VM-based Setup on ESXi

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Contents

About this Document

This document provides information on VM deployment over ESXi using an OVF template. It also provides the Docker and Docker Compose installation procedures.

1. Pre-requisites

Below are the pre-requisites for VSP installation:

1. EC2 machine with:
   a. Minimum requirements are listed below

Component	Minimum Configuration	Operating System	Additional Information
VSP VM (LFR and CMS - Large) [All the Core and optional CMS services are installed]	• **8 CPU Cores** • **64 GB RAM** • **250 GB Disk Space**	**RHEL 7.9** **RHEL 8.5**	**Requires** • **Docker-compose version 1.29+** • **Docker version – 18.x, 19.x, 20.x** • **200 GB in `/var` partition**
VSP VM (LFR and CMS - Small) [Only the Core CMS services are installed; Recommended for POVs only]	• **8 CPU Cores** • **32 GB RAM** • **250 GB Disk Space**	**RHEL 7.9** **RHEL 8.5**	**Requires** • **Docker-compose version 1.29+** • **Docker version – 18.x, 19.x, 20.x** • **200 GB in `/var` partition**

Table 1 – Hardware Requirements for VSP VM

   b. Network Security Group with the below ports opened for communication:

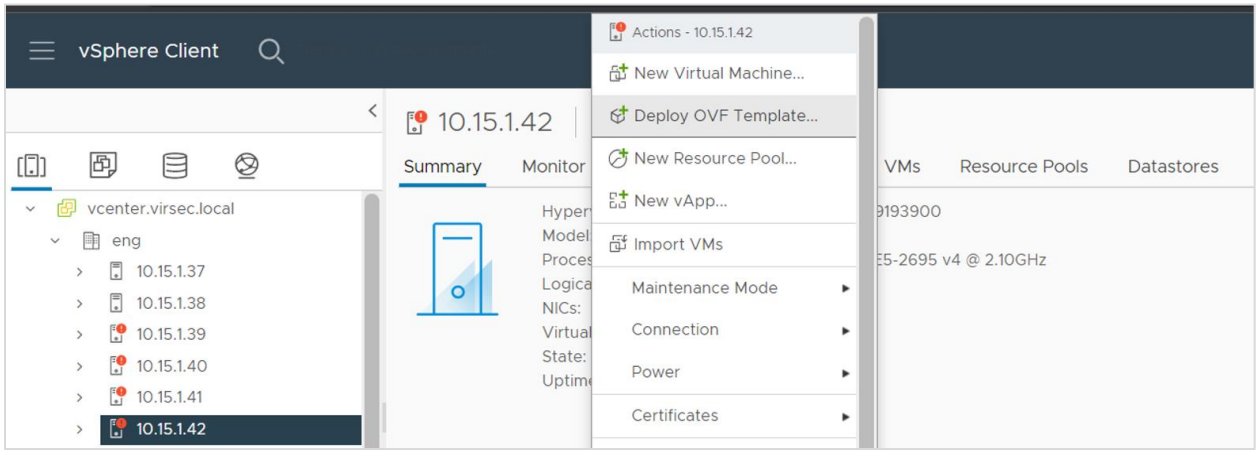
Client	Server	Client Port	Server Port	Protocol
VSP Probe (Deployed on customer workload)	**CMS**	**Any**	**22, 443,** **9092** (Secure Kafka ***not*** enabled) **OR** **9093** (Secure Kafka enabled)	**TCP**
VSP Probe (Deployed on customer workload)	**Remote vRule (Optional)**	**Any**	**55555**	**TCP**

Table 2 – Communication Matrix

2. OVF Deployment

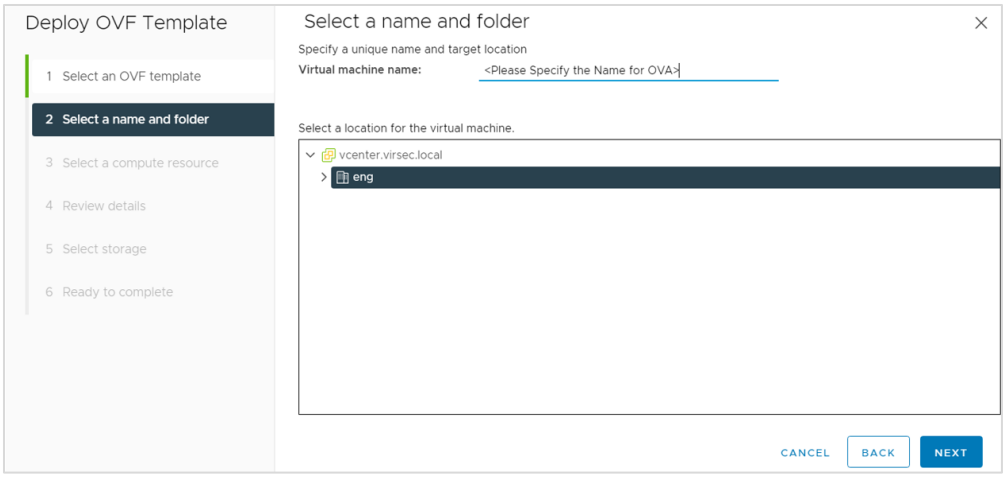
Once the OVA file with the above minimum configuration is procured, follow the steps below to deploy the virtual Machine via VMware vSphere / vCenter Server

1. Log in to the VMware vSphere Web Client and navigate to the tab **VMs**
2. Navigate to Actions and click **Deploy OVF Template**

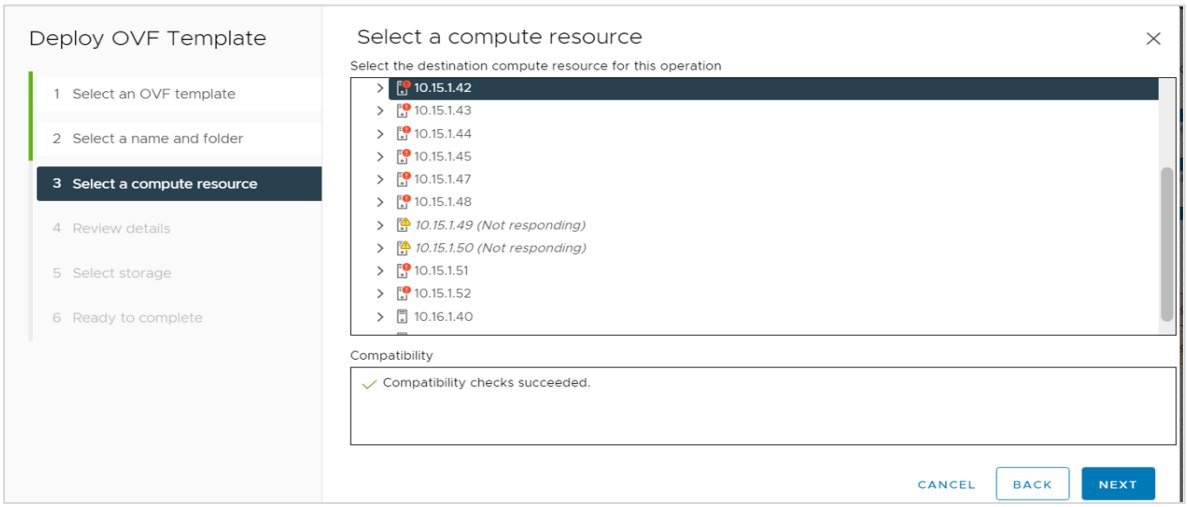


3. On the new window, click **Browse** and select the required OVA file from the local system. Click **Next**

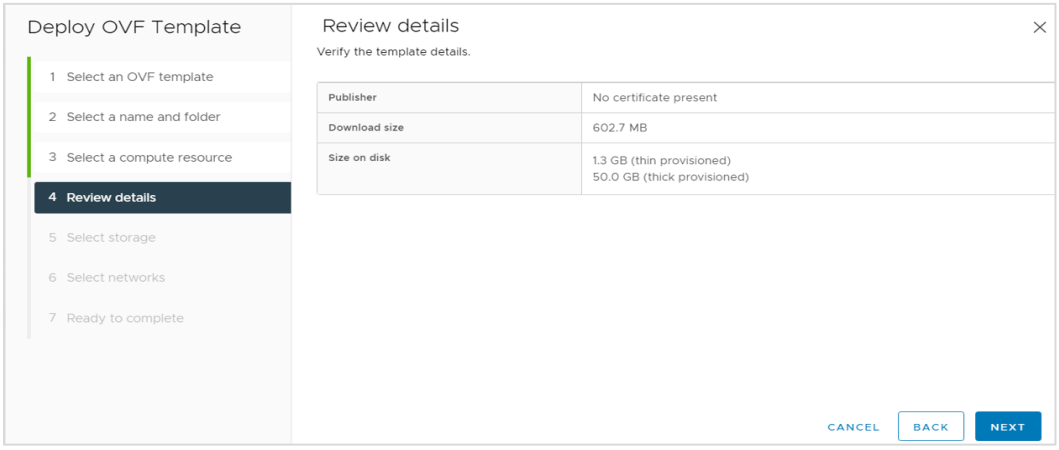
4. Provide the **Virtual Machine Name** and select the location for VM deployment. Click **Next**



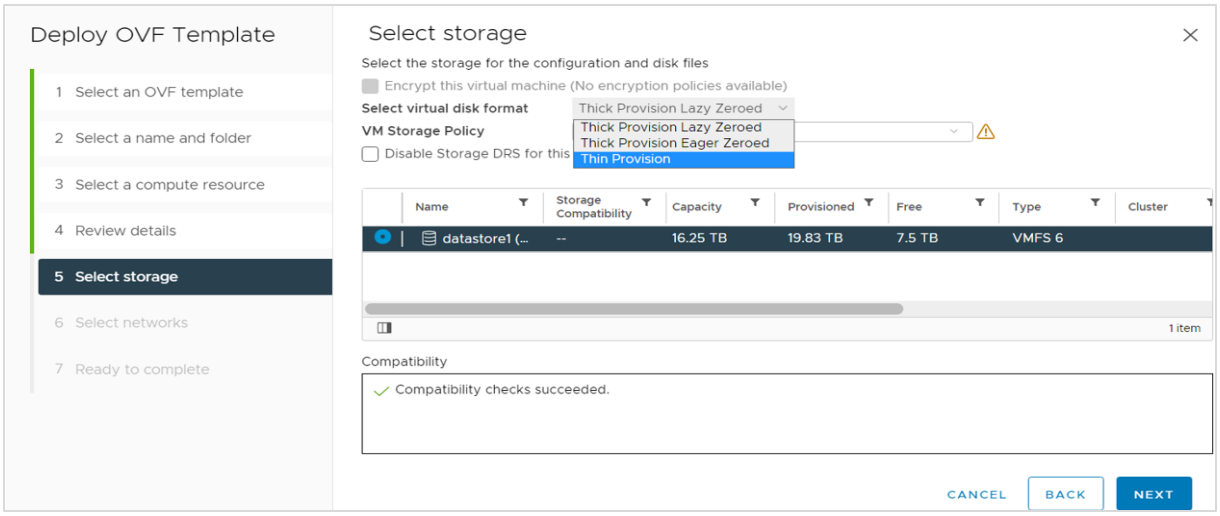
5. Select the resource to be utilized for VM deployment. Click **Next**



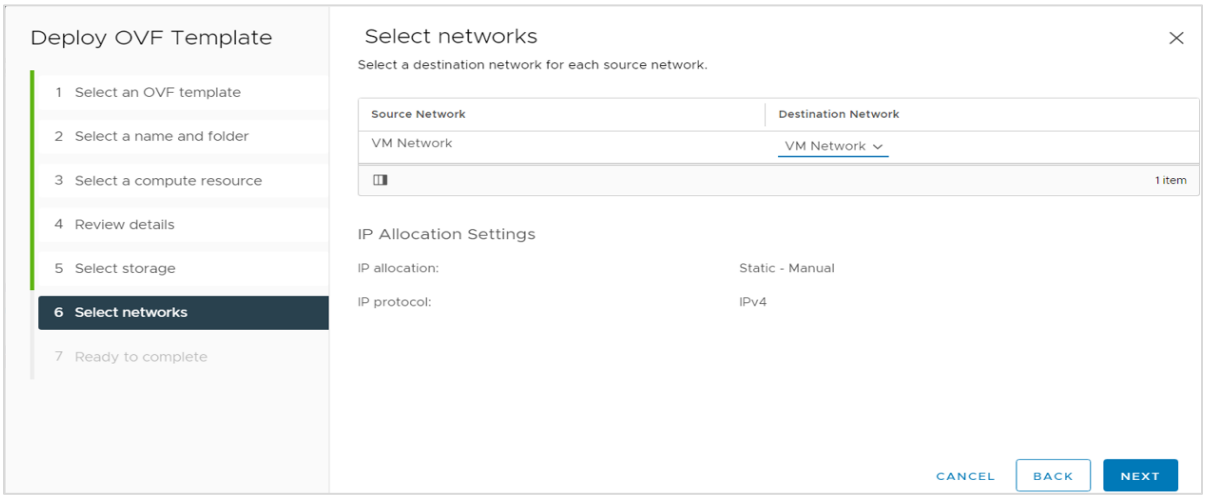
6. Review the package information that consists of advanced configuration options. Click **Next** to accept them



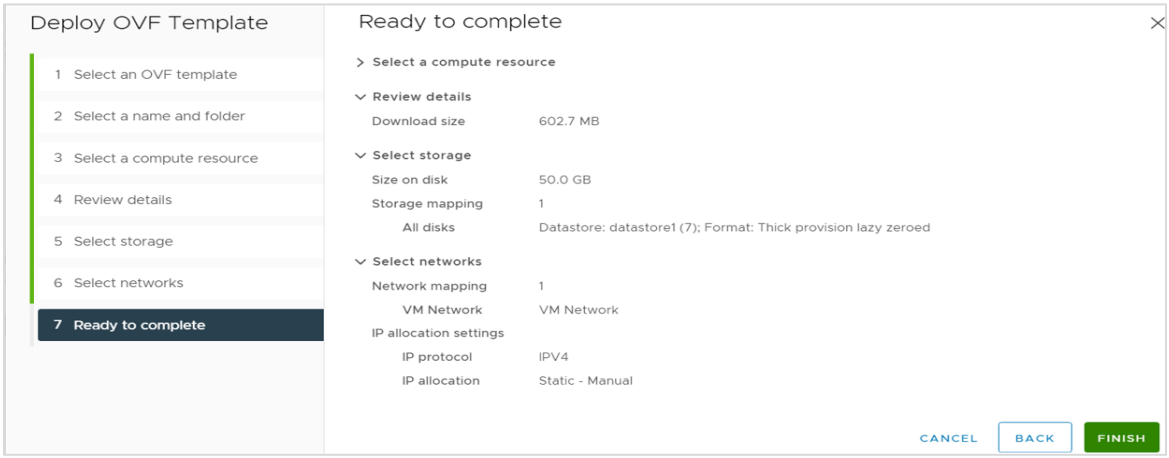
7. Select the required storage location from the datastore list. Select **Thin Provision** and click **Next**



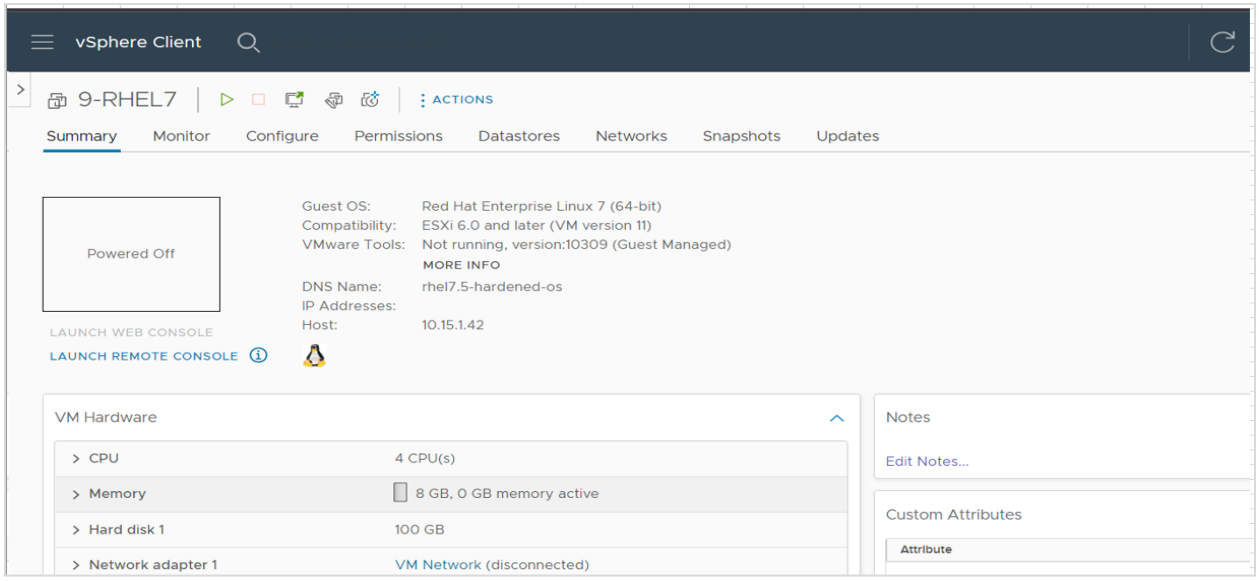
8. Select the required destination network from the dropdown list for each source network. Click **Next**



9. Review the configuration data and click **Finish**



10. The system imports and deploys the OVA file. Once the import is complete, click **Refresh** to update the system. It is listed in the center pane. Select the VM and click **Power On**



11. Once the VM is powered on, click Launch Web Console icon to open the VM in a new window
12. Once logged in, change the IP Address of the VM (if required)

3. Installation

1. Log in to the two newly created machines using SSH and install Docker and Docker Compose using the commands below:
   a. `sudo su`
   b. Register the machine with the Red Hat subscription to download dependencies
      i. `subscription-manager register --username <username> --password <password> --auto-attach`
   c. `yum update`
      `subscription-manager repos --enable=rhel-7-server-rpms --enable=rhel-7-server-extras-rpms --enable=rhel-7-server-optional-rpms`
   d. `yum install -y https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm`
   e. `yum install -y yum-utils device-mapper-persistent-data lvm2`
   f. `yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo`
   g. `yum install docker-ce`
   h. `systemctl enable --now docker.service`

i. `curl -L "https://github.com/docker/compose/releases/download/1.29.x/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose`

j. `chmod +x /usr/local/bin/docker-compose`

k. `mv /usr/local/bin/docker-compose /usr/bin/`

2. **Verification:** Execute the commands below to verify the Docker and Docker Compose versions:

   a. `docker version`

   b. `docker-compose version`

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