



Working environments

Cloud Manager Automation

NetApp

February 16, 2022

This PDF was generated from https://docs.netapp.com/us-en/cloud-manager-automation/cm/wf_gcp_cloud_create_we_paygo.html on February 16, 2022. Always check docs.netapp.com for the latest.

Table of Contents

- Working environments 1
 - Create a working environment with PAYGO..... 1
 - Create a working environment with BYOL..... 4
 - Get working environment 8
 - Delete a working environment 11
 - Create CIFS server configuration..... 11
 - Get CIFS server configurations 14
 - Delete CIFS server configuration 15

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": "xxxxxx@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: "00000108000000000000"
  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: "Netappl23"
  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 VsaWorkingEnvironmentResponse 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,
    "complianceProperties": 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,
    "complianceProperties": 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
<code>dnsDomain</code>	Use the Active Directory domain as the DNS name.
<code>ipAddresses</code>	Define the primary DNS IP address and optionally add a secondary IP address.
<code>netBIOS</code>	Use the CIFS server NetBIOS name.
<code>organizationalUnit</code>	Include the organizational unit as appropriate.
<code>activeDirectoryDomain</code>	Set the Active Directory domain to join.
<code>activeDirectoryUsername</code>	A username with authorization to join the domain.
<code>activeDirectoryPassword</code>	The password for the authorized username.

3. Create the CIFS configuration

Create the CIFS server configuration.

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

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.

Copyright Information

Copyright © 2022 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system-without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.