## Revision History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Description of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rev. C</td>
<td>May 2015</td>
<td>- Updated the document with the appropriate product name.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Replaced the cover page boilerplate and corrected the version details.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Updated the Seagate support page.</td>
</tr>
<tr>
<td>Rev. B</td>
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<td>- Updated the Nytro vCenter information.</td>
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<tr>
<td></td>
<td></td>
<td>- Added Nytro Event Monitoring Service plug-in information.</td>
</tr>
<tr>
<td>Rev. A</td>
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<td>Initial release of the document.</td>
</tr>
</tbody>
</table>

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When referring to drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes. Your computer’s operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual quantities will vary based on various factors, including file size, file format, features and application software. Actual data rates may vary depending on operating environment and other factors. The export or re-export of hardware or software containing encryption may be regulated by the U.S. Department of Commerce, Bureau of Industry and Security (for more information, visit www.bis.doc.gov), and controlled for import and use outside of the U.S.
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Chapter 1: Nytro vCenter Plug-In Overview

The Nytro™ vCenter plug-in enables you to manage the Seagate® controllers in the vSphere® environment to provide all of the major system integrators or OEMs with a single window to manage the Seagate controllers in the VMware® ESXi operating system. The plug-in coexists with the VMware ecosystem to provide seamless control over the Seagate controllers.

The Nytro vCenter plug-in includes the Nytro vCenter plug-in and Nytro vCenter Event Monitoring Service (EMS) plug-in, hereon called Nytro vCenter EMS plug-in.

- The Nytro vCenter plug-in enables you to create basic configurations, rename the virtual drive (VD), and monitor the health status of the controllers. The plug-in leverages the core vCenter server capabilities, such as authentication. The plug-in includes storage monitoring, hardware status, management and monitoring of physical and virtual resources, and alert notifications. The Nytro vCenter plug-in empowers you to effectively manage your storage resources, that is, your physical and virtual storage infrastructure through a vSphere web client. See Chapter 3, Using the Nytro vCenter Plug-In.

- The Nytro vCenter EMS plug-in enables you to view all of the controller events occurring at the vCenter level in a single common event console. You can monitor the connected controllers by using the events generated on the controllers. See Chapter 4, Using the Nytro vCenter Event Monitoring Service Plug-In.

You can use the Nytro vCenter plug-in without any additional hardware resources.

1.1 Supported Controllers

- Nytro XP 6209
- Nytro XP 6210
- Nytro XP 730X
- WDELP4X100
- WDELP4X200
- NWD-BLP4-136S
- NWD-RLP4-1860
- NWD-6209-4A1024
- NWD-6210-4A2048
- MLSI800M
- MLSI400S
- NWD-BLP3-300
- NWD-WLP3-300
- NWD-BLP3-600
- NWD-BLP4-800
- NWD-WLP4-200
- NWD-WLP4-400
- NWD-BLP4-400
- NWD-BLP4-800
- NWD-BLP4-1600
- NXD-BLP4-400
- NXD-BLP4-800
- NXD-BLP4-1600
- NWD-BFH6-1200
1.2 Supported Operations

The Nytro vCenter plug-in supports the operations provided in the following table.

<table>
<thead>
<tr>
<th>Operation Supported</th>
<th>MLSI/NWD/NXD/WDELP/Nytro XP62xx</th>
<th>Nytro XP 73xx/Nytro XP 64xx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create or Delete virtual drive (VD)</td>
<td>Not supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Format controller</td>
<td>Supported</td>
<td>Not supported</td>
</tr>
<tr>
<td>Format Nytro Flash Modules</td>
<td>Supported (if there are no VDs)</td>
<td>Not supported</td>
</tr>
<tr>
<td>Erase physical drive (PD)</td>
<td>Not supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Clear configuration</td>
<td>Not supported</td>
<td>Supported</td>
</tr>
<tr>
<td>VD rename</td>
<td>Not supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Event Monitoring</td>
<td>Supported</td>
<td>Supported</td>
</tr>
</tbody>
</table>
Chapter 2: Installing and Registering the Nytro vCenter Plug-In

This chapter provides you the steps to install and register the Nytro vCenter plug-in. The Nytro vCenter plug-in installation includes the installation of Nytro vCenter plug-in and Nytro vCenter EMS plug-in into the vSphere environment.

2.1 Hardware and Software Requirements

The Nytro vCenter plug-in is supported on the following hardware and software components.

2.1.1 Supported Platforms

- vCenter Server 5.5
- vSphere web client 5.5
- ESXi 5.5

**NOTE** Refer to your vCenter server documentation and to the operating system documentation for more information.

2.2 Prerequisites to Use the Nytro vCenter Plug-In

- Seagate provided CIM provider (included in the release package; the Nytro vCenter plug-in works with version 80.101.V0.08) installed on the ESXi host

**NOTE** vCenter installation must have the Single sign-on, inventory service modules, and vSphere Web Client installed (visit: https://www.vmware.com/support/pubs/vsphere-esxi-vcenter-server-pubs.html).

- vSphere web client 5.5
- Nytro vCenter plug-in
- Nytro vCenter EMS plug-in (included in the release package)
- ESXi host version 5.5 with the Seagate controllers attached

**NOTE** Known issue with ESXi 5.5: sfcb service might fail to open the ESXi firewall for CIM indication delivery if more than one destination listens to the indication on different ports. The Nytro vCenter plug-ins work with ESXi 5.5 hosts and the fix for this issue is available with only ESXi 5.5 U2. To work around this issue, disable the firewall on the ESXi hosts to be able to view the events passing from into the Nytro vCenter plug-ins. For more information, visit: https://www.vmware.com/support/vsphere5/doc/vsphere-esxi-55u2-release-notes.html

- ESXi host must be configured as a part of a domain.
2.3 Deploying the Nytro vCenter Plug-In

You can deploy the Nytro vCenter plug-in by performing one of the two methods: installing or registering the Nytro vCenter plug-in and Nytro vCenter EMS plug-in as mentioned in this chapter.

2.4 Installing the Nytro vCenter Plug-In

To install the Nytro vCenter plug-in, perform the following steps:

1. Extract the contents of the nytro-xm.zip into the nytro-xm folder.

   **NOTE** Make sure that the vCenter plug-in contents are in the same path as mentioned under the nytro-xm.zip folder structure, that is, the plug-in contents must not be in any intermediate folder.

2. Stop the vSphere web client service.
3. Copy the nytro-xm folder into the following locations based on the operating systems used.

   **On the Windows server**
   
   —  ..\Program Files\VMware\Infrastructure\vSphereWebClient\plugin-packages

   **On the Linux server**
   
   —  /usr/lib/vmware-vsphere-client/plugin-packages

4. Start the vSphere web client service.
5. Log on to vSphere Web Client.
6. To use the Nytro vCenter plug-in, navigate to the vCenter->Host->Manage tab, and click the Nytro XM tab.

2.5 Registering the Nytro vCenter Plug-In

To register the Nytro vCenter plug-in, perform the following steps:

1. Pick up the respective zip file, nytro-xm.zip bundled within the release package.
2. Host the nytro-xm.zip on an HTTP location.
3. To ensure that the HTTP location is working correctly, type the URL, for example, http://<Webserver IP>:Port/nytro-xm.zip in a browser, and press Enter. Downloading starts.
4. In the PluginExtension.xml XML file, change the package location URL (zip file downloadable HTTP location) with the HTTP path provided in Step 2, and then save the XML file on the machine where you have the vSphere Client 5.5 installed.

   **NOTE** vSphere Client 5.5 is a prerequisite to register the Nytro vCenter plug-in.

5. Modify the web client properties file, webclient under C:\ProgramData\VMware\vSphere Web Client on the vCenter machine to add a new line as shown in the following example:

   allowHttp=true

6. Run vSphere client and connect it to the vCenter server.
7. Go to Plug-ins->Manage Plugins.

   The Plug-in Manager dialog appears.
8. Right-click the blank space in the dialog, and select New Plug-in.
The **Register Plug-in** dialog appears.

9. Click the **Browse** button, and select the path to the `PluginExtension.xml` file as provided in Step 3 in Section 2.4, Installing the Nytro vCenter Plug-In.

10. Click **Register Plug-in**.

11. Open a new web client session to the vCenter, and click the **Nytro XM** tab under **Manage**.

   This action triggers the deployment of the plug-in on the web client host.

### 2.6 Enabling the Nytro vCenter Plug-In

You can access the Nytro vCenter plug-in interface in a separate tab when an ESXi host is selected.

To enable the Nytro vCenter plug-in, perform the following steps:

1. From the Applications menu, select **System Administration > Plug-in Management**.
2. Right-click the **Nytro XM Plug-in**, and select **Other > Enable**, from the **Context** menu.
3. Click **Yes**.

   **NOTE**   
   By default, the plug-ins are enabled.

### 2.7 Disabling the Nytro vCenter Plug-In

You can disable the Nytro vCenter plug-in. The plug-in remains installed, but will be inoperative. You can re-enable the plug-in anytime later.

1. From the Applications menu, select **System Administration > Plug-in Management**.
2. Right-click **Nytro XM Plug-in**, and select **Other > Disable** from the context menu.
3. Click **Yes**.
4. Click **Yes** on the **Reload vSphere Web Client** dialog that appears.

### 2.8 Unregistering the Nytro vCenter Plug-In

You can unregister the Nytro vCenter plug-in that you had previously registered with the vCenter server. You can manually delete the extension (for more information, look up for `com.Seagate.vCenterPlugin.NytroXM`) by using the vCenter Managed Object Browser (MOB) interface in your Web browser (refer to the vCenter documentation for the MOB interface usage).

Unregistering a Nytro vCenter plug-in package on the vCenter server does not delete the Nytro vCenter plug-in package files that are installed locally on the vSphere Web Client Virgo server. The files are not used after you unregister the package. To remove the files for clean-up purposes, you must delete the Nytro vCenter plug-in package files manually.

Perform the following steps to unregister the plug-in:

1. Open the VMware vSphere API Browser (MOB interface),
   `https://<vCenter_IP_Address>/mob/?moid=ExtensionManager`.
2. Log on to the vCenter server.
3. Under the **Methods** list that appears, click the **UnregisterExtension** method.
A pop-up dialog appears.

4. Enter the extension key for the plug-in, and then click **Invoke Method** at the bottom of the dialog.

**NOTE** The extension key is, `com.Seagate.vCenterPlugin.NytroXM`.

The preceding steps will unregister the plug-in extension. However, unregistering the plug-in on the vCenter server does not delete the plug-in files that are installed locally on the vSphere Web Client Virgo server. The files are not usable after you unregister the package. To remove the files for clean-up purposes, you must delete the plug-in files manually; typically from the following location on a Windows host:

```
C:\ProgramData\VMware\vSphere Web Client\vc-packages\vsphere-client-serenity
```

## 2.9 Installing the Nytro vCenter EMS Plug-In

To install the Nytro vCenter EMS plug-in, perform the following steps:

1. **Extract the contents of the** `nytro-xm-ems.zip` **into the** `nytro-xm-ems` **folder.**

   **NOTE** Make sure that the plug-in contents are in the same path as mentioned under the `nytro-xm-ems.zip` folder structure, that is, the plug-in contents must not be in any intermediate folder.

2. **Stop the vSphere web client service.**
3. **Copy the** `nytro-xm-ems` **folder into the following locations based on the operating systems used.**

   **On the Windows server**
   
   ```
   ..\Program Files\VMware\Infrastructure\vSphereWebClient\plugin-packages
   ```

   **On the Linux server**
   
   ```
   /usr/lib/vmware-vsphere-client/plugin-packages
   ```

4. **Start the vSphere web client service.**
5. **Log on to vSphere Web Client.**
6. **To use the Nytro vCenter EMS plug-in, click the home ( ) icon on the top of the window.**
The Home page appears.

Figure 1 Nytro vCenter EMS Plug-in Home Page

2.10 Registering the Nytro vCenter EMS Plug-In

To register the Nytro vCenter EMS plug-in, perform the following steps:

1. Pick up the respective zip file, nytro-xm-ems.zip bundled within the release package.
2. Host the nytro-xm-ems.zip on an HTTP location.
3. To ensure that the HTTP location is working correctly, type the URL, for example, http://<Webserver IP>:Port/nytro-xm-ems.zip in a browser, and press Enter.
   Downloading starts.
4. In the PluginExtension.xml XML file, change the package location URL (zip file downloadable HTTP location) with the HTTP path provided in Step 2, and then save the XML file on the machine where you have the vSphere Client 5.5 installed.

   **NOTE** vSphere Client 5.5 is a pre-requisite to register the Nytro vCenter EMS plug-in.

5. Modify the web client properties file, webclient under C:\ProgramData\VMware\vSphere Web Client on the vCenter machine to add a new line as shown in the following example:
   ```
   allowHttp=true
   ```
6. Run vSphere client and connect it to the vCenter server.
7. Go to Plug-ins->Manage Plugins.
Enabling the Nytro vCenter EMS Plug-In

You can access the Nytro vCenter EMS plug-in interfaces in a separate tab when an ESXi host is selected.

To enable the Nytro vCenter EMS plug-in, perform the following steps:

1. From the Applications menu, select System Administration > Plug-in Management.
2. Right-click the Nytro XM EMS plug-in, and select Other > Enable, from the Context menu.
3. Click Yes.

**NOTE** By default, the plug-in is enabled.

Disabling the Nytro vCenter EMS Plug-In

You can disable the Nytro vCenter EMS plug-in. The plug-in remains installed, but will be inoperative. You can re-enable the plug-in anytime later.

1. From the Applications menu, select System Administration > Plug-in Management.
2. Right-click Nytro XM EMS Plug-in, and select Other > Disable from the context menu.
3. Click Yes.
4. Click Yes on the Reload vSphere Web Client dialog that appears.

Unregistering the Nytro vCenter EMS Plug-In

You can unregister the Nytro vCenter EMS plug-in that you had previously registered with the vCenter server. You can manually delete the extension (for more information, look up for com.Seagate.vCenterPlugin.nytro-xm-ems) by using the vCenter Managed Object Browser (MOB) interface in your Web browser (refer to the vCenter documentation for the MOB interface usage).

Unregistering a Nytro vCenter EMS plug-in package on the vCenter server does not delete the Nytro vCenter EMS plug-in package files that are installed locally on the vSphere Web Client Virgo server. The files are not used after you unregister the package. To remove the files for clean-up purposes, you must delete the Nytro vCenter EMS plug-in package files manually.

Perform the following steps to unregister the plug-in:

1. Open the VMware vSphere API Browser (MOB interface), https://<vCenter_IP_Address>/mob/?moid=ExtensionManager.
2. Log on to the vCenter server.
3. Under the Methods list that appears, click the **UnregisterExtension** method.
   A pop-up dialog appears.
4. Enter the extension key for the plug-in, and then click **Invoke Method** at the bottom of the dialog.

   **NOTE** The extension key is, `com.Seagate.vCenterPlugin.nytro-xm-ems`.

   The preceding steps will unregister the plug-in extension. However, unregistering the plug-in on the vCenter server does not delete the plug-in files that are installed locally on the vSphere Web Client Virgo server. The files are not usable after you unregister the package. To remove the files for clean-up purposes, you must delete the plug-in files manually; typically from the following location on a Windows host:

   `C:\ProgramData\VMware\vSphere Web Client\vc-packages\vsphere-client-serenity` path.
Chapter 3: Using the Nytro vCenter Plug-In

This chapter helps you configure/setup the Nytro vCenter plug-in, and perform all of the controller-related operations. The plug-in enables you to perform the following operations:

- Viewing the health and status of the controllers.
- Viewing the information of the events generated.
- Issuing management and administration commands to the VDs.
- Creating, configuring, or deleting VDs.
- Discovering the controllers, physical disk, virtual drive and viewing the controller properties.

3.1 Logging On to the VMware vSphere Web Client

Log on to the VMware vSphere Web Client interface with your user credentials.

After you log on to the VMware vSphere Web Client, go to the Nytro vCenter plug-in environment to perform the Nytro controller-related operations.

3.2 Navigating to the Nytro vCenter Plug-In environment

To navigate to a Nytro vCenter Core plug-in, perform the following steps:

1. Click the icon on the VMware vSphere Web Client window or click on the left pane of the VMware vSphere Web Client window.
2. In the vCenter Home tree, expand Inventory Lists, and click Hosts.
   The Hosts window appears on the right pane.
3. Select the host where the Seagate controllers are attached and can be viewed or managed.
4. Under the host view, select the Manage tab to view the plug-in-specific Nytro XM tab.
The Nytro vCenter Plug-In main window appears.

**Figure 2 Nytro vCenter Plug-In Main Window**

![Nytro vCenter Plug-In Main Window](image)

### 3.2.1 Controller Grid

The Grid view shows an overview of the system and shows the controller name, controller firmware version, the SAS address of the controller, and device ID. After you log onto the vCenter server, in the Managed Hosts page, select any controllers as shown in the following figure.

The selected controller is highlighted.

**Figure 3 Controller Grid**

![Controller Grid](image)

The following table shows the GUI icons that appear in the Nytro vCenter plug-in application.

<table>
<thead>
<tr>
<th>Icons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Alarm" /></td>
<td>Alarm to indicate the critical events.</td>
</tr>
<tr>
<td><img src="image" alt="Warning" /></td>
<td>Alarm to indicate the warning events.</td>
</tr>
</tbody>
</table>

LED status of the controller:

| ![Red LED](image) | Indicates that the controller status is critical or needs attention ( ). |
| ![Green LED](image) | Indicates that the controller status is in an optimal state. |
### 3.2.2 Controller Summary View

The summary view is the default window. This view shows the information about the selected controller. The information on this dialog is read-only and cannot be modified directly. The available operations on the Nytro vCenter plug-in are, viewing the controller properties, drive properties, VD properties, health information, and other information. The properties shown might vary based on the controller that is being monitored.

![Figure 4 Nytro vCenter Plug-in Summary View](image)

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Properties</strong></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>Shows the controller health.</td>
</tr>
<tr>
<td>Product Name</td>
<td>Shows the name of the controller.</td>
</tr>
<tr>
<td>Vendor ID</td>
<td>Shows the vendor ID.</td>
</tr>
<tr>
<td>Device ID</td>
<td>Shows the device ID.</td>
</tr>
<tr>
<td>SAS Address</td>
<td>Shows the SAS address for the drive.</td>
</tr>
<tr>
<td>Cache Flush Interval</td>
<td>The interval (in seconds) at which the contents of the on-board data cache are flushed. The default is 4 seconds.</td>
</tr>
<tr>
<td>Chip Temperature</td>
<td>Shows the controller temperature; based upon this value, the controller functionality can be monitored and managed.</td>
</tr>
<tr>
<td>Alarm Enabled</td>
<td>Indicates if the controller alarm is enabled.</td>
</tr>
<tr>
<td>Alarm Present</td>
<td>Indicates if the alarm is present in the controller.</td>
</tr>
<tr>
<td>Battery Backup Present</td>
<td>Indicates if the battery backup unit is present.</td>
</tr>
<tr>
<td><strong>Firmware Properties</strong></td>
<td></td>
</tr>
<tr>
<td>Firmware Version</td>
<td>Shows the controller firmware version supported.</td>
</tr>
<tr>
<td>BIOS Version</td>
<td>Shows the server BIOS version supported.</td>
</tr>
<tr>
<td>Online Firmware Update</td>
<td>Shows if the online firmware upgrade operation is enabled.</td>
</tr>
</tbody>
</table>
### 3.2.3 Controller Physical View

The Physical view shows the hierarchy of physical devices that are a part of the controller.

**Figure 5 Controller Physical View**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>The drive health information.</td>
</tr>
<tr>
<td>Device ID</td>
<td>Shows the drive ID. Each of the drive has a unique ID.</td>
</tr>
<tr>
<td>Life Left</td>
<td>Nytro Flash module Life Left values (based on the Nytro controller life).</td>
</tr>
<tr>
<td>Temperature</td>
<td>Shows the temperature of the controller.</td>
</tr>
<tr>
<td><strong>General Properties</strong></td>
<td></td>
</tr>
<tr>
<td>Raw Capacity</td>
<td>Shows the original storage capacity.</td>
</tr>
<tr>
<td>Media Type</td>
<td>A drive property, either Nytro Flash module or Nytro Serviceable Flash module.</td>
</tr>
<tr>
<td>FDE Capable</td>
<td>Indicates whether the drive is capable of encryption. This option is available only if the controller supports security, and if security is configured.</td>
</tr>
<tr>
<td>SAS Address</td>
<td>Shows the SAS address for the drive.</td>
</tr>
<tr>
<td>Vendor ID</td>
<td>Shows the physical device vendor ID.</td>
</tr>
<tr>
<td>Serviceable</td>
<td>Shows if the Serviceable Flash module or Nytro Flash module is serviceable.</td>
</tr>
<tr>
<td>State</td>
<td>Shows the drive state (online or offline).</td>
</tr>
<tr>
<td>Thermal IO Status</td>
<td>Shows whether the current drive temperature is in a critical, warning, or normal state.</td>
</tr>
<tr>
<td>Usable Capacity</td>
<td>Usable storage varies depending on what RAID level you use on an array. If you select drives of varying sizes, the usable space on each drive is restricted to the size of the smallest selected drive</td>
</tr>
<tr>
<td>Serial Number</td>
<td>Shows the serial number of the enclosure. Each of the enclosures has a unique serial number.</td>
</tr>
</tbody>
</table>
### 3.2.4 Controller Logical View

The **Logical** view shows the hierarchy of controllers, virtual drives, and the drives and drive groups that make up the virtual drives.

**Figure 6 Controller Logical View**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negotiated Link Speed</td>
<td>The negotiated link speed for data transfer to and from the drive.</td>
</tr>
<tr>
<td>Slot ID</td>
<td>Shows the slot ID of the drive.</td>
</tr>
<tr>
<td>Logical Sector Size</td>
<td>Shows the logical sector size of this virtual drive.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>The drive group health information.</td>
</tr>
<tr>
<td>Configured Capacity</td>
<td>The entire drive group capacity.</td>
</tr>
<tr>
<td>Remaining Capacity</td>
<td>The remaining capacity in the drive group.</td>
</tr>
<tr>
<td>RAID Level</td>
<td>The RAID level of the drive group.</td>
</tr>
<tr>
<td>Drive Group Name</td>
<td>The name given to a group of drives that is attached to a RAID controller on which one or more virtual drives can be created.</td>
</tr>
<tr>
<td>Contributing Drives</td>
<td>The drives that are part of the drive group.</td>
</tr>
</tbody>
</table>
### Figure 7 Controller Logical View VD Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>The virtual drive health information.</td>
</tr>
<tr>
<td>Read Policy</td>
<td>Read policy of the virtual drive.</td>
</tr>
<tr>
<td>Write Policy</td>
<td>Write policy of the virtual drive.</td>
</tr>
<tr>
<td>State</td>
<td>Indicates the status of the drive.</td>
</tr>
<tr>
<td>RAID Level</td>
<td>The RAID level of the virtual drive.</td>
</tr>
<tr>
<td>Capacity</td>
<td>The amount of storage space on a virtual drive.</td>
</tr>
<tr>
<td>I/O Policy</td>
<td>The I/O policy on a specific virtual drive.</td>
</tr>
</tbody>
</table>
### 3.2.5 Controller Events Log View

This window shows the firmware event log entries. The new event log entries appear during the session. Each entry has an ID, an error level indicating the severity of the event, the timestamp and date, and a brief description of the event. You can filter the view based on your requirement.

To access the event log entries, perform the following steps:

1. Click the **Event Log** tab.

![Controller Event Log](image)

### 3.3 Managing the Storage Device

#### 3.3.1 Creating a Virtual Drive

The following steps help you can create a virtual drive (VD).

![Create Virtual Drive](image)

1. Select the required controller, and right-click the **Create VD** icon.
2. Select **Create VD**.
The create virtual drive dialog appears.

**Figure 10 Create Virtual Drive**

3. From the drop-down list, select the desired number of VDs to create, and click **Create**.

### 3.3.2 Renaming a Virtual Drive

The following steps help you rename the VD.

**Figure 11 Rename Virtual Drive**

1. Expand the drive group, and select the VD that you want to rename.
2. Right-click the VD.
3. Select **Rename**.
The Rename dialog appears.

**Figure 12  Rename**

![Rename dialog](image)

4. Enter the new VD name, and click Rename.

### 3.3.3 Deleting a Virtual Drive

The following steps help you delete a VD.

**CAUTION** This operation is not recommended. Back up any data that is on the virtual drive that you want to keep before you delete the virtual drive. Make sure that the operating system is not installed on this VD.

You can delete any virtual drive on the controller if you want to reuse that space for a new virtual drive. If multiple virtual drives are defined on a single drive group, you can delete a VD without deleting the whole drive group.

1. Click the Logical tab.
2. Expand the drive group, and select the VD that you want to delete.
3. Right-click the VD that you want to delete.
4. Select Delete as shown in the following figure.

**Figure 13  Delete Virtual Drive**

![Delete Virtual Drive](image)

5. When the warning messages appear, click Yes to confirm that you want to delete the virtual drive.
NOTE You are asked for a confirmation if you want to delete a VD to avoid accidental deletion of the VD.

### 3.3.4 Physical Drive Secure Erase

The secure erase operation is not supported on all of the controllers.

**Figure 14  Secure Erase Physical Drive**

1. Right-click the SFM that you want to erase.
2. Select **Erase**.

### 3.3.5 Clearing the Configuration On the Nytro Controller

The clear configuration operation is not supported on all of the controllers.

**Figure 15  Clear Configuration**

1. Select the required controller, and right-click the **icon.
2. Select **Clear**.
3.3.6 Formatting the Nytro WarpDrive

The format operation is supported only on the Nytro WarpDrive card.

Figure 16 Format Controller
Chapter 4: Using the Nytro vCenter Event Monitoring Service Plug-In

This chapter helps you monitor the connected controllers by using the events generated on the controllers. You can view the generated events in a single interface.

4.1 Nytro vCenter Event Monitoring Service Plug-In Operations

The plug in enables you to perform the following operations:

- View the run-time events in the Event console.
- Fetch and view the event logs (up to a maximum of 32 events per ESXi host).

4.2 Navigating to the Event Console

1. Click the Nytro XM Event Monitoring Service icon (marked in blue arrow in Figure 1). If you are the first user for the day, the following window appears.

   ![Figure 17 Nytro vCenter Event Monitoring Service](image)

2. Enter the vCenter server IP, your user name and password that are provided to you, and click Submit.
3. Click Enable Event Monitoring.
If the Nytro vCenter EMS plug-in is running, the following window appears.

**Figure 18  Nytro vCenter Event Monitoring Service**

To navigate to the Event console, perform the following steps:

1. Click the icon on the top of the window.
   The **Home** window as shown in Figure 1 appears.
2. On the **Home** window, lick **Event Console** (see marked in red arrow in Figure 1) or click the icon on the left pane of the Nytro vCenter EMS plug-in window.
The **Event Console** window appears.

### Figure 19 Event Console

<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Date Time</th>
<th>Task</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>User logged event [INFO] Fri Dec 19 06:26:38 IST 2014</td>
<td>User</td>
<td>12/19/2014 11:49 AM</td>
<td></td>
<td>10.201.43.141 VSPHERE LOCALAdministrator</td>
</tr>
<tr>
<td>User logged event [INFO] Fri Dec 19 06:26:38 IST 2014</td>
<td>User</td>
<td>12/19/2014 11:49 AM</td>
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</tr>
</tbody>
</table>

**NOTE**

To view the new events, refresh the **Event Console** by using the refresh ( ) button.

3. Highlight and click the event to be viewed as shown in the preceding figure. The detailed information appears in the lower section of the window.

   Click the **Target** hyperlink to navigate directly to the host machine that is responsible for this event. This information helps you take corrective action.
4.2.1 Exporting the Events

1. Click the icon to export the events list into the clipboard.
2. Click the arrow mark.
   The Export Events dialog appears.

![Figure 20 Export Events](image)

3. Select the required columns or fields to be included in the list, and then click **Generate CSV Report**.
   The following table provides the error icons with their description.

<table>
<thead>
<tr>
<th>ICONS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Indicates error in the controller.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Indicates the warning status of any of the components of the controller.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Indicates that the event type is user.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Indicates that the event type is information.</td>
</tr>
</tbody>
</table>
Appendix A: Troubleshooting the Nytro vCenter Plug-In Issues

A.1 Nytro vCenter Plug-In Issues

The Nytro vCenter plug-in uses the logging framework (which is used by vSphere Web Client plug-ins). If there are any issues while retrieving the data, the Nytro vCenter plug-ins log the debug statements to a log file. These logs can provide useful information to debug the issues, if any. This log file can be identified by the timestamp, vSphere_client_virgo. If you face any issues while working with the Nytro vCenter plug-in, retrieve the log file from its location, and contact Seagate Technical Support for further assistance at http://www.seagate.com/about/contact-us/technical-support/

- You can find the Log file in the following locations based on the platform used:
  - On Windows: <OS_DISK>:\ProgramData\VMware\vSphere Web Client\serviceability\logs
  - On Linux: /var/log/vmware/vsphere-client/

A.2 Nytro vCenter Event Monitoring Service Plug-In Issues

- I am unable to view the events in my event console.
  This could be because of one of the following reasons:
  - You might not have copied the Nytro vCenter EMS plug-in package.
  - You might not have correctly installed the Nytro vCenter EMS plug-in.
  - You might not have enabled Event Monitoring.

Perform the following steps to enable Event Monitoring.

1. Go to Home icon > Administration > Client Plug-Ins.
2. Check if the Nytro vCenter EMS plug-in is enabled. If it is not enabled, go back to the home screen, click the Nytro vCenter Event Monitoring Service icon.
3. Log on with your vCenter credentials, and remember to click Enable Event Monitoring.
## Glossary

This appendix provides a glossary for terms used in this document.

**C**
- **Controller**: A controller that transfers data between the microprocessor and memory, or between the microprocessor and a peripheral device, such as a drive. The controllers perform functions, such as striping and mirroring to provide data protection.

**D**
- **Device ID**: A controller or drive property indicating the manufacturer-assigned device ID.
- **Drive group**: A group of drives attached to a RAID controller on which one or more virtual drives can be created. All virtual drives in the drive group use all of the drives in the drive group.
- **Drive state**: A drive property indicating the status of the drive.

**G**
- **GUI**: Graphical User Interface

**P**
- **Product name**: A controller property indicating the manufacturing name of the controller.

**V**
- **VC**: vCenter
- **Virtual drive**: A storage unit created by the controller card from one or more drives. Although a virtual drive (logical drive) can be created from several drives, it is seen by the operating system as a single drive. Depending on the RAID level used, the virtual drive can retain redundant data in case of a drive failure.