

Bring your own Microsoft Windows Image from VBOX to OCI Dedicated Virtual Host Machine

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NB: Avoid directly doing copy/paste from this document since it could include hidden characters resulting into command lines failures.

1. Introduction

Dedicated virtual machine hosts let you run Oracle Cloud Infrastructure Compute virtual machine (VM) instances on dedicated servers that are a single tenant and not shared with other customers. Use dedicated virtual machine hosts to meet compliance and regulatory requirements for isolation that prevent you from using shared infrastructure. You can also use dedicated virtual machine hosts to meet node-based or host-based licensing requirements that require you to license an entire server.

You can use DVH to run your on-prem images in OCI using the Bring Your Own Image feature. This feature enables you to bring your own versions of operating systems to the cloud as long as the underlying hardware supports it. The services do not depend on the OS you run. Combining BYOI and DVH provides you a great flexibility in terms of running your preferred image rather on shared hosts or dedicated host used solely by you.

This step-by-step guide shows how to create a DVH and BYOI to run a Windows OS image on Dedicated Virtual machine host in OCI. The following software and tools were used for the demo:

- Virtual Box 7.0.8 to run an on-prem image
- Windows Server 2012 R2 Standard Evaluation Edition
- Dedicated Virtual Machine Hosts with a DVH.Standard2.52 shape
- Microsoft Remote Desktop MacOS Client by Microsoft

2. Prepare on-prem Windows Image for Export

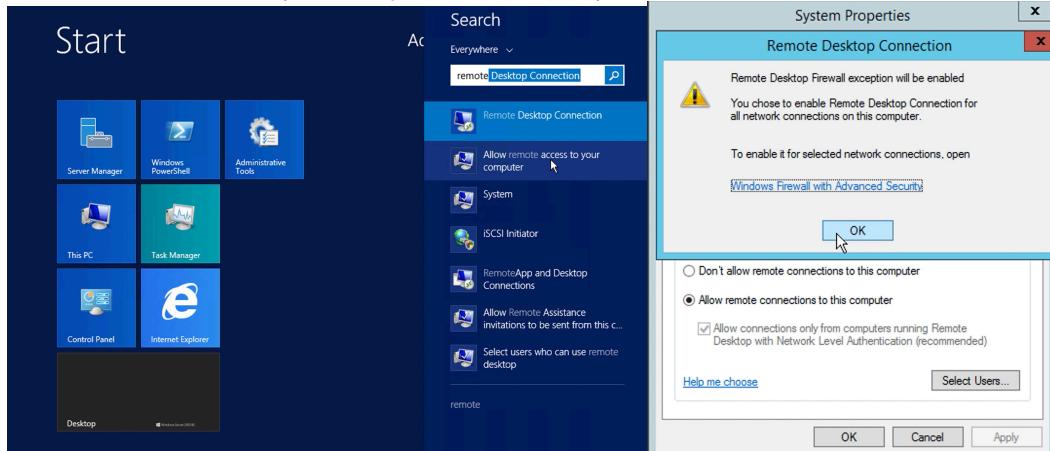
The official documentation regarding importing custom Windows Image to OCI can be found on the following link:

https://docs.oracle.com/en-us/iaas/Content/Compute/Tasks/importingcustomimagewindows.htm#Importing_Custom_Windows_Images

Please have a look on a " Windows Source Image Requirements" section for the pre-requisites.

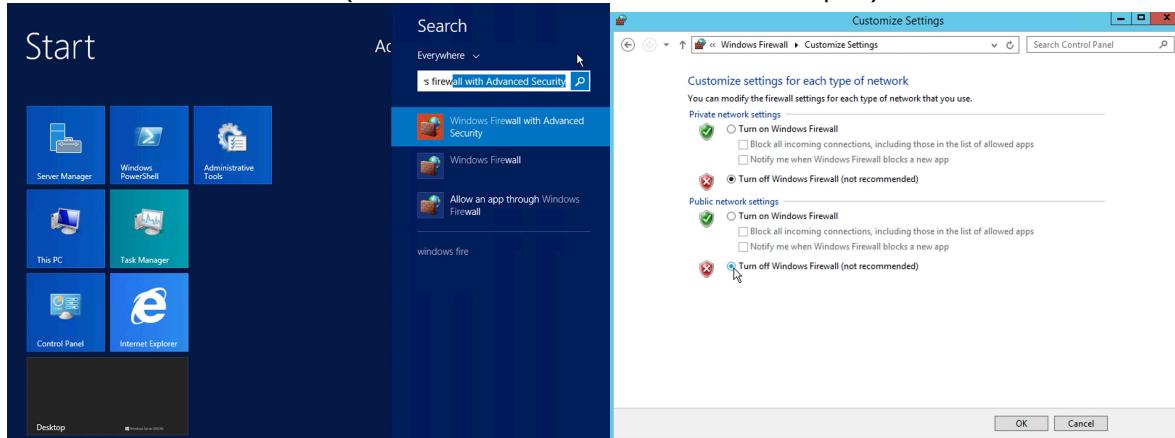
Prepare your image for export:

- Allow remote access on your computer if not already allowed



- Note the Administrator user password (or any other local admin user).

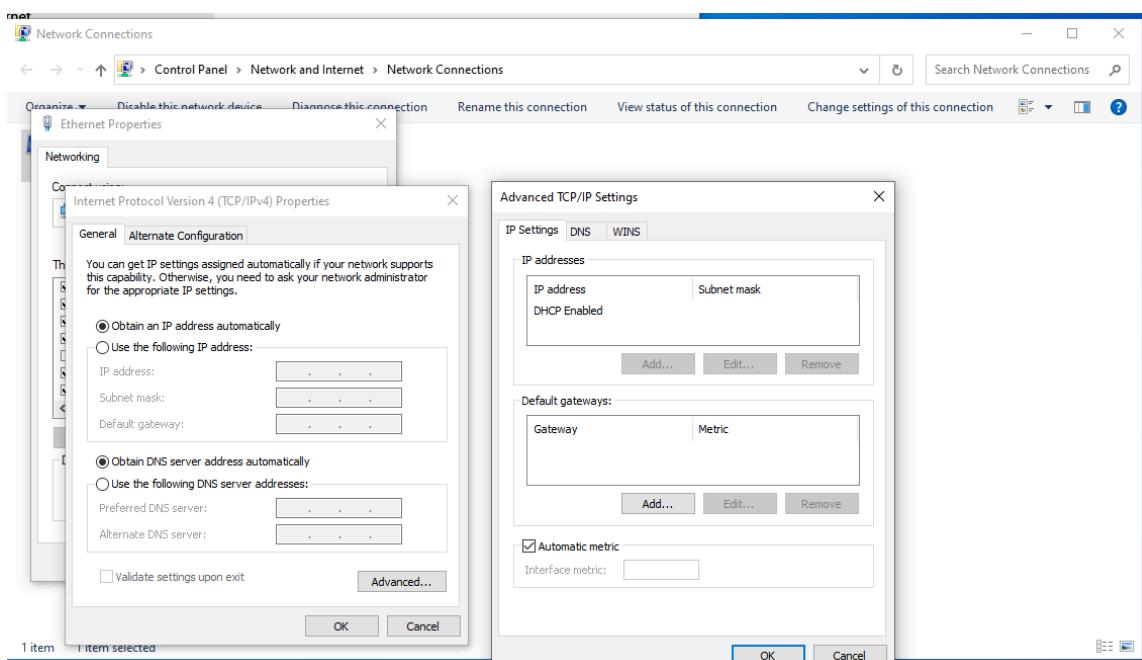
- c) Disable the Windows Firewall (it can be enabled later after successful Import).



- d) Download and Install Oracle Windows VirtIO drivers from edelivery.oracle.com and execute standard installation, reboot the VM.

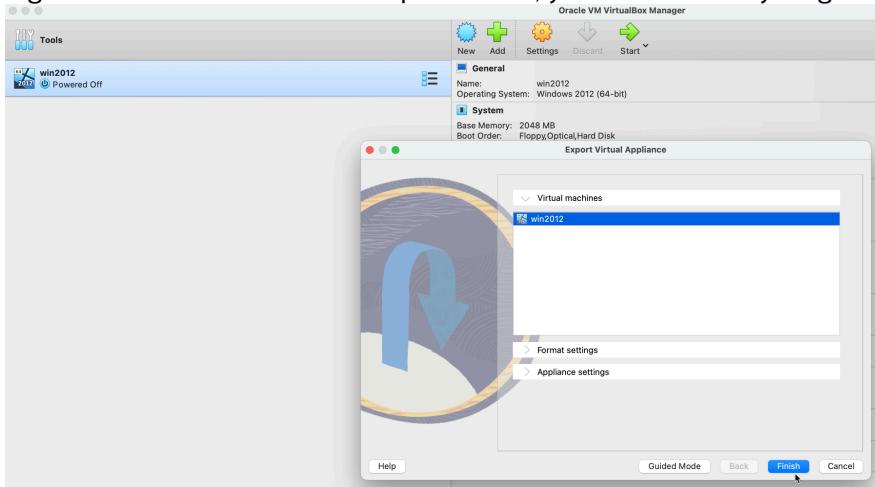
The screenshot shows the Oracle Software Delivery Cloud interface. It displays a list of files for Oracle Linux 7.0.0.0, including ISO images and source DVDs. A specific file, 'V984560-01.zip' (Oracle VirtIO Drivers Version for Microsoft Windows 1.1.5, 68.0 MB), is selected and highlighted with a yellow bar at the bottom. Below the list, it says 'Total 6 distinct files Total Size 13.9 GB'. At the bottom right, there are 'View Digest Details', 'WGET Options', 'Restore', and a large green 'Download' button.

- e) Make sure that network interface settings are correct (all network interfaces use DHCP, and that the MAC address and IP addresses are not hard-coded)



3. Export and Upload an exported image to OCI Object Storage

- Stop the VM.
- Right Click the VM and Choose "Export to OCI", you can leave everything as default and click "Finish".



- Extract VMDK file from OVA file.

We will need to export the vmdk file from exported ".ova" file to upload to OCI. You can use "tar -xvf" or 7.zip on Windows to unzip ".ova" file.

```
a$ pwd  
/Documents/vmexports  
a$ ls  
win2012.ova  
|  
x win2012.ovf  
x win2012-disk001.vmdk  
x win2012.mf
```

- Upload an image to OCI Object Storage.

We will use an OCI Object Storage bucket to upload an Image. You need to have all required permissions to upload an object to a bucket and read it (read and manage). You can use any method you prefer (GUI, oci cli).

Upload Objects

Object Name Prefix *Optional*

Storage Tier

Standard

Choose Files from your Computer

Drop files here or [select files](#)

win2012-disk001.vmdk 4.42 GiB

1 files, 4.42 GiB total

[Show Optional Response Headers and Metadata](#)

- Import an image from OCI Object Storage to OCI Compute Images.

Go to Compute -> Custom Image and Click on "Import image" button. On the Import Image page, enter a name, choose appropriate OS (in my case it is "Windows"), choose an OS version and check the box to certify that OS complies "Microsoft licensing requirements". You can follow the link to see the details. Choose your bucket and

object name corresponding to the image uploaded in the previous step.

Import image

Name
Win2012

Operating system
Windows

Operating system version
Server 2012 R2 Standard

Verify the operating system you are using to avoid breach of contract.

I certify that my use of this OS complies with [Microsoft licensing requirements](#)

Import from an Object Storage bucket
 Import from an Object Storage URL

Bucket in [REDACTED] ([Change compartment](#))
mybucket

Object name
vboxWin2012win2012-disk001.vmdk

Image type
 VMDK
Virtual machine disk file format. For disk images used in virtual machines.
 OOCWQ

[Import image](#) [Cancel](#)

You can leave the rest as default and click on "Import image". Wait for an image to become "Available" and turn green.

Compute » Custom images » Custom image details

Win2012

[Create instance](#) [Edit details](#) [Edit image capabilities](#) [Export](#) [More actions ▾](#)

[Custom image information](#) [Compatible shapes](#) [Tags](#)

Custom image information

OCID: ...w2obwq [Show](#) [Copy](#)

Original image: -

Compartment: [REDACTED]

Size (MB): 51200

Billable size (GB): 9 [i](#)

Launch options

Launch options include the networking type and boot volume attachment type used when launching a virtual machine instance.

NIC attachment type: PARAVIRTUALIZED

Remote data volume: PARAVIRTUALIZED

At this stage our image is ready to be used for an instance creation either on VM or DVH.

4. Create a DVH and a Compute Instance

To find more information about DVH and shapes which are available please check the following documentation:

<https://docs.oracle.com/en-us/iaas/Content/Compute/References/computeshapes.htm>

<https://docs.oracle.com/en-us/iaas/Content/Compute/Concepts/dedicatedvmhosts.htm>

a) Creating a DVH

To create a DVH go to Compute -> Dedicated Virtual Machine Hosts and click on "Create dedicated virtual machine host". Give it a name, select a desired shape and click "Create". In this test I will be using "DVH.Standard2.52".

Create dedicated virtual machine host [Help](#)

Name
myDVH

Create in compartment
[REDACTED]

Availability domain
fyxu:EU-FRANKFURT-1-AD-1

Dedicated host shape

Name	OCPUs
DVH.DenseO2.52	52
DVH.Optimized3.36	36
DVH.Standard.E3.128	128
DVH.Standard.E4.128	128
<input checked="" type="checkbox"/> DVH.Standard2.52	52
<input type="checkbox"/> DVH.Standard3.64	64

[Create](#) [Cancel](#)

Wait for the DVH to become available.

Compute > Dedicated virtual machine hosts > Dedicated virtual machine host details

myDVH

ACTIVE

[Edit name](#) [Move resource](#) [Add tags](#) [Delete](#)

Dedicated virtual machine host information [Tags](#)

Availability domain: fyxu:EU-FRANKFURT-1-AD-1
Compartment: [REDACTED]
Total OCPUs: 48 [i](#)
Remaining OCPUs: 48 [i](#)
Total memory (GB): 736
Remaining memory (GB): 736 [i](#)

Fault domain: FAULT-DOMAIN-2
OCID: ...olz4thmdma [Show](#) [Copy](#)
Host shape: DVH.Standard2.52
Created: Fri, Sep 15, 2023, 10:36:24 UTC

b) Creating a VM Instance

The creation of an instance on DVH is similar to normal VM instance creation with the difference that it will be

placed on DVH.

Go to Compute -> Instances and click on "Create Instance". Enter a name and select corresponding compartment. Click on "Show advanced options" under "Placement". Select the "Dedicated host" radio button and select your DVH name from the list.

The screenshot shows the 'Placement' section of the 'Create Instance' wizard. It includes fields for 'Availability domain' (AD 1 selected), 'Capacity type' (Dedicated host selected), 'Dedicated virtual machine host' (myDVH selected), and 'Fault domain' (FAULT-DOMAIN-2 selected). A note at the bottom says 'When should I specify a fault domain?'. A 'Collapse' link is in the top right corner.

Under "Images" section click on "Change image" and "My images" from the menu.

The screenshot shows the 'Select an image' dialog. It has tabs for 'Windows', 'AlmaLinux', 'Rocky Linux', and 'Marketplace'. The 'My images' tab is selected, showing a list of custom images: 'winButLin' (selected), 'MynewWinfromOnPrem', 'RHEL9.1', and 'Win2012'. Below the list are buttons for 'Select image' and 'Cancel'.

You can change a shape of your VM to select more OCPU or Memory. Note that the shapes will correspond to the type of your DVH.

Continue to a normal Windows installation and click "Create". When the creation is finished you can use the IP address, an Admin password and RDP client to connect to the instance.

Compute > Instances > Instance details > Work requests

WinOnDVH

Start | Stop | Reboot | **Terminate** | More actions ▾

Instance information Shielded instance Oracle Cloud Agent Notifications Tags

General information

- Availability domain: AD-1
- Fault domain: FD-1
- Region: eu-frankfurt-1
- OCID: ...d2qfwa Show Copy
- Launched: Thu, Sep 21, 2023, 10:41:08 UTC
- Compartment: orasemeocids (root)/COMPUTE/AinuraMadylova
- Capacity type: Dedicated virtual machine host
- Dedicated virtual host: [REDACTED]

Instance details

- Virtual cloud network: **FRAVCN**
- Maintenance reboot: -
- Image: **Win2012**
- Launch mode: PARAVIRTUALIZED
- Instance metadata service: Versions 1 and 2 [Edit](#)
- Live migration: Enabled
- Maintenance recovery action: Restore instance

Instance access

You connect to a running Windows instance using Remote Desktop. The network that the instance is in must allow Remote Desktop Protocol (RDP) access. Use the instance's initial password to sign in for the first time, and then use the password that you set.

- Public IPv4 address: 89.168.86.33 [Copy](#)
- Username: opc
- Initial password: - [Edit](#)

Primary VNIC

- Public IPv4 address: 89.168.86.33
- Private IPv4 address: 10.0.0.195
- Network security groups: None [Edit](#)
- Subnet: Public Subnet-FRAVCN
- Private DNS record: Enable
- Hostname: winondvh... [Show Copy](#)
- Internal FQDN: winondvh... [Show Copy](#)

Launch options

- NIC attachment type: PARAVIRTUALIZED
- Remote data volume: PARAVIRTUALIZED

89.168.86.33
Server Manager

Server Manager • Dashboard

WELCOME TO SERVER MANAGER

1 Configure this local server

- 2 Add roles and features
- 3 Add other servers to manage
- 4 Create a server group

QUICK START

WHAT'S NEW

LEARN MORE

ROLES AND SERVER GROUPS
Roles: 1 | Server groups: 1 | Servers total: 1

File and Storage Services	Local Server	All Servers
Manageability Events Performance RPA results	Manageability Events Services Performance	Manageability Events Services Performance

3:56 AM
9/21/2023

5. Post-Import Tasks for Windows Image

There are some post import steps that should be taken after the successful import of a Windows Custom Image and an instance creation using this image. The list of the tasks can be found here:

<https://docs.oracle.com/en-us/iaas/Content/Compute/Tasks/importingcustomimagewindows.htm#ariaid-title6>

Please follow them to execute tasks like configuration of NTP protocols or registering the instance with the Oracle-provided Key Management Service (KMS) server.