**About Infoblox vNIOS for Azure**

Infoblox vNIOS for Azure is an Infoblox virtual appliance designed for deployments through Microsoft Azure, a collection of integrated cloud services in the Microsoft Cloud.

The vNIOS for Azure enables you to deploy robust, manageable, and cost effective Infoblox appliances in the Microsoft Cloud. Infoblox NIOS provides core network services and a framework for integrating all the components of the modular Infoblox solution. It provides integrated, secure, and easy-to-manage DNS (Domain Name System) and IPAM (IP address management) services. For more information about the Infoblox Grid, DNS, and IPAM, refer to the *Infoblox NIOS Administrator Guide*.

You can deploy one or more Infoblox vNIOS for Azure instances through the Microsoft Azure Marketplace and provision them to join the on-prem NIOS Grid. You can then use the vNIOS for Azure instance as the primary DNS server to provide enterprise-grade DNS and IPAM services in the Microsoft Cloud. You can also utilize Infoblox Cloud Network Automation with your vNIOS for Azure instances to streamline with IPAM, improve visibility of your cloud networks, and increase the flexibility of your cloud environment.

After you spin up your Infoblox vNIOS for Azure instances, you can use vDiscovery to discover and to periodically re-discover all resources in the VNets (Azure virtual networks) within your Microsoft Cloud.

**Prerequisites**

Before you deploy the vNIOS for Azure, ensure that you have completed the following:

- Set up a Microsoft Azure account and create a resource manager in Azure.
- This is required only if you want to join the vNIOS for Azure instance to the on-prem Grid. Configure an on-prem Infoblox Grid or Grid Master. For more information, refer to the *Infoblox NIOS Administrator Guide*.

**Supported vNIOS for Azure Models**

Table 1.1 lists the Infoblox vNIOS for Azure appliance models that are supported for this release.

<table>
<thead>
<tr>
<th>vNIOS Appliance</th>
<th>Overall Disk (GB)</th>
<th># of vCPU Cores</th>
<th>Memory Allocation (GB)</th>
<th>Supported as Grid Master and Grid Master Candidate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE-V820</td>
<td>160</td>
<td>2</td>
<td>4</td>
<td>Yes</td>
</tr>
<tr>
<td>TE-V1420</td>
<td>160</td>
<td>4</td>
<td>8</td>
<td>Yes</td>
</tr>
<tr>
<td>TE-V2200</td>
<td>160</td>
<td>4</td>
<td>12</td>
<td>Yes</td>
</tr>
<tr>
<td>CP-V800</td>
<td>160</td>
<td>2</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>CP-V1400</td>
<td>160</td>
<td>4</td>
<td>8</td>
<td>No</td>
</tr>
<tr>
<td>CP-V2200</td>
<td>160</td>
<td>4</td>
<td>12</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: Only TE-V1420 is available for Infoblox preview. More vNIOS models are available in the GA product.
Note: After you successfully install a vNIOS for Azure instance, you may upgrade to a supported NIOS software release on the instance. The vNIOS for Azure is supported starting with NIOS 7.4.0; therefore, downgrading to an earlier NIOS 7.4.0 version will fail. If for any reason your upgrade fails, you can review the Infoblox syslog to find out the reasons for the failure. For information about how to access the syslog, refer to the Infoblox NIOS Administrator Guide.

DEPLOYING vNIOS FOR AZURE FROM THE MARKETPLACE

You can easily download and deploy vNIOS for Azure virtual appliances directly from the Azure Marketplace. The vNIOS for Azure virtual appliance is pre-configured for Microsoft Azure so you only need to take a few easy steps to complete the deployment.

To deploy vNIOS for Azure virtual appliance directly from the Azure Marketplace, complete the following (as illustrated in Figure 1):

1. Go to the Microsoft Azure web site.
2. Log in to your Microsoft Azure account.
4. Enter “infoblox” as the search filter, and then select Infoblox NIOS for Azure from the search results.
5. Use Resource Manager as the deployment model for the new virtual appliance.

Figure 1 Selecting vNIOS for Azure Model

6. Click Create.
Configuring Basic Settings

In the Basics panel, complete the following (as illustrated in Figure 2):

- **NIOS model**: Select the vNIOS model that will be installed on the VM.
- **NIOS VM name**: Enter the VM name that will be used in the Azure portal.
- **Password for ‘admin’ user**: Enter a password for the admin user. The admin user can make changes to all configuration for this virtual appliance. The password must be between 12 and 123 characters long and contains one upper case alphabetic character, one lower case alphabetic character, one numeric number, and one special character. Re-enter the password to confirm.
- **Subscription**: You can select the subscription on which you want to create the virtual appliance. This is a pay-as-you-go subscription by default.
- **Resource group**: You must create a new resource group to which this virtual appliance belongs. Enter a unique name for this resource group. You will receive an error message if you use the name of an existing resource group. A resource group is a collection of resources that share the same life cycle, permissions, and policies.
- **Location**: From the drop-down list, select the physical site in which the virtual appliance resides. You must select a site that is compatible with the vNIOS for Azure virtual appliance. The following are the compatible sites: Central US, East US, East US 2, North Central US, South Central US, West US, North Europe, West Europe, East Asia, Southeast Asia, Japan East, Japan West, Australia East, and Australia Southeast.

Figure 2 Configuring Basic Settings

Click OK after you complete the basic configuration. The Portal prompts you to configure VM settings.
Configuring VM Settings

To ensure that your vNIOS for Azure functions properly, you can set up certain configuration in the Azure Portal. In the *NIOS VM settings* panel, complete the following (as illustrated in Figure 3). Note that some of the fields are automatically populated with values based on previous configuration. Click a field that you want to make changes to. The portal displays relevant information in the right panel. Ensure that you click **OK** to save changes for each configuration. If certain configuration is missing or invalid, the portal displays a red warning sign next to the field. Click the field to enter valid information.

- **Storage account**: Click this option to configure the storage account. The Portal opens the *Choose storage account* panel from which you can select an existing account in the selected location and subscription. This account gives you access to resources in the Azure Storage, which provides a namespace for your DNS data objects. By default, the data in the Azure account is available only to the account owner. You can also click **Create new** in the *Create storage account* panel to create a new account, as follows:
  - Name: Enter a name for the storage account you are about to create. The name must have a minimum of 3 characters and a maximum of 24 characters, and it can contain only lower case alphabetic characters and numeric numbers.
  - Performance: This field indicates the type of storage account for the data storage. For virtual appliances, you must use **Premium** storage accounts. You cannot change this to **Standard**. Premium storage accounts are backed by solid-state drives and offer consistent and low-latency performance. They are used only with Azure virtual machine disks, and are best for I/O-intensive appliances such as databases. Standard storage accounts are backed by magnetic drives and provide the lowest cost per GB of memory. They are the best type of storage account for applications that require bulk storage or where data is accessed infrequently. If you want to create a storage account to save all diagnostics files associated with the VM, click **Storage account for BootDiagnostics** to create the standard account. You can create a new account or select an existing one from the available list.
  - Replications: This field displays the default replication strategy. The data in your Azure storage account is always replicated to ensure durability and high availability. The default replication strategy matches the durability requirements your appliance needs. You might not be able to change this once the storage account is created.

- **Storage account for BootDiagnostics**: Click this option to create a **Standard** storage account to save all diagnostics files associated with the VM.

- **Virtual network**: Select an existing virtual network or create a new one in which the virtual appliance resides. To create a new network, complete the following in the *Create virtual network* panel:
  - Name: Enter the name of the virtual network.
  - Address space: Enter the range of the IP address space for the virtual network in the CIDR format. Example: 10.11.0.0/16.

- **Subnets**: Click this to configure the settings of the network interfaces. Infoblox vNIOS virtual appliances require two network interfaces (LAN1 and MGMT) for proper Grid communications. These interfaces must be assigned to separate subnets within the same Azure virtual network. By default, only the LAN1 communication is activated and all traffic goes through the LAN1 interface (including management and protocol services). If you want to change this configuration, you must activate the MGMT port in the Grid configuration (for information, refer to the *Infoblox NIOS Administrator Guide*). When you set up the MGMT interface, ensure that you use the same IP address that is currently defined for the NIC card on the Azure portal for the Infoblox GUI. Depending on your configuration, you may have the GUI communication going through the MGMT interface only when you activate the MGMT port.

- **Public IP address**: If you need to communicate with the virtual appliance outside of the virtual network, click here to create a public IP address. In the *Choose public IP address* panel, you can select an existing public IP address or create a new one by clicking **Create new**, and then enter the
IP address in the *Create public IP address* panel. You can select whether this IP is **Dynamic** or **Static**. Note that the public IP address can only be associated with the primary interface (LAN1 by default). However, if you change the networking options in NIOS, such as attaching the public IP address to the MGMT interface (because there is no way to change the attachment to another interface), then you must re-map your interfaces so that the current LAN1 is renamed to MGMT and is attached to the MGMT network.

- **Public DNS name**: When you create a public IP address, enter the DNS name for the public address.
- **Availability set**: Select the availability set for this VM. An availability set helps keep your virtual appliance available during downtime, such as during maintenance. You can place this virtual appliance in an existing availability set to create redundancy needed to maintain availability of the services that your virtual appliance provides. Select **None** if you do not want to add this VM to any availability set. Select **New** to create a new availability set. Select **Existing** to add this VM to an existing availability set.
- **Availability set name**: Enter the name of the new availability set you are about to create or the name of an existing availability set if you are adding this VM to an existing set.
- **Install temporary licenses**: Click **yes** to install the following temporary licenses on your virtual appliance: vNIOS, Grid, DNS, and CNA (Cloud Network Automation). Installing temporary licenses might prolong the installation time by up to five minutes. Note that the CNA license is active only when the virtual appliance is configured as the Grid Master; the license has no effect on Grid members.
- **Enhanced options**: You may coordinate with Infoblox Technical Support to upload files with custom data.

Click **OK** to save the VM configuration.

*Figure 3 Configuring VM Settings*
Validating and Accepting Configuration

After you have entered and saved your VM configuration, you can view the information in the Summary panel. If for any reason you need to make changes to the configuration, you can go back to step 2 (Configure VM settings) to do so. If the configuration is correct, click OK to accept (as illustrated Figure 4).

Figure 4 Viewing VM Summary

Purchasing and Deploying the Virtual Appliance

You are now ready to deploy the vNIOS for Azure virtual appliance that you have previously configured. The Purchase panel displays the details about your purchase (as illustrated in Figure 5). Please peruse the information in this panel so you fully understand the price, the terms of use, and privacy policies of your deployment.

Now click Purchase to start the deployment of your vNIOS for Azure virtual appliance. This process might take up to 10 minutes to complete. If you have chosen to install temporary licenses, the process might take an additional five minutes. You can monitor the process in your Azure Dashboard.

Note: You will be purchasing the VM, storage, and IP address on an hourly basis payable to Microsoft Azure through your Azure account. If you have not installed the Infoblox NIOS temporary licenses, you can purchase them through your Infoblox representatives or contact Infoblox Technical Support.

When the virtual appliance is deployed successfully, you will receive an alert and the Azure Portal displays the Resource group overview panel from which you can see an overview of the deployment in the Essentials section.
To use vNIOS for Azure as the primary DNS server, complete the following in the Azure Portal (as illustrated in Figure 6):

1. Go to the Microsoft Azure web site.
2. Log in to your Microsoft Azure account.
3. On the Microsoft Azure web site, select the VNet for which you want vNIOS for Azure to serve DNS.
4. Click Settings → DNS servers.
5. In the DNS servers panel, complete the following:
   - DNS servers: Select Custom DNS.
   - Primary DNS server: Enter the IP address of the vNIOS for Azure.

   Note: For detailed information about setting primary DNS servers in Azure, refer to the Microsoft documentation.

6. Click Save at the top of the panel.
Figure 6 Configuring DNS Server in Azure