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create-image.html).
If you would like to suggest an improvement or fix for the AWS CLI, check out our contributing guide (https://github.com/aws/aws-cli/blob/develop/CONTRIBUTING.md) on GitHub.

User Guide

First time using the AWS CLI? See the User Guide (https://docs.aws.amazon.com/cli/latest/userguide/) for help getting started.

Note:

You are viewing the documentation for an older major version of the AWS CLI (version 1).

AWS CLI version 2, the latest major version of AWS CLI, is now stable and recommended for general use. To view this page for the AWS CLI version 2, click here (https://awscli.amazonaws.com/v2/documentation/api/latest/reference/ec2/create-image.html). For more information see the AWS CLI version 2 installation instructions (https://docs.aws.amazon.com/cli/latest/userguide/install-cliv2.html) and migration guide (https://docs.aws.amazon.com/cli/latest/userguide/cliv2-migration.html).

create-image ¶

Description ¶

Creates an Amazon EBS-backed AMI from an Amazon EBS-backed instance that is either running or stopped.

If you customized your instance with instance store volumes or Amazon EBS volumes in addition to the root device volume, the new AMI contains block device mapping information for those volumes. When you launch an instance from this new AMI, the instance automatically launches with those additional volumes.

For more information, see Create an Amazon EBS-backed Linux AMI (https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/creating-an-ami-ebs.html) in the *Amazon Elastic Compute Cloud User Guide* .

See also: AWS API Documentation (https://docs.aws.amazon.com/goto/WebAPI/ec2-2016-11-15/CreateImage)

Synopsis ¶

```
  create-image
[--block-device-mappings <value>]
[--description <value>]
[--dry-run | --no-dry-run]
--instance-id <value>
--name <value>
[--no-reboot | --reboot]
[--tag-specifications <value>]
[--cli-input-json <value>]
[--generate-cli-skeleton <value>]
[--debug]
[--endpoint-url <value>]
[--no-verify-ssl]
[--no-paginate]
[--output <value>]
[--query <value>]
[--profile <value>]
[--region <value>]
[--version <value>]
[--color <value>]
[--no-sign-request]
[--ca-bundle <value>]
[--cli-read-timeout <value>]
[--cli-connect-timeout <value>]
```

Options ¶

`--block-device-mappings` (list)

The block device mappings.

When using the CreateImage action:

- You can't change the volume size using the VolumeSize parameter. If you want a different volume size, you must first change the volume size of the source instance.
- You can't modify the encryption status of existing volumes or snapshots. To create an AMI with volumes or snapshots that have a different encryption status (for example, where the source volume and snapshots are unencrypted, and you want to create an AMI with encrypted volumes or snapshots), use the CopyImage action.
- The only option that can be changed for existing mappings or snapshots is `DeleteOnTermination` .

(structure)

Describes a block device mapping, which defines the EBS volumes and instance store volumes to attach to an instance at launch.

DeviceName -> (string)

The device name (for example, `/dev/sdh` or `xvdh`).

VirtualName -> (string)

The virtual device name (`ephemeral` N). Instance store volumes are numbered starting from 0. An instance type with 2 available instance store volumes can specify mappings for `ephemeral0` and `ephemeral1` . The number of available instance store volumes depends on the instance type. After you connect to the instance, you must mount the volume.

NVMe instance store volumes are automatically enumerated and assigned a device name. Including them in your block device mapping has no effect.

Constraints: For M3 instances, you must specify instance store volumes in the block device mapping for the instance. When you launch an M3 instance, we ignore any instance store volumes specified in the block device mapping for the AMI.

Ebs -> (structure)

Parameters used to automatically set up EBS volumes when the instance is launched.

DeleteOnTermination -> (boolean)

Indicates whether the EBS volume is deleted on instance termination. For more information, see Preserving Amazon EBS volumes on instance termination (https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/terminating-instances.html#preserving-volumes-on-termination) in the *Amazon EC2 User Guide* .

Iops -> (integer)

The number of I/O operations per second (IOPS). For `gp3` , `io1` , and `io2` volumes, this represents the number of IOPS that are provisioned for the volume. For `gp2` volumes, this represents the baseline performance of the volume and the rate at which the volume accumulates I/O credits for bursting.

The following are the supported values for each volume type:

- `gp3` : 3,000 - 16,000 IOPS
- `io1` : 100 - 64,000 IOPS
- `io2` : 100 - 256,000 IOPS

For `io2` volumes, you can achieve up to 256,000 IOPS on instances built on the Nitro System (https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instance-types.html#ec2-nitro-instances) . On other instances, you can achieve performance up to 32,000 IOPS.

This parameter is required for `io1` and `io2` volumes. The default for `gp3` volumes is 3,000 IOPS.

SnapshotId -> (string)

The ID of the snapshot.

VolumeSize -> (integer)

The size of the volume, in GiBs. You must specify either a snapshot ID or a volume size. If you specify a snapshot, the default is the snapshot size. You can specify a volume size that is equal to or larger than the snapshot size.

The following are the supported sizes for each volume type:

- `gp2` and `gp3` : 1 - 16,384 GiB
- `io1` : 4 - 16,384 GiB
- `io2` : 4 - 65,536 GiB
- `st1` and `sc1` : 125 - 16,384 GiB
- `standard` : 1 - 1024 GiB

VolumeType -> (string)

The volume type. For more information, see Amazon EBS volume types (https://docs.aws.amazon.com/ebs/latest/userguide/ebs-volume-types.html) in the *Amazon EBS User Guide* .

KmsKeyId -> (string)

Identifier (key ID, key alias, ID ARN, or alias ARN) for a customer managed CMK under which the EBS volume is encrypted.

This parameter is only supported on `BlockDeviceMapping` objects called by RunInstances (https://docs.aws.amazon.com/AWSEC2/latest/APIReference/API_RunInstances.html) , RequestSpotFleet (https://docs.aws.amazon.com/AWSEC2/latest/APIReference/API_RequestSpotFleet.html) , and RequestSpotInstances (https://docs.aws.amazon.com/AWSEC2/latest/APIReference/API_RequestSpotInstances.html) .

Throughput -> (integer)

The throughput that the volume supports, in MiB/s.

This parameter is valid only for `gp3` volumes.

Valid Range: Minimum value of 125. Maximum value of 1000.

OutpostArn -> (string)

The ARN of the Outpost on which the snapshot is stored.

This parameter is not supported when using CreateImage (https://docs.aws.amazon.com/AWSEC2/latest/APIReference/API_CreateImage.html) .

Encrypted -> (boolean)

Indicates whether the encryption state of an EBS volume is changed while being restored from a backing snapshot. The effect of setting the encryption state to `true` depends on the volume origin (new or from a snapshot), starting encryption state, ownership, and whether encryption by default is enabled. For more information, see Amazon EBS encryption (https://docs.aws.amazon.com/ebs/latest/userguide/ebs-encryption.html#encryption-parameters) in the *Amazon EBS User Guide* .

In no case can you remove encryption from an encrypted volume.

Encrypted volumes can only be attached to instances that support Amazon EBS encryption. For more information, see Supported instance types (https://docs.aws.amazon.com/ebs/latest/userguide/ebs-encryption-requirements.html#ebs-encryption_supported_instances) .

This parameter is not returned by DescribeImageAttribute .

For CreateImage and RegisterImage , whether you can include this parameter, and the allowed values differ depending on the type of block device mapping you are creating.

- If you are creating a block device mapping for a **new (empty) volume** , you can include this parameter, and specify either `true` for an encrypted volume, or `false` for an unencrypted volume. If you omit this parameter, it defaults to `false` (unencrypted).
- If you are creating a block device mapping from an **existing encrypted or unencrypted snapshot** , you must omit this parameter. If you include this parameter, the request will fail, regardless of the value that you specify.
- If you are creating a block device mapping from an **existing unencrypted volume** , you can include this parameter, but you must specify `false` . If you specify `true` , the request will fail. In this case, we recommend that you omit the parameter.
- If you are creating a block device mapping from an **existing encrypted volume** , you can include this parameter, and specify either `true` or `false` . However, if you specify `false` , the parameter is ignored and the block device mapping is always encrypted. In this case, we recommend that you omit the parameter.

NoDevice -> (string)

To omit the device from the block device mapping, specify an empty string. When this property is specified, the device is removed from the block device mapping regardless of the assigned value.

Shorthand Syntax:

```
DeviceName=string,VirtualName=string,Ebs={DeleteOnTermination=boolea
n,Iops=integer,SnapshotId=string,VolumeSize=integer,VolumeType=strin
g,KmsKeyId=string,Throughput=integer,OutpostArn=string,Encrypted=boo
lean},NoDevice=string ...
```

JSON Syntax:

```
[
  {
    "DeviceName": "string",
    "VirtualName": "string",
    "Ebs": {
      "DeleteOnTermination": true|false,
      "Iops": integer,
      "SnapshotId": "string",
      "VolumeSize": integer,
      "VolumeType": "standard"|"io1"|"io2"|"gp2"|"sc1"|"st1"|"gp3",
      "KmsKeyId": "string",
      "Throughput": integer,
      "OutpostArn": "string",
      "Encrypted": true|false
    },
    "NoDevice": "string"
  }
  ...
]
```

`--description` (string)

A description for the new image.

`--dry-run` | `--no-dry-run` (boolean)

Checks whether you have the required permissions for the action, without actually making the request, and provides an error response. If you have the required permissions, the error response is `DryRunOperation` . Otherwise, it is `UnauthorizedOperation` .

`--instance-id` (string)

The ID of the instance.

`--name` (string)

A name for the new image.

Constraints: 3-128 alphanumeric characters, parentheses (()), square brackets ([]), spaces ( ), periods (.), slashes (/), dashes (-), single quotes ('), at-signs (@), or underscores(_)

`--no-reboot` | `--reboot` (boolean)

Indicates whether or not the instance should be automatically rebooted before creating the image. Specify one of the following values:

- `true` - The instance is not rebooted before creating the image. This creates crash-consistent snapshots that include only the data that has been written to the volumes at the time the snapshots are created. Buffered data and data in memory that has not yet been written to the volumes is not included in the snapshots.
- `false` - The instance is rebooted before creating the image. This ensures that all buffered data and data in memory is written to the volumes before the snapshots are created.

Default: `false`

`--tag-specifications` (list)

The tags to apply to the AMI and snapshots on creation. You can tag the AMI, the snapshots, or both.

- To tag the AMI, the value for `ResourceType` must be `image` .
- To tag the snapshots that are created of the root volume and of other Amazon EBS volumes that are attached to the instance, the value for `ResourceType` must be `snapshot` . The same tag is applied to all of the snapshots that are created.

If you specify other values for `ResourceType` , the request fails.

To tag an AMI or snapshot after it has been created, see CreateTags (https://docs.aws.amazon.com/AWSEC2/latest/APIReference/API_CreateTags.html) .

(structure)

The tags to apply to a resource when the resource is being created. When you specify a tag, you must specify the resource type to tag, otherwise the request will fail.

> **Note:**
>
> The `Valid Values` lists all the resource types that can be tagged. However, the action you're using might not support tagging all of these resource types. If you try to tag a resource type that is unsupported for the action you're using, you'll get an error.

ResourceType -> (string)

The type of resource to tag on creation.

Tags -> (list)

The tags to apply to the resource.

(structure)

Describes a tag.

Key -> (string)

The key of the tag.

Constraints: Tag keys are case-sensitive and accept a maximum of 127 Unicode characters. May not begin with `aws:` .

Value -> (string)

The value of the tag.

Constraints: Tag values are case-sensitive and accept a maximum of 256 Unicode characters.

Shorthand Syntax:

```
ResourceType=string,Tags=[{Key=string,Value=string},{Key=string,Valu
e=string}] ...
```

JSON Syntax:

```
[
  {
    "ResourceType": "capacity-reservation"|"client-vpn-endpoint"|"cu
stomer-gateway"|"carrier-gateway"|"coip-pool"|"dedicated-host"|"dhcp
-options"|"egress-only-internet-gateway"|"elastic-ip"|"elastic-gp
u"|"export-image-task"|"export-instance-task"|"fleet"|"fpga-imag
e"|"host-reservation"|"image"|"import-image-task"|"import-snapshot-t
ask"|"instance"|"instance-event-window"|"internet-gateway"|"ipam"|"i
pam-pool"|"ipam-scope"|"ipv4pool-ec2"|"ipv6pool-ec2"|"key-pair"|"lau
nch-template"|"local-gateway"|"local-gateway-route-table"|"local-gat
eway-virtual-interface"|"local-gateway-virtual-interface-group"|"loc
al-gateway-route-table-vpc-association"|"local-gateway-route-table-v
irtual-interface-group-association"|"natgateway"|"network-acl"|"netw
ork-interface"|"network-insights-analysis"|"network-insights-pat
h"|"network-insights-access-scope"|"network-insights-access-scope-an
alysis"|"placement-group"|"prefix-list"|"replace-root-volume-tas
k"|"reserved-instances"|"route-table"|"security-group"|"security-gro
up-rule"|"snapshot"|"spot-fleet-request"|"spot-instances-request"|"s
ubnet"|"subnet-cidr-reservation"|"traffic-mirror-filter"|"traffic-mi
rror-session"|"traffic-mirror-target"|"transit-gateway"|"transit-gat
eway-attachment"|"transit-gateway-connect-peer"|"transit-gateway-mul
ticast-domain"|"transit-gateway-policy-table"|"transit-gateway-route
-table"|"transit-gateway-route-table-announcement"|"volume"|"vpc"|"v
pc-endpoint"|"vpc-endpoint-connection"|"vpc-endpoint-service"|"vpc-e
ndpoint-service-permission"|"vpc-peering-connection"|"vpn-connectio
n"|"vpn-gateway"|"vpc-flow-log"|"capacity-reservation-fleet"|"traffi
c-mirror-filter-rule"|"vpc-endpoint-connection-device-type"|"verifie
d-access-instance"|"verified-access-group"|"verified-access-endpoin
t"|"verified-access-policy"|"verified-access-trust-provider"|"vpn-co
nnection-device-type"|"vpc-block-public-access-exclusion"|"ipam-reso
urce-discovery"|"ipam-resource-discovery-association"|"instance-conn
ect-endpoint",
    "Tags": [
      {
        "Key": "string",
        "Value": "string"
      }
      ...
    ]
  }
  ...
]
```

`--cli-input-json` (string) Performs service operation based on the JSON string provided. The JSON string follows the format provided by `--generate-cli-skeleton`. If other arguments are provided on the command line, the CLI values will override the JSON-provided values. It is not possible to pass arbitrary binary values using a JSON-provided value as the string will be taken literally.

`--generate-cli-skeleton` (string) Prints a JSON skeleton to standard output without sending an API request. If provided with no value or the value `input`, prints a sample input JSON that can be used as an argument for `--cli-input-json`. If provided with the value `output`, it validates the command inputs and returns a sample output JSON for that command.

Global Options ¶

`--debug` (boolean)

Turn on debug logging.

`--endpoint-url` (string)

Override command's default URL with the given URL.

`--no-verify-ssl` (boolean)

By default, the AWS CLI uses SSL when communicating with AWS services. For each SSL connection, the AWS CLI will verify SSL certificates. This option overrides the default behavior of verifying SSL certificates.

`--no-paginate` (boolean)

Disable automatic pagination.

`--output` (string)

The formatting style for command output.

- json
- text
- table

`--query` (string)

A JMESPath query to use in filtering the response data.

`--profile` (string)

Use a specific profile from your credential file.

`--region` (string)

The region to use. Overrides config/env settings.

`--version` (string)

Display the version of this tool.

`--color` (string)

Turn on/off color output.

- on
- off
- auto

`--no-sign-request` (boolean)

Do not sign requests. Credentials will not be loaded if this argument is provided.

`--ca-bundle` (string)

The CA certificate bundle to use when verifying SSL certificates. Overrides config/env settings.

`--cli-read-timeout` (int)

The maximum socket read time in seconds. If the value is set to 0, the socket read will be blocking and not timeout. The default value is 60 seconds.

`--cli-connect-timeout` (int)

The maximum socket connect time in seconds. If the value is set to 0, the socket connect will be blocking and not timeout. The default value is 60 seconds.

Examples ¶

Note:

To use the following examples, you must have the AWS CLI installed and configured. See the Getting started guide (https://docs.aws.amazon.com/cli/v1/userguide/cli-configure-quickstart.html) in the *AWS CLI User Guide* for more information.

Unless otherwise stated, all examples have unix-like quotation rules. These examples will need to be adapted to your terminal's quoting rules. See Using quotation marks with strings (https://docs.aws.amazon.com/cli/v1/userguide/cli-usage-parameters-quoting-strings.html) in the *AWS CLI User Guide* .

Example 1: To create an AMI from an Amazon EBS-backed instance

The following `create-image` example creates an AMI from the specified instance.

```
aws ec2 create-image \
    --instance-id i-1234567890abcdef0 \
    --name "My server" \
    --description "An AMI for my server"
```

Output:

```
{
    "ImageId": "ami-abcdef01234567890"
}
```

For more information about specifying a block device mapping for your AMI, see Specifying a block device mapping for an AMI (https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/block-device-mapping-concepts.html#create-ami-bdm) in the *Amazon EC2 User Guide*.

Example 2: To create an AMI from an Amazon EBS-backed instance without reboot

The following `create-image` example creates an AMI and sets the --no-reboot parameter, so that the instance is not rebooted before the image is created.

```
aws ec2 create-image \
    --instance-id i-1234567890abcdef0 \
    --name "My server" \
    --no-reboot
```

Output:

```
{
    "ImageId": "ami-abcdef01234567890"
}
```

For more information about specifying a block device mapping for your AMI, see Specifying a block device mapping for an AMI (https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/block-device-mapping-concepts.html#create-ami-bdm) in the *Amazon EC2 User Guide*.

Example 3: To tag an AMI and snapshots on creation

The following `create-image` example creates an AMI, and tags the AMI and the snapshots with the same tag `cost-center=cc123`

```
aws ec2 create-image \
    --instance-id i-1234567890abcdef0 \
    --name "My server" \
    --tag-specifications "ResourceType=image,Tags=[{Key=cost-center,
Value=cc123}]" "ResourceType=snapshot,Tags=[{Key=cost-center,Value=c
c123}]"
```

Output:

```
{
    "ImageId": "ami-abcdef01234567890"
}
```

For more information about tagging your resources on creation, see Add tags on resource creation (https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Using_Tags.html#tag-on-create-examples) in the *Amazon EC2 User Guide*.

Output ¶

ImageId -> (string)

> The ID of the new AMI.

← create-fpga-image (create-fpga-image.html) / create-instance-connect-endpoint → (create-instance-connect-endpoint.html)