

MILESTONE 4

Microsoft PowerShell

Sean Redding

Project & Portfolio III: Information Technology | 05/30/2025

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PART#1: Set-Up

- 1) First, in preparation for installing and uninstalling new server roles using PowerShell.

Use the command > **Get-NetIPAddress**

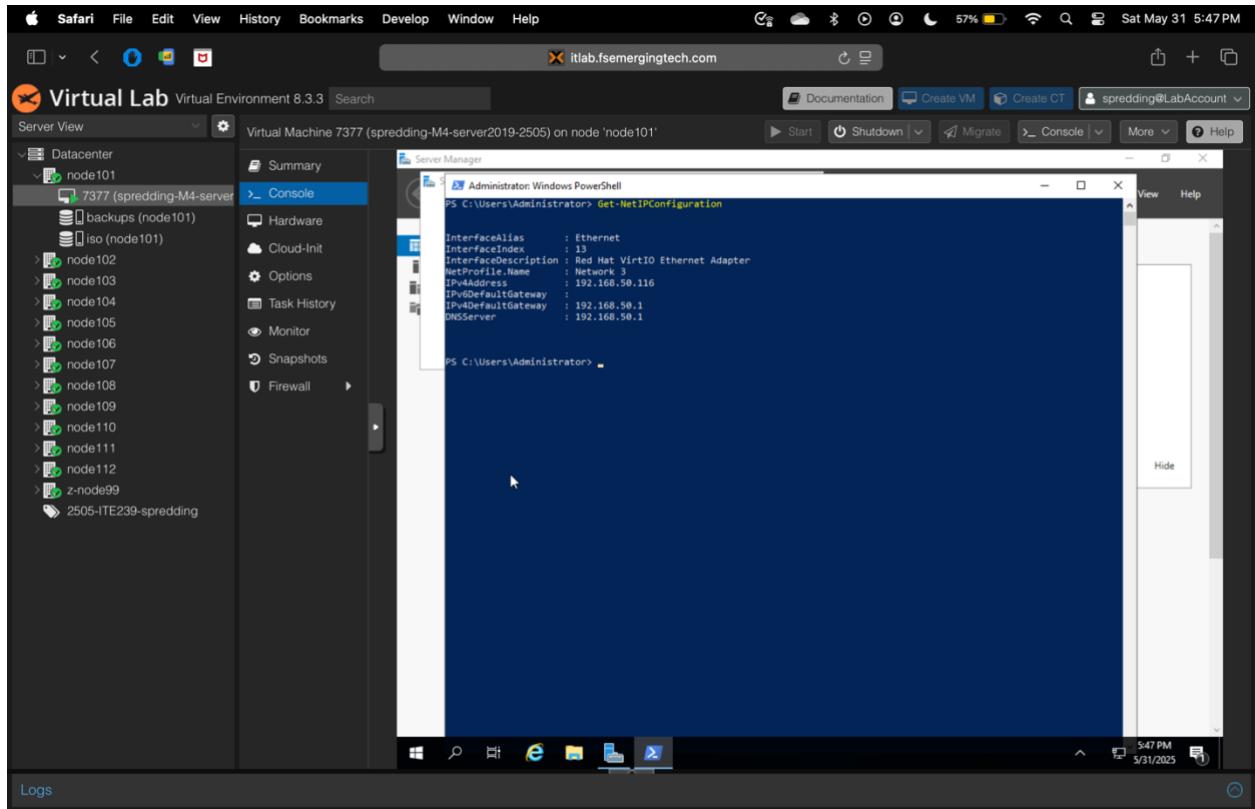
Screenshot, this page. You will need several specifications from this command.

```

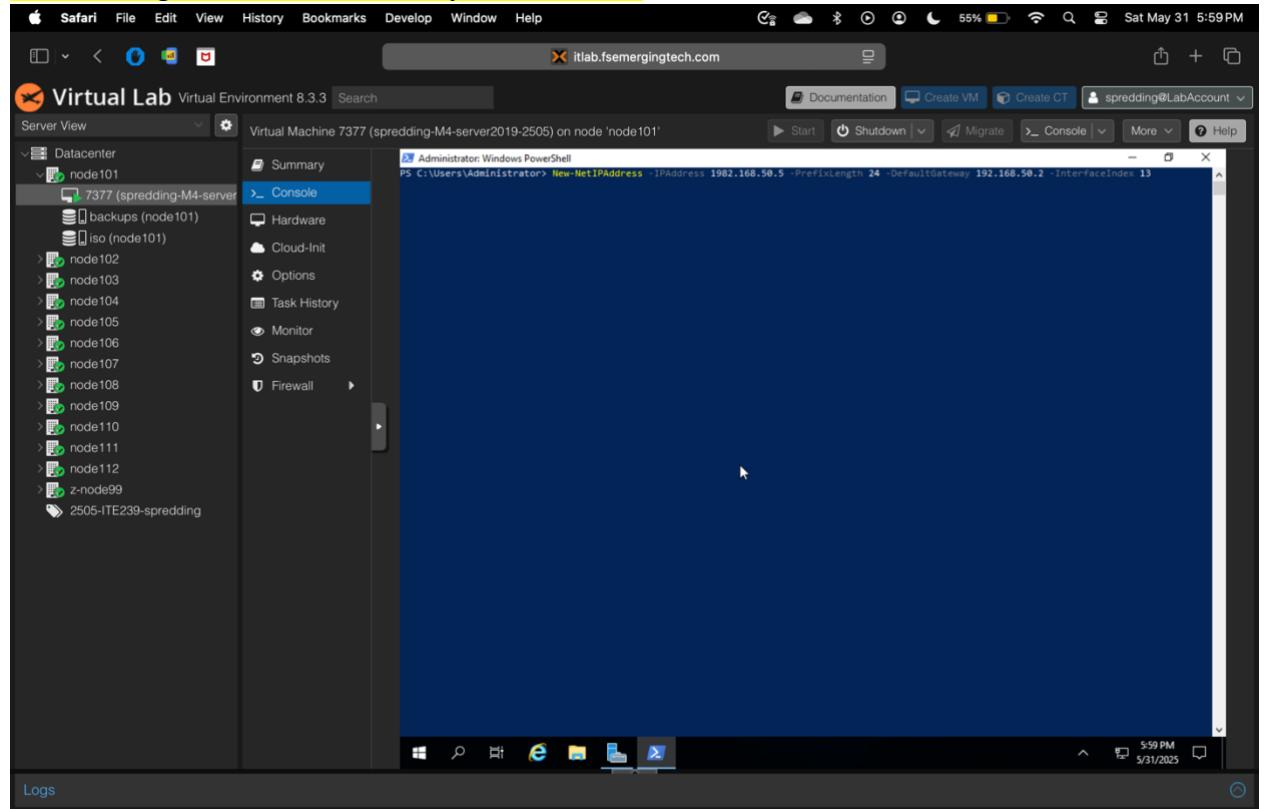
Administrator: Windows PowerShell
PreferredLifetime : Infinite ((TimeSpan)::.MaxValue)
SkipNsSource : False
PolicyStore : ActiveStore
IPAddress : ::1
InterfaceIndex : 1
InterfaceAlias : Loopback Pseudo-Interface 1
AddressFamily : IPv6
Type : Unicast
PrefixLength : 128
PrefixOrigin : WellKnown
SuffixOrigin : WellKnown
AddressState : Preferred
ValidLifetime : Infinite ((TimeSpan)::.MaxValue)
PreferredLifetime : Infinite ((TimeSpan)::.MaxValue)
SkipNsSource : False
PolicyStore : ActiveStore
IPAddress : 192.168.50.116
InterfaceIndex : 13
InterfaceAlias : Ethernet
AddressFamily : IPv4
Type : Unicast
PrefixLength : 24
PrefixOrigin : Dhcp
SuffixOrigin : Dhcp
AddressState : Preferred
ValidLifetime : 01:00:47
PreferredLifetime : 01:00:47
SkipNsSource : False
PolicyStore : ActiveStore
IPAddress : 127.0.0.1
InterfaceIndex : 1
InterfaceAlias : Loopback Pseudo-Interface 1
AddressFamily : IPv4
Type : Broadcast
PrefixLength : 8
PrefixOrigin : WellKnown
SuffixOrigin : WellKnown
AddressState : Preferred
ValidLifetime : Infinite ((TimeSpan)::.MaxValue)
PreferredLifetime : Infinite ((TimeSpan)::.MaxValue)
SkipNsSource : False
PolicyStore : ActiveStore

```

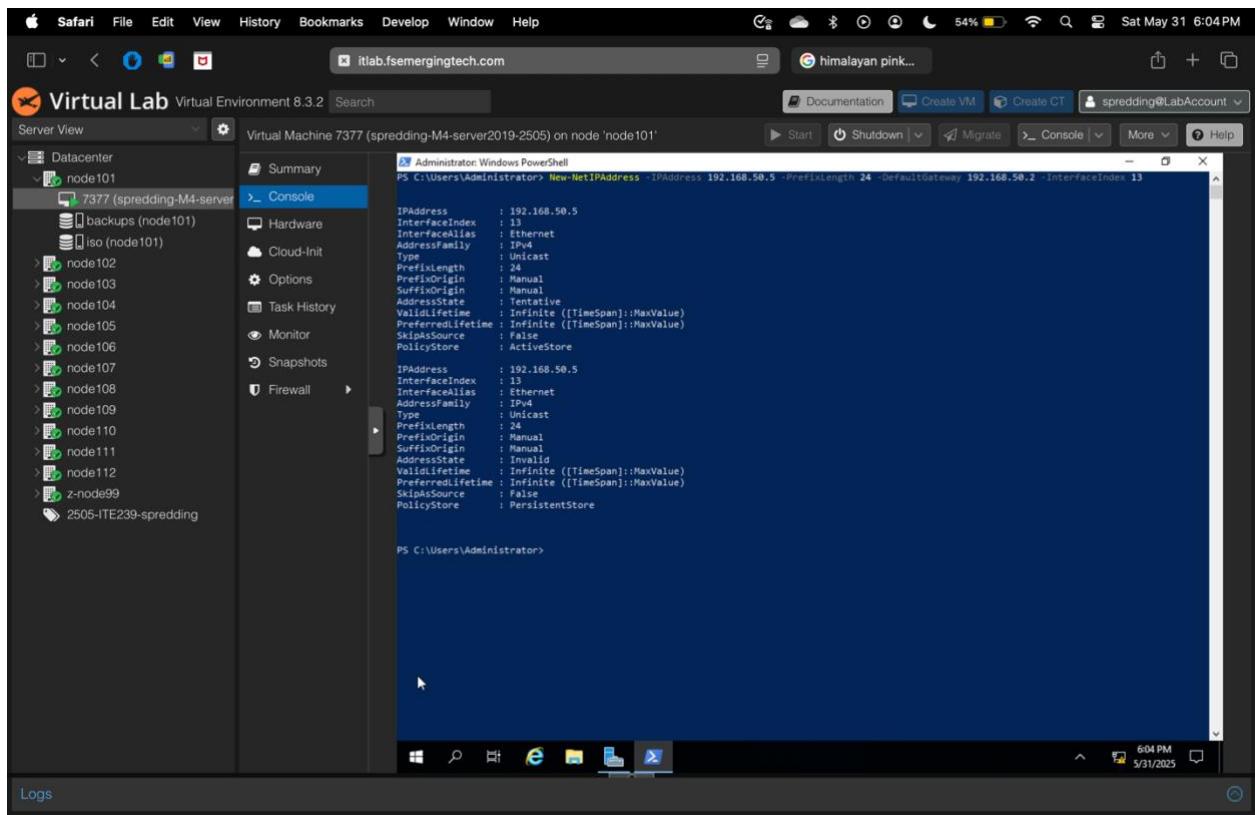
- 2) Another command to see your NetIP is > **Get-NetIPConfiguration**. This shows the IP Configuration you are currently using and its specifications.



- 3) After getting the details, we need to configure our new IP configuration (IP address, Interface Index, Gateway, and Prefix Length). Now, we must enter the command to input the changes > **New-NetIPAddress -IPAddress 192.168.50.5 -InterfaceIndex 13 -PrefixLength 24 -DefaultGateway 192.168.50.2**



- 4) This is the output you should receive after running the last command. If you receive an error message, check your code to ensure everything is spelled correctly and consistent.



The screenshot shows a virtual machine interface from 'Virtual Lab' version 8.3.2. On the left, a tree view of a 'Datacenter' containing various nodes like node101, node102, node103, etc. The central pane is titled 'Console' and shows a Windows PowerShell window. The command run is:

```
Administrator: Windows PowerShell
PS C:\Users\Administrator> New-NetIPAddress -IPAddress 192.168.50.5 -PrefixLength 24 -DefaultGateway 192.168.50.2 -InterfaceIndex 13
```

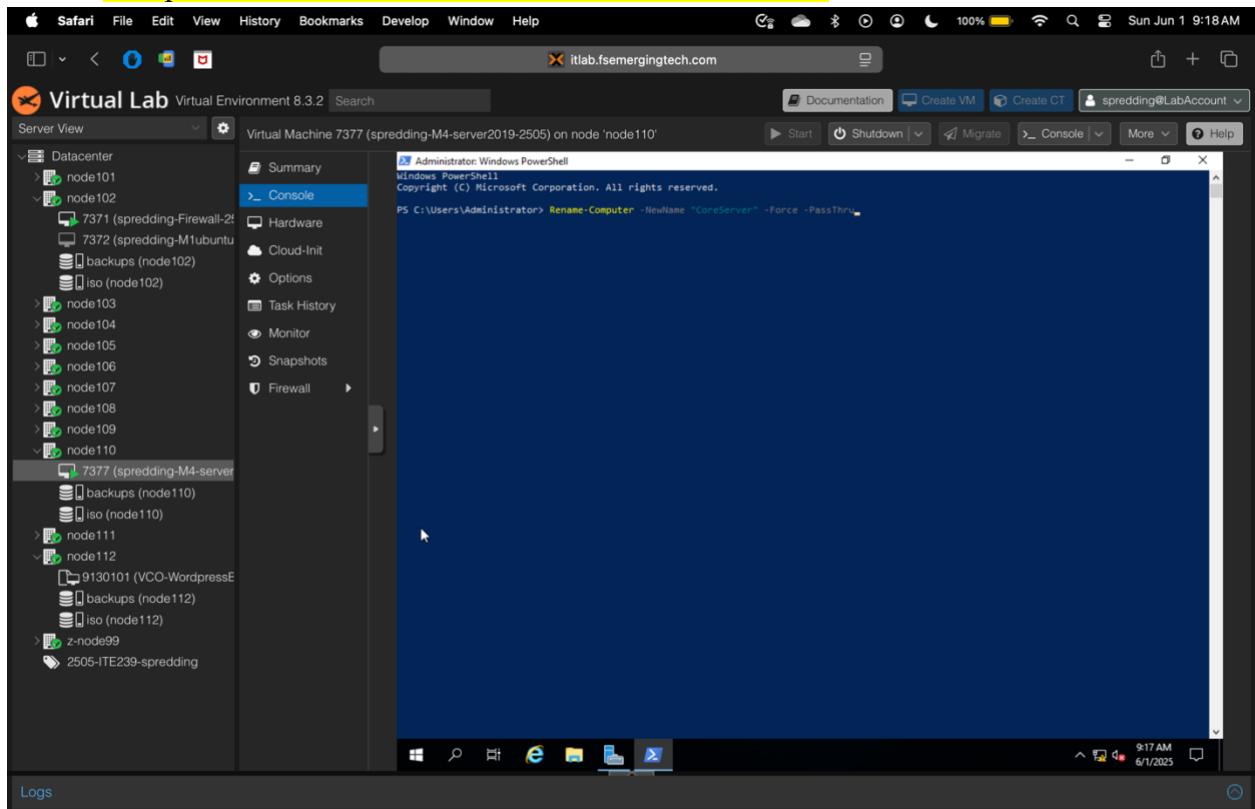
The output shows the configuration of two network interfaces:

```
IPAddress          : 192.168.50.5
InterfaceIndex     : 13
InterfaceAlias     : Ethernet
AddressFamily      : IPv4
Type               : Unicast
PrefixLength       : 24
PrefixOrigin       : Manual
SuffixOrigin       : Manual
AddressState       : Tentative
ValidLifetime     : Infinite ([TimeSpan]::.MaxValue)
PreferredLifetime : Infinite ([TimeSpan]::.MaxValue)
SkipNsSource       : False
PolicyStore        : ActiveStore

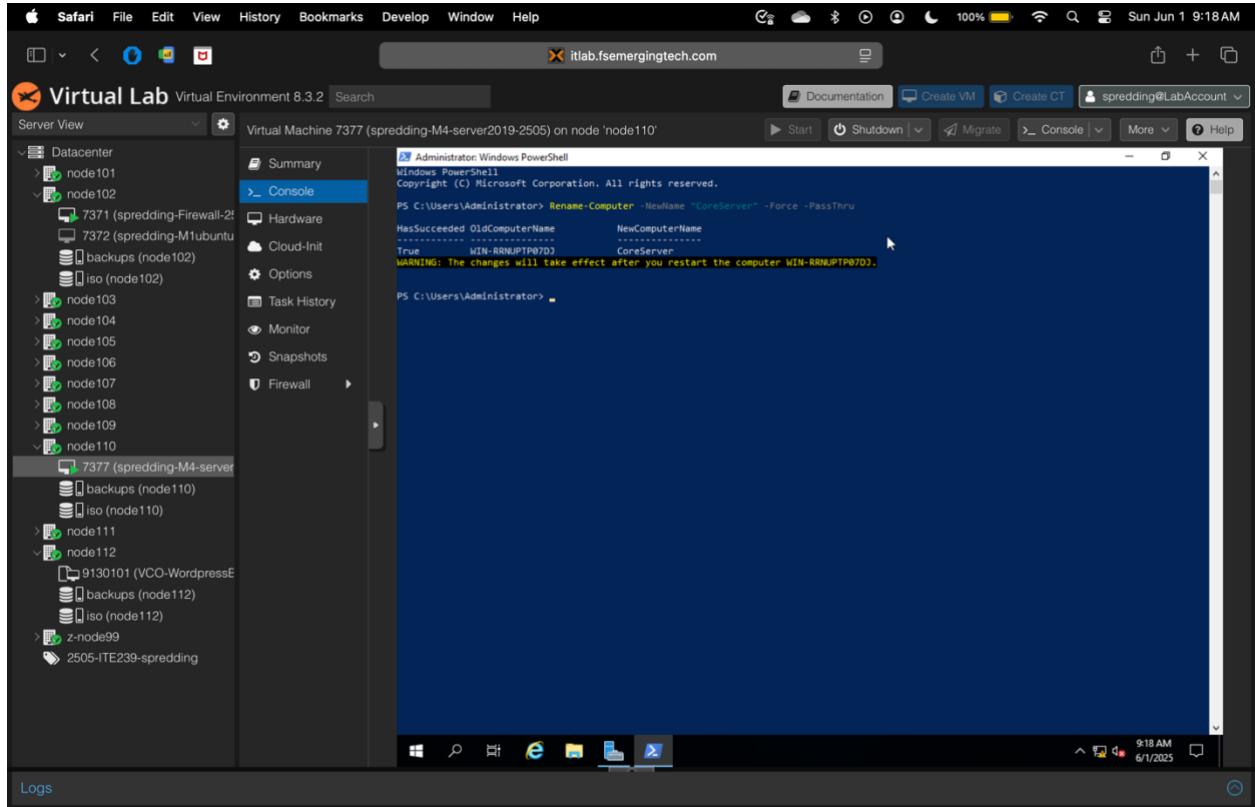
IPAddress          : 192.168.50.5
InterfaceIndex     : 13
InterfaceAlias     : Ethernet
AddressFamily      : IPv6
Type               : Unicast
PrefixLength       : 64
PrefixOrigin       : Manual
SuffixOrigin       : Manual
AddressState       : Invalid
ValidLifetime     : Infinite ([TimeSpan]::.MaxValue)
PreferredLifetime : Infinite ([TimeSpan]::.MaxValue)
SkipNsSource       : False
PolicyStore        : PersistentStore
```

At the bottom of the PowerShell window, it says 'PS C:\Users\Administrator>'.

- 5) To rename the computer without using the GUI, enter the command > Rename-Computer -NewName "NewPCName" -Force -PassThru



- 6) This will be the output of the command. Make sure the NewComputerName is the new name assigned to the computer.



The screenshot shows a virtual machine console window titled "Administrator: Windows PowerShell". The command run is:

```
PS C:\Users\Administrator> Rename-Computer -NewName "CoreServer" -Force -PassThru
```

The output shows the success of the command:

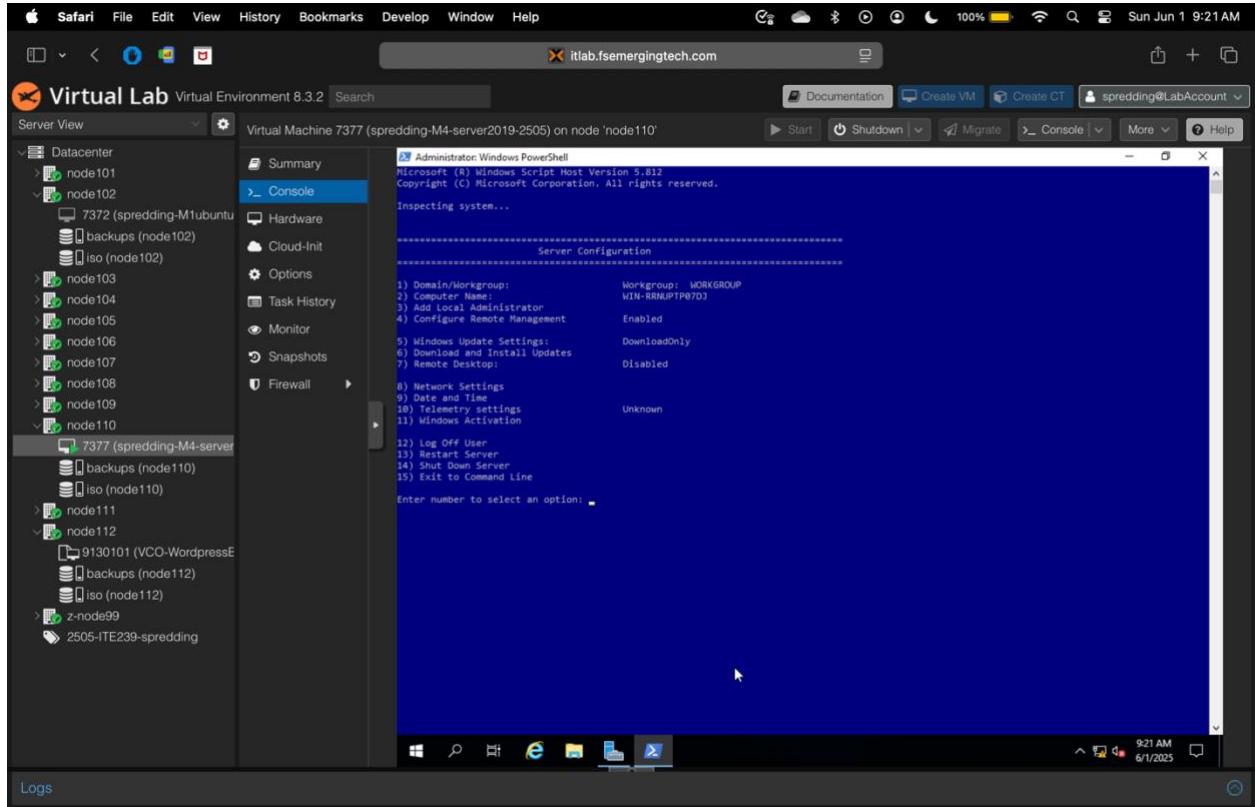
```
HasSucceeded OldComputerName      NewComputerName
----- -----
True      WIN-RRNUPTP07D3      CoreServer
```

A warning message follows:

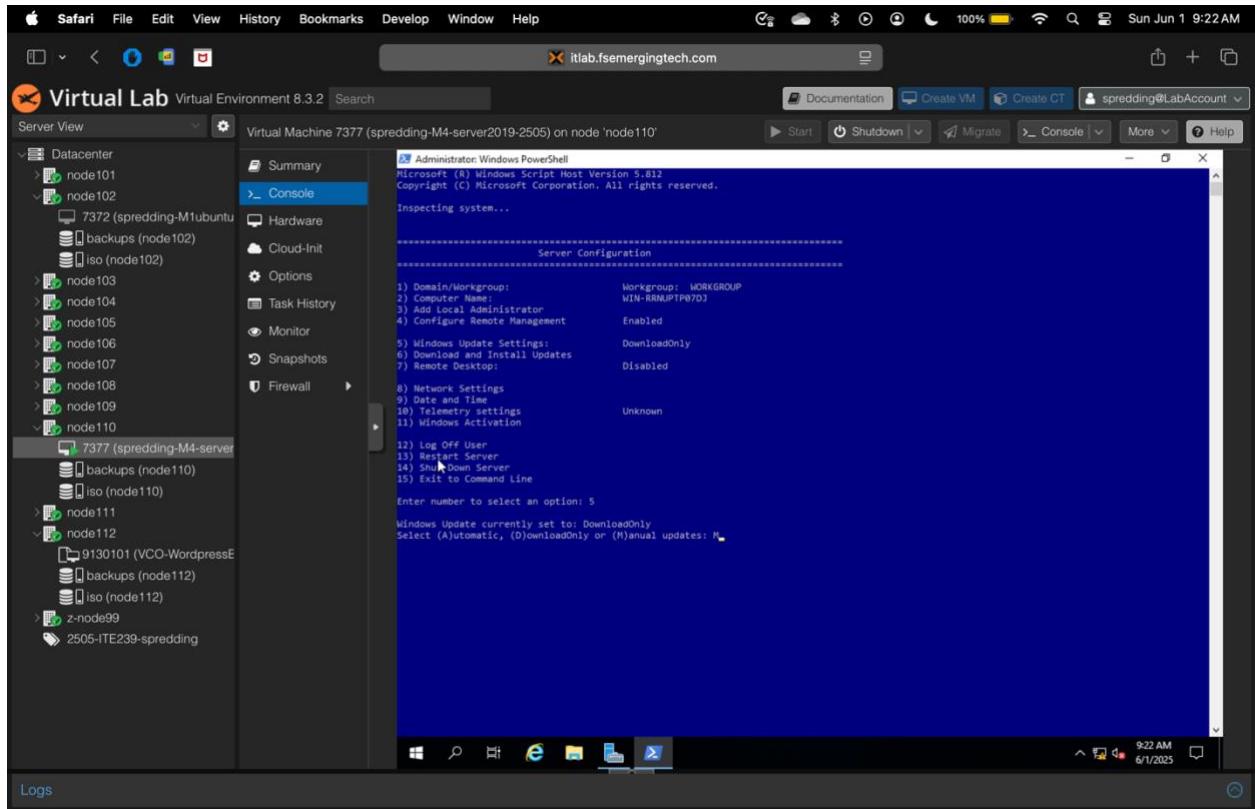
```
WARNING: The changes will take effect after you restart the computer WIN-RRNUPTP07D3.
```

The PowerShell prompt PS C:\Users\Administrator> is visible at the bottom.

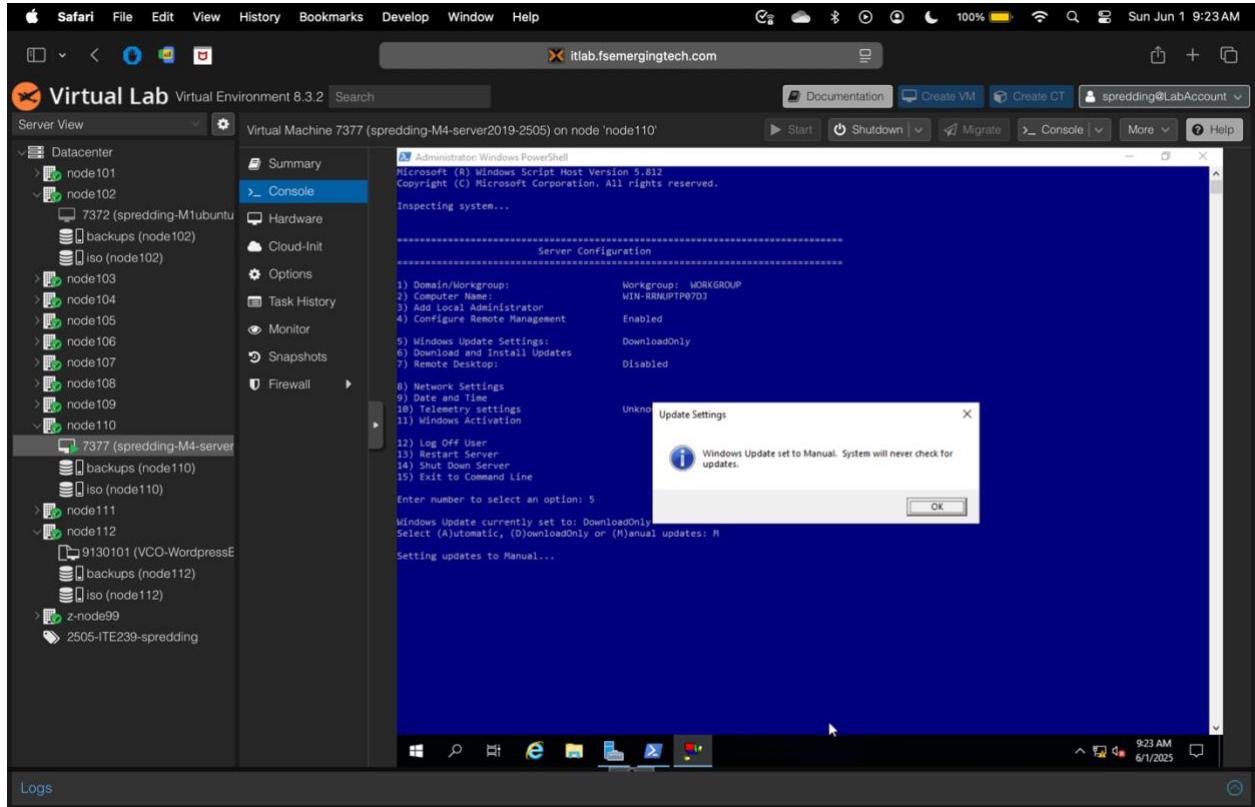
- 7) Now, using the command > **sconfig**, we will use this command to switch from automatic updates on Windows to manual updates.



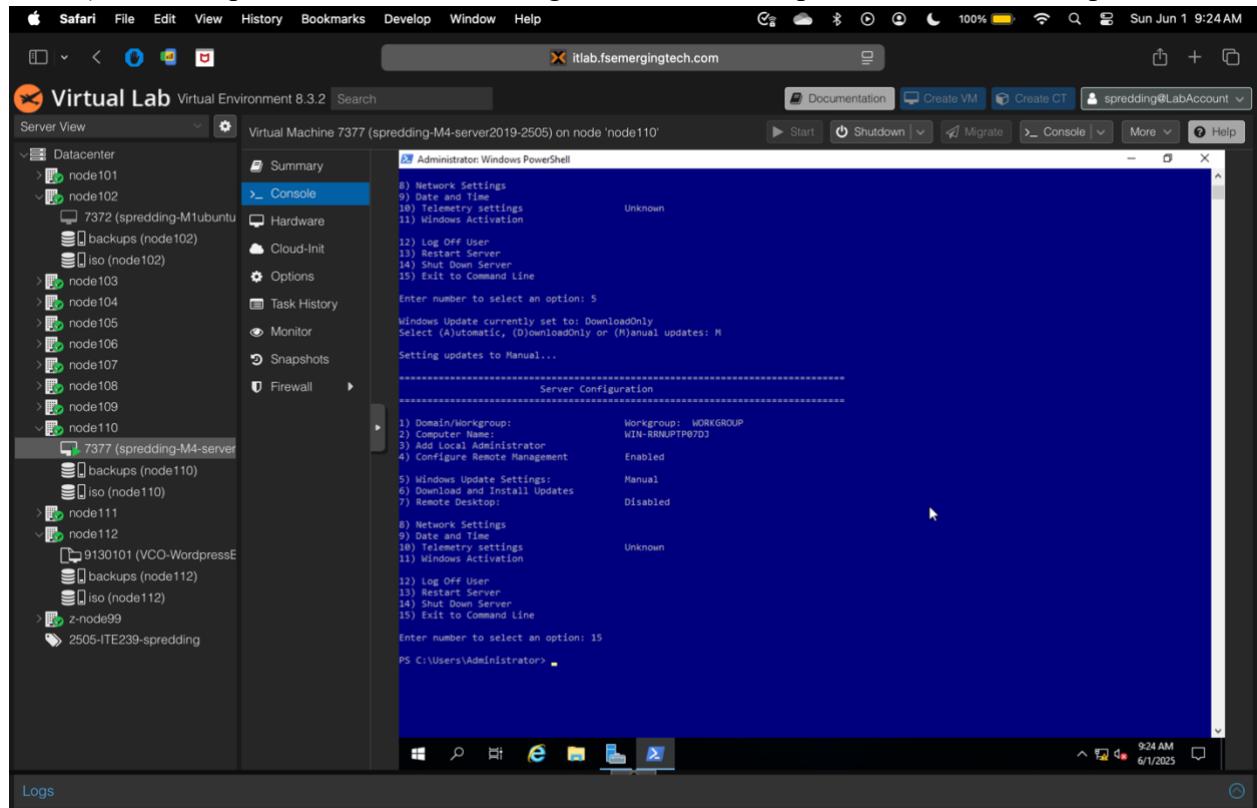
- 8) Enter the number “5” and press Enter. You will see the choice between A (Automatic), D (DownloadOnly), and M(Manual) updates.



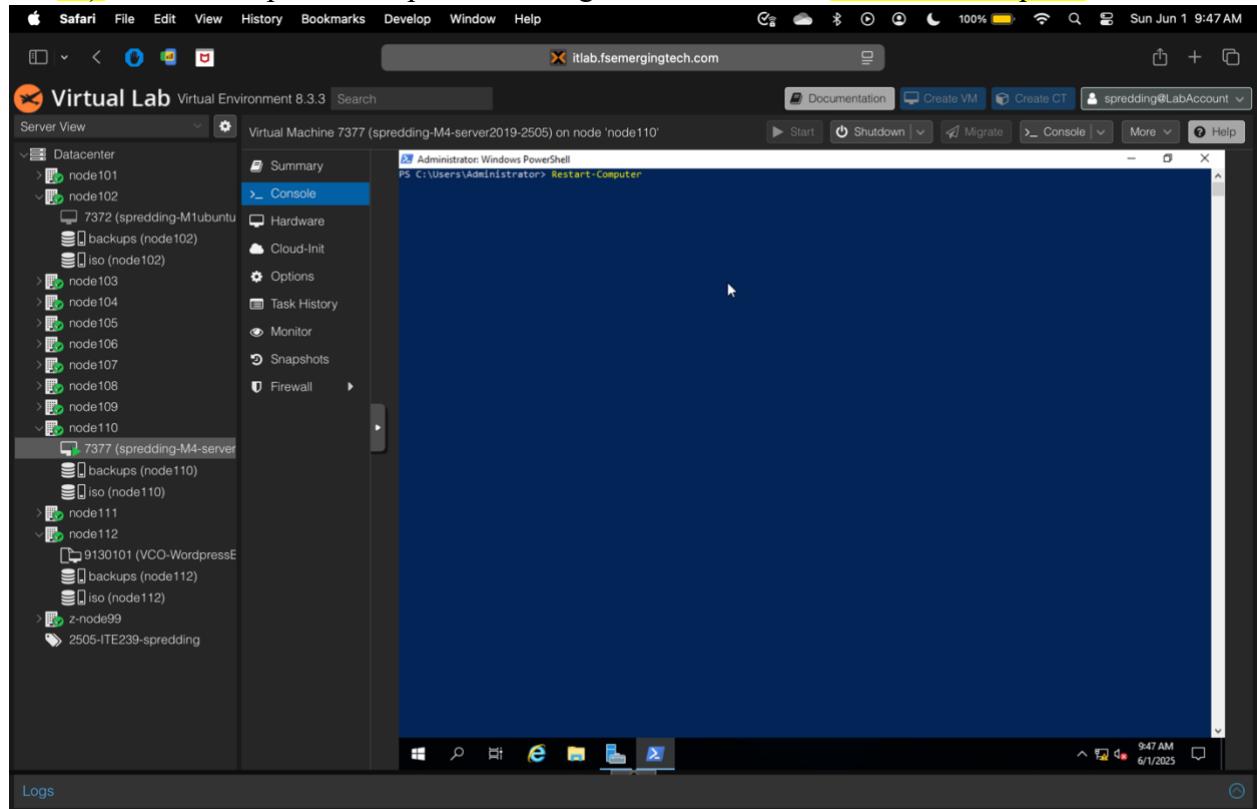
- 9) Once manual updates are chosen, this will be the output. Now updates instead of being automatic the user or admin will manually have to update Windows.



10) Enter 15, press Enter to exit sconfig. Now we are complete with Part #1 Setup.

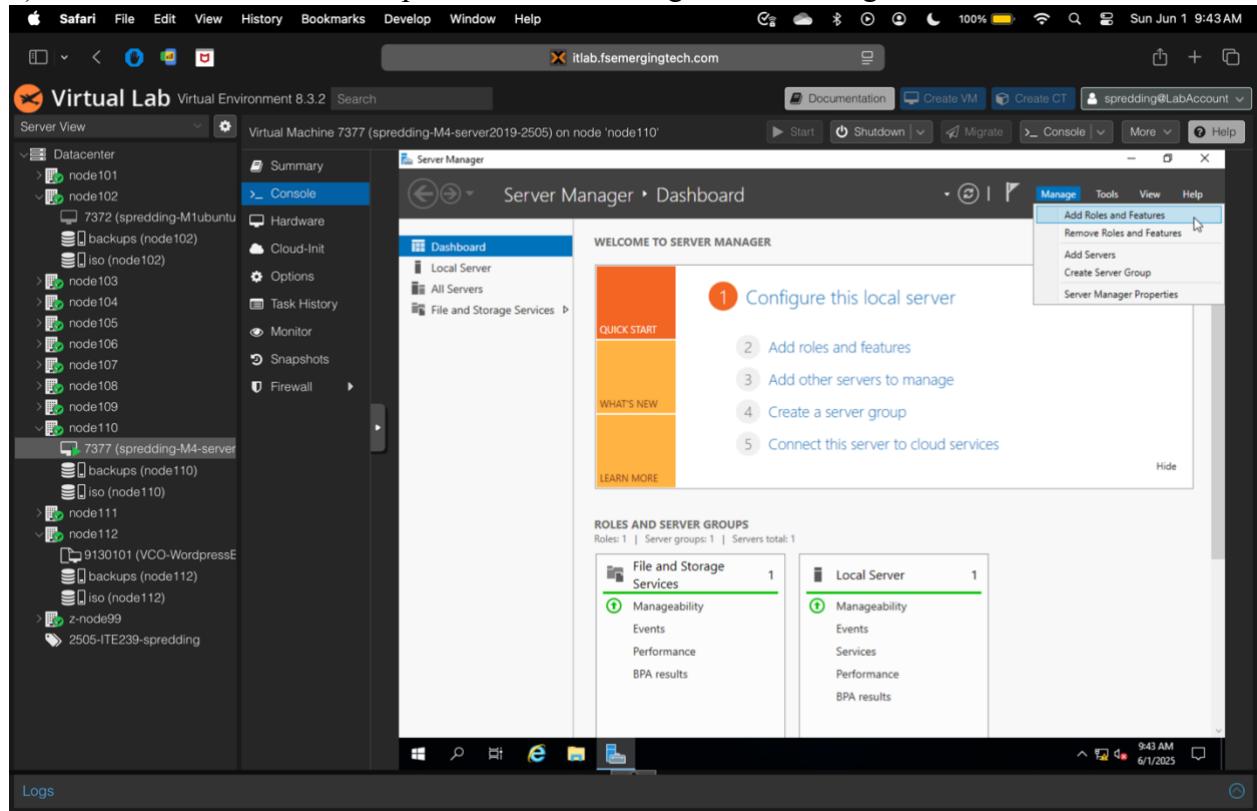


11) Reboot Computer to implement changes. Use command > Restart-Computer

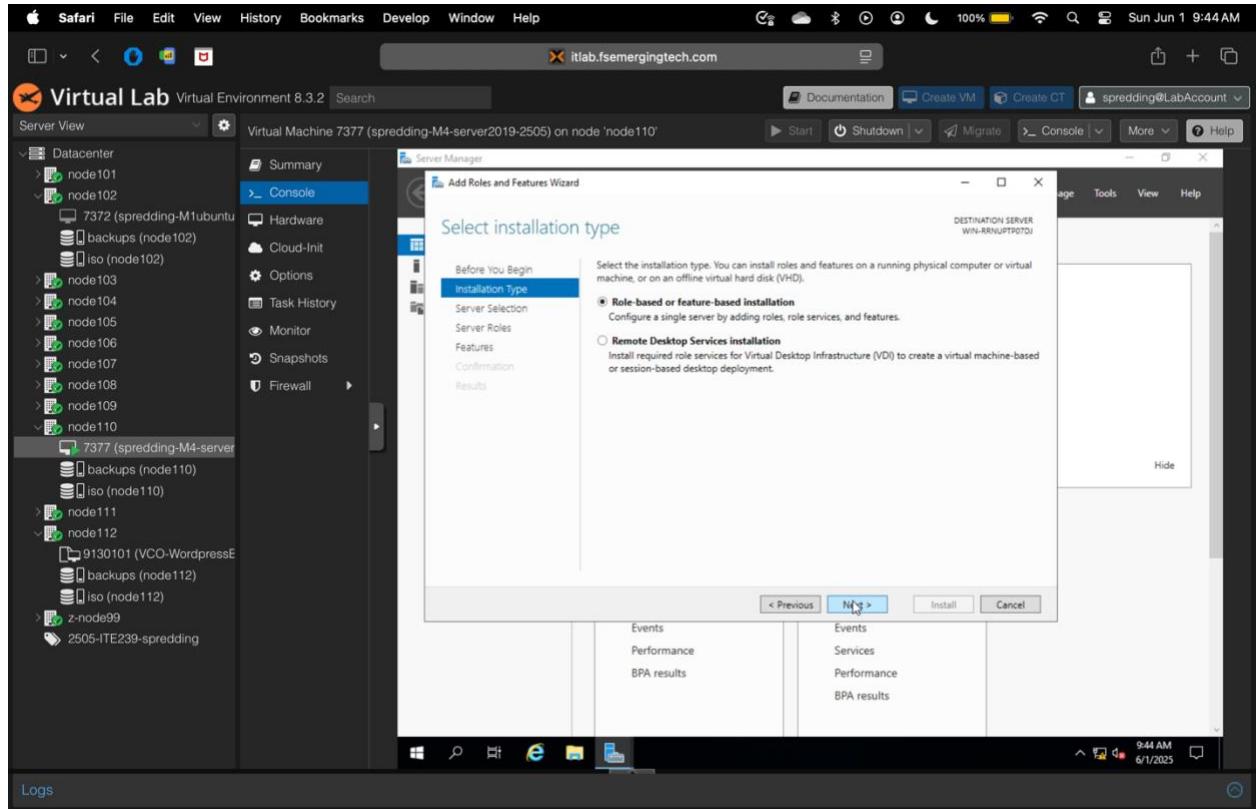


PART#2: Install and uninstall server roles using PowerShell

- 1) To Install a new role first open the Server Manager, click manage, add roles and features.



- 2) Click Next until you come to Server Roles. Next Click the “web server (IIS)” role. Continue until confirmation page, reviewing and making sure all info is accurate. Install.



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Virtual Lab Virtual Environment 8.3.3 Search Documentation Create VM Create CT spredding@LabAccount

Server View

Virtual Machine 7377 (spredding-M4-server2019-2505) on node 'node110'

Console Hardware Cloud-Init Options Task History Monitor Snapshots Firewall

Add Roles and Features Wizard

Select destination server

Before You Begin Installation Type Server Selection Server Roles Features Confirmation Results

Select a server or a virtual hard disk on which to install roles and features.

Select a server from the server pool
 Select a virtual hard disk

Server Pool

Filter:

Name	IP Address	Operating System
CoreServer	192.168.50.5	Microsoft Windows Server 2019 Standard

1 Computer(s) found

This page shows servers that are running Windows Server 2012 or a newer release of Windows Server, and that have been added by using the Add Servers command in Server Manager. Offline servers and newly-added servers from which data collection is still incomplete are not shown.

< Previous Next > Install Cancel 9:53 AM 6/1/2025

Logs

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Virtual Lab Virtual Environment 8.3.3 Search Documentation Create VM Create CT spredding@LabAccount

Server View

Virtual Machine 7377 (spredding-M4-server2019-2505) on node 'node110'

Console Hardware Cloud-Init Options Task History Monitor Snapshots Firewall

Add Roles and Features Wizard

Select server roles

Before You Begin Installation Type Server Selection Server Roles Features Confirmation Results

Select one or more roles to install on the selected server.

Roles

Web Server (IIS)

Description

Web Server (IIS) provides a reliable, manageable, and available Web application infrastructure.

Add features that are required for Web Server (IIS)?

The following tools are required to manage this feature, but do not have to be installed on the same server.

File and S Host Gua Hyper-V Network Print and Remote A Remote E Web S Windows Windows

Web Server (IIS)
Management Tools
[Tools] IIS Management Console

Include management tools (if applicable)

Add Features Cancel

< Previous Next > Install Cancel 9:54 AM 6/1/2025

Logs

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Virtual Lab Virtual Environment 8.3.3 Search

Server View Datacenter node101 node102 7372 (spredding-M1ubuntu) backups (node102) iso (node102) node103 node104 node105 node106 node107 node108 node109 node110 7377 (spredding-M4-server) backups (node110) iso (node110) node111 node112 9130101 (VCO-WordpressE) backups (node112) iso (node112) z-node99 2505-ITE239-spredding

Virtual Machine 7377 (spredding-M4-server2019-2505) on node 'node110'

Add Roles and Features Wizard

Start Shutdown Migrate Console More Help

DESTINATION SERVER CoreServer

Select features

Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results

Features

- .NET Framework 3.5 Features
- .NET Framework 4.7 Features (2 of 7 installed)
- Background Intelligent Transfer Service (BITS)
- BitLocker Drive Encryption
- BitLocker Network Unlock
- BranchCache
- Client for NFS
- Cloud
- Data Center Bridging
- Direct Play
- Enhanced Storage
- Failover Clustering
- Group Policy Management
- Host Guardian Hyper-V Support
- I/O Quality of Service
- IIS Hostable Web Core
- Internet Printing Client
- IP Address Management (IPAM) Server
- iSCSI Server service
- LPR Printer
- Management OData IIS Extension
- Media Foundation
- Message Queuing
- Multipath I/O
- MultiPoint Connector
- Network Load Balancing
- Network Virtualization
- Peer Name Resolution Protocol
- Quality Windows Audio Video Experience
- RAS Connection Manager Administration Kit (CMACK)
- Remote Assistance

Description

.NET Framework 3.5 combines the power of the .NET Framework 2.0 APIs with new technologies for building applications that offer appealing user interfaces, protect your customers' personal identity information, enable seamless and secure communication, and provide the ability to model a range of business processes.

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Virtual Lab Virtual Environment 8.3.3 Search

Server View Datacenter node101 node102 7372 (spredding-M1ubuntu) backups (node102) iso (node102) node103 node104 node105 node106 node107 node108 node109 node110 7377 (spredding-M4-server) backups (node110) iso (node110) node111 node112 9130101 (VCO-WordpressE) backups (node112) iso (node112) z-node99 2505-ITE239-spredding

Virtual Machine 7377 (spredding-M4-server2019-2505) on node 'node110'

Add Roles and Features Wizard

Start Shutdown Migrate Console More Help

DESTINATION SERVER CoreServer

Confirm installation selections

Before You Begin Installation Type Server Selection Server Roles Features Web Server Role (IIS) Role Services Confirmation Results

To install the following roles, role services, or features on selected server, click Install.

Restart the destination server automatically if required

Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.

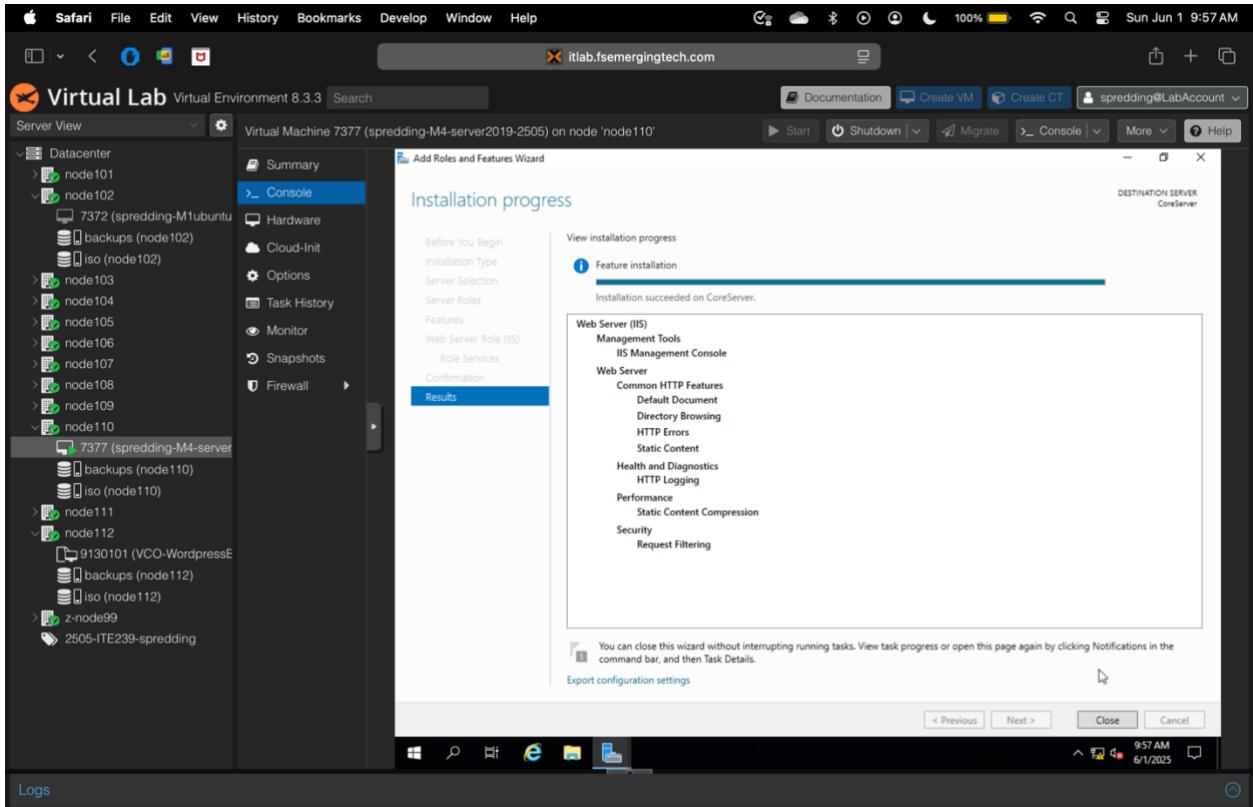
Web Server (IIS)

- Management Tools
 - IIS Management Console
- Web Server
 - Common HTTP Features
 - Default Document
 - Directory Browsing
 - HTTP Errors
 - Static Content
 - Health and Diagnostics
 - HTTP Logging
 - Performance
 - Static Content Compression
 - Security
 - Request Filtering

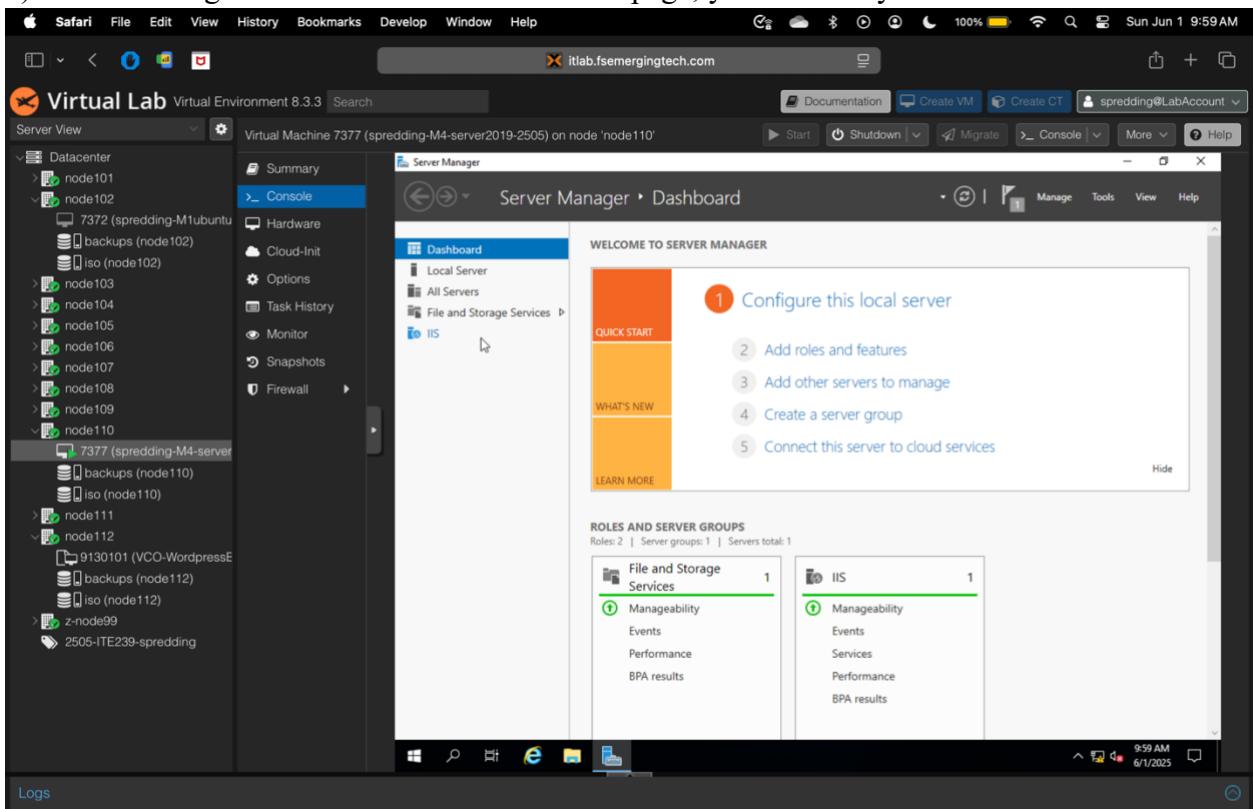
Export configuration settings
Specify an alternate source path

< Previous Next > Install Cancel 9:55 AM 6/1/2025

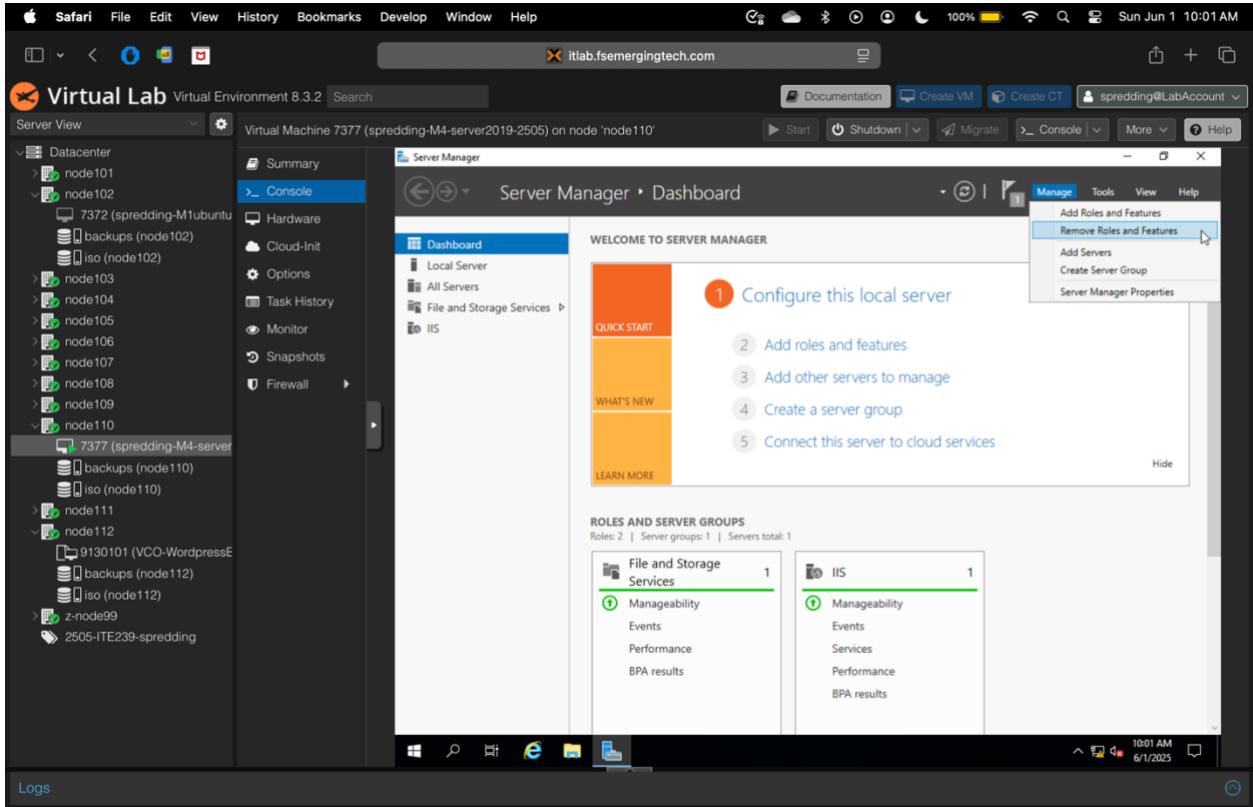
Logs

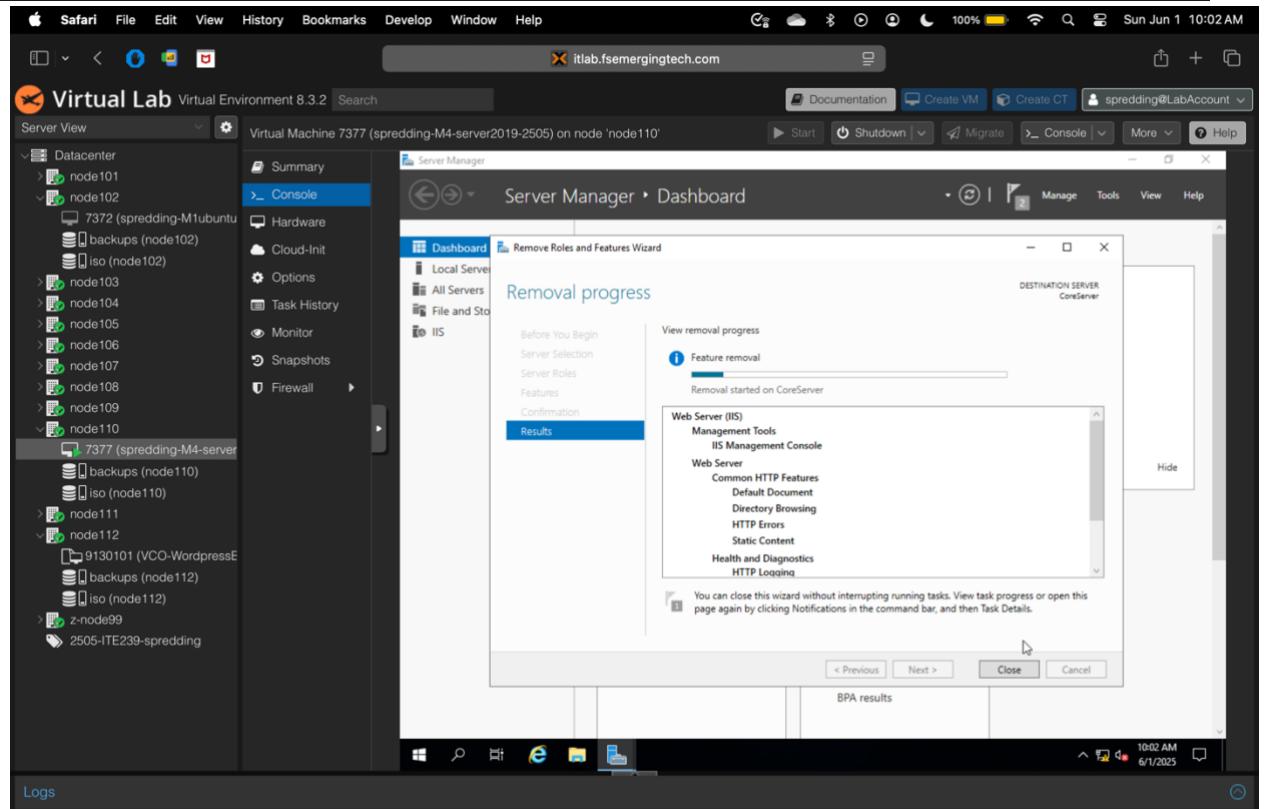
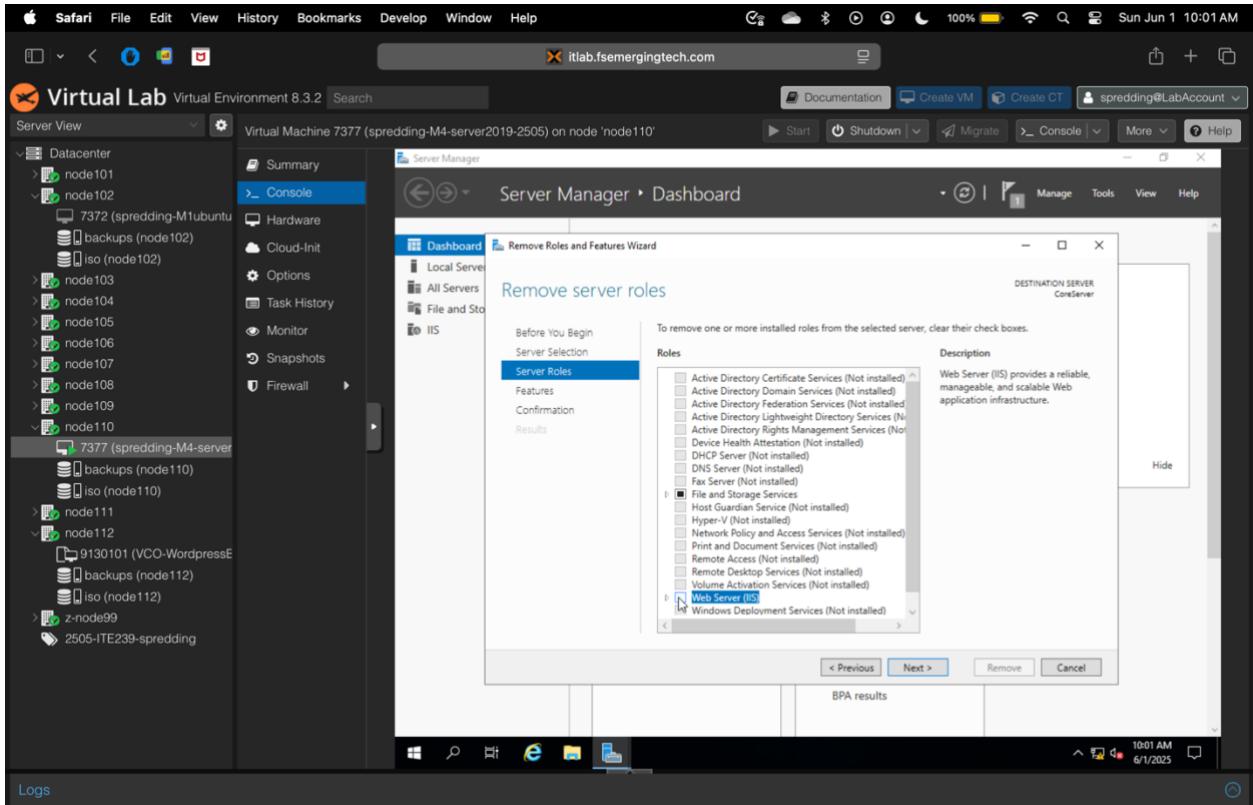


3) After closing out the roles and feature install page, you can verify IIS is now added.



- 4) To remove the added role, simply return to “remove roles and features” and follow the steps to remove the role, very similar to adding a role.





- 5) We can verify in this screenshot IIS role is no longer available on this server. A successful removal of the role.

