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About the Hybrid Cloud Module

The ForeScout Hybrid Cloud Module provides visibility and control functions across physical and virtual devices that are on-premises and off-premises through the following plugin integrations:

- AWS Plugin
- Azure Plugin
- VMware NSX Plugin
- VMware vSphere Plugin

The Hybrid Cloud Module is a ForeScout Base Module. Base Modules are delivered with each ForeScout release.

The plugins listed above are installed and rolled back with the Hybrid Cloud Module.

Refer to the *ForeScout Hybrid Cloud Module Overview Guide* for more module information, such as module requirements, upgrade, and rollback instructions.

Refer to the relevant configuration guides for detailed information about how to work with and configure plugins included with this module. See [Additional ForeScout Documentation](#) for information about how to access these guides, and other documentation.

ForeScout Requirements

This plugin requires the following ForeScout release and other components:

- ForeScout version 8.1.
- (Flexx licensing) A valid ForeScout eyeControl (ForeScout CounterACT Control) license, to use enforcement actions provided by the plugin/component. If you do not have this license, these actions will be disabled in the Console. Refer to the *ForeScout Flexx Licensing How-to Guide* for more information about managing Flexx licenses and how to request/purchase this license.

Components described in this document may have additional requirements and dependencies.

About This Release

This section describes updates and important information related to components delivered in this version of the Hybrid Cloud Module.

- [AWS Plugin 2.1](#)
- [Azure Plugin 1.0](#)

- [VMware NSX Plugin 1.2](#)
- [VMware vSphere Plugin 2.4](#)

This release also includes enhancements and fixes provided in previous releases.

AWS Plugin 2.1

This release supports Certification Compliance mode. For information about this mode, refer to the *Forescout Installation Guide*.

The following section describes requirements for AWS Plugin version 2.1.

Requirements

This plugin requires the following AWS components:

- An Amazon Web Services online account.
- You will need one AWS Access Key ID and Secret Key to configure the AWS plugin. These are associated with a User profile on AWS. The access key ID is a unique identifier associated with a secret key. These two keys are used by the AWS plugin to communicate with AWS on behalf of that user.
- If you are using a proxy server with Basic Authentication, you need that proxy's credentials.
- The plugin requires the following AWS services:
 - **Amazon EC2** – Amazon Elastic Compute Cloud (Amazon EC2) is a web service that enables you to launch and manage Linux / UNIX and Windows server instances in Amazon's public cloud.
 - **Amazon VPC** – Amazon Virtual Private Cloud (VPC) is a web service for provisioning a logically isolated section of AWS Cloud where you can launch AWS resources in a virtual network you define. You control your virtual networking environment, including selection of your own IP address range, creation of subnets, and configuration of route tables and network gateways.
 - **CloudWatch** - CloudWatch is a web service that enables you to monitor and manage various metrics. It also allows the configuration of alarm actions based on the metrics data.

There are two user permissions options that can be used on the Forescout platform:

- Read-only permissions (the Forescout platform will support visibility only)
- Full permissions (the Forescout platform will support both visibility and control)

Networking Requirements

The following must be configured on enterprise firewalls to support communication between the Forescout platform and AWS regional access points.

- Outgoing communication on port 443/TCP must be allowed
- The *.amazonaws.com domain must be reachable with HTTPS

- (Optional) Proxy communication, for example, port 8080 is open

Fixed Issues

This section describes the fixed issues for this release.

Defect #	Description
AWS-1183	New AWS Account addition. The AWS Plugin will show new regions as AWS adds them in the future. They will be displayed in the Regions pane.

Known Issues

None.

Azure Plugin 1.0

This release supports Certification Compliance mode. For information about this mode, refer to the *ForeScout Installation Guide*.

The following section describes requirements for Azure Plugin version 1.0.

Requirements

This plugin requires the following Azure components:

- An Azure online account.
- One Azure account tenant ID, one Azure account client/application ID, and one access key to configure the Azure Plugin. These are associated with a User account on Azure.
- The following Azure services:
 - **Azure Virtual Machine** – A web service that enables you to launch and manage Linux and Windows server instances in Azure’s public cloud.
 - **Azure VNet (VNet)** – A web service for provisioning a logically isolated section of the Azure Cloud where you can launch Azure resources in a virtual network you define. You control your virtual networking environment, including the selection of your own IP address range, creation of subnets, and configuration of route tables and network gateways.
 - **Azure Subscriptions** – A web service that grants you access to Azure services. It includes the Azure account for usage and billing as well as governing the use of Azure subscription services.

There are two user permissions options that can be used on the ForeScout platform:

- Read-only permissions (the ForeScout platform supports visibility only)
- Full permissions (the ForeScout platform supports both visibility and control)

Networking Requirements

The following must be configured on enterprise firewalls to support communication between the Forescout platform and Azure regional access points.

- Outgoing communication on port 443/TCP must be allowed
- The *.azure.com domain must be reachable with HTTPS
- (Optional) Proxy communication, for example, port 8080 is open

Known Issues

This section describes known issues for this release.

Defect #	Description
MAZ-146	The log lists a SocketTimeoutException. The Azure Plugin will retry in the next polling interval and will recover.

VMware NSX Plugin 1.2

This release:

- Supports the ability to enable and disable server certificate validation.
- Supports Certification Compliance mode. For information about this mode, refer to the *Forescout Installation Guide*.

The following section describes requirements for VMware NSX Plugin version 1.2.

Networking Requirements

- The 443/TCP port must be open on the enterprise firewall to support communication between the Forescout platform and the NSX Manager
- NSX server certificate (self-signed acceptable)

Supported Vendor Requirements

- VMware NSX® version 6.2 and 6.3
- VMware vSphere® version 6.0 and 6.5

The following VMware licenses are required to work with the plugin.

- VMware NSX® (standard)
- VMware vSphere® Enterprise Plus Edition™
- VMware vCenter Server® (standard)

Known Issues

None.

VMware vSphere Plugin 2.4

This release:

- Supports the ability to enable and disable server certificate validation.
- Supports Certification Compliance mode. For information about this mode, refer to the *ForeScout Installation Guide*.

The following section describes requirements for VMware vSphere version 2.4.

Networking Requirements

In case the ForeScout platform and the VMware vCenter server are not in the same location, the following ports must be open on enterprise firewalls to support communication between them.

- 443/TCP

Supported Vendor Requirements

- VMware vSphere® version 5.5, 6.0, 6.5, and 6.7

The following VMware licenses are required to work with the plugin.

- VMware vSphere® Enterprise Plus Edition™
- VMware vCenter® Server (standard)

Fixed Issues

For information about the following fixed issues from the recently released VMware vSphere Plugin hotfixes that are incorporated into this plugin version, refer to the following:

- Hotfix 2.2.0.1:
 - VMW-492

<https://forescout.force.com/support/s/article/VMware-vSphere-HF-2-2-0-1xxx-Builds>

Known Issues

This section describes the known issues for this release.

Defect #	Description
VMW-525	When configuring the vSphere server, the fully qualified domain name or IP address is required. Otherwise, the polling operation fails due to the session not being correctly saved and restored. If the certificate validation is enabled, the server name should be the same as the common name (CN) on the certificate.

Defect #	Description
VMW-536	When the vSphere Plugin sent a full poll request to the vSphere server, a response was not received and after three minutes, a SOAP Request Error message displayed. When this error occurs, the vSphere Plugin aborts the current operation and starts the full poll at the next scheduled poll.

Feature Enhancements

- In the Add VMware vSphere Server wizard, the Query Interval field was removed and replaced with three new fields: Full Poll Interval, Delta Poll Interval, and Performance Data Poll. These changes help optimize vSphere context collection performance.
- In the Advanced settings of the Add VMware Server wizard, additional performance property options have been added. These are designed to assist troubleshooting CounterACT virtual appliance (vCT) deployments. By default, five performance properties (CPU Ready %, CPU Usage %, Disk Usage %, Disk Highest Latency, and Memory Usage %) are always being calculated and resolved for VMs detected as CounterACT virtual appliances (vCTs). To expose these values in the ForeScout platform, define specific policies for these properties and then apply these policies to the segments that cover the vCTs.
- You can now configure the VMware vSphere Plugin to validate the server certificate when it connects to the vSphere server. A server certificate issued by a Certificate Authority (CA) or a self-signed server certificate can be used. This capability helps with trusted communication between systems and leverages the Certificate Management functionality added to the ForeScout platform in version 8.0.

[Tracked as VMW-506]

Upgrading the Module




New module releases may become available between ForeScout releases. This section describes how to install the module when a new release becomes available.

To install the module:

1. Navigate to one of the following ForeScout download portals, depending on the licensing mode your deployment is using:
 - [Product Updates Portal](#) - **Per-Appliance Licensing Mode**
 - [Customer Portal, Downloads Page](#) - **Flexx Licensing Mode**

To identify your licensing mode, select **Help > About ForeScout** from the Console.

2. Download the module `.fpi` file.
3. Save the file to the machine where the Console is installed.
4. Log into the Console and select **Options** from the **Tools** menu.

5. Select **Modules**. The Modules pane opens.
6. Select **Install**. The Open dialog box opens.
7. Browse to and select the saved module **.fpi** file.
8. Select **Install**. The Installation screen opens.
9. Select **I agree to the License Agreement** to confirm that you have read and agree to the terms of the License Agreement, and select **Install**. The installation will not proceed if you do not agree to the license agreement.
 -  *The installation will begin immediately after selecting Install, and cannot be interrupted or canceled.*
 -  *In modules that contain more than one component, the installation proceeds automatically one component at a time.*
10. When the installation completes, select **Close** to close the window. The installed module is displayed in the Modules pane.
 -  *Some components are not automatically started following installation.*

Rollback and Upgrade the Module

The following rollback/upgrade activities are not supported:

- Rolling back this module (or one of its components) to a version released prior to Forescout 8.1.
- Upgrading to this module (or one of its components) from a version released prior to Forescout 8.1.

If you upgrade to a newer module or component version that becomes available after this release, you may be able to roll it back. When rollback is supported, the Rollback button is enabled in the Console.

Modules/components on Appliances connected to the Enterprise Manager are rolled back to the selected version. Modules/components on Appliances that are not connected to the Enterprise Manager during the rollback are rolled back when the Enterprise Manager next reconnects to the Appliances.

To roll back the module or component:

1. Select **Options** from the Console **Tools** menu.
2. Navigate to the **Modules** folder.
3. In the Modules pane, select the module or component to be rolled back.
4. Select **Rollback**. A dialog box opens listing the versions to which you can roll back.
5. Select a version and select **OK**. A dialog box opens showing you the rollback progress.

Additional Forescout Documentation

For information about other Forescout features and modules, refer to the following resources:

- [Documentation Downloads](#)
- [Documentation Portal](#)
- [Forescout Help Tools](#)

Documentation Downloads

Documentation downloads can be accessed from the [Forescout Resources Page](#), or one of two Forescout portals, depending on which licensing mode your deployment is using.

- **Per-Appliance Licensing Mode** – [Product Updates Portal](#)
- **Flexx Licensing Mode** – [Customer Portal](#)

 *Software downloads are also available from these portals.*

To identify your licensing mode:

- From the Console, select **Help > About Forescout**.

Forescout Resources Page

The Forescout Resources Page provides links to the full range of technical documentation.

To access the Forescout Resources Page:

- Go to <https://www.Forescout.com/company/resources/>, select **Technical Documentation** and search for documents.

Product Updates Portal

The Product Updates Portal provides links to Forescout version releases, Base and Content Modules, and eyeExtend products, as well as related documentation. The portal also provides a variety of additional documentation.

To access the Product Updates Portal:

- Go to <https://updates.forescout.com/support/index.php?url=counteract> and select the version you want to discover.

Customer Portal

The Downloads page on the Forescout Customer Portal provides links to purchased Forescout version releases, Base and Content Modules, and eyeExtend products, as well as related documentation. Software and related documentation will only appear on the Downloads page if you have a license entitlement for the software.

To access documentation on the Forescout Customer Portal:

- Go to <https://Forescout.force.com/support/> and select **Downloads**.

Documentation Portal

The Forescout Documentation Portal is a searchable, web-based library containing information about Forescout tools, features, functionality, and integrations.

- 📄 *If your deployment is using Flexx Licensing Mode, you may not have received credentials to access this portal.*

To access the Documentation Portal:

- Go to https://updates.forescout.com/support/files/counteract/docs_portal/ and use your customer support credentials to log in.

Forescout Help Tools

Access information directly from the Console.

Console Help Buttons

Use context sensitive *Help* buttons to quickly access information about the tasks and topics you are working with.

Forescout Administration Guide

- Select **Forescout Help** from the **Help** menu.

Plugin Help Files

- After the plugin is installed, select **Tools** > **Options** > **Modules**, select the plugin and then select **Help**.

Online Documentation

- Select **Online Documentation** from the **Help** menu to access either the [Forescout Resources Page](#) (Flexx licensing) or the [Documentation Portal](#) (Per-Appliance licensing).

Contact Information

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About the Documentation

- Refer to the Resources page on the ForeScout website for additional technical documentation: <https://www.forescout.com/company/resources/>
- Have feedback or questions? Write to us at documentation@forescout.com

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