

Active Roles 8.0.1

Release Notes

19 May 2023, 15:45

These release notes provide information about the Active Roles 8.0.1 LTS release. For the most recent documents and product information, see Active Roles Technical Documents on the *One Identity support portal*.

About this release

Active Roles 8.0.1 LTS is a patch release with no new functionality.

This release fixes a potential breaking change due to the deprecation of the Remote PowerShell (RPS) protocol in Exchange Online PowerShell, effective from June 2023.

- For more information on this breaking change and its related enhancements, see Enhancements.
- For more information on other resolved issues fixed in this release, see Resolved issues.
- For more information on the list of known issues, see Known issues.

Enhancements

The following is a list of enhancements implemented in Active Roles 8.0.1 LTS.

Table 1: General enhancements

Enhancement	Issue
	ID

In preparation for the deprecation of the Remote PowerShell (RPS) protocol in 402974 Exchange Online PowerShell, Active Roles 8.0.1 LTS is updated to:

- Use Exchange Online PowerShell v3 instead of earlier versions.
- Use cmdlet Connect-ExchangeOnline instead of the deprecated cmdlet New-PSSession when establishing Exchange Online connections.

For more information, see Announcing Deprecation of Remote PowerShell (RPS) Protocol in Exchange Online PowerShell in the Microsoft Tech Community portal.

NOTE: You can continue using cmdlet New-PSSession to connect to onpremises Exchange Server deployments.

Table 2: Synchronization Service enhancements

Enhancement	Issue ID
Updated the Generic SCIM Connector with the following enhancements:	404915

 Added support for the following Starling Connect connectors and connector versions:

- Pipedrive 1.0
- ServiceNow 2.0
- SuccessFactors HR 9.0
- WorkdayHR 3.0
- Zendesk 1.0

NOTE: While the **Generic SCIM Connector** may work with other SCIM 2.0-based Starling Connect connectors, One Identity tested it to work only with these connectors and connector versions.

- Added new Query only synced attributes setting to support guerying only attributes that are specifically defined for synchronization.
- Added new Starling cursor-based pagination setting to support Starling Connect connectors using cursor-based pagination instead of the SCIM protocol-defined index-based pagination method.

For more information, see Configuring data synchronization with the Generic SCIM Connector in the Active Roles Synchronization Service Administration Guide.

In preparation for the deprecation of the Remote PowerShell (RPS) protocol in 403476 Exchange Online PowerShell, Active Roles Synchronization Service is updated with the following enhancements:



Enhancement Issue ID

• Increased the minimum required version of Exchange Online PowerShell to v3.0.0.

- Replaced New-PSSession cmdlet calls with Connect-ExchangeOnline cmdlet calls.
- Updated the Microsoft 365 Connector (formerly known as Office 365 Connector) and the Microsoft Azure AD Connector to support certificate-based authentication and automatic configuration.

For more information on configuring the updated connectors, see *Working with Microsoft 365* and *Working with Microsoft Azure Active Directory* in the *Active Roles Synchronization Service Administration Guide*.

The Synchronization Service Capture Agent now supports Local Security Authority (LSA). For more information, see Configuring Additional LSA Protection in the *Microsoft Windows Server documentation*.

125828

Table 3: Web Interface enhancements

Enhancement	Issue ID
The Active Roles Web Interface was updated to support quick searches for AD LDS and Azure AD objects. These settings are enabled by default: disabling them will result in AD LDS and Azure AD objects not appearing in quick search results.	412502

Resolved issues

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

Table 4: Active Roles Service resolved issues

Resolved Issue	Issue ID
Previously, scheduled Active Roles operations could fail with the following error if the Active Directory domain controller (DC) assigned to perform the scheduled operation was unavailable:	407373
The server is not operational.	

This issue occurred because Active Roles did not fall back to another working DC in the Disaster Recovery Plan (DRP) process in such cases, and is now fixed.



Table 5: Configuration Transfer Wizard resolved issues

Resolved Issue	Issue ID
Previously, the Active Roles Configuration Transfer Wizard could not be installed, even if the required Active Roles ADSI Provider was installed.	389286
This issue was caused by a version checking problem, and is now fixed.	
Table 6: Console (MMC Interface) resolved issues	
Resolved Issue	Issue ID
Previously, when applying both an Access Template (AT) using a Full Control permission and another granular AT denying access to certain password-related attributes (such as PasswordNeverExpires, UserCannotChangePassword, UserMustChangePasswordAtNextLogon) to a user, the deny AT did not take effect for the user.	410412
This issue was caused by the AT specifying an explicit deny not taking precedence over the AT using the Full Control permission.	
The issue was fixed by ensuring that explicit deny ATs always take precedence over inherited allow permissions.	
Previously, in certain environments, Active Roles might not update Dynamic Groups in time when adding a new rule or forcing a rebuild. Also, in case of more than 1,000 changes, the changes were not processed until the nightly scheduled task.	405859
To solve this problem, Active Roles features a rebuilt Dynamic Group logic that removes the 1,000 group member limit for normal group membership changes, and also ensures that changes are now always processed immediately.	
Previously, when configuring the mail configuration in Configuration > Server Configuration > Mail Configuration > Default Mail Settings Properties to use Exchange Web Services with Exchange Online and send approval responses by email, response emails sent by approvers could stuck indefinitely without being processed by Active Roles. This problem did not affect approval workflows using on-premises Exchange Server mailboxes.	404659
The issue was caused by approval notifications not supporting Exchange Web Service modern authentication, and is now fixed.	
Previously, when configuring the mail configuration in Configuration > Server Configuration > Mail Configuration > Default Mail Settings Properties to use Exchange Web Services with Exchange Online and send approval responses by email, the mailto: links of approval workflow notification emails always contained the service account address even if an impersonated account was configured in the mail configuration settings.	404217

The issue was caused by approval notifications not supporting Exchange Web



Resolved Issue	Issue ID
Service modern authentication, so Active Roles could not collect emails from the impersonated account. Instead, it was falling back to the service account address.	
This issue is now fixed, so when you configure an impersonated account address, that email address will appear properly in the approval workflow email messages.	
Previously, the change history for operation types Deprovision , Undo Deprovision and Run Scheduled Workflow remained indefinitely in the management history database despite running the Change Tracking Cleanup scheduled task.	399889
The issue is now fixed and old management history records are deleted as expected.	
Previously, users received an Access denied error in the Web Interface when attempting to create a new cloud-only user if any of the following Access Templates (ATs) were assigned to them in the Active Roles Console:	392939
Azure Cloud User - Full Control	
 Azure Cloud User - Create Objects 	
 Any custom AT based on the settings of Azure Distribution Group - Create Objects 	
 Any custom AT in which you assigned the Full Control permission on the Azure users container. 	
This issue is now fixed, and assigning these ATs to users now delegate the proper administration permissions.	
Previously, when adding members to a room mailbox with the Properties > Resource Information > Resource in-policy requests > Selected recipients setting, deleting an added user either via Active Roles or native Active Directory tools resulted in Active Roles failing to load the list of added users.	390095
This issue occurred because Active Roles Console could not load the list of assigned users due to the null value of deleted users, and was fixed by filtering out deleted users from the list.	
Previously, undoing the deprovision of a user object that was originally licensed via group-based licensing would result in the previous license reassigned to the object directly instead of inheriting it from the group.	388433
The issue is fixed and now if a user has a license inherited from a group, after deprovisioning and undo-deprovisioning it, the license will be inherited from the group again instead of being reassigned directly.	



Table 7: Management Tools resolved issues

Resolved Issue	Issue ID
Previously, the Active Roles Management Pack for SCOM showed an incorrect version number.	405577
This issue is now fixed.	

Table 8: Installer resolved issues

Resolved Issue	Issue ID
Previously, attempting to install Microsoft OLE DB Driver for SQL Server via the Active Roles installer required users to manually install the prerequisite Microsoft Visual C++ Redistributable for Visual Studio packages, as they were not included in the Active Roles installation package.	411389
This issue was fixed by including the packages in the installer.	
Previously, in the Introduction page of the installer, the Release Notes URL was incorrect and did not work.	388317
This issue is now fixed.	

Table 9: Synchronization Service resolved issues

This issue was fixed by updating the WorkdayHR schema.

Resolved Issue	Issue ID
Previously, when running the Azure BackSync with the Azure AD Connector for several thousand users, Synchronization Service did not indicate the number of processed user objects until all user objects were processed. Because of this, it could appear that nothing happened until the on-screen counter jumped to the total number of processed objects.	401938
The issue is fixed, and now the counter of processed objects in the Azure AD Connector increases gradually, as expected.	
Previously, the Synchronization Service Capture Agent recorded and processed password change events for computer accounts.	307297
This behavior was changed so that the Capture Agent no longer logs and forwards password change events for computer accounts to the Synchronization Service.	
Previously, the SCIM Connector did not support synchronizing data from WorkdayHR via Starling Connect.	294258



Table 10: Web Interface resolved issues

Resolved Issue	Issue ID
Previously, when setting a custom global color scheme in Customization > Global settings > Color scheme , the customized Web Interface scheme could appear incorrectly in the user interface, with the sidebar colors, various selected elements and certain panes not following the base color of the scheme.	407336
This issue was fixed by adjusting the management of customized Web Interface themes.	
Previously, customizing the Web Interface could negatively impact the functionality and performance of object search queries. Following customization, queries in the Web Interface could return too many objects, and query searches could slow down due to performing complex internal filtering before displaying query results in the Web Interface.	395064
This issue is now fixed, so customized Web Interface instances now work without any such problems.	
Previously, searching for Azure objects took approximately 15-20 seconds.	389314
The issue has been resolved by modifying Microsoft Graph API pagination to reduce network traffic. As a result, searching for Azure objects is now significantly faster.	
Previously, when selecting an AD LDS user, the Web Interface returned an Unable to load contents error instead of listing the available user management actions.	386102
This issue is now fixed, and the list of actions is now populated correctly.	
Previously, using a personal view to open an Organizational Unit (OU) whose name contained special characters resulted in a Directory object not found error.	322727
This issue was caused by Active Roles removing these special characters from the OU name when saving the configured personal view, and it is now fixed.	
Previously, when using the Customization > Directory Objects > Customize Navigation Bar > General option of the Web Interface to open the Item Properties of the Reload button or the Restore Default button, clicking OK to close the dialog without any changes and reloading the configuration resulted in the changed Reload or Restore Default button no longer working.	322689
This issue occurred because Active Roles was unable to get the target URL of these buttons, resulting in the Item Properties > URL to open field appearing empty in the Web Interface. If this field was left empty, clicking OK in the dialog to save the button settings broke the button.	

To fix the issue, the Web Interface now sends a pop-up alert to inform users



Resolved Issue	Issue ID
that the URL to open field cannot be left empty.	
Previously, when copying a shared, equipment or room mailbox in the Web Interface, the copied mailbox did not inherit the original mailbox type, and was created as a standard User Mailbox instead. In other words, the value of its msExchRecipientDisplayType attribute was always set to 1073741824 instead of inheriting the original value.	307164
This issue was caused by a Web Interface infrastructure problem, and was fixed by implementing a switch case to determine the type of mailbox and add the proper attribute during the copy process.	
Previously, if a user was assigned to a group with a temporary membership, attempting to assign the same group membership again to the user via the	289342

Active Roles Console, which returned an error message in this scenario.

To ensure that the Web Interface works the same as the Active Roles Console, the Web Interface was updated to filter out already added elements, and return the following message when attempting to assign the user again to the

Member of > **Add** command resulted in Active Roles overwriting the temporary group membership of the user. This behavior differed from the

The object 'groupName' is already in the list and cannot be added for the second time.

Known issues

same group:

The following is a list of issues, including those attributed to third-party products, known to exist at the time of release.

Table 11: General known issues

Known Issue	Issue ID
Activating the EnableAntiForgery key (<add key="EnableAntiForgery" value="true"></add> 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 **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 12: Configuration Center known issues

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

Table 13: Console (MMC Interface) known issues

Known Issue	Issue ID
Automation workflows with the Microsoft 365 script fail, if multiple workflows share the same script and the script is scheduled to execute at the same time.	200328
Workaround	
One Identity recommends scheduling the workflows with different scripts or at a different time.	
When a workflow is copied from a built-in workflow, it may not run as expected.	153539
Azure Group Properties are not available if they are added to the Microsoft 365 Portal or Hybrid Exchange Properties from the forwarding address attribute of	98186



Exchange online users.

Known Issue	Issue ID
In Active Roles with the Office 365 Licenses Retention policy applied, after deprovisioning the Azure AD user, the Deprovisioning Results for the Office	91901
365 Licenses Retention policy are not displayed in the same window.	

Workaround

To view the deprovisioning results of an Azure AD user:

- In the Active Roles Console, right-click and select **Deprovisioning** Results.
- In the right pane of the Active Roles Web Interface, click **Deprovisioning Results**.
- To refresh the form, press **F5**.

Table 14: Installer known issues

Issue ID
91933

Table 15: Language Pack known issues

Known Issue	Issue ID
In the Active Roles Configuration Center, changing the language in Global settings does not work properly.	125880
Workaround	
To change the language of the Web Interface, configure the language with the Active Roles 8.0.1 LTS > Settings > User interface language option of the Web Interface.	
In the Active Roles Console, the O365 script execution configuration activity of the Workflow Designer is not completely localized to German.	151392
In the Active Roles Console, the German localization may contain visual issues and truncated texts.	91946
In the Active Roles Console, some strings are displayed in English instead of German in the German localization.	91942
In the Active Roles Synchronization Service, the Event Viewer messages are not translated to German.	91753
In the Active Roles Synchronization Service, the German localization does not have all connector strings translated.	91709



Known Issue	Issue ID
In the Active Roles Web Interface, some Azure-related strings are translated incorrectly for the supported languages. Translated texts may also contain link inconsistencies.	257995
In Active Roles, several German localization issues are present.	164713
In Active Roles, strings on the notification page are not localized.	153695
In the Language Pack installer, the link of the online EULA agreement in the EULA text does not work.	91925

Table 16: Synchronization Service known issues

Known Issue	Issue ID
The Microsoft 365 Connector (formerly known as Microsoft Office 365 Connector) can only synchronize up to 1,000 mail users.	405966
Azure BackSync can only synchronize up to 1,000 contacts.	387685
In the Active Roles Synchronization Service, the following attributes of the Microsoft Azure AD Connector are currently not supported and cannot be queried via the Microsoft Graph API:	304074

- **user** attributes:
 - aboutMe
 - birthday
 - contacts
 - hireDate
 - interests
 - mySite
 - officeLocation
 - pastProjects
 - preferredName
 - responsibilites
 - schools
 - skills
- group attributes:
 - acceptedSenders
 - allowExternalSenders
 - autoSubscribeNewMembers



Known Issue	Issue ID
• hasMembersWithLicenseErrors	
• hideFromAddressLists	
 hideFromOutlookClients 	
• isSubscribedByMail	
 membersWithLicenseErrors 	
• rejectedSenders	
• unseenCount	
This means that although these attributes are visible, they cannot be set in a mapping rule.	
After running the get-qcworkflowstatus cmdlet in the Synchronization Service, the workflow status is not accurate.	125768
Table 17: Web Interface known issues	
Known Issue	Issue ID
If you click Azure > Resource Mailboxes to query room mailboxes after being idle for approximately 15-20 minutes, the Active Roles Web Interface will not list any room mailboxes.	293380
Workaround	
Restart the Administration Service.	
In the Active Roles Web Interface, Azure roles are not restored automatically after performing an Undo Deprovision action on a user.	172655
Workaround	
After the Undo Deprovision action is completed, assign the Azure roles to the user manually.	
Active Roles does not support creating Azure groups for existing groups.	117015
Active Roles Web Interface does not support setting the Exchange Online Property of the ProhibitSendQuota value in Storage Quotas .	91905
Table 18: Known Issues – Active Roles Add-on Manager	
Known Issue	Issue

Known Issue	Issue ID
After installing an add-on that creates Web Interface customization items, the Web Interface may not display the customization items created by the add-	179835
on.	



Workaround

In the Web Interface, click Reload.

After installing an add-on that creates a virtual attribute, the virtual attribute may not appear in the **Advanced Properties** dialog of the affected object.

180508

Workaround

After installing the add-on, reconnect to the Administration Service.

After installing an add-on that creates a virtual attribute and a Web Interface customization item using that virtual attribute, an error may occur when opening any Web Interface site.

180524

Workaround

Restart Internet Information Services (IIS) on the web server running the Web Interface (for example, by running the **iisreset** command in the Windows command prompt).

If there is a replication group in your Active Roles environment, do the following:

- 1. After the changes are propagated to all replication partners, click **Reload** in the Web Interface.
- 2. If the Web Interface does not open, enter the following in the address bar of your browser to reload the Web Interface:

<site url>/customization/metadata-Reload.aspx?ReloadFromWorkingCopy=1

3. After the changes are propagated to all replication partners, restart Internet Information Services (IIS) on the web server running the Web Interface (for example, by running the **iisreset** command in the Windows command prompt).

When you use Add-on Manager to uninstall an add-on, the following error may 180700 occur:

Object 'objectDN' was not found.

This error can occur if the add-on modifies an existing object during installation, and then the modified object is deleted by a user after the add-on has been installed.

Workaround

Uninstall the add-on from the command line using the /ForceUninstall parameter. For example:



AddOnManager.exe /UninstallAddon /AddonName:"my-addon" /ForceUninstall /Service:"servicename" /User:"domain\user" /Password:"password"

After uninstalling an add-on that creates a virtual attribute and a Web Interface customization item that uses that virtual attribute, the Web Interface customization item created by the add-on may not be removed, and the Web Interface may return the following error:

180721

An error occurred during the last operation.

Workaround

Perform the following steps:

1. In the Web Interface, click the **Reload** command.

If the Web Interface does not open, reload the Web Interface by entering the following URL in the address bar of your browser:

<site url>/customization/metadataReload.aspx?ReloadFromWorkingCopy=1

NOTE: If there is a replication group in your Active Roles environment, reload the Web Interface only after the changes are propagated to all replication partners.

2. Restart Internet Information Services (IIS) on the web server running the Web Interface (for example, by running the **iisreset** command in the Windows command prompt).

NOTE: If there is a replication group in your Active Roles environment, restart IIS only after the changes are propagated to all replication partners.

After installing an add-on that creates Web Interface customization items, the Web Interface customization items created by the add-on may not be displayed.

This issue may occur if you provide incorrect user name and password for reloading Web Interface sites.

Workaround

In the Web Interface, click the **Reload** command.

When you install Add-on Manager from the command-line, you may encounter 183252 the following error:

Command line option syntax error. Type Command /? for Help.

This error may occur if one or several parameters of the command contain



more than 255 characters.

Workaround

Edit the command-line parameters (for example, the path to a file) so that each parameter is not longer than 255 characters.

System requirements

Before installing Active Roles 8.0.1 LTS, ensure that your system meets the following minimum hardware and software requirements, and install the following required software.

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.

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

Requirement	Details
Exchange Online Power- Shell V3 module 3.0.0	The Exchange Online PowerShell V3 module version 3.0.0 (or newer) must be installed on the computer(s) running the Administration Service.For more information, see Exchange Online PowerShell in the Microsoft Exchange PowerShell documentation.
Az.Accounts PowerShell module 2.5.3	You must install Az.Accounts PowerShell module version 2.5.3 (or older) on the computer(s) running Active Roles Administration Service and Active Roles Synchronization Service. For installation instructions, see Az.Accounts 2.5.3 in the <i>Microsoft PowerShell Gallery</i> .
Microsoft Edge WebView2 Runtime	You must install Microsoft Edge WebView2 Runtime on the computer running Active Roles Administration Service. For more information, see Introduction to Microsoft Edge WebView2 in the Microsoft Edge Developer documentation.
(Optional) One Identity certi- ficate	If your organization enforces the AllSigned policy, you must install the One Identity certificate during the installation of Active Roles.

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
- Language Pack requirements

Hardware requirements

Table 19: Hardware requirements

Requirement	Details
NOTE: The number of cores required depends on the size of the environment and the total number of managed objects.	For Administration Service, Web Interface and Synchronization Service, any of the following:
	 Intel 64 (EM64T) AMD64 Minimum 2 cores CPU speed: 2.0 GHz or faster. NOTE: For Synchronization Service, One Identity recommends using a multi-core CPU for the best performance. For Console and Management Tools, any of the following: Intel x86 Intel 64 (EM64T) AMD64 CPU speed: 1.0 GHz or faster.
RAM	Administration Service:
NOTE: The amount of	A minimum of 4 GB of RAM.
RAM required depends on the size of the environment and the total number of managed objects.	Web Interface, Synchronization Service: A minimum of 2 GB of RAM.
	Console, Management Tools: A minimum of 1 GB of RAM.
Hard disk space	Administration Service, Web Interface, Console, Management Tools: A minimum of 100 MB of free disk space.
	Synchronization Service:
	A minimum of 250 MB of free disk space.
	NOTE: If SQL Server and Synchronization Service are installed on the same computer, the amount required



Requirement	Details
	depends on the size of the Synchronization Service database.
NOTE: Active Roles is not supported on Windows Server Core mode setup. o Microsoft Windows Server 2022 o Microsoft Windows Server 2019 o Microsoft Windows Server 2016 Active Roles supports the Standard or Datacenter these operating systems.	 Microsoft Windows Server 2022 Microsoft Windows Server 2019
	In addition, you can install the Active Roles Console and Management Tools on a computer running:
	 Microsoft Windows 10, Professional or Enterprise edition, 32-bit (x86) or 64-bit (x64).
	 Microsoft Windows 8.1, Professional or Enterprise edition, 32-bit (x86) or 64-bit (x64).

Administration Service requirements

This section lists the system requirements of Active Roles Administration Service. All Active Roles components require:

- Microsoft .NET Framework 4.7.2 and 4.8. For more information, see Installing .NET Framework for developers in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

Table 20: Administration Service requirements

Requirement	Details
SQL Server	You can host the Active Roles database on the following SQL Server versions:
	 Microsoft SQL Server 2022, any edition.
	 Microsoft SQL Server 2019, any edition.
	 Microsoft SQL Server 2017, any edition.
	 Microsoft SQL Server 2016, any edition.
	 Microsoft SQL Server 2014, any edition, 32-bit (x86) or 64-bit (x64), with or without any Service Pack.
	 Azure SQL hosted databases.



Requirement	Details
	To connect Active Roles to a Microsoft SQL Server deployment, the following driver is required:
	 Microsoft OLE DB Driver for SQL Server (MSOLEDBSQL).
Windows Management Framework	Windows Management Framework 5.1 (download here) is required on all supported operating systems.
Operating system on domain controllers	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:
	 Microsoft Windows Server 2022
	 Microsoft Windows Server 2019
	 Microsoft Windows Server 2016
	NOTE: 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.
Exchange Server	Active Roles is capable of managing Exchange recipients on:
	Microsoft Exchange Server 2019
	 Microsoft Exchange Server 2016
	NOTE: Microsoft Exchange 2013 and 2013 CU11 are not supported. For more information, see Knowledge Base Article 202695.

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 and 4.8. For more information, see Installing .NET Framework for developers in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.



Table 21: Web Interface requirements

Requirement

Details

Internet Services

Active Roles Web Interface requires the Web Server (IIS) server role with the following role services:

- 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

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

- Handler Mappings
- Modules
- Use Feature Delegation in IIS Manager to confirm that these features have their delegation set to Read/Write.

Web browser

You can access Active Roles Web Interface using:

- Mozilla Firefox 36 (or newer) on Windows.
- Google Chrome 61 (or newer) on Windows.
- Microsoft Edge 79 (or newer), based on Chromium on Windows 10.

You can use a later version of Firefox and Google Chrome to access Active Roles Web Interface. However, the Active Roles



Requirement	Details
	Web Interface was tested only with the browser versions listed above.
Minimum screen resolution	Active Roles Web Interface is optimized for screen resolutions of 1280x800 or higher.
	The minimum supported screen resolution is 1024x768.

Console requirements

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

All Active Roles components require:

- Microsoft .NET Framework 4.7.2 and 4.8. For more information, see Installing .NET Framework for developers in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

Table 22: Console (MMC Interface) requirements

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

Management Tools requirements

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, Active Roles Management Tools also includes the Active Roles Configuration Center component.

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

All Active Roles components require:

- Microsoft .NET Framework 4.7.2 and 4.8. For more information, see Installing .NET Framework for developers in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

Table 23: Management Tools requirements

Requirement	Details
Windows Management	Windows Management Framework 5.1 (download here) is
Framework	required on all supported operating systems.



Requirement	Details
Remote Server Administration Tools (RSAT)	To manage Terminal Services user properties by using Active Roles Management Shell, Active Roles Management Tools requires Remote Server Administration Tools (RSAT) for Active Directory.
	For more information on installing the RSAT version applicable to your operating system, see Remote Server Administration Tools (RSAT) for Windows in the Microsoft Windows Server documentation.

Synchronization Service requirements

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

All Active Roles components require:

- Microsoft .NET Framework 4.7.2 and 4.8. For more information, see Installing .NET Framework for developers in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

Table 24: Synchronization Service requirements

Requirement	Details
SQL Server	You can host the Active Roles Synchronization Service database on:
	 Microsoft SQL Server 2022, any edition.
	 Microsoft SQL Server 2019, any edition.
	 Microsoft SQL Server 2017, any edition.
	 Microsoft SQL Server 2016, any edition.
	 Microsoft SQL Server 2014, any edition, 32-bit (x86) or 64-bit (x64), with or without any Service Pack.
	NOTE: Active Roles Synchronization Service does not support Azure SQL hosted databases.
Windows Management Framework	Windows Management Framework 5.1 (download here) is required on all supported operating systems.
Supported connections	Active Roles Synchronization Service can connect to the following data systems:
	 Microsoft Active Directory Domain Services (AD DS) with the domain or forest functional level of Windows Server 2016 or higher.



- Microsoft Active Directory Lightweight Directory Services (AD LDS) running on any Windows Server operating system supported by Microsoft.
- The following Microsoft Exchange Server versions:
 - · Microsoft Exchange Server 2019
 - Microsoft Exchange Server 2016

NOTE: Microsoft Exchange 2013 and 2013 CU11 are not supported. For more information, see Knowledge Base Article 202695.

- Microsoft Lync Server version 2013 with limited support.
- Microsoft Skype for Business 2019, 2016 or 2015.
- Microsoft Windows Azure Active Directory (Azure AD) using Microsoft Graph API version 1.0.
- · Microsoft Office 365 directory.
- Microsoft Exchange Online service.
- 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 SCIM-based data import operations.
- 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.

Legacy Active Roles ADSI To connect to Active Roles version 6.9, install the Active Roles



Requirement	Details
Provider	ADSI Provider. For more information, see <i>Installing additional</i> components in the Active Roles Quick Start Guide.
One Identity Manager API	To connect to One Identity Manager 7.0, install One Identity Manager Connector on the computer running Active Roles Synchronization Service. This connector works with the RESTful web service and no SDK installation is required.
Internet connection	To connect to cloud directories or online services, the machine running Active Roles Synchronization Service must have a reliable Internet connection.

Synchronization Service Capture Agent

To synchronize passwords from an Active Directory (AD) domain to other connected data systems, install Active Roles Synchronization Service Capture Agent on all domain controllers (DCs) in the source AD domain.

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

All Active Roles components require:

- Microsoft .NET Framework 4.7.2 and 4.8. For more information, see Installing .NET Framework for developers in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

Table 25: Synchronization Service Capture Agent requirements

Requirement	Details
Operating system	The DCs on which you install Active Roles Synchronization Service Capture Agent must run one of the following operating systems with or without any Service Pack:
	 Microsoft Windows Server 2022
	 Microsoft Windows Server 2019
	 Microsoft Windows Server 2016
	For more information, see the <i>Active Roles Synchronization Service Administration Guide</i> .

Language Pack requirements

Available for download from the One Identity Support Portal, the Active Roles Language Pack provides product localization for Active Roles. To enable localization, install the



Language Pack on the machine(s) running the Active Roles Administration Service, Configuration Center, Console, Synchronization Service or Web Interface components.

Table 26: Hardware requirements

Requirement	Details
Active Roles version	The Active Roles 8.0.1 LTS Language Pack requires Active Roles version 8.0.1 LTS of the Administration Service, Configuration Center, Console, Synchronization Service or the Web Interface installed on the target machine.
	The Active Roles 8.0.1 LTS Language Pack will not work properly with earlier versions of Active Roles.
Operating system	You can install the Active Roles Language Pack on 64-bit operating systems only.

Add-on Manager requirements

This section lists the system requirements of the Active Roles Add-on Manager.

All Active Roles components require:

- Microsoft .NET Framework 4.7.2 and 4.8. For more information, see Installing .NET Framework for developers in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

Table 27: Add-on Manager requirements

Requirement	Details
Processor	Any of the following:
	• Intel 64 (EM64T)
	• AMD64
	 CPU speed: 1.0 GHz or faster
Memory	A minimum of 1 GB of RAM.
Hard disk space	A minimum of 100 MB of free disk space.
Operating system	Any of the following Windows Server operating systems:
	 Microsoft Windows Server 2022
	 Microsoft Windows Server 2019
	 Microsoft Windows Server 2016
Active Roles Console	Add-on Manager requires Active Roles 8.0.1 LTS Console installed.



Requirement	Details
Microsoft Windows PowerShell	Windows PowerShell 5.1 or later.
Web browser	Microsoft Edge 79 (or newer) based on Chromium.

Diagnostic Tools requirements

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

All Active Roles components require:

- Microsoft .NET Framework 4.7.2 and 4.8. For more information, see Installing .NET Framework for developers in the *Microsoft .NET documentation*.
- Visual C++ 2017 Redistributable.

Table 28: Diagnostic Tools requirements

Requirement	Details
Processor	1.0 GHz or faster 32-bit (x86) or 64-bit (x64) CPU.
Memory NOTE: The amount of RAM required depends on the size of the log file opened with the Log Viewer tool.	A minimum of 1 GB of RAM.
Hard disk space	A minimum of 10 MB of free disk space.
Operating system	Any of the following Windows Server operating systems: • Microsoft Windows Server 2022 • Microsoft Windows Server 2019 • Microsoft Windows Server 2016

Product licensing

Use of this software is governed by the Software Transaction Agreement found at 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 version compatibility

NOTE: You must run the Active Roles installer with administrator privileges.

You can upgrade the following versions of Active Roles to Active Roles 8.0.1 LTS:

- Active Roles 7.5
- Active Roles 7.5.3
- Active Roles 7.5.4
- Active Roles 7.6.1
- Active Roles 7.6.2
- Active Roles 8.0 LTS

CAUTION: You cannot upgrade from Active Roles version 8.0.1 LTS to Active Roles 8.1.1 due to feature disparity. Upgrading Active Roles 8.0.1 LTS to Active Roles 8.1.1 will result in the product not working as intended.

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 upgrading the Active Roles Administration Service first, and the client components (Active Roles Console and Active Roles Web Interface) afterwards.

Upgrade and installation instructions

This section contains information about the upgrade and installation changes affecting Active Roles 8.0.1 LTS.



- 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 instructions on how to install the Active Roles Language Pack, see *Active Roles Language Pack* in the *Active Roles Administration Guide*.
- For special considerations regarding the installation of Active Roles 8.0.1 LTS, 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 reconsent them after installing Active Roles 8.0.1 LTS. Otherwise, Active Roles will not receive the required permissions for managing existing Azure tenants, and tenant administration in Active Roles 8.0.1 LTS 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 the Azure BackSync workflows of the Active Roles Synchronization Service. After upgrading to Active Roles 8.0.1 LTS 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 backsynchronization, 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.

Active Roles Language Pack

Available for download from the One Identity Support Portal, the Active Roles Language Pack provides product localization for Active Roles. To enable localization, install the Language Pack on the machine(s) running the Active Roles Administration Service, Configuration Center, Console, Synchronization Service or Web Interface components.

The Active Roles Language Pack supports the following languages:

- For the Active Roles Administration Service, Configuration Center, Console and Synchronization Service components, the Language Pack provides support for German language.
- For the Active Roles Web Interface component, the Language Pack provides support for the following languages:
 - Chinese (Simplified and Traditional)
 - French
 - German
 - Portuguese (Brazilian and European)
 - Spanish

For more information on the features, limitations and installation steps of the Language Pack, see *Active Roles Language Pack* in the *Active Roles Administration Guide*.



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.

Contacting us

For sales and other inquiries, such as licensing, support, and renewals, visit https://www.oneidentity.com/company/contact-us.aspx.

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:

- Submit and manage a Service Request
- · View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to videos at www.YouTube.com/OneIdentity
- Engage in community discussions
- · Chat with support engineers online
- · View services to assist you with your product

Copyright 2023 One Identity LLC.

ALL RIGHTS RESERVED.

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of One Identity LLC .



The information in this document is provided in connection with One Identity products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of One Identity LLC products. EXCEPT AS SET FORTH IN THE TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, ONE IDENTITY ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL ONE IDENTITY BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF ONE IDENTITY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. One Identity makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. One Identity does not make any commitment to update the information contained in this document.

If you have any questions regarding your potential use of this material, contact:

One Identity LLC. Attn: LEGAL Dept 4 Polaris Way Aliso Viejo, CA 92656

Refer to our Web site (http://www.OneIdentity.com) for regional and international office information.

Patents

One Identity is proud of our advanced technology. Patents and pending patents may apply to this product. For the most current information about applicable patents for this product, please visit our website at http://www.OneIdentity.com/legal/patents.aspx.

Trademarks

One Identity and the One Identity logo are trademarks and registered trademarks of One Identity LLC. in the U.S.A. and other countries. For a complete list of One Identity trademarks, please visit our website at www.OneIdentity.com/legal/trademark-information.aspx. All other trademarks are the property of their respective owners.

Legend

- **WARNING:** A WARNING icon highlights a potential risk of bodily injury or property damage, for which industry-standard safety precautions are advised. This icon is often associated with electrical hazards related to hardware.
- **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

Third-party contributions

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 29: List of Third-Party Contributions

Component	License or Acknowledgment
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
AngleSharpCss 0.16.1	MIT N/A
ASP.NET Ajax 4.0	Microsoft Permissive License (Ms-PL) N/A
Azure.Core 1.24.0.0	MIT Template 2020
Azure.Identity 1.4.1	MIT Template 2020
Azure.Identity 1.6.0	MIT Template 2020
Bootstrap 3.2	MIT N/A
BouncyCastle 1.8.9	MIT N/A
ComponentArt Web.UI for ASP.NET 2011.1.1134.35	Component Art Web.UI Suite Enterprise License N/A
HtmlSanitizer 6.0.4	MIT Template 2020
jquery 3.4.1	Copyright JS Foundation and other contributors, https://js.foundation/
JQuery UI 1.12.1	Copyright 2007, 2014 jQuery Foundation and other contributors, https://jquery.org/ MIT N/A
MediatR 9.0.0	Copyright Jimmy Bogard Apache 2.0
MediatR.Extensions.Microsoft.DependencyInjection 9.0.0	Copyright Jimmy Bogard Apache 2.0
Microsoft AspNet WebApi 5.0.0	Microsoft .Net Framework 4.5
Microsoft Exchange Web Services (EWS) Managed API 2.2	Microsoft Exchange Web Services Managed API 2.2



Component	License or Acknowledgment
Microsoft Unity 3.5	Apache 2.0
Microsoft.aspNet.SignalR.Core 2.3.0	MICROSOFT .NET LIBRARY 1.0
Microsoft.Extensions.Http.Polly 6.0.3	Copyright (c) .NET Foundation and Contributors
	MIT Template 2020
Microsoft.Graph 4.25.0	MIT N/A
Microsoft.Identity.Client 4.36.2	MIT N/A
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
Microsoft.IdentityModel.Tokens 5.2.2	MIT N/A
Microsoft.SharePointOnline.CSOM 16.1.21610.12000	MSNET-Library-JS License N/A
Newtonsoft.Json 13.0.0	Copyright 2007 James Newton- King
	Copyright © James Newton-King 2008
	MIT Template 2020
Newtonsoft.Json.dll 11.0.1.21818	Copyright (c) 2007 James Newton-King
	The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.
	MIT Json.NET N/A
NLog 4.7.15	Copyright (c) 2004-2011 Jaroslaw Kowalski jaak@jkowalski.net BSD 3-Clause License N/A
Polly 7.2.3	Copyright (c) 2015-2020, App vNext
	All rights reserved. BSD 3-Clause for App vNext 1.0



Component	License or Acknowledgment
Polly.Extensions.Http 3.0.0	Copyright (c) 2015-2018, App vNext. All rights reserved.
	BSD - Polly 7.1
WCF Data Services 5.8.4	Copyright (c) 2018 Microsoft. All rights reserved.
	The above copyright notice and this permission notice shall be included in all copies or substantial
	MICROSOFT WCF DATA SERVICES N/A

Open Source Initiative OSI - The MIT License (MIT) 2012

Copyright < year > < copyright holders >

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

MIT AngleSharp 0.16.1

License URL is on this page:	https://www.nuget.org/	/packages/AngleSharp/0.16.0?_
src=template		

SPDX identifier
MIT
License text
MIT License
Permission is hereby granted, free of charge, to any person obtaining a copy of (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the

Software, and to permit persons to whom the Software is furnished to do so, subject to the



following conditions:

The above copyright notice and this permission notice (including the next paragraph) shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL ____ BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Microsoft Permissive License (Ms-PL) N/A

Microsoft AJAX Library

Microsoft Permissive License (Ms-PL)

This license governs use of the accompanying software. If you use the software, you accept this license. If you do not accept the license, do not use the software.

1. Definitions

The terms "reproduce," "reproduction," "derivative works," and "distribution" have the same meaning here as under U.S. copyright law.

A "contribution" is the original software, or any additions or changes to the software.

A "contributor" is any person that distributes its contribution under this license.

"Licensed patents" are a contributor's patent claims that read directly on its contribution.

2. Grant of Rights

- (A) Copyright Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free copyright license to reproduce its contribution, prepare derivative works of its contribution, and distribute its contribution or any derivative works that you create.
- (B) Patent Grant- Subject to the terms of this license, including the license conditions and limitations in section 3, each contributor grants you a non-exclusive, worldwide, royalty-free license under its licensed patents to make, have made, use, sell, offer for sale, import, and/or otherwise dispose of its contribution in the software or derivative works of the contribution in the software.

3. Conditions and Limitations

- (A) No Trademark License- This license does not grant you rights to use any contributors' name, logo, or trademarks.
- (B) If you bring a patent claim against any contributor over patents that you claim are infringed by the software, your patent license from such contributor to the software ends automatically.
- (C) If you distribute any portion of the software, you must retain all copyright, patent, trademark, and attribution notices that are present in the software.
- (D) If you distribute any portion of the software in source code form, you may do so only under this license by including a complete copy of this license with your distribution. If you distribute any portion of the software in compiled or object code form, you may only do so under a license that complies with this license.



- (E) The software is licensed "as-is." You bear the risk of using it. The contributors give no express warranties, guarantees or conditions. You may have additional consumer rights under your local laws which this license cannot change. To the extent permitted under your local laws, the contributors exclude the implied warranties of merchantability, fitness for a particular purpose and non-infringement.
- (F) If you distribute the software or derivative works with programs you develop, you agree to indemnify, defend, and hold harmless all contributors from any claims, including attorneys' fees, related to the distribution or use of your programs. For clarity, you have no such obligations to a contributor for any claims based solely on the unmodified contributions of that contributor.
- (G) If you make any additions or changes to the original software, you may only distribute them under a new namespace. In addition, you will clearly identify your changes or additions as your own.

MIT Template 2020

Copyright <YEAR> <COPYRIGHT HOLDER>

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

MIT N/A

Copyright (c) < year > < copyright holders >

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,



OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Component Art Web.UI Suite Enterprise License N/A

Please review the following license agreement before installing or using the Web.UI suite, any individual ComponentArt software component or other software product, and/or all related materials. If you agree to the terms herein then you must click the "YES" button during the software installation process as confirmation before you are permitted to use this software and related documents.

Definitions:

This ComponentArt Inc. End-User Software License Agreement ("EULA") is a legal agreement between you (either as an individual user, corporation or single entity) and ComponentArt Inc. ("ComponentArt") for the Web.UI suite or individual software product - which includes computer software, and may include associated media, printed materials, and "online" or electronic documentation ("SOFTWARE PRODUCT" or "SOFTWARE"). By exercising your rights to install the SOFTWARE PRODUCT, you agree to be bound by the terms of this End User License Agreement ("EULA"), including the limitations and warranty disclaimers. If you do NOT agree to the terms of this EULA, you may not install nor use the SOFTWARE PRODUCT; If this is the case, please uninstall the SOFTWARE PRODUCT from your system immediately, and destroy all copies of the SOFTWARE PRODUCT and all of its component parts, source code, associated documentation, and related materials.

SOFTWARE PRODUCT LICENSE:

The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties.

1. GRANT OF LICENSE.

This is a license agreement, and NOT an agreement for sale. ComponentArt retains ownership of the copy of THE SOFTWARE in your possession, and all copies you may be licensed to make. ComponentArt retains all rights not expressly granted to you in this LICENSE. ComponentArt hereby grants to you, and you accept, a non-exclusive, non-transferable license to use, copy and modify THE SOFTWARE only as authorized below.

Provided that you have accepted these terms contained herein by clicking the "YES" button at the end of this Agreement, this EULA grants you the following rights:

Installation and Use:

DEVELOPER LICENSE: For single-version licenses, you are granted a license as a single developer (individual) to the particular licensed version of the SOFTWARE PRODUCT. For subscription-based licenses, you are granted a license as a single developer (individual) to all versions of the particular product released during the period of the subscription.

For the version(s) you are licensed for, you are granted a license as a single individual to distribute the SOFTWARE PRODUCT royalty-free with an unlimited number of different solutions to an unlimited number of web servers, provided they are developed solely by you. The term "different solutions" is understood to mean non-identical, non-"shrink-wrapped" applications to be resold or re-licensed by you. You may not distribute the product with more than 10 copies of an identical or similarly-functioning ("shrink-wrapped") solution or application. For royalty-free distribution of more than 10 identical or similarly-functioning copies of a solution or application, you must purchase a subscription-



level license or higher, and are required to modify the SOFTWARE PRODUCT code as per ComponentArt's instructions.

At no time may the SOFTWARE PRODUCT be used by more than one individual at the same time for development purposes -- nor may the SOFTWARE PRODUCT be distributed for use with applications other than those developed by you.

For subscription-based licenses, you are further licensed as a single individual to distribute the SOFTWARE PRODUCT royalty-free with an unlimited number of solutions or applications to an unlimited number of web servers, provided they are developed solely by you. This includes royalty-free distribution of multiple copies of identical or similarly-functioning ("shrink-wrapped") solutions or applications. For royalty-free distribution of more than 10 identical or similarly-functioning copies of a solution or application, you are required to modify the SOFTWARE PRODUCT code as per ComponentArt's instructions to ensure it cannot be re-used for any purpose outside of your distributed application.

For subscription-based licenses, you are also further licensed to view the source code to the SOFTWARE PRODUCT or part thereof, as permitted by the licensor, and modify it for your own needs. You may only re-distribute the source code as part of a compiled solution that adds significant functionality to THE SOFTWARE PRODUCT, and may not redistribute it in non-compiled form.

For Developer and Subscription-based licenses, you are required to reasonably ensure that the SOFTWARE PRODUCT is not reused by or with any application other than those with which you distribute it. For example, if you install the Menu for ASP.NET control along with a packaged application on a customer's server, that customer is not permitted to use the control independent of your application, and must be informed as such.

CORPORATE SITE LICENSE: You are granted a license for all developers/individuals who are part an entire single collective entity, organization, enterprise, or corporation AT A SINGLE PHYSICAL LOCATION - or up to ten (10) developers/individuals AT SEPARATE PHYSICAL LOCATIONS who are still part of a single collective entity, organization, enterprise or corporation - to all versions of the particular product released during the period of the Corporate Site License subscription.

For the version(s) you are licensed for, you are granted a license to distribute the SOFTWARE PRODUCT royalty-free with an unlimited number of solutions or applications to an unlimited number of web servers, provided they are developed solely within the single organization. The SOFTWARE PRODUCT may be used by an unlimited (or limited, as defined above) number of individuals employed by or belonging to the single organization, at the same time, for development purposes -- and the SOFTWARE PRODUCT may be distributed for use with an unlimited number of applications developed by the collective entity, organization, enterprise or corporation. This includes royalty-free distribution of multiple copies of identical or similarly-functioning ("shrink-wrapped") solutions or applications.

For applications distributed outside of the licensed organization, you are required to reasonably ensure that the SOFTWARE PRODUCT is not reused by or with any application other than those with which you distribute it. For example, if you install the Menu for ASP.NET control along with a packaged application on a customer's server, that customer is not permitted to use the control independent of your application, and must be informed as such.

For royalty-free distribution of more than 10 identical or similarly-functioning copies of a solution or application, you are required to modify the SOFTWARE PRODUCT code as per



ComponentArt's instructions to ensure it cannot be re-used for any purpose outside of your distributed application.

You are further licensed to view the source code to the SOFTWARE PRODUCT or part thereof, as permitted by the licensor, and modify it for your own needs. You may only redistribute the source code as part of a compiled solution that adds significant functionality to THE SOFTWARE PRODUCT, and may not redistribute it in non-compiled form.

FOR ALL LICENSES: In no case shall you rent, lease, lend, redistribute nor re-license THE SOFTWARE PRODUCT or any related source code to a 3rd party individual or entity, except as outlined above. In no case shall you grant further redistribution rights for THE SOFTWARE PRODUCT to the end-users of your solution.

UNDER NO CIRCUMSTANCES MAY THE SOURCE CODE OR THE COMPILED PRODUCT BE USED AS THE BASIS FOR CREATING A PRODUCT THAT CONTAINS THE SAME, OR SUBSTANTIALLY THE SAME, FUNCTIONALITY AS ANY COMPONENTART INC. PRODUCT.

2. DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS.

MICROSOFT OFFICE 2007 USER INTERFACE: Some code and examples included with the ComponentArt Web.UI software mimic the look and behaviour of the interface introduced in the 2007 release of Microsoft Office. ComponentArt has officially licensed this UI from Microsoft for use in the Web.UI product line. Developers and organizations using Web.UI who wish to create their own products that utilize the Microsoft Office UI must similarly obtain a license from Microsoft. Detailed information on this licensing program is available at http://msdn.microsoft.com/officeui.

TERMINATION: Without prejudice to any other rights, ComponentArt Inc. may terminate this EULA if you fail to comply with the terms and conditions of this EULA. In such event, you must destroy all copies of the SOFTWARE PRODUCT and all of its component parts, source code, associated documentation, and related materials.

3. COPYRIGHT.

All title and copyrights in and to the SOFTWARE PRODUCT (including but not limited to any images, photographs, animations, video, audio, music, text, and "applets" incorporated into the SOFTWARE PRODUCT), the accompanying printed materials, and any copies of the SOFTWARE PRODUCT are owned by ComponentArt Inc. The SOFTWARE PRODUCT is protected by Canadian and U.S. copyright laws and international treaty provisions. Therefore, you must treat the SOFTWARE PRODUCT like any other copyrighted material.

4. LIMITED WARRANTY.

NO WARRANTIES. ComponentArt Inc. expressly disclaims any warranty for the SOFTWARE PRODUCT. The SOFTWARE PRODUCT and any related documentation is provided "as is" without warranty of any kind, either expressed or implied, including, without limitation, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. The entire risk arising out of use or performance of the SOFTWARE PRODUCT remains with you.

5. LIMITATION OF LIABILITY.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES. In no event shall ComponentArt Inc. or its distributors be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use this ComponentArt Inc. product (THE SOFTWARE PRODUCT) and related materials, even if ComponentArt Inc. has been



advised of the possibility of such damages. Because some states do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

If you have any questions regarding this End User License Agreement, please write to:

ComponentArt Inc.

511 King Street West, Suite 400

Toronto, Ontario M5V 1K4

Canada

Apache 2.0

Apache License

Version 2.0, January 2004

http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but

not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.



"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or addition to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner.

For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License.

Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License.

Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution.

You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
- (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file



distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions.

Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty.

Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability.

In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability.

While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor



harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

Microsoft .Net Framework 4.5

MICROSOFT SOFTWARE SUPPLEMENTAL LICENSE TERMS

.NET FRAMEWORK 4.5 FOR MICROSOFT WINDOWS OPERATING SYSTEM AND ASSOCIATED LANGUAGE PACKS

Microsoft Corporation (or based on where you live, one of its affiliates) licenses this supplement to you. If you are licensed to use Microsoft Windows operating system software (the "software"), you may use this supplement. You may not use it if you do not have a license for the software. You may use this supplement with each validly licensed copy of the software.

The following license terms describe additional use terms for this supplement. These terms and the license terms for the software apply to your use of the supplement. If there is a conflict, these supplemental license terms apply.

By using this supplement, you accept these terms. If you do not accept them, do not use this supplement.

If you comply with these license terms, you have the rights below.

- 1. DISTRIBUTABLE CODE. The supplement is comprised of Distributable Code. "Distributable Code" is code that you are permitted to distribute in programs you develop if you comply with the terms below.
- a. Right to Use and Distribute.
 - You may copy and distribute the object code form of the supplement.
 - Third Party Distribution. You may permit distributors of your programs to copy and distribute the Distributable Code as part of those programs.
- b. Distribution Requirements. For any Distributable Code you distribute, you must
 - add significant primary functionality to it in your programs;
 - for any Distributable Code having a filename extension of .lib, distribute only the results of running such Distributable Code through a linker with your program;
 - distribute Distributable Code included in a setup program only as part of that setup program without modification;
 - require distributors and external end users to agree to terms that protect it at least as much as this agreement;
 - display your valid copyright notice on your programs; and
 - indemnify, defend, and hold harmless Microsoft from any claims, including attorneys' fees, related to the distribution or use of your programs.
- c. Distribution Restrictions. You may not



- alter any copyright, trademark or patent notice in the Distributable Code;
- use Microsoft's trademarks in your programs' names or in a way that suggests your programs come from or are endorsed by Microsoft;
- distribute Distributable Code to run on a platform other than the Windows platform;
- include Distributable Code in malicious, deceptive or unlawful programs; or
- modify or distribute the source code of any Distributable Code so that any part of it becomes subject to an Excluded License. An Excluded License is one that requires, as a condition of use, modification or distribution, that
- the code be disclosed or distributed in source code form; or
- · others have the right to modify it.
- 2. SUPPORT SERVICES FOR SUPPLEMENT. Microsoft provides support services for this software as described at www.support.microsoft.com/common/international.aspx.
- 3. MICROSOFT .NET FRAMEWORK BENCHMARK TESTING. The software includes one or more components of the .NET Framework (.NET Components). You may conduct internal benchmark testing of those components. You may disclose the results of any benchmark test of those components, provided that you comply with the conditions set forth at http://go.microsoft.com/fwlink/?LinkID=66406. Notwithstanding any other agreement you may have with Microsoft, if you disclose such benchmark test results, Microsoft shall have the right to disclose the results of benchmark tests it conducts of your products that compete with the applicable .NET Component, provided it complies with the same conditions set forth at http://go.microsoft.com/fwlink/?LinkID=66406.

Microsoft Exchange Web Services Managed API 2.2

MICROSOFT SOFTWARE LICENSE TERMS

MICROSOFT EXCHANGE WEB SERVICES MANAGED API 2.0

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and You. Please read them. They apply to the software named above, which includes the media on which You received it, if any. The terms also apply to any Microsoft

- · updates,
- · supplements,
- · Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply.

BY INSTALLING, ACCESSING OR OTHERWISE USING THE SOFTWARE, YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE AGREEMENT, DO NOT INSTALL, ACCESS OR USE THE SOFTWARE.

YOU MAY USE THE SOFTWARE SOLELY IN PROGRAMS DEVELOPED BY YOU THAT INTEROPERATE WITH MICROSOFT EXCHANGE SERVER (REFERRED TO AS "AUTHORIZED PROGRAMS").

If You comply with these license terms, You have the rights below.



- 1. INSTALLATION AND USE. You may install and use any number of copies of the software on Your devices solely to design, develop and test Authorized Programs.
- 2. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS.
- a. Distributable Code. The software contains code that You are permitted to include in Authorized Programs if You comply with the terms below.
- i. Right to Use and Distribute. The code and text files listed below are "Distributable Code."
 - REDIST.TXT Files. You may copy and distribute the object code form of code listed in REDIST.TXT files.
 - Redistribution. You may permit the distributors of Authorized Programs to copy and distribute the Distributable Code as part of those programs.
- ii. Distribution Requirements. For any Distributable Code You distribute, You must
 - add significant primary functionality to it in Authorized Programs;
 - for any Distributable Code having a filename extension of .lib, distribute only the results of running such Distributable Code through a linker with your program;
 - distribute Distributable Code included in a setup program only as part of that setup program without modification;
 - require distributors and external end users to agree to terms that protect it at least as much as this agreement;
 - display Your valid copyright notice on Authorized Programs; and
 - indemnify, defend, and hold harmless Microsoft from any claims, including attorneys' fees, related to the distribution or use of Authorized Programs.
- iii. Distribution Restrictions. You may not
 - alter any copyright, trademark or patent notice in the Distributable Code;
 - use Microsoft's trademarks in Your programs' names or in a way that suggests Your programs come from or are endorsed by Microsoft;
 - include Distributable Code in malicious, deceptive or unlawful programs; or
 - modify, distribute or convey any Distributable Code so that the Distributable Code or any application to which it links, or of which it is a part, becomes subject to an Excluded License. An Excluded License is any other license that requires, as a condition of use, modification, distribution or conveyance that,
 - the code be disclosed or distributed in source code form; or
 - others have the right to modify or create derivative works of it.
- 3. INTERNET-BASED SERVICES. Microsoft provides Internet-based services with the software. It may change or cancel them at any time.
- 4. SCOPE OF LICENSE. You may only use the software in Authorized Programs. The software is licensed, not sold. This agreement only gives You some rights to use the software. Microsoft reserves all other rights. Unless applicable law gives You more rights despite this limitation, You may use the software only as expressly permitted in this agreement. You may not:



- · work around any explicit instructions in the software that limit or restrict their use;
- reverse engineer, decompile or disassemble the software, except and only to the extent that applicable law expressly permits, despite this limitation;
- use the software in any way that intentionally harms services provided by Microsoft or impairs anyone else's use of such services;
- use the software to try to gain unauthorized access to any service, data, account or network by any means;
- make more copies of the software than reasonably necessary for You to exercise Your rights under this agreement;
- publish the software for others to copy;
- · rent, lease or lend the software or
- publish the software as a hosted service without adding significant primary functionality to them in Authorized Programs.
- 5. TRANSFER TO A THIRD PARTY. The first user of the software may transfer them and this agreement directly to a third party. Before the transfer, that party must agree that this agreement applies to the transfer and use of the software. The first user must uninstall the software before transferring them separately from the device. The first user may not retain any copies.
- 6. EXPORT RESTRICTIONS. The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. For additional information, see www.microsoft.com/exporting.
- 7. SUPPORT. Microsoft is not obligated to provide any technical or other support under this agreement ("Support Services") for the software to You. However, if Microsoft chooses to provide any Support Services to You, Your use of such Support Services will be governed by then-current Microsoft policies (i.e. terms separate from this agreement). With respect to any technical or other information You provide to Microsoft in connection with the Support Services, You agree that Microsoft has an unrestricted right to use such information for its business purposes, including for product support and development. Microsoft will not use such information in a form that personally identifies You.
- 8. RESERVATION OF RIGHTS. Except for the licenses expressly granted under this license, Microsoft and its suppliers retain all right, title and interest in and to the software, and all intellectual property rights therein. You are not authorized to alter, modify, copy, edit, format, create derivative works of or otherwise use any materials, content or technology provided under this license except as explicitly provided in this license or approved in advance in writing by Microsoft.
- 9. ENTIRE AGREEMENT. This agreement, and the terms for supplements, updates, Internet-based services and Support Services that You use, are the entire agreement with respect to the software.
- 10. APPLICABLE LAW.
- a. United States. If You acquired the software in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where You live govern all



other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.

- b. Outside the United States. If You acquired the software in any other country, the laws of that country apply.
- 11. LEGAL EFFECT. This agreement describes certain legal rights. You may have other rights under the laws of Your country. You may also have rights with respect to the party from whom You acquired the software. This agreement does not change Your rights under the laws of Your country if the laws of Your country do not permit it to do so.
- 12. DISCLAIMER OF WARRANTY. The software is licensed "as-is." You bear the risk of using them. Microsoft gives no express warranties, guarantees or conditions. You may have additional consumer rights under Your local laws which this agreement cannot change. To the extent permitted under Your local laws, Microsoft excludes the implied warranties of merchantability, fitness for a particular purpose and non-infringement.
- 13. LIMITATION ON AND EXCLUSION OF REMEDIES AND DAMAGES. You can recover from Microsoft and its suppliers only direct damages up to U.S. \$5.00. You cannot recover any other damages, including consequential, lost profits, special, indirect or incidental damages.

This limitation applies to:

- anything related to the software, content (including code) on third party Internet sites, or third party programs; and
- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft knew or should have known about the possibility of the damages. The above limitation or exclusion may not apply to You because Your country may not allow the exclusion or limitation of incidental, consequential or other damages.

MICROSOFT .NET LIBRARY 1.0

MICROSOFT SOFTWARE LICENSE TERMS

MICROSOFT .NET LIBRARY

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft

- · updates,
- · supplements,
- · Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply.

BY USING THE SOFTWARE, YOU ACCEPT THESE TERMS. IF YOU DO NOT ACCEPT THEM, DO NOT USE THE SOFTWARE.

IF YOU COMPLY WITH THESE LICENSE TERMS, YOU HAVE THE PERPETUAL RIGHTS BELOW.



- 1. INSTALLATION AND USE RIGHTS.
- a. Installation and Use. You may install and use any number of copies of the software to design, develop and test your programs.
- b. Third Party Programs. The software may include third party programs that Microsoft, not the third party, licenses to you under this agreement. Notices, if any, for the third party program are included for your information only.
- 2. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS.
- a. DISTRIBUTABLE CODE. The software is comprised of Distributable Code. "Distributable Code" is code that you are permitted to distribute in programs you develop if you comply with the terms below.
- i. Right to Use and Distribute.
 - You may copy and distribute the object code form of the software.
 - Third Party Distribution. You may permit distributors of your programs to copy and distribute the Distributable Code as part of those programs.
- ii. Distribution Requirements. For any Distributable Code you distribute, you must
 - add significant primary functionality to it in your programs;
 - require distributors and external end users to agree to terms that protect it at least as much as this agreement;
 - display your valid copyright notice on your programs; and
 - indemnify, defend, and hold harmless Microsoft from any claims, including attorneys' fees, related to the distribution or use of your programs.
- iii. Distribution Restrictions. You may not
 - alter any copyright, trademark or patent notice in the Distributable Code;
 - use Microsoft's trademarks in your programs' names or in a way that suggests your programs come from or are endorsed by Microsoft;
 - include Distributable Code in malicious, deceptive or unlawful programs; or
 - modify or distribute the source code of any Distributable Code so that any part of it becomes subject to an Excluded License. An Excluded License is one that requires, as a condition of use, modification or distribution, that
 - the code be disclosed or distributed in source code form; or
 - others have the right to modify it.
- 3. SCOPE OF LICENSE. The software is licensed, not sold. This agreement only gives you some rights to use the software. Microsoft reserves all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that only allow you to use it in certain ways. You may not
 - · work around any technical limitations in the software;
 - reverse engineer, decompile or disassemble the software, except and only to the extent that applicable law expressly permits, despite this limitation;



- publish the software for others to copy;
- rent, lease or lend the software;
- · transfer the software or this agreement to any third party; or
- use the software for commercial software hosting services.
- 4. BACKUP COPY. You may make one backup copy of the software. You may use it only to reinstall the software.
- 5. DOCUMENTATION. Any person that has valid access to your computer or internal network may copy and use the documentation for your internal, reference purposes.
- 6. EXPORT RESTRICTIONS. The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. For additional information, see www.microsoft.com/exporting.
- 7. SUPPORT SERVICES. Because this software is "as is," we may not provide support services for it.
- 8. ENTIRE AGREEMENT. This agreement, and the terms for supplements, updates, Internet-based services and support services that you use, are the entire agreement for the software and support services.
- 9. APPLICABLE LAW.
- a. United States. If you acquired the software in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.
- b. Outside the United States. If you acquired the software in any other country, the laws of that country apply.
- 10. LEGAL EFFECT. This agreement describes certain legal rights. You may have other rights under the laws of your country. You may also have rights with respect to the party from whom you acquired the software. This agreement does not change your rights under the laws of your country if the laws of your country do not permit it to do so.
- 11. DISCLAIMER OF WARRANTY. THE SOFTWARE IS LICENSED "AS-IS." YOU BEAR THE RISK OF USING IT. MICROSOFT GIVES NO EXPRESS WARRANTIES, GUARANTEES OR CONDITIONS. YOU MAY HAVE ADDITIONAL CONSUMER RIGHTS OR STATUTORY GUARANTEES UNDER YOUR LOCAL LAWS WHICH THIS AGREEMENT CANNOT CHANGE. TO THE EXTENT PERMITTED UNDER YOUR LOCAL LAWS, MICROSOFT EXCLUDES THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.
- FOR AUSTRALIA YOU HAVE STATUTORY GUARANTEES UNDER THE AUSTRALIAN CONSUMER LAW AND NOTHING IN THESE TERMS IS INTENDED TO AFFECT THOSE RIGHTS.
- 12. LIMITATION ON AND EXCLUSION OF REMEDIES AND DAMAGES. YOU CAN RECOVER FROM MICROSOFT AND ITS SUPPLIERS ONLY DIRECT DAMAGES UP TO U.S. \$5.00. YOU CANNOT RECOVER ANY OTHER DAMAGES, INCLUDING CONSEQUENTIAL, LOST PROFITS, SPECIAL, INDIRECT OR INCIDENTAL DAMAGES.

This limitation applies to



- anything related to the software, services, content (including code) on third party Internet sites, or third party programs; and
- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft knew or should have known about the possibility of the damages. The above limitation or exclusion may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

Please note: As this software is distributed in Quebec, Canada, some of the clauses in this agreement are provided below in French.

Remarque : Ce logiciel étant distribué au Québec, Canada, certaines des clauses dans ce contrat sont fournies ci-dessous en français.

EXONÉRATION DE GARANTIE. Le logiciel visé par une licence est offert « tel quel ». Toute utilisation de ce logiciel est ? votre seule risque et péril. Microsoft n'accorde aucune autre garantie expresse. Vous pouvez bénéficier de droits additionnels en vertu du droit local sur la protection des consommateurs, que ce contrat ne peut modifier. La ou elles sont permises par le droit locale, les garanties implicites de qualité marchande, d'adéquation ? un usage particulier et d'absence de contrefaçon sont exclues.

LIMITATION DES DOMMAGES-INTÉR?TS ET EXCLUSION DE RESPONSABILITÉ POUR LES DOMMAGES. Vous pouvez obtenir de Microsoft et de ses fournisseurs une indemnisation en cas de dommages directs uniquement ? hauteur de 5,00 \$ US. Vous ne pouvez prétendre ? aucune indemnisation pour les autres dommages, y compris les dommages spéciaux, indirects ou accessoires et pertes de bénéfices.

Cette limitation concerne:

- tout ce qui est relié au logiciel, aux services ou au contenu (y compris le code) figurant sur des sites Internet tiers ou dans des programmes tiers ; et
- les réclamations au titre de violation de contrat ou de garantie, ou au titre de responsabilité stricte, de négligence ou d'une autre faute dans la limite autorisée par la loi en vigueur.

Elle s'applique également, m?me si Microsoft connaissait ou devrait connaître l'éventualité d'un tel dommage. Si votre pays n'autorise pas l'exclusion ou la limitation de responsabilité pour les dommages indirects, accessoires ou de quelque nature que ce soit, il se peut que la limitation ou l'exclusion ci-dessus ne s'appliquera pas ? votre égard.

EFFET JURIDIQUE. Le présent contrat décrit certains droits juridiques. Vous pourriez avoir d'autres droits prévus par les lois de votre pays. Le présent contrat ne modifie pas les droits que vous conf?rent les lois de votre pays si celles-ci ne le permettent pas.

MS-.NET-Library-JS License N/A

MICROSOFT SOFTWARE LICENSE TERMS

MICROSOFT .NET LIBRARY

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft



- · updates,
- · supplements,
- · Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply.

BY USING THE SOFTWARE, YOU ACCEPT THESE TERMS. IF YOU DO NOT ACCEPT THEM, DO NOT USE THE SOFTWARE.

IF YOU COMPLY WITH THESE LICENSE TERMS, YOU HAVE THE PERPETUAL RIGHTS BELOW.

- 1. INSTALLATION AND USE RIGHTS.
- a. Installation and Use. You may install and use any number of copies of the software to design, develop and test your programs. You may modify, copy, distribute or deploy any .js files contained in the software as part of your programs.
- b. Third Party Programs. The software may include third party programs that Microsoft, not the third party, licenses to you under this agreement. Notices, if any, for the third party program are included for your information only.
- 2. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS.
- a. DISTRIBUTABLE CODE. In addition to the .js files described above, the software is comprised of Distributable Code. ?Distributable Code? is code that you are permitted to distribute in programs you develop if you comply with the terms below.
- i. Right to Use and Distribute.
 - You may copy and distribute the object code form of the software.
 - Third Party Distribution. You may permit distributors of your programs to copy and distribute the Distributable Code as part of those programs.
- ii. Distribution Requirements. For any Distributable Code you distribute, you must
 - use the Distributable Code in your programs and not as a standalone distribution;
 - require distributors and external end users to agree to terms that protect it at least as much as this agreement;
 - display your valid copyright notice on your programs; and
 - indemnify, defend, and hold harmless Microsoft from any claims, including attorneys' fees, related to the distribution or use of your programs.
- iii. Distribution Restrictions. You may not
 - alter any copyright, trademark or patent notice in the Distributable Code;
 - use Microsoft's trademarks in your programs' names or in a way that suggests your programs come from or are endorsed by Microsoft;
 - include Distributable Code in malicious, deceptive or unlawful programs; or
 - modify or distribute the source code of any Distributable Code so that any part of it becomes subject to an Excluded License. An Excluded License is one that requires, as



a condition of use, modification or distribution, that

- · the code be disclosed or distributed in source code form; or
- · others have the right to modify it.
- 3. SCOPE OF LICENSE. The software is licensed, not sold. This agreement only gives you some rights to use the software. Microsoft reserves all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that only allow you to use it in certain ways. You may not
 - · work around any technical limitations in the software;
 - reverse engineer, decompile or disassemble the software, except and only to the extent that applicable law expressly permits, despite this limitation;
 - · publish the software for others to copy;
 - · rent, lease or lend the software; or
 - transfer the software or this agreement to any third party.
- 4. BACKUP COPY. You may make one backup copy of the software. You may use it only to reinstall the software.
- 5. DOCUMENTATION. Any person that has valid access to your computer or internal network may copy and use the documentation for your internal, reference purposes.
- 6. EXPORT RESTRICTIONS. The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. For additional information, see www.microsoft.com/exporting.
- 7. SUPPORT SERVICES. Because this software is "as-is." we may not provide support services for it.
- 8. ENTIRE AGREEMENT. This agreement, and the terms for supplements, updates, Internet-based services and support services that you use, are the entire agreement for the software and support services.
- 9. APPLICABLE LAW.
- a. United States. If you acquired the software in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.
- b. Outside the United States. If you acquired the software in any other country, the laws of that country apply.
- 10. LEGAL EFFECT. This agreement describes certain legal rights. You may have other rights under the laws of your country. You may also have rights with respect to the party from whom you acquired the software. This agreement does not change your rights under the laws of your country if the laws of your country do not permit it to do so.
- 11. DISCLAIMER OF WARRANTY. THE SOFTWARE IS LICENSED "AS IS." YOU BEAR THE RISK OF USING IT. MICROSOFT GIVES NO EXPRESS WARRANTIES, GUARANTEES OR CONDITIONS. YOU MAY HAVE ADDITIONAL CONSUMER RIGHTS OR STATUTORY



GUARANTEES UNDER YOUR LOCAL LAWS WHICH THIS AGREEMENT CANNOT CHANGE. TO THE EXTENT PERMITTED UNDER YOUR LOCAL LAWS, MICROSOFT EXCLUDES THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

FOR AUSTRALIA - YOU HAVE STATUTORY GUARANTEES UNDER THE AUSTRALIAN CONSUMER LAW AND NOTHING IN THESE TERMS IS INTENDED TO AFFECT THOSE RIGHTS.

12. LIMITATION ON AND EXCLUSION OF REMEDIES AND DAMAGES. YOU CAN RECOVER FROM MICROSOFT AND ITS SUPPLIERS ONLY DIRECT DAMAGES UP TO U.S. \$5.00. YOU CANNOT RECOVER ANY OTHER DAMAGES, INCLUDING CONSEQUENTIAL, LOST PROFITS, SPECIAL, INDIRECT OR INCIDENTAL DAMAGES.

This limitation applies to

- anything related to the software, services, content (including code) on third party Internet sites, or third party programs; and
- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft knew or should have known about the possibility of the damages. The above limitation or exclusion may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

Please note: As this software is distributed in Quebec, Canada, some of the clauses in this agreement are provided below in French.

Remarque : Ce logiciel étant distribué au Québec, Canada, certaines des clauses dans ce contrat sont fournies ci-dessous en français.

EXONÉRATION DE GARANTIE. Le logiciel visé par une licence est offert « tel quel ». Toute utilisation de ce logiciel est à votre seule risque et péril. Microsoft n'accorde aucune autre garantie expresse. Vous pouvez bénéficier de droits additionnels en vertu du droit local sur la protection des consommateurs, que ce contrat ne peut modifier. La ou elles sont permises par le droit locale, les garanties implicites de qualité marchande, d'adéquation à un usage particulier et d'absence de contrefaçon sont exclues.

LIMITATION DES DOMMAGES-INTÉRÊTS ET EXCLUSION DE RESPONSABILITÉ POUR LES DOMMAGES. Vous pouvez obtenir de Microsoft et de ses fournisseurs une indemnisation en cas de dommages directs uniquement à hauteur de 5,00 \$ US. Vous ne pouvez prétendre à aucune indemnisation pour les autres dommages, y compris les dommages spéciaux, indirects ou accessoires et pertes de bénéfices.

Cette limitation concerne:

- tout ce qui est relié au logiciel, aux services ou au contenu (y compris le code) figurant sur des sites Internet tiers ou dans des programmes tiers ; et
- les réclamations au titre de violation de contrat ou de garantie, ou au titre de responsabilité stricte, de négligence ou d'une autre faute dans la limite autorisée par la loi en vigueur.

Elle s'applique également, même si Microsoft connaissait ou devrait connaître l'éventualité d'un tel dommage. Si votre pays n'autorise pas l'exclusion ou la limitation de responsabilité



pour les dommages indirects, accessoires ou de quelque nature que ce soit, il se peut que la limitation ou l'exclusion ci-dessus ne s'appliquera pas à votre égard.

EFFET JURIDIQUE. Le présent contrat décrit certains droits juridiques. Vous pourriez avoir d'autres droits prévus par les lois de votre pays. Le présent contrat ne modifie pas les droits que vous confèrent les lois de votre pays si celles-ci ne le permettent pas.

MIT Json.NET N/A

The MIT License (MIT)

Copyright (c) 2007 James Newton-King

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

BSD - Kowalski 2011

Copyright (c) 2004-2011 Jaroslaw Kowalski < jaak@jkowalski.net>

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of Jaroslaw Kowalski nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN



CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

BSD 3-Clause for App vNext 1.0

New BSD License

=

Copyright (c) 2015-2020, App vNext

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of App vNext nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL <COPYRIGHT HOLDER> BE LIABLE FOR ANY DIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

BSD - Polly 7.1

Copyright (c) 2015-2018, App vNext

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of App vNext nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.



THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL <COPYRIGHT HOLDER> BE LIABLE FOR ANY DIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

MICROSOFT WCF DATA SERVICES N/A

MICROSOFT SOFTWARE LICENSE TERMS

MICROSOFT WCF DATA SERVICES

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft

- updates,
- · supplements,
- · Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply.

By using the software, you accept these terms. If you do not accept them, do not use the software.

If you comply with these license terms, you have the perpetual rights below.

- 1. INSTALLATION AND USE RIGHTS. You may install and use any number of copies of the software on your devices.
- 2. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS.
- a. Distributable Code. The software contains code that you are permitted to distribute in programs you develop if you comply with the terms below.
- i. Right to Use and Distribute. The code and text files listed below are "Distributable Code."
 - REDIST.TXT Files. You may copy and distribute the object code form of code listed in REDIST.TXT files.
 - Third Party Distribution. You may permit distributors of your programs to copy and distribute the Distributable Code as part of those programs.
- ii. Distribution Requirements. For any Distributable Code you distribute, you must
 - add significant primary functionality to it in your programs;
 - for any Distributable Code having a filename extension of .lib, distribute only the results of running such Distributable Code through a linker with your program;



- distribute Distributable Code included in a setup program only as part of that setup program without modification;
- require distributors and external end users to agree to terms that protect it at least as much as this agreement;
- display your valid copyright notice on your programs; and
- indemnify, defend, and hold harmless Microsoft from any claims, including attorneys' fees, related to the distribution or use of your programs.
- iii. Distribution Restrictions. You may not
 - alter any copyright, trademark or patent notice in the Distributable Code;
 - use Microsoft's trademarks in your programs' names or in a way that suggests your programs come from or are endorsed by Microsoft;
 - distribute Distributable Code to run on a platform other than the Windows platform;
 - include Distributable Code in malicious, deceptive or unlawful programs; or
 - modify or distribute the source code of any Distributable Code so that any part of it becomes subject to an Excluded License. An Excluded License is one that requires, as a condition of use, modification or distribution, that
 - the code be disclosed or distributed in source code form; or
 - · others have the right to modify it.
- 3. SCOPE OF LICENSE. The software is licensed, not sold. This agreement only gives you some rights to use the software. Microsoft reserves all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that only allow you to use it in certain ways. You may not
 - work around any technical limitations in the software;
 - reverse engineer, decompile or disassemble the software, except and only to the extent that applicable law expressly permits, despite this limitation;
 - make more copies of the software than specified in this agreement or allowed by applicable law, despite this limitation;
 - publish the software for others to copy;
 - rent, lease or lend the software; or
 - use the software for commercial software hosting services.
- 4. BACKUP COPY. You may make one backup copy of the software. You may use it only to reinstall the software.
- 5. DOCUMENTATION. Any person that has valid access to your computer or internal network may copy and use the documentation for your internal, reference purposes.
- 6. TRANSFER TO A THIRD PARTY. The first user of the software may transfer it and this agreement directly to a third party. Before the transfer, that party must agree that this agreement applies to the transfer and use of the software. The first user must uninstall the software before transferring it separately from the device. The first user may not retain any copies.



- 7. EXPORT RESTRICTIONS. The software is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. For additional information, see www.microsoft.com/exporting.
- 8. SUPPORT SERVICES. Because this software is "as is," we may not provide support services for it.
- 9. ENTIRE AGREEMENT. This agreement, and the terms for supplements, updates, Internet-based services and support services that you use, are the entire agreement for the software and support services.

10. APPLICABLE LAW.

- a. United States. If you acquired the software in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.
- b. Outside the United States. If you acquired the software in any other country, the laws of that country apply.
- 11. LEGAL EFFECT. This agreement describes certain legal rights. You may have other rights under the laws of your country. You may also have rights with respect to the party from whom you acquired the software. This agreement does not change your rights under the laws of your country if the laws of your country do not permit it to do so.
- 12. DISCLAIMER OF WARRANTY. The software is licensed "as-is." You bear the risk of using it. Microsoft gives no express warranties, guarantees or conditions. You may have additional consumer rights or statutory guarantees under your local laws which this agreement cannot change. To the extent permitted under your local laws, Microsoft excludes the implied warranties of merchantability, fitness for a particular purpose and non-infringement.

FOR AUSTRALIA – You have statutory guarantees under the Australian Consumer Law and nothing in these terms is intended to affect those rights.

13. LIMITATION ON AND EXCLUSION OF REMEDIES AND DAMAGES. You can recover from Microsoft and its suppliers only direct damages up to U.S. \$5.00. You cannot recover any other damages, including consequential, lost profits, special, indirect or incidental damages.

This limitation applies to

- anything related to the software, services, content (including code) on third party Internet sites, or third party programs; and
- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft knew or should have known about the possibility of the damages. The above limitation or exclusion may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

