

**PostgreSQL + Info-Gathering:**

**CMF - PostgreSQL** **Azure Single Server Info-Gathering Automation User Guide**

**For Script:**

**CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering.ps1**

**Document Summary**

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# Executive Summary

## Objective

This document provides the procedure/steps to execute the Automation script (CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering.ps1) which gathers the PostgreSQL Azure Single Server details.

The following PostgreSQL information is gathered from the given Azure Subscription:

* Host\_Name
* Resource\_Group
* Port
* VCore
* Auth\_Type
* User\_ID
* DB\_Name
* tenant
* Subscription\_ID

## Recommendations

Key recommendations are as follows:

1. Run the script on Non-Mission-Critical systems ONLY (i.e.**NOT** on any production server)
2. Windows 10, Windows Server 2012, Windows Server 2012 R2 and above
3. Connectivity must exist between the SYSTEM which runs the PostgreSQL Azure Single Server Info Gathering Automation script and Azure Cloud
4. Powershell 5.1 version

# Prerequisites for PostgreSQL Azure Single Server Info gathering - Execution

## Non-Mission-Critical system

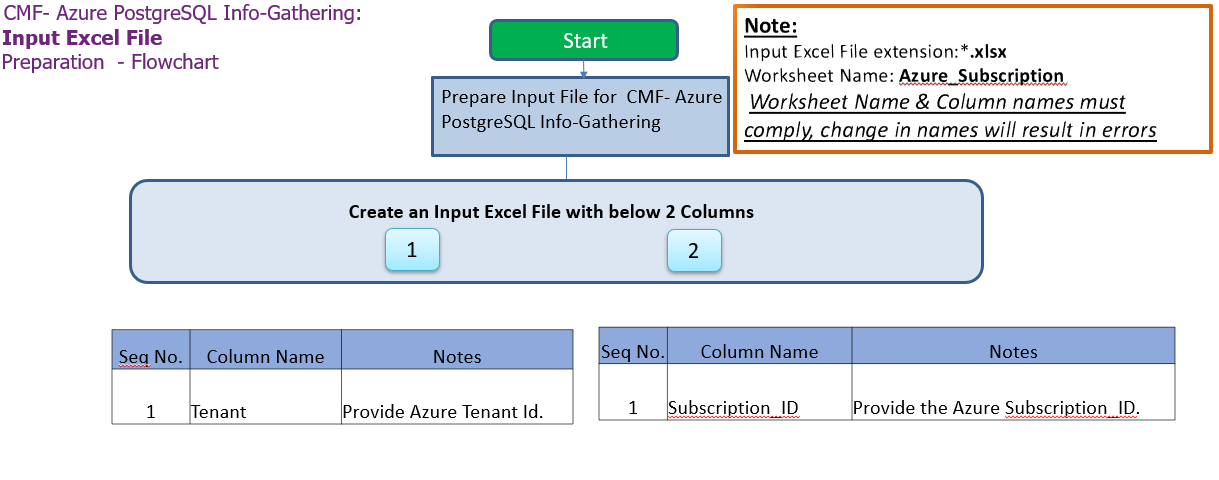
* **Don't install and run the Automation scripts on any mission-critical production server**

## Operating System Requirements

* Supported Operating System

Windows 10, Windows Server 2012, Windows Server 2012 R2 and above

## Input Excel File



**Important Notes:**

* This script is based on the worksheet named ‘Azure\_Subscription’ and the following columns in the worksheet of the Input Excel file:
* Worksheet name in the INPUT EXCEL FILE must be **Azure\_Subscription**
* **Column Name must be kept as shown below, change in names will result in errors**
* **Values in the column must be correct, incorrect values will also result in errors**
* If there is only one server/instance to be assessed using the script, please add a duplicate line with same server information to avoid an input related issue

|  |  |
| --- | --- |
| **Column Name** | **Note** |
| **Tenant** | **Azure Subscription tenant ID** |
| **Subscription\_ID** | **Azure Subscription ID** |

|  |  |  |
| --- | --- | --- |
| **Seq.No** | **File** | **Note** |
| 1 |  | Sample: **CMF-PostgreSQL\_Server\_Input\_file.xlsx** |

## Windows User credentials

Windows user must have privileges to install the following software & PowerShell module:

* Azure CLI
* ImportExcel

## Storage Space & Folder read write permission

* Windows user must have a privilege to create folder and write the assessment results to that folder
* Minimum disk free space required is 1GB

## Internet access

* Connectivity must exist between the SYSTEM which runs the PostgreSQL Azure Single Server Info Gathering Automation script and Azure Cloud.

## Internet access to the URLs below:

|  |  |
| --- | --- |
| **URL** | **Note** |
| https://aka.ms/installazurecliwindows | Azure CLI |

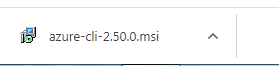
## Without Internet access to the URLs

**Note:** Follow the instructions below to download all the software manually to a server where internet connectivity is enabled. Once all the software is downloaded, move all of it to the server where PostgreSQL Azure Single Server Info Gathering automation script will be executed and install all of them one by one.

### Installing Azure CLI

1. Paste the download link in web - https://aka.ms/installazurecliwindows





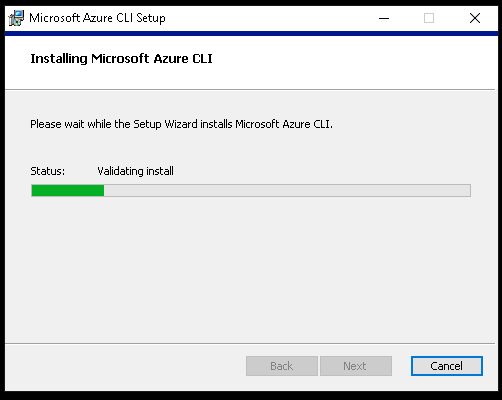
1. Launch the downloaded offline installer **azure-cli-2.50.0.msi,**



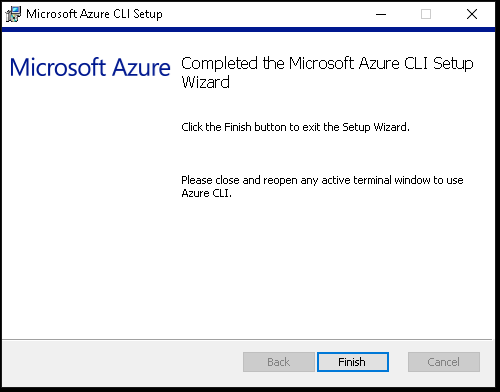
1. Read and accept the license terms.
2. Click on Install.



1. Azure CLI Installation is in progress



6. Once the installation is complete, click on Finish



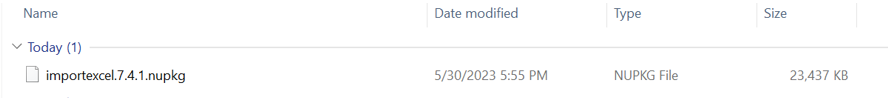
### Installing ImportExcel Module

1. Open Browser and navigate to the link <https://www.powershellgallery.com/packages/ImportExcel/7.4.1>
2. Click On Manual Download

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Description automatically generated with medium confidence

1. Now Click on Download the raw nupkg file.
2. The file will be downloaded to Downloads folder

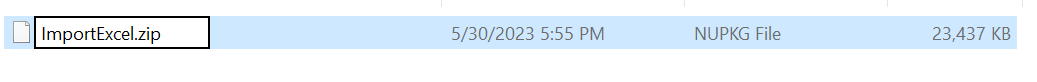


1. Right Click Properties-> and unblock the file -> Apply.

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1. Rename the file as ImportExcel.zip.



1. Extract the zip Right Click-> Extract All

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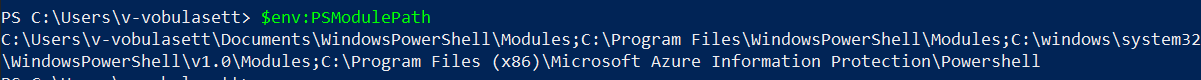
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1. Goto Run Button -> Type Powershell and click on -> Windows PowerShell

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1. Run the command. $env:PSModulePath which will list all the Environment variable paths for PowerShell Module



1. Navigate to the path which reflects with Program Files or ProgramFiles(X86) to the Respective modules Folder via FileExplorer and paste the extracted file (i.e. Step7)

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Execute the below command from windows PowerShell as Administrator.

* **Import-Module ImportExcel**



## PowerShell Version, Modules & Execution policy

Execute the below commands from windows PowerShell as Administrator.

1. To find the PowerShell Version

* Get-Host

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1. Set the PowerShell execution policy

* **Set-ExecutionPolicy Unrestricted -Scope CurrentUser**



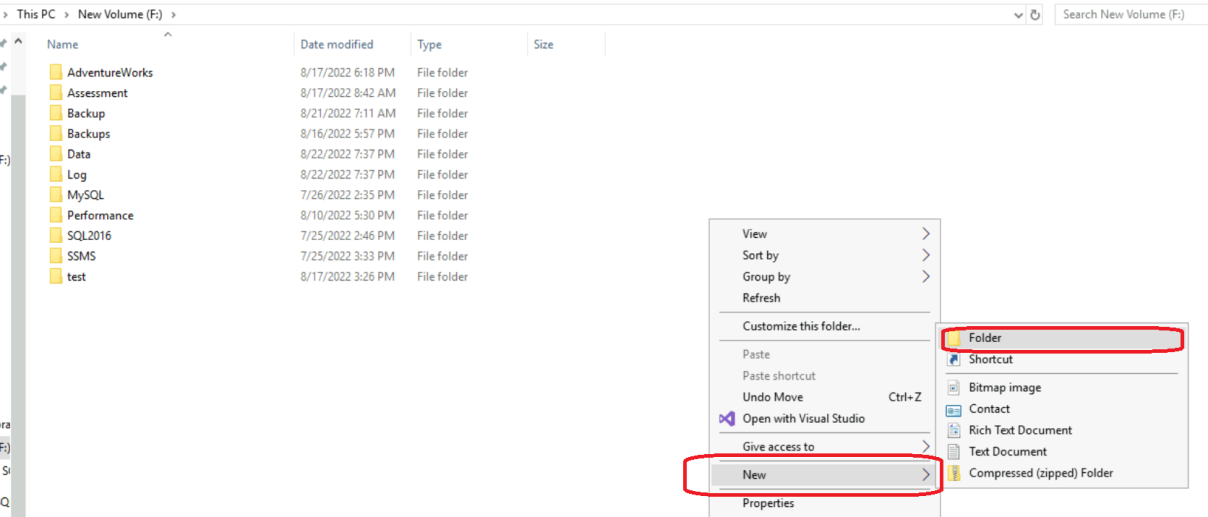
## Connectivity

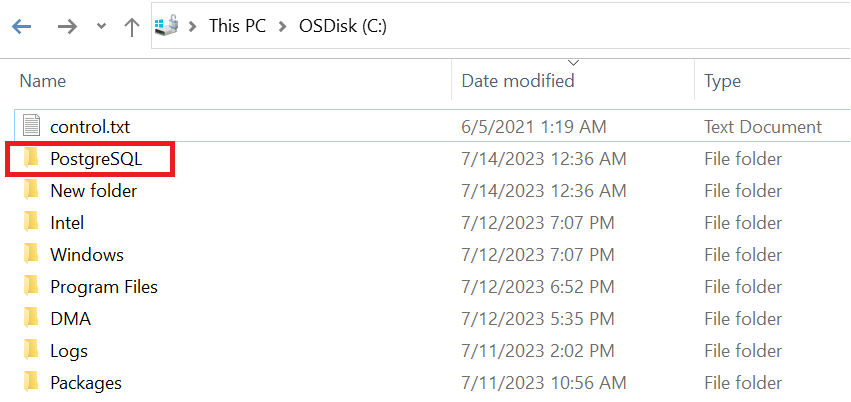
* Connectivity must exist between the SYSTEM which runs the PostgreSQL Azure Single Server Info Gathering Automation script and Azure Cloud.

# Copying Script

## Folder Name

* Login into a Non-Mission-Critical system (i.e.**NOT**on any production server) from where the PostgreSQL Automation is to be run
* Create a folder C:\PostgreSQL (you may choose any available drive)





## Script and Input file

* Copy the folder named Validation\_Scripts under the folder created in the previous step. For example: If PostgreSQL was the folder created in the previous step, then copy the Validation\_Scripts under the PostgreSQL Folder.
* Copy the content to a file named   
  CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering.ps1 and   
  CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering\_Trigger.ps1 under the folder created in the previous step. For example: If PostgreSQL was the folder created in the previous step, then copy the file named CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering.ps1 and CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering\_Trigger.ps1 under the PostgreSQL Folder.

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# Preparing the INPUT EXCEL file

In Order to support the Info Gathering process, INPUT EXCEL FILE has been feed with Azure Subscription data.

**Each column will represent an Azure Subscription detail for PostgreSQL** **Azure Single Server Info Gathering**

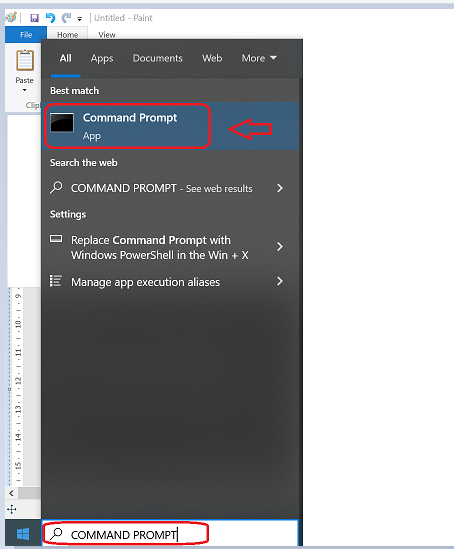
|  |  |
| --- | --- |
| **Tenant** | **Subscription\_ID** |

* Ensure the connectivity exists between the SYSTEM which runs the PostgreSQL Azure Single Server Info Gathering Automation script and Azure Cloud.
* Once the input file is prepared Copy the file (**CMF-PostgreSQL\_Server\_Input\_file.xlsx**) under the folder created in the previous step (C:\PostgreSQL)

# Executing the Script

## PostgreSQL Azure Info Gathering execution

* Open windows Command prompt as **Administrator**



Change the working directory/folder to the folder where you created/copied the script (CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering.ps1 and CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering\_Trigger.ps1) in previous step

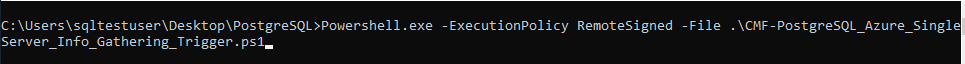
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**Note:** The file size may change based on the current policies and bug fixes

* Enter the following command at the windows command prompt to trigger the CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering.ps1 script

**Powershell.exe -ExecutionPolicy RemoteSigned -File .\CMF-PostgreSQL\_Azure\_SingleServer\_Info\_Gathering\_Trigger.ps1**



### Create support folders (Logs, Output, Downloads etc)

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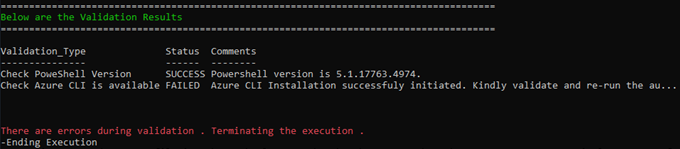
After triggering the automation all the support folders (Logs, Output, Downloads etc. ) will be created automatically by the automation script in the C:\PostgreSQL folder

### Validate ImportExcel Module and Azure CLI

* Automation script validates the ImportExcel module & Azure CLI. If not found, automation will initiate installation

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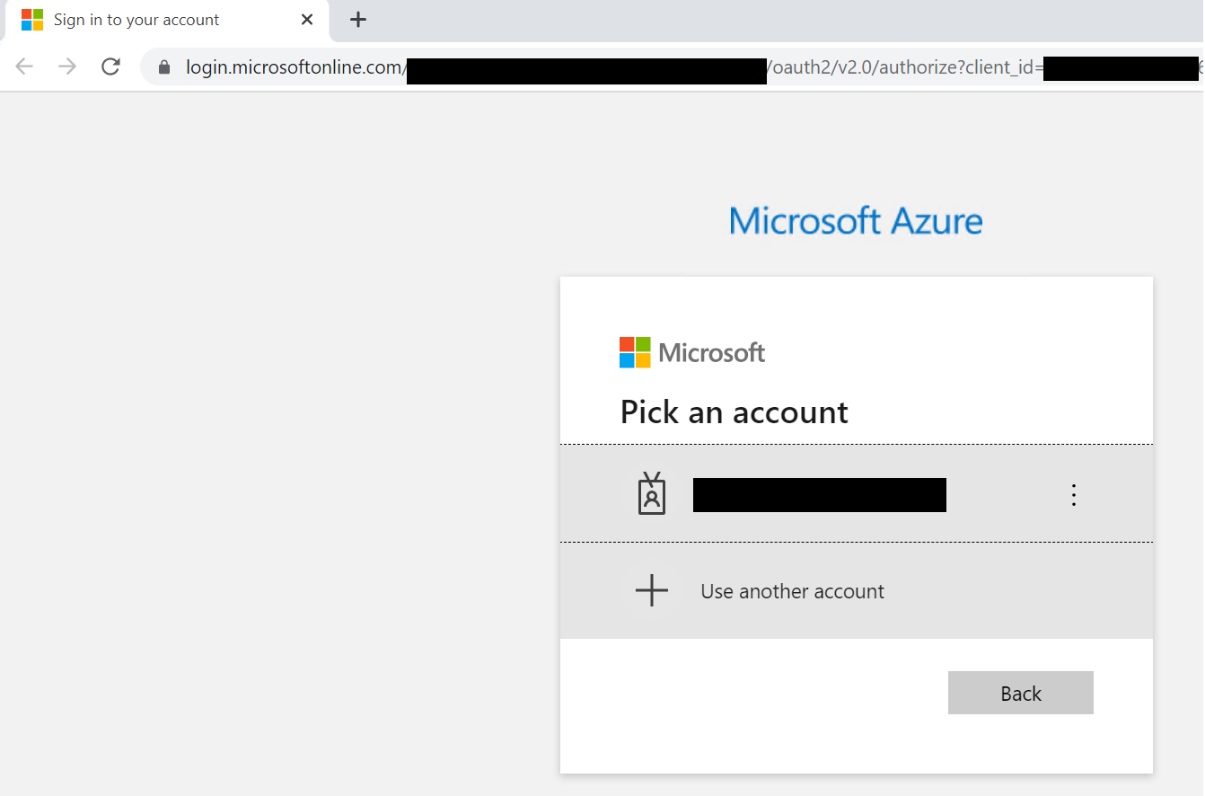
* Once Azure CLI Installation completed successfully initiated. Kindly close the Command Prompt and validate Azure CLI by re-running the automation script again.

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* Powershell version, ImportExcel Module and Azure CLI are validated successfully.

### Azure Portal authentication



* Automation requires the Azure portal authentication

### Export Info-Gathering details and generate JSON files

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* Once Azure portal authentication is successful, Automation gathers PostgreSQL Azure Single Server details to update them in spread sheet. Also, Azure Postgres CLI’s commands output will be exported to JSON files.
* The JSON files can be found in the Folder Output 🡪 Single

## Server List workbook in CMF-PostgreSQL\_Server\_Input\_file.xlsx

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**Note:**

* “Server\_List” worksheet will be created with the details of the PostgreSQL Single server/instance on the excel “CMF-PostgreSQL\_Server\_Input\_file.xlsx” i.e. Host\_Name, Resource\_Group, VCore, Auth\_Type, User\_ID, tenant, Subscription\_ID
* Except the headers, the “Server\_List” worksheet should be empty
* **Once the Script execution is complete, the columns/fields in the Server\_List worksheet are automatically populated with values.**

### PostgreSQL Azure Single Server JSON output

The Following JSON output files will be generated for each PostgreSQL Azure Single Server from the given Azure subscription.

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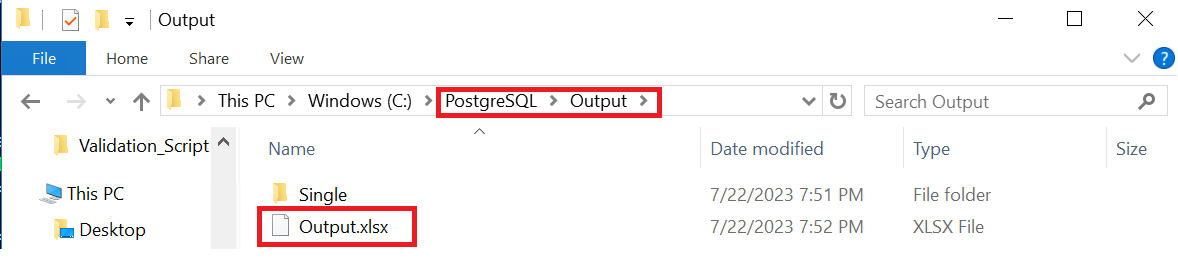
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**Note:** For all the Single PostgreSQL servers/instances, output will be generated in JSON format as above (.\Output\Single\<server-name>)

## PostgreSQL Azure Single Server Output excel file

Output.xlsx file will be generated for all the PostgreSQL Single Server/Instance(s) from the given Azure subscription. Azure CLI’s output are as follow.

* Server List
* DB\_Details
* Configuration\_Data
* AD\_Admin
* FW\_List (Firewall Rules)
* Replica\_List



**Note:** output file will be generated in excel format as above (.\Output\Output.xlsx)

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Note: work sheets will be created with details in output.xlsx file as above.

## Automation Script Transcript Log

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**Note:** For the Automation, transcript will be generated in text format as above

(.\Logs\CMF-PostgreSQL-Azure-Single-Server-Info-gathering.txt)