Desired State Configuration with Azure Automation Service

Create a Virtual Machine on Azure Portal

Create a virtual machine ...

Help me create a low cost VM	Help me create a VM optimized for high availability	Help me choose the right VM size for my workload

Subscription * ⓘ

MSDN Platforms Subscription ⌄

Resource group * ⓘ

rgdemo

Create new

Instance details

Virtual machine name * ⓘ

simplevm

Region * ⓘ

(Asia Pacific) South India ⌄

Availability options ⓘ

No infrastructure redundancy required ⌄

Security type ⓘ

Trusted launch virtual machines ⌄

Configure security features

Image * ⓘ

▦ Windows Server 2022 Datacenter: Azure Edition - x64 Gen2

See all images | Configure VM generation

VM architecture ⓘ

○ Arm64

● x64

Availability options ⓘ

No infrastructure redundancy required ⌄

Security type ⓘ

Trusted launch virtual machines ⌄

Configure security features

Image * ⓘ

▦ Windows Server 2022 Datacenter: Azure Edition - x64 Gen2 ⌄

See all images | Configure VM generation

VM architecture ⓘ

○ Arm64

● x64

ⓘ Arm64 is not supported with the selected image.

Run with Azure Spot discount ⓘ

☐

Size * ⓘ

Standard_D2s_v3 - 2 vcpus, 8 GiB memory (₹5,830.28/month) ⌄

See all sizes

Enable Hibernation ⓘ

☐

ⓘ Hibernate is not supported by the size that you have selected. Choose a size that is compatible with Hibernate to enable this feature. Learn more ↗

Administrator account

Administrator account

Username * ⓘ   `azureuser` ✓

Password *   `••••••••••••` ✓

Confirm password *   `••••••••••••` ✓

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * ⓘ   ○ None

                               ● Allow selected ports

Select inbound ports *   HTTP (80), HTTPS (443), RDP (3389) ⌄

                               ☑ HTTP (80)

                               ☑ HTTPS (443)

                               ☐ SSH (22)

                               ☑ RDP (3389)

Rest all settings keep as default.

me >

CreateVm-MicrosoftWindowsServer.WindowsServer-202-20240916162613 | Overview 📌 ···
Deployment

Search   ✕   «   🗑 Delete   ⊘ Cancel   ⬆ Redeploy   ⬇ Download   ↻ Refresh

Overview
Inputs
Outputs
Template

••• **Deployment is in progress**

Deployment name: CreateVm-MicrosoftWindowsServer.WindowsSe...
Subscription: MSDN Platforms Subscription
Resource group: rgdemo

Start time: 9/16/2024, 4:29:35 PM
Correlation ID: 22aedaa0-44cc-49e7-a418-496d0d92681f 📋

⌃ **Deployment details**

Resource	Type	Status	Operation details
No results.			

Give feedback

Create Automation Account

Create an Automation Account ...

Basics   Advanced   Networking   Tags   Review + Create

Create an Automation Account to hold the Automation runbooks & configuration used for automating operations and management tasks around Azure and non-Azure resources. You could execute cloud jobs in a serverless environment or use hybrid jobs on your compute via Azure Virtual machines, Arc-enabled servers or Arc-enabled VMWare VM (preview). Learn more

Subscription * ⓘ | MSDN Platforms Subscription   ⌄ |

    Resource group * ⓘ | rgdemo   ⌄ |
                                     Create new

Instance Details

Automation account name * ⓘ | demoautomation   ✓ |

Region * ⓘ | East US   ⌄ |

Review + Create   Previous   Next

Navigate to State Configuration under DSC (Configuration Management) . Add a configuration.

demoautomation | State configuration (DSC) ...
Automation Account

| Search | + Add   ✎ Compose configuration   ⟳ Refresh   ⟳ Reset filters |

Overview

Activity log   ⓥ A new configuration service is now generally available, with features like control over drift correction, assigning multiple configurations per ma
                                         PowerShell support for Linux. Learn more
Access control (IAM)

Tags   Nodes   **Configurations**   Compiled configurations   Gallery

Diagnose and solve problems   Configuration ⓘ

Process Automation | |

Configuration Management
                                     Configuration   **Compiled Configuration Count**
🔲 Inventory (Deprecated)
                                     No data
📋 Change tracking
   (Deprecated)

📋 **State configuration
   (DSC)**

Update management

Upload PowerShell File from Local state .

Import
Configuration

ⓘ Add a new configuration or update an existing one.
Select a file smaller than 1 MB to import.
The configuration name in the script must match the configuration name in the textbox "Name" below.

Configuration file * ⓘ

"Newconfig.ps"

Name *

NewConfig

Description

The contents of File are:

Configuration NewConfig

{

  Node 'localhost'

 {

   # Install IIS features

   WindowsFeature WebServerRole {

    Name = "Web-Server"

    Ensure = "Present"

   }

  }

}

It will make ensure that web server role on windows server be always present. If not automatically with the help of Automation Account, it will install the web server role.

Under Nodes add VM

demoautomation | State configuration (DSC) ☆ ···

Automation Account

+ Add   ✎ Compose configuration   ↻ Refresh   ↺ Reset filters

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Process Automation

Configuration Management

🗋 Inventory (Deprecated)

🗋 Change tracking (Deprecated)

🗋 State configuration (DSC)

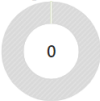Update management

Shared Resources

Related Resources

Account Settings

Settings

ⓘ A new configuration service is now generally available, with features like control over drift correction, assigning multiple configurations per machine, increased configuration si PowerShell support for Linux. Learn more

Nodes   Configurations   Compiled configurations   Gallery

Configuration status

	Failed	Pending
0	0	0
	Not compliant	In progress
	0	0
	Unresponsive	Compliant
	0	0

Nodes ⓘ   Status ⓘ   Node configuration ⓘ   VM DS

Search Node names...   6 selected   ▾   All   ▾   2 sele

Node	Status	Node configuration	Last seen
No data			

Home > Microsoft.AutomationAccount | Overview > demoautomation | State configuration (DSC) >

Virtual Machines ···

demoautomation

↻ Refresh

Filter by name...   MSDN Platforms Subscription ▾   rgdemo ▾   East US

Virtual Machines	↑↓	Subscription	↑↓	Resource group	↑↓	Location
🖵	simplevm	MSDN Platforms Subscription		rgdemo		East US 2

Navigate to Configuration and click on compile.

Home > Automation Accounts > demoautomation | State configuration (DSC) >

NewConfig ···

Configuration

⊞ Compile   ⤒ Export   🗑 Delete

∧ Essentials

Resource group (move) : rgdemo   Account   : demoautomation
Location   : East US   Subscription (move) : MSDN Platforms S
Subscription ID   : c5f6b777-a115-4e13-86f4-e1af2e819314   Status   : Published
Last published   : 9/16/2024, 4:34 PM   Configuration source : View configuration

Compilation jobs   Node configurations

Created	Status	La
No compilation jobs found.		

Select VM and connect to it.

simplevm ···
Virtual machine

+ Connect   ↻ Refresh   ↗ Learn more

ℹ Not connected

Power State

VM running

OS

Windows

Status

Not connected

Complete the registration.Change the configuration Mode to ApplyandAutoCorrect.

▦ **Registration** ···

Registration key *
◉ Primary key   ○ Secondary key

Node configuration name ⓘ

NewConfig.localhost

Refresh Frequency * ⓘ

30

Configuration Mode Frequency * ⓘ

15

Configuration Mode ⓘ

ApplyAndAutoCorrect

Allow Module Override ⓘ
☑

Reboot Node if Needed ⓘ
☑

Action after Reboot ⓘ

ContinueConfiguration

OK

simplevm   ...
Virtual machine

+ Connect   ○ Refresh   ↗ Learn more

🛈 Connecting...

Power State
VM running

OS
Windows

Status
Connecting

Microsoft Azure

simplevm   ...
Virtual machine

+ Connect   ○ Refresh   ↗ Learn more

Power State
VM running

OS
Windows

Status
Connected

Extension Version
2.83.5

Registration url
https://2dc96dad-6f98-42ce-862f-275167613a9c.agentsvc.eus.azure-automation.net/accounts/2dc96dad-6f98-42ce-862f-275167613a9c

Refresh Frequency
30

Home > demoautomation

demoautomation | State configuration (DSC)   ☆   ...   ✕
Automation Account

🔍 Search   ○   «   + Add   ✎ Compose configuration   ○ Refresh   ○ Reset filters

⚙ Overview
▢ Activity log   🛈 A new configuration service is now generally available, with features like control over drift correction, assigning multiple configurations per machine, increased configuration size, machine resource ID in reports, and
⛓ Access control (IAM)   PowerShell support for Linux. Learn more
🏷 Tags
✗ Diagnose and solve problems   Nodes   Configurations   **Compiled configurations**   Gallery
> Process Automation   Node configuration 🛈
∨ Configuration Management   [   ]
   ⚙ Inventory (Deprecated)
   ☰ Change tracking   **Node Configuration**   **Configuration**   **Node Count**   **Created**   **Last Modified**
      (Deprecated)
   ▤ **State configuration**   NewConfig.localhost   NewConfig   1   9/16/2024, 5:16 PM   9/16/2024, 5:16 PM   ...
      (DSC)
> Update management   Showing 1 - 1 of 1 results.

In VM, you can verify the DSC extension.

simplevm | Extensions + applications ☆ ⋯
Virtual machine

🔍 Search

«

🖥 Overview

📋 Activity log

👥 Access control (IAM)

🏷 Tags

🔧 Diagnose and solve problems

> Connect

> Networking

∨ Settings

  💾 Disks

  📱 Extensions + applications ⭐

  🖥 Operating system

  🖥 Configuration

  ☁ Advisor recommendations

	What extensions can help me keep my virtual machine secure?	What is the difference between VM applications and extensions?	What are the types of VM extensions available?	

Extensions   VM Applications

+ Add   🔄 Refresh   📨 Feedback

🔍 Search to filter items...

Showing all 1 items

Name	Type	Version	Status	Automatic upgrade s
Microsoft.Powershell.DSC	Microsoft.Powershell.DSC	2.*	Provisioning succeeded	Not supported

Take the RDP of windows VM

> Virtual machines >

simplevm 📌 ☆ ⋯
Virtual machine

🔍 Search

«

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Networking

Settings

💾 Disks

📱 Extensions + applications

🖥 Operating system

🖥 Configuration

☁ Advisor

🔗 Connect ∨   ▷ Start   🔄 Restart   ⬛ Stop   🕐 Hibernate   📷 Capture ∨   🗑 Delete   🔄 Refresh   📱 Open in mobile   📨 Feedback   📋 CLI / PS

∧ Essentials

Resource group (move)	: rgdemo	Operating system	: Windows (Windows Server 2022 Datacenter Azure Ed
Status	: Running	Size	: Standard D2s v3 (2 vcpus, 8 GiB memory)
Location	: East US 2	Public IP address	: 20.122.74.4 📋
Subscription (move)	: MSDN Platforms Subscription	Virtual network/subnet	: simplevm-vnet/default
Subscription ID	: c5f6b777-a115-4e13-86f4-e1af2e819314	DNS name	: Not configured
		Health state	: -
		Time created	: 9/16/2024, 10:59 AM UTC

Tags (edit)   : Add tags

Properties   Monitoring   Capabilities (8)   Recommendations   Tutorials
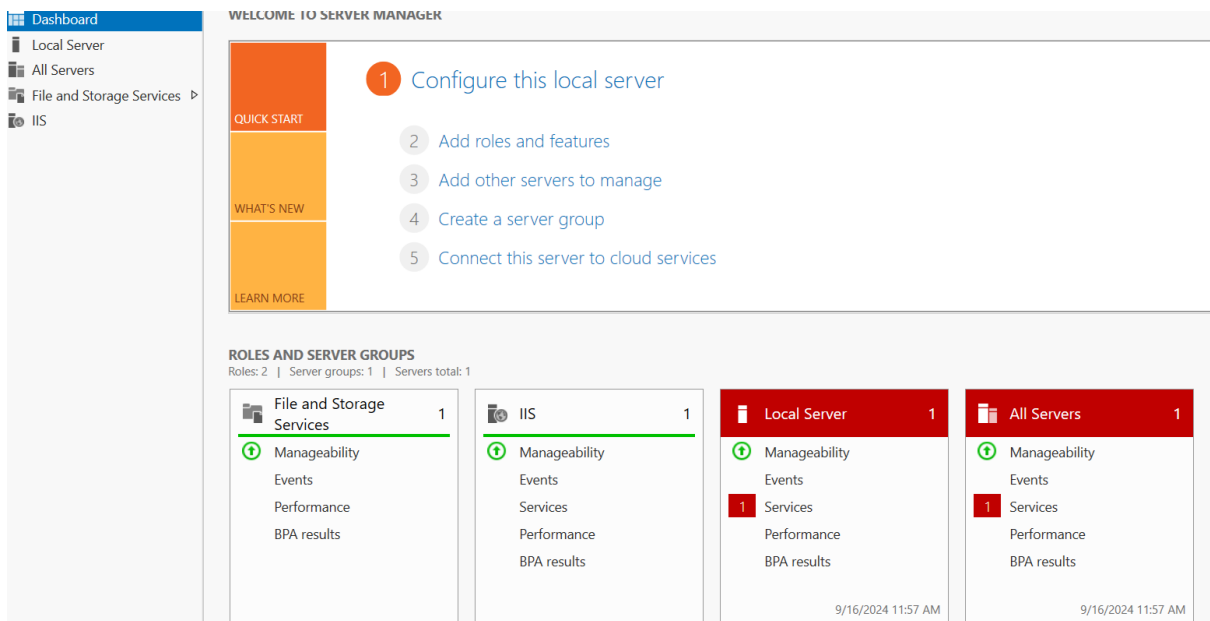
🖥 **Virtual machine**

Computer name	simplevm
Operating system	Windows (Windows Server 2022 Datacenter Azure Edition)

🌐 **Networking**

Public IP address	20.122.74.4 (Network interface simplevm764
Public IP address (IPv6)	-

Windows Security

Enter your credentials

These credentials will be used to connect to 20.122.74.4.

azureuser

••••••••••••

☐ Remember me

More choices

Tanvi Puri
tanvi.p@cloudthat.com

Use a different account

PIN
tanvi.p@cloudthat.com

OK   Cancel

- Dashboard
- Local Server
- All Servers
- File and Storage Services ▷
- IIS

WELCOME TO SERVER MANAGER

QUICK START

WHAT'S NEW

LEARN MORE

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

ROLES AND SERVER GROUPS
Roles: 2 | Server groups: 1 | Servers total: 1

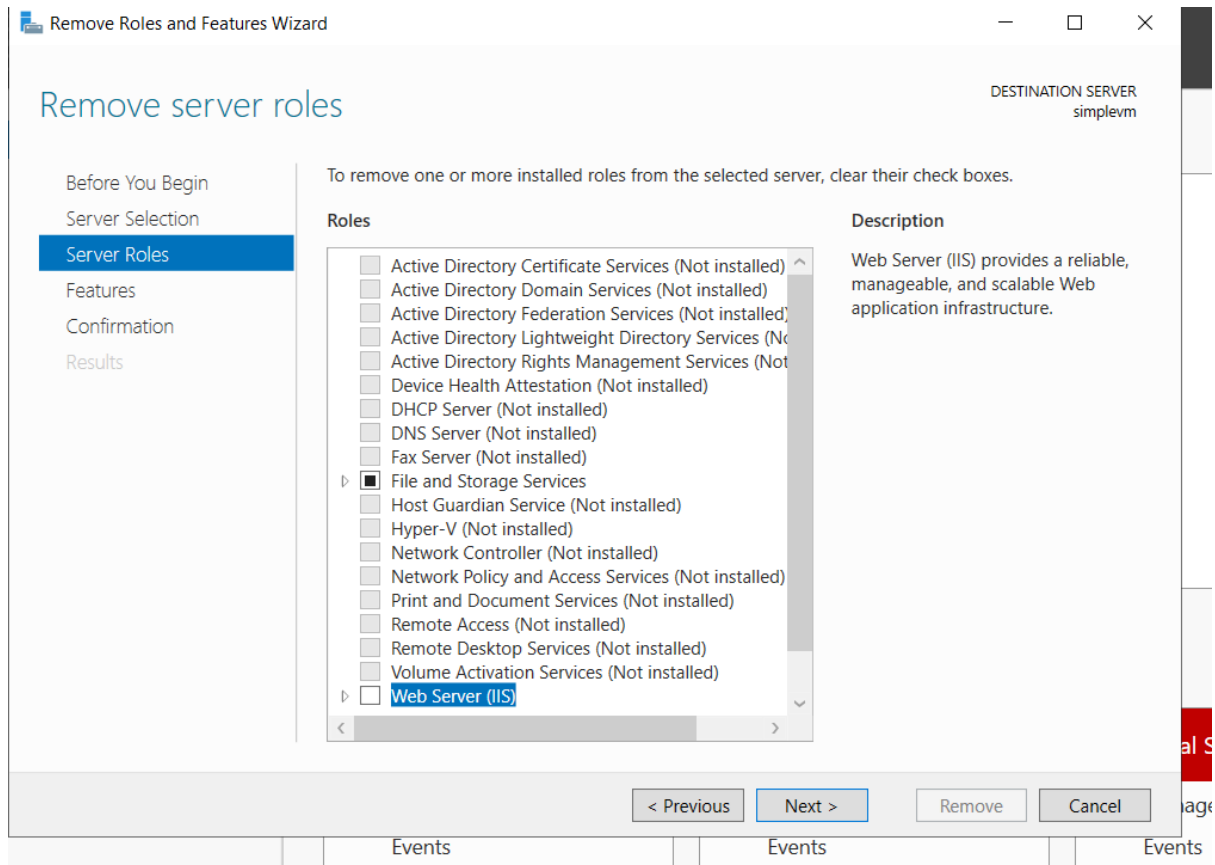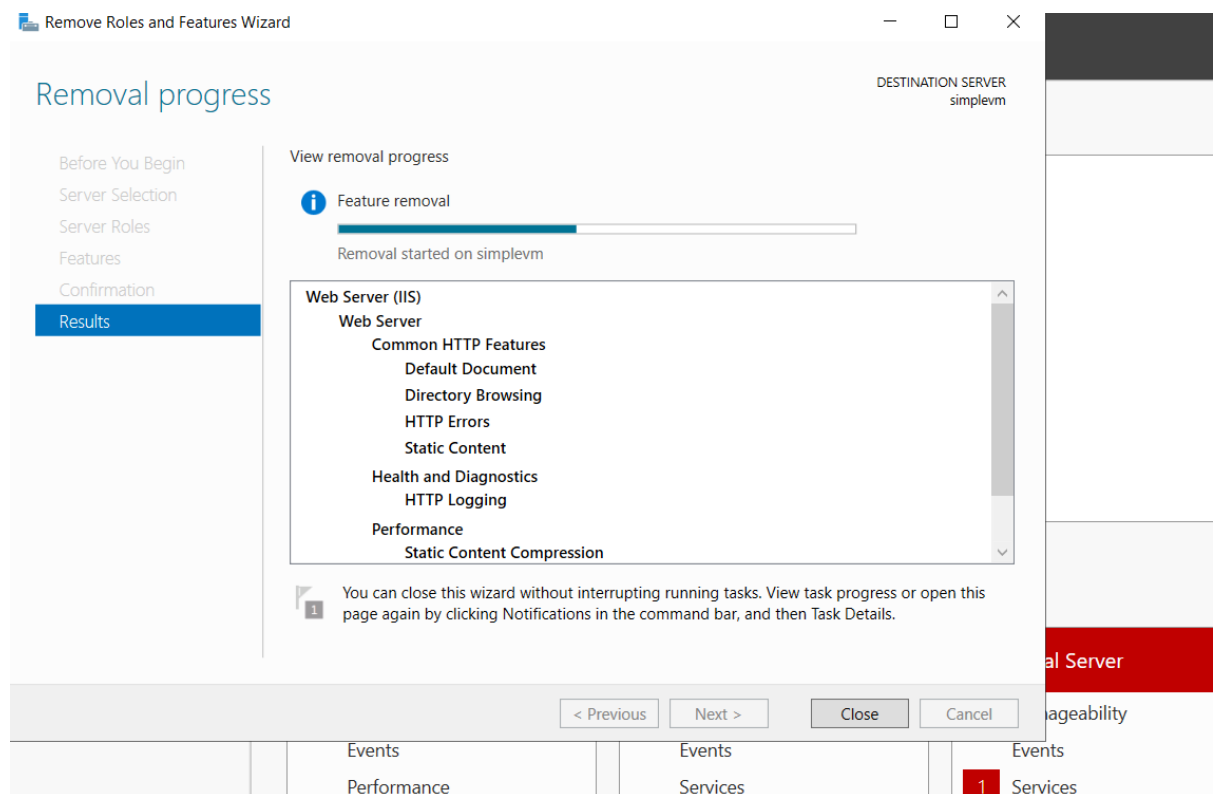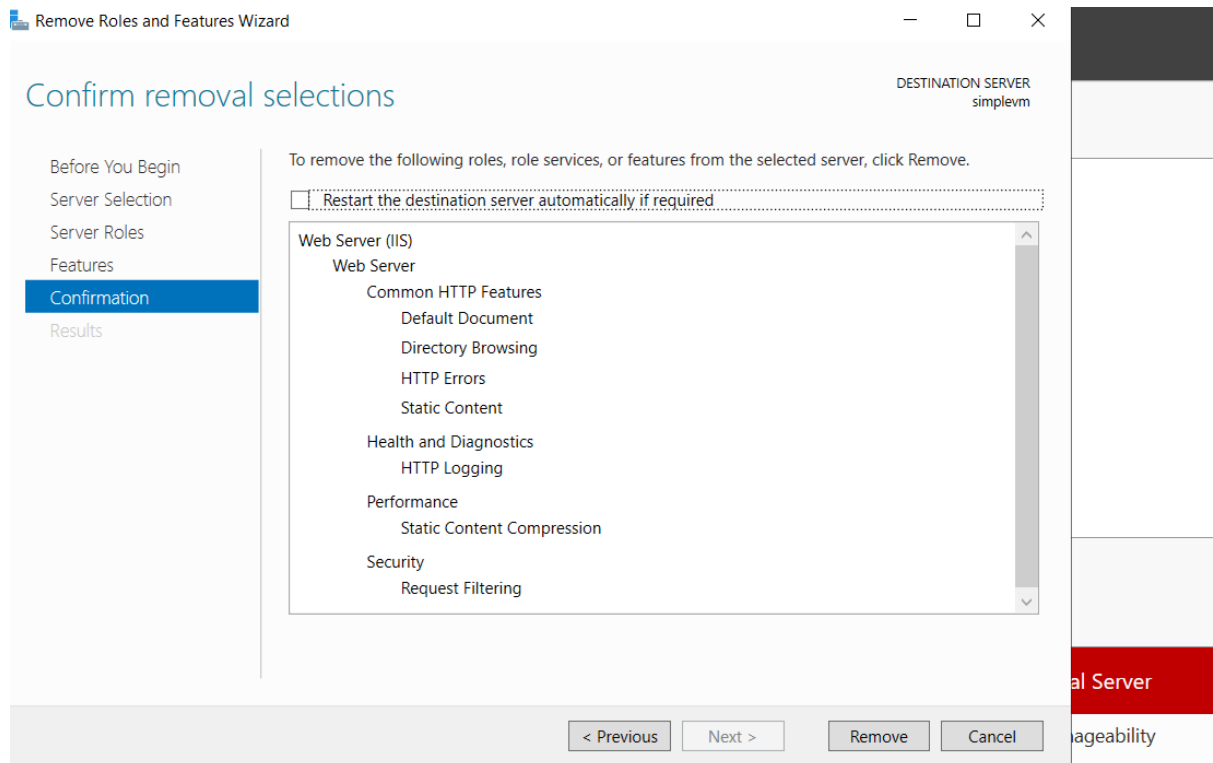| File and Storage Services	1	IIS	1	Local Server	1	All Servers	1
Manageability		Manageability		Manageability		Manageability	
Events		Events		Events		Events	
Performance		Services		Services	1	Services	1
BPA results		Performance		Performance		Performance	
		BPA results		BPA results		BPA results	
				9/16/2024 11:57 AM		9/16/2024 11:57 AM	

Web Server Role was installed.

Now Remove the web server role manually.

Under Manage click on Remove Roles and Feature. Disable web server role.

Click on Remove.

Remove Roles and Features Wizard

Confirm removal selections

Before You Begin
Server Selection
Server Roles
Features
Confirmation
Results

To remove the following roles, role services, or features from the selected server, click Remove.

☐ Restart the destination server automatically if required

Web Server (IIS)
    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

[< Previous] [Next >] [Remove] [Cancel]

Remove Roles and Features Wizard

Removal progress

Before You Begin
Server Selection
Server Roles
Features
Confirmation
Results

View removal progress

ℹ Feature removal

Removal started on simplevm

Web Server (IIS)
    Web Server
        Common HTTP Features
            Default Document
            Directory Browsing
            HTTP Errors
            Static Content
        Health and Diagnostics
            HTTP Logging
        Performance
            Static Content Compression

You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.

[< Previous] [Next >] [Close] [Cancel]

Events
Performance

After sometime you will be able to see the web server role again. It was due to Automation DSC.