

Azure Migration Day

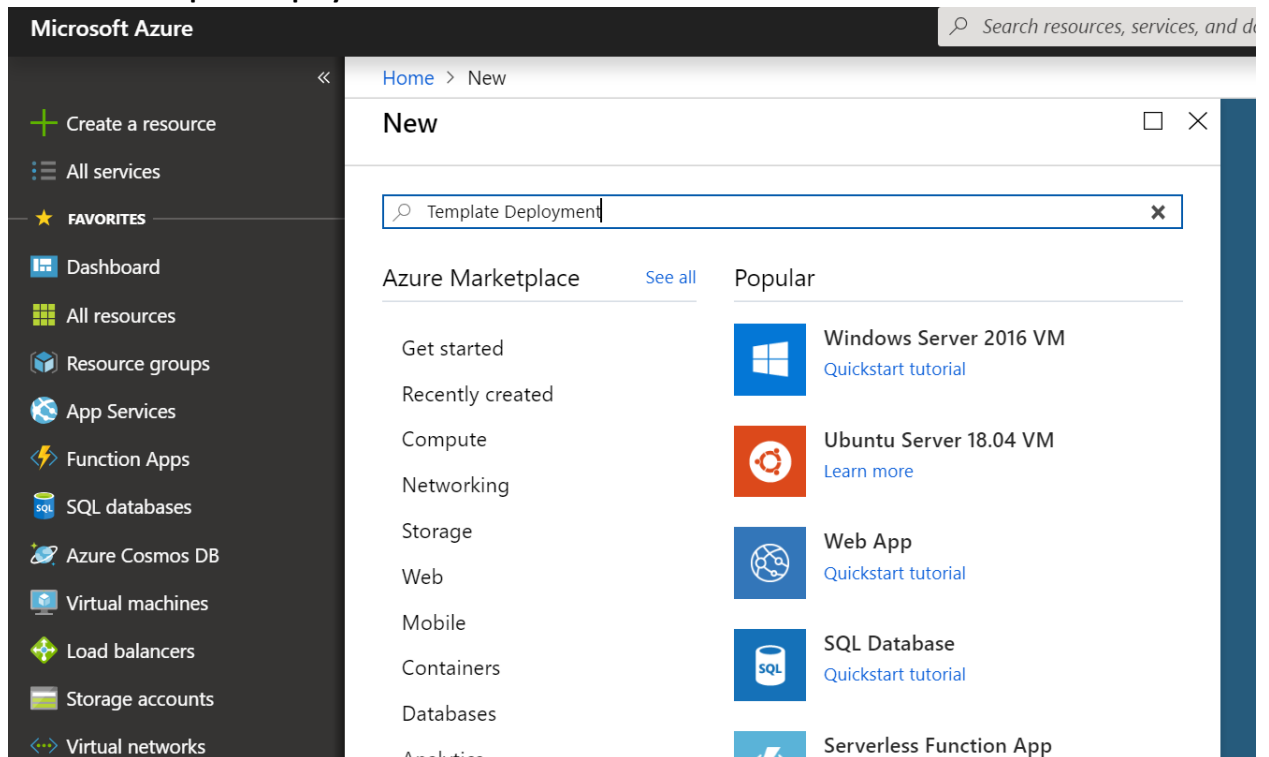
Activating Azure Pass

1. Browse to <https://www.microsoftazurepass.com/>
2. Click Start
3. Login with your Microsoft Account
4. Enter the Promo Code and click Claim Promo Code
5. Wait for a few minutes for the subscription to be provisioned
6. Login to <https://portal.azure.com>

Setting up On Premise environment

The lab consists of a Hyper-V host with a Web Server and DB Server VMs. The lab environment is provisioned on Azure and must be considered as a small on premise environment.

1. Login to <https://portal.azure.com>
2. Click Create Resource
3. Search for **Template Deployment**



4. Click on Template Deployment
5. Click Create
6. Click Build your own template in the editor

Microsoft Azure

Search resources, service

Home > New > Template deployment > Custom deployment

Custom deployment

Deploy from a custom template

Learn about template deployment

- [Read the docs](#)
- [Build your own template in the editor](#)

Common templates

- [Create a Linux virtual machine](#)
- [Create a Windows virtual machine](#)
- [Create a web app](#)
- [Create a SQL database](#)

Load a GitHub quickstart template

Select a template (disclaimer) ⓘ

Type to start filtering...

7. Click Load File

Microsoft Azure

Search resources, services, and docs

Home > New > Template deployment > Custom deployment > Edit template

Edit template

Edit your Azure Resource Manager template

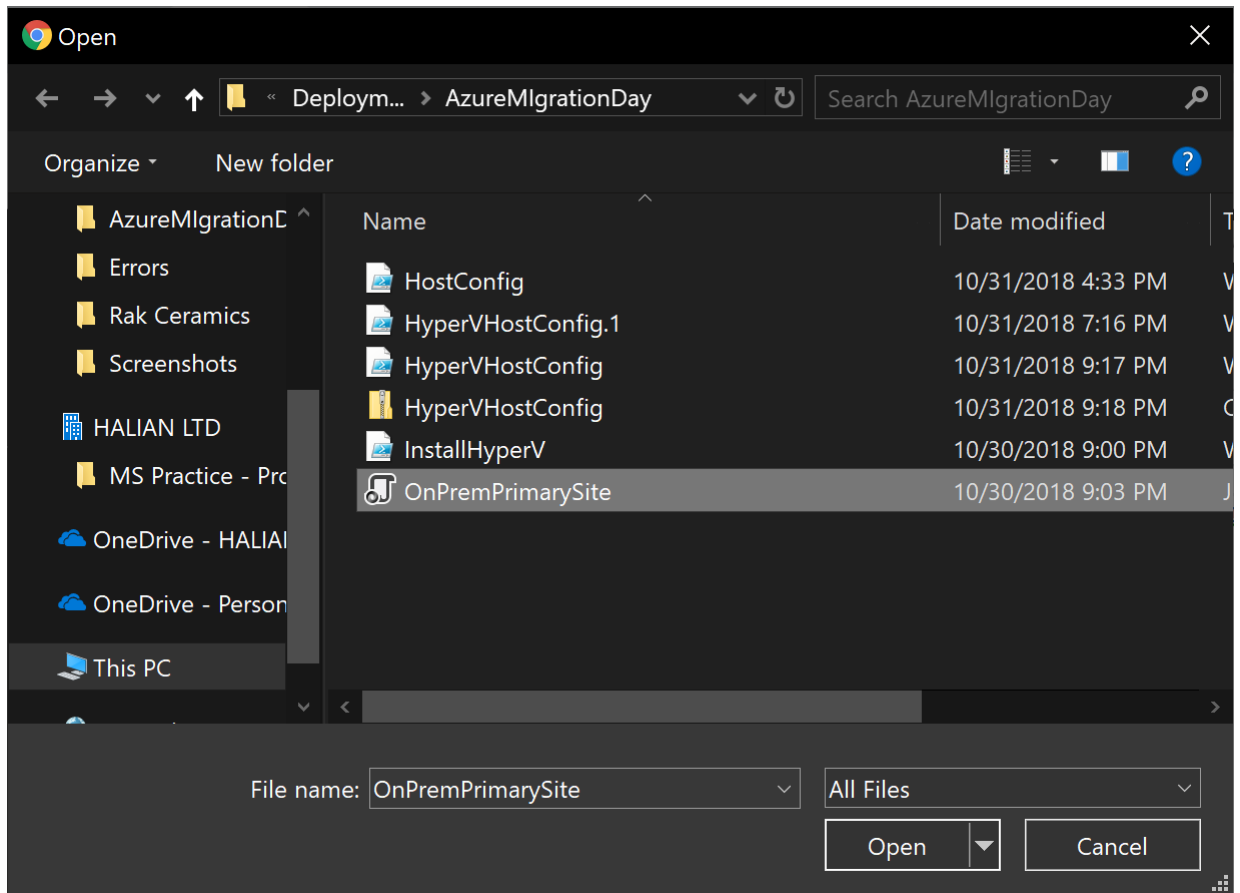
[Add resource](#) [Quickstart template](#) [Load file](#) [Download](#)

- Parameters (0)
- Variables (0)
- Resources (0)

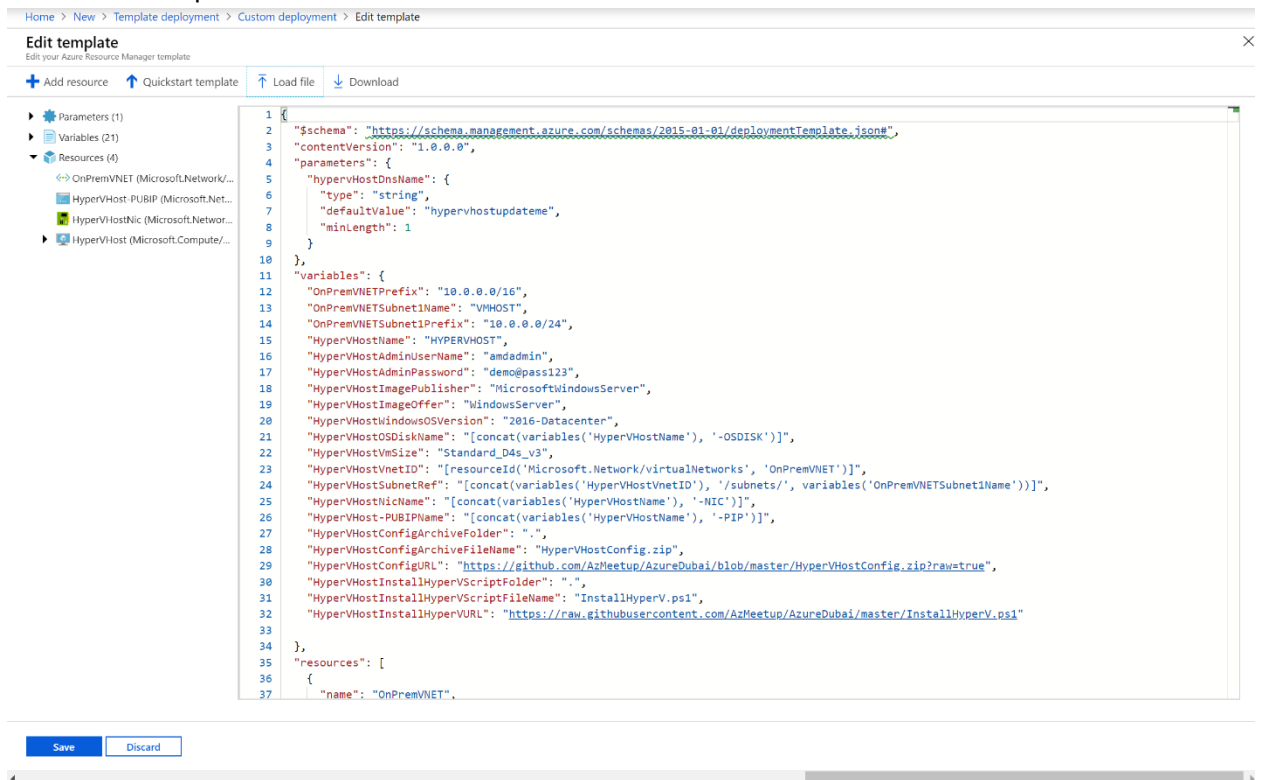
```

1 {
2   "$schema": "https://schema.management.azure.com/schemas/2015-08-01/
3   "contentVersion": "1.0.0.0",
4   "parameters": {},
5   "resources": []
6 }
```

8. Select the OnPremPrimarySite.json and upload it



9. Review the template and click Save




10. Resource Group - Click New and Type AzMigrate or anything easily identifiable


Home > New > Template deployment > Custom deployment


Custom deployment


Deploy from a custom template

TEMPLATE

 Customized template
4 resources

 Edit template

 Edit parameters

 Learn more

BASICS

* Subscription

Azure Pass

* Resource group

Select a resource group

[Create new](#)

* Location

SETTINGS

Hyperv Host Dns Name

TERMS AND CONDITIONS

[Azure Marketplace Terms](#) | [Azure Marketplace Terms](#)

By clicking "Purchase," I (a) agree to the applicable legal terms associated with the offering; (b) authorize Microsoft to charge or bill my current payment method for the fees associated the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s); and (c) agree that, if the deployment involves 3rd party offerings, Microsoft may share my contact information and other details of such deployment with the publisher of that offering.

☐ I agree to the terms and conditions stated above

A resource group is a container that holds related resources for an Azure solution.

* Name

AzMigrate

OK Cancel

11. Location - Make sure the location is selected as **NORTH EUROPE**. Other locations will work but will prolong lab deployment time since lab files are hosted in North Europe
12. Hyper Host DNS Name - This needs to be unique. Delete the updateme part of the default name and put your name and last two digits of your phone number to make it unique.
13. Agree to the terms and conditions
14. Click Purchase
15. The deployment will take 20-30 mins

Custom deployment

Deploy from a custom template

TEMPLATE



Customized template
4 resources

Edit template

Edit parameters

Learn more

BASICS

* Subscription	<div>Azure Pass</div>
* Resource group	<div>(New) AzMigrate</div> <div>Create new</div>
* Location	<div>North Europe</div>

SETTINGS

Hyperv Host Dns Name	<div>hypervhostowais32</div>
----------------------	------------------------------

TERMS AND CONDITIONS

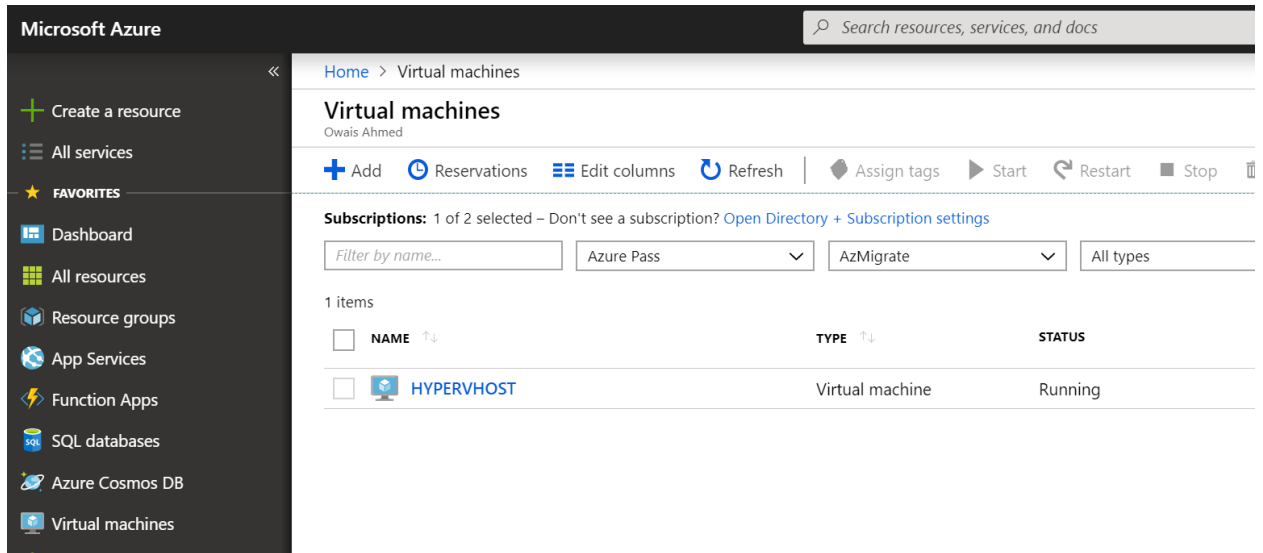
[Azure Marketplace Terms](#) | [Azure Marketplace](#)

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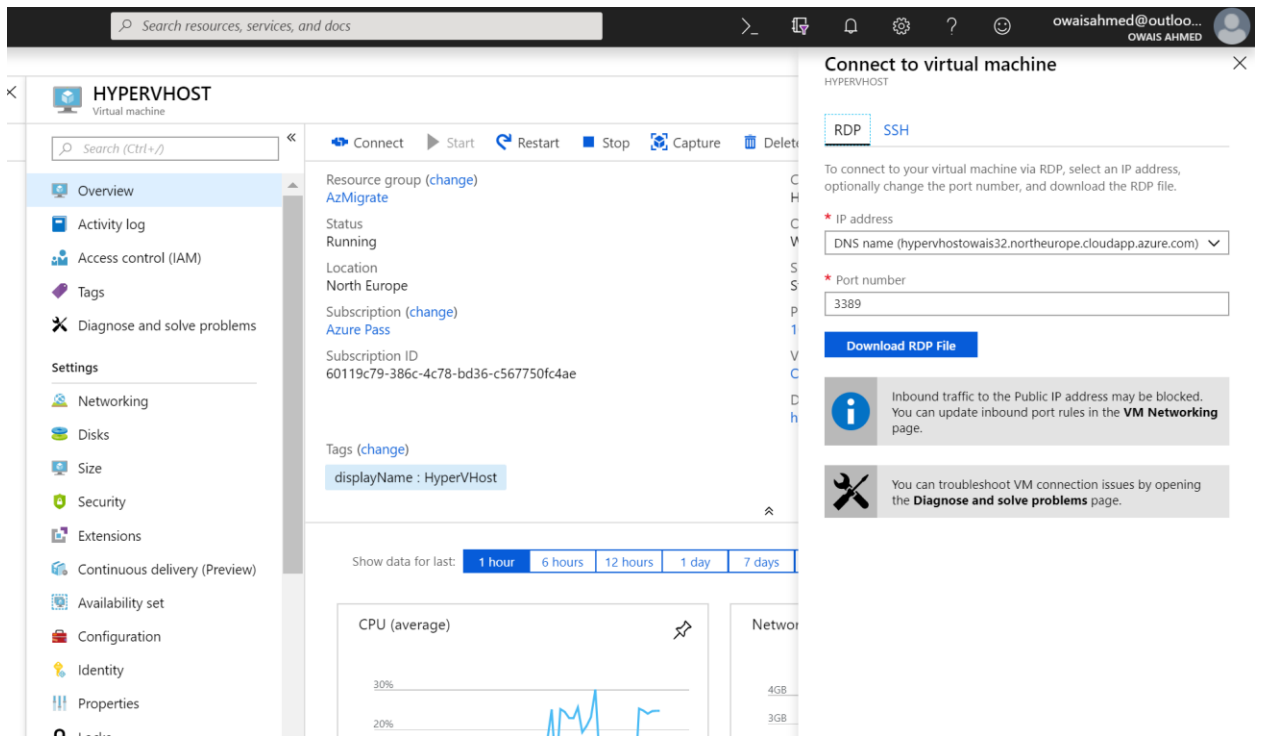
☒ I agree to the terms and conditions stated above

Purchase

16. Once the deployment is complete, click on Virtual Machines on the left and then click on HYPERVHOST



17. Click Connect and then click on Download RDP File

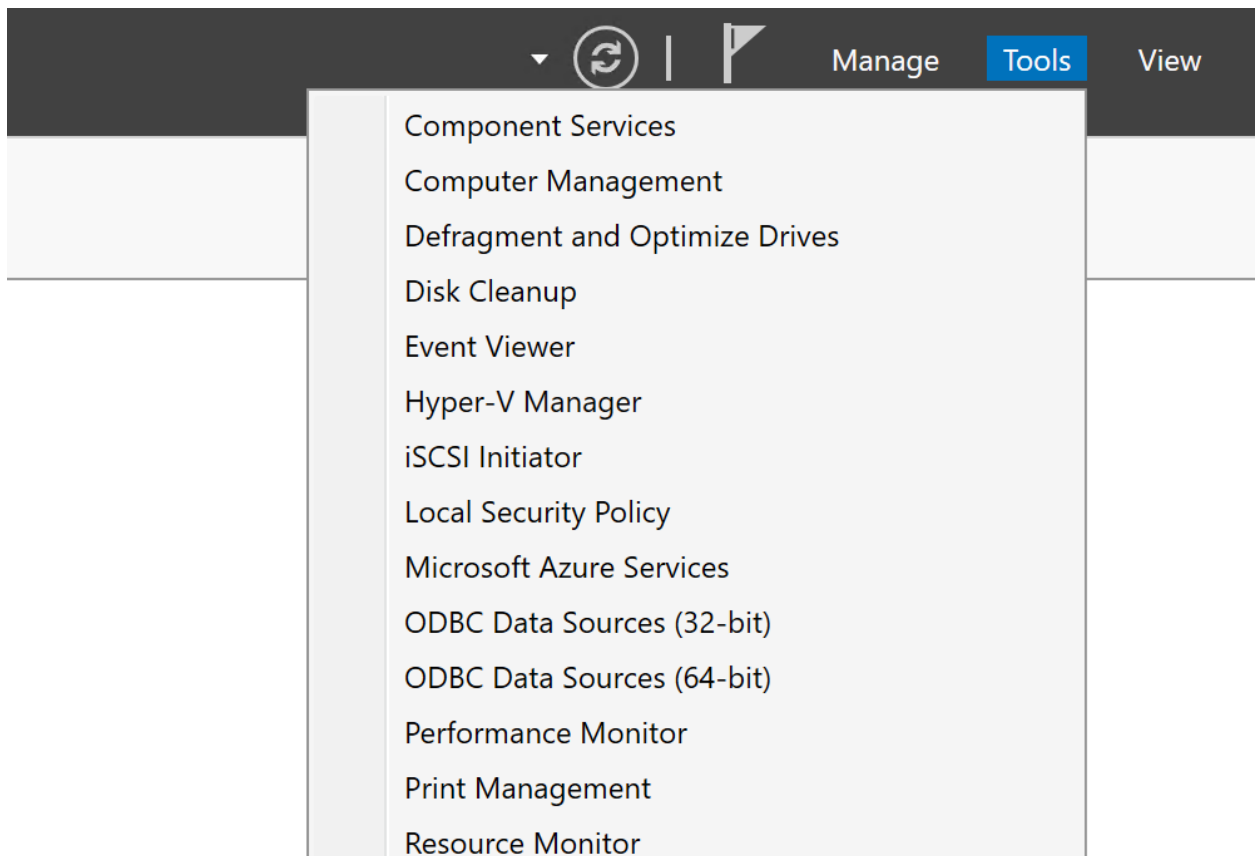


NOTE: IT IS NOT RECOMMENDED TO ALLOW PUBLIC RDP ACCESS IN PRODUCTION

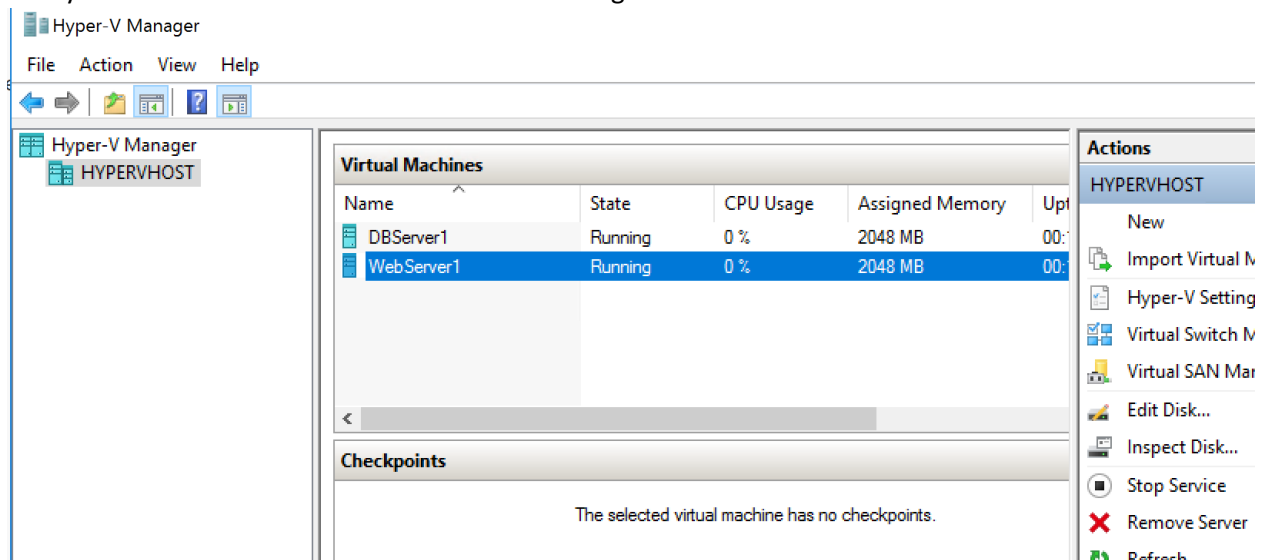
18. Login to the server with the following credentials

- a. amdadmin
- b. demo@pass123

19. Open Server Manager and go to Tools->Hyper-V Manager

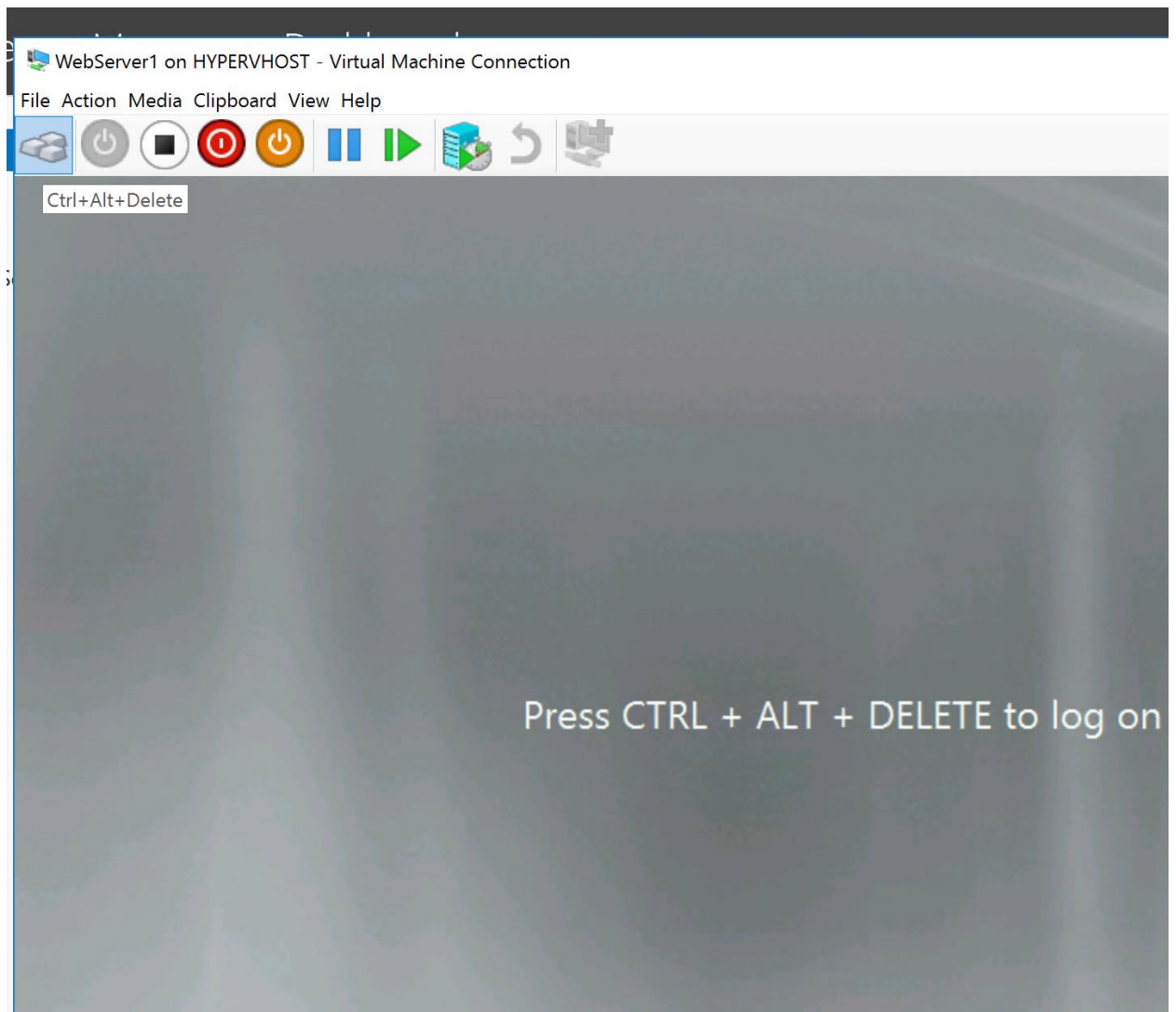


20. Verify if Web Server and DB Server VMs are running



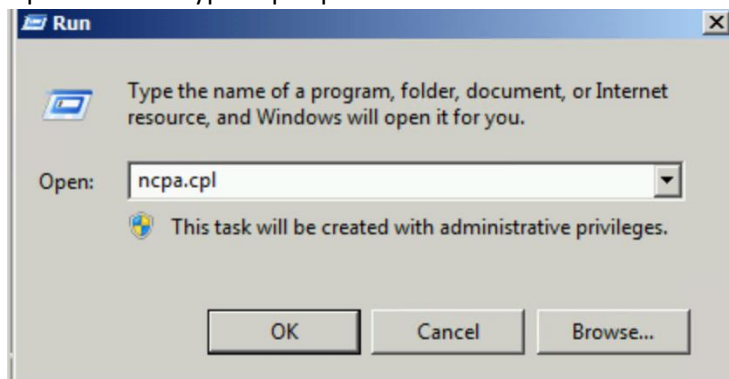
21. Double Click on WebServer1

22. Press the CTRL+ALT+DEL button

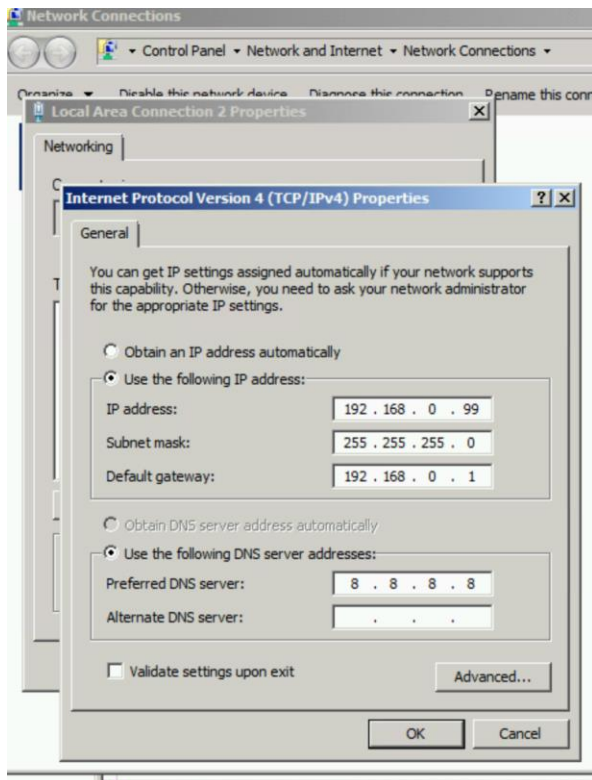


23. Password – P@ssw0rd

24. Open Run and type ncpa.cpl



25. Modify the network properties and set the following IP Address and Click OK.



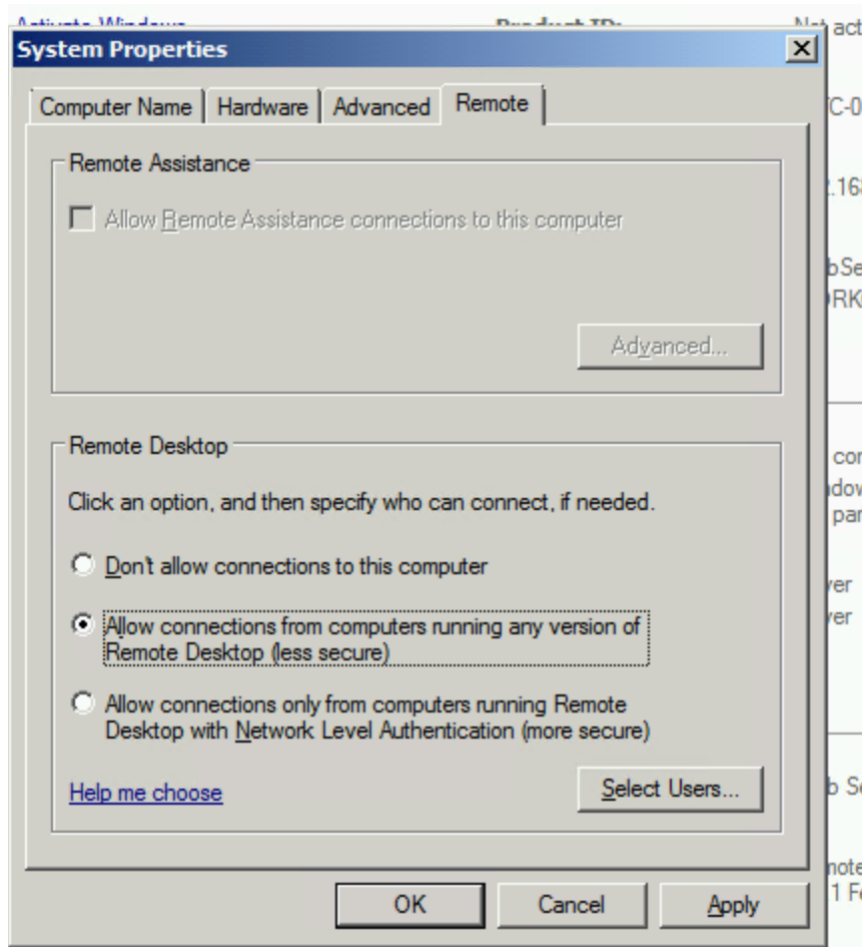
26. If you get any warning, click yes to proceed.

27. Go to Server Manager

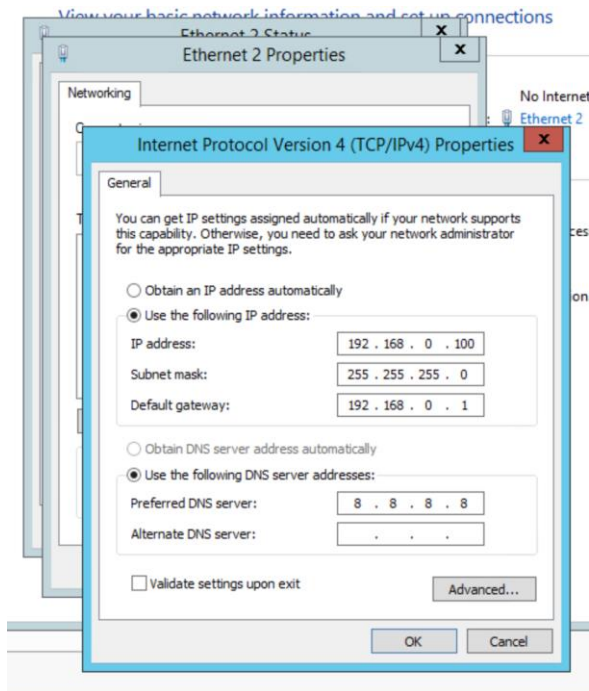
28. Click on Enable Remote Desktop

		Feedback:	Windows Error Reporting off Not participating in Customer Experience Improvement
	Download and install updates	Checked for Updates:	Never
		Installed Updates:	Never
3 Customize This Server		Custom	
	Add roles	Roles:	Web Server (IIS)
	Add features	Features:	Remote Server Administration Tools, Windows Process 3.5.1 Features
	Enable Remote Desktop	Remote Desktop:	Disabled
	Configure Windows Firewall	Firewall:	Public: On

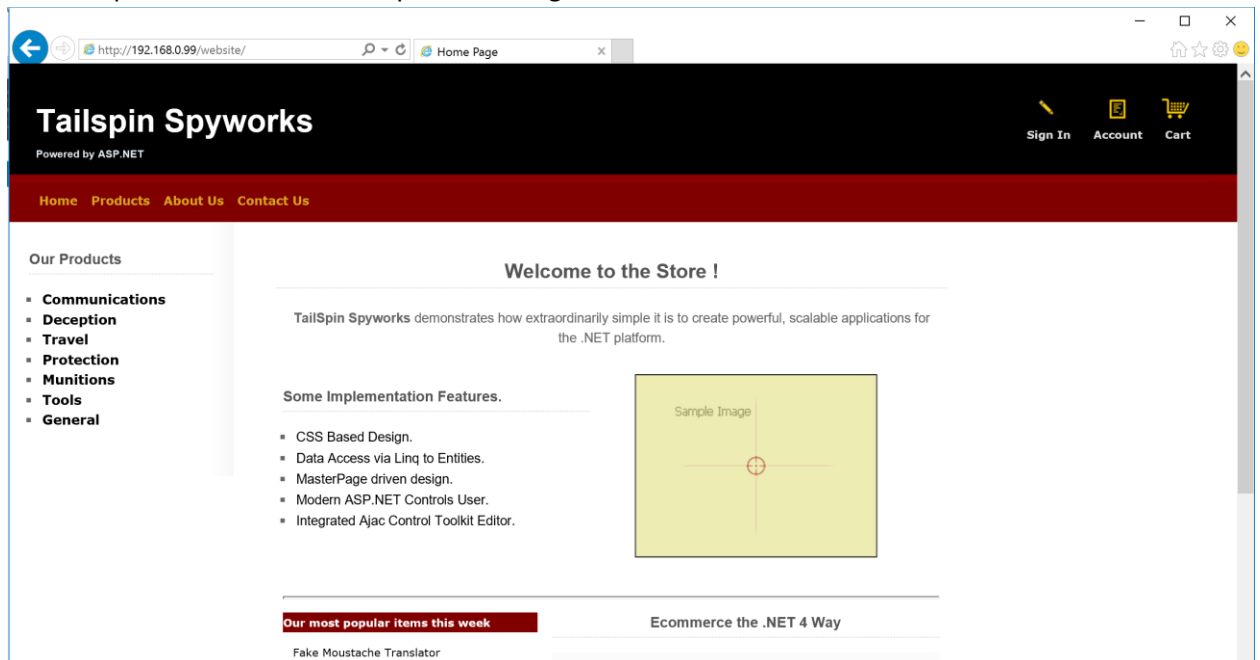
29. Select Allow Remote Connections from Any Computer



30. Click OK and Apply
31. Go back to Hyper-V Manager and double click on DBServer1
32. Login with the password – P@ssw0rd
33. Configure the IP Address with the following details



34. Open a browser on the HyperV host and type 192.168.0.99/website
35. The TailSpin website should be up and running



Prepare for Migration

To migrate our VMs to Azure, we need to create a few resources on Azure.

1. Click Virtual Networks on the left and then click ADD

Microsoft Azure

Home > Virtual networks > Create virtual network

Virtual networks

Create virtual network

Name

Address space

10.1.0.0/16

10.1.0.0 - 10.1.255.255 (65536 addresses)

Subscription

Azure Pass

Resource group

Select existing...

Create new

Location

North Europe

Subnet

Name

default

Address range

10.1.0.0/24

10.1.0.0 - 10.1.0.255 (256 addresses)

DDoS protection

Basic Standard

Service endpoints

Disabled Enabled

Firewall

Disabled Enabled

2. Use the following details
 - a. Name – ProdVNET
 - b. Address Space – 10.1.0.0/16
 - c. Resource Group – Create New – AzureProduction
 - d. Location – North Europe
 - e. Subnet – WebSubnet
 - f. Address Range – 10.1.0.0/24

Create virtual network

* Name

ProdVNET

* Address space ⓘ

10.1.0.0/16

10.1.0.0 - 10.1.255.255 (65536 addresses)

* Subscription

Azure Pass

* Resource group

(New) AzureProduction

Create new

* Location

North Europe

Subnet

* Name

WebSubnet

* Address range ⓘ

10.1.0.0/24

10.1.0.0 - 10.1.0.255 (256 addresses)

DDoS protection ⓘ

☒ Basic ☐ Standard

Service endpoints ⓘ

Disabled Enabled

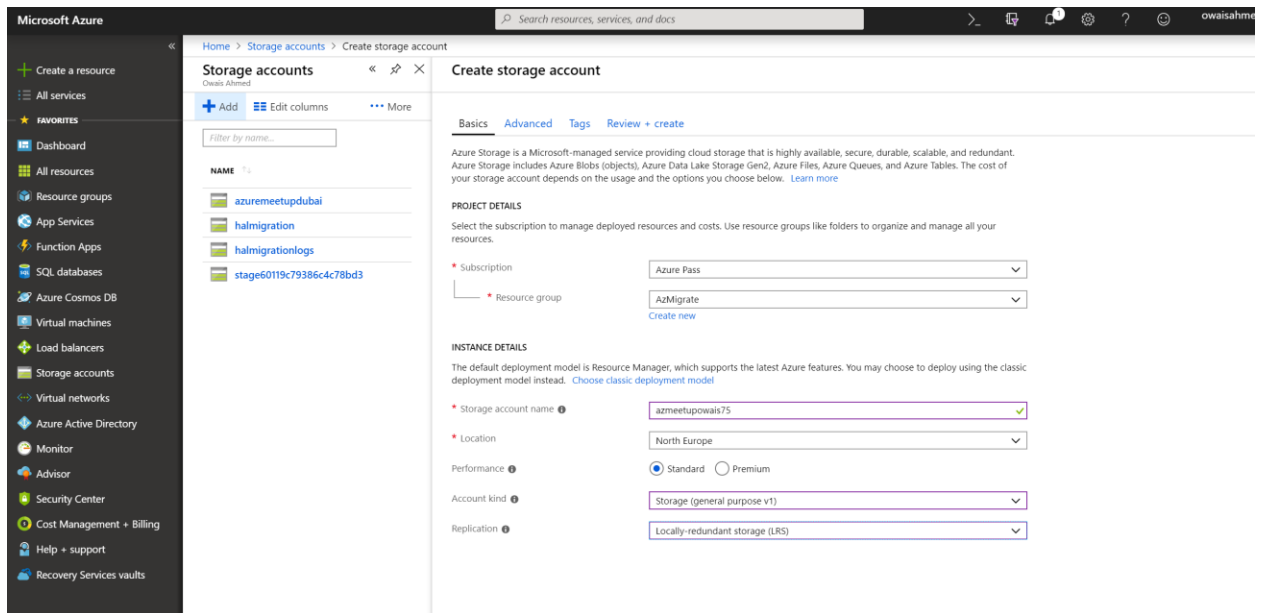
Firewall

Disabled Enabled

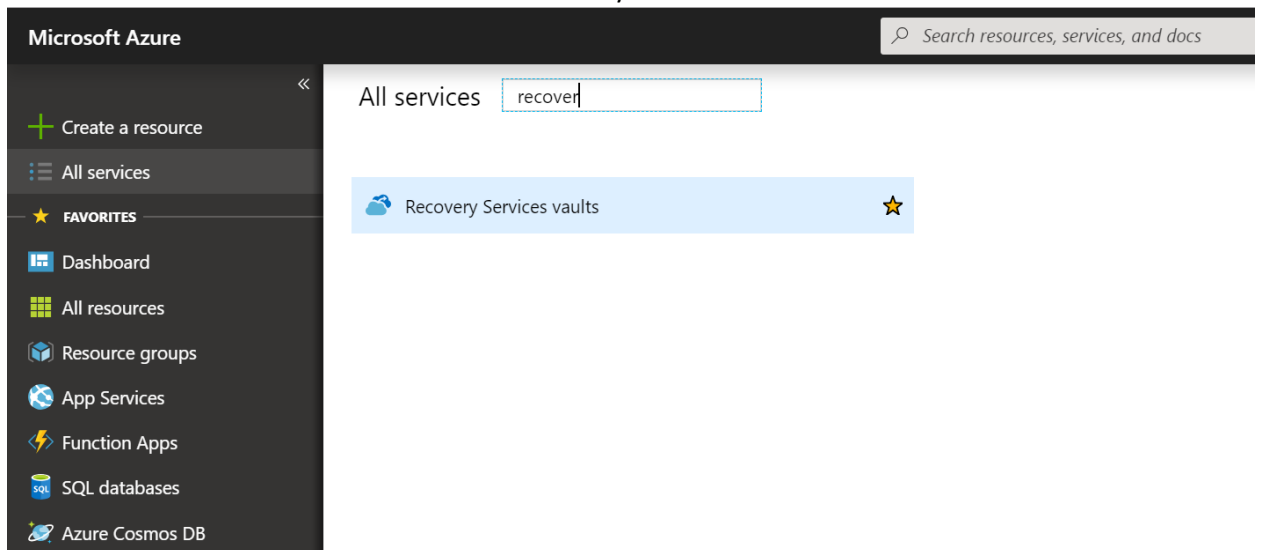
Create

Automation options

3. Click Create
4. Click Storage Accounts on the left and click Add



5. Use the following details
 - a. ResourceGroup – AzMigrate
 - b. Storage account name – azmeetupyour**namelasttwodigitsnumber**
 - c. Location – North Europe
 - d. Performance – Standard
 - e. Account kind – Storage (general purpose v1)
 - f. Replication – LRS
6. Click Review+Create and then click Create
7. Click All Services on the left and search for Recovery Services Vault



8. Click Add and use the following details

Home > Recovery Services vaults > Recovery Services vault

Recovery Services vaults

Owais Ahmed

[+ Add](#) [Edit columns](#) [More](#)

Filter by name...

NAME ↑↓

Vault

Recovery Services vault

Recovery Services vault

* Name ✓

* Subscription ▼

* Resource group ▼
[Create new](#)

* Location ▼

9. After the deployment is complete, click on the newly created vault

10. Click on Getting Started -> Site Recovery

Home > Recovery Services vaults > AzMigrate - Site Recovery

Recovery Services vaults

Owais Ahmed

[+ Add](#) [Edit columns](#) [More](#)

Filter by name...

NAME ↑↓

AzMigrate

Vault

AzMigrate - Site Recovery

Recovery Services vault

Search (Ctrl+/)

Filter settings

FOR ON-PREMISES MACHINES

Prepare Infrastructure >

FOR ON-PREMISES MACHINES AND AZURE VMs

Step 1: Replicate Application >

Step 2: Manage Recovery Plans >

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Properties

Locks

Automation script

Getting started

Backup

Site Recovery

Protected items

Backup items

Deduplicated items

11. Click Prepare Infrastructure

12. Use the following details and click ok

Prepare infrastructure

AzMigrate

These are long running tasks done on-premises.

1

Protection goal
Select

>

2

Deployment planning
Select

>

3

Source
Prepare

>

4

Target
Prepare

>

5

Replication settings

>

Protection goal

AzMigrate

* Where are your machines located?

On-premises

▼

* Where do you want to replicate your machines to?

To Azure

▼

* Are your machines virtualized?

Yes, with Hyper-V

▼

* Are you using System Center VMM to manage your Hyper-V hosts?

No

▼

13. In the Deployment Planning pane, select I will do it later and click Ok

14. In the Source Pane, click Add Hyper-V Site and give it a name. Eg. OnPrem


Prepare source

AzMigrate

+ Hyper-V Site

+ Hyper-V Server

→ Step 1: Select Hyper-V site



(0 sites found) Click on +Hyper-V Site in the command bar above to add a site.

Step 2: Ensure Hyper-V servers are added

Complete previous step(s).

Create Hyper-V site

AzMigrate

* Name

OnPrem

✓

15. Click on Hyper-V Server

The screenshot shows two side-by-side windows from the AzMigrate application. The left window, titled 'Prepare source', has a tab for 'Hyper-V Server' selected. It displays 'Step 1: Select Hyper-V site' with a dropdown menu set to 'OnPrem'. Below this is 'Step 2: Ensure Hyper-V servers are added', which shows a message: '0 Found... Click on +Hyper-V server in top command bar to add a Hyper-V server to the site. This may take approximately 15 min to 30 min.' The right window, titled 'Add Server', shows 'Server type' as 'Hyper-V server'. It includes an information icon and text: 'Adding Hyper-V server may take 15 minutes to 30 minutes'. Below this is a section 'Register your Hyper-V host(s)' with the sub-header 'On-premises'. It lists five steps: 1. Make sure the host is running Windows Server 2012 R2 or above. 2. Configure Proxy setting and ensure each host can access the Service URLs. 3. Download the installer for the Microsoft Azure Site Recovery Provider. 4. Download the vault registration key to register the host in a Hyper-V site. Below step 4 is a dropdown menu set to 'OnPrem' and a 'Download' button. Step 5 is: Install the Provider on the Hyper-V host and use the registration key to register the host in the vault.

16. Download Vault registration file and copy it to the Hyper-V Host.

17. Open the browser on the Hyper-V Host and type http://aka.ms/downloadaddra_ne

18. If you are unable to download, switch of IE Enhanced Security from Server Manager

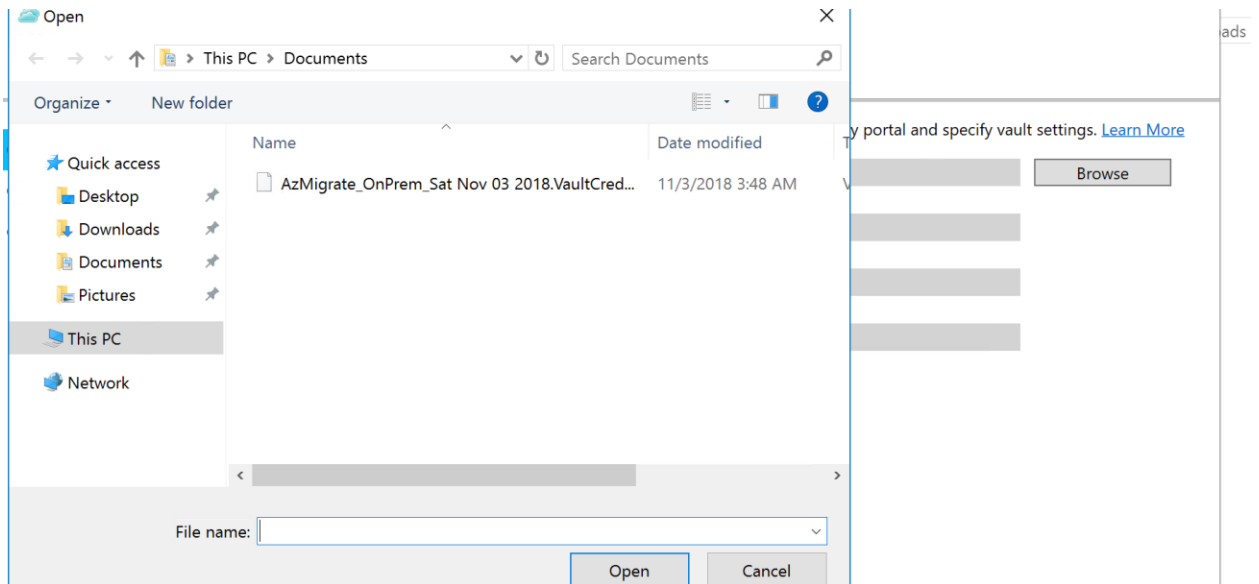
The screenshot shows the Windows Server Manager interface for a 'Local Server'. The left sidebar shows 'Local Server' selected under 'Dashboard'. The main area displays 'PROPERTIES For HYPERVHOST'. It lists various system settings in two columns. The first column includes: Computer name (HYPERVHOST), Workgroup (WORKGROUP), Windows Firewall (Public: On), Remote management (Enabled), Remote Desktop (Enabled), NIC Teaming (Disabled), Ethernet 2 (IPv4 address assigned by DHCP, IPv6 enabled), and vEthernet (Nat Switch) (192.168.0.1, IPv6 enabled). The second column includes: Last installed updates (Never), Windows Update (Install updates automatically using Windows Upd), Last checked for updates (Never), Windows Defender (Real-Time Protection: On), Feedback & Diagnostics (Settings), IE Enhanced Security Configuration (Off), Time zone ((UTC) Coordinated Universal Time), and Product ID (00376-40000-00000-AA947 (activated)).

19. Run the downloaded ASR Provider

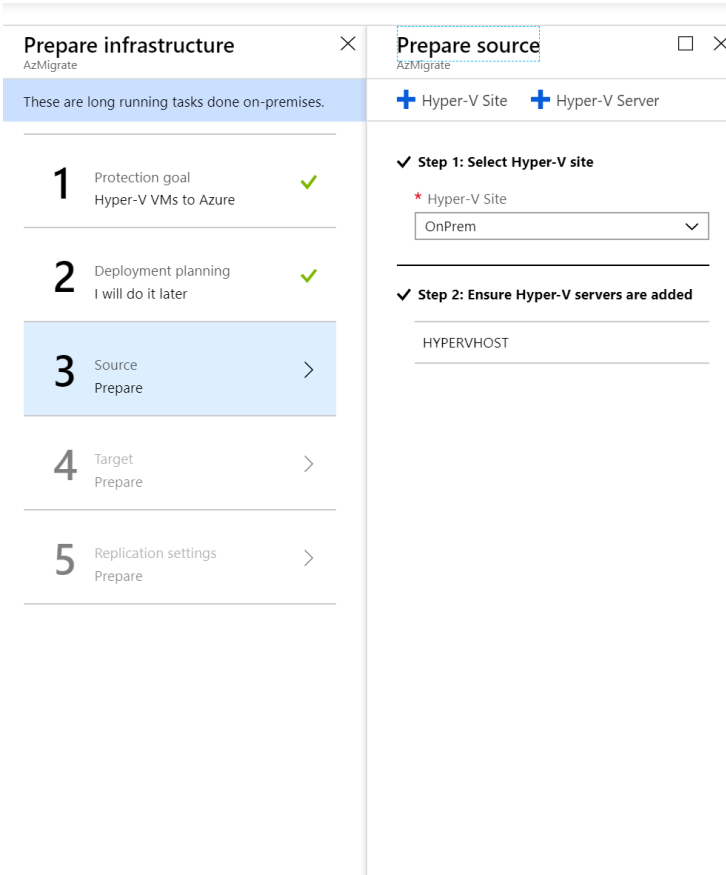
20. Select On on the Windows Update page and click Next and then proceed with the Installation

21. Wait till the installation completes and then click Register

22. Browse to your Vault Registration file and select it



23. Proceed with the default options and complete the registration
24. Go back to the Azure Portal
25. Click on Deployment Planning and then Click Source to refresh the registration



26. In the Target screen, click OK
27. In the Replication Settings, click Create and Associate. Name the Policy and click OK

Enable replication

AzMigrate

- Source
OnPrem ✓
- Target
Configure** >
- Virtual machines
Select >
- Properties
Configure properties >
- Replication settings
Configure replication settings >

Target

AzMigrate

Select your target settings for recovery

* Target ⓘ
Azure ▼

* Subscription ⓘ
Azure Pass ▼

Post-failover resource group ⓘ
AzureProduction ▼

* Post-failover deployment model ⓘ
Resource Manager ▼

* Storage account ⓘ
azmeetupowais75 >

Azure network ⓘ
Configure now for selected machines. ▼

Post-failover Azure network ⓘ
ProdVNET >

Subnet ⓘ
WebSubnet (10.1.0.0/24) ▼

32. In the Virtual Machines screen, select only the Web Server and click Ok

Select virtual machines

Finished retrieving data.

Filter items...

DBServer1

☒ WebServer1

33. In the Configure Properties, select the OS Type as Windows and click OK

34. Click OK in the next screen and then select Enable Replication
35. Click on Replicated Items to check the status of Replication

AzMigrate - Replicated items Recovery Services vault ×

Search (Ctrl+J) << Refresh + Replicate Columns Filter

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems

Settings
Properties
Locks
Automation script

Getting started
Backup
Site Recovery

Protected items
Backup items
Replicated items

Info You can run your machines on managed disks after a failover or migration from on-premises to Azure. Set the option to use managed disks in Replicated item -> Settings -> Compute and Network.

Last refreshed at: 03/11/2018, 8:07:03 AM

Info Finished loading data from service.

filter items...

NAME	REPLICATION HEALTH	STATUS	ACTIVE LOCATION
WebServer1	Healthy	Enabling protection	OnPrem ...

36. Once the replication completes, the status turns to Protected

Refresh + Replicate Columns Filter

Info You can run your machines on managed disks after a failover or migration from on-premises to Azure. Set the option to use managed disks in Replicated item -> Settings -> Compute and Network.

Last refreshed at: 03/11/2018, 8:15:37 AM

Info Finished loading data from service.

Filter items...

NAME	REPLICATION HEALTH	STATUS	ACTIVE LOCATION
WebServer1	Healthy	Protected	OnPrem

Failover to Azure

1. Click on the WebServer1 Protected item in the Vault
2. Click on Compute and Network and click Edit

Home > Recovery Services vaults > AzMigrate - Replicated items > WebServer1 - Compute and Network

WebServer1 - Compute and Network

Replicated items

Search (Ctrl+V)

Save Discard

Overview

General

Properties

Compute and Network

Disks

Compute properties

PROPERTIES	ON-PREMISES	MICROSOFT AZURE
Name	WebServer1	WebServer1
Resource group	-	AzureProduction
Size	1 cores, 2.00 GB memory, 1 NICs	D2_v2 (2 cores, 7 GB memory, 2 NICs)
Availability set	-	No applicable availability sets in the resource group
Use managed disks	-	No

Network properties

PROPERTIES	TARGET NETWORK
Virtual network	ProdVNET

Network interfaces

ON-PREMISES NETWORK NAME	TARGET SUBNET	TARGET IP	TARGET NETWORK INTERFACE TYPE
Nat Switch	WebSubnet	DHCP assigned	Primary

Azure Hybrid Benefit

Apply Azure Hybrid Benefit and save up to 49% vs. pay-as-you-go virtual machine costs with an eligible Windows Server license.

Already have an eligible Windows Server License?

3. Change the VM size to D2_V2 and verify other properties and click Save
4. Go back to the Overview page.
5. Click on Planned Failover
6. Skip on any warnings and click OK
7. The Failover process should start
8. You can click on the Starting Planned Failover Notification and review the job

OWAIS AHMED

Notifications

[More events in the activity log](#) [Dismiss all](#)

Starting Planned Failover

Running

The operation is in progress.

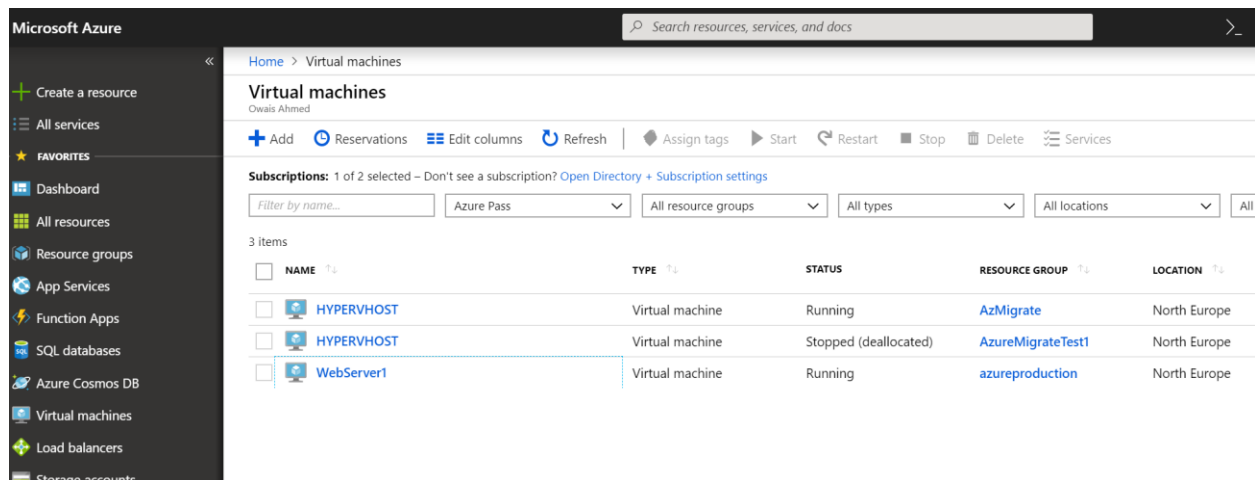
by me a few seconds ago

Update failover configuration for WebServer1.

Successfully completed the operation.

by me 2 minutes ago

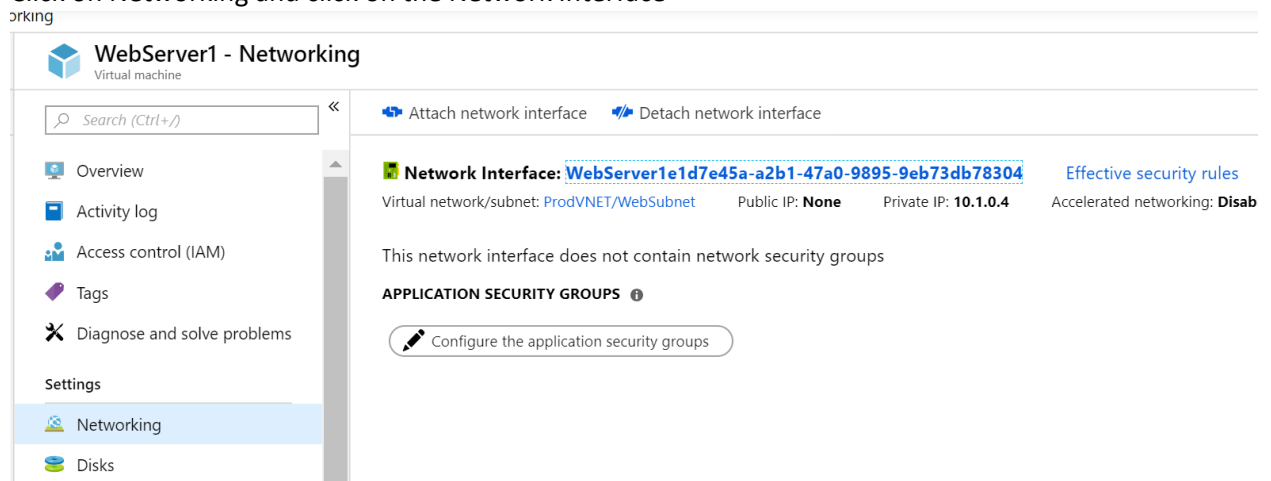
9. Once the failover is complete, you can verify if the VM is running by going to the Virtual Machines pane



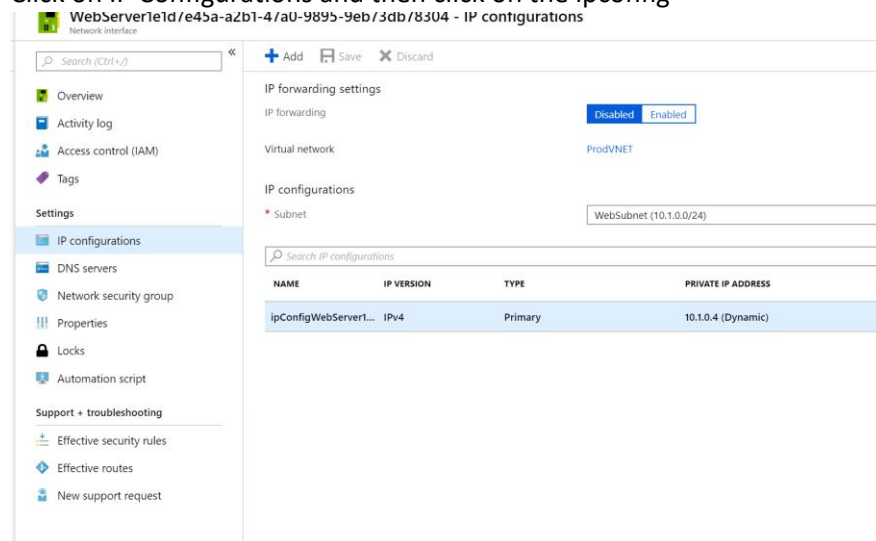
10. Click on WebServer1.

11. To connect to the Server, we need to configure Public IP.

12. Click on Networking and click on the Network Interface



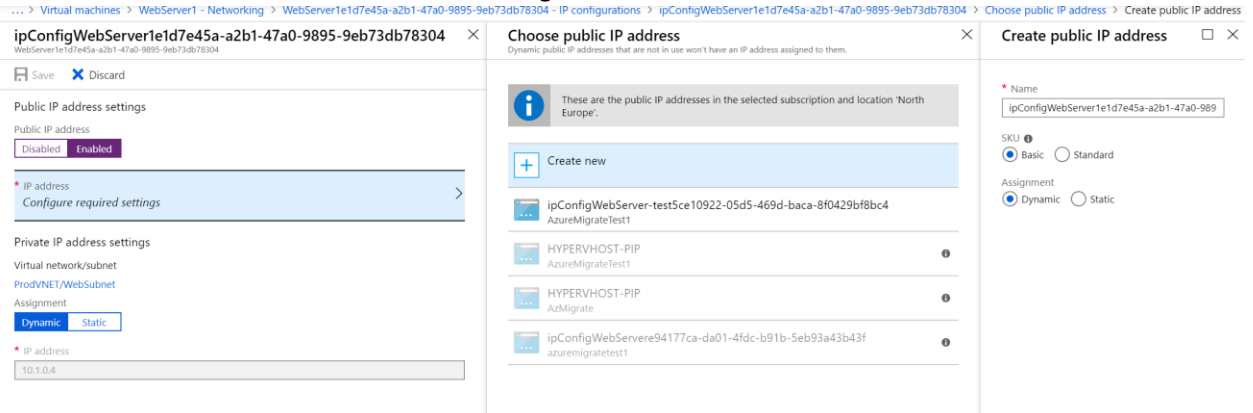
13. Click on IP Configurations and then click on the ipconfig



14. Change the Public IP Address status to Enabled

15. Click on Configure

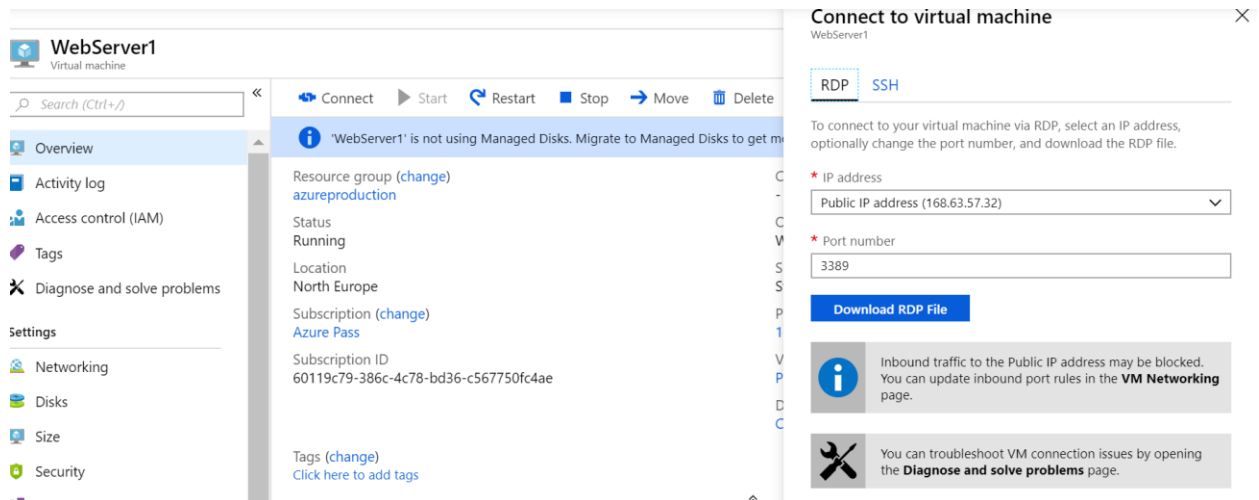
16. Click Create New and chose the default settings and click OK



17. Click Save

18. Go back to the Overview Page of the WebServer1 VM

19. Click Connect



20. Download the RDP File and connect to the server using the same details

- Administrator
- P@ssw0rd

Changing Connection String

Once the DB has been migrated, we need to change the connection string of the application to point to the new SQL Server

- On the Azure Web Server VM, open the Web Config file in the following location
 - C:\intepub\wwwroot\website
- Open the web.config file in notepad
- Change the connection string to reflect the new SQL server