Microsoft Azure Administrator: Create and Configure Virtual Machines

CREATE AND MANAGE VIRTUAL MACHINES



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Course Coverage of Certification Objectives



Create and Configure Virtual Machines

- Create a virtual machine
- Move virtual machines from one resource Group to another
- Manage virtual machine sizes
- Redeploy virtual machines
- Configure networking
- Add data disks
- Configure Azure Disk Encryption



Exercise Files

Slides

Code

Links to Resources





Create and Move a Virtual Machine



Create a Virtual Machine



Azure Virtual Machines still require maintenance



Must consider design considerations such as availability and scalability



Virtual machines use virtual hard disks(VHDs) for operating system and data



Extensions are available for Azure virtual machines



Resources Used by VMs

Resource	Required	Description
Resource Group	Yes	Must be contained in a resource Group
Storage account	Yes	Needs storage account
Virtual network	Yes	Must be a member of a network
Public IP	No	Can have a PIP assigned to access remotely
Network Interface	Yes	The VM needs a NIC to communicate
Data Disks	No	Can include to data disks to expand storage

Reference:

https://bit.ly/36tgf2u



PowerShell

```
New-AzVm -ResourceGroupName 'ps-course-rg' -Name 'windows-1'`
-Location 'NorthCentralUS' -VirtualNetworkName 'main-vnet'`
-SubnetName 'backend' -SecurityGroupName 'myNetworkSecurityGroup'`
-PublicIpAddressName 'myPublicIpAddress'-OpenPorts 80,3389
```

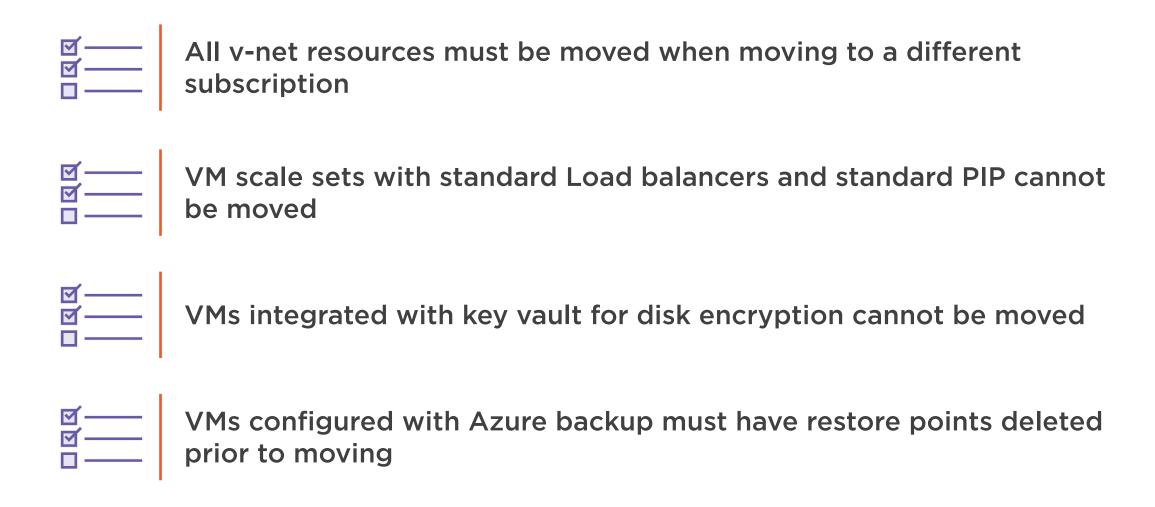


```
az vm create --resource-Group ps-course-rg --name windows-1 \
    --image win2016datacenter --admin-username azureuser
```

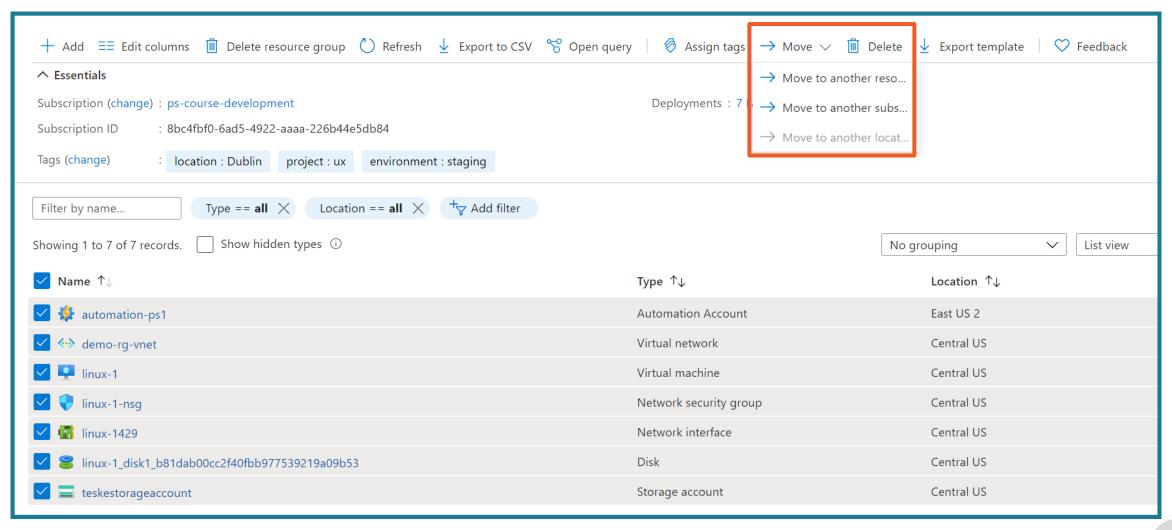
Azure CLI



Move an Azure VM



Move an Azure VM





```
Move-AzResource -DestinationResourceGroupName 'ps-course-rg'
-ResourceId <myResourceId, myResourceId, myResourceId>

Move-AzResource -DestinationSubscriptionId "8bc4fbf0-blah-blah-blah-226b44e5db84" `
-DestinationResourceGroupName 'ps-course-rg'
-ResourceId <myResourceId, myResourceId, myResourceId>
```

Move an Azure VM using PowerShell

Each example supports moving multiple resources via comma separated list.



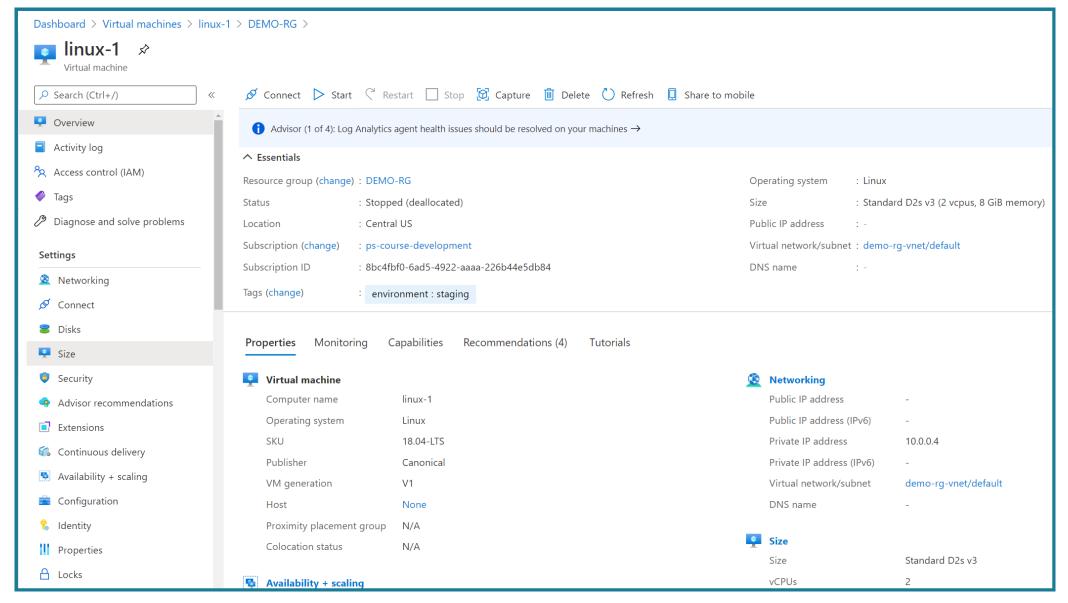
Demo



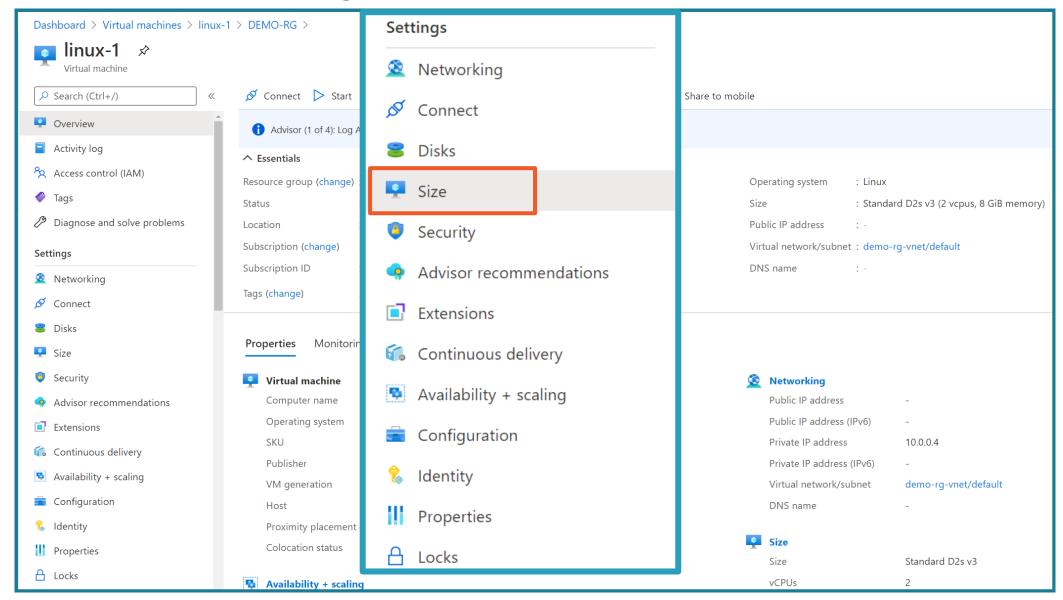
Create and move an Azure VM













howing 302 VM sizes. Subscription: ps-course-development Region: Central US Current size: Standard_D2s_v3 Learn more about VM sizes									
M Size ↑↓	Family ↑↓	vCPUs ↑↓	RAM (GiB) ↑↓	Data disks ↑↓	Max IOPS ↑↓	Temp storage (GiB) ↑↓	Premium dis		
Most used by Azur	e users	The most used	d sizes by users in Azure						
DS1_v2 🖊	General purpose	1	3.5	4	3200	7	Supported		
D2s_v3 📈	General purpose	2	8	4	3200	16	Supported		
B2s ✓	General purpose	2	4	4	1280	8	Supported		
B1s ✓	General purpose	1	1	2	320	4	Supported		
B2ms 🖊	General purpose	2	8	4	1920	16	Supported		
B1ms ✓	General purpose	1	2	2	640	4	Supported		
B1ls ✓	General purpose	1	0.5	2	160	4	Supported		
DS2_v2 📈	General purpose	2	7	8	6400	14	Supported		
B4ms 🖊	General purpose	4	16	8	2880	32	Supported		
D4s_v3 📈	General purpose	4	16	8	6400	32	Supported		
DS3_v2 🖊	General purpose	4	14	16	12800	28	Supported		
D8s_v3 ✓	General purpose	8	32	16	12800	64	Supported		

Prices presented are estimates in your local currency that include only Azure infrastructure costs and any discounts for the subscription and location. The prices don't include any applicable software costs.

🙀 Availability + scaling

Final charges will appear in your local currency in cost analysis and billing views. View Azure pricing calculator.

Resize

vCPUs

ls



Demo



Manage virtual machine sizes







Cannot connect via RDP or SSH

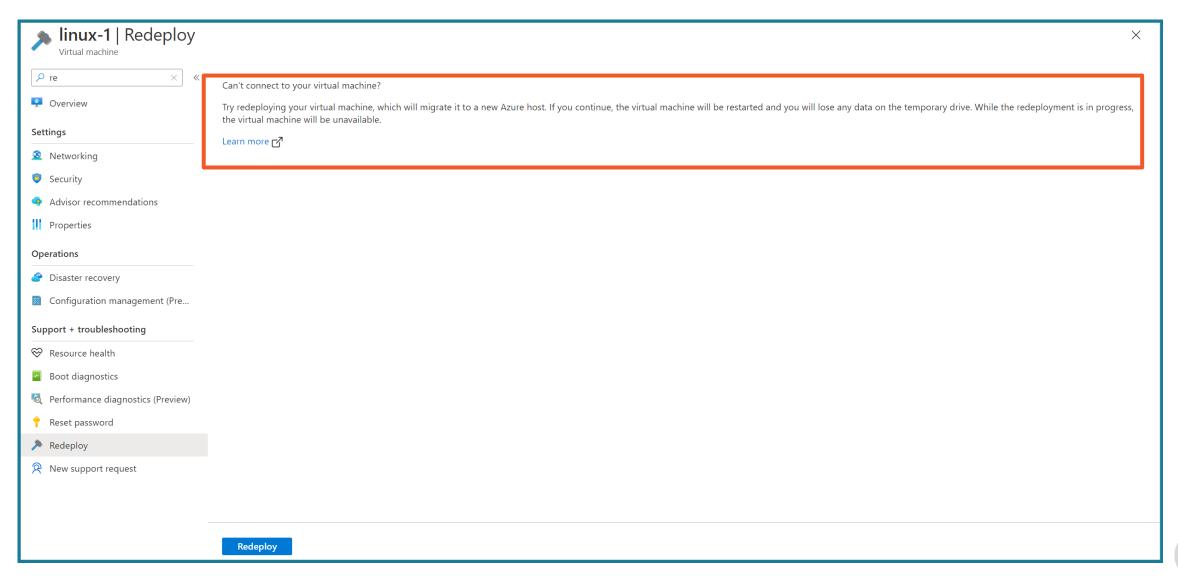


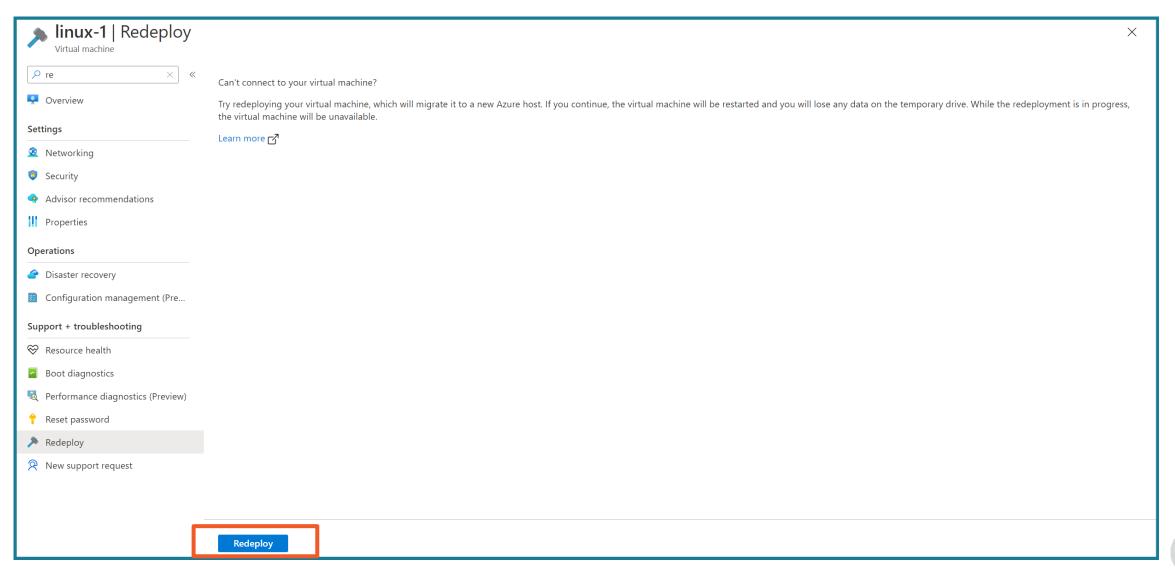
Difficulty troubleshooting application access on Azure VM



Redeploy shuts down the VM and moves to new node and powers back up







```
# PowerShell
Set-AzVM -Redeploy -ResourceGroupName 'ps-course-rg' -Name "linux-1"

# Azure CLI
az vm redeploy --resource-Group ps-course-rg --name linux-1
```



Demo



Redeploy a virtual machine



Next Up

Configure Virtual Machines

