Create a system with a capacity-based license

You can create a new Cloud Volumes ONTAP system using capacity-based licensing.

You can add new volumes when creating the system.

> **When using a capacity-based license:**
>
> - A marketplace subscription is required.
> - If you purchase a license from NetApp (BYOL), a NetApp Support Site (NSS) key is required to register the system for support.
> - You can add more volumes after creating the system. You can choose to create a volu
>
> Learn more about capacity-based licensing.

Choose the workflow to use based on the type of the Cloud Volumes ONTAP deployment:

- Single Node
- HA pair

Create a system for a single node

You can use this workflow to create a single node Cloud Volumes ONTAP system.

Step 1. Select the region

Perform the workflow Get regions and choose the code value for the region parameter in step 11.

Step 2. Select the workspace

Perform the workflow Get tenants and choose the workspacePublicId value for the tenantId parameter in step 11.

Step 3. Select the permutations configuration

Perform the workflow Get permutations and choose the ontapVersion and license: type and instanceType values for the vsaMetadata parameter in step 11.

Step 4. Select the capacity package name

Choose the package name for the vsaMetadata:capacityPackageName parameter in step 11. There are three licensing options available: Professional, Essentials, and Freemium. Review

the Cloud Volumes ONTAP licensing types offered to new customers to know more about the available options.

Step 5. Select the VPC

Perform the workflow Get VPCs and do the following:

- Choose the vpcId value for the vpcId parameter in step 11.
- Choose the cidrBlock values for the ips value of the volume parameter in step 11.

Step 6. Select the EBS volume configuration

Perform the workflow Get EBS volume types and choose the size and supportedVolumeTypes values for the ebsVolumeSize and ebsVolumeType parameters in step 11.

> You need to choose one of the allowed values for the required ebsVolumeType parameter. V

Step 7. Attach a marketplace subscription

Perform the workflow Attach SaaS subscription and choose the subscriptionId value for the saasSubscriptionId parameter in step 11.

Step 8. (Optional) Obtain an NSS key

An NSS key is **optional** when using a marketplace subscription. When using BYOL, you can create a key or select an existing key, and include the NSS key in the nssAccount parameter in step 11.

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

Step 9. (Optional) Add a BYOL license

If you purchase a license from NetApp (BYOL), make sure that the purchased license is available in the Console. The license gets automatically added to your account if you have associated the NSS account with the Console. To add the license manually, refer to Add purchased licenses to your account.

Step 10. (Optional) Create a new volume

You can optionally add a new volume while creating a system.

- Choose the name and size values for the corresponding name and size:size input parameters in step 11. The size:unit must be one of the following: TB, GB, MB, KB, or Byte.
- Choose the policyType, ips, and the nfsVersion parameters in the exportPolicyInfo input parameter in step 11 if you choose to create a volume using the NFS protocol. The ips parameter signifies the client IP address (could be multiple addresses) that can access the volume over the network.
  The nfsVersion parameter signifies the version of the NFS protocol that a client will use for data transmission over a network.

> If you choose to create a volume using CIFS protocol, you will need to set the sha
> will need to set the iscsiInfo parameter accordingly.

Step 11. Create the system

You can issue a REST API call to create the system.

HTTP method and endpoint

This REST API call uses the following method and endpoint.

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

Curl example

```
curl --request POST \
--location "https://api.bluexp.netapp.com/occm/api/vsa/working-environments" \
--header "x-agent-id: <AGENT_ID>" \
--header "Authorization: Bearer <ACCESS_TOKEN>" \
--header "Content-Type: application/json" \
--d @JSONinput
```

Curl

Copy

Enable Elastic Volumes

Disable Elastic Volumes

The ebsVolumeType parameter must be gp3 or io1.

disableEv: boolean, default value is false. By default, new Cloud Volumes ONTAP instances are created with Elastic Volumes enabled on aggregates.


```
{
  "name": "bycapacitycvo",
  "tenantId": "workspace-ksJa8vEY",
  "region": "us-east-1",
  "packageName": "aws_custom",
  "dataEncryptionType": "AWS",
  "capacityTier": "S3",
  "tierLevel": "normal",
  "vsaMetadata": {
    "ontapVersion": "ONTAP-9.11.1RC1.T1",
    "licenseType": "capacity-paygo",
    "instanceType": "m5.2xlarge",
    "capacityPackageName": "Professional"
  },
  "nssAccount": "b247b000-d0b3-4e05-bdca-f5e26a7xxb9",
  "writingSpeedState": "NORMAL",
  "subnetId": "subnet-xxx55de",
  "svmPassword": "password",
  "vpcId": "vpc-a762xx00",
  "ontapEncryptionParameters": null,
  "ebsVolumeType": "gp3",
  "ebsVolumeSize": {
    "size": 1,
    "unit": "TB",
    "_identifier": "1 TB"
  },
```

```
  "disableEv": "false",
  "awsTags": [],
  "optimizedNetworkUtilization": true,
  "instanceTenancy": "default",
  "iops": null,
  "throughput": null,
  "instanceProfileName": null,
  "cloudProviderAccount": "InstanceProfile",
  "saasSubscriptionId": "aws-a0s9zvu5ghepz0j9yamr2wsjk-FJsUvVHffi9",
  "backupVolumesToCbs": false,
  "enableCompliance": false,
  "enableMonitoring": false
}
```

JSON

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This API request uses the hourly pay-as-you-go (PAYGO) subscription as indicated in the licenseType parameter.

JSON output example

The JSON output example includes an example of the VsaWorkingEnvironmentresponse.

```
{
    "publicId": "VsaWorkingEnvironment-0NWsb1aX",
    "name": "ziv01we02",
    "tenantId": "tenantIDgoeshere",
    "svmName": "svm_ziv01we02",
    "creatorUserEmail": "user_email",
    "status": null,
    "awsProperties": null,
    "reservedSize": null,
    "encryptionProperties": null,
```

```
    "clusterProperties": null,
    "ontapClusterProperties": null,
    "actionsRequired": null,
    "interClusterLifs": null,
    "cronJobSchedules": null,
    "snapshotPolicies": null,
    "svms": null,
    "activeActions": null,
    "replicationProperties": null,
    "schedules": null,
    "cloudProviderName": "Amazon",
    "isHA": false,
    "workingEnvironmentType": "VSA",
    "supportRegistrationProperties": null,
    "supportRegistrationInformation": null,
    "haProperties": null,
    "capacityFeatures": null,
    "cloudSyncProperties": null,
    "supportedFeatures": null,
    "k8sProperties": null,
    "fpolicyProperties": null,
    "saasProperties": null,
    "cbsProperties": null,
    "complianceProperties": null,
    "monitoringProperties": null
}
```


Create a system for a high availability pair

You can use this workflow to create an HA Cloud Volumes ONTAP system.

Step 1. Select the region

Perform the workflow Get regions and choose the code value for the region parameter in step 13.

Step 2. Select the cloud provider account

Perform the workflow Get cloud provider accounts and choose the publicId value of the required account for the cloudProviderAccount parameter.

Step 3. Select the workspace

Perform the workflow Get tenants and choose the workspacePublicId value for the tenantId parameter in step 13.

Step 4. Select the permutations configuration

Perform the workflow Get permutations and choose the ontapVersion and license: type and instanceType values for the vsaMetadata parameter in step 13.

Step 5. Select the capacity package name

Choose the package name for the vsaMetadata:capacityPackageName parameter in step 13. There are three options available: Professional, Essentials, and Freemium.
Review the Cloud Volumes ONTAP licensing types offered to new customers to know more about the available options.

Step 6. Select the packages configuration

Perform the Get Packages and choose the packageName, instanceTenancy and writingSpeedState values for the corresponding parameters in step 13.

Step 7. Select the VPC

Perform the workflow Get VPCs and do the following:

- Choose the vpcId value for the vpcId parameter in step 13.
- Choose three subnets and choose the subnetId value for the haParams:mediatorSubnetId, haParams:node1SubnetId, haParams:node2SubnetId in step 13.
- Select the IPs for the clusterFloatingIP, dataFloatingIP, dataFloatingIP2 values for the corresponding parameters in step 13.

Step 8. Select route table

Perform the workflow Get route tables and choose the id value of the required route table for haParams:routeTableIds parameter is step 13.

Step 9. Select the EBS volume configuration

Perform the workflow Get EBS volume types and choose the size and supportedVolumeTypes values for the ebsVolumeSize and ebsVolumeType parameters in step 13.

> You need to choose one of the allowed values for the required ebsVolumeType parameter. V

Step 10. Attach a marketplace subscription

Perform the workflow Attach SaaS subscription and choose the subscriptionId value for the saasSubscriptionId parameter in step 13.

Step 11. (Optional) Obtain an NSS key

An NSS key is optional when using a marketplace subscription. When using BYOL, you can create a key or select an existing key, and include the NSS key in the nssAccount parameter in step 13.

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

Step 12. (Optional) Add a BYOL license

If you purchase a license from NetApp (BYOL), ensure that the purchased license is available in the Console. The license gets automatically added to your account if you have associated the NSS account with the Console. To add the license manually, refer to Add purchased licenses to your account.

Step 13. (Optional) Create a new volume

You can optionally add a new volume while creating a system.

- Choose the name and size values for the corresponding name and size:size input parameters in step 13. The size:unit must be one of the following: TB, GB, MB, KB, or Byte.
- Choose the policyType, ips, and the nfsVersion parameters in the exportPolicyInfo input parameter in step 10 if you choose to create a volume using the NFS protocol. The ips parameter signifies the client IP address (could be multiple addresses) that can access the volume over the network.
  The nfsVersion parameter signifies the version of the NFS protocol that a client will use for data transmission over a network.

[NOTE] If you choose to create a volume using CIFS protocol, you will need to set the shareInfo parameter. If you choose to create a volume using iSCSI protocol, you will need to set the iscsiInfo parameter accordingly.

Step 14. Create the system

You can issue a REST API call to create a system.

HTTP method and endpoint

This REST API call uses the following method and endpoint.

HTTP method	Path
POST	/occm/api/aws/ha/working-environments

Curl example

```
curl --request POST \
--location "https://api.bluexp.netapp.com/occm/api/aws/ha/working-environments" \
--header "x-agent-id: <AGENT_ID>" \
--header "Authorization: Bearer <ACCESS_TOKEN>" \
--header "Content-Type: application/json" \
--d @JSONinput
```

Curl

Copy

Enable Elastic Volumes

Disable Elastic Volumes

The ebsVolumeType parameter must be gp3 or io1.

disableEv: boolean, default value is false. By default, new Cloud Volumes ONTAP instances are created with Elastic Volumes enabled on aggregates.

```
{
  "name": "bycapacitycvo",
  "tenantId": "workspace-ksJa8vEY",
  "region": "us-east-1",
```

```
"packageName": "aws_custom",
"dataEncryptionType": "AWS",
"capacityTier": "S3",
"tierLevel": "normal",
"vsaMetadata": {
  "ontapVersion": "ONTAP-9.11.1RC1.T1",
  "licenseType": "capacity-paygo",
  "instanceType": "m5.2xlarge",
  "capacityPackageName": "Professional"
},
"nssAccount": "b247b000-d0b3-4e05-bdca-f5e26a7xxb9",
"writingSpeedState": "NORMAL",
"subnetId": "subnet-xxx55de",
"svmPassword": "password",
"vpcId": "vpc-a762xx00",
"ontapEncryptionParameters": null,
"ebsVolumeType": "gp2",
"disableEv": "true",
"ebsVolumeSize": {
  "size": 1,
  "unit": "TB",
  "_identifier": "1 TB"
},
"awsTags": [],
"optimizedNetworkUtilization": true,
"instanceTenancy": "default",
"iops": null,
"throughput": null,
"instanceProfileName": null,
```

```
  "cloudProviderAccount": "InstanceProfile",
  "saasSubscriptionId": "aws-a0s9zvu5ghepz0j9yamr2wsjk-FJsUvVHffi9",
  "backupVolumesToCbs": false,
  "enableCompliance": false,
  "enableMonitoring": false
}
```

JSON

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This API request uses the hourly pay-as-you-go (PAYGO) subscription as indicated in the licenseType parameter.

JSON output example

The JSON output includes an example of the HA system details.


```
{
    "publicId": "VsaWorkingEnvironment-sQ9AELDS",
    "name": "ziv04we02ha",
    "tenantId": "tenantIDshownhere",
    "svmName": "svm_ziv04we02ha",
    "creatorUserEmail": "user_email",
    "status": null,
    "awsProperties": null,
    "reservedSize": null,
    "encryptionProperties": null,
    "clusterProperties": null,
    "ontapClusterProperties": null,
    "actionsRequired": null,
    "interClusterLifs": null,
    "cronJobSchedules": null,
    "snapshotPolicies": null,
    "svms": null,
```

```
    "activeActions": null,
    "replicationProperties": null,
    "schedules": null,
    "cloudProviderName": "Amazon",
    "isHA": true,
    "workingEnvironmentType": "VSA",
    "supportRegistrationProperties": null,
    "supportRegistrationInformation": null,
    "haProperties": null,
    "capacityFeatures": null,
    "cloudSyncProperties": null,
    "supportedFeatures": null,
    "k8sProperties": null,
    "fpolicyProperties": null,
    "saasProperties": null,
    "cbsProperties": null,
    "complianceProperties": null,
    "monitoringProperties": null
}
```