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

HCI

NetApp
October 01, 2020

This PDF was generated from https://docs.netapp.com/us-en/hci-solutions/hciaiedge_setp_the_deployment_jump__and_the_kubernetes_master_node_vms_manual_deployment.html on November 04, 2020. Always check docs.netapp.com for the latest.

Table of Contents

Set Up the Deployment Jump VM and the Kubernetes Master Node VMs (Manual Deployment) 1

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)

Copyright Information

Copyright © 2020 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system-without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at http://www.netapp.com/TM are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.