

# Implementing Windows Server 2016 SDN (Software Defined Networking)

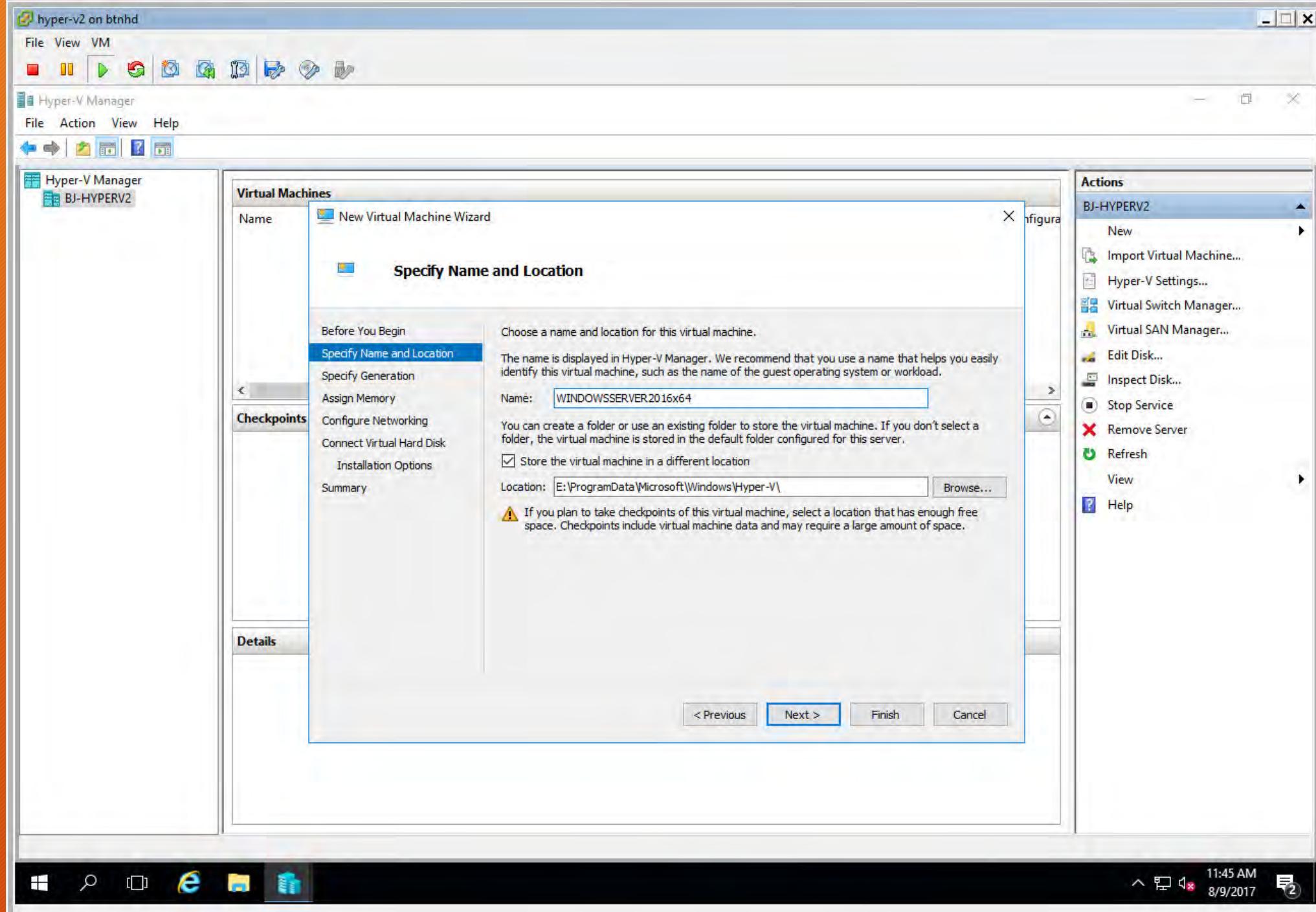
The Server Room Episode #020

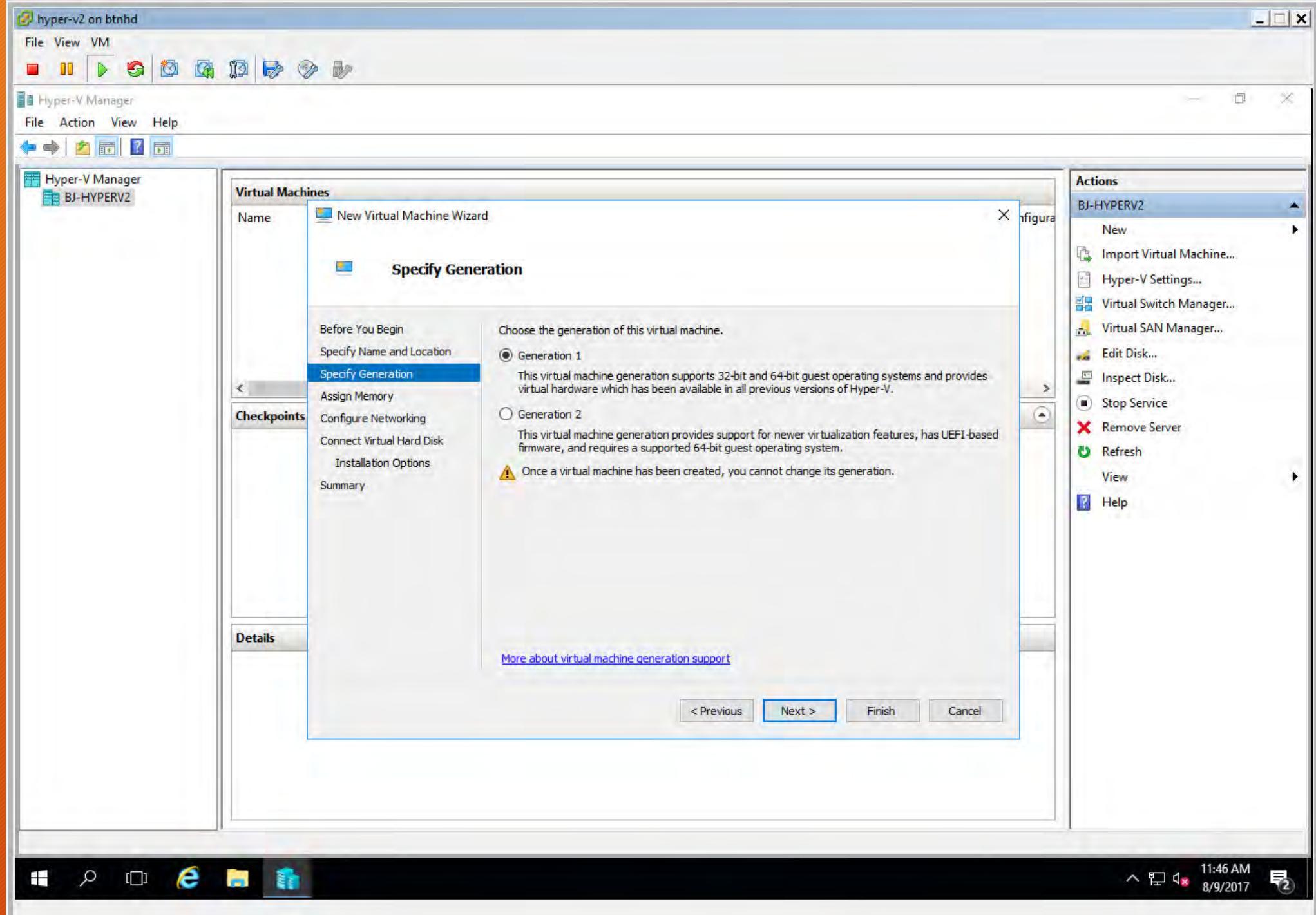
BTNHD

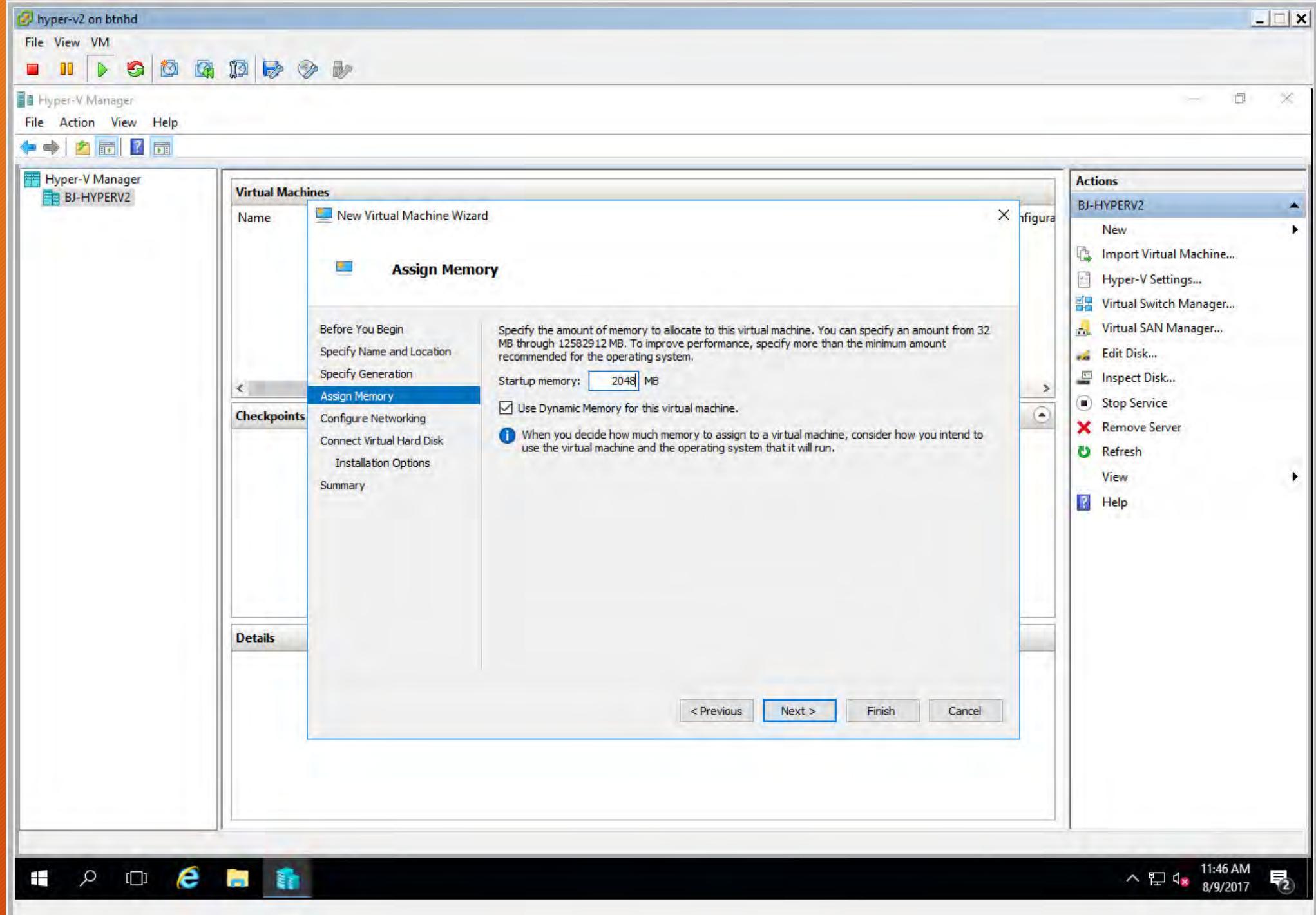
# Software Defined Networking (SDN)

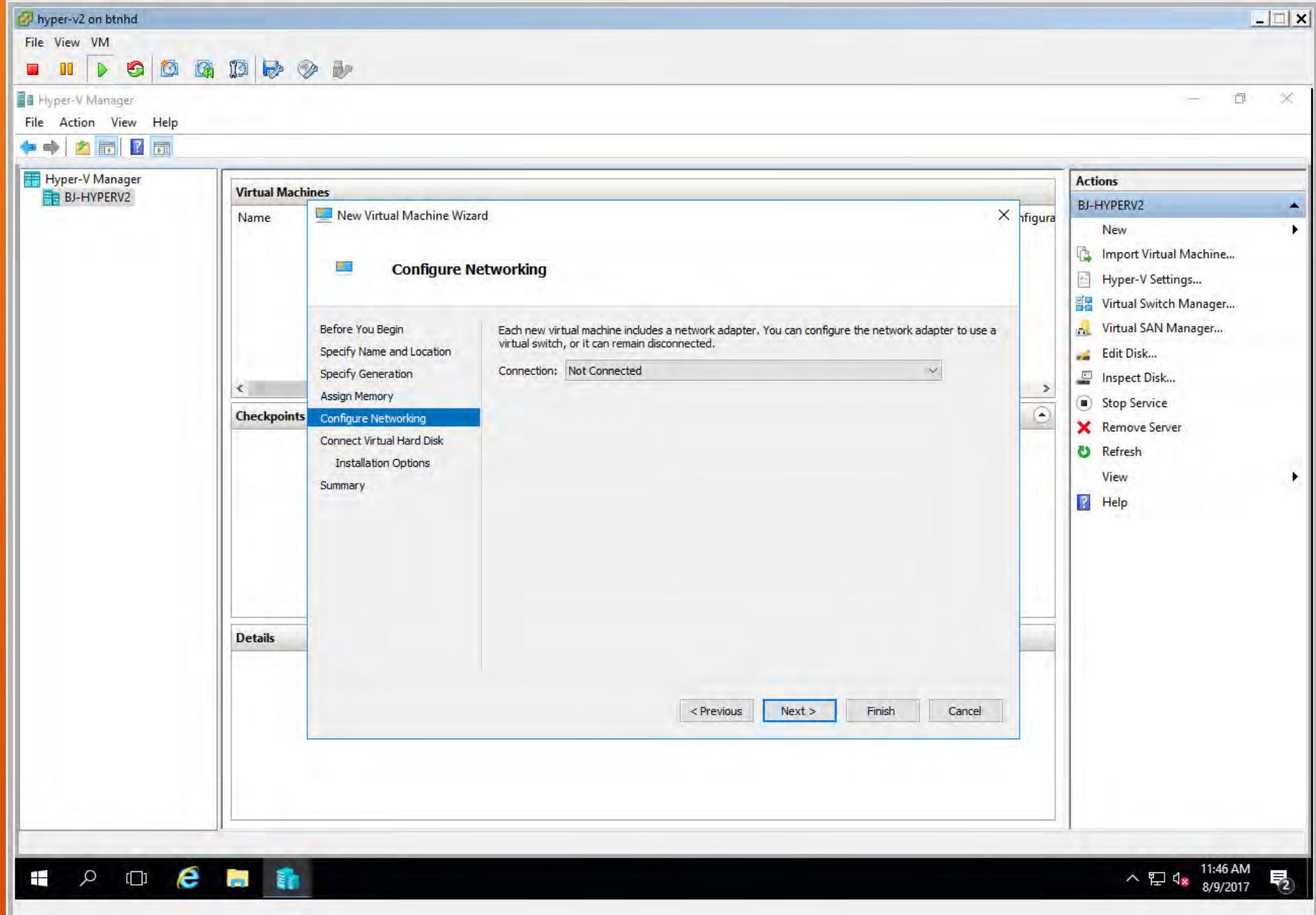
- An approach to computer networking that allows network admins to *initialize, control, change, and manage network behavior dynamically via open interfaces* and abstraction of lower-level functionality
- SDN is meant to address the fact that the static architecture of traditional networks doesn't support the dynamic, scalable computing and storage needs of more modern computing environments such as data centers

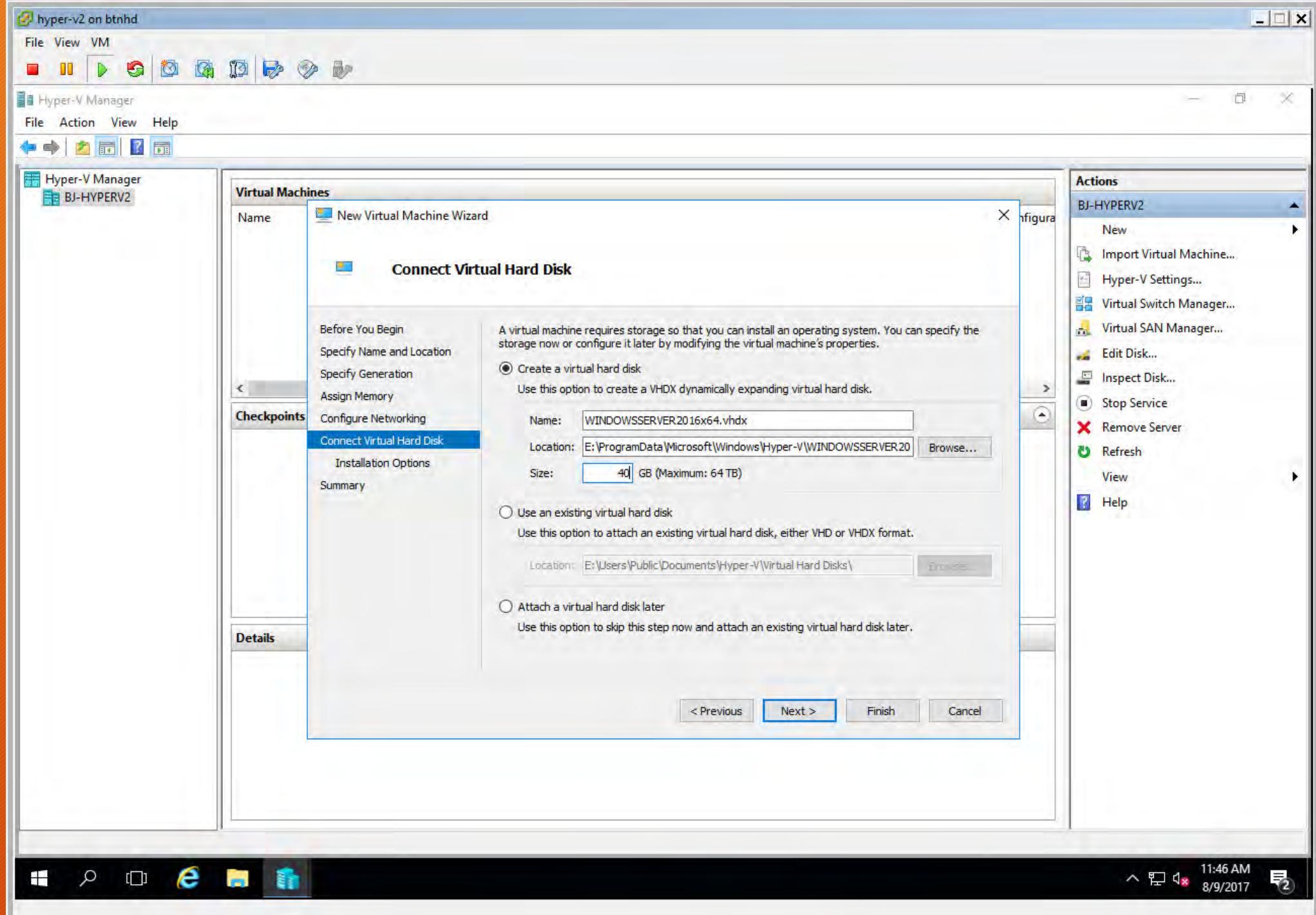
# Create Windows Server 2016 Hyper-V Template

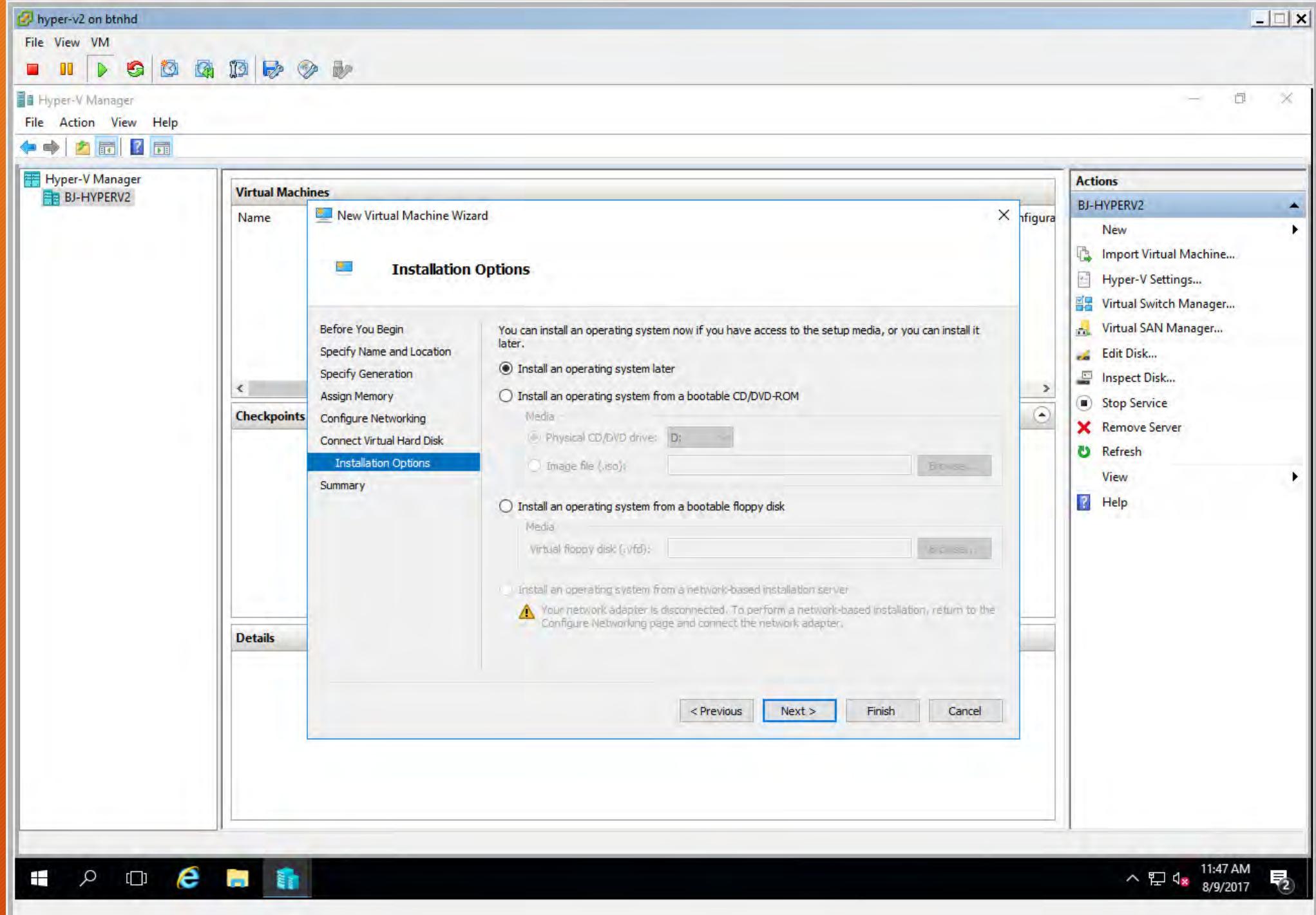


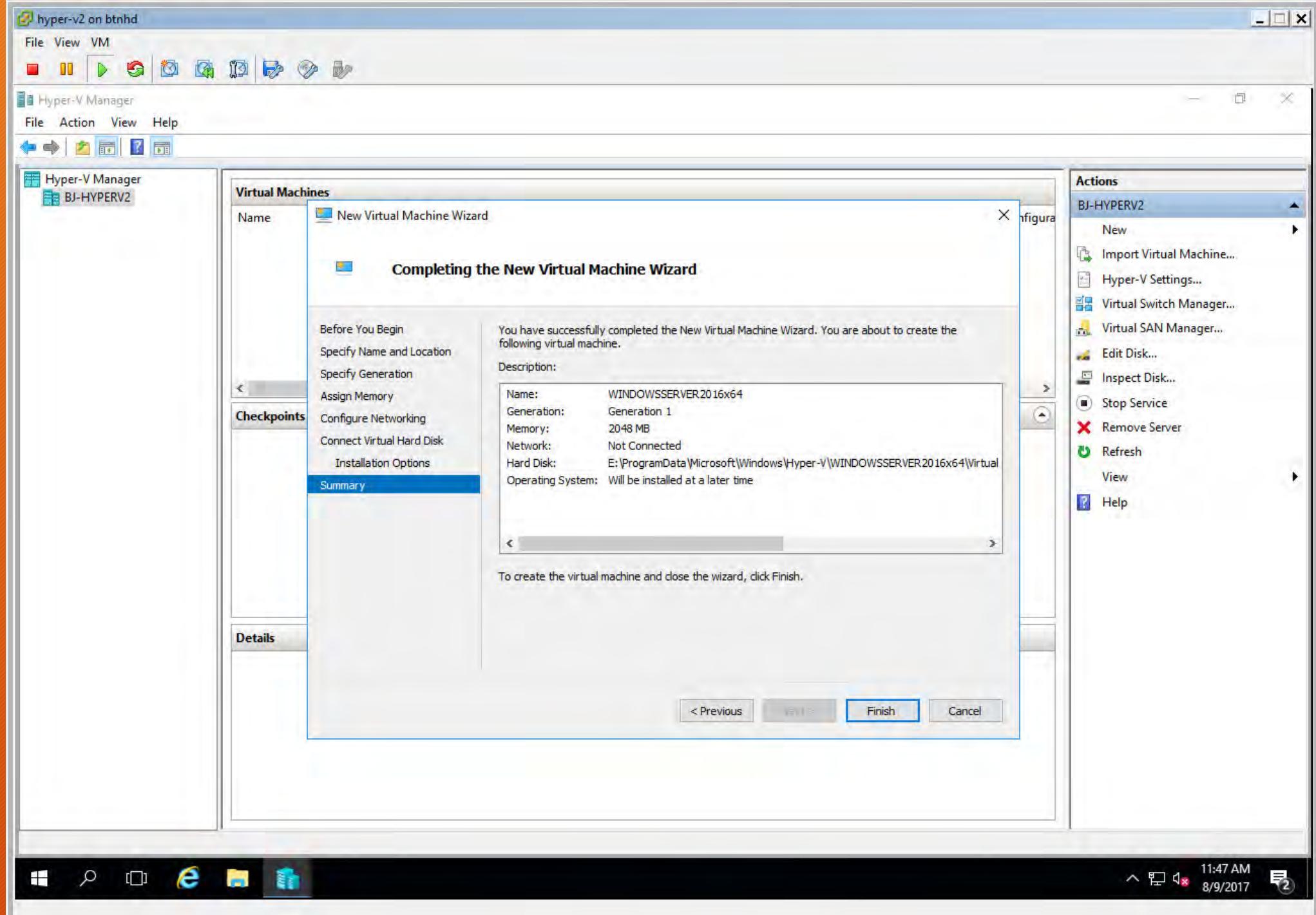












hyper-v2 on btnhd

File View VM

Hyper-V Manager

File Action View Help

Hyper-V Manager

BJ-HYPERV2

**Virtual Machines**

Name	State	CPU Usage	Assigned Memory	Uptime	Status	Configura
WINDOWSSERVER2016...	Off					8.0

**Checkpoints**

The selected virtual machine has no checkpoints.

**WINDOWSSERVER2016x64**

	<b>Created:</b> 8/9/2017 11:47:41 AM	<b>Clustered:</b> No
	<b>Configuration Version:</b> 8.0	
	<b>Generation:</b> 1	
	<b>Notes:</b> None	

Summary Memory Networking Replication

Actions

BJ-HYPERV2

- New
- Import Virtual Machine...
- Hyper-V Settings...
- Virtual Switch Manager...
- Virtual SAN Manager...
- Edit Disk...
- Inspect Disk...
- Stop Service
- Remove Server
- Refresh

View

Help

WINDOWSSERVER2016x64

- Connect...
- Settings...
- Start
- Checkpoint
- Move...
- Export...
- Rename...
- Delete...
- Enable Replication...
- Help

BJ-HYPERV2: 1 virtual machine selected.

11:47 AM  
8/9/2017

Windows Taskbar icons: Start, Search, Task View, Internet Explorer, File Explorer, Taskbar settings, Notifications (2).

hyper-v2 on btnhd

File View VM

Hyper-V Manager

File Action View Help

Hyper-V Manager

BJ-HYPERV2

Virtual Machines

Name	State	CPU Usage	Assigned Memory	Uptime	Status	Configuration Version
WINDOWS SERVER 2016	Running	Low	8.0 GB	0 days, 0 hours, 0 minutes	Normal	8.0

Actions

BJ-HYPERV2

- New
- Import Virtual Machine...
- Hyper-V Settings...
- Virtual Switch Manager...
- Virtual SAN Manager...
- Edit Disk...
- Inspect Disk...
- Stop Service
- Remove Server
- Refresh

View

Help

WINDOWSSERVER2016x64

Summary | Memory | Networking | Replication

The selected virtual machine has no checkpoints.

Created: 8/9/2017 11:47:41 AM Clustered: No

Configuration Version: 8.0

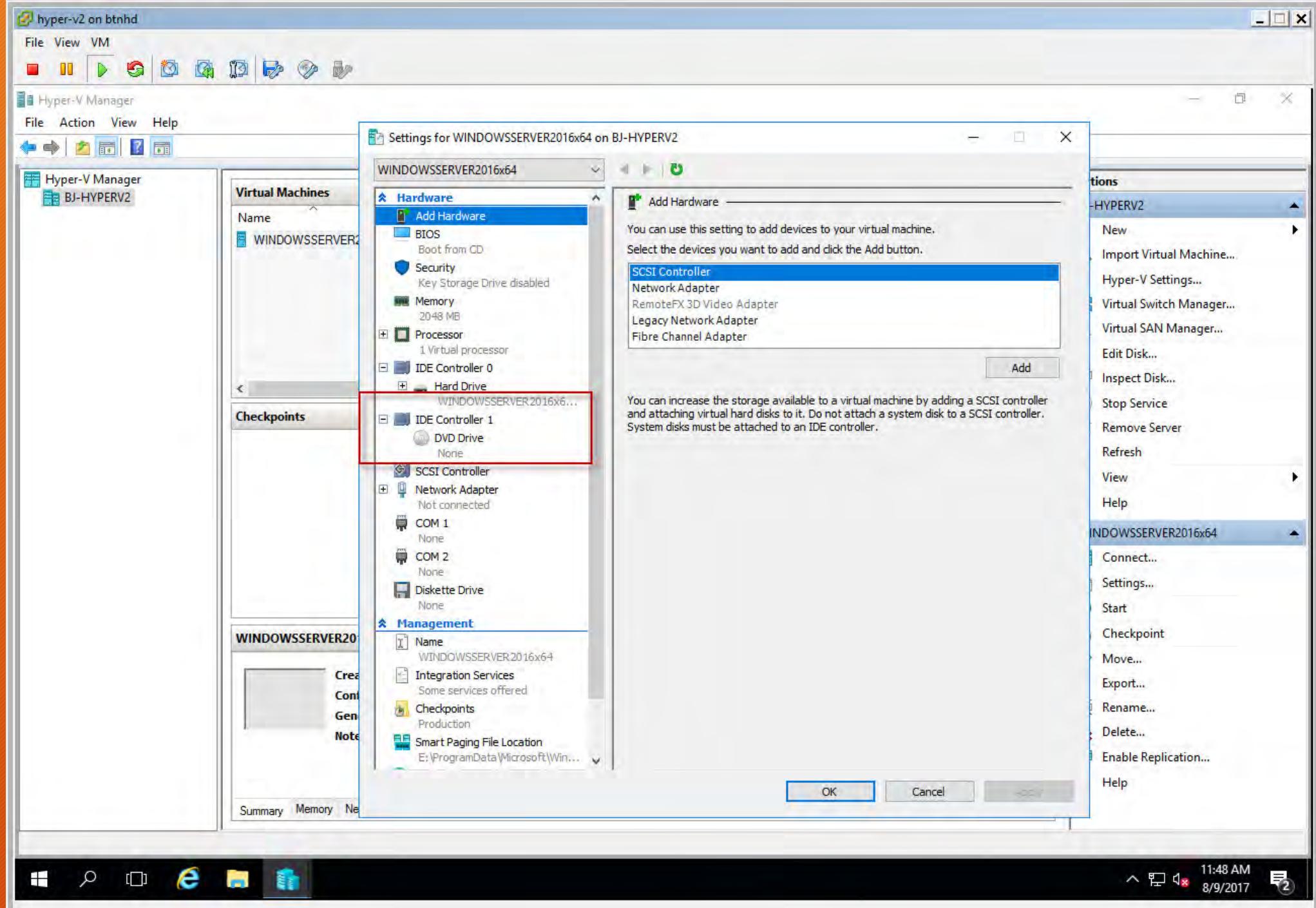
Generation: 1

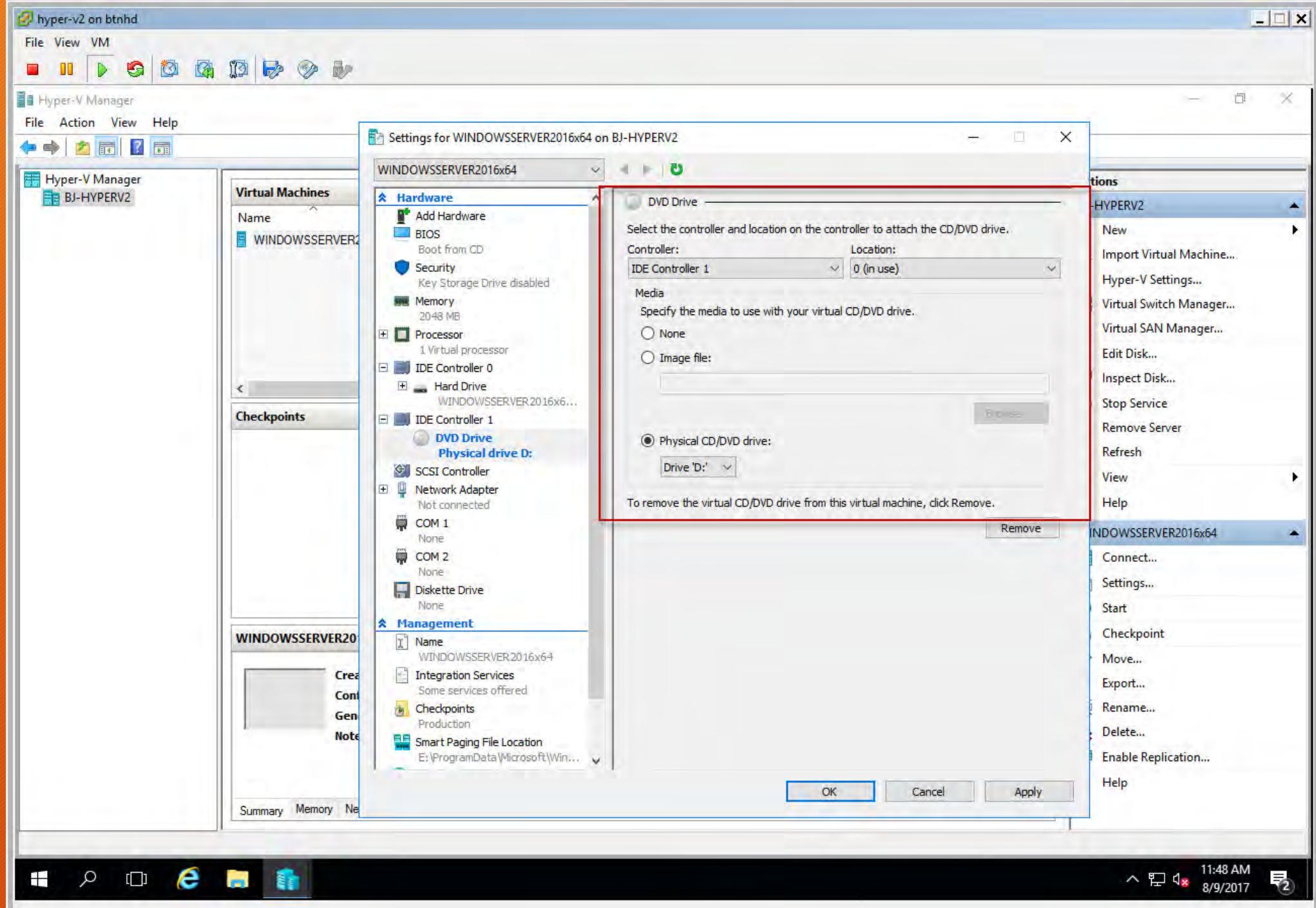
Notes: None

Launches the Virtual Machine Connection application.

11:48 AM 8/9/2017

Windows Taskbar icons: Start, Search, Task View, Edge, File Explorer, Taskbar settings





hyper-v2 on btnhd

File View VM

Hyper-V Manager

File Action View Help

Hyper-V Manager

BJ-HYPERV2

Virtual Machines

Name	State	CPU Usage	Assigned Memory	Uptime	Status	Configuration Version
WINDOWSSERVER2016x64	Connected	Low	8.0	0 days, 0 hours, 0 minutes, 0 seconds	Normal	8.0

Actions

BJ-HYPERV2

- New
- Import Virtual Machine...
- Hyper-V Settings...
- Virtual Switch Manager...
- Virtual SAN Manager...
- Edit Disk...
- Inspect Disk...
- Stop Service
- Remove Server
- Refresh
- View
- Help

WINDOWSSERVER2016x64

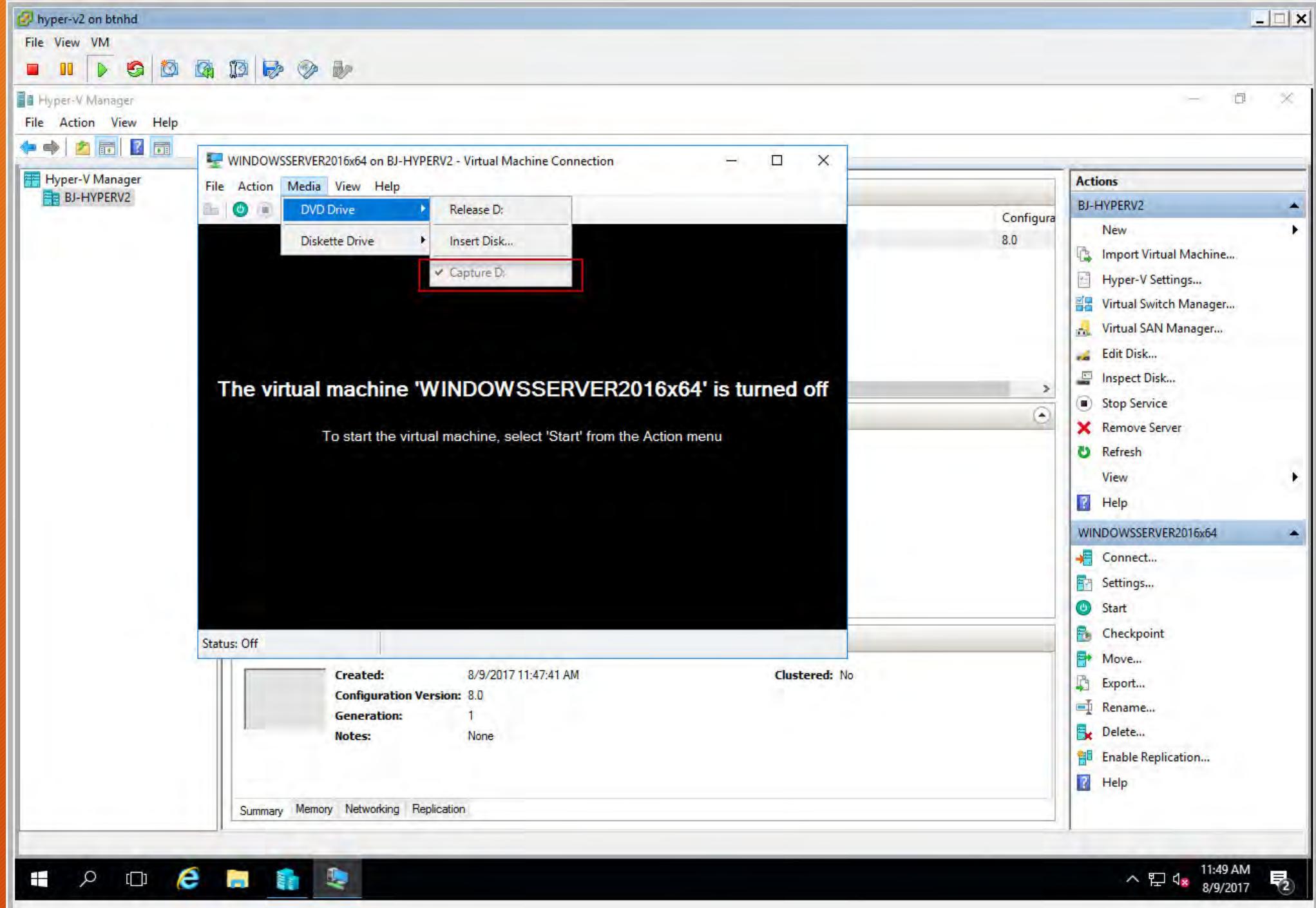
The selected virtual machine has no checkpoints.

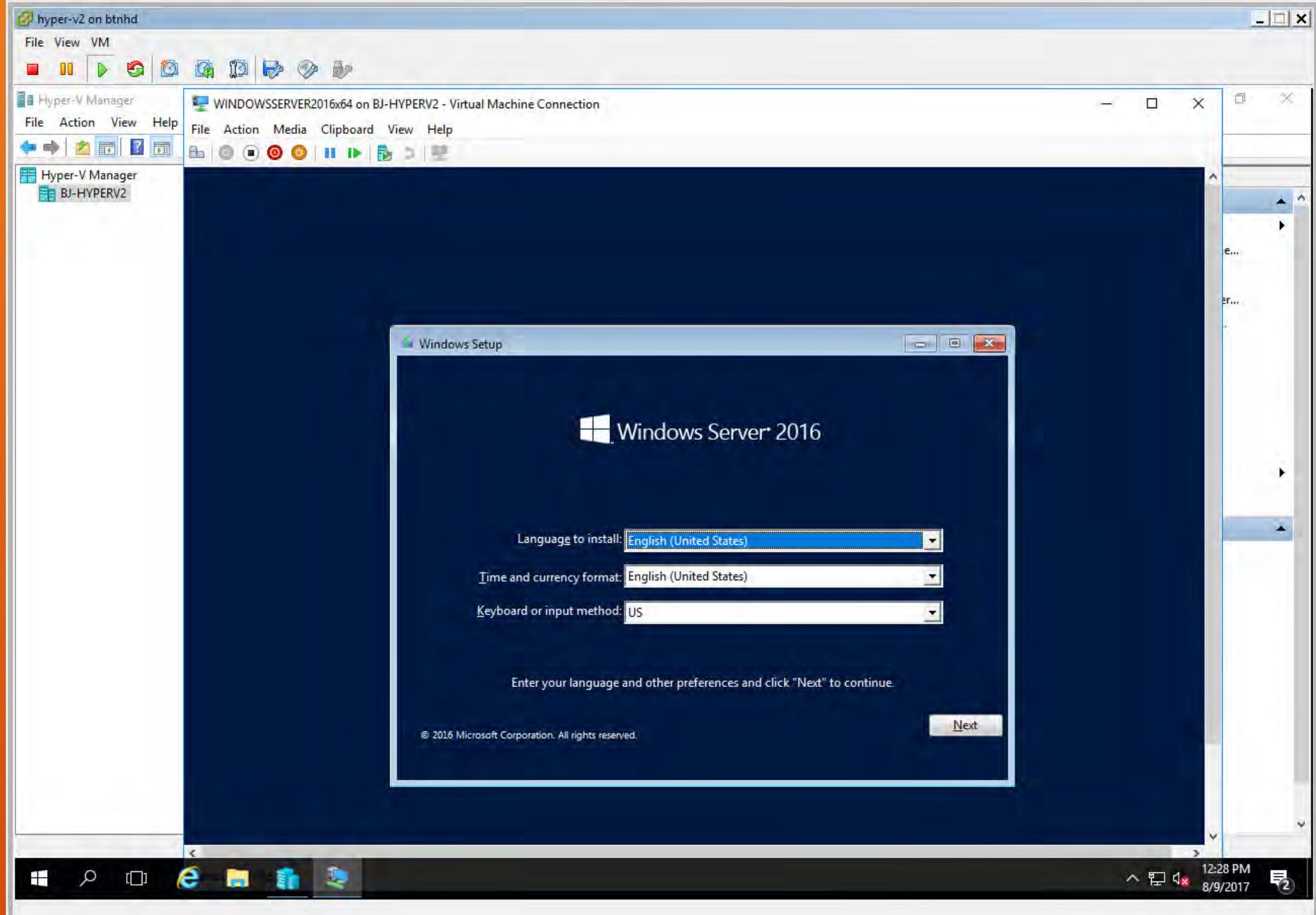
Summary | Memory | Networking | Replication

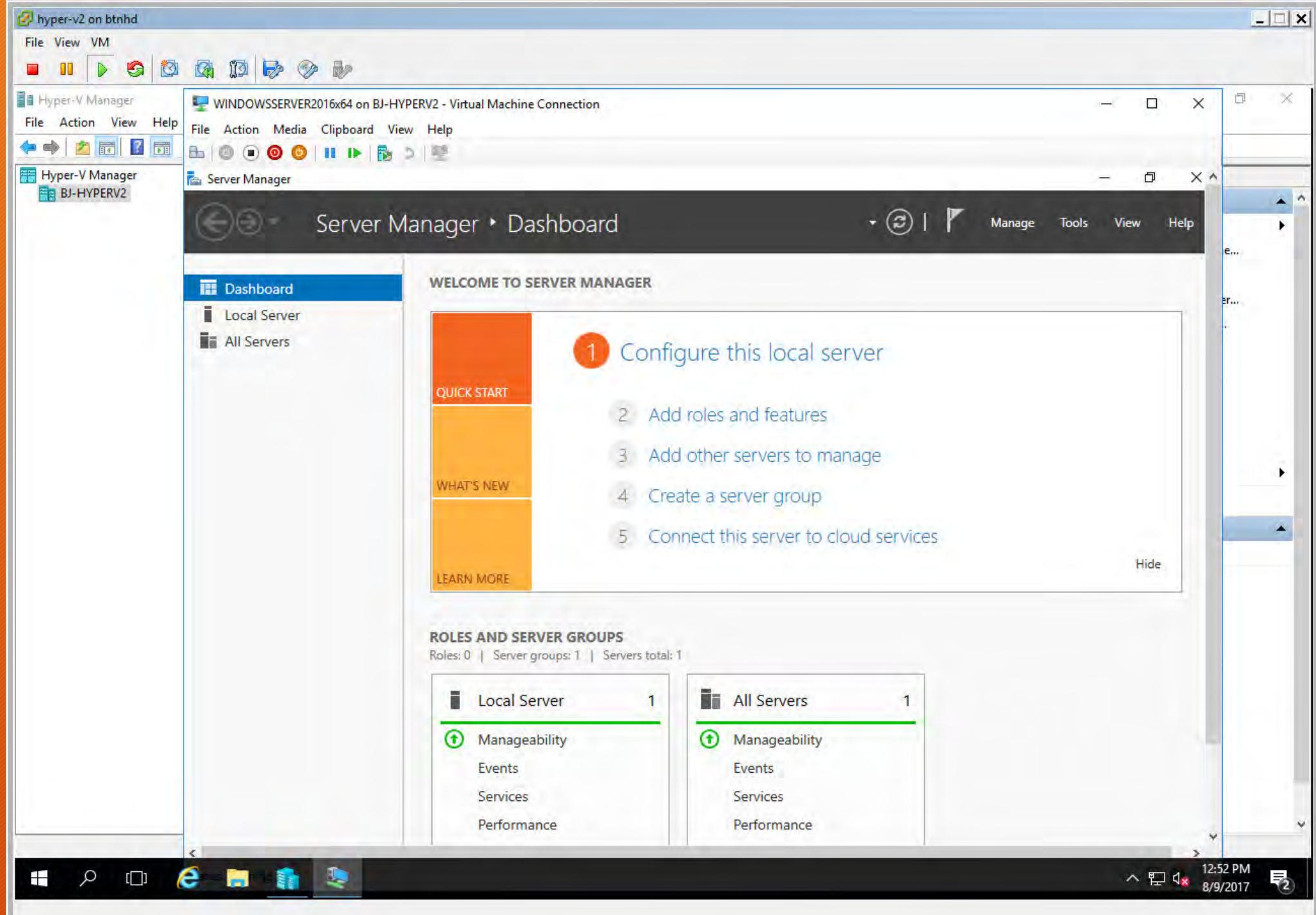
Launches the Virtual Machine Connection application.

11:48 AM  
8/9/2017

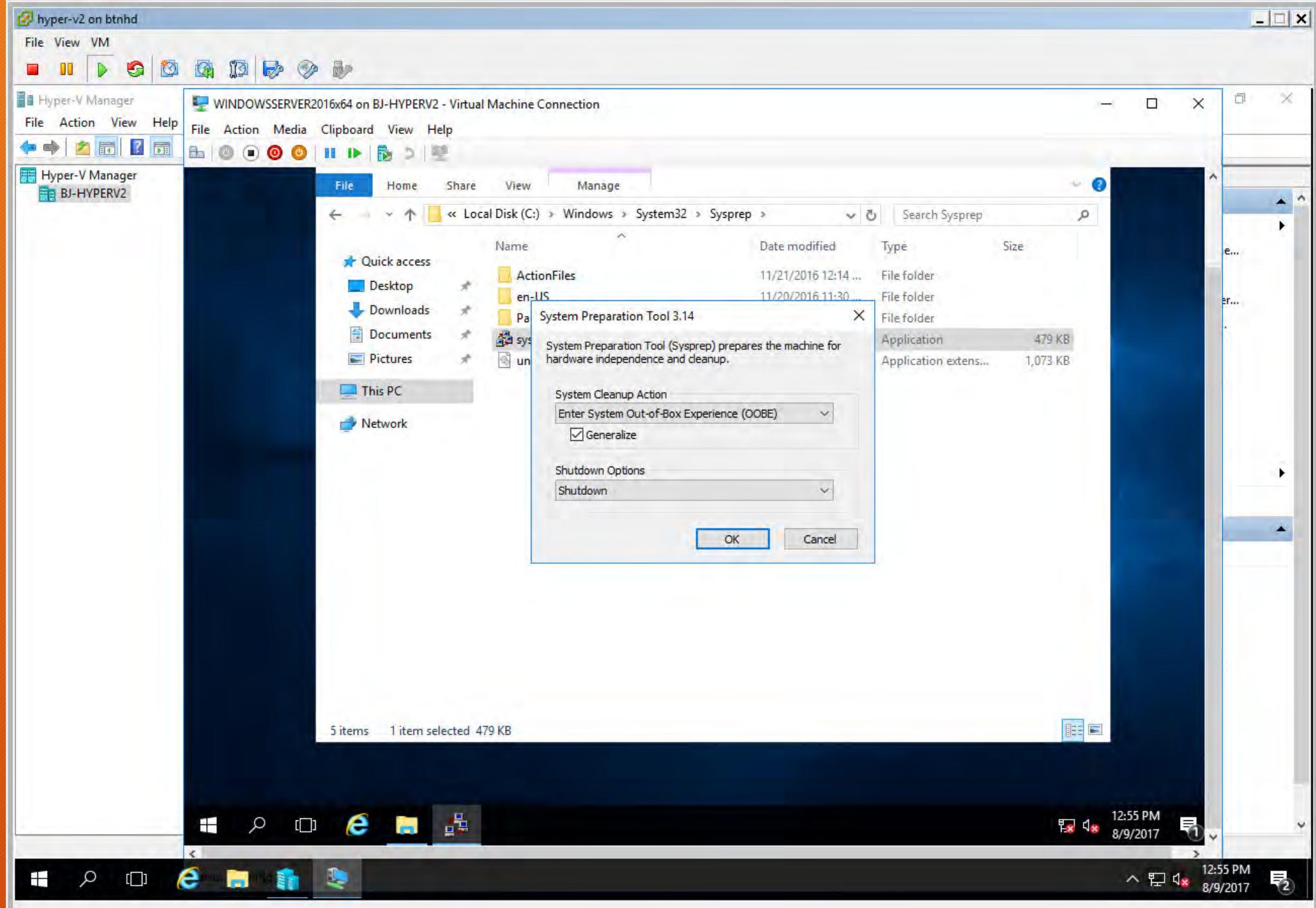
Windows Taskbar icons: Start, Search, Task View, Edge, File Explorer, Taskbar settings, Notifications (2).

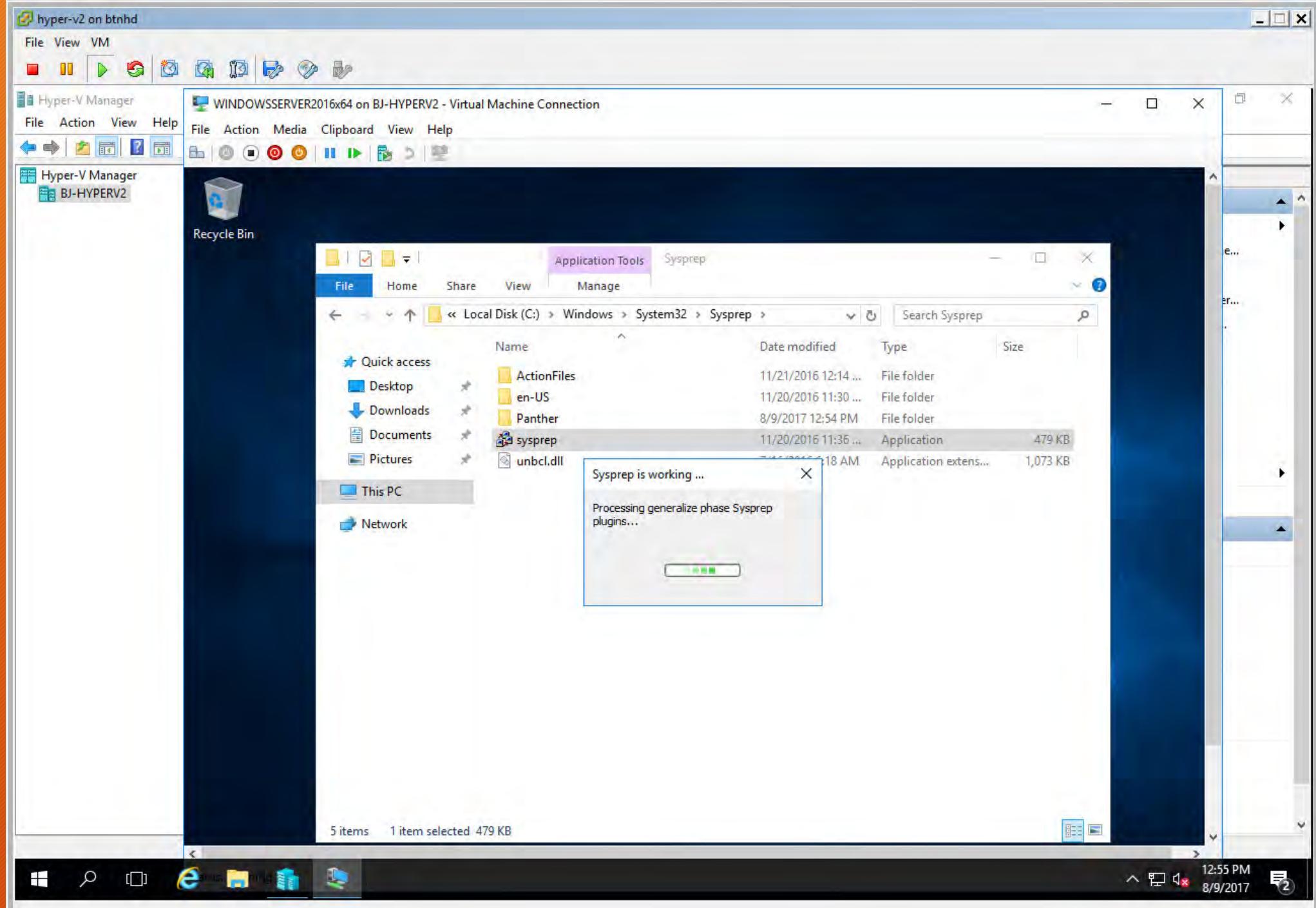


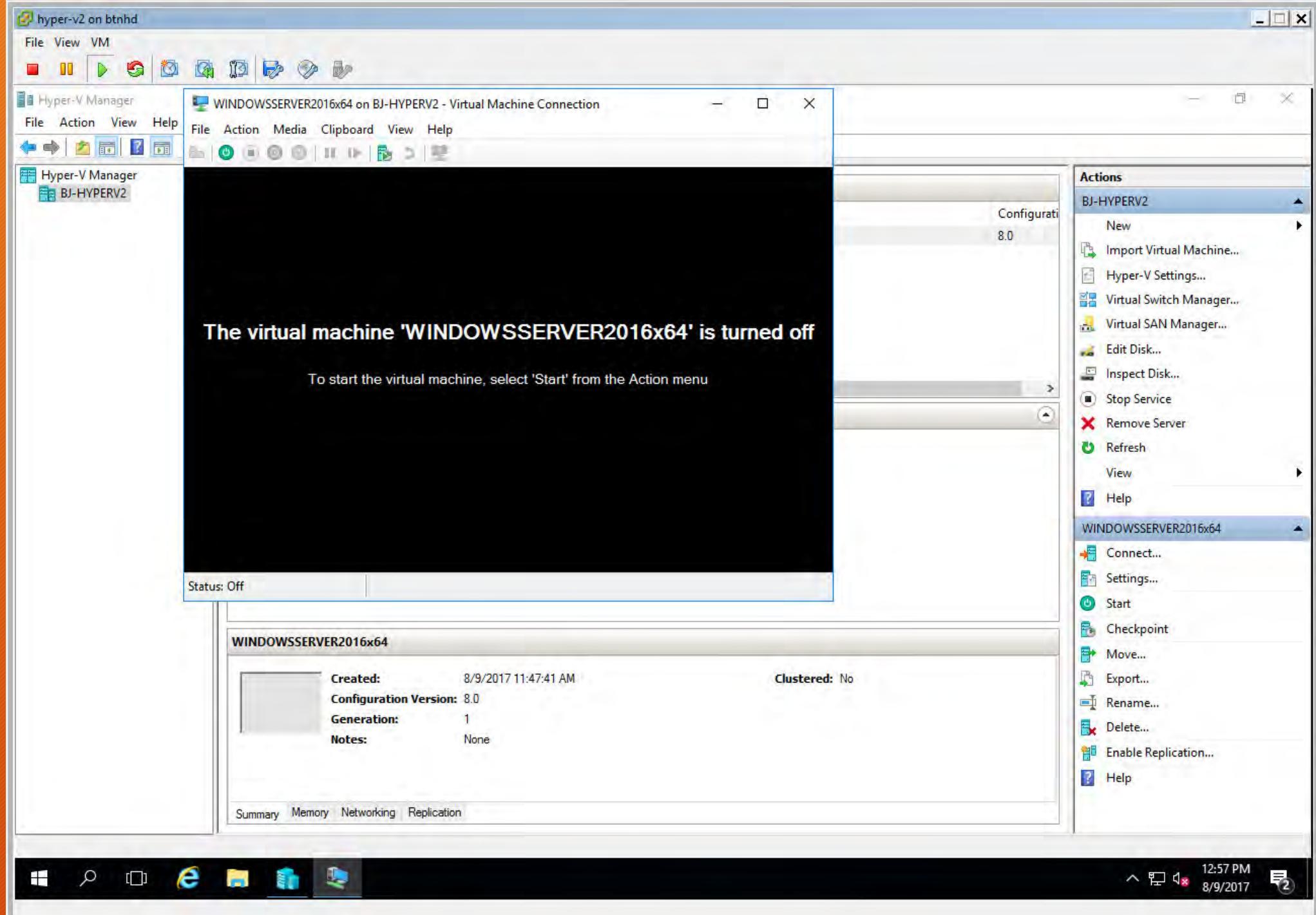


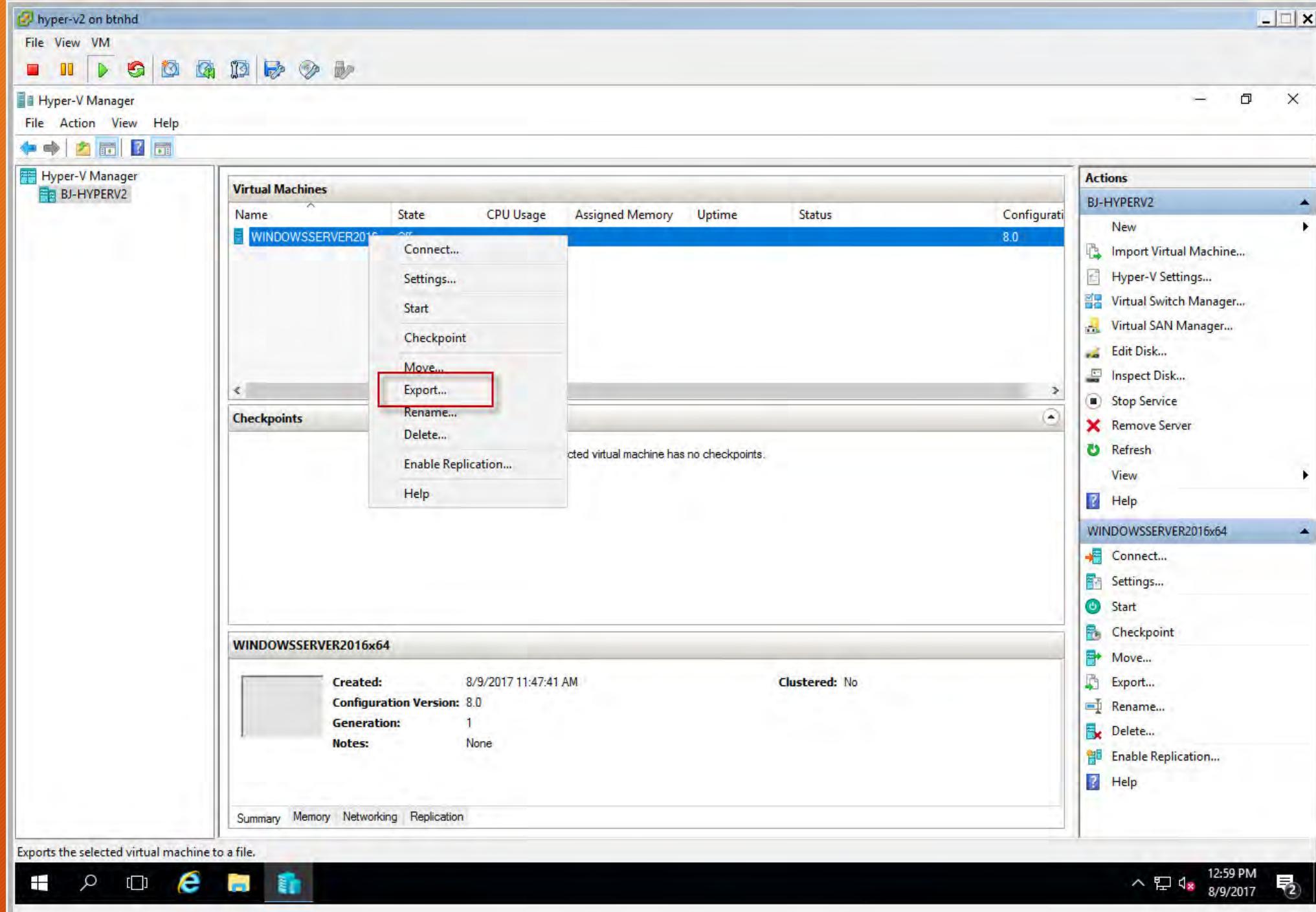


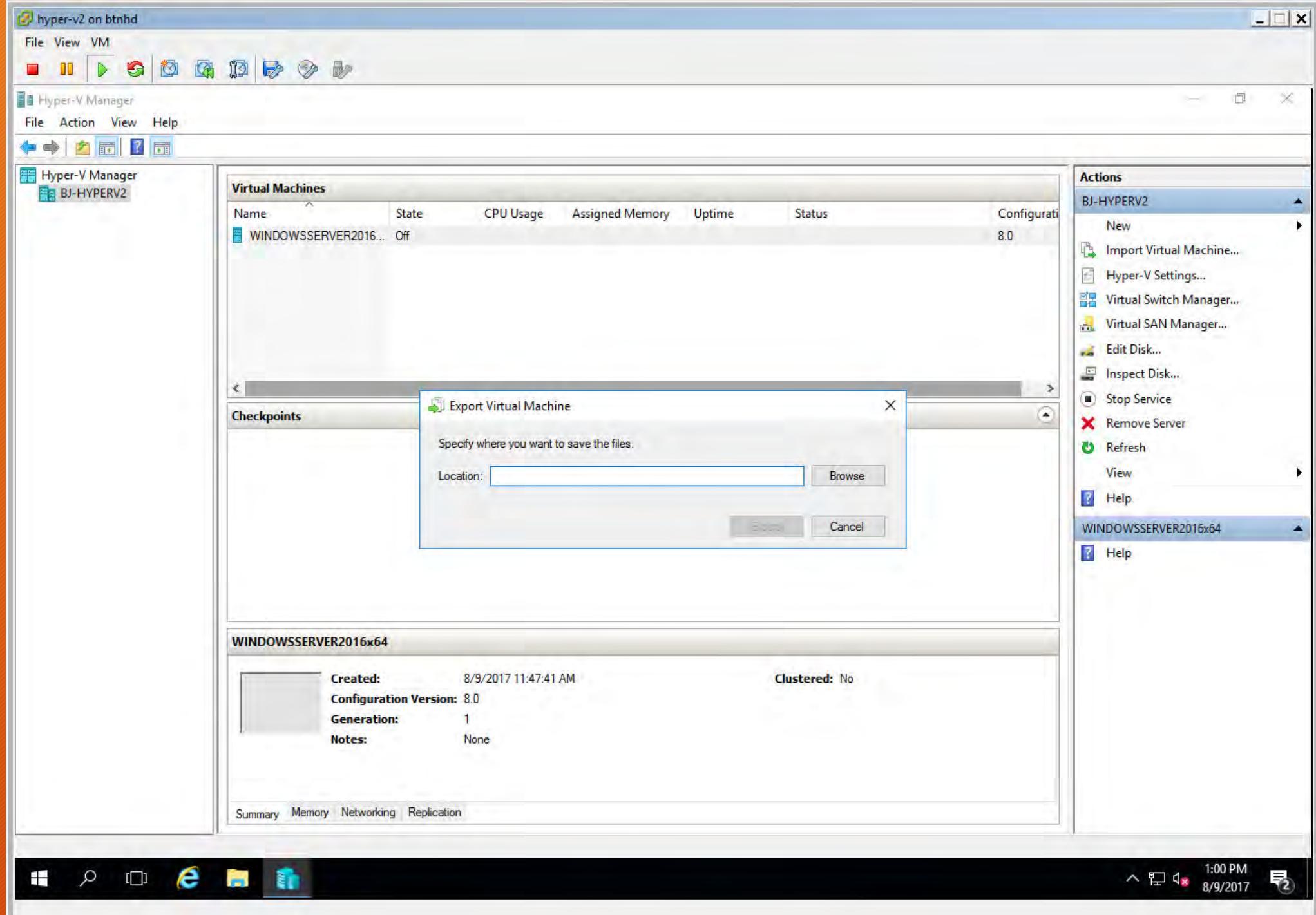
# Export Hyper-V Server 2016

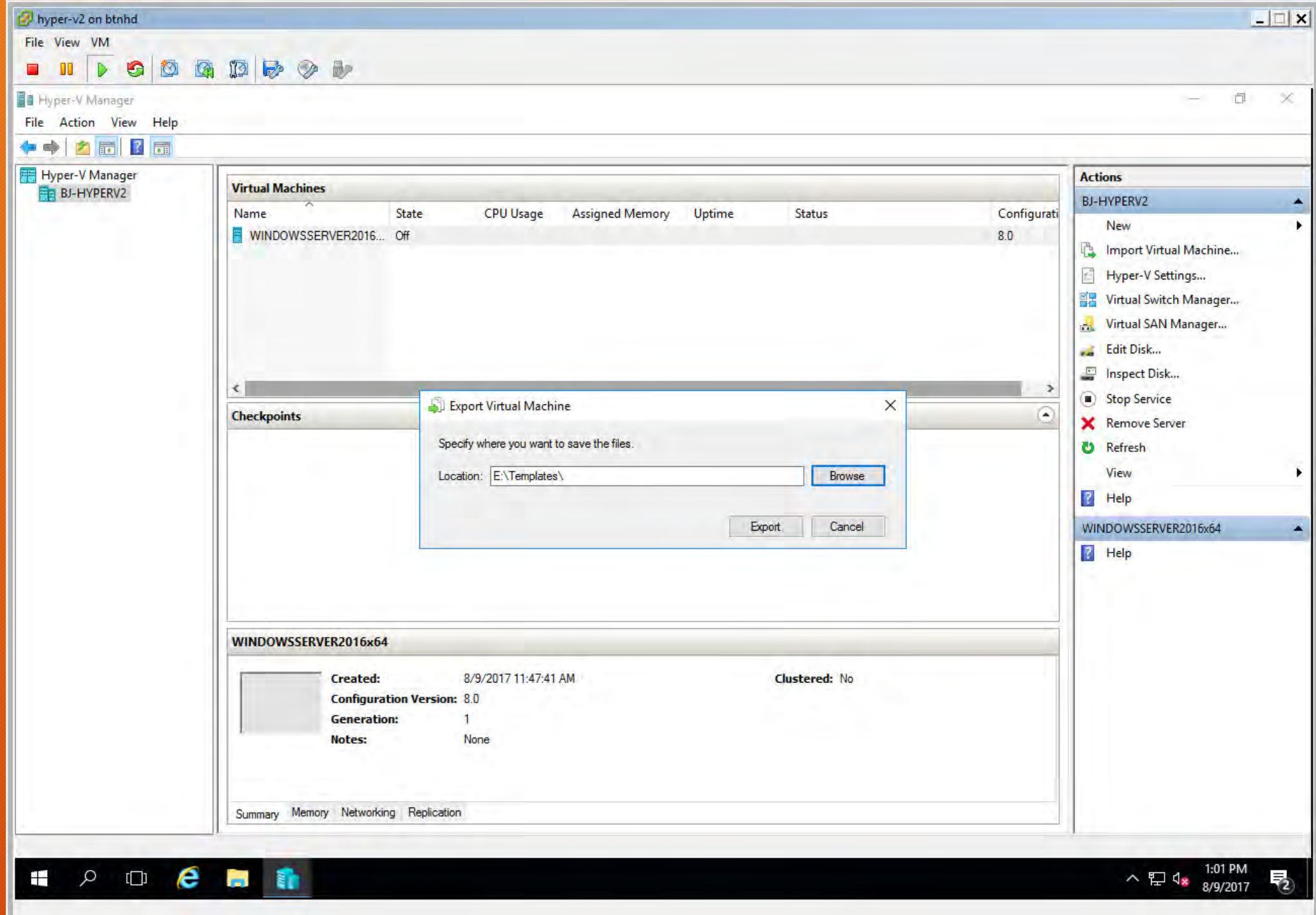












hyper-v2 on btnhd

File View VM

Hyper-V Manager

File Action View Help

Hyper-V Manager

BJ-HYPERV2

Virtual Machines

Name	State	CPU Usage	Assigned Memory	Uptime	Status	Configuration
WINDOWS SERVER2016x64	Off				Exporting...	8.0

Checkpoints

The selected virtual machine has no checkpoints.

Actions

- New
- Import Virtual Machine...
- Hyper-V Settings...
- Virtual Switch Manager...
- Virtual SAN Manager...
- Edit Disk...
- Inspect Disk...
- Stop Service
- Remove Server
- Refresh
- View
- Help

WINDOWSSERVER2016x64

Created: 8/9/2017 11:47:41 AM Clustered: No

Configuration Version: 8.0

Generation: 1

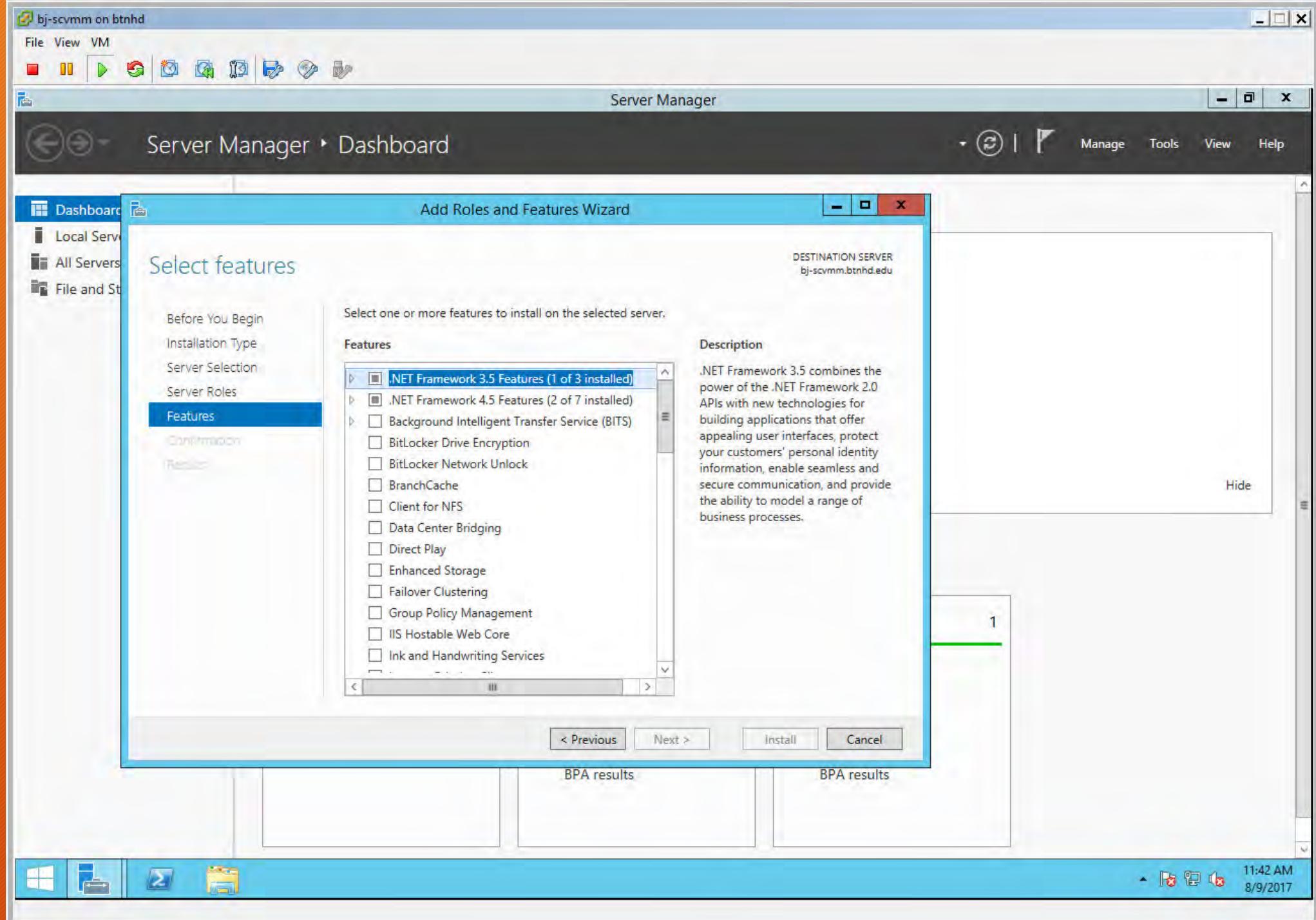
Notes: None

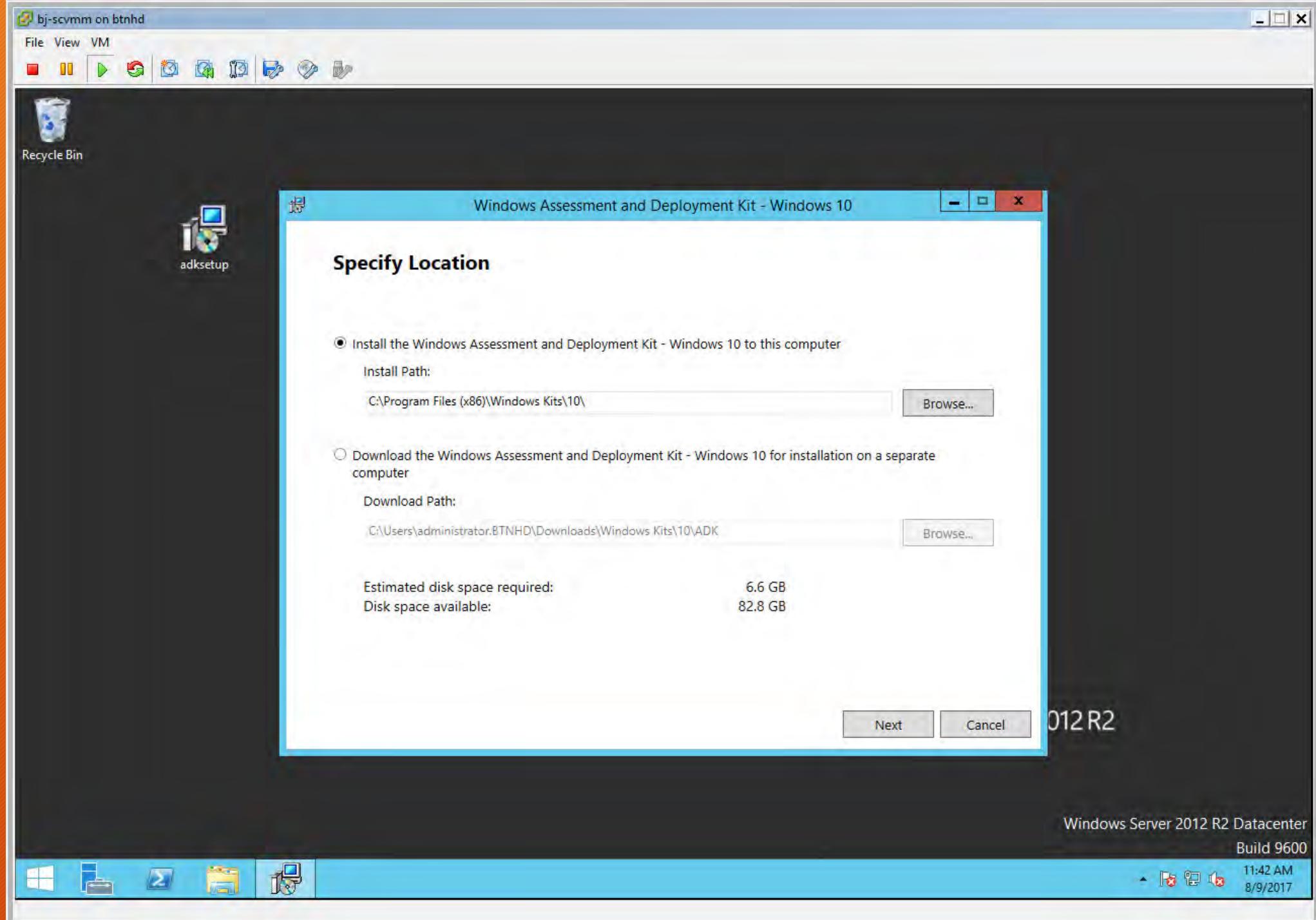
Summary Memory Networking Replication

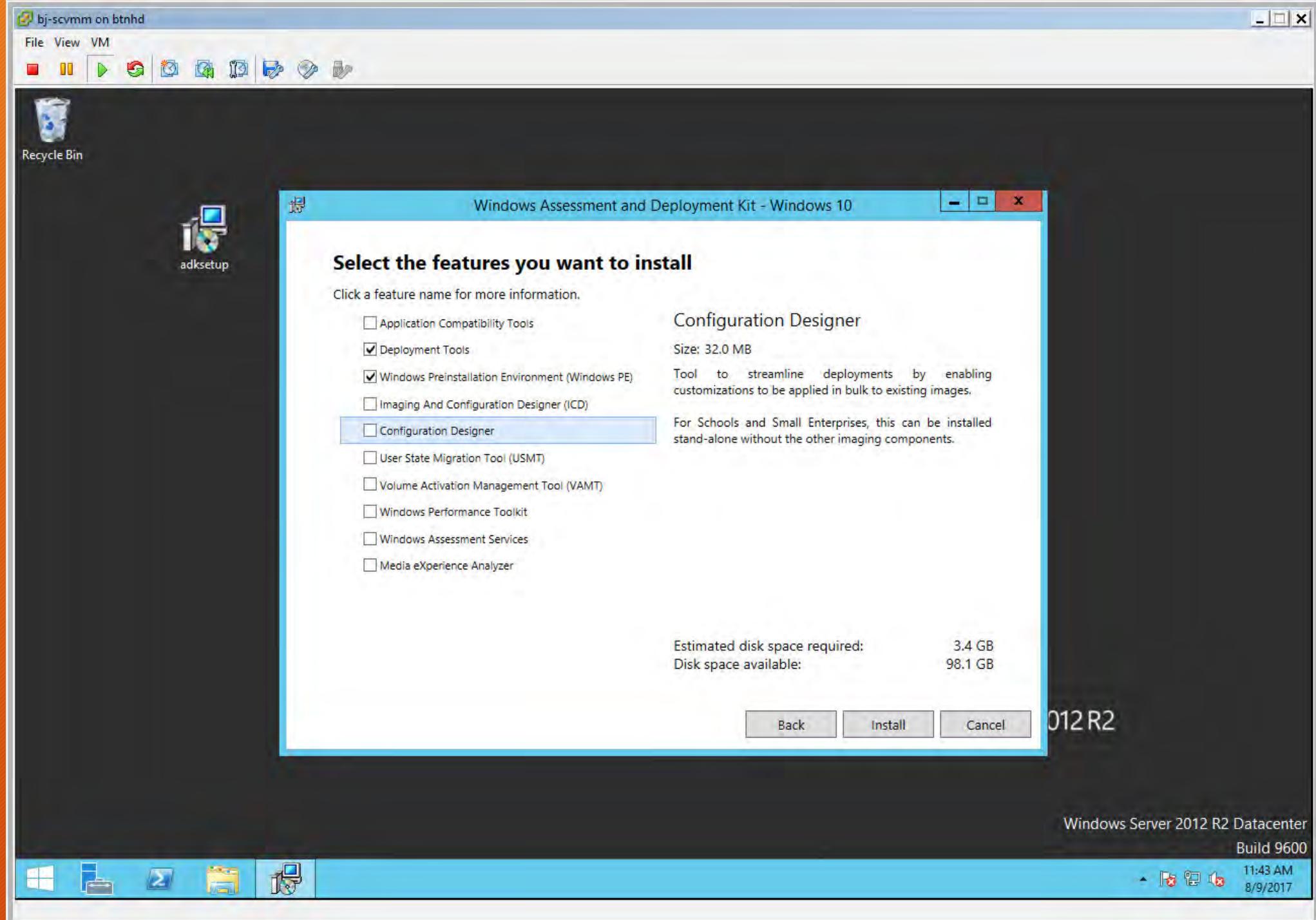
1:01 PM 8/9/2017

This screenshot shows the Microsoft Hyper-V Manager application window. The title bar indicates it is running on a host machine named 'hyper-v2 on btnhd'. The main interface includes a ribbon menu with File, View, and VM tabs, and a toolbar with various icons for managing virtual machines. On the left, a navigation pane lists 'Hyper-V Manager' and the host server 'BJ-HYPERV2'. The central area features a 'Virtual Machines' table with one entry: 'WINDOWS SERVER2016x64' (State: Off, Status: Exporting...). Below the table is a 'Checkpoints' section stating 'The selected virtual machine has no checkpoints.' The right side contains an 'Actions' pane with a list of management tasks such as New, Import Virtual Machine, and Refresh, along with a specific context menu for the selected VM ('WINDOWSSERVER2016x64'). This context menu includes options like Connect..., Settings..., Enable Replication..., Cancel Exporting, and Help. At the bottom, a taskbar shows standard Windows icons (Start, Search, Task View, Internet Explorer, File Explorer) and a system tray with a battery icon, network status, and a notification bubble. The system clock shows the time as 1:01 PM on 8/9/2017.

# Core Requirements for SCVMM



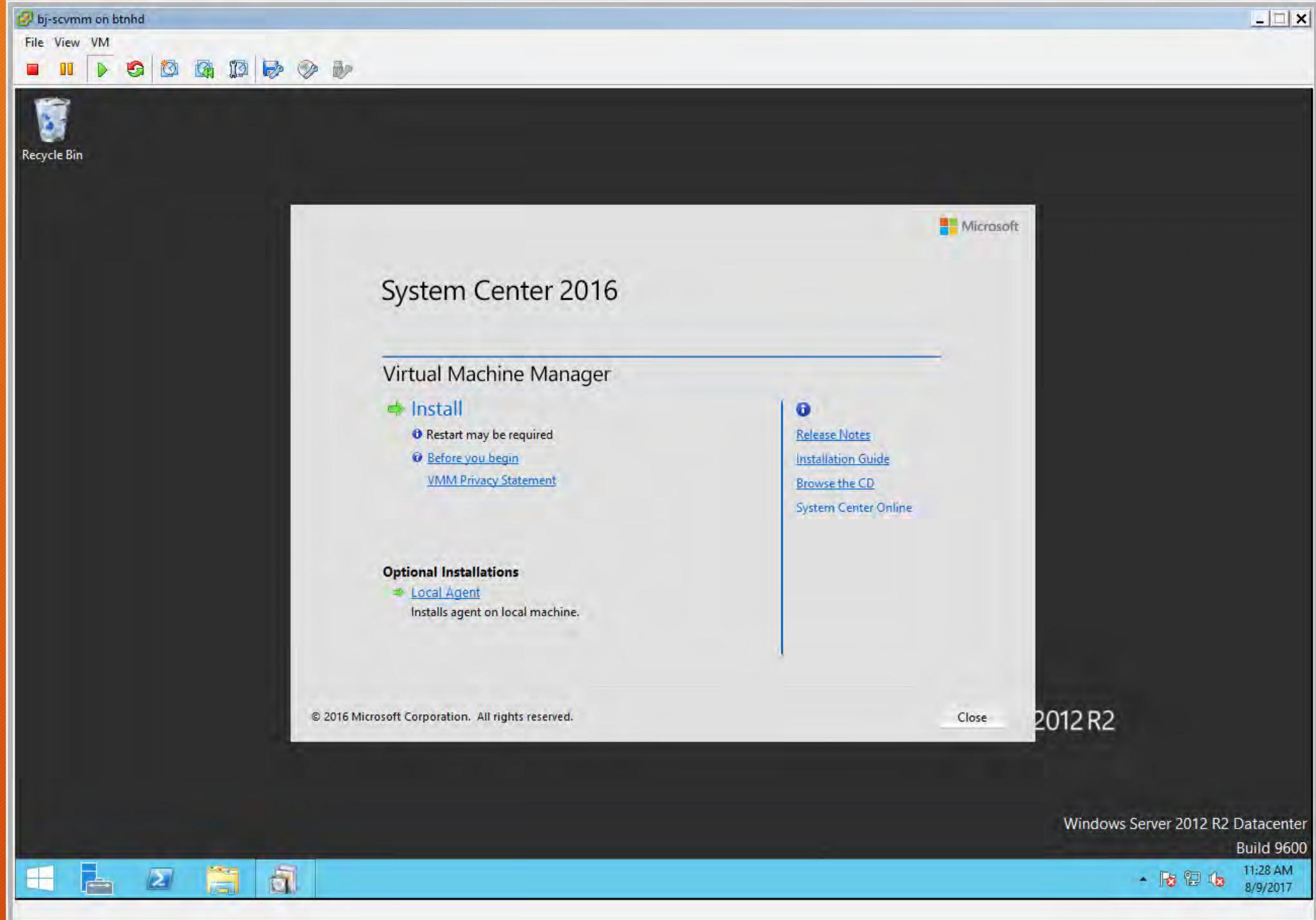


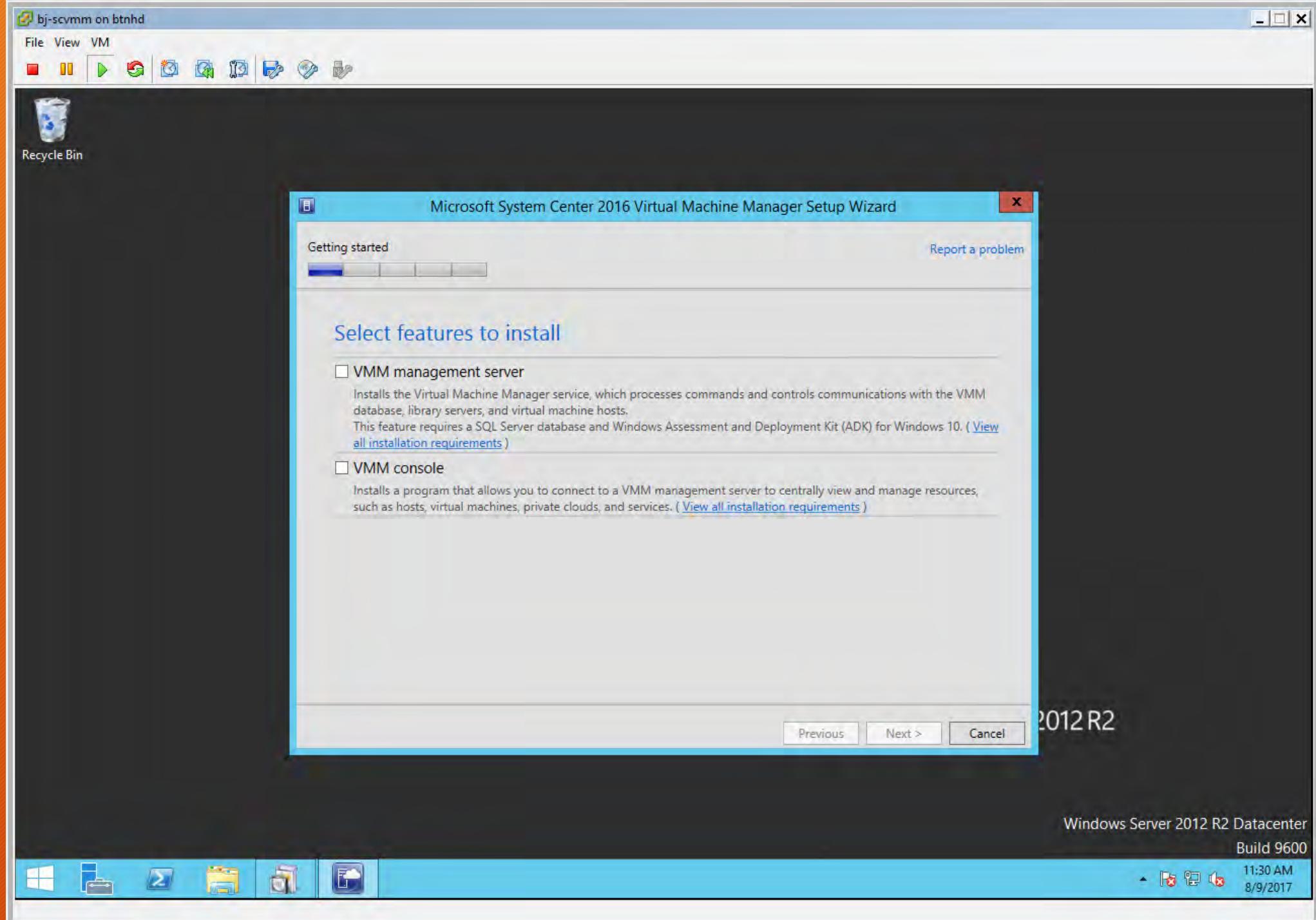


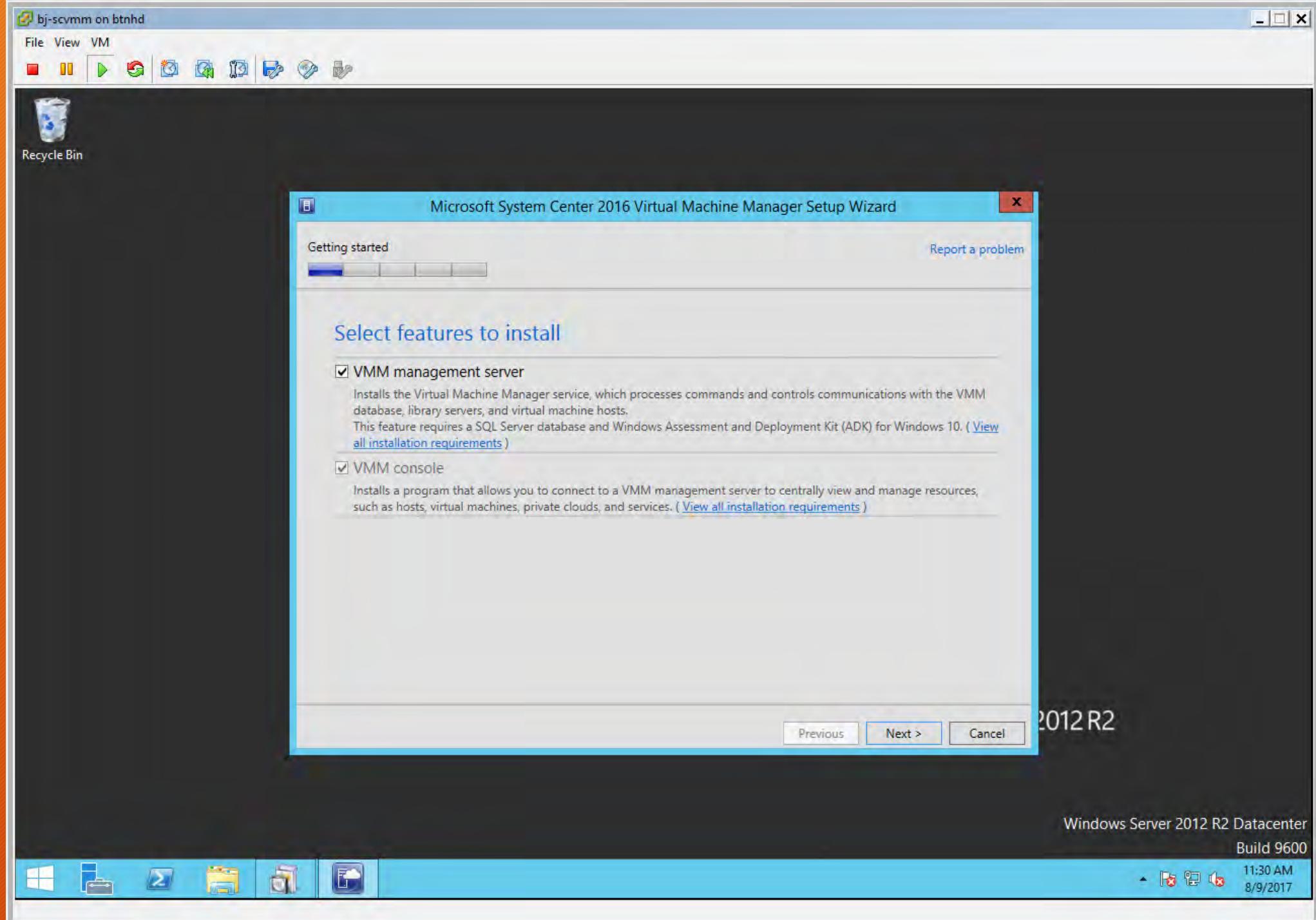


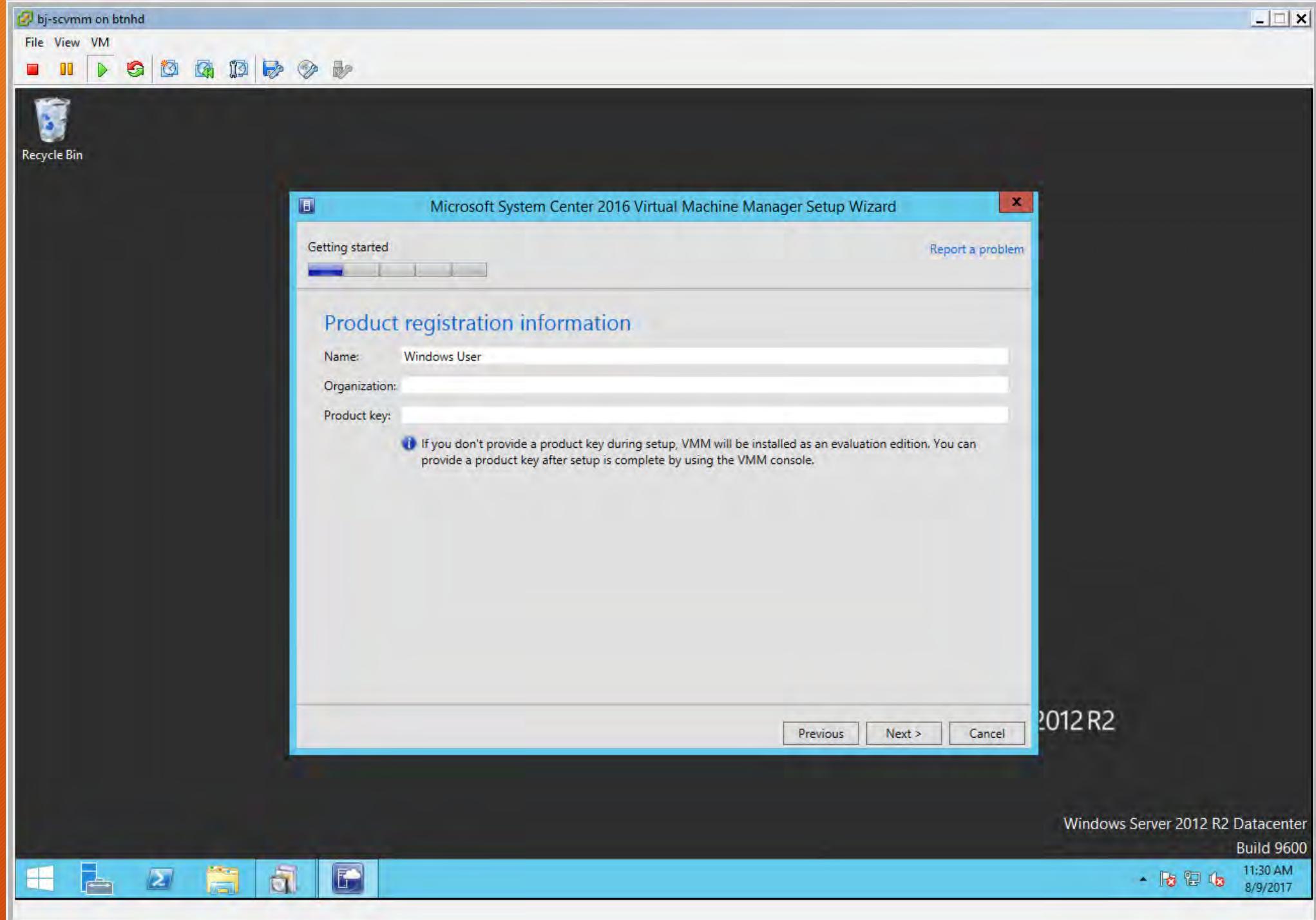
Microsoft®  
**SQL Server®**

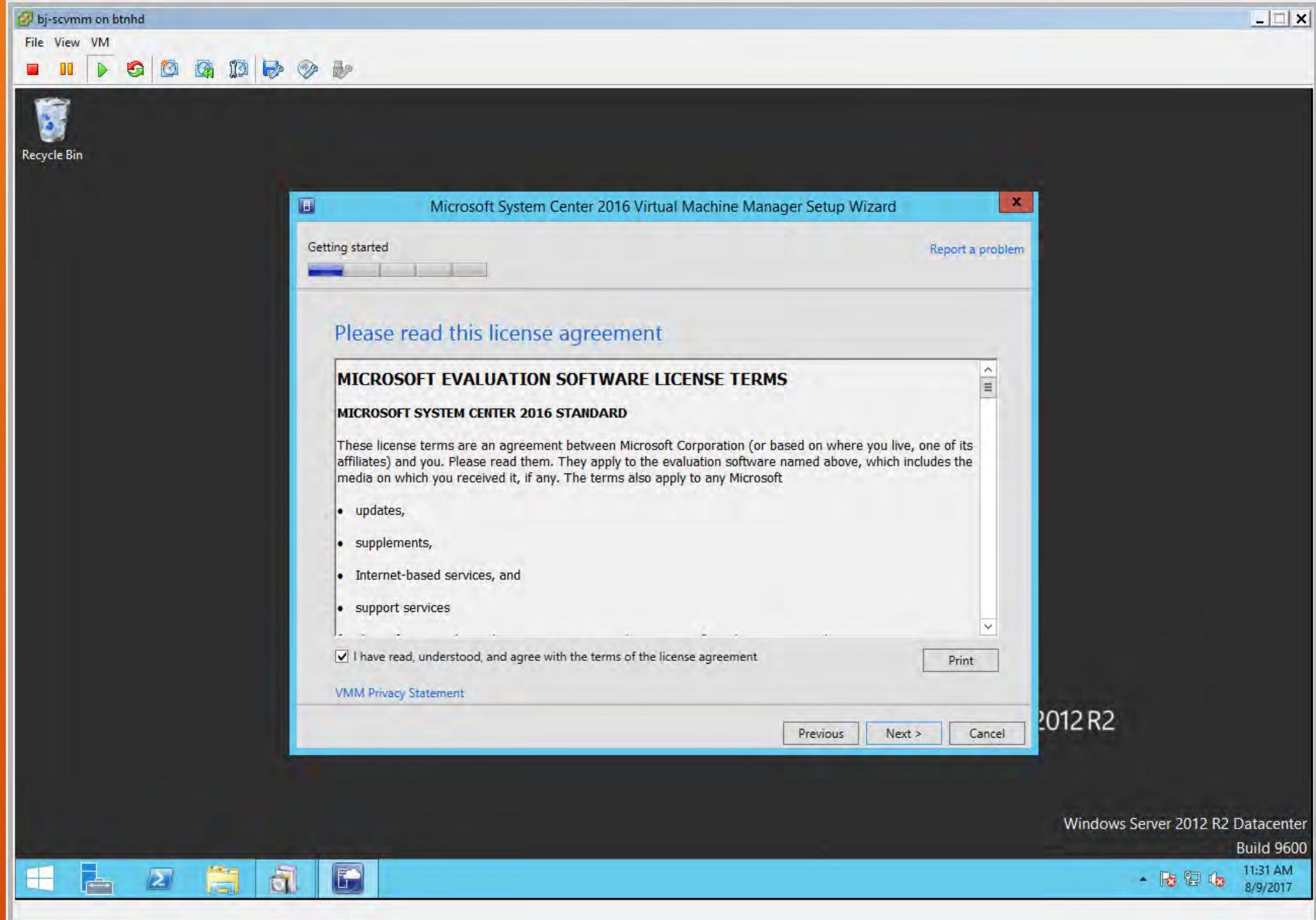
# Install SCVMM

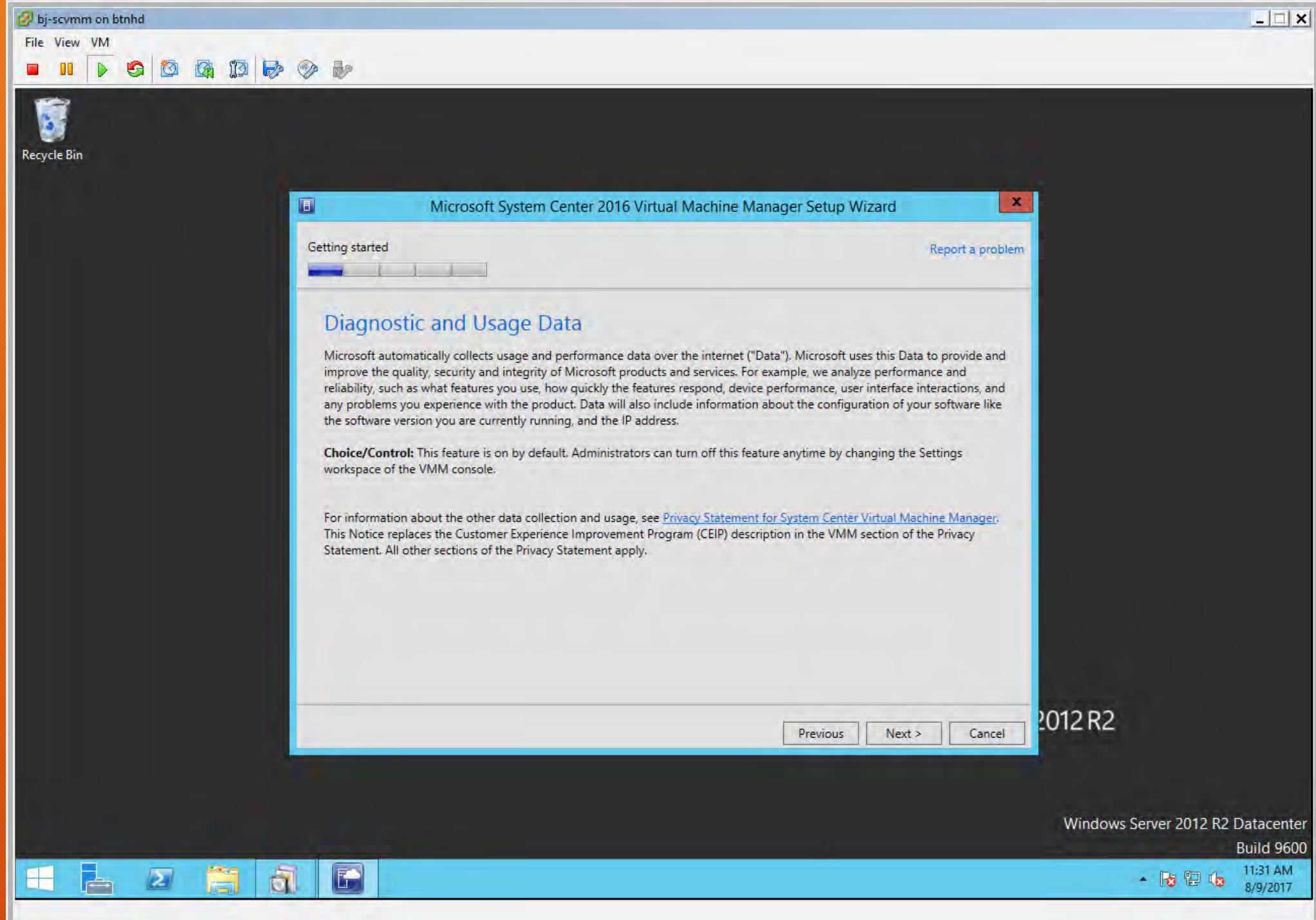


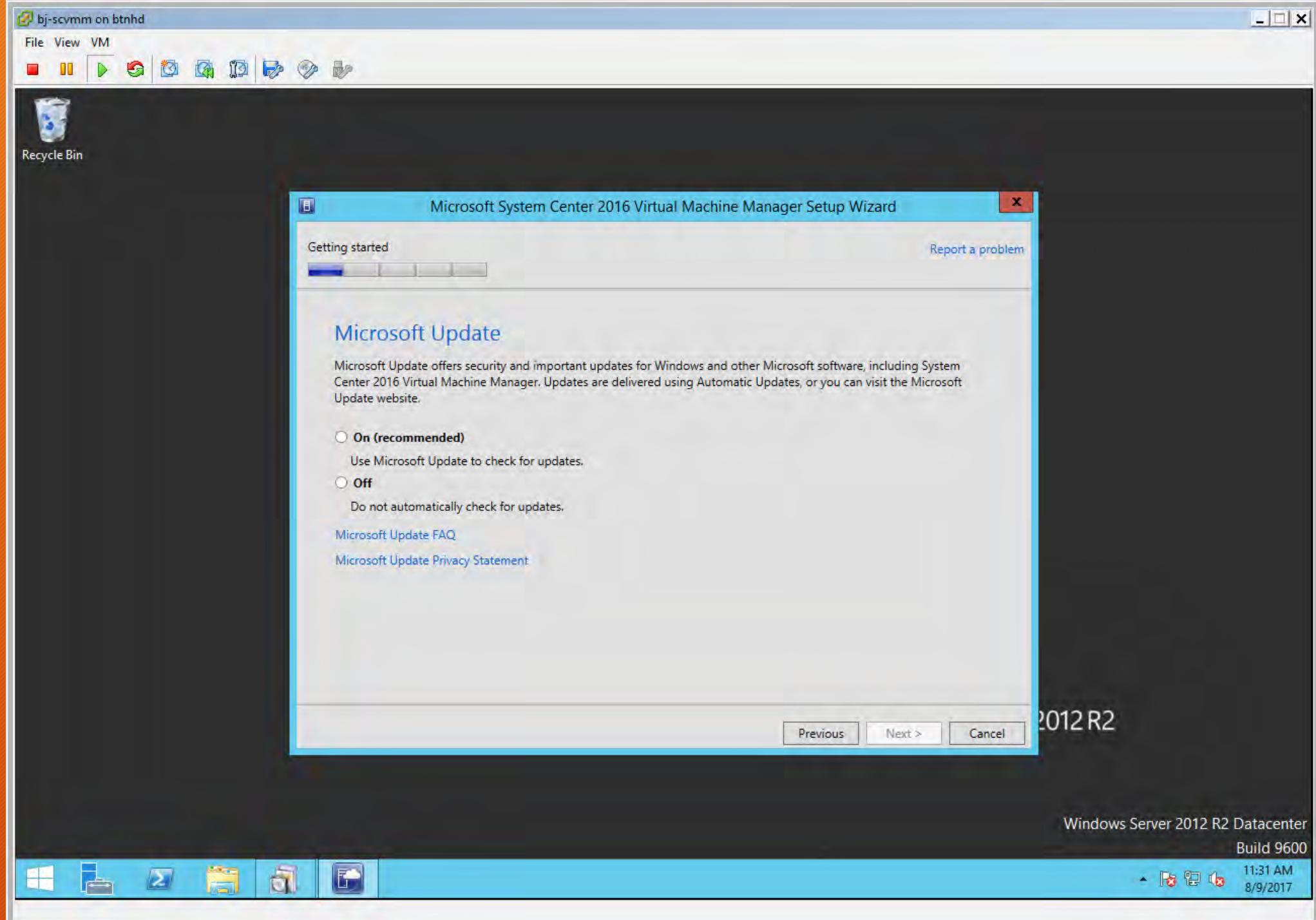


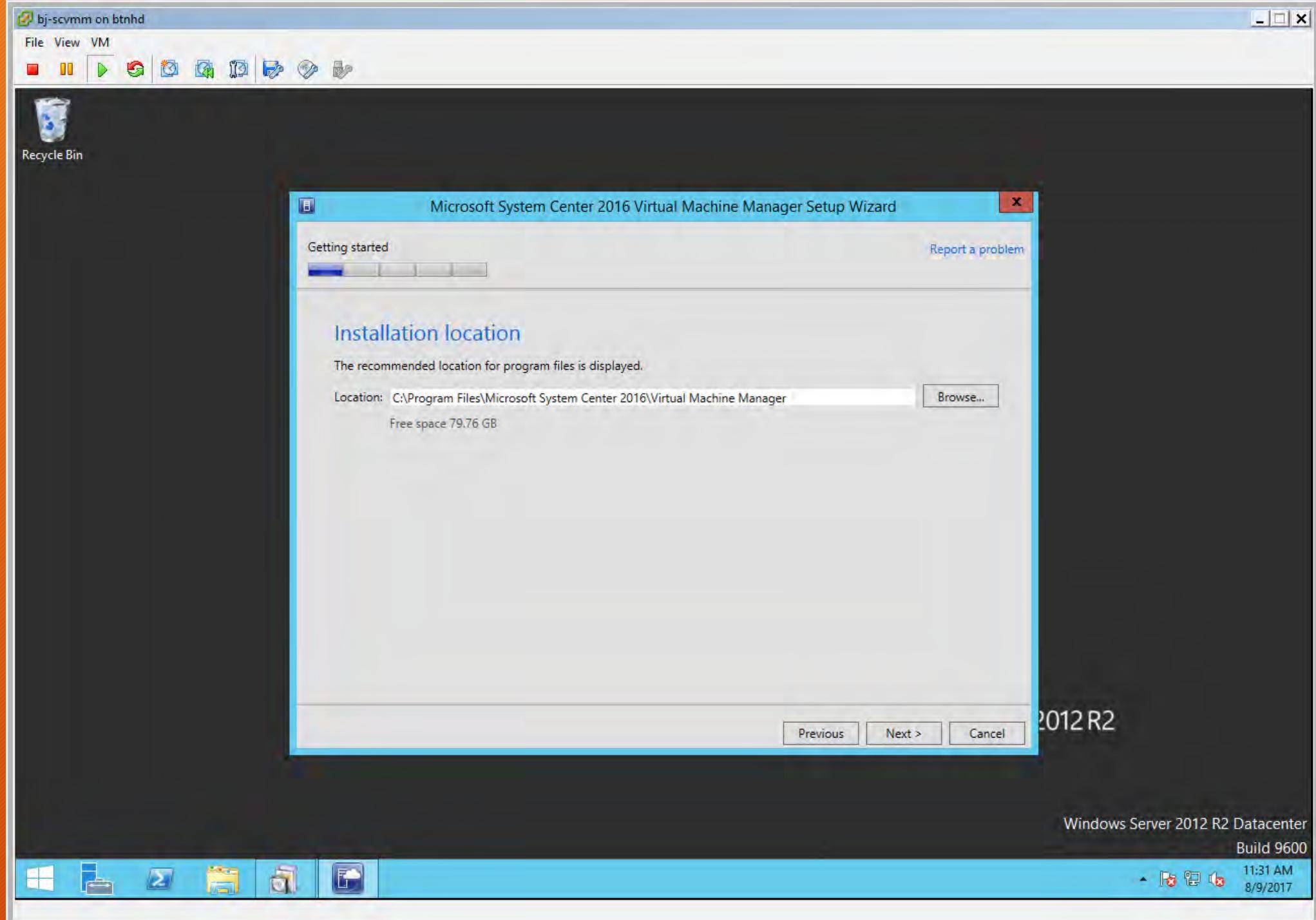


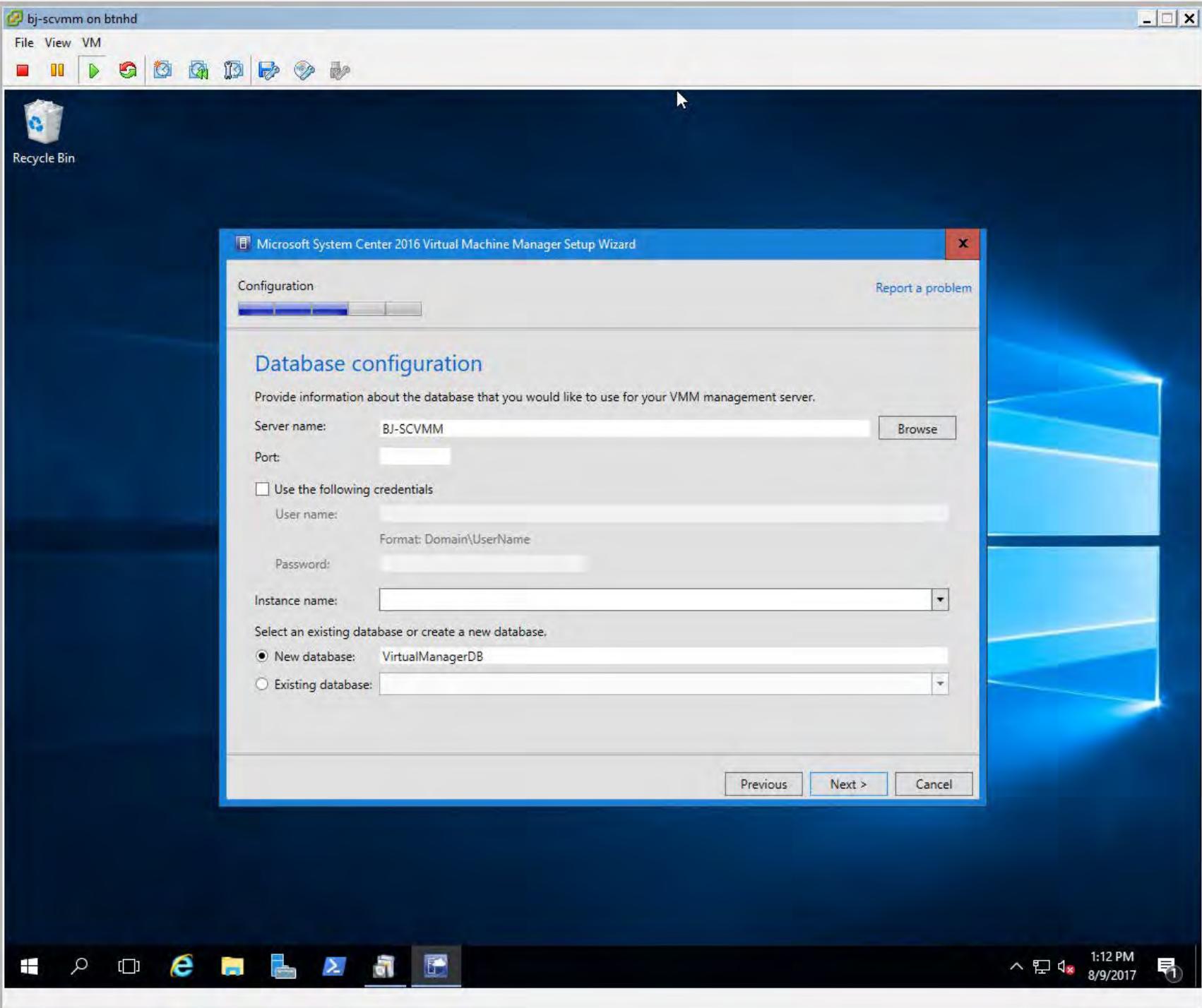


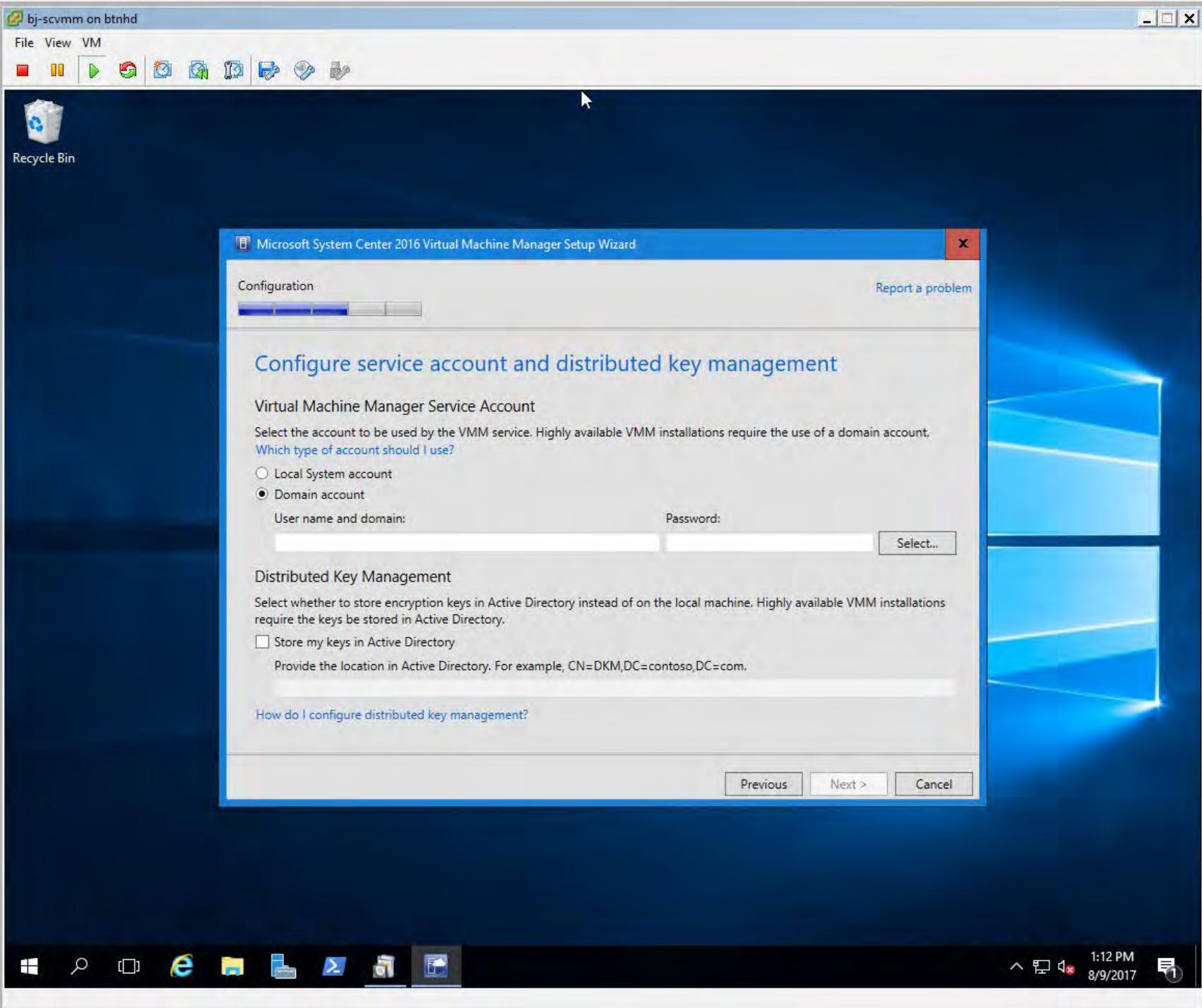


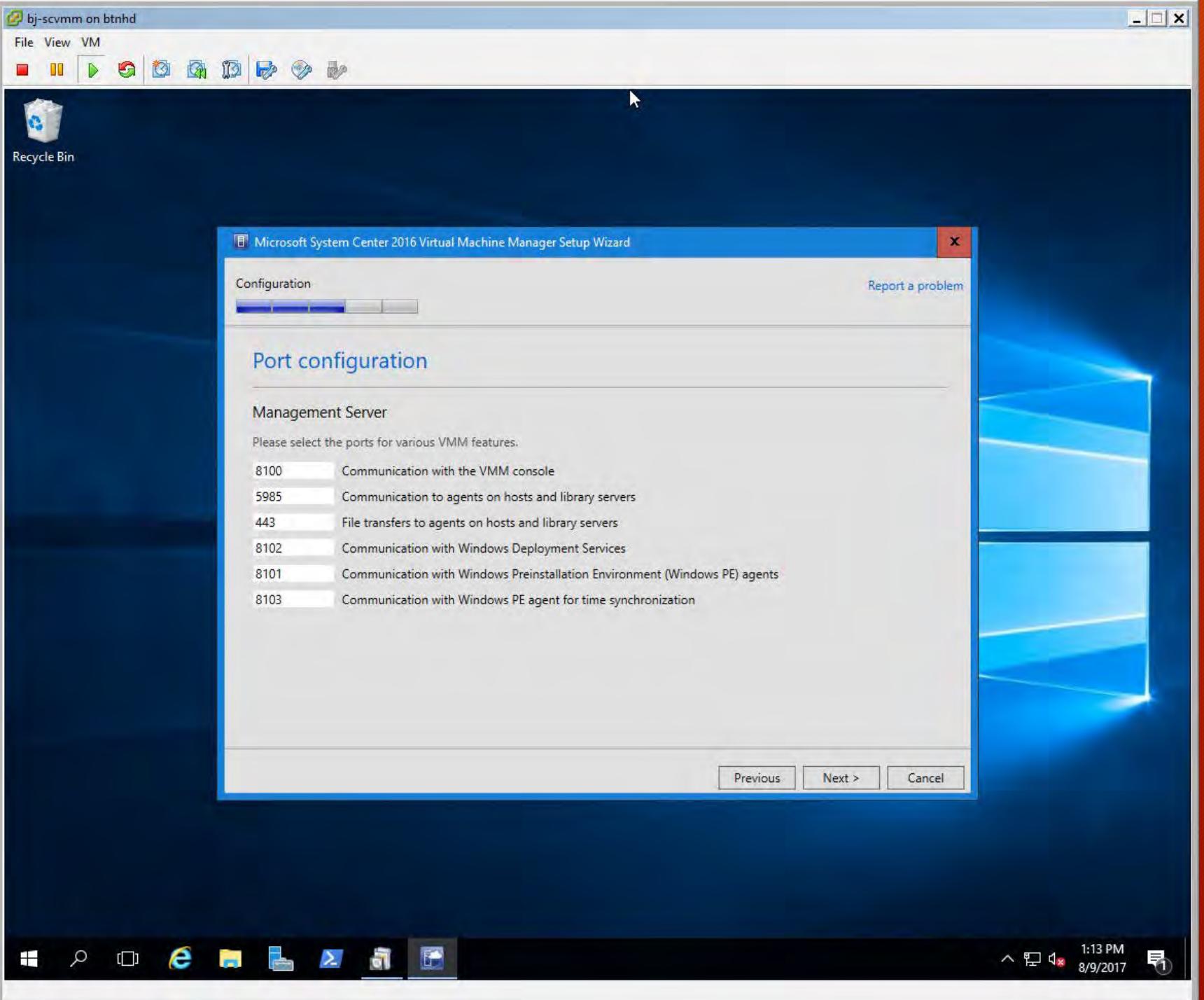


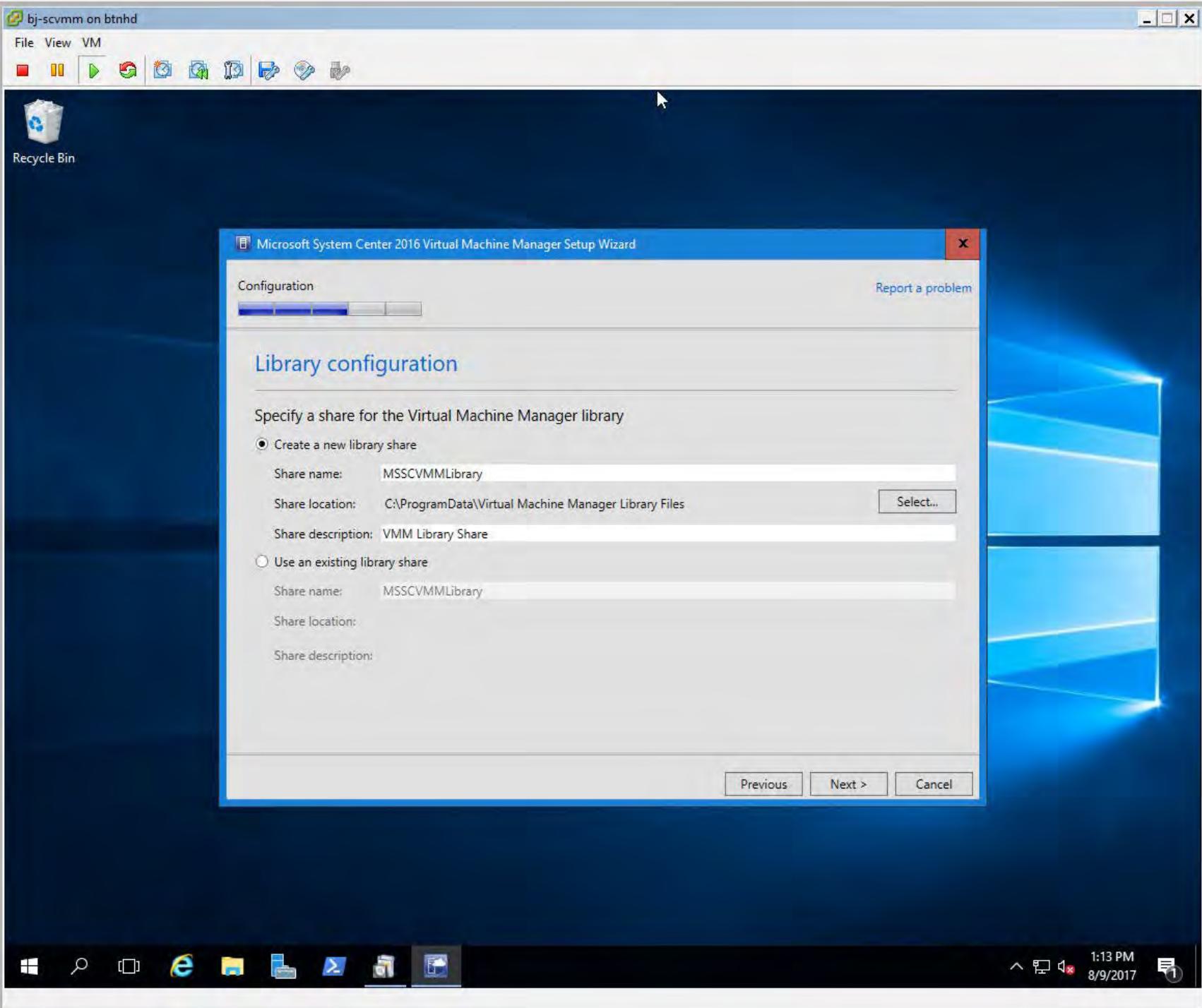


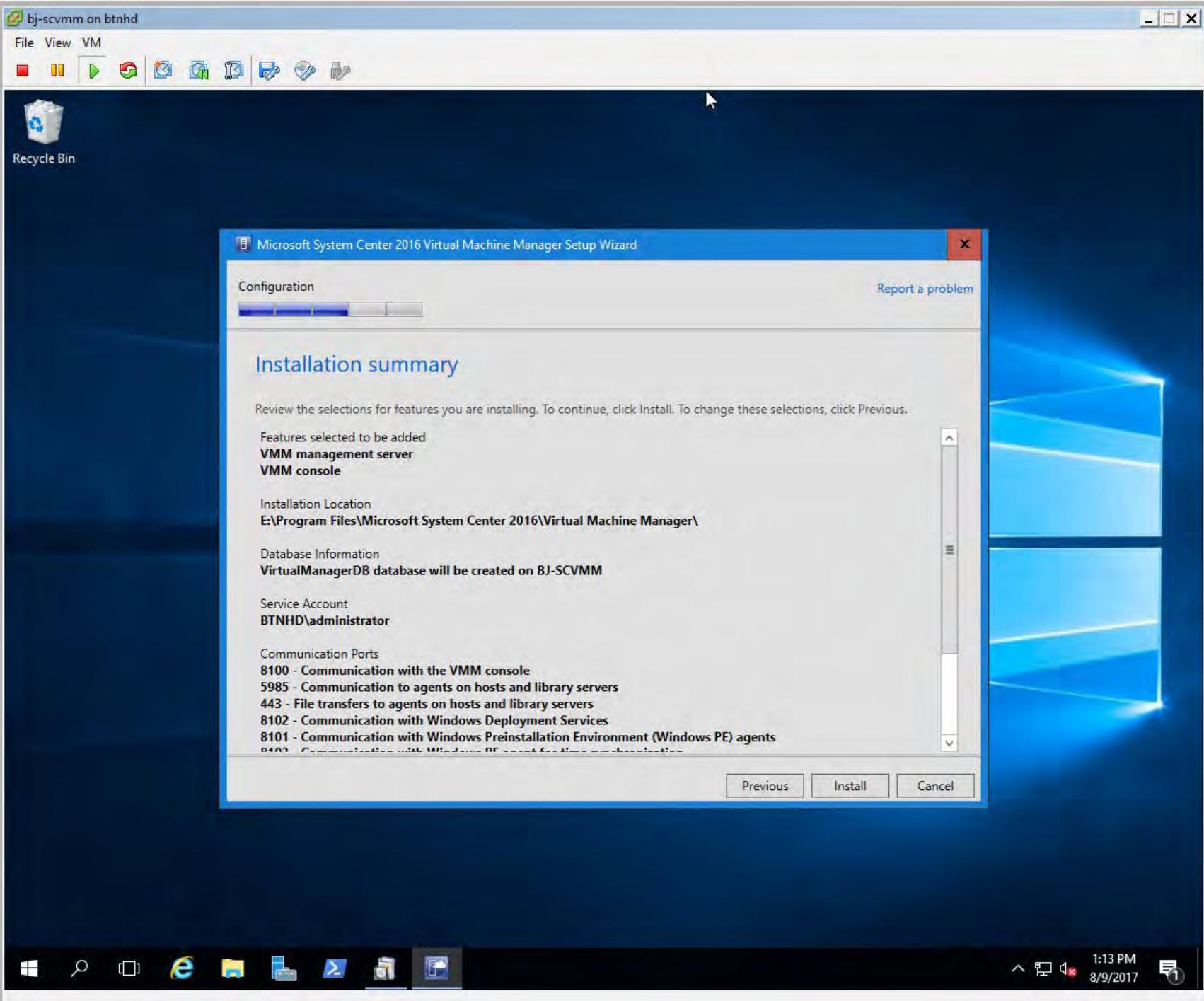


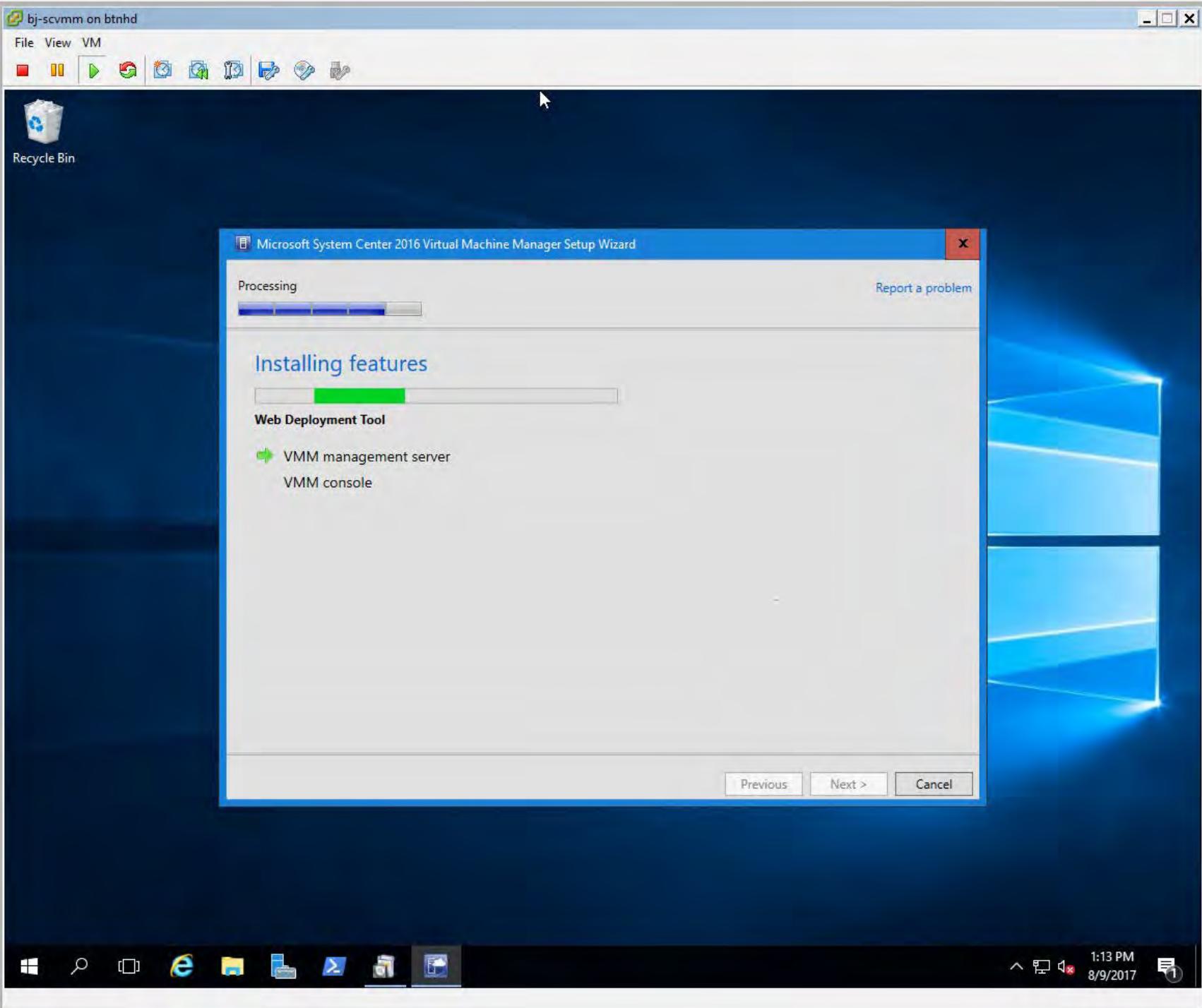


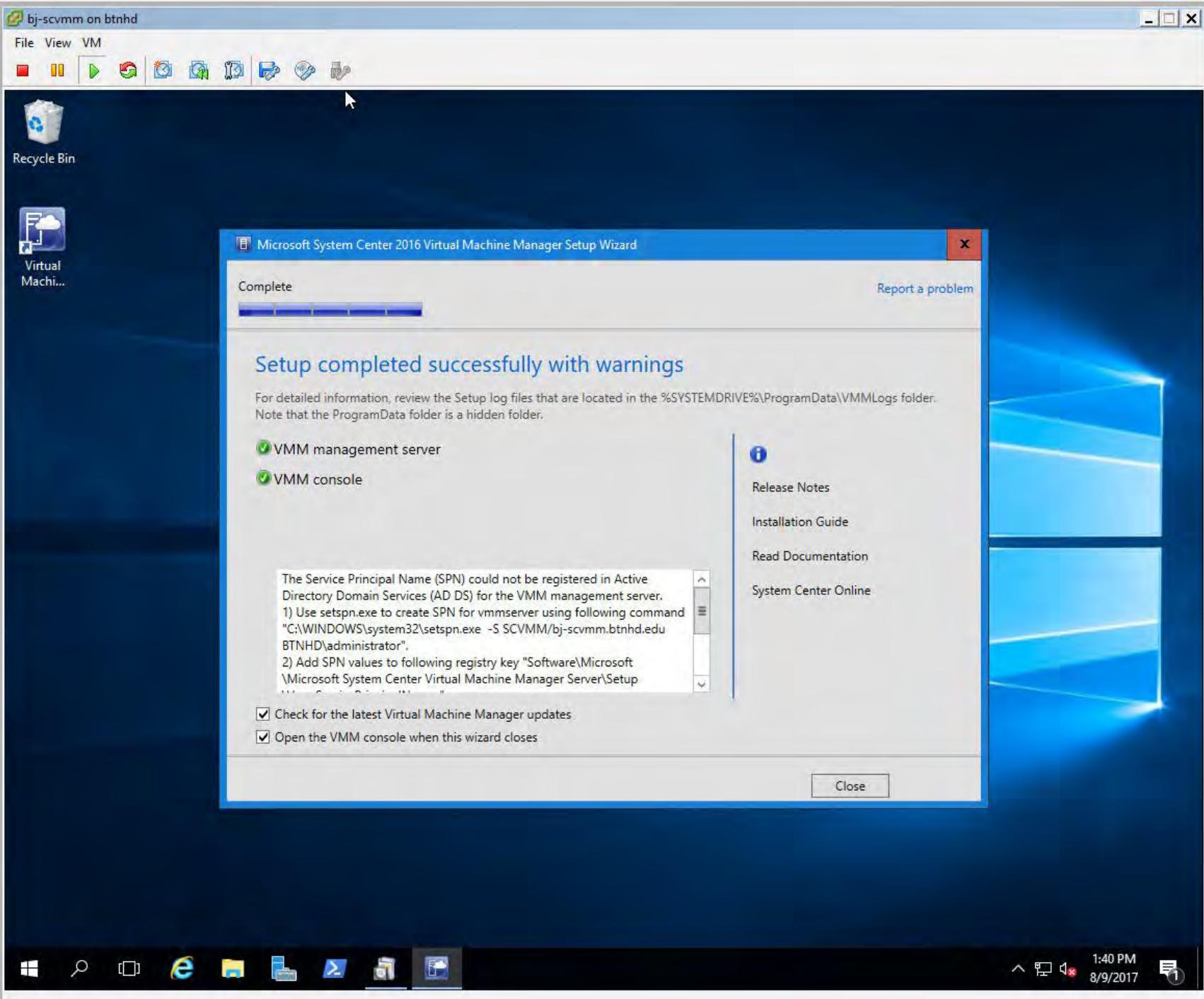


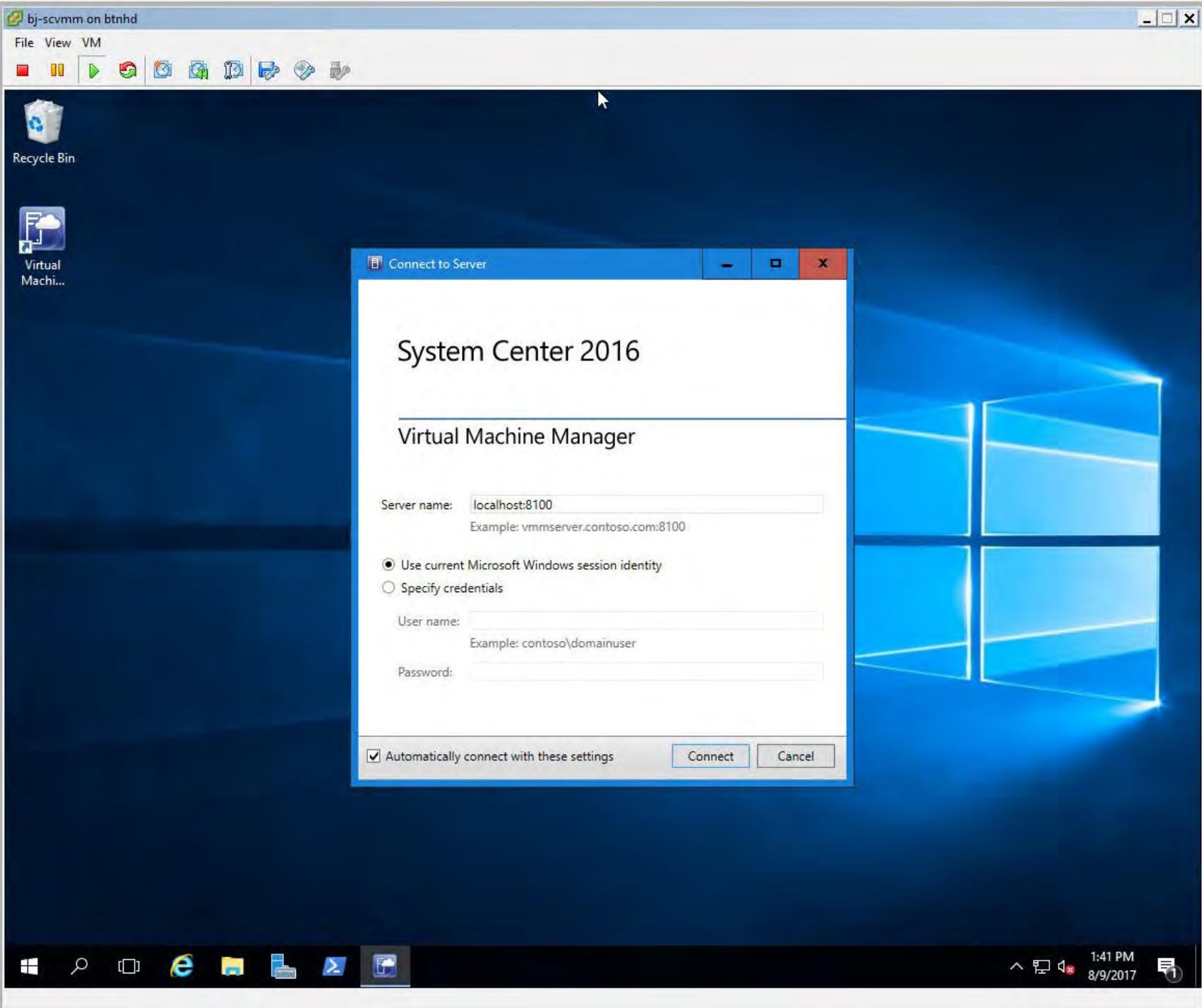


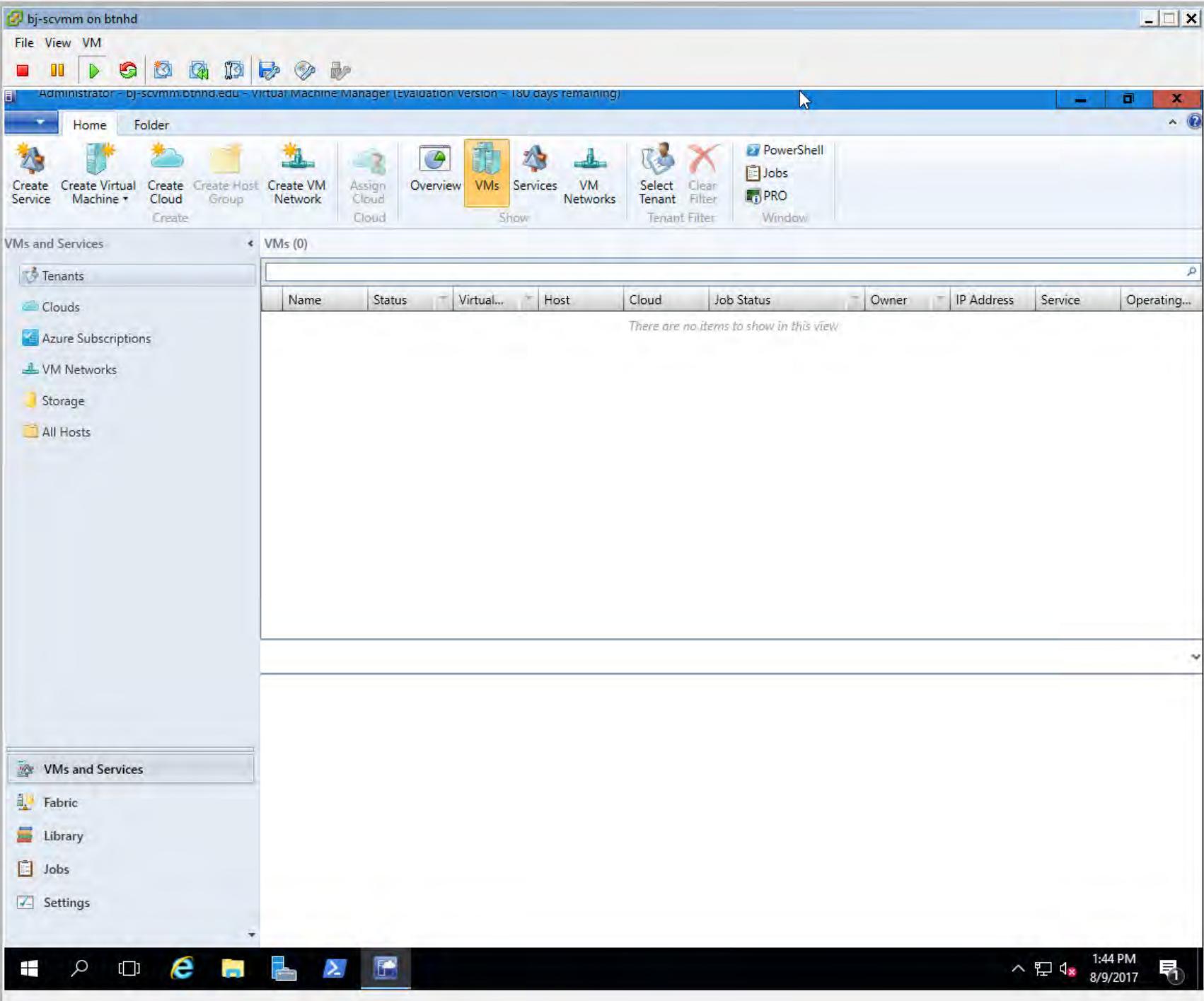




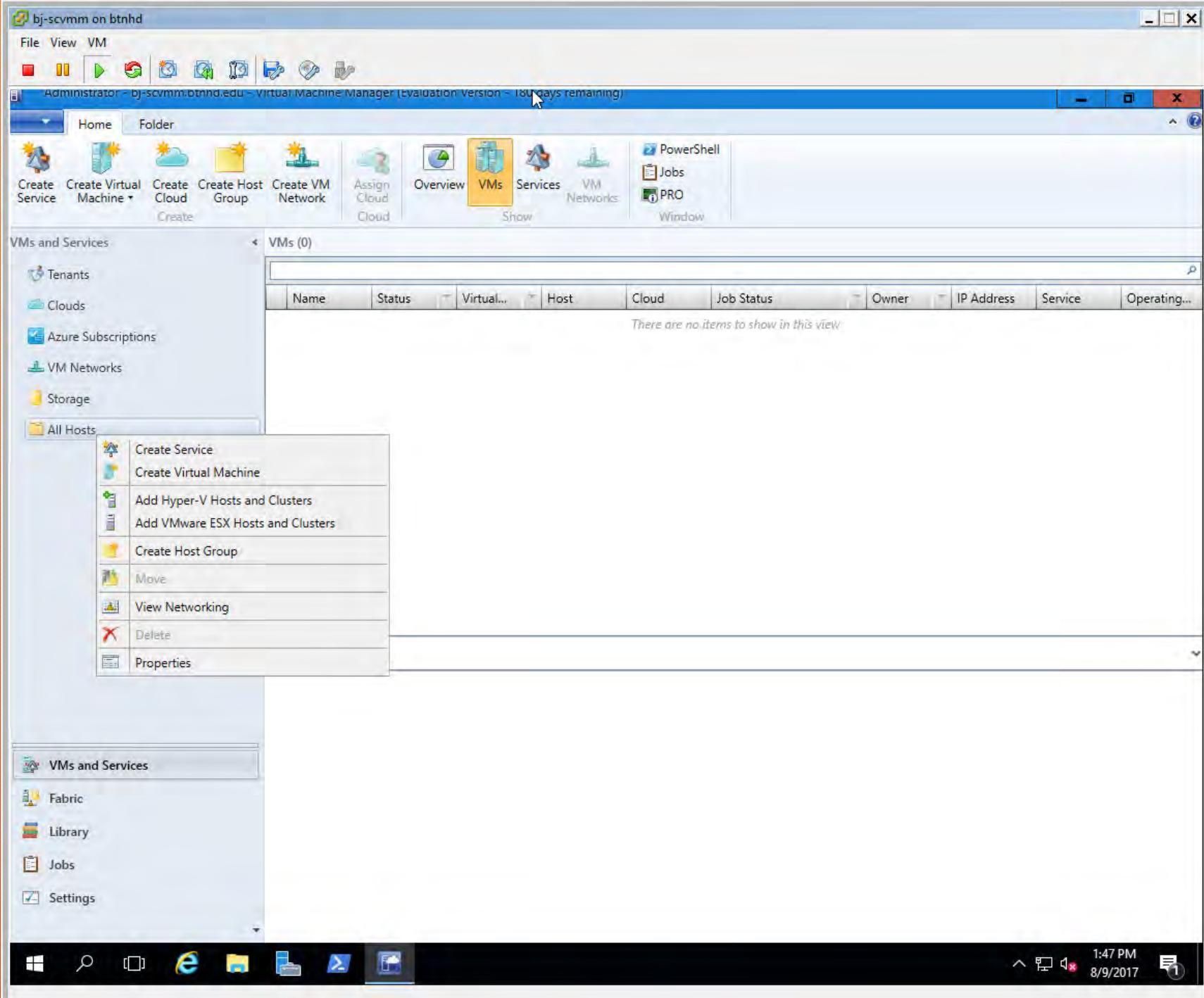


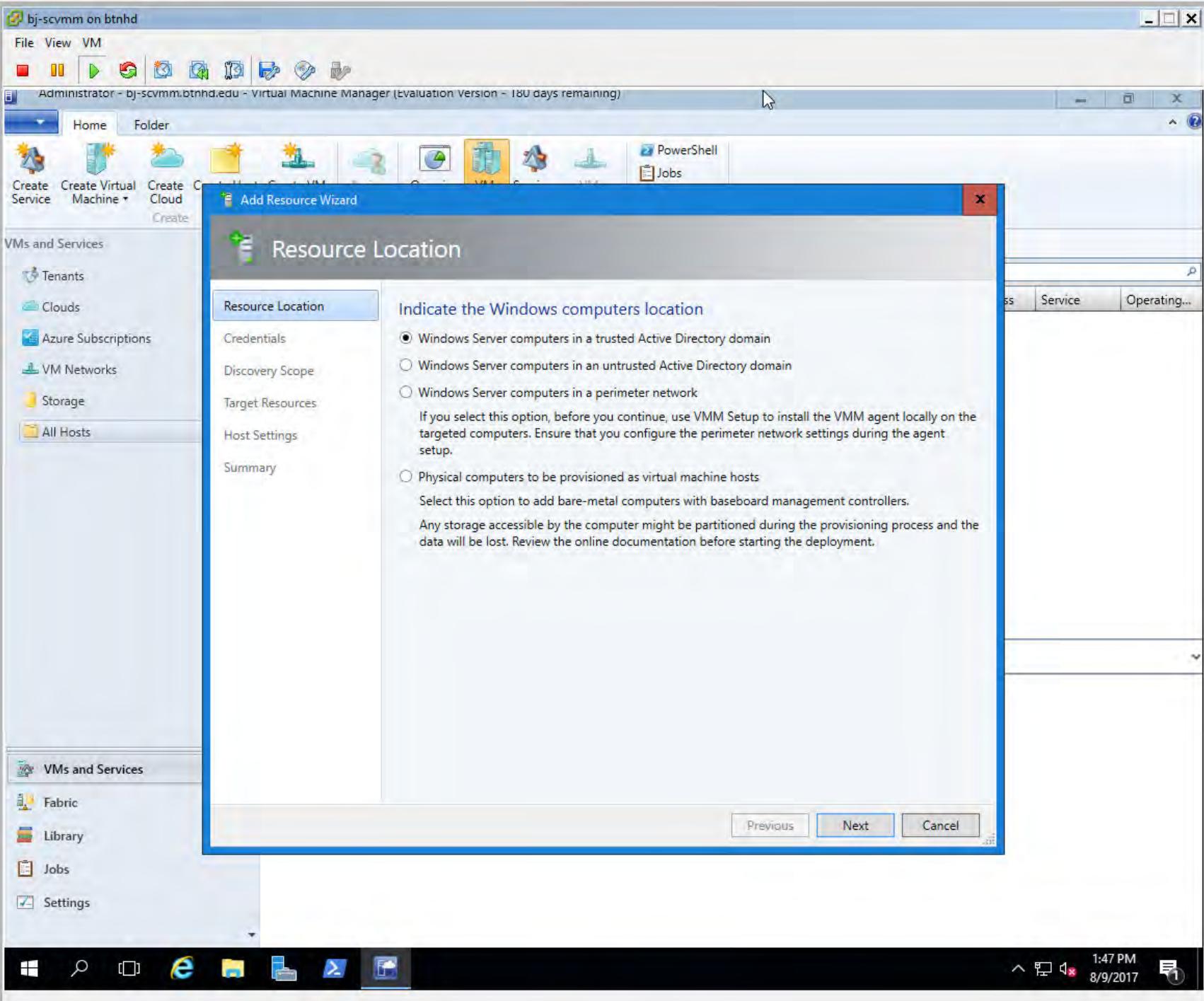


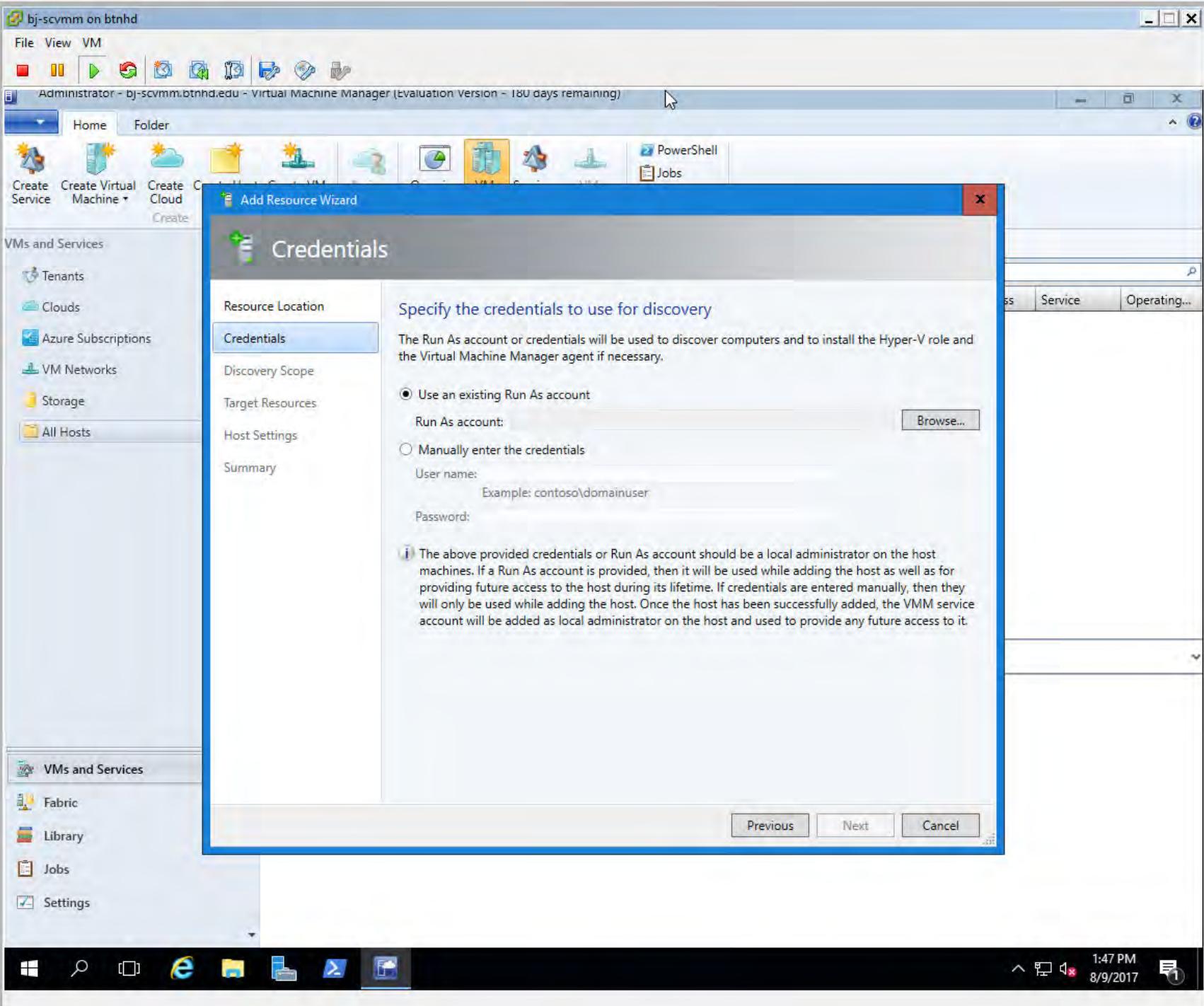


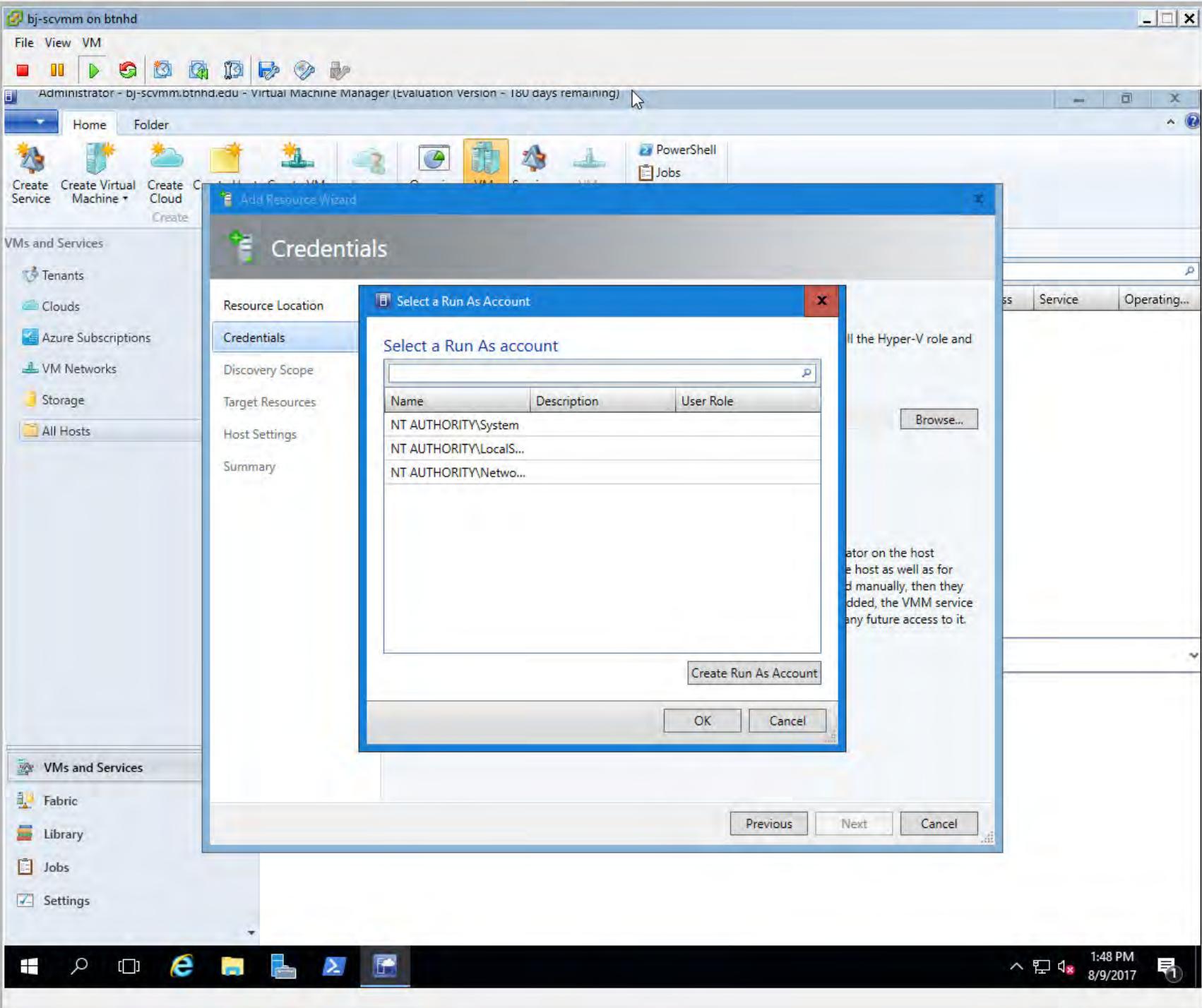


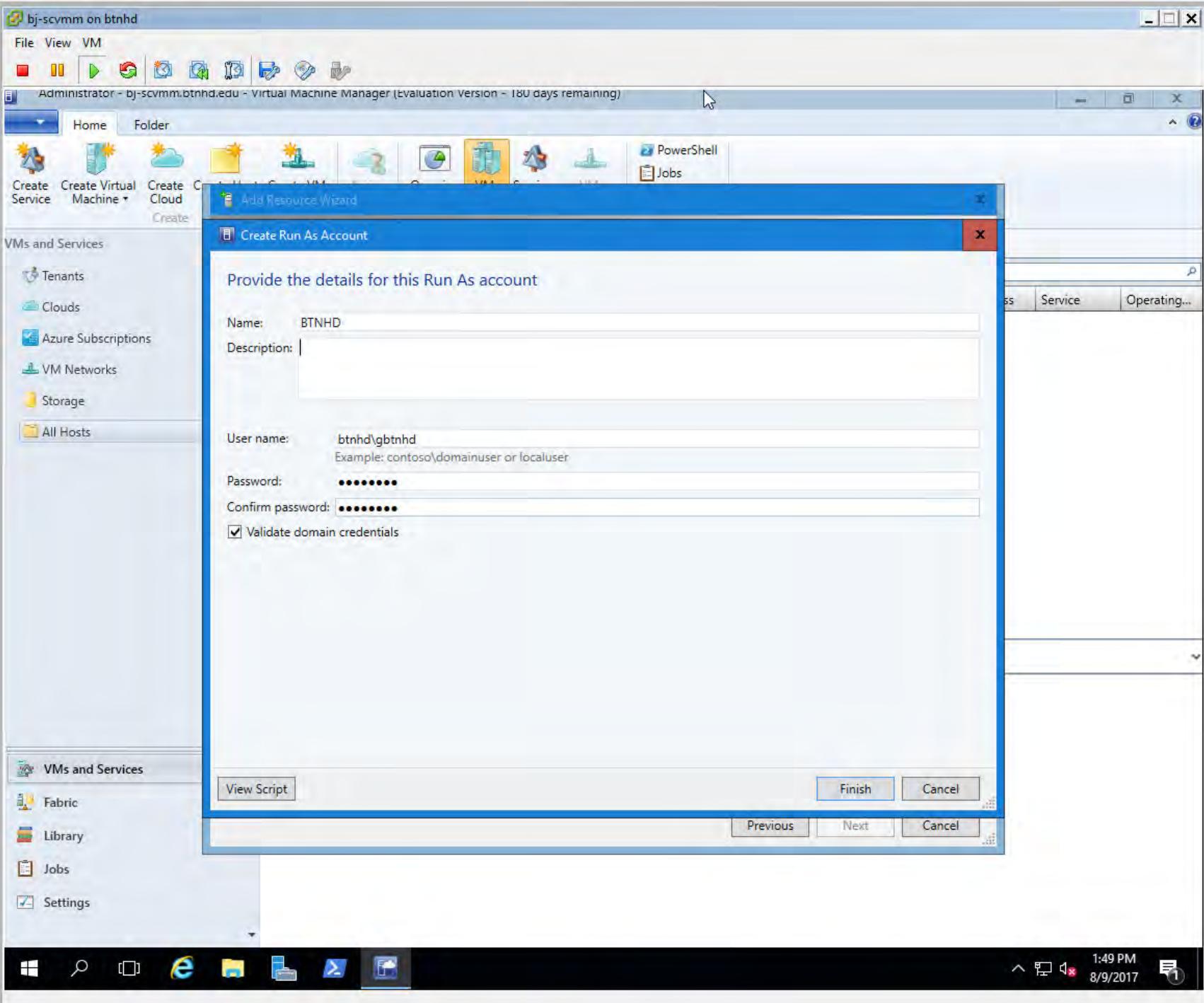
# Add Hyper-V Server into SCVMM

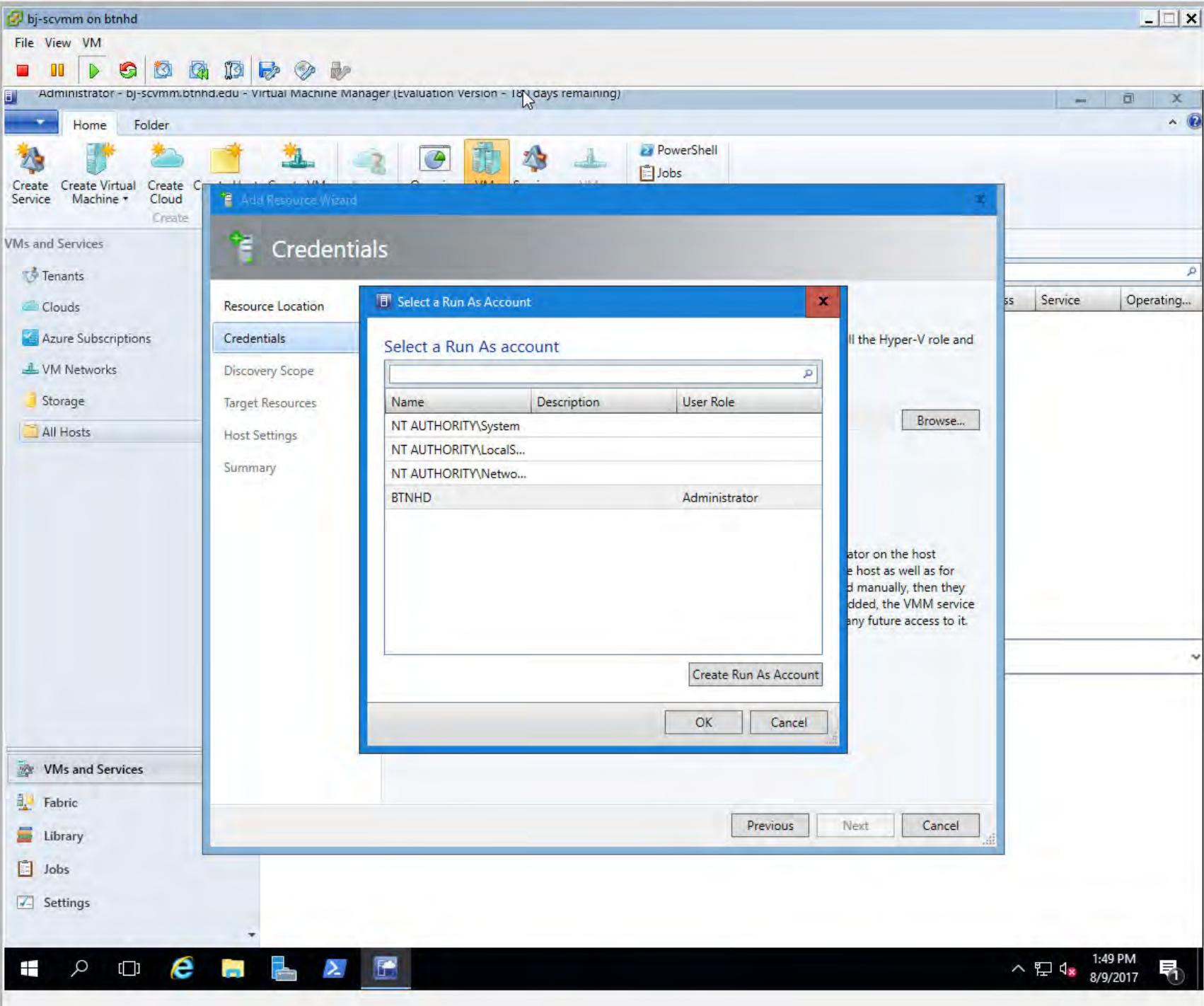


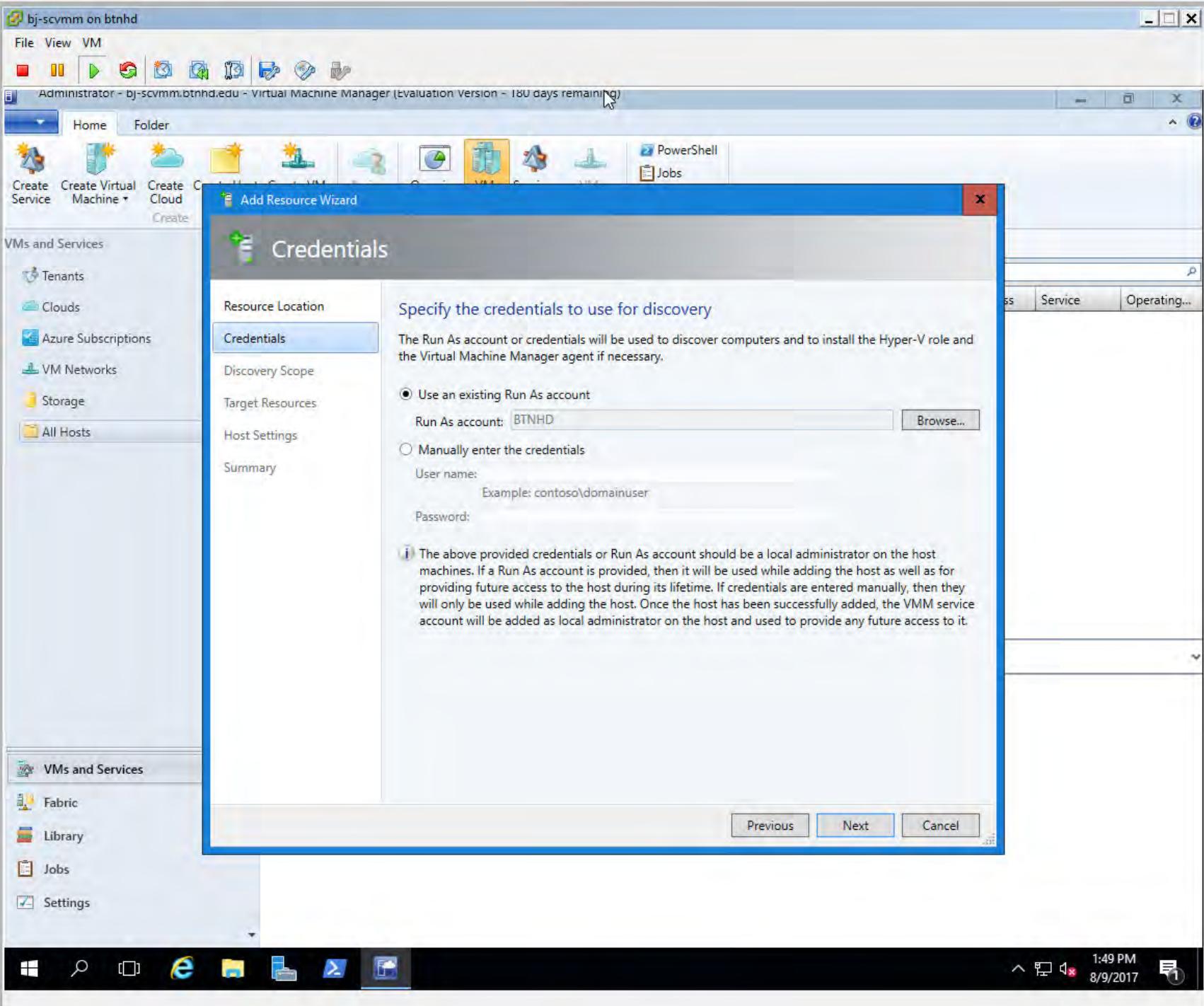


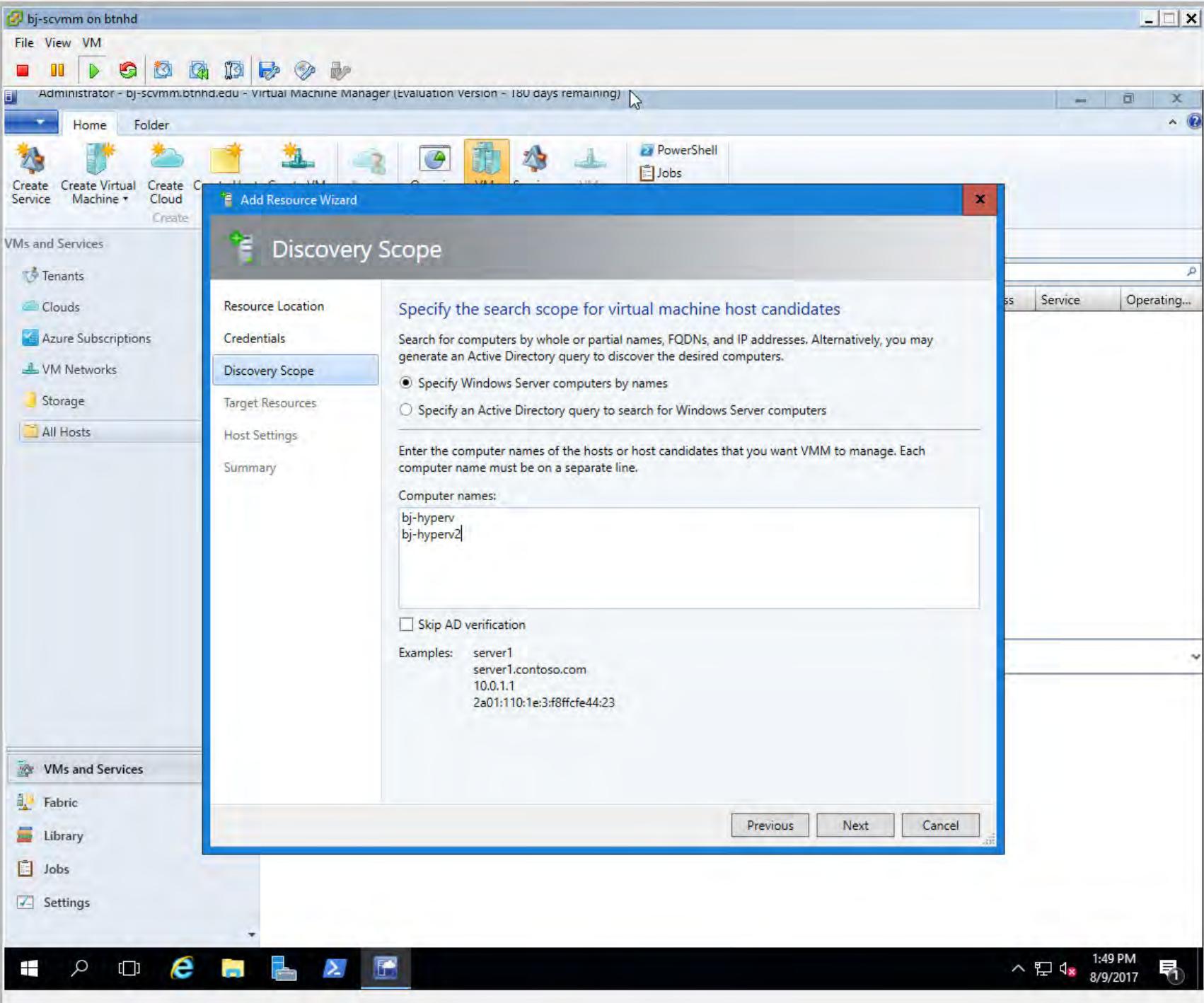


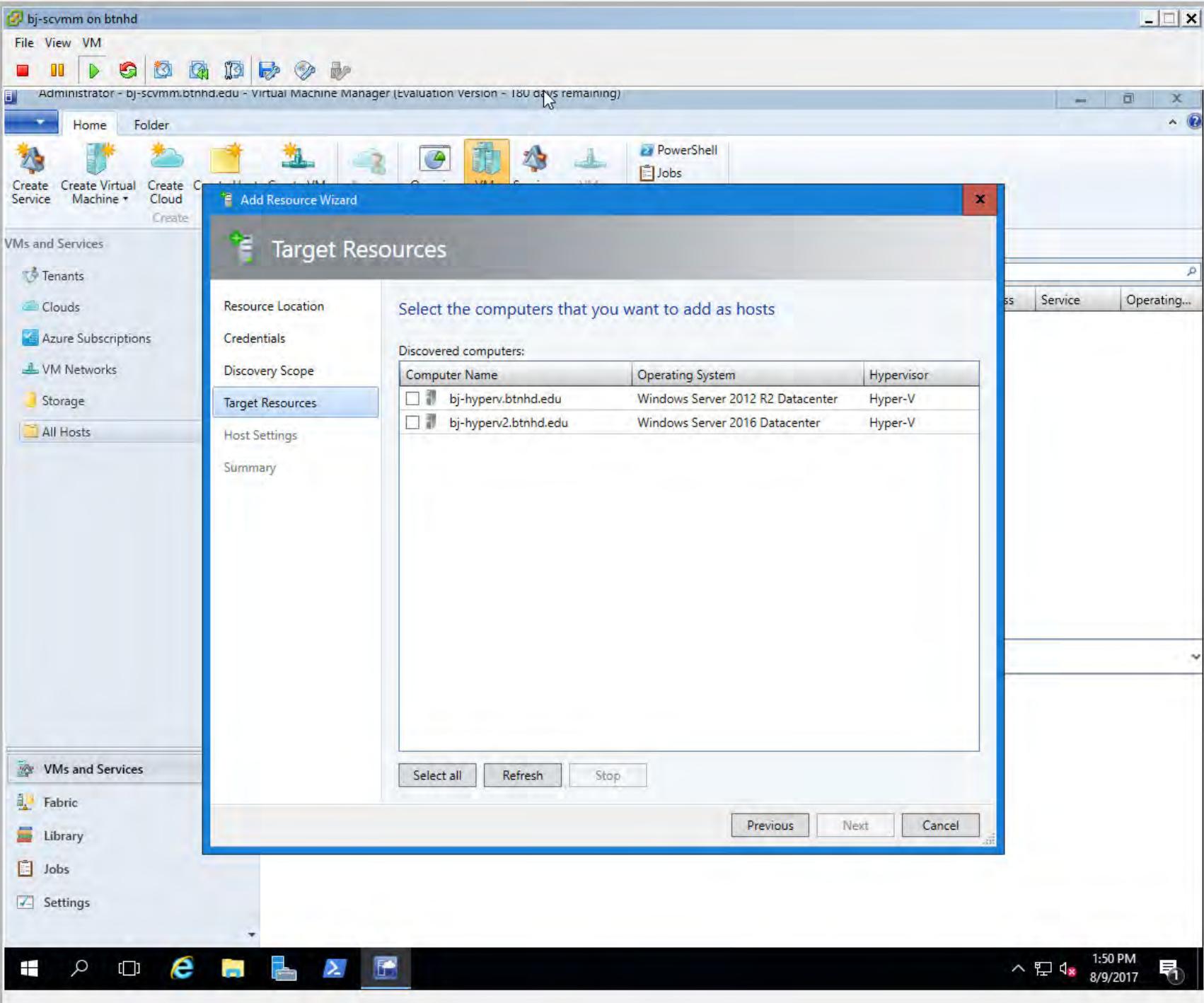


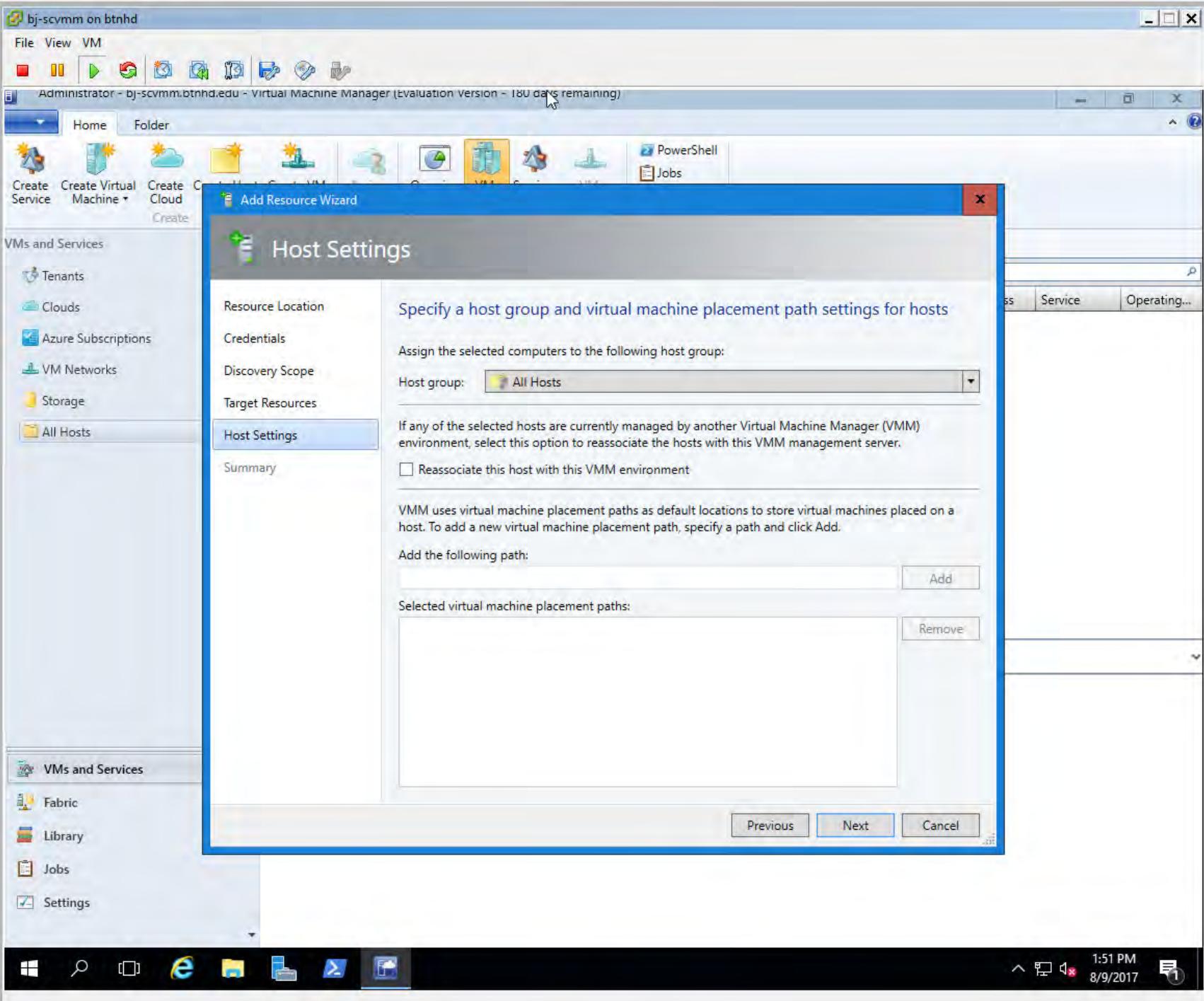


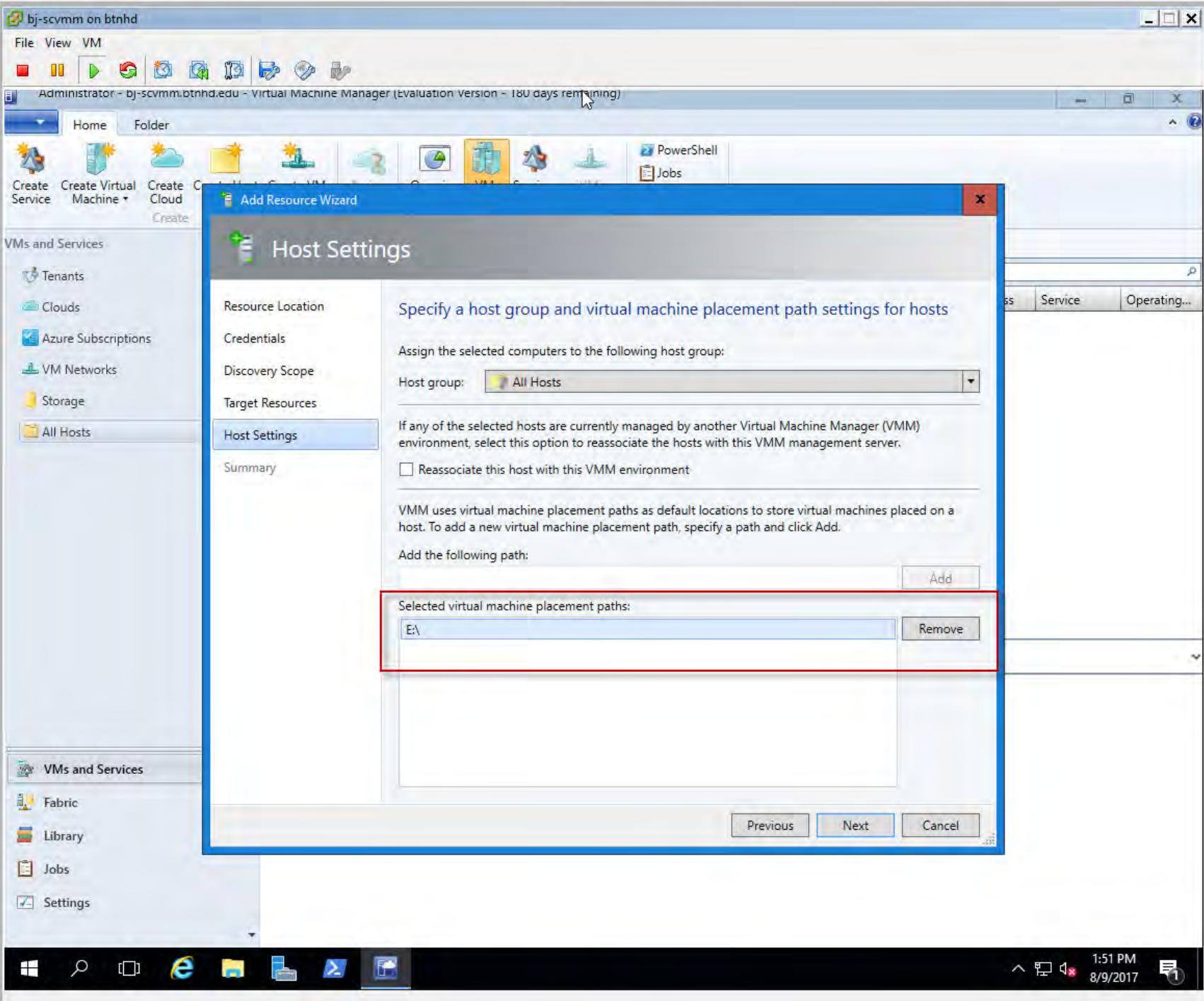


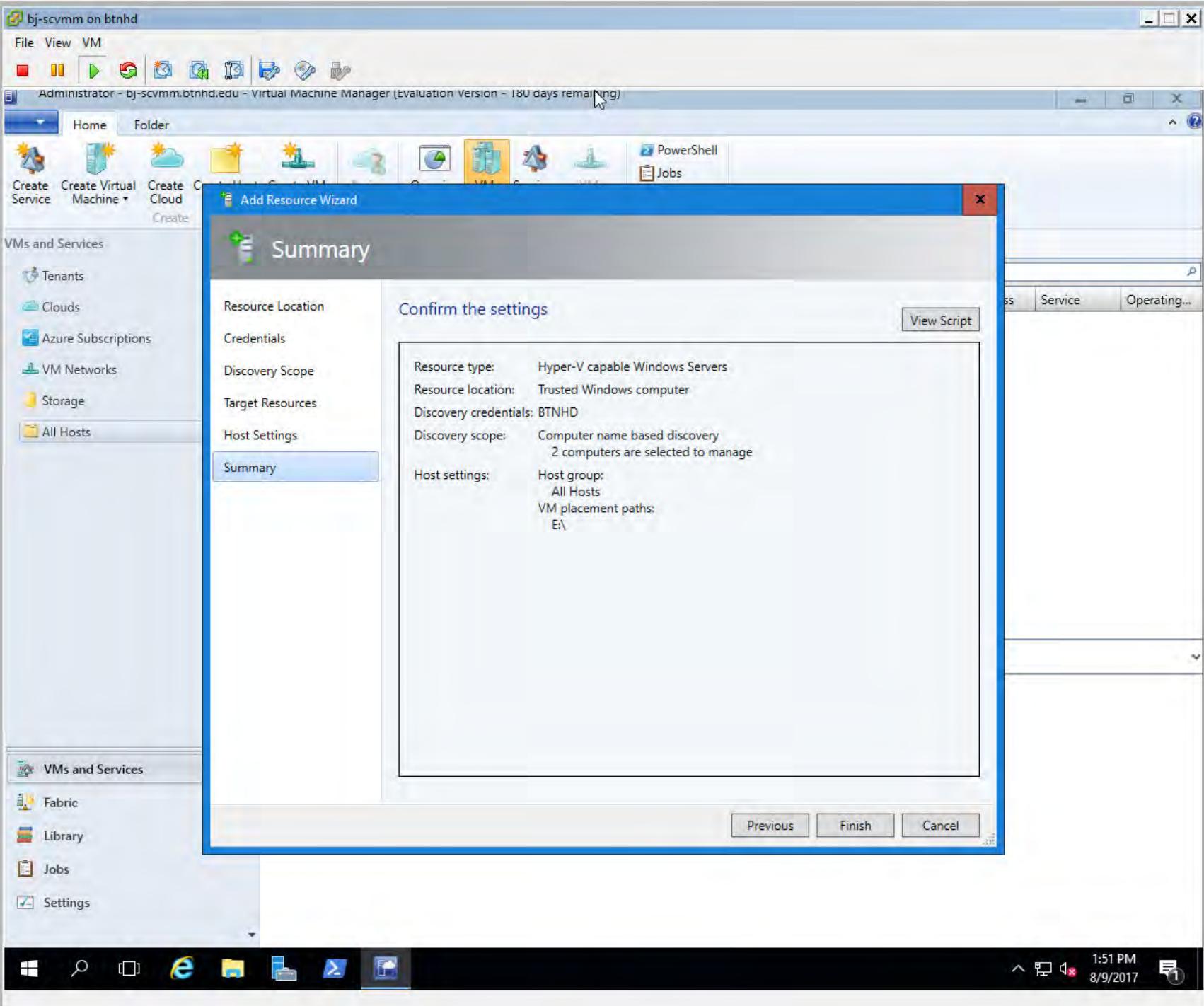


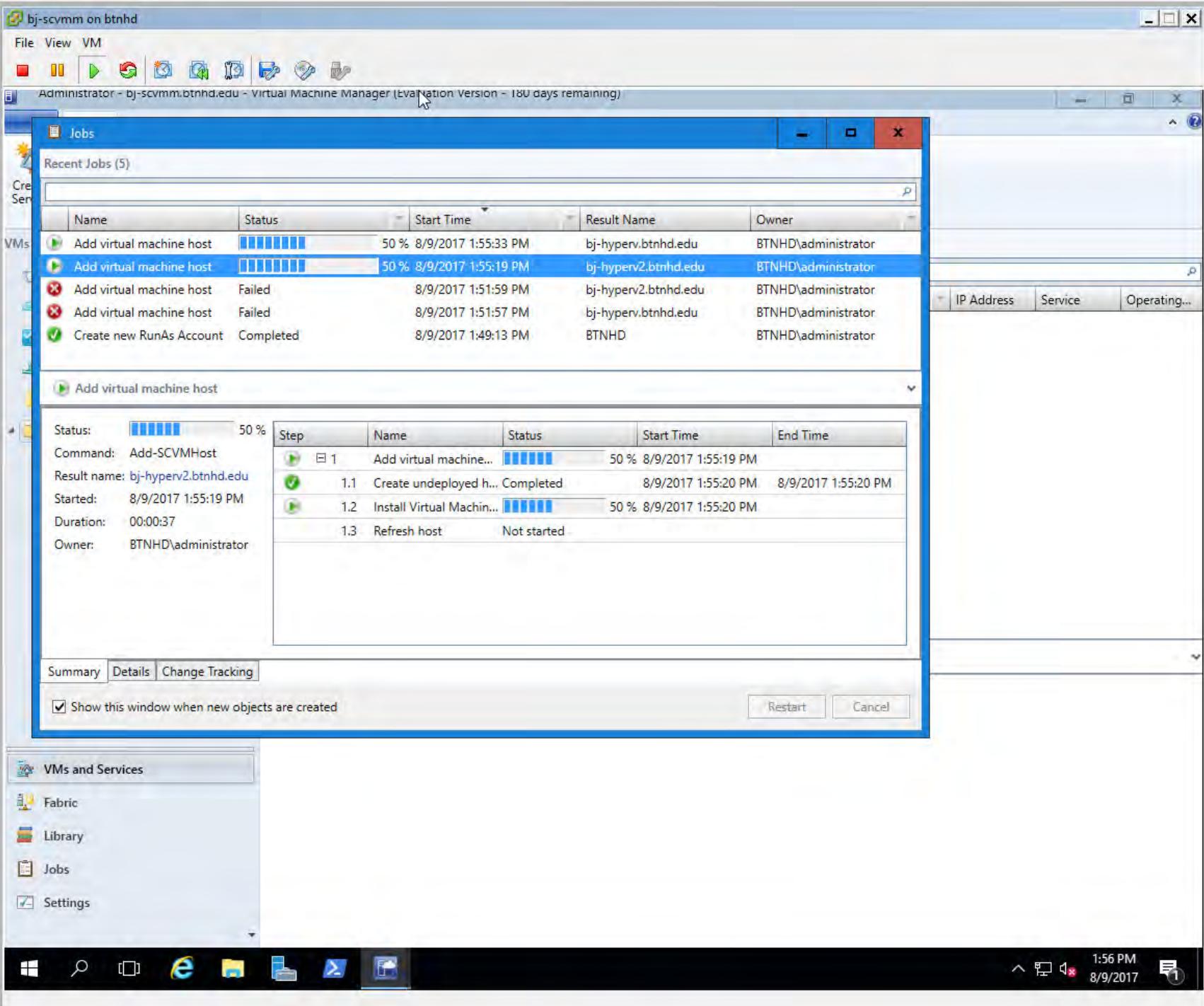


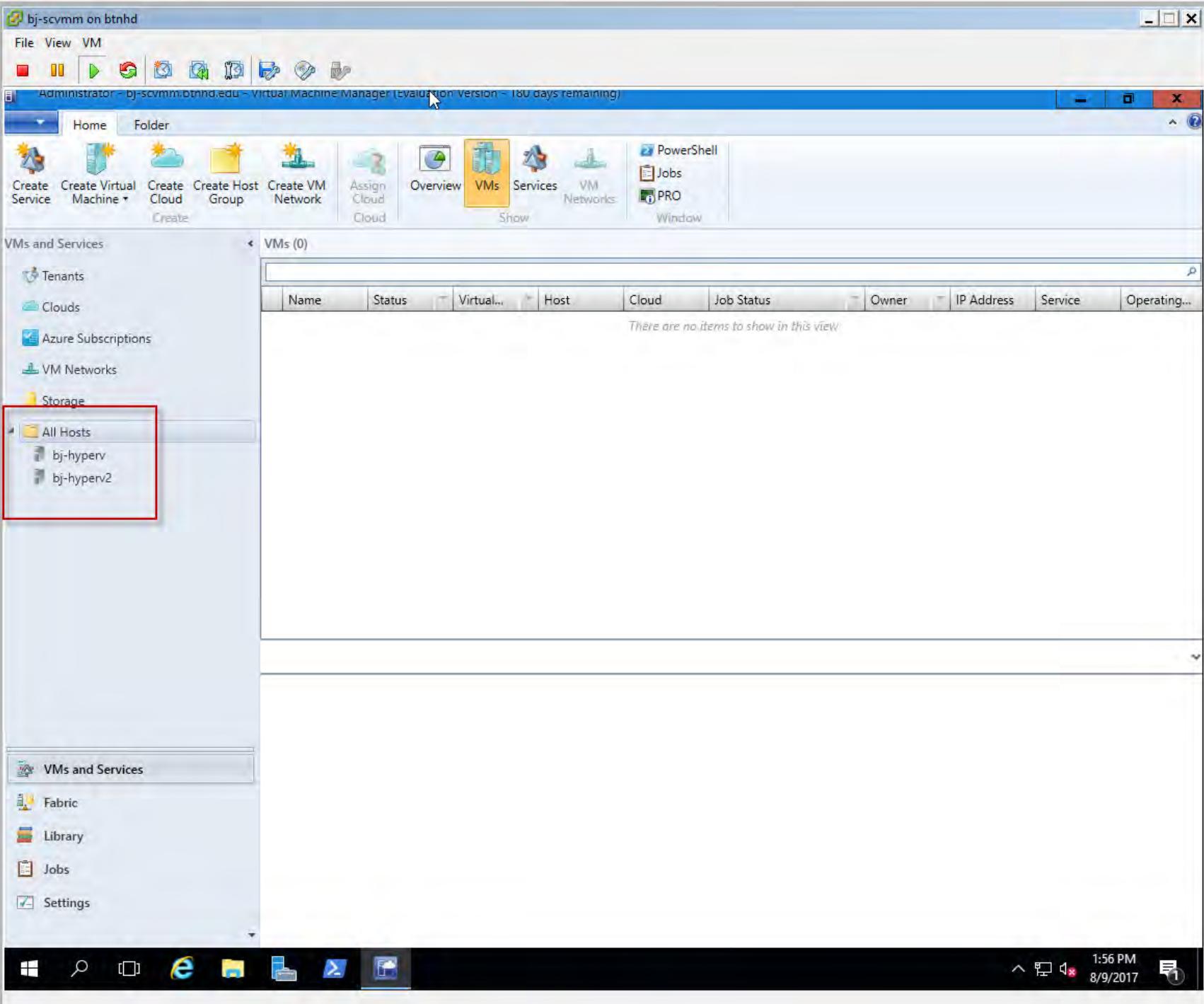












# Multipath I/O Issues

Name	Status	Start Time	Result Name	Owner
Update library	Completed	8/9/2017 1:59:27 PM	bj-scvmm.btnhd.edu	BTNHD\administrator
Refresh virtual machine pro...	Completed	8/9/2017 1:58:02 PM	bj-hyperv2.btnhd.edu	BTNHD\administrator
Add virtual machine host	Completed w/ Info	8/9/2017 1:55:33 PM	bj-hyperv.btnhd.edu	BTNHD\administrator
Add virtual machine host	Completed w/ Info	8/9/2017 1:55:19 PM	bj-hyperv2.btnhd.edu	BTNHD\administrator
Add virtual machine host	Failed	8/9/2017 1:51:59 PM	bj-hyperv2.btnhd.edu	BTNHD\administrator
Add virtual machine host	Failed	8/9/2017 1:51:57 PM	bj-hyperv.btnhd.edu	BTNHD\administrator

Add virtual machine host

Status: Completed w/ Info  
Command: Add-SCVMHost  
Result name: bj-hyperv.btnhd.edu  
Started: 8/9/2017 1:55:33 PM  
Duration: 00:01:02  
Owner: BTNHD\administrator

⚠ Warning (26179)

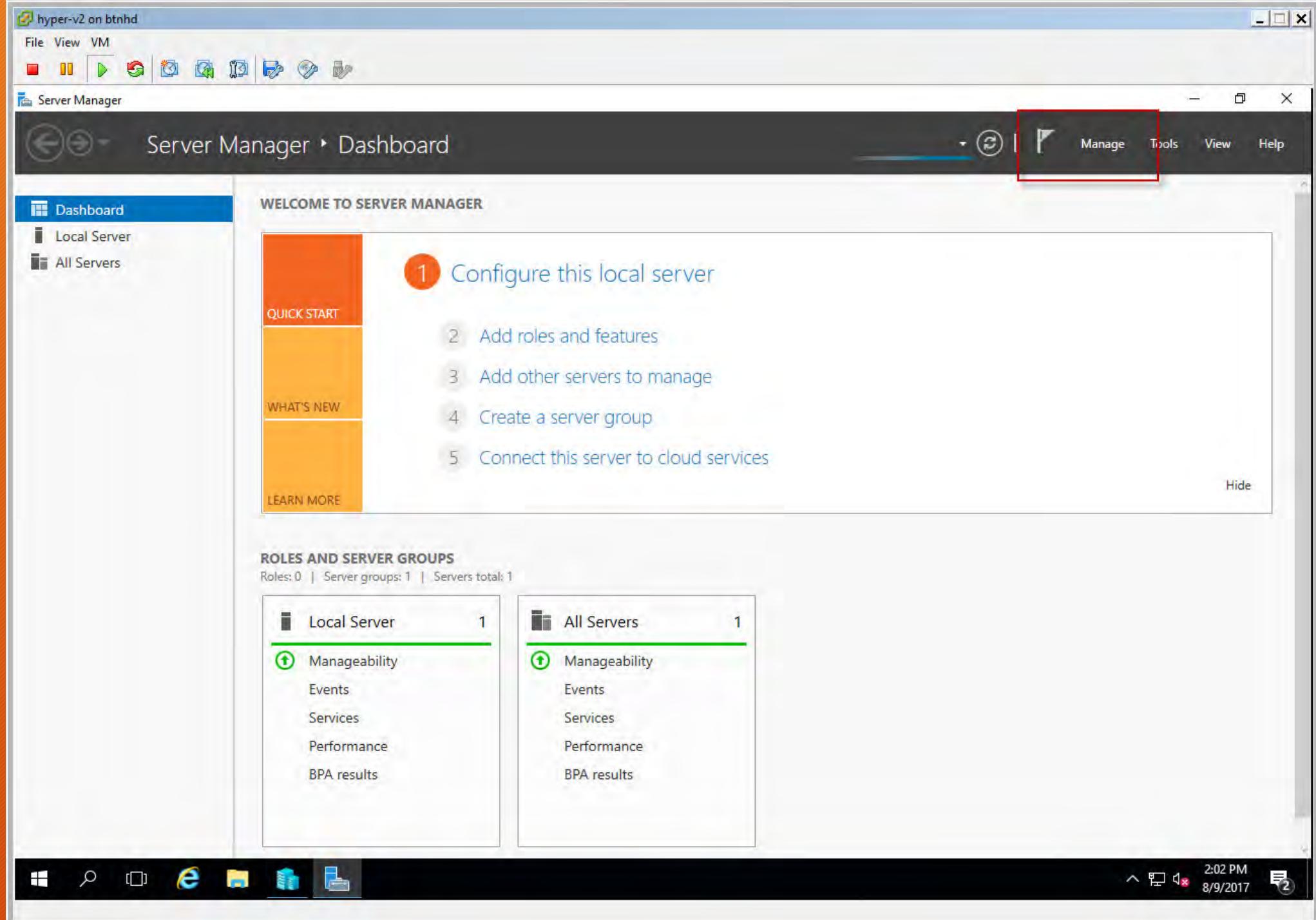
**Warning (26179)**

Multipath I/O is not enabled for known storage arrays on host bj-hyperv.btnhd.edu.

**Recommended Action**

If you want to provision storage using VMM, then enable Multipath I/O for storage arrays being used on the host manually after adding the Multipath I/O feature.

[Copy Errors](#)



hyper-v2 on btnhd

File View VM

Server Manager

Server Manager • Dashboard

Manage Tools View Help

Add Roles and Features  
Remove Roles and Features  
Add Servers  
Create Server Group  
Server Manager Properties

Dashboard

Local Server  
All Servers  
File and Storage Services  
Hyper-V

WELCOME TO SERVER MANAGER

QUICK START

1 Configure this local server

2 Add roles and features  
3 Add other servers to manage  
4 Create a server group  
5 Connect this server to cloud services

WHAT'S NEW

LEARN MORE

ROLES AND SERVER GROUPS

Roles: 2 | Server groups: 1 | Servers total: 1

File and Storage Services 1

Manageability  
Events  
Performance  
BPA results

Hyper-V 1

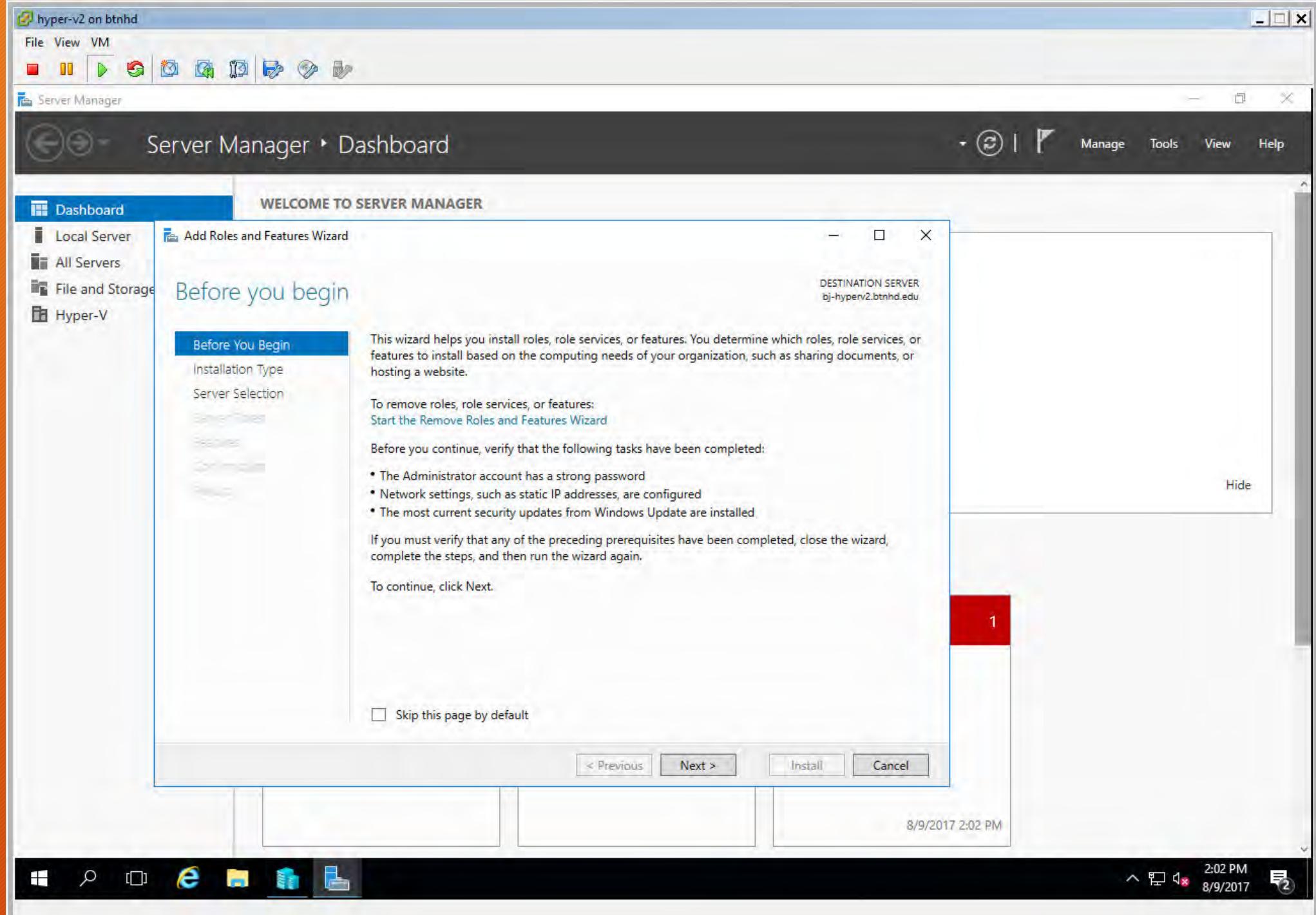
Manageability  
Events  
Services  
Performance  
BPA results

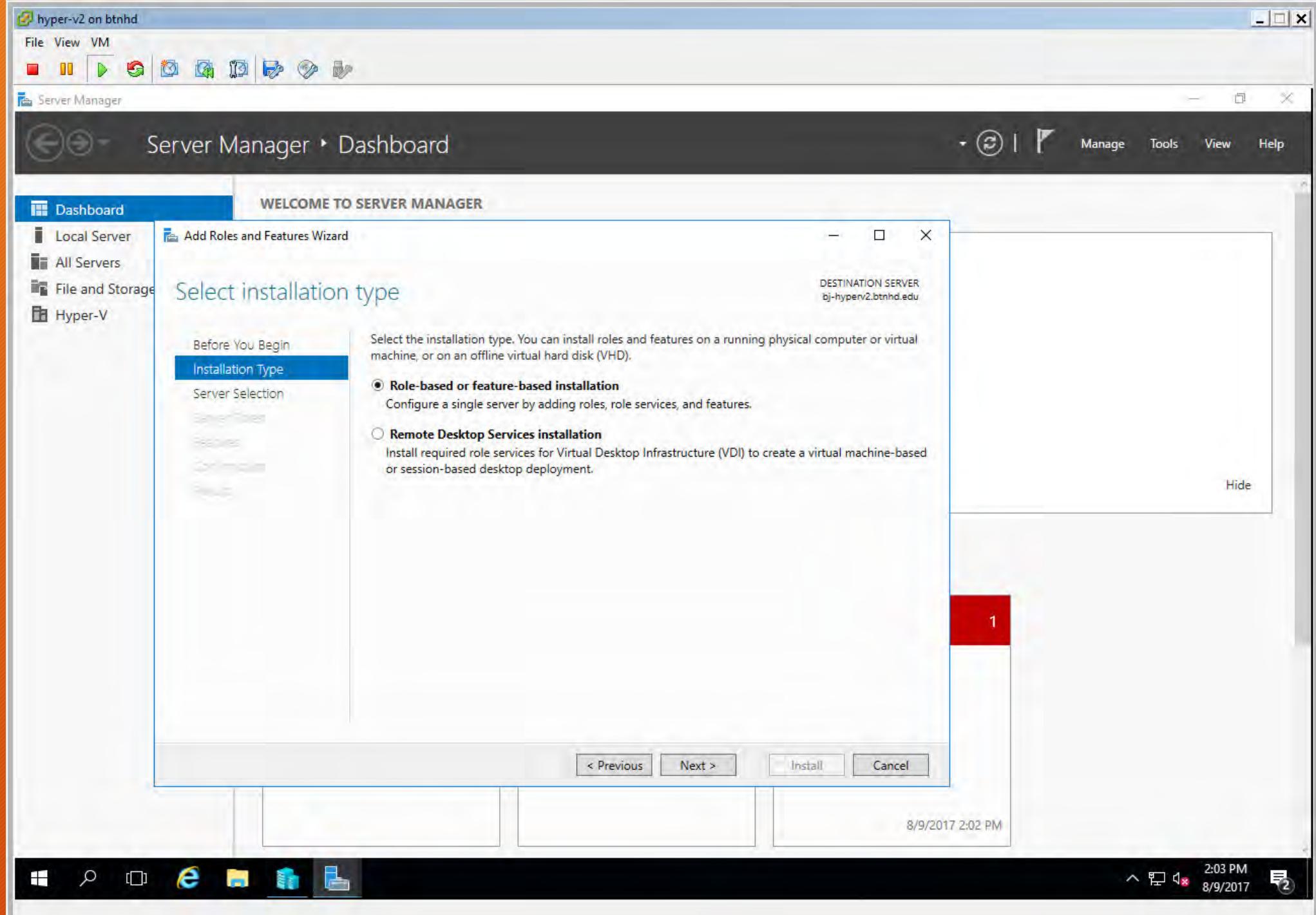
Local Server 1

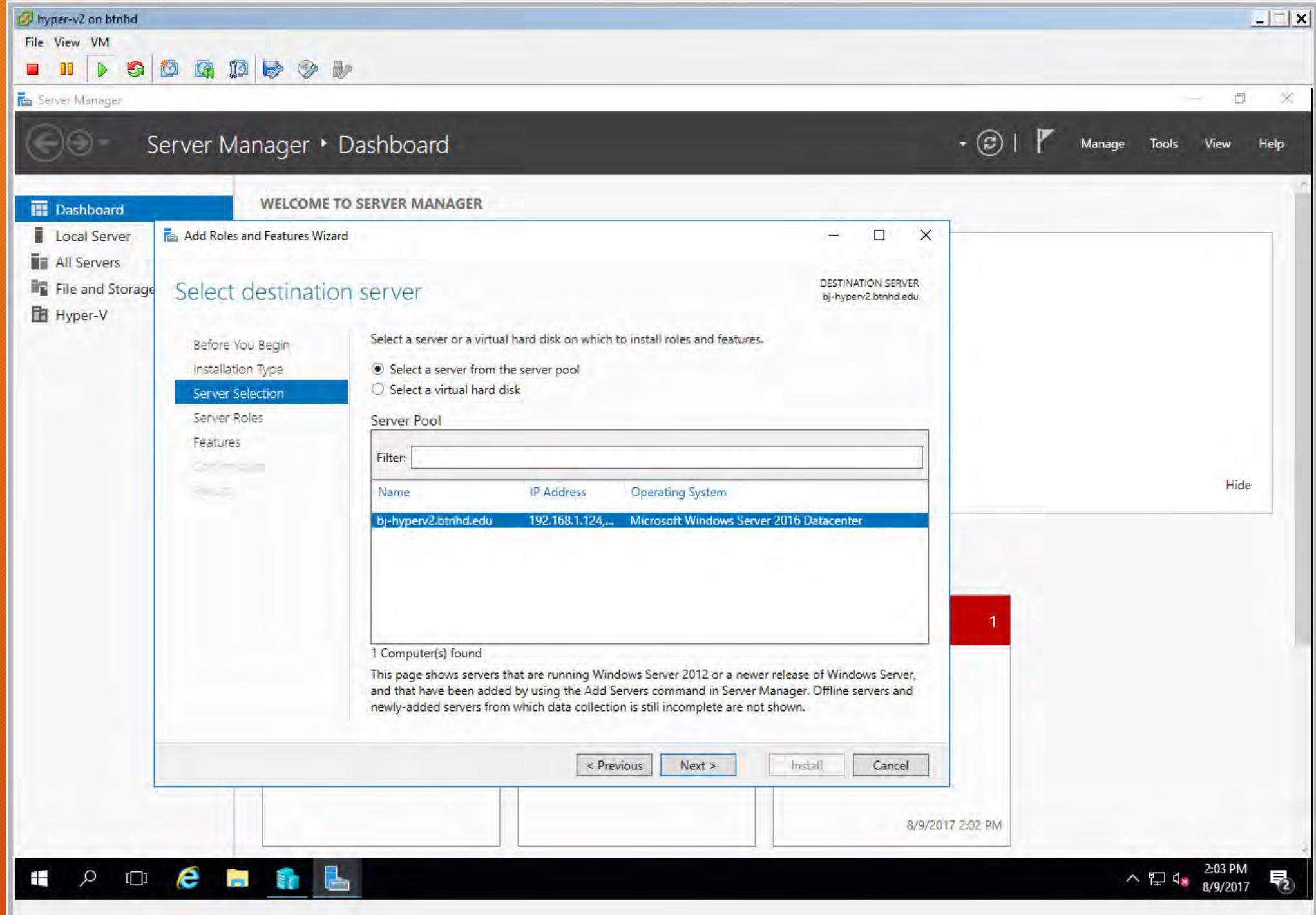
Manageability  
Events  
Services  
Performance  
BPA results

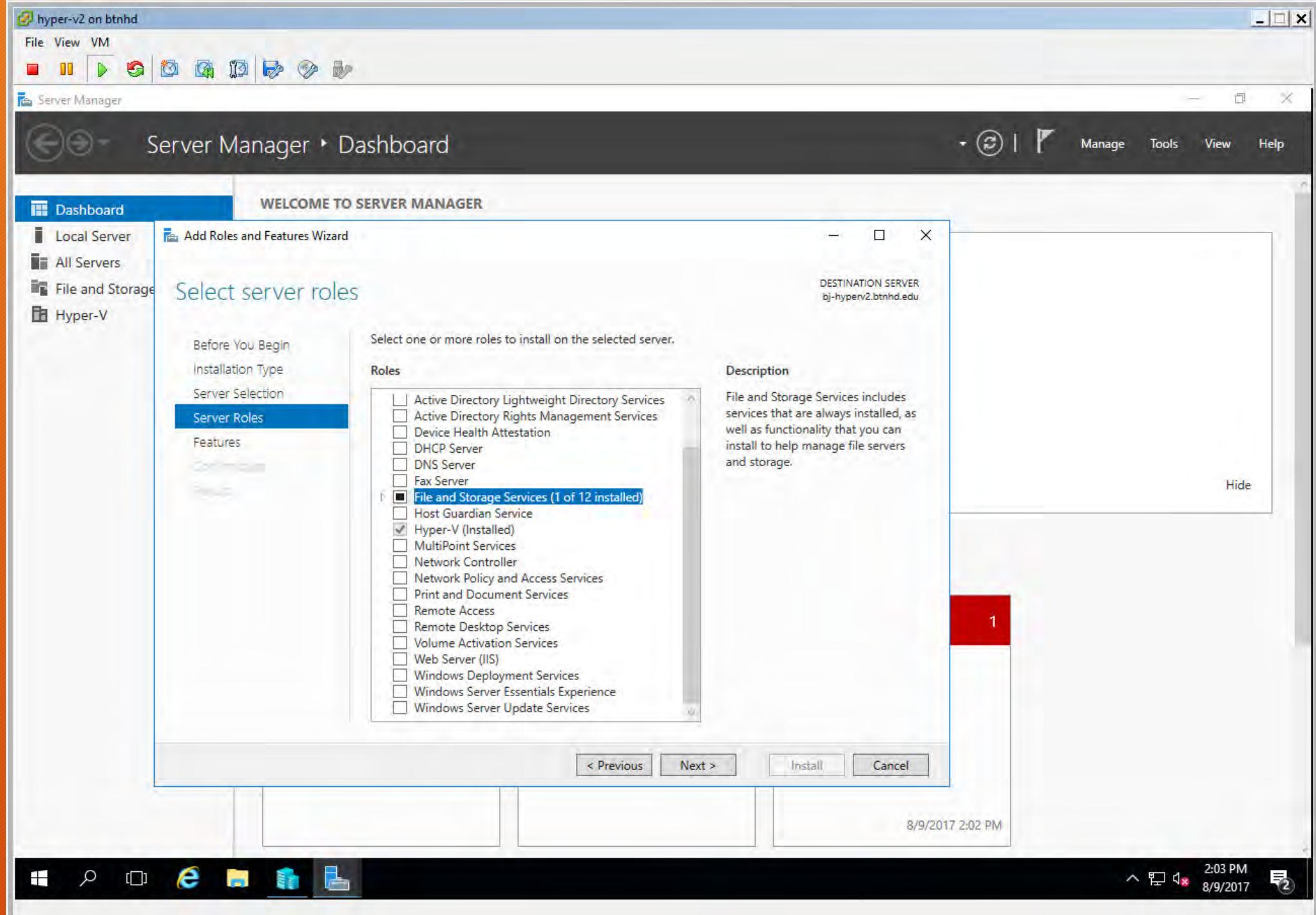
8/9/2017 2:02 PM

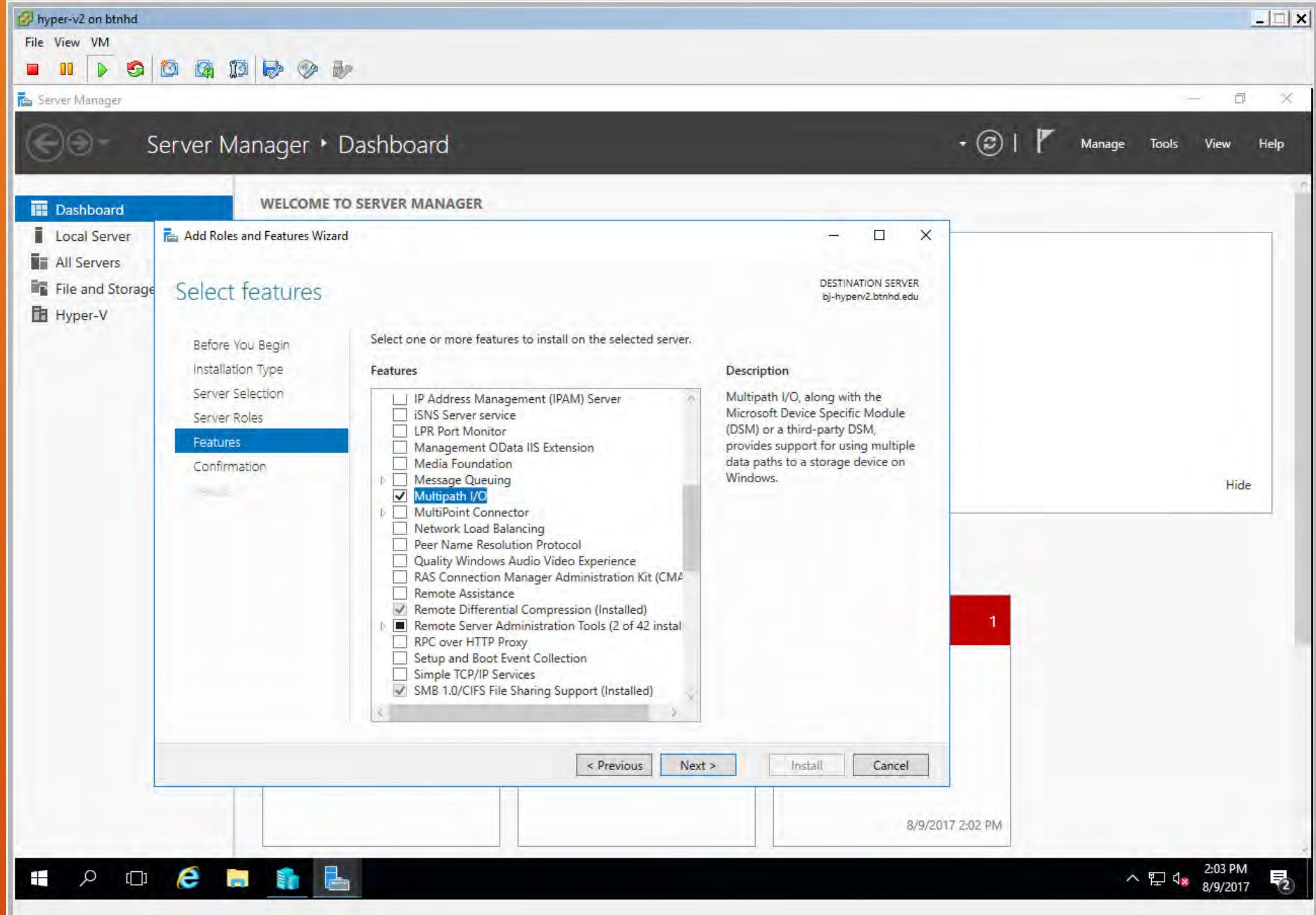
2:02 PM 8/9/2017

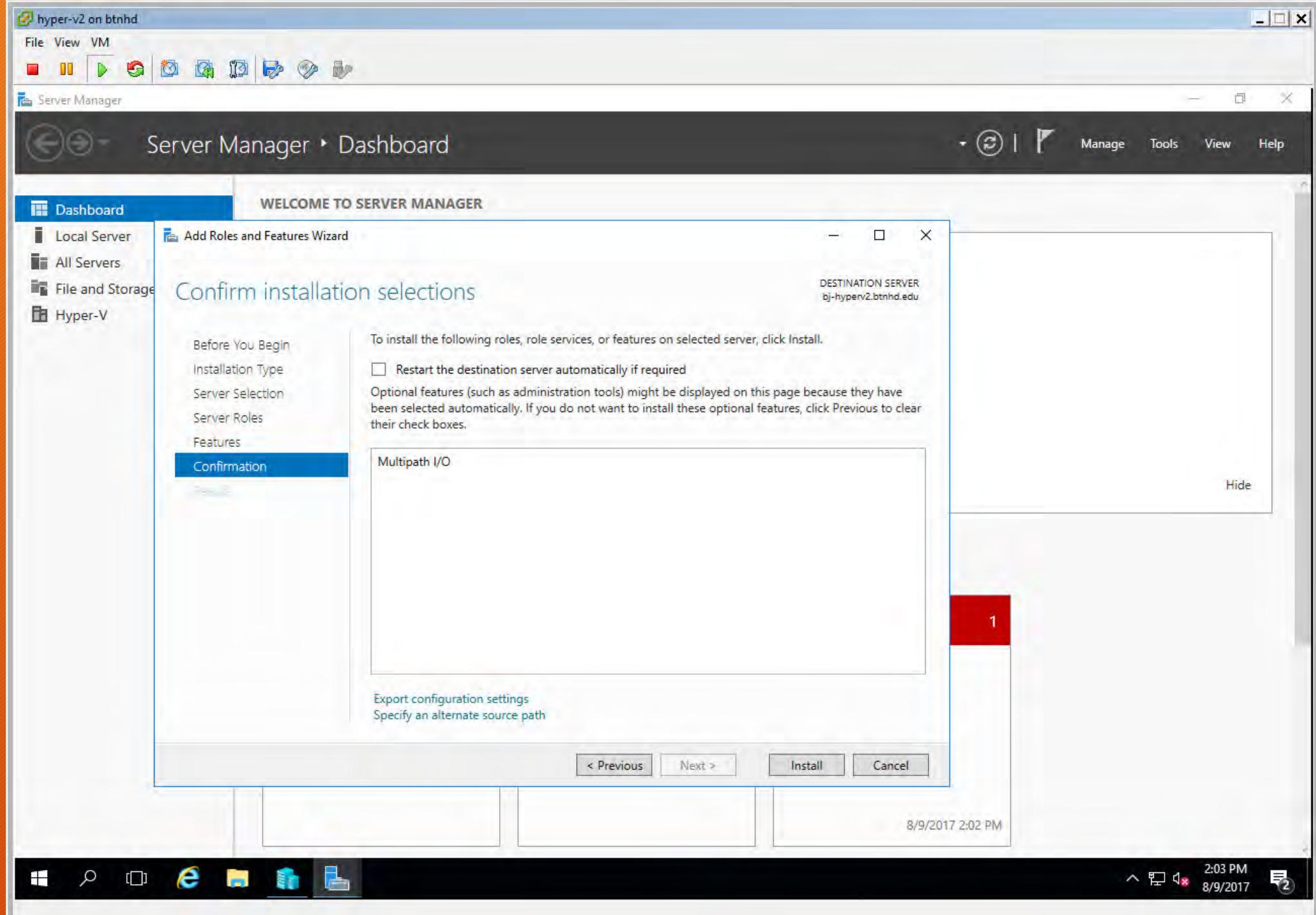


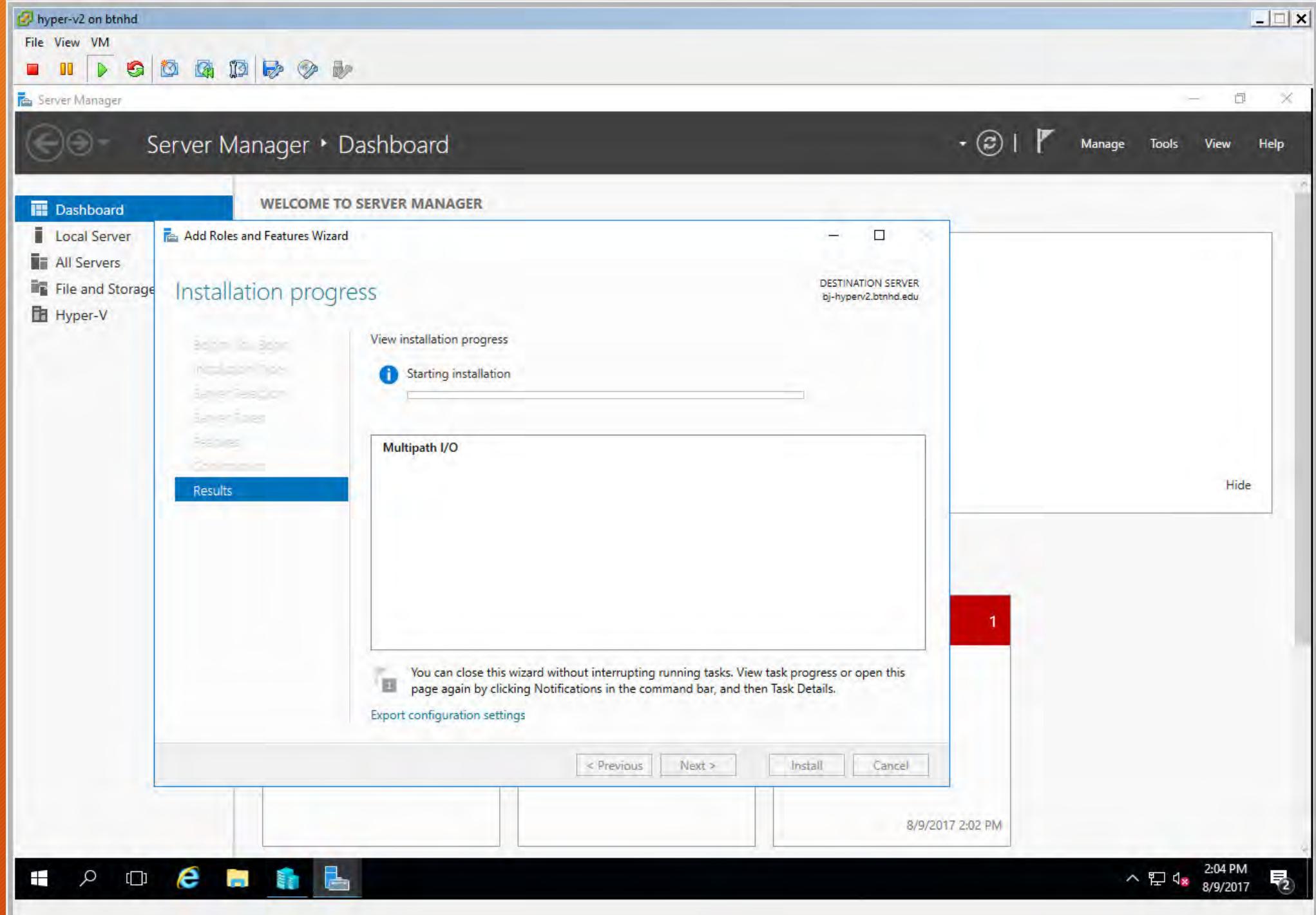


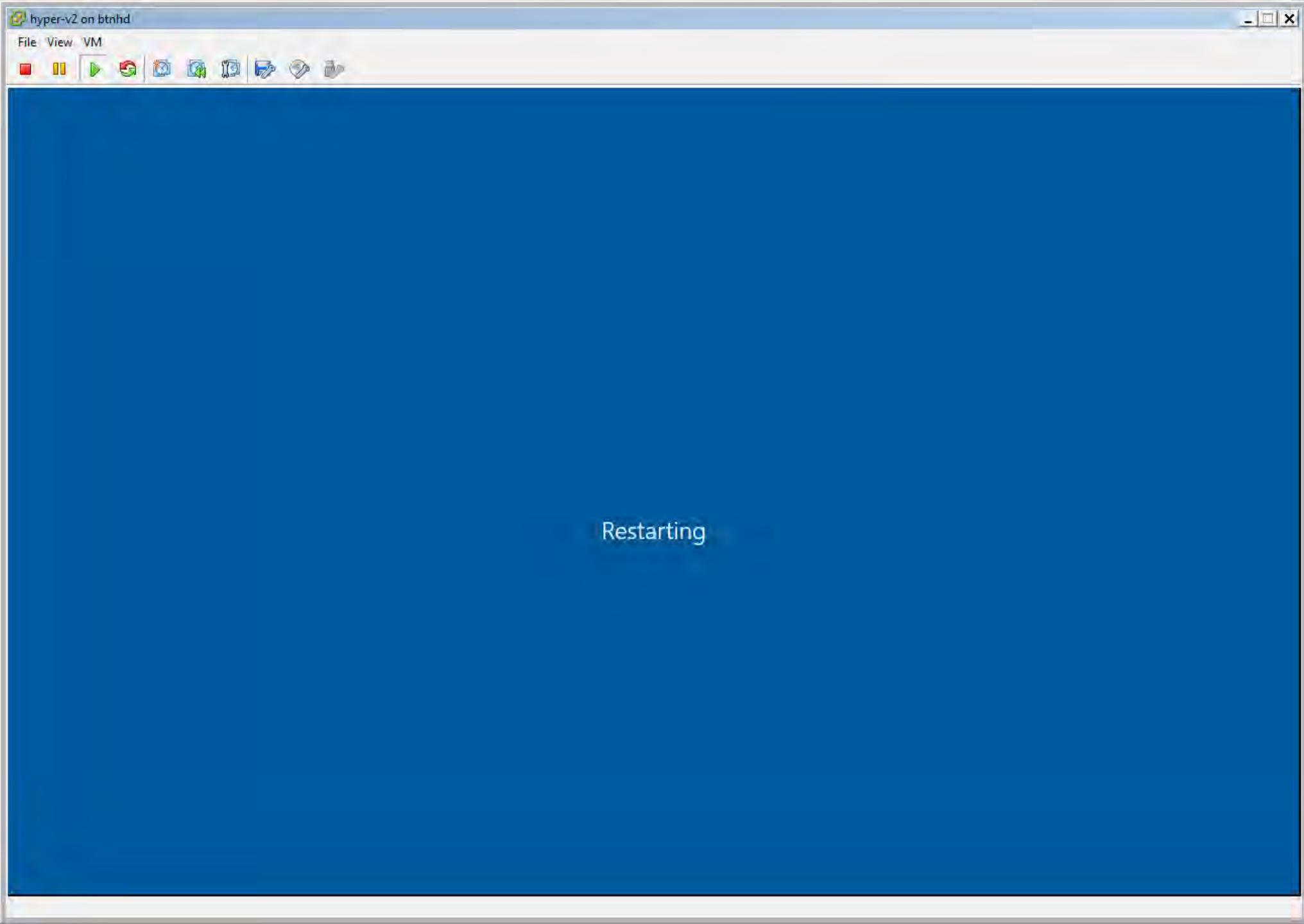


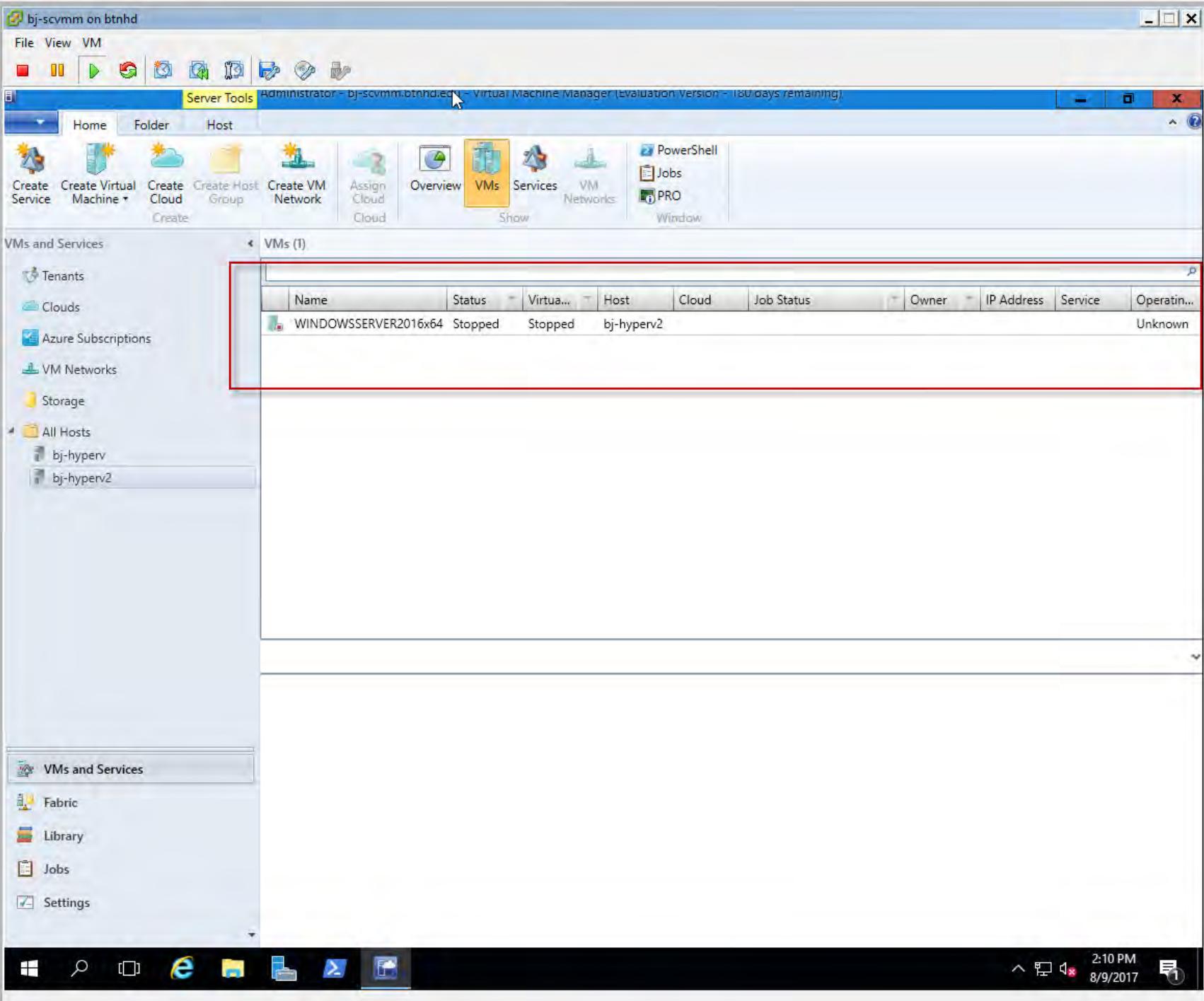




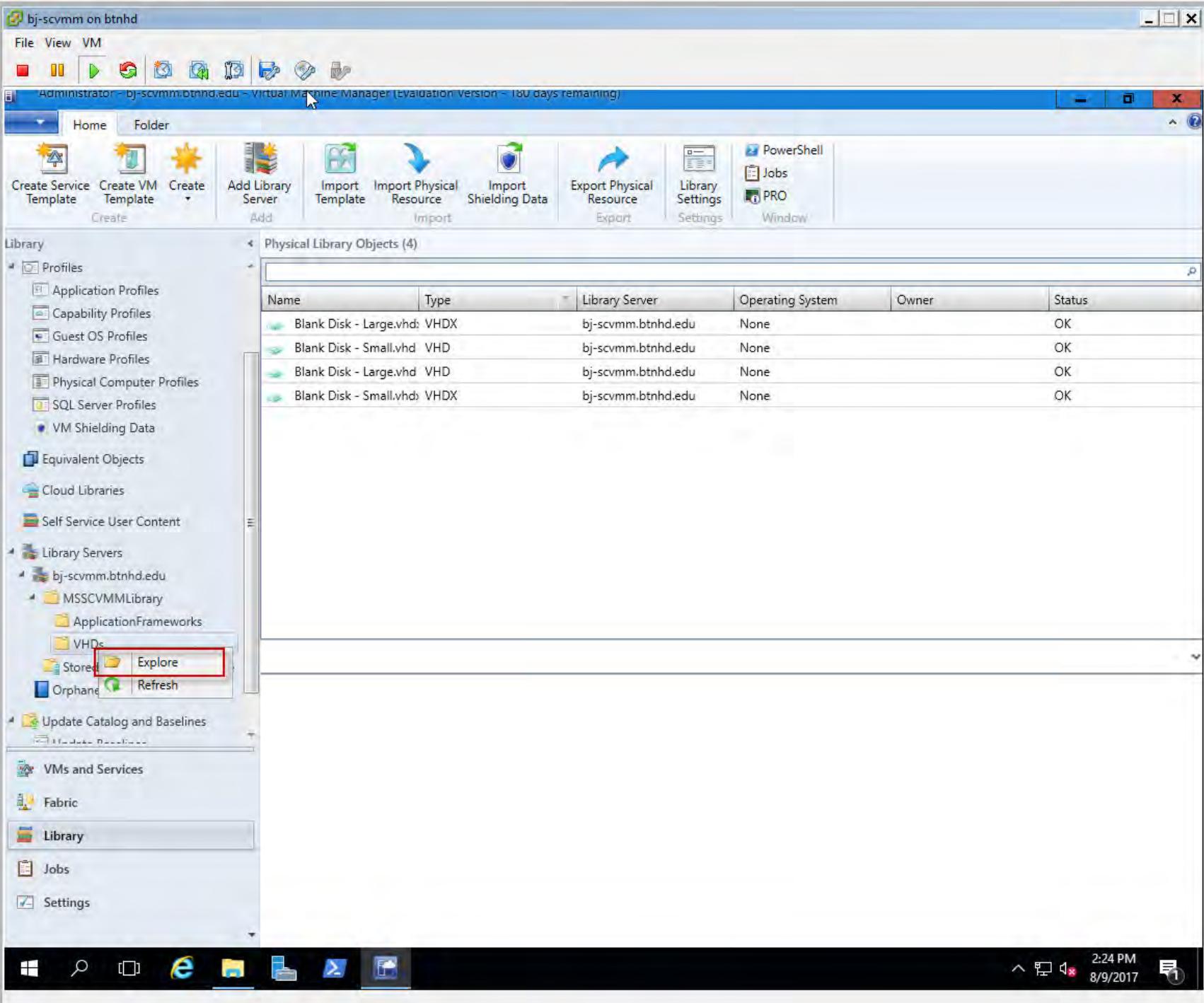


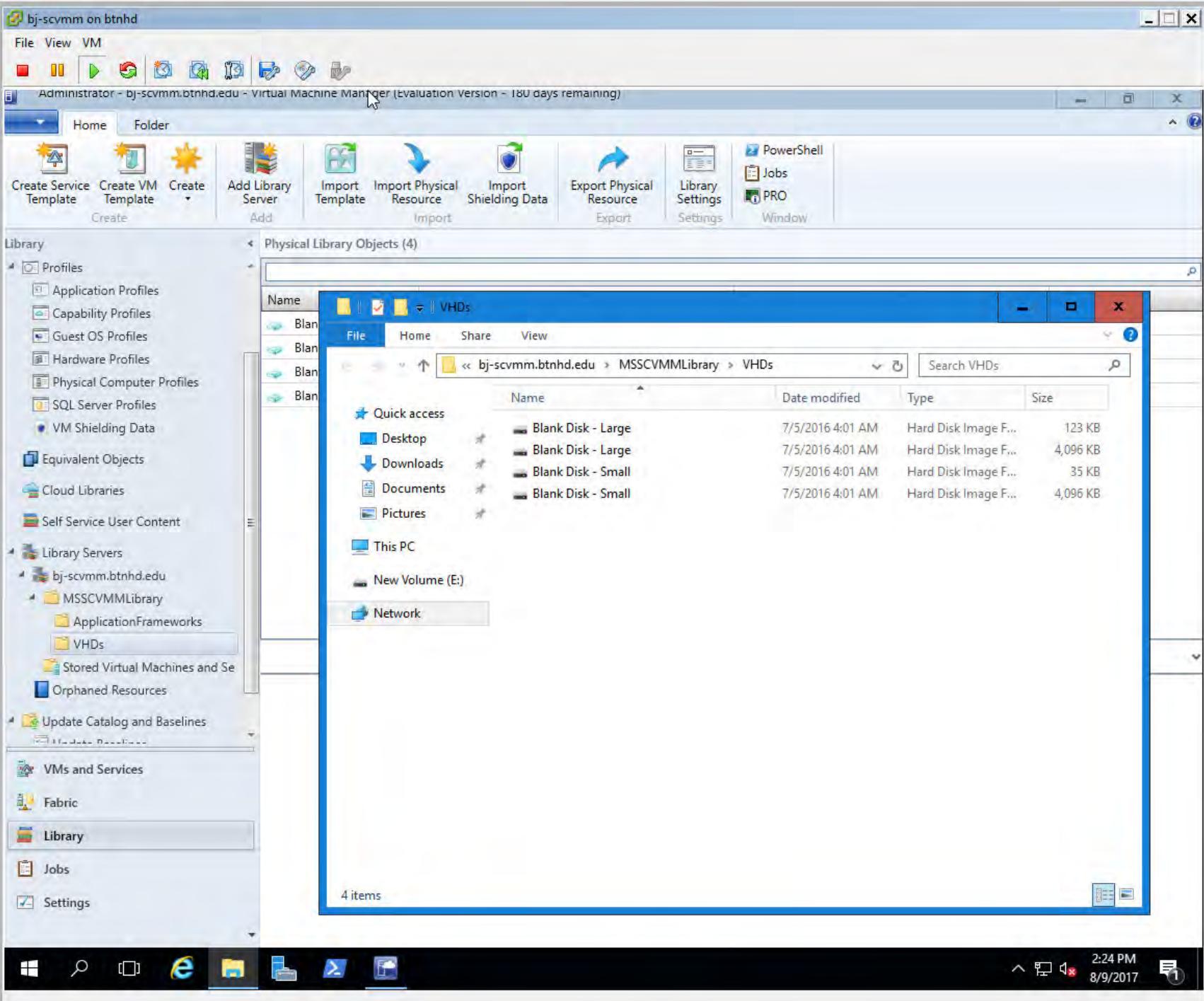


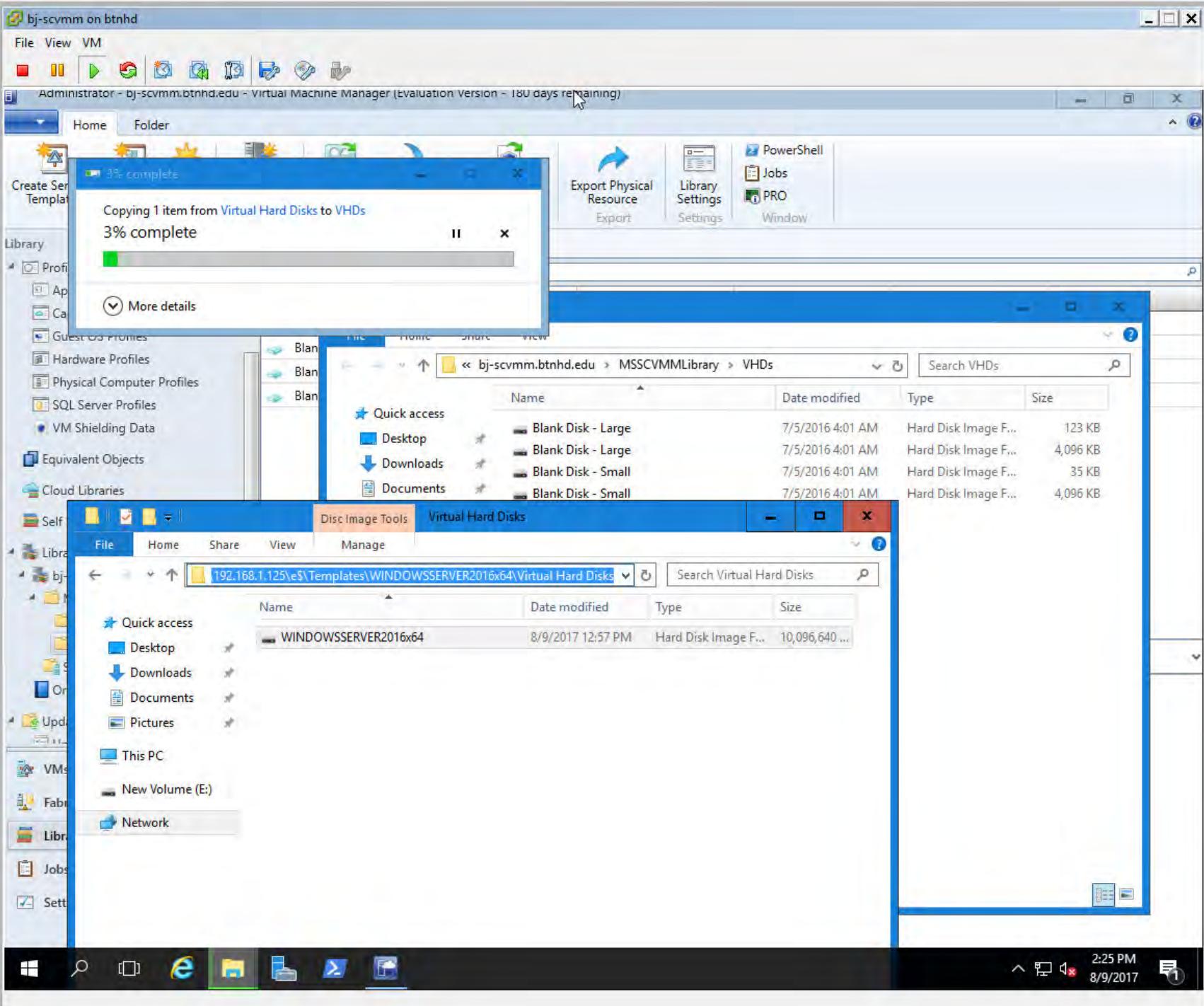


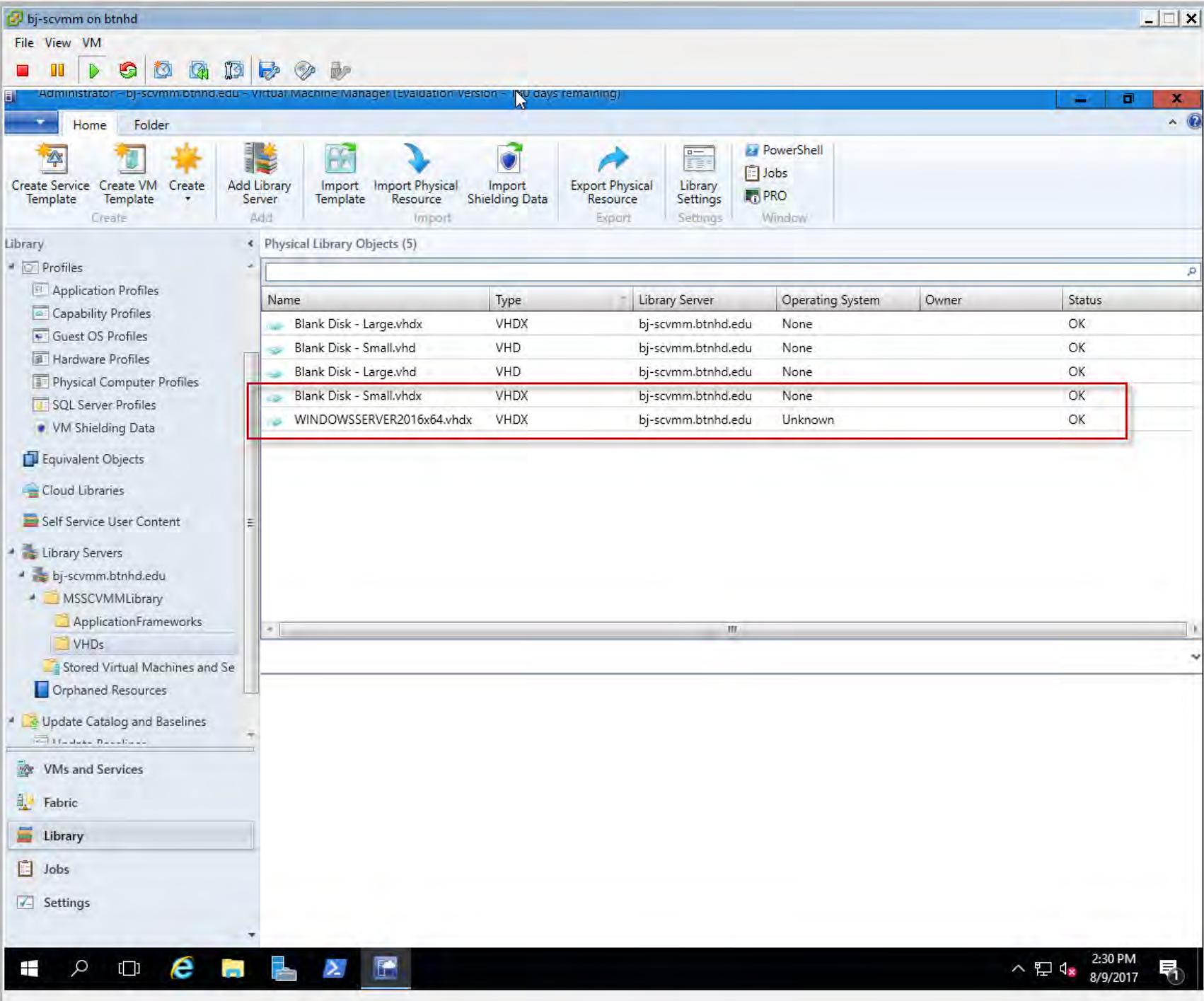


# Add Windows Server 2016 Template into SCVMM Library

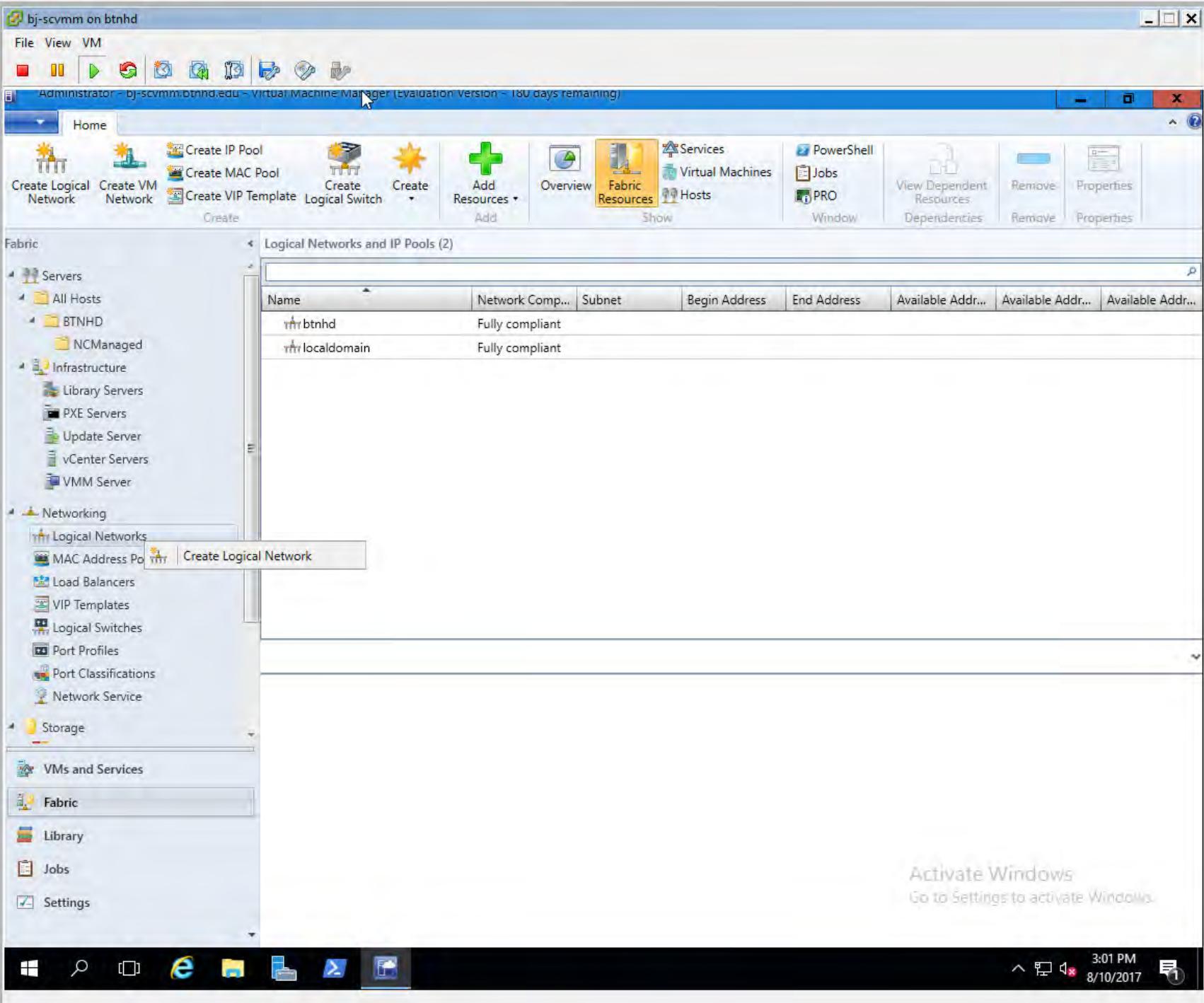


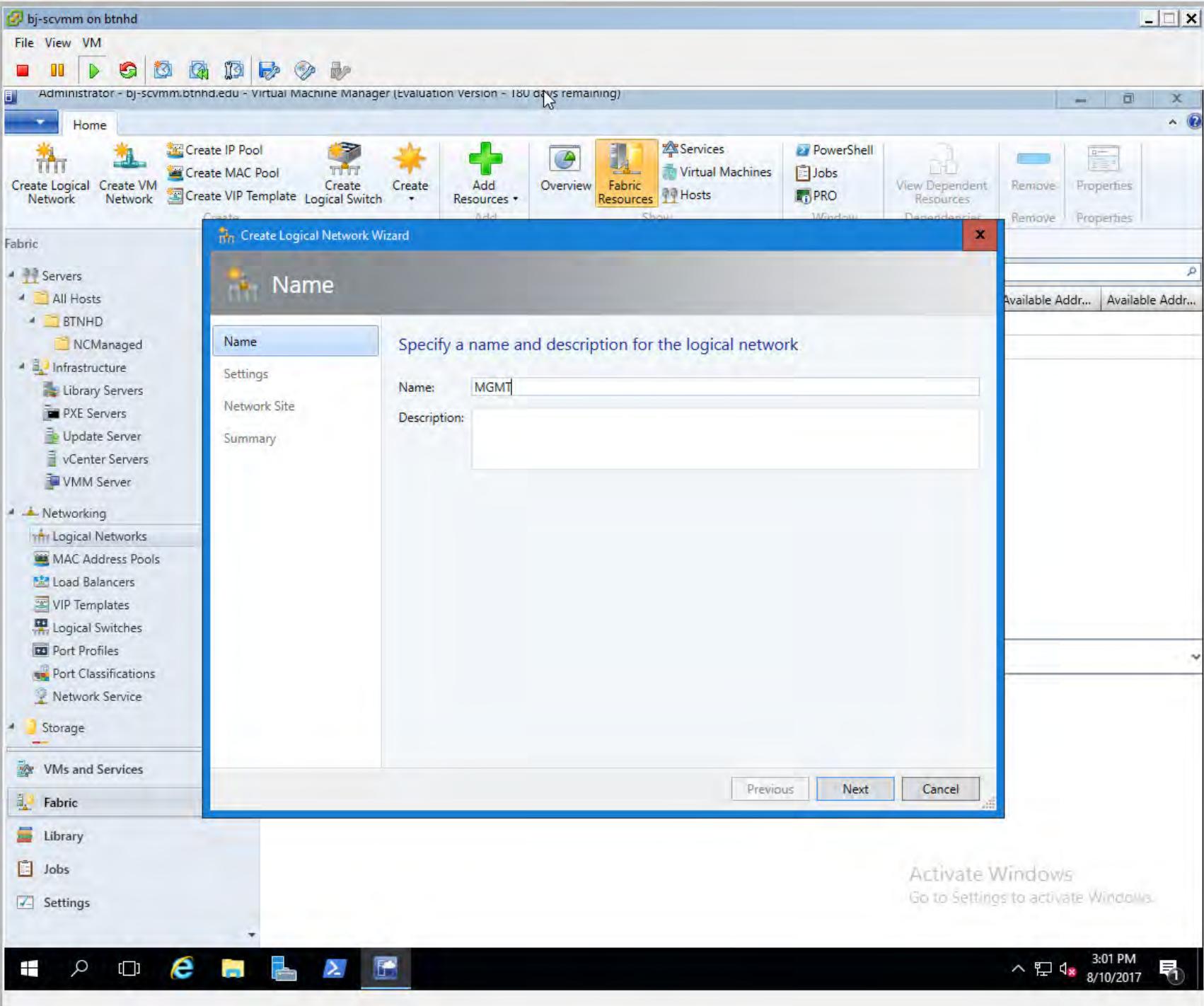


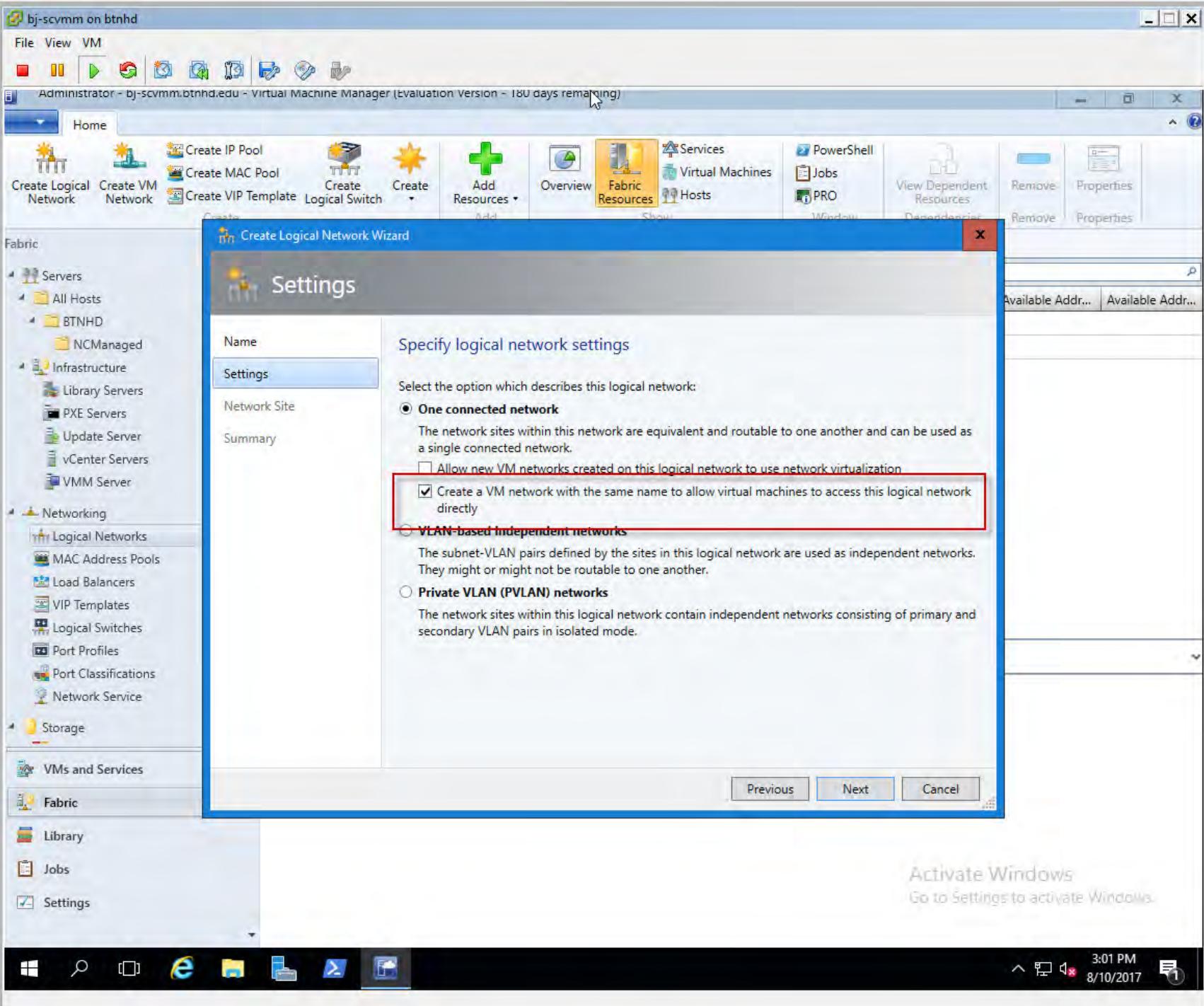


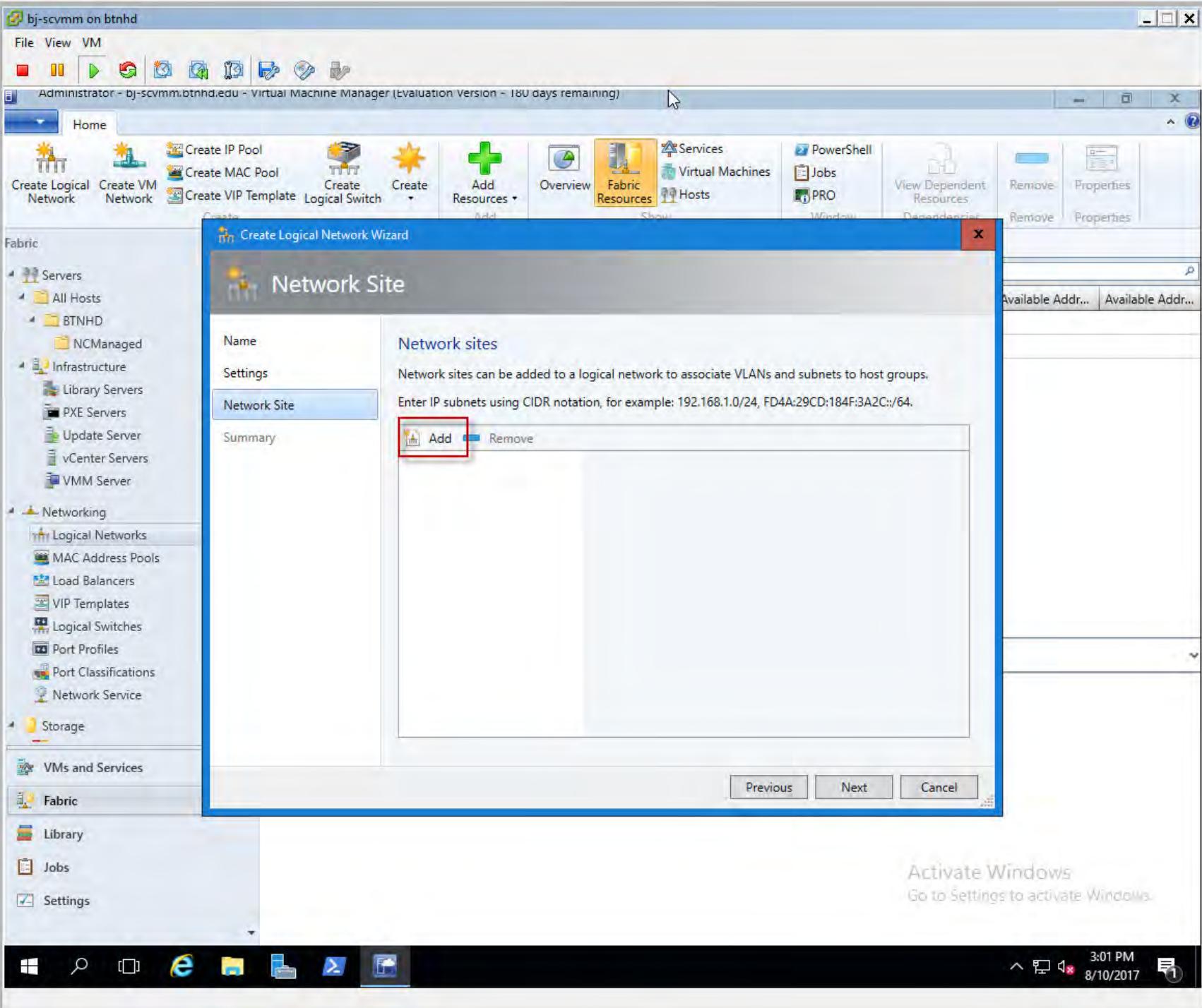


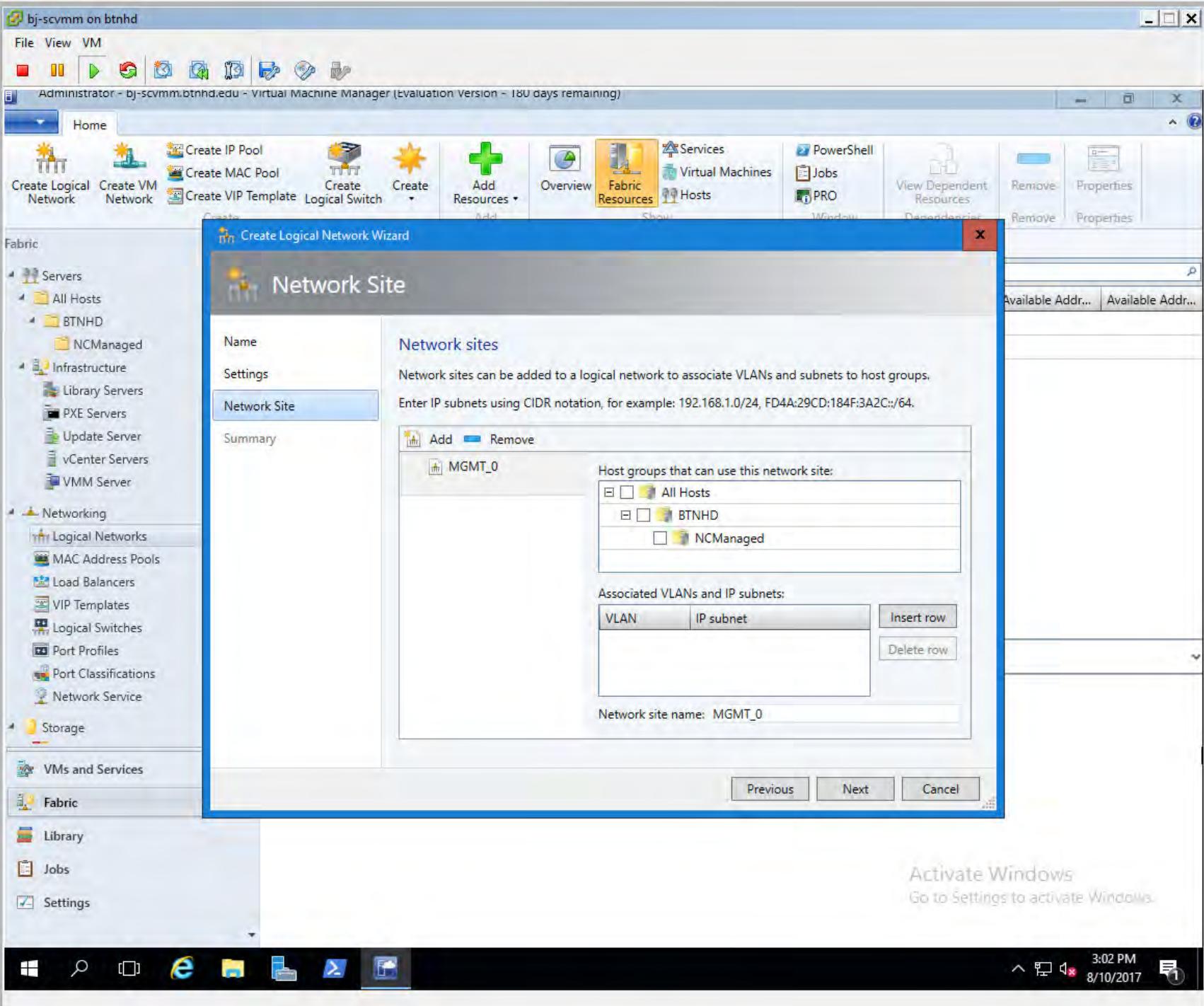
# Create Logical Network

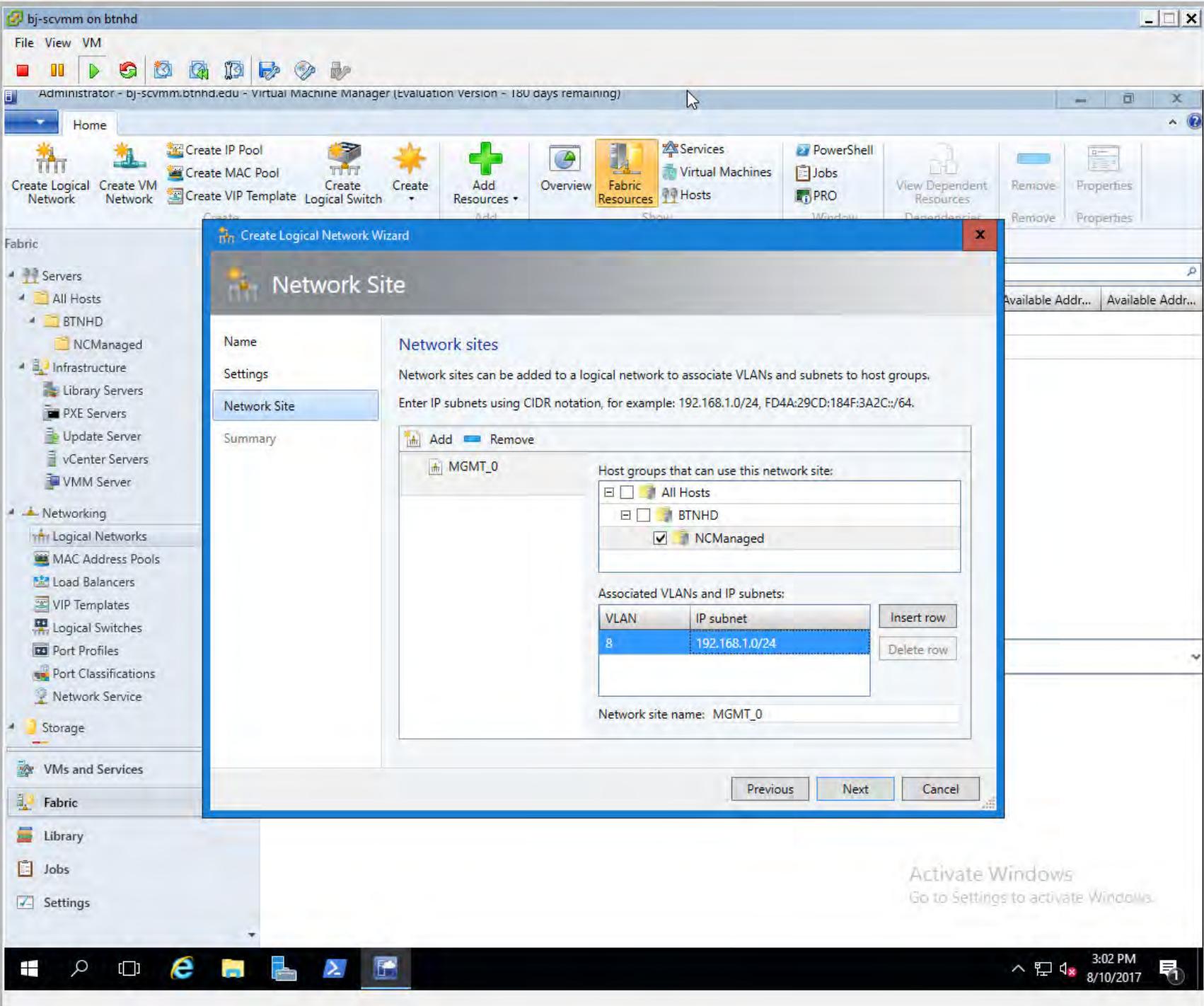


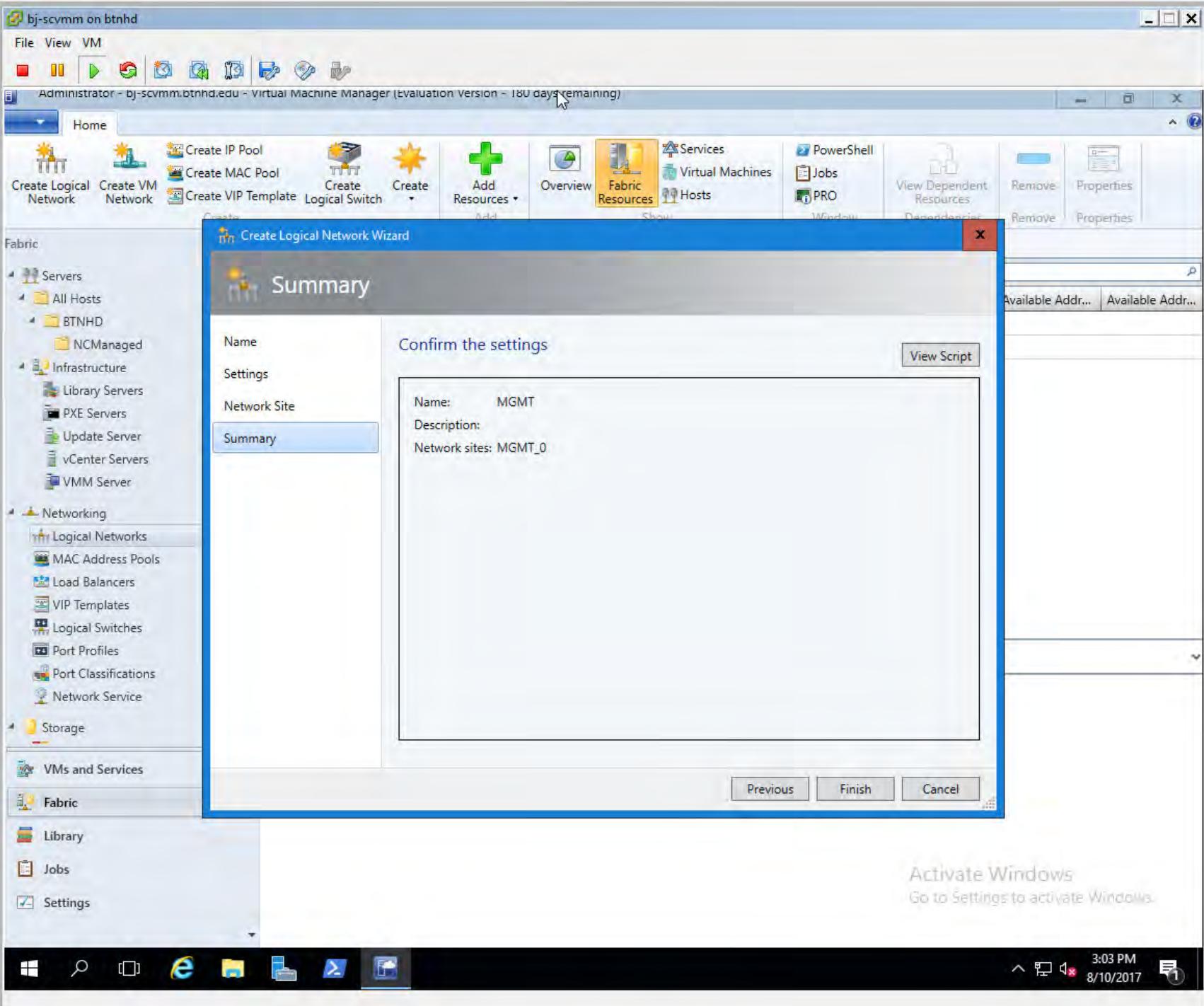


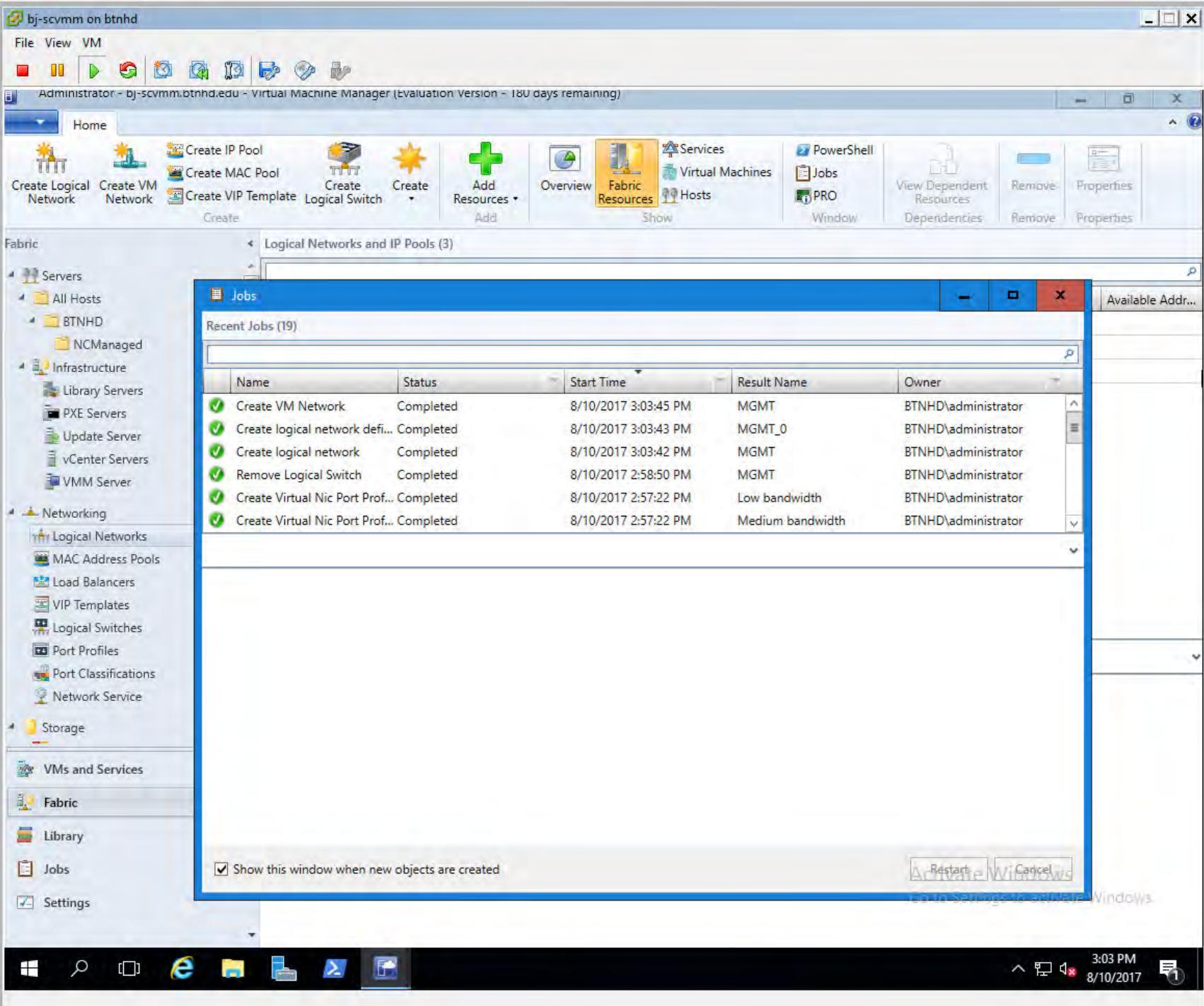












bj-scvmm on btnhd

File View VM

Create Logical Network Create VM Network Create IP Pool Create MAC Pool Create VIP Template Create Logical Switch Add Resources Overview Fabric Resources Services Virtual Machines PowerShell Jobs PRO Window View Dependent Resources Dependencies Remove Remove Properties Properties

Administrator - bj-scvmm:btnhd.edu - Virtual Machine Manager (Evaluation Version - 180 days remaining)

Fabric

Servers

- All Hosts
- BTNHD
- NCManaged

Infrastructure

- Library Servers
- PXE Servers
- Update Server
- vCenter Servers
- VMM Server

Networking

- Logical Networks
- MAC Address Pools
- Load Balancers
- VIP Templates
- Logical Switches
- Port Profiles
- Port Classifications
- Network Service

Storage

VMs and Services

Fabric

Library

Jobs

Settings

Logical Networks and IP Pools (3)

Name	Network Comp...	Subnet	Begin Address	End Address	Available Addr...	Available Addr...	Available Addr...
btndh							
localdomain							
MGMT							

Activate Windows  
Go to Settings to activate Windows.

3:04 PM 8/10/2017

The screenshot displays the Microsoft System Center Virtual Machine Manager (SCVMM) interface. The main window title is "bj-scvmm on btnhd". The ribbon menu includes "File", "View", "VM", and several icons for creating resources and managing services. The "Fabric" tab is selected in the ribbon. The left sidebar navigation tree includes "Servers", "Infrastructure", "Networking", "Storage", "VMs and Services", and "Fabric". Under "Networking", "Logical Networks" is selected. The central pane shows a table titled "Logical Networks and IP Pools (3)". The table has columns: Name, Network Comp..., Subnet, Begin Address, End Address, Available Addr..., Available Addr..., and Available Addr... . Three rows are listed: "btndh" (Fully compliant), "localdomain" (Fully compliant), and "MGMT" (Fully compliant). The "MGMT" row is highlighted with a red box. A message at the bottom right says "Activate Windows Go to Settings to activate Windows.". The status bar at the bottom right shows the date and time as "3:04 PM 8/10/2017".

# Create a Port Profile

bj-scvmm on btnhd

File View VM

Administrator - bj-scvmm\btnhd.edu - Virtual Machine Manager (Evaluation Version - 180 days remaining)

Home Create IP Pool Create MAC Pool Create VIP Template Create Logical Switch Add Resources Overview Fabric Resources Services Virtual Machines PowerShell Jobs PRO Window View Dependent Resources Dependencies Remove Remove Properties Properties

Create Logical Network Create VM Network Create Create Logical Switch Add Add Show

Fabric Port Profiles (11)

Name	Type	Applies To	Source
Low Bandwidth Adapter	Virtual	Hyper-V	Virtual Machine Manager
Default	Virtual	Hyper-V	Virtual Machine Manager
Live migration	Virtual	Hyper-V	Virtual Machine Manager
iScsi	Virtual	Hyper-V	Virtual Machine Manager
SR-IOV Profile	Virtual	Hyper-V	Virtual Machine Manager
Network load balancer NIC Profile	Virtual	Hyper-V	Virtual Machine Manager
Medium Bandwidth Adapter	Virtual	Hyper-V	Virtual Machine Manager
Host management	Virtual	Hyper-V	Virtual Machine Manager
Cluster	Virtual	Hyper-V	Virtual Machine Manager
Guest Dynamic IP	Virtual	Hyper-V	Virtual Machine Manager
High Bandwidth Adapter	Virtual	Hyper-V	Virtual Machine Manager

Create Hyper-V Port Profile

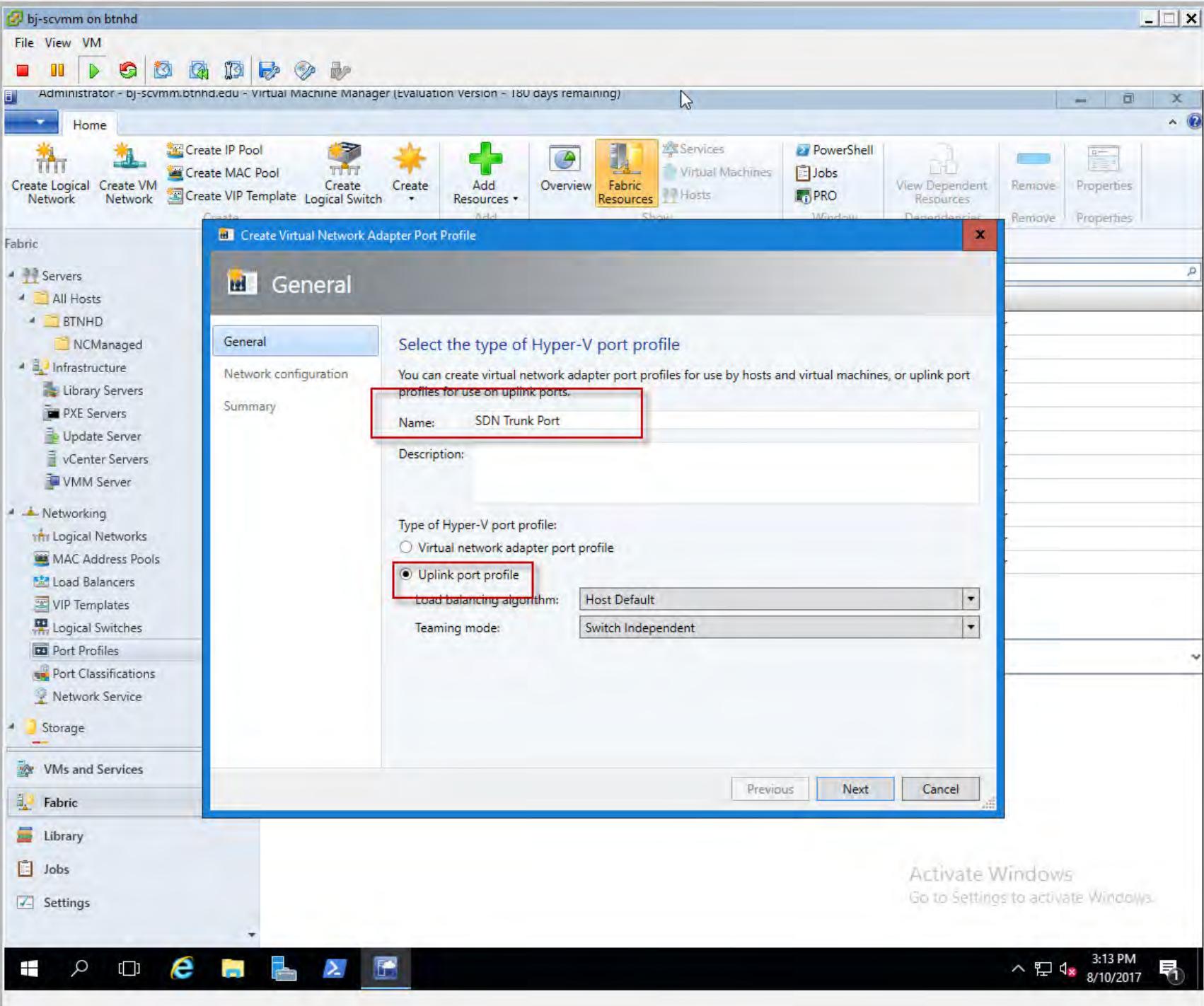
Port profile information

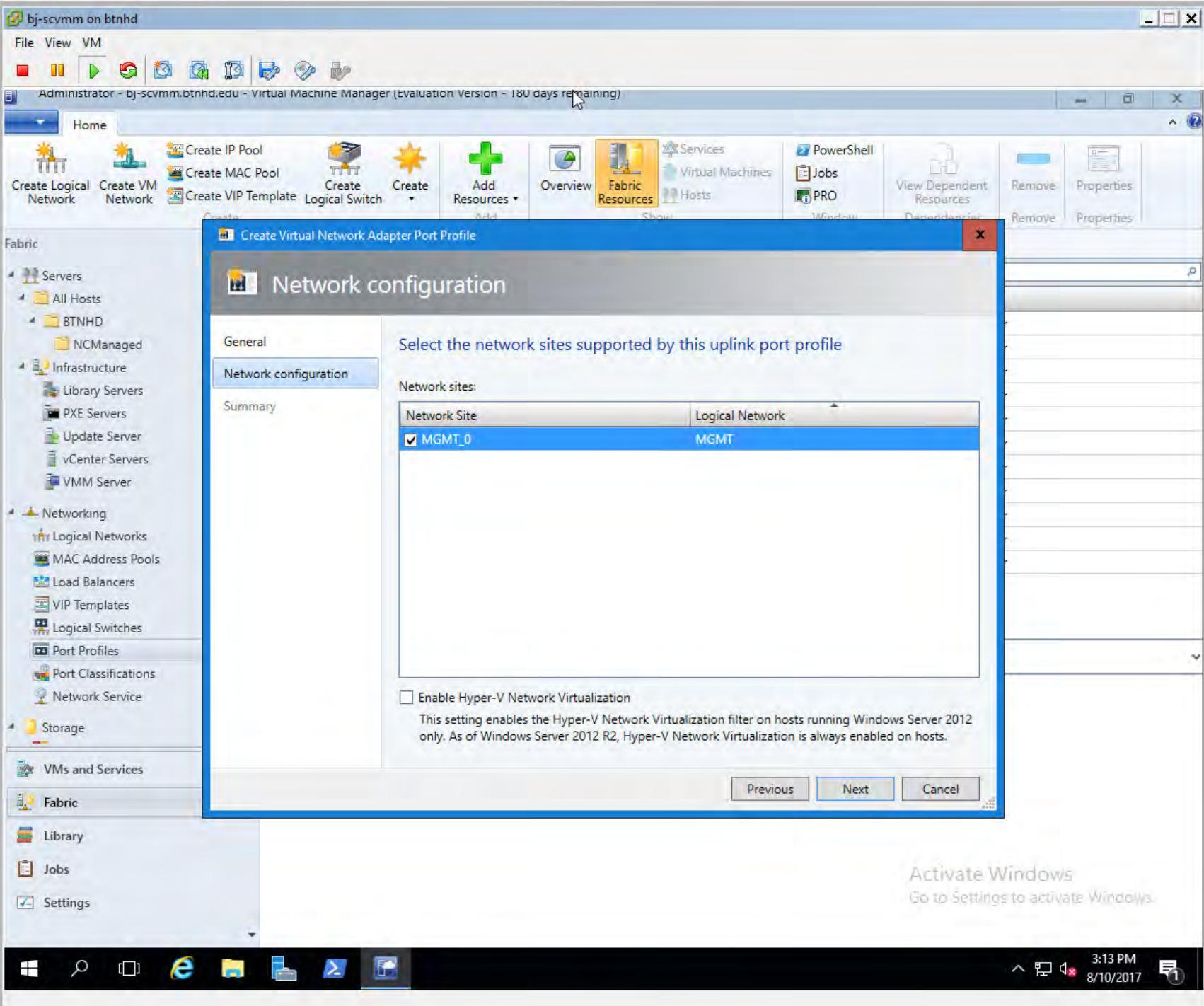
Name: Type: Applies to:

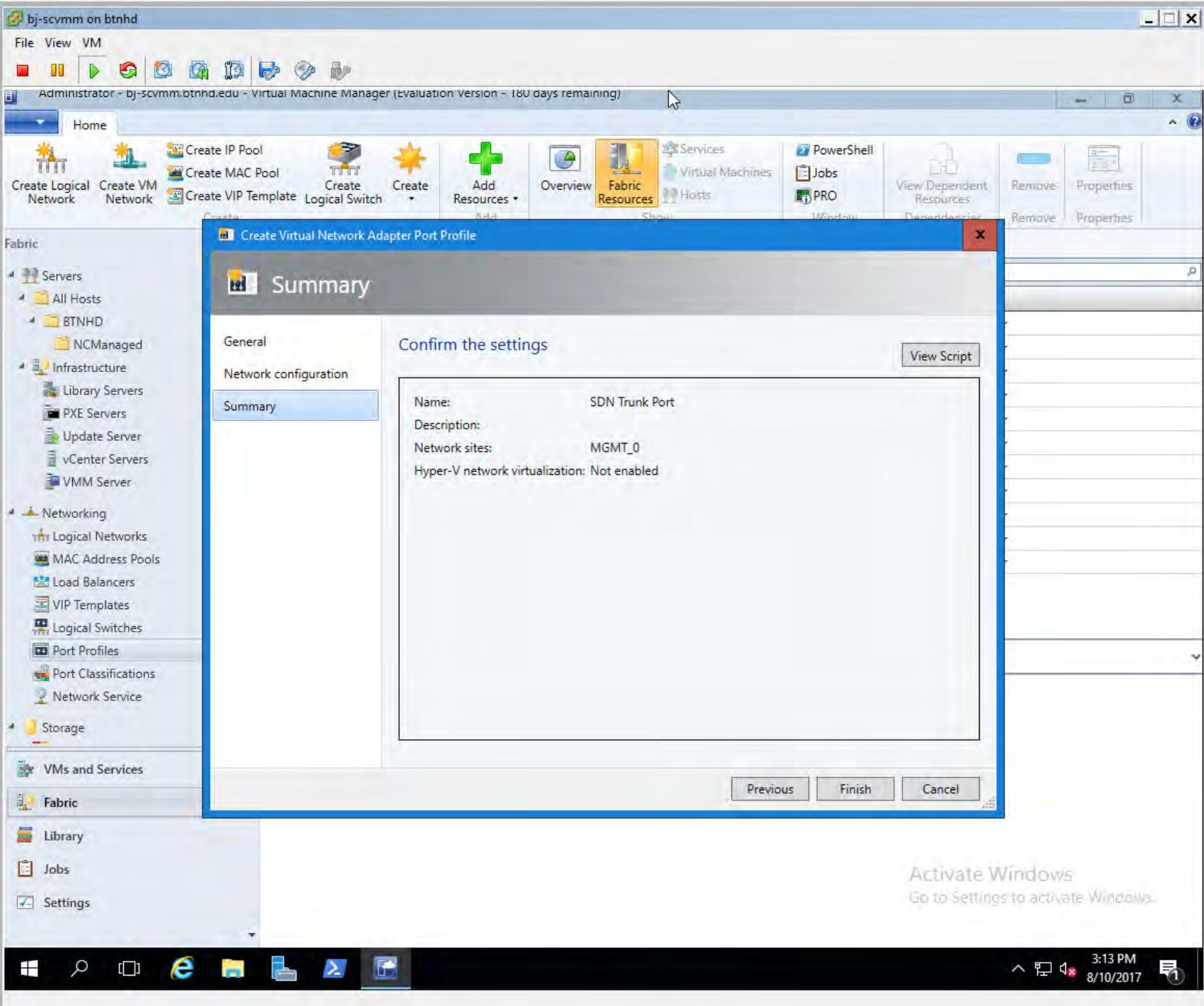
Activate Windows  
Go to Settings to activate Windows

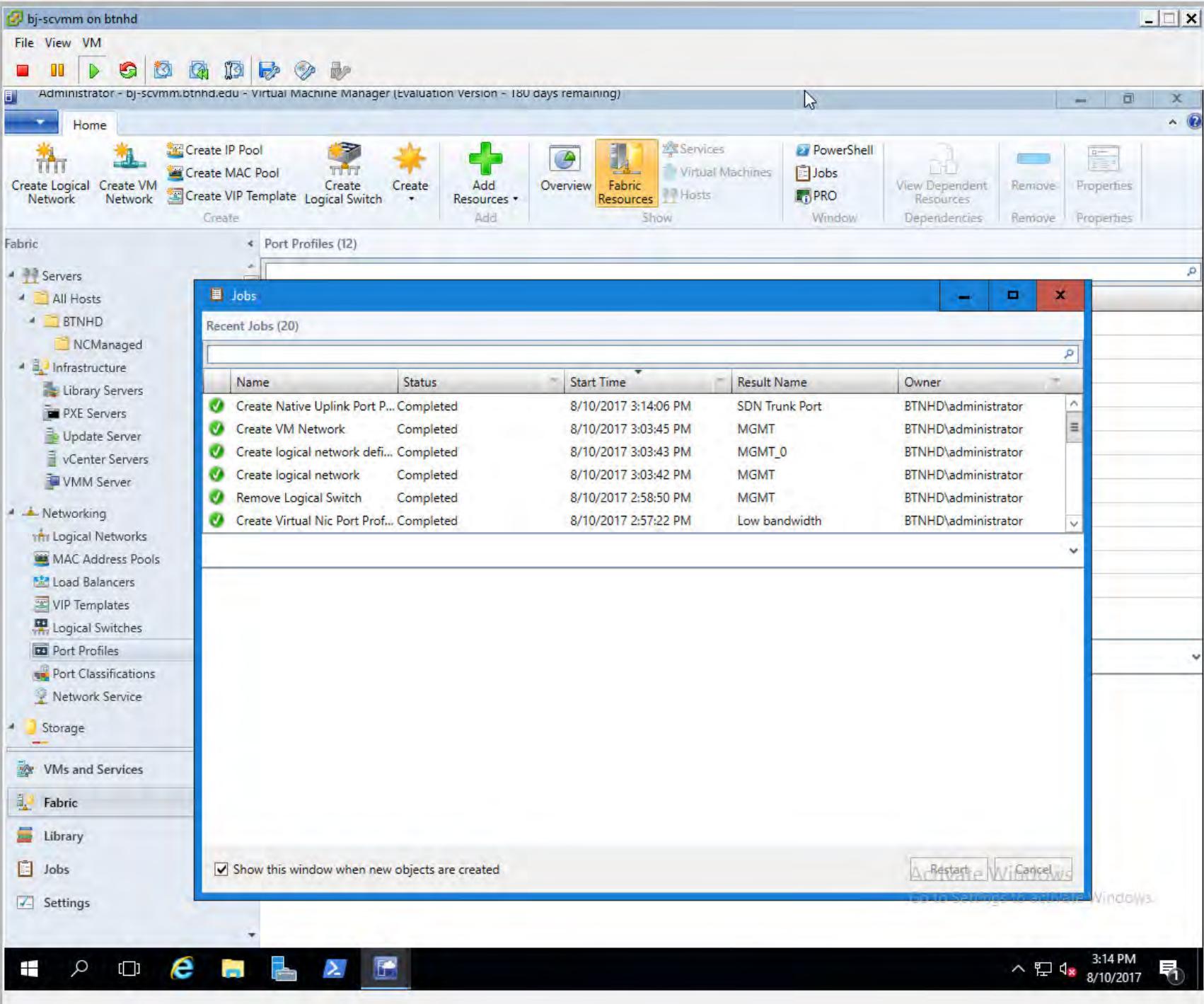
3:12 PM 8/10/2017

Servers All Hosts BTNHD NCManaged Infrastructure Library Servers PXE Servers Update Server vCenter Servers VMM Server Networking Logical Networks MAC Address Pools Load Balancers VIP Templates Logical Switches Port Profiles Create Hyper-V Port Profile Network Service Storage VMs and Services Fabric Library Jobs Settings









bj-scvmm on btnhd

File View VM

Create Logical Network Create VM Network Create IP Pool Create MAC Pool Create VIP Template Create Logical Switch Add Resources Overview Fabric Resources Services PowerShell Jobs PRO Window View Dependent Resources Dependencies Remove Remove Properties Properties

Administrator - bj-scvmm\btnhd.edu - Virtual Machine Manager (Evaluation Version - 180 days remaining)

Fabric Port Profiles (12)

Name	Type	Applies To	Source
Low Bandwidth Adapter	Virtual	Hyper-V	Virtual Machine Manager
Default	Virtual	Hyper-V	Virtual Machine Manager
Live migration	Virtual	Hyper-V	Virtual Machine Manager
iScsi	Virtual	Hyper-V	Virtual Machine Manager
SR-IOV Profile	Virtual	Hyper-V	Virtual Machine Manager
Network load balancer NIC Profile	Virtual	Hyper-V	Virtual Machine Manager
Medium Bandwidth Adapter	Virtual	Hyper-V	Virtual Machine Manager
Host management	Virtual	Hyper-V	Virtual Machine Manager
Cluster	Virtual	Hyper-V	Virtual Machine Manager
Guest Dynamic IP	Virtual	Hyper-V	Virtual Machine Manager
High Bandwidth Adapter	Virtual	Hyper-V	Virtual Machine Manager
SDN Trunk Port	Uplink	Hyper-V	Virtual Machine Manager

Port profile information

Name:

Type:

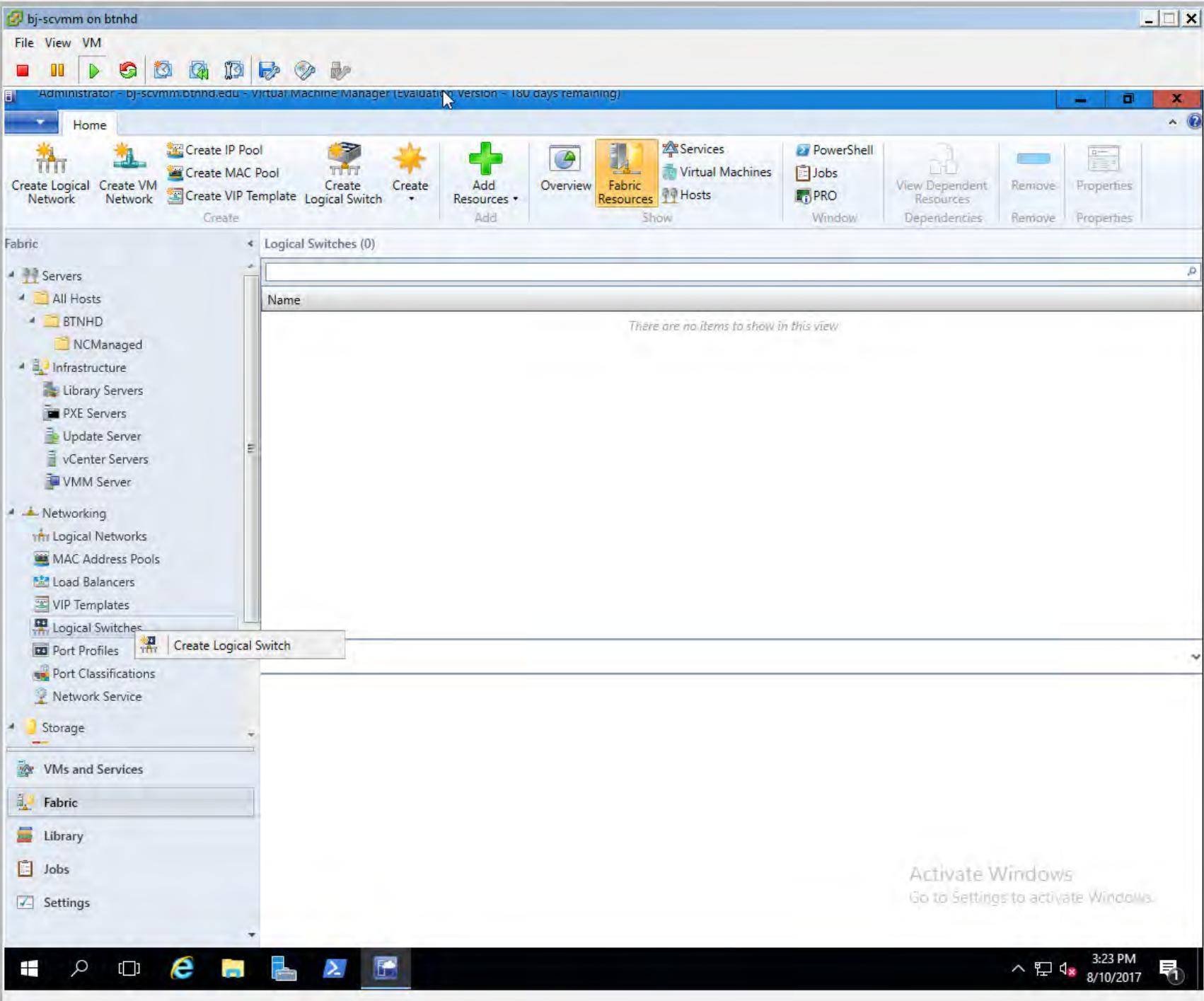
Applies to:

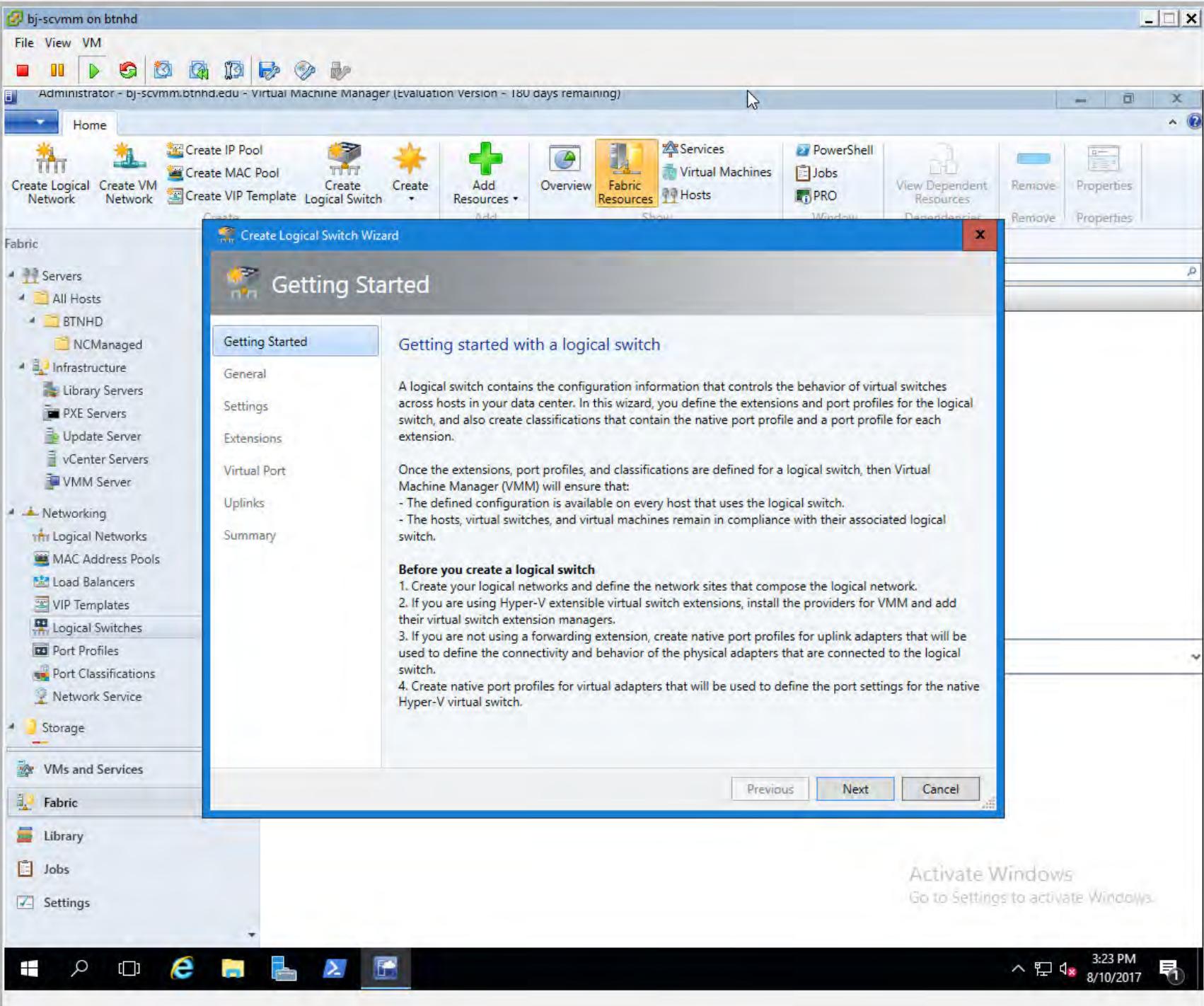
Activate Windows  
Go to Settings to activate Windows

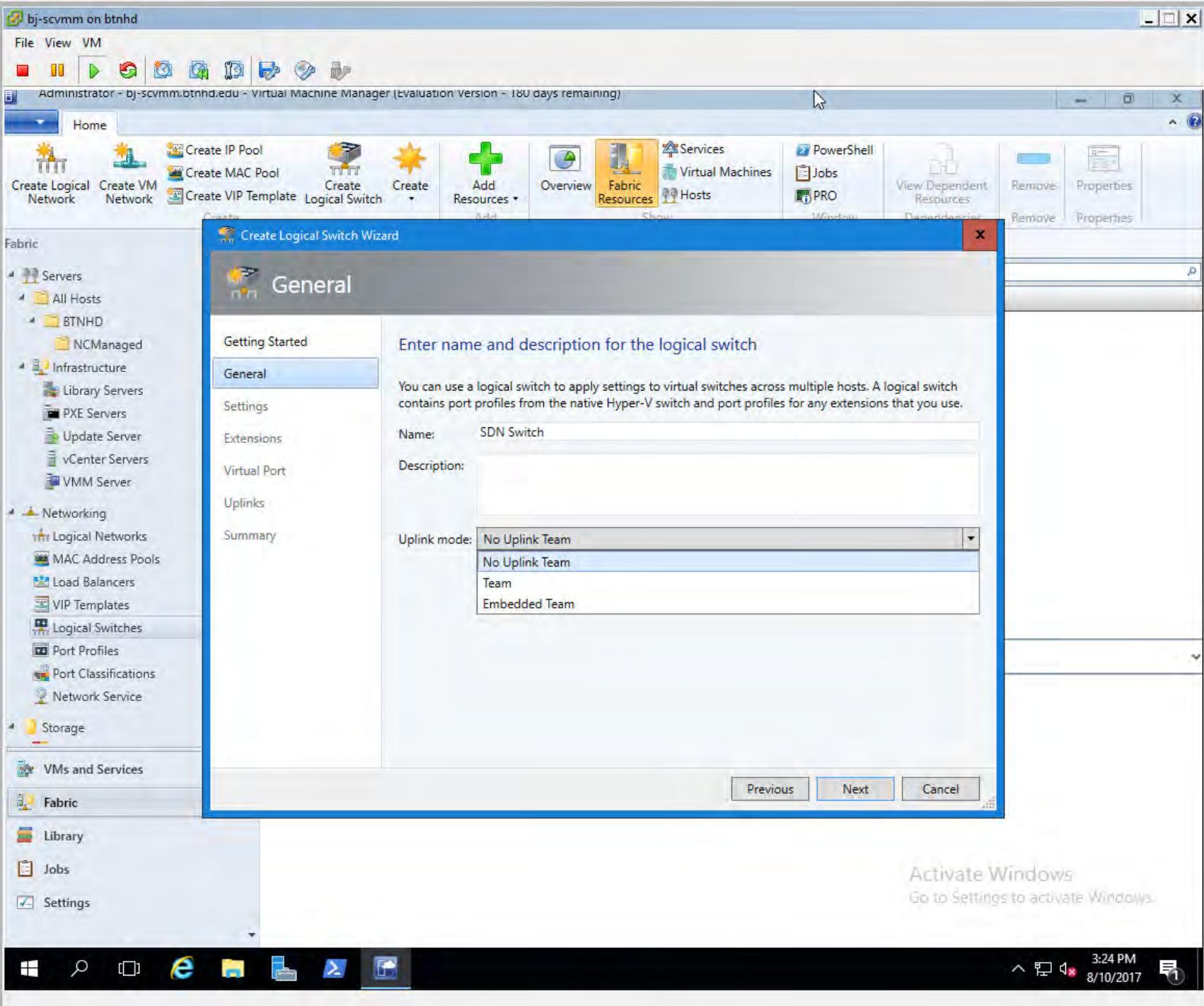
3:14 PM 8/10/2017

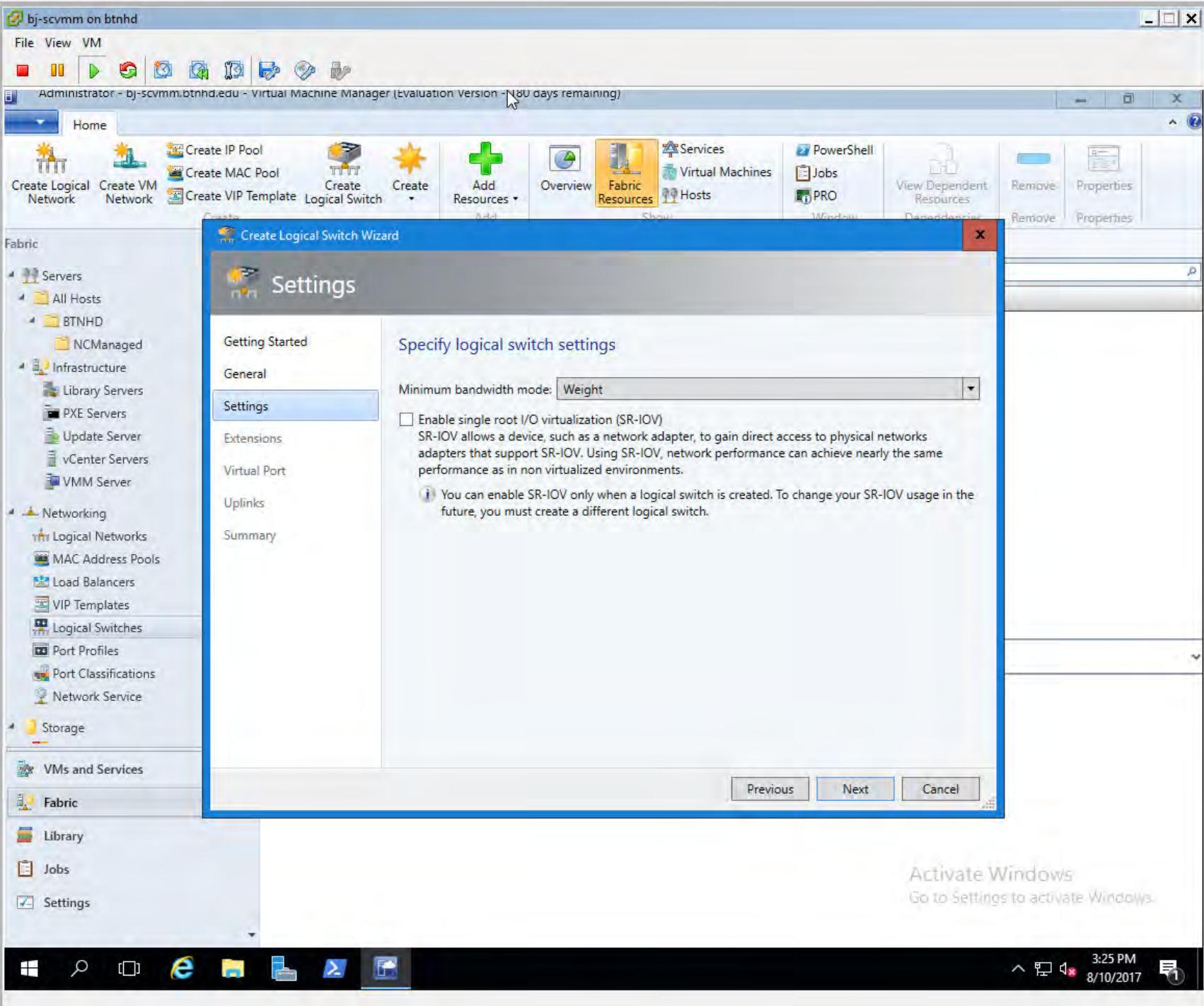
Servers All Hosts BTNHD NCManaged Infrastructure Library Servers PXE Servers Update Server vCenter Servers VMM Server Networking Logical Networks MAC Address Pools Load Balancers VIP Templates Logical Switches Port Profiles Port Classifications Network Service Storage VMS and Services Fabric Library Jobs Settings

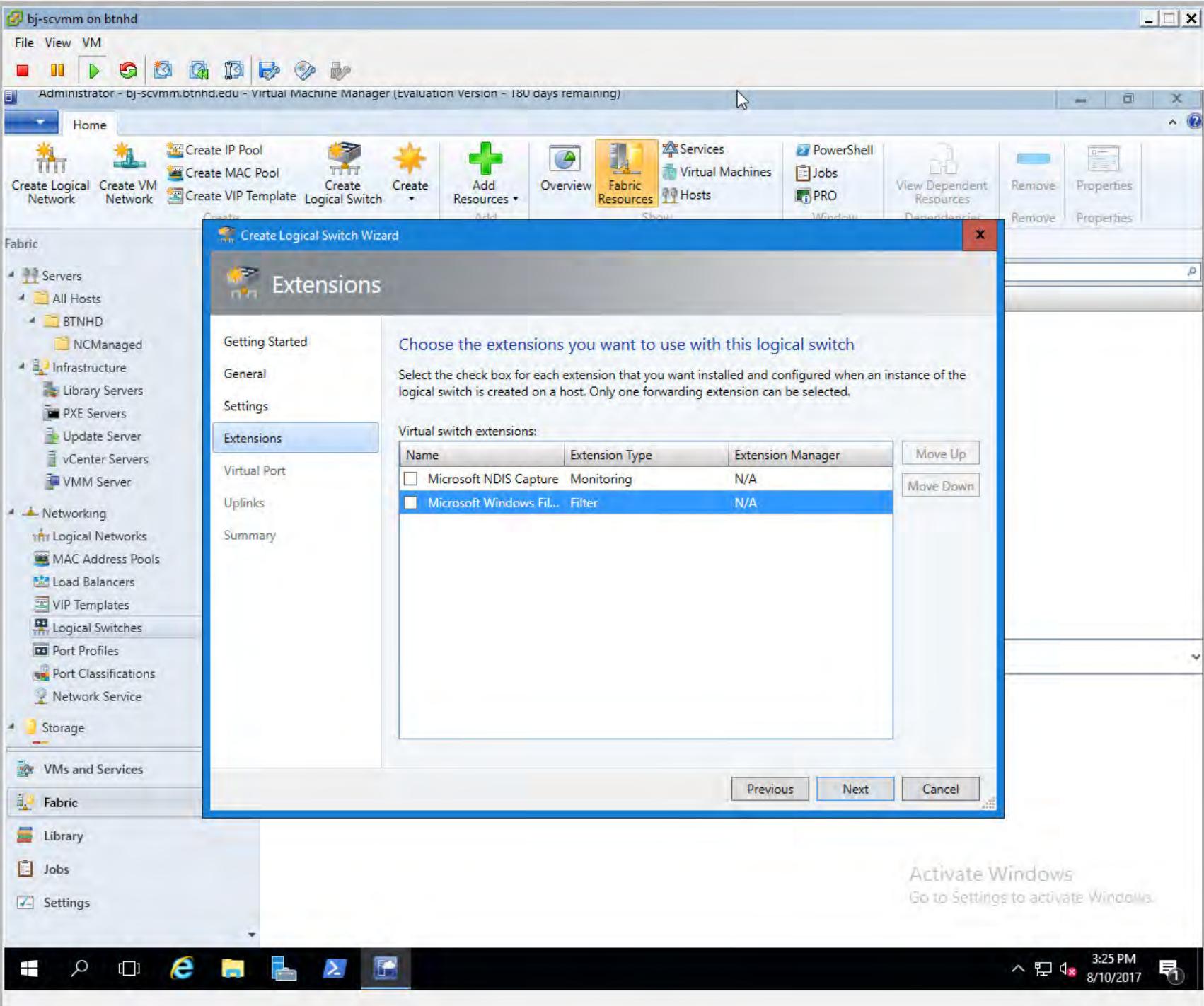
# Create a Logical Switch

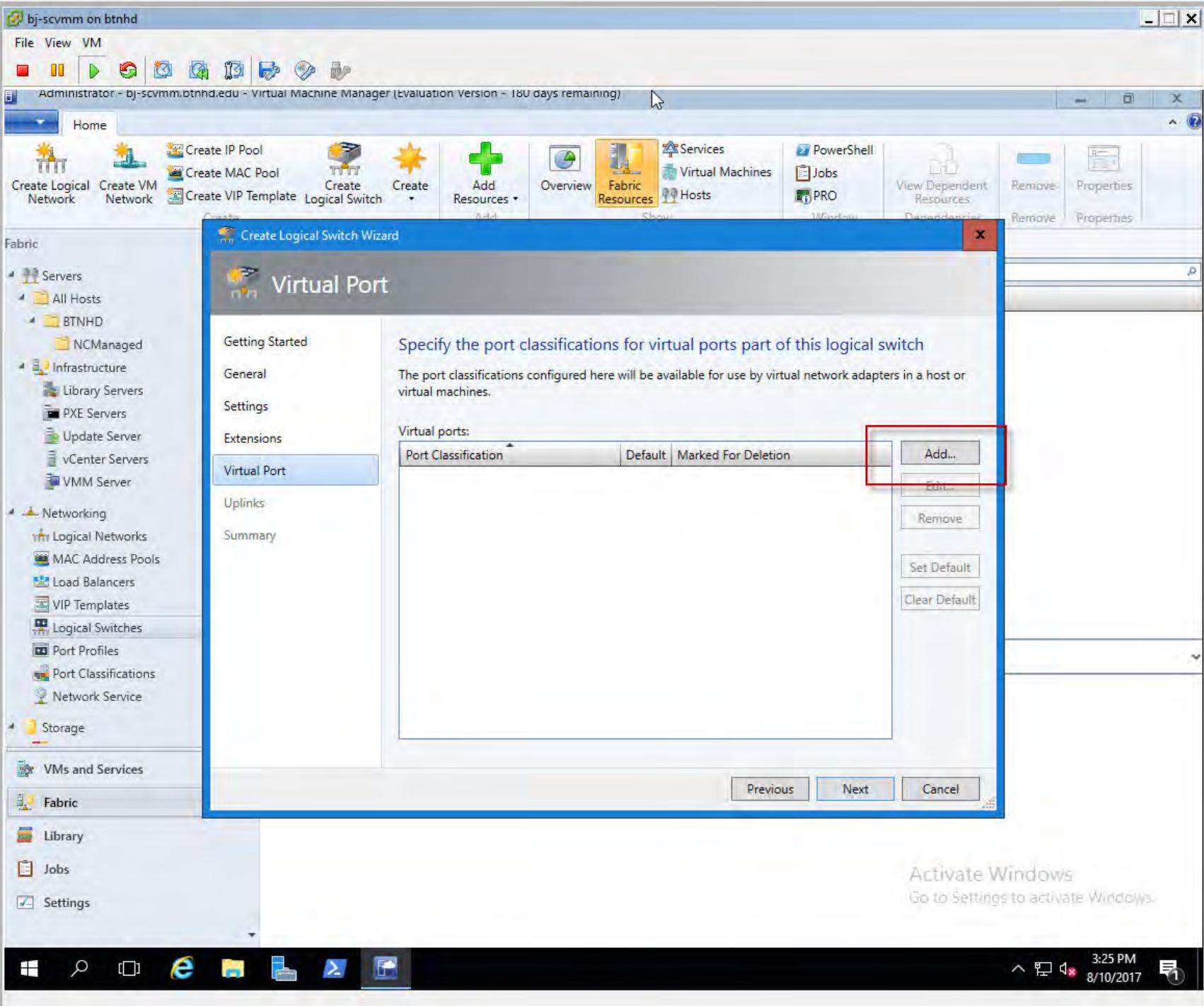


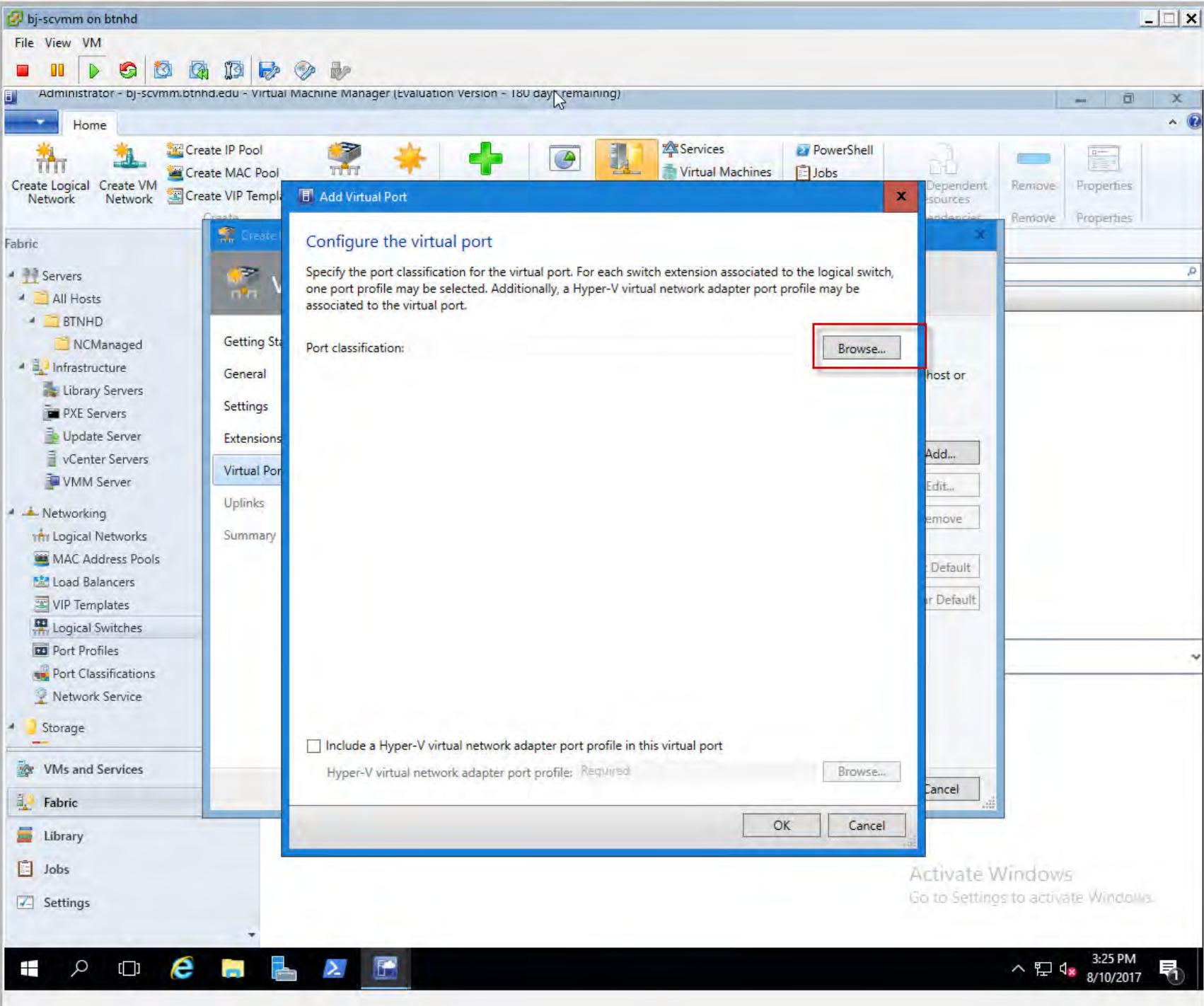


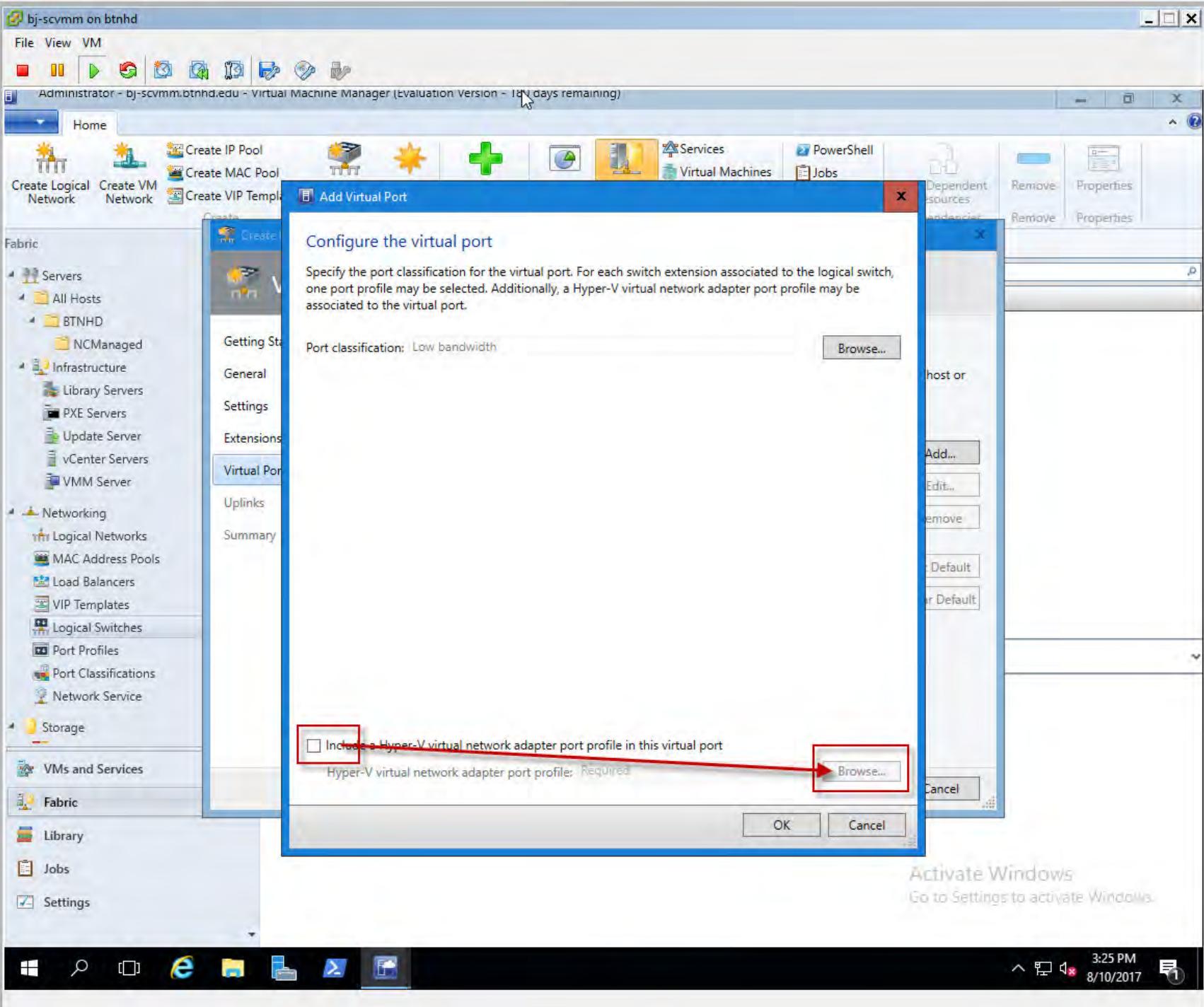


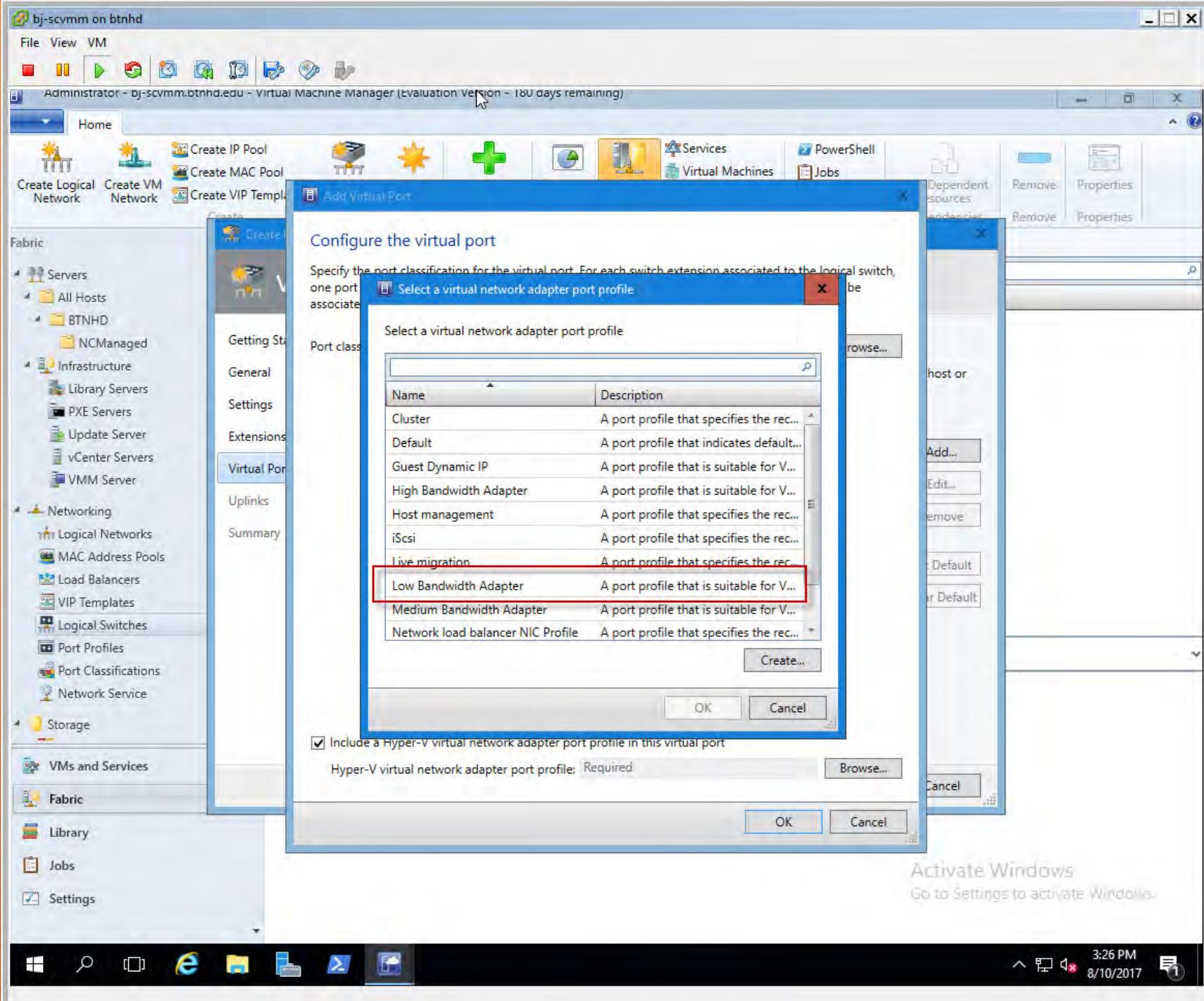


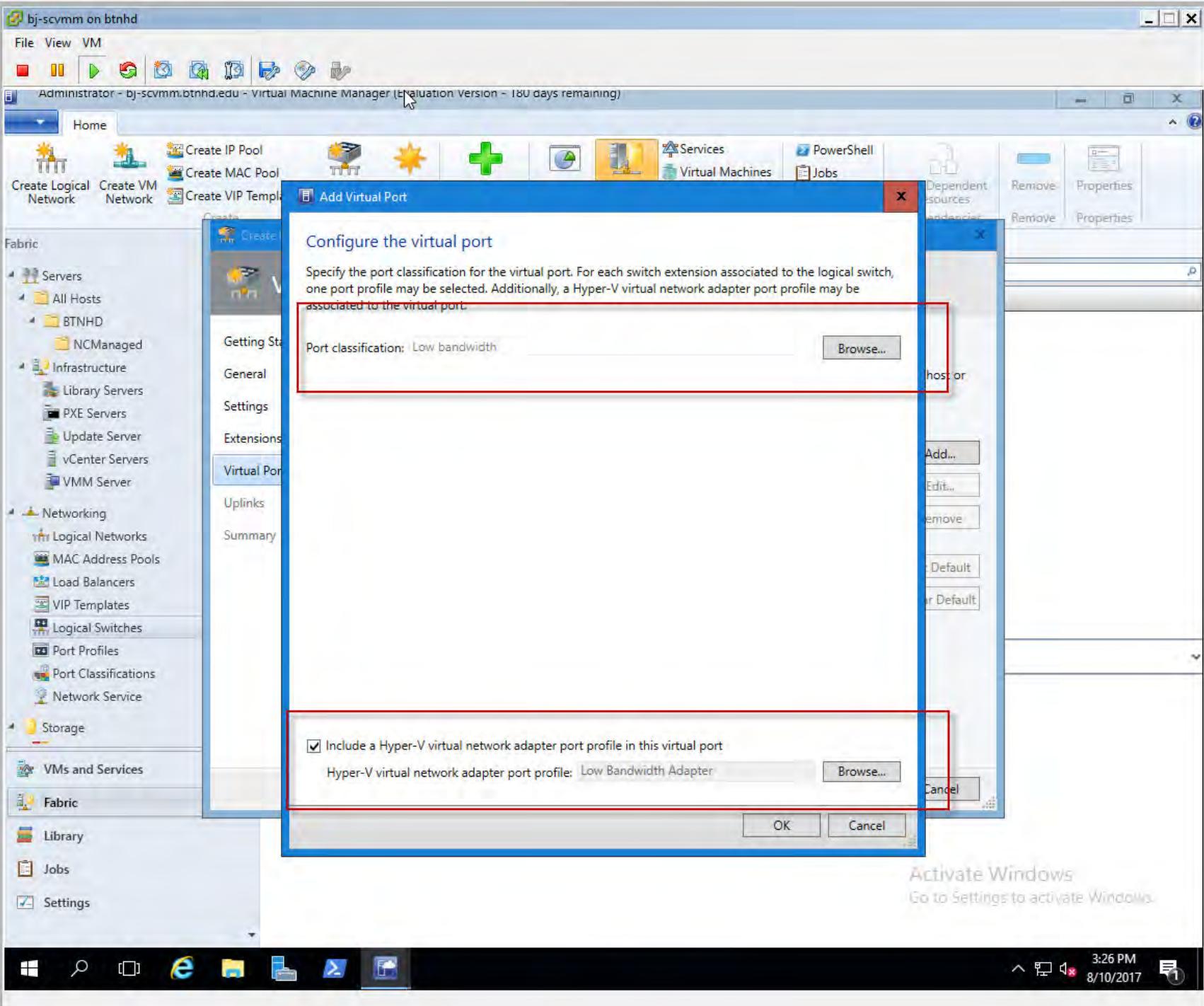


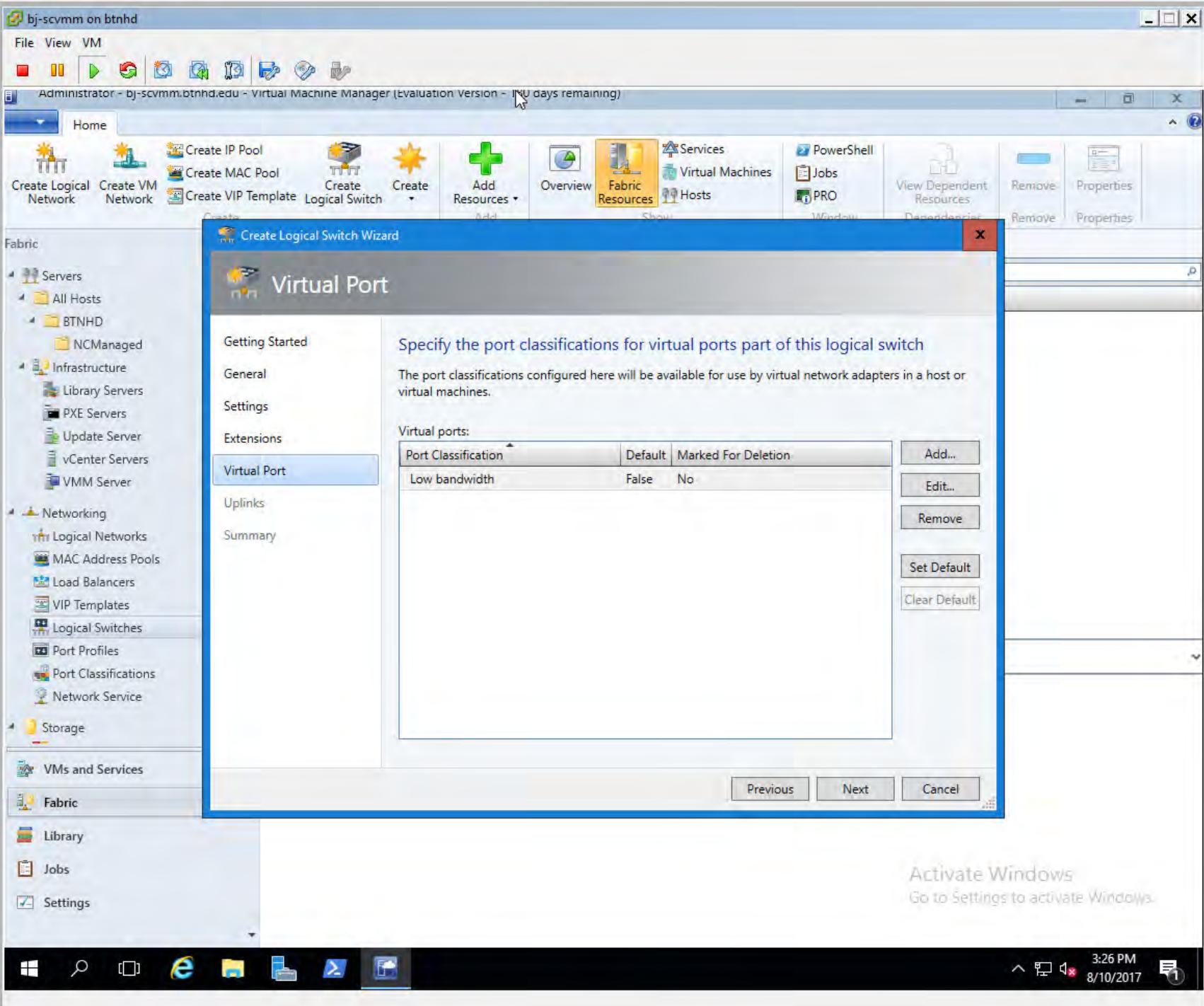


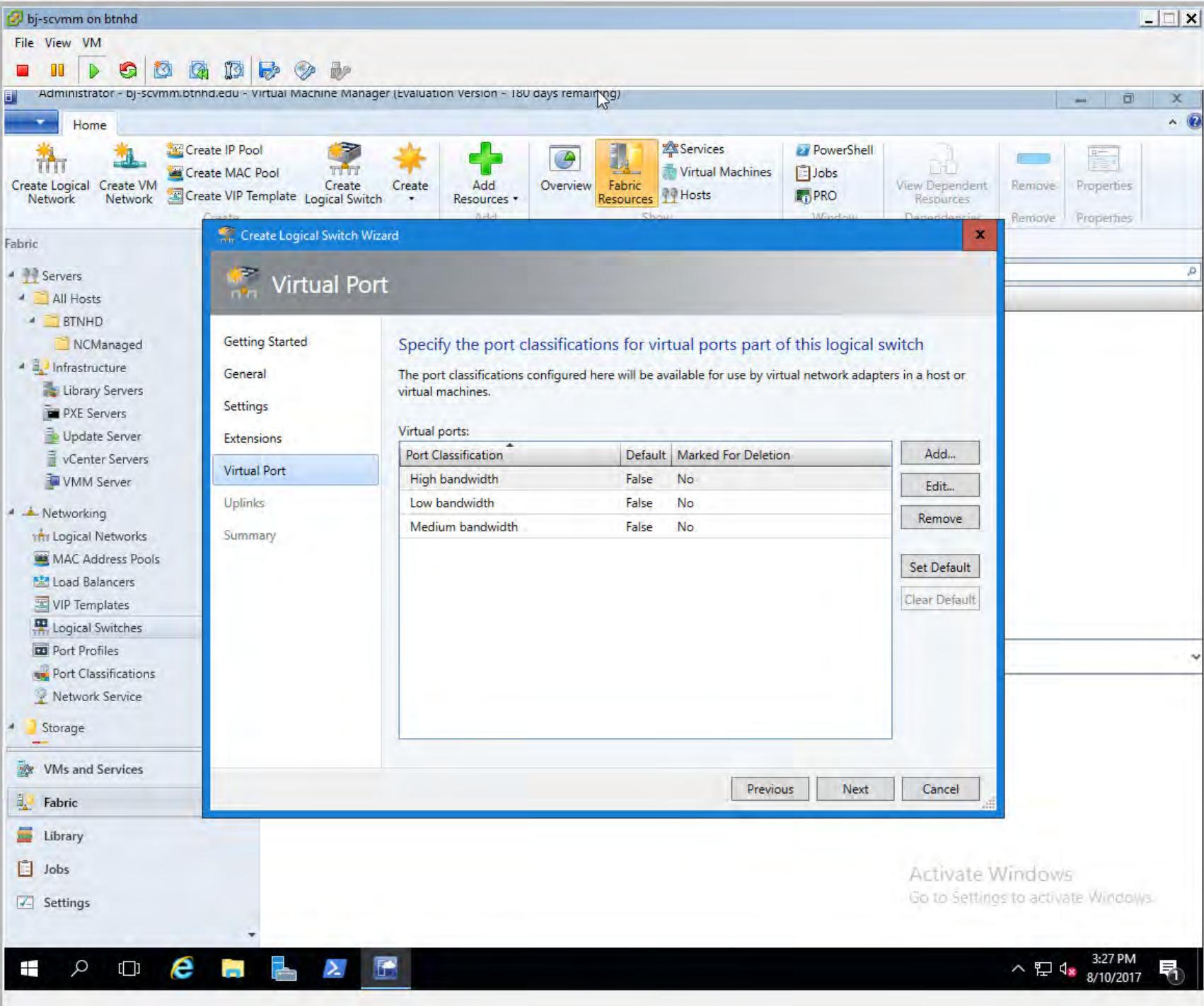


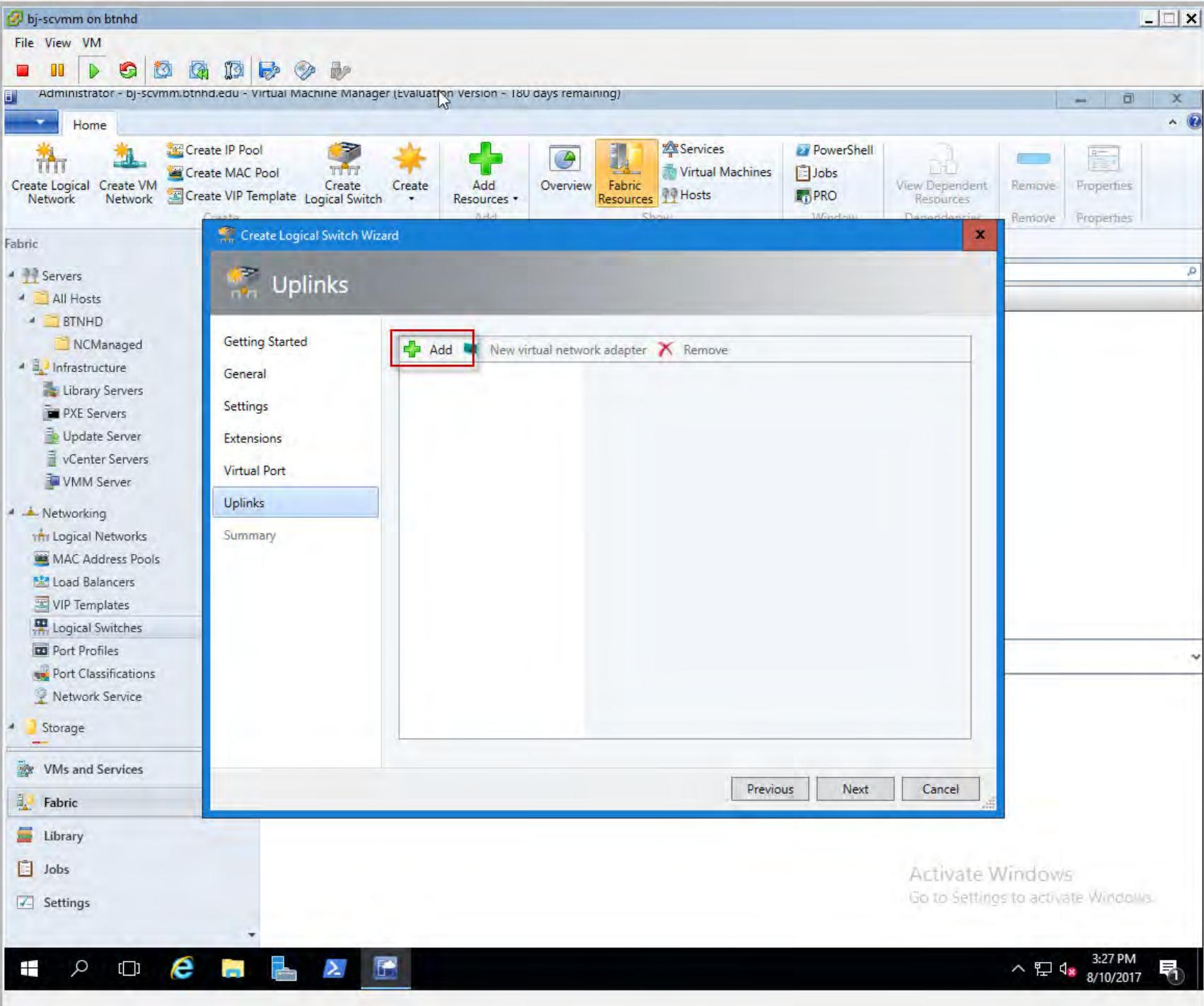


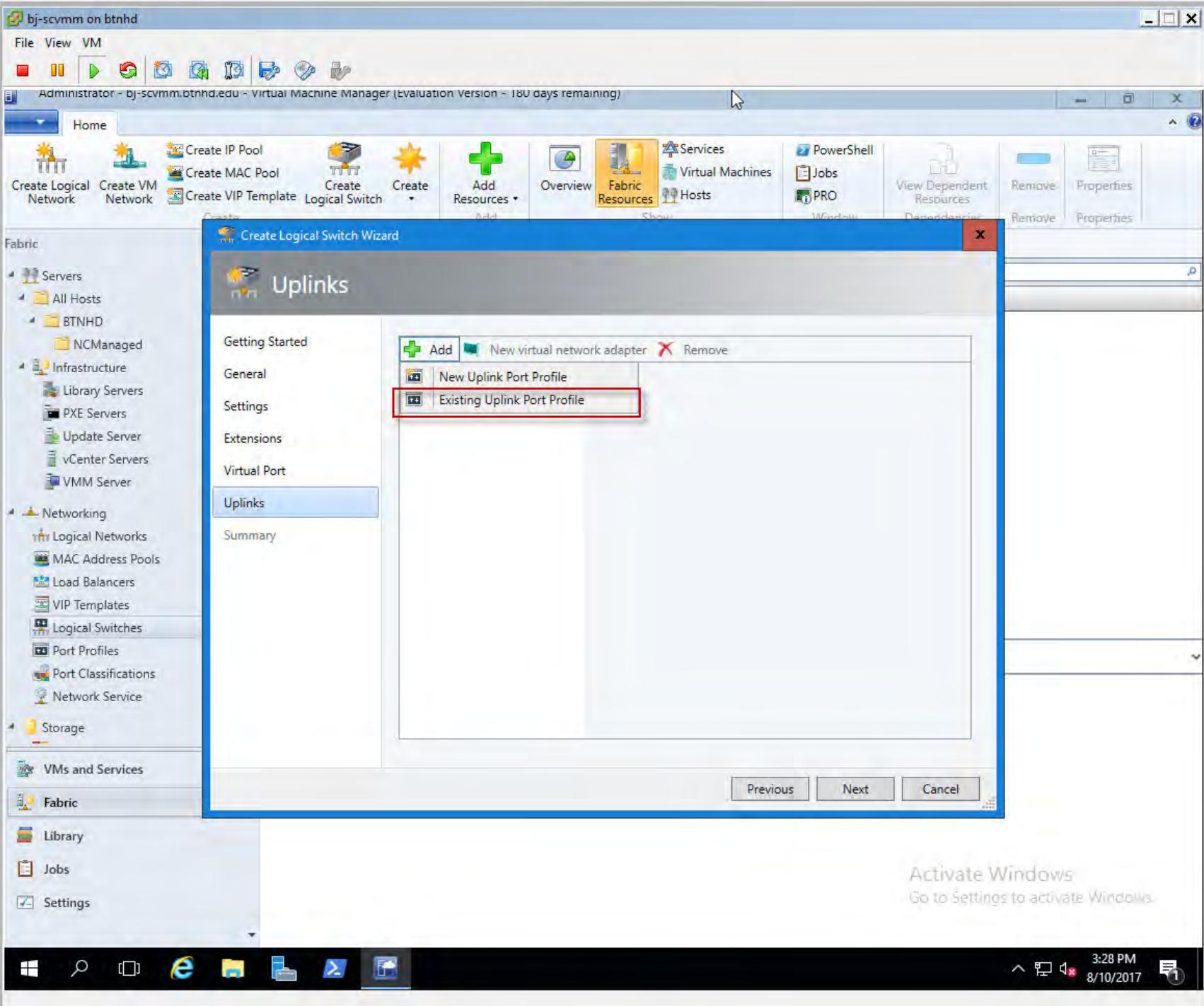


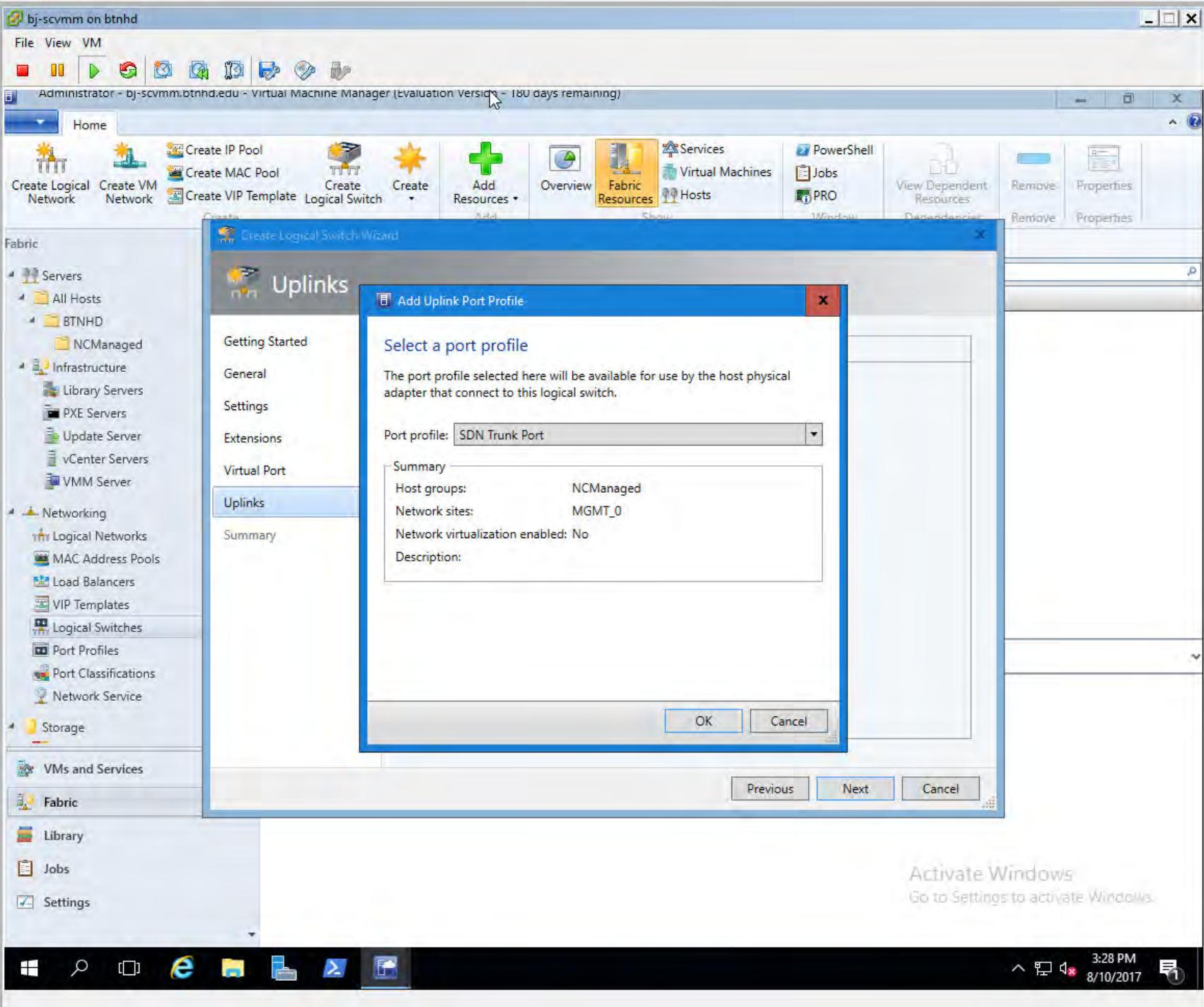


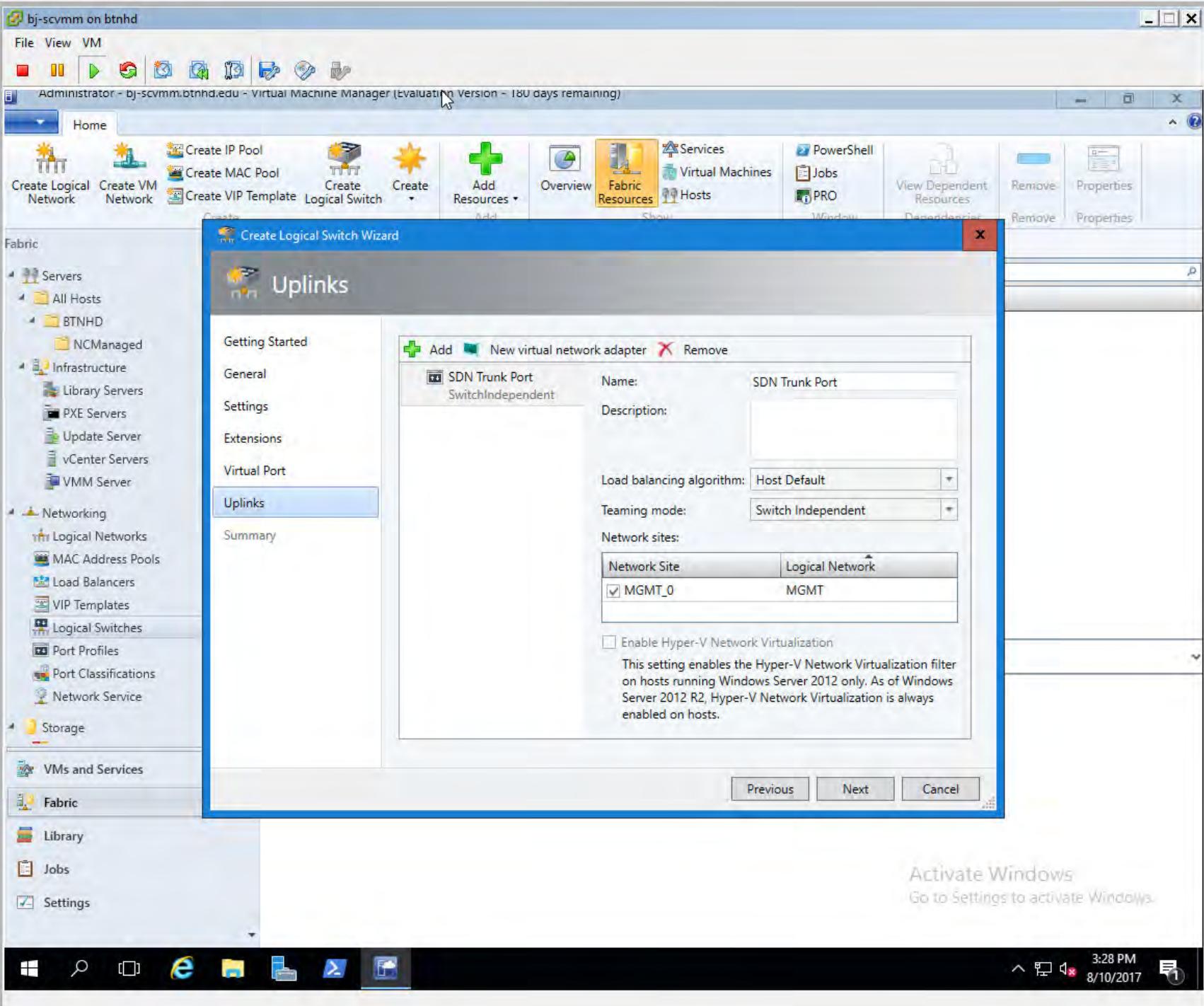


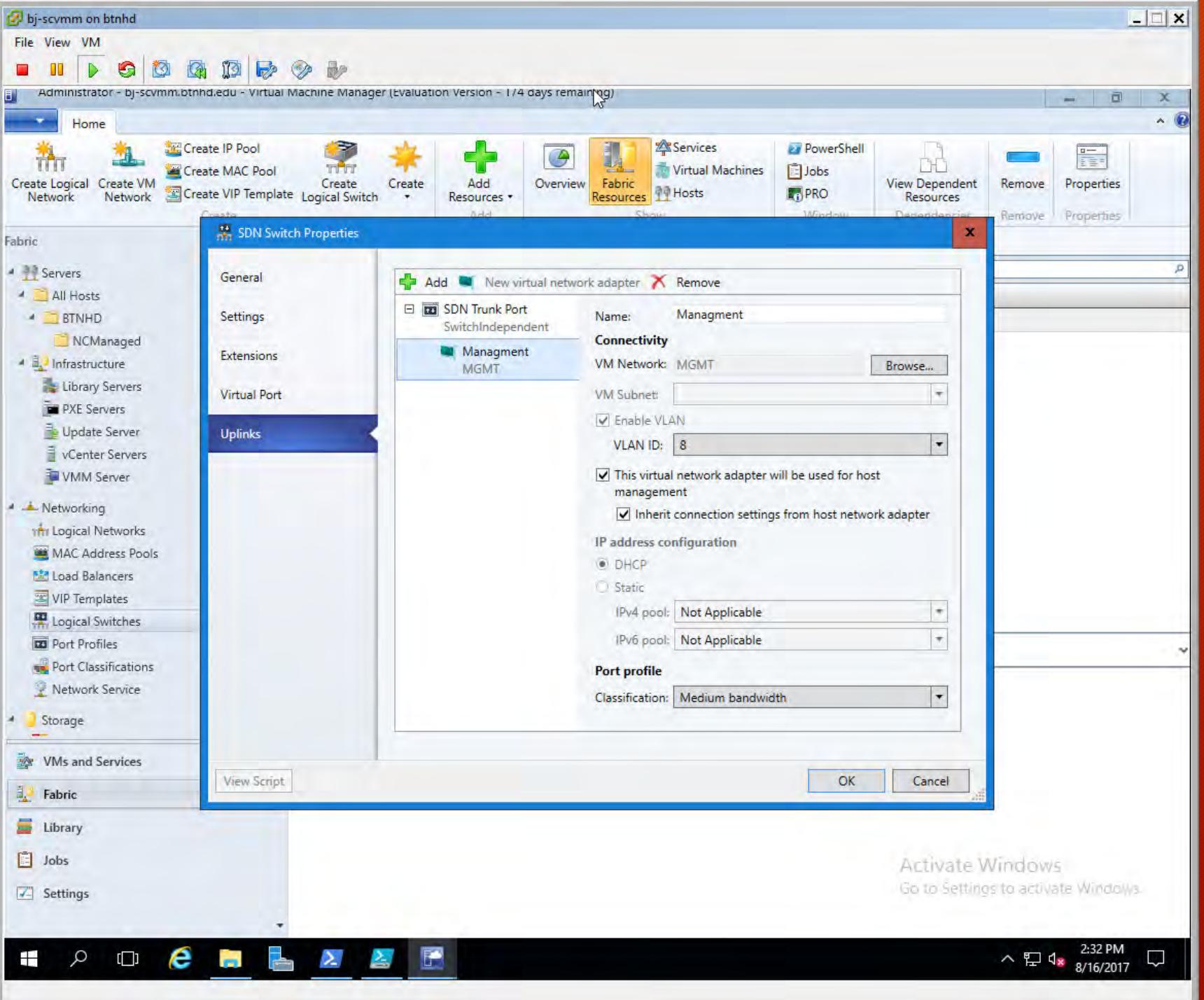


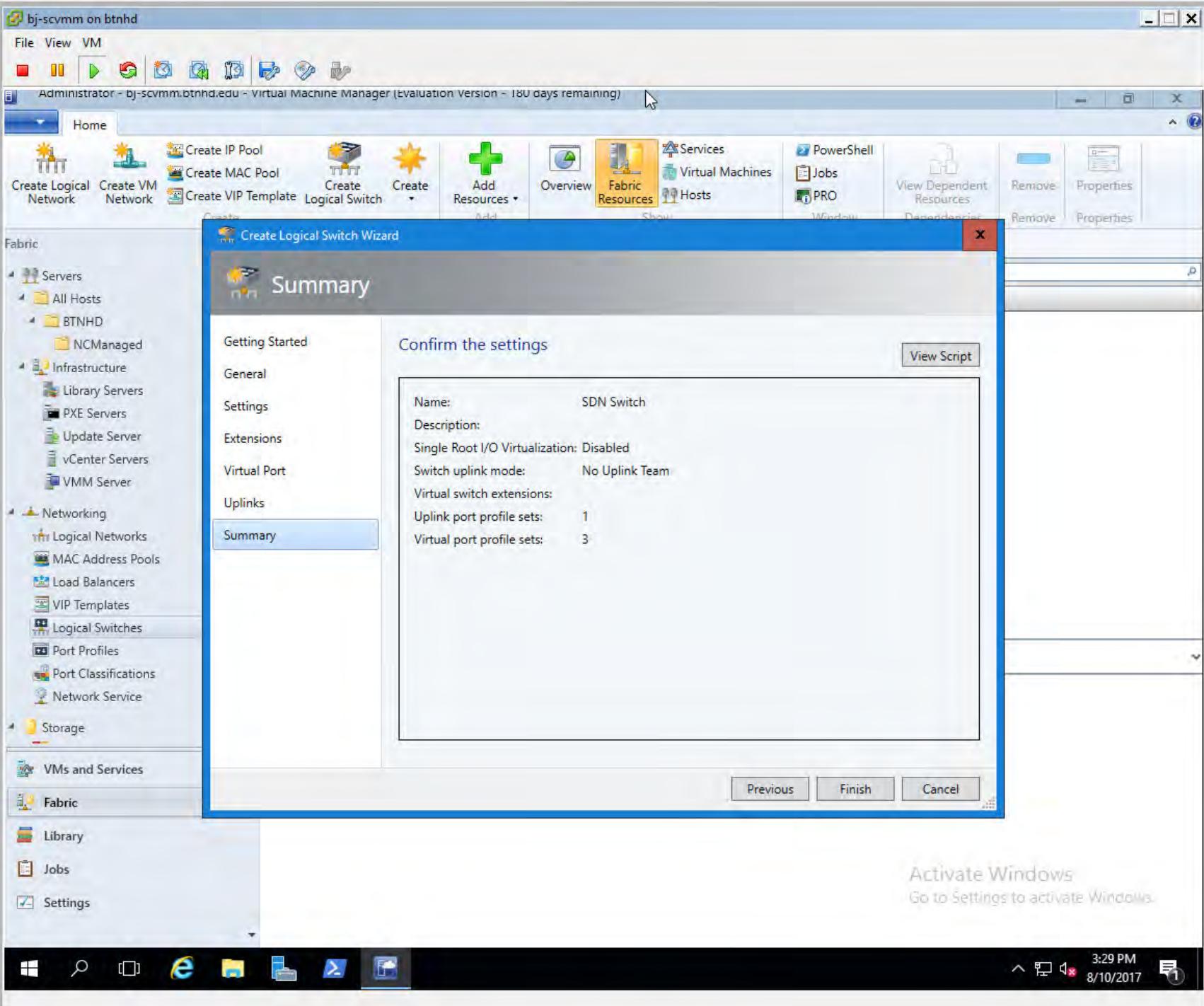


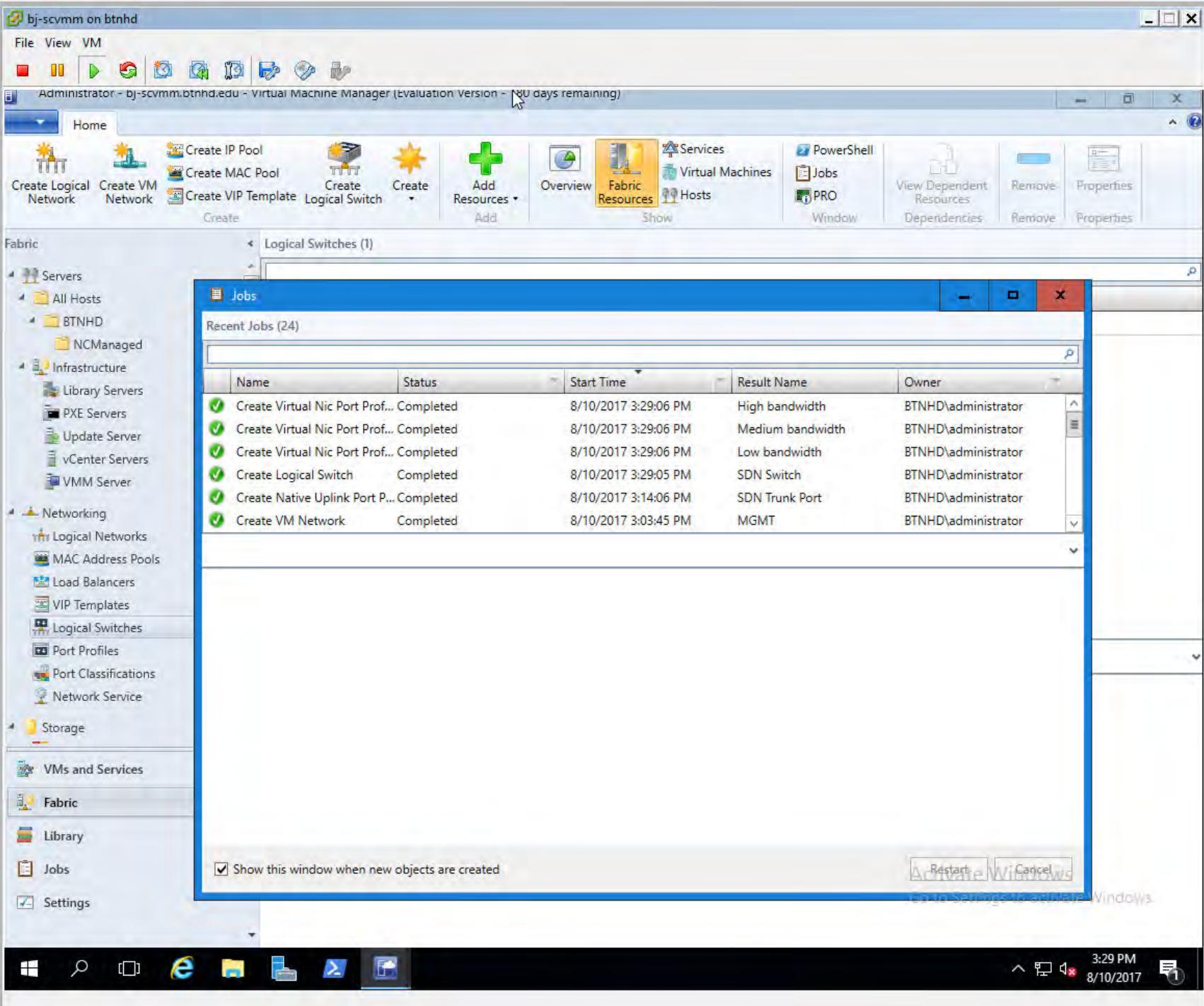


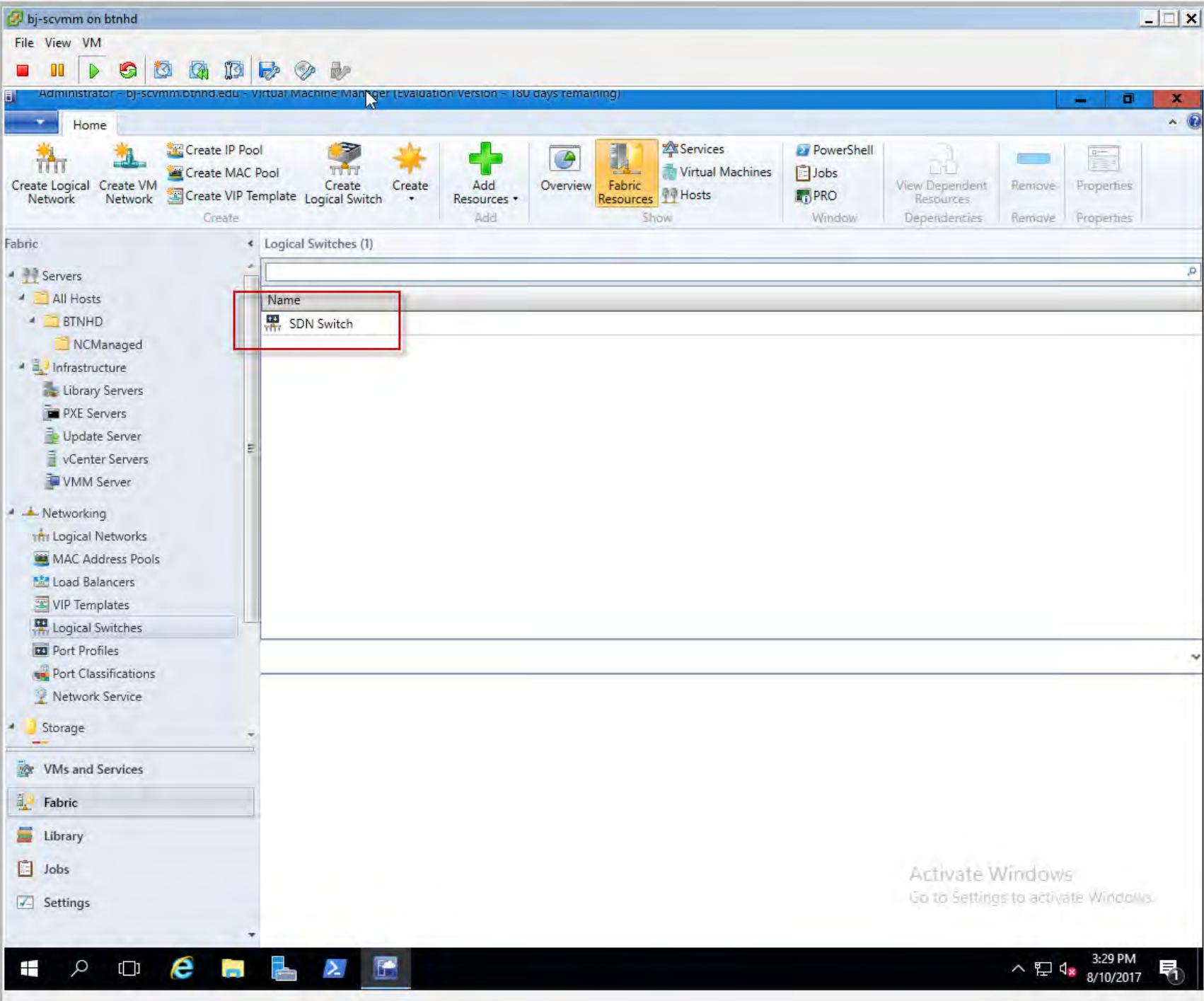












# Add Logical Switch to Hyper-V Server

bj-scvmm on btnhd

File View VM

Server Tools Administrator - bj-scvmm.btnhd.edu - Virtual Machine Manager (Evaluation Version - 180 days remaining)

Home Folder Host

Refresh Virtual Machines Restart Power On Start Maintenance Mode Apply Latest Code Integrity Policy Remove Cluster Node Connect via RDP View Networking Remove Properties

Power Off Stop Maintenance Mode Move to Host Group View Status Run Script Command

Fabric

Hosts (2)

Name	Host Status	Role	Job Status	CPU Average	Available Memory	Operating System
bj-hyperv.btnhd.edu	OK	Host	Completed	1 %	4.55 GB	Microsoft Windows S...
bj-hyperv2.btnhd.edu	OK			2 %	4.01 GB	Microsoft Windows S...

Host

bj-hyperv.btnhd.edu

Status

Host status: OK  
Date modified: 8/10/2017 3:29:23 PM

Host

Operating system: Microsoft Windows Server 2012 R2 Datacenter  
Virtualization software: Microsoft Hyper-V  
Processor: (6) 1.90 GHz Intel  
Memory: 6.00 GB

Scan Remediate Compliance Properties Update Agent Reassociate Refresh Refresh Virtual Machines Shut Down Restart Reset Power On Power Off View Status Start Maintenance Mode Stop Maintenance Mode Run Script Command Apply Latest Code Integrity Policy Move to Host Group Remove Cluster Node Connect via RDP View Networking Remove Properties

Recent job

Managed computer job: No recent job  
Job status:  
Host job: Refresh host  
Job status: 100 % Completed

Compliance

Compliance status: Windows  
Operational status: No issues to activate Windows.  
Last scan:

3:32 PM 8/10/2017

Servers

- All Hosts
- BTNHD
  - NCManaged

Infrastructure

- Library Servers
- PXE Servers
- Update Server
- vCenter Servers
- VMM Server

Networking

- Logical Networks
- MAC Address Pools
- Load Balancers
- VIP Templates
- Logical Switches
- Port Profiles
- Port Classifications
- Network Service

Storage

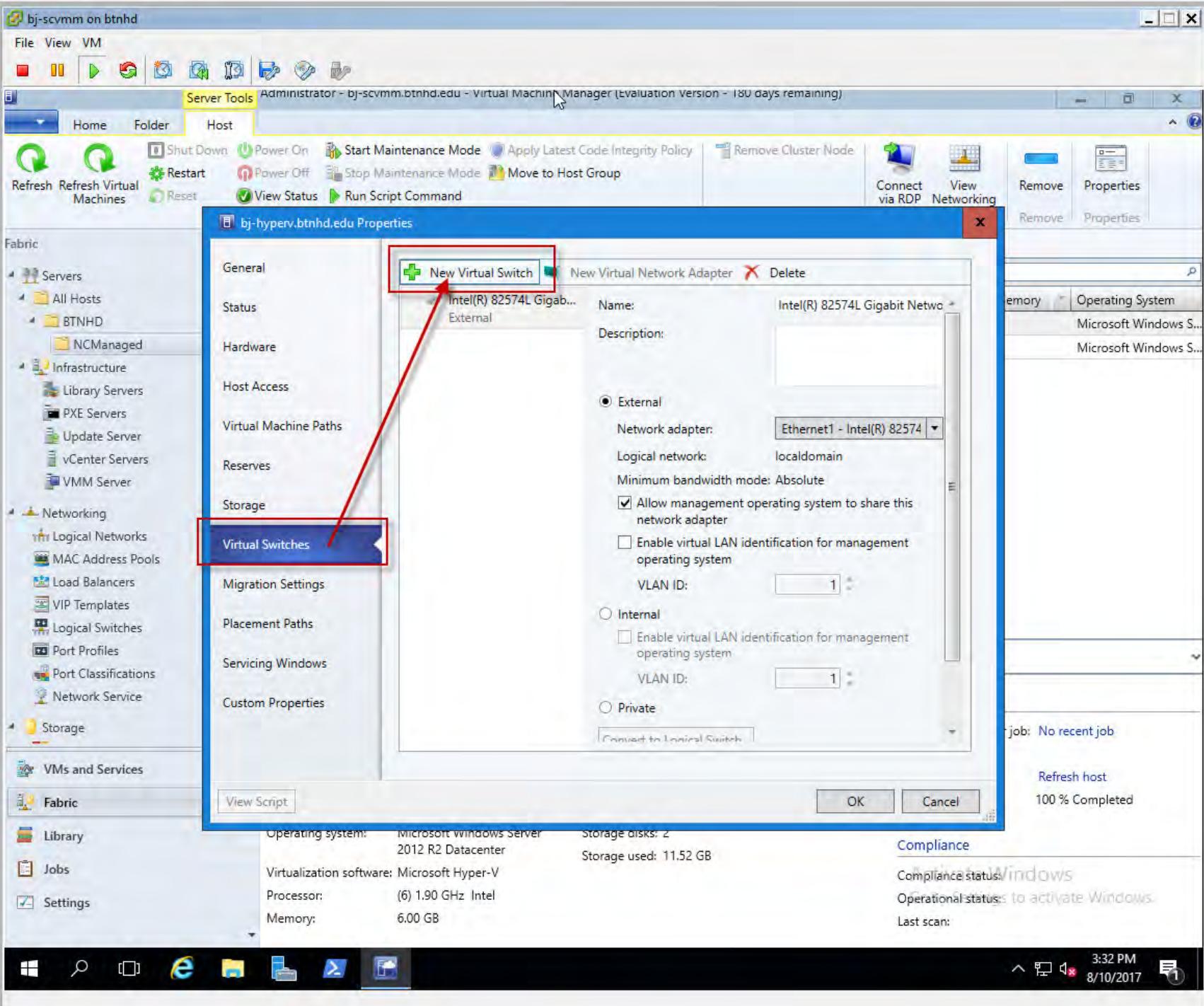
VMs and Services

Fabric

Library

Jobs

Settings



bj-svmm on btnhd

File View VM

Server Tools Administrator - bj-svmm.btnhd.edu - Virtual Machine Manager (Evaluation Version - 180 days remaining)

Home Folder Host

Refresh Virtual Machines Restart Power On Start Maintenance Mode Apply Latest Code Integrity Policy Remove Cluster Node Connect via RDP View Networking

Power Off Stop Maintenance Mode Move to Host Group Remove Properties

View Status Run Script Command

Remove Properties

Fabric

- Servers
  - All Hosts
  - BTNHD
    - NCManaged
- Infrastructure
  - Library Servers
  - PXE Servers
  - Update Server
  - vCenter Servers
  - VMM Server
- Networking
  - Logical Networks
  - MAC Address Pools
  - Load Balancers
  - VIP Templates
  - Logical Switches
  - Port Profiles
  - Port Classifications
  - Network Service
- Storage
- VMs and Services
- Fabric
- Library
- Jobs
- Settings

bj-hyperv.btnhd.edu Properties

New Virtual Switch New Logical Switch New Standard Switch Delete

Status: Intel(R) 82574L Gigabit Network Adapter

Hardware

Host Access

Virtual Machine Paths

Reserves

Storage

Virtual Switches

Migration Settings

Placement Paths

Servicing Windows

Custom Properties

New Virtual Switch New Logical Switch New Standard Switch Delete

External

Network adapter: Ethernet1 - Intel(R) 82574

Logical network: localdomain

Minimum bandwidth mode: Absolute

Allow management operating system to share this network adapter

Enable virtual LAN identification for management operating system

VLAN ID: 1

Internal

Enable virtual LAN identification for management operating system

VLAN ID: 1

Private

Convert to Unicast Switch

OK Cancel

Operating system: Microsoft Windows Server 2012 R2 Datacenter Storage disks: 2 Compliance

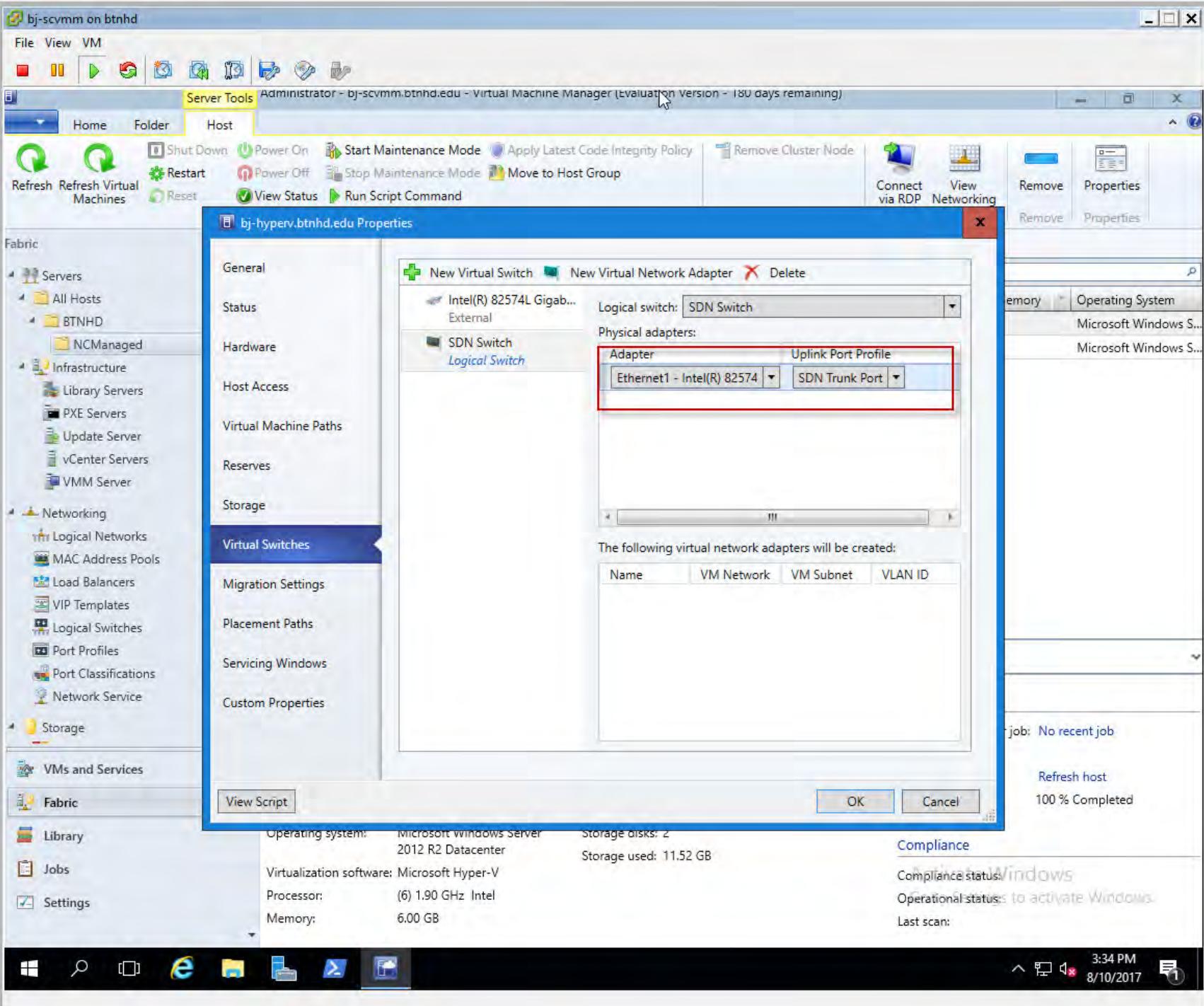
Virtualization software: Microsoft Hyper-V Storage used: 11.52 GB Compliance status:

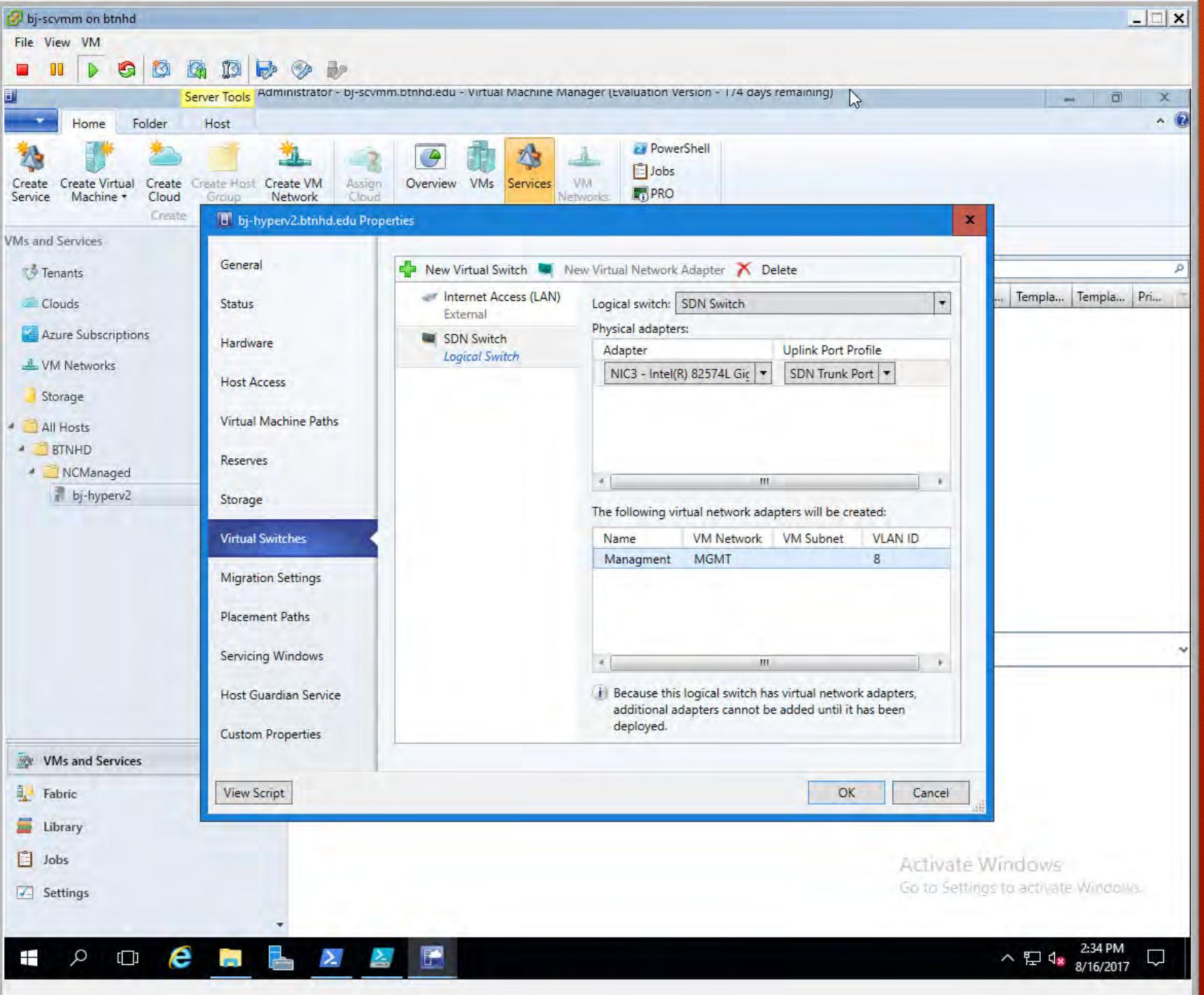
Processor: (6) 1.90 GHz Intel Operational status: You need to activate Windows.

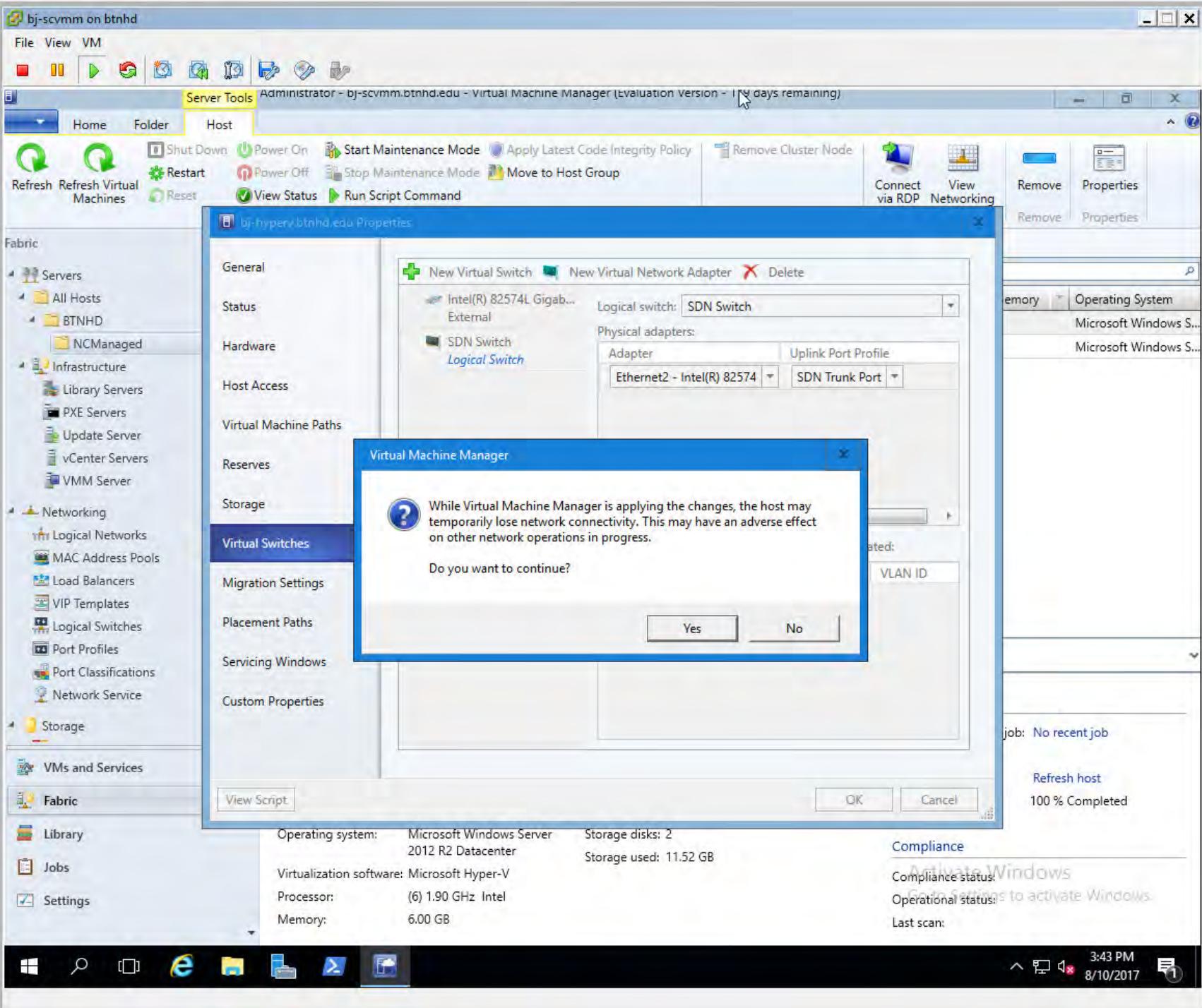
Memory: 6.00 GB Last scan:

Refresh host 100 % Completed

3:33 PM 8/10/2017







bj-scvmm on btnhd

File View VM

Server Tools Administrator - bj-scvmm\btnhd\edu - Virtual Machine Manager (Evaluation Version - 179 days remaining)

Home Folder Host

Refresh Virtual Machines Shut Down Power On Start Maintenance Mode Apply Latest Code Integrity Policy Remove Cluster Node Connect via RDP View Networking Remove Properties

Restart Power Off Stop Maintenance Mode Move to Host Group View Status Run Script Command

Fabric

Hosts (2)

Name	Host Status	Role	Job Status	CPU Average	Available Memory	Operating System
bj-hyperv.btnhd.edu	OK	Host	Running	2 %	4.51 GB	Microsoft Windows S...
bj-hyperv2.btnhd.edu	OK	Host	Completed	1 %	4.00 GB	Microsoft Windows S...

bj-hyperv.btnhd.edu

Status	Virtual machine	Recent job
Host status: OK	Virtual machines: 0	Managed computer job: No recent job
Date modified: 8/10/2017 3:38:22 PM		Job status:

Host	Fabric	Compliance
Operating system: Microsoft Windows Server 2012 R2 Datacenter	Storage disks: 2	Activate Windows
Virtualization software: Microsoft Hyper-V	Storage used: 11.52 GB	Compliance status: <small>Get more settings to activate Windows.</small>
Processor: (6) 1.90 GHz Intel		Operational status:
Memory: 6.00 GB		Last scan:

File Search Start Task View Home Back Forward Address Bar 3:43 PM 8/10/2017

# Create IP Pool within Logical Network

bj-scvmm on btnhd

File View VM

Create IP Pool Create MAC Pool Create VIP Template Create Logical Switch Add Resources Overview Fabric Resources Services Virtual Machines PowerShell Jobs PRO Window View Dependent Resources Dependencies Remove Properties

Administrator - bj-scvmm:btnhd.edu - Virtual Machine Manager (Evaluation Version - 179 days remaining)

Home

Create Logical Network Create VM Network Create Create IP Pool Create MAC Pool Create VIP Template Create Logical Switch Add Resources Overview Fabric Resources Services Virtual Machines PowerShell Jobs PRO Window View Dependent Resources Dependencies Remove Properties

Fabric

Servers

- All Hosts
- BTNHD
- NCManaged

Infrastructure

- Library Servers
- PXE Servers
- Update Server
- vCenter Servers
- VMM Server

Networking

- Logical Networks
- MAC Address Pools
- Load Balancers
- VIP Templates
- Logical Switches
- Port Profiles
- Port Classifications
- Network Service

Storage

VMs and Services

Fabric

Library

Jobs

Settings

Logical Networks and IP Pools (4)

Name	Network Comp...	Subnet	Begin Address	End Address	Available Addr...	Available Addr...	Available Addr...
btnhd							
localdomain							
MGMT							
Private							

Create IP Pool  
Create VM Network  
View Dependent Resources  
Remove  
Properties

MGMT

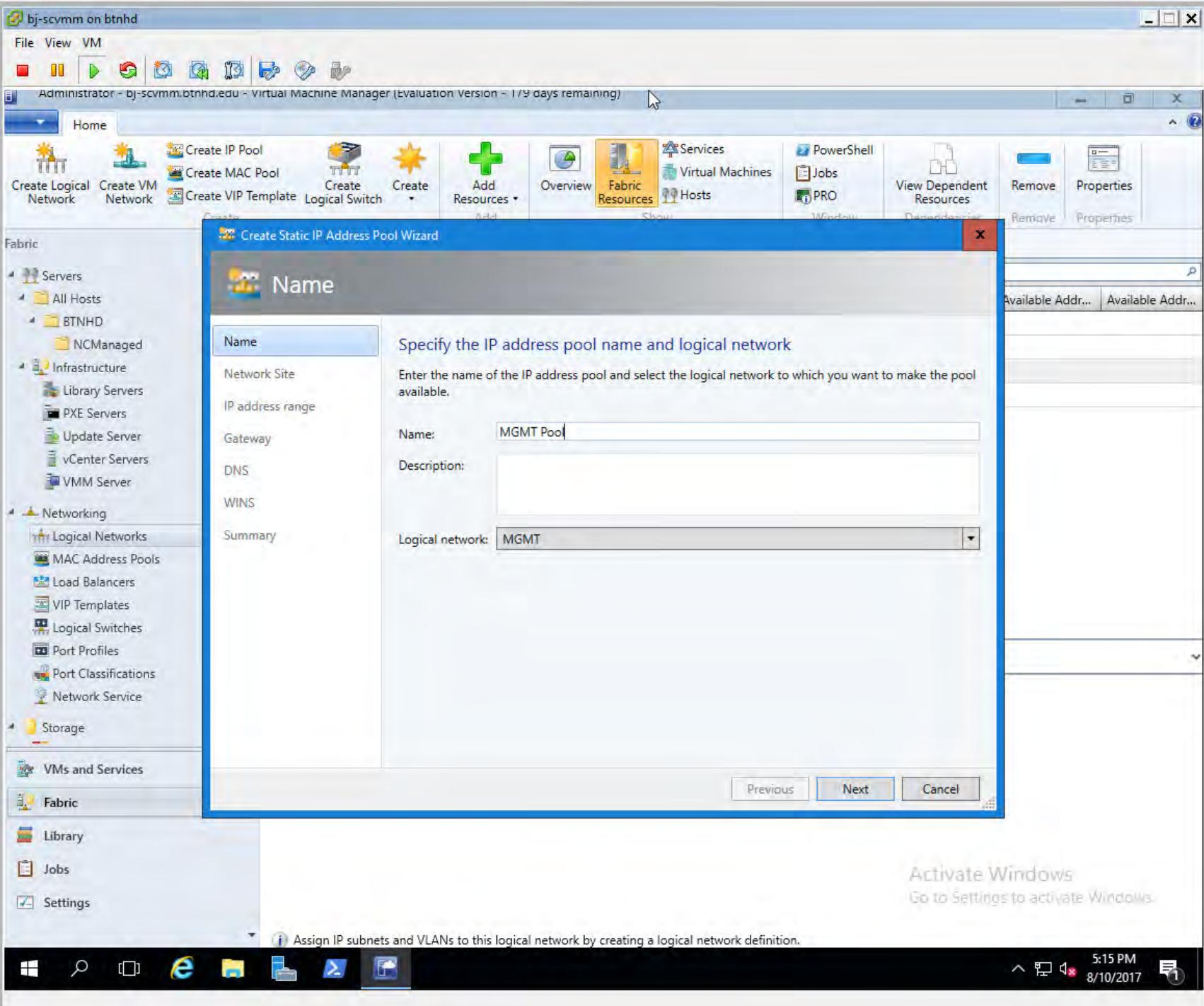
Logical network information

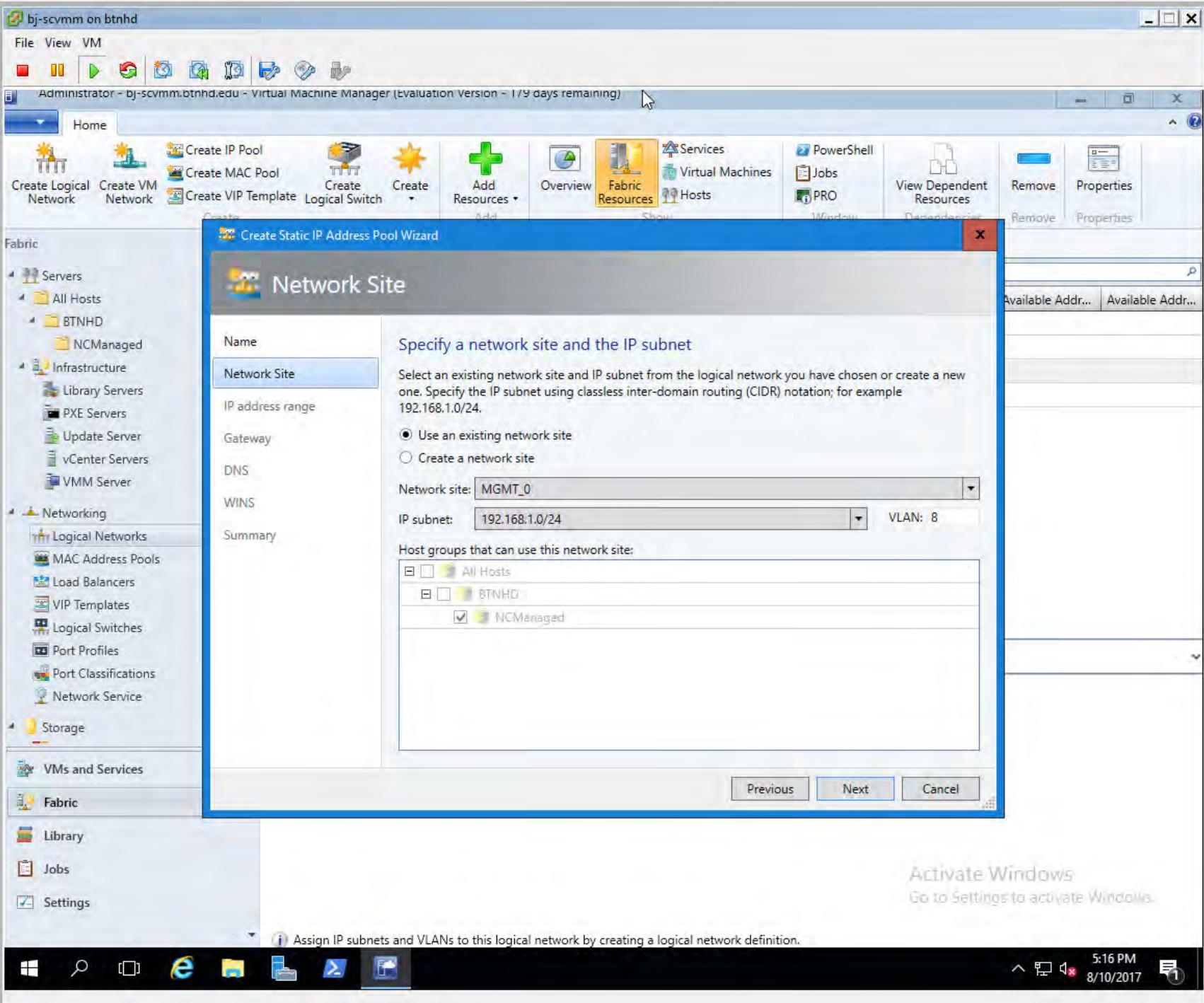
Description:

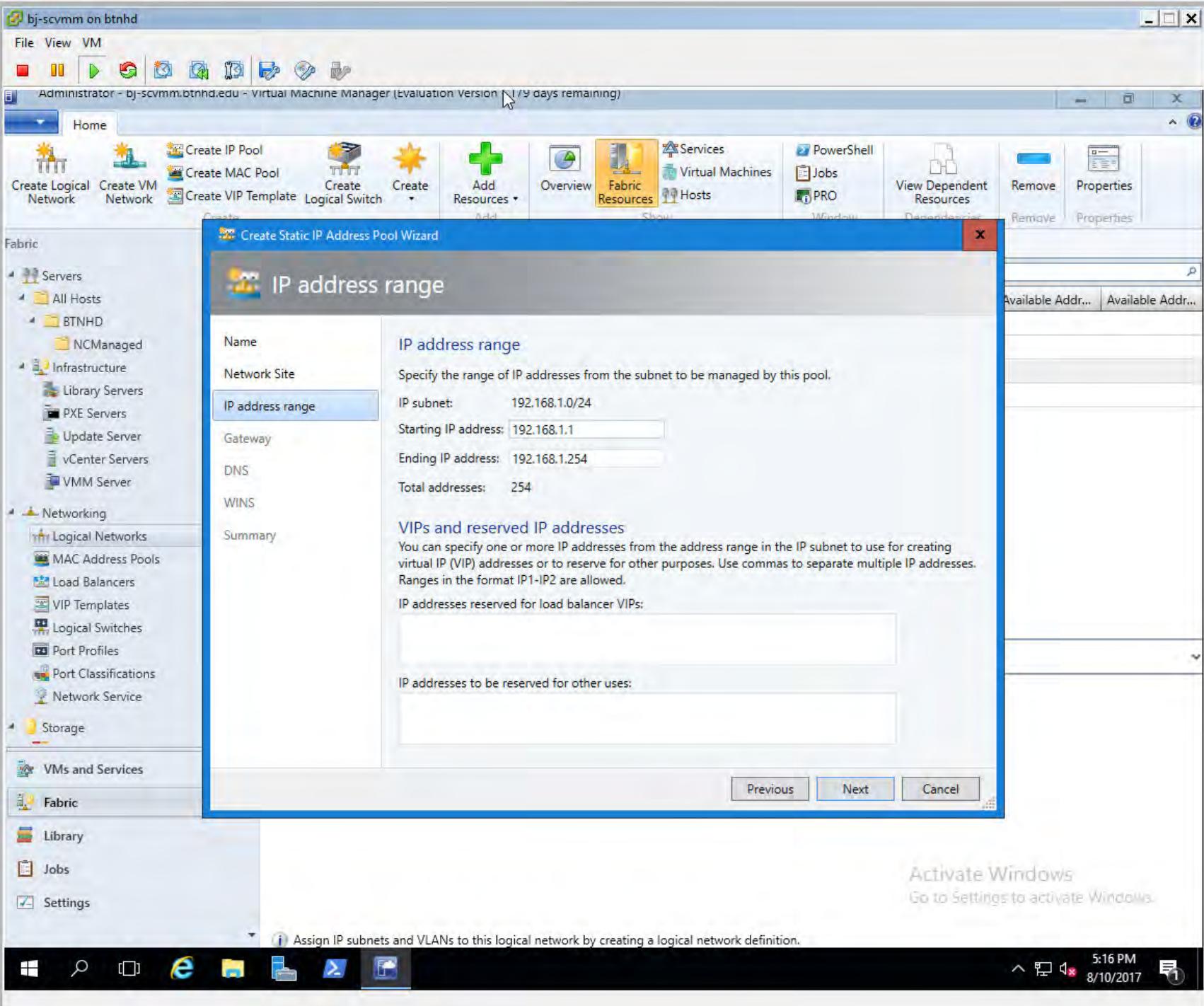
Assign IP subnets and VLANs to this logical network by creating a logical network definition.

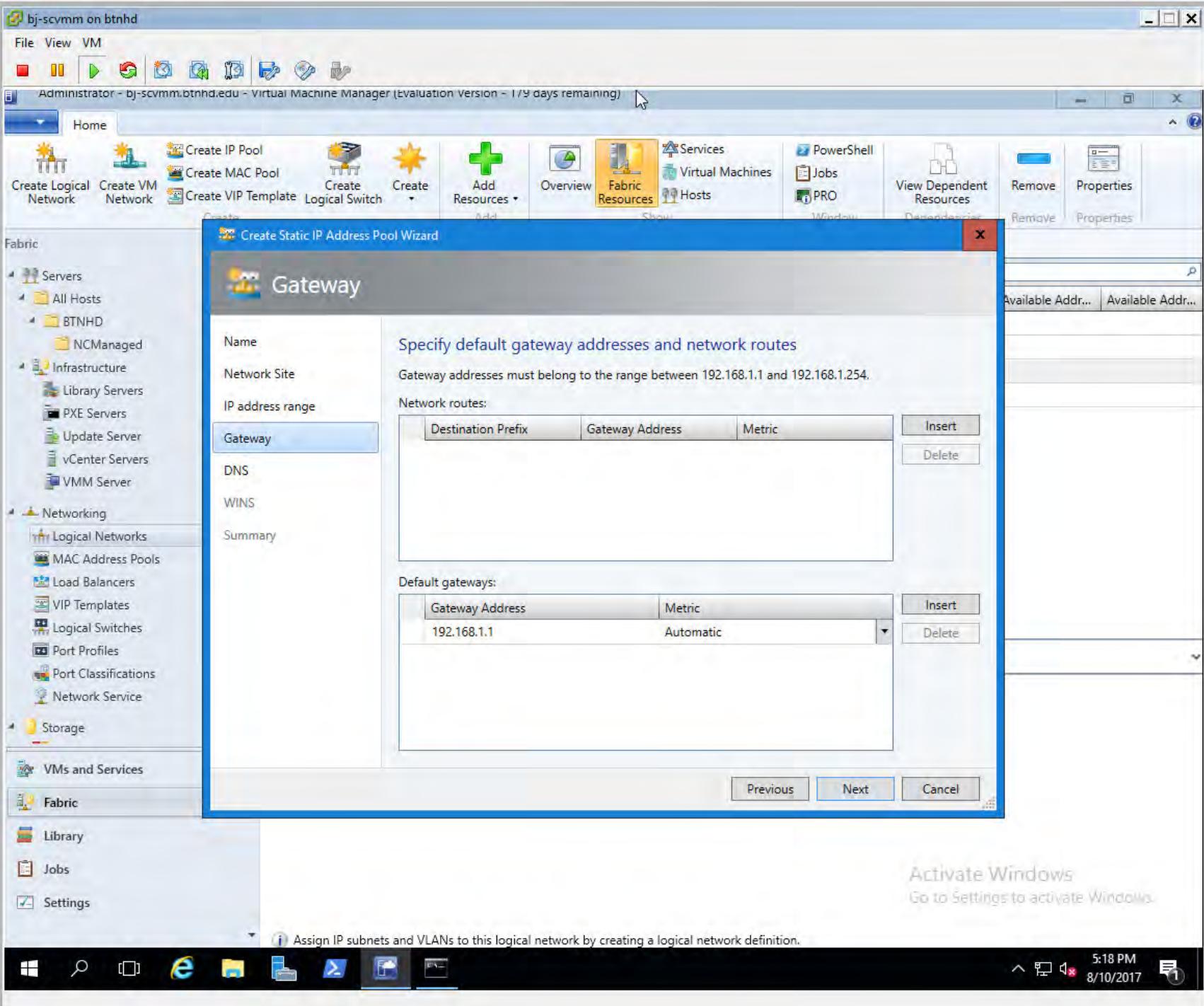
Activate Windows  
Go to Settings to activate Windows.

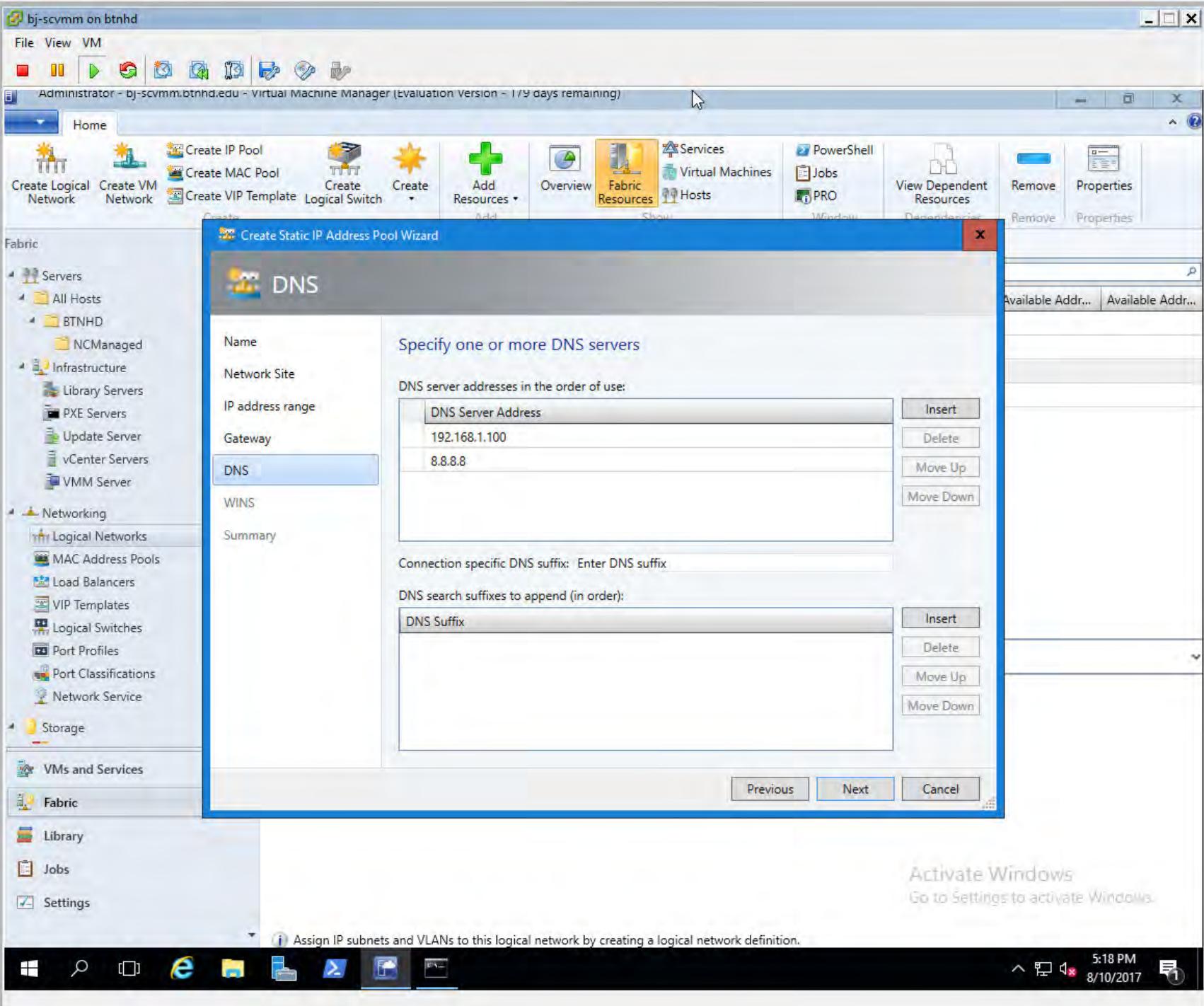
5:15 PM 8/10/2017

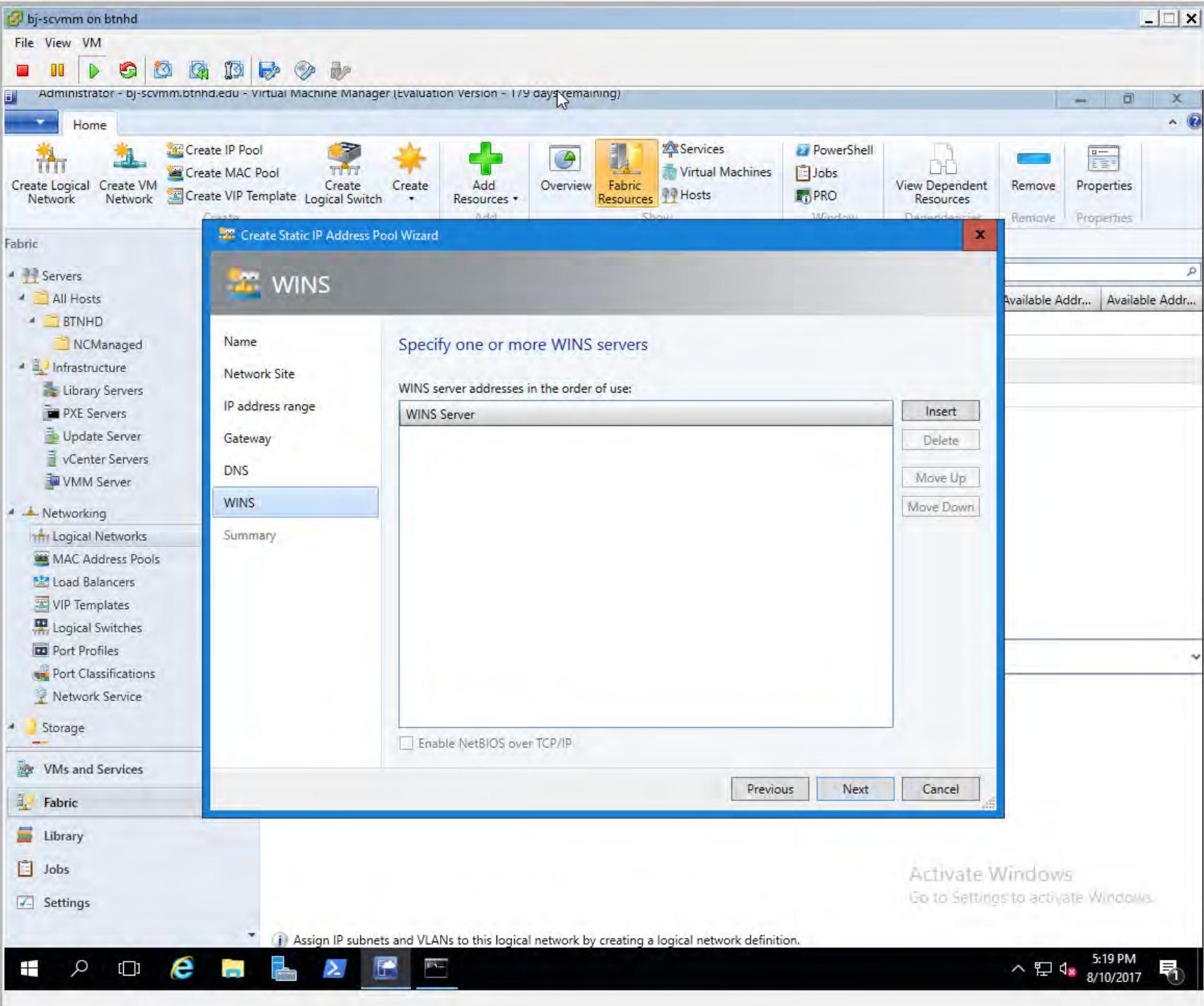


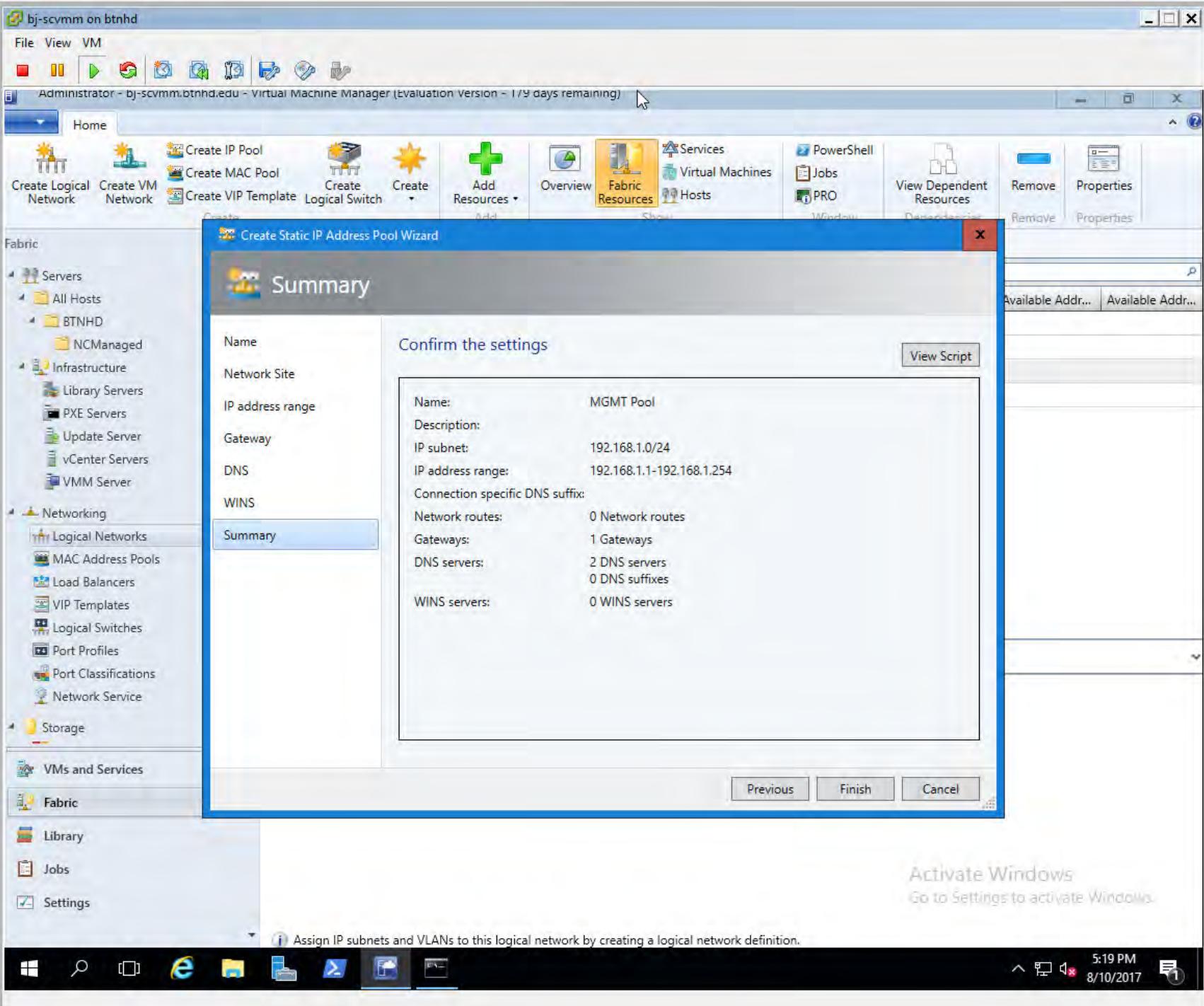


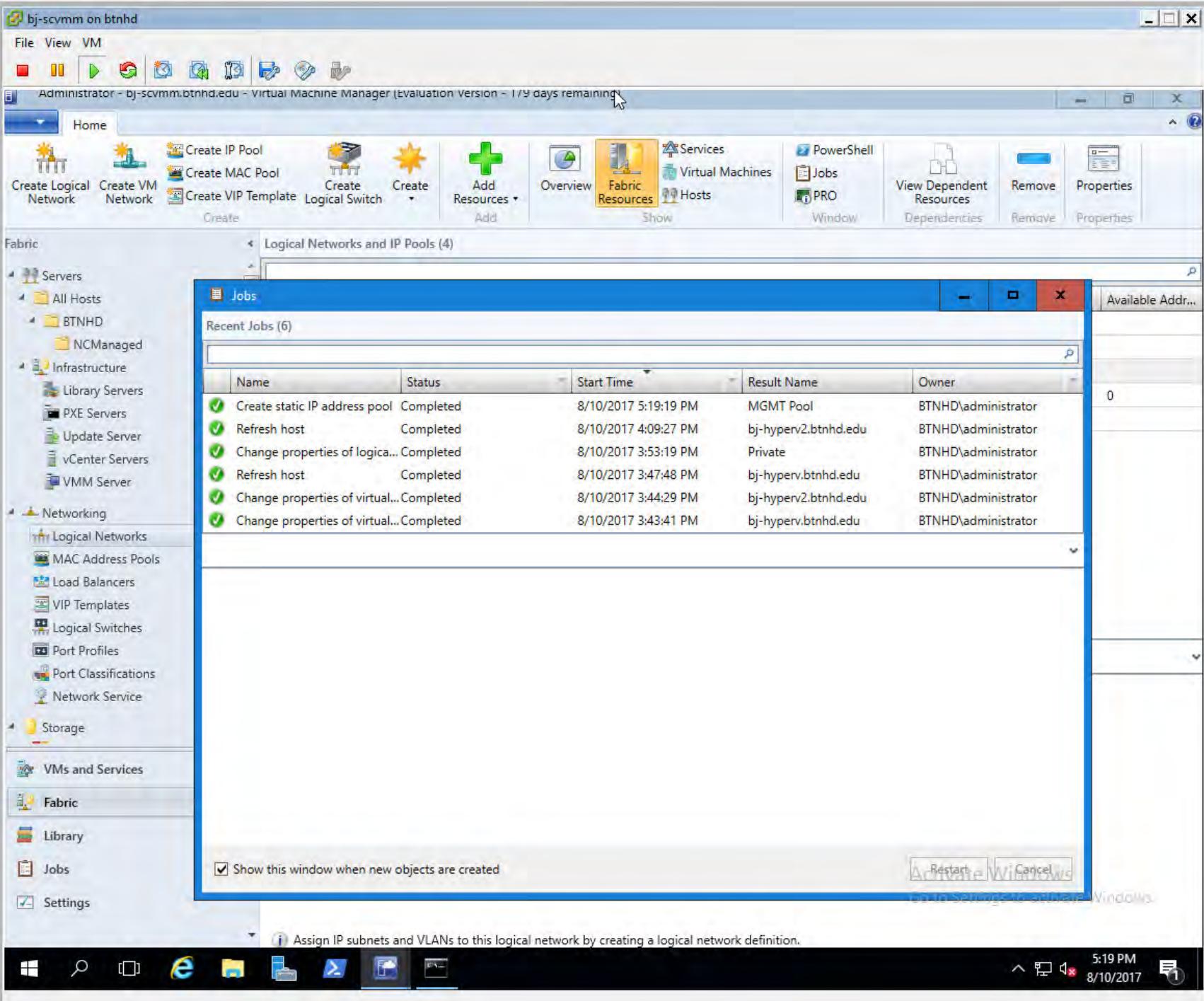












bj-scvmm on btnhd

File View VM

Create Logical Network Create VM Network Create IP Pool Create MAC Pool Create VIP Template Create Logical Switch Add Resources Overview Fabric Resources Services Virtual Machines PowerShell Jobs PRO Window View Dependent Resources Dependencies Remove Properties

Administrator - bj-scvmm\btnhd.edu - Virtual Machine Manager (Evaluation Version ~ 179 days remaining)

Fabric

Servers

- All Hosts
- BTNHD
- NCManaged

Infrastructure

- Library Servers
- PXE Servers
- Update Server
- vCenter Servers
- VMM Server

Networking

- Logical Networks
- MAC Address Pools
- Load Balancers
- VIP Templates
- Logical Switches
- Port Profiles
- Port Classifications
- Network Service

Storage

VMs and Services

Fabric

Library

Jobs

Settings

Logical Networks and IP Pools (4)

Name	Network Comp...	Subnet	Begin Address	End Address	Available Addr...	Available Addr...	Available Addr...
btnhd	Fully compliant						
localdomain	Fully compliant						
MGMT	Fully compliant						
MGMT Pool	Fully compliant	192.168.1.0/24	192.168.1.1	192.168.1.254	253	253	0
Private	Fully compliant						

MGMT

Logical network information

Description:

Assign IP subnets and VLANs to this logical network by creating a logical network definition.

Activate Windows  
Go to Settings to activate Windows

5:19 PM 8/10/2017

bj-scvmm on btnhd

File View VM

Administrator - bj-scvmm:btnhd.edu ~ Virtual Machine Manager (Evaluation Version - 180 days remaining)

Home Folder Create Add Resources Overview Fabric Resources Compliance Scan Remediate Compliance Properties Update Agent Reassociate Agent Connect via RDP PowerShell Jobs PRO Window

Fabric

Hosts (2)

Name	Host Status	Role	Job Status	CPU Average	Available Memory	Operating System
bj-hyperv.btnhd.e...	OK	Host	Completed	1 %	4.54 GB	Microsoft Windows S...
bj-hyperv2.btnhd....	OK	Host	Completed	1 %	3.96 GB	Microsoft Windows S...

Servers

- All Hosts
- BTNHD
  - NCManaged
- Infrastructure
  - Library Servers
  - PXE Servers
  - Update Server
  - vCenter Servers
  - VMM Server

Networking

- Logical Networks
- MAC Address Pools
- Load Balancers
- VIP Templates
- Logical Switches
- Port Profiles
- Port Classifications
- Network Service

Storage

VMs and Services

Fabric

Library

Jobs

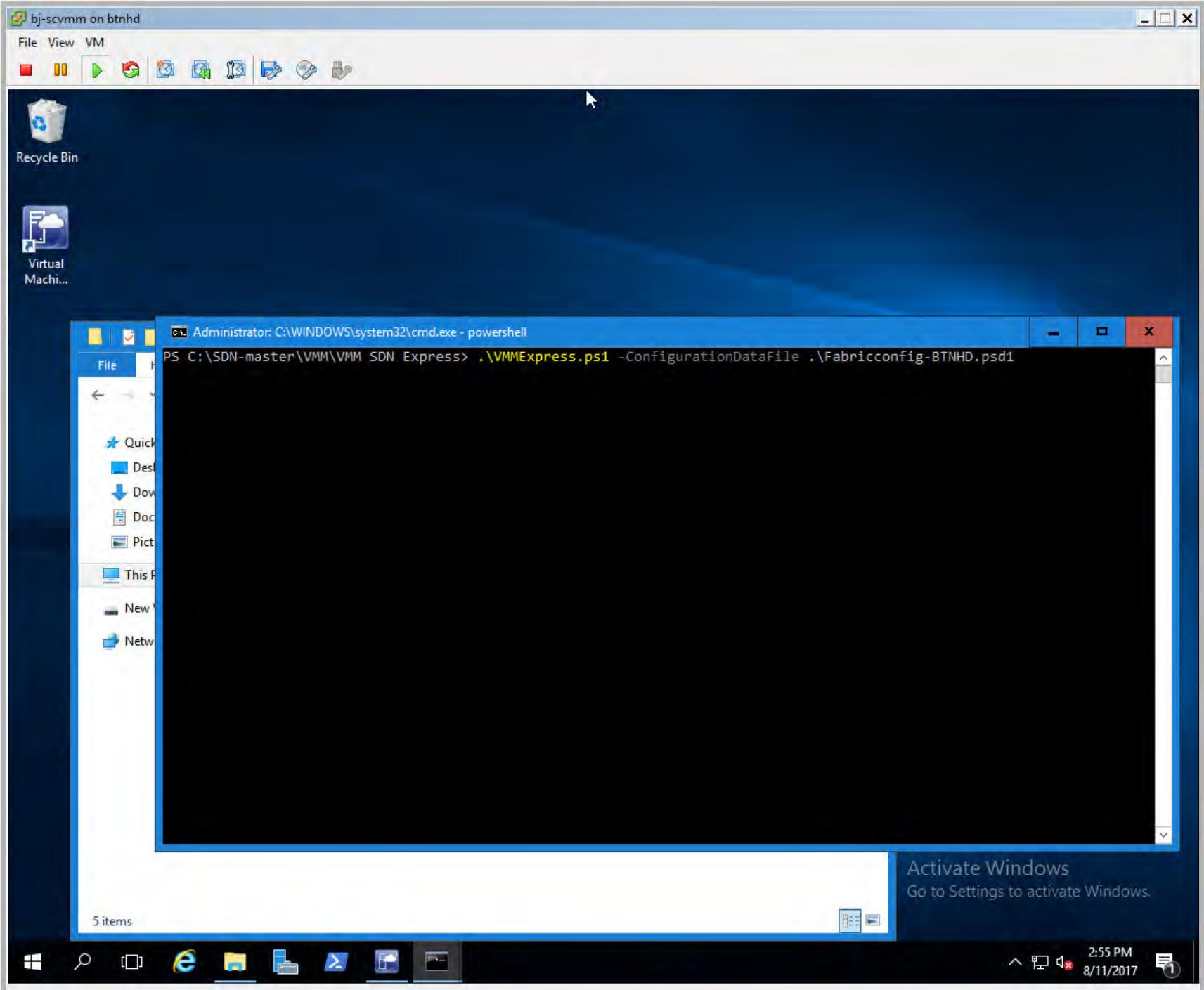
Settings

Activate Windows  
Go to Settings to activate Windows.

2:32 PM 8/10/2017

The screenshot shows the Microsoft Virtual Machine Manager (SCVMM) application window. The title bar reads "bj-scvmm on btnhd". The menu bar includes "File", "View", and "VM". Below the menu is a toolbar with icons for creating VMs, adding resources, scanning, remediation, compliance properties, and agent management. The main area is titled "Fabric" and shows "Hosts (2)". A table lists two hosts: "bj-hyperv.btnhd.e..." and "bj-hyperv2.btnhd....", both in an "OK" status. The left sidebar navigation tree is expanded under "Servers", showing "All Hosts", "BTNHD" (which contains "NCManaged"), and "Infrastructure" (which includes Library Servers, PXE Servers, Update Server, vCenter Servers, and VMM Server). Other collapsed sections include "Networking" (Logical Networks, MAC Address Pools, Load Balancers, VIP Templates, Logical Switches, Port Profiles, Port Classifications, Network Service), "Storage", "VMs and Services", and "Fabric". The bottom right corner displays a watermark: "Activate Windows Go to Settings to activate Windows." The system tray at the bottom shows the date and time as "2:32 PM 8/10/2017".

# Run VMM SDN Express



bj-scvmm on btnhd

File View VM

Administrator - bj-scvmm\btnhd.edu - Virtual Machine Manager (Evaluation Version - 179 days remaining)

Home

Recent Last 30 Days All Custom

Refresh Load More Recent Last 24 Hours Last 7 Days

Restart Cancel PowerShell Jobs PRO

Results Date Filter Job Window

Jobs History - Recent Jobs (132)  
Last refresh: 8/11/2017 5:49:52 PM

Name	Status	Start Time	Result Name	Owner
Create Service Instance	85 %	8/11/2017 5:49:41 PM	NC	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:40 PM	ServerCertificatePass...	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:39 PM	MgmtSecurityGroup	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:38 PM	MgmtDomainFQDN	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:38 PM	MgmtDomainAccou...	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:37 PM	MgmtDomainAccou...	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:36 PM	MgmtDomainAccount	BTNHD\administrator
Create new RunAs Account	Completed	8/11/2017 5:49:36 PM	NC_MgmtAdminRAA	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:35 PM	LocalAdmin	BTNHD\administrator
Create new RunAs Account	Completed	8/11/2017 5:49:35 PM	NC_LocalAdminRAA	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:33 PM	ClientSecurityGroup	BTNHD\administrator
Update placement of a service	Completed	8/11/2017 5:49:32 PM	NC	BTNHD\administrator
Set Global Setting	Completed	8/11/2017 5:49:32 PM	Management	BTNHD\administrator

Create Service Instance

Status	Step	Name	Status	Start Time	End Time
85 %	1	Create Service Insta...	85 %	8/11/2017 5:49:41 P...	
✓	1.1	Update placement...	Completed	8/11/2017 5:49:42 P...	8/11/2017 5:49:43 P...
✓	1.2	Evacuate highly avai...	Completed	8/11/2017 5:49:45 P...	8/11/2017 5:49:45 P...
✗	1.3	Create group of virt...	57 %	8/11/2017 5:49:47 P...	
✓	1.3.1	Parallel execution st...	Completed	8/11/2017 5:49:47 P...	8/11/2017 5:49:47 P...
✗	1.3.2	Parallel execution st...	14 %	8/11/2017 5:49:47 P...	
✗	1.3.2.1	Create virtual machi...	14 %	8/11/2017 5:49:47 P...	
✓	1.3.2.1.1	Create virtual machi...	Completed	8/11/2017 5:49:50 P...	8/11/2017 5:49:51 P...

VMs and Services

Fabric

Library

Jobs

Settings

Summary Details Change Tracking

5:50 PM 8/11/2017

hyper-v2 on btnhd

File View VM

Hyper-V Manager

File Action View Help

Hyper-V Manager

BJ-HYPERV2

Virtual Machines

Name	State	CPU Usage	Assigned Memory	Uptime	Status	Co
SDN-NCVM01.btnhd.edu	Starting	0 %		00:00:00	Starting (10%)	8.0
WINDOWS SERVER 2016x64	Off					8.0

Checkpoints

The selected virtual machine has no checkpoints.

WINDOWSSERVER2016x64

Created: 8/9/2017 11:47:41 AM Clustered: No

Configuration Version: 8.0

Generation: 1

Notes: #CLUSTER-INVARIANT#: {d187ae52-9f34-4004-a799-186d27ec23a3}

Summary Memory Networking Replication

Actions

BJ-HYPERV2

- New
- Import Virtual Machine...
- Hyper-V Settings...
- Virtual Switch Manager...
- Virtual SAN Manager...
- Edit Disk...
- Inspect Disk...
- Stop Service
- Remove Server
- Refresh
- View
- Help

WINDOWSSERVER2016x64

- Connect...
- Settings...
- Start
- Checkpoint
- Move...
- Export...
- Rename...
- Delete...
- Enable Replication...
- Help

Activate Windows

Go to Settings to activate Windows

5:54 PM 8/11/2017

Windows Taskbar icons: Start, Search, Task View, Internet Explorer, File Explorer, Taskbar settings

bj-scvmm on btnhd

File View VM

Service Tools Tier Tools Administrator - bj-scvmm\btnhd.edu - Virtual Machine Manager (Evaluation Version ~ 1/9 days remaining)

Home Folder Service Tier

Start Save State Shut Down Stop Discard Saved State Pause Resume Service Refresh Set Template Apply Template Clear Template Commit Template Notifications Scale Out Delete Properties Update Delete Properties

VMs and Services < Services (I)

Name	Status	All VMs...	VM Stat...	Owner	User Role	Job Status	Update...	Templat...	Templat...	Templat...	Prio...
.. Deploying	Yes	BTNHD\...	Administris...	<div style="width: 97%;">97%</div>	NC Depl...	1.0	Current	Normal			
OK	Yes	Creating...	Creating...	BTNHD\...	Administris...						

All Hosts

- BTNHD
- NCManaged
  - bj-hyperv
  - bj-hyperv2

Windows Server Network Controller

Tier information

Status:	OK
Owner:	
Number of machines:	0 (Min: 1, Max: 1)
Date added:	8/11/2017 5:49:42 PM
Date modified:	8/11/2017 5:49:42 PM

Activate Windows  
Go to Settings to activate Windows.

VMs and Services

- Fabric
- Library
- Jobs
- Settings

5:58 PM 8/11/2017