Working environments

Cloud Manager Automation

NetApp
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Working environments

Create a working environment with PAYGO

You can use this workflow to create a new GCP Cloud Volumes ONTAP working environment using pay-as-you-go (PAYGO) subscription.

Note the following when using PAYGO:

- A marketplace subscription is required.
- A NetApp Support Site (NSS) key is recommended to register the system for support, but it's not required.
- You can add more volumes after creating the working environment. You can choose to create a volume using either NFS, CIFS, or iSCSI protocol.

1. Select the region

Perform the workflow Get regions and do the following:

- Choose the `name` value of the required region for the `region` parameter in step 8.
- Choose one of the VPCs. Choose `name` for `vpcId` parameter and `subnets: path` for `subnetId` and `subnetPath` parameters in step 8.

2. Select the workspace

Perform the workflow Get tenants and choose the `workspacePublicId` value for the `tenantId` parameter in step 8.

3. Select the projects

Perform the workflow Get projects and choose the `projectId` value of the required project for `project` parameter in step 8.

4. Select the permutations

Perform the workflow Get permutations and choose the `ontapVersion`, `license: type`, and `instanceType` values of the required `vsaMetadata` parameter in step 8.

5. Select the packages configuration

Perform the workflow Get packages and search the `licenseType` from permutations:

- Choose the `name` for `packageName` parameter.
- Choose the `diskSize` for `gcpVolumeSize`.
- Choose the `diskType` and `writingSpeedState` for the `gcpVolumeType` and `writingSpeedState` parameters.

6. Select the service account

Perform the workflow Get service accounts workflow and choose the `email` value of the required service accounts for the `gcpServiceAccount` parameter in step 8.

7. (Optional) Obtain an NSS key

An NSS key is **optional** when using PAYGO subscription. If needed, you can create a key or select an existing key, and include the NSS key in the `nssAccount` parameter in step 8.

- To create a new NSS key using the Cloud Manager web user interface, perform the task Generate NSS user ID and choose the `id`.
- To select an existing NSS key, perform the Get NSS keys workflow and choose the `id` value of the required NSS user.

8. Create the working environment

HTTP method	Path
POST	/occm/api/gcp/vsa/working-environments

curl example

```
curl --location --request POST
'https://cloudmanager.cloud.netapp.com/occm/api/gcp/vsa/working-
environments' --header 'x-agent-id: <AGENT_ID>' //<1> --header
'Authorization: Bearer <ACCESS_TOKEN>' //<2> ---header 'Content-Type:
application/json' --d @JSONinput
```

(1) Replace <AGENT_ID> with your agent ID.
(2) Replace <ACCESS_TOKEN> with your obtained bearer access token.

Input

The JSON input example includes the minimum list of parameters.

This request uses PAYGO as indicated in the `licenseType` parameter.

JSON input example

```
{
  "name": "zivgcp01we03",
  "svmPassword": "password",
  "vpcId": "default",
  "region": "us-west1-b",
  "tenantId": "tenantID",
  "subnetPath": "projects/occm-dev/regions/us-west1/subnetworks/default",
  "subnetId": "projects/occm-dev/regions/us-west1/subnetworks/default",
  "dataEncryptionType": "GCP",
  "vsaMetadata": {
    "ontapVersion": "ONTAP-9.9.0X4.T1.gcp",
    "licenseType": "gcp-cot-explore-paygo",
    "instanceType": "custom-4-16384"
  },
  "gcpVolumeSize": {
    "size": 100,
    "unit": "GB"
  },
  "gcpVolumeType": "pd-ssd",
  "gcpLabels": [],
  "writingSpeedState": "NORMAL",
  "packageName": "gcp_poc",
  "gcpServiceAccount": "xxxxx@occm-dev.iam.xxx.com",
  "project": "occm-dev",
  "backupVolumesToCbs": false
}
```


JSON output example

```
{
    "publicId": "vsaworkingenvironment-2qkd75xv",
    "name": "zivgcp01we03",
    "tenantId": "tenantIDshownhere",
    "svmName": "svm_zivgcp01we03",
    "creatorUserEmail": "user_email",
    "status": null,
    "providerProperties": null,
    "reservedSize": null,
    "clusterProperties": null,
    "ontapClusterProperties": null,
    "cloudProviderName": "GCP",
    "snapshotPolicies": null,
    "actionsRequired": null,
    "activeActions": null,
    "replicationProperties": null,
    "schedules": null,
    "svms": null,
    "workingEnvironmentType": "VSA",
    "supportRegistrationProperties": null,
    "supportRegistrationInformation": null,
    "capacityFeatures": null,
    "encryptionProperties": null,
    "supportedFeatures": null,
    "isHA": false,
    "haProperties": null,
    "k8sProperties": null,
    "fpolicyProperties": null,
    "saasProperties": null,
    "cbsProperties": null,
    "complianceProperties": null,
    "monitoringProperties": null
}
```


Create a working environment with BYOL

You can use this workflow to create a new Cloud Volumes ONTAP working environment using bring your own license (BYOL) licensing.

Note the following when using BYOL licensing:

- A marketplace subscription is not required.
- A NetApp Support Site (NSS) key is required to register the system for support.
- You can add more volumes after creating the working environment. You can choose to create a volume using either NFS, CIFS, or iSCSI protocol.

1. Select the region

Perform the workflow Get regions and do the following:

- Choose the `name` value of the required region for the `region` parameter in step 8.
- Choose one of the VPCs. Choose `name` for `vpcId` parameter and `subnets: path` for `subnetId` and `subnetPath` parameters in step 8.

2. Select the workspace

Perform the workflow Get tenants and choose the `workspacePublicId` value for the `tenantId` parameter in step 8.

3. Select the project

Perform the workflow Get projects and choose the `projectId` value of the required project for `project` parameter in step 8.

4. Select the permutations

Perform the workflow Get permutations and choose the `ontapVersion`, `license: type`, and `instanceType` values of the required `vsaMetadata` parameter in step 8.

5. Select the packages configuration

Perform the workflow Get packages and search the `licenseType` from permutations:

- Choose the `name` for `packageName` parameter.
- Choose the `diskSize` for `gcpVolumeSize`.
- Choose the `diskType` and `writingSpeedState` for the `gcpVolumeType` and `writingSpeedState` parameters.

6. Select the service account

Perform the workflow Get service accounts workflow and choose the `email` value of the required service accounts for the `gcpServiceAccount` parameter in step 8.

7. Obtain an NSS key

An NSS key is **required** when using BYOL subscription. If needed, you can create a key or select an existing key, and include the NSS key in the `nssAccount` parameter in step 8.

- To create a new NSS key using the Cloud Manager web user interface, perform the task Generate NSS user ID and choose the `id`.
- To select an existing NSS key, perform the Get NSS keys workflow and choose the `id` value of the required NSS user.

8. Create the working environment

HTTP method	Path
POST	/occm/api/gcp/vsa/working-environments

curl example

```
curl --location --request POST
'https://cloudmanager.cloud.netapp.com/occm/api/gcp/vsa/working-
environments' --header 'x-agent-id: <AGENT_ID>' //<1> --header
'Authorization: Bearer <ACCESS_TOKEN>' //<2> ---header 'Content-Type:
application/json' --d @JSONinput
```

(1) Replace <AGENT_ID> with your agent ID.
(2) Replace <ACCESS_TOKEN> with your obtained bearer access token.

Input

The JSON input example includes the minimum list of parameters. This request uses BYOL licensing as indicated in the `licenseType` parameter. The `serialNumber` is required.

JSON input example

```
{
name: "gcpwe123"
backupVolumesToCbs: true
capacityTier: "cloudStorage"
dataEncryptionType: "GCP"
enableCompliance: true
gcpLabels: []
gcpServiceAccount: "fabric-pool@occm-dev.iam.gserviceaccount.com"
gcpVolumeSize: {size: 500, unit: "GB", _identifier: "500 GB"}
gcpVolumeType: "pd-ssd"
name: "gcpwe123"
nssAccount: "0xxx-000-4c70-9cee-304f36b74db6"
packageName: "gcp_poc"
project: "occm-dev"
region: "europe-west3-c"
serialNumber: "000001080000000000000"
subnetId: "projects/occm-dev/regions/europe-west3/subnetworks/vpc4qa-2-
europe-west3"
subnetPath: "projects/occm-dev/regions/europe-west3/subnetworks/vpc4qa-2-
europe-west3"
svmPassword: "Netapp123"
tenantId: "workspaceNqaJyVMz"
tierLevel: "standard"
volume: {
  exportPolicyInfo: {
    policyType: "custom",
    ips: ["172.22.13.0/24"],
    nfsVersion: ["nfs3", "nfs4"]
  }
}
vpcId: "vpc4qa-2"
vsaMetadata: {
  ontapVersion: "ONTAP-9.10.1RC1.T1.gcp",
  licenseType: "gcp-cot-premium-byol"
}
instanceType: "n2-standard-4"
licenseType: "gcp-cot-premium-byol"
ontapVersion: "ONTAP-9.10.1RC1.T1.gcp"
writingSpeedState: "NORMAL"
}
```


Output

The JSON output example includes an example of the `VsaWorkingEnvironmentRresponse` response.

JSON output example

```
{
 "publicId": "vsaworkingenvironment-9nhkrtu0",
 "name": "yuvalbyol3101",
 "tenantId": "tenantIDshownhere",
 "svmName": "svm_yuvalbyol3101",
 "creatorUserEmail": "user_email",
 "status": null,
 "providerProperties": null,
 "reservedSize": null,
 "clusterProperties": null,
 "ontapClusterProperties": null,
 "cloudProviderName": "GCP",
 "snapshotPolicies": null,
 "actionsRequired": null,
 "activeActions": null,
 "replicationProperties": null,
 "schedules": null,
 "svms": null,
 "workingEnvironmentType": "VSA",
 "supportRegistrationProperties": null, "supportRegistrationInformation":
null,
 "capacityFeatures": null,
 "encryptionProperties": null,
 "supportedFeatures": null,
 "isHA": false,
 "haProperties": null,
 "fpolicyProperties": null,
 "saasProperties": null,
 "cbsProperties": null,
 "complianceProperties": null,
 "monitoringProperties": null,
 "licensesInformation": null
}
```


Get working environment

You can retrieve the public identifier, working environment ID, the storage virtual machine name for Cloud Volumes ONTAP working environments and other Cloud Volumes ONTAP related details (visible to currently logged in user) which would be used in other workflows.

1. Get the working environments

HTTP method	Path
GET	/occm/api/gcp/vsa/working-environments/{workingEnvironmentId}

curl

```
curl --location --request GET
'https://cloudmanager.cloud.netapp.com/occm/api/gcp/vsa/working-
environments' --header 'Content-Type: application/json' --header 'x-agent-
id: <AGENT_ID>' --header 'Authorization: Bearer <ACCESS_TOKEN>'
```

Input

(Optional) Query parameters:

- `fields` string
- `tenantId` string

Output

The JSON output example includes details of a single node Google Cloud working environment.

JSON output example


```
[
    {
        "publicId": "vsaworkingenvironment-sfrf3wvj",
        "name": "zivgcp01we02",
        "tenantId": "tenantIDshownhere",
        "svmName": "svm_zivgcp01we02",
        "creatorUserEmail": "user_email",
        "status": null,
        "providerProperties": null,
        "reservedSize": null,
        "clusterProperties": null,
        "ontapClusterProperties": null,
        "cloudProviderName": "GCP",
        "snapshotPolicies": null,
        "actionsRequired": null,
        "activeActions": null,
        "replicationProperties": null,
        "schedules": null,
        "svms": null,
        "workingEnvironmentType": "VSA",
        "supportRegistrationProperties": null,
        "supportRegistrationInformation": [],
        "capacityFeatures": null,
        "encryptionProperties": null,
        "supportedFeatures": null,
```

```
        "isHA": false,
        "haProperties": null,
        "k8sProperties": null,
        "fpolicyProperties": null,
        "saasProperties": null,
        "cbsProperties": null,
        "compliancesProperties": null,
        "monitoringProperties": null
    },
    {
        "publicId": "vsaworkingenvironment-2qkd75xv",
        "name": "zivgcp01we03",
        "tenantId": "tenantIdshownhere",
        "svmName": "svm_zivgcp01we03",
        "creatorUserEmail": "user_email",
        "status": null,
        "providerProperties": null,
        "reservedSize": null,
        "clusterProperties": null,
        "ontapClusterProperties": null,
        "cloudProviderName": "GCP",
        "snapshotPolicies": null,
        "actionsRequired": null,
        "activeActions": null,
        "replicationProperties": null,
        "schedules": null,
        "svms": null,
        "workingEnvironmentType": "VSA",
        "supportRegistrationProperties": null,
        "supportRegistrationInformation": [],
        "capacityFeatures": null,
        "encryptionProperties": null,
        "supportedFeatures": null,
        "isHA": false,
        "haProperties": null,
        "k8sProperties": null,
        "fpolicyProperties": null,
        "saasProperties": null,
        "cbsProperties": null,
        "compliancesProperties": null,
        "monitoringProperties": null
    }
]
```

Delete a working environment

You can delete an existing GCP Cloud Volumes ONTAP working environment.

1. Select the working environment

Perform the workflow Get working environment and choose the `publicId` value of the working environment for the `workingEnvironmentId` path parameter.

2. Delete the working environment

HTTP method	Path
DELETE	/occm/api/gcp/vsa/working-environments/{workingEnvironmentId}

Curl example

```
curl --location --request DELETE
'https://cloudmanager.cloud.netapp.com/occm/api/gcp/vsa/working-
environments/<WORKING_ENV_ID>' --header 'Content-Type: application/json'
--header 'x-agent-id: <AGENT_ID>' --header 'Authorization: Bearer
<ACCESS_TOKEN>'
```

Input

Path parameter <WORKING_ENV_ID> `(workingEnvironmentId)` string

(Optional) Query parameters:

- `localDelete` boolean

  If `true` the Cloud Volumes ONTAP instance in the cloud is not terminated, but Cloud Manager no longer manages it (default is `false`). If `false` the Cloud Volumes ONTAP instance is deleted including all the cloud resources created for this working environment.

- `forceDelete` boolean

  If `true` the working environment is deleted even if it is part of one or more SnapMirror relationships (default is `false`).

Output

None

Create CIFS server configuration

If you want to create CIFS volumes on your Cloud Volumes ONTAP system, you first need to configure the CIFS server. You can choose to set up the CIFS server in a workgroup or in an Active Directory domain. Review the ONTAP documentation for more information.

Choose the workflow that is specific to your goal:

- Set up a CIFS server in a workgroup
- Set up a CIFS server in an Active Directory domain

Set up a CIFS server in a workgroup

You can configure a CIFS server in a workgroup when the Microsoft Active Directory domain infrastructure is not available.

1. Select the working environment

Perform the workflow Get working environments and choose the `publicId` value for the working environment used in the `workingEnvironmentId` path parameter.

2. Create the CIFS configuration

Create the CIFS server configuration.

HTTP method	Path
POST	/occm/api/gcp/vsa/working-environments/{workingEnvironmentId}/cifs-workgroup

curl example

```
curl --location --request POST
'https://cloudmanager.cloud.netapp.com/occm/api/gcp/vsa/working-
environments/<WORKING_ENV_ID>/cifs-workgroup' --header 'Content-Type:
application/json' --header 'x-agent-id: <AGENT_ID>' --header
'Authorization: Bearer <ACCESS_TOKEN>' --d @JSONinput
```

Input

- Path parameter <WORKING_ENV_ID> `workingEnvironmentId` string

JSON input example

```
{
  "serverName": "SMB_SERVER02",
  "workgroupName": "workgroup02",
  "svmName": "svm_ziv01we01"
}
```

Output

None.

Set up a CIFS server in an Active Directory domain

You can create a CIFS server on the SVM and specify the Active Directory (AD) domain to which it belongs.

1. Select the working environment

Perform the workflow Get working environments and choose the `publicId` value for the working environment used in the `workingEnvironmentId` path parameter.

2. Determine the Active Directory configuration

You need the following configuration parameters for an Active Directory server.

Input parameter	Description
dnsDomain	Use the Active Directory domain as the DNS name.
ipAddresses	Define the primary DNS IP address and optionally add a secondary IP address.
netBIOS	Use the CIFS server NetBIOS name.
organizationalUnit	Include the organizational unit as appropriate.
activeDirectoryDomain	Set the Active Directory domain to join.
activeDirectoryUsername	A username with authorization to join the domain.
activeDirectoryPassword	The password for the authorized username.

3. Create the CIFS configuration

Create the CIFS server configuration.

HTTP method	Path
POST	/occm/api/gcp/vsa/working-environments/{workingEnvironmentId}/cifs

curl example

```
curl --location --request POST
'https://cloudmanager.cloud.netapp.com/occm/api/gcp/vsa/working-
environments/<WORKING_ENV_ID>/cifs' --header 'Content-Type:
application/json' --header 'x-agent-id: <AGENT_ID>' --header
'Authorization: Bearer <ACCESS_TOKEN>' --d @JSONinput
```

Input

- Path parameter <WORKING_ENV_ID> `workingEnvironmentId` string

JSON input example

```
{
  "dnsDomain": "zivh.netapp.com",
  "ipAddresses": [
    "172.31.5.241"
  ],
  "netBIOS": "zivaws02we03",
  "organizationalUnit": "CN=Computers",
  "activeDirectoryDomain": "zivh.netapp.com",
  "activeDirectoryUsername": "administrator",
  "activeDirectoryPassword": "password"
}
```

Output

None.

Get CIFS server configurations

You can use this workflow to retrieve the CIFS server configurations for an existing Cloud Volumes ONTAP working environment.

1. Select the working environment

Perform the workflow Get working environments and choose the `publicId` value for the working environment used in the `workingEnvironmentId` path parameter.

2. Get the CIFS configurations

HTTP method	Path
GET	/occm/api/gcp/vsa/working-environments/{workingEnvironmentId}/cifs

curl example

```
curl --location --request GET
'https://cloudmanager.cloud.netapp.com/occm/api/gcp/vsa/working-
environments/<WORKING_ENV_ID>/cifs' --header 'Content-Type:
application/json' --header 'x-agent-id: <AGENT_ID>' --header
'Authorization: Bearer <ACCESS_TOKEN>'
```

Input

- Path parameter <WORKING_ENV_ID> `workingEnvironmentId` string
- (Optional) Query parameter `svm` string

Output

The JSON output example includes the CIFS configurations for an existing Cloud Volumes ONTAP ONTAP working environment.

JSON output example


```
[
    {
        "dnsDomain": "zivh.netapp.com",
        "activeDirectoryDomain": "zivh.netapp.com",
        "ipAddresses": [
            "172.31.5.241"
        ],
        "netBIOS": "zivaws02we01",
        "organizationalUnit": "CN=Computers",
        "authenticationType": "domain"
    }
]
```


Delete CIFS server configuration

You can use this workflow to delete a CIFS server configuration for an existing Cloud Volumes ONTAP working environment.

1. Select the working environment

Perform the workflow Get working environments and choose the `publicId` value for the working environment used in the `workingEnvironmentId` path parameter.

2. Delete the CIFS configurations

HTTP method	Path
POST	/occm/api/gcp/vsa/working-environments/{workingEnvironmentId}/delete-cifs

curl example

```
curl --location --request POST
'https://cloudmanager.cloud.netapp.com/occm/api/gcp/vsa/working-
environments/<WORKING_ENV_ID>/delete-cifs' --header 'Content-Type:
application/json' --header 'x-agent-id: <AGENT_ID>' --header
'Authorization: Bearer <ACCESS_TOKEN>'
```

Input

- Path parameter <WORKING_ENV_ID> `workingEnvironmentId` string
- Optional JSON body

```
{
  "activeDirectoryUsername": "string",
  "activeDirectoryPassword": "string",
  "svmName": "string"
}
```

Output

None.