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Prerequisites

In order to make use of this cmdlet the firewall on the Azure SQL Server will need to be configured to "Allow Azure services and resources to access this server". If this is not configured then GatewayTimeout errors will be experienced.

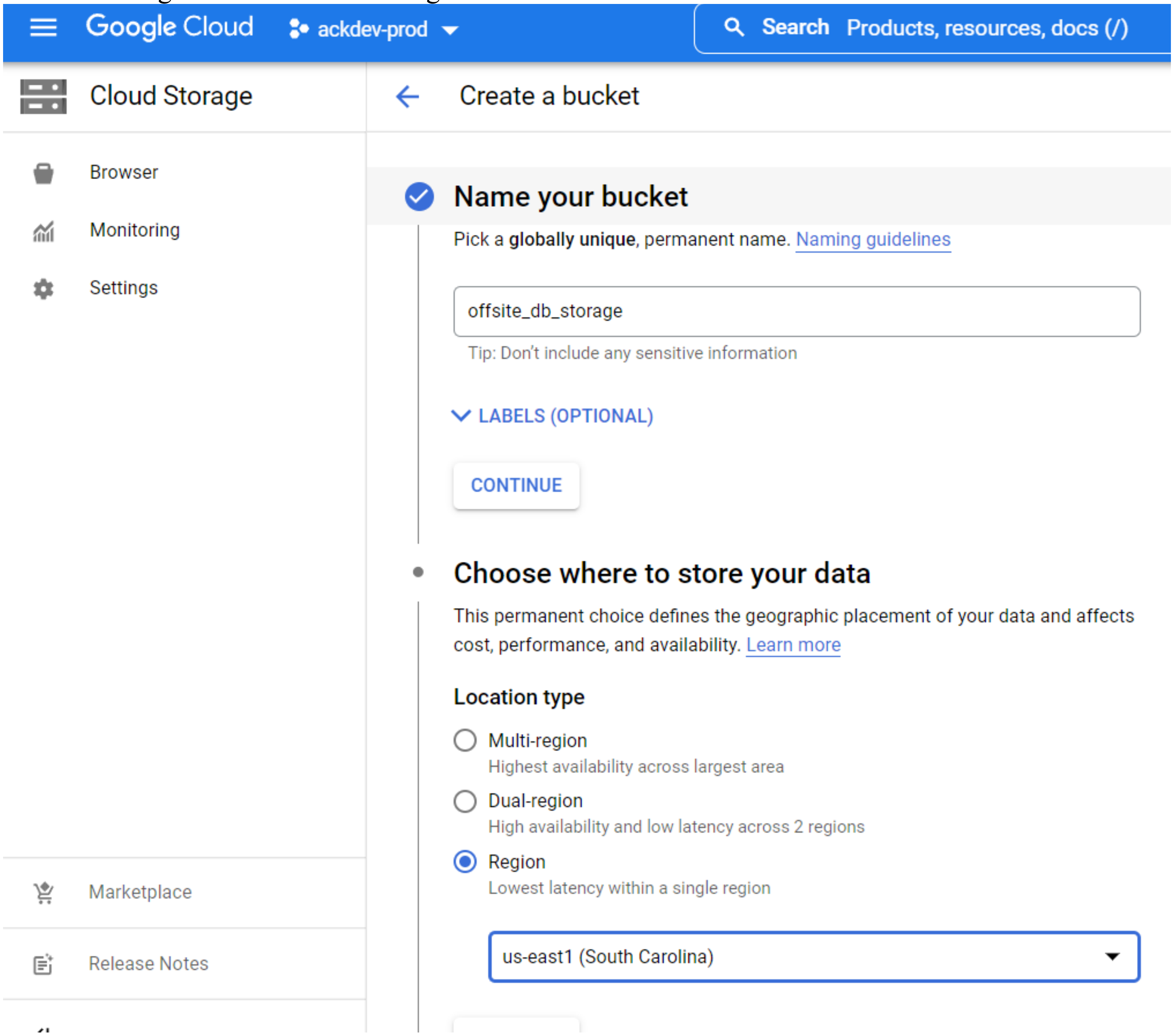
Provisioning Google

If you don't already have a Google cloud account for your organization begin at https://console.cloud.google.com/

After entering your billing information etc:

Create Storage Bucket

Create a storage bucket in cloud storage:



Create a bucket

Name your bucket

Pick a **globally unique**, permanent name. Naming guidelines

offsite_db_storage

Tip: Don't include any sensitive information

Choose where to store your data

This permanent choice defines the geographic placement of your data and affects cost, performance, and availability. Learn more

Location type

○ Multi-region
Highest availability across largest area

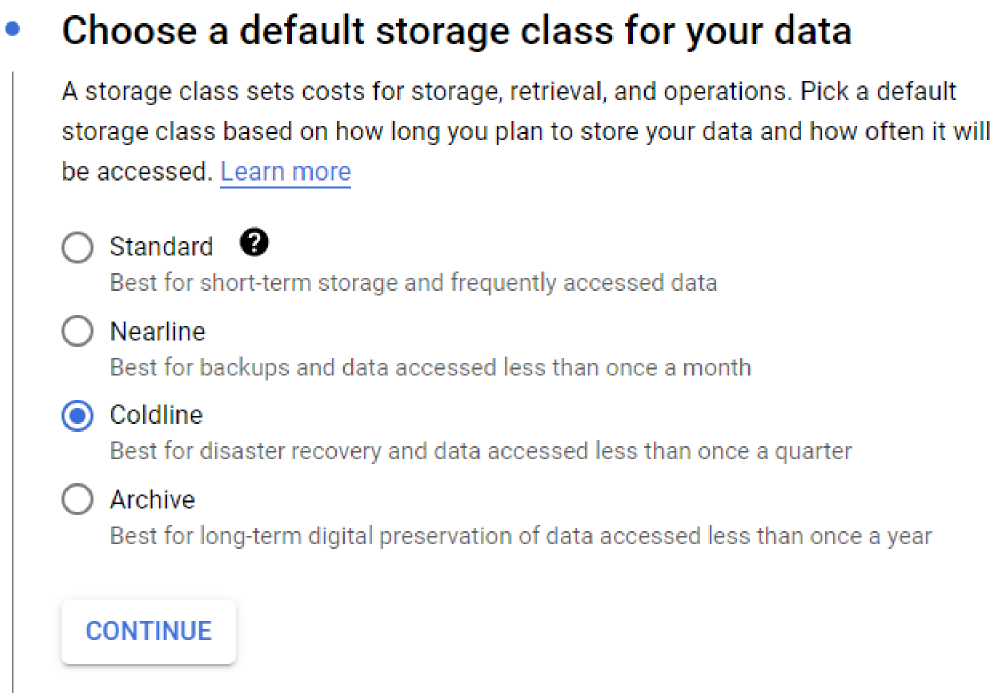
○ Dual-region
High availability and low latency across 2 regions

● Region
Lowest latency within a single region

us-east1 (South Carolina)

Be sure to pick a region away from your current storage location. For example if your main database is on the west coast, choose the east coast for your offsite backup location.

Choose coldline storage for lower costs while maintaining availability:



Choose a default storage class for your data

A storage class sets costs for storage, retrieval, and operations. Pick a default storage class based on how long you plan to store your data and how often it will be accessed. Learn more

○ Standard
Best for short-term storage and frequently accessed data

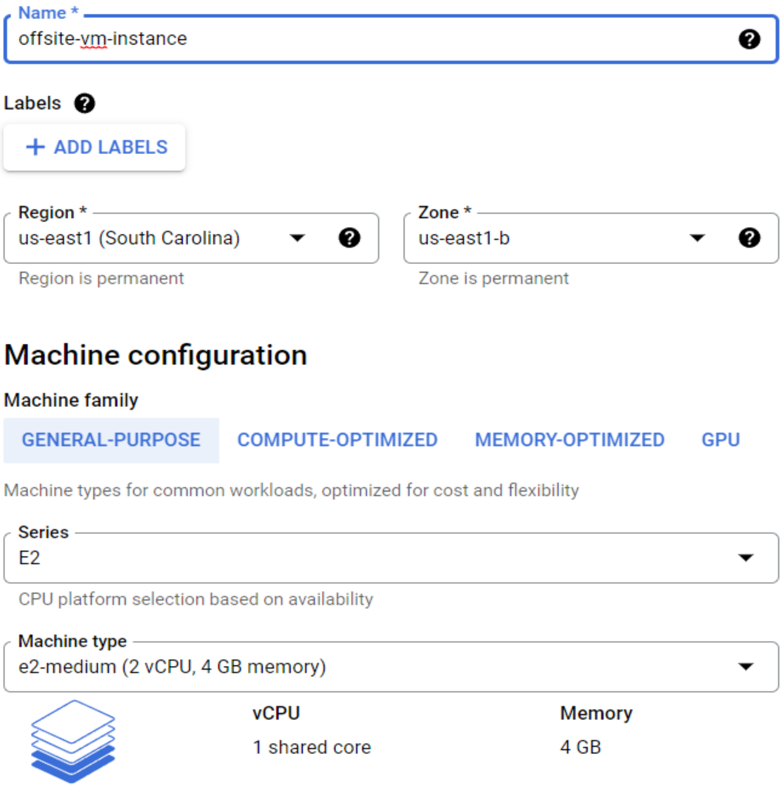
○ Nearline
Best for backups and data accessed less than once a month

● Coldline
Best for disaster recovery and data accessed less than once a quarter

○ Archive
Best for long-term digital preservation of data accessed less than once a year

Configuring the Agent

Create a VM instance using Debian, again choose a location away from your databases in Azure:



Name * offsite-vm-instance

Labels

Region * us-east1 (South Carolina)
Region is permanent

Zone * us-east1-b
Zone is permanent

Machine configuration

Machine family

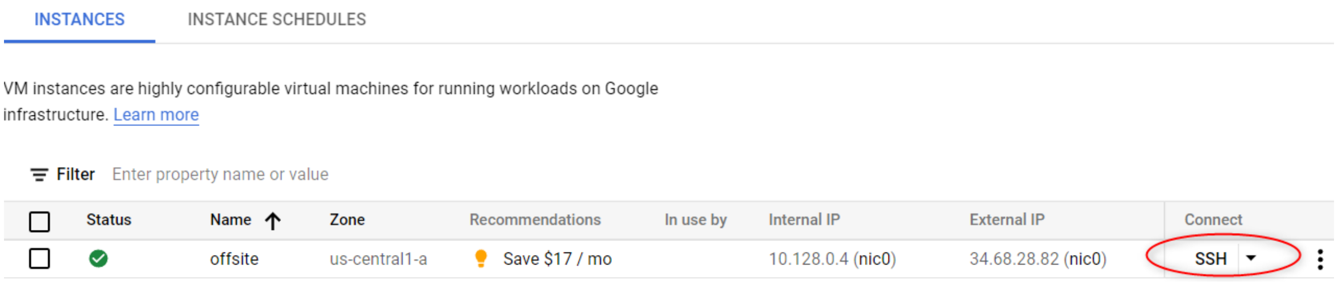
Machine types for common workloads, optimized for cost and flexibility

Series E2
CPU platform selection based on availability

Machine type e2-medium (2 vCPU, 4 GB memory)

vCPU	Memory
1 shared core	4 GB

Start your new VM instance and SSH into it via the SSH button to the right on the instance:



VM instances are highly configurable virtual machines for running workloads on Google infrastructure. Learn more

□	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
□	✓	offsite	us-central1-a	Save $17 / mo		10.128.0.4 (nic0)	34.68.28.82 (nic0)	SSH ▾

Install GCSFuse which mounts your storage account as a local directory.

Copy and paste the following commands:

```
sudo apt-get update -y
sudo apt-get install gcsfuse -y
mkdir /mnt/gcsfuse
gcsfuse {name of your storage bucket} /mnt/gcsfuse/
ex.
gcsfuse offsite_db_storage /mnt/gcsfuse/
```

Install Docker: https://docs.docker.com/engine/install/debian/

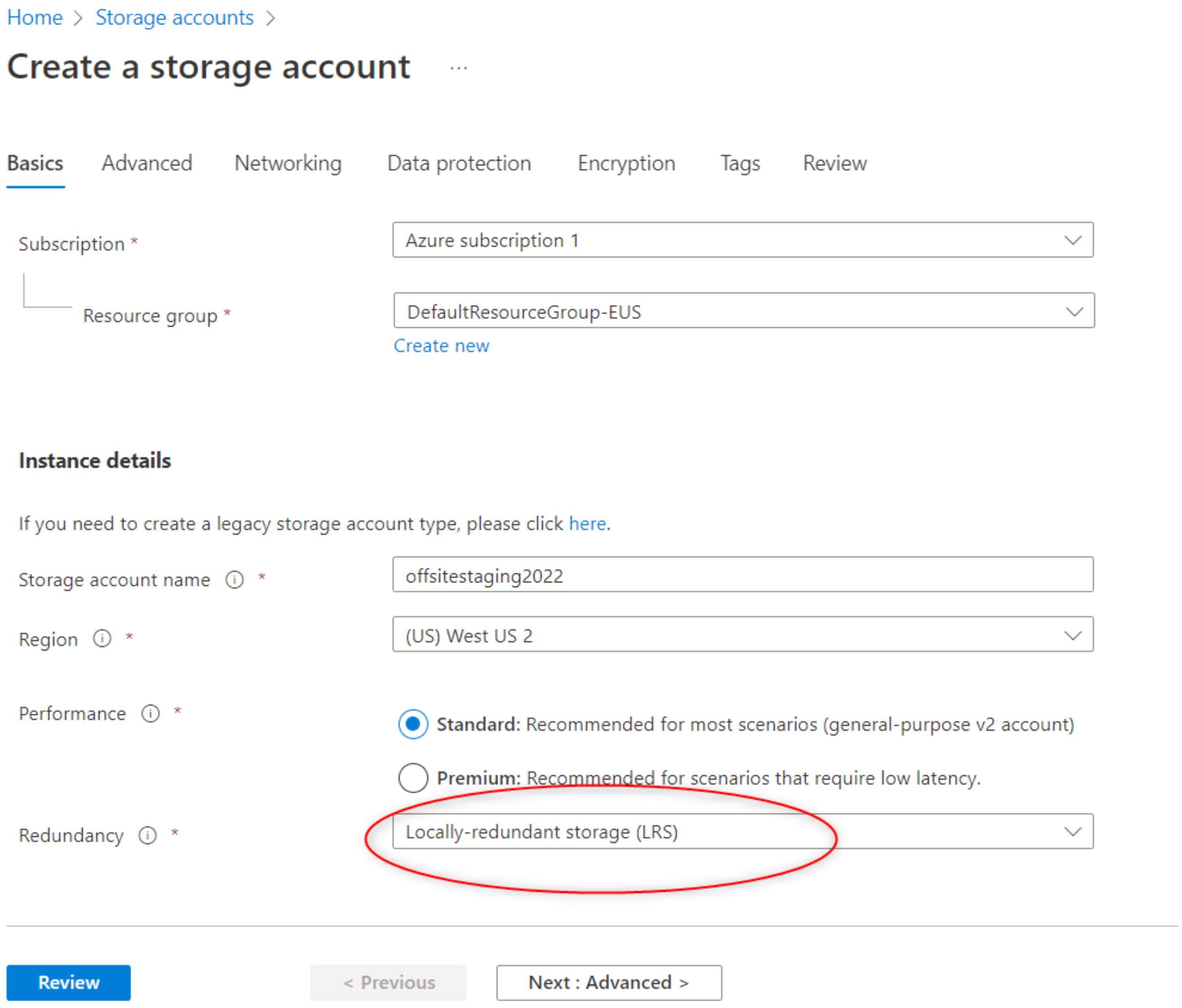
Install SecuritasMachina docker image
TODO

Run docker image
Several environmental variables are needed:
connectionString (Use your Azure Storage Access Keys ConnectionString)
topicName (Your customer GUID)
`azureBlobEndpoint (Your Azure blob endpoint)`
passPhrase (Override if you don't want us to have your encryption pass phrase)

Azure Configuration

Setup Storage Account

Choose LRS for lower costs:



Home > Storage accounts >

Create a storage account

Subscription * Azure subscription 1

Resource group * DefaultResourceGroup-EUS

Instance details

If you need to create a legacy storage account type, please click here.

Storage account name * offsitestaging2022

Region * (US) West US 2

Performance *

● **Standard:** Recommended for most scenarios (general-purpose v2 account)

○ **Premium:** Recommended for scenarios that require low latency.

Redundancy * Locally-redundant storage (LRS)

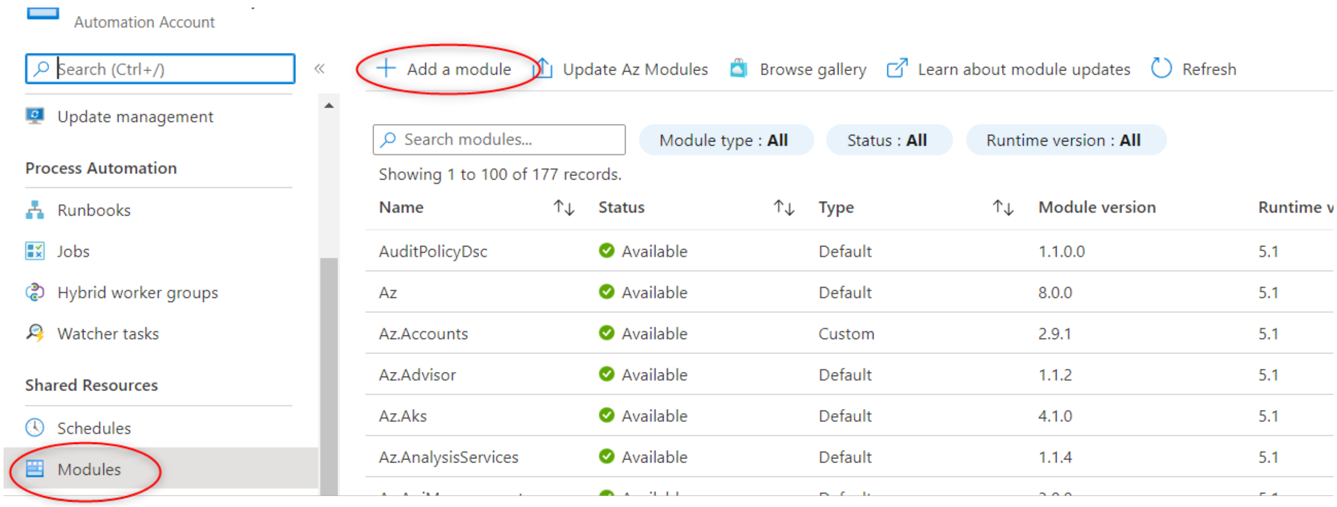
After creation, using the menu on the left, create a container, call it staging or similar.

Installing the Runbook

Create an automation account

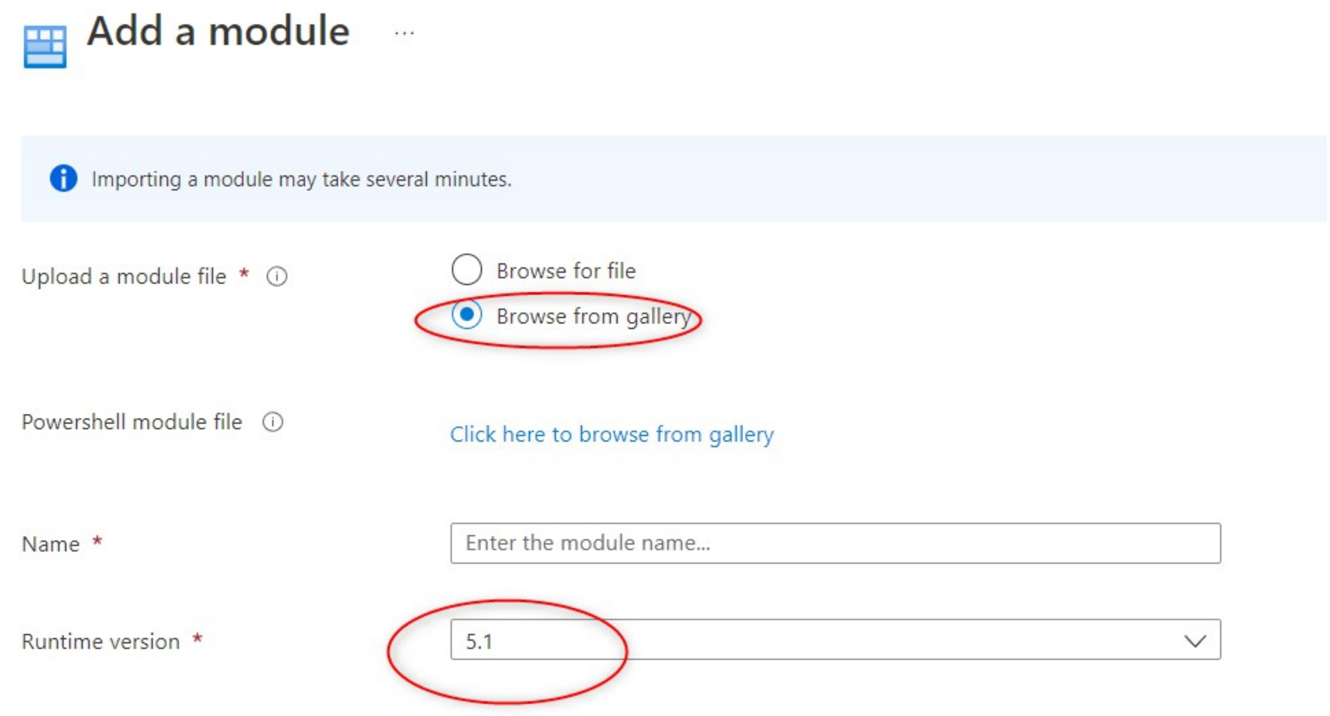
Import the following powershell modules:

Az.Accounts
Az.Sql
AzureRM.Profile
AzureRM.Sql



Showing 1 to 100 of 177 records.

Name	Status	Type	Module version	Runtime v
AuditPolicyDsc	✓ Available	Default	1.1.0.0	5.1
Az	✓ Available	Default	8.0.0	5.1
Az.Accounts	✓ Available	Custom	2.9.1	5.1
Az.Advisor	✓ Available	Default	1.1.2	5.1
Az.Aks	✓ Available	Default	4.1.0	5.1
Az.AnalysisServices	✓ Available	Default	1.1.4	5.1



Add a module ...

Importing a module may take several minutes.

Upload a module file *
○ Browse for file
● Browse from gallery

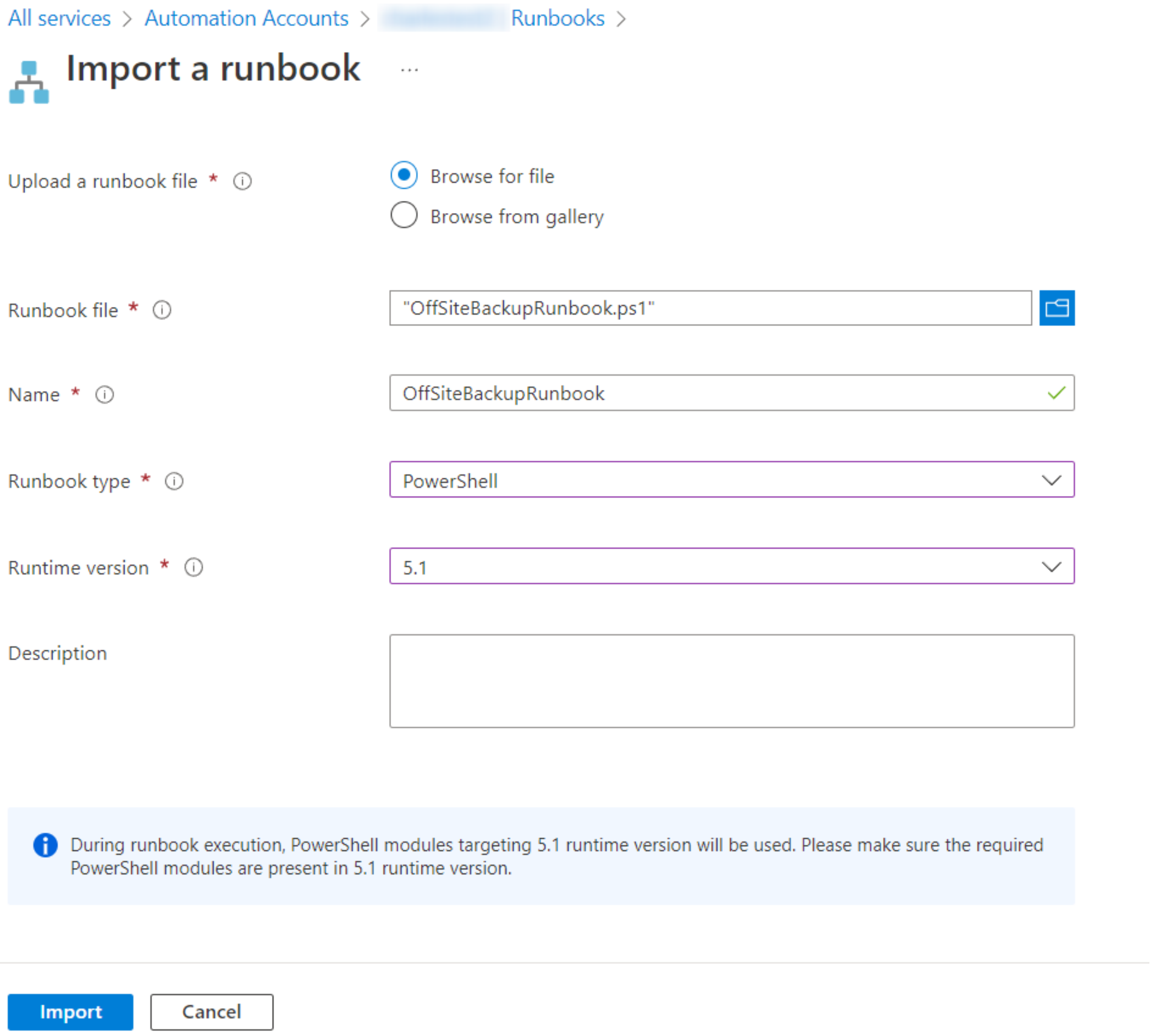
Powershell module file
Click here to browse from gallery

Name *
Enter the module name...

Runtime version *
5.1

Download the runbook from
https://storage.googleapis.com/www.ackdev.com/SecuritasMachina/OffSiteBackupRunbook.ps1

Import the runbook:



All services > Automation Accounts > [redacted] Runbooks >

Import a runbook ...

Upload a runbook file * ⓘ
● Browse for file
○ Browse from gallery

Runbook file * ⓘ "OffSiteBackupRunbook.ps1"

Name * ⓘ OffSiteBackupRunbook ✓

Runbook type * ⓘ PowerShell

Runtime version * ⓘ 5.1

Description

ⓘ During runbook execution, PowerShell modules targeting 5.1 runtime version will be used. Please make sure the required PowerShell modules are present in 5.1 runtime version.

.PARAMETER ResourceGroupName

Specifies the name of the resource group where the Azure SQL Database server is located

.PARAMETER DatabaseServerName

Specifies the name of the Azure SQL Database Server which script will backup

.PARAMETER DatabaseAdminUsername

Specifies the administrator username of the Azure SQL Database Server

.PARAMETER DatabaseAdminPassword

Specifies the administrator password of the Azure SQL Database Server

.PARAMETER DatabaseNames

Comma separated list of databases script will backup

.PARAMETER StorageAccountName

Specifies the name of the storage account where backup file will be uploaded

.PARAMETER BlobStorageEndpoint

Specifies the base URL of the storage account

.PARAMETER StorageKey

Specifies the storage key of the storage account

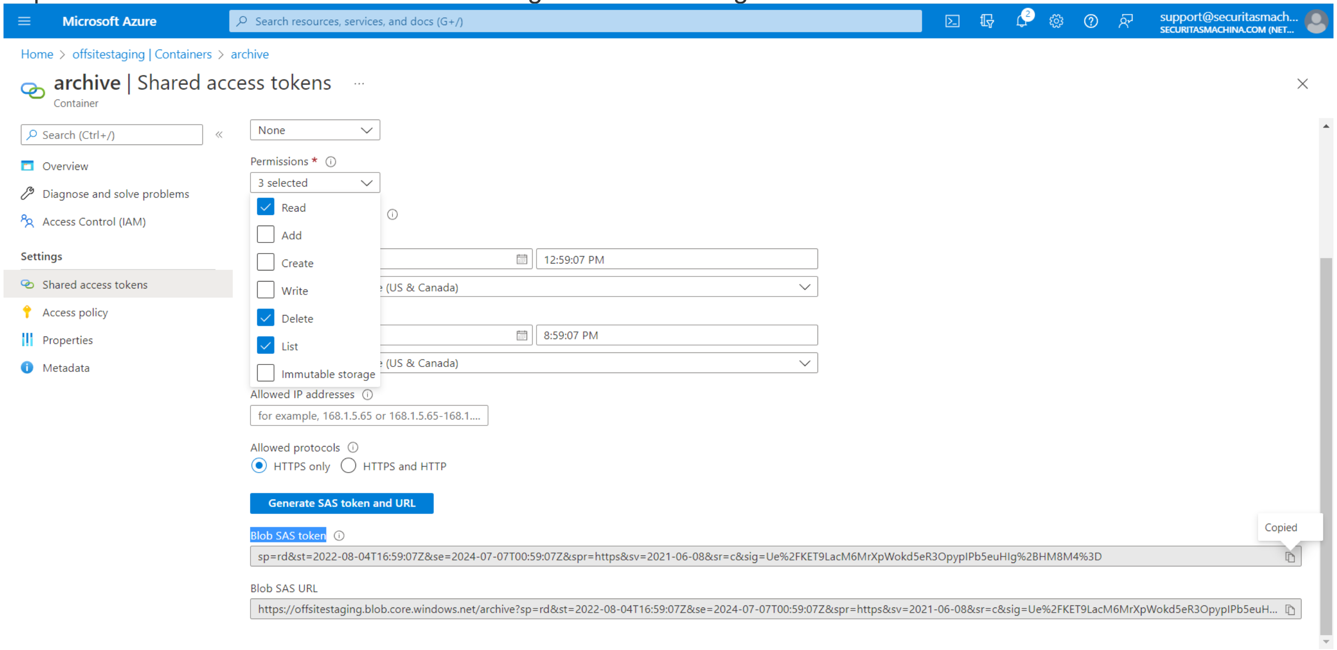
.PARAMETER BlobContainerName

Specifies the container name of the storage account where backup file will be uploaded. Container will be created if it does not exist.

Admin Configuration & Reporting

Install runbook

Create automation account, add IAM permissions at subscription(narrow rights)
Az.Accounts
Az.Sql
AzureRM.Profile
add module AzureRM.Sql
https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview


Microsoft Azure
Search resources, services, and docs (G+/)
support@securitasmach...
SECURITASMACHINA.COM (NET...
Home > offsitestaging | Containers > archive

archive | Shared access tokens
Container

Search (Ctrl+/)
Overview
Diagnose and solve problems
Access Control (IAM)
Settings
Shared access tokens
Access policy
Properties
Metadata

None

Permissions * 3 selected
☑ Read
□ Add
□ Create
□ Write
☑ Delete
☑ List
□ Immutable storage

12:59:07 PM
(US & Canada)
8:59:07 PM
(US & Canada)

Allowed IP addresses
for example, 168.1.5.65 or 168.1.5.65-168.1....

Allowed protocols
● HTTPS only ○ HTTPS and HTTP

Generate SAS token and URL
Copied

Blob SAS token
sp=rd&st=2022-08-04T16:59:07Z&se=2024-07-07T00:59:07Z&spr=https&sv=2021-06-08&sr=c&sig=Ue%2FKET9LacM6MrXpWokd5eR3OpypIPb5euHlg%2BHM8M4%3D

Blob SAS URL
https://offsitestaging.blob.core.windows.net/archive?sp=rd&st=2022-08-04T16:59:07Z&se=2024-07-07T00:59:07Z&spr=https&sv=2021-06-08&sr=c&sig=Ue%2FKET9LacM6MrXpWokd5eR3OpypIPb5euH...

[!IMPORTANT] In order to make use of this cmdlet the firewall on the Azure SQL Server will need to be configured to "Allow Azure services and resources to access this server". If this is not configured then GatewayTimeout errors will be experienced.

dd
.PARAMETER ResourceGroupName db_eus2
    Specifies the name of the resource group where the Azure SQL Database server is located

.PARAMETER DatabaseServerName test-offsite-server
    Specifies the name of the Azure SQL Database Server which script will backup

.PARAMETER DatabaseAdminUsername support
    Specifies the administrator username of the Azure SQL Database Server

.PARAMETER DatabaseAdminPassword OLtw8K7PkuJohb84h9vI
    Specifies the administrator password of the Azure SQL Database Server

.PARAMETER DatabaseNames OffsiteTest1
    Comma separated list of databases script will backup

.PARAMETER StorageAccountName offsitestaging
    Specifies the name of the storage account where backup file will be uploaded

.PARAMETER BlobStorageEndpoint https://offsitestaging.blob.core.windows.net/archive
    Specifies the base URL of the storage account

.PARAMETER StorageKey FBzxqBpxgT79Ze9fxe3GzZ1MVbkw0Tdj12pf/DMhpibLCtVoN3y1uo7W3n+YNsNWamQ6W0jbWsgY+AStAeLL8Q==
    Specifies the storage key of the storage account

.PARAMETER BlobContainerName archive
    Specifies the container name of the storage account where backup file will be uploaded. Container will be created if it does not exist.

.PARAMETER RetentionDays 3
    Specifies the number of days how long backups are kept in blob storage. Script will remove all older files from container.
    For this reason dedicated container should be only used for this script.

Installing Listener

Install GCSFuse
Create bucket
Install docker https://docs.docker.com/engine/install/debian/