

# One Identity Active Roles 7.5.3

## Release Notes

**27 April 2022, 13:26**

These release notes provide information about the changes, enhancements, and known or resolved issues of Active Roles 7.5.3. For the most recent documents and product information, and for the release notes and documentation of earlier product releases, see the [online Active Roles technical documentation](#) on the One Identity Support Portal.

## About this release

Active Roles 7.5.3 is a full maintenance release with enhancements and resolved issues. This release also introduces support for Microsoft Graph API, superseding the Azure AD Graph API that is planned to retire in the future.

- For more information on the enhancements, see [Enhancements](#).
- For more information on the list of resolved issues, see [Resolved issues](#).

## Supported platforms

Active Roles 7.5.3 has the following changes to system requirements compared to Active Roles 6.9.0:

- Windows Server 2016 or a later version of the Windows Server operating system is required to run the Administration Service or Web Interface.
- The following SQL Server versions are supported: Microsoft SQL Server 2019, 2017, 2016, 2014 and 2012.
- You can use Active Roles to manage Exchange recipients on Exchange Server 2019, 2016, or 2013.

**NOTE:** Microsoft Exchange 2013 CU11 is no longer supported. For more information, refer to [Knowledge Base Article 202695](#).

- Internet Explorer 7, 8, 9, and 10 are no longer supported for the Web Interface access. You can use the following Web browsers to access the Web Interface:
  - Internet Explorer 11
  - Google Chrome 61 (or newer)
  - Microsoft Edge 79 (or newer), based on Chromium
  - Mozilla Firefox 36 (or newer)
- The Active Roles Web Interface is optimized for screen resolutions of 1280x800 or higher.

The minimum supported screen resolution is 1024x768.

For more information, see [System requirements](#).

## Enhancements

The following is a list of enhancements implemented in Active Roles 7.5.3.

**Table 1: General Active Roles enhancements**

Enhancement	Issue ID
<p>Previously, Group Family Key comparison operations (such as group reevaluations) in scheduled tasks or manually performed operations had suboptimal performance when being performed on a large number of users and on different user properties.</p> <p>This has been enhanced, so that such comparisons are now faster when a large number of Group Families are affected.</p>	300104
<p>Previously, group reevaluation operations affecting a large number of Dynamic Groups had suboptimal performance. This has been enhanced to increase performance.</p>	300512
<p>Active Roles 7.5.3 introduces support for cryptography libraries and algorithms compliant with Federal Information Processing Standards (FIPS) 140-2. For more information on FIPS-compliant libraries and algorithms, see the official <a href="#">Approved Security Functions for FIPS</a> document.</p> <p><b>NOTE:</b> Consider the following when planning to use FIPS-compliant cryptography libraries or algorithms:</p> <ul style="list-style-type: none"><li>• Although Active Roles continues to support non-FIPS compliant cryptography libraries and algorithms, it will not work properly if it is configured to use non-FIPS compliant solutions in a FIPS-compliant</li></ul>	298978

Enhancement	Issue ID
<p>environment.</p> <ul style="list-style-type: none"> <li>If you already use FIPS-compliant security algorithms in your environment (such as the TripleDES security algorithm, or the SHA256 hash algorithm), you must export your existing configuration, and import it in a new Active Roles installation.</li> </ul>	

**Table 2: Active Roles Synchronization Service enhancements**

Enhancement	Issue ID
The Azure AD Connector has been reworked to support Microsoft Graph API.	302258

## Deprecated features

Active Roles 7.5.3 no longer supports the following feature.

### Redistributable STS

Redistributable STS (rSTS) was a third party authentication component that you could use as an alternative to the default IIS Windows authentication when logging in to the Active Roles Web Interface. You could configure the rSTS authentication method in the rSTS API Admin Tool and the Active Roles Configuration Center. You also needed the rSTS API Admin Tool to configure Active Roles integration with Duo or Okta.

Starting from Active Roles 7.5.3:

- For new Active Roles installations, the rSTS authentication method and the rSTS Admin Tool are no longer supported and available.
- For Active Roles installations upgraded to 7.5.3 from an earlier version, existing rSTS installations and configurations are preserved. However, rSTS will not be available for fresh Active Roles 7.5.3 (or newer) installations.

The Active Roles documentation has been updated to reflect this change.

- To use Active Roles with Duo, contact One Identity Professional Services. For more information, see <https://support.oneidentity.com/active-roles/professional-services>.
- To use Active Roles integration with Okta, see *Appendix H: Active Roles Integration with Okta* in the *Active Roles Administration Guide*.

# Resolved issues

The following is a list of issues addressed in this release.

**Table 3: Resolved Issues – Active Roles Administration Service**

Resolved issue	Issue ID
Previously, when upgrading to Active Roles 7.5.2 from an earlier version, performing a Management History import could delete configured Active Roles Web Interface sites. In such cases, you had to redeploy deleted sites from an existing configuration in the Active Roles database.  This critical issue has been fixed in Active Roles 7.5.3.	306753
Previously, when importing a specific configuration, the Active Roles Administration Service was stuck at the getting ready phase because the <code>IsOnInitCommentedOut</code> function had an infinite loop when the script had more than one comment.  The issue has been fixed.	287577

**Table 4: Resolved Issues – Active Roles Configuration Center**

Resolved issue	Issue ID
Previously, in the Active Roles Configuration Center during an upgrade, when navigating to <b>Active Roles databases &gt; Import Configuration</b> to import the configuration database of an earlier Active Roles 7.x version to a newer Active Roles 7.x version, the following error could occur:  <pre>[Error] [ArsBaseCommand.ProcessRecord]: Violation of UNIQUE KEY constraint 'UQ_APOs_distinguishedName'. Cannot insert duplicate key in object 'dbo.APOs'. The duplicate key value is (CN=Built-in Policy - Azure - Default Rules to Generate Proper-ties,CN=Builtin,CN=Administration,CN=Policies,CN=Configuration). The statement has been terminated.</pre> This error occurred if you changed the name of any built-in object, such as a policy, and then created a new built-in object with the same name, which caused the import configuration operation to fail.  The issue has been fixed: the import configuration operation finishes successfully even if there are built-in objects with the same name, and the error will be logged and displayed at the end instead of causing the operation to fail.	240451
Previously, attempting to configure a new Active Roles Web Interface in the Active Roles Configuration Center from an existing 7.4.x configuration was not possible, as the previous Web Interface configuration did not appear in the list	297632

**Resolved issue****Issue ID**

of configuration files.

This issue was caused by a version information update error, resulting in the existing Web Interface configuration accidentally filtered out by the Active Roles Configuration Center. This issue has been fixed in this release.

**Table 5: Resolved Issues – Active Roles Console (MMC Interface)**

Resolved issue	Issue ID
<p>Previously, in the Active Roles Console, using the <code>\$context.0365ImportModule("&lt;moduleName&gt;")</code> command in a workflow with the <code>azuread</code> or the <code>exchangeonlinemanagement</code> module resulted in a null reference exception instead of importing and connecting the modules using the stored credentials.</p> <p>The issue has been fixed and now the <code>\$context.0365ImportModule("&lt;moduleName&gt;")</code> command imports and connects the module successfully using the stored credentials.</p>	280567
<p>Previously, in customer environments where database replication was configured, when a workflow approval was created in the Active Roles Console (MMC Interface), and the approval request was approved (via the Active Roles Self Service Web Interface) on a different Administration Service, the secondary approval activity in the workflow approval was bypassed and the request was completed.</p> <p>The issue has been fixed and now the second level workflow approval is not bypassed anymore when the first approval is performed:</p> <ul style="list-style-type: none"> <li>• On the publisher Active Roles instance when the modification which needs to be approved is done on the subscriber.</li> <li>• On the subscriber Active Roles instance when the modification which needs to be approved is done on the publisher.</li> </ul>	251629
<p>Previously, in the Active Roles Console (MMC Interface), using the <code>\$context.0365ImportModules</code> function in a script module inside a workflow did not work. Instead, you could import multiple modules at once by specifying a string array with the <code>\$context.0365ImportModule</code> function.</p> <p>The issue has been fixed by changing the behavior of these functions as follows:</p> <ul style="list-style-type: none"> <li>• Use the <code>\$context.0365ImportModule</code> function to import a single Microsoft Azure or O365 PowerShell module. If you have multiple versions of the specified module installed, you can optionally specify the major version to import.</li> <li>• Use the <code>\$context.0365ImportModules</code> function to import multiple Microsoft Azure or O365 PowerShell modules at once by specifying them in an array.</li> </ul>	283192

<b>Resolved issue</b>	<b>Issue ID</b>
<p>Both functions support importing the following Azure and O365 Windows PowerShell modules:</p> <ul style="list-style-type: none"> <li>• Azure Az</li> <li>• AzureAD</li> <li>• ExchangeOnlineManagement</li> <li>• MicrosoftTeams PowerShell Module</li> </ul>	
<p>Previously, the Active Roles Console did not list any Access Templates for Security Groups and Resource Mailboxes. This issue has been fixed, and the new Security Group and Resource Mailbox Access Templates are available under the <b>Configuration &gt; Access Templates &gt; Azure</b> node.</p>	297763

**Table 6: Resolved Issues – Active Roles Installer**

<b>Resolved issue</b>	<b>Issue ID</b>
<p>Previously, the Active Roles installer could not detect the required Microsoft OLE DB Driver for SQL Server component if you had version 19.0 or newer of the component installed on the machine.</p> <p>This issue was caused by a change in how Microsoft stores the OLE DB Driver version number in the Windows Registry, introduced in Microsoft OLE DB Driver for SQL version 19.0.</p> <p>The issue has been fixed by updating the Active Roles installer to make sure it always properly detects the component version.</p>	306900
<p>Previously, the Active Roles Installer stopped with an error if users launched it without the required elevated permissions. This issue is now fixed, and the installer prompts users to restart it with elevated permissions to perform the installation.</p>	298958

**Table 7: Resolved Issues – Active Roles SPML Provider**

<b>Resolved issue</b>	<b>Issue ID</b>
<p>Previously, when the Active Roles SPML Provider was installed on a separate host from the Active Roles Administration Service, submitting a modification request using Constrained Delegation resulted in an unsupportedOperation error due to a com_object that the Active Roles SPML Provider could not cast properly.</p> <p>The issue has been fixed.</p>	289838

**Table 8: Resolved Issues – Active Roles Synchronization Service**

<b>Resolved issue</b>	<b>Issue ID</b>
<p>Previously, after upgrading Active Roles to a new version, the Azure Backsync wizard could appear for reconfiguration when launching the Active RolesSynchronization Service console, even if Azure BackSync has not been configured and used before in your deployment.</p> <p>This issue has been fixed by implementing additional checks to ensure that the Azure BackSync wizard appears automatically after an in-place upgrade only if it has been configured and used before.</p> <p>Also, starting from Active Roles7.5.3, clicking <b>Cancel</b> in the Azure BackSync update wizard dialog will result in the wizard dialog not appearing anymore automatically.</p>	306257
<p>Previously, in the Active Roles Synchronization Service, when you created or updated a connector with incorrect configuration (that is, you entered an incorrect username, password, and so on), you could not modify your settings later due to connection failure.</p> <p>The issue has been fixed and now if you create or update a connector with incorrect configuration, an error message appears with a <b>Open and fix</b> button, allowing you to fix the configuration.</p>	302092
<p>Previously, in the Active Roles Synchronization Service, if you configured a new mapping pair between Active Roles and a SCIM connector created in the Active Roles Synchronization Service Console that used the configuration of an Azure AD connector created in Starling Connect, running a full map caused the SCIM Connector to loop infinitely.</p> <p>The issue has been fixed and now mapping a SCIM connector which was created in Starling Connect with Active Roles does not cause the SCIM connector to loop infinitely.</p>	296338
<p>Previously, in the Active Roles Synchronization Service, you could save a connection with an incorrect username or password without any warning.</p> <p>The issue has been fixed and now if you try to save a connection with an incorrect username or password, Active Roles Synchronization Service will warn you to fix your settings.</p>	90712
<p>Previously, in the Active Roles Synchronization Service, when creating a new connection with the Oracle Database Connector, then creating another connection to Active Directory (AD) and configuring password synchronization, the Oracle Database Connector connection was listed as available for password synchronization.</p> <p>The issue has been fixed and now the Oracle Database Connector connection is not listed as available for password synchronization.</p>	301940
<p>Previously, in the Active Roles Synchronization Service, creating a new</p>	301941

## Resolved issue

## Issue ID

connection using the Oracle Database User Accounts Connector with any connection information or even blank values resulted in the following error: Value cannot be null. Parameter name: type.

This error was caused by a case sensitivity issue when loading the assembly, and is now fixed.

Previously, in the Active Roles Synchronization Service and Quick Connect, when synchronizing groups, both in case of Azure-to-Active Directory or Active Directory-to-Active Directory merge attempts, the merge rule on the members attribute ignored mapping and did not resolve object references. 270758

The issue has been fixed and now when synchronizing groups, the merge rule on the members attribute handles members as references and not as string attributes (either DN in case of an on-prem Active Directory object, or Object ID in case of an Azure Active Directory object), so the merge rule does not overwrite DNs or Object IDs.

An earlier fix in the Active Roles Synchronization Service included a different null result handling for scripts, causing issues. 286380

The issue has been fixed.

Previously, in the Active Roles Synchronization Service, defining a mapping rule on the Microsoft Office 365 (O365) Connector failed due to the incorrect handling of invalid, corrupted or unrecognizable license files located in the connected O365 platform. Such license files can be the result of a broken Azure operation originating from an earlier version. 294905

The issue has been fixed and now invalid, corrupted or unrecognizable license files are ignored during the O365 Connector mapping operations.

Attempting to define a mapping rule for the Microsoft Office 365 Connector results in an error if the Azure BackSync application does not have the minimum set of roles assigned. 296252

To solve this issue, the *Active Roles Synchronization Service Administration Guide* has been updated to clarify that the O365 Connector works only if the Azure BackSync application receives the minimum set of roles (namely, the Exchange Administrator and the Directory Writers roles) required for implementing automatic permission and role assignment in Active Roles Synchronization Service.

Previously, configuring a Microsoft Office 365 Connector workflow returned a True value for all license attributes instead of individual values, even if just one license has been applied. 297183

This issue was caused by a license synchronization problem due to the incorrect processing of certain cmdlet calls, and has been fixed by ensuring that the O365 Connector returns the proper True or False values depending on whether the related service plan is enabled or disabled for a user within a specific license.

**Table 9: Resolved Issues – Active Roles Web Interface**

<b>Resolved issue</b>	<b>Issue ID</b>
<p>Previously, in the Active Roles Web Interface, after registering an Azure Tenant in the Active Roles Configuration Center, searching for a room mailbox in the global search bar did not return any room mailbox objects.</p> <p>The issue has been fixed and now you can search for room mailbox objects in the global search bar of the Active Roles Web Interface.</p>	301535
<p>Previously, in the Active Roles Web Interface, after registering an Azure Tenant in the Active Roles Configuration Center, opening the <b>User properties</b> of any user took 4-5 seconds.</p> <p>The issue has been fixed and now opening the <b>User properties</b> takes the same amount of time both when the Azure Tenant is not registered and when it is registered.</p>	303259
<p>Previously, in the Active Roles Web Interface, you could only select users for email forwarding, while all other email-enabled objects, such as groups or contacts, were not available for email forwarding because searches only returned user objects.</p> <p>The issue has been fixed and now you can select any email-enabled object for email forwarding.</p>	299990
<p>Previously, in the Active Roles Web Interface, examining an approval task or approving group memberships without configuring Azure resulted in the following exception error:</p> <div data-bbox="212 1144 1273 1272" style="background-color: #f0f0f0; padding: 10px;"><pre>Can't execute custom entry method Get_Azure0365GroupMembers due following error: "Exception of type 'ActiveRoles.Web.ScriptServices.ScriptServiceException' was thrown."</pre></div> <p>This UI-related issue has been fixed.</p>	291961
<p>Previously, importing an Active Roles configuration with the <b>Administration Service &gt; Active Roles databases &gt; Import configuration</b> wizard of the Active Roles Configuration Center could result in an inconsistent Active Roles Web Interface configuration state if the Active Roles Web Interface had been previously configured with the <b>Dashboard &gt; Web Interface &gt; Configure</b> setting. This issue was caused by a discrepancy between the previously configured Active Roles Web Interface configuration and the imported Active Roles Web Interface configuration.</p> <p>The issue has been fixed and now importing an Active Roles Web Interface configuration will not result in a conflicted Active Roles Web Interface configuration state if the Active Roles Web Interface has already been configured in the Active Roles Configuration Center.</p>	275240
<p>Previously, there was a reflected cross-site scripting (XSS) vulnerability in the</p>	284021

## Resolved issue

## Issue ID

Active Roles Web Interface's internal redirect URL handling.

The issue has been fixed, the XSS vulnerability is now removed, and all querystring inputs are sanitized correctly.

# Known issues

The following is a list of issues known to exist at the time of release.

**Table 10: General known issues**

Known Issue	Issue ID
Activating the EnableAntiForgery key (<add key="EnableAntiForgery" value="true"/> in web.config) may cause the following error message:	91977

Session timeout due to inactivity. Please reload the page to continue.

### Workaround

Update the **IgnoreValidation** key in the <appSettings> section by adding a property value in lowercase:

1. Open the IIS Manager.
2. In the left pane, under **Connections**, expand the tree view to **Sites > Default Web Site**.
3. Under **Default Web Site**, click on the Active Roles application (ARWebAdmin by default).
4. Double-click **Configuration Editor**.
5. From the **Section** drop-down, select **appSettings**.
6. Find the **IgnoreForValidation** key.
7. Append the comma-separated value to **IgnoreForValidation**, for example: **lowercasecontrolname**.
8. In the right pane, under **Actions**, click **Apply**.
9. Recycle the App pool.

**Table 11: Known Issues – Active Roles Configuration Center**

<b>Known Issue</b>	<b>Issue ID</b>
When configured for Group and Contacts, the <b>Office 365 and Azure Tenant Selection</b> policy displays additional tabs.	229031
Tenant selection supports selecting only a single tenant.	229030
In the <b>Starling Connect Connection Settings</b> link, clicking <b>Next</b> displays progress, but the functionality is not affected, so the button is not required.	126892

**Table 12: Known Issues – Active Roles Console (MMC Interface)**

<b>Known Issue</b>	<b>Issue ID</b>
Automation workflow with Office 365 script fails, if multiple workflows share the same script and the script is scheduled to execute at the same time. <b>Workaround</b> One Identity recommends scheduling the workflows with different scripts or at a different time.	200328
When a workflow is copied from built-in workflows, it may not be executed as expected.	153539
Azure Group Properties are not available if they are added to the Office 365 Portal or Hybrid Exchange Properties from the forwarding address attribute of Exchange online users.	98186
In Active Roles with the <b>Office 365 Licenses Retention</b> policy applied, after deprovisioning the Azure AD user, the Deprovisioning Results for the <b>Office 365 Licenses Retention</b> policy are not displayed in the same window. <b>Workaround</b> To view the Deprovisioning Results after deprovisioning the Azure AD user: <ul style="list-style-type: none"> <li>• In Active Roles MMC Console, right-click and select <b>Deprovisioning Results</b>.</li> <li>• In the right pane of the Active Roles Web Interface, click <b>Deprovisioning Results</b>.</li> <li>• To refresh the form, press <b>F5</b>.</li> </ul>	91901

**Table 13: Known Issues – Active Roles Installer**

<b>Known Issue</b>	<b>Issue ID</b>
After upgrading Active Roles, the pending approval tasks are not displayed in the Active Roles Web Interface.	91933

**Table 14: Known Issues – Active Roles Synchronization Service**

Known Issue	Issue ID																										
In the Active Roles Synchronization Service, the following new attributes of the AzureAD Connector are currently not supported and cannot be queried via the Microsoft Graph API:	304074																										
<table border="1"> <thead> <tr> <th>user</th> <th>group</th> </tr> </thead> <tbody> <tr><td>aboutMe</td><td>allowExternalSenders</td></tr> <tr><td>birthday</td><td>autoSubscribeNewMembers</td></tr> <tr><td>hireDate</td><td>hideFromAddressLists</td></tr> <tr><td>interests</td><td>hideFromOutlookClients</td></tr> <tr><td>mySite</td><td>isSubscribedByMail</td></tr> <tr><td>officeLocation</td><td>unseenCount</td></tr> <tr><td>pastProjects</td><td>acceptedSenders</td></tr> <tr><td>preferredName</td><td>membersWithLicenseErrors</td></tr> <tr><td>responsibilities</td><td>rejectedSenders</td></tr> <tr><td>schools</td><td>hasMembersWithLicenseErrors</td></tr> <tr><td>skills</td><td></td></tr> <tr><td>contacts</td><td></td></tr> </tbody> </table>	user	group	aboutMe	allowExternalSenders	birthday	autoSubscribeNewMembers	hireDate	hideFromAddressLists	interests	hideFromOutlookClients	mySite	isSubscribedByMail	officeLocation	unseenCount	pastProjects	acceptedSenders	preferredName	membersWithLicenseErrors	responsibilities	rejectedSenders	schools	hasMembersWithLicenseErrors	skills		contacts		
user	group																										
aboutMe	allowExternalSenders																										
birthday	autoSubscribeNewMembers																										
hireDate	hideFromAddressLists																										
interests	hideFromOutlookClients																										
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officeLocation	unseenCount																										
pastProjects	acceptedSenders																										
preferredName	membersWithLicenseErrors																										
responsibilities	rejectedSenders																										
schools	hasMembersWithLicenseErrors																										
skills																											
contacts																											
This means that although these attributes are visible, they cannot be set in a mapping rule.																											
After running the <code>get-qcworkflowstatus</code> cmdlet in the Synchronization Service, the workflow status is not accurate.	125768																										

**Table 15: Known Issues – Active Roles Web Interface**

Known Issue	Issue ID
In the Active Roles Web Interface, Azure roles are not restored automatically after performing an <b>Undo Deprovision</b> action on a user.	172655
<b>Workaround</b> After the <b>Undo Deprovision</b> action is completed, assign the Azure roles to the user manually.	
Active Roles does not support creating Azure groups for existing groups.	117015

Known Issue	Issue ID
Active Roles Web Interface does not support setting the <b>Exchange Online Property</b> of the <b>ProhibitSendQuota</b> value in <b>Storage Quotas</b> .	91905
In the Active Roles Web Interface, when you click <b>Azure &gt; Resource Mailboxes</b> to query room mailboxes after being idle for approximately 15-20 minutes, the Active Roles Web Interface will not list any room mailboxes.	293380
<b>Workaround</b>	
Restart the Administration Service.	
Trying to reset the password of an Azure user in the Active Roles Web Interface returns the following error message:	293601
<pre>One or more errors occurred. Http Exception - Status Code Forbidden. Reason phrase Forbidden {"error":{"code":Authorization_RequestDenied,"message":"Insufficient privileges to complete the operation"}}</pre>	
This error occurs because of a Microsoft Graph API-related issue, described in the <a href="#">Authorization_RequestDenied error when you try to change a password using Graph API</a> article of the <i>Microsoft Azure Troubleshooting</i> documentation.	
<b>Workaround</b>	
To solve this problem, assign the <b>Company Administrator</b> Office 365 administrative role to Active Roles with the following PowerShell cmdlets:	
<pre>Connect-MsolService \$displayName = "ActiveRoles" \$objectId = (Get-MsolServicePrincipal -SearchString \$displayName).ObjectId \$roleName = "Company Administrator" Add-MsolRoleMember -RoleName \$roleName -RoleMemberType ServicePrincipal -RoleMemberObjectId \$objectId</pre>	

## System requirements

Before installing Active Roles 7.5.3, ensure that your system meets the following minimum hardware and software requirements.

**NOTE:** When setting up a virtual environment, carefully consider the configuration aspects such as CPU, memory availability, I/O subsystem, and network infrastructure to ensure the virtual layer has the necessary resources available. Please consult [One Identity's Product Support Policies](#) for more information on environment virtualization.

Before installing Active Roles 7.5.3, ensure that your system meets the following minimum hardware and software requirements, and install the following required software:

**NOTE:** To run these PowerShell commands, use the 64-bit version of Windows PowerShell.

Requirement	Details
Exchange Online PowerShell V2 module 2.0.3	The Exchange Online PowerShell V2 module version 2.0.3 (or newer) must be installed on the computer(s) running the Administration Service. For installation instructions, see <a href="#">Install and maintain the EXO V2 module</a> in the <i>Microsoft Azure Exchange PowerShell documentation</i> .
Azure AD PowerShell module	The latest version of the Azure Active Directory (AD) PowerShell module must be installed on the computer(s) running the Administration Service. For installation instructions, see <a href="#">Installing the Azure AD Module</a> in the <i>Microsoft Azure PowerShell documentation</i> .
Azure Az PowerShell module 2.5.3	The Azure Az PowerShell module version 2.5.3 (or older) must be installed on the computer(s) running the Administration Service and the Synchronization Service. For installation instructions, see <a href="#">Install the Azure Az PowerShell module</a> in the <i>Microsoft Azure PowerShell documentation</i> .
Microsoft Teams PowerShell module 2.3.1	The Microsoft Teams PowerShell version 2.3.1 must be installed on the computer running the Administration Service. For installation instructions, see <a href="#">Install Microsoft Teams PowerShell</a> in the <i>Microsoft Teams documentation</i> .
SharePoint Online Management Shell - x64	The <a href="#">SharePoint Online Management Shell</a> must be installed on the computer running the Administration Service. For installation instructions, see <a href="#">Get started with SharePoint Online Management Shell</a> in the <i>Microsoft SharePoint PowerShell documentation</i> .

For the system requirements of each Active Roles component, see the following sections:

- [Administration Service requirements](#)
- [Web Interface requirements](#)
- [Console requirements](#)
- [Management Tools requirements](#)
- [Synchronization Service requirements](#)
  - [Synchronization Service Capture Agent](#)

This section lists the hardware and software requirements for installing and running each of these components.

# Hardware requirements

**Table 16: Hardware requirements**

Requirement	Details
Processor	<p>For Administration Service, Web Interface, and Synchronization Service, any of the following:</p> <ul style="list-style-type: none"><li>• Intel 64 (EM64T)</li><li>• AMD64</li><li>• Minimum 2 processors</li><li>• Processor speed: 2.0 GHz or faster.</li></ul> <p><b>NOTE:</b> For Synchronization Service, One Identity recommends using a multi-core processor for the best performance.</p> <p>For Console and Management Tools, any of the following:</p> <ul style="list-style-type: none"><li>• Intel x86</li><li>• Intel 64 (EM64T)</li><li>• AMD64</li><li>• Processor speed: 1.0 GHz or faster.</li></ul>
Memory	<p>Administration Service: A minimum of 4 GB of RAM.</p> <p>Web Interface, Synchronization Service: A minimum of 2 GB of RAM.</p> <p>Console, Management Tools: A minimum of 1 GB of RAM.</p>
Hard disk space	<p>Administration Service, Web Interface, Console, Management Tools: A minimum of 100 MB of free disk space.</p> <p>Synchronization Service: A minimum of 250 MB of free disk space.</p> <p><b>NOTE:</b> If SQL Server and Synchronization Service are installed on the same computer, the amount required depends on the size of the Synchronization Service database.</p>

Requirement	Details
Operating system	<p>You can install any of the Active Roles components on a computer running:</p> <ul style="list-style-type: none"> <li>• Microsoft Windows Server 2022, Standard or Datacenter edition.</li> <li>• Microsoft Windows Server 2019, Standard or Datacenter edition.</li> <li>• Microsoft Windows Server 2016, Standard or Datacenter edition.</li> </ul> <p>In addition, you can install Console and Management Tools on a computer running:</p> <ul style="list-style-type: none"> <li>• Microsoft Windows 10, Professional or Enterprise edition, 32-bit (x86) or 64-bit (x64).</li> <li>• Microsoft Windows 8.1, Professional or Enterprise edition, 32-bit (x86) or 64-bit (x64).</li> </ul>

**NOTE:** Active Roles is not supported on Windows Server Core mode setup.

## Administration Service requirements

This section lists the system requirements of the Active Roles Administration Service.

All Active Roles components require:

- Microsoft .NET Framework 4.7.2. For more information, see [Installing .NET Framework for developers](#) in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

**Table 17: Administration Service requirements**

Requirement	Details
SQL Server	<p>You can host the Active Roles database on:</p> <ul style="list-style-type: none"> <li>• Microsoft SQL Server 2019, any edition.</li> <li>• Microsoft SQL Server 2017, any edition.</li> <li>• Microsoft SQL Server 2016, any edition.</li> <li>• Microsoft SQL Server 2014, any edition, 32-bit (x86) or 64-bit (x64), with or without any Service Pack.</li> <li>• Microsoft SQL Server 2012, any edition, 32-bit (x86) or 64-bit (x64), with or without any Service Pack.</li> </ul>

## Requirement Details

	<ul style="list-style-type: none"><li>• Microsoft OLE DB Driver for SQL Server (MSOLEDBSQL).</li></ul> <p>Active Roles also supports Azure SQL hosted database.</p>
Windows Management Framework	On all supported operating systems, the Active Roles Administration Service requires Windows Management Framework 5.1 (available for download <a href="#">here</a> ).
Operating system on domain controllers	<p>Active Roles retains all features and functions when managing Active Directory on domain controllers running any of these operating systems, any edition, with or without any Service Pack:</p> <ul style="list-style-type: none"><li>• Microsoft Windows Server 2022</li><li>• Microsoft Windows Server 2019</li><li>• Microsoft Windows Server 2016</li></ul> <p>Active Roles deprecates managed domains with the domain functional level lower than Windows Server 2008 R2. One Identity recommends that you raise the functional level of the domains managed by Active Roles to Windows Server 2008 R2 or higher.</p>
Exchange Server	<p>Active Roles is capable of managing Exchange recipients on:</p> <ul style="list-style-type: none"><li>• Microsoft Exchange Server 2019</li><li>• Microsoft Exchange Server 2016</li><li>• Microsoft Exchange Server 2013</li></ul> <p><b>NOTE:</b> Microsoft Exchange 2013 CU11 is no longer supported. For more information, see <a href="#">Knowledge Base Article 202695</a>.</p>

## Web Interface requirements

This section lists the system requirements of the Active Roles Web Interface.

All Active Roles components require:

- Microsoft .NET Framework 4.7.2. For more information, see [Installing .NET Framework for developers](#) in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

**Table 18: Web Interface requirements**

Requirement	Details
Internet Services	On Windows Server 2016, Windows Server 2019, and Windows Server 2022, the Active Roles Web Interface requires the Web Server (IIS) server role with the following role services:

## Requirement Details

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- Web Server/Common HTTP Features/
  - Default Document
  - HTTP Errors
  - Static Content
  - HTTP Redirection
- Web Server/Security/
  - Request Filtering
  - Basic Authentication
  - Windows Authentication
- Web Server/Application Development/
  - .NET Extensibility
  - ASP
  - ASP.NET
  - ISAPI Extensions
  - ISAPI Filters
- Management Tools/IIS 6 Management Compatibility/
  - IIS 6 Metabase Compatibility

Internet Information Services (IIS) must be configured to provide **Read/Write** delegation for the following features:

- Handler Mappings
- Modules
- Use **Feature Delegation** in Internet Information Services (IIS) Manager to confirm that these features have their delegation set to **Read/Write**.

---

Web browser	<p>You can access Active Roles Web Interface using:</p> <ul style="list-style-type: none"><li>• Mozilla Firefox 36 (or newer) on Windows.</li><li>• Google Chrome 61 (or newer) on Windows.</li><li>• Microsoft Edge 79 (or newer), based on Chromium on Windows 10.</li></ul> <p>You can use a later version of Firefox and Google Chrome to access the Active Roles Web Interface. However, the Active Roles Web Interface was tested only with the browser versions listed above.</p>
Minimum screen resolution	<p>The Active Roles Web Interface is optimized for screen resolutions of 1280x800 or higher.</p> <p>The minimum supported screen resolution is 1024x768.</p>

# Console requirements

This section lists the system requirements of the Active Roles Console (MMC Interface).

All Active Roles components require:

- Microsoft .NET Framework 4.7.2. For more information, see [Installing .NET Framework for developers](#) in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

**Table 19: Console (MMC Interface) requirements**

Requirement	Details
Web browser	The Active Roles Console requires Microsoft Edge 79 (or newer), based on Chromium.

# Management Tools requirements

The Active Roles Management Tools is a composite component that includes the Active Roles Management Shell, ADSI Provider, and SDK. On a 64-bit (x64) system, the Active Roles Management Tools also include the Active Roles Configuration Center.

This section lists the system requirements of the Active Roles Management Tools.

All Active Roles components require:

- Microsoft .NET Framework 4.7.2. For more information, see [Installing .NET Framework for developers](#) in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

**Table 20: Management Tools requirements**

Requirement	Details
Windows Management Framework	On all supported operating systems, the Active Roles Management Tools require Windows Management Framework 5.1 (available for download <a href="#">here</a> ).
Remote Server Administration Tools (RSAT)	To manage Terminal Services user properties by using the Active Roles Management Shell, Management Tools require Remote Server Administration Tools (RSAT) for Active Directory. For more information on installing the RSAT version applicable to your operating system, see <a href="#">Remote Server Administration Tools (RSAT) for Windows</a> in the <i>Microsoft Documentation</i> .

# Synchronization Service requirements

This section lists the system requirements of the Active Roles Synchronization Service.

All Active Roles components require:

- Microsoft .NET Framework 4.7.2. For more information, see [Installing .NET Framework for developers](#) in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

**Table 21: Synchronization Service requirements**

Requirement	Details
SQL Server	<p>You can host the Active Roles Synchronization Service database on:</p> <ul style="list-style-type: none"><li>• Microsoft SQL Server 2019, any edition.</li><li>• Microsoft SQL Server 2017, any edition.</li><li>• Microsoft SQL Server 2016, any edition.</li><li>• Microsoft SQL Server 2014, any edition, 32-bit (x86) or 64-bit (x64), with or without any Service Pack.</li><li>• Microsoft SQL Server 2012, any edition, 32-bit (x86) or 64-bit (x64), with or without any Service Pack.</li></ul> <p><b>NOTE:</b> The Active Roles Synchronization Service does not support Azure SQL hosted database.</p>
Windows Management Framework	<p>On all supported operating systems, the Active Roles Synchronization Service requires Windows Management Framework 5.1 (available for download <a href="#">here</a>).</p>
Supported connections	<p>The Active Roles Synchronization Service can connect to:</p> <ul style="list-style-type: none"><li>• Microsoft Active Directory Domain Services with the domain or forest functional level of Windows Server 2016 or higher.</li><li>• Microsoft Active Directory Lightweight Directory Services running on any Windows Server operating system supported by Microsoft.</li><li>• Microsoft Exchange Server version 2019, 2016, or 2013.</li></ul> <p><b>NOTE:</b> Microsoft Exchange 2013 CU11 is no longer supported. For more information, see <a href="#">Knowledge Base Article 202695</a>.</p> <ul style="list-style-type: none"><li>• Microsoft Lync Server version 2013 with limited support.</li><li>• Microsoft Skype for Business 2019, 2016 or 2015.</li><li>• Microsoft Windows Azure Active Directory using Microsoft Graph API version 1.0.</li><li>• Microsoft Office 365 directory.</li><li>• Microsoft Exchange Online service.</li></ul>

## Requirement Details

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- Microsoft Skype for Business Online service.
- Microsoft SharePoint Online service.
- Microsoft SQL Server, any version supported by Microsoft.
- Microsoft SharePoint 2019, 2016, or 2013.
- Active Roles version 7.4.3, 7.4.1, 7.3, 7.2, 7.1, 7.0, and 6.9
- One Identity Manager version 7.0 (D1IM 7.0)
- One Identity Manager version 8.0
- Support for Generic LDAP Connector, MySQL Connector, Open LDAP Connector, IBM Db2 Connector, Salesforce Connector, Service now Connector, and IBM RACF Connector.
- Support for Oracle Database, Oracle Database User Accounts, Oracle Unified Directory, Micro Focus NetIQ Directory, and IBM AS/400 connectors.
- Data sources accessible through an OLE DB provider
- Delimited text files

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Legacy Active Roles ADSI Provider	To connect to Active Roles version 6.9, see the Active Roles ADSI Provider of <i>Quick Start Guide</i> for the appropriate Active Roles version.
One Identity Manager API	To connect to One Identity Manager 7.0, One Identity Manager Connector must be installed on the computer running the Active Roles Synchronization Service. This connector works with RESTful web service and SDK installation is not required.
Internet Connection	To connect to cloud directories or online services, the computer running the Active Roles Synchronization Service must have a reliable connection to the Internet.

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## Synchronization Service Capture Agent

This section lists the system requirements of the Active Roles Synchronization Service Capture Agent.

All Active Roles components require:

- Microsoft .NET Framework 4.7.2. For more information, see [Installing .NET Framework for developers](#) in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

**Table 22: Synchronization Service Capture Agent requirements**

Requirement	Details
Additional Requirements	<p>To synchronize passwords from an Active Directory domain to some other connected data system, you must install the Active Roles Synchronization Service Capture Agent on all domain controllers in the source Active Directory domain.</p> <p>The domain controllers on which you install the Active Roles Synchronization Service Capture Agent must run one of the following operating systems with or without any Service Pack (both x86 and x64 platforms are supported):</p> <ul style="list-style-type: none"><li>• Microsoft Windows Server 2022</li><li>• Microsoft Windows Server 2019</li><li>• Microsoft Windows Server 2016</li></ul> <p>For more information, see the <i>Active Roles Synchronization Service Administration Guide</i>.</p>

## Product licensing

Use of this software is governed by the Software Transaction Agreement found at [www.oneidentity.com/legal/sta.aspx](http://www.oneidentity.com/legal/sta.aspx). This software does not require an activation or license key to operate.

The product usage statistics can be used as a guide to show the scope and number of managed objects in Active Roles.

## Upgrade and compatibility

**CAUTION:** You must run the Active Roles Setup in Administrator Mode. Failing to do so will result in Active Roles not starting up at all.

You can upgrade any 7.x version of Active Roles to Active Roles 7.5.3.

For instructions on how to upgrade from an earlier version of Active Roles, see the *Active Roles Quick Start Guide*.

**NOTE:** Consider the following before upgrading to a new version of Active Roles:

- Components of an earlier Active Roles version may not work with the components of the new version you are upgrading to.
- Custom solutions (scripts or other modifications) that rely on Active Roles features may fail to work after an upgrade due to compatibility issues. Therefore, before

starting the upgrade, test your existing solutions with the new version of Active Roles in a lab environment to verify that your custom solutions will continue to work.

**TIP:** When upgrading to a new Active Roles version, One Identity recommends to upgrade the Active Roles Administration Service first, and the client components (Active Roles Console and Active Roles Web Interface) afterwards.

## Upgrade and installation instructions

For instructions on how to upgrade from an earlier version of Active Roles or how to install and initially configure Active Roles, see the *Active Roles Quick Start Guide*.

For special considerations regarding the installation of Active Roles 7.5.3, see the following information.

### Changes related to Azure tenants

**NOTE:** If your organization has any Azure tenants that are managed with Active Roles, you need to reauthenticate and reauthorize them after installing Active Roles 7.5.3. Otherwise, Active Roles will not receive the required permissions for managing existing Azure tenants, and tenant administration in Active Roles 7.5.3 will not work correctly. For more information, see *Reconfiguring Azure tenants during upgrade configuration* in the *Active Roles Quick Start Guide*.

### Changes related to Active Roles Synchronization Service

**NOTE:** Active Roles 7.5 introduced support for Modern Authentication in Azure BackSync workflows of the Active Roles Synchronization Service. After upgrading to Active Roles 7.5 or 7.5.3 from an earlier version, if you previously had an Azure BackSync workflow configured, you will be prompted to reconfigure it in the Active Roles Synchronization Service Console.

**⚠ CAUTION:** If you previously had an Azure BackSync workflow configured in Active Roles Synchronization Service, and you use more than one Azure Active Directory (Azure AD) service in your deployment, you must specify the Azure AD for which you want to configure Azure BackSync. Failure to do so may either result in directory objects not synchronized at all, or synchronized to unintended locations.

For more information on how to specify the Azure AD used for back-synchronization, see *Configuring automatic Azure BackSync* in the *Active Roles Synchronization Service Administration Guide*.

## More resources

Additional information is available from the following resources:

- Online product documentation (<https://support.oneidentity.com/active-roles/>)
- Active Roles community (<https://www.oneidentity.com/community/active-roles>)

## Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release is Unicode-enabled and supports any character set. It supports simultaneous operation with multilingual data. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, Japan.

# About us

One Identity solutions eliminate the complexities and time-consuming processes often required to govern identities, manage privileged accounts and control access. Our solutions enhance business agility while addressing your IAM challenges with on-premises, cloud and hybrid environments.

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# Technical support resources

Technical support is available to One Identity customers with a valid maintenance contract and customers who have trial versions. You can access the Support Portal at <https://support.oneidentity.com/>.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

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- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to videos at [www.YouTube.com/OneIdentity](http://www.YouTube.com/OneIdentity)
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This product contains some third-party components (listed below). Copies of their licenses may be found at referencing <https://www.oneidentity.com/legal/license-agreements.aspx>. Source code for components marked with an asterisk (\*) is available at <http://opensource.quest.com>.

**Table 23: List of Third-Party Contributions**

<b>Component</b>	<b>License or Acknowledgment</b>
Active Directory Authentication Library 3.13.1	Copyright (c) Microsoft Corporation. All rights reserved. Licensed under the MIT License (the "License");  Open Source Initiative OSI - The MIT License (MIT) 2012
ASP.NET Ajax 4.0	Microsoft Permissive License (Ms-PL) N/A
Bootstrap 3.2	MIT N/A
jquery 3.4.1	Copyright JS Foundation and other contributors, <a href="https://js.foundation/">https://js.foundation/</a>  The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.  MIT N/A
JQuery UI 1.12.1	Copyright 2007, 2014 jQuery Foundation and other contributors, <a href="https://jquery.org/">https://jquery.org/</a>  MIT N/A
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Microsoft Exchange Web Services (EWS) Managed API 2.2	Microsoft Exchange Web Services Managed API 2.2
Microsoft Unity 3.5	Apache 2.0
Microsoft.aspNet.SignalR.Core 2.3.0	MICROSOFT .NET LIBRARY 1.0
Microsoft.IdentityModel.Clients.ActiveDirectory 3.19.8	Copyright (c) Microsoft Corporation MIT N/A
Microsoft.IdentityModel.Logging 5.2.2	Copyright (c) Microsoft Corporation. All rights reserved.  MIT N/A
Newtonsoft.Json 12.0.3	Copyright 2007 James Newton-King Copyright (c) James Newton-King 2008 Copyright (c) James Newton-King 2008 MIT Template 2020
NLog 3.1	Copyright (c) 2004-2011 Jaroslaw

Component	License or Acknowledgment
WCF Data Services 5.8.4	<p>Kowalski jaak@jkowalski.net</p> <p>Redistributions of source code must retain the above copyright notice.</p> <p>Redistributions in binary form must reproduce the above copyright notice.</p> <p>BSD - Kowalski 2011</p> <p>Copyright (c) 2018 Microsoft. All rights reserved.</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>MICROSOFT WCF DATA SERVICES N/A</p>

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