on the corresponding forward link attribute each time a query is issued.

In this section:

- [Creating an Active Directory connection](#)
- [Modifying an existing Active Directory connection](#)
- [Communication ports required to synchronize data between two AD domains](#)
- [Synchronizing user passwords between two AD domains](#)
- [Synchronizing SID history of users or groups](#)

For instructions on how to rename a connection, delete a connection, or modify synchronization scope for a connection, see the *Quick Connect Administrator Guide*.

# Creating an Active Directory connection

## *To create a new connection*

- 1 In the Quick Connect Administration Console, open the **Connections** tab.
- 2 Click **Add connection**, and then use the following options:
  - **Connection name.** Type a descriptive name for the connection.
  - **Use the specified connector.** Select **Active Directory Connector**.
- 3 Click **Next**.
- 4 On the **Specify connection settings** page, use the following options:
  - **Any available domain controller in the specified domain.** Allows you to connect to an available domain controller in the Active Directory domain you specify. In the **Domain** text box, type the fully qualified domain name of the domain to which you want to connect.
  - **Specified domain controller.** Allows you to connect to a specific domain controller in a particular Active Directory domain. In the **Domain controller** text box, type the fully qualified domain name of the domain controller to which you want to connect.
  - **Active Directory forest.** Allows you to connect to the Active Directory forest you specify in this option. When synchronizing data to or from a connected forest, Quick Connect Sync Engine automatically selects the appropriate domain controllers in the forest to read and write data according to the synchronization scope configured for the connection.
  - **Secure Sockets Layer usage.** Use this list to select one of the following:
    - **None.** Allows you to connect without using Secure Sockets Layer (SSL).
    - **Use.** Allows you to connect through SSL.
    - **Preferred.** Allows you to attempt the connection through SSL first. If this connection attempt fails, the Sync Engine tries to connect without using SSL.
  - **Access Active Directory using.** Use this option to select one of the following:
    - **Quick Connect Service account.** Allows you to access the Active Directory domain in the security context of the account under which the Quick Connect Service is running.
    - **Windows account.** Allows you to access Active Directory in the security context of the account whose user name and password you specify below this option.
  - **Test Connection.** Click this button to verify the specified connection settings.
- 5 Click **Finish** to create a connection to Active Directory.

# Modifying an existing Active Directory connection

## *To modify connection settings*

- 1 In the Quick Connect Administration Console, open the **Connections** tab.
- 2 Click **Connection settings** below the existing Active Directory connection you want to modify.
- 3 On the **Connection Settings** tab, click the **Specify connection settings** item to expand it, and then use the following options:
  - **Any available domain controller in the specified domain.** Allows you to connect to any available domain controller in the Active Directory domain you specify. In the **Domain** text box, type the fully qualified domain name of the domain to which you want to connect.
  - **Specified domain controller.** Allows you to connect to a specific domain controller in a particular Active Directory domain. In the **Domain controller** text box, type the fully qualified domain name of the domain controller to which you want to connect.

- **Active Directory forest.** Allows you to connect to the Active Directory forest you specify in this option. When synchronizing data to or from a connected forest, Quick Connect Sync Engine automatically selects the appropriate domain controllers in the forest to read and write data according to the synchronization scope configured for the connection.
  - **Secure Sockets Layer usage.** Use this list to select one of the following:
    - **None.** Allows you to connect without using Secure Sockets Layer (SSL).
    - **Use.** Allows you to connect through SSL.
    - **Preferred.** Allows you to attempt the connection through SSL first. If this connection attempt fails, the Sync Engine tries to connect without using SSL.
  - **Access Active Directory using.** Use this option to select one of the following:
    - **Quick Connect Service account.** Allows you to access Active Directory in the security context of the account under which the Quick Connect Service is running.
    - **Windows account.** Allows you to access Active Directory in the security context of the account whose user name and password you specify below this option.
  - **Test Connection.** Click this button to verify the specified connection settings.
- 4 Optionally, you can narrow the number of objects participating in the connection scope by setting up filter conditions: on the **Connection Settings** tab, click the **Advanced** item to expand it, and then use the following list columns:
- **Object type.** Use this column to select the Active Directory object types for which you want to configure filter conditions: click the **Add Object Type** button to add an object type to the list. Once you have added an object type, use the **Filter condition** column to specify a condition the objects of that type must meet in order to participate in the connection scope.
  - **Filter condition.** Use this column to specify a filter condition for the corresponding Active Directory object type. To specify a filter condition, type an LDAP query. The Active Directory objects that meet the specified filter condition will participate in the connection scope. When no filter condition specified for an object type, all objects that belong to that type participate in the connection scope.
- 5 When you are finished, click **Save**.

## Communication ports required to synchronize data between two AD domains

When Synchronizing data between two Active Directory domains, One Identity Quick Connect Sync Engine uses the following ports to access domain controllers in the domains:

**Table 3. Required communication ports**

Port	Protocol	Type of traffic	Direction of traffic
53	TCP/UDP	DNS	Inbound
88	TCP/UDP	Kerberos	Outbound
389	TCP/UDP	LDAP	Outbound
636	TCP	LDAP over SSL (LDAPS)	Outbound

## Synchronizing user passwords between two AD domains

You can automatically synchronize user passwords from one Active Directory domain to the other by using One Identity Quick Connect Express for Active Directory. The next procedure assumes that One Identity Quick

Connect Sync Engine is already connected to the source and target domains. For more information, see [Creating an Active Directory connection](#) on page 6.

### **To synchronize user passwords between two AD domains**

- 1 Install Capture Agent on all domain controllers in the source and target Active Directory domains.
- 2 Use the **pwdHash** attribute to perform an initial synchronization of user passwords between the source and target domains:
  - a Create a new or choose an existing provisioning or updating synchronization step for the source and target domains.
  - b If you use an updating synchronization step, ensure that user objects in the source domain are properly mapped to their counterparts in the target domain. For more information on mapping objects, see the *One Identity Quick Connect Sync Engine Administrator Guide*.
  - c In the provisioning or updating synchronization step, configure a rule to synchronize the **pwdHash** attribute value from the user objects in the source domain to their counterparts in the target domain.
  - d Run the provisioning or updating synchronization step to perform an initial synchronization of user passwords from the source to the target domain.

Step 2 allows you to synchronize user passwords only once. If you want to synchronize all subsequent password changes on a permanent basis, complete step 3.

- 3 To synchronize all subsequent password changes from the source to the target domain, do one of the following:
  - Create a recurring run schedule for the synchronization step you configured in step 1 of this procedure. For instructions, see the section titled “Running a workflow automatically on a recurring schedule” in the *One Identity Quick Connect Sync Engine Administrator Guide*.
  - Configure a password sync rule to automate the password synchronization between the two Active Directory domains. For instructions, see the chapter titled “Automated password synchronization” in the *One Identity Quick Connect Sync Engine Administrator Guide*.

## **Synchronizing SID history of users or groups**

You can use One Identity Quick Connect Express for Active Directory to synchronize SID history between user or group objects in two Active Directory domains. For example, you can synchronize SID history when migrating users from one Active Directory domain to the other.

Before you start synchronizing SID history, consider the following:

- To read SID data in the source Active Directory domain, you can use the **sidHistory** or **objectSid** attribute.
- To write SID data to the target Active Directory domain, always use the **sidHistory** attribute.

### **To synchronize SID history of users or groups**

- 1 Install Capture Agent on all domain controllers in the source and target Active Directory domains you want to participate in the SID history synchronization.  
  
For instructions on how to install Capture Agent, see the *One Identity Quick Connect Sync Engine Administrator Guide*.
- 2 Use the **Specified domain controller** option to connect One Identity Quick Connect Sync Engine to the source and target domains.  
  
For instructions on how to connect One Identity Quick Connect Sync Engine to an Active Directory domain, see [Creating an Active Directory connection](#) on page 6.
- 3 Create a new or choose an existing provisioning or updating synchronization step for the source and target domains.



If you use an updating synchronization step, ensure that user or group objects in the source domain are properly mapped to their counterparts in the target domain. For more information on mapping objects, see the *One Identity Quick Connect Sync Engine Administrator Guide*.

- 4 Configure the synchronization step to do the following:
  - Read SID data in the source Active Directory domain. For this purpose, you can use the **sIDHistory** attribute or the **objectSid** attribute, or both.
  - Write SID data to the target Active Directory domain by using the **sIDHistory** attribute.

To read attribute values in the source domain and write them to the target domain, you can configure attribute modification rules in your synchronization workflow step. For detailed instructions, see “Configuring rules to modify attribute values” in the *One Identity Quick Connect Sync Engine Administration Guide*.

- 5 Run the created step to synchronize SID history.

# Working with an AD LDS (ADAM) instance

This section explains how to create or modify a connection to an AD LDS (ADAM) instance so that One Identity Quick Connect Express for Active Directory could work with data in that data system.

To create a connection to an AD LDS (ADAM) instance, you need to use One Identity Quick Connect Sync Engine in conjunction with a special connector called *AD LDS (ADAM) Connector*. This connector is included in the One Identity Quick Connect Express for Active Directory package.

The AD LDS (ADAM) Connector supports the following features:

**Table 4. Supported features**

Feature	Supported
<b>Bidirectional synchronization</b> Allows you to read and write data in the connected data system.	Yes
<b>Delta processing mode</b> Allows you to process only the data that has changed in the connected data system since the last synchronization operation, thereby reducing the overall synchronization operation time.	Yes
<b>Password synchronization</b> Allows you to synchronize user passwords from an Active Directory domain to the connected data system.	Yes

In this section:

- [Creating an AD LDS \(ADAM\) instance connection](#)
- [Modifying an existing AD LDS \(ADAM\) instance connection](#)

For instructions on how to rename a connection, delete a connection, synchronize passwords in a connected data system, or modify synchronization scope for a connection, see the *Quick Connect Administrator Guide*.

## Creating an AD LDS (ADAM) instance connection

### *To create a new connection*

- 1 In the Quick Connect Administration Console, open the **Connections** tab.
- 2 Click **Add connection**, and then use the following options:
  - **Connection name.** Type a descriptive name for the connection.
  - **Use the specified connector.** Select **AD LDS (ADAM) Connector**.
- 3 Click **Next**.
- 4 On the **Specify connection settings** page, use the following options:
  - **Server.** Type the fully qualified domain name of the computer on which the AD LDS (ADAM) instance to which you want to connect is running.
  - **Port.** Type the LDAP communication port number used by the AD LDS (ADAM) instance.
  - **Access AD LDS (ADAM) instance using.** Use this option to select one of the following:
    - **Quick Connect Service account.** Allows you to access the target AD LDS (ADAM) instance in the security context of the account under which the Quick Connect Service is running.
    - **Windows account.** Allows you to access the target AD LDS (ADAM) instance in the security context of the account whose user name and password you specify below this option.

- **Advanced.** Click to specify advanced settings for connecting to the AD LDS (ADAM) instance.
  - **Test Connection.** Click this button to verify the specified connection settings.
- 5 Click **Finish** to create a connection to the AD LDS (ADAM) instance.

## Modifying an existing AD LDS (ADAM) instance connection

### *To modify connection settings*

- 1 In the Quick Connect Administration Console, open the **Connections** tab.
- 2 Click **Connection settings** below the existing AD LDS (ADAM) instance connection you want to modify.
- 3 On the **Connection Settings** tab, click the **Specify connection settings** item to expand it and use the following options:
  - **Server.** Type the fully qualified domain name (FQDN) of the computer on which the AD LDS (ADAM) instance to which you want to connect is running.
  - **Port.** Type the LDAP communication port number used by the AD LDS (ADAM) instance.
  - **Access AD LDS (ADAM) instance using.** Use this option to select one of the following:
    - **Quick Connect Service account.** Allows you to access the target AD LDS (ADAM) instance in the security context of the account under which the Quick Connect Service is running.
    - **Windows account.** Allows you to access the target AD LDS (ADAM) instance in the security context of the account whose user name and password you specify below this option.
  - **Advanced.** Click to specify advanced settings for connecting to the AD LDS (ADAM) instance.
  - **Test Connection.** Click this button to verify the specified connection settings.
- 4 Optionally, you can narrow the number of AD LDS (ADAM) objects participating in the connection scope by setting up filter conditions: on the **Connection Settings** tab, click the **Advanced** item to expand it, and then use the following list columns:
  - **Object type.** Use this column to select the AD LDS (ADAM) object types for which you want to configure filter conditions: click the **Add Object Type** button to add an object type to the list. Once you have added an object type to the list, use the **Filter condition** column to specify a condition the objects of that type must meet in order to participate in the connection scope.
  - **Filter condition.** Use this column to specify a filter condition for the corresponding AD LDS (ADAM) object type. To specify a filter condition, type an LDAP query. The AD LDS (ADAM) objects that meet the specified filter condition will participate in the connection scope. When no filter condition specified for an object type, all objects that belong to that type participate in the connection scope.
- 5 When you are finished, click **Save**.

# Working with Lync Server

This section describes how to create or modify a connection to Microsoft Lync Server so that One Identity Quick Connect Express for Active Directory could read and write data in Lync Server. This section also describes what data you can read and/or write in Lync Server by using One Identity Quick Connect Express for Active Directory.

To create a connection to Microsoft Lync Server, you need to use One Identity Quick Connect Sync Engine in conjunction with a special connector called *Lync Server Connector*.

The Lync Server Connector supports the following features:

**Table 5. Supported features**

Feature	Supported
<b>Bidirectional synchronization</b> Allows you to read and write data in the connected data system.	Yes For more information on what data you can read and write in Lync Server, see <a href="#">Lync Server data supported out of the box</a> on page 14.
<b>Delta processing mode</b> Allows you to more quickly synchronize identity data by processing only the data that has changed in the source and target systems since their last synchronization.	No
<b>Password synchronization</b> Allows you to synchronize user passwords from an Active Directory domain to the connected data system.	No

In this section:

- [Creating a new Lync Server connection](#)
- [Modifying an existing Lync Server connection](#)
- [Lync Server data supported out of the box](#)
- [Attributes required to create a Lync Server user](#)
- [Getting or setting the Telephony option value in Lync Server](#)

For instructions on how to rename a connection, delete a connection, or modify synchronization scope for a connection, see the *One Identity Quick Connect Sync Engine Administrator Guide*.

## Creating a new Lync Server connection

Before creating a new connection to Lync Server, make sure that unsigned Windows PowerShell scripts are allowed to run on the computer on which One Identity Quick Connect Express for Active Directory is installed. This is required because One Identity Quick Connect Express for Active Directory uses Windows PowerShell scripts to work with Microsoft Lync Server.

**NOTE:** To view the current Windows PowerShell execution policy, you can use the **Get-ExecutionPolicy** cmdlet supplied with Windows PowerShell. To change the Windows PowerShell execution policy, you can use the **Set-ExecutionPolicy** cmdlet supplied with Windows PowerShell.

### To create a new connection

- 1 In the Quick Connect Administration Console, open the **Connections** tab.
- 2 Click **Add connection**, and then do the following:

- a In the **Connection name** box, type a descriptive name for the connection.
    - b From the **Use the specified connector** list, select **Lync Server Connector**.
    - c Click **Next**.
  - 3 Use the following text boxes:
    - **Lync Server computer name.** Specify the fully qualified domain name (FQDN) of the Lync Server computer to which you want to connect.
    - **User name.** Specify a domain user account that has sufficient rights to administer Lync Server users. The account must be a member of all of the following groups that Lync Server creates in Active Directory: CsAdministrator, CsUserAdministrator, and CsServerAdministrator.
    - **Password.** Type the password of the specified user account.
- When you are finished, you can click **Test Connection** to verify the specified connection settings.
- 4 Click **Finish**.

## Modifying an existing Lync Server connection

### *To modify connection settings*

- 1 In the Quick Connect Administration Console, open the **Connections** tab.
- 2 Click **Connection settings** below the existing Lync Server connection you want to modify.
- 3 Expand the **Specify Lync Server name and access account** element to modify the following settings:
  - **Lync Server computer name.** Specify the fully qualified domain name (FQDN) of the Lync Server computer to which you want to connect.
  - **User name.** Specify a domain user account that has sufficient rights to administer Lync Server users. The account must be a member of all of the following groups that Lync Server creates in Active Directory: CsAdministrator, CsUserAdministrator, and CsServerAdministrator.
  - **Password.** Type the password of the specified user account.
- 4 When you are finished, click **Save**.

## Lync Server data supported out of the box

The next table lists the Lync Server object types supported by the Lync Server Connector out of the box and the operations you can perform on these objects by using the Lync Server Connector.

**Table 6. Supported objects and operations**

Object	Read	Create	Delete	Update
<b>User</b> Allows you to read and write data related to users in Lync Server.	Yes	Yes	Yes	Yes
<b>ArchivingPolicy</b> Allows you to read and write data related to custom archiving policies configured by user in Lync Server.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">ArchivingPolicy object attributes</a> on page 18.
<b>ClientPolicy</b> Allows you to read and write data related to custom client policies configured by user in Lync Server. Client policies define which Lync Server features are available to users.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">ClientPolicy object attributes</a> on page 18.
<b>ClientVersionPolicy</b> Allows you to read and write data related to custom client version policies configured by user in Lync Server. These policies define what clients (such as Microsoft Office Communicator 2007 R2) and their versions can be used in conjunction with Lync Server.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">ClientVersionPolicy object attributes</a> on page 19.
<b>ConferencingPolicy</b> Allows you to read and write data related to custom conferencing policies configured by user in Lync Server.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">ConferencingPolicy object attributes</a> on page 19.
<b>DialPlanPolicy</b> Allows you to read and write data related to custom dial plan policies configured by user in Lync Server.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">DialPlanPolicy object attributes</a> on page 19.

**Table 6. Supported objects and operations**

Object	Read	Create	Delete	Update
<b>ExternalAccessPolicy</b> Allows you to read and write data related to custom external access policies configured by user in Lync Server.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">ExternalAccessPolicy object attributes</a> on page 20.
<b>LocationPolicy</b> Allows you to read and write data related to custom location policies configured by user in Lync Server. These policies determine the configuration of the Enhanced 9-1-1 (E9-1-1) Location Information service.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">LocationPolicy object attributes</a> on page 20.
<b>MobilityPolicy</b> Allows you to read and write data related to custom mobility policies configured by user in Lync Server. These policies determine who can use mobility features (such as Call via Work, voice over IP (VoIP), or video).	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">MobilityPolicy object attributes</a> on page 21.
<b>PersistentChatPolicy</b> Allows you to read and write data related to custom persistent chat policies configured by user in Lync Server.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">PersistentChatPolicy object attributes</a> on page 21.
<b>PinPolicy</b> Allows you to read and write data related to custom PIN policies configured by user in Lync Server.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">PinPolicy object attributes</a> on page 21.

**Table 6. Supported objects and operations**

Object	Read	Create	Delete	Update
<b>VoicePolicy</b> Allows you to read and write data related to custom voice policies configured by user in Lync Server.	Yes	No	No	Yes <b>NOTE:</b> You can only update one attribute provided for this object type. For details, see <a href="#">VoicePolicy object attributes</a> on page 22.
<b>LyncSettings</b> Allows you to read data related to a number of Lync Server settings. LyncSettings is not a native LyncServer object type and only exists in the Lync Server Connector schema.	Yes	No	No	No

For each of the above-listed Lync Server object types One Identity Quick Connect Express for Active Directory provides special attributes that allow you to read or write data in Lync Server. You can access and use these attributes from the Quick Connect Administration Console (for example, when selecting the source and target attributes you want to participate in the synchronization operation).

The next sections describe the attributes provided by One Identity Quick Connect Express for Active Directory and explain what data you can read or write in Lync Server by using a particular attribute.

In the next sections:

- [User object attributes](#)
- [ArchivingPolicy object attributes](#)
- [ClientPolicy object attributes](#)
- [ClientVersionPolicy object attributes](#)
- [ConferencingPolicy object attributes](#)
- [ExternalAccessPolicy object attributes](#)
- [LocationPolicy object attributes](#)
- [MobilityPolicy object attributes](#)
- [PersistentChatPolicy object attributes](#)
- [PinPolicy object attributes](#)
- [VoicePolicy object attributes](#)
- [LyncSettings object attributes](#)



# User object attributes

Table 7. User attributes

Attribute	Type	Description	Supported operations
ArchivingPolicy	Single-valued, reference	Gets or sets the value of the <b>Archiving policy</b> option for the Lync Server user.	Read, write
AudioVideoDisabled	Single-valued, Boolean	Allow you to get or set the <b>Telephony</b> option value for the Lync Server user.	Read, write
EnterpriseVoice Enabled	Single-valued, Boolean	For more information, see <a href="#">Getting or setting the Telephony option value in Lync Server</a> on page 23.	Read, write
RemoteCallControl TelephonyEnabled	Single-valued, Boolean		Read, write
ClientPolicy	Single-valued, reference	Gets or sets the value of the <b>Client policy</b> option for the Lync Server user.	Read, write
ClientVersionPolicy	Single-valued, reference	Gets or sets the value of the <b>Client version policy</b> option for the Lync Server user.	Read, write
ConferencingPolicy	Single-valued, reference	Gets or sets the value of the <b>Conferencing policy</b> option for the Lync Server user.	Read, write
DialPlan	Single-valued, reference	Gets or sets the dial plan for the Lync Server user.	Read, write
DisplayName	Single-valued, string	Gets the value of the <b>Display name</b> option for the Lync Server user.	Read
DistinguishedName	Single-valued, string	Gets the distinguished name of the Lync Server user.	Read
EnabledForLyncServer	Single-valued, Boolean	Gets or sets whether or not the user account is enabled and can log on to Lync Server.	Read, write
ExternalAccessPolicy	Single-valued, reference	Gets or sets the value of the External access policy option for the Lync Server user.	Read, write
Identity	Single-valued, string	Gets the unique identifier of the User object.	Read
LineServerURI	Single-valued, string	Gets or sets the value of the <b>Line Server URI</b> option for the Lync Server user.	Read, write
LineURI	Single-valued, string	Gets or sets the value of the <b>Line URI</b> option for the Lync Server user.	Read, write
LocationPolicy	Single-valued, reference	Gets or sets the value of the <b>Location policy</b> option for the Lync Server user.	Read, write
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read
PinPolicy	Single-valued, reference	Gets or sets the value of the <b>Pin policy</b> option for the Lync Server user.	Read, write
PrivateLine	Single-valued, string	Gets or sets phone number for the user's private telephone line. This private phone number is not published in Active Directory.	Read, write

Table 7. User attributes

Attribute	Type	Description	Supported operations
RegistrarPool	Single-valued, string	Gets or sets the value of the <b>Registrar pool</b> option for the Lync Server user.	Read, write
SipAddress	Single-valued, string	Gets or sets the value of the <b>SIP address</b> option for the Lync Server user. SIP address is a unique identifier that allows the user to communicate by using devices that support Session Initiation Protocol (SIP).	Read, write

## ArchivingPolicy object attributes

Table 8. ArchivingPolicy attributes

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## ClientPolicy object attributes

Table 9. ClientPolicy attributes

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## ClientVersionPolicy object attributes

Table 10. ClientVersionPolicy attributes

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## ConferencingPolicy object attributes

Table 11. ConferencingPolicy attributes

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## DialPlanPolicy object attributes

Table 12. DialPlanPolicy attributes

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write

**Table 12. DialPlanPolicy attributes**

Attribute	Type	Description	Supported operations
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## ExternalAccessPolicy object attributes

**Table 13. ExternalAccessPolicy attributes**

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## LocationPolicy object attributes

**Table 14. LocationPolicy attributes**

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## MobilityPolicy object attributes

Table 15. MobilityPolicy attributes

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## PersistentChatPolicy object attributes

Table 16. PersistentChatPolicy attributes

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## PinPolicy object attributes

Table 17. PinPolicy attributes

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write

**Table 17. PinPolicy attributes**

Attribute	Type	Description	Supported operations
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## VoicePolicy object attributes

**Table 18. VoicePolicy attributes**

Attribute	Type	Description	Supported operations
Description	Single-valued, string	Gets the policy description.	Read
Identity	Single-valued, string	Gets the unique identifier of the policy.	Read
Members	Multivalued, reference	Gets or sets the user accounts to which the policy is applicable.	Read, write
Name	Single-valued, string	Gets the name of the policy.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read

## LyncSettings object attributes

**Table 19. LyncSettings attributes**

Attribute	Type	Description	Supported operations
Domains	Multivalued, string	Gets information about Session Initiation Protocol (SIP) domains existing in your organization.	Read
Identity	Single-valued, string	Gets the unique identifier of the Lync Server object.	Read
ObjectClass	Single-valued, string	Gets the type of the Lync Server object. For possible Lync Server object types, see the table at the beginning of the section titled <a href="#">Lync Server data supported out of the box</a> on page 14.	Read
Pools	Multivalued, string	Gets information about Lync Server pools. A pool is a collection of computers that all run the same set of Lync Server services.	Read
ServerVersion	Single-valued, string	Gets the Lync Server version.	Read

## Attributes required to create a Lync Server user

To create a Lync Server user, you must populate the following required attributes provided by One Identity Quick Connect Express for Active Directory:

- RegistrarPool
- SipAddress
- DistinguishedName, DisplayName, or Identity

For more information about the attributes listed above, see [User object attributes](#) on page 17.

## Getting or setting the Telephony option value in Lync Server

To get or set the **Telephony** option value for a Lync Server user object, you need to use the following attributes provided by One Identity Quick Connect Express for Active Directory:

- AudioVideoDisabled
- EnterpriseVoiceEnabled
- RemoteCallControlTelephonyEnabled

For more information about these and other attributes that One Identity Quick Connect Express for Active Directory provides for a Lync Server user object, see [User object attributes](#) on page 17.

The next table describes the combinations of the attribute values that correspond to a particular value in the **Telephony** option.

**Table 20. Telephony option: Combinations of attribute values**

Telephony option value in Lync Server	AudioVideo Disabled	EnterpriseVoice Enabled	RemoteCallControlTelephony Enabled
Audio/video disabled	TRUE	FALSE	FALSE
PC-to-PC only	FALSE	FALSE	FALSE
Enterprise voice	FALSE	TRUE	FALSE
Remote call control	FALSE	FALSE	TRUE
Remote call control only	TRUE	FALSE	TRUE

# Working with Exchange Server

This section describes how to create or modify a connection to Microsoft Exchange Server so that One Identity Quick Connect Express for Active Directory could read and write data in that data system. This section also describes what data you can read and/or write in Exchange Server by using One Identity Quick Connect Express for Active Directory.

To create a connection to Microsoft Exchange Server, you need to use One Identity Quick Connect Sync Engine in conjunction with a special connector called *Exchange Server Connector*.

The Exchange Server Connector supports the following features:

**Table 21. Supported features**

Feature	Supported
<b>Bidirectional synchronization</b> Allows you to read and write data in the connected data system.	Yes
<b>Delta processing mode</b> Allows you to more quickly synchronize identity data by processing only the data that has changed in the source and target systems since their last synchronization.	No
<b>Password synchronization</b> Allows you to synchronize user passwords from an Active Directory domain to the connected data system.	No

In this section:

- [Creating a new connection to Exchange Server](#)
- [Modifying an existing connection to Exchange Server](#)
- [Exchange Server data supported out of the box](#)

For instructions on how to rename a connection, delete a connection, or modify synchronization scope for a connection, see the *One Identity Quick Connect Sync Engine Administrator Guide*.

## Creating a new connection to Exchange Server

### *To create a new connection*

- 1 In the Quick Connect Administration Console, open the **Connections** tab.
- 2 Click **Add connection**, and then do the following:
  - a In the **Connection name** box, type a descriptive name for the connection.
  - b From the **Use the specified connector** list, select **Exchange Server Connector**.
  - c Click **Next**.
- 3 On the **Specify connection settings** page, use the following options:
  - **Select the Exchange Server version to which you want to connect.** Select the Exchange Server version to which you want to connect. If you select the **Automatically select latest version** option, the connector searches your environment for available Exchange Server 2013 or 2010, and connects to the latest of these versions found. Use the **Automatically select latest version** option only together with the **Any available Exchange Server in the forest** option.
  - **Connect to.** Choose how you want to connect to Exchange Server by selecting one of the following:



- **Any available Exchange Server in the forest.** Allows you to connect to any available Exchange Server computer residing in the Active Directory forest you specify. In the **Domain in the forest** text box, type the fully qualified domain name (FQDN) of any domain that belongs to the forest that includes the Exchange Server you want to connect to. If you select this option, make sure the account you specify under **Access Exchange Server using** has sufficient permissions to read the Root Directory Service Entry (rootDFS) and configuration naming context of the forest.
- **Specified Exchange Server.** Allows you to connect to the Exchange Server computer whose fully qualified domain name (FQDN) you type in the provided text box.
- **Advanced.** Opens a dialog box that allows you to specify advanced options for connecting to Exchange Server and reading and writing Exchange configuration data in Active Directory.

Options related to reading and writing Exchange configuration data in Active Directory:

- **Use default domain controller.** Causes Quick Connect to read and write Exchange configuration data in Active Directory by using the default domain controller defined on the Exchange Server used for the connection.
- **Use specified domain controller.** Causes Quick Connect to read and write Exchange configuration data in Active Directory by using the domain controller whose FQDN is specified in the text box below this option.

Options related to connecting to Exchange Server:

- **Connect using HTTPS.** Select this check box to connect to Exchange Server by using HTTPS.
- **Validate server certificate.** Select this check box to validate server certificate on the target Exchange Server.
- **Authentication method.** Select an authentication method to access Exchange Server.
- **Access Exchange Server using.** Select one of the following access options:
  - **Quick Connect Service account.** Allows you to access Exchange Server in the security context of the account under which the Quick Connect Service is running.
  - **Windows account.** Allows you to access Exchange Server in the security context of the account whose user name and password you type in the provided text box.
- **Test Connection.** Click this button to verify the specified connection settings.

4 Click **Finish**.

## Modifying an existing connection to Exchange Server

### *To modify connection settings*

- 1 In the Quick Connect Administration Console, open the **Connections** tab.
- 2 Click **Connection settings** below the existing Exchange Server connection you want to modify.
- 3 Expand **Specify connection settings** option to modify the options it provides.
  - **Select the Exchange Server version to which you want to connect.** Select the Exchange Server version to which you want to connect.
  - **Connect to.** Choose how you want to connect to Exchange Server by selecting one of the following:

- **Any available Exchange Server in the forest.** Allows you to connect to an Exchange Server computer residing in the Active Directory forest you specify. In the **Domain in the forest** text box, type the fully qualified domain name (FQDN) of any domain that belongs to the forest that includes the Exchange Server you want to connect to. If you select this option, make sure the account you specify under **Access Exchange Server using** has sufficient permissions to read the Root Directory Service Entry (rootDFS) and configuration naming context of the forest.
- **Specified Exchange Server.** Allows you to connect to the Exchange Server computer whose fully qualified domain name (FQDN) you type in the provided text box.
- **Advanced.** Opens a dialog box that allows you to specify advanced options for connecting to Exchange Server and reading and writing Exchange configuration data in Active Directory.

Options related to reading and writing Exchange configuration data in Active Directory:

- **Use default domain controller.** Causes Quick Connect to read and write Exchange configuration data in Active Directory by using the default domain controller defined on the Exchange Server used for the connection.
- **Use specified domain controller.** Causes Quick Connect to read and write Exchange configuration data in Active Directory by using the domain controller whose FQDN is specified in the text box below this option.

Options related to connecting to Exchange Server:

- **Connect using HTTPS.** Select this check box to connect to Exchange Server by using HTTPS.
- **Validate server certificate.** Select this check box to validate server certificate on the target Exchange Server.
- **Authentication method.** Select an authentication method to access Exchange Server.
- **Access Exchange Server using.** Select one of the following access options:
  - **Quick Connect Service account.** Allows you to access Exchange Server in the security context of the account under which the Quick Connect Service is running.
  - **Windows account.** Allows you to access Exchange Server in the security context of the account whose user name and password you type in the provided text box.
- **Test Connection.** Click this button to verify the specified connection settings.

4 When you are finished, click **Save**.

## Exchange Server data supported out of the box

The next table lists the Exchange Server object types supported by the Exchange Server Connector out of the box and the operations you can perform on these objects by using the connector.

**Table 22. Supported objects and operations**

Object	Read	Create	Delete	Update
<b>ActiveSyncMailboxPolicy</b> Allows you to read the Mobile Device mailbox policy settings for a specified Mobile Device mailbox policy. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No
<b>AddressBookPolicy</b> Allows you to read data related to address book policies. This object type is supported for Exchange Server 2010 and 2013.	Yes	No	No	No
<b>AddressList</b> Allows you to read data related to a specified address list. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No
<b>DistributionGroup</b> Allows you to read or write data related to a specified distribution group. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	Yes	Yes	Yes
<b>DynamicDistributionGroup</b> Allows you to read or write data related to a specified dynamic distribution group. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	Yes	Yes	Yes
<b>ExchangeServer</b> Allows you to read attribute values of a specified Exchange Server. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No

**Table 22. Supported objects and operations**

Object	Read	Create	Delete	Update
<b>GlobalAddressList</b> Allows you to read data related to a specified global address list (GAL). This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No
<b>Mailbox</b> Allows you to read or write data related to a specified mailbox. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	Yes	Yes	Yes
<b>MailboxDatabase</b> Allows you to read a specified mailbox database object. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No
<b>MailContact</b> Allows you to read or write data related to a specified mail-enabled contact. This object type is supported for Exchange Server 2007, 2010, and 2013.  <b>NOTE:</b> The Exchange Server Connector cannot create new users in Active Directory. You can create new AD users with the Active Directory Connector.	Yes	Yes	Yes	Yes
<b>MailUser</b> Allows you to read or write data related to a specified mail-enabled user. This object type is supported for Exchange Server 2007, 2010, and 2013.  <b>NOTE:</b> The Exchange Server Connector cannot create new users in Active Directory. You can create new AD users with the Active Directory Connector.	Yes	Yes	Yes	Yes
<b>OfflineAddressBook</b> Allows you to read data related to an offline address book (OAB). This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No

**Table 22. Supported objects and operations**

Object	Read	Create	Delete	Update
<b>OrganizationConfig</b> Allows you to read configuration data of an Exchange organization. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No
<b>OwaMailboxPolicy</b> Allows you to read data related to Microsoft Office Outlook Web App mailbox policies in the Exchange organization. This object type is supported for Exchange Server 2010 and 2013.	Yes	No	No	No
<b>PublicFolder</b> Allows you to read data related to a public folder. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No
<b>PublicFolderDatabase</b> Allows you to read data related to a specified public folder database. This object type is supported for Exchange Server 2007 and 2010.	Yes	No	No	No
<b>RoleAssignmentPolicy</b> Allows you to read data related to a management role assignment policy. This object type is only supported for Exchange Server 2010 and 2013.	Yes	No	No	No
<b>StorageGroup</b> Allows you to get a storage group object from Active Directory. This object type is only supported for Exchange Server 2007.	Yes	No	No	No

**Table 22. Supported objects and operations**

Object	Read	Create	Delete	Update
<b>UmDialPlan</b> Allows you to read data related to a Unified Messaging (UM) dial plan. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No
<b>UmMailboxPolicy</b> Allows you to read data related to a Unified Messaging (UM) mailbox policy. This object type is supported for Exchange Server 2007, 2010, and 2013.	Yes	No	No	No

For each of the above-listed Exchange Server object types One Identity Quick Connect Express for Active Directory provides a number of special attributes that allow you to read and/or write the data related to that object type in Exchange Server. You can access and use these attributes from the Quick Connect Administration Console (for example, when selecting the source and target attributes you want to participate in the synchronization operation).

The next sections describe the attributes provided by One Identity Quick Connect Express for Active Directory and explain what data you can read and/or write in Exchange Server by using a particular attribute.

In the next sections:

- [ActiveSyncMailboxPolicy object attributes](#)
- [AddressBookPolicy object attributes](#)
- [AddressList object attributes](#)
- [DistributionGroup object attributes](#)
- [DynamicDistributionGroup object attributes](#)
- [ExchangeServer object attributes](#)
- [GlobalAddressList object attributes](#)
- [Mailbox object attributes](#)
- [MailContact object attributes](#)
- [MailboxDatabase object attributes](#)
- [MailUser object attributes](#)
- [OfflineAddressBook object attributes](#)
- [OrganizationConfig object attributes](#)
- [OwaMailboxPolicy object attributes](#)
- [PublicFolder object attributes](#)
- [PublicFolderDatabase object attributes](#)
- [RoleAssignmentPolicy object attributes](#)
- [StorageGroup object attributes](#)
- [UmDialPlan object attributes](#)
- [UmMailboxPolicy object attributes](#)

## ActiveSyncMailboxPolicy object attributes

Table 23. ActiveSyncMailboxPolicy attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **ActiveSyncMailboxPolicy** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-ActiveSyncMailboxPolicy

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## AddressBookPolicy object attributes

Table 24. AddressBookPolicy attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **AddressBookPolicy** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-AddressBookPolicy

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## AddressList object attributes

Table 25. AddressList object attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **AddressList** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-AddressList

For more information, see the Exchange Management Shell Help topic for this cmdlet.

# DistributionGroup object attributes

Table 26. DistributionGroup attributes

Attribute	Type	Description	Supported operations
Members	Multivalued, reference	<p>Gets or sets the distribution group members.</p> <p>For recipients, this attribute accepts any of the following values:</p> <ul style="list-style-type: none"><li>• Alias</li><li>• Canonical DN</li><li>• Display Name</li><li>• Distinguished Name (DN)</li><li>• Domain\Account</li><li>• GUID</li><li>• Immutable ID</li><li>• Legacy Exchange DN</li><li>• SMTP Address</li><li>• User Principal Name</li></ul> <p>For Active Directory users, this attribute accepts any of the following values:</p> <ul style="list-style-type: none"><li>• Distinguished Name (DN)</li><li>• Domain\Account</li><li>• GUID</li><li>• User Principal Name (UPN)</li></ul>	Read, Write
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **DistributionGroup** object have the same names and descriptions as parameters or return types of the following Exchange Management Shell cmdlets:

- Enable-DistributionGroup
- Get-DistributionGroup
- Set-DistributionGroup

For more information, see the Exchange Management Shell Help topic for an appropriate cmdlet.

# DynamicDistributionGroup object attributes

Table 27. DynamicDistributionGroup attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **DynamicDistributionGroup** object have the same names and descriptions as parameters or return types of the following Exchange Management Shell cmdlets:

- Get-DynamicDistributionGroup
- New-DynamicDistributionGroup
- Set-DynamicDistributionGroup



For more information, see the Exchange Management Shell Help topic for an appropriate cmdlet.

## ExchangeServer object attributes

Table 28. ExchangeServer attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **ExchangeServer** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-ExchangeServer

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## GlobalAddressList object attributes

Table 29. GlobalAddressList attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **GlobalAddressList** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-GlobalAddressList

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## Mailbox object attributes

Table 30. Mailbox attributes

Attribute	Type	Description	Supported operations
LinkedCredentialLogin	Single-valued, string	Specifies the user name of the account with which you want to access the domain controller specified in the LinkedDomainController attribute.	Write
LinkedCredentialPassword	Single-valued, string	Specifies the password that matches the user name specified in the LinkedCredentialLogin attribute.	Write
MoveMailboxTo	Single-valued, string	Moves mailbox to the Exchange Server database whose name is specified in this attribute.	Write

**Table 30. Mailbox attributes**

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read
RecipientTypeDetails	Single-valued, string	<p>Gets or sets a mailbox type.</p> <p>When you create a mailbox object, this attribute supports the following values:</p> <ul style="list-style-type: none"> <li>• <b>DiscoveryMailbox</b></li> <li>• <b>EquipmentMailbox</b></li> <li>• <b>RoomMailbox</b></li> <li>• <b>SharedMailbox</b></li> <li>• <b>UserMailbox</b></li> </ul> <p>When you update a mailbox object, this attribute supports the following values:</p> <ul style="list-style-type: none"> <li>• <b>EquipmentMailbox</b></li> <li>• <b>RoomMailbox</b></li> <li>• <b>SharedMailbox</b></li> <li>• <b>UserMailbox</b></li> </ul> <p>When you read data of a mailbox object, this attribute supports the following values:</p> <ul style="list-style-type: none"> <li>• <b>DiscoveryMailbox</b></li> <li>• <b>EquipmentMailbox</b></li> <li>• <b>LegacyMailbox</b></li> <li>• <b>LinkedMailbox</b></li> <li>• <b>RoomMailbox</b></li> <li>• <b>SharedMailbox</b></li> <li>• <b>UserMailbox</b></li> </ul>	Read, Write

Other attributes provided for the **Mailbox** object have the same names and descriptions as parameters or return types of the Exchange Management Shell cmdlets listed in the next table. Also, some attributes may perform actions by calling certain Exchange Management Shell cmdlets, as noted in the table.

For more information, see the Exchange Management Shell Help topic for an appropriate cmdlet.

**Table 31. Exchange Management Shell cmdlets**

Exchange Server 2007	Exchange Server 2010 or 2013
<ul style="list-style-type: none"> <li>• Enable-Mailbox</li> <li>• Get-Mailbox</li> <li>• Set-Mailbox</li> <li>• Get-MailboxStatistics</li> <li>• Disable-UMMailbox (called by UMEEnabled attribute)</li> <li>• Enable-UMMailbox (called by UMEEnabled attribute)</li> <li>• Get-UMMailbox</li> <li>• Set-UMMailbox</li> <li>• Get-UMMailboxPIN</li> <li>• Set-UMMailboxPIN</li> </ul>	<ul style="list-style-type: none"> <li>• Set-CalendarProcessing</li> <li>• Get-CASMailbox</li> <li>• Set-CASMailbox</li> <li>• Disable-Mailbox (called by Archive and RemoteArchive attributes)</li> <li>• Enable-Mailbox (called by Archive and RemoteArchive attributes)</li> <li>• Get-Mailbox</li> <li>• Set-Mailbox</li> <li>• Get-MailboxAutoReplyConfiguration</li> <li>• Set-MailboxAutoReplyConfiguration</li> <li>• Get-MailboxStatistics</li> <li>• Get-MoveRequest</li> <li>• New-MoveRequest</li> <li>• Remove-MoveRequest</li> <li>• Set-MoveRequest</li> <li>• Disable-UMMailbox (called by UMEEnabled attribute)</li> <li>• Enable-UMMailbox (called by UMEEnabled attribute)</li> <li>• Get-UMMailbox</li> <li>• Set-UMMailbox</li> <li>• Get-UMMailboxPIN</li> <li>• Set-UMMailboxPIN</li> </ul>

## MailContact object attributes

Table 32. MailContact attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **MailContact** object have the same names and descriptions as parameters or return types of the following Exchange Management Shell cmdlets:

- Enable-MailContact
- Get-MailContact
- Set-MailContact

For more information, see the Exchange Management Shell Help topic for an appropriate cmdlet.

Note that the Exchange Server Connector cannot create new users in Active Directory. You can create new AD users with the Active Directory Connector.

## MailboxDatabase object attributes

Table 33. MailboxDatabase attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **MailboxDatabase** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-MailboxDatabase

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## MailUser object attributes

Table 34. MailUser attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **MailUser** object have the same names and descriptions as parameters or return types of the following Exchange Management Shell cmdlets:

- Enable-MailUser
- Get-MailUser
- Set-MailUser

For more information, see the Exchange Management Shell Help topic for an appropriate cmdlet.

Note that the Exchange Server Connector cannot create new users in Active Directory. You can create new AD users with the Active Directory Connector.

## OfflineAddressBook object attributes

Table 35. OfflineAddressBook attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **OfflineAddressBook** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-OfflineAddressBook

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## OrganizationConfig object attributes

Table 36. OrganizationConfig attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **OrganizationConfig** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-OrganizationConfig

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## OwaMailboxPolicy object attributes

Table 37. OwaMailboxPolicy attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **OwaMailboxPolicy** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-OwaMailboxPolicy

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## PublicFolder object attributes

Table 38. PublicFolder attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **PublicFolder** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-PublicFolder

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## PublicFolderDatabase object attributes

**Table 39. PublicFolderDatabase attributes**

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **PublicFolderDatabase** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-PublicFolderDatabase

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## RoleAssignmentPolicy object attributes

**Table 40. RoleAssignmentPolicy attributes**

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **RoleAssignmentPolicy** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-RoleAssignmentPolicy

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## StorageGroup object attributes

**Table 41. StorageGroup attributes**

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **StorageGroup** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-StorageGroup

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## UmDialPlan object attributes

Table 42. UmDialPlan attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **UmDialPlan** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-UMDialPlan

For more information, see the Exchange Management Shell Help topic for this cmdlet.

## UmMailboxPolicy object attributes

Table 43. UmMailboxPolicy attributes

Attribute	Type	Description	Supported operations
ObjectID	Single-valued, string	Gets the unique identifier for a specified object in Exchange Server.	Read

Other attributes provided for the **UmMailboxPolicy** object have the same names and descriptions as parameters of the following Exchange Management Shell cmdlet:

- Get-UMMailboxPolicy

For more information, see the Exchange Management Shell Help topic for this cmdlet.

# Scenario: Migrate mailboxes from one Exchange Server to another

To migrate a mailbox, you need to use the **MoveMailboxTo** attribute provided for the **Mailbox** object. Update the value of the **MoveMailboxTo** attribute, so that it includes the name or GUID of the Exchange Server database to which you want to move the mailbox. As a result, the mailbox is migrated to the Exchange Server computer that hosts the specified database.

Before migrating mailboxes, consider the following:

- You can only migrate mailboxes between Exchange Servers that belong to the same Exchange organization.
- If the computers between which you want to migrate mailboxes run the same version of Exchange Server, make sure they have either no or the same Exchange Server Service Pack installed.

Migrating a mailbox includes the following steps:

- [Step 1: Configure a connection to Exchange Server](#)
- [Step 2: Create a new synchronization workflow](#)
- [Step 3: Configure a step to update MoveMailboxTo attribute value](#)
- [Step 4: Run your synchronization workflow](#)

## Step 1: Configure a connection to Exchange Server

Configure a connection to the Exchange Server you will use to move the mailbox object. See the table below to determine which Exchange Server you must use to perform the move operation in a particular migration scenario.

**Table 44. Migration scenarios**

Source	Target	Configure connection to
Exchange Server 2007	Exchange Server 2007	Exchange Server 2007
	<b>NOTE:</b> The source and target computers must have either no or the same Exchange Server Service Pack installed.	
	Exchange Server 2010	Exchange Server 2010
Exchange Server 2010	Exchange Server 2013	Exchange Server 2013
	Exchange Server 2007	Exchange Server 2010
	Exchange Server 2010	Exchange Server 2010
Exchange Server 2013	<b>NOTE:</b> The source and target computers must have either no or the same Exchange Server Service Pack installed.	
	Exchange Server 2013	Exchange Server 2013
	Exchange Server 2007	Exchange Server 2013
	Exchange Server 2010	Exchange Server 2013
Exchange Server 2013	Exchange Server 2013	Exchange Server 2013
	Exchange Server 2007	Exchange Server 2013
	Exchange Server 2010	Exchange Server 2013
Exchange Server 2013	<b>NOTE:</b> The source and target computers must have either no or the same Exchange Server Service Pack installed.	
	Exchange Server 2013	Exchange Server 2013
	Exchange Server 2007	Exchange Server 2013
	Exchange Server 2010	Exchange Server 2013



For instructions on how to configure a connection to Exchange Server, see [Creating a new connection to Exchange Server](#) on page 24.

## Step 2: Create a new synchronization workflow

For instructions on how to create a new synchronization workflow, see the *One Identity Quick Connect Sync Engine Administrator Guide*.

## Step 3: Configure a step to update MoveMailboxTo attribute value

- 1 In the synchronization workflow you created in [Step 2: Create a new synchronization workflow](#)[Step 2: Create a new synchronization workflow](#) on page 41, create a new update step.
- 2 In the update step, select the target data system for the data synchronization operation. This must be the Exchange Server to which you created connection in [Step 1: Configure a connection to Exchange Server](#).
- 3 Configure the update step so that it updates the value of the **MoveMailboxTo** attribute on the appropriate **Mailbox** objects. The new attribute value must include the name or GUID of the Exchange Server database to which you want to move the mailboxes.

For instructions on how to create and configure an update step, see the *One Identity Quick Connect Sync Engine Administrator Guide*.

## Step 4: Run your synchronization workflow

For instructions on how to run a synchronization workflow, see the *One Identity Quick Connect Sync Engine Administrator Guide*.

# About Dell

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## Technical Support Resources

Technical support is available to customers who have purchased Dell software with a valid maintenance contract and to customers who have trial versions. To access the Support Portal, go to <http://software.dell.com/support/>.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. In addition, the portal provides direct access to product support engineers through an online Service Request system.

The site enables you to:

- Create, update, and manage Service Requests (cases)
- View Knowledge Base articles
- Obtain product notifications
- Download software. For trial software, go to [Trial Downloads](#).
- View how-to videos
- Engage in community discussions
- Chat with a support engineer