

Setup S3 Object Storage using PetaSAN

Version 1.0



Revision History

| Date | Version | Description |
|-----------|---------|-----------------|
| 26/5/2022 | 1.0 | Initial version |
| | | |
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1. Purpose

The purpose of this document is to describe how to setup S3 Object storage using PetaSAN.

2. Pre-requisites

This document assumes the user has already setup a PetaSAN cluster and optionally a second cluster in case a multisite S3 setup is required.

The examples used in this guide assume the following sample configuration:

Single Site Installation

- One PetaSAN cluster with Release 3.0.0 or higher installed, each cluster consists of 3 nodes with no pools created during deployment.
- Each node has 3 interfaces:
 - Management uses subnet ip 10.0.1.0 and subnet mask 255.255.255.0
 - o Backend uses subnet ip 10.0.2.0 and subnet mask 255.255.255.0
 - **S3** uses subnet ip 10.0.3.0 and subnet mask 255.255.255.0 (Defined post installation as will be shown)
- Nodes have the following IPs:
 - Node1
 - Management uses subnet ip 10.0.1.10
 - Backend uses subnet ip 10.0.2.10
 - o Node2
 - Management uses subnet ip 10.0.1.11
 - Backend uses subnet ip 10.0.2.11
 - o Node3
 - Management uses subnet ip 10.0.1.12
 - Backend uses subnet ip 10.0.2.12
- An EC rule is created based on template ec-by-host-hdd (assuming HDD drives)
 - •

Multi Site Installation

- A second PetaSAN cluster with Release 3.0.0 or higher installed, cluster consists of 3 nodes with no pools created during deployment.
- Each node has 3 interfaces:
 - Management uses subnet ip 10.0.1.0 and subnet mask 255.255.255.0
 - o Backend uses subnet ip 10.0.2.0 and subnet mask 255.255.255.0
 - **S3 Public** uses subnet ip 10.0.3.0 and subnet mask 255.255.255.0 (Defined post installation as will be shown).
- Nodes have the following IPs:
 - o Node1
 - Management uses subnet ip 10.0.1.90
 - Backend uses subnet ip 10.0.2.90



- o Node2
 - Management uses subnet ip 10.0.1.91
 - Backend uses subnet ip 10.0.2.91
- o Node3
 - Management uses subnet ip 10.0.1.92
 - Backend uses subnet ip 10.0.2.92
- An EC rule is created based on template ec-by-host-hdd hdd (assuming HDD drives).

3. Single Site Installation

3.1. Configuring S3

3.1.1.S3 Settings

• Define protocol as http or https, interface to use and the IP range for the S3 service. You can also define a custom gateway.

| | = PetaSAN | | • |
|---|--|--|-----------------------------|
| B | S3 Settings | | Configuration > S3 Settings |
| | RadosGW http port:* 7480 Load Balancer Port:* 8000 HTTPS () Interface:* eth2 Subnet Mask:* 255.255.255.0 Public IP Range: From: * () 10.0.3.10 Gateway: Custom | ✓ ✓ VLAN Tagging 7c: • □ 10.0.3.14 | Network Configuration |
| | | | Cancel Save |

Note:

It is recommended to use https when using Veeam.

To use https with a self signed certificate, generate the certificate by clicking on the Generate button and specify the certificate common name. The common name needs to match the S3 service URL that will clients will use to access the service, it will be configured in the hosts file or round robin DNS as will be discussed later.



| | | | | Cek |
|---------|---|--|----------------|---------------------------------|
| B | S3 Settings | Load Balancer Certificate | X | F Configuration > O S3 Settings |
| * | RadosGW http port:* 7480 | Common Name:* Zone1-S3-Service | | E Network Configuration |
| 1 1 1 1 | Load Balancer Port: 8000 | | Ciose Generate | |
| 10 B F | HTTPS 0 Private Key:" | gkqAgEAAOICAQOMIkipAOBj7FTUQ ZHj9CcPC1J5C3SxibUkOqJPKUOL 6pJVoJC1A4LgQahKTIFmBBmRTNA Aabhm9rHIJUb/SsiktchiHaGXS 0X7hirT9F3OnJaikI12/hm+EWdbU | į | Generate |
| | Certificate:" MITE42CCAsugAwIBAgIUY9Q619K55X6eeIZXB BQUWG2E2WBCGAIUBAwWQMB9G2TE1U2XHUZ4YQ Fw0RH_GAIPOQHTA2H2AMB5KGTAXBgINVBAPHE MAGCSqGS1b3DQEBAQUAA4ICDWAugEKAGICA 5v3RdqCRxo/X727dddcHmq3bK2Ndj e CGr013cC | YVmY18368AwDQY3KoZIİvcNAQEL mijZTAFFWQYMjA1MTAYMTA2MZZA FpVbmLUMZLYMILCNZYVZUWggIi QMMwpA08j7FTUQ71/0KQ23F7K2 355MbLK9qIPKUDLXmI/YYQDMee3 | | |

After entering the interface name and the IP range, click on save.

In the case of self signed certificate as we use in this example, download the certificate, so it can be later installed on S3 clients.



| | = PetaSAN | | | 0 |
|---------|--|------------------------------------|----------|-----------------------------|
| ക | S3 Settings | | | Configuration > S3 Settings |
| ۶ ≡ | ✓ S3 Settings saved successfully. | | | × |
| 1 1 1 I | RadosGW http port:" 7480 Load Balancer Port:" 8000 | | | E Network Configuration |
| 43 | ► HTTPS 0 Private Key: MIIJAAIBAAWIBKAhkiG>wBAAQEAAASCC54wggkqAgEAAOICAQDeJ4jlJJ+b/niu wnDzLAzLQ24T9ANLCDJM/EU3C/+5N005ylr2Ja59+F4p+3t535h3DLHmV0gp3VmHU2 aV4NK/595J/VK5e0yAITIn59F2cqFK61IpP07FQJxvZABER1icF1Ky609CidrVbd dBR9sc+gp4VryjYxUcafFLTCMOncK1NB66pdvHG59Vhr36SL2TTDyA9P92 f89ZxHq1hD1CaZUk00K1BcBEvy0UZDVA9bhbxOU45RH5jgRwq1hno08bFyWjBdaz Certificate: MIILE42CCASugMwIBAgIUV0ce9v76QNL9fW4ER6RI7+7RyJ0wDQY3KoZ1hvcMAQEL BQAwG2E2NBcGA1UEAwnQMm9uZTEU2NtU2VydmljZTAeFw8yMjAINTEyMjISNDJa Fw00#fjJNH0JMJ1SNDJA#SxGTA02BgIXMATCAQDeJ4JJJJ+b/nium02La2QAZT M00G5qG5tBD0ERAQUAAICT0xMggIKX0ACAQDeJ4JJJJ+b/nium02La2QAZT | | Generate | |
| | 9AV1CD34/Eu3c/45M08yliz1a59+F4p+3t535h30LMW00gp3VmMU22Y4HK/58j/yk Certificate CN: Zone1-83-Service Interface:* eth2 Subnet Mask:* 255.255.00 Public IP Range: From: * 0 10.0.3.10 Gateway: • Default O Custom | VLAN Tagging To: 10.0.3.15 | | |
| | | | Cancel | Download Certificate Save |

3.1.2. Assign S3 Role to nodes

• Start by assigning the S3 Role to one or more cluster nodes, in this example we will assign the S3 role to all the 3 nodes.

| | = PetaSAN | | | ۵ |
|---|------------------------------------|----------------|--------------------------|---------|
| æ | Node Node1 Roles | ■ Manage Nodes | 🗉 🖾 Nodes List 🗧 🌣 Manag | e Roles |
| F | | | | |
| = | Management and Monitoring Services | | Network Interfac | es |
| _ | Coal Storage Service | | | |
| | Backup/Replication Service | | | |
| | ISCSI Target Service | | | |
| - | CIFS Service | | | |
| - | NFS Service | | | |
| - | S Service | | | |
| • | | | Cancel Save | |
| 2 | | | | |



3.1.3. Add Zonegroup

Add the zonegroup from Configuration->S3 Configuration->Zonegroups->Add Zonegroup

| æ | Add Zonegroup | S3 Configuration | 🕞 Zonegroup | Add Zonegroup |
|----------|---------------------------|------------------|-------------|---------------|
| ۶ | Configuration | | | |
| ≡ | 🛓 Download Certificate | | | |
| | EC Profiles | | | |
| | Pools | | | |
| ► | NJ CRUSH < | | | |
| P | Ceph Configuration | | | |
| | ## NUMA Pinning | | | |
| • | File Systems | | | |
| 100 | S3 Configuration v | | | |
| | Conegroups | | | |
| 69 | 📥 Zones 🗸 | | | |
| • | 1 Import Peer Certificate | | | |
| | ¢\$ General Settings | | | + |
| | iSCSI Settings | | | _ |
| | CIFS Settings | | | |
| | NFS Settings | | | _ |
| | S3 Settings | | | |
| | STANDARD | | | |

• Enter the zonegroup name, the root pool settings and the placement targets.

In this example we will create zone named Zonegroup1 with 2 placement targets, first is named "default-placement" and the second is named "backups"

| | = Petasan | | e |
|----------------|--------------------|----------------------|-------------------------------|
| ക | Add Zonegroup | 🎥 S3 Configuration 🚿 | 🗁 Zonegroup 🚿 🗁 Add Zonegroup |
| ۶ | Name:* | 2 | |
| ≡ | Zonegroup1 | | |
| | .rgw.root Pool | | |
| - | PGs Autoscale:* | | |
| - | on ~ | | |
| | Placement Rule:* | | |
| | replicated_rule ~ | | |
| ~ | Size:* | | |
| 6 9 | 3 ~ | | |
| • | Placement Targets | | • |
| | default-placement | | |
| | Storage Class Name | | + |
| | STANDARD | | |
| | | | |
| | backups | | • |
| | Storage Class Name | | + |
| | STANDARD | | |
| | | | |
| | | | Cancel Save |



• You can also add storage classes but in this example we will only use the "STANDARD" storage class.

| | = PetaSAN | () |
|---------------|---------------------------------|-----------------------------------|
| 8 3 | Zonegroups | 😓 S3 Configuration 🗁 😂 Zonegroups |
| <i>▶</i> ≡ | ✓ Zonegroup saved Successfully. | × |
| E d | + Add Zonegroup | |
| • | Show 10 v entries | Search: |
| ► | Name | ↓1. Actions |
| 2 | Zonegroup1 | <i>ℤ</i> × i |
| 43 A | Showing 1 to 1 of 1 entries | Previous 1 Next |

3.1.4. Add Local Zone

- Add zone from Configuration->S3 Configuration->Zones->Add Zone.
- In the zone form, The system will display the main pools that will be used for internal operations (Control, Meta and log pools). You can optionally define their crush placement rule and replica count if desired. In this example we will use the defaults.
- We configure the pools that will be created for each placement target (Bucket Index and Storage class bucket data pools). We need to define their crush placement rule and replica count.
- In this example we will create the main pools and the default-placement pools using the replicated rule which is selected by default.
- For the backups placement target we will create a data pool with EC rule "ec-by-host-hdd" and profile "ec-21-profile" for testing purpose but in production you should use a higher profile like "ec-42-profile"

Note:

Using an EC data pool is for ideal for backups due to the storage efficiency.



| Conegroup Name:* | | | | | | | |
|--|--|--------------------------------|--|--|--|---------------------------------------|------------------------|
| onegroup | | | | | | | |
| Zone1 | | | | | | | |
| | | | | | | | |
| http://192.168.120.53 | site) | 120 55-8080 http://192 168 12 | 0.56 | | | | |
| :8080 | .0000,mp.//102.100.120.04.0000,mp.//102.100 | .120.30.0000,http://102.100.12 | | | | | |
| | | | h | | | | |
| lain Pools | | | | | | Modif | ly Main Pools |
| Function | Pool Name | | PGs Autoscale | Rule Name | | Size | |
| Control | Zone1.rgw.control | | on | ✓ replicated_rule | | ~ 3 | |
| Meta | Zone1.rgw.meta | | on | ✓ replicated_rule | | ~ 3 | |
| Log | Zone1.rgw.log | | on | ✓ replicated_rule | | Ƴ 3 | |
| | | | | | | | |
| lacement Targets | | | | | | | |
| Default Placement | t | | | | | | |
| Buckets Index Pool: | | | | | | | |
| BUCKELS IIIUEA FOOL | | | | | | | |
| Function | Pool Name | | PGs Autoscale | Rule Name | | Size | |
| Function Buckets Index | Pool Name | | PGs Autoscale | Rule Name | | Size | |
| Function Buckets Index Storage Classes Buc | Pool Name Zone1.rgw.buckets.index ckets Data Pools: | | PGs Autoscale | Rule Name replicated_rule | | Size | + |
| Function Buckets Index Storage Classes Buc | Pool Name Zone 1.rgw.buckets.index ckets Data Pools: Pool Name | | PGs Autoscale | Rule Name | Size | Size | + Action |
| Function Euckets Index Storage Classes Buc Storage Classe STANDARD | Pool Name Zone 1.rgw.buckets.index Ckets Data Pools: Pool Name Zone 2.rgw.buckets.index | , | PGs Autoscale | Rule Name replicated_rule ule Name | Size | Size ✓ 3 | + Action |
| Function Euckets Index Storage Classes Buc Storage Class STANDARD | Pool Name Zone 1.rgw.buckets.index Ckets Data Pools: Pool Name Zone 1.rgw.buckets.data | • | PGs Autoscale | Rule Name replicated_rule replicated_rule | Size | Size 3 | + Action |
| Function Function Buckets Index Storage Classes Buc Storage Class STANDARD backupa | Pool Name Zone 1.rgw.buckets.index Ckets Data Pools: Pool Name Zone 1.rgw.buckets.data | P | PGs Autoscale | Rule Name replicated_rule | Size | Size | + Action |
| Function Euckets Index Storage Classes Buc Storage Classes Buc Storage Classes STANDARD backups | Pool Name Zone 1.rgw.buckets.index Ckets Data Pools: Pool Name Zone 1.rgw.buckets.data Pool Name Pool | | PGs Autoscale | Rule Name v replicated_rule ule Name replicated_rule | Size | Size | + Action |
| Function Function Buckets Index Storage Classes Buc Storage Classes Buc Storage Classes STANDARD backups Buckets Index Pool: | Pool Name Zone 1.rgw.buckets.index Ckets Data Pools: Zone 1.rgw.buckets.data Zone 1.rgw.buckets.data | F | PGs Autoscale | Rule Name v veplicated_rule replicated_rule | Size | Size | + Action |
| Function Function Storage Classes Buc Storage Classes Buc Storage Classes Buc backups Buckets Index Pool: Function Function | Pool Name Cone 1.rgw.buckets.index Cone 1.rgw.buckets.index Cone 1.rgw.buckets.index Cone 1.rgw.buckets.index Cone 1.rgw.buckets.index Cone 1.rgw.buckets.index Pool Name Pool Name Pool Name | | PGs Autoscale Ru on V PGs Autoscale Ru PGs Autoscale Ru | Rule Name | Size | Size | + Action |
| Function Euckets Index Storage Classes Buc Storage Classes Buc Storage Class STANDARD backups Buckets Index Pool: Function Buckets Index | Pool Name Zone 1.rgw.buckets.index Cone 1.rgw.buckets.data Zone 1.rgw.buckets.data Pool Name Pool Name Zone 1.rgw.backups.buckets.index | εx | PGs Autoscale on PGs Autoscale Ru on PGs Autoscale PGs Autoscale On PGs Autoscale On | Rule Name replicated_rule replicated_rule Rule Name replicated_rule | Size | Size | + Action |
| Function Function Buckets Index Storage Classes Buc Storage Classes Buc backups Buckets Index Pool: Function Buckets Index Storage Classes Buc | Pool Name Cotests Data Pool Cotest Data Pool Name Cotests Data Pool Name Pool Name Pool Name Cotest DataPools: | ex | PGs Autoscale on PGs Autoscale PGs Autoscale PGs Autoscale On PGs Autoscale On | Rule Name | Size | Size | + Action |
| Function Function Buckets Index Storage Classes Buc Storage Classes Buc StANDARD backups Buckets Index Pool: Function Buckets Index Storage Classes Buc Storage Classes | Pool Name Cone 1.rgw.buckets.index Cone 1.rgw.buckets.index Cone 1.rgw.buckets.index Cone 1.rgw.buckets.index Pool Name Pool Name Cone 1.rgw.backups.buckets.index Pool Name Cone 1.rgw.backups.buckets.index | ex PGs Autoscale | PGs Autoscale on PGs Autoscale PGs Autoscale On PGs Autoscale On PGs Autoscale Ru | Rule Name | Size 3 | Size | Action |
| Function Buckets Index Storage Classes Buc Storage Classes Buc backups Buckets Index Function Buckets Index Storage Classes Buc Storage Classes Buc Storage Class STANDARD | Pool Name Zone 1.rgw.buckets.index Ckets Data Pools: Pool Name Zone 1.rgw.buckets.data Pool Name Pool Name Pool Name Pool Name Resets Data Pools: Pool Name Zone 1.rgw.backups.buckets.index | ex PGs Autoscale on | PGs Autoscale on PGs Autoscale Ru on PGs Autoscale On PGs | Rule Name replicated_rule Rule Name replicated_rule Size Size 3 | Size 3 Size 3 Size 3 Size 3 Size 3 Size 3 Size 3 Size Siz | Size | + Action |
| Function Function Buckets Index Storage Classes Buc Storage Classes Buc backups Buckets Index Pool: Function Buckets Index Storage Classes Buc Storage Classes Buc Storage Classes STANDARD Data Extra Pool: | Pool Name Core 1.rgw.buckets.index Core 1.rgw.buckets.index Core 1.rgw.buckets.index Core 1.rgw.buckets.index Pool Name Core 1.rgw.buckets.index Pool Name Core 1.rgw.buckets.index Pool Name Core 1.rgw.buckets.index | ex PGs Autoscale | PGs Autoscale on PGs Au | Rule Name replicated_rule replicated_rule Rule Name replicated_rule Size 3 | Size 3 EC Profile ec-21-profile | Size | + Action |
| Function Function Buckets Index Storage Classes Buc Storage Classes Buc backups Buckets Index Pool: Function Buckets Index Storage Classes Buc Storage Classes Buc Storage Class STANDARD Data Extra Pool: Function | Pool Name Code 1.rgw.buckets.index Pool Name Code 1.rgw.buckets.index Pool Name Code 1.rgw.buckets.index | ex PGs Autoscale | PGs Autoscale on PGs Autoscale O PGS Au | Rule Name | Size Si | Size | + Action |
| Function Buckets Index Storage Classes Buc Storage Classes Buc Storage Class STANDARD Buckets Index Constraints Buckets Index Storage Classes Buc Storage Classes Buc Storage Classes Buc Storage Classes Buc Storage Class STANDARD Data Extra Pool: Function Buckets.non-ec | | ex PGs Autoscale | PGs Autoscale on PGs Autoscale PGs Autoscale O | Rule Name replicated_rule Rule Name replicated_rule Size Rule Name | Size 3 EC Profile ec-21-profile | Size | + Action |
| Function Fun | Pool Name Zone1.rgw.buckets.index Cone1.rgw.buckets.index Cone1.rgw.buckets.index Zone1.rgw.buckets.index Zone1.rgw.buckets.index Zone1.rgw.buckets.index Zone1.rgw.buckets.index Zone1.rgw.buckets.index Zone1.rgw.buckets.index Zone1.rgw.buckets.index Pool Name Zone1.rgw.buckets.index Pool Name Zone1.rgw.buckets.index | ex PGs Autoscale on | PGs Autoscale | Rule Name replicated_rule Rule Name replicated_rule Size Size Rule Name ule Name Rul | Size 3 EC Profile ec-21-profile | Size | + Action Action Action |
| Function Buckets Index Storage Classes Buc Storage Classes Buc Storage Class STANDARD Buckets Index Comment Buckets Index Storage Classes Buc Stor | Pool Name Cone 1.rgw.buckets.index | ex PGs Autoscale on | PGs Autoscale | Rule Name replicated_rule Rule Name replicated_rule Size Size Size Rule Name | Size 3 EC Profile ec-21-profile | Size | + Action Action Action |



| | = Petasan | | | | | | | | | | ₿ |
|---------|--------------------------------------|--------|------------|----|-------------|------------|---------|---|---------|------------------|-----------|
| 89 | Zones | | | | | | | | | S3 Configuration | > 🖻 Zones |
| = | Zone created suc | cessfi | ully. | | | | | | | | × |
| | | | | | | | | | | | |
| - | + Add Zone | | | | | | | | | | |
| | Show 10 ↓ entries | | | | | | | | Search: | | |
| • | Name | ļž | Zonegroup | 11 | Master Zone | Local Zone | Actions | | | | |
| 2 | Zone1 | | Zonegroup1 | | Yes | Yes | 3 | × | i | | |
| 49 • | Showing 1 to 1 of 1 entri | es | | | | | | | | Previous 1 | Next |

After creating the zone you could notice that the new pools have been created

| | E PETASAN | | | | | | | | | | | | | | |
|---|----------------------------------|-------------|---------------|----------------------|------------------|-----------|------------|--------------|-----------------|------------------|-----------------------|----------------|----------|------------|-------|
| , | Pools | | | | | | | | | | | | 🗲 Config | guration > | Pools |
| | + Add Pool Show 10 - entries Us | sage: All V | | | | | | | | | | Sean | ch: | | |
| | Name | 1 | li ↓† Type | ↓† Usage | PGs Autoscale | ↓† PGs | ↓† Size | Min† Size | ↓↑ Rule Name | Used ↓† Space | Available 11 Space | Active OSDs | Status | Action | |
| , | .rgw.root | | replicated | radosgw | on | 64 | 3 | 2 | replicated_rule | 3.56 MB | 187.92 GB | | Active | ß | × |
| | device_health_metrics | | replicated | mgr_devic ehealth | off | 1 | 3 | 2 | replicated_rule | 0 Bytes | 187.92 GB | | Active | ß | × |
| | Zone1.rgw.backups.buckets.data | | EC | radosgw | on | 64 | 3 | 2 | ec-by-host-hdd | 0 Bytes | 375.85 GB | | Active | Ø | × |
| | Zone1.rgw.backups.buckets.Index | | replicated | radosgw | on | 64 | 3 | 2 | replicated_rule | 0 Bytes | 187.92 GB | | Active | ß | × |
| | Zone1.rgw.backups.buckets.non-ec | | replicated | radosgw | on | 16 | 3 | 2 | replicated_rule | 0 Bytes | 187.92 GB | | Active | Ø | × |
| | Zone1.rgw.buckets.data | | replicated | radosgw | on | 64 | 3 | 2 | replicated_rule | 0 Bytes | 187.92 GB | | Active | ľ | × |
| | Zone1.rgw.buckets.index | | replicated | radosgw | on | 16 | 3 | 2 | replicated_rule | 0 Bytes | 187.92 GB | | Active | ľ | × |
| | Zone1.rgw.control | | replicated | radosgw | on | 16 | 3 | 1 | replicated_rule | 0 Bytes | 187.92 GB | | Active | ľ | × |
| | Zone1.rgw.log | | replicated | radosgw | on | 16 | 3 | 1 | replicated_rule | 6.19 MB | 187.92 GB | | Active | Ø | × |
| | Zone1.rgw.meta | | replicated | radosgw | on | 16 | 3 | 1 | replicated_rule | 0 Bytes | 187.92 GB | | Active | Ø | × |
| | Showing 1 to 10 of 10 entries | | | | | | | | | | | | Previous | 1 | Next |

3.1.5.Add S3 user

- In this example we will create a new S3 user named S3-User1 that stores its data in the backups placement target which we created earlier.
- This can be done from Manage S3->S3 Users Menu item



| | = Petasan | |
|----|-------------------------------|----------------------------------|
| Ba | Add S3 User | |
| 5 | ID:* | |
| = | 1 | |
| | Display Name:* | |
| | S3-User1 | |
| = | Email: | |
| - | PetaSANuser1@gma | il.com |
| 2 | Suspended:* | No. |
| æ | Default placement tarr | nati* 0 |
| • | backups | yor. 9 |
| | Max number of bucket | ts:* |
| | 1000 | |
| | Bucket Quota | |
| | Max Size:* | |
| | Unlimited | Limit Size |
| | Max Number of Ob | ojects:* |
| | Oninnited | |
| | User Quota | |
| | Max Size:* | ○ Limit Size |
| | Max Number of Ob | viante** |
| | | Limit Number |
| | | |
| | | |
| | | |

After saving the S3 user you can view the user's generated access and secret keys which will be used later while connecting with S3 clients.



| Edit S3 User | | | S2 Configuration > Db S2 Llasse > Db Ed |
|-------------------------------------|---------------|--|--|
| | | | S3 Configuration > (2) 53 Users > (2) Ed |
| ID:* | | User Quota | |
| 1 | | Max Size:* | |
| Display Name:* | | Unlimited Limit Size | |
| S3-User1 | | Max Number of Objects:* | |
| Email: | | Unlimited Limit Number | |
| PetaSANuser1@gmail.com | | Access Key ID:* | |
| Suspended:* | | OFKH84TO5X0ZFAD29CF9 | |
| Yes No | | Secret Access Key:* | |
| Default placement target:* | | MHRH2bZgZNc1kjuoK9u2vBBh4lQGUoCRcicfDNk2 | |
| backups | , | Size used: | |
| Max number of buckets:* | | 0.0 | GB |
| 1000 | | | |
| Bucket Quota | | Number of objects: | |
| Max Size:* | | • | |
| Unlimited Limit Size | | | |
| Max Number of Objects:* | | | |
| Unlimited Limit Number | | | |
| | | | |
| Subusers: | | | |
| + Add Subuser | | | |
| Show 10 v entries | | | Search: |
| Subuser ID Is Access Rights | Access Key ID | Secret Access Key | LT Actions |
| No data available in table | | | |
| Showing 0 to 0 of 0 aptrice | | | Devideurs |
| Showing 0 to 0 01 0 entities | | | Previous Next |
| | | | |

Note:

- You can set maximum number of buckets the user can create or set the max size or maximum number of objects the user can upload for any bucket.
- You can add one or more Sub User under the user you created, for each sub user you need to set the sub user id and its Access Right, but in this example we will not create any sub users.

| Add Subuser | | Х |
|---|------|---------|
| Parent User: | | |
| ID:* | | |
| Access Right:* | | |
| Full Control Read Read/Write Write | Canc | el Save |



4. Clients Connectivity

4.1. S3 Browser

- One of the client applications that is widely used is S3 Browser.
- We will be using the self-signed certificate previously created from the S3 Settings form.

4.1.1. Define service ip in hosts file

- If not using a DNS, define the ip address corresponding to the S3 service. The name of the service should match the common name of the certificate. The IP address should be one within the range of IPs defined for the service.
- If using a DNS, setup a round robin configuration with all the range of IPs defined. In this example we will use the hosts file method.



4.1.2. Import s3-service certificate

• In Chrome settings, select privacy and security then Security.



| ~ · | C S Chrome chrome://settings/privacy | | @☆ |
|------|--|--|----|
| 0 | Settings | Q. Search settings | |
| • | You and Google | Safety check | |
| Ê | Autofill | Chrome can help keep you safe from data breaches, bad extensions, and more | |
| • | Privacy and security | | |
| ۲ | Appearance | Privacy and security | |
| ۹ | Search engine | Clear browsing data Clear history, cookies, cache, and more | |
| | Default browser | Cockies and other site data Third-party cockies are blocked in Incognito mode | |
| Advi | anced + | Security Safe Browsing (protection from dangerous sites) and other security settings | |
| * | Extensions | Site Settings Controls what information sites can use and show (location, camera, pop-ups, and more) | |
| 0 | About Chrome | Privacy Sandbox Trial features are on | |
| | | | |

• Then select Manage Certificates

| \leftrightarrow \rightarrow C (\odot Chrome | chrome:// settings /security | | |
|--|-------------------------------------|--|--|
| Settings | | Q Search settings | |
| You and Google Autofill | | No protection (not recommended) O Does not protect you against dangerous websites, downloads, and extensions. You'll still get Safe Browsing protection, where available, in other Google services, like Gmail and Search. | |
| Privacy and security | | Advanced | |
| Appearance | | Always use secure connections Upgrade navigations to HTTPS and warn you before loading sites that don't support it | |
| Search engine Default browser | | Use secure DNS Determines how to connect to websites over a secure connection | |
| (¹) On startup | | With your current service provider Secure DNS may not be available all the time | |
| Advanced | • | O With Custom Custom Custom provider | |
| ExtensionsAbout Chrome | Z | Manage phones Control which phones you use as security keys | |
| | | Manage certificates Manage HTTPS/SSL certificates and settings | |
| | | Google Advanced Protection Program Safeguards the personal Google Accounts of anyone at risk of targeted attacks | |

• Under Trusted Root Certification Authorities tab select import button



| Certificates | | | | | | × |
|---|--|---|---|---|-----------------------|--------|
| I <u>n</u> tended purpose: | <all></all> | | | | | \sim |
| Intermediate Certifica | tion Authorities | Trusted | Root Certific | cation Authorities | Trusted Pub | • • |
| Issued To AAA Certificate . Actalis Authentic AddTrust Extern. Baltimore Cyber. Certum CA Certum Trusted Class 3 Public Pr COMODO RSA C. COpyright (c) 19. | Issued By AAA Certifica Actalis Authe AddTrust Ext Baltimore Cy Certum CA Certum Trus Class 3 Publi COMODO RS Copyright (c) DESKTOP-95 | ate Se enticat ternal /berTr sted N ic Pri GA Cer) 1997 GRGNP3 | Expirati 1/1/2029 9/22/20 5/30/20 5/13/20 6/11/20 12/31/2 8/2/2028 1/19/20 12/31/1 3/6/2032 | Friendly Name Sectigo (AAA) Actalis Authen Sectigo (AddT DigiCert Balti Certum Certum Trust VeriSign Clas Sectigo (form Microsoft Tim Veeam Backu | | ~ |
| Import | oort <u>R</u> urposes | emove | | | <u>A</u> dvan ⊻iew | ced |
| | | | | | <u>C</u> los | e |

• Continue with the steps of importing the certificate as follows:



| 🔶 🛿 🛃 Certificate Import Wizard | × |
|---|----|
| Welcome to the Certificate Import Wizard | |
| This wizard helps you copy certificates, certificate trust lists, and certificate revocation lists from your disk to a certificate store. | |
| A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept. | |
| To continue, click Next. | |
| | -1 |



| <i>←</i> | F Certificate Import Wizard | > |
|----------|---|----|
| | File to Import | |
| | Specify the file you want to import. | |
| | File name: | |
| | D:\zone1-s3-service.crt Browse | |
| | Note: More than one certificate can be stored in a single file in the following formats: Personal Information Exchange- PKCS #12 (.PFX,.P12) | |
| | Cryptographic Message Syntax Standard- PKCS #7 Certificates (.P7B) | |
| | Microsoft Serialized Certificate Store (.SST) | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | Next Cance | el |



| <u>,</u> | Certificate Import Wizard | |
|----------|--|--|
| | Certificate Store Certificate stores are system areas where certificates are kept. | |
| | Windows can automatically select a certificate store, or you can specify a location for the certificate. | |
| | $\bigcirc A\underline{u} tomatically select the certificate store based on the type of certificate$ | |
| | Place all certificates in the following store | |
| | Certificate store: | |
| | Trusted Root Certification Authorities Browse | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |



| ← 🛛 & Certificate Import Wizard | | × |
|------------------------------------|---|------|
| Completing the Cert | tificate Import Wizard | |
| The certificate will be imported a | fter you click Finish. | |
| You have specified the following | settings: | |
| Certificate Store Selected by Us | er Trusted Root Certification Authorities | |
| Content | Certificate | |
| File Name | D:\zone1-s3-service.crt | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | Finish Ca | ncel |



| Certificates | | |) | × | |
|---|---|---|---------------|---|----------------------|
| Intended purpose: | <all></all> | | , | ~ | |
| Intermediate Certific Issued To AAA Certificate AddTrust Exter Baltimore Cybe Certum CA Certum Truster ComoDo RSA Copyright (c) 1 DESKTOP-95RC | Issued By AAA Certificate Se ic Actalis Authenticat n AddTrust External r Baltimore CyberTr Certum CA d Certum Trusted N d Certum Trusted N d ComoDo RSA C Ce 9 Copyright (c) 195 DFSKTOP-95RGN xport Remo purposes | d Root Certification Authorities Expirati Friendly Name 1/1/2029 Sectigo (AAA) 9/22/20 Actalis Authen 5/30/20 Sectigo (AddT 5/13/20 DigiCert Balti 6/11/20 Certum 12/31/2 Certum Trust 8/2/2028 VeriSion Clase rtificate Import Wizard The import was suc | Trusted Pub • | Search settings No protection (not recommended) Does not protect you against dangero Browsing protection, where available, anced ays use secure connections rade navigations to HTTPS and warn you | us we in oth |
| | _ | | Close | secure DNS ermines how to connect to websites ove With your current service provi Secure DNS may not be available | rase der oleal |
| Advanced | - | | | O With Custom | |

4.1.3. Create S3 Browser user account

- We will create a S3 user account using "S3-User1" Access and Secret keys previously created in PetaSAN
- From S3 Browser select Accounts->Manage Accounts->Add Account



| 53 S3 Brow | vser 9.5 | 3 Add New Account - C X | | | | | | | | | | |
|------------|---|---|-----|--|--|--|--|--|--|--|--|--|
| Accounts | Buc | Add New Account online help Enter new account details and click Add new account | ŀ | | | | | | | | | |
| | | Account Name: | | | | | | | | | | |
| | | New Account | | | | | | | | | | |
| | Assign any name to your account. Account Type: | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | Storag | S3 Compatible Storage 🗸 | | | | | | | | | | |
| | Storag | Choose the storage you want to work with. Default is Amazon S3 Storage. | | | | | | | | | | |
| | <u>II</u> | REST Endpoint: | Ŀ | | | | | | | | | |
| | | | | | | | | | | | | |
| | | Specify S3-compatible API endpoint. It can be found in storage documentation. Example: rest.server.com:8080 | | | | | | | | | | |
| A | Accour Ahm | Access Key ID: | | | | | | | | | | |
| | Vee | Required to sign the requests you send to Amazon S3, see more details at https://s3browser.com/keys | der | | | | | | | | | |
| | _ | Secret Access Key: | | | | | | | | | | |
| Tas | | | | | | | | | | | | |
| Та | | Required to sign the requests you send to Amazon S3, see more details at https://s3browser.com/keys | | | | | | | | | | |
| | | Encrypt Access Keys with a password: | | | | | | | | | | |
| | Turn this option on if you want to protect your Access Keys with a master password. | | | | | | | | | | | |
| | | Use secure transfer (SSL/TLS) | | | | | | | | | | |
| | | If checked, all communications with the storage will go through encrypted SSL/TLS channel | | | | | | | | | | |
| 4 | - Add | Advanced S3-compatible storage settings | | | | | | | | | | |

- Enter the account name, select S3 Compatible Storage then enter the Endpoint (Service name: port number).
- Then enter the S3-User1 Access and Secret Keys.



| Edit Acc | count | | - 0 | × |
|---|---|---|--------------------------------------|-----|
| | Edit Account | | online h | elp |
| | Edit account datails and click Savo changes | | | |
| | Luit account details and click Save changes | | | |
| Account N | Name: | | | |
| Sβ-Us | ser1 | | | |
| Assign | n any name to your account. | | | |
| Account T | Гуре: | | | |
| S3 Co | ompatible Storage | | | ~ |
| Choose | e the storage you want to work with. Default is Amazon S3 Storage | | | |
| REST En | ndpoint: | | | |
| | | | | |
| zone | 1-s3-service:8000 | | | |
| zone | 1-s3-service:8000 ifv S3-compatible API endpoint. It can be found in storage docume | entation Example: rest se | erver.com:808(| |
| zone ⁻ Speci | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume | entation. Example: rest.se | erver.com:8080 |) |
| Zone Speci Access K | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: | entation. Example: rest.se | erver.com:8080 |) |
| zone Speci Access K 5NOC | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK | entation. Example: rest.se | erver.com:808(|) |
| zone Speci Access K 5NOC Requi | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail | entation. Example: rest.se s at https://s3browser.co | erver.com:808(m/keys |) |
| zone Speci Access K 5NOC Requi | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: | entation. Example: rest.se s at https://s3browser.co | erver.com:808(m/keys |) |
| zone Speci Access K 5NOC Requi Secret Ac | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: | entation. Example: rest.se s at https://s3browser.co | erver.com:808(m/keys | |
| zone Speci Access K 5NOC Requi Secret Ac Requi | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: ired to sign the requests you send to Amazon S3, see more detail | entation. Example: rest.se s at https://s3browser.co s at https://s3browser.co | erver.com:808(m/keys m/keys | |
| zone Speci Access K 5NOC Requi Secret Ac Requi | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: ired to sign the requests you send to Amazon S3, see more detail | entation. Example: rest.se s at https://s3browser.co s at https://s3browser.co | erver.com:808(m/keys m/keys |) |
| zone Speci Access K 5NOC Requi Secret Ac Requi | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail: ccess Key: ired to sign the requests you send to Amazon S3, see more detail: pt Access Keys with a password: | entation. Example: rest.se s at https://s3browser.co s at https://s3browser.co | erver.com:808(om/keys om/keys | |
| zone Speci Access K 5NOC Requi Secret Ac Requi | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: ired to sign the requests you send to Amazon S3, see more detail pt Access Keys with a password: | entation. Example: rest.se s at https://s3browser.co s at https://s3browser.co | erver.com:808(m/keys m/keys | |
| zone Speci Access K 5NOC Requi Secret Ac Requi | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: ired to sign the requests you send to Amazon S3, see more detail pt Access Keys with a password: his option on if you want to protect your Access Keys with a master | entation. Example: rest.se s at https://s3browser.co s at https://s3browser.co password. | erver.com:808(m/keys | |
| zone Speci Access K 5NOC Requi Secret Ac Requi | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: OHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: ired to sign the requests you send to Amazon S3, see more detail pt Access Keys with a password: his option on if you want to protect your Access Keys with a master ecure transfer (SSL/TLS) | entation. Example: rest.se s at https://s3browser.co s at https://s3browser.co password. | erver.com:808(pm/keys pm/keys | |
| Zone [™] Speci Access K 5NOC Requi Secret Ac Requi C Encryp Turn th ✓ Use se | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: ired to sign the requests you send to Amazon S3, see more detail pt Access Keys with a password: his option on if you want to protect your Access Keys with a master acure transfer (SSL/TLS) cked, all communications with the storage will go through encrypted | entation. Example: rest.se s at https://s3browser.co s at https://s3browser.co password. | erver.com:808(m/keys m/keys | |
| Zone [™] Speci Access K 5NOC Requi Secret Ac Requi C Encryp Turn th Use se If chec | 1-s3-service:8000 ify S3-compatible API endpoint. It can be found in storage docume Key ID: DHRB82YP9XFR597LK ired to sign the requests you send to Amazon S3, see more detail ccess Key: ired to sign the requests you send to Amazon S3, see more detail pt Access Keys with a password: his option on if you want to protect your Access Keys with a master ecure transfer (SSL/TLS) cked, all communications with the storage will go through encrypted | entation. Example: rest.se s at https://s3browser.co s at https://s3browser.co password. | erver.com:808(om/keys | |



• After saving the account you will be able to view the existing buckets, create new buckets and upload your files.

| | 🔁 Refresh | Path: / | | | | | | | |
|--------------------------|--|--|--------------------------------|-----------|------|---------|----|--|--|
| | | File | | | | | Si | | |
| | Create New Bucket | | - 🗆 > | < | | | | | |
| | Create New Bucket Specify bucket name | t e and optional parameters and click C | online he Create new bucket | lp | | | | | |
| | Bucket name: backup | | | | | | | | |
| | Should contain only lowercas Bucket region: | e letters, numbers, periods (.) and da | ashes (-) | | | | | | |
| | Default Region | | | ~ | | | | | |
| | You can choose the geograph | hical region where your bucket will be | e created. | | | | | | |
| | | Create new bucket | O Cancel | | | Refresh | | | |
| | | | | .: New Fo | Ider | | | | |
| Tasks Permissions Http H | aders Tags Properties Preview V | ersions EventLog | | New Fo | lder | | | | |

| S3 Browser 9.5.5 - Pi | o - S3 | -User1 | | | | | | | | | - 0 |
|---|--------|--|----------------|---|------------|---|----------|----------------------|--------------------------------------|--|---------------------------|
| Accounts Buckets | File | s Tools Help | | | | | | | | | |
| New bucket 💥 De — <mark>—— backup</mark> | | Upload file(s) Ctrl+U Upload folder(s) Ctrl+Shift+U | | Path: / | | | | Size | Туре | Last Modified | Storage Class |
| | % © | Cut Ctrl+X Copy Ctrl+C Paste Ctrl+V | | U Configuration Audit Reportxitx 헬 Configuration Management Plan.dot | | | | 40.28 KB 67.00 KB | Microsoft Office Microsoft Office | 4/18/2022 11:44:38 AM 4/18/2022 11:44:38 AM | STANDARD |
| | | Copy to Ctrl+Shift+C Move to Ctrl+Shift+X | | | | | | | | | |
| | 188 | Rename F2 Delete Del | | | | | | | | | |
| | 2 | Create New Folder Ctrl+N Refresh F5 | | | | | | | | | |
| | | Edit Permissions (ACL) Ctrl+L Edit HTTP Headers Ctrl+H Edit Object Tags Ctrl+T | | | | | | | | | |
| | | Generate Web URL Ctrl+W | | | | | | | | | |
| | | Invert Selection Ctrl+1 | | Upload - Download Delete | New Folder | | Refresh | | | | 2 files (107.28 KB) and 0 |
| Tasks Permission | | Change Storage Class to ▶ | review Version | s EventLog | | | | | | | |
| Task | | Server Side Encryption | - | | Size | % | Progress | Status | | | |
| | (i) | Properties Ctrl+P | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| < | | | | | | | | | | | |

• Data will be stored in the Backups placement target data pool



| | = Petasan | | | | | | | | | | | | | |
|---|----------------------------------|------------|----------------------|------------------|-----------|------|---------------|-----------------|------------------|-----------------------|----------------|---------|----------|-------|
| - | Pools | | | | | | | | | | | 🗲 Confi | guration | Pools |
| ۶ | | | | | | | | | | | | | | |
| = | + Add Pool | | | | | | | | | | | | | |
| | Show 10 v entries Usage: All v | | | | | | | | | | Sear | ch: | | |
| | Name | ⊥† Туре | ∐† Usage | PGs Autoscale | ↓† PGs | Size | Min 👫 Size | Rule Name | Used 11 Space | Available 11 Space | Active OSDs | Status | Action | |
| | .rgw.root | replicated | radosgw | on | 64 | 3 | 2 | replicated_rule | 3.56 MB | 187.92 GB | 6 | Active | Ø | × |
| R | device_health_metrics | replicated | mgr_devic ehealth | off | 1 | 3 | 2 | replicated_rule | 0 Bytes | 187.92 GB | 3 | Active | ß | × |
| # | Zone1.rgw.backups.buckets.data | EC | radosgw | on | 64 | 3 | 2 | ec-by-host-hdd | 384.0 KB | 375.83 GB | 6 | Active | Ø | × |
| | Zone1.rgw.backups.buckets.index | replicated | radosgw | on | 64 | 3 | 2 | replicated_rule | 99.78 KB | 187.92 GB | 6 | Active | Ø | × |
| | Zone1.rgw.backups.buckets.non-ec | replicated | radosgw | on | 16 | 3 | 2 | replicated_rule | 0 Bytes | 187.92 GB | 6 | Active | ß | × |

4.2. Cyberduck

4.2.1. Define certificate in hosts file

• Same as mentioned in step 4.1.1, if done before no need to repeat it

4.2.2. Import s3-service certificate

• Same as mentioned in step 4.1.2, if done before no need to repeat it

4.2.3. Connect using cyberduck

• Open new connection by entering the service name and port number ,S3-User1 Access and Secret Keys



| Open Connection | | | × |
|-------------------|--|----------|--------|
| 🚨 Amazon S3 | | | ~ |
| Server | zone1-s3-service Po | ort: | 8000 🜩 |
| URL | : https://5NOOHRB82YP9XFR597LK@zone1-s3- | <u>s</u> | |
| Access Key ID | 5NOOHRB82YP9XFR597LK | | |
| Secret Access Key | | •••• | 4 |
| | Anonymous Login | | |
| SSH Private Key | None | \sim | Choose |
| | Save Password | | |
| | Co | nnect | Cancel |
| More Option | s | | |
| Path: | | | |
| Connect Mode: | Default | | \sim |
| Encoding: | UTF-8 | | ~ |

• You will be able to view the user's bucket list



| SFKH84TO5X0ZFAD29CF9@s3-service – S3 | | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| File Edit View Go Bookmark Window Help | | | | | | | | |
| Quick Connect Quick Connect Open Connection Quick Connect | | | | | | | | |
| ₩ 2 8 | | | | | | | | |
| Filename | | | | | | | | |
| ✓ Le backup Support Configuration Audit Report.xltx Image: Configuration Management Plan.dot | | | | | | | | |

4.3. Amazon CLI Tool

4.3.1. Define certificate in hosts file

• Same as mentioned in step 4.1.1, if done before no need to repeat it

4.3.2. Import s3-service certificate

• setup the s3 service certificate using command line, example if the cert file placed on the D: drive

aws configure set default.ca_bundle "D:\zone1-s3-service.crt"

4.3.3. Configure the aws using configure command

- Configure AWS using command aws configure
- Enter the S3-User1 Access and Secret Keys and enter the zonegroup name





4.3.4. Get bucket List

 You can get the bucket list using command aws s3 ls --endpoint-url <u>https://zone1-s3-service:8000</u>

4.3.5. Create new Bucket

• You can create new bucket named "bucket1" using command: aws s3api create-bucket --bucket bucket1 --endpoint-url https://zone1-s3-service:8000

4.3.6. Upload file

• You can upload a file named Notes in my desktop in bucket1 using the following command:

aws s3 cp Desktop\Notes.docx s3://bucket1/ --endpoint-url https://zone1-s3service:8000

4.3.7. List bucket content

• You can list the content in a specifc bucket using the following command: aws s3 ls s3://bucket1/ --endpoint-url <u>https://zone1-s3-service:8000</u>





5. Multi Site Installation

• You can setup a multi site by doing the following :

5.1. Configuring S3

5.1.1.S3 Settings

• Follow the same steps done for the first cluster.

5.1.2. Assign S3 Role to nodes

• Follow the same steps done for the first cluster.

5.1.3. Add End Point to the Master Zone

• Go to the first cluster, open the zones view list and select to edit the master zone, in this example it is Zone1.

| | ≡ PetaSAN | | | | | | ¢ |
|--------------|-----------------------------|-------------|----------------|------------|---------|------------------|-----------|
| B | Zones | | | | | S3 Configuration | 🖻 🗁 Zones |
| יא ≡ ■ | + Add Zone | | | | Sé | parch | |
| 5 | Name | 1 Zonegroup | ↓↑ Master Zone | Local Zone | Actions | | |
| = | Zone1 | Zonegroup1 | Yes | Yes | 𝔅 × i | | |
| 1 | Showing 1 to 1 of 1 entries | | | | | Previous 1 | Next |

• Enter the endpoint of the zone.

| | = Petasan | | | 0 |
|----------|--|----------------|---------|-----------|
| ß | Edit Zone | 🖒 Manage Zones | 🕞 Zones | Edit Zone |
| ۶ | | | | |
| ≡ | Zonegroup Name:* Zonegroup1 | | | |
| | Zone Name:* | | | |
| Þ | Zone1 | | | |
| 5 | Access Key :* 4Q2ZHADTYOJUI3QOOU1F | | | |
| Þ | Secret Key :* | | | |
| 2 | 96ABPcZVomCzUVI9wkbDiQYovrr74Sa9aBL60AXA | | | |
| æ | End Points: (For Multisite) | | | |
| a | https://zone1-s3-service:8000 | | | |

• Notice that the system has created user named "Synchronization-user".



| | = Petasan | | | | | | | | ۵ |
|--------|-----------------------------|----------------------|-------------|--------------------------|---------------------|----------------|-----------------|-----------------|----------|
| ക്ഷ | S3 Users | | | | | | | 🝃 Manage S3 🚿 🗁 | S3 Users |
| ۶ ≡ | + Add S3 User | | | | | | | | |
| | Show 10 ~ entries | | | | | | Search: | | |
| • | ID 🎼 | Display Name | Suspended 1 | Default Placement Target | † Size Used (GB) ↓↑ | Num Of Objects | Num Of Subusers | Actions | |
| • | 1 | S3-User1 | No | backups | 0.0 | 3 | 0 | 𝔅 × i | |
| • | synchronization-user | Synchronization User | No | | 0.0 | 0 | 0 | I i | |
| ₩ • | Showing 1 to 2 of 2 entries | | | | | | | Previous 1 | Next |

| PetaSAN | | | | | | |
|-----------------------------|---------------|-------------------------------|----------------------------------|--------|--------------------------|------------|
| Edit S3 User | | | | 🖨 S3 C | onfiguration 🔹 🗁 S3 User | s 🕞 😂 Edit |
| ID:* | | User Quota | | | | |
| synchronization-user | | Max Size:* | | | | |
| Display Name:* | | Unlimited | Limit Size | | | |
| Synchronization User | | Max Number of Ob | pjects:* | | | |
| Email: | | Unlimited | Limit Number | | | |
| | | Access Key ID:* | | | | |
| Suspended:* | | GIV4LMXXGBXQ1U3 | 3WHU27 | | | |
| O Yes 💿 No | | Secret Access Key:* | | | | |
| Default placement target:* | | PPDVUwQ45WczxBC | CVUAWPdrFNovfA8TwC7fAL33Pf | | | |
| · | | Size used: | | | | |
| Max number of buckets:" | | 0.0 | | GB | | |
| 1000 | | Number of objects | | | | |
| Bucket Quota | | Number of objects. | | | | |
| Max Size:* | | 0 | | | | |
| Unlimited Limit Size | | | | | | |
| Max Number of Objects:" | | | | | | |
| Unlimited Limit Number | | | | | | |
| | | | | | | |
| Subusers: | | | | | | |
| + Add Subuser | | | | | | |
| Show 10 v entries | | | | S | earch: | |
| Subuser ID 👫 Access Rights | Access Key ID | .⊥† Se | ecret Access Key | | 11 Actions | |
| No data available in table | | | | | | |
| Showing 0 to 0 of 0 entries | | | | | Previou | s Next |
| | | | | Capce | Regenerate Keys | Save |
| | | | | Carloe | Regenerate Keys | Save |

• You will use the "Synchronization-user" information in the Pull screen coming next.

5.1.4. Import Peer Certificate

• Import certificate of the second cluster in case of using self signed certificates.



| | = PetasAN | • |
|----------|--|--|
| B | Import Peer Certificate | S3 Configuration > 🗈 Import Peer Certificate |
| ۶ ≡ | Info If using set signed S3 certificates, ensure you install all peer certificates in all sites. | × |
| | Certificate File:* Choose File zone2-s3-service.crt | |
| • | | Cancel Import |

• Your peer certificate has been imported successfully

| | = PetaSAN | e |
|----------|---|--|
| 89a 6 | Import Peer Certificate | S3 Configuration > 🖻 Import Peer Certificate |
| = | Peer Certificate imported successfully . | x |
| 8 1 | Info If using self signed S3 certificates, ensure you install all peer certificates in all sites. | × |
| R 0 | Certificate File:" Choose File No file chosen | |
| 49 • | | Cancel Import |

5.1.5. Define the service names in hosts files

In this example we need each zone to be able to access the other zone for data replication and configuration.

Update the hosts files on the first and second zones, PetaSAN always syncs the hosts file in consul server, so all nodes in cluster gets the same copy of the file. We need to do the following steps on both zones to correctly setup the hosts file:

Zone1

- stop auto sync service systemctl stop petasan-file-sync
- Update the hosts file in node1 of the first cluster
 Connect to node1 using WinSCP tool and go to path /etc/hosts or use command use winscp or nano nano /etc/hosts

Edit the hosts file to add entry 10.0.3.90 zone2-s3-service which is the S3 service ip of zone2



| 🣝 /etc/hosts - | 10.0.1.10 - Editor - WinSCP | | | - | × |
|--|--------------------------------------|--------------------|---------------------------|---|---|
| 8 6 2 4 | 🦟 🖺 🗙 a 😕 C 🛗 🎎 🖁 | Encoding - 🗌 Color | - 🏟 😮 | | |
| 10.0.1.12 127.0.0.1 10.0.1.10 10.0.1.11 | Node3 localhost Node1 Node2 | | | | |
| 10.0.3.90 | zone2-s3-service | | | | |
| Line: 6/6 | Column: 29 | | Encoding: 1252 (ANSI - La | | |

- sync the hosts file to consul /opt/petasan/scripts/util/sync_file.py /etc/hosts
- Restart the sync service on current node systemctl start petasan-file-sync

This will sync the updated hosts file to all nodes

Zone2

- stop auto sync service systemctl stop petasan-file-sync
- Update the hosts file in the second cluster node
 Connect to node90 using WinSCP tool and go to path /etc/hosts or use command use winscp or nano /etc/hosts

Edit the hosts file to add entry 10.0.3.10 zone1-s3-service which is the S3 service ip of zone1

| | 🣝 /etc/hosts - | 10.0.1.90 - | Editor - WinSCP | | | - | | \times |
|---|----------------|--|-----------------|----------------------|---------------------------|---|--|----------|
| | | 🖩 🖬 🖻 🎼 🗶 🗿 笋 🥙 🛗 🎎 🚔 📕 Encoding 🗸 🗋 Color 🛛 🏶 🖓 | | | | | | |
| | 10.0.1.92 | Node92 | | | | | | |
| | 127.0.0.1 | localh | ost | | | | | |
| | 10.0.1.90 | Node90 | | | | | | |
| | 10.0.1.91 | Node91 | | | | | | |
| 1 | 10.0.3.10 | zone1- | s3-service | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | Line: 1/5 | | Column: 1 | Character: 49 (0x31) | Encoding: 1252 (ANSI - La | | | |

- sync the hosts file to consul /opt/petasan/scripts/util/sync_file.py /etc/hosts
- Restart the sync service on current node systemctl start petasan-file-sync

This will sync the updated hosts file to all nodes



•

- Add a temporary ip in the same zone1 network so we can access it to pull the zone information ifconfig eth2 10.0.3.100 netmask 255.255.255.0
- Now you will be able to ping the first zone ip ping 10.0.3.10

5.1.6. Import Peer Certificate

For self signed certificates, import certificate of the first cluster.

| | = PetaSAN | (a |
|------------|--|--|
| 8 2 | Import Peer Certificate | 🏷 S3 Configuration 🗁 😂 Import Peer Certificate |
| = | i Info If using self signed S3 certificates, ensure you instail all peer certificates in all sites. | x |
| | Certificate File:* Choose File zone1-s3-service.crt | |
| • | | Cancel Import |

• Your peer certificate has been imported successfully

| | = PetaSAN | (• |
|------------|--|--|
| 6 8 | Import Peer Certificate | S3 Configuration 🚿 🕒 Import Peer Certificate |
| = | ✓ Peer Certificate imported successfully. | x |
| 1 1 | i Info If using self signed S3 certificates, ensure you install all peer certificates in all sites. | × |
| R P | Certificate File:* Choose File No file chosen | |
| 43 • | | Cancel Import |

5.1.7. Pull First Cluster S3 Configuration

- From the menu select Configuration /S3 configuration/Zonegroups
- Pull the settings of the master zone by using its endpoint and Synchronization-user access and secret keys.



| 8 | Zonegroups | Pull | X | 😂 S3 Configura | ition 🕞 🗁 Zonegrou |
|----------|-----------------------------|--|-------------|----------------|--------------------|
| P | | Master Zone Endpoint URL:* 1 | | | |
| ≡ | + Add Zonegroup | https://zone1-s3-service:8000/ | | | |
| | Show 10 v entries | Master Zone Access Key:* | | Search: | |
| ð | Name | 4Q2ZHADTYOJUI3QOOU1F | | 14 Actions | |
| 2 | No data available in table | Master Zone Secret Key:* 0 | | | |
| a. | Showing 0 to 0 of 0 entries | 96ABPcZVomCzUVI9wkbDIQYovrr74Sa9aBL60AXA | | F | |
| M | | | | | |
| 60 | | c | Cancel Pull | | |
| * | | | | | |
| | | | | | |

• The multisite zone configuration is pulled successfully and you can view the zonegroup information.

| = Petasan | | | € |
|--------------------------------------|---------|---|--|
| Zonegroups | | S3 Configuration | > 🗁 Zonegroups |
| ✓ Configuration pulled successfully. | | | × |
| 초 Pull | | | |
| Show 10 v entries | Se | arch: | |
| Name | Actions | | |
| Zonegroup1 | i | | |
| Showing 1 to 1 of 1 entries | | Previous | 1 Next |
| | | ■ PetaSAN Zonegroups Configuration pulled successfully. Pull Show 10 ventries Se Name 11 Actions Zonegroup1 10 1 of 1 entries | E PetaSAN Zonegroups Configuration pulled successfully. Pull Show 10 • entries Name Lations Zonegroup1 Showing 1 to 1 of 1 entries |

5.1.8. Add local zone

• You should now add a local zone to the second cluster

| | ≡ PetasAN | | | | | | | • |
|---|-----------------------------|--------------|----|-------------|------------|---------|------------------|-----------|
| ങ | Zones | | | | | | S3 Configuration | > D Zones |
| 1 | | | | | | | | |
| ≡ | + Add Zone | | | | | | | |
| | Show 10 v entries | | | | | Search: | | |
| = | Name | ↓≟ Zonegroup | 11 | Master Zone | Local Zone | Actions | | |
| 5 | Zone1 | Zonegroup1 | | Yes | No | ≓ i | | |
| 5 | Showing 1 to 1 of 1 entries | | | | | | Previous 1 | Next |
| 2 | | | | | | | | |

• Enter the zone name ,main pools and placement targets pools



| | | | | | 🏷 Manas | ge Zones > 🗁 Z | iones > B |
|--|--|------------------|--|---|--|---|---|
| | | | | | | | |
| onegroup Name:* onegroup1 | | | | | | | |
| one Name:* | | | | | | | |
| Zone2 | | | | | | | |
| Aastar Zona Accass Ki | 20/** | | | | | | |
| 4Q2ZHADTYOJUI3Q0 | DOU1F | | | | | | |
| | | | | | | | |
| 964BBc7VomCzLIVI9 | Y:" | | | | | | |
| | | | | | | | |
| End Points:* (For Multi | site) | | | | | | |
| nups://zonez-so-servic | e:0000/ | | | | | | |
| | | h | r. | | | | |
| lain Pools | | | | | | Modify Mair | Pools |
| - | | | | - | | | |
| Function | Pool Name | PGs | Autoscale | Rule Name | | Size | |
| Control | Zone2.rgw.control | 0 | n ~ | replicated_rule | ~ | 3 | ~ |
| Meta | Taxe 0 serverate | | | verificated a dr | | 0 | |
| | zonez.rgw.meta | 0 | n ~ | replicated_rule | Ŷ | 3 | ~ |
| Log | Zope2 raw log | 0 | 0 | replicated rule | ~ | 3 | ~ |
| | | | | | | | |
| Function Pool Name | | | PGs Autoscale Rule Name | | | Size | |
| Duralizata Jandary | | | | | | | |
| Buckets Index | Zone2.rgw.buckets.index | | on | replicated_rule | | 3 | ~ |
| Buckets Index Storage Classes Buck | Zone2.rgw.buckets.index | | on | v replicated_rule | | 3 | • |
| Buckets Index Storage Classes Buck | Zone2 rgw.buckets.index kets Data Pools: Pool Name | PGs A | on Rule N | replicated_rule | Size | 3 Actio | r n |
| Buckets Index Storage Classes Buck Storage Class STANDARD | Zone2 rgw.buckets.index kets Data Pools: Pool Name Zone2 row buckets.data | PGs Al | on utoscale Rule N | | Size | Actio | r n |
| Buckets Index Storage Classes Buck Storage Class STANDARD | Zone2.rgw.buckets.index kets Data Pools: Pool Name Zone2.rgw.buckets.data | PGs Al | on Rule N | replicated_rule | Size | Actio | + n |
| Buckets Index Storage Classes Buck Storage Class STANDARD Dackups | Zone2.rgw.buckets.index kets Data Pools: Pool Name Zone2.rgw.buckets.data | PGs Al | on Rule N | v replicated_rule | Size | Actio | • • |
| Buckets Index Storage Classes Buck Storage Class STANDARD backups | Zone2.rgw.buckets.index kets Data Pools: Pool Name Zone2.rgw.buckets.data ~ Placement | PGs Al | on Rule N | v replicated_rule | Size | Actio | • • |
| Buckets Index Storage Classes Buck Storage Class STANDARD backups Buckets Index Pool: | Zone2.rgw.buckets.index kets Data Pools: Pool Name Zone2.rgw.buckets.data Placement | PGs Al | on Rule N | | Size | Actio | • • |
| Buckets Index Storage Classes Buck Storage Classes STANDARD backups Buckets Index Pool: Function | Zone2.rgw.buckets.index kets Data Pools: Pool Name Pool Name Pool Name | PGs Al | on Rule N v repl | v replicated_rule | Size | Actio | • • |
| Buckets Index Storage Classes Buck Storage Classes Buck STANDARD backups Buckets Index Pool: Function Buckets Index | Zone2.rgw.buckets.index kets Data Pools: Pool Name U Pool Name Zone2.rgw.buckets.data Zone2.rgw.buckets.data | PGs A | on Rule N v repl PGS Autoscale on | | Size v 3 | Actions Size | • • |
| Buckets Index Storage Classes Buck Storage Classes STANDARD backups Buckets Index Pool: Function Buckets Index Storage Classes Buck | Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.data Placement Pool Name Zone2.rgw.backups.buckets.index | PGs Ai | on Rule N vitoscale Rule N v repl PGs Autoscale | <pre>v replicated_rule Name licated_rule v replicated_rule</pre> | Size | Action Size | • • • • • • • • • • • • • • • • • • • |
| Buckets Index Storage Classes Bucl Storage Classes Bucl StANDARD Buckets Index Pool: Function Buckets Index Storage Classes Bucl Storage Classes Bucl Storage Classes | | PGs Autoscale | on | <pre>v replicated_rule Name icated_rule v replicated_rule v replicated_rule Size</pre> | Size | Actio Size 3 | • • • |
| Buckets Index Storage Classes Bucl Storage Classes Bucl STANDARD Buckets Index Pool: Function Buckets Index Storage Classes Bucl Storage Classes Bucl Storage Classes STANDARD | | PGs Autoscale | on Rule Name | <pre>v replicated_rule Name icated_rule v replicated_rule size</pre> | Size V 3 EC Profile | Actio Size 3 | /ul> |
| Buckets Index Storage Classes Bucl Storage Class STANDARD Buckets Index Pool: Function Buckets Index Storage Classes Bucl Storage Classes STANDARD | Zone2.rgw.buckets.index Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.index | PGs Autoscale On | on Rule Name ce-by-host-hdd | <pre>v replicated_rule Name icated_rule Rule Name v replicated_rule Size 3</pre> | Size Si | Action Size 3 | * /ul> |
| Buckets Index Storage Classes Buck Storage Classes Buck STANDARD Buckets Index Pool: Function Buckets Index Storage Classes Buck Storage Classes Buck Storage Classes Buck Storage Classes Buck StanDARD Dtat Extra Pool: | kets Data Pools: Pool Name Cone2.rgw.buckets.index Pool Name Pool Name Rets Data Pools: Re | PGs Autoscale | on | <pre>v replicated_rule Name licated_rule v replicated_rule v replicated_rule v i replicated_rule v i i i i i i i i i i i i i i i i i i i</pre> | Size v Size Size v Size C C Profile v ec-21-profile | Action Size 3 Action | • n |
| Buckets Index Storage Classes Buck Storage Classes Buck STANDARD backups Buckets Index Pool: Function Buckets Index Storage Classes Buck Storage Classes Storage Classe Storage Sto | Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.data Pool Name Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.index Zone2.rgw.buckets.index | PGs Autoscale | on | <pre>v replicated_rule Name licated_rule V replicated_rule V replicated_rule V Size V 3 V </pre> | Size Si | Actio Size 3 Actio Size Size | • n |
| Buckets Index Storage Classes Buck Storage Classes Buck STANDARD Buckets Index Pool: Function Buckets Index Storage Classes Buck Buckets non-ec | Zone2.rgw.buckets.index Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.data Pool Name Zone2.rgw.buckets.index Zone2.rgw.buckets.index Zone2.rgw.buckets.index | PGs Autoscale | on | <pre>v replicated_rule v replicated_rule v replicated_rule v size v 3 v 3 v 1 v 1 v 1 v 1 v 1 v 1 v 1 v 1 v 1 v 1</pre> | Size v 3 EC Profile ec-21-profile | Actio | • n |
| Buckets Index Storage Classes Buck Storage Classes Buck STANDARD Buckets Index Pool: Function Buckets Index Storage Classes Buck Buckets non-ec Buckets non-ec Buckets non-ec | Zone2.rgw.buckets.index Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.data Pool Name Zone2.rgw.buckets.index Zone2.rgw.buckets.index | PGs Autoscale | on | replicated_rule Name Icated_rule Icated_rule Icated_rule V Rule Name V Size Size Size Rule Name V Size Size V Size V Size Size | Size Si | Actio | n c c c c c c c c c c c c c |
| Buckets Index Storage Classes Buck Starage Class STANDARD Buckets Index Pool: Function Buckets Index Storage Classes Buck Storage Classes Buck Storage Classes Buck Storage Classes Buck Storage Classes Buckets Stara Pool: Function Buckets.non-ec B | Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.data Pool Name Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.index Pool Name Zone2.rgw.buckets.index | PGs Autoscale | on | replicated_rule Name icated_rule Rule Name Size Size Rule Name replicated_rule | Size Size Size Carteria and a size and | Actio | n • • |
| Buckets Index Storage Classes Buck Storage Classes StANDARD backups Buckets Index Pool: Function Buckets Index Storage Classes Buck Storage Classes Storage Storage Classes Storage Classe Storage Classe Storage Classes Storage Storage Classes Storage Storage Classes Storage | kets Data Pools: Pool Name Pool Name Pool Name Pool Name Pool Name Pool Name Rets Data Pools: Pool Name Rets Data Pools: Pool Name Cone2.rgw.backups.buckets.index Pool Name Cone2.rgw.backups.buckets.non-eo | PGs Autoscale | on | replicated_rule Name Icated_rule Icated_rule Icated_rule Icated_rule Icated_rule Icated_rule Icated_rule Icated_rule Icated_rule | Size Size Size Carteria and a second s | Actio | n t t t t |

• Zone2 is created successfully as shown



| | ≡ PetaSAN | | | | 6 |
|----------|--------------------------------------|--------------|----------------|------------|-----------------------------|
| ങ്ങ ച | Zones | | | | S3 Configuration = E> Zones |
| = | Zone created suc | ccessfully. | | | × |
| | + Add Zone | | | | |
| • | Show 10 v entries | | | | Search: |
| • | Name | 11 Zonegroup | ↓↑ Master Zone | Local Zone | Actions |
| 2 | Zone1 | Zonegroup1 | Yes | No | ≓ i |
| 43 43 | Zone2 | Zonegroup1 | No | Yes | 2 × 🛧 i |
| | Showing 1 to 2 of 2 entri | ies | | | Previous 1 Next |

Repeat the client connectivity steps, installing the second zone certificate.

Now users can use any of the clusters to upload their data and data will be replicated automatically to the other cluster. Data can be written to both clusters in active/active manner.

6. Add S3 User

You can't add, update or delete users from the secondary cluster, users must be maintained in the master cluster and they will be synched automatically to the second cluster.

In this example we added S3-User2 in the master cluster and it has been synched to the secondary cluster

| | ≡ PetaSAN | | | | | | | ¢ |
|---|-----------------------------|----------------------|-------------|--------------------------|----------------|----------------|-----------------|--------------------------|
| ക | S3 Users | | | | | | | 🖿 Manage S3 🚿 🗁 S3 Users |
| ۶ | | | | | | | | |
| ≡ | Show 10 → entries | | | | | | Search: | |
| - | ID . | Display Name | Suspended 1 | Default Placement Target | Size Used (GB) | Num Of Objects | Num Of Subusers | 11 Actions |
| • | 1 | S3-User1 | No | backups | 0.0 | 1 | 0 | i |
| • | 2 | S3-User2 | No | backups | 0.0 | 0 | 0 | i |
| • | synchronization-user | Synchronization User | No | | 0.0 | 0 | 0 | i |
| 8 | Showing 1 to 3 of 3 entries | | | | | | | Previous 1 Next |

7. Client Connectivity

7.1. S3 Browser

7.1.1. Define certificate in hosts file

Same as the first cluster section 4.1.1 but add the IP of the second zone service



| C:\Windows\System32\drivers\etc\hosts - Notepad++ [Administrator] | _ | | × |
|---|-------|---|--------|
| File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ? | | | x |
|] | . UKC | | |
| Hosts X | | | |
| 1 # Copyright (c) 1993-2009 Microsoft Corp. | | | ^ |
| 2 # 3 # This is a sample HOSTS file used by Microsoft TCP/IP for Windows. | | | |
| 4 # | | | |
| 5 # This file contains the mappings of IP addresses to host names. Each | | | |
| 6 # entry should be kept on an individual line. The IP address should | | | |
| 7 # be placed in the first column followed by the corresponding host name. | | | |
| 8 # The IP address and the host name should be separated by at least one | | | |
| 9 # space. 10 # | | | |
| 11 # Additionally, comments (such as these) may be inserted on individual | | | |
| 12 # lines or following the machine name denoted by a '#' symbol. | | | |
| 13 # | | | |
| 14 # For example: | | | |
| 15 # | | | |
| 16 # 102.54.94.0 rhino.acme.com # source server | | | |
| 1/ + S0.23.63.10 X.adme.com + X Client host | | | |
| 19 # localhost name resolution is handled within DNS itself. | | | |
| 20 # 127.0.0.1 localhost | | | |
| 21 # ::1 localhost | | | |
| 22 | | | Ē |
| | | | |
| 24 10.0.3.10 Zone1-53-SetVice | | | |
| | | | |
| 27 | | | |
| 28 | | | |
| 29 | | | \sim |
| Normal text file length : 892 lines : 31 Ln : 25 Col : 29 Pos : 882 Windows (CR LF) UTF | -8 | I | NS |

7.1.2. Import s3-service certificate

• Import the second cluster certificate following the same steps in section 4.1.2, in this example we will import certificate zone2-s3-service.crt.

7.1.3. Create S3 Browser user account

• We will need to create an S3 browser account using the same S3User1 access key and secret keys but connecting to zone2-s3-service.



| | Edit Account | | | | | online | nel |
|--|--|--|--|--|-----------------------------------|----------------------------|-----|
| A | Edit account details | and click Save of | changes | | | | |
| Account | Name: | | | | | | |
| \$3-U | ser1 Zone2 | | | | | | |
| Assig | any name to your ac | count. | | | | | |
| Account | Гуре: | | | | | | |
| S3 C | ompatible Storage | | | | | | |
| Choos | e the storage you wa | nt to work with. D | efault is Amazon S3 Sto | rage. | | | |
| REST E | idpoint: | | | | | | |
| zone | 2-s3-service:8000 | | | | | | |
| | | | | | | | |
| Spec | ify S3-compatible AF | l endpoint. It can | be found in storage doo | umentation. Example: re | est.serve | er.com:80 | 80 |
| Spec | ify S3-compatible AF | l endpoint. It can | be found in storage doo | cumentation. Example: re | estserve | er.com:80 | 80 |
| Spec Access I | ify S3-compatible AF Key ID: DHRB82YP9XFR597 | l endpoint. It can LK | be found in storage doo | umentation. Example: re | estserve | er.com:80 | 80 |
| Spec Access I 5NO Requ | fy S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque | l endpoint. It can LK ests you send to A | be found in storage doo Amazon S3, see more d | etails at https://s3browse | est.serve er.com/k | er.com:80 | 80 |
| Spec Access I 5NO Requ | ify S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque | l endpoint. It can LK ests you send to <i>i</i> | be found in storage doo Amazon S3, see more d | etails at https://s3browse | est.serve er.com/k | er.com:80 | 80 |
| Spec Access I 5NO Requ Secret A | ify S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque ccess Key: | l endpoint. It can LK ests you send to <i>i</i> | be found in storage doo Amazon S3, see more d | etails at https://s3browse | est.serve er.com/k | er.com:80 | 80 |
| Spec Access I 5NO Requ Secret A | ify S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque ccess Key: | I endpoint. It can LK ests you send to a | be found in storage doo Amazon S3, see more d | etails at https://s3browse | est.serve | er.com:80 | 80 |
| Spec Access I 5NO Requ Secret A Requ | ify S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque ccess Key: ired to sign the reque | l endpoint. It can LK ests you send to a ests you send to a | be found in storage doo Amazon S3, see more d Amazon S3, see more d | etails at https://s3browse | est.serve er.com/k er.com/k | er.com:803 .eys .eys | 80 |
| Spec Access I 5NO Requ Secret A Requ | ify S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque ccess Key: ired to sign the reque of Access Keys with | I endpoint. It can LK ests you send to a ests you send to a password: | be found in storage doo Amazon S3, see more d Amazon S3, see more d | etails at https://s3browse | est.serve er.com/k er.com/k | er.com:803 ceys | 80 |
| Spec Access I 5NO Requ Secret A Requ | fy S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque ccess Key: ired to sign the reque of Access Keys with a | I endpoint. It can LK ests you send to a ests you send to a password: | be found in storage doo Amazon S3, see more d Amazon S3, see more d | etails at https://s3browse | est.serve er.com/k er.com/k | er.com:808 teys | 80 |
| Spec Access I 5NO Requ Secret A Requ C Encry | ify S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque ccess Key: ired to sign the reque of Access Keys with a his option on if you wa | I endpoint. It can LK sts you send to a sts you send to a sts you send to a n password: nt to protect you | be found in storage doo Amazon S3, see more d Amazon S3, see more d r Access Keys with a ma | etails at https://s3browse etails at https://s3browse etails at https://s3browse | est.serve er.com/k er.com/k | er.com:803 eeys | 80 |
| Spec Access I 5NO Requ Secret A Requ Encry Turn ti | ify S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque ccess Key: ired to sign the reque of Access Keys with a bis option on if you wa | I endpoint. It can LK sts you send to a sts you send to a password: nt to protect you LS) | be found in storage doo Amazon S3, see more d Amazon S3, see more d r Access Keys with a ma | etails at https://s3browse etails at https://s3browse etails at https://s3browse | est.serve er.com/k | er.com:803 | 80 |
| Spec Access I 5NO Requ Secret A Requ Encry Turn ti V Use so If chea | ify S3-compatible AF Key ID: DHRB82YP9XFR597 ired to sign the reque ccess Key: ired to sign the reque of Access Keys with is option on if you wa ecure transfer (SSL/T :ked, all communicat | I endpoint. It can LK ests you send to a ests you send to a password: nt to protect you LS) ons with the store | be found in storage doo Amazon S3, see more d Amazon S3, see more d Amazon S3, see more d r Access Keys with a ma age will go through encry | etails at https://s3browse etails at https://s3browse etails at https://s3browse | est.serve er.com/k er.com/k | er.com:803 | 80 |

• You should see the same buckets as you have when you were connecting to zone1



| Path: / | | | | | 1 | |
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| File Motes.docx | | | | Size 15.83 KB | Type Microsoft Office | Last Mod 5/12/2022 |
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7.2. Cyberduck

Same as done with the first cluster.

7.3. Amazon CLI Tool

Same as done with the first cluster.

8. Promote Zone

- In case the master zone (Currently in this example zone1) is down ,you can promote a non-master zone (Currently in this example zone2) to be a master zone by using the promote button in the zones view list.
- Make sure that all metadata (like zonegroup , zone or user updates) are synced before the promotion.



| | = Petasan | | | | G |
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| æ | Zones | | | | 🝃 S3 Configuration 🔌 🗁 Zone |
| ۶ | | | | | |
| ≡ | + Add Zone | | | | |
| | Show 10 v entries | | | | Search: |
| • | Name | La Zonegroup | 1 Master Zone | Local Zone | Actions |
| • | Zone1 | Zonegroup1 | Yes | No | ≓ i |
| • | Zone2 | Zonegroup1 | No | Yes | 3 × 1 i |
| *9 | Showing 1 to 2 of 2 entrie | S | | | Promote Zone Previous 1 Next |

If you promoted the zone2 to be the master zone then you will be able to do all the functionally of the master zone like adding S3 users.

| | = Petasan | | | | | | 0 |
|--------|-----------------------------|------------------|-------------|------------|---------|--------------------|---------|
| 23 | Zones | | | | | S3 Configuration > | ⊖ Zones |
| ≁ ≡ | ✓ Zone successfully prom | ioled as master. | | | | | × |
| 1 | + Add Zone | | | | | | |
| 4 | Show 10 v entries | | | | Search: | | |
| - | Name 1 | Zonegroup 11 | Master Zone | Local Zone | Actions | | |
| 2 | Zone1 | Zonegroup1 | No | No | ≓ i | | |
| មា | Zone2 | Zonegroup1 | Yes | Yes | 𝔅 🗙 i | | |
| - | Showing 1 to 2 of 2 entries | | | | | Previous 1 | Next |