

Oracle Linux 8: Uploading a VHD image of the Nextthink Appliance to Microsoft Azure



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This file outlines the process of uploading a Virtual Hard Disk (VHD) image of the Nextthink Appliance to Microsoft Azure. While Nextthink provides a set of scripts and installation packages to streamline the process, some of the required steps are manual.

Nextthink recommends having basic knowledge of Linux to ensure proper Appliance setup. The Nextthink Appliance is public-facing and requires the Security Hardening protocol.

Uploading the image to Blob Storage

Requirements:

- A Microsoft Azure subscription, configured and primed for authentication
- A storage account linked to the intended resource group
- A Blob container with the intended level of Anonymous access

Nextthink recommends uploading the VHD image to the Azure Storage Explorer. Refer to the [Upload a VHD file](#) documentation from Microsoft.

Distributing the image

Requirements:

- Virtual machine generation set to **Gen 1**

Nextthink recommends using the Azure Compute Gallery for sharing custom VM images to your Azure organization. Refer to the [Create an image definition and an image version](#) documentation from Microsoft.

Creating the virtual machine

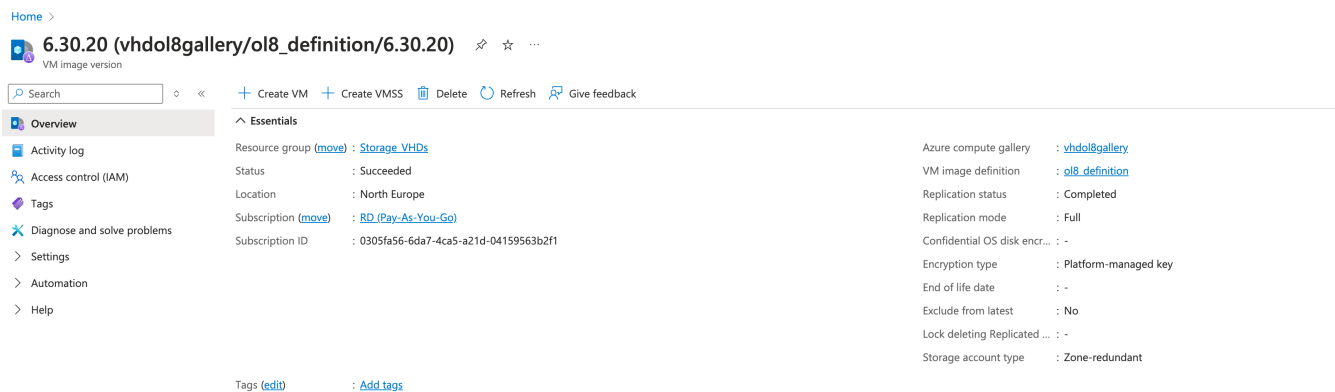
Requirements:

- An Azure Virtual Network (VNet) with a corresponding subnet
- A security group configured according to [Nextthink's connectivity requirements](#)

The **VM creation** menu in the **Networking** section can fulfill both of the above requirements.

Check the Appliance VM hardware requirements before creating Nextthink Portal or Engine instances in Azure. Refer to the Hardware Requirements PDF file from the [Installing the Appliance on Azure](#) documentation.

After creating an image, **Create VM**.



Configuring the virtual machine

Basic configuration:

1. Nextthink recommends setting up remote access to your VM using SSH keys. Create a new user or use the **'nextthink'** default.
2. Set **inbound port rules** to **None**. They will be configured through the security group.
3. Set **license type** to **Other**.

Disk configuration:

1. Set **OS disk size** to **32GB**.
2. **Data disk size** must be configured according to the Hardware Requirements PDF file from the [Installing the Appliance on Azure](#) documentation, as it contains the Nextthink Portal or Engine databases.
 - Set **source type** to **None (Empty disk)**.

Network configuration:

1. Create a VNet, subnet, and public IP.
2. Set **NIC network security group** to **Advanced**.
3. Select the previously created security group, or create a new one following the same requirements.

Change the rest of the settings as needed and **Review and create** to finalize the process.

When creating a new set of SSH credentials, Azure will prompt you to store the information. Be sure to do so, as this information is lost otherwise.

Store the private key in your local `.ssh` folder, e.g. `.ssh/nexthink_portal.pem`. The file should be accessible only to the current user.

```
chmod 400 .ssh/nexthink_portal.pem
```

Configuring the VM disks

1. Access the VM from the Nextthink image in your Azure Compute Gallery (Gallery) using SSH.

```
ssh -i .ssh/nexthink_portal.pem nexthink@<vm_external_ip>
#NB: replace nexthink user if you picked a different one during VM creation
```

2. Run the **lsblk** command to ensure the system can use the entire disk.

```
[nextrthink@test-azure-ol8 2024-05-21 14:15:39 ~]$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda          8:0    0   32G  0 disk
sda1         8:1    0    1M  0 part
sda2         8:2    0 1000M  0 part /boot
sda3         8:3    0  200M  0 part /boot/efi
sda4         8:4    0    1K  0 part
sda5         8:5    0   6.7G  0 part
  nxt-root 253:0    0   6.6G  0 lvm  /
sdb          8:16   0    16G  0 disk
sdb1         8:17   0    16G  0 part /mnt/resource
sdc          8:32   0    1T  0 disk
sr0         11:0    1   628K  0 rom
```

In this example, **sda** is the OS disk, **sdb** is a temporary operations disk managed by Azure and **sdc** is the data disk.

1. Configure the **OS disk** with the following commands:

```
# (optional) if growpart is not installed, install it:
# sudo yum install --disablerepo=* --enablerepo=ol8_baseos_latest --enablerepo=ol8_appstream cloud-
utils-growpart
sudo growpart /dev/sda 4
sudo growpart /dev/sda 5
sudo pvresize /dev/sda5
sudo lvextend -r -l +100%FREE /dev/mapper/nxt-root
```

2. Configure the **data disk** with the following commands:

```
sudo bash /root/formatDataDisk.sh /dev/sdc
sudo systemctl daemon-reload
```

3. Verify the partition sizes and mounting with the following command:

```
df -ah
```

Configuring a static private IP

The VHD installation process requires a default dynamic private IP, which must be made static to prevent DHCP lease expiration and subsequent connectivity issues.

1. From the **Virtual Machines** tab, select your VN.
2. Select **Networking > Networking Settings**.
3. Select the primary network interface.
4. Select **Settings > IP configurations**.
5. Select the default IP configuration assigned to this interface.
6. Select **Static** and insert an IP address that belongs to the VNet's network. The IP given by the DHCP server will work.
7. **Save** and wait for Azure to finish configurations.

Avoid editing network configurations through the Webconsole as if it were a local machine. This can cause loss of connectivity and render the machine unusable, as the only possible access is through SSH.

Installing Nextrthink on the VM

1. Use any SCP client to download the 'Nextrthink-offline-install-6.X.tgz' installation package onto the VM. Alternatively, visit the [V6 release notes page](#) to download the package.
2. Unpack the package with the following command:

```
tar -xzf Nexthink-offline-install-6.X.tgz
```

3. Install the package contents with the following command. Use the `-p` parameter to install the Portal or the `-e` parameter to install the Engine.

```
sudo sh installNexthinkInCloud.sh -p  
# or alternatively  
sudo sh installNexthinkInCloud.sh -e
```

4. Verify the components are running with the following commands.

- Engine:

```
nxinfo info
```

- Portal:

```
sudo systemctl status nxportal
```

Alternatively, connect to the public IP to verify if the Portal is running. Monitor the logs in `/var/nexthink/portal/logs`.

5. Change the default password for the Webconsole and the Portal with the following commands:

```
sudo passwd root  
sudo passwd nexthink
```

Alternatively, change the passwords when prompted upon logging into the Webconsole for the first time.

Important notes and considerations

Compared to an on-premise installation of Nexthink, Nexthink Appliance faces a public connection and an internal network. Regarding the Portal to Engine Configuration, both the public and private IP/DNS of the machines must be configured in:

- Internal and External DNS on the Webconsole parameters
- Portal IP/Hostname on the Engine's Webconsole
- Engine DNS name when performing Appliance federation, the same name
 - must be resolved as the Engine's internal IP address by the Portal machine
 - must be resolved as the Engine's external IP address using the Finder
 - This is so the Finder can have access to the Engine