

AZURE LAB 8 (CUSTOM SCRIPT EXTENSIONS)

So now in this Lab, I want to showcase an example when it comes onto custom script extensions. In this example, you're going to install a web server role that is Internet information services on a Windows server.

I have a very simple PowerShell script in place. PowerShell is a language that's available for Microsoft in which you can actually develop, you know, very useful scripts when it comes onto automation. This is a very simple script that just has two lines of code.

This two lines of code file is converted into a file so that it can be uploaded to Azure.

 You can get this file from GitHub, or you can convert it into a file on your own, the code that is going to be used in it is.

```
(import-module servermanager
```

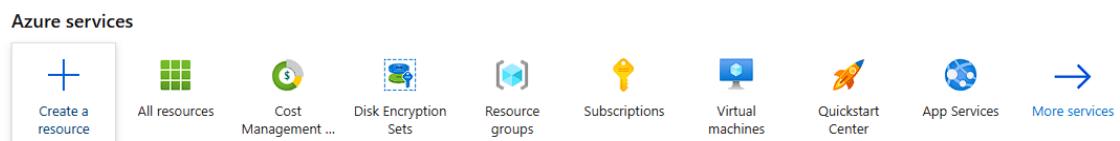
```
add-windowsfeature web-server -includeallsubfeature)
```

The above is the two-line code that you are going to use to install a web server role on your virtual machine.

TO BEGIN WITH THE LAB:

STEP 1: CREATE A STORAGE ACCOUNT AND UPLOAD FILE

1. Log in to your Azure Portal.
2. Then navigate to create resources.



3. Now you need to search **Storage Account**. Then you need to select this option from there. Then click on create.





Storage account

Microsoft

Azure Service

Use Blobs, Tables, Queues, Files, and Data Lake Gen 2 for reliable, economical cloud storage.

Create ▾



4. On the create screen, you need to give it a unique name then, select your region.
5. Keep performance to Standard.
6. Then for Redundancy select LRS (Locally-Redundant Storage)
7. Now just move to review page by keeping everything to default and create your first storage account.

Create a storage account

Basics Advanced Networking Data protection Encryption Tags Review

storage accounts

Project details

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription *	Free Trial
Resource group *	app-grp
	Create new

Instance details

Storage account name ⓘ *	appstorage2711
Region ⓘ *	(Asia Pacific) Central India
Deploy to an edge zone	
Performance ⓘ *	<input checked="" type="radio"/> Standard: Recommended for most scenarios (general-purpose v2 account) <input type="radio"/> Premium: Recommended for scenarios that require low latency.
Redundancy ⓘ *	Locally-redundant storage (LRS)

[Review](#)

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Next : Advanced >

8. Once the deployment is complete go to resources page.

✓ Your deployment is complete

 Deployment name: appstorage2711_1703577573220 Start time: 12/26/2023, 1:29:34 PM
Subscription: Free Trial Correlation ID: e608ca72-20a3-4c0e-a177-1616fce7dbcc 
Resource group: app-grp

✗ Deployment details

^\ Next steps

[Go to resource](#)

9. On the resources page under the Data Storage section, click on Containers.

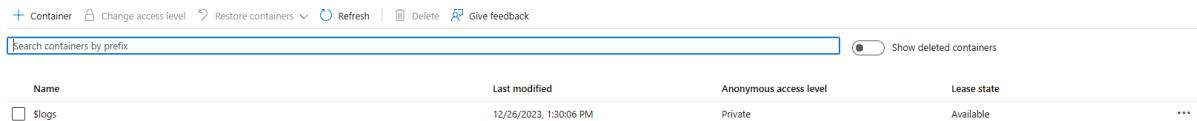
Data storage

 Containers

 File shares

 Queues

 Tables

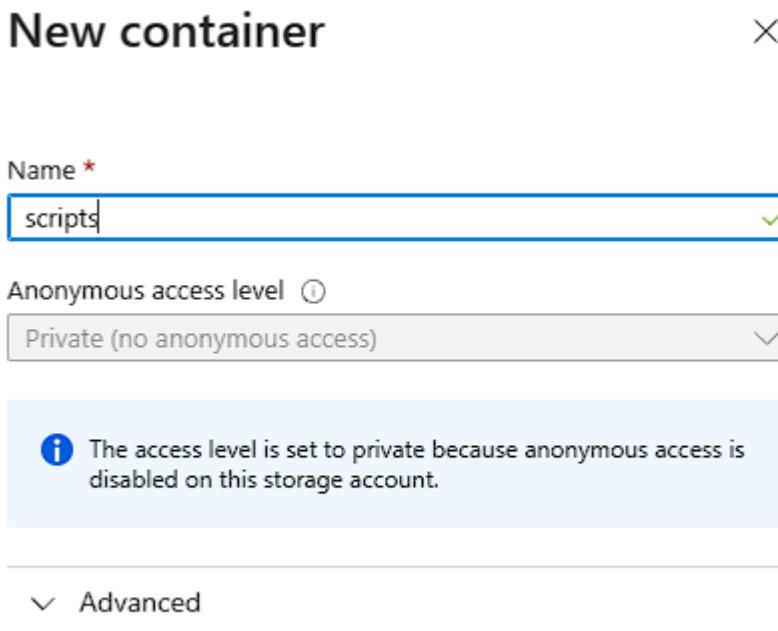


A screenshot of the Azure Storage Data storage page. At the top, there are navigation links for Container, Change access level, Restore containers, Refresh, Delete, Give feedback, and a search bar labeled 'Search containers by prefix'. Below these are buttons for '+ Container' and 'Show deleted containers'. A table lists two containers: 'Slogs' and 'scripts'. The 'scripts' container was created on 12/26/2023 at 1:30:06 PM, has 'Private' anonymous access level, and is 'Available'.

Name	Last modified	Anonymous access level	Lease state
Slogs	12/26/2023, 1:30:06 PM	Private	Available
scripts	12/26/2023, 1:34:56 PM	Private	Available

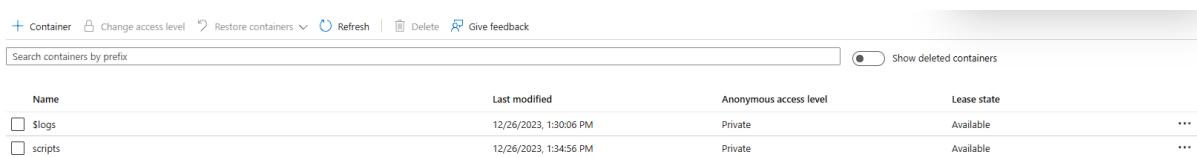
10. Now you need to create a container where you are going to store that file.

11. For that click on **+container icon**. A window will be opened in the right of the screen. There you need to give a name to it. Then create it.



The 'New container' dialog box is open. It has a 'Name' field containing 'scripts' with a green checkmark. Below it is an 'Anonymous access level' dropdown set to 'Private (no anonymous access)'. A tooltip message says: 'The access level is set to private because anonymous access is disabled on this storage account.' At the bottom, there is an 'Advanced' section with a collapse arrow.

12. Once your container is created, you can see it.



A screenshot of the Azure Storage Data storage page. The table now shows three containers: 'Slogs', 'scripts', and a new one named 'scripts'. The 'scripts' container was created on 12/26/2023 at 1:34:56 PM, has 'Private' anonymous access level, and is 'Available'.

Name	Last modified	Anonymous access level	Lease state
Slogs	12/26/2023, 1:30:06 PM	Private	Available
scripts	12/26/2023, 1:30:06 PM	Private	Available
scripts	12/26/2023, 1:34:56 PM	Private	Available

13. Now you need to open your container. There you need to upload your file from your system.

14. For that click on Upload and select the file.

Upload Change access level Refresh | Delete Change tier Acquire lease Break lease View snapshots Create snapshot Give feedback

Authentication method: Access key (Switch to Microsoft Entra user account)
Location: scripts

Search blobs by prefix (case-sensitive) Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
No results						

Upload blob X

1 file(s) selected: IIS.ps1

Drag and drop files here or [Browse for files](#)

Overwrite if files already exist

[Advanced](#)

[Upload](#)

[Give feedback](#)

Upload Change access level Refresh | Delete Change tier Acquire lease Break lease View snapshots Create snapshot Give feedback

Authentication method: Access key (Switch to Microsoft Entra user account)
Location: scripts

Search blobs by prefix (case-sensitive) Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
IIS.ps1	12/26/2023, 1:36:47 PM	Hot (Inferred)		Block blob	216 B	Available

STEP 1: CREATE A VIRTUAL MACHINE

1. Now you need to create a windows virtual machine.
2. Go to create resources, select virtual machine and create it.

Create a virtual machine

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *	Free Trial
Resource group *	app-grp
	Create new

Instance details

Virtual machine name *	windowsvm
Region *	(Asia Pacific) Central India
Availability options	No infrastructure redundancy required
Security type	Standard
Image *	 Windows Server 2022 Datacenter - x64 Gen2 (free services eligible)
	See all images Configure VM generation

 This image is compatible with additional security features. [Click here to swap to the Trusted launch security type](#).

VM architecture	<input checked="" type="radio"/> x64
	<input type="radio"/> Arm64

 Arm64 is not supported with the selected image.

Run with Azure Spot discount	<input type="checkbox"/>
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Size *	Standard_D2s_v3 - 2 vcpus, 8 GiB memory (₹11,294.05/month)
	See all sizes

Enable Hibernation (preview)	<input type="checkbox"/>
	 To enable Hibernation, you must register your subscription. Learn more

Administrator account

Username *	demousr
Password *	*****
Confirm password *	*****

- Just keep one thing in mind while creating your virtual machine, select HTTP (80) as your inbound port, because it will enable your virtual machine to connect with the outside world.

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), RDP (3389)

- HTTP (80)
 HTTPS (443)
 SSH (22)
 RDP (3389)

Review + create

< Previous

Next : Disks >

4. Now you need to move directly to the Advanced section by keep rest of the things to default.

Basics Disks Networking Management Monitoring **Advanced** Tags Review + create

Add additional configuration, agents, scripts or applications via virtual machine extensions or cloud-init.

Extensions

Extensions provide post-deployment configuration and automation.

Extensions ⓘ

Select an extension to install

5. In the advanced section click on Select an extension to install. This option will enable you to select your stored file from the storage and it will get installed while the machine will be generating.
6. So, there first you need to search custom script extension, then select it, and click on next.
7. Now you need to browse your file. For that click on browse.
8. Select your account.
9. Then select our container, in last select your file.

Install an Extension

The screenshot shows the Azure Marketplace search results for 'Custom script extension'. At the top is a search bar with the text 'Custom script extension'. Below it is a card for the 'Custom script extension' by Microsoft Corp. The card includes a blue square icon with a white four-pane window, the title 'Custom script extension', the developer 'Microsoft Corp.', and a description 'Custom script handler extension for windows'. A 'Load more' button is visible at the bottom left of the card.

Configure Custom script extension Extension

Create

Script file (Required) * ① Browse

Arguments (Optional) ①

The screenshot shows the Azure Storage account configuration page. At the top, there are buttons for '+ Storage account', 'Refresh', and 'Give feedback'. Below is a search bar for 'Search storage accounts' and a checkbox for 'Show classic storage accounts'. A table lists storage accounts: 'appstorage2711' (Type: Standard-LRS, Resource Group: app-grp, Location: Central India). Below this is a 'Containers' section with a table for blob containers: 'Slogs' (Last modified: 12/26/2023, 1:30:06 PM, Anonymous access level: Private, Lease state: Available) and 'scripts' (Last modified: 12/26/2023, 1:34:56 PM, Anonymous access level: Private, Lease state: Available). At the bottom, there is a 'Blobs' section with a table for blob files: 'IIS.zip' (Modified: 12/26/2023, 1:36:47 PM, Access tier: Hot (Inferred), Blob type: Block blob, Size: 216 B, Lease state: Available).

10. Once your file is selected click on create.

Add additional configuration, agents, scripts or applications via virtual machine extensions or cloud-init.

Extensions

Extensions provide post-deployment configuration and automation.

Extensions ⓘ

 Custom script extension
Microsoft Corp.

Select an extension to install



11. Now jump to review page and create your virtual machine.

12. It will take around 4-5 minutes this time to create the machine.

✓ Your deployment is complete

 Deployment name: CreateVm-MicrosoftWindowsServer.WindowsSe... Start time: 12/26/2023, 2:02:51 PM
Subscription: Free Trial Correlation ID: ba72af94-be8b-4d18-bd5f-132d5a1bbe23 
Resource group: app-grp

✓ Deployment details

✗ Next steps

Setup auto-shutdown Recommended

Monitor VM health, performance and network dependencies Recommended

Run a script inside the virtual machine Recommended

[Go to resource](#)

[Create another VM](#)

13. Once the deployment is complete go to resource page.

14. On the resource page copy Public IP address and paste it in a new tab.

15. You'll see that you web server is successfully installed on the virtual machine.

