

- Assign the DSC configuration to an **existing VM** and verify compliance.
- Force a **non-compliant** state (e.g., stop the service or delete the config file), then observe Azure Automation **remediating** the issue automatically.

### Practical Task 10: Automate Multi-Resource Deployment and Configuration Using Runbooks and DSC

#### Requirements:

- Create a new **Runbook** named DeployAndConfigureWebServer.
- Inside the Runbook, automate the following tasks:
  - **Create a new VM** named WebServerVM.
  - **Attach a managed disk** to WebServerVM.
- **Deploy a DSC configuration** to ensure IIS is installed and a website is running.
  - Publish and **execute** the Runbook, ensuring the web server is deployed and configured automatically.
  - Verify the deployment by accessing the website hosted on the VM via its **public IP address**.
  - Implement **logging** within the Runbook to track execution progress.

Windows Server

# Internet Information Services



Microsoft

devMyResourceGroup - Micros x PowerShell Script Logging x Azure DevOps : Azure Automat x PDF to JPG Converter | Convert x +

portal.azure.com/#@dmytroslotvinskygmail.onmicrosoft.com/resource/subscriptions/9a6ae428-d8c3-44fe-bdf2-4e08593901a0... Update

Microsoft Azure Search resources, services, and docs (G+/) Copilot 20+ StanislavKostenich@dm... DEFAULT DIRECTORY

Dashboard >

devMyResourceGroup Resource group

Search

Create Manage view Delete resource group Refresh Export to CSV Open query Assign tags Move Delete

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

Events

Settings

Deployments

Security

Deployment stacks

Policies

Properties

Locks

Cost Management

Cost analysis

Cost alerts (preview)

Resources Recommendations

Filter for any field... Type equals all Location equals all Add filter

Showing 1 to 7 of 7 records. Show hidden types No grouping List view

Name	Type	Location
azuredevmyrdevm021015590	Storage account	East US
devMyWinVM	Virtual machine	East US
devMyWinVM-NIC	Network Interface	East US
devMyWinVM-PublicIP	Public IP address	East US
devMyWinVM-VNet	Virtual network	East US
devMyWinVM_disk1_a8f5951288d447c2a3684537a6f92d92	Disk	East US
WebServerDisk	Disk	East US

< Previous Page 1 of 1 Next >

Give feedback

devMyAutomationAccount2025

PowerShell Script Logging

Azure DevOps : Azure Automat

PDF to JPG Converter | Convert

portal.azure.com/#@dmytroslovinskygma.onmicrosoft.com/resource/subscriptions/9a6ae428-d8c3-44fe-bdf2-4e08593901a0...

Update

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

20+

?

StanislavKostenich@dm...

DEFAULT DIRECTORY

Dashboard > Automation Accounts > devMyAutomationAccount202502

devMyAutomationAccount202502 | State configuration (DSC)

Automation Account

Search

«

+ Add

Compose configuration

Refresh

Reset filters

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 PowerShell support for Linux. [Learn more](#)

Nodes

Configurations

Compiled configurations

Gallery

Configuration status

Failed

0

Pending

0

Not compliant

0

In progress

0

Unresponsive

0

Compliant

1

1

Learn more

About State Configuration

Add non-Azure machine

Supported operating systems

Nodes ⓘ

Status ⓘ

Node configuration ⓘ

VM DSC extension version > 2.70 ⓘ

Search Node names...

6 selected

All

2 selected

Node	Status	Node configuration	Last seen	Version	
devMyWinVM	Compliant	MyDSCConfig.devMyWinVM	2/10/2025, 6:34 PM	2.83.5	...

Showing 1 - 1 of 1 results.

Registration - Microsoft Azure

PowerShell Script Logging

Azure DevOps : Azure Automat

PDF to JPG Converter | Convert

portal.azure.com/#@dmytroslovinskygmail.onmicrosoft.com/resource/subscriptions/9a6ae428-d8c3-44fe-bdf2-4e08593901a0...

Update

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

20+

?

StanislavKostenich@dm...  
DEFAULT DIRECTORY

Dashboard > Automation Accounts > devMyAutomationAccount202502 | State configuration (DSC) > Virtual Machines > devMyWinVM >

Registration

Registration key \*

☒ Primary key ☐ Secondary key

Node configuration name ⓘ

MyDSCConfig.devMyWinVM

Refresh Frequency \* ⓘ

30

Configuration Mode Frequency \* ⓘ

15

Configuration Mode ⓘ

ApplyAndMonitor

Allow Module Override ⓘ

☒

Reboot Node if Needed ⓘ

☒

Action after Reboot ⓘ

ContinueConfiguration

OK



MyDSCConfig - Microsoft Azure x PowerShell Script Logging x Azure DevOps : Azure Automat x PDF to JPG Converter | Convert x +

portal.azure.com/#view/Microsoft\_Azure\_Automation/DscConfigurationDashboardV2Blade/dscConfigurationResourceId/%2Fsu... Update

Microsoft Azure Search resources, services, and docs (G+/) Copilot 20+ StanislavKostenich@dm... DEFAULT DIRECTORY

Dashboard > Automation Accounts > devMyAutomationAccount202502 | State configuration (DSC) >

MyDSCConfig Configuration

Compile Export Delete

Essentials JSON View

Resource group (move) : StanislavKostenich

Location : East US

Subscription ID : 9a6ae428-d8c3-44fe-bdf2-4e08593901a0

Last published : 2/10/2025, 6:27 PM

Account : devMyAutomationAccount202502

Subscription (move) : Azure subscription 1

Status : Published

Configuration source : View configuration source

Compilation jobs

Node configurations

Created	Status	Last updated
2/10/2025, 6:28 PM	Completed	2/10/2025, 6:29 PM
2/10/2025, 6:29 PM	Running	2/10/2025, 6:30 PM

```
PS /home/stanislav> pwsh ./devwindowsvm.ps1

MOTD: SqlServer has been updated to Version 22!

VERBOSE: Authenticating to Azure ...
VERBOSE: Building your Azure drive ...
IMPORT THE CONFIGURATION

ResourceGroupName      : StanislavKostenich
AutomationAccountName  : devMyAutomationAccount202502
Location               : eastus
State                 : Published
Name                  : MyDSCConfig
Tags                  : {}
CreationTime           : 2/10/2025 4:27:11 PM +00:00
LastModifiedTime       : 2/10/2025 4:27:11 PM +00:00
Description            :
Parameters             : {}
LogVerbose             : False

PS /home/stanislav> 
```

```
1 $grp="StanislavKostenich"
2 $automationAccount="devMyAutomationAccount202502"
3
4
5 echo "IMPORT THE CONFIGURATION"
6 Import-AzAutomationDscConfiguration -Published -ResourceGroupName $grp -SourcePath ./MyDSCConfig.ps1 -Force -
   AutomationAccountName $automationAccount
7
```



devMyAutomationAccount2025

PowerShell Script Logging

Azure DevOps : Azure Automat

PDF to JPG Converter | Convert

+

portal.azure.com/#view/Microsoft\_Azure\_Automation/JobDashboard.ReactView/JobResourceId/%2Fsubscriptions%2F9a6ae428-...

Update

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

20+

StanislavKostenich@dm...  
DEFAULT DIRECTORY

devMyAutomationAccount202502 | Runbooks > devMyAutomationAccount2025 (devMyAutomationAccount202502/devMyAutomationAccount2025)

devMyAutomationAccount2025 2/10/2025, 4:32 PM

Job

Resume

Stop

Suspend

Feedback

Refresh

Export output

2/10/2025, 4:33:36 PM	Output	Creating resource group...
2/10/2025, 4:33:49 PM	Output	
2/10/2025, 4:33:49 PM	Output	Creating virtual network...
2/10/2025, 4:33:58 PM	Output	Creating subnet...
2/10/2025, 4:34:08 PM	Output	Creating public IP...
2/10/2025, 4:34:11 PM	Output	Creating network interface...
2/10/2025, 4:34:14 PM	Output	Creating VM configuration...
2/10/2025, 4:34:16 PM	Output	Deploying VM...
2/10/2025, 4:34:38 PM	Warning	Since there is no standard storage account in the same region as the VM, new standard storage account, azuredevmyrdevm02101...
2/10/2025, 4:37:05 PM	Output	
2/10/2025, 4:37:05 PM	Output	Creating managed disk...
2/10/2025, 4:37:09 PM	Output	
2/10/2025, 4:37:09 PM	Output	Attaching managed disk to VM...
2/10/2025, 4:37:19 PM	Output	
2/10/2025, 4:37:20 PM	Output	Deployment and configuration completed successfully.

devMyAutomationAccount2025

PowerShell Script Logging

Azure DevOps : Azure Automati

PDF to JPG Converter | Convert

portal.azure.com/#view/Microsoft\_Azure\_Automation/JobDashboard.ReactView/JobResourceId/%2Fsubscriptions%2F9a6ae428-...

Update

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

20+

StanislavKostenich@dm...  
DEFAULT DIRECTORY

devMyAutomationAccount202502 | Runbooks

devMyAutomationAccount2025 (devMyAutomationAccount202502/devMyAutomationAccount2025)

devMyAutomationAccount2025 2/10/2025, 4:32 PM

Job

Resume

Stop

Suspend

Feedback

Refresh

Export output

Essentials

JSON View

Id

: b88412f7-3da3-463d-8633-bd99ea8ff4c7

Status

: Completed

Ran on

: Azure

Ran As

: User

Created

: 2/10/2025, 4:32:32 PM

Last Update

: 2/10/2025, 4:37:20 PM

Runbook

: [devMyAutomationAccount2025](#)

Source snapshot

: [View source snapshot](#)

Input

Output

Errors

Warnings

All Logs

Exception

Errors

Warnings<sup>0</sup>

0

1

Type : Any

Search logs...

Time	Type	Details
2/10/2025, 4:33:36 PM	Output	
2/10/2025, 4:33:36 PM	Output	Initializing variables...

devMyAutomationAccount2025.ps1 - Visual Studio Code

File Edit Selection View Go Run Terminal Help

AZURE

- AZURE AUTOMATION
  - Azure subscription 1
    - AMAutomationAccount ( WebServerGroup )
    - automationsa ( Serhii\_Pavlenko\_cli )
    - devMyAutomationAccount202502 ( Stanisla...
      - Assets
      - Hybrid Worker Groups
      - PowerShell Modules
      - Python Packages
      - Recent Jobs
      - Runbooks
        - AzureAutomationTutorialWithIdentity (P...
        - AzureAutomationTutorialWithIdentityGr...
        - devMyAutomationAccount2025 (Published)
        - devRunbook (In Edit)
      - Schedules
      - MyAutomationAccount ( AndriiBesaha )
      - MyAutomationAccount7 ( MarkiiianKhymynets )
      - MyAutomationAccountTask7 ( MarkiiianKhym...
      - MyAutomationAccountYS ( YuriyShelest )
- RESOURCES
- WORKSPACE
- ACCOUNTS & TENANTS
- HELP AND FEEDBACK

evops > vscodeAutomation > 222627011 > vscodeAutomation > 222627011 > vscodeAutomation > 775755840 > devMyAutomationAccount2025.ps1 > ...

```
79 Log-Message "Network Interface $VMName-NIC created successfully."
80
81 # Create VM Configuration
82 Log-Message "Creating VM configuration for $VMName..."
83 $vmConfig = New-AzVMConfig -VMName $VMName -VMSize "Standard_DS1_v2" | `
84     Set-AzVMOperatingSystem -Windows -ComputerName $VMName -Credential (New-Object System.Management.Automation.PSCredential ($VMName, (ConvertTo-SecureString "Password123!" -AsPlainText -Force))) `
85     Set-AzVMSourceImage -PublisherName "MicrosoftWindowsServer" -Offer "WindowsServer" -Sku "Datacenter" -Version "20H2" `
86     Add-AzVMNetworkInterface -Id $nic.Id
87 Log-Message "VM configuration for $VMName created successfully."
88
89 # Create VM
90 Log-Message "Deploying VM $VMName..."
91 New-AzVM -ResourceGroupName $ResourceGroupName -Location $location -VM $vmConfig
92 Log-Message "VM $VMName deployed successfully."
93
94 # Create Managed Disk
95 Log-Message "Creating managed disk $diskName..."
96 $diskConfig = New-AzDiskConfig -SkuName Standard_LRS -Location $location -CreateOption Empty
97 New-AzDisk -ResourceGroupName $ResourceGroupName -DiskName $diskName -Disk $diskConfig
98 Log-Message "Managed disk $diskName created successfully."
99
100 # Attach Managed Disk to VM
101 Log-Message "Attaching managed disk $diskName to VM $VMName..."
102 $vm = Get-AzVM -ResourceGroupName $ResourceGroupName -VMName $VMName
103 $disk = Get-AzDisk -ResourceGroupName $ResourceGroupName -DiskName $diskName
104 $vm = Add-AzVMDataDisk -VM $vm -ManagedDiskId $disk.Id -Lun 0 -CreateOption Attach
105 Update-AzVM -ResourceGroupName $ResourceGroupName -VM $vm
106 Log-Message "Managed disk $diskName attached to VM $VMName successfully."
107
108 Log-Message "Deployment and configuration completed successfully."
109
```

Ln 6, Col 35 (10 selected) Spaces: 4 UTF-8 LF {} PowerShell

0 1 Error acquiring .NET