## OpenStack on VMware Workstation12.5 instructions

Version 3: 2020-01-27

These instructions will guide the student through deploying and configuring Openstack Virtual Machines in VMware Workstation 12.5. Deploy OpenStack OVFs in VMware Workstation 12.5

## **Attributions:**



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Installation Instructions for OpenStack in Workstation 12.5



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## **General information:**



Installation Instructions for OpenStack in Workstation 12.5

- Tested on a Dell Optiplex 980 i7-2600 @3.40GHz and 16 GB memory 64-bit OS
- Host PC must support virtualization
- Install VMware Workstation 12.5 on host PC
- You can use an email address to activate the Workstation 30 day trial
- The **Openstack\_Mitaka\_WS** username is **root** and the password is **P@ssword**
- The **Openstack\_WS\_client2** username is **student** and the password is **P@ssword**
- The **Openstack\_WS\_client2 root user** password is **P@ssword**

1. From the WS console, select file>open>openstack\_Mitaka\_WS



2. Change the storage path for the new virtual machine (if required) and click Import Note: If you change this default location, you may need to change the default location for virtual machines also (see step 5).



3. Importing the VMs will take about 20 minutes to complete depending on host system configuration



## 4. Repeat for **Openstack\_WS\_client2**

Openstack_Mitaka_WS - VMware Workstation						
File Edit View VM Tabs Help   🕨 🗸 🛱 💭 💭 💭   🚺 🗔 🗔						
Library  C Type here to s  My Comput  D Openstack						
□ Openstack_Mitaka_WS - VMware Workstation          File       Edit       View       VM       Tabs       Help       ►       +						
Library X Q Type here to search V My Computer Openstack_Mitaka_WS Shared VMs Cancel						

5. Click on the OpenStack\_Mitaka\_WS then select edit>preferences from the toolbar menu. If you changed the default location while deploying the OVF, then you may need to change this location also, which would probably be the same location that you deployed the OVF file to. The other settings can usually be left at their default settings for now. This should change the default location for both of the VMs.

Openstack_Mitaka_WS - VMware Workstation				
File	Edit View VM	Tabs Help   🕨 🗸   🖧   😳 💭 💭 📘 🎞 🖽 🔯   🔚		
Libra	Preferences		- -	
٩	Workspace	Default location for virtual machines		
	Input	C: \Users\TEMP\Documents\Virtual Machines Browse		
	Display Display Unity Updates Feedback Shared VMs Memory Priority Oevices	Virtual machines          Virtual machines         Image: Remember opened tabs between sessions         Image: Remember opened tabs         Show Aero Peek thumbnails for open tabs         Show tray icon:         Always         Image: Default hardware compatibility:         Image: Workstation 12.x         Image: Default hardware compatibility:         Image: Workstation 12.x         Image: Default hardware compatibility:         Image: Default hardware compa		

6. Select the OpenStack\_Mitaka\_WS VM and click on edit virtual machine settings



7. Enable virtualize Intel VT-x/EPT or AMD-V/RVI (only required for the Openstack\_Mitaka\_WS VM)

Virtual Machine Settings	×
Hardware Options           Device         Summary           Image: Memory         8 GB           Image: Processors         3           Image: Hard Disk (SCSI)         80 GB           Options         4 Mard Disk (SCSI)           Image: CD/DVD (IDE)         Auto detect           Image: Network Adapter         NAT           Image: Display         1 monitor	Processors Number of processors: Custom: 3 Number of cores per processor: Total processor cores: Virtualization engine Preferred mode: Disable acceleration for binary translation Virtualize Intel VT-x/EPT or AMD-V/RVI Virtualize CHI performance counters

8. Select edit>Virtual Network Editor from the workstation toolbar menu. Click on the VMnet8 virtual NIC and select change settings and change the Subnet IP: to 10.220.0.0 and Subnet mask: to 255.255.254.0. Open NAT Settings... (shown on next page).

/Mnet1 /Mnet8 /Mnet Infor	Host-only NAT	NAT	Connected Connected	Enabled Enabled	192,168,18.0 10.220.0.0	
VMnet8 VMnet Infor	NAT	NAT	Connected	Enabled Add Netwo	10.220.0.0	
VMnet Infor				Add Netwo	ork) Remove Netwo	
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O Destand	mauon (	and the state of the sector sector	-tured 2			
Bridged (connect VMs directly to the external network)						
Bridged to: Automatic Settings						
NAT (shared host's IP address with VMs)     NAT Settings						
(WAT Settings						
Host-only (connect VMs internally in a private network)						
✓ Connect a host virtual adapter to this network						
Host virtual adapter name: VMware Network Adapter VMnet8						
Use local DHCP service to distribute IP address to VMs DHCP Settings						
Subpat ID: 10, 220, 0, 0, Subpat marker, 255, 255, 254, 0						
Subriet IP: 10, 220, 0, 0 Subriet mask: 255, 255, 254, 0						
					(	
	🔥 Adn	ministrator privileges are req	uired to modify the netwo	ork configurat	tion. 🔞 Change Settir	
Restore Def	aults				Apply Help	

9. Click on NAT Settings and change the Gateway IP: address to 10.220.0.254

Openstack_Mitaka_WS - VMware Workstation	
File Edit View VM Tabe Help Tabe Hel	X
A T NAT Settings	Subnet Address
Network: vmnet8	10.220.0.0
Subnet IP: 10.220.0.0 Subnet mask: 255.255.254.0 Gateway IP: 10.220.0.0.254	
Port Forwarding Host Port Type Virtual Machine IP Address Description	
	work Remove Network
Add Remove Properties	
Advanced	Automatic Settings

10. Go back to edit virtual machine settings and click on Network Adapter NAT in the left pane. Then click on Advanced In the right pane. Record the MAC Address, yours will be different. You will have to power cycle the VM to populate the MAC address.

🔲 Ope	nstack_Mitaka	Virtual Machine Settings	-	Network Adapter Advanced Settings	×
File Library	Edit View	Hardware Options		Incoming Transfer Bandwidth: Unlimited	•
٩	Type here to s	Memory Processors	8 GE	Kbps:	er on
	My Comput	Hard Disk (SCSI)	80 G Auto	Outgoing Transfer	_
Ē	Shared VMs	Network Adapter	NAT 1 mc	Bandwidth: Unlimited	ysical network connection state
				Packet Loss (%): 0.0	are the host's IP address rate network shared with the host
				MAC Address 00:0C:29:39:EC:A2 Generat	e virtual network

11. Power on the Openstack\_Mitaka\_WS and Edit the /etc/sysconfig/network-scripts/ifcfg-ens160 and change the HWADDR to match the MAC address from the previous step. Repeat for the Openstack\_WS\_client2. (Don't use the HWADDR in the screenshot!)



12. Set both VMs to Custom: Specific virtual network VMnet8 (NAT)



13. Open a web browser on the host PC and navigate to 10.220.0.30. You should see the OpenStack Log in page.

10.220.0.30/dashboard/auth/login/?next=/dashboard/	C Q. Search
	Denstack Log in
	User Name
	Password
	Connect

Note: The OpenStack Horizon View Dashboard must be active to see this page. If the Mitaka VM has been running for several minutes then there should be no problem. To verify it is ready run the command **openstack-status | grep openstack-dashbord** on the Mitaka terminal and look for active. If the status is not active, then wait a couple minutes and run the command again.

14. **Open another web browser from the openstack\_WS\_client2** and the OpenStack log in page should open as the home page.

Note: There is a link on the toolbar menu for the OpenStack dashboard.



	openstack DASHBOARD	
Log in		
User Name		

15. Take a snapshot of the base install for both VMs (both VMs should be powered off first).

Note: This step is critical because you want a known starting point for each lab. If you don't do this step and someone completes a lab, you'll have to manually undo everything they did and possibly recovery the used disk space.



16. Optionally, you can set the VM to automatically revert to the snapshot whenever the VM is shutdown (highly recommended).

Openstack_Mitaka_WS - VMware Workstation							
File Edit View VM Jake Help Virtual Machine Settings							
Library Q Type here to search	Hardware Options						
B My Computer	Settings Summary	Snapshot					
Dpenstack_Mi	ita General Openstack_Mitaka_WS	<ul> <li>Just power off</li> </ul>					
Shared VMs	Shared Folders Disabled	Revert to snapshot     Take a new snapshot					
	AutoProtect Disabled     Guest Isolation	⊘ Ask me					