



# **Set Up the Deployment Jump VM and the Kubernetes Master Node VMs (Manual Deployment)**

NetApp Solutions

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# Set Up the Deployment Jump VM and the Kubernetes Master Node VMs (Manual Deployment)

A Deployment Jump VM running a Linux distribution is used for the following purposes:

- Deploying ONTAP Select using an Ansible playbook
- Deploying the Kubernetes infrastructure with NVIDIA DeepOps and GPU Operator
- Installing and configuring NetApp Trident

Three more VMs running Linux are set up; these VMs are configured as Kubernetes Master Nodes in this solution.

Ubuntu 18.04.4 LTS was used in this solution deployment.

1. Deploy the Ubuntu 18.04.4 LTS VM with VMware tools

You can refer to the high-level steps described in section [Install Ubuntu 18.04.4 LTS](#).

2. Configure the in-band management network for the VM. See the following sample netplan template:

```
# This file describes the network interfaces available on your system
# For more information, see netplan(5).
network:
  version: 2
  renderer: networkd
  ethernets:
    ens160:
      dhcp4: false
      addresses: [ipv4_address/subnet]
      routes:
        - to: 0.0.0.0/0
          via: 172.21.232.111
          metric: 100
          table: 3488
      routing-policy:
        - from: 0.0.0.0/0
          priority: 32768
          table: 3488
      nameservers:
        addresses: [nameserver_ip]
        search: [ search_domain ]
      mtu: 1500
```

This template is not the only way to setup the network. You can use any other approach that you prefer.

3. Apply the netplan.

```
sudo netplan --debug apply
```

4. Stop and disable Network Manager if it is running.

```
systemctl stop NetworkManager  
systemctl disable NetworkManager
```

5. Open a VI editor to `/etc/iproute2/rt_tables` and add a table entry.

```
#  
# reserved values  
#  
255     local  
254     main  
253     default  
0       unspec  
#  
# local  
#  
#1      inr.ruhep  
101     3488
```

6. Add a host record for the VM in DNS.

7. Verify outbound internet access.

8. Update the system.

```
sudo apt-get update && sudo apt-get upgrade
```

9. Reboot the system.

10. Repeat steps 1 through 9 to set up the other three VMs.

[Next: Deploy a Kubernetes Cluster with NVIDIA DeepOps \(Automated Deployment\)](#)

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