Ubuntu 20.04 Template for XenServer

Introduction

This document details the steps required to configure a template XVA for XenServer.

XVA Template Creation

Follow these instructions to create an Ubuntu-20.04 XVA that can be used to quickly deploy Kubernetes to XenServer. Note that these steps will only be **rarely necessary** to regenerate the XVA from scratch. Most of the time, you’ll be able to quickly **clone the pre-built XVA** downloaded from Amazon S3 from (where **#** is the Ubuntu revision):

https://s3.amazonaws.com/neonforge/kube/xenserver-ubuntu-20.04.#.xva

or the latest version from:  
  
 <https://s3.amazonaws.com/neonforge/kube/xenserver-ubuntu-20.04.latest.xva>  
  
NOTE: These files are compressed via **GZIP**.

**Setup Instructions**

1. Download the **Ubuntu-20.04 Server ISO** from (where **#** is the desired revision) from:   
     
   http://releases.ubuntu.com/20.04/

Edit the downloaded file name to remove the last version field (probably “.0”) and the “live-server-amd64” and then archive the ISO file to (making it public):  
  
<https://s3.amazonaws.com/neonforge/kube/ubuntu-20.04.#.iso>

1. Burn the ISO to a DVD (or add it to a XenServer ISO library).
2. Power up XenServer and wait for the UX to display on the monitor.
3. Run XenCenter/XCPCenter on your workstation and connect to the XenServer.
4. Create the setup VM (You’ll need an **XCP-ng v7.5.0** server, newer versions (like v8.1.0) generate VM templates that are **not compatible with older servers**:  
   1. **VM/New VM…**
   2. Scroll to the end and select **Ubuntu Xenial Xerus 16.04** and click **Next**
   3. Name the VM: **xenserver-ubuntu-neon**
   4. **Insert the DVD** (or select the ISO from the library) into the XenServer machine (the new VM will mount this by default).
   5. Click **Next** until you get processors and memory page. Set **4 procs** and **1024MB RAM**.
   6. Click **Next** until the last page and click **Create Now** to create the VM.
   7. **Wait for the VM to be created** in the left panel, select it, and then click the **Console tab** and wait for the VM to boot.
5. Wait for the installation UX to start.
6. Press enter to select **English**.
7. **DO NOT UPDATE** to the **latest installer** if asked.
8. Press enter to install the **default keyboard**.
9. On the network connections page, **wait for DHCP to assign an IP**. Do not proceed without networking.  
     
   If you are especially clever, **make a note of the VM IP address** to save a step below 😊
10. Press enter to **Install**.
11. Press enter to **skip proxy** configuration (you may need to wait for DHCP; don’t proceed without networking).
12. Press enter to choose the **default mirror**.
13. **Use the entire disk**.
14. **Confirm the file system settings**.
15. **Continue with setup** (there’s no going back 😊)
16. Enter **sysadmin** as your **name** and **username** and enter **sysadmin0000** as the password. Set the server name to **ubuntu** and select **done**.
17. Install **OpenSSH**.
18. Install **NO Server Snaps**.
19. Let the installation get to the **security update** step and then **cancel the update and reboot** (the idea is that we want our templates to match the Ubuntu releases and that we’ll handle updates separately).
20. **Remove the DVD:** by selecting **<empty>** in the DVD drive dropdown.
21. Press ENTER to **Reboot**
22. **Login** with the credentials you specified earlier to verify that the VM works.
23. Use the command below to discover the VM’s **IP address** for the **eth0** interface. You’ll need this later to finish preparing the node.

ip address

1. **IMPORTANT:** Be sure to **logout** of any PuTTY or XenServer consoles terminals so the next step will work.
2. Run this command **on your workstation** to complete the preparation, passing the IP address of the VM as the argument and the IP address and credentials for the XenServer host machine as options:  
     
   neon prepare node-template –xenserver \  
    --host-address=HOST-ADDRESS \  
    --host-password=PASSWORD \  
    VM-ADDRESS
3. Create the **XVA template**:  
   1. Right-click the VM and **Convert to Template**.
   2. Right-click on the template and select **Export to file…** Save the file to your workstation as **xenserver-ubuntu-20.04.#.xva** where **#** is the revision, set the **format to XVA** and then export to a local file.
4. Copy the file somewhere and then GZIP it:  
     
   gzip --best xenserver-ubuntu-20.04.#.xva
5. Use the AWS Console to **Upload** the image to the location below (where **#** is the revision:

Then upload the ZIP file to S3 (**removing the .gz** extension and setting **Content-Encoding=gzip**):  
  
<https://s3.amazonaws.com/neonforge/kube/ubuntu-20.04.#.vhdx>   
  
Be sure to: **Remove the .gz extension.**Be sure to: **Add AWS metadata: Content-Encoding = gzip**Be sure to: **Make these files public on AWS!**

1. If this is the latest Ubuntu image, we’ll also build a fully upgraded template:  
   1. In XenCenter, rename the most recent Ubuntu point release template from **xenserver-ubuntu-neon** to **x- xenserver-ubuntu-neon**.
   2. Create a VM named **xenserver-ubuntu-neon** from the **x- xenserver-ubuntu-neon** template.
   3. Start the VM, login via the Console tab and **get the IP address**.
   4. Run this command to upgrade the template VM, passing its address:  
        
      neon prepare node-template --upgrade VM-ADDRESS
   5. You can **delete** the **x- xenserver-ubuntu-neon** template if you wish or rename it to include the Ubuntu version for archival.
   6. Convert the VM to a template and export the XVA file like we did above and then compress and upload it to S3:  
        
      <https://s3.amazonaws.com/neonforge/kube/ubuntu-20.04.latest.vhdx>   
        
      Be sure to: **Remove the .gz extension.**Be sure to: **Add AWS metadata: Content-Encoding = gzip**Be sure to: **Make these files public on AWS!**