

Quantum DXi V-Series Quick Start Guide



This guide provides system requirements, and installation and configuration instructions for the Quantum DXi V-Series appliances. For additional information about the DXi V-Series appliances, see resources located at <http://www.quantum.com/DXiV-SeriesDocs> or <http://www.quantum.com/forumv>.

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About the Quantum DXi V-Series

The Quantum DXi V-Series virtual appliances provide an entry point for Quantum customers who want to implement a virtual infrastructure. They offer flexible backup solutions, integrating data deduplication and replication technology to connect backup and disaster recovery protection across distributed corporate environments.

Virtual DXi appliances use Quantum's patented data deduplication technology to increase disk capacities by 10 to 50 times. In addition, they make WAN replication a practical and effective part of disaster recovery planning.

Delivered as VMware virtual appliances in OVF formats, the virtual DXi appliances are designed for customers who need to protect up to 24 TB of deduplicated data and who do not wish to deploy a physical DXi system. You can select from the following virtual DXi appliances.

	DXi V1000	DXi V2000	DXi V4000
Available Capacity	1 – 2 TB	1 – 8 TB	4 – 24 TB
Evaluation Capacity	256 GB for 30 days	2 TB for 30 days	4 TB for 30 days
Replication	1:1 source-to-target	1:1 source-to-target	10:1 source-to-target 1:2 target-to-source
Performance	1 TB/hour	1 TB/hour	4.9 TB/hour
System Resources	4 GB RAM/2 CPUs	8 GB RAM/2 CPUs	48 GB RAM/8 CPUs

Note: For the purposes of this guide, the different versions will be generically referred to as virtual DXi appliances. When appropriate, the model number will be included to distinguish the specific appliance.

Features Included With Your DXi V-Series Appliance

Your virtual DXi appliance is configured to a standard specification. Each order comes with a download media kit containing a download authorization code, a product key certificate, a Registration/Explore card, and the EULA.

The following features can accompany your virtual DXi appliance.


Licenses

The following licenses are included with the virtual DXi.

- Network Attached Storage (NAS) – Enables NAS (NFS, CIFS) connectivity.
- Data Deduplication – Enables data deduplication and compression.
- Replication – Enables replication to other DXi systems.
- OST – Enables OpenStorage backup with Symantec OST.
- Storage Capacity – Enables the purchased storage capacity for the system.

DXi V1000

- A Trial license has 256 GB of storage capacity.
- An Enterprise Edition license has 1 TB of storage capacity. You can expand the license to 2 TB of storage capacity.
- The Standard Edition license of the DXi V1000 has 1 TB of storage.

 **Note:** Keep in mind that DXi V1000 will eventually require 2 TB of disk space.

DXi V2000

- A Trial license has 2 TB of storage capacity.
- An Enterprise Edition license has 1 TB of storage capacity. You can expand the license in 1 TB increments up to 8 TB of storage capacity.

If you purchase a storage capacity upgrade, you will receive an additional license certificate.

DXi V4000

- A Trial license has 4 TB of storage capacity.
- An Enterprise Edition license has 4 TB of storage capacity. You can expand the license in 1 TB increments up to 24 TB of storage capacity.

If you purchase a storage capacity upgrade, you will receive an additional license certificate.

DXi Accent

Quantum's DXi Accent software accelerates backups and reduces network bandwidth requirements by distributing deduplication between the backup server and DXi appliances. With DXi Accent, backup windows are reduced and network bottlenecks are eliminated.

To use DXi Accent, you must install the Quantum OST Client Plug-in on the media server. For information about installing the OST Plug-in and using DXi Accent, see the *Symantec NetBackup OST Configuration Guide*.

DXi V-Series Warranties and Support

The following warranties and support plans are available, depending on the version of your virtual DXi appliance.

DXi V-Series Trial Versions

The DXi V-Series Trial versions include a 30 day warranty. The DXi V-Series Trial versions also include 30 days of Quantum Customer Support. Support includes software downloads, Email Home, and Internet access to Quantum's online Customer Support website.

DXi V1000 Standard Edition

The DXi V1000 Standard Edition product does not include a warranty or Customer Support. For DXi V1000 Standard Edition users, documentation, community support, and other resources are available through [Forum V](#), Quantum's online support forum for virtualization products.

DXi V-Series Enterprise Editions

The DXi V-Series Enterprise editions require the purchase of either a **Gold** or **Silver** Quantum Support Service Plan. A 90 day warranty runs concurrent with the start of the Support Service plan.

Service Plans

Quantum's Global Services organization is geared towards delivering the fastest possible response and root cause resolution, helping you maximize your backup investments, better manage processes, and make the best use of your resources. We ensure total customer satisfaction by providing comprehensive, responsive services on a worldwide basis.

Support options are available to you via Quantum's tiered support plans to meet a range of budget and availability requirements.

Support Option	Description
Gold Support Contract	Includes 7x24 phone support for 1 year.
Silver Support Contract	Includes 5x9 phone support for 1 year.

For more information on these service plans, please visit www.quantum.com or contact your Quantum Sales Representative.

Email Home

The Email Home capability can be configured to automatically send XML-based reports to e-mail recipients.

The report represents a snapshot of the system information at the time the report is generated. We recommend generating and saving a report before performing a software upgrade or reconfiguring the system.

Quantum Customer Support Website

The Quantum Customer Support website (<http://www.quantum.com/serviceandsupport/index.aspx>) features the following:

- Online service request processing
- Web-based event status tracking
- A comprehensive Knowledge Base, providing you with 7x24 real-time electronic access to complete product and support resources and the expertise of Quantum's Global Services organization.

Quantum Customer Support Contacts

The following table lists the Quantum Customer Support contacts by region.

Region	Support Contact
North America	1-800-284-5101 (toll free) +1-720-249-5700
EMEA	+800-7826-8888 (toll free) +49 6131 324 185
Asia Pacific	+800-7826-8887 (toll free) +603-7953-3010
For worldwide support: http://www.quantum.com/serviceandsupport/index.aspx	

DXi Advanced Reporting

DXi Advanced Reporting, which is included with all DXi appliances, sets new standards for onboard intelligence by giving users the following:

- Detailed views into internal appliance operations
- Years of backup and replication data for extended trend analysis.

DXi Advanced Reporting reduces administration time, improves operations, streamlines performance tuning, and helps users maximize the value of their DXi appliances.

Quantum Vision

For systems with a larger scope, Quantum Vision™ management software provides industry-unique capabilities, giving IT departments global management of all their Quantum disk and tape systems from a single console.

Vision’s centralized reporting and flexible trend analysis tools help users optimize system value by giving them automated, flexible access to the information they need to make proactive decisions concerning on-going system administration.

DXi V-Series Deployments

You can deploy your virtual DXi appliance from VMware’s vSphere client on an ESXi server.

Note: For DXi V1000 appliances, Quantum also supports deployment from VMware Workstation and Fusion. For more information regarding these types of deployments, see the documentation that accompanied the VMWare Workstation or Fusion utility.

References

Before deploying your virtual DXi appliance, we recommend reviewing the following topics:

- [Pre-Installation Checklist](#)
- [DXi V-Series Installation and Configuration Notes](#)
- [Disk Format Provisioning Types](#)

Pre-Installation Checklist

Before installing your virtual DXi appliance make sure that your environment meets or exceeds the following system requirements.

Component	Requirements
Host Server	<ul style="list-style-type: none">Server system with at least an i7 quad-core Intel processor.<ul style="list-style-type: none">DXi V1000: 2 virtual CPU cores requiredDXi V2000: 2 virtual CPU cores requiredDXi V4000: 8 virtual CPU cores requiredNote: AMD processors are not supported.A 1 GbE or 10 GbE Ethernet port for data movement on the DXi host server.

Component	Requirements
Virtual Server	<ul style="list-style-type: none"> vSphere vCenter version 4.0 u2 or later. One of the following ESX or ESXi servers: <ul style="list-style-type: none"> DXi V1000: One or more ESX4, ESXi4, or ESXi5.x servers that are part of a vSphere vCenter cluster or on a VMware Workstation 9. DXi V2000: One or more ESXi5.x servers that are part of a vSphere vCenter cluster. DXi V4000: One or more ESXi5.x servers that are part of a vSphere vCenter cluster. Note: Quantum supports V1000s that have been initially deployed on either a VMware Workstation 9 or on a VMware vSphere server, and both V2000s and V4000s that have been initially deployed on a VMware vSphere server. Virtual DXi appliances that have been migrated or converted from their initial deployment environment are not supported. Free space on the appropriate vSphere server. In general, you will need .5 TB plus your license capacity. Note: The virtual DXi appliances do not provide a facility for shrinking virtual disks, nor does Quantum Technical Support provide guidance or instruction for implementing such an activity. If you need to shrink virtual disks, you can find information in the following VMware article: Shrinking Virtual Disks.
System Resources	<ul style="list-style-type: none"> DXi V1000: 4 GB/ 2 CPUs DXi V2000: 8 GB/2 CPUs DXi V4000: 48 GB/8 CPUs
Network	<p>At least one IP address available for use by the DXi.</p> <p>Note: The IP address can be obtained from DHCP or manually assigned at boot time. If assigned manually, have your Gateway IP and Node Netmask IP available.</p>
Browsers	<p>One of the following Web browsers:</p> <ul style="list-style-type: none"> Mozilla Firefox 6 or higher Microsoft Internet Explorer 8 or higher (Internet Explorer 10 currently not supported)
Flash Player plug-in	Adobe Flash Player plug-in 9 or higher.

Caution: Creating a secondary copy of the data on your virtual DXi appliance should be performed using the DXi Replication feature rather than using your backup software.

DXi V-Series Installation and Configuration Notes

Review the following DXi V-Series configuration notes before deploying your virtual DXi appliance.

Infrastructure and Resource Allocation

When configuring your virtual DXi appliance, it is imperative to note that the allocated infrastructure and resources impact the appliance's performance and scalability. Make sure to understand your environments and how resources are shared.

The following two Use Cases demonstrate the importance of infrastructure and resource allocation.

Note: Changes with respects to any of the resources, CPU speeds, type of storage, and network infrastructure are unique to your environment. Performance results vary.

Use Case 1

In this Use Case, which was performed within a controlled environment, a DXi V4000 sustained 24 concurrent streams. The allocated infrastructure and resources consisted of the following:

Dedicated ESXi host

- ESXi 5.1.0
- 2x Intel E7540 @ 2.0 Ghz
- 128GB RAM
- 1x 10 GbE Network interface
- 1x 1 GbE Network interface
- 4x 8GbFC HBA's for datastores
- 20 data stores, each having the following attribute
 - Capable of up to 300 MB/s read/write rates
 - RAID 6

DXi V4000 VM

- A single dedicated datastore
- 1x 10GbE Network Interface (data)
- 1x 1 GbE Network Interface (management)
- Processor: 8 virtual CPU cores (as reported by vSphere)
- RAM: 48 GB

Use Case 2

In this Use Case, DXi V4000 appliances sustained 48 concurrent streams. These appliances were allocated 14 separate datastores, or one datastore for each virtual data disk.

Using the same configuration, other testing has shown DXi V400 appliances sustaining up to 50 concurrent streams.

Installation and Performance Recommendations

Review the following recommendations before configuring your virtual DXi appliance.

Datastore Configuration

A default deployment maps the DXi appliance's virtual disks to a single datastore. You can remap these virtual disks to dedicated datastores for higher performance. Such a configuration will improve overall DXi performance under heavy loads.

Perform all mapping of virtual disks to VMware datastores before initial configuration of the virtual DXi appliance. VMware may place limitations preventing such changes after the appliance has been run.

Host Resources

When selecting a host on which to install the virtual DXi appliance, keep in mind that the host needs to have enough available resources to allow the appliance to perform at the desired service level. The more load your ESX host carries, the greater the chance that your virtual DXi guest machine will not perform up to your expectations. This lack of performance is due to other guest machines consuming the resources – such as CPU, RAM, I/O – needed by the virtual DXi appliance.

- **Procmon** timeouts occur when your host has insufficient or over committed resources, causing the virtual DXi appliance to go into its diagnostic mode. When these timeouts occur, you need to take corrective actions by re-balancing the ESXi server to eliminate the overload condition. The ESXi server needs 20% of the available CPU and RAM to start the virtual machine (VM) and address this overload condition.
- Make sure applications and VMs are not competing for resources with the virtual DXi appliance. In order to guarantee memory allocation for the virtual DXi appliance, use the reserve memory feature found under the VM settings on the vSphere server.

Note: If you use VMware Workstation 9 to configure your DXi V1000, you cannot set memory reservation for an individual VM as this option does not exist.

Storage Subsystem Resources

The storage subsystem of the ESXi server contributes the most to the overall performance of the DXi V-Series systems. Make sure that the storage subsystem is not over-used nor that it has high latencies for access. Such issues can cause timeouts and errors within the virtual DXi appliances, and possibly within the VMware products.

We recommend that you install your virtual DXi appliance with high performance storage systems, such as direct attached storage, fibre channel SAN, or 10GbE iSCSI and NFS storage:

- Direct attached storage or Fibre Channel SAN offer the best performance and the most reliable storage connectivity.
- If your environment requires iSCSI or NFS datastores, we recommend configuring multiple datastores, using multiple network access paths, and distributing the appliance's virtual disks (VMDK) across the datastores.

vCenter Operations Manager

To support and monitor your virtual DXi appliances, we recommend using VMware's vCenter Operations Manager. This software provides automated monitoring of ESXi servers and automatically identifies issues.

Recommended Disk Speed

Review the following disk speed recommendations before deploying your virtual DXi appliance.

- Deploy virtual DXi appliances in an environment with a minimum disk speed of 7200 rpm.
- When running a virtual DXi appliance in a slow disk environment, such as a USB 2.0 external device, you may encounter the following errors:
 - The file system initializes in read-only mode.
 - Various system services timeout and the virtual DXi appliance starts up in its diagnostic mode.
 - The virtual DXi appliance fails to load during start-up.

Deploying a Virtual DXi Appliance from an ESXi Server

When you deploy a virtual DXi appliance from an ESXi server, you must first deploy the appliance's OVF file. After deploying the OVF file, you can power on the appliance.

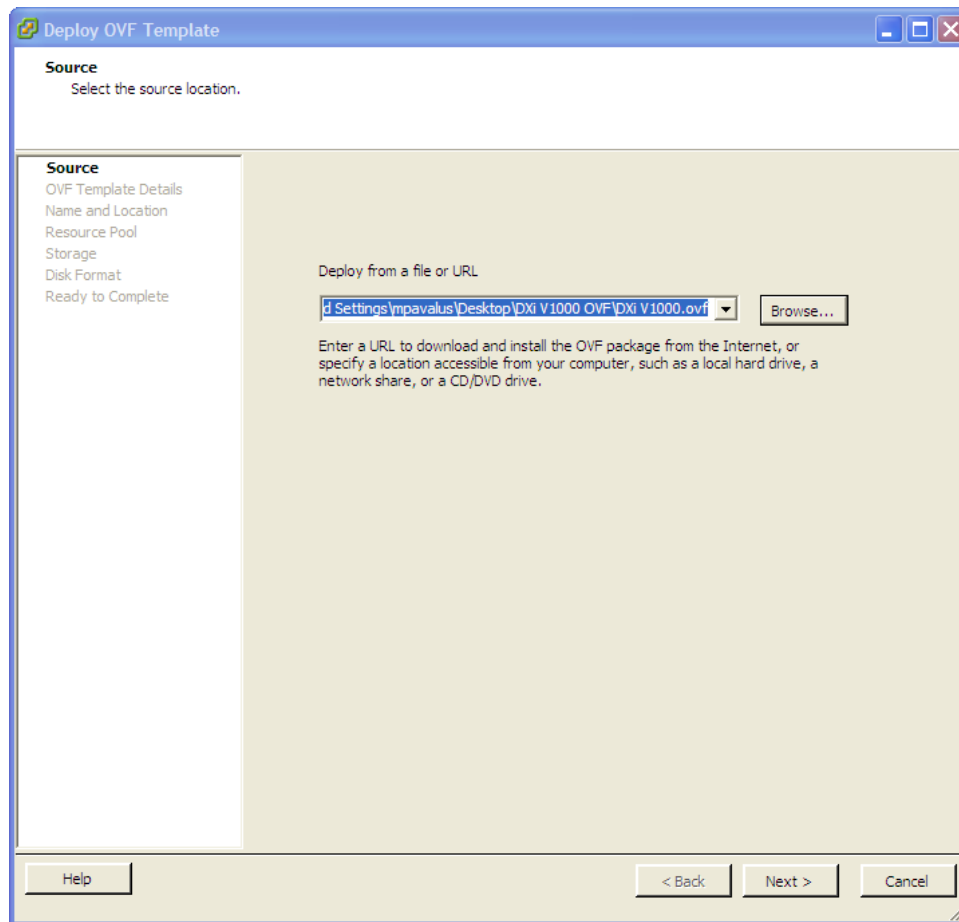
i Note: The following tasks represent a typical DXi V1000 OVF deployed from a ESXi V5.0.0 server. The actual sequence of windows depends on your system's configuration. With a basic knowledge of your system, your selections should be intuitive.

Deploy the appliance's OVF

1. If you have not downloaded the Quantum DXi V-Series software, do so now by following the instructions on your **DXi Download Authorization Code** certificate.
2. Extract the files from the downloaded zip file.
3. Start a vSphere Client.

4. From the **File** menu, select **Deploy OVF Template** to open the **Deploy OVF Template Wizard** with the **Source** window displayed.

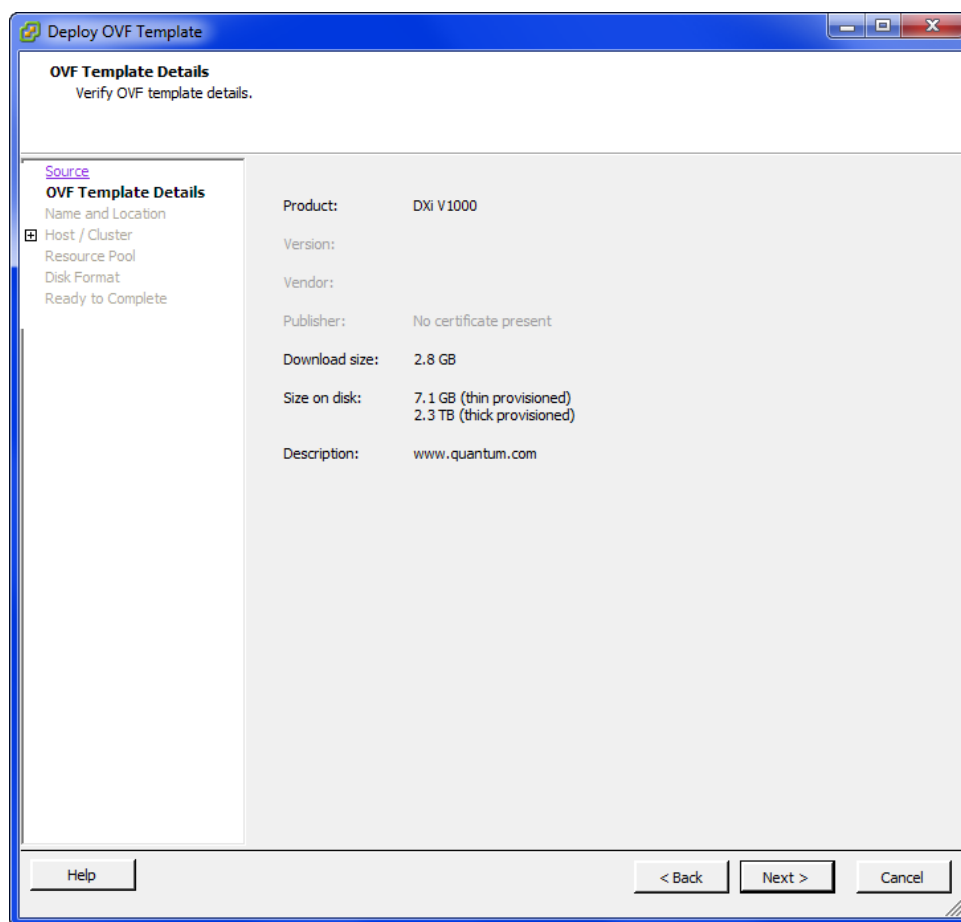
Figure 1: Source Window



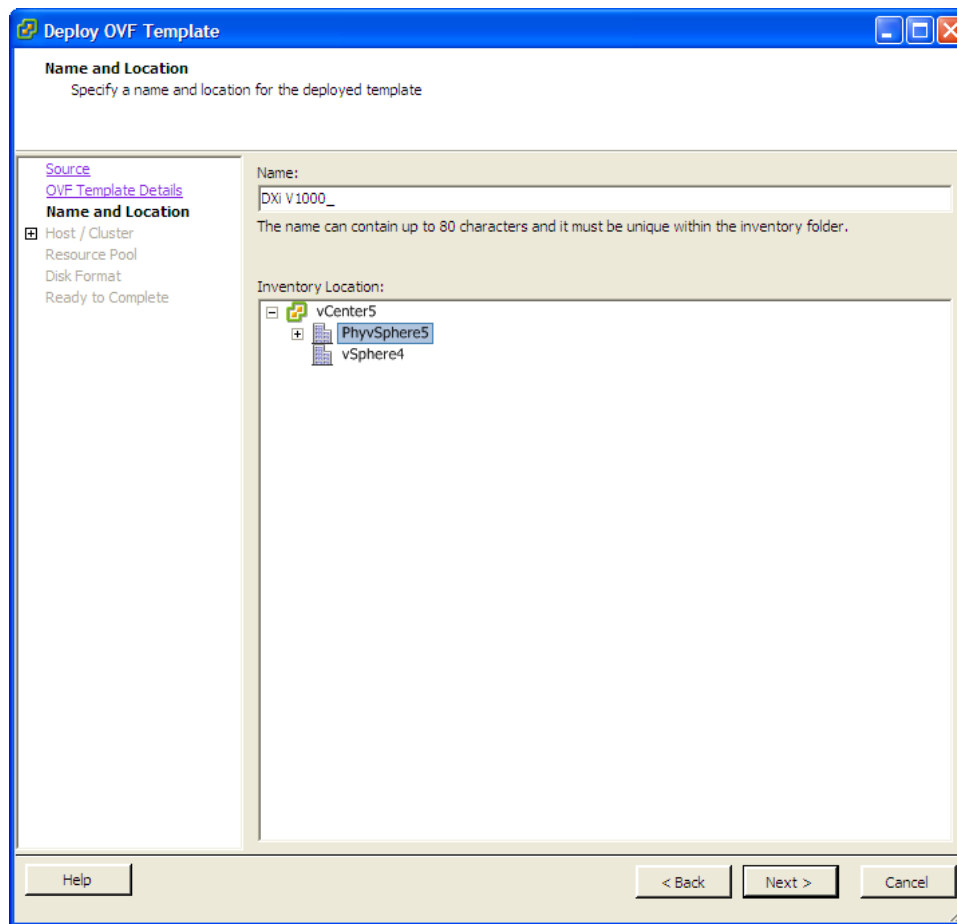
5. On the **Source** window, select the OVF file to deploy.

To select the OVF file

- a. Select **Browse** to browse to the files you extracted from the zip file.
- b. Choose the file **DXi V1000.ovf**.
- c. Click **Next** to display the **OVF Template Details** window.

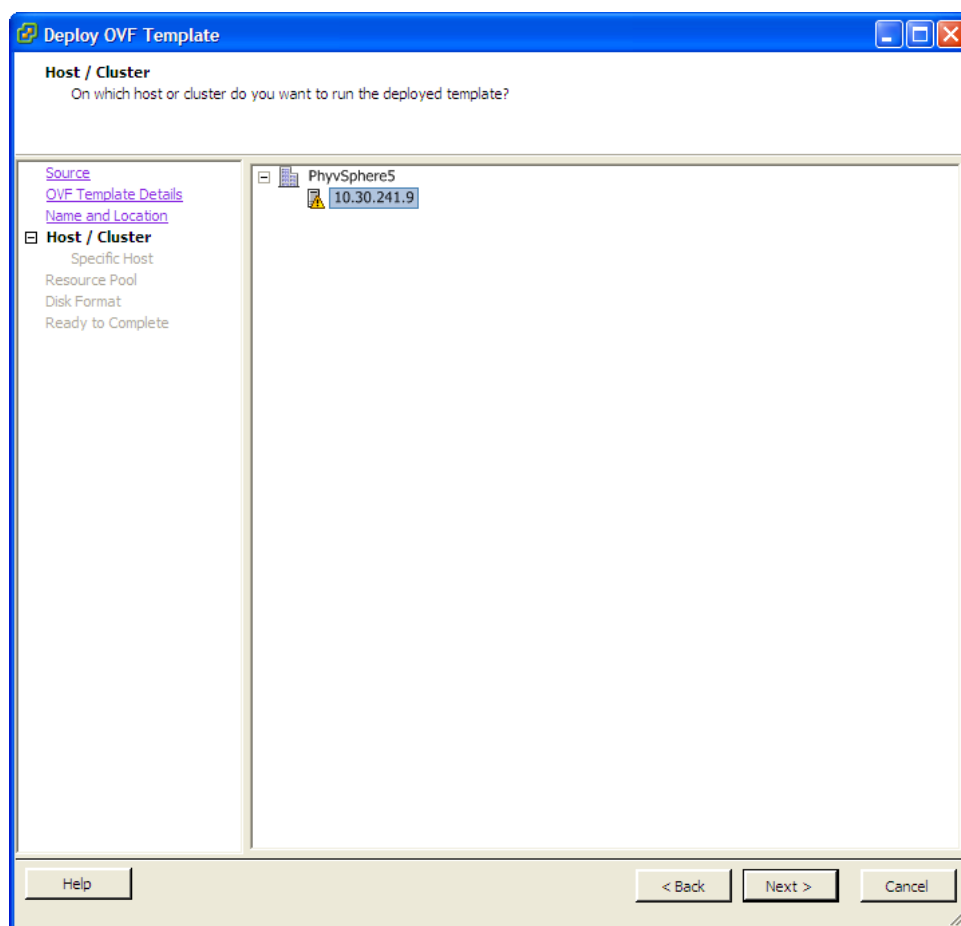
Figure 2: OVF Template Details Window

6. Make note of any information you feel you may need, and click **Next** to display the **Name and Location** window.

Figure 3: Name and Location Window

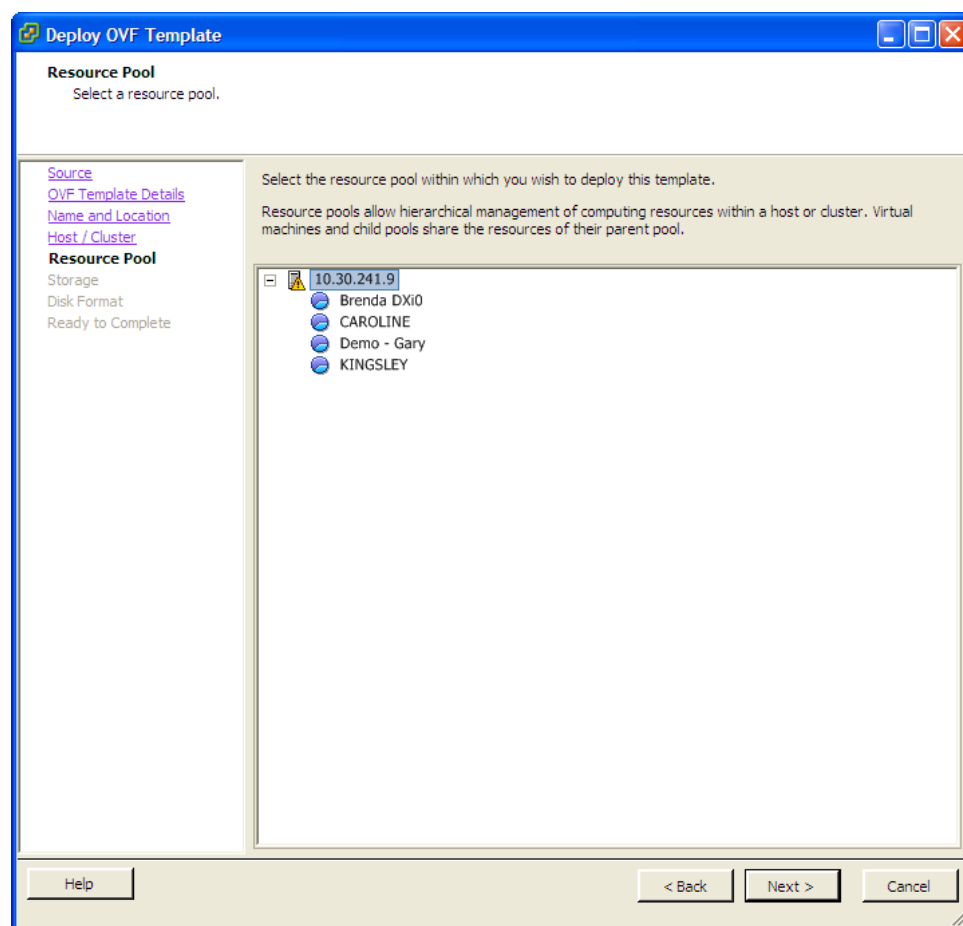
7. In the **Name** field, enter a name for the new appliance.
8. Select an **Inventory Location**, as needed, and click **Next** to display the **Host/Cluster** window.

i Note: The **Host/Cluster** window displays only if you have multiple hosts or clusters.

Figure 4: Host or Cluster

9. Select your host or cluster, as needed, and click **Next** to display the **Resource Pool** window.

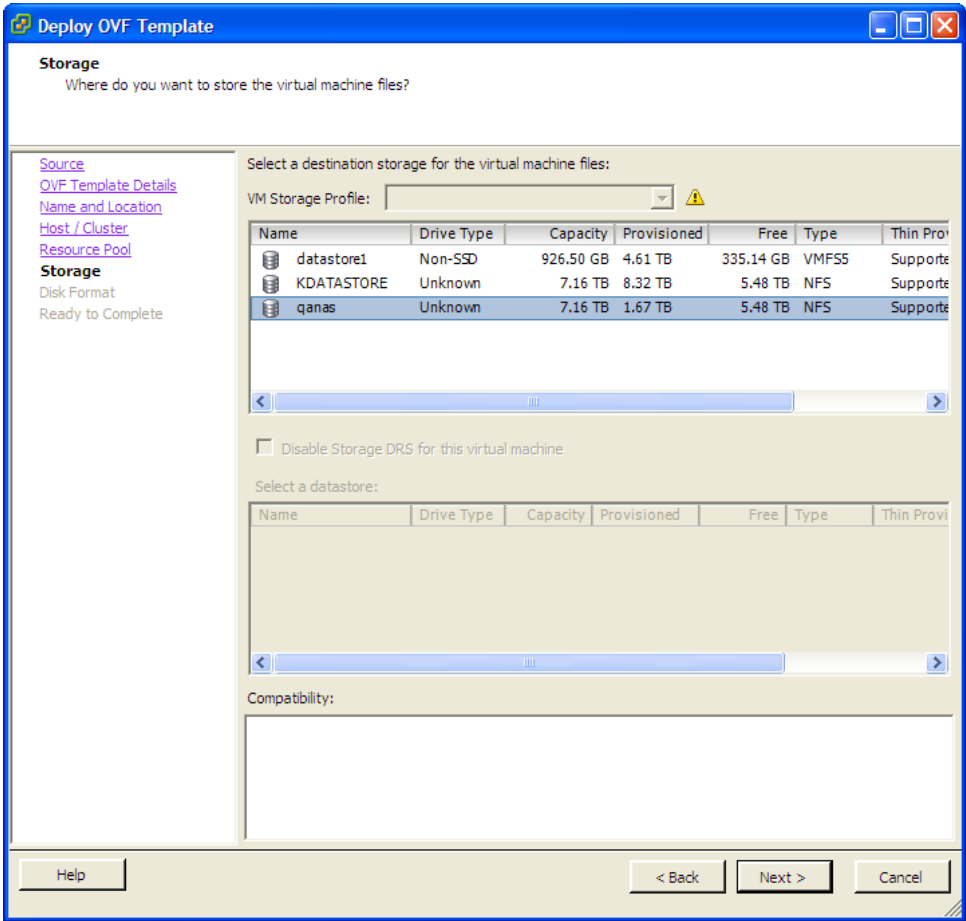
Note: The **Resource Pool** window displays only if you use the resource pool capability.

Figure 5: Resource Pool Window

10. Select your resource pool, as needed, and click **Next** to display the **Storage** window.

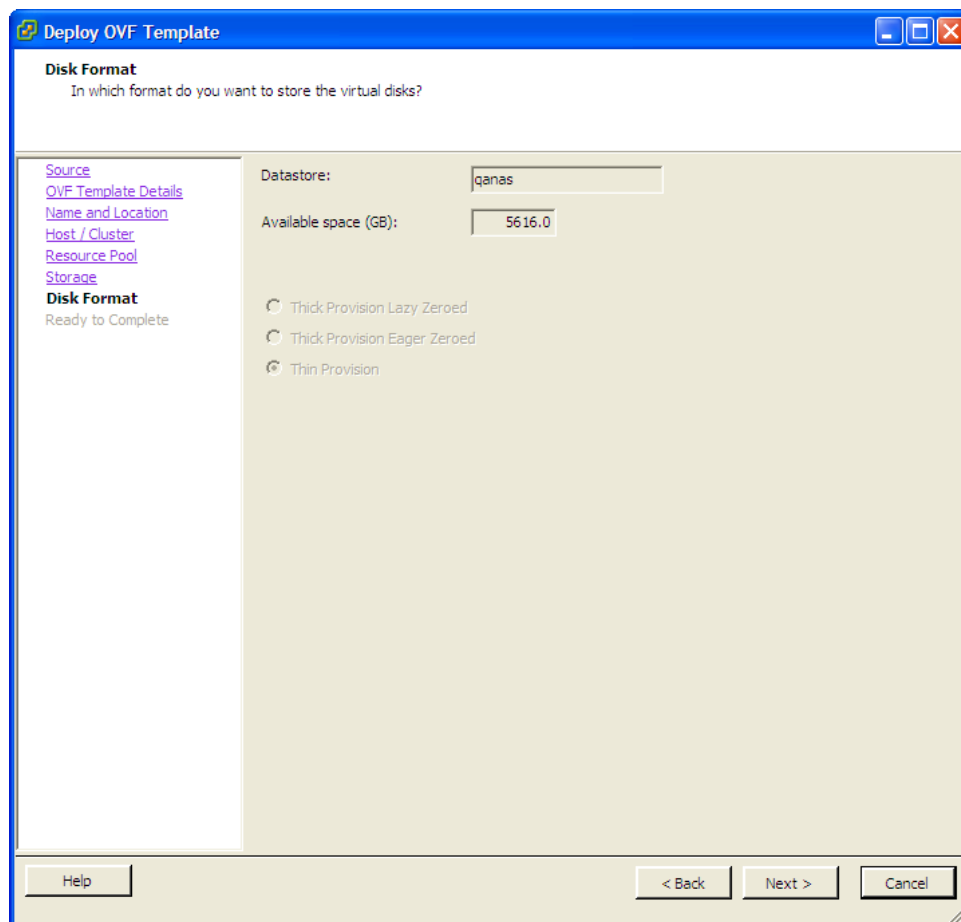
Note: The **Storage** window displays only if you have multiple storage devices.

Figure 6: Storage Window



11. Select your storage destination, as needed, and click **Next** to display the **Disk Format** window.

Figure 7: Disk Format Window



12. Select the appropriate disk format provisioning option based on your configuration and resources, and click **Next**. For information about disk format provisioning, see [Disk Format Provisioning Types](#).

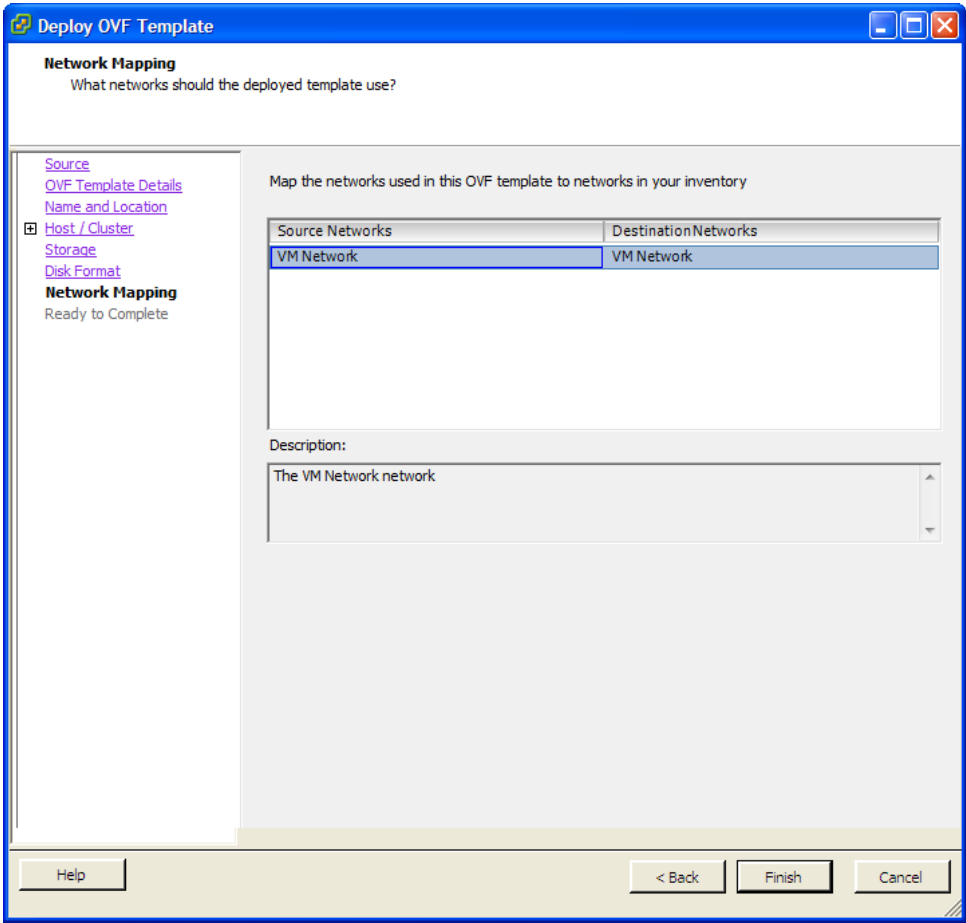
Insufficient Storage

If you see a message stating that you have insufficient storage, cancel the deployment and address this issue. For free space requirements, see the [Pre-Installation Checklist](#).

Multiple Network Connections

If you have multiple network connections the **Network Mapping** window displays.

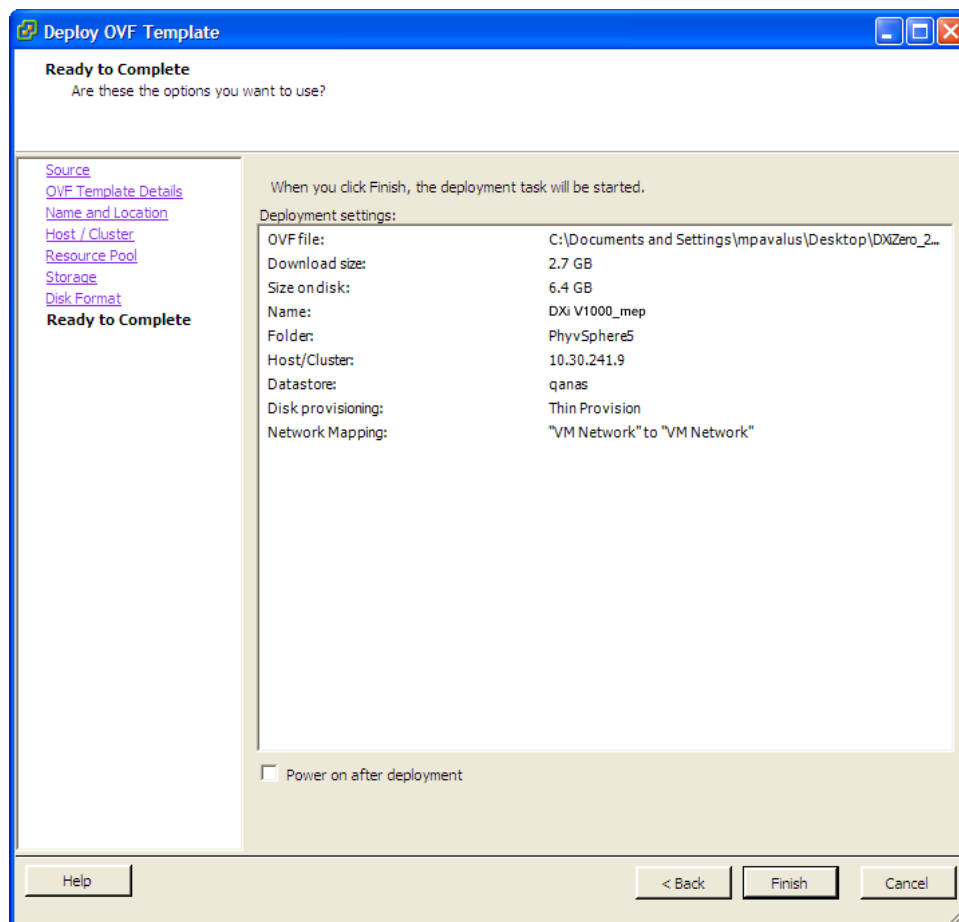
Figure 8: Network Mapping Window



Note: The default **Network Connection** for the DXi is **VM Network**. After the OVF has been installed, you can select a different network connection by editing the virtual machine properties.

- Click **Next** to display the **Ready to Complete** window.

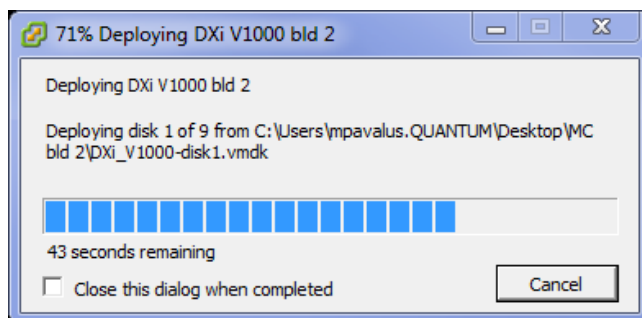
Figure 9: Ready to Complete Window



- After verifying that the settings are correct, click **Finish** to display deployment progress dialog box.

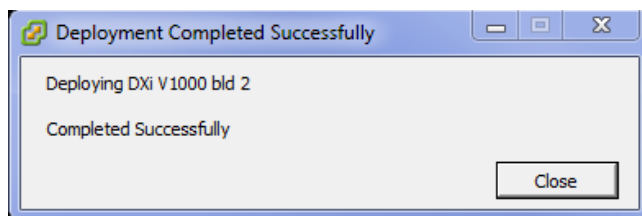
i Note: The deployment takes approximately 7 minutes for a DXi V1000 and DXi V2000, and approximately 10 to 12 minutes for a DXi V4000.

Figure 10: OVF Deployment Progress Dialog Box



When the OVF deployment has completed, the **Deployment Completed Successfully** dialog box displays.

Figure 11: Deployment Completed Successfully Dialog Box



15. Select **Close** to exit the wizard.

Power on your appliance


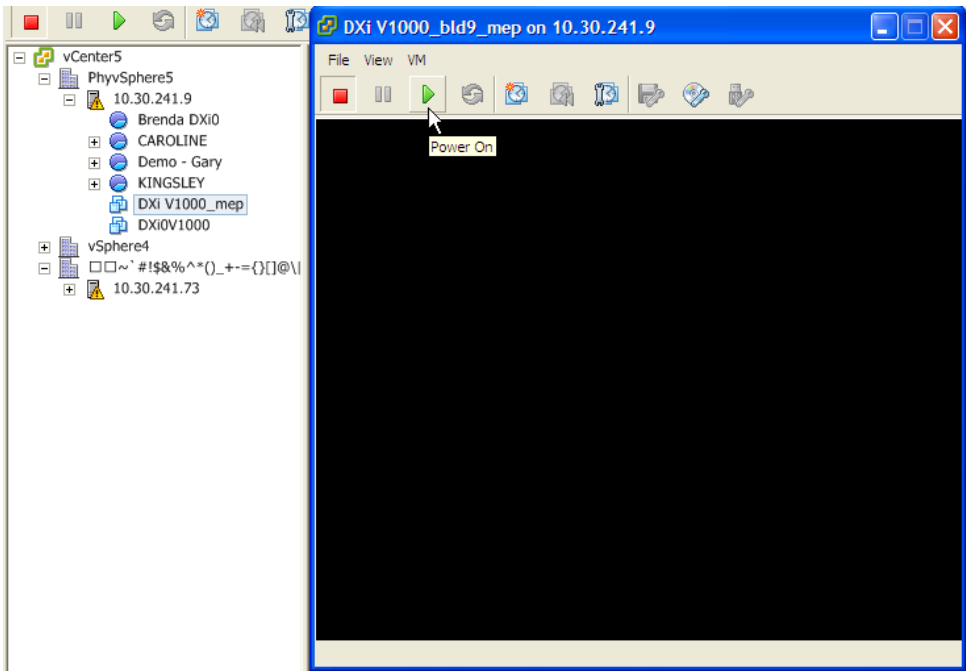
1. In the left pane of your vSphere Client window, select the appliance that you deployed in the task above.
2. Click the **Launch Virtual Machine Console** button  to display your appliance's virtual machine (VM) console window.

Figure 12: Virtual Machine Console Window



3. Click the **Power On** button .

Note: The power on process takes approximately 15 minutes for a DXi V1000 and V2000, and approximately 20 to 25 minutes for a DXi V4000.

4. Do one of the following:

If your network uses DHCP to assign IP addresses

Wait for the VM console to notify you that the appliance is powered on. See below.

If your network does not use DHCP to assign IP addresses

- a. Populate the following displayed prompts:

Prompt	Entry
Please enter Node IP address	Enter the IP address to assign to the appliance.
Please enter Node Netmask	Enter the netmask to assign to the appliance.
Please enter Gateway IP	Enter the gateway IP address to assign to the appliance. If you do not have a gateway IP address, enter IP 0.0.0.0 .

Prompt	Entry
Please Enter VLAN ID (optional)	If necessary, enter the VLAN ID

- b. Press **Enter** to display the IP addresses assigned to the appliance.
- c. At the **Apply changes (y/n)** prompt, enter **y**.

Figure 13: VM Console Window – IP Address Prompts

```
Please enter Node IP address: 10.30.13.203
Please enter Node Netmask: 255.255.252.0
Please enter Gateway IP: 10.30.12.1
Please enter VLAN ID (optional):
IP=10.30.13.203 NETMASK=255.255.252.0 GATEWAY=10.30.12.1
Apply changes(y/n)? y
```

When you see the **System status: Normal** message with the IP address under it, your DXi has completed its power on process

Figure 14: VM Console Window – System Status Message

```
System status: Normal
IP Addresses: 10.20.85.6/22 10.20.85.22/22 10.20.85.28/22 10.20.85.30/22
```

Note: You can always find your IP address in the **Summary** tab of your vSphere Client.

Disk Format Provisioning Types

When deploying a DXi appliance from your vSphere client, you must select the type of disk format provisioning to assign to the appliance's virtual disk. Review the following sections to gain a better understanding of disk formats.

Note: For more information regarding disk format provisioning types, see the following VMware KB article: [KB 1005418](#).

Thick Provision Lazy Zeroed

With Thick Provisioned Lazy Zeroed disk formats, vSphere creates a virtual disk as follows:

- Allocates space required for the virtual disk when the virtual disk is created.
- Retains data on the physical device during the creation of the virtual disk.
- Zeroes out the data on the physical device on demand when the first write of data from the virtual machine occurs.

Considerations

When using this type of disk format, keep the following in mind:

- The possibility of recovering deleted files or restoring old data that might be present on this allocated space is not zeroed out or eliminated.
- You cannot convert a thick disk to a thin disk.

Thick Provision Eager Zeroed

The Thick Provision Eager Zeroed disk format is a type of thick provisioned virtual disk that supports clustering features, such as Fault Tolerance. vSphere creates Thick Provision Eager Zeroed disks as follows:

- Allocates space required for the virtual disk when the virtual disk is created.
- In contrast to the Lazy Zeroed format, zeroes out the data on the physical device when the virtual disk is created.

Consideration

Keep in mind that creating disks in this format can take longer than creating other types of disks.

Thin Provision

The Thin Provision disk format allocates and commits the virtual disk's storage space on demand, allowing you to save storage space.

When using this type of disk format, you can provision as much datastore space as the disk requires based on the disk size. When created, however, the thin disk starts small and uses only as much datastore space as the disk needs for its initial operations.

Considerations

We recommend using the **Thin Provision** disk format. Keep the following in mind if you follow these recommendations:

- Thin provisioning provides for a faster deployment and uses less disk space during the initial installation.
- Thin provisioning does create more I/O traffic for the vSphere server because the server will need to increase the size of its virtual disk and update its file system (vmfs) metadata accordingly.
- Thin provisioning allows you to deploy the DXi in a datastore smaller than what is presented in the system requirements. Make sure that you can move the DXi to a larger datastore when it grows in size or when you add more disk capacity to the datastore. In either case, your system must meet the system requirements.

DXi V-Series Launch

After deploying your virtual DXi appliance, you can launch it from a supported Web browser to begin configuring and using the appliance. You will need to take the following steps to launch your appliance:

Entering the Product Key and Accepting the License Agreement

As the first step in launching the appliance, you will need to walk through the Getting Started Wizard to enter the product key and accept the product's license agreement. Make sure you have the product key emailed to you from Quantum. See [Entering the Product Key and Accepting the License Agreement on the next page](#).

Verifying or Entering the License Key

During the initial launch and configuration, your appliance will contact the Quantum Mosaic licensing server to automatically retrieve its license key. You will need to verify that the license has been retrieved and entered into your appliance. See [Verifying License Retrieval on page 28](#).

If you are an **Enterprise Edition** customer and you do not have Internet access, contact [Quantum Technical Support](#) to obtain your license key.

If you are a **Standard Edition** customer and you do not have Internet access, you must manually retrieve and enter the appliance's license key. See [Manually Retrieving and Entering License Keys on page 30](#).

Registering the Product for Service and Support

You will also need to register your appliance to receive service and support from Quantum. See [Registering a Virtual DXi Appliance on page 32](#).

Important

The Standard Edition of DXi V1000 does not include any Custom Support. You do not need to register your DXi V1000 appliance if you are a Standard Edition customer.

Generate the System Diagnostics File

The final step in the appliance's launch is to generate a system diagnostics file. You can use this file as a future reference in troubleshooting problems on the virtual DXi appliance. See [Generating a System Diagnostics File on page 36](#).

Entering the Product Key and Accepting the License Agreement

As the first step in launching the appliance, you will need to walk through the Getting Started Wizard to enter the product key and accept the product's license agreement.

Prerequisite

During the initial launch and configuration of your virtual DXi appliance, you will need to enter the product key sent to you from Quantum. Make sure to have this product key on hand.

Product key format

Cxxxx-xxxxx-xxxxx-xxxxx

Note: For illustrative purposes, the following tasks depicts the launching of a DXi V1000 appliance.

Complete the Getting Started Wizard

1. Open a supported Web browser on a workstation that has access to your network.
2. In the browser address box, enter the IP address of your appliance to display the **Login** window for your appliance.


Note: If your DXi has not completed its power on process, it will display a message telling you that it has not finished.

Figure 15: DXi V1000 Login Window

Login

Select login type and enter password.

Login type: ☐ Monitor (view-only access) ☒ Administrator

Password: 

Login

U.S. Pat. No.: 5,990,810

3. Log in to your virtual DXi appliance.

To log in

- a. In the **Login type** field, select **Administrator**.
- b. In the **Password** field, enter **password**.
- c. Click **Login** to display the Getting Started Wizard's **Welcome** page.

Figure 16: Getting Started Wizard – Welcome Page



i Note: If you log on to your appliance before its power-on process completes, a **Limited Mode** window displays. Exit your appliance. When the power-on process has completed, start a new browser session, and log in again to gain full access to your appliance.

4. After reviewing the information presented on the **Welcome** page, click **Next** to display the **Getting Started – Product Key and License Agreement** page.

Figure 17: Getting Started – Product Key and License Agreement Page

Getting Started Wizard

1 Welcome 2 License Agreement 3 Confirm

Getting Started - Product Key and License Agreement

Product Key Required

* Product Key - - -

* Required Field

Accept End User License Agreement

QUANTUM CORPORATION

VMPRO/DXi V1000/DXi V4000 END USER LICENSE AGREEMENT

THIS LICENSE AGREEMENT ("LICENSE" AND/OR "AGREEMENT") DEFINES THE TERMS AND CONDITIONS OF THE LICENSE BETWEEN QUANTUM CORPORATION, A DELAWARE CORPORATION WITH CORPORATE HEADQUARTERS LOCATED AT 1650 TECHNOLOGY DRIVE, SAN JOSE, CA 95110 ("QUANTUM") AND THE LICENSEE (AS DEFINED BELOW) FOR USE OF QUANTUM'S SOFTWARE AND DOCUMENTATION AS DEFINED BELOW. ANY SOFTWARE OR DOCUMENTATION PROVIDED TO LICENSEE BY QUANTUM WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF THIS LICENSE, AND BY DOWNLOADING, INSTALLING, OR USING THE SOFTWARE OR DOCUMENTATION; LICENSEE SIGNIFIES ITS AGREEMENT WITH THIS LICENSE. IF LICENSEE DOES NOT AGREE TO ALL OF THE TERMS OF THIS LICENSE, THEN LICENSEE MUST NOT DOWNLOAD, INSTALL, OR USE THE SOFTWARE OR DOCUMENTATION.

1. Definitions:

a. "Designated System" shall be the system specified on the sales quote or other applicable sales document at the time the Software is licensed, and means

i. the specific Hardware that is authorized for use with Software; and/or

ii. the parameters otherwise defining or limiting use of Software by some relevant licensing metric, including, but not limited to, socket capacity or target

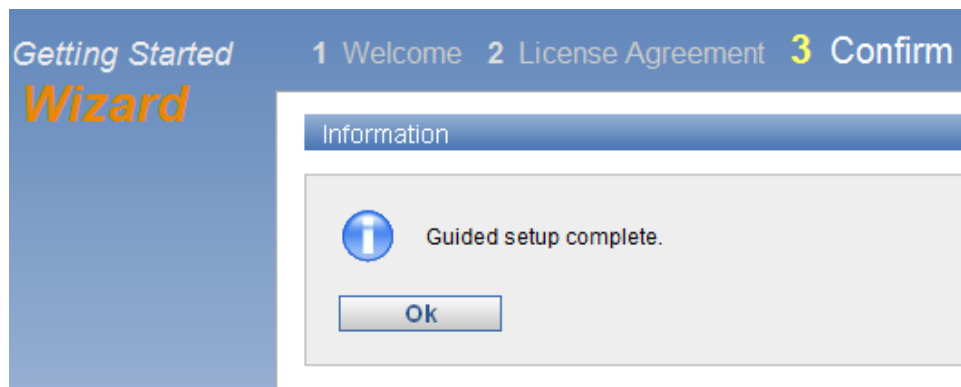
☐ I have read and accept this License Agreement

< Previous Next >

5. In the **Product Key** field, enter the product key emailed to you from Quantum.
6. Review the license agreement, and then select **I have read and accept this License Agreement**.

- Click **Next** to display the **Information – Confirm** page.

Figure 18: Information – Confirm Page



- Click **OK** to complete the Getting Started Wizard and to display the **Configuration Wizard Home** page.
- Continue with verifying that the appliance's license has been retrieved. See [Verifying License Retrieval below](#).

Verifying License Retrieval

You can begin configuring your virtual DXi appliance when the **Configuration Wizard Home** page displays, and the **No Space** warning at the top of the window has changed to **Normal**. The first step in configuring your virtual DXi appliance is to verify its license.

Important

Review the following information before installing the virtual DXi appliance's license:

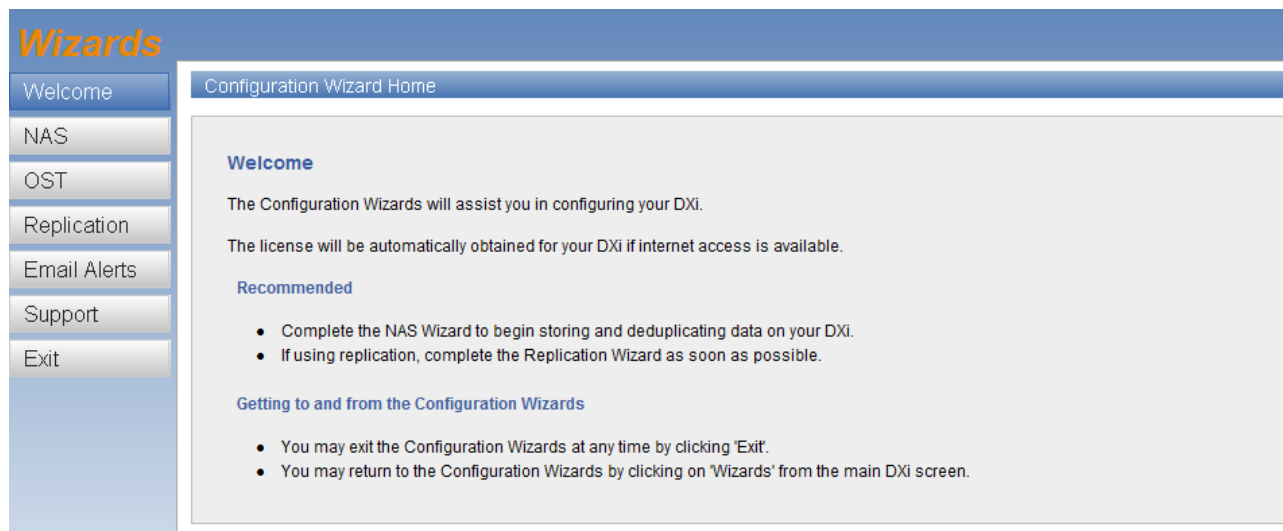
- If you have Internet access and you have entered a valid Product Key on the [Getting Started Wizard](#), the virtual DXi appliance automatically retrieve its license. In addition, after a successful installation, it automatically checks with the license server to retrieve any future license updates.
- If you do not have Internet access and you are an **Enterprise Edition** customer, contact [Quantum Technical Support](#) to obtain your license key.
- If you do not have Internet access and you are a **Standard Edition** customer, you must manually retrieve and enter the appliance's license key. See [Manually Retrieving and Entering License Keys on page 30](#).

Note: For illustrative purposes, the configuration of a DXi V1000 is shown.

Verify automatic license retrieval

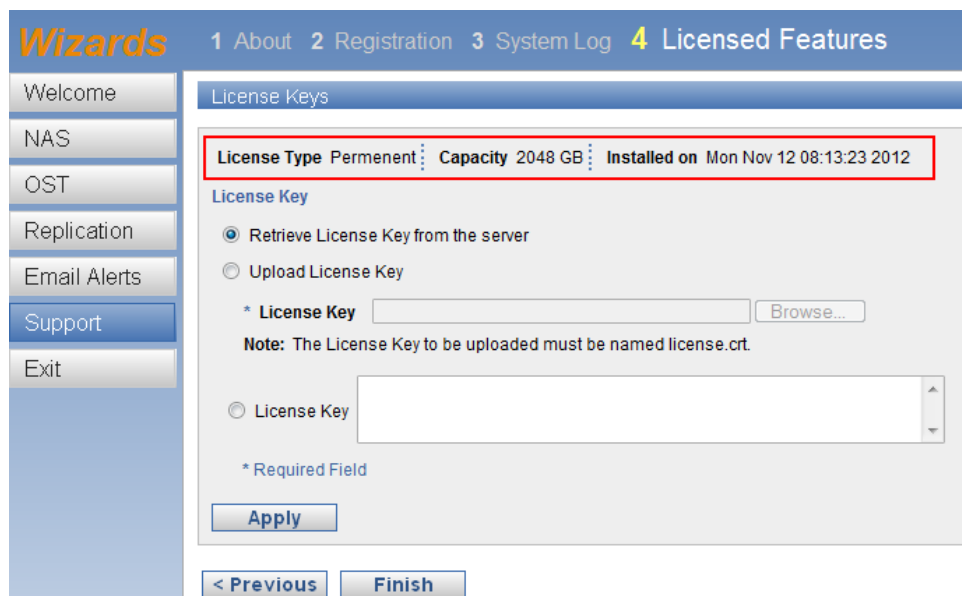
1. From the DXi V1000 **Home** page, select **Wizards** to display the **Configuration Wizard Home** page.

Figure 19: Configuration Wizard Home Page



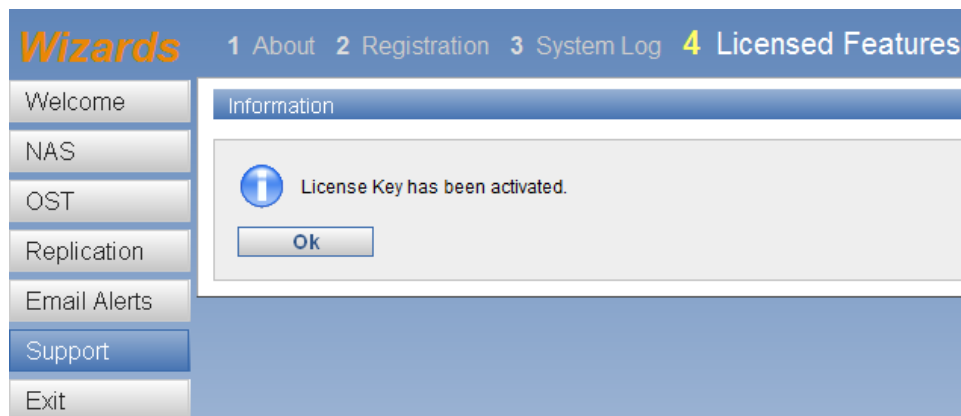
2. Select **Support** to display the **About System Support** page, and then click **Next** until you have navigated to the **License Keys** page.

Figure 20: License Keys Page



3. Select **Retrieve License Key from the server**, and click **Apply** to display the **Information** page.

Figure 21: Information Page



If the virtual DXi appliance can connect to the Internet and you entered a valid Product Key

The appliance automatically retrieves and applies its license. The appliance displays the following message on the **Information** page:

License Key has been activated.

If the DXi appliance cannot connect to the Internet

- And you are an **Enterprise Edition** customer, contact [Quantum Technical Support](#) to obtain your license key. After obtaining your license key, you will need to enter it into the virtual DXi. See [Manually Retrieving and Entering License Keys below](#).
- And you are a **Standard Edition** customer, you must manually retrieve and enter the appliance's license key. See [Manually Retrieving and Entering License Keys below](#).

4. Click **OK** to return to the **License Keys** page.
5. Select **Finish** to return to the **Configuration Wizard Home** page.

Manually Retrieving and Entering License Keys

Important

The manual retrieval of license keys applies to Standard Edition customers only. If you are an Enterprise Edition customer, contact [Quantum Technical Support](#) to obtain your license key.

If your virtual DXi is behind a corporate firewall that does not allow the appliance to communicate with the Quantum Mosaic licensing server, you can manually retrieve your license key from a system that can communicate with the Internet. After retrieving your license key, you can manually enter it into the virtual DXi appliance's GUI.

Prerequisite

To manually retrieve license keys, you will need to supply the product key sent to you from Quantum. Make sure to have this product key on hand.

Product key format

Cxxxx-xxxxx-xxxxx-xxxxx

Manually retrieve your license key

1. From a Internet-connected system, open a Web browser and navigate to <https://mosaic.quantum.com/register>.
2. On the **Quantum Product Key Registration** page, populate the registration fields.

Figure 22: Quantum Product Key Registration Page and Registration Fields

Quantum Product Key Registration

Welcome! To receive your license for Quantum vmPRO or DXi, please fill out the form below. Once you complete the registration, you will receive an email containing your license and download instructions.

For technical support, please contact Quantum at 800-284-5101 (Toll Free) or 720-249-5700. Please have your Quantum Product Key available when you call.

The Product Key is located on a certificate in your Download Media Kit. You may use upper or lower case, with or without dashes.

If your license certificate includes a Serial Number rather than a Product Key, please [click here](#).

3. Click **Submit**. Quantum will send you an email with a complete list of your appliance's serial numbers and license keys.
4. Save this email as a text file so that you can copy and paste the license key into the appliance's GUI.

Manually install your license

1. From the virtual DXi **Home** page, select **Wizards** to display the **Configuration Wizard Home** page.
2. Select **Support** to display the **About System Support** page, and then click **Next** until you have navigated to the **License Keys** page.

3. Select the **License Key** option.
4. Copy the license key sent to you by Quantum and paste it into the text area located next to the **License Key** option.

Figure 23: License Key Example

License Keys

License Type Permanent Capacity 2048 GB Installed on Tue Jan 29 10:21:36 2013

License Key

☐ Retrieve License Key from the server

☐ Upload License Key

* License Key Browse...

Note: The License Key to be uploaded must be named license.crt.

☒ License Key

Paa0xbWf8cJ2fkUkHse8NnGYyQbYB2H1CxAmzeR50EzjtI03GsXukOO
Rww1uIF8jS36XzLx67jcx1AlHocalld1r5Yd5ABP6zgNFC2fluTjZITT4yIjqy3I
EGEDaB1VUIFzuFPxIwizJIFdYENNOSAulJS1e7OIWfprbS5G8=

* Required Field

Apply

< Previous Finish

5. Select **Apply** to display the **Information** page.
6. Verify that **License Key has been activated** displays.
7. Click **OK** to return to the **License Keys** page.
8. Select **Finish** to return to the **Configuration Wizard Home** page.

Registering a Virtual DXi Appliance

After [verifying](#) or [installing](#) your virtual DXi appliance's license, return to the **About System Support** page of the **Support** wizard to register your appliance. You must register your appliance to receive service and support from Quantum.

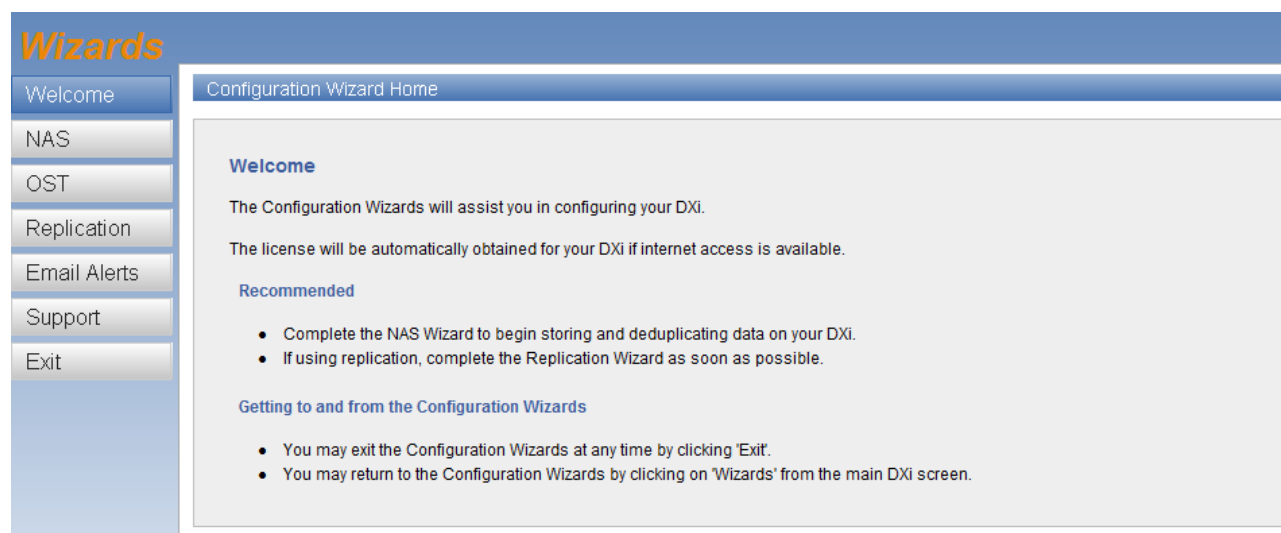
Important

The Standard Edition version of the DXi V1000 does not include any Custom Support. You do not need to register your DXi V1000 appliance if you are a Standard Edition customer.

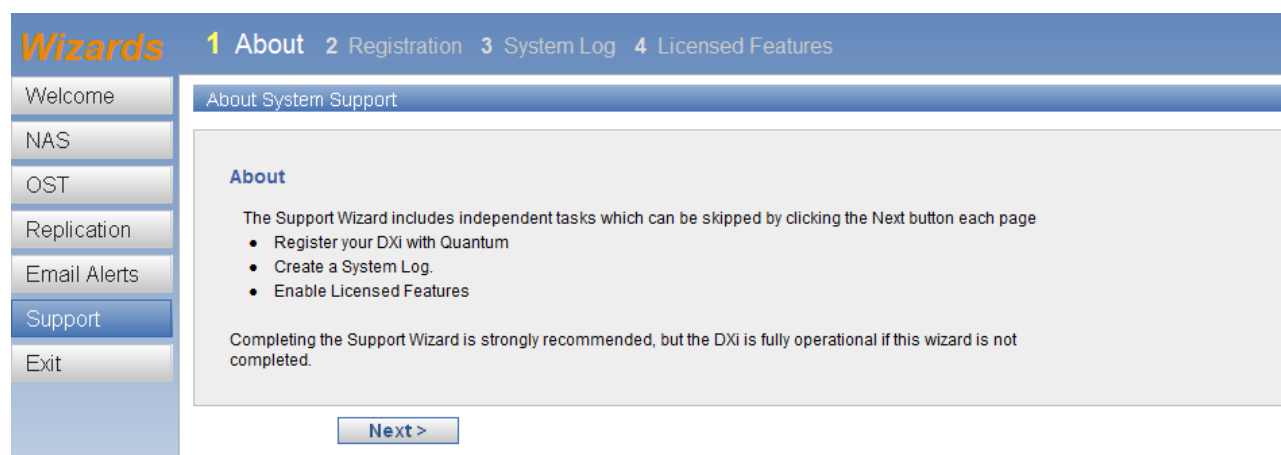
Note: For illustrative purposes, the configuration of a DXi V1000 is shown.

Register your virtual DXi appliance

1. From the DXi V1000 **Home** page, select **Wizards** to display the **Configuration Wizard Home** page.

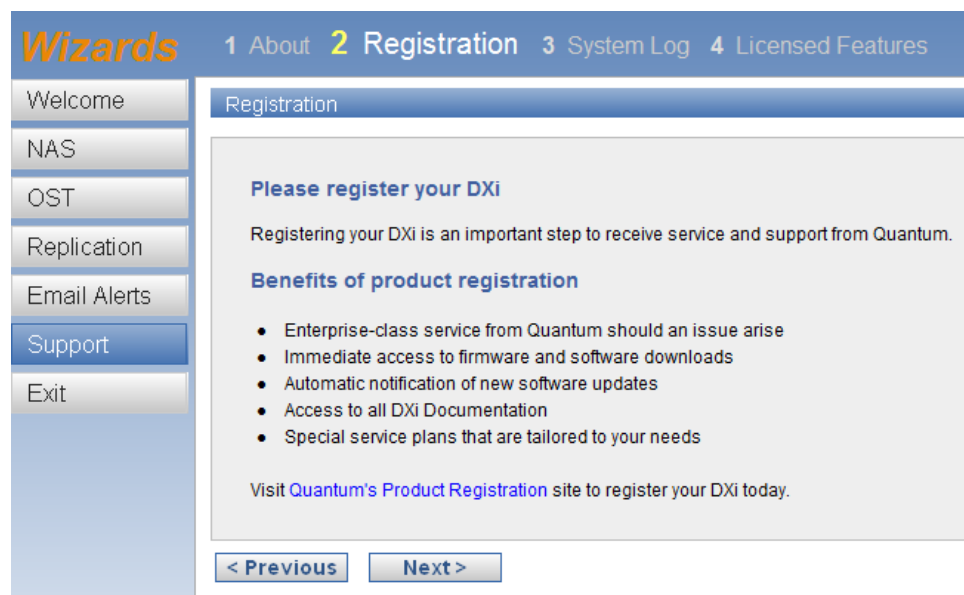
Figure 24: Configuration Wizard Home Page

2. Select **Support** to display the **About System Support** page.

Figure 25: About System Support Page

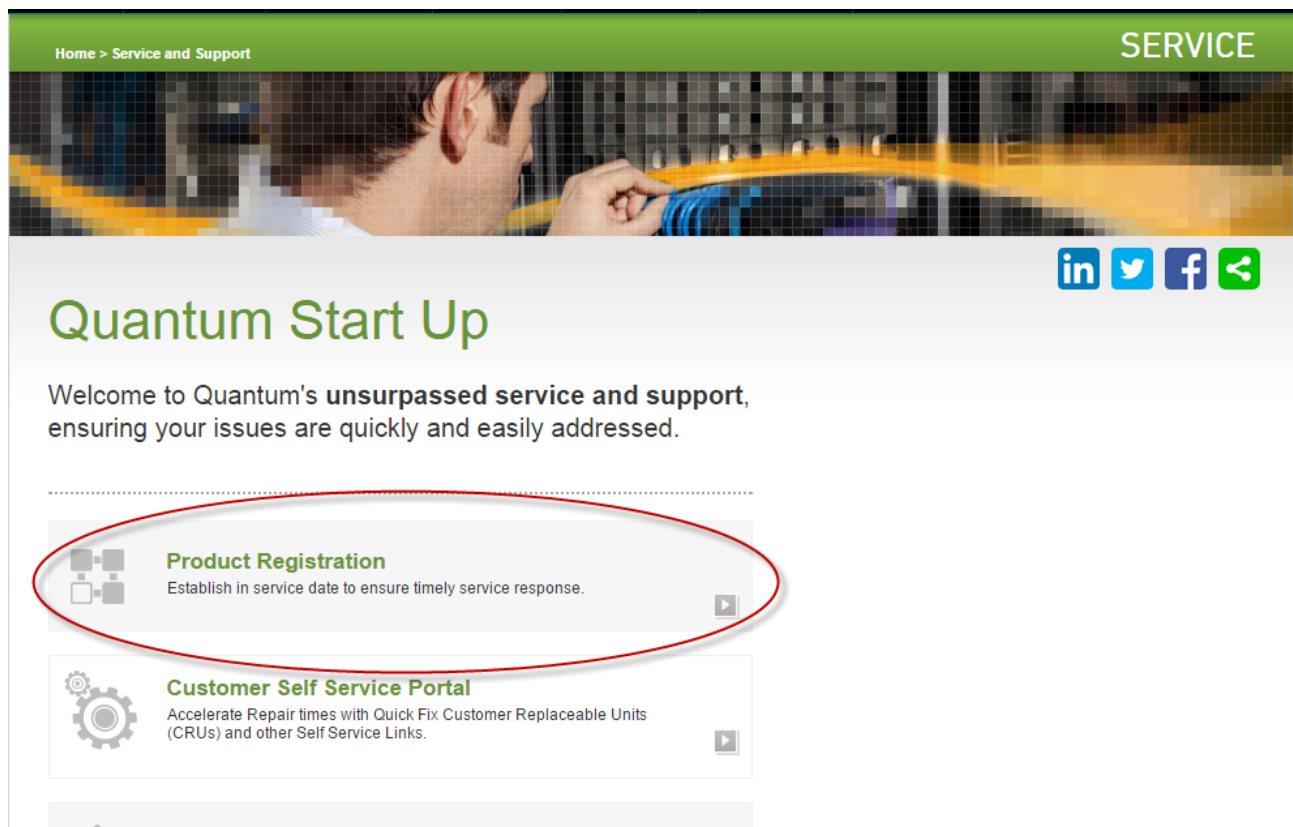
3. After reviewing the information displayed on the page, click **Next** to display the **Registration** page.

Figure 26: Registration Page



4. Click the [Quantum's Product Registration](#) link to display the **Quantum Start Up** Web page.

Figure 27: Quantum Start Up Web Page



- Click **Product Registration** to display the **Quantum Product Registration** Web page.

Figure 28: Quantum Product Registration Web Page

Home > Service and Support > Product Registration

PRODUCT REGISTRATION

ShareThis

For New Customers

Thank you for your purchase of a Quantum product. You **MUST** register your product to receive service and support from Quantum. Benefits of product registration include:

- Enterprise-class service from Quantum should an issue arise
- StorageCare™ Guardian proactive monitoring solution
 - To download Guardian, product must be registered first
- Immediate access to firmware and software downloads
- Automatic notification of new software updates
- Special service plans that are tailored to your needs

To start the registration process, please enter your email address below:

For Existing Customers

Would you like to register another Quantum product to your account? Do you need to update your contact information from an earlier registration? Would you like to download StorageCare™ Guardian software?

Please login to download the materials you have requested. In order to verify that you are eligible for the StorageCare™ Guardian software, we need to ensure that you have at least one qualifying product registered.

Please enter your email address or the serial number of a **previously** registered product in the box below:

STAY CONNECTED

YouTube Twitter RSS

IN THE Q NEWSLETTER

Sign Up

RELATED LINKS

- Locate Your Serial Number
- Warranty Information
- StorageCare Services
- Installation & Configuration
- StorageCare Guardian
- Product Comparison Tool
- Compatibility Guides
- Multi-Vendor Support

- Follow the on screen instructions to register your system.
- When you are finished, return to the **Support** wizard.

Generating a System Diagnostics File

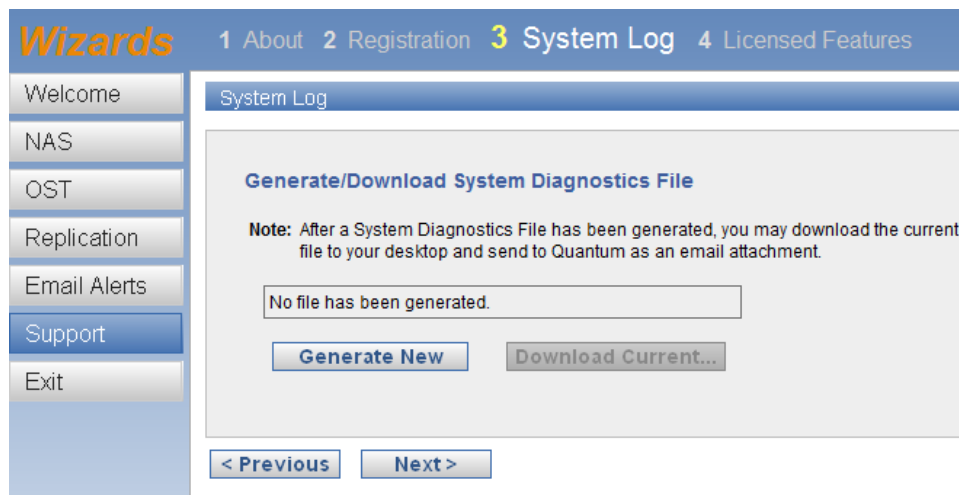
The system diagnostics file contains the diagnostic logs for all of the DXi system components. You can use the diagnostic files to troubleshoot problems on the virtual DXi appliance. Generate a system diagnostic file after setting up your appliance and save it for future reference.

Generate a system diagnostics file

- After [registering](#) your virtual DXi appliance, click **Next** on the Support wizard's **Registration** page to

display the **System Log** page.

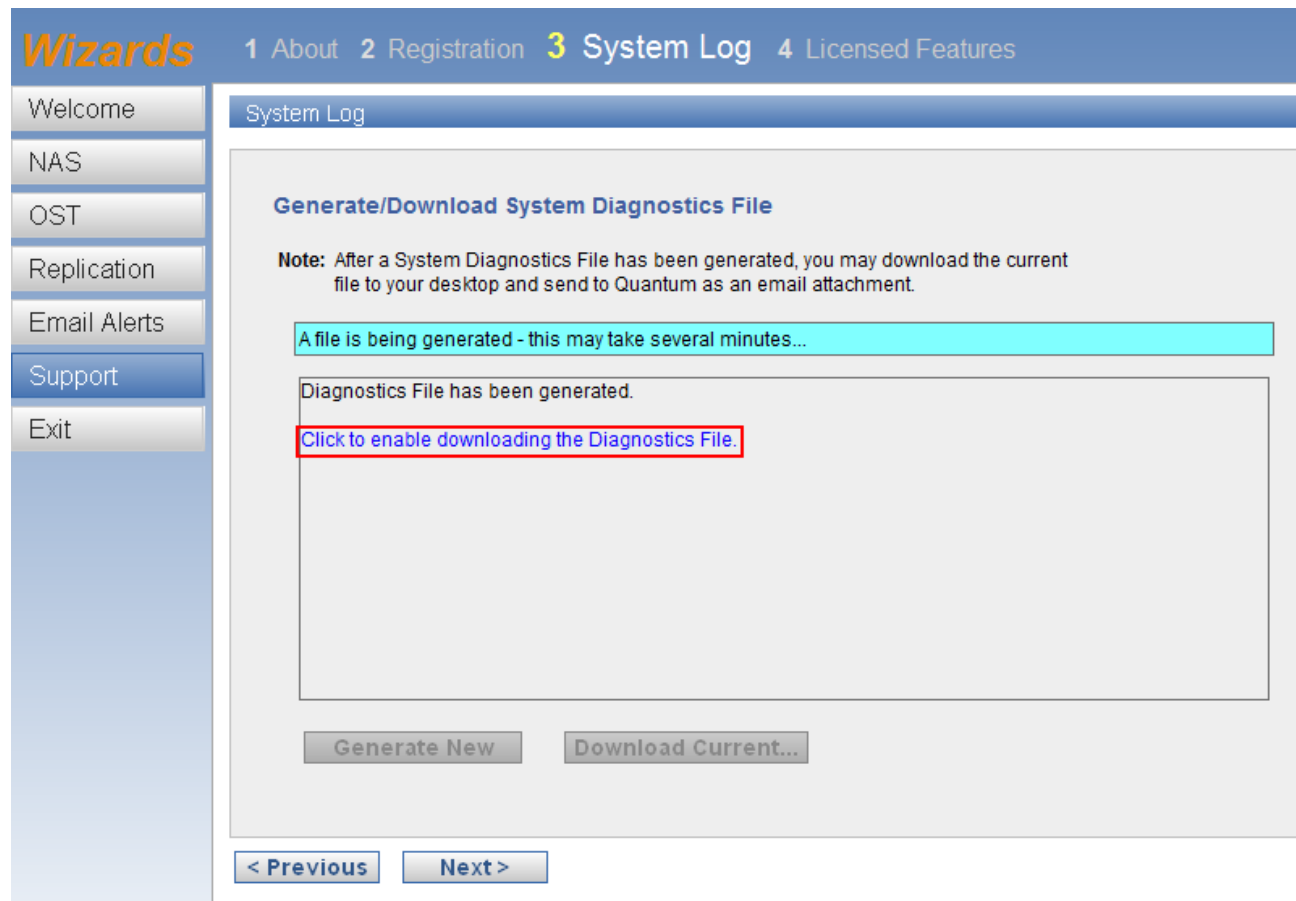
Figure 29: System Log Page



2. Click **Generate New** to generate a new system diagnostics file.

i Note: It can take several minutes for the system to generate the file.

3. After the file finishes generating, select **Click to enable downloading the Diagnostics file** to enable the **Download Current** button.

Figure 30: Enable Download Link

4. Click **Download Current** to download the generated system diagnostics file.
5. At the prompt asking whether to open or save the file, click **Save** or **OK** to download the file.
6. Click **Next** to continue to the **License Keys** page, as needed.

DXi V-Series Configuration

After deploying and launching your virtual DXi appliance, use the Configuration Wizards to configure its settings.

NAS Wizard

Use to configure the virtual DXi appliance as a Network Attached Storage (NAS) appliance for use on a Windows or UNIX/Linux network.

OST Wizard

Use to configure the virtual DXi appliance to present its storage as one or more OpenStorage (OST) servers for use with a backup application.

Replication Wizard

Use to configure the virtual DXi appliance to send replicated data to or receive replicated data from another DXi system.

Email Alerts Wizard

Use to configure the virtual DXi appliance to automatically send notifications and reports to selected recipients.

Support Wizard

Use to enable licensed features on the virtual DXi appliance, register your system with Quantum, and generate system diagnostic files.

i Note: We recommend configuring Support settings first.

Additional Resources

For detailed instructions on using the following wizards, please refer to the "Configuration Wizards" section of the *Quantum DXi V-Series User's Guide*.

Contacting Quantum

Contacts

For information about contacting Quantum, including Quantum office locations, go to:

<http://www.quantum.com/aboutus/contactus/index.aspx>

Getting More Information or Help

For further assistance, or if training is desired, contact the Quantum Customer Support Center:

Region	Support Contact
North America	1-800-284-5101 (toll free) +1-720-249-5700
EMEA	+800-7826-8888 (toll free) +49 6131 324 185
Asia Pacific	+800-7826-8887 (toll free) +603-7953-3010
For worldwide support: http://www.quantum.com/serviceandsupport/index.aspx	

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