



# INTEGRATION MODULE FOR VMWARE VSPHERE

*For Keverion Runbook Studio and Azure Automation*

## Release Notes

Version 1.4

January 2023

Microsoft  
Azure

Certified

# Introduction

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The Keverion Integration Module for VMware vSphere is an integration module for Runbook Studio and Azure Automation that provides integration and automation capabilities for VMware vSphere. The Keverion Integration Module for VMware vSphere is Microsoft Azure Certified.

*The integration module includes the following activities:*

<b>Add-VsphereVmDevice</b>	Adds a new device to an existing VM.
<b>Get-VsphereCustomAttribute</b>	Retrieves custom attributes for a VM or host and returns the results as a sequence of PObject instances.
<b>Get-VsphereObject</b>	Retrieves vSphere objects of a specified type (VM, host, datastore, etc.) and returns the results as a sequence of PObject instances.
<b>Get-VsphereVmDevice</b>	Retrieves VM device information for a specific VM and returns the results as a sequence of PObject instances.
<b>Get-VsphereVmInfo</b>	Retrieves additional Guest OS or status information for a specific VM.
<b>Get-VsphereVmSnapshot</b>	Retrieves VM snapshots.
<b>Move-VsphereVm</b>	Moves a VM to another folder/datastore/resource pool.
<b>New-VsphereVm</b>	Creates a new VM based on a specified VM template.
<b>New-VsphereVmSnapshot</b>	Creates a new VM snapshot.
<b>Remove-VsphereVm</b>	Removes an existing VM from inventory or deletes it permanently.
<b>Remove-VsphereVmSnapshot</b>	Removes VM snapshots.
<b>Restart-VsphereVm</b>	Restarts a running VM.
<b>Set-VsphereCustomAttribute</b>	Sets a VM or host custom attribute.
<b>Set-VsphereVm</b>	Modifies the properties and/or devices of an existing VM.
<b>Start-VsphereVm</b>	Starts a VM.
<b>Stop-VsphereVm</b>	Stops a VM.
<b>Suspend-VsphereVm</b>	Suspends a VM.

# System Requirements

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The Integration Module for VMware vSphere requires the following software to be installed and configured prior to implementing the integration. For more information about installing and configuring Runbook Studio and VMware vSphere, refer to the respective product documentation.

- Keverion Runbook Studio 5.2
- .Net Framework 4.7.2

- VMware vSphere vCenter 6.7, 7.0, 8.0 (On-premise)
- Windows Hybrid Runbook Worker

The Keverion Integration Module for VMware vSphere requires TLS 1.2 support to be enabled on your local computer or hybrid runbook worker. Please use [SystemDefaultTlsVersions](#) and [SCHANNEL\Protocols](#) in the Windows Registry to control the version of TLS in use.

## Installing the Integration Module

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The easiest way to install and deploy the Integration Module for VMware vSphere is from the PowerShell Gallery, but you can also download the module from Keverion and perform the steps manually.

You must install and deploy the integration module to each Azure Automation Account and Windows Hybrid Runbook Worker host system that you plan to use to run your runbooks. You must also install the Integration Module on any Runbook Studio host systems that you will be using to build and manage your runbooks.

### Using the PowerShell Gallery

Using the commands in the **PowerShellGet** module you can download the Keverion Integration Module for VMware vSphere from the PowerShell Gallery and install it on your local computer. You can also deploy the module directly from the PowerShell Gallery to any of your Azure Automation Accounts.

#### *Install the Integration Module on your local computer or Hybrid Runbook Worker:*

1. Confirm that the latest **PowerShellGet** module is installed.
2. Start a PowerShell window as Administrator and run the command:

```
Install-Module -Name Keverion.Vmware.Vsphere -Scope AllUsers
```

#### *Upload the Integration Module to an Azure Automation account:*

1. Go to the [PowerShell Gallery](#).
2. Click the **Azure Automation** tab.
3. Click **Deploy to Azure Automation**. You will be directed to Microsoft Azure.
4. Select the **Automation account** that you want to deploy the module to.
5. Click **OK**.

### Manual Installation

Alternatively, you can download the Integration Module package from Keverion and deploy it manually to your local computer, hybrid runbook workers and Automation Accounts.

The download package from Keverion includes a **.zip** file containing the Integration module as well as the User Guide and Release Notes. The following instructions assume that you have unzipped the download package and have access to the **.zip** file containing the Integration Module.

***Install the Integration Module on your local computer or Hybrid Runbook Worker:***

1. Copy the **Keverion.Vmware.Vsphere.zip** file to your local computer.
2. Right-click on the file and select **Properties**.
3. Click the **General** tab. If necessary, click **Unblock**, and then click **OK**.
4. Unzip the **Keverion.Vmware.Vsphere.zip** file.
5. Copy the **Keverion.Vmware.Vsphere** folder to a location in the `%PsModulePath%` path.

**Important:** When installing the integration module on a hybrid runbook worker, you must use a location that is accessible to all users of the computer.

***Upload the Integration Module to an Azure Automation account:***

1. Sign into [Microsoft Azure](#).
2. Open the Automation account that you want to upload the module to.
3. Click **Modules** under Shared Resources. The list of installed modules is displayed.
4. Click **Add a module** at the top of the list.
5. In the **Upload File** box, select the **Keverion.Vmware.Vsphere.zip** file that you downloaded.
6. Click **OK**. Importing the module may take several minutes.

## Licensing the Integration Module

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Licenses for Keverion integration modules are managed and deployed using the *Keverion Runbook Studio* and *Automation Connection Assets*.

***Register an Integration Module license with Runbook Studio:***

1. Open **Keverion Runbook Studio**.
2. On the **File** tab, click **About**.
3. Click **License Information**.
4. Click the **Integration Modules** tab, and then click **Add License**.
5. Select the integration module license file (.kaml) and click **Open**.
6. You should see your entitlements displayed in the list.
7. Click **OK**.

**Important:** Entitlements will not display until after the integration module has been installed on the Runbook Studio computer.

### *Create a Connection Asset with a license key and upload it to Azure:*

1. On the **Home** tab, click **Sign In**. The Sign In dialog appears.
2. Sign into your account.
3. In the **Active Azure Automation Account** box, select the account that you want to add the connection asset to.
4. Click **New Asset** and then click **Connection**. The New Connection dialog appears.
5. In the **Name** field, enter a name to identify the connection.
6. In the **Connection Type** field, select the desired connection type.
7. Enter the appropriate connection information in the provided fields.
8. Click **OK**.

### *Update all Connection Asset license keys and upload them to Azure:*

1. On the **Home** tab, click **Sign In**. The Sign In dialog appears.
2. Sign into your account.
3. In the Explorer panel, click the **Azure (Online)** group.
4. Right-click the Azure Automation Account that contains the connection assets you want to update, and then click **Update License Keys**. A summary is displayed.

## Version History

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### Version 1.4

- Verified support for VMware vSphere vCenter 8.0

### Version 1.3

- Added new activities Get-VsphereVmSnapshot, New-VsphereVmSnapshot, Remove-VsphereVmSnapshot.

### Version 1.2

- Verified support for VMware vSphere vCenter 7.0
- The Integration Module is now using .Net Framework 4.7.2.
- Hardcoded support for TLS 1.2 has been removed based on [Microsoft's TLS best practices](#). Please use [SystemDefaultTlsVersions](#) and [SCHANNEL\Protocols](#) in the Windows Registry to control the version of TLS in use.

### Version 1.1

- Improved error notification when no valid licenses can be found.

## Version 1.0

- The Keverion Integration Module for VMware vSphere is a new integration module for Runbook Studio and Azure Automation that lets you integrate your runbooks with vSphere.