

Deployment Guide

vNIOS deployment on VMware vSphere

October 2019



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Introduction

About Infoblox NIOS Virtual Appliance for VMware

The Infoblox NIOS virtual appliance on VMware software can run on ESX or ESXi servers that have DAS (Direct Attached Storage), or iSCSI (Internet Small Computer System Interface) or FC (Fibre Channel) SAN (Storage Area Network) attached. You can install the NIOS virtual software package on a host with VMware ESX or ESXi 6.x.x and 5.5.x installed, and then configure it as a virtual appliance.

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), DHCP (Dynamic Host Configuration Protocol) and IPAM (IP address management) services. In addition to this, the NIOS software also provides TFTP, HTTP, NTP, and FTP file transfer services.

NIOS virtual appliances support the following features:

- Configuration as a HA pair, a Grid master, Reporting server, or a Grid master candidate
- Anycast addressing
- OSPF
- BGP
- Static routes
- IPv6

vSphere vMotion is also supported. You can migrate NIOS virtual appliances from one ESX or ESXi server to another without any service outages. The migration preserves the hardware IDs and licenses of the NIOS virtual appliances. VMware Tools is automatically installed for each NIOS virtual appliance. Infoblox supports the control functions in VMware Tools. For example, through the vSphere client, you can shut down the virtual appliance. You can configure most NIOS virtual appliances as independent or HA (high availability) Grid Masters, Grid Master candidates, and Grid members.

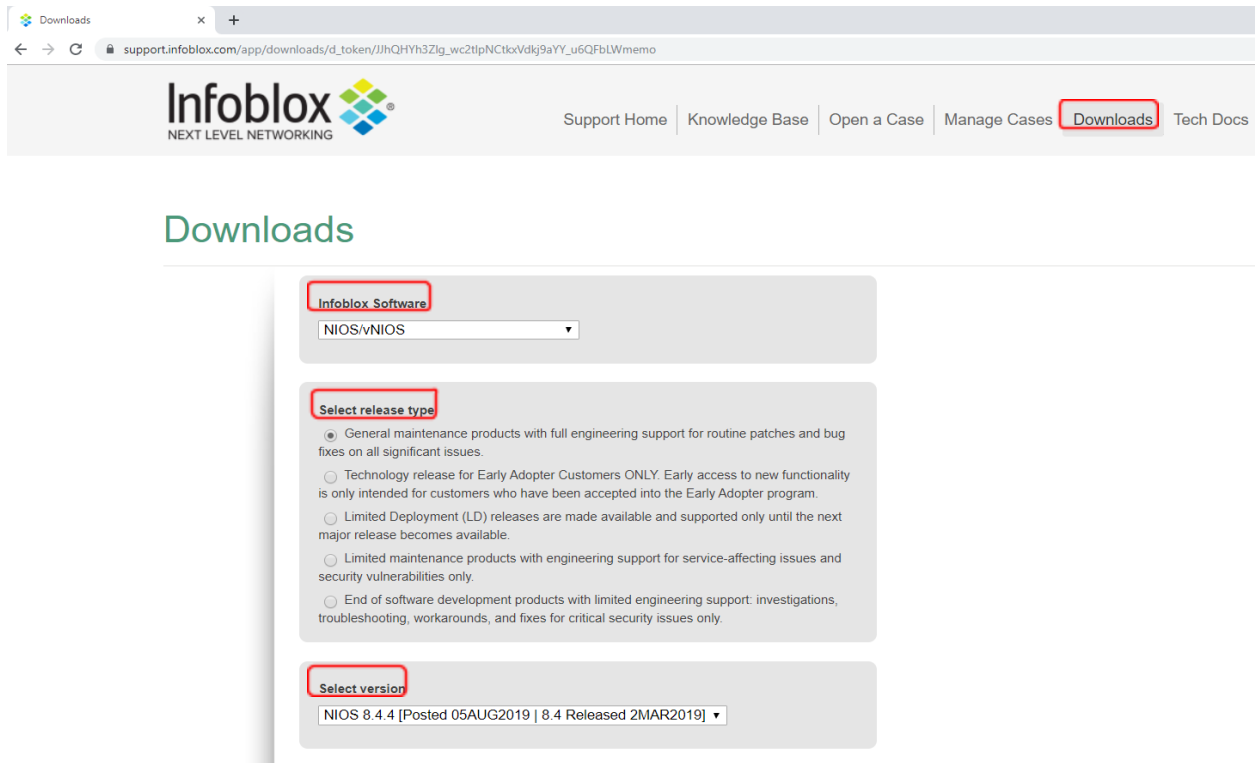
This deployment guide covers deployment of vNIOS on VMware vSphere 6.5 onwards using VMware vCenter server.

Deployment

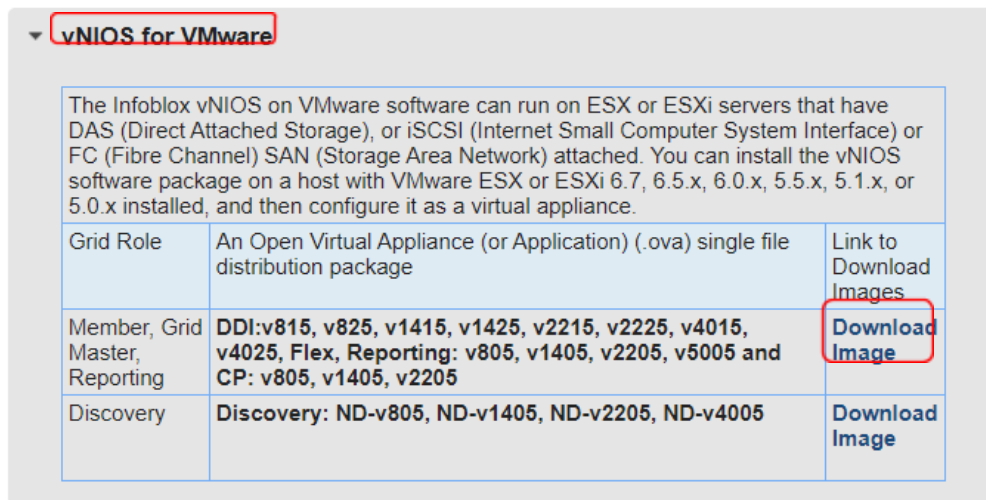
Downloading vNIOS .ova file

1. Login to the <https://support.infoblox.com> portal.
2. Navigate to **Downloads**.
3. In the **Infoblox Software** drop-down menu select **NIOS/vNIOS**.
4. Under **Select release** type select the first option.

- In the **Select version** drop box select the latest NIOS release.



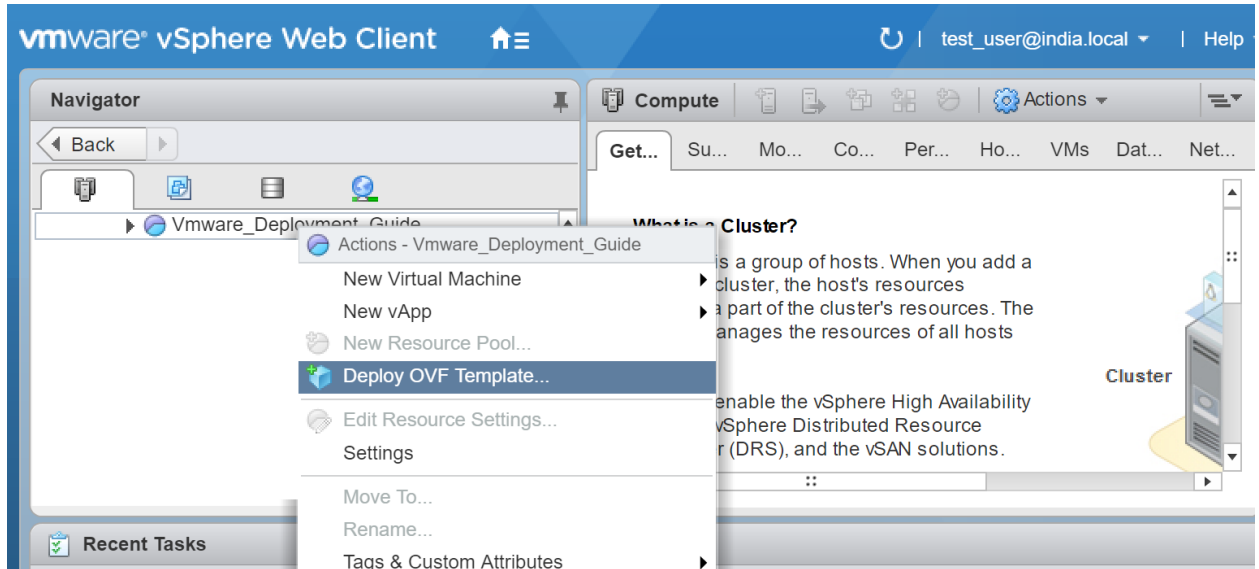
- Scroll down and expand **vNIOS for VMware** section.
- Click on **Download Image** section to download the .OVA file for Grid Master or Member.



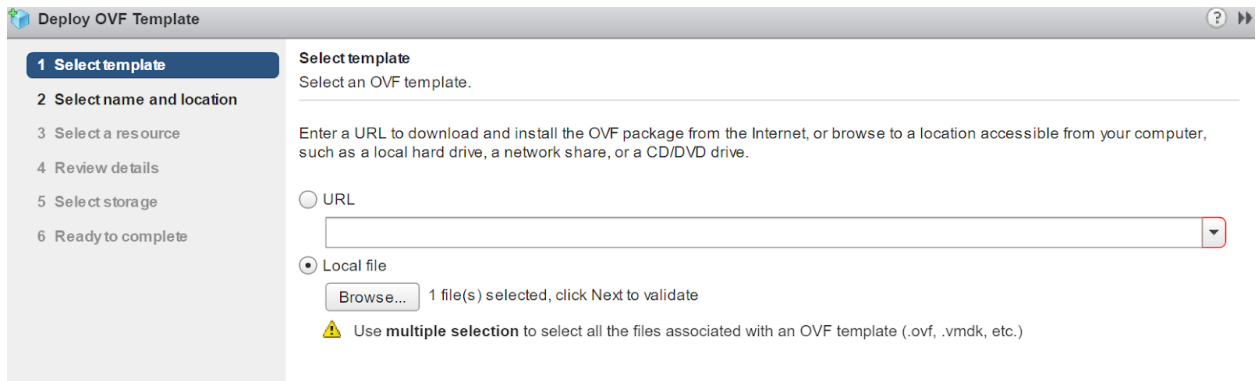
Deploying Grid Master

- Login to your vCenter server with enough permissions to deploy an OVF template.

2. Once you are logged in to the vCenter server, right click on cluster/esxi/resource pool/vapp and select **Deploy OVF Template**.

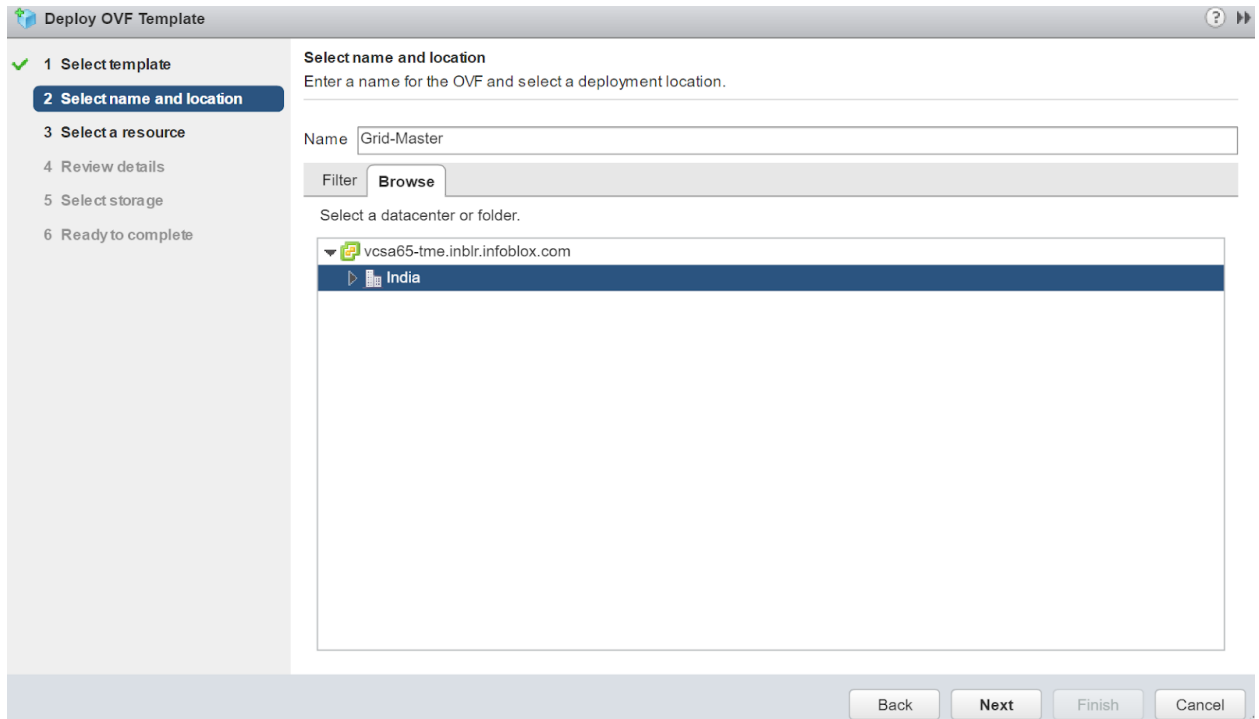


3. In the following wizard you can either give a URL by selecting **URL** option to download the OVA file or you can browse the locally downloaded OVA file by selecting **Local file** option.

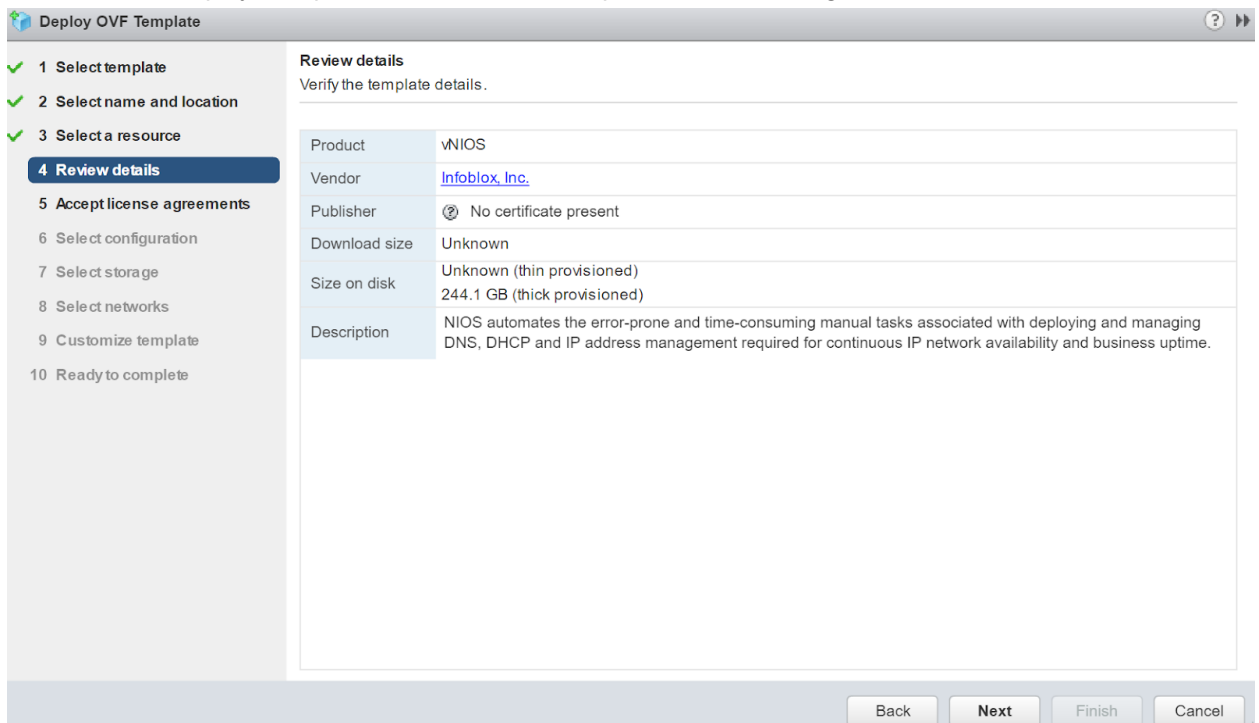


Note: This deployment guide covers deploying vNIOS though locally downloaded OVA file.

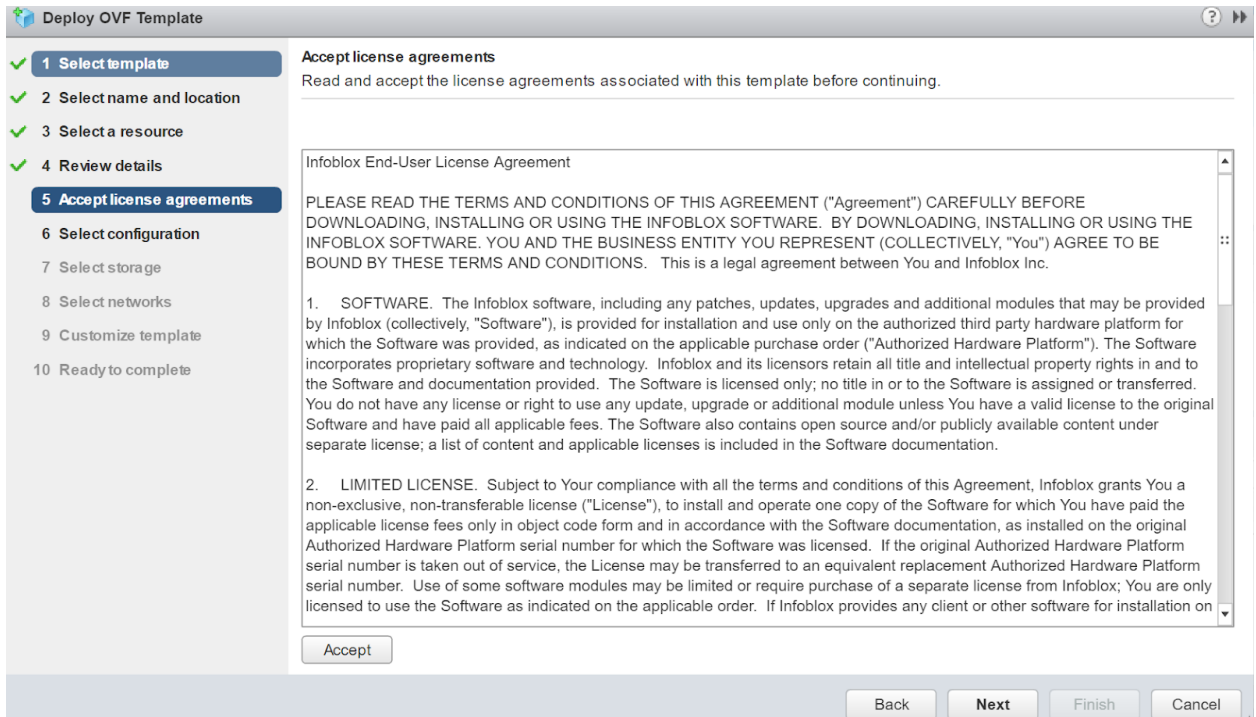
- In the **Select name and location** wizard, enter a name for the vNIOS and select a datacenter or folder where vNIOS will be deployed. Click on **Next**.



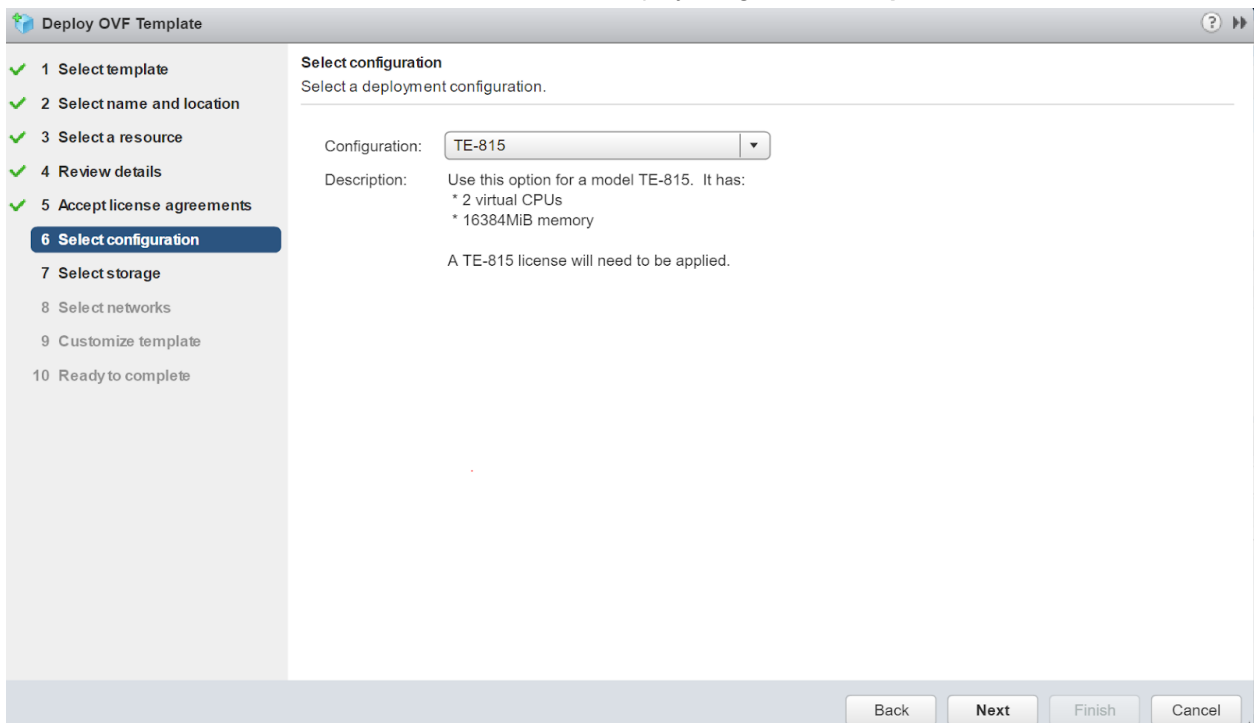
- Review wizard displays the product details and description. After reviewing the details click on **Next**.



6. Accept the End User License Agreement (EULA) and click on **Next**.



7. In the **Select configuration wizard**, select the vNIOS model, by clicking the dropdown menu. RAM and CPU utilization of each vNIOS differs and is displayed against **Description**. Click on **Next**.



- Select the datastore where vNIOS files will be stored from the **Select Storage** wizard.
Note: Infoblox recommends using thick provisioning for enhanced performance.

Select storage
Select location to store the files for the deployed template.

Select virtual disk format:

Show datastores from Storage DRS clusters

Filter

Name	Status	VM storage policy	Capacity	Free
datastore1	✓ Normal	-	1.81 TB	1.53 TB
Dell_Datastore_10TB_1	✓ Normal	-	10 TB	7.3 TB
Dell_Datastore_10TB_2	✓ Normal	-	10 TB	7.43 TB
Dell_Datastore_ISO	✓ Normal	-	2 TB	1.79 TB
DS-ESX1-11	✓ Normal	-	7.27 TB	4.48 TB
DS-ESX1-11B	✓ Normal	-	7.28 TB	4.5 TB
DS-ESX2-12	✓ Normal	-	7.27 TB	6.21 TB
DS-ESX2-12B	✓ Normal	-	7.28 TB	6.46 TB
ISOs_NFS	✓ Normal	-	1.92 TB	1.92 TB

9 Objects

- Select the network for the vNIOS appliance from the **Select networks** wizard.

Select networks
Select a destination network for each source network.

Source Network	Destination Network
VM Network	Internet-200-24

Description - VM Network
The network that the production DNS/DHCP queries and responses go over.

IP Allocation Settings
IP protocol: IPv4 IP allocation: Static - Manual

- Customize template** wizard, lets you to assign LAN-1 networking details for the Grid-Master and licensing details.

- a. Expand the **Uncategorized** option and enter license strings **nios IB-V815 enterprise** for activating vNIOs 815 and grid license. License strings are separated by space only. Refer [Some Useful Information](#) section to get the list of license strings.

Deploy OVF Template

Customize template
Customize the deployment properties of this software solution.

1 Select template
2 Select name and location
3 Select a resource
4 Review details
5 Accept license agreements
6 Select configuration
7 Select storage
8 Select networks
9 **Customize template**
10 Ready to complete

Customize template
Customize the deployment properties of this software solution.

All properties have valid values [Show next...](#) [Collapse all...](#)

▼ Uncategorized	3 settings
Admin Password	Default admin password, min length 4. <input type="text"/>
Enable Remote Console	Boolean value controlling status of remote console via ssh. <input checked="" type="checkbox"/>
Temp License	Space separated list of temp license identifiers. <input type="text" value="nios IB-V815 enterprise"/>
▶ Gridmaster	3 settings
▶ Networking	6 settings

Back **Next** **Finish** **Cancel**

Expand **Networking** option to enter LAN-1 networking details. Click on **Next**.

Deploy OVF Template

Customize template
Customize the deployment properties of this software solution.

1 Select template
2 Select name and location
3 Select a resource
4 Review details
5 Accept license agreements
6 Select configuration
7 Select storage
8 Select networks
9 **Customize template**
10 Ready to complete

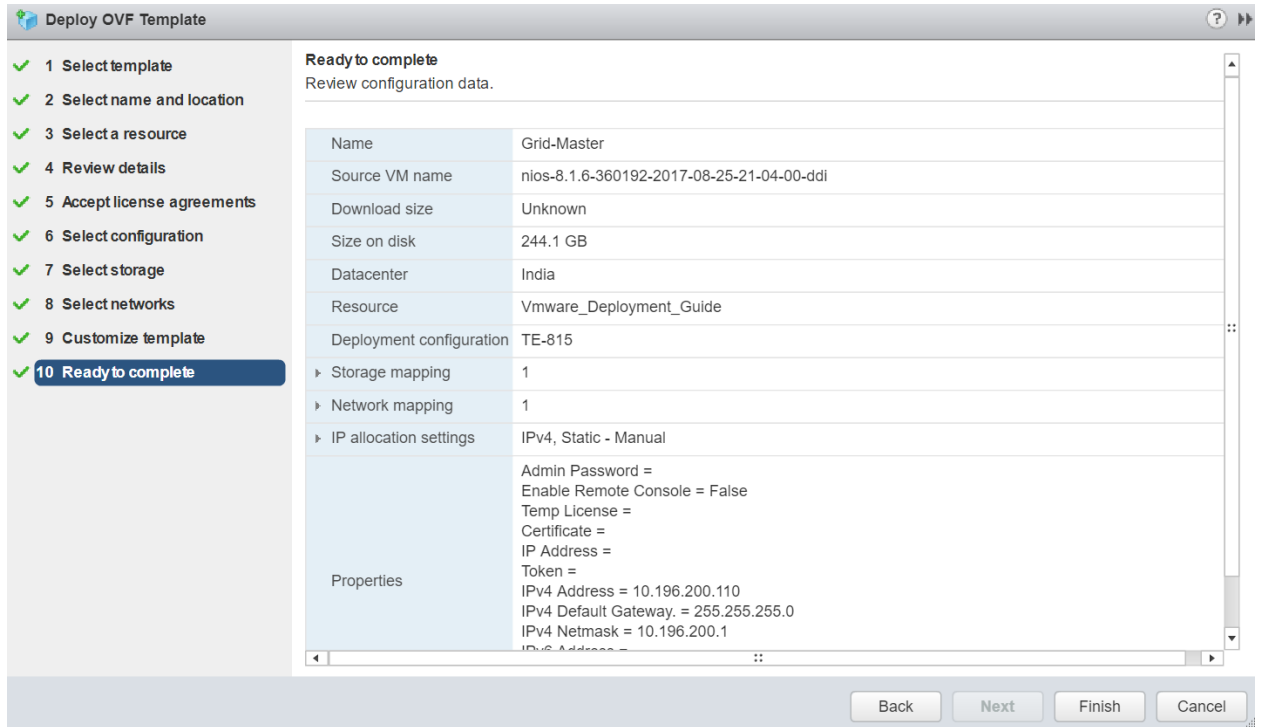
Customize template
Customize the deployment properties of this software solution.

All properties have valid values [Show next...](#) [Collapse all...](#)

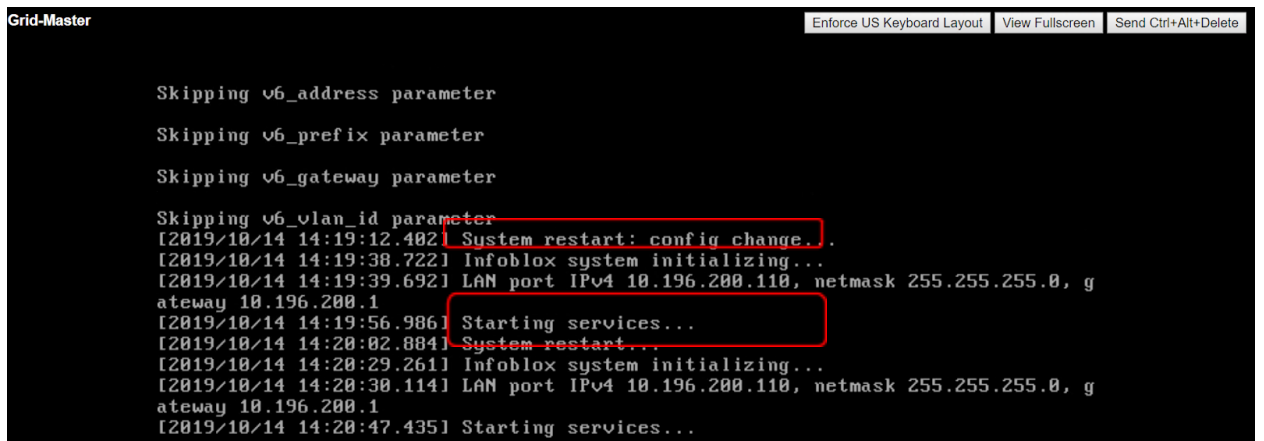
▶ Uncategorized	3 settings
▶ Gridmaster	3 settings
▼ Networking	6 settings
IPv4 Address	LAN1 IPv4 IP address. <input type="text" value="10.196.200.110"/>
IPv4 Default Gateway.	LAN1 IPv4 default gateway. <input type="text" value="255.255.255.0"/>
IPv4 Netmask	LAN1 IPv4 netmask. <input type="text" value="10.196.200.1"/>
IPv6 Address	LAN1 IPv6 IP address. <input type="text"/>
IPv6 CIDR	LAN1 IPv6 CIDR block. <input type="text"/>
IPv6 Default Gateway	LAN1 IPv6 default gateway. <input type="text"/>

Back **Next** **Finish** **Cancel**

- You will be presented with the summary of your vNIOS deployment details. Review it and click on **Finish** to commence the deployment.



- Deployment will take some time. In the meantime, you can monitor the console of the vNIOS to find out what is happening.
- After initial deployment cloud-init kicks in and assigns the networking and licenses which triggers multiple reboots.



- Once vNIOS successfully boots up, login to it using **admin/infoblox** as user id and password

15. To validate IP address and license assignment, run the following commands respectively.

```
show network
show license
```

```
Infoblox > show network
Current LAN1 Network Settings:
  IPv4 Address:      10.196.200.110
  Network Mask:     255.255.255.0
  Gateway Address:  10.196.200.1
  VLAN Tag:         Untagged
  HA enabled:       false
  Grid Status:      Master of Infoblox Grid

Note: Additional addresses configured can be viewed through "show interface" command
Infoblox > _
```

```
Infoblox > show license
Version      : 8.4.4-386831
Hardware ID  : 420171485032B4F62C4E84A93BE48987

License Type : NIOS (Model IB-V815)
Expiration Date : 12/13/2019
License String : GgAAAHY1mUMnZUDe IO23HXdSN017rmn2DbYnZNhU

License Type : Grid
Expiration Date : 12/13/2019
License String : GgAAAH0yg lUpJwbLYru3HXMf PwY2uGH2Ae5wMYoA

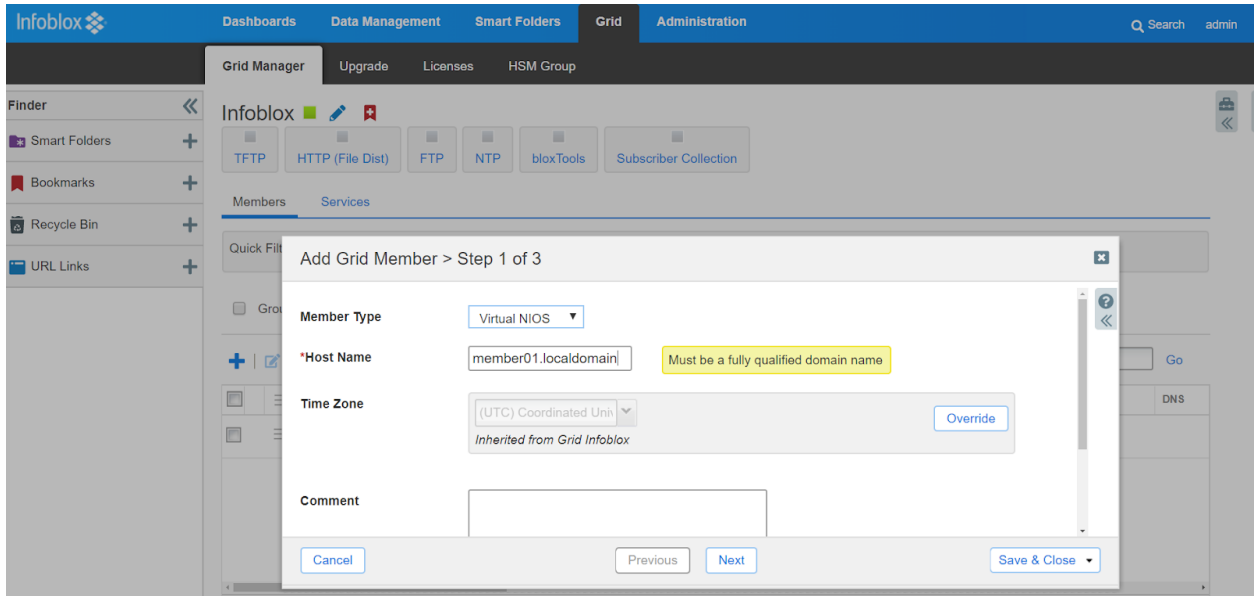
Infoblox > _
```

Deploying a Grid Member

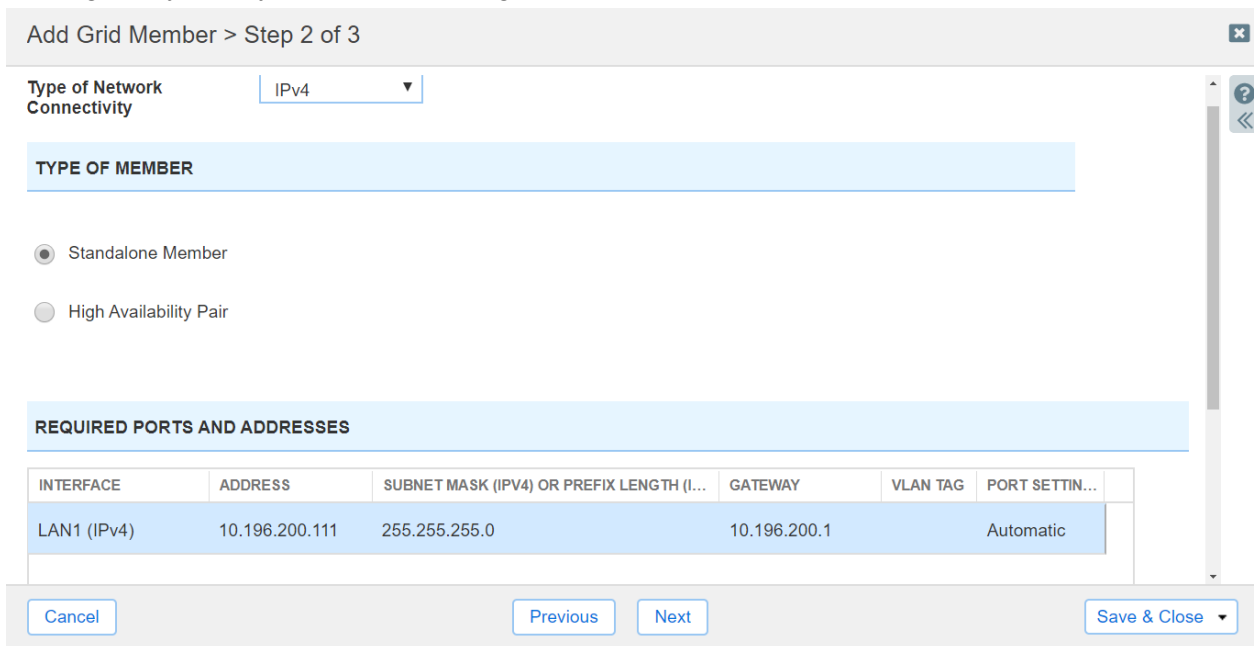
Pre-provisioning a member in the Grid-Master

1. Login to the Grid UI using the IP address which was specified in the **Customize template** option.
2. Once logged in, navigate to the **Grid Grid-Manager Members** Click on + option.

3. Select **Member type** as **Virtual NIOS**. Specify a FQDN for this member in the **Host Name** option and click on **Next**.



4. For **Type of Member** option select **Standalone Member**. Specify the IP address, subnet mask and default gateway which you would like to assign to this member and click on **Next**.



- Click on **Save and Close** to add this member.

Add Grid Member > Step 3 of 3

Extensible Attributes + | 🗑️

<input type="checkbox"/>	ATTRIBUTE N...	VALUE	REQUIRED
No data			

? <<

Cancel Previous Next Save & Close ▾

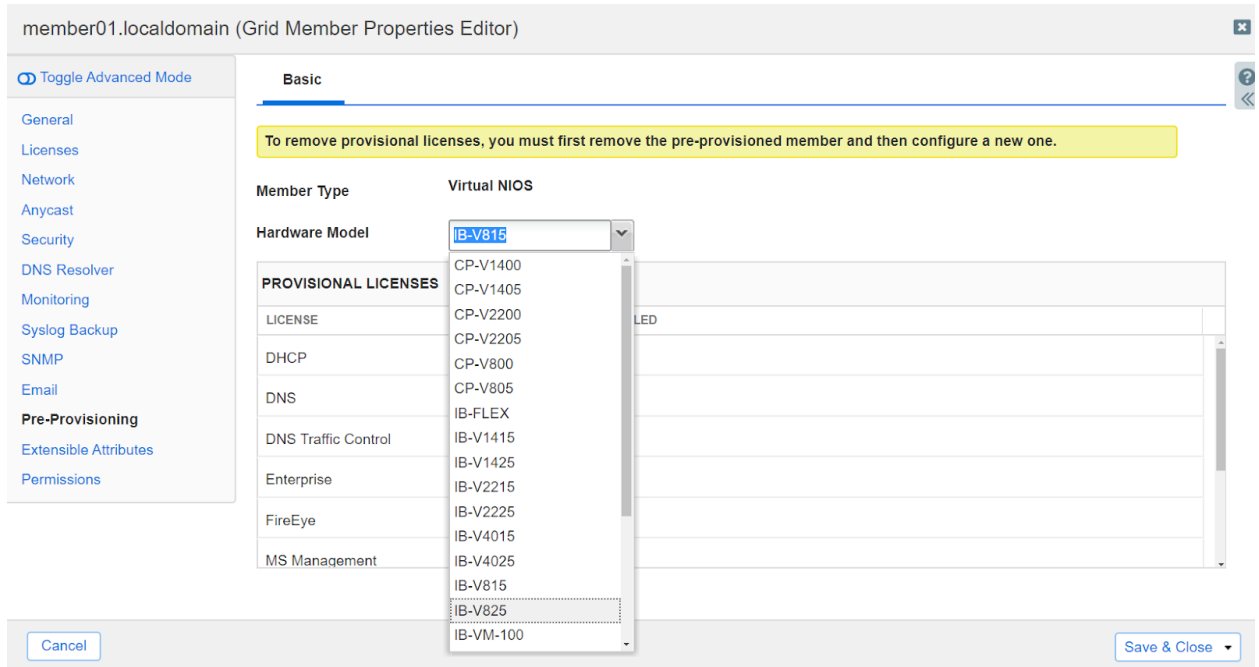
- Once the member is added successfully it will show as offline in the GUI.

+ | ✎ | 🗑️ | ☰ | 📄 | 📅 | ⬆️ ▾ | 🖨️

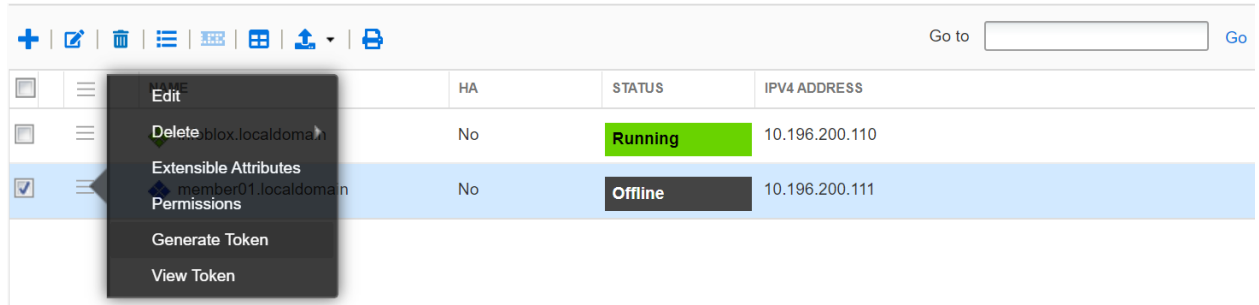
<input type="checkbox"/>	☰	NAME	HA	STATUS	IPV4 ADDRESS
<input type="checkbox"/>	☰	🟩 infoblox.localdomain	No	Running	10.196.200.110
<input type="checkbox"/>	☰	🟦 member01.localdomain	No	Offline	10.196.200.111

Pre-provisioning and generating a token for the offline member

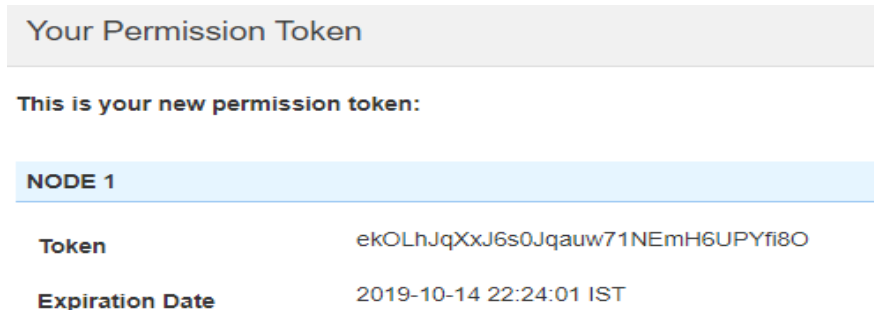
1. Select the newly added offline member and click on edit option.
2. Navigate to the **Pre-Provisioning** option.
3. From the Hardware Model drop down option select the desired vNIOS model type. Click on **Save and Close**



4. Click on the  icon of the newly added member and select **Generate Token**.



5. You will be presented with a token like the one mentioned below. Make a note of this token.



Getting the Grid-Master certificate

1. Execute the following command from a Linux machine with openssl utility installed.

```
# openssl s_client -connect grid_master_ip:443 -showcerts
```
2. You will be presented the with the certificate details of the Grid-Master. Make a note of the PEM certificate section of the Grid Master.
PEM certificate chain looks like.

```
-----BEGIN CERTIFICATE-----
MIIDrzCCApegAwIBAgIQVsnxwt+YTMPOyYQBU7yQbDANBqkqhkiG9w0BAQUFADB+
MQswCQYDVQQGEwJVUzETMBEGA1UECBMKQ2FsaWZvcml5pYTESMBAGA1UEBxMJU3Vu
bnl2YWxlMREwDwYDVQQKEwhJbWZvYmxveDEUMBIGA1UECXMlRW5naW5lZlZKJpbmcx
HTAbBgNVBAMTFGluZm9ibG94LmXvY2FsZG9tYW1uMB4XDTE5MTAxNDE0MjIyOVVoX
DTIwMTAxMzE0MjIyOVVowfjELMAkGA1UEBhMCVVMxEzARBgNVBAgTCkNhbmG1mb3Ju
aWExEjAQBGNVBAcTCVN1bm55dmFsZTERMA8GA1UEChMISW5mb2Jsb3gxFDASBgNV
BAwTC0Vuz21uZWVyaW5nMR0wGwYDVQQDExRpbmZvYmxveC5sb2NhbGRvbWVpbiCC
ASIdDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAMA73j1+6UrbY7h6/JgBbW69
PVJR+vh5oZ6RKNB0g8UeezT3OZUx8Y41Tng/LTj61afpyojSTvGot3S68EhjyDcC
AwEAAaMpmCcwJQYDVR0RBBA4wHIcECsTIboIUaW5mb2Jsb3gubG9jYWxkb21haW4w
DQYJKoZIhvcNAQEFBQADggEBAARRPis+194uUi7G+4JFdPV+O1+P7Y6ujPmeZ8vX
ZLpNvEFOyz8BbR7LvH/KYDiFnp5C/CSqg0IbLFxTeIH6627xwYC5hN/mehyri5vG
fHNMfcaJ4bZSjyvwnSEre9MmDySmEkSySZp2WwqJRLwLsm3Zq0dAAQy1cTmgo/qv
gnQET5CstzxY17fV5yd6mNPa5OZW131XjHcOo2o+OtcKUnRpUGLJFoeWh90U1n2L
bK0tVjcQjupzcQXcsF4fsB+XgPOUJzMxuxjMz/StzYGD8rWaayWmW3rbzMHTYn9J
Mioq/CHCFA2/diz31yttHUTzpc8aYjxakpILH0bc2y3p9o=
-----END CERTIFICATE-----
```

Deploying a Member and adding it to the Grid

1. To deploy a vNIOS member follow same set of instructions as mentioned under [Deploying Grid-Master section](#) (till step 9)
Note: Please give a different name while deploying the member vNIOS.
2. Once you arrive at Customize Template wizard,
 - a. Expand **Uncategorized** option and specify **Temp license strings** **nios IB-815 enterprise** to active vNIOS and grid license.

- b. Expand the **Gridmaster** section and enter the **Certificate** and **Token** which we obtained previously.

Deploy OVF Template

Customize template
Customize the deployment properties of this software solution.

All properties have valid values [Show next...](#) [Collapse all...](#)

▼ Uncategorized	3 settings
Admin Password	Default admin password, min length 4. <input type="text"/>
Enable Remote Console	Boolean value controlling status of remote console via ssh. <input checked="" type="checkbox"/>
Temp License	Space separated list of temp license identifiers. <input type="text" value="nios IB-V815 enterprise"/>
▼ Gridmaster	3 settings
Certificate	Grid Master's certificate. <input type="text" value="j8HwzVfwuCZB3fkzpTc8vcw/2G+U8swX38sMtpYZxCG8=-----END CERTIFICATE-----"/>
IP Address	Grid Master's IP address. <input type="text" value="10.196.200.110"/>
Token	Member token. <input type="text" value="ekOLhJqXxJ6s0Jqauw71NEmH6UPYfi8O"/>

Back Next Finish Cancel

3. Scroll down and expand the **Networking** section, enter the IPv4 address, IPv4 netmask and IPv4 default gateway details. This should match with the details specified during pre-provisioning of the member.

Deploy OVF Template

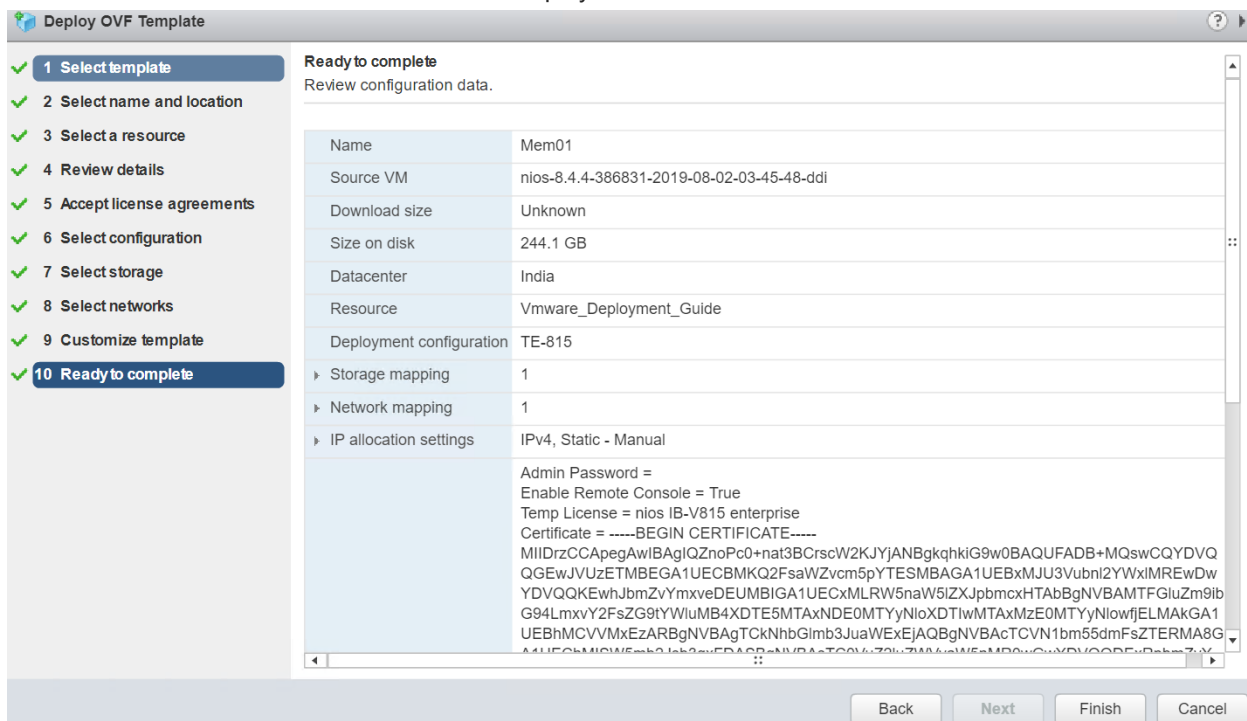
Customize template
Customize the deployment properties of this software solution.

All properties have valid values [Show next...](#) [Collapse all...](#)

	<input type="text" value="ekOLhJqXxJ6s0Jqauw71NEmH6UPYfi8O"/>
▼ Networking	6 settings
IPv4 Address	LAN1 IPv4 IP address. <input type="text" value="10.196.200.111"/>
IPv4 Default Gateway	LAN1 IPv4 default gateway. <input type="text" value="10.196.200.1"/>
IPv4 Netmask	LAN1 IPv4 netmask. <input type="text" value="255.255.255.0"/>
IPv6 Address	LAN1 IPv6 IP address. <input type="text"/>
IPv6 CIDR	LAN1 IPv6 CIDR block. <input type="text"/>
IPv6 Default Gateway	LAN1 IPv6 default gateway. <input type="text"/>

Back Next Finish Cancel

- Click on **Next** and you will be presented with the summary of all the deployment details.
- Review and click on **Finish** to commence the deployment.



- Deployment will take some time. In the meantime, you can monitor the console of the vNIOS member to find out what is happening.
- After initial deployment cloud-init kicks in and assigns the networking and licenses which triggers multiple reboots.
- Post this cloud-init also adds the newly deployed vNIOS member to the Grid.

```
[2019/10/14 18:02:16.878] Starting services...

Skipping v6_address parameter

Skipping v6_prefix parameter

Skipping v6_gateway parameter

Skipping v6_vlan_id parameter
[2019/10/14 18:02:27.277] System restart: config change...
[2019/10/14 18:02:53.385] Infoblox system initializing...
[2019/10/14 18:02:54.262] LAN port IPv4 10.196.200.111, netmask 255.255.255.0, g
ateway 10.196.200.1
[2019/10/14 18:03:11.533] Starting services...
[2019/10/14 18:03:17.477] System restart...
[2019/10/14 18:03:43.872] Infoblox system initializing...
[2019/10/14 18:03:44.733] LAN port IPv4 10.196.200.111, netmask 255.255.255.0, g
ateway 10.196.200.1
[2019/10/14 18:04:02.000] Starting services...
```

10. Login to the grid and verify that member is showing up as green and in online state.

	NAME	HA	STATUS	IPV4 ADDRESS
	infoblox.localdomain	No	Running	10.196.200.110
	member01.localdomain	No	Running	10.196.200.111

Deploying vNIOS through VMware ovftool

The VMware OVF Tool is a command-line utility that allows administrators to import and export Open Virtualization Format (OVF) packages to and from VMware products. VMware OVF tool comes handy when a scripted deployment of OVA is desired.

Downloading VMware ovftool

Ovftool can be downloaded from <https://code.vmware.com/web/tool/4.3.0/ovf>. This site also provides the documentation on the installation procedure on ovftool on Linux. More information on installation of ovftool on a Linux machine can be obtained from <https://www.virtual-odyssey.com/2017/11/26/install-vmware-ovftool-ubuntu/>

Using ovftool to deploy vNIOS appliance on VMware vSphere

1. Login to the Ubuntu machine where ovftool is installed as a root user.
2. Create a directory **ovftool** by executing the following command

```
root@ubuntu-desktop:~# mkdir ovftool
root@ubuntu-desktop:~#
```

- Copy the vNIOS OVA file to `ovftool` directory.

```
root@ubuntu-desktop:~# cd ovftool/
root@ubuntu-desktop:~/ovftool# ls
nios-8.1.6-360192-2017-08-25-21-04-00-ddi.ova
root@ubuntu-desktop:~/ovftool#
```

- Use the following command to commence the deployment of Grid-Master using `ovftool`.

```
ovftool --noSSLVerify --name=name_of_the_vm --acceptAllEulas
--datastore=name_of_the_datastore -dm="disk_provisioning"
--network=name_of_the_portgroup --powerOn
--prop:remote_console_enabled=True --prop:temp_license="license_string"
--prop:lan1-v4_addr=lan1_ip_address --prop:lan1-v4_netmask=lan1_netmask
--prop:lan1-v4_gw=lan1_gateway_absolute_path_of_the_ova_file
'vi://vcenter_user_id:password@vcenter_fqdn/datacenter_name/vm/name_of_vapp
_already_created_in_vcenter'
```

- Sample command and its output

```
root@ubuntu-desktop:~/ovftool# ovftool --noSSLVerify --name=Grid-Master --acceptAllEulas --datastore=Dell_Datastore_10TB_1 -dm="thin" --network=In
ternet-200-24 --powerOn --prop:remote_console_enabled=True --prop:temp_license="nios IB-V815 enterprise" --prop:lan1-v4_addr=10.196.200.109 --prop
:lan1-v4_netmask=255.255.255.0 --prop:lan1-v4_gw=10.196.200.1 /root/ovftool/nios-8.1.6-360192-2017-08-25-21-04-00-ddi.ova 'vi://vcuser@vmware.local
a:infoblox@vcenter.infoblox.com/India/vm/deployed_by_ovftool'

Opening OVA source: /root/ovftool/nios-8.1.6-360192-2017-08-25-21-04-00-ddi.ova
The manifest validates
```

- `ovftool` will take some time to deploy the OVA. Once deployed you should be able to access Grid GUI using the LAN-1 IP address.
- Once Grid GUI shows up, please follow the same set of instructions as mentioned under [Pre-provisioning and generating a token for the offline member](#) section.
- To get the Grid-Master certificate details follow the instructions mentioned under [Getting the Grid-Master certificate](#) section.
- After generating member token and getting certificate details use the following command to deploy a vNIOS member and add it to the grid.

```
ovftool --noSSLVerify --name=name_of_the_vm --acceptAllEulas
--datastore=name_of_the_datastore -dm="disk_provisioning"
--network=name_of_the_portgroup --powerOn
--prop:remote_console_enabled=True --prop:temp_license="license_string"
--prop:lan1-v4_addr=lan1_ip_address --prop:lan1-v4_netmask=lan1_netmask
--prop:lan1-v4_gw=lan1_gateway
--prop:gridmaster-ip_addr=gridmaster_ip_address
--prop:gridmaster-token=member_token
--prop:gridmaster-certificate=gridmaster_certificate_pem
absolute_path_of_the_ova_file
'vi://vcenter_user_id:password@vcenter_fqdn/datacenter_name/vm/name_of_vapp
_already_created_in_vcenter'
```

10. Sample command and its output.

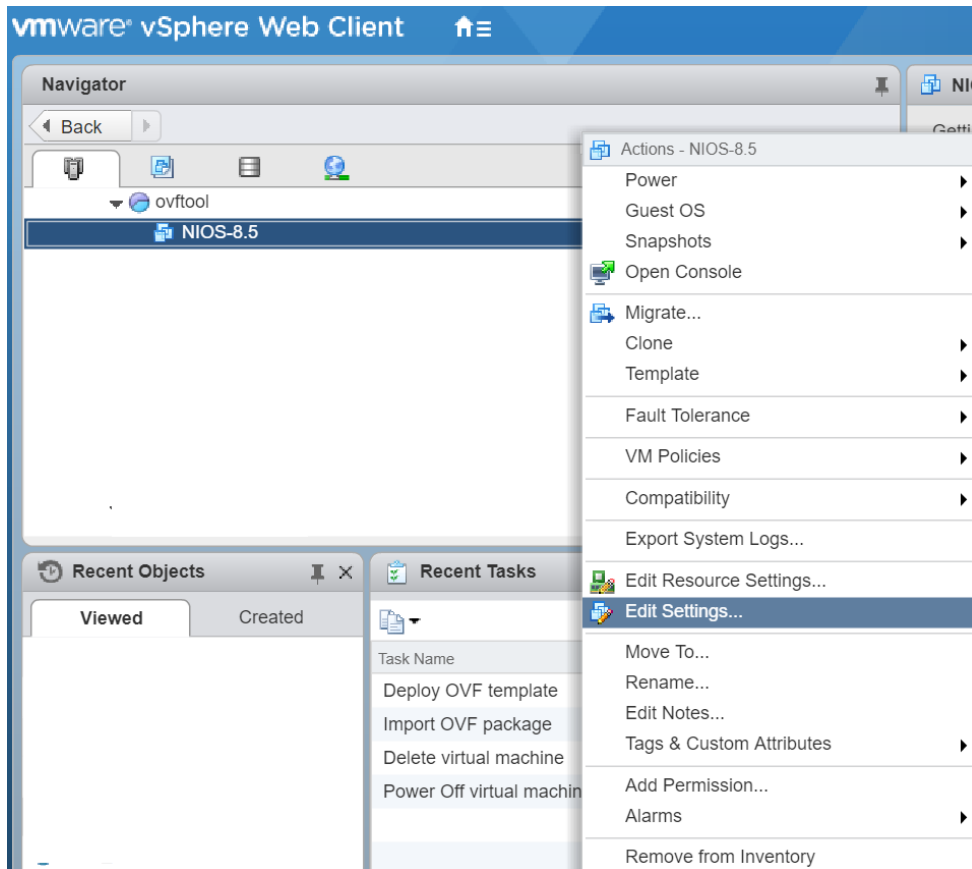
```
root@ubuntu-desktop:~/ovftool# ovftool --noSSLVerify --name=member_by_ovf_tool_02 --acceptAllEulas --datastore=Dell_Datastore_10TB_1 -dm="thin" --
network=Internet-200-24 --powerOn --prop:remote_console_enabled=True --prop:temp_license="nios IB-V815 enterprise" --prop:lan1-v4_addr=10.196.200.
105 --prop:lan1-v4_netmask=255.255.255.0 --prop:lan1-v4_gw=10.196.200.1 --prop:gridmaster-ip_addr=10.196.200.110 --prop:gridmaster-token=akdEKwVTK
vS4vdxq4nllCpgeudtjJZL --prop:gridmaster-certificate="-----BEGIN CERTIFICATE-----MIIIDdzCCA18CEndgS4Khz7cVmjoJVh1CA0wDQYJKoZIhvcNAQEFBQAwEjELMAkG
A1UEBhMCVWwxEzARBgNVBAGTCkNhbg1mb3JuaWEeXjAQBgNVBACTCVNi1bm55dmF5ZTERMA8GA1UEChMIISM5mb2Jsb3B3gxFDASBgNVBAStC0Vuz21uZWVyaW5nMRkwFwYDVQDEEXB3d3cuaW5mb2
Jsb3B3guY29tNB4XDTESMTAxNTA5NDUxNi0xMjEwMTAxNDUxNDUxNi0wZjELMAkGA1UEBhMCVWwxEzARBgNVBAGTCkNhbg1mb3JuaWEeXjAQBgNVBACTCVNi1bm55dmF5ZTERMA8GA1UEChMIISM5m
b2Jsb3B3gxFDASBgNVBAStC0Vuz21uZWVyaW5nMRkwFwYDVQDEEXB3d3cuaW5mb2Jsb3B3guY29tNB4XDTESMTAxNTA5NDUxNDUxNi0wZjELMAkGA1UEBhMCVWwxEzARBgNVBAGTCkNhbg1mb3JuaWEeXjAQBgNVBACTCVNi1bm55dmF5ZTERMA8GA1UEChMIISM5m
r3aBRLPK6KzJjOk8QVPT/smXQvrc90CicU8cR6oCNa8jxJkaMdeCSTktdkVkcVjtQ++z8xt4IwNtut7aSHfzmrCfUDVvTSGIheGvCEMx9Z5QXfg6BpJ2hf10mnYkv/fSRUeYLMnqkHTOI74eqV
innfyZ5vMdhDhGVQ/Py5gNHJVemHy92UArnP3/NEMjGcDUqPzXciTGzZ/+MP7XNu4VPTRBonKbF2XaUvMSSrB81wy1WswWwvvnjcv1Y03PJPinqrFt0ay7FhhWwh3nDcW6p4cIY1Uy/TD6M9F
w0VKh/ZyS0Ud1mqC6cCqQIDAQABMA0GCSqGSIb3DQEBBQUAA4IBAQCrc3Y36RUosYdjbUNj7KS3vdkYKPSXUfHIuB7ft2eCvDxBfVIZXJawNkQ9Ek1JTaSSjJK6WmehPZnQW2r36twI8Sqe4w
6eVUCav6IF6BwW2UXuao0Eq1pDgNggKvHSsuJJ57bcxqz7WP9ynBhkFDr+0CAIEHMIr0q7T1upCX+DcbDubqBnFq5R7L7e1duU66SocILA96n8Qhc9oNuvNs45pAvqE8hT0pjfArBtXKXmU48
30FssD2RgTP6ghuUPMI0LcRN3z9iVrB3cLkTFDUI3u+azcU1ZXFr4MbgIw7nU012jF+YdbGFp5HonTGR16ApQNOIC8FB9i44XRpi-----END CERTIFICATE-----" /root/ovftool/nio
s-8.1.6-360192-2017-08-25-21-04-00-ddi.ova 'vi://administrator@india.local:Indiatme_1@10.196.215.21/India/vm/deployed_by_ovftool'
Opening OVA source: /root/ovftool/nios-8.1.6-360192-2017-08-25-21-04-00-ddi.ova
The manifest validates
Opening VI target: vi://administrator%40india.local@10.196.215.21:443/India/vm/deployed_by_ovftool
Deploying to VI: vi://administrator%40india.local@10.196.215.21:443/India/vm/deployed_by_ovftool
Transfer Completed
Powering on VM: member_by_ovf_tool_02
Task Completed
Completed successfully
```

Resizing vNIOs vmdk disk

Starting from NIOS 8.5 onwards, customers can resize vNIOs virtual hard disk. Once vNIOs is deployed from the resizable OVA file, its virtual hard disk can be resized based on your requirement and future expansion. By default, 60 GB hard disk gets provisioned post deployment. Once the virtual hard disk usage reaches 80%, Infoblox GUI flashes a disk usage warning. Infoblox recommends increasing the virtual hard disk size immediately after disk usage warning appearance. Resize option can only be performed before powering on vNIOs for the first time.

1. Follow the steps mentioned under [download vNIOs OVA file](#) section to download resizable vNIOs OVA file.
2. After OVA file is downloaded, follow the instructions mentioned under [Deploying Grid-Master](#).

3. Post-deployment, right click on the vNIOS and click on **Edit Settings** option.



- Expand the **Hard disk 1** option to view and change hard disk related options.

N **NIOS-8.5 - Edit Settings** ? >>

Virtual Hardware

VM Options

SDRS Rules

vApp Options

CPU	2	▼	i	
Memory	16384	▼		MB ▼
Hard disk 1	60	▲▼		GB ▼
Maximum Size	7.34 TB			
VM storage policy	Datastore Default			▼ i
Type	Thick provision lazy zeroed			
Sharing	No sharing			▼
Disk File	[Dell_Datastore_10TB_2] NIOS-8.5/NIOS-8.5.vmdk			
Shares	Normal	▼	1,000	
Limit - IOPs	Unlimited			▼
Virtual flash read cache	0	GB ▼	Advanced	
Disk Mode	Dependent			▼ i
Virtual Device Node	SCSI controller 0	▼	SCSI(0:0)	▼
SCSI controller 0	LSI Logic Parallel			
Network adapter 1	Internet-200-24 (Dswitch-Internet-200	▼	<input checked="" type="checkbox"/> Connect...	
Network adapter 2	Internet-200-24 (Dswitch-Internet-200	▼	<input checked="" type="checkbox"/> Connect...	
Network adapter 3	Internet-200-24 (Dswitch-Internet-200	▼	<input checked="" type="checkbox"/> Connect...	

New device:

----- Select -----
▼

Add

Compatibility: ESXi 5.5 and later (VM version 10)

OK

Cancel

- To increase the vNIOS virtual hard disk size, enter virtual hard size against **Hard disk 1** option and click on **OK**.

NIOS-8.5 - Edit Settings

Virtual Hardware | VM Options | SDRS Rules | vApp Options

CPU	2	
Memory	16384	MB
*Hard disk 1	150	GB
Maximum Size	7.34 TB	
VM storage policy	Datastore Default	
Type	Thick provision lazy zeroed	
Sharing	No sharing	
Disk File	[Dell_Datastore_10TB_2] NIOS-8.5/NIOS-8.5.vmdk	
Shares	Normal	1,000
Limit - IOPs	Unlimited	
Virtual flash read cache	0	GB Advanced
Disk Mode	Dependent	
Virtual Device Node	SCSI controller 0	SCSI(0:0)
SCSI controller 0	LSI Logic Parallel	
Network adapter 1	Internet-200-24 (Dswitch-Internet-200)	<input checked="" type="checkbox"/> Connect...
Network adapter 2	Internet-200-24 (Dswitch-Internet-200)	<input checked="" type="checkbox"/> Connect...
Network adapter 3	Internet-200-24 (Dswitch-Internet-200)	<input checked="" type="checkbox"/> Connect...

New device:

Compatibility: ESXi 5.5 and later (VM version 10)

Some useful information

- NIOS virtual appliance for VMware supports most of the features of the Infoblox NIOS appliances, with the following limitations:
 - When you configure an HA pair, both nodes in the HA pair must be NIOS virtual instances. You cannot configure a physical NIOS appliance and a NIOS virtual instance in an HA pair.
 - NIOS virtual appliances run on virtual hardware. They do not have sensors to monitor the physical CPU temperature, fan speed, and system temperature.
 - Changing the NIOS virtual appliance settings through the VMware vSphere or vCenter console may violate the terms of the NIOS virtual licensing and support models. The NIOS virtual appliance may not join the Grid or function properly.
- Following are the temp license strings which activates the corresponding licensed features using cloud-init.

String	License description
<code>nios</code>	NIOS license
<code>dns</code>	DNS server
<code>dhcp</code>	DHCP server
<code>enterprise</code>	Grid license
<code>vnios</code>	vNIOS license
<code>cloud</code>	Cloud Network Automation
<code>cloud_api</code>	Cloud Platform license
<code>load_bal</code>	Load Balancer license
<code>ms_management</code>	Microsoft management license
<code>qrd</code>	Query Redirection license
<code>dnsqrw</code>	DNS Query Rewrite license
<code>dtc</code>	DNS Traffic Control license
<code>rpz</code>	Response Policy Zones license
<code>fireeye</code>	FireEye license
<code>threat_anl</code>	Threat Analytics license
<code>sw_tp</code>	Threat Protection (Software add-on) license
<code>tp_sub</code>	Threat Protection Update license
<code>sec_eco</code>	Security Ecosystem license
<code>flex_grid</code>	Flex Grid Activation ("Organization") license

- After increasing the vNIOS virtual hard disk size it cannot be decreased.
- vNIOS virtual hard disk can be increased up to 2.5 TB.



Infoblox is the leader in modern, cloud-first networking and security services. Through extensive integrations, its solutions empower organizations to realize the full advantages of cloud networking today, while maximizing their existing infrastructure investments. Infoblox has over 12,000 customers, including 70 percent of the Fortune 500.

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