



HP Operations Manager

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CentOS Linux 6.7

HPOM Virtual Appliance

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Introduction to the HPOM Virtual Appliance

HPOM virtual appliance is a preconfigured virtual machine image that you can run on your Virtual Machine Monitor (VMM). The main benefit of the HPOM virtual appliance is that it eliminates the need for installing, configuring, and maintaining complex software systems.

The HPOM virtual appliance contains a preinstalled and preconfigured HPOM system and is available as an Open Virtual Appliance (OVA) file: `OML_922.ova`.

Note: HPOM virtual appliance is not intended to be used in a production environment because of the predefined operating system settings. HPOM virtual appliance is installed only with components required to run HPOM, and does not have up-to-date operating system patches.

This document provides you with important information on how to deploy HPOM virtual appliance to VMware in your environment. This information is presented as follows:

- ["Default Configuration of HPOM Virtual Appliance" on page 6](#)
- ["Deploying the HPOM Virtual Appliance" on page 7](#)
- ["Verifying the Deployment, and starting the Administration UI and Java GUI" on page 15](#)

Deploying HPOM Virtual Appliance to VMware

Default Configuration of HPOM Virtual Appliance

The following is the default configuration of the HPOM virtual appliance system:

System details	Value
CPU	1 vCPUs
Memory	3 GB vRAM
Disk	50 GB
Swap	8 GB
Operating system	CentOS 6.7 (64-bit)

Caution: Do not install any other HP Software products or components and third-party software products on the virtual appliance instance.

The following are the HPOM specifics of your virtual appliance system:

System details	Version
HPOM	9.22.190
PostgreSQL database	9.3.6
HP Operations Agent	12.02.008

During the HPOM installation and configuration, the default values are used for all passwords. In addition, the following applies:

- Performance Manager is not configured.
- The PostgreSQL database directory locations are as follows:

- Binaries: /usr/pgsql-9.3/bin
- Libraries: /usr/pgsql-9.3/lib
- Cluster: /PSQL/c
- Data: /PSQL/d
- Index: /PSQL/i
- The Event Storm Filter and Health Check components are disabled.
- The HP Operations management server is configured to run as root user.
- Agent depot (12.02.008) is located at: /HPOM_DEPOT/HPOM_agent_depot.
- OpenSSL (1.0.2j) is located at: /openssl-1.0.2j

Deploying the HPOM Virtual Appliance

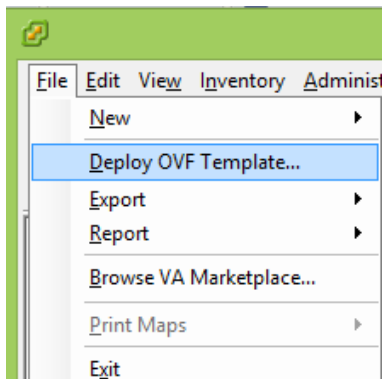
To deploy the HPOM virtual appliance to your virtual environment, choose one of the following methods:

- ["Deploying from the VMware vSphere Console" below](#)
- ["Deploy Using the Command-Line Prompt" on page 12](#)

Deploying from the VMware vSphere Console

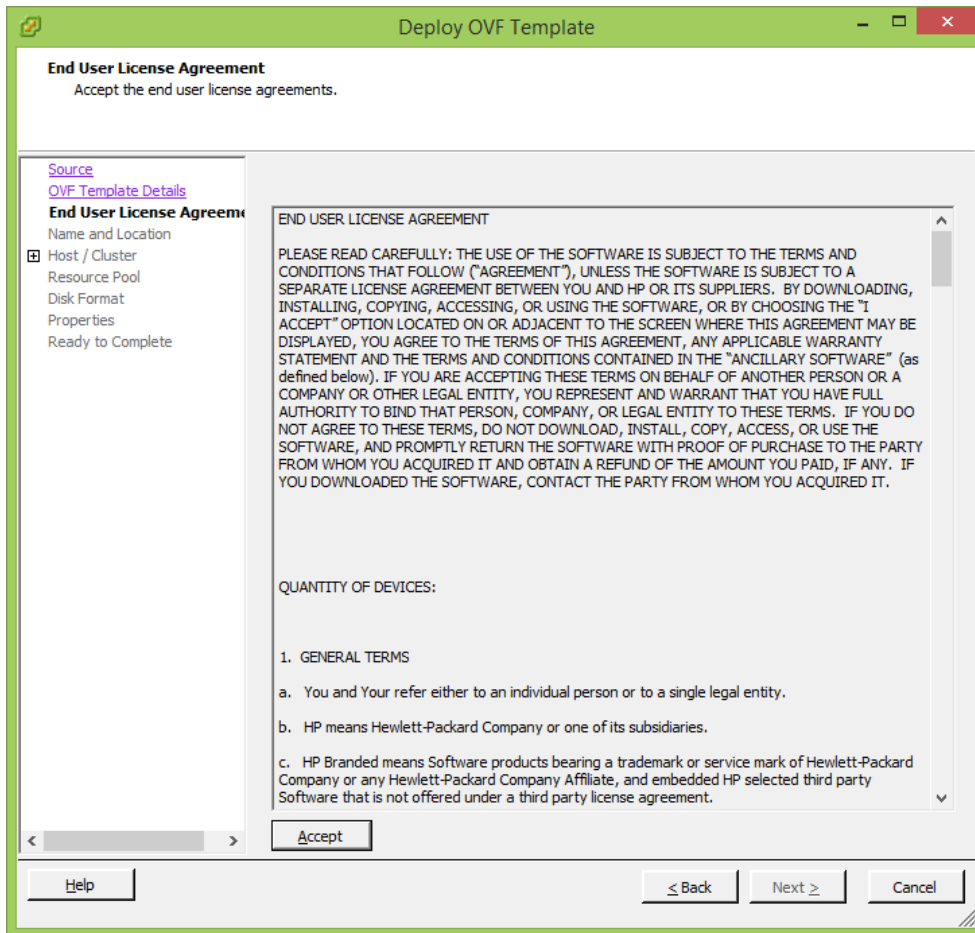
To deploy the HPOM virtual appliance from the VMware vSphere console, follow these steps:

1. Log on to the VMware vSphere console.
2. From the File menu, select **Deploy OVF Template...**. The Deploy OVF Template window opens.

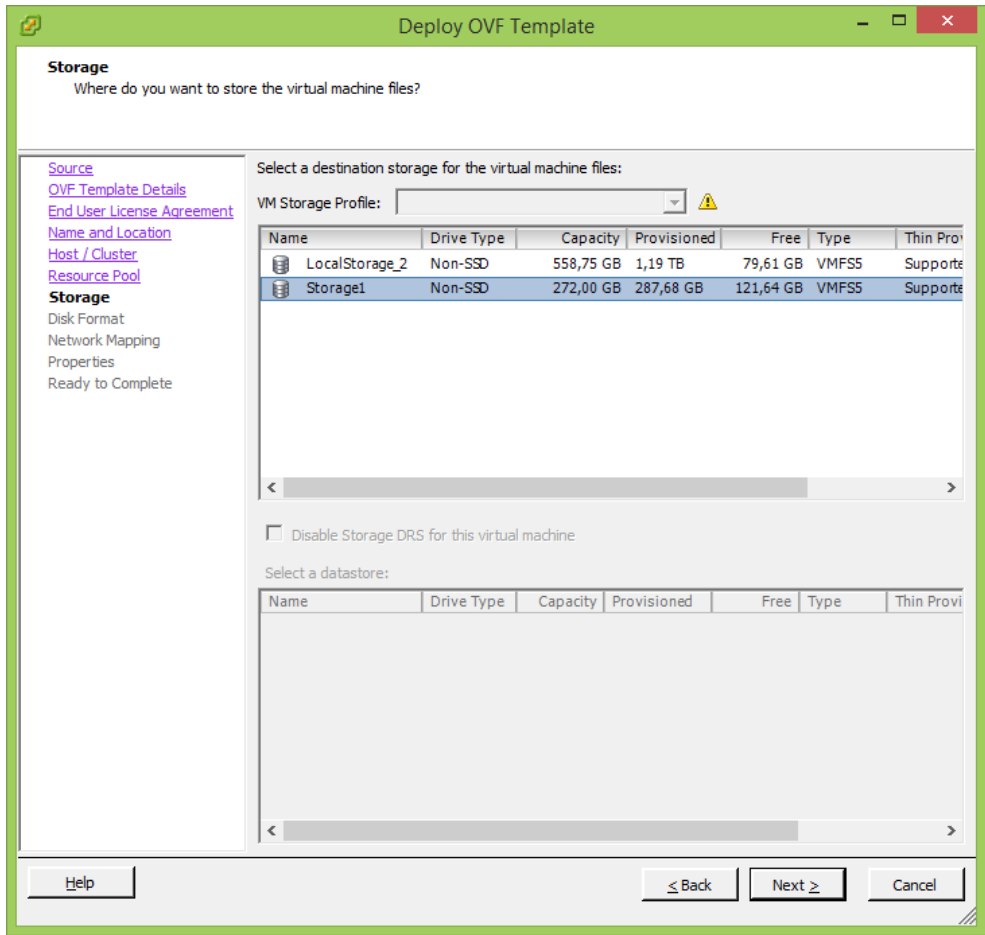


3. In the Source section, select the HPOM virtual appliance (OML_922.ova).

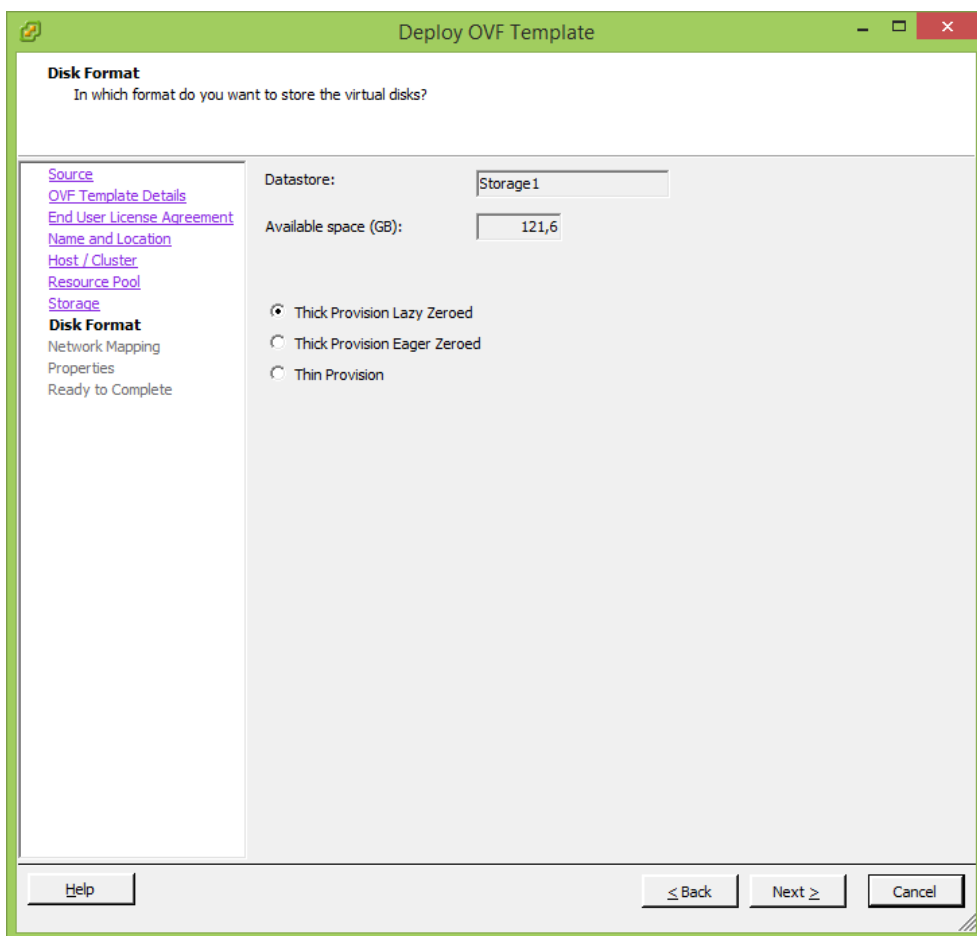
4. In the OVF Template Details section, verify the OVF template-related information.
5. In the End User License Agreement section, read the End User License Agreement and accept it.



6. In the Name and Location section, specify the data center.
7. In the Host/Cluster section, select the host system from the list of available systems.
8. In the Resource Pool section, select the resource pool where you want to run the OVF template.
9. In the Storage section, select the destination storage for the new virtual appliance.



10. In the Disk Format section, select the disk format.



Note: It is recommended to use the Thick Provision Lazy Zeroed option. Selecting this option creates a virtual disk in a default thick format. Space required for the virtual disk is allocated when the virtual disk is created. Data remaining on the physical device is not erased during creation, but is zeroed out on demand at a later time upon the first write from the virtual machine.

11. In the Network Mapping section, select a network from the list of available networks.
12. In the Properties section, do one of the following:

- If you use the static IP address, specify the networking configuration options.

The screenshot shows the 'Deploy OVF Template' wizard in a green-themed window. The 'Properties' section is active, with a sidebar on the left containing links for 'Source', 'OVF Template Details', 'End User License Agreement', 'Name and Location', 'Host / Cluster', 'Resource Pool', 'Storage', 'Disk Format', 'Network Mapping', and 'Properties' (which is highlighted as 'Ready to Complete'). The main area displays the 'Networking Properties' section, which includes the following fields and values:

- Hostname:** An empty text box.
- Default Gateway:** A text box containing '192.168.254.1'.
- DNS:** A text box containing '192.168.254.1'.
- Network 1 IP Address:** A text box containing '192.168.254.12'.
- Network 1 Netmask:** A text box containing '255.255.255.0'.

At the bottom of the window, there are buttons for 'Help', '< Back', 'Next >', and 'Cancel'.

Caution: Make sure that the following applies:

- The Site and Hostname fields are empty, clear them if required.
- The DNS entry exists for the IP address that is assigned to the virtual appliance.
- All provided data is correct (IP address gateway, netmask, and DNS). If you fail to provide the correct data DHCP will be used instead.

- If you use DHCP, leave these options blank.

Note: If your virtual machine is configured to use the DHCP, you can change the IP address to static later on, as described in the ["Reconfiguring Your Virtual Machine with a New Static IP Address"](#) on page 13.

The IP address of this virtual machine may change after restart. In such a case you must reconfigure the (including local and all remote nodes) as described in the *HPOM Administrator's Reference*.

13. Review your settings and click **Finish** to start the deployment.

For additional information, see the ESXi and vCenter Server 5.5 documentation.

Deploy Using the Command-Line Prompt

To deploy the HPOM virtual appliance, run the VMware OVF tool (`ovftool` command) instead of using VMware vSphere Console.

Note: You can download the OVF tool from the following web location:

<https://my.vmware.com/web/vmware/details?productId=352&downloadGroup=OVFTOOL350>

The following are the examples of the `ovftool` command usage, depending on the IP address that you use:

- Static IP address

```
ovftool --acceptAllEulas -n=<name of the appliance> --network=<name of the network> -ds=<data store name> --powerOn -dm=thin --prop:dhcp_static=STATIC --prop:static_ip=<static IP address> --prop:subnet_ip=<subnet IP> --prop:gateway_ip=<gateway IP> --prop:dns1=<DNS IP><Location of OVA file> <URL vCenter host cluster Location>
```

- Dynamic IP address

```
ovftool --acceptAllEulas -n=<name of the appliance> --network=<name of the network> -ds=<data store name> --powerOn -dm=thin --prop:dhcp_static=DHCP --prop:subnet_ip=<subnet IP> --prop:gateway_ip=<gateway IP> --prop:dns1=<DNS IP> <Location of OVA file> <URL vCenter host cluster Location>
```

In this instance, the following applies:

<i><name of the appliance></i>	Name that you want to assign to a new virtual appliance.
<i><name of the network></i>	Name of the network where you want to deploy the virtual appliance.
<i><static IP address></i>	Static IP address of the virtual appliance.
<i><subnet IP></i>	IP address of the subnet where you want to deploy the virtual appliance.
<i><gateway IP></i>	IP address of the gateway server for the virtual appliance.
<i><DNS IP></i>	IP address of the DNS server for the virtual appliance.
<i><Location of OVA file></i>	Location where you stored the HPOM OVA file.
<i><URL vCenter host cluster Location></i>	Location in vCenter where the virtual appliance is deployed.

Reconfiguring Your Virtual Machine with a New Static IP Address

If your system is configured to use the DHCP protocol and you want to use the static IP address, follow this procedure:

1. Reconfigure the HP Operations management server system with the new static IP address, as described in the *HPOM Administrator's Reference*.
2. In the `/etc/sysconfig/network-scripts/ifcfg-eth0` file, replace the `BOOTPROTO=dhcp` line with the following:

```
BOOTPROTO=static
```

3. Add the following lines to the `/etc/sysconfig/network-scripts/ifcfg-eth0` file:

```
IPADDR=<NEW_IP_ADDR>
```

```
NETMASK=<NETMASK>
```

```
GATEWAY=<GATEWAY>
```

In these instances, `<NEW_IP_ADDR>` is a newly specified IP address and `<NETMASK>` is a netmask or prefix for your system, and `<GATEWAY>` is a gateway.

4. Add the following line to the `/etc/resolv.conf` file:

```
nameserver <DNS_IP>
```

In this instance, `<DNS_IP>` is the IP address of the DNS server.

5. Update the `/etc/hosts` file with the new IP address and hostname. The syntax is as follows:

```
<IP address> <FQDN> <alias>
```

6. Restart the system for your changes to take effect by using the `reboot` command.

Registering DHCP node with DNS

You can register DHCP nodes with DNS to use the node hostname instead of IP address in communication. Registration of DHCP nodes with DNS is possible only in environments where DNS allows such configurations.

To register DHCP nodes with DNS:

1. Edit the `/etc/sysconfig/network` file:
 - a. Set the variable `HOSTNAME` to your desired hostname.
 - b. If the variable `DOMAINNAME` exists, remove it from the file.

Example of `/etc/sysconfig/network` file, where `HOSTNAME` is set to `testserver`:

```
NETWORKING=yes
```

```
NETWORKING_IPV6=yes
```

```
HOSTNAME=testserver
```

2. Edit the `/etc/sysconfig/network-scripts/ifcfg-eth0` file. Set value for the variable `DHCP_HOSTNAME`. This value must be the same value that you set for variable `HOSTNAME` in step 1.

Example of `/etc/sysconfig/network-scripts/ifcfg-eth0` file, where `DHCP_HOSTNAME` is set to `testserver`:

```
DEVICE=eth0
```

```
BOOTPROTO='dhcp'
```

```
ONBOOT=yes
```

```
TYPE=Ethernet
```

```
IPV6INIT=no
```

```
DHCP_HOSTNAME=testserver
```

3. Edit the `/etc/hosts` file. Remove the line with `localhost` and DHCP IP address, and add a line with the system IP address and new hostname.

For example:

```
127.0.0.1 localhost.localdom localhost localhost
```

```
::1 localhost.localdom localhost localhost ip6-localhost ip6-loopback
```

```
# X.X.X.X localhost.localdom localhost
```

```
X.X.X.X testserver.testdomain.com testserver
```

In this example, the line with `localhost` and DHCP IP address (`X.X.X.X localhost.localdom localhost`) is removed or commented. A new line (`X.X.X.X testserver.testdomain.com testserver`) is added, where `X.X.X.X` is the system IP address, `testserver` is the new hostname, and `testdomain.com` is the fully qualified domain name (FQDN).

4. Reboot the system by running the following command:

```
shutdown -r 0
```

5. Verify the settings by running the following commands:

- a. `hostname`: Displays the hostname that you set in steps 1 and 2.

- b. `getent hosts <hostname>`, where `<hostname>` is the hostname that you set in steps 1 and step 2. This command displays the IP address and FQDN of the system.

After the settings are verified, changes to the operating system are complete. You must configure HPOM to the new hostname.

6. Stop all HPOM processes by running the following command:

```
/opt/OV/bin/ovc -kill
```

7. Replace the hostname in the HPOM database by running the following command:

```
/opt/OV/contrib/OpC/opcchgaddr IP <IP> localhost.localdom IP <IP> <FQDN>
```

In this instance, <IP> is the IP address of the system, and <FQDN> is the fully qualified domain name that was used in step 3.

8. Change the configuration settings by running the following commands:

```
ovconfchg -ns sec.core.auth -set MANAGER <FQDN>  
ovconfchg -ns sec.core.auth -set CERTIFICATE_SERVER <FQDN>  
ovconfchg -ns sec.cm.client -set CERTIFICATE_SERVER <FQDN>  
ovconfchg -ns eaagt.lic.mgrs -set general_licmgr <FQDN>  
ovconfchg -ns eaagt -set OPC_NODENAME <FQDN>  
ovconfchg -ovrg server -ns opc -set OPC_MGMT_SERVER <FQDN>
```

Here, <FQDN> is the fully qualified domain name that was used in step 3.

9. Modify the node name in the following file for Java GUI Webstart:

```
/opt/OV/www/htdocs/ito_op/ito_op_ws.jnlp
```

Set the code base variable to the FQDN.

For example:

```
<jnlp spec="7.0+"  
codebase="http://testserver.testdomain.com:8081/ITO_OP/">
```

10. Start all HPOM processes by running the following command:

```
/opt/OV/bin/ovc -start
```

Verifying the Deployment, and starting the Administration UI and Java GUI

Follow these steps to verify if the deployment of the HPOM virtual appliance was successful:

1. Log on to the operating system of the deployed system by using the VMware vSphere Console or SSH:

Log-on name: root

Password: password

2. HPOM starts automatically on the deployed server. Use the `opcsv` command line tool to verify that all HP Operations management server processes are running:

```
/opt/OV/bin/OpC/opcsv
```

3. After HPOM is up and running, check whether the Administration UI is accessible from the

supported web browser. Log on to the following URL as the `opc_adm` user (the password is `OpC_adm`) or as default user `admin` (the password is `secret`). You are asked to change the password after you log on for the first time.

```
http://<management_server>:9662
```

In this instance, `<management_server>` is a fully qualified hostname or IP address of your HP Operations management server.

4. Enter the following URL in a web browser to open the Java GUI:

```
http://<management_server>:8081/ITO_OP/ito_op_applet.html
```

In this instance, `<management_server>` is a fully qualified hostname or IP address of your HP Operations management server.

5. Log on to the Java GUI with the following credentials:

Log-on name: `opc_op`

Password: `OpC_op`

You are asked to change the password when you log on for the first time.

To check if a new message is visible in the Java GUI message browser, run the following command to send a test message:

```
opcmsg a=a o=o msg_t="Test message"
```

6. The `rlogin` utility is disabled by default. To enable `rlogin` manually, follow these steps:

- a. Edit the `/etc/xinetd.d/rlogin` file to set the following:

```
disable = no
```

- b. Uncomment `rlogin` from `/etc/securetty` by removing `#`.

- c. Run the following command:

```
service xinetd reload
```

Updating OpenSSL version 1.0.1e to 1.0.2j

Open SSL 1.0.1e is available with VA (`OML_922.ova`) by default. Updating OpenSSL from version 1.0.1e to 1.0.2j is optional.

Follow these steps to update.

1. Copy the file `/usr/bin/openssl` by running the following command:

```
mv /usr/bin/openssl /usr/bin/openssl.old
```

2. Copy the engines folder by running the following commands:

```
mv /usr/lib64/openssl/engines /usr/lib64/openssl/engines.old
```

```
mv -R /openssl-1.0.2j/lib/engines /usr/lib64/openssl/
```


3. Run the following commands:

```
ln -sf /openssl-1.0.2j/lib/libcrypto.so /usr/lib64/libcrypto.so.10
```

```
ln -sf /openssl-1.0.2j/lib/libssl.so /usr/lib64/libssl.so.10
```

```
ln -sf /openssl-1.0.2j/bin/openssl /usr/bin/openssl
```

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