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Contents

| | |
|---|----------|
| Legal Notice | 2 |
| Trademarks | 2 |
| Technical Support | 2 |
| Audience | 2 |
| Supported Versions | 2 |
| Required Components | 2 |
| Reflex Software | 2 |
| VMware Software | 2 |
| Checklist | 2 |
| Network Firewall and Internet Access | 3 |
| Installation | 3 |
| Step 1: Importing the Reflex Virtualization Management Center Server | 4 |
| Step 2: Configure Networking for the Reflex Virtualization Management Center Server | 4 |
| Networking | 4 |
| vSphere OVF Installs | 4 |
| Using Setup Helper | 5 |
| Configure Networking | 6 |
| Configure SSH | 6 |
| Configure Administrative User | 6 |
| Configure Support Label | 6 |
| Step 3: Install the VMC Client and Initial Virtual Center Connection | 7 |
| • For vSphere environments the default user is “ <i>admin</i> ” and the password is “ <i>admin</i> ”. The account can be modified from within the client. | 7 |
| • In VI3 environments the password was configured via the Setup Helper in the previous section. | 7 |
| Configuring a Virtual Management Server | 7 |
| Next Steps | 7 |

Technical Support

Reflex Systems offers comprehensive technical support via email, telephone, and online.

Reflex Systems Technical Support can be reached via the following methods:

| | |
|--------------------|--|
| Web: | www.reflexsystems.com |
| Telephone Support: | 1.888.696.5725 (US and Canada) +1.770.408.2034 (International) |
| Via E-Mail: | support@reflexsystems.com |

Audience

This guide provides a quick summary of the installation procedures for the Reflex Virtualization Management Center component. See the Installation Guide for detailed installation instructions.

This guide is intended for those with familiarity with the **VMware** product suite, specifically importing and configuring virtual appliances using the VMware Virtual Infrastructure Client. It does not require any previous Reflex product knowledge.

Supported Versions

Reflex VMC and Reflex VSA are supported on Virtual Infrastructure 3 and vSphere 4.0. Reflex vTrust for VMsafe requires installation in vSphere 4 environment. The reflex VMC can manage a hybrid environment of VI3 and vSphere 4 virtual centers and hosts.

- Reflex VMC is not supported on the Linux vCenter or any other non –GA product from VMware.

Required Components

Reflex Software

To install the Reflex Virtualization Management Center (VMC), the installation package must be obtained from Reflex. The package is a zip archive containing documentation and the server image packed in the Open Virtualization Format or OVF. The install OVF file contains all the software components required: Reflex VSA Sensor, Reflex Virtualization Management Center Server, and the Reflex Virtualization Management Center Client for Microsoft Windows™.

VMware Software

The following VMware provided management tools are required to perform the installation.

- **VMware Virtual Infrastructure Client 2.5 or VMware vSphere Client 4.0**

Checklist

- ✓ A deployment of supported ESX servers. (Managed by at least one instance of VMware's vCenter)
- ✓ IP address of the vCenter Server that manages the environment
- ✓ User credentials for the vCenter (minimum of read only, read/write required for VSA deployment later)
- ✓ A Microsoft Windows (XP or newer) PC to manage the system and run the Reflex VMC client software
- ✓ IP address and Network information (network mask and DNS) for the new VMC Server
- ✓ Network Connectivity is required from the VMC server
 - to vCenter Server

- (Optional) to all managed ESX(i) host management interfaces for automated deployment of Reflex vTrust or Reflex VSA.

Network Firewall and Internet Access

The VMC Server needs Internet access for signature updates. Signature updates are used for both security and for protocol/service identification.

The following TCP ports need to be open for communications between the components:

| Source | Destination | Reason | Protocol | Type | Port |
|------------|------------------------------|---|----------|------|-----------|
| VMC Client | VMC Server | Client connection for system management | SSH | TCP | 1301 |
| VMC Server | VSA Sensor | Sensor configuration and management | SSH | TCP | 22 |
| VMC Server | VMware Virtual Center Server | Collection of virtual environment information and event gathering | SSL | TCP | 443 |
| VMC Server | Each ESX Host being managed | Deployment of VSA and vTrust components. Software asset inventory collection. | SSL | TCP | 443, 902 |
| VMC Server | update.reflexsystems.com | Automatic signature updates from Reflex | HTTP | TCP | 80 |
| VMC Server | reporting.reflexsystems.com | Non-identifiable environment statistics to Reflex (optional). To disable the heartbeat, contact Reflex support. | HTTP | TCP | 80 |
| VMC Server | support.reflexsystems.com | Support Tunnel connection to Reflex for live support (optional) | SSH | TCP | 22,80,443 |



Automatic deployment of the Reflex components requires network connectivity between the Reflex VMC and the service console interface of each ESX host that a component will be deployed to. If the optional components are not automatically deployed then the Reflex VMC only needs network connectivity to the vCenter Server(s).

Installation

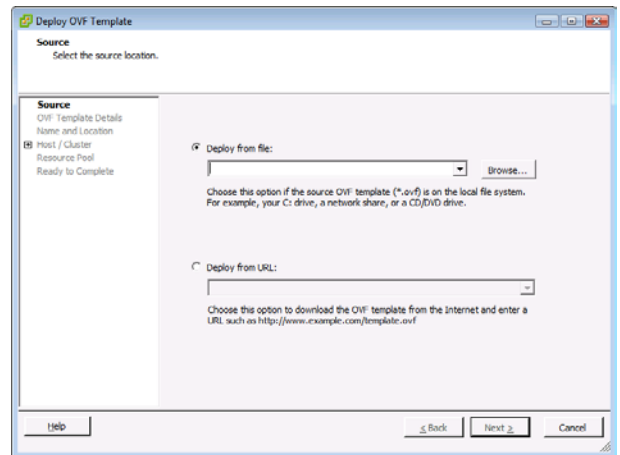
There are three basic steps to installing the Reflex VMC:

1. Import the Reflex Virtualization Management Center Appliance into the ESX environment
2. Configure Networking for the Reflex Virtualization Management Center
3. Install the VMC Client and Initial Configuration

Step 1: Importing the Reflex Virtualization Management Center Server

The first step is to import the Reflex VMC server virtual machine. Using the VMware Infrastructure Client (VIC) application, import the VMC image. The Reflex solution is delivered as a ZIP archive. The ZIP archive contains an OVF file for the VMC.

- From the VIC 2.5 , click FILE->Virtual Appliance->Import
- From VIC 4.0, click FILE->Deploy OVF Template...



| | |
|--------------------------|---|
| Import Location | Import from File or URL: Choose location of Reflex VMC OVF |
| Name and Location | Reflex suggests "Reflex VMC", Choose the Datacenter destination |
| Host or Cluster | Chose the desired host or cluster for the VMC |
| Network Mapping | Choose the management network for the environment. The VMC needs to communicate with Virtual Center. Choose a network that will allow that communication. |
| Datstore | As appropriate for the environment |

Step 2: Configure Networking for the Reflex Virtualization Management Center Server

Networking

The VMC server needs to be able to communicate with the management IP of the VSA sensors, VMware Virtual Center, and the client PC being used to manage the system. During the import process, the management network to connect the VMC virtual NIC was selected. If this network needs to be changed, it can be accomplished via the VMware VI Client by modifying the VM's configuration.

vSphere OVF Installs

When using vSphere, the OVF import process will prompt for all required networking information. It will not be necessary to open a console to the Reflex VMC VM for configuration.

Using Setup Helper

Reflex VMC uses a simple wizard called the “Setup Helper” to facilitate installation. The setup helper allows basic network configuration, adding of administrative users and configuration of SSH for remote console access.

This section is only required when deploying into a VI3 vCenter. When deploying into vSphere, the OVF deployment process will prompt the administrator for all required information. The setup helper is only needed if changes are to be made to the network or user configuration information.


- Using the VMware Infrastructure Client, ensure Reflex VMC is powered on and completed boot up.
- In the VMware Infrastructure Client, select the VMC Server VM. Go to the console tab, and click inside the console window. If nothing appears, pressing the enter key should reveal the console CLI.
- Type “ok” at the prompt to start the wizard.
- Type “B” for basic configuration.

```
Welcome to the Reflex Setup Helper (X.X.X build #####) on core.
```

```
Type 'ok" to begin: ok<enter>
```

```
Do you want to do Basic setup or run the Advanced configuration shell? [B/a] b<enter>
```

The wizard will step through the configuration items. If a mistake is made, the process can be aborted at the end, before any configuration changes have been made.

 ***The wizard can be rerun at any time to change configuration. Note that each time it is run and a configuration change made, the software will reset any active client connections.***

The first time the helper is run, the following tasks will be completed. Subsequent use of the helper will prompt the user for changes to those sections and will not require complete reconfiguration.

1. Configure Networking
2. Configure SSH Access
3. Configure Administrative User
4. Configure Support Label
5. Confirm Changes and Commit

Configure Networking

The helper attempts to discover details about the management network. It will use that information as hints to help configure its management interface.

- Enter the IP Address for the management interface. This address must be accessible from client PC's running the VMC Client, VSA sensors, and VMware Virtual Center. (or "dhcp" for a dynamic address assignment)
- Enter the subnet mask in dotted-quad notation (i.e. 255.255.255.0).
- Enter the default gateway address
- Accept the management interface default of "en0"
- Enter the DNS server address(s)

Configure SSH

After the IP networking, there is an optional configuration for SSH access. Setting a password for SSH makes the Setup Helper available over SSH instead of requiring the use of the Virtual Infrastructure Client. The user ID for SSH is "reflex".

Configure Administrative User

The next step is to configure the administrative user. This is an administrative credential for using the Reflex VMC client. Additional administrative and read only users can then be managed via the GUI. At least one administrative user must be created at this time.

Configure Support Label

The support label is a common name for the VMC Server. This is typically set to something meaningful as this name is transmitted to Reflex during remote support sessions. Reflex suggests that the label be set to a combination of the site/company name and its location or logical function (i.e. AcmeInc-DevLab-Atlanta).

At this point all configuration steps are completed. A summary of what was entered is displayed and the user is prompted to confirm the settings.

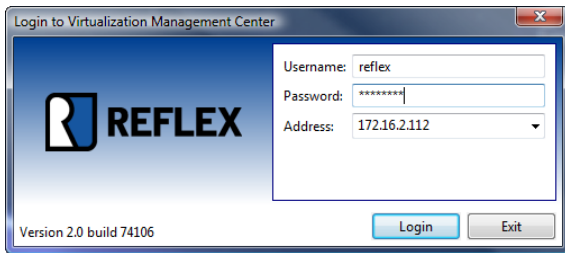
A success message will be displayed that contains the URL needed for the remainder of the installation. Open a web browser to that URL to test connectivity to the VMC Server.

The Reflex VMC Server is now ready to run.

Step 3: Install the VMC Client and Initial Virtual Center Connection

The Reflex VMC Client installer is available via web download from the VMC Server. Opening a web browser to the IP address assigned to the VMC Server will bring up a web page that contains download links for all of the Reflex software as well as product documentation.

The VMC Client is a standard Microsoft Windows™ installer. Double-clicking the executable will launch the installer. A shortcut is placed on the user's desktop when installation is complete. Clicking the shortcut will launch the application.



Reflex only supports upgrades for the previous two major releases. If you plan to upgrade an older release, you must upgrade incrementally until the system is two (2) releases away from the target version. Launching the client will prompt for an IP/Hostname of the Reflex VMC Server, a username and password.

Enter the VMC Server IP, and administrative username and password.

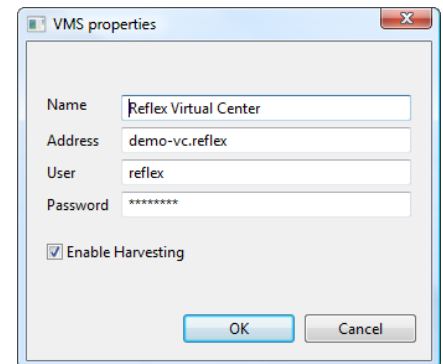


- For vSphere environments the default user is “**admin**” and the password is “**admin**”. The account can be modified from within the client.
- In VI3 environments the password was configured via the Setup Helper in the previous section.

Configuring a Virtual Management Server

Reflex VMC needs to communicate with VMware Virtual Center to start tracking the virtual infrastructure. At each startup, the application will prompt to add a VMS if none is configured. To configure additional VMS's, click on “Topology”-> “VMS Configuration” and then “Add”.

The name field is just a logical name and can be set to any value. Address should be the IP/Hostname or specific URL to access VMware virtual Center. If only the IP or Hostname are supplied, the client will rewrite the address with the standard URL. The user needs to have sufficient privileges to create VM's and manipulate network configurations if the automated deployment features are desired. **Minimally read-only permissions for the entire vCenter are required.**



Once a valid Virtual Management Server is configured, the VMC will perform an initial harvest of the infrastructure and make it visible in the Topology view.

Next Steps

At this point the VMS server is running and the VMC Client can be used to manager, visualize and report on the virtual infrastructure.

The Reflex VMC comes with a 30 day evaluation license. This license enables ALL feature sets (vWatch, vProfile, and vTrust). The VMC will cease to function when the evaluation license expires.

To extend an evaluation, contact Reflex Sales (sales@reflexsystems.com) for an extension. See the User Guide for details on application of license keys.

Additional network functionality is available when using Reflex vTrust or Reflex VSA. See the full installation guide or the user guide for details on installing the vTrust vmSafe kernel module or Reflex VSA.

DRAFT