RabbitMQ Helper

Integration Guide

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About RabbitMQ and RabbitMQ Helper

RabbitMQ is an important component of Secret Server's on-premises environment, providing a robust framework for queuing messages between Secret Server and its Distributed Engines. RabbitMQ is an enterprise-ready software package that provides reliability and clustering functionality superior to other applications. For more details, visit the RabbitMQ official website.



Note: RabbitMQ is not a Delinea product. Delinea provides support for RabbitMQ and Erlang versions that you install with the Delinea RabbitMQ Helper.

RabbitMQ Helper is a PowerShell-based tool designed to work with RabbitMQ. It provides a set of commands to streamline various RabbitMQ-related tasks including installation, configuration, and management. This makes it easier for users to interact with and efficiently manage RabbitMQ instances. The installation and un-installation steps for Erlang and RabbitMQ can be performed using two workflow commands, Install-Connector and Uninstall-Connector.

What can RabbitMQ Helper do for me?

RabbitMQ Helper can help with the following tasks:

- Install RabbitMQ online or offline with or without TLS
- Convert certificates for use with RabbitMQ
- Establish RabbitMQ clusters and streamline cluster policies
- Enable the management interface
- Create basic users
- View and manage the RabbitMQ log



Note: RabbitMQ Helper only works on Windows systems.

Installing RabbitMQ with RabbitMQ Helper

This documentation provides information about the different types of RabbitMQ and Helper installations, the usage of a Site Connector, and the validation for the RabbitMQ product.

- "Software Downloads and Requirements" on the next page
- "Installing RabbitMQ and Setting Up a Site Connector" on page ix
- "Installing RabbitMQ with RabbitMQ Helper" above
- "Validating the RabbitMQ Installation" on page x
- "About the Install-Connector Cmdlet" on page x

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Software Downloads and Requirements

The following table lists the download links and versions for each software element required to use the RabbitMQ Helper correctly.



Note: Delinea is aware that certain anti-virus scanners have flagged the OpenSSL download as malware. For more information, click <u>here</u>. Before installing RabbitMQ Helper, you must set up inbound firewall rules on the computer that is hosting the connector.

To view the compatible versions of the RabbitMQ-related applications, see the "Compatibility Matrix" on page xxv Starting from v11.0.0.0, RabbitMQ Helper introduces a new installation method via a guided user interface. The installation supports all types of Online and Offline installations for TLS and non-TLS configurations.

RabbitMQ Helper Software Downloads

Software and Download Links	Additional Notes
RabbitMQ Helper (current version)	You can install RabbitMQ Helper 11.1 by double-clicking the installer. To install RabbitMQ Helper for version 10.5.0.0 and above from a command line:
	1. Run the cmd as an administrator.
	2. Run on cmd: cd <helper-installer-directory>.</helper-installer-directory>
	<pre>3. Run on cmd: msiexec /i Delinea.RabbitMq.Helper.xx.x.x.msi /l*v install.log</pre>
	Starting from version 10.2.0.0 the -useDelineaMirror switch is now-useNonMirror. This change happened because commands use Delinea download mirror links as the default.
Microsoft.NET Desktop Runtime (v6.0 or above)	Installation of the RabbitMQ Helper v.11.0.0 requires Microsoft.NET Desktop Runtime (v6.0 or above) to run the User Interface.
Microsoft.NET - Windows Server Hosting (v7.0 or above)	We recommend installing .NET before you install RabbitMQ Helper.
PowerShell Core (v7.3.2 or above)	Install PowerShell 7 before performing the RabbitMQ Helper installation. To install the PowerShell Core:
	1. Run the installer.
	2. Accept the terms in the license agreement.
	3. Select Install and Finish.

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Software and Download Links	Additional Notes
ErLang (current version)	
RabbitMQ Server (current version)	

Installing RabbitMQ and Setting Up a Site Connector

A Site Connector is a combination of Erlang and RabbitMQ. To view the installation requirements for setting up a site connector, see RabbitMQ Secret Server documentation.

Downloading Installers using RabbitMQ Helper

To download the Erlang and RabbitMQ Installers using the RabbitMQ Helper, run the following commands (recommended):

```
Get-ErlangInstaller -Verbose
Get-RabbitMqInstaller -Verbose
```

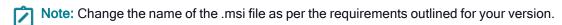
Alternatively, you can download the installers using official CND mirrors:

```
Get-ErlangInstaller -UseNonMirror -Verbose
Get-RabbitMqInstaller -UseNonMirror -Verbose
```

Installing RabbitMQ Helper via command line

To install RabbitMQ Helper for v10.5.0.0 and above:

- 1. Run the cmd prompt as an administrator.
- 2. Switch to the directory where the .msi file exists using the cd <helper-msi-directory-path> command.
- 3. Run the msiexec / i Delinea.RabbitMq.Helper.10.6.0.0.msi /l*v install.log command.



To install RabbitMQ Helper for v10.4.2.0 and below:

- 1. Double-click the RabbitMQ Helper Installer (Delinea.RabbitMq.Helper.xx.xx.xx.msi).
- 2. Once completed, the Installer window closes, and you can check for Delinea RabbitMQ Helper in the App drawer.

Installing RabbitMQ via the command line

Depending on your installation scenario, certain PowerShell cmdlets need to be run. For details, follow the links below to select what type of installation you need and its relevant cmdlets.

- Simple installations (without TLS):
 - "Installing RabbitMQ Online without TLS PowerShell" on page xii
 - "Installing RabbitMQ Offline Without TLS PowerShell" on page xiii
- Advanced installations (with TLS):
 - "Installing RabbitMQ Online with TLS (Advanced) PowerShell" on page xv
 - "Installing RabbitMQ Offline with TLS (Advanced) PowerShell" on page xvi

Validating the RabbitMQ Installation

After successfully installing RabbitMQ, the next step is to validate the RabbitMQ Helper installation.

Use the following commands in the RabbitMQ Helper PowerShell window:

- 1. Assert-RabbitMqConnectivity-Validates the connectivity to RabbitMQ.
- 2. Assert-RabbitMqIsRunning-Validates that RabbitMQ is running on the current host.



Note: If the command executes successfully without producing any output, this indicates a successful operation.

About the Install-Connector Cmdlet

The table below lists the commands to process in the Install-Connector cmdlet. Use the Install-Connector cmdlet to install RabbitMQ and not the individual commands available.

Install-Connector Cmdlet commands

Command	Description
Get-ErlangInstaller	Downloads the currently supported Erlang installer.
Get-RabbitMqInstaller	Downloads the currently supported RabbitMQ installer.
Uninstall-RabbitMq	Uninstalls the previous RabbitMQ installation.
Uninstall-Erlang	Uninstalls the previous Erlang installation.
Set-ErlangHomeEnvironmentalVariable	Sets the Erlang and RabbitMQ environmental variables.
Install-Erlang	Installs Erlang.

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Command	Description	
New-RabbitMqConfigDirectory	Creates a custom RabbitMQ configuration directory.	
Set-RabbitMqBaseEnvironmentalVariable	Sets the RabbitMQ BASE environment variable to the created configuration directory.	
With TLS		
Convert-CaCerToPem	Converts a CA certificate to the PEM file format.	
Convert-PfxToPem	Converts a Host PFX to the PEM file format.	
Convert-CngOrEccToPem	Converts a CNG or ECC key type certificate to the PEM file format.	
New-RabbitMqTlsConfigFiles	Creates a RabbitMQ TLS configuration file.	
Install-RabbitMq	Installs RabbitMQ.	
Copy-ErlangCookieFile	Copies the Erlang system cookie to the current user profile.	
Assert-RabbitMqIsRunning	Verifies that RabbitMQ is running.	
Enable-RabbitMqManagement	Enables the RabbitMQ management UI.	
New-RabbitMqUser	Creates a basic user.	
Grant-RabbitMqUserPermission	Grants permissions to the created user.	
Assert-RabbitMqConnectivity	Verifies that the newly created user can connect to RabbitMQ with TLS.	
Delete-RabbitMqUser	Deletes a default Admin(guest) in RabbitMQ.	
Create RabbitMQ Management Admin	Creates an Admin User for RabbitMQ Management UI access and for running commands that need Admin access.	
Enable-RabbitMqFeatureFlags	Enables all the stable feature flags in RabbitMQ. All feature flags will eventually become mandatory. For example, RabbitMQ 3.12 requires enabling feature flags introduced in the 3.11 series before the upgrade, RabbitMQ 3.11 graduates all 3.8 flags, and so on.	

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Command	Description	
New-RabbitMqNonTlsConfigFiles	Creates a RabbitMQ non-TLS configuration file.	
Install-RabbitMq	Installs RabbitMQ.	
Copy-ErlangCookieFile	Copies the Erlang system cookie to the current user profile.	
Assert-RabbitMqIsRunning	Verifies that RabbitMQ is running.	
Enable-RabbitMqManagement	Enables the RabbitMQ management UI.	
New-RabbitMqUser	Creates a basic user.	
Grant-RabbitMqUserPermission	Grants permissions to the created user.	
Assert-RabbitMqConnectivity	Asserts that the newly created user can connect to RabbitMQ without TLS.	
Delete-RabbitMqUser	Deletes a default Admin(guest) in RabbitMQ.	
Create RabbitMQ Management Admin	Creates an Admin User for RabbitMQ Management UI access and for running commands that need Admin access.	
Enable-RabbitMqFeatureFlags	Enables all the stable feature flags in RabbitMQ.	
	All feature flags will eventually become mandatory. For example, RabbitMQ 3.12 requires enabling feature flags introduced in the 3.11 series before the upgrade, RabbitMQ 3.11 graduates all 3.8 flags, and so on.	



Note: After a successful installation, you must create an Admin User to access RabbitMQ Management. Therefore, the Install-Connector command process now includes a provision to add an Admin User.

Installing RabbitMQ Online without TLS PowerShell

If you are installing RabbitMQ without TLS, run the following PowerShell commands:

```
# Get the values from your Secret Server Site Connector page for the following:
$username = "<SITE CONNECTOR USERNAME FROM SECRET SERVER>"
$password = "<SITE CONNECTOR PASSWORD FROM SECRET SERVER>"

# Create a PSCredential object to use for the installation
$credential = New-Object System.Management.Automation.PSCredential ($username, (ConvertTo-SecureString -String $password -AsplainText -Force))
```

```
# Insert RabbitMQ Admin User Credentials
$adminUsername = "<User-defined RabbitMQ admin Username>"
$adminPassword = "<User-defined RabbitMQ admin Password>"

# Create a PSCredential object to use for the installation
$adminCredential = New-Object System.Management.Automation.PSCredential ($adminUsername, (ConvertTo-SecureString -String $adminPassword -AsPlainText -Force))

#Online install without TLS command
Install-Connector
    -Credential $credential
    -AdminCredential $adminCredential
    -Verbose;
```

There are more switches for this Install-Connector cmdlet. For more information, run get-help install-connector when inside the RabbitMQ Helper.



Note: Using an admin account for the installation is required.

Installing RabbitMQ Offline Without TLS PowerShell

An offline RabbitMQ installation is helpful when you are trying to install RabbitMQ on a system without internet access and cannot download any installers directly.

Installing RabbitMQ Offline Without TLS for Version 10.5.0.0 and Later

- 1. Download the Erlang and RabbitMQ Installers on a computer with internet access using the installation links provided in the "Installing RabbitMQ with RabbitMQ Helper" on page vii section.
 - Note: Make sure to verify the compatibility matrix before downloading the installer.
- 2. Copy the downloaded installers (for Erlang and RabbitMQ) and the RabbitMQ-Helper Installer to the target (offline) host computer.
- 3. Install the RabbitMQ-Helper on the host computer that does not have internet access.
- 4. Conduct the desired offline installation on the target host by running the commands provided below.

```
#Get the values from your Secret Server Site Connector page for the following:
$username = "<SITE CONNECTOR USERNAME FROM SECRET SERVER>"
$password = "<SITE CONNECTOR PASSWORD FROM SECRET SERVER>"

#Create a PSCredential object to use for the installation
$credential = New-Object System.Management.Automation.PSCredential ($username, (ConvertTo-SecureString -String $password -AsPlainText -Force))
```

```
# Insert RabbitMQ Admin User Credentials
$adminUsername = "<User-defined RabbitMQ admin Username>"
$adminPassword = "<User-defined RabbitMQ admin Password>"

# Create a PSCredential object to use for the installation
$adminCredential = New-Object System.Management.Automation.PSCredential
($adminUsername, (ConvertTo-SecureString -String $adminPassword -AsPlainText -Force))

Install-Connector
-Credential $credential
-AdminCredential $adminCredential
-OfflineErlangInstallerPath "<erlang-installer-with-complete-path>"
-OfflineRabbitMqInstallerPath "<rabbitmq-installer-with-complete-path>"
-Verbose;
```

Installing RabbitMQ Offline Without TLS for Version 10.4.2.0 and Earlier

- 1. Download the Erlang and RabbitMQ Helper on a computer with internet access. For details about the installation process, see "Installing RabbitMQ with RabbitMQ Helper" on page vii.
 - Note: Make sure to verify the <u>compatibility matrix</u> before downloading the installer.
- 2. Copy the downloaded installers (Erlang and RabbitMQ) and RabbitMQ Helper Installer to the target (offline) host computer.
- 3. Install the RabbitMQ Helper on the host computer that does not have internet access.
- 4. Run the scripts listed below on the host computer where RabbitMQ Helper is installed.

These scripts are a necessary preliminary step for the RabbitMQ installation command, as they prepare the Helper for offline installation.

```
Get-ErlangInstaller ` -PrepareForOfflineInstall ` -OfflineErlangInstallerPath "<erlang-
installer-with-complete-path>" ` -Verbose;
#Use the -Force switch to force download even if the files exist on the system

Get-RabbitMqInstaller ` -PrepareForOfflineInstall ` -OfflineRabbitMqInstallerPath
"<rabbitmq-installer-with-complete-path>" ` -Verbose;
#Use the -Force switch to force download even if the files exist on the system
```

5. Conduct the desired offline installation on the target host by running the installation scripts provided below.

```
# Get the values from your Secret Server Site Connector page for the following:
$username = "<SITE CONNECTOR USERNAME FROM SECRET SERVER>"
$password = "<SITE CONNECTOR PASSWORD FROM SECRET SERVER>"
```

```
# Create a PSCredential object to use for the installation
$credential = New-Object System.Management.Automation.PSCredential ($username.
(ConvertTo-SecureString -String $password -AsPlainText -Force))
# Insert RabbitMQ Admin User Credentials
$adminUsername = "<User-defined RabbitMQ admin Username>"
$adminPassword = "<User-defined RabbitMQ admin Password>"
# Create a PSCredential object to use for the installation
$adminCredential = New-Object System.Management.Automation.PSCredential
($adminUsername, (ConvertTo-SecureString -String $adminPassword -AsPlainText -Force))
# Offline Installation Without TLS
Install-Connector
    -Credential $credential
    -AdminCredential $adminCredential
    -offlineErlangInstallerPath "<erlang-installer-with-complete-path>" `
    -OfflineRabbitMqInstallerPath "<rabbitmq-installer-with-complete-path>" `
    -verbose;
```

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Note: There are more switches for this Install-Connector cmdlet. For more information, run gethelp install-connector when inside the RabbitMQ Helper.

Installing RabbitMQ Online with TLS (Advanced) PowerShell

General TLS requirements

- The certificate used has to match the hostname used by RabbitMQ. Wildcard certificates are supported.
- The certificate has to be an RSA with 2048 bit encryption or higher for the RabbitMQ Helper to be able to convert it.
 - CNG and/or ECC certificates can be manually converted with OpenSSL, see <u>Convert a CNG or ECC</u> certificate to PEM File
- The certificate chain has to be trusted by both the RabbitMq node and anything connecting to the RabbitMQ host
 - If using self-signed certificates, ensure that the certificates are properly installed in the certificate store.

To conduct an online with TLS installation, run the commands provided below.

```
$path = "C:\Program Files\Delinea Software Ltd\RabbitMq Helper\net6.0"
$username = "<SITE CONNECTOR USERNAME FROM SECRET SERVER>"
$password = "<SITE CONNECTOR PASSWORD FROM SECRET SERVER>"
```

```
# Create a PSCredential object to use for the installation
$cred = New-Object System.Management.Automation.PSCredential ($username, (ConvertTo-
SecureString -String $password -AsPlainText -Force))
# Insert RabbitMQ Admin User Credentials
$adminUsername = "<User-defined RabbitMQ admin Username>"
$adminPassword = "<User-defined RabbitMQ admin Password>"
# Create a PSCredential object to use for the installation
$adminCredential = New-Object System.Management.Automation.PSCredential ($adminUsername,
(ConvertTo-SecureString -String $adminPassword -AsPlainText -Force))
# FQDN which will be used by clients connecting to this RabbitMq host
$fqdn = "localhost";
$certpath = $path;
$pfxCred = Get-Credential -UserName PfxUserName -Message "Enter the PFX password. Username
is ignored";
#(the password for the example localhost.pfx certificate is "password1")
#$password = ConvertTo-SecureString "PlainTextPassword" -AsPlainText -Force
#$pfxCred = New-Object System.Management.Automation.PSCredential ("Ignored", $password)
Install-Connector
-Hostname $fqdn
-Credential $cred
-AdminCredential $adminCredential
-CaCertPath "$certpath\localhostca.cer" \rightarrow
-PfxPath "$certpath\localhost.pfx"
-PfxCredential $pfxCred
-verbose:
```

There are more switches for this commandlet. For more information, run "get-help install-connector" when inside the helper.



Note: Using a local, non-domain admin account for the installation is required.

Installing RabbitMQ Offline with TLS (Advanced) PowerShell

Downloading the RabbitMQ and and installers

Before you begin, make sure that you download the RabbitMQ and Erlang installers.



Note: Starting from version 10.2.0.0 the **-UseDelineaMirror** switch is now **-UseNonMirror**. This change happened because commands are using Delinea download mirror links as the default.

To set up download locations, run the commands below.

```
To get the download locations for the installers, run the following command: Get-DownloadLocations;
```

```
#To get the official CND mirror download location, run the following command:
Get-DownloadLocations -UseNonMirror
```

Next, copy the offline folder to the target system which does not have internet and proceed with the desired installation.

General TLS requirements

- The certificate used has to match the hostname used by RabbitMq. Wildcard certificates are supported.
- The certificate has to be an RSA with 2048 bit encryption or higher for the RabbitMq Helper to be able to convert
 it
 - CNG and/or ECC certificates can be manually converted with OpenSSL, see <u>Convert a CNG or ECC</u> certificate to PEM File
- The certificate chain has to be trusted by both the RabbitMq node and anything connecting to the RabbitMq host.
 - If using self-signed certificates, ensure that the certificates are properly installed in the certificate store.

Conduct the desired offline installation by running the commands provided below.

```
$path = "C:\Program Files\Delinea Software Ltd\RabbitMq Helper\net6.0"
$username = "<SITE CONNECTOR USERNAME FROM SECRET SERVER>"
$password = "<SITE CONNECTOR PASSWORD FROM SECRET SERVER>"
# Create a PSCredential object to use for the installation
$cred = New-Object System.Management.Automation.PSCredential ($username, (ConvertTo-
SecureString -String $password -AsplainText -Force))
# FQDN which will be used by clients connecting to this RabbitMq host. *It has to match
the subject name in the PFX*
$fqdn = "fullyqualifieddomainname.in.the.pfx";
$certpath = $path;
#(the password for the example localhost.pfx certificate is "password1")
#if you don't want to be prompted, you can hardcode your credential in the script
#$password = ConvertTo-SecureString "PlainTextPassword" -AsPlainText -Force
#$pfxCred = New-Object System.Management.Automation.PSCredential ("Ignored", $password)
Install-Connector ` -Hostname $fqdn ` -Credential $cred ` -UseTls ` -CaCertPath
"$certpath\localhostca.cer" \ -PfxPath "$certpath\localhost.pfx" \ -PfxCredential $pfxCred
 -OfflineErlangInstallerPath "$path\o-erlang.exe" -OfflineRabbitMgInstallerPath
"$path\o-rabbitMq.exe" \ -Verbose;
```

There are more switches for this Install-Connector cmdlet. For more information, run the get-help install-connector command inside the RabbitMQ Helper.

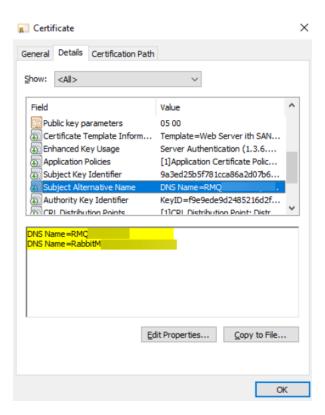


Note: Using a local, non-domain admin account for the Installation is suggested.

RabbitMQ TLS Certificate requirements

TLS Certificates for RabbitMQ must comply with the following rules:

- Common name should match the host FQDN.
- Subject alternative name for the host NetBIOS name.
- Subject alternative name for the cluster name (if you are planning to implement a RabbitMQ cluster).
- Certificate must have a private key.
- Certificate must support Server Authentication.
- Key size of at least 2048 bits or higher.
- Optional: Installed in the machine's local certificate store if possible (not all certificate formats and certificate authorities will support this).
- The certificate should come from a certificate authority with a certificate in the Trust Root Certification Authorities store on the host.



Exporting the machine certificate for use with RabbitMQ

To export the machine certificate:

- 1. Open the Certificate Manager.
- 2. Press Win + R to open the Run dialog.
- 3. Type certmgr.msc and press Enter.
- 4. In the Certificate Manager, go to Personal > Certificates.
- 5. Find the certificate you want to export.
- 6. Right-click the certificate and select All Tasks > Export.
- 7. The Certificate Export Wizard will open. Select **Next**.
- 8. Select Yes, export the private key and then, select Next.
- 9. Ensure that Personal Information Exchange PKCS #12 (.PFX) is selected.
- 10. Check Password and enter a password to protect the PFX file. Confirm the password and select Next.
- 11. Select **Browse** to choose the location and file name for the PFX file.
- 12. Enter the desired file name and select **Save**.
- 13. Select **Next** and review the settings.
- 14. Select **Finish** to complete the export process.

Exporting the Certificate Authority certificate for use with RabbitMQ

To export the Certificate Authority certificate:

- 1. Open the Certificate Manager.
- 2. Press Win + R to open the Run dialog.
- 3. Type certmgr.msc and press Enter.
- 4. In the Certificate Manager, go to **Trusted Root Certification Authorities > Certificates**.
- 5. Find the root certificate you want to export.
- 6. Right-click the certificate and select All Tasks > Export.
- 7. The Certificate Export Wizard will open. Select Next.
- 8. Choose DER encoded binary X.509 (.CER).
- 9. Select **Browse** to choose the location and file name for the CER file.
- 10. Enter the desired file name and select Save.
- Select Next and review the settings.
- 12. Select Finish to complete the export process.

Manually converting a non-TLS RabbitMQ to use TLS

Converting the host PFX certificate

1. Install OpenSSL.

You can also choose another service for the certificate conversion.

- Run the "C:\Program Files\OpenSSL-Win64\bin\openssl.exe" pkcs12 -in <filename>.pfx -nocerts
 -out key.pem:
 - a. Enter password created when the PFX was created.
 - b. Enter a password to use for the PEM (best to use the same password as the PFX).
- 3. Run the "C:\Program Files\OpenSSL-Win64\bin\openssl.exe" pkcs12 -in <filename>.pfx -clcerts -nokeys -out cert.pem using the original PFX password.
- 4. Run the "C:\Program Files\OpenSSL-Win64\bin\openssl.exe" rsa -in key.pem -out cert.key using the newly created password.

Converting the Trusted Root Certificate Authority Certificate

Run the "C:\Program Files\OpenSSL-Win64\bin\openssl.exe" x509 -in ca.cer -outform pem -out ca.pem.

The complete example looks like the following:

- "C:\Program Files\OpenSSL-Win64\bin\openssl.exe" pkcs12 -in c:\temp\RMQCLUSTER3.pfx nocerts -out c:\temp\key.pem
- "C:\Program Files\OpenSSL-Win64\bin\openssl.exe" pkcs12 -in c:\temp\RMQCLUSTER3.pfx clcerts -nokeys -out c:\temp\cert.pem
- "C:\Program Files\OpenSSL-Win64\bin\openssl.exe" rsa -in c:\temp\key.pem -out c:\temp\cert.key
- "C:\Program Files\OpenSSL-Win64\bin\openssl.exe" x509 -in c:\temp\ca.cer -outform pem -out c:\temp\ca.pem

If the process was successful, you should have the following files ready for use with RabbitMQ:

- ca.pem
- cert.pem
- cert.key

Updating the RabbitMQ config to use TLS

To make necessary updates to use TLS in the RabbitMQ:

- 1. Copy the ca.pem, cert.pem, and cert.key to c:\RabbitMQ location on your RabbitMQ host.
- 2. Run notepad as administrator and open C:\RabbitMq\rabbitmq.conf.
- 3. Add the following lines to the end of the config file:

```
listeners.ssl.default = 5671
ssl_options.versions.1 = tlsv1.2
ssl_options.versions.2 = tlsv1.3
ssl_options.verify = verify_peer
ssl_options.fail_if_no_peer_cert = false
ssl_options.cacertfile = C:\\RabbitMq\\ca.pem
ssl_options.certfile = C:\\RabbitMq\\cert.pem
```

```
ssl_options.keyfile = C:\\RabbitMq\\cert.key
The complete example will look like the following:
listeners.tcp.default = 5672
# logging to file and/or to an exchange
# log.dir = C:\\temp
log.file = rabbit@RMQCLUSTER3.log
# log.file = false
log.file.level = error
# log.exchange = true
# log.exchange.level = error
listeners.ssl.default = 5671
ssl options.versions.1 = tlsv1.2
ssl options.versions.2 = tlsv1.3
ssl_options.verify = verify_peer
ssl options.fail if no peer cert = false
ssl_options.cacertfile = C:\\RabbitMq\\ca.pem
ssl options.certfile = C:\\RabbitMq\\cert.pem
ssl_options.keyfile = C:\\RabbitMq\\cert.key
```

Installing RabbitMQ with TLS for CNG/ECC or Chained Certificates

The TLS Installation process for CNG/ECC or Chained certificates differs because this conversion requires OpenSSL as a prerequisite. If you don't have OpenSSL installed, click here to download it.

If you're installing RabbitMQ with TLS for CNG/ECC or Chained Certificates, follow these steps:

- 1. Perform a Non-TLS Installation(Offline/Online).
- 2. Convert the CNG/ECC or Chained certificates to PEM using Conversion commands.

After the conversion, you will get a .pem and a .key files. For details, see "Certificates Conversion Commands" on page xxvi.

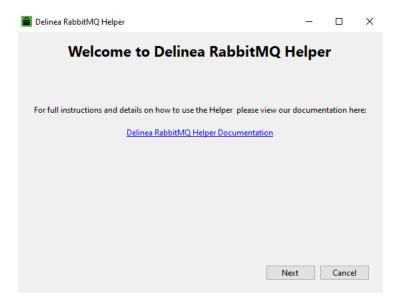
- 3. Convert a CA Certificate to PEM using the Convert-CaCertToPem command.
- 4. In the PowerShell prompt, run the following commands:

```
#Run the below command to configure your Non-TLS installation for TLS

New-RabbitMqTlsConfigFiles `-CaCertFile <ca.pem-file-with-full-path> `-CertFile <converted-cert.pem-file-with-full-path> `-KeyFile <generated-cert.key-file-with-full-path> -Verbose;
```

About RabbitMQ Helper Management User Interface

With v11.0.0.0, RabbitMQ Helper introduces a new user interface (UI) to simplify RabbitMQ installation by executing commands for Erlang and RabbitMQ installation. It supports all types of Online and Offline installations for TLS and non-TLS configurations.



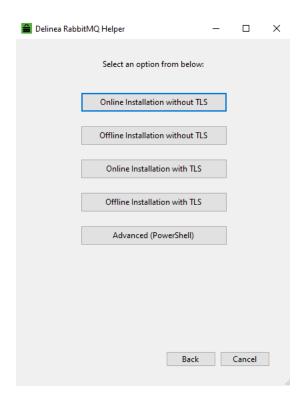
Installing RabbitMQ Helper via User Interface

Once you run RabbitMQ Helper v11.0.0.0, a welcome screen with the documentation hyperlink will appear for any related help. Select **Next** to see all the options available for RabbitMQ installation.

You can select the Advanced (PowerShell) option to execute any command other than the Installation. It will open the PowerShell window to execute all the Helper commands using this PowerShell window just as the Helper used to work in earlier versions.

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Installing RabbitMQ with RabbitMQ Helper



Installing UI RabbitMQ Online without TLS

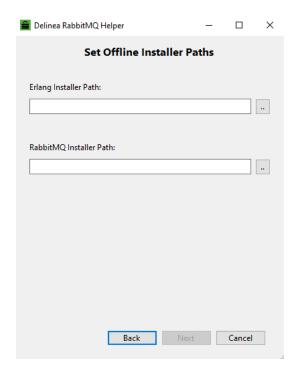
To install RabbitMQ online without TLS:

- 1. In the welcome screen, select Online Installation without TLS from the available options.
- 2. In the displayed dialog, review and accept the **Erlang and RabbitMQ License Agreement**. Once you selected both the license checkboxes, select **Next**.
- 3. In the displayed dialog, provide your **Secret Server Site Connector** credentials. Once you entered the username and password, select **Next**.
- 4. In the displayed dialog, provide credentials to create your RabbitMQ admin user and select Next.
- 5. The installation begins, and progress details are displayed in the **Command Run Output** dialog.
- 6. Upon the installation is complete, a message box will appear stating: "Command Run Successful."

Installing UI RabbitMQ Offline without TLS

The process for installing RabbitMQ without TLS using the offline installers is similar to installing UI RabbitMQ Online without TLS. The only difference is the extra dialog after the **Erlang and RabbitMQ License Agreement** requesting offline installer paths. Provide the installer paths, and select **Next** to finalize the installation.

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Installing UI RabbitMQ Online with TLS

To install RabbitMQ online with TLS:

- 1. In the welcome screen, select Online Installation without TLS from the available options.
- 2. In the displayed dialog, review and accept the **Erlang and RabbitMQ License Agreement**. Once you selected both the license checkboxes, select **Next**.
- 3. In the displayed dialog, specify the **Trusted Certificate Authority** path. You can select the certificate from the local directory.
- 4. Select Next.
- 5. Specify the Server Certificate PFX path. You can select the PFX file from the local directory.
- 6. Select Next.
- 7. Provide the **PFX** credentials. By default, the username is *Ignored*.
- 8. Select Next.
- 9. The installation starts, and process information is displayed in the Command Run Output dialog.
- Provide your Secret Server Site Connector credentials. Once you enter the username and password, select Next.
- 11. The installation begins, and progress details are displayed in the Command Run Output dialog.
- 12. Upon the installation is complete, a message box will appear stating: "Command Run Successful."

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Installing UI RabbitMQ Offline with TLS

To perform RabbitMQ installation with TLS, complete the steps described in the Installing UI RabbitMQ Online with TLS section. After the Erlang and RabbitMQ License Agreement completion, in the displayed dialog, provide offline installer paths. Then, select **Next** to finalize the installation.

Uninstalling RabbitMQ and Erlang



Note: If you have issues with RabbitMQ or Erlang, it is recommended to look at the troubleshooting section

Run the following commands to delete the required software:

- To uninstall RabbitMQ and Erlang installations, run the Uninstall-Connector cmdlet. This cmdlet removes both RabbitMQ and Erlang from the system.
- To uninstall only Rabbit MQ, run the Uninstall-RabbitMq cmdlet.
- To uninstall only Erlang, run the Uninstall-Erlang cmdlet.

For details about the RabbitMQ cmdlests, see "Uninstall-Connector" on page lxxxiv, "Uninstall-Erlang" on page lxxxiv and "Uninstall-RabbitMQ" on page lxxxv.

Compatibility Matrix

To install the supported version of the RabbitMQ-related applications, see the "Installing RabbitMQ with RabbitMQ Helper" on page vii.

RabbitMQ Helper	Release Date	Erlang	RabbitMQ
v11.1.0.0	11/15/2024	V26.2.5	V4.0.2
v11.0.0.0	8/29/2024	v26.2.5	v3.13.2
v10.6.0.0	7/03/2024	v26.2.5	v3.13.2
v10.5.0.0	6/07/2024	v26.2.1	v3.12.12
v10.4.2.0	2/16/2024	v26.2.1	v3.12.12
v10.4.1.0	12/01/2023	v26.1.2	v3.12.8
v10.4.0.0	9/22/2023	v26.0.2	v3.12.2
v10.3.0.0	8/25/2023	v26.0.2	v3.12.2

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RabbitMQ Helper	Release Date	Erlang	RabbitMQ
v10.2.0.0	6/12/2023	v25.1.2	v3.11.2
v10.1.0.0	5/23/2023	v25.1.2	v3.11.2
v10.0.0.1	5/4/2023	v25.1.2	v3.11.2
v10.0.0.0	8/2/2023	v25.1.2	v3.11.2
v9.6.0.0	12/20/2022	v25.1.2	v3.11.2
v9.5.0.2	3/8/2022	v24.0.0	v3.9.5
v9.5.0.1	11/7/2022	v24.0.0	v3.9.5
v9.5.0.0	3/14/2022	v24.0.0	v3.9.5



RabbitMQ recommends performing a rolling upgrade, i.e., upgrading to the corresponding version rather than jumping from a very old to the latest version. For more details, see the RabbitMQ official documentation.

Certificates Conversion Commands

The Convert cmdlets may be necessary when renewing a certificate, as typical installation commands handle initial certificate conversion and placement.



OpenSSL must be installed for the conversion using the **Convert-CngOrEccToPem** and **Convert-CaCertChainToPem** commands. Also, the path must be set in the System Environment Variables (for example, C:\Program Files\OpenSSL-Win64\bin).

Convert a CA Certificate to a PEM File

RabbitMQ only supports the PEM file format for certificate verification. Typically, a collection of CA certificates is provided in a single file called a CA bundle. There are two types of certificates: **Root** and **Intermediate**.

After generation, the newly created PEM file will appear in HomeDirectory%\rabbitmg.

For more information on certificates and TLS Support for RabbitMQ, see TLS Support.

Example Localhostca.cer

The Examples folder contains the following test file: localhostca.cer. This certificate file CER is strictly for testing TLS on a single machine. You have to import it into the machine Trusted Root Certification Authorities since it is not an actual CA certificate and is not trusted. Any connections made to RabbitMQ when this certificate is used will otherwise fail.

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```
$path = "$env:programfiles\Delinea Software Ltd\RabbitMq Helper\net6.0\Examples";
#Use a real CA cert in production unless there are good reasons not to
Convert-CaCertToPem `
   -CaCertPath "$path\localhostca.cer" `
   -Verbose;
```

Convert a CA Certificate Chain into a PEM File

RabbitMQ only supports the PEM file format for certificate verification. The new PEM file created below will be placed in the %HomeDirectory%\rabbitmq folder. Chains of CA certificates are usually distributed together in a single file, called a CA bundle. One certificate is considered a Root certificate, and the other is an Intermediate certificate.

The new PEM file created will be appear in HomeDirectory%\rabbitmq.

Examples rootca.cer and intermediateca.cer

In the Examples folder, you will find the rootca.cer and the intermediateca.cer files. These certificates are aimed to test TLS on a single machine. It is important to note that they are not actual CA certificates and therefore, cannot be trusted. To use them, import them into the Trusted Root Certification Authorities folder. Any connections made to RabbitMQ when these certificates are used before this addition, will fail.

Click here for more information on certificates and TLS Support for RabbitMQ.

Convert a Host PFX to a PEM File

RabbitMQ only supports the PEM File format for certificate verification. After generation, the newly created PEM file will appear in HomeDirectory%\rabbitmq.

Example Localhost.pfx

The Examples folder contains the following test file: localhost.pfx. This PFX is strictly for testing TLS on a single machine. You must import it into the Personal/Certificates certificate store, as it is not a valid certificate issued by a CA and is not trusted.

```
$path = "$env:programfiles \Program Files\Delinea Software Ltd\RabbitMq
Helper\net6.0\Examples";
```

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```
Convert-PfxToPem
-PfxPath "$path\localhost.pfx"
-PfxCredential $pfxCred
-Verbose;
```

For more information on certificates, see RabbitMQ TLS Support.

How to Use CNG or ECC Certificates with the Helper

To use CNG or ECC certificates:

- 1. Run the Convert-CngOrEccToPem command to convert your CNG or ECC PFX certificate to cert.key and cert.pem files.
- 2. Follow the Convert a CA Certificate to a PEM File instructions to generate your ca.pem file.
- 3. Follow the instructions to install RabbitMQ with TLS enabled, using the localhost certs.
- 4. Replace the example cert.key, cert.pem, and ca.pem in %HomeDirectory%\rabbitmq with your files.
- 5. Restart the RabbitMQ service using the Stop-RabbitMq and Start-RabbitMq helper commands.

Convert a CNG or ECC Certificate to PEM Files

RabbitMQ only supports the PEM File format for certificate verification. The new PEM file created below will be placed in the %HomeDirectory%\rabbitmq folder.

.pfx to .pem Conversion Example

The Examples folder contains the following test file: localhost.pfx. This PFX is strictly for testing TLS on a single machine. You have to import it in the Personal/Certificates certificate store for it to be useable, as it is not a valid certificate issued by a CA and is not trusted. Any connections made to RabbitMQ when this certificate is used before being added to the store, will otherwise fail.

RabbitMQ supports CNG and/or ECC certificates. OpenSSL is needed to convert these types of certificates from PFX. OpenSSL can also be used directly to perform the conversion.

Manual Conversion from .pfx to .pem Using OpenSSL

For manual conversions, use the following commands:

```
openssl pkcs12 -in localhost.pfx -nocerts -out cert.key -nodes
openssl pkcs12 -in localhost.pfx -clcerts -nokeys -out cert.pem
```

.pfx to .pem Conversion Using RabbitMQ Helper

You can use the Convert-CngOrEccToPem command for this conversion. It will generate the two files below in the %HomeDirectory%\rabbitmq folder:

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Migrating an existing RabbitMQ to use the new RabbitMQ Quorum Site Connector

- CngEccCert.key
- CngEccCert.pem

The converted files will be generated in the RabbitMQ folder inside the Default Directory (for example, C:\RabbitMq\...).

Migrating an existing RabbitMQ to use the new RabbitMQ Quorum Site Connector

In the new RabbitMQ v4.0.2, the developers have deprecated the classic mirroring queues, prompting users to migrate to Quorum queues. This documentation provides details about how to configure a new Quorum Site Connector and use it for a RabbitMQ instance.

Creating the new Site Connector

To create a new Site Connector:

- 1. In Secret Server, go to **Settings > Site Connectors**.
- 2. Select Add site connector in the top right corner.
- 3. For the Queue type, select RabbitMQ Quorum.
- 4. For the **Site Connector**, provide a name.
- 5. Select the checkbox for Use SSL if you are using SSL with your RabbitMQ.
- 6. Provide the hostname for your RabbitMQ node.
 - Note: If you are using a RabbitMQ cluster, use the cluster hostname.
- 7. Leave the **Port** set to 5672 or 5671 if you are using SSL.
- 8. Save the Site Connector.
- 9. Select **View Credentials** in the top right corner to view the username and password you will need for the next steps.

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Adding the new Site Connector credentials to your existing RabbitMQ instance

To add a Site Connector to the existing RabbitMQ instance:

- 1. Log in to your RabbitMQ Management console on your RabbitMQ server. If you are using a cluster, it is recommended to do this on your primary node.
- 2. Select the Admin tab.
- 3. In the Add a user section, enter the credentials from the new Site Connector you have just created.
- 4. Leave the Tags field blank as this is not required.
- 5. Select Add user.
- 6. Select the newly created user in the list at the top.
- 7. By default, the new user does not have any permissions assigned. In the **Set Permission** section, leave the default settings and select **Set permission**.
- 8. Once completed, this results in a new user account setup in your RabbitMQ with the same permission as your existing Site Connector user.



Validating and selecting the new Site Connector

To validate a new Site Connector:

- 1. In Secret Server, go to Settings > Site Connectors and select the Site Connector you created at the beginning.
- 2. Select the **Validate** link on the page to verify that Secret Server can connect to RabbitMQ using the new Quorum Queue Site Connector.

Once completed, the Site Connector will be ready for use.

Selecting the new Site Connector in Secret Server

To select an Internal Site Connector:

- 1. In Secret Server, go to **Settings > Internal Site Connector**.
- 2. Select **Edit** in the top right corner.
- 3. From the displayed drop down, select your new Site Connector.

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This will cause the Secret Server to restart to set up the Queues and Exchanges on the new Site Connector. It is recommended that this step be performed during a downtime window.

4. Select Save.

To select a Site Connector in the Sites and engines:

- In Secret Server, go to Settings > Sites and engines.
- 2. Select the Configuration tab.
- 3. Select **Edit** in the top right corner.
- 4. From the Response Bus Site Connector drop down, select your new Site Connector.
- 5. Select Save.

To select a Site Connector in the Secret Server Sites:

- 1. In Secret Server, go to Settings > Sites and engines.
- 2. From the displayed drop down, select your new Site Connector.

Note: This option does not apply to the Local Site.

- 3. Select **Edit** in the top right corner.
- From the Response Bus Site Connector drop down, select your new Site Connector.
- 5. Select Save.

Note: When downtime is scheduled, restarting RabbitMQ and Secret Server is recommended to clear old

To perform RabbitMQ and Secret Server restart:

- 1. Turn off the Secret Server application pool on each of the Secret Server Web Servers by running the iisreset /stop command in an administrator cmd prompt.
- 2. Stop the RabbitMQ service on each of your RabbitMQ nodes.
- 3. After the service is stopped on all RabbitMQ nodes, start the service again on each.
- 4. Run the command iis reset /start on each you're your Secret Server Web Servers.

Clustering

The RabbitMQ Helper is a tool that streamlines that streamlines the RabbitMQ clustering process on Windows. For instructions, see Clustering Guide and Quorum Queues.



Warning: For Quorum Queues, ensure you have at least three nodes, or your cluster cannot tolerate a node fault.

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Warning: Be careful not to decommission a node from your cluster without first removing it from the member list of the Quorum Queues. It hosts replicas using the rabbitmq-queues shrink command. And if adding nodes after Quorum Queues has been configured in Secret Server, you must explicitly add the Quorum Queues to the node by using the rabbitmg-queues grow command. For more details, see RabbitMq Quorum Queue Management documentation.

The Helper does not assist with load-balancing. For details, see Load Balancing.

Clustering Prerequisites

When RabbitMQ is installed on a virtual or physical machine, it is already in a cluster of one node. To add another node to the cluster, you need to install RabbitMQ on a different virtual or physical machine and then join either of the nodes to the other cluster. The cluster name is irrelevant and can be changed later.

- Ensure that you have at least three RabbitMQ nodes already installed following the appropriate installation process.
- Ensure that all cluster nodes can resolve each others' DNS names to the correct IPs.
- Install RabbitMQ on N+1 virtual or physical machines.
- Check the availability of open firewall for cluster ports:
 - Make sure the firewall rule is open for the network type (private/domain only) on each virtual/physical machine where RabbitMQ nodes will be installed.
 - Required TCP ports: 4369, 25672,44002.
- See RabbitMQ Clustering to find more about the clustering details.
- On Erlang versions starting with 20.2, the cookie file locations are:
 - \%HOMEPATH%\.erlang.cookie (usually C:\Users\%USERNAME%\erlang.cookie for user %USERNAME%') if both the HOMEPATH environment variables is set.
 - %USERPROFILE%\.erlang.cookie, (usually C:\`Users\%USERNAME%\.erlang.cookie') if the HOMEPATH is not set.
- For the RabbitMQ Windows service: %USERPROFILE%\.erlang.cookie (usually C:\`WINDOWS\system32\config\systemprofile'). The cookie file used by the Windows service account and the user running CLI tools must be synchronized.
- On Erlang versions prior to 20.2 (e.g. 19.3 or 20.1), the cookie file locations are: %HOMEDRIVE%%HOMEPATH%.erlang.cookie(usually C:\`Users%USERNAME%.\erlang.cookiefor user %USERNAME%') if both the HOMEDRIVE and HOMEPATH environment variables are set,%USERPROFILE%.erlang.cookie (usually C:\`Users\%USERNAME%.\erlang.cookie') if HOMEDRIVE and HOMEPATH are not both set.
- For the RabbitMQ Windows service: %windir%\users\%user%.\erlang.cookie (usually C:Users\<UserName>.\erlang.cookie) The cookie file used by the Windows service account and the user running CLI tools must be synchronized.

Usually, the cookie location is the following: C:\WINDOWS\system32\config\systemprofile. That cookie value is the shared secret for the cluster, so all nodes joining the cluster must use this shared secret. By retrieving the value

Delinea RabbitMQ Helper Integration Guide Page xxxii of 98 from the cookie in the above node's location, try to join and use it with the Set ErlangCookieFileCommand on another node. The other node will have its Erlang cookie set to match the first node. Clustering commands join the other node to the first node and then bring the first node into the mirror.

Joining a Cluster Using the RabbitMQ Helper

To join a cluster using the RabbitMQ Helper, run the commands listed below.

Set-ErlangCookieFileCommand-updates the Erlang Cookie file with values given by the user. If two or more
nodes want to communicate, they must have the same shared secret called the Erlang cookie. For details, see
the Prerequisites section above.

You can update the existing erlang cookie file values to the nodes that need to be joined for clustering. Alternatively, use the same command with an arbitrary cookie on all nodes (if you want to use a new value or cannot look the existing one up).

2. Join-RabbitMqCluster—joins the other node in a cluster.



You will likely want to establish policies to replicate your queues. While the above two commands are enough to join three nodes minimum to a cluster, that cluster will not replicate queues without policies. For details, see RabbitMQ Clustering.

Joining a Cluster Powershell Example

#on the node which you are joining into the target node/cluster
#Use the value for cookie from the target node, collected in the prerequisite steps.
<cluster-cookie-value> can be found iside the Erlang Cookie File

Set-ErlangCookieFileCommand -CookieContent cluster-cookie-value> -Verbose
#using the CookieSet and FirewallConfigured will prevent the helper for prompting. Only use if you have actually already set the cluster cookie and you have configured your firewall
#OTHERHOSTNAME is CASE SENSITIVE and is the exact hostname of a machine that you are trying to join this machine into a cluster with.

Join-RabbitMqCluster -StrictHostname OTHERHOSTNAME -CookieSet - FirewallConfigured - Verbose

Clustering a Rabbit Node Without the Helper

Prerequisites

- Ensure that RabbitMQ is installed and running on each machine you want to include in the cluster
- Each node must have a unique name. By default, it is rabbit@hostname. You can change this value using the RABBITMQ_NODENAME environment variable

To cluster a Rabbit node in an alternative way:

- 1. Copy the .erlang.cookie from one node to all nodes in the system profile (usually C:\windows\System32\config\systemprofile) and the user profile running rabbitmqctl.bat.
- Restart the RabbitMQ nodes.

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- 3. Go to the RabbitMQ Bin Directory and run the following reset commands:
 - a. rabbitmqctl stop_app
 - b. rabbitmqctl reset

An example of the RabbitMQ Bin Directory: - C:\Program Files\RabbitMQ Server\rabbitmq_server-xx.xx\sbin.

- 4. Join the cluster by running the rabbitmqctl join_cluster rabbit@OTHERHOSTNAME command.
- 5. Start the RabbitMQ nodes by running the rabbitmqct start_app command.
- 6. Verify the cluster by running the rabbitmqctl cluster_statuscommand.

Establishing Cluster Policy (RabbitMQ Helper 11.0 and below)



Classic Mirroring Queues were deprecated in RabbitMQ v3.9 and removed in v4.0. It is recommended that users migrate to Quorum Queues.



Quorum queues do not require a minimum master policy. They use a more flexible quorum-based replication mechanism that ensures data durability and availability without relying on a specific number of master nodes. Therefore, 'Set-MinMasterToClusterPolicy' and 'New-RabbitMqClusterPolicy' are removed from RabbitMQ Helper v11.1.

Clusters do not mirror queues unless configured to do so via policies. The Helper creates unbalanced policies by default. Balanced policies require the execution of the Set-MinMasterToClusterPolicy command, which distributes queues to all nodes in the cluster.

Non-Balanced policy

All queues have it as primary. Therefore, the other nodes are not helping with the load even though they may have mirrors of those queues.

Balanced policy (Min-Master)

The gueues are distributed inside the cluster. Almost half use one node as their primary and vice versa.

Creating a New Cluster Policy Using the Helper



Quorum queues do not require a minimum master policy. They use a more flexible quorum-based replication mechanism that ensures data durability and availability without relying on a specific number of master nodes. Therefore, 'Set-MinMasterToClusterPolicy' and 'New-RabbitMqClusterPolicy' are removed from RabbitMQ Helper v11.1.

To create a new cluster policy, run the New-RabbitMqClusterPolicy -Name <policy_name> -Pattern <pattern_string> command in PowerShell command prompt.

The command consists of the following elements:

- New-RabbitMqClusterPolicy argument—creates an unbalanced cluster policy
- '-Name' argument sets the policy name. It must be unique

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■ The '-Pattern' argument sets a pattern to match at the beginning of the queue name. If the pattern is matched, the queue is replicated. For example, "^ActiveNonSslRabbitMq:" would match a queue that begins with 'ActiveNonSslRabbitMq:' and would replicate that queue across the cluster

An example of setting up a cluster policy in the Powershell prompt:

\$admincred = Get-Credential -Message "Enter the administrative user RabbitMq user username and
password";

New-RabbitMqClusterPolicy -Name cluster-test-all -Pattern "^ActiveNonSslRabbitMq:" -AdminCredential \$admincred.

You can create a policy with a custom sync batch size. The default is 400 for New-RabbitMqClusterPolicy because Delinea products have a worst-case scenario for messages to be 256KB. When a sync message is generated, 256* 400 = 100MB. A larger sync message can cause fragmentation if there is latency or network connection drops between cluster nodes.

An example of a synch batch size policy:

New-RabbitMqClusterPolicy -Name cluster-test-all -Pattern "^ActiveNonSslRabbitMq:" - AdminCredential \$admincred -SyncBatchSize 100.

For a policy with a custom replica count batch size, the default value for New-RabbitMqClusterPolicy is two because anything higher strains the cluster. Two replicas mean one master and one mirror.

An example of a replica count batch size policy:

New-RabbitMqClusterPolicy -Name cluster-test-all -Pattern "^ActiveNonSslRabbitMq:" - AdminCredential \$admincred -QueueReplicaCount 3.

For a policy with automatic sync mode, the default value for New-RabbitMqClusterPolicy is manual to avoid forcing a queue to synchronize when a new mirror joins automatically.

An example of an automatic sync mode policy:

New-RabbitMqClusterPolicy -Name cluster-test-all -Pattern "^ActiveNonSslRabbitMq:" - AdminCredential \$admincred -AutomaticSyncMode.

Establishing Policy without the Helper

The mentioned policy is not ideal and is not balanced. Use the RabbitMQ Helper if possible.

An example of a ctl command:

```
rabbitmqctl set_policy cluster-test-all "\^cluster\-test:" "{""ha-mode"":""all""}".
```

Commands:

- rabbitmqct1—the base command to interact with the RabbitMQ server
- set_policy—this subcommand defines a new policy for managing queues

Policy Definition Commands:

- cluster-test-all—this is the chosen name for the policy. It helps identify its purpose
- "\^cluster\-test:"—defines the pattern that the policy applies to.

Command elements description:

Management

- ^-matches the beginning of the queue name
- cluster-test-matches the literal string "cluster-test"
- ::-matches a colon, potentially separating a category from the queue name (optional here)
- .*—matches any character sequence zero or more times (to capture anything after "cluster-test:")
- '{"ha-mode"":""a11""}'-defines the policy configuration as a JSON string enclosed in single quotes.

Command elements description:

- "ha-mode"—this property specifies the High Availability (HA) mode for the gueues
- "all"—this value sets the HA mode to "all," which means the queue will be mirrored to all nodes in the RabbitMQ cluster

Leaving a Cluster



Warning: The Helper uses reset to leave the clusters. This removes the node from any cluster it belongs to, all data from the management database (such as configured users and hosts), and all persistent messages.

Removing a Node from a RabbitMQ Cluster Using the Helper

To reset the RabbitMQ node to the initial condition, run the Reset-RabbitMQNodeCommand.

Management

Generally, most management tasks are handled via the <u>RabbitMQ Management Plugin</u> and <u>RabbitMQ Management HTTP API.</u>

The RabbitMQ Helper uses the API to either automate or to assist with the following:

- RabbitMQ Node Diagnostics.
- Remove All Queues on a RabbitMQ Node.

RabbitMQ Node Diagnostics

The Helper contains several cmdlets that allow you to extract information about your cluster nodes and queues. You can use standard Powershell syntax to suit your needs.

The examples below represent a node where the Helper is installed. It is available to use the -verbose switch for more details.

User Credential Validation

```
Assert-RabbitMqConnectivity

$usercred = Get-Credential -Message "Enter the RabbitMq user username and"
```

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```
password to validate";
Assert-RabbitMqConnectivity -Credential $usercred
Assert-RabbitMqConnectivity -Hostname Nefarian -Credential $usercred
```

Node and Queue Information

```
#check to make sure RabbitMq is running
Assert-RabbitMqIsRunning
$admincred = Get-Credential -Message "Enter the administrative user RabbitMq user username
and password";
#get the cluster name
Get-RabbitMqClusterName -AdminCredential $admincred
#get all cluster nodes
$nodes = Get-RabbitMqClusterNodes -AdminCredential $admincred
#select basic node information
$nodes | Select name, type, running
#request the current node to conduct a health-check
Request-RabbitMqHealthCheck -AdminCredential $admincred
$queues = Get-RabbitMqQueues -AdminCredential $admincred
#select all queues which have a node as their master node
$queues | Where-Object {$_.node -eq 'rabbit@Nefarian'} | Select name | format-list
$queues | Where-Object {$_.node -eq 'rabbit@Nefarian'} | Measure
#select all queues which do not have a node as their master node
$queues | Where-Object {$_.node -ne 'rabbit@Nefarian'} | Select name,node | format-list
$queues | Where-Object {$_.node -ne 'rabbit@Nefarian'} | Measure
#select all queues which have a node as their salve node
$queues | Where-Object {$_.slave_nodes.Contains('rabbit@Nefarian')} | Select name,node |
format-list
#select all gueues and their respective effective policies
$queues | Select name.effective_policy_definition | format-list
```

Remove All Queues on a RabbitMQ Node

For debugging and testing purposes, you can remove all queues using the following commandlet: Remove-RabbitMqQueues

LoadBalancing

While RabbitMQ Helper can't assist with TCP load balancing for RabbitMQ, it's important to note that this is because it falls outside the scope of RabbitMQ. However, you can choose any load balancer that best suits your needs.

Several load-balancers are available, including but not limited to F5, NetScaler, and HAProxy.

HAProxy on Ubuntu Example for POC

```
sudo apt-get install openssh-server
sudo apt-get install haproxy
sudo nano /etc/haproxy/haproxy.cfg
sudo ufw allow 5671
sudo ufw enable
sudo service haproxy restart
```

Sample haproxy.cfg

```
qlobal
        log /dev/log
                        local0
                        local1 notice
        log /dev/log
        chroot /var/lib/haproxy
        user haproxy
        group haproxy
        daemon
defaults
        mode tcp
        maxconn 10000
        timeout connect 5s
        timeout client 100s
        timeout server 100s
listen rabbitmg 172.25.0.30:5671
        mode tcp
        balance roundrobin
        server SSLRabbitMqCN1 172.25.0.31:5671 weight 10 check inter 2000 rise 2 fall 2
        server SSLRabbitMqCN2 172.25.0.32:5671 weight 10 check inter 2000 rise 2 fall 2
```

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Get Help for Powershell cmdlets

The Powershell cmdlets provide instruction for various helper cmdlets.

Assert-RabbitMQConnectivity

```
NAME
    Assert-RabbitMqConnectivity
SYNOPSIS
    Validates connectivity to RabbitMq
    Assert-RabbitMqConnectivity -Credential <PSCredential> [-Hostname <string>] [-Port
<int>] [-UseTls <SwitchParameter>] [<CommonParameters>]
DESCRIPTION
    The Assert-RabbitMqConnectivity attempts to connect to RabbitMq the same way a
Distributed Engine or Secret Server would.
PARAMETERS
    -UseTls <SwitchParameter>
        Gets or sets the use TLS.
    -Hostname <string>
        Gets or sets the hostname.
    -SubjectName <string>
        Gets or sets the hostname.
        This is an alias of the Hostname parameter.
    -FQDN <string>
        Gets or sets the hostname.
        This is an alias of the Hostname parameter.
    -Port <int>
        Port to connect on.
    -Credential <PSCredential>
        Gets or sets the credential of the rabbit mg user.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
```

```
PS C:\>Assert-RabbitMqConnectivity

REMARKS
To see the examples, type: "get-help Assert-RabbitMqConnectivity -examples".
For more information, type: "get-help Assert-RabbitMqConnectivity -detailed".
For technical information, type: "get-help Assert-RabbitMqConnectivity -full".
For online help, type: "get-help Assert-RabbitMqConnectivity -online"
```

Assert-RabbitMQIsRunning

```
NAME
   Assert-RabbitMqIsRunning
SYNOPSIS
   Validates RabbitMq is running on the current host.
SYNTAX
   Assert-RabbitMqIsRunning [<CommonParameters>]
DESCRIPTION
   The Assert-RabbitIsRunning attempts read the status of RabbitMq.
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Assert-RabbitIsRunning
REMARKS
   To see the examples, type: "get-help Assert-RabbitMqIsRunning -examples".
   For more information, type: "get-help Assert-RabbitMqIsRunning -detailed".
   For technical information, type: "get-help Assert-RabbitMqIsRunning -full".
    For online help, type: "get-help Assert-RabbitMqIsRunning -online"
```

Convert-CaCertToPem

NAME

Convert-CaCertToPem

```
SYNOPSIS
   Converts a Certificate Authority cert to a pem.
SYNTAX
   Convert-CaCertToPem [-CaCertPath] <string> [<CommonParameters>]
DESCRIPTION
   The Convert-CaCertToPem cmdlet converts a Certificate Authority cert to a pem.
   The pem file will be located in the Delinea RabbitMq Site Connector folder.
PARAMETERS
    -CaCertPath <string>
       Gets or sets the ca cert path.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- FXAMPLF 1 -----
    PS C:\>
   Convert-CaCertToPem -CaCertPath "$PSScriptRoot\..\Examples\sc.cer" -Verbose
REMARKS
To see the examples, type: "get-help Convert-CaCertToPem -examples".
For more information, type: "get-help Convert-CaCertToPem -detailed".
For technical information, type: "get-help Convert-CaCertToPem -full".
For online help, type: "get-help Convert-CaCertToPem -online"
```

Convert-CngOrEccToPem

```
Converts a CNG or ECC Certificate Authority cert to a pem.

SYNTAX

Convert-CngOrEccToPem [-PfxPath] <string> -PfxCredential <PsCredential>
[<CommonParameters>]

DESCRIPTION

The Convert-CngOrEccToPem cmdlet converts a CNG or ECC Certificate Authority cert to a pem.

The pem file will be located in the Delinea RabbitMQ Site Connector folder.
```

```
PARAMETERS
-PfxPath <string>
Gets or sets the PFX path.
-PfxCredential <PSCredential>
Gets or set the credential for the PFX. Username part is ignored.
<CommonParameters>
This cmdlet supports the common parameters: Verbose, Debug,
ErrorAction, ErrorVariable, WarningAction, WarningVariable,
OutBuffer, PipelineVariable, and OutVariable. For more information, see
about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
----- EXAMPLE 1 -----
PS C:\>Convert-CngOrEccToPem -PfxPath "$PSScriptRoot..\Examples\sc.pfx"
-PfxPassword "password1" -Verbose
REMARKS
To see the examples, type: "Get-Help Convert-CngOrEccToPem -Examples"
For more information, type: "Get-Help Convert-CngOrEccToPem -Detailed"
For technical information, type: "Get-Help Convert-CngOrEccToPem -Full"
For online help, type: "Get-Help Convert-CngOrEccToPem -Online"
```

Convert-PfxToPem

```
NAME
Convert-PfxToPem

SYNOPSIS
Converts a PFX cert to a pem/key combination.

SYNTAX
Convert-PfxToPem [-PfxPath] <string> -PfxCredential <PSCredential>
[<CommonParameters>]

DESCRIPTION
The Convert-PfxToPem cmdlet converts a PFX cert to a pem/key combination.
```

```
The pem file will be located in the Delinea RabbitMq Site Connector folder.
PARAMETERS
   -PfxPath <string>
       Gets or sets the PFX path.
   -PfxCredential <PSCredential>
       Gets or set the credential for the PFX. Username part is ignored.
    <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
   ----- EXAMPLE 1 -----
   PS C:\>Convert-PfxToPem -PfxPath "$PSScriptRoot\..\Examples\sc.pfx" -PfxPassword
"password1" -Verbose
REMARKS
   To see the examples, type: "get-help Convert-PfxToPem -examples".
   For more information, type: "get-help Convert-PfxToPem -detailed".
   For technical information, type: "get-help Convert-PfxToPem -full".
   For online help, type: "get-help Convert-PfxToPem -online"
```

Copy-ErlangCookieFile

```
NAME
Copy-ErlangCookieFile

SYNOPSIS
Copies system cookie to user profile.

SYNTAX
Copy-ErlangCookieFile [<CommonParameters>]

DESCRIPTION
The Copy-ErlangCookieFile cmdlet copies Erlang cookie.
Cookie is placed in the current user's profile.

PARAMETERS
<CommonParameters>
This cmdlet supports the common parameters: Verbose, Debug,
ErrorAction, ErrorVariable, warningAction, warningVariable,
OutBuffer, PipelineVariable, and OutVariable. For more information, see
```

```
about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).

------ EXAMPLE 1 ------

PS C:\>Copy-ErlangCookieFile

REMARKS

To see the examples, type: "get-help Copy-ErlangCookieFile -examples".

For more information, type: "get-help Copy-ErlangCookieFile -detailed".

For technical information, type: "get-help Copy-ErlangCookieFile -full".

For online help, type: "get-help Copy-ErlangCookieFile -online"
```

Disable-RabbitMQFederationAndManagement



Note: For Release 10.0 and going forward, this command is obsolete.

```
AME
   Disable-RabbitMqFederationAndManagement
SYNOPSIS
   Disables the RabbitMq federation and federation management UI
SYNTAX
   Disable-RabbitMqFederationAndManagement [<CommonParameters>]
DESCRIPTION
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Disable-RabbitMqFederationAndManagement
REMARKS
   To see the examples, type: "get-help Disable-RabbitMqFederationAndManagement -
examples".
   For more information, type: "get-help Disable-RabbitMqFederationAndManagement -
detailed".
    For technical information, type: "get-help Disable-RabbitMqFederationAndManagement -
full".
    For online help, type: "get-help Disable-RabbitMqFederationAndManagement -online"
```

Disable-RabbitMQManagement

```
NAME
   Disable-RabbitMqManagement
SYNOPSIS
   Disables the RabbitMQ management UI (https://www.rabbitmq.com/management.html)
SYNTAX
   Disable-RabbitMqManagement [<CommonParameters&gt;]
DESCRIPTION
PARAMETERS
   <CommonParameters&gt;
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
   ----- EXAMPLE 1 -----
   PS C:\> Enable-RabbitMqManagement
REMARKS
   To see the examples, type: "get-help Disable-RabbitMqManagement -examples".
   For more information, type: "get-help Disable-RabbitMqManagement -detailed".
   For technical information, type: "get-help Disable-RabbitMqManagement -full".
   For online help, type: "get-help Disable-RabbitMqManagement -online"
```

Enable-RabbitMQFederationAndManagement



Note: For Release 10.0 and going forward, this command is obsolete.

```
NAME
```

Enable-RabbitMqFederationAndManagement

SYNOPSIS

Enables the RabbitMq federation and federation management UI

SYNTAX

Enable-RabbitMqFederationAndManagement [<CommonParameters>]

DESCRIPTION

```
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Enable-RabbitMqFederationAndManagement
REMARKS
   To see the examples, type: "get-help Enable-RabbitMqFederationAndManagement -
examples".
   For more information, type: "get-help Enable-RabbitMqFederationAndManagement -
detailed".
   For technical information, type: "get-help Enable-RabbitMqFederationAndManagement -
   For online help, type: "get-help Enable-RabbitMqFederationAndManagement -online"
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```

Enable-RabbitMQManagement

```
NAME
Enable-RabbitMqManagement

SYNOPSIS
Enables the RabbitMq management UI (https://www.rabbitmq.com/management.html)

SYNTAX
Enable-RabbitMqManagement [<CommonParameters&gt;]

DESCRIPTION

PARAMETERS
&lt;CommonParameters&gt;
This cmdlet supports the common parameters: Verbose, Debug,
ErrorAction, ErrorVariable, WarningAction, Warningvariable,
OutBuffer, Pipelinevariable, and Outvariable. For more information, see
about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
```

```
PS C:\>Enable-RabbitMqManagement

REMARKS

To see the examples, type: "get-help Enable-RabbitMqManagement -examples".

For more information, type: "get-help Enable-RabbitMqManagement -detailed".

For technical information, type: "get-help Enable-RabbitMqManagement -full".

For online help, type: "get-help Enable-RabbitMqManagement -online"
```

Get-RabbitMQClusterName

```
NAME
   Get-RabbitMqClusterName
SYNOPSIS
   Gets the current cluster name
SYNTAX
   Get-RabbitMqClusterName [-Credential] <PSCredential> [-AdminCredential <PSCredential>]
[-BaseUrl <string>] [<CommonParameters>]
DESCRIPTION
    RabbitMQ nodes are identified by node names. A node name consists of two parts, a
prefix (usually rabbit) and hostname.
    For example, 'rabbit@demo.node' is a node name with the prefix of 'rabbit' and a
hostname of 'demo.node'.
   This command gives the name to the running node.
PARAMETERS
    -Credential <PSCredential>
    Gets or sets the name of the rabbitmg admin user.
    -BaseUrl <string>
    Gets or sets the base URL for the RabbitMq REST API.
    -AdminCredential <PSCredential>
    Gets or sets the credential of the RabbitMq administrator user.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
    PS C:\>Get-RabbitMqClusterName
```

```
REMARKS

To see the examples, type: "get-help Get-RabbitMqClusterName -examples".

For more information, type: "get-help Get-RabbitMqClusterName -detailed".

For technical information, type: "get-help Get-RabbitMqClusterName -full".

For online help, type: "get-help Get-RabbitMqClusterName -online"
```

Get-RabbitMQLog

```
NAME
   Get-RabbitMqLog
SYNOPSIS
    Selects the tail of the RabbitMq log
SYNTAX
   Get-RabbitMqLog [[-Count] <int>] [<CommonParameters>]
DESCRIPTION
Log files are an essential aspect of system observability, much like monitoring.
Developers and operators should inspect logs when troubleshooting an issue or assessing
the state of the system.
PARAMETERS
    -Count <int>
       Gets or sets the count.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Get-RabbitMqLog
REMARKS
   To see the examples, type: "get-help Get-RabbitMqLog -examples".
   For more information, type: "get-help Get-RabbitMqLog -detailed".
    For technical information, type: "get-help Get-RabbitMqLog -full".
    For online help, type: "get-help Get-RabbitMqLog -online"
```

Get-DownloadLocations

NAME

Get-DownloadLocations

```
SYNOPSIS
   Gets download locations for Erlang and RabbitMg (most helpful when needing to do
offline installation)
SYNTAX
   Get-DownloadLocations [-UseNonMirror <SwitchParameter>] [<CommonParameters>]
DESCRIPTION
PARAMETERS
UseNonMirror <SwitchParameter>
       Gets or sets a value indicating whether to use the Non Delinea Mirrors during
download.
   -Mirror <SwitchParameter>
       Gets or sets a value indicating whether to use the Delinea Mirror even if the file
exists.
       This is an alias of the UseNonMirror parameter.
   <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Get-DownloadLocations
   ----- EXAMPLE 2 -----
   PS C:\>Get-DownloadLocations -UseDelineaMirror-UseNonMirror
REMARKS
   To see the examples, type: "get-help Get-DownloadLocations -examples".
   For more information, type: "get-help Get-DownloadLocations -detailed".
   For technical information, type: "get-help Get-DownloadLocations -full".
   For online help, type: "get-help Get-DownloadLocations -online"
```

Get-ErlangInstaller

```
NAME
```

Get-ErlangInstaller

```
SYNOPSIS
   Downloads Erlang Installer
SYNTAX
   Get-ErlangInstaller [-Force <SwitchParameter>] [-UseNonMirror <SwitchParameter>]
[<CommonParameters>]
DESCRIPTION
Downloads the Erlang Installer.
PARAMETERS
   -UseNonMirror <SwitchParameter>
   Gets or sets a value indicating whether to use the Non Delinea Mirrors during
download.
    -Mirror <SwitchParameter>
    Gets or sets a value indicating whether to use the Non Delinea Mirrors during
download.
    This is an alias of the UseNonMirror parameter.
    -Force <SwitchParameter>
    Gets or sets a value indicating whether force download (even if they already exist).
This is an alias of the UseNonMirror parameter.
    -Force <SwitchParameter>
    Gets or sets a value indicating whether the force download is necessary (even if it
already exists).
    <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
   ----- EXAMPLE 1 -----
   Download from erlang's web site
   PS C:\>Get-ErlangInstaller
   ----- EXAMPLE 2 -----
   Download from Official mirror web site
   PS C:\>Get-ErlangInstaller -UseNonMirror
```

```
Force download from Official mirror web site even if the file already exists PS C:\>Get-ErlangInstaller -UseNonMirror -Force

REMARKS

To see the examples, type: "get-help Get-ErlangInstaller -examples".
For more information, type: "get-help Get-ErlangInstaller -detailed".
For technical information, type: "get-help Get-ErlangInstaller -full".
For online help, type: "get-help Get-ErlangInstaller -online"
```

Get-RabbitMQClusterNodes

```
NAME
    Get-RabbitMqClusterNodes
SYNOPSIS
    Gets the current cluster nodes
SYNTAX
Get-RabbitMqClusterNodes [-Credential] <PSCredential> [-AdminCredential <PSCredential>] [-
BaseUrl <string>]
[<CommonParameters>]
DESCRIPTION
Shows the details of nodes present in the cluster.
PARAMETERS
-Credential <PSCredential>
Gets or sets the name of the rabbitmq admin user.
-BaseUrl <string>
Gets or sets the base URL for the RabbitMQ REST API.
-AdminCredential <PSCredential>
Gets or sets the credential of the RabbitMQ administrator user.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
```

PS C:\>Get-RabbitMqClusterNodes REMARKS To see the examples, type: "get-help Get-RabbitMqClusterNodes -examples". For more information, type: "get-help Get-RabbitMqClusterNodes -detailed". For technical information, type: "get-help Get-RabbitMqClusterNodes -full". For online help, type: "get-help Get-RabbitMqClusterNodes -online"

Get-RabbitMQInstaller

```
NAME
   Get-RabbitMqInstaller
SYNOPSIS
   Downloads RabbitMq Installer
SYNTAX
   Get-RabbitMqInstaller [-Force <SwitchParameter>] [-UseNonMirror <SwitchParameter>]
[<CommonParameters>]
DESCRIPTION
   Downloads RabbitMq Installer
PARAMETERS
    -Force <SwitchParameter>
        Gets or sets a value indicating whether to force download even the file exists.
   UseNonMirror <SwitchParameter>
        Gets or sets a value indicating whether to use the Non Delinea Mirrors during
download.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   Download from rabbitmg's web site
    PS C:\>Get-RabbitMqInstaller
    ----- EXAMPLE 2 -----
   Download from Non-Delinea's mirror web site
    PS C:\>Get-RabbitMqInstaller -UseNonMirror
```

```
Force download from Official mirror web site even if the file already exists PS C:\>Get-RabbitMqInstaller -UseNonMirror -Force

REMARKS

To see the examples, type: "get-help Get-RabbitMqInstaller -examples".

For more information, type: "get-help Get-RabbitMqInstaller -detailed".

For technical information, type: "get-help Get-RabbitMqInstaller -full".

For online help, type: "get-help Get-RabbitMqInstaller -online"
```

Get-RabbitMQQueues

```
NAME
    Get-RabbitMqQueues
SYNOPSIS
    Gets all queues in the cluster.
SYNTAX
Get-RabbitMqQueues [-Credential] <PSCredential> [-AdminCredential <PSCredential>] [-
BaseUrl <string>] [<CommonParameters>]
DESCRIPTION
Gets all the queues in the current system node.
PARAMETERS
     -Credential <PSCredential>
      Gets or sets the name of the rabbitmq admin user.
     -BaseUrl <string>
      Gets or sets the base URL for the RabbitMq REST API.
     -AdminCredential <PSCredential>
      Gets or sets the credential of the RabbitMq administrator user.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
    PS C:\>Get-RabbitMqQueues
```

```
REMARKS

To see the examples, type: "get-help Get-RabbitMqQueues -examples".

For more information, type: "get-help Get-RabbitMqQueues -detailed".

For technical information, type: "get-help Get-RabbitMqQueues -full".

For online help, type: "get-help Get-RabbitMqQueues -online"
```

Grant-RabbitMQUserPermission

```
NAME
   Grant-RabbitMqUserPermission
SYNOPSIS
   Grants a RabbitMq permissions
   Grant-RabbitMqUserPermission -UserName <string> [-VirtualHost <string>]
[<CommonParameters>]
DESCRIPTION
PARAMETERS
    -VirtualHost <string>
       Gets or sets the virtual host.
    -VHost <string>
        Gets or sets the virtual host.
        This is an alias of the VirtualHost parameter.
    -UserName <string>
        Gets or sets the name of the rabbit mg user.
    -RabbitMqUserName <string>
        Gets or sets the name of the rabbit mq user.
        This is an alias of the UserName parameter.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
    PS C:\>New-BasicRabbitMqUser
REMARKS
```

Delinea RabbitMQ Helper

```
To see the examples, type: "get-help Grant-RabbitMqUserPermission -examples".

For more information, type: "get-help Grant-RabbitMqUserPermission -detailed".

For technical information, type: "get-help Grant-RabbitMqUserPermission -full".

For online help, type: "get-help Grant-RabbitMqUserPermission -online"
```

Install-Connector

```
NAME
Install-Connector
SYNOPSIS
    Installs the site connector.
SYNTAX
Install-Connector [-Credential] <PSCredential> [[-AgreeErlangLicense] <SwitchParameter>]
[[-AgreeRabbitMqLicense]
    <SwitchParameter>] -AdminCredential <PSCredential> -OfflineErlangInstallerPath
<string>
    -OfflineRabbitMqInstallerPath <string> [<CommonParameters>]
Install-Connector [-Credential] <PSCredential> [[-AgreeErlangLicense] <SwitchParameter>]
[[-AgreeRabbitMqLicense]
    <SwitchParameter>] -AdminCredential <PSCredential> -CaCertPath <string> -Hostname
<string> -PfxCredential
    <PSCredential> -PfxPath <string> -UseTls <SwitchParameter> [-
OfflineErlangInstallerPath <string>]
    [-OfflineRabbitMqInstallerPath <string>] [-UseNonMirror <SwitchParameter>]
[<CommonParameters>]
Install-Connector [-Credential] <PSCredential> [[-AgreeErlangLicense] <SwitchParameter>]
[[-AgreeRabbitMqLicense]
    <SwitchParameter>] -AdminCredential <PSCredential> [-ForceDownload <SwitchParameter>]
[-UseNonMirror
  <SwitchParameter>] [<CommonParameters>
DESCRIPTION
```

The Install-Connector cmdlet is designed to make the installation of a non-TLS and TLS site connector.

It will install both Erlang and RabbitMQ provided that the appropriate parameters are supplied.

The cmdlet requires that a basic user also be created. This user is strictly **for** putting and pulling messages **from** RabbitMQ.

PARAMETERS

-AgreeRabbitMgLicense

Gets or sets the agree rabbit mq license. **If** omitted, the user will not be prompted to agree to the license.

-AgreeErlangLicense

Gets or sets the agree Erlang license. **If** omitted, the user will not be prompted to agree to the license.

-OfflineErlangInstallerPath <string>

Gets or sets the offline Erlang installer path. **If** omitted, the installer will be downloaded.

-OfflineRabbitMqInstallerPath <string>

Gets or sets the offline RabbitMq installer path to use. **If** omitted, the installer will be downloaded.

-ForceDownload <SwitchParameter>

Gets or sets a value indicating whether force download (even they already exist) the **pre-requisites**. This value has no effect when **using** an offline installer.

-Force <SwitchParameter>

Gets or sets a value indicating whether force download (even they already exist) the **pre-requisites**. This value has no effect when **using** an offline installer.

This is an alias of the ForceDownload parameter.

UseNonMirror <SwitchParameter>

Gets or sets a value indicating whether to use the Non Delinea Mirrors during download.

-Mirror <SwitchParameter>

Gets or sets a value indicating whether to use the Non Delinea Mirrors during download.

This is an alias of the UseNonMirror parameter.

-Credential <PSCredential>

Gets or sets the name of the rabbit mq user.

-AdminCredential <PSCredential>

Gets or sets the name of the rabbitmg admin user.

```
-UseTls <SwitchParameter>
       Gets or sets whether to use TLS or not.
   -Hostname <string>
       Gets or sets the hostname or FQDN of the server which will host the RabbitMq node.
    -SubjectName <string>
       Gets or sets the hostname or FQDN of the server which will host the RabbitMq node.
       This is an alias of the Hostname parameter.
   -FQDN <string>
       Gets or sets the hostname or FQDN of the server which will host the RabbitMq node.
       This is an alias of the Hostname parameter.
   -CaCertPath <string>
       Gets or sets the CA certificate path. This certificate is use to establish the
trust chain to the CA.
   -PfxPath <string>
       Gets or sets the PFX path. This could be a self-signed or a certificate from a
public CA.
       If self-signed, the certificate should be installed on all client/engine machines.
It does NOT to be installed on the RabbitMq node.
    -PfxCredential <PSCredential>
       Gets or set the credential for the PFX. Username part is ignored.
    <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
   ----- EXAMPLE 1 -----
   The most basic use case to install RabbitMq is to have a single node without using
encryption.
   This is generally useful during development or during POC stages.
   To do so, you could use the following:
   PS C:\>Install-Connector -agreeErlangLicense -agreeRabbitMqLicense
REMARKS
   To see the examples, type: "get-help Install-Connector -examples".
   For more information, type: "get-help Install-Connector -detailed".
   For technical information, type: "get-help Install-Connector -full".
   For online help, type: "get-help Install-Connector -online"
```

Install- ConnectorWithSSCred

```
NAME
Install-ConnectorWithSSCred
SYNOPSIS
    Installs the site connector with credentials fetched from secret server.
SYNTAX
   Install-ConnectorWithSSCred [-BaseUrl] <string> [-SSCredential] <PSCredential> [-
ConnectorName] <string>
    [[-AgreeErlangLicense] <SwitchParameter>] [[-AgreeRabbitMgLicense] <SwitchParameter>]
-AdminCredential
    <PSCredential> -OfflineErlangInstallerPath <string> -OfflineRabbitMgInstallerPath
<string> [<CommonParameters>]
   Install-ConnectorWithSSCred [-BaseUrl] <string> [-SSCredential] <PSCredential> [-
ConnectorName] <string>
    [[-AgreeErlangLicense] <SwitchParameter>] [[-AgreeRabbitMqLicense] <SwitchParameter>]
-AdminCredential
    <PSCredential> -CaCertPath <string> -Hostname <string> -PfxCredential <PSCredential> -
PfxPath <string> -UseTls
    <SwitchParameter> [-OfflineErlangInstallerPath <string>] [-
OfflineRabbitMqInstallerPath <string>] [-UseNonMirror
    <SwitchParameter>] [<CommonParameters>]
   Install-ConnectorWithSSCred [-BaseUrl] <string> [-SSCredential] <PSCredential> [-
ConnectorName] <string>
    [[-AgreeErlangLicense] <SwitchParameter>] [[-AgreeRabbitMgLicense] <SwitchParameter>]
-AdminCredential
    <PSCredential> [-ForceDownload <SwitchParameter>] [-UseNonMirror <SwitchParameter>]
[<CommonParameters>]
DESCRIPTION
   The Install-Connector cmdlet is designed to make the installation of a non-TLS and TLS
site connector with site
    connector credentials from secret server.
```

It will install both Erlang and RabbitMq provided that the appropriate parameters are supplied.

The cmdlet requires that a basic user also be created. This user is strictly **for** putting and pulling messages **from**

RabbitMq.

PARAMETERS

-AgreeErlangLicense <SwitchParameter>

Gets or sets the agree Erlang license. **If** omitted, the user will not be prompted to agree to the license.

-AgreeRabbitMqLicense <SwitchParameter>

Gets or sets the agree rabbit mq license. **If** omitted, the user will not be prompted to agree to the license.

-OfflineErlangInstallerPath <string>

Gets or sets the offline Erlang installer path. **If** omitted, the installer will be downloaded.

-OfflineRabbitMqInstallerPath <string>

Gets or sets the offline RabbitMq installer path to use. **If** omitted, the installer will be downloaded.

-ForceDownload <SwitchParameter>

Gets or sets a value indicating whether force download (even they already exist) the **pre-requisites**. This

value has no effect when using an offline installer.

-Force <SwitchParameter>

Gets or sets a value indicating whether force download (even they already exist) the **pre-requisites**. This

value has no effect when using an offline installer.

This is an alias of the ForceDownload parameter.

-UseNonMirror <SwitchParameter>

Gets or sets a value indicating whether to use the Non Delinea Mirrors during download.

-Mirror <SwitchParameter>

Gets or sets a value indicating whether to use the Non Delinea Mirrors during download.

This is an alias of the UseNonMirror parameter.

-SSCredential <PSCredential>

Gets or sets the name of the rabbit mg user.

-AdminCredential <PSCredential>

Gets or sets the name of the rabbitmq admin user.

-UseTls <SwitchParameter>

Gets or sets whether to use TLS or not.

-Hostname <string>

Gets or sets the hostname or FQDN of the server which will host the RabbitMq node.

-SubjectName <string>

Gets or sets the hostname or FQDN of the server which will host the RabbitMq node.

This is an alias of the Hostname parameter.

-FQDN <string>

Gets or sets the hostname or FQDN of the server which will host the RabbitMq node.

This is an alias of the Hostname parameter.

-CaCertPath <string>

Gets or sets the CA certificate path. This certificate is use to establish the trust chain to the CA.

-PfxPath <string>

Gets or sets the PFX path. This could be a **self-signed** or a certificate **from** a public CA.

If self-signed, the certificate should be installed on all client/engine machines.
It does NOT to be installed

on the RabbitMq node.

-PfxCredential <PSCredential>

Gets or set the credential for the PFX. Username part is ignored.

```
-BaseUrl <string>
        Gets or sets the Secret Server URL.
    -ConnectorName <string>
        Gets or sets the Site Connector Name.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   The most basic use case to install RabbitMq is to have a single node without using
encryption.
   This is generally useful during development or during POC stages.
   To do so, you could use the following:
    PS C:\>Install-ConnectorWithSSCred -agreeErlangLicense -agreeRabbitMqLicense
REMARKS
   To see the examples, type: "Get-Help Install-ConnectorWithSSCred -Examples"
   For more information, type: "Get-Help Install-ConnectorWithSSCred -Detailed"
   For technical information, type: "Get-Help Install-ConnectorWithSSCred -Full"
   For online help, type: "Get-Help Install-ConnectorWithSSCred -Online"
```

Install-Erlang

```
NAME
    Install-Erlang

SYNOPSIS
    Installs Erlang

SYNTAX
    Install-Erlang [<CommonParameters>]

DESCRIPTION
    The Install-Erlang cmdlet will attempt to load the installed from Path.Combine (Path.GetTempPath(), "erlang.exe");
```

Install-RabbitMQ

```
NAME
    Install-RabbitMq
SYNOPSIS
    Installs RabbitMq
SYNTAX
    Install-RabbitMq [<CommonParameters>]
DESCRIPTION
    The Install-RabbitMq cmdlet will attempt to load the installed from Path.Combine
(Path.GetTempPath(), "rabbitMq.exe");
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
    PS C:\>Install-RabbitMq
REMARKS
    To see the examples, type: "get-help Install-RabbitMq -examples".
    For more information, type: "get-help Install-RabbitMq -detailed".
    For technical information, type: "get-help Install-RabbitMg -full".
```

```
For online help, type: "get-help Install-RabbitMq -online"
```

Join-RabbitMQCluster

```
NAME
   Join-RabbitMqCluster
SYNOPSIS
   Joins a RabbitMq cluster
SYNTAX
    Join-RabbitMqCluster [-StrictHostname] <string> [-CookieSet <SwitchParameter>] [-
FirewallConfigured <SwitchParameter>] [<CommonParameters>]
DESCRIPTION
PARAMETERS
    -StrictHostname <string>
       Gets or sets name of the other node. Not the FQDN. Has to match exactly what the
target machine thinks its name is, including case.
    -FirewallConfigured <SwitchParameter>
        Gets or sets that the firewall configured.
    -CookieSet <SwitchParameter>
        Gets or sets that the cookie is configured. the license.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Join-RabbitMqCluster
   To see the examples, type: "get-help Join-RabbitMqCluster -examples".
   For more information, type: "get-help Join-RabbitMqCluster -detailed".
   For technical information, type: "get-help Join-RabbitMqCluster -full".
    For online help, type: "get-help Join-RabbitMqCluster -online"
```

New-RabbitMQClusterPolicy



Note: The command is now obsolete as of Release 11.1 and will remain so in future versions.

NAME

New-RabbitMqClusterPolicy

SYNOPSIS

Creates a policy on the RabbitMq node

SYNTAX

New-RabbitMqClusterPolicy -Name <string> -Pattern <string> [-AdminCredential
<PSCredential>] [-ApplyToExchanges <SwitchParameter>] [-ApplyToQueues
<SwitchParameter>] [-AutomaticSyncMode <SwitchParameter>] [-BaseUrl
<string>] [-IncludeInFederation

<SwitchParameter>] [-Priority <int>] [-QueueReplicaCount <int>]
[-SyncBatchSize <int>] [-VirtualHost <string>] [<CommonParameters>]

DESCRIPTION

PARAMETERS

-SyncBatchSize <int>

Since RabbitMQ 3.6.0, masters perform synchronization **in** batches. Batch can be configured via the **ha-sync-batch-size** queue argument. Earlier versions will synchronise 1 message at a time by default. By synchronising messages **in** batches, the

synchronisation **process** can be sped up considerably. To choose the right value **for hasync-batch-size** you need to consider: average message size, network throughput between RabbitMQ nodes, net_ticktime value **For** example, **if** you set **ha-sync-batch-size**

to 50000 messages, and each message in the queue is 1KB, then each synchronisation message between nodes will be \adjustarrow 49MB.You need to make sure that your network between queue mirrors can accommodate this kind of traffic. If the network takes longer than

net_ticktime to send one batch of messages, then nodes in the cluster could think they are in the presence of a network partition.

-QueueReplicaCount <int>

Number of queue replicas (master plus mirrors) **in** the cluster. A count value of 1 means just the queue master, with no mirrors.**If** the node running the queue master becomes unavailable, the behavior depends on queue durability. A count value of 2

means 1 queue master and 1 queue mirror. If the node running the queue master becomes unavailable, the queue mirror will be automatically promoted to master. In conclusion: NumberOfQueueMirrors = NumberOfNodes -1

-AutomaticSyncMode <SwitchParameter>

A queue will automatically synchronize when a new mirror joins. It is worth

```
you have a fast network between RabbitMQ nodes and the
ha-sync-batch-size was optimized, this is a good choice.
-Name <string>
Gets or sets the name.
-Pattern <string>
Gets or sets the pattern.
-VirtualHost <string>
Gets or sets the virtual host.
-Priority <int>
Priority for the policy. In the event that more than one policy can match a given
exchange or queue, the policy with the greatest priority applies.
-ApplyToQueues <SwitchParameter>
Policy will apply to queues.
-ApplyToExchanges <SwitchParameter>
Policy will apply to exchanges.
-IncludeInFederation <SwitchParameter>
Policy will include the matching targets in federation.
-BaseUrl <string>
Gets or sets the base URL for the RabbitMQ REST API.
-AdminCredential <PSCredential>
Gets or sets the credential of the RabbitMQ administrator user.
<CommonParameters>
This cmdlet supports the common parameters: Verbose, Debug,
ErrorAction, ErrorVariable, WarningAction, WarningVariable,
OutBuffer, PipelineVariable, and OutVariable. For more information, see
about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
----- EXAMPLE 1 -----
```

reiterating that queue synchronization is a blocking operation. If queues are small, or

```
PS C:\>New-RabbitMqOneMirrorManualSyncClusterPolicy

REMARKS

To see the examples, type: "get-help New-RabbitMqClusterPolicy -examples".

For more information, type: "get-help New-RabbitMqClusterPolicy -detailed".

For technical information, type: "get-help New-RabbitMqClusterPolicy -full".

For online help, type: "get-help New-RabbitMqClusterPolicy -online"
```

New-RabbitMQConfigDirectory

```
NAME
   New-RabbitMqConfigDirectory
SYNOPSIS
   Creates a RabbitMq configuration directory
SYNTAX
   New-RabbitMqConfigDirectory [<CommonParameters>]
DESCRIPTION
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
    PS C:\>New-RabbitMqConfigDirectory
REMARKS
   To see the examples, type: "get-help New-RabbitMqConfigDirectory -examples".
   For more information, type: "get-help New-RabbitMqConfigDirectory -detailed".
    For technical information, type: "get-help New-RabbitMqConfigDirectory -full".
    For online help, type: "get-help New-RabbitMqConfigDirectory -online"
```

New-RabbitMQNonTlsConfigFiles

```
NAME
```

New-RabbitMqNonTlsConfigFiles

```
SYNOPSTS
   Copies RabbitMg non-TLS example configuration file.
SYNTAX
   New-RabbitMqNonTlsConfigFiles [<CommonParameters>]
DESCRIPTION
   The Copy-RabbitMqExampleNonTlsConfigFile cmdlet copies RabbitMq non-TLS example
configuration file.
   The configuration file will be located in the Delinea RabbitMq Site Connector folder.
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https://go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>New-RabbitMqNonTlsConfigFiles
REMARKS
   To see the examples, type: "get-help New-RabbitMqNonTlsConfigFiles -examples".
   For more information, type: "get-help New-RabbitMqNonTlsConfigFiles -detailed".
   For technical information, type: "get-help New-RabbitMqNonTlsConfigFiles -full".
    For online help, type: "get-help New-RabbitMqNonTlsConfigFiles -online"
```

New-RabbitMQTIsConfigFiles

```
NAME
New-RabbitMqTlsConfigFiles

SYNOPSIS
Copies RabbitMq TLS example configuration file.

SYNTAX
New-RabbitMqTlsConfigFiles [<CommonParameters>]

DESCRIPTION
The new-RabbitMqTlsConfigFiles cmdlet copies RabbitMq TLS example configuration file.

The configuration file will be located in the Delinea RabbitMq Site Connector folder.
```

```
PARAMETERS
   <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
   ----- EXAMPLE 1 -----
   PS C:\>New-RabbitMqTlsConfigFiles
REMARKS
   To see the examples, type: "get-help New-RabbitMqTlsConfigFiles -examples".
   For more information, type: "get-help New-RabbitMqTlsConfigFiles -detailed".
   For technical information, type: "get-help New-RabbitMqTlsConfigFiles -full".
   For online help, type: "get-help New-RabbitMqTlsConfigFiles -online"
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```

New-RabbitMQUser

```
NAME
   New-RabbitMqUser
SYNOPSIS
   Adds a basic user to RabbitMq. This user has no permissions
SYNTAX
   New-RabbitMqUser -Credential <PSCredential> [<CommonParameters>]
DESCRIPTION
PARAMETERS
   -Credential <PSCredential>
       Gets or sets the credential of the rabbit mg user.
   <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>New-RabbitMqUser
```

REMARKS

```
To see the examples, type: "get-help New-RabbitMqUser -examples".

For more information, type: "get-help New-RabbitMqUser -detailed".

For technical information, type: "get-help New-RabbitMqUser -full".

For online help, type: "get-help New-RabbitMqUser -online"
```

Open-RabbitMQManagement

```
NAME
   Open-RabbitMqManagement
SYNOPSIS
   Opens the RabbitMq management plugin (https://www.rabbitmq.com/management.html)
SYNTAX
   Open-RabbitMqManagement [<CommonParameters>]
DESCRIPTION
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
    PS C:\>Enable-RabbitMgManagementPlugin
REMARKS
   To see the examples, type: "get-help Open-RabbitMgManagement -examples".
   For more information, type: "get-help Open-RabbitMqManagement -detailed".
   For technical information, type: "get-help Open-RabbitMqManagement -full".
    For online help, type: "get-help Open-RabbitMqManagement -online"
```

Remove-RabbitMQClusterNode

```
NAME
Remove-RabbitMqClusterNode

SYNOPSIS
Removes a node from the current nodes cluster. Use when a node is not responsive and/or cannot leave the cluster

SYNTAX
```

```
Remove-RabbitMqClusterNode [-StrictHostname] <string> [<CommonParameters>]
DESCRIPTION
PARAMETERS
   -StrictHostname <string>
       Gets or sets name of the other node. Not the FQDN. Has to match exactly what the
target machine thinks its name is, including case.
    <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
   ----- EXAMPLE 1 -----
   PS C:\>Remove-RabbitMqClusterNode UnresponsiveNode1
REMARKS
   To see the examples, type: "get-help Remove-RabbitMqClusterNode -examples".
   For more information, type: "get-help Remove-RabbitMgClusterNode -detailed".
   For technical information, type: "get-help Remove-RabbitMqClusterNode -full".
   For online help, type: "get-help Remove-RabbitMqClusterNode -online"
```

Remove-RabbitMQQueues

```
NAME
Remove-RabbitMqQueues

SYNOPSIS
Removes all non-autodelete and non-exclusive queues in the RabbitMq cluster.

SYNTAX
Remove-RabbitMqQueues [-AdminCredential <PSCredential>] [-BaseUrl <string>]
[<CommonParameters>]

DESCRIPTION

PARAMETERS
-BaseUrl <string>
Gets or sets the base URL for the RabbitMq REST API.

-AdminCredential <PSCredential>
Gets or sets the credential of the RabbitMq administrator user.
```

```
<CommonParameters>
         This cmdlet supports the common parameters: Verbose, Debug,
         ErrorAction, ErrorVariable, WarningAction, WarningVariable,
         OutBuffer, PipelineVariable, and OutVariable. For more information, see
         about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
     ----- EXAMPLE 1 -----
     PS C:\>Remove-RabbitMqQueues
 REMARKS
     To see the examples, type: "get-help Remove-RabbitMqQueues -examples".
     For more information, type: "get-help Remove-RabbitMqQueues -detailed".
     For technical information, type: "get-help Remove-RabbitMqQueues -full".
     For online help, type: "get-help Remove-RabbitMqQueues -online"
Request-RabbitMQHealthCheck
 NAME
     Request-RabbitMqHealthCheck
     Runs basic healthchecks in the current node. Checks that the rabbit application is
 running, channels and queues can be listed successfully, and that no alarms are in effect.
 SYNTAX
     Request-RabbitMgHealthCheck [-Credential] <PSCredential> [-AdminCredential
 <PSCredential>] [-BaseUrl <string>]
     [<CommonParameters>]
 DESCRIPTION
     Checks the node's health for any defects, errors, or issues that can cause
 malfunction.
 PARAMETERS
     -Credential <PSCredential>
         Gets or sets the name of the rabbitmq admin user.
     -BaseUrl <string>
         Gets or sets the base URL for the RabbitMq REST API.
     -AdminCredential <PSCredential>
         Gets or sets the credential of the RabbitMq administrator user.
     <CommonParameters>
         This cmdlet supports the common parameters: Verbose, Debug,
```

```
ErrorAction, ErrorVariable, WarningAction, WarningVariable,
         OutBuffer, PipelineVariable, and OutVariable. For more information, see
         about_CommonParameters (https://go.microsoft.com/fwlink/?LinkID=113216).
     ----- EXAMPLE 1 -----
     PS C:\>Request-RabbitMqHealthCheck
 REMARKS
     To see the examples, type: "get-help Request-RabbitMqHealthCheck -examples".
     For more information, type: "get-help Request-RabbitMqHealthCheck -detailed".
     For technical information, type: "get-help Request-RabbitMgHealthCheck -full".
     For online help, type: "get-help Request-RabbitMgHealthCheck -online"
Reset-RabbitMQNodeCommand
 NAME
     Reset-RabbitMqNodeCommand
 SYNOPSIS
     Returns a RabbitMQ node to its original state. Removes the node from any cluster it
 belongs to, removes all data from the management database, such as configured users and
 vhosts, and deletes all persistent messages.
 SYNTAX
     Reset-RabbitMqNodeCommand [-Force <SwitchParameter>] [<CommonParameters>]
 DESCRIPTION
 PARAMETERS
     -Force <SwitchParameter>
         Gets or sets a value indicating whether to force reset and avoid prompting.
     -ForceReset <SwitchParameter>
         Gets or sets a value indicating whether to force reset and avoid prompting.
         This is an alias of the Force parameter.
     <CommonParameters>
         This cmdlet supports the common parameters: Verbose, Debug,
         ErrorAction, ErrorVariable, WarningAction, WarningVariable,
         OutBuffer, PipelineVariable, and OutVariable. For more information, see
```

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about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).

----- EXAMPLE 1 -----

PS C:\>Reset-RabbitMqNodeCommand

REMARKS

```
To see the examples, type: "get-help Reset-RabbitMqNodeCommand -examples".
     For more information, type: "get-help Reset-RabbitMqNodeCommand -detailed".
     For technical information, type: "get-help Reset-RabbitMgNodeCommand -full".
     For online help, type: "get-help Reset-RabbitMqNodeCommand -online"
Select-Exception
 NAME
     Select-Exception
 SYNOPSIS
     Selects the exception as well its inner exceptions. Optionally selects the stack trace
     Select-Exception [-Exception] <Exception> [-IncludeStackTrace <SwitchParameter>]
 [<CommonParameters>]
 DESCRIPTION
     The Select-Exception cmdlet enumerates the specified exception is generates a list of
 key-value pairs which could be selected further.
 PARAMETERS
     -Exception <Exception>
         Gets or sets the exception.
     -PfxPw <Exception>
         Gets or sets the exception.
         This is an alias of the Exception parameter.
     -IncludeStackTrace <SwitchParameter>
         Gets or sets the include stack trace.
     <CommonParameters>
         This cmdlet supports the common parameters: Verbose, Debug,
         ErrorAction, ErrorVariable, WarningAction, WarningVariable,
         OutBuffer, PipelineVariable, and OutVariable. For more information, see
         about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
```

REMARKS

To see the examples, type: "get-help Select-Exception -examples".

PS C:\>try { Assert-RabbitMqConnectivity -UserName test15 -Password test15 -Hostname

For more information, type: "get-help Select-Exception -detailed".

For technical information, type: "get-help Select-Exception -full".

----- EXAMPLE 1 -----

localhost } catch { Select-Exception \$_.Exception}

```
For online help, type: "get-help Select-Exception -online"
```

Set-ErlangCookieFileCommand

```
NAME
   Set-ErlangCookieFileCommand
SYNOPSIS
    Sets the Erlang cookie file contents
SYNTAX
   Set-ErlangCookieFileCommand -CookieContent <string> [<CommonParameters>]
DESCRIPTION
PARAMETERS
    -CookieContent <string>
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Set-ErlangCookieFileCommand -CookieContent "monster"
REMARKS
   To see the examples, type: "get-help Set-ErlangCookieFileCommand -examples".
   For more information, type: "get-help Set-ErlangCookieFileCommand -detailed".
   For technical information, type: "get-help Set-ErlangCookieFileCommand -full".
    For online help, type: "get-help Set-ErlangCookieFileCommand -online"
```

Set-ErlangHomeEnvironmentalVariable

```
NAME
Set-ErlangHomeEnvironmentalVariable

SYNOPSIS
Sets the ERLANG_HOME environmental variable

SYNTAX
Set-ErlangHomeEnvironmentalVariable [<CommonParameters>]
```

```
DESCRIPTION
 PARAMETERS
     <CommonParameters>
         This cmdlet supports the common parameters: Verbose, Debug,
         ErrorAction, ErrorVariable, WarningAction, WarningVariable,
         OutBuffer, PipelineVariable, and OutVariable. For more information, see
         about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
     ----- EXAMPLE 1 -----
     PS C:\>Set-ErlangHomeEnvironmentalVariable
 REMARKS
     To see the examples, type: "get-help Set-ErlangHomeEnvironmentalVariable -examples".
     For more information, type: "get-help Set-ErlangHomeEnvironmentalVariable -detailed".
     For technical information, type: "get-help Set-ErlangHomeEnvironmentalVariable -full".
     For online help, type: "get-help Set-ErlangHomeEnvironmentalVariable -online"
Set-MinMasterToClusterPolicy
     Note: The command is now obsolete as of Release 11.1 and will remain so in future versions.
 NAME
 Set-MinMasterToClusterPolicy
 SYNOPSIS
 Adds min-master definition to existing policy.
 SYNTAX
 Set-MinMasterToClusterPolicy [-Credential] <PSCredential> -Name <string> [-AdminCredential
 <PSCredential>]
 [-BaseUrl <string>] [-VirtualHost <string>] [<CommonParameters>]
 DESCRIPTION
 The Set-MinMasterToClusterPolicy adds the queue-master-locator definition to the existing
 cluster policy.
 Then queue-master-locator is visible as min-master in cluster definition.
```

-Credential <PSCredential>

Gets or sets the name of the rabbitmq admin user.

PARAMETERS

```
-Name <string>
Gets or sets the name.
-VirtualHost <string>
Gets or sets the virtual host.
-BaseUrl <string>
Gets or sets the base URL for the RabbitMq REST API.
-AdminCredential <PSCredential>
Gets or sets the credential of the RabbitMq administrator user.
<CommonParameters>
This cmdlet supports the common parameters: Verbose, Debug,
ErrorAction, ErrorVariable, WarningAction, WarningVariable,
OutBuffer, PipelineVariable, and OutVariable. For more information, see
about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
REMARKS
To see the examples, type: "get-help Set-MinMasterToClusterPolicy -examples".
For more information, type: "get-help Set- MinMasterToClusterPolicy -detailed".
For technical information, type: "get-help Set- MinMasterToClusterPolicy -full".
For online help, type: "get-help Set- MinMasterToClusterPolicy
-online"**Set-RabbitMqBaseEnvironmentalVariable**
NAME
Set-RabbitMqBaseEnvironmentalVariable
SYNOPSIS
Sets the RABBITMQ_BASE environmental variable
SYNTAX
Set-RabbitMgBaseEnvironmentalVariable [<CommonParameters>]
DESCRIPTION
PARAMETERS
<CommonParameters\>
```

Set-RabbitMQBaseEnvironmentalVariable

```
REMARKS
     To see the examples, type: "get-help Set-RabbitMqBaseEnvironmentalVariable -examples".
     For more information, type: "get-help Set-RabbitMgBaseEnvironmentalVariable -
     For technical information, type: "get-help Set-RabbitMgBaseEnvironmentalVariable -
 full".
     For online help, type: "get-help Set-RabbitMgBaseEnvironmentalVariable -online"
Set-RabbitMQFederationUpstream
     Note: For Release 10.0 and going forward, this command is obsolete.
 NAME
     Set-RabbitMgFederationUpstream
     Creates a federation upstream on the RabbitMq node. This version does NOT support TLS
 connections
 SYNTAX
     Set-RabbitMqFederationUpstream -Credential <PSCredential> -Hostname <string> -Name
 <string> [-AdminCredential <PSCredential>] [-BaseUrl <string>] [-Expires <int>] [-
 FirewallConfigured <SwitchParameter>] [-Port <int>] [-PreFetchCount <int>]
      [-ReconnectDelay <int>] [-VirtualHost <string>] [<CommonParameters>]
 DESCRIPTION
 PARAMETERS
     -Name <string>
         Gets or sets the name.
     -Hostname <string>
         Gets or sets the hostname.
     -SubjectName <string>
         Gets or sets the hostname.
         This is an alias of the Hostname parameter.
      -FQDN <string>
         Gets or sets the hostname.
         This is an alias of the Hostname parameter.
```

-Port <int>

Port to connect to the upstream on.

```
-Credential <PSCredential>
       Gets or sets the credential of the rabbit mg user to connect with on the upstream.
   -VirtualHost <string>
       Gets or sets the virtual host.
   -Expires <int>
       The upstream will be defined to buffer messages when disconnected for up to one
the specified number of milliseconds
   -PreFetchCount <int>
       The pre-fetch count.
   -ReconnectDelay <int>
       The reconnect delay in seconds.
   -FirewallConfigured <SwitchParameter>
       Gets or sets that the firewall configured.
    -BaseUrl <string>
       Gets or sets the base URL for the RabbitMg REST API.
   -AdminCredential <PSCredential>
       Gets or sets the credential of the RabbitMq administrator user.
   <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Set-RabbitMqFederationUpstream
REMARKS
   To see the examples, type: "get-help Set-RabbitMqFederationUpstream -examples".
   For more information, type: "get-help Set-RabbitMqFederationUpstream -detailed".
   For technical information, type: "get-help Set-RabbitMqFederationUpstream -full".
   For online help, type: "get-help Set-RabbitMqFederationUpstream -online"
```

Set-RabbitMqUserAdmin

NAME

Set-RabbitMqUserAdmin

SYNOPSIS

```
Sets a basic RabbitMQ user as Admin.
```

SYNTAX

```
Set-RabbitMqUserAdmin -UserName <string> [<CommonParameters>]
```

DESCRIPTION

Gives Administrative rights to an existing RabbitMQ User.

PARAMETERS

```
<CommonParameters>
```

```
This cmdlet supports the common parameters: Verbose, Debug,

ErrorAction, ErrorVariable, WarningAction, WarningVariable,

OutBuffer, PipelineVariable, and OutVariable. For more information, see about_CommonParameters (https://go.microsoft.com/fwlink/?LinkID=113216).
```

```
----- EXAMPLE 1 -----
```

```
PS C:\> Set-RabbitMqUserAdmin -UserName local
```

REMARKS

```
To see the examples, type: "get-help Set-RabbitMqUserAdmin -examples".

For more information, type: "get-help Set-RabbitMqUserAdmin -detailed".

For technical information, type: "get-help Set-RabbitMqUserAdmin -full".

For online help, type: "get-help Set-RabbitMqUserAdmin -online"
```

Start-RabbitMQ

```
NAME
    Start-RabbitMq
SYNOPSIS
    Starts RabbitMq
SYNTAX
    Start-RabbitMq [<CommonParameters>]
DESCRIPTION
    The Start-RabbitMq cmdlet starts RabbitMq.
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
    PS C:\>Start-RabbitMq
REMARKS
    To see the examples, type: "get-help Start-RabbitMq -examples".
    For more information, type: "get-help Start-RabbitMq -detailed".
    For technical information, type: "get-help Start-RabbitMq -full".
    For online help, type: "get-help Start-RabbitMq -online"
```

Stop-RabbitMQ

```
NAME
Stop-RabbitMq

SYNOPSIS
Stops RabbitMq

SYNTAX
Stop-RabbitMq [-StopErlangNode <SwitchParameter>] [<CommonParameters>]

DESCRIPTION
The Stop-RabbitMq cmdlet stops RabbitMq.
```

Test-RabbitMqPort

```
Test-RabbitMqPort

SYNOPSIS

Checks RabbitMQ Port connectivity

SYNTAX

Test-RabbitMqPort [-Hostname <string>] [-Port <int>] [<CommonParameters>]

DESCRIPTION

Checks connection between the Port and the Hostname

Default Hostname and Port are 'localhost' and '5672'.
```

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```
PARAMETERS
   -Hostname <string>
       Gets or sets the hostname.
   -SubjectName <string>
        Gets or sets the hostname.
This is an alias of the Hostname parameter.
   -FQDN <string>
       Gets or sets the hostname.
This is an alias of the Hostname parameter.
   -Port <int>
        Port to connect to RabbitMQ.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Test-RabbitMqPort -verbose
REMARKS
   To see the examples, type: "get-help Test-RabbitMqPort -examples".
```

```
For more information, type: "get-help Test-RabbitMqPort -detailed".

For technical information, type: "get-help Test-RabbitMqPort -full".

For online help, type: "get-help Test-RabbitMqPort -online"
```

Uninstall-Connector

```
NAME
   Uninstall-Connector
SYNOPSIS
   Uninstalls Erlang and RabbitMq
SYNTAX
   Uninstall-Connector [<CommonParameters>]
DESCRIPTION
PARAMETERS
   <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Uninstall-Connector
   To see the examples, type: "get-help Uninstall-Connector -examples".
   For more information, type: "get-help Uninstall-Connector -detailed".
   For technical information, type: "get-help Uninstall-Connector -full".
   For online help, type: "get-help Uninstall-Connector -online"
```

Uninstall-Erlang

```
NAME
Uninstall-Erlang

SYNOPSIS
Uninstalls prior installation of Erlang
```

```
SYNTAX
   Uninstall-Erlang [<CommonParameters>]
DESCRIPTION
PARAMETERS
   <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Uninstall-Erlang
REMARKS
   To see the examples, type: "get-help Uninstall-Erlang -examples".
   For more information, type: "get-help Uninstall-Erlang -detailed".
   For technical information, type: "get-help Uninstall-Erlang -full".
   For online help, type: "get-help Uninstall-Erlang -online"
```

Uninstall-RabbitMQ

```
REMARKS

To see the examples, type: "get-help Uninstall-RabbitMq -examples".

For more information, type: "get-help Uninstall-RabbitMq -detailed".

For technical information, type: "get-help Uninstall-RabbitMq -full".

For online help, type: "get-help Uninstall-RabbitMq -online"
```

Update Connector

```
NAME
   Update-RabbitMq
SYNOPSIS
   Updates Erlang and RabbitMQ
SYNTAX
    Update-Connector [<CommonParameters>]
DESCRIPTION
    The Update-Connector cmdlet will download the .exe for newer version of erlang and
rabbitmq; And installs them
   without data loss.
PARAMETERS
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Update-Connector
REMARKS
   To see the examples, type: "get-help Update-Connector -examples".
   For more information, type: "get-help Update-Connector -detailed".
    For technical information, type: "get-help Update-Connector -full".
    For online help, type: "get-help Update-Connector -online"
```

Important: Please remember to create a backup of all your data, including queues and messages, before updating RabbitMQ. This is crucial to ensure that you have a recent backup that is compatible with the new version and to prevent any loss of messages or queues during the upgrade. Click here to get more information about backing up your messages. If your queues were set as "durable" and messages were marked as "persistent", then they should have been stored in RabbitMQ before being confirmed. Therefore, your messages should still be available and ready to use after the upgrade.

Important: If your queues were set as "durable" (meaning they survive server restarts) and messages were marked as "persistent," they should have been stored in RabbitMQ before being confirmed.

Update Erlang

```
NAME
   Update-RabbitMq
SYNOPSIS
   Updates Erlang
SYNTAX
    Update-Erlang -DownloadUrl <string> [<CommonParameters>]
DESCRIPTION
   The Update-Erlang cmdlet will download the .exe for newer version of erlang and
install it.
PARAMETERS
    -DownloadUrl <string>
        Gets or sets the URL for Erlang download.
    <CommonParameters>
        This cmdlet supports the common parameters: Verbose, Debug,
        ErrorAction, ErrorVariable, WarningAction, WarningVariable,
        OutBuffer, PipelineVariable, and OutVariable. For more information, see
        about_CommonParameters (https://go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
    PS C:\>Update-Erlang -DownloadUrl {url string}
REMARKS
   To see the examples, type: "get-help Update-Erlang -examples".
    For more information, type: "get-help Update-Erlang -detailed".
   For technical information, type: "get-help Update-Erlang -full".
    For online help, type: "get-help Update-Erlang -online"
```

- Important: Please remember to create a backup of all your data, including queues and messages, before updating RabbitMQ. This is crucial to ensure that you have a recent backup that is compatible with the new version, and to prevent any loss of messages or queues during the upgrade. Click here to get more information about backing up your messages. If your queues were set as "durable" and messages were marked as "persistent", then they should have been stored in RabbitMQ before being confirmed. Therefore, your messages should still be available and ready to use after the upgrade.
- Important: If your queues were set as "durable" (meaning they survive server restarts) and messages were marked as "persistent", they should have been stored in RabbitMQ before being confirmed.

Update RabbitMQ

```
NAME
   Update-RabbitMq
SYNOPSIS
   Updates RabbitMq
SYNTAX
   Update-RabbitMq -DownloadUrl <string> [<CommonParameters>]
DESCRIPTION
   The Update-RabbitMq cmdlet will download the .exe for newer version of rabbitmq and
install it.
PARAMETERS
   -DownloadUrl <string>
       Gets or sets the URL for RabbitMQ download.
       Required?
                                    true
       Position?
                                    named
       Default value
       Accept pipeline input? true (ByValue, ByPropertyName)
       Accept wildcard characters? false
    <CommonParameters>
       This cmdlet supports the common parameters: Verbose, Debug,
       ErrorAction, ErrorVariable, WarningAction, WarningVariable,
       OutBuffer, PipelineVariable, and OutVariable. For more information, see
       about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).
    ----- EXAMPLE 1 -----
   PS C:\>Update-RabbitMq -DownloadUrl {url string}
REMARKS
   To see the examples, type: "get-help Update-RabbitMq -examples".
   For more information, type: "get-help Update-RabbitMq -detailed".
   For technical information, type: "get-help Update-RabbitMg -full".
   For online help, type: "get-help Update-RabbitMq -online"
```

Important: Please remember to create a backup of all your data, including queues and messages, before updating RabbitMQ. This is crucial to ensure that you have a recent backup that is compatible with the new version, and to prevent any loss of messages or queues during the upgrade. Click here to get more information about backing up your messages. If your queues were set as "durable" and messages were marked as "persistent", then they should have been stored in RabbitMQ before being confirmed. Therefore, your messages should still be available and ready to use after the upgrade.

①

Important: If your queues were set as "durable" (meaning they survive server restarts) and messages were marked as "persistent", they should have been stored in RabbitMQ before being confirmed.

Troubleshooting

The following topics can assist with troubleshooting.

For RabbitMQ deployment recommendations, see this documentation.

Cannot Delete epmd.exe after Uninstalling RabbitMQ and Erlang

This error happens when you uninstall RabbitMQ (and optionally Erlang) but cannot delete one or more programs or folders associated with RabbitMQ or Erlang.

One common example would be "epmd.exe". This occurs because these files are still being held open by an active process and can present a problem if you uninstalled in order to perform a clean reinstall. To fix this:

- 1. Open the command prompt as Administrator and run the tasklist command.
- Find the epmd.exe process (or whichever process cannot be deleted) and note the process ID by running the taskkill /pid {PROCESSID} /F command.
- 3. Delete the file or folder.

Can't Remove Erlang Cookie During Installation

Example of an error:

Failed to copy system cookie: Access to the path 'C:\Users\user1\\.erlang.cookie' is denied.. Manual deletion might be necessary; Access to the path 'C:\Users\user1\\.erlang.cookie' is denied.;. Would you like to Retry?

For the fix, you can manually delete the cookie from the location the Helper has no access to and retry.

Management Plugin Does Not Load

The management plugin is the web page where the user logs in to manage RabbitMQ. This is usually located at http://localhost:15672

When installing RabbitMQ using the helper:

- The management plugin should be enabled automatically
- The specified user should be automatically created and
- The user should have appropriate permissions granted

However, if any error occurs during the installation while using the Helper, the management plugin may not be enabled. See the following 2 ways to fix:

1. Open the Helper and run the

Enable-RabbitMgManagement -Verbose command.

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 Open the RabbitMQ Command Prompt and run the rabbitmq-plugins enable rabbitmq_management command.

Getting Exceptions but Not Seeing Details

When running a Helper cmdlet, you may run into an exception but do not see any details or inner exceptions.

You can either wrap the cmdlet call or select the exception to get a list of key-value pairs of exception messages:

```
try { Stop-RabbitMq } catch { Select-Exception $_.Exception}
```

Or you can select topmost or combined message:

```
try { Stop-RabbitMq } catch { (Select-Exception $_.Exception)[0].Value}
```

Need the PowerShell Command Help Content?

```
#markdown links
Get-Command -Module Delinea.RabbitMq.Helper.PSCommands | Sort | % { Write-Host "Get-Help $_ -
Full | Out-File $_.txt" };
#detailed help file generation script Get-Command -Module Delinea.RabbitMq.Helper.PSCommands
| Sort | % { Write-Host "Get-Help $_ -Detailed | Out-File $_.txt" };
#full help file generation script Get-Command -Module Delinea.RabbitMq.Helper.PSCommands |
Sort | % { Write-Host "Get-Help $_ -Full | Out-File $_.txt" };
```

RabbitMQ "broken" After Hostname Change

This error occurs when you rename the RabbitMQ Hostname. This results in creating a new database directory with the current hostname. The result is the SecretServer username no longer exists in the database. Hence, it breaks every function that requires the RabbitMQ Site Connector.

To resolve this issue:

- 1. Manually recreate the user with the credentials in the Site Connector > "View Credentials".
- 2. Then, apply the required permissions to match the guest user.

Best Practice: Do not change your RabbitMQ Hostname.

TypeError: Cannot read properties of undefined (reading 'length')

If the following error display on RabbitMQ Management, manually clear the browser cache on which the Management is used.

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Troubleshooting



Vulnerability scans return AMQP Cleartext Authentication on port 5672 on RabbitMQ server(s)

This is not a problem with Secret Server but rather with the RabbitMQ Helper. However, it is fully supported and can be easily resolved by Secret Server.

Steps to resolve the issue:

- 1. Enable RabbitMQ TLS
 - Helper online
 - Helper offline
 - RabbitMQ
- 2. Switch the Secret Server site connector to **Use SSL = Yes**.
- Go to Admin > Distributed Engine > Site Connectors > select the affected RabbitMQ site connector(s) > Use SSL = Yes.
- 4. To disable the TCP listener in RabbitMQ configuration in C:\RabbitMQ\rabbitmq.conf, edit the following line: listeners.tcp = none.
- 5. Click here for more information.

You have the option to fully disable non-TLS listeners. This would limit node access to only TLS-enabled clients who use the designated port.

```
# disables non-TLS listeners, only TLS-enabled clients will be able to connect
listeners.tcp = none

listeners.ssl.default = 5671

ssl_options.cacertfile = /path/to/ca_certificate.pem
ssl_options.certfile = /path/to/server_certificate.pem
```

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```
ssl_options.keyfile = /path/to/server_key.pem
ssl_options.verify = verify_peer
ssl_options.fail_if_no_peer_cert = true
```

RabbitMQ Helper Release Notes

Versions	Release Date	Changes in the Release
11.1.0.0	11/15/2024	Helper has been updated to RabbitMQ v4.0.2.
		The creation of an admin user has become mandatory during the installation process when using the RabbitMQ Helper.
		The RabbitMQ Helper Installer has been updated to create a desktop shortcut during installation.
		Fixed update commands for offline upgrading.
		 Removed the 'New-RabbitMqClusterPolicy' and 'Set- MinMasterToClusterPolicy' commands due to the deprecation of Classic Mirroring Queues in RabbitMQ v4.
11.0.0.0	9/4/2024	 Upgraded RabbitMQ Helper to utilize UI-guided installation.
		Provided the ability to control log size and rotation.
10.6.0.0	7/03/2024	■ RabbitMQ Helper now supports Erlang v26.2.5 and RabbitMQ v3.13.2.
		 TLS support for version 1.3 has been added. Support for TLS version 1.1 has been removed as it was deprecated.
		Fixed vulnerabilities for Regular Expression Injection.
10.5.0.0	6/07/2024	 Starting from this version, 'Get-ErlangInstaller', and 'Get-RabbitMqInstaller' cmdlets will be used only for the installers downloading.
		Optimized the offline installation process.
		Admin creation became optional in the Install Connector.
		The feature flags prompt was removed from the installation. All flags are enabled by default from RabbitMQ v3.12 and above.

Versions	Release Date	Changes in the Release
10.4.2.0	02/16/2024	 Process extension in 'Install-Connector' and 'Install-ConnectorWithSSCred' installation commands, now incorporating the creation of a RabbitMQ Administration User upon completion of the installation process.
		Fixed Update commands for Offline upgradation.Updated Helper to Erlang v26.2.1.
		 Updated Helper to RabbitMQ v3.12.12.
10.4.1.0	12/01/2023	Upgraded RabbitMQ to v3.12.8 and Erlang v26.1.2.
		 Fixed 'New-RabbitMqClusterPolicy' command to default to 'ha-mode: all' and let user customize the policy on creation.
		Fixed Installation commands for 'Installer Not Found' Error.
		Fixed Get Installer commands to support Offline Installation.
10.4.0.0	9/22/2023	 Upgraded the new-rabbitmquser command to enable administrative access.
		 Upgraded the assert-RabbitMqConnectivity command by adding credential parameter to allow passing of credential objects to the command.
		 Significantly improved download timings for installation commands.
		 Added support for offline upgrade with Update commands for Erlang and RabbitMQ.
10.3.0.0	8/25/2023	Added command Update-Erlang to manually upgrade to newer version of Erlang.
		 Added command Update-Connector to manually upgrade to newer versions of Erlang and RabbitMq without data loss.
		 UpdatedRabbitMQ Helper to install the latest stable versions of Erlang and RabbitMQ.
10.2.0.0	6/12/2023	Added a command called Update-RabbitMQ. This allows for manual upgrades of RabbitMQ using a URL provided by the user.

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Versions	Release Date	Changes in the Release
10.1.0.0	5/31/2023	 Added command 'Convert-CaCertChainToPem' for conversion of chain of certificates to PEM.
		Added command 'Test-RabbitMqPort' to check whether RabbitMQ Port is open or not.
		 Added command 'Install-ConnectorWithSSCred' to Install RabbitMQ with Basic User by fetching credentials Secret Server.
		Now 'Install-Connector' command will not create an Admin User.
		 Added 'Set-RabbitMqUserAdmin' command to set Basic User as Admin.
10.0.0.1	5/4/2023	 Made OpenSSL an optional prerequisite (for example, it is not needed for a successful Helper Installation).
		ErLang and RabbitMQ installation now use Delinea Marketplace links for download.
		The default admin user of RabbitMQ (named as 'guest') is removed. The User will set the admin by providing the credentials during the installation.
		Made links in prerequisites popups clickable during the RabbitMQ Helper Installation.
10.0.0.0	8/2/2023	 Upgraded to the most recent versions of .NET Core.
		Upgraded from PowerShell 5 to PowerShell 7.
		Integrated OpenSSL commands with RabbitMQ Helper Installer to convert CNG and/or ECC key certificates to PEM file format which will help in the conversion through the RabbitMQ Helper itself.
		In this release onwards, RabbitMQ Helper will not set the min-master policy by default. * Added command to set min-master definition to the existing cluster policy.
		Added command to enable feature flags for Direct Exchanges.
		'Set-RabbitMqBalancedClusterPolicy' had the wrong naming convention. It was renamed to 'New-RabbitMqClusterPolicy'.
		 Removed Federation Support from RabbitMQ Helper.
9.6.0.0	12/20/2022	 RabbitMQ 3.9.5 version updated to 3.11.2.
		■ ErLang 24.0 version updated to 25.1.2.
9.5.0.2	3/8/2022	This release fixed RabbitMQ displaying incorrect document URL's.

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Versions	Release Date	Changes in the Release
9.5.0.1	11/7/2022	The port issue for joining a RabbitMQ cluster has been resolved, and the new port number being used for clustering is 25672.
9.5.0.0	3/14/2022	 Rebranded company name to Delinea. Removed vulnerabilities from rabbitmq-helper for RestSharpSigned and Bouncy Castle packages. User was not getting created while installing Erlang version 24.0 and RabbitMQ version 3.9.5 by using rabbitmq-helper. Unable to uninstall RabbitMQ and ErLang from current system.

RabbitMQ Helper FAQ

Here are some answers to frequently asked questions about RabbitMQ Helper.

What is RabbitMQ Helper?

RabbitMQ Helper is a message brochure orchestration application that simplifies the RabbitMQ processes. For details, see "About RabbitMQ and RabbitMQ Helper" on page vii.

How do I check if RabbitMQ is running using RabbitMQ Helper?

Run the Assert-RabbitMqIsRunning command.

For details, see "Assert-RabbitMQIsRunning" on page xl.

What is the purpose of a particular command?

This section explains some of the common RabbitMQ Helper commands.

Assert-RabbitMqConnectivity

The Assert-RabbitMqConnectivity command helps to check the RabbitMQ connectivity on the system.

Install-RabbitMq

The Install-RabbitMq command is used to install RabbitMQ.

Grant-RabbitMqUserPermission

The <u>Grant-RabbitMqUserPermission</u> command is used to grant permissions to RabbitMQ users to access Queues and Policies of the node.

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Set-RabbitMqUserAdmin

The Set-RabbitMqUserAdmin command sets a Normal RabbitMQ user as an admin in RabbitMQ Management.

Test-RabbitMqPort

The Test-RabbitMqPort command is used to check connection between the Port and the Hostname.

Set-ErlangHomeEnvironmentalVariable

The <u>Set-ErlangHomeEnvironmentalVariable</u> command is used to set the Erlang_Home as system environment variable.

How can I install Erlang using RabbitMQ Helper?

Go to "Install-Erlang" on page lxi.

How do I join a RabbitMQ cluster using RabbitMQ Helper?

Go to Joining a Cluster Using RabbitMQ Helper

How can I remove RabbitMQ queues using RabbitMQ Helper?

Run the Remove-RabbitMqQueues command. It will remove all non-autodelete and non-exclusive queues in the RabbitMq cluster.

How do I perform a health check on RabbitMQ with RabbitMQ Helper?

Use the Request-RabbitMqHealthCheck command to run basic health checks in the current node. It checks that the Rabbit application is running, channels and queues can be listed successfully, and that no alarms are in effect.

How can I update Erlang or RabbitMQ with RabbitMQ Helper?

By using the Enable-RabbitMqManagement command.

How do I enable RabbitMQ Management features with RabbitMQ Helper?

By using the Enable-RabbitMqManagement command.

Who can log in to the RabbitMQ Management UI?

User tags control access to the Management UI. For RabbitMQ Helper, Admin has access to RabbitMQ Management UI. Newly created users do not have any tags set on them by default. To view the list of other tags, see the RabbitMQ official documentation https://www.rabbitmq.com/management.html#permissions.

How can I uninstall Erlang, RabbitMQ, or both with RabbitMQ Helper?

You can uninstall by using the <u>Uninstall-Erlang</u>, <u>Uninstall-RabbitMq</u>, and <u>Uninstall-Connector</u> commands. For more details, see:

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Can I view RabbitMQ logs using RabbitMQ Helper?

Yes, you can view RabbitMQ logs using the Get-RabbitMqLog command.

How can I update an existing connector using RabbitMQ Helper?

You can update the existing installation of Erlang and RabbitMQ by using the Update-Connector command. The command itself will download the required installers and execute the processes themselves.

Important: Please create a backup of all your data, including queues and messages, before updating RabbitMQ. This is crucial to ensure that you have a recent backup compatible with the new version and to prevent any loss of messages or queues during the upgrade. For more information about backing up your messages, see RabbitMQ official documentation. If your queues were marked as "durable" and messages were marked as "persistent," they should have been stored in RabbitMQ before being confirmed. Therefore, your messages should still be available and ready to use after the upgrade.

Will updating an existing connector using the RabbitMQ Helper impact the existing data?

Updating the existing installation of Erlang and RabbitMQ can impact the data. Therefore, creating a backup of all your data, including queues and messages, is recommended before updating.

Will my Queues and Messages get affected on Update?

If your queues were set as "durable" (meaning they survive server restarts) and messages were marked as "persistent," they should have been stored in RabbitMQ before being confirmed. If so, the messages will still be there and ready for usage after the upgrade.

Does the Install-Connector command create a default admin account ('guest') during the process?

The RabbitMQ helper does not create an administrative account as it is not required for normal operation. If desired, you can create user accounts to manage and monitor the RMQ server(s).

What are the Direct Exchanges?

Direct exchanges are a fundamental building block for routing messages in RabbitMQ. They provide a mechanism for targeted message delivery based on a specific routing key.

The main elements of the routing mechanism are the following:

- Queues: In RabbitMQ, messages are stored in queues and consumed by applications
- Exchanges: Exchanges act as message routers. Producers publish messages to exchanges, and the exchange determines which queues receive the message
- Routing Key: Direct exchanges rely on a routing key associated with each message

The routing mechanism works as following:

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- Producer Publishes Message: An application (producer) publishes a message to a specific exchange. The
 message includes a routing key
- Exchange Matches Routing Key: The exchange looks at the message's routing key
- Queues with Matching Bindings: The exchange checks its bindings. A binding specifies a queue and a routing key
- Message Delivery: If a queue is bound to the exchange with a routing key that exactly matches the message's routing key, the message is delivered to that queue

What is a feature flag?

In the context of RabbitMQ, a feature flag is a mechanism that controls the availability of specific functionalities within the RabbitMQ server. These flags act like switches, allowing you to turn on or off certain features independent of the core RabbitMQ version. This provides flexibility during upgrades, enables testing new features in a controlled environment, and helps manage functionalities that might still require fixing.

What is 'Enable Feature Flags for Direct Exchanges'?



Note: This feature is obsolete for v10.5.0.0 and further versions.

It is an optional prompt that is available for the user during installation. By enabling "empty_basic_get_metric" and "drop_unroutable_metric," Feature Flags are enabled in RabbitMQ. Both flags are disabled by default in RabbitMQ versions prior to 3.12. This is because RabbitMQ cannot definitively determine if it is a new cluster or an upgrade during startup. Enabling these flags on a fresh cluster deployment might be desirable to gather these metrics from the beginning.

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