

Infoblox Installation Guide

for vNIOS Reporting Virtual Appliances
(IB-VM-800 and IB-VM-1400)



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Company Information

<http://www.infoblox.com/contact/>

Product Information

Virtual Appliances

IB-VM-100, IB-VM-800, IB-VM-810, IB-VM-820, IB-VM-1400, IB-VM 1410, IB-VM-1420, ND-VM-800, and ND-VM-1400

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Warranty Information

Your purchase includes a 90-day software warranty and a one year limited warranty on the Infoblox appliance, plus an Infoblox Warranty Support Plan and Technical Support. For more information about Infoblox Warranty information, refer to the Infoblox Web site, or contact Infoblox Technical Support.

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Preface

The preface describes the content and organization of this guide, how to find additional product information, and how to contact Infoblox Technical Support. It includes the following topics:

- *Document Overview* on page 6
 - *Conventions* on page 6
 - *Navigation* on page 6
- *Related Documentation* on page 7
- *Customer Care* on page 8
 - *User Accounts* on page 8
 - *Software Upgrades* on page 8
 - *Technical Support* on page 8

DOCUMENT OVERVIEW

This guide introduces the vNIOs reporting virtual appliance. It describes how to install the vNIOs software and how to deploy the vNIOs reporting virtual appliance as a reporting server in the Grid.

For complete information about administering Infoblox appliances and the Infoblox reporting solution, refer to the *Infoblox NIOS Administrator Guide*.

For the latest Infoblox documentation, visit the Infoblox Support web site at <http://support.infoblox.com>.

Conventions

This guide follows the Infoblox documentation style conventions, as listed in the following table.

Style	Usage
bold	Indicates anything that you input by clicking, choosing, selecting, typing or by pressing on the keyboard.
input	Signifies command line entries that you type.
<i>variable</i>	Signifies variables typed into the GUI that you need to modify specifically for your configuration, such as command line variables, file names, and keyboard characters.

Navigation

Infoblox technical documentation uses an arrow “->” to represent navigation through the GUI. For example, to access member information, the description is as follows:

From Grid Manager, select the **Reporting** tab -> **Searches** tab.

RELATED DOCUMENTATION

Other NIOS appliance documentation:

- *Infoblox CLI Guide*
- *Infoblox API Documentation*
- *Infoblox CSV Import Reference*
- *Infoblox Installation Guide for the Trinzic 100 Appliance*
- *Infoblox Installation Guide for the Trinzic 800 Series and Network Insight ND-800 Platforms*
- *Infoblox Installation Guide for the Trinzic 1400 Series and Network Insight ND-1400 Platforms*
- *Infoblox Installation Guide for the Trinzic 2200 Series and Network Insight ND-2200 Platforms*
- *Infoblox Installation Guide for the Infoblox-4010 and Network Insight ND-4000 Platforms*
- *Infoblox Installation Guide for Infoblox Advanced Appliance PT-1400*
- *Infoblox Installation Guide for Infoblox Advanced Appliance PT-2200*
- *Infoblox Installation Guide for Infoblox Advanced Appliance PT-4000*
- *Infoblox Installation Guide for the Infoblox-4030 Appliance*
- *Infoblox DNS Caching Acceleration Application Guide*
- *Infoblox Installation Guide for the Trinzic Reporting 1400 Appliance*
- *Infoblox Installation Guide for the Trinzic Reporting 2000 Appliance*
- *Infoblox Installation Guide for the Trinzic Reporting 2200 Appliance*
- *Infoblox Installation Guide for the Trinzic Reporting 4000 Appliance*
- *Infoblox Installation Guide for the Infoblox-250-A Appliance*
- *Infoblox Installation Guide for the Infoblox-550-A, -1050-A, -1550-A, and -1552-A Appliances*
- *Infoblox Installation Guide for the Infoblox-1852-A Appliance*
- *Infoblox Installation Guide for the Infoblox-2000-A Appliance*
- *Infoblox Installation Guide for vNIOS Software on Riverbed Services Platforms*
- *Infoblox Installation Guide for Installing vNIOS Software on Cisco Platforms*
- *Infoblox Installation Guide for vNIOS Software on VMware*
- *Infoblox Installation Guide for vNIOS on Microsoft 2008 R2 for Hyper-V*
- *Quick Start Guide for Installing vIBOS Software on VMware Platforms*
- *Infoblox IBOS Administrator Guide*
- *Infoblox Safety Guide*

To provide feedback on any of the Infoblox technical documents, please e-mail techpubs@infoblox.com.

CUSTOMER CARE

This section addresses user accounts, software upgrades, licenses and warranties, and technical support.

User Accounts

The Infoblox appliance ships with a default user name and password. Change the default `admin` account password immediately after the system is installed to safeguard its use. Make sure that the NIOS appliance has at least one administrator account with superuser privileges at all times, and keep a record of your account information in a safe place. If you lose the `admin` account password, and did not already create another superuser account, the system will need to be reset to factory defaults, causing you to lose all existing data on the NIOS appliance. You can create new administrator accounts, with or without superuser privileges. For more information, refer to the Infoblox NIOS Administrator Guide.

Software Upgrades

Software upgrades are available according to the Terms of Sale for your system. Infoblox notifies you when an upgrade is available. Register immediately with Infoblox Technical Support at <http://www.infoblox.com/support/customer/evaluation-and-registration> to maximize your Technical Support.

Technical Support

Infoblox Technical Support provides assistance via the Web, e-mail, and telephone. The Infoblox Support web site at <https://support.infoblox.com> provides access to product documentation and release notes, but requires the user ID and password you receive when you register your product online at: <http://www.infoblox.com/support/customer/evaluation-and-registration>.



About Infoblox vNIOS Reporting Appliance for VMware

The Infoblox vNIOS reporting appliance is designed to run on any virtual machine installed on VMware ESX or ESXi servers 4.1, 5.0, or 5.1. You can add the vNIOS virtual appliance as a reporting member to an Infoblox Grid and configure it as a dedicated logging and reporting appliance.

When you set up a vNIOS reporting virtual appliance, it is used solely for reporting purposes. You cannot add licenses to run other services, such as DNS and DHCP, on a reporting appliance. The Infoblox reporting solution automates the collection, analysis, and presentation of core network service data that assist you in planning and mitigating network outage risks so you can manage your networks more efficiently. For more information about the Infoblox reporting solution, refer to the *Infoblox NIOS Administrator Guide*.

Infoblox vNIOS virtual appliance for VMware provides most of the features supported by NIOS, with some limitations. For more information, see [Known Limitations](#) on page 16.

[Table 2.1](#) lists the specifications for all supported vNIOS reporting virtual appliances.

Table 2.1 Reporting Virtual Appliance Specifications

vNIOS Appliances (Daily Reporting Limit)	Corresponding SKUs	Primary Disk (GB)	Reporting Disk (GB)	# of CPU Cores	Memory Allocation	Virtual CPU Core Frequency
IB-VM-800 (1 GB)	TR-V800-1GB	50	250	2	Range: 2 - 8 GB Default: 8 GB	3000 MHz
IB-VM-800 (2 GB)	TR-V800-2GB	50	250	2	Range: 4 - 8 GB Default: 8 GB	3000 MHz
IB-VM-1400 (5 GB)	TR-V1400-5GB	55	500	4	Default: 8 GB	8000 MHz

Note: When you upgrade to vNIOS 6.10.4 release, the memory of any existing IB-VM-800 appliances in your Grid remains at 2 GB. For new deployments, the default memory is 8 GB. Infoblox recommends 8 GB of memory for optimal performance. You may change the memory configuration within the supported range. However, reducing appliance memory may affect performance on your virtual appliances. Before you increase the memory on any virtual appliances, ensure that there is enough memory on the virtualization host.

REQUIREMENTS

You can deploy IB-VM-800 that comes with a 250 GB hard disk or IB-VM-1400 that comes with a 500 GB hard disk. Note that vNIOs reporting virtual appliances can run on ESX or ESXi servers that have DAS (Direct Attached System) or iSCSI (Internet Small Computer System Interface) SAN (Storage Area Network) attached. For information about VMware products, refer to the VMware documentation.

The following are required before you install the vNIOs reporting virtual appliance on a VMware ESX or ESXi server:

- The vNIOs reporting software package. You can download the vNIOs software from the Infoblox Technical Support site. To download the software, you must have a valid login account on the Infoblox Support site. Register your product at <https://support.infoblox.com> if you do not already have an account. The vNIOs software package consists of the following:
 - Two virtual disk files (.vmdk) that store the contents of the hard disk drive of the vNIOs appliance. Ensure that you download the correct file. For IB-VM-800, download the following: -800-disk1.vmdk and -800-disk2.vmdk. For IB-VM-1400, download -1400-disk1.vmdk and -1400-disk2.vmdk.
 - An OVF (Open Virtualization Format) template file (.ovf) for the supported vNIOs appliance models. Download the file with an extension that corresponds to the appliance model number.
Both the .vmdk and .ovf files must be installed in the same directory. You can deploy the vNIOs software package from a remote web server or a local file system accessible from your management system.
- A management system that has a vSphere Client installed. To manage multiple hosts, the vSphere Client must be connected to the vCenter Server system.

Deploying the vNIOS Reporting Virtual Appliance

Before setting up the vNIOS virtual appliance as a reporting member, you must install the virtual appliance on the VMware platform. The instructions in this section assume that you have configured the server on your network, and you are able to connect to it from your management station. (For information about configuring the VMware products, refer to the VMware documentation.) Infoblox recommends that you back up your existing configuration before proceeding.

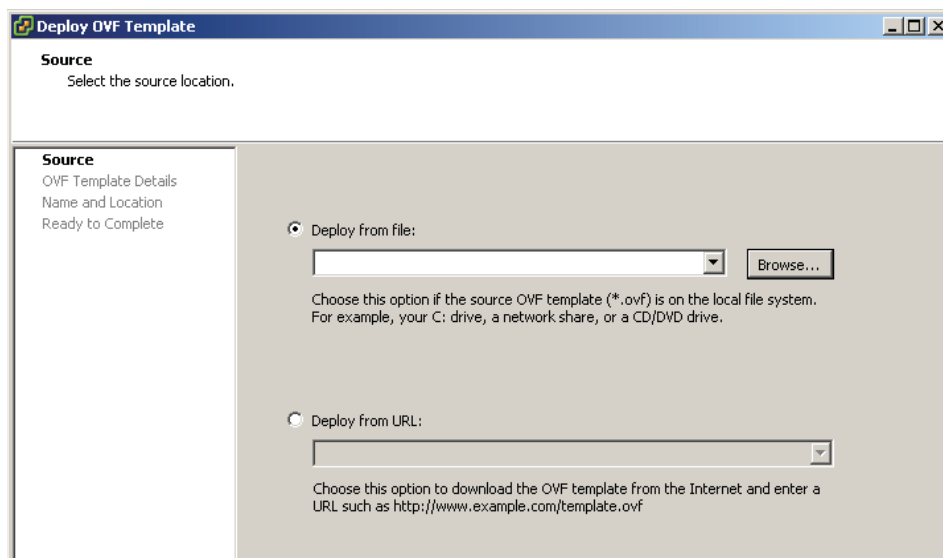
To deploy a vNIOS reporting appliance, log in to the vSphere Client, connect to the ESX or ESXi server, and then complete the following:

- Install the vNIOS software package on the server, as described in [Installing the vNIOS Reporting Software Package](#).
- Configure the NIC (Virtual Network Adapter) of the vNIOS appliance, as described in [Configuring the Virtual NIC](#) on page 12.
- Power on the vNIOS reporting appliance, as described in [Powering on the vNIOS Reporting Virtual Appliance](#) on page 13.
- Configure the Reporting Appliance as a Grid member, as described in [Configuring the vNIOS Reporting Appliance as a Grid Member](#) on page 13.
- Define the vNIOS virtual appliance on the Grid Master, as described in [Provisioning the vNIOS Reporting Member on the Grid Master](#) on page 13.
- Verify the vNIOS reporting virtual appliance configuration, as described in [Verifying and Monitoring](#) on page 15.

INSTALLING THE vNIOS REPORTING SOFTWARE PACKAGE

1. Download the vNIOS software package from the Infoblox Technical Support web site.
2. From the vSphere Client, click **File** -> **Deploy OVF Template** to start the *Deploy OVF Template* wizard, as shown in [Figure 2.1](#).

Figure 2.1 Deploy OVF Template Wizard

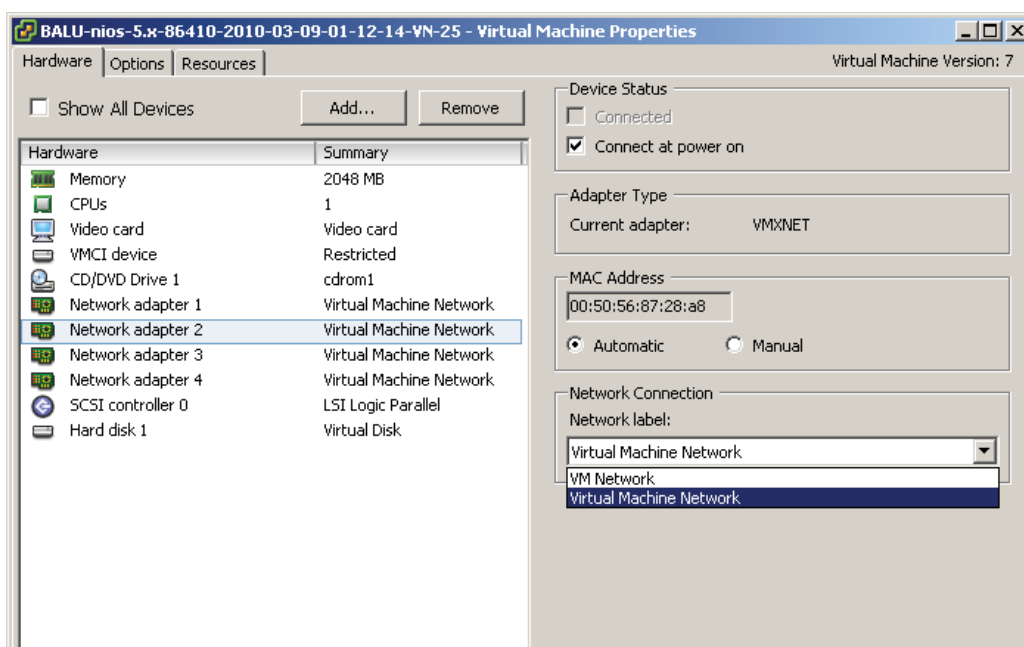


3. Depending on the download location of the vNIOS software package, select **Deploy from file** to deploy the .ovf file from a local file system, or select **Deploy from URL** to deploy from a remote web server. Locate the .ovf file or enter the URL of the file, and then click **Next**.
4. Verify the OVF template file details and click **Next**.
5. Specify a name for the vNIOS instance and click **Next**.
6. Select the network of the vNIOS instance and click **Next**.
7. Verify the information in the summary screen and click **Finish**.
The vNIOS installation begins. Both the .vmdk and .ovf files are installed. The *Deployment Completed Successfully* dialog box appears after the installation is complete.
8. Click **Close** to close the dialog box.
9. To verify the installation of the virtual appliance, click the **Virtual Machines** tab in the vSphere Client.

CONFIGURING THE VIRTUAL NIC

1. From the vSphere Client, select the newly deployed vNIOS instance.
2. Click **Inventory** -> **Virtual Machine** -> **Edit Settings**.
3. In the *Virtual Machine Properties* dialog box, select the **Hardware** tab.
4. From the Hardware list, select one of the following based on the configuration of your vNIOS machine.
 - **Network Adapter 1: MGMT**
 - **Network Adapter 2: LAN1**
 - **Network Adapter 3: HA**
 - **Network Adapter 4: LAN2**
5. For each network adapter, select the network of the vNIOS instance from the **Network Connection** drop-down menu. The list includes all networks configured for virtual machines on the host, as shown in [Figure 2.2](#).
6. Click **OK**.

Figure 2.2 Virtual NIC Configuration



POWERING ON THE vNIOS REPORTING VIRTUAL APPLIANCE

1. From the vSphere Client, select the vNIOS instance.
2. Click **Inventory** -> **Virtual Machine** -> **Power** -> **Power On**.

Note: After you power on the virtual appliance, it may take a few minutes for the CLI prompt to appear while the appliance initializes.

CONFIGURING THE vNIOS REPORTING APPLIANCE AS A GRID MEMBER

You can configure the vNIOS Reporting virtual appliance as a Grid member. However, it cannot be configured as a Grid Master or Grid Master Candidate.

To configure the vNIOS reporting virtual appliance as a Grid member:

1. Define the reporting virtual appliance on the Grid Master, as described in [Provisioning the vNIOS Reporting Member on the Grid Master](#).
2. Specify the initial settings and join the reporting appliance to the Grid, as described in [Configuring and Joining the Reporting Member](#) on page 14.

Provisioning the vNIOS Reporting Member on the Grid Master

Before adding the reporting virtual member to the Grid, you must first define it on the Grid Master, as follows:

1. Log in to the Grid Master.
2. From the **Grid** tab, select the **Grid Manager** tab -> **Members** tab, and then click **Add** -> **Add Grid Member** from the Toolbar.
3. In the *Add Grid Member* wizard, enter the following and click **Next**:
 - **Member Type:** Select **Virtual NIOS**.
 - **Host Name:** Type the FQDN (fully qualified domain name) of the vNIOS reporting appliance.
 - **Time Zone:** If the vNIOS reporting appliance is in a different time zone from the Grid, click **Override** and select a time zone.
 - **Comment:** Enter useful information about the reporting appliance.
4. Enter the following information about the reporting appliance and click **Next**:
 - **Standalone Member:** Select this option.
 - **Address:** Type the IP address of the reporting member.
 - **Subnet Mask:** Choose the netmask.
 - **Gateway:** Type the IP address of the default gateway of the reporting member.
 - **Port Settings:** The default is **Automatic**. You cannot change port settings for the reporting appliance.
5. Optionally, define extensible attributes. For more information, refer to the *Infoblox NIOS Administrator Guide*.
6. Save the configuration and click **Restart** if it appears at the top of the screen.

Configuring and Joining the Reporting Member

After you successfully install the vNIO software package and power on the reporting appliance, connect to the NIOS CLI and specify the initial settings.

1. Connect to the Grid Master to which you can add the reporting appliance.
2. From the vSphere Client, select the vNIO instance.
3. Select the **Console** tab.
4. Click anywhere in the console screen to activate the console.
5. When the Infoblox login prompt appears, log in with the default user name and password.

```
login: admin
```

```
password: infoblox
```

```
The Infoblox prompt appears: Infoblox >
```

6. You must have valid licenses before you can configure the vNIO reporting appliance. To obtain permanent licenses, first use the **show version** command to obtain the serial number of the vNIO reporting appliance, and then visit the Infoblox Support web site at <https://support.infoblox.com>. Log in with the user ID and password you receive when you register your product online at: http://www.infoblox.com/support/product_registration.cfm.

If the vNIO reporting appliance does not have the Infoblox licenses required to run NIOS services and to join a Grid, you can use the **set temp_license** command to generate and install a temporary 60-day license. The appliance lists the available licenses and you select those you need.

```
Infoblox > set temp_license
```

From the list of licenses, select the Grid, vNIO, and Reporting licenses. Note that you must have both the Grid and vNIO licenses for the reporting appliance to join a Grid.

7. Set the network settings and join the vNIO appliance to the Grid. Use the CLI command **set network** to configure the network settings and specify the Grid.

```
Infoblox > set network
```

```
NOTICE: All HA configurations are performed from the GUI. This interface is used only to configure a standalone node or to join a Grid.
```

```
Enter IP address: 10.1.1.11
```

```
Enter netmask: [Default: 255.255.255.0]: 255.255.255.0
```

```
Enter gateway address [Default: 10.1.1.1]: 10.1.1.1
```

```
Become Grid member? (y or n): y
```

```
Enter Grid Master VIP: 10.1.1.22
```

```
Enter Grid Shared Secret: L0ck37
```

```
Join Grid as member with attributes:
```

```
Join Grid Master VIP: 10.1.1.22
```

```
Grid Name: DaveyJones
```

```
Grid Shared Secret: L0ck37
```

```
WARNING: Joining a Grid will replace all the data on this node!
```

```
Is this correct? (y or n): y
```

```
Are you sure? (y or n): y
```

```
The network settings have been updated.
```

VERIFYING AND MONITORING

After you configure the vNIOs reporting appliance, you can check its status on the Dashboard and in the **Grid** -> **Grid Manager** -> **Members** tab, as shown in [Figure 2.3](#) and [Figure 2.4](#).

Figure 2.3 vNIOs Appliance Status on the Dashboard

The screenshot shows a window titled "Grid Status" for the "Infoblox" grid. It displays the status of various services: DHCP (grey), DNS (green), TFTP (grey), HTTP (File Dist) (grey), FTP (grey), NTP (grey), and bloxTools (grey). Below the service status is a table with the following data:

Member Name	IP Address	Status
infoblox.localdomain	10.34.10.41	Running
infoblox-vn-1050a.infoblox.com	10.39.6.60	Running

Figure 2.4 vNIOs Appliance Status in the Members Tab

The screenshot shows the "Members" tab with a "Services" sub-tab. It includes a "Toggle Replication Status View" button (Off) and a "Toggle Filter On" button (Off). Below these are icons for adding, deleting, and refreshing. The main table displays the following data:

Name	Status	IP Address	DHCP	DNS	TFTP	HTTP
ib-10-35-3-110	Running	10.35.3.110	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vnios5.com	Running	10.39.7.106	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Known Limitations

The vNIO reporting virtual appliance has the following limitations:

- You cannot configure the reporting virtual appliance as an HA pair. You also cannot configure it as a Grid Master or Grid Master Candidate. You can use it only as a dedicated reporting server in the Grid.
- The reporting virtual appliance runs on virtual hardware. It does not have sensors to monitor the physical CPU temperature, fan speed, and system temperature.
- Changing the vNIO reporting appliance settings through the VMware vSphere or vCenter console may violate the terms of the vNIO licensing and support models. The vNIO appliance may not join the Grid or function properly.