

# Welcome

## Topics

- [Who Should Read This Guide](#)
- [Reader Feedback](#)
- [How This Guide Is Organized](#)
- [Amazon EC2 Resources](#)

This is the *Amazon Elastic Compute Cloud* Command Line Tools Reference Guide. It provides the syntax, a description, options, and usage examples for each command line tool. This section describes who should read this guide, how the guide is organized, and other resources related to Amazon Elastic Compute Cloud.

The Amazon Elastic Compute Cloud is occasionally referred to within this guide as simply "Amazon EC2"; all copyrights and legal protections still apply.

# Who Should Read This Guide

This guide is intended for users that administer Amazon EC2 instances using the command line tools.

## Required Knowledge and Skills

Use of this guide assumes you are familiar with the following:

- Basic understanding of web services (go to [W3 Schools Web Services Tutorial](#))
- Experience using Amazon EC2 obtained by working through the [Amazon Elastic Compute Cloud Getting Started Guide](#),
- A basic understanding of the command line AMI and API tools (which were installed when working through the [Amazon Elastic Compute Cloud Getting Started Guide](#)).



### Note

For high level concepts and examples of how to use major Amazon EC2 features, go to the [Amazon Elastic Compute Cloud User Guide](#).

# Reader Feedback

The online version of this guide provides a link at the top of each page that enables you to enter feedback about this guide. We strive to make our guides as complete, error free, and easy to read as possible. You can help by giving us feedback. Thank you in advance!

[Documentation Feedback](#)



Welcome

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# How This Guide Is Organized

This guide is organized into several major sections described in the following table.

Information	Relevant Sections
Comprehensive reference to the tools for creating Amazon EC2 AMIs.	<a href="#">AMI Tools Reference</a>
Comprehensive reference to the Amazon EC2 command line tools.	<a href="#">API Command Line Tools Reference</a>
Amazon EC2 terms.	<a href="#">Glossary</a>
Typographic and symbol conventions.	<a href="#">Document Conventions</a>

# Amazon EC2 Resources

The following table lists related resources that you'll find useful as you work with this service.

Resource	Description
<a href="#">Amazon Elastic Compute Cloud Getting Started Guide</a>	The Getting Started Guide provides a quick tutorial of the service based on a simple use case. Examples and instructions are included.
<a href="#">Amazon Elastic Compute Cloud User Guide</a>	The Console and Command Line User Guide provides conceptual information about Amazon EC2 and describes how to use Amazon EC2 features using the AWS Management Console and command line tools.
<a href="#">Amazon Elastic Compute Cloud Developer Guide</a>	The Developer Guide provides conceptual information about Amazon EC2 and describes how to use Amazon EC2 features using the SOAP and Query APIs.
<a href="#">Amazon Elastic Compute Cloud API Reference</a>	The API Reference contains a comprehensive description of all SOAP and Query APIs. Additionally, it contains a list of all SOAP data types.
<a href="#">Amazon Elastic Compute Cloud Command Line Reference</a>	The Command Line Tools Reference contains a comprehensive description of all the command line tools and their options.
<a href="#">Amazon EC2 Release Notes</a>	The Release Notes give a high-level overview of the current release. They specifically note any new features, corrections, and known issues.
<a href="#">AWS Developer Resource Center</a>	A central starting point to find documentation, code samples, release notes, and other information to help you build innovative applications with AWS.
<a href="#">Discussion Forums</a>	A community-based forum for developers to discuss technical questions related to Amazon Web Services.
<a href="#">AWS Support Center</a>	The home page for AWS Technical Support, including access to our Developer Forums, Technical FAQs, Service Status page, and AWS Premium Support (if you are subscribed to this program).
<a href="#">AWS Premium Support Information</a>	The primary web page for information about AWS Premium Support, a one-on-one, fast-response support channel to help you build and run applications on AWS Infrastructure Services.
Form for questions related to your AWS account: <a href="#">Contact Us</a>	This form is <i>only</i> for account questions. For technical questions, use the Discussion Forums.

[Conditions of Use](#)

Detailed information about the copyright and trademark usage at Amazon.com and other topics.

# What's New

This What's New is associated with the 2009-04-04 release of Amazon EC2. This guide was last updated on August 04, 2009.

The following table describes the important changes since the last release of the Amazon EC2 documentation set.

Change	Description	Release Date
Auto Scaling	<p>Auto Scaling enables you to automatically increase or decrease the number of running Amazon EC2 instances in response to your web application's usage and the configuration you define. Auto Scaling makes it easy for you to optimize your Amazon EC2 usage, automatically scaling your cluster to ensure your application has the right number of instances running to meet your workload demands. Auto Scaling is particularly well suited for applications that experience hourly, daily, or weekly variability in usage.</p> <p>For more information, see <a href="#">Amazon Auto Scaling Developer Guide</a>.</p>	18 May 2009
Elastic Load Balancing	<p>Elastic Load Balancing offers the ability to evenly spread requests across your running Amazon EC2 instances. Unlike traditional load balancers or load balancing software, there is no need to provision, manage, or plan for load balancing capacity needs. Each Elastic Load Balancer is automatically scaled, fully fault-tolerant, and distributes incoming application traffic across a group of Amazon EC2 instances.</p> <p>For more information, see <a href="#">Elastic Load Balancing Developer Guide</a>.</p>	18 May 2009
Amazon CloudWatch	<p>Amazon CloudWatch is a monitoring service for Amazon EC2 that is designed to gather, aggregate, store, and retrieve metrics. Amazon CloudWatch makes it easy to monitor your Amazon EC2 instances and aggregate metrics from instances like CPU or disk utilization over different time ranges and across different pools of resources. This service is tightly integrated with Amazon EC2's Auto Scaling and Elastic Load Balancing, enabling you to use monitoring metrics to trigger scaling activities.</p> <p>For more information, see <a href="#">Amazon CloudWatch Developer Guide</a>.</p>	18 May 2009

New Guides

Amazon EC2 now consists of six guides:

18 May  
2009

- [\*\*Amazon Elastic Compute Cloud Getting Started Guide\*\*](#)—Describes how to set up your environment and get started with Amazon EC2.
- [\*\*Amazon Elastic Compute Cloud User Guide\*\*](#)—Describes Amazon EC2 concepts and how to use Amazon EC2 with the AWS Management Console or the command line tools.
- [\*\*Amazon Elastic Compute Cloud Developer Guide\*\*](#)—Describes Amazon EC2 concepts and how to use Amazon EC2 with the APIs.
- [\*\*Amazon Elastic Compute Cloud API Reference\*\*](#)—Provides detailed information about the Amazon EC2 APIs.
- [\*\*Amazon Elastic Compute Cloud Command Line Reference\*\*](#)—Provides detailed information about the Amazon EC2 command line tools..
- [\*\*Amazon Elastic Compute Cloud Quick Reference Card\*\*](#)—Provides a quick summary of the Amazon EC2 command line tools.



# Getting the Command Line Tools

To use the commands described in this guide, you must install both the AMI tools and the API tools. The AMI tools create, bundle, and migrate AMIs between regions. The API tools mirror the Amazon EC2 SOAP and Query APIs and enable you to perform all other functions. For information on setting up and using the tools, go to [Amazon Elastic Compute Cloud Getting Started Guide](#) and [Amazon Elastic Compute Cloud User Guide](#).

# AMI Tools Reference

## Topics

- [Common Options for AMI Tools](#)
- [ec2-bundle-image](#)
- [ec2-bundle-vol](#)
- [ec2-delete-bundle](#)
- [ec2-download-bundle](#)
- [ec2-migrate-bundle](#)
- [ec2-migrate-manifest](#)
- [ec2-unbundle](#)
- [ec2-upload-bundle](#)

# Common Options for AMI Tools

Most AMI tools described in this section accept the set of optional parameters described in the following table.

Option	Description
--help, -h	Display the help message.
--version	Displays the version and copyright notice.
--manual	Displays the manual entry.
--batch	Runs in batch mode, suppressing user interaction and confirmation.
--debug	Prints internal debugging information. This is useful to assist us when troubleshooting problems.

# **ec2-bundle-image**

# Description

Create a bundled AMI from an operating system image created in a loopback file. For more information, go to the

[Amazon Elastic Compute Cloud Getting Started Guide](#) or [Amazon Elastic Compute Cloud User Guide](#).



## Note

Scripts that require a copy of the public key from the launch key pair must obtain the key from the instance's metadata (not the key file in the instance store) for instances bundled with the 2007-08-29 AMI tools and later. AMIs bundled before this release will continue to work normally.

## Syntax

```
ec2-bundle-image -k private_key -c cert -u user_id -i  
image_path -r {i386 | x86_64} [-d destination] [-p  
ami_prefix] [--ec2cert cert_path] [--kernel kernel-id]  
[--ramdisk ramdisk_id] [--block-device-  
mapping block_device_mapping]
```

# Options

Option	Description	Required
<code>-k, --privatekey private_key</code>	The path to the user's PEM-encoded RSA key file. Example: <code>-k pk-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-c, --cert cert</code>	The user's PEM encoded RSA public key certificate file. Example: <code>-c cert-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-u, --user user_id</code>	The user's AWS account number without dashes. Do not use the Access Key ID. Example: <code>-u AIDADH4IGTRXXKCD</code>	Yes
<code>-i, --image image_path</code>	The path to the image to bundle. Example: <code>-i /var/spool/my-image/version-2/debian.img</code>	Yes
<code>-d, --destination destination</code>	The directory in which to create the bundle. Default: The current directory Example: <code>-d /var/run/my-bundle</code>	No
<code>-p, --prefix ami_prefix</code>	The filename prefix for bundled AMI files. Default: <code>image</code> Example: <code>-p my-image-is-special</code>	No
<code>--ec2cert cert_path</code>	The path to the Amazon EC2 X.509 public key certificate. Default: <code>/etc/ec2/amitools/cert-ec2.pem</code> (varies, depending on tools) Example: <code>--ec2cert /etc/ec2/amiutil/cert-ec2.pem</code>	No
<code>--kernel kernel_id</code>	The ID of the kernel to select. Default: <code>2.6.16-xenU</code> Example: <code>--kernel aki-ba3adfd3</code>	No
<code>--ramdisk ramdisk_id</code>	The ID of the RAM disk to select. Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk. To find kernel requirements, go to the <a href="#">Resource Center</a> and search for the kernel ID. Example: <code>--ramdisk ari-badbad00</code>	No
<code>--block-device-</code>	Default block-device-mapping scheme with which to launch the AMI. This defines how block devices are exposed to an instance of this AMI if the instance	No

mapping  
mappings

type supports the specified device.

The scheme is a comma-separated list of key=value pairs, where each key is a virtual name and each value is the desired device name. Virtual names include:

- **ami**—The root file system device, as seen by the instance
- **root**—The root file system device, as seen by the kernel
- **swap**—The swap device, as seen by the instance
- **ephemeralN**—The Nth ephemeral store

Example: `--block-device-mapping  
ami=sda1,root=/dev/sda1,ephemeral0=sda2,swap=sda3`

Example: `--block-device-mapping  
ami=0,root=/dev/dsk/c0d0s0,ephemeral0=1`



# **Output**

Status messages describing the stages and status of the bundling process.

## Example

This example creates a bundled AMI from an operating system image that was created in a loopback file.

```
$ ec2-bundle-image -k pk-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55  
Splitting bundled/fred.gz.crypt...  
Created fred.part.00  
Created fred.part.01  
Created fred.part.02  
Created fred.part.03  
Created fred.part.04  
Created fred.part.05  
Created fred.part.06  
Created fred.part.07  
Created fred.part.08  
Created fred.part.09  
Created fred.part.10  
Created fred.part.11  
Created fred.part.12  
Created fred.part.13  
Created fred.part.14  
Generating digests for each part...  
Digests generated.  
Creating bundle manifest...  
Bundle Image complete.
```

## Related Topics

- [ec2-bundle-vol](#)
- [ec2-unbundle](#)
- [ec2-upload-bundle](#)
- [ec2-download-bundle](#)
- [ec2-delete-bundle](#)

**ec2-bundle-vol**

# Description

Creates a bundled AMI by compressing, encrypting and signing a snapshot of the local machine's root file system.



## Note

Scripts that require a copy of the public key from the launch key pair must obtain the key from the instance's metadata (not the key file in the instance store) for instances bundled with the 2007-08-29 AMI tools and later. AMIs bundled before this release will continue to work normally.

On a running instance, Amazon EC2 attempts to inherit product codes, kernel settings, RAM disk settings, and block device mappings with which the instance launched.

## Syntax

```
ec2-bundle-vol -k private_key -u user_id -c cert -r  
{i386 | x86_64} [-s size] [-d destination] [-e  
exclude_directory_1,exclude_directory_1,...] [-p  
ami_prefix] [-v volume] [--ec2cert cert_path] [--fstab  
fstab_path] [--generate-fstab] [--kernel kernel-id] [--  
ramdisk ramdisk_id] [--block-device-  
mappingblock_device_mapping]
```

# Options

Option	Description	Required
<code>-k, --privatekey private_key</code>	The path to the user's PEM-encoded RSA key file.  Example: <code>-k pk-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-c, --cert cert</code>	The user's PEM encoded RSA public key certificate file.  Example: <code>-c cert-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-u, --user user_id</code>	The user's AWS account number without dashes. Do not use the Access Key ID.  Example: <code>-u AIDADH4IGTRXXKCD</code>	Yes
<code>-s, --size size</code>	The size, in MB (1024 * 1024 bytes), of the image file to create. The maximum size is 10240 MB.  Default: 10240  Example: <code>-s 2048</code>	No
<code>-d, --destination destination</code>	The directory in which to create the bundle.  Default: <code>/tmp</code>  Example: <code>-d /var/run/my-bundle</code>	No
<code>-e, --exclude directory_1,directory_2,...</code>	A list of absolute directory paths and files to exclude from the bundle operation. This overrides the <code>--all</code> parameter.  Example: <code>-e /tmp,/home/secret-data</code>	No
<code>-p, --prefix ami_prefix</code>	The filename prefix for bundled AMI files.  Default: <code>image</code>  Example: <code>-p my-image-is-special</code>	No
<code>-v, --volume volume</code>	The absolute path to the mounted volume from which to create the bundle.  Default: The root directory ( <code>/</code> )  Example: <code>-v /mnt/my-customized-ami</code>	No
<code>-a, --all</code>	Bundle all directories, including those on remotely mounted filesystems.  Example: <code>-a</code>	No
<code>--ec2cert cert_path</code>	The path to the Amazon EC2 X.509 public key certificate.	No

	<p>Default: <code>/etc/ec2/amiutils/cert-ec2.pem</code> (varies, depending on tools)</p> <p>Example: <code>--ec2cert /etc/ec2/amiutil/cert-ec2.pem</code></p>	
<code>--fstab <i>fstab_path</i></code>	<p>The path to the fstab to bundle into the image. If this is not specified, Amazon EC2 bundles <code>/etc/fstab</code>.</p> <p>Example: <code>--fstab /etc/fstab</code></p>	No
<code>--generate-fstab</code>	<p>Causes Amazon EC2 to bundle the volume using an Amazon EC2-provided fstab.</p> <p>Example: <code>--generate-fstab</code></p>	No
<code>--kernel <i>kernel_id</i></code>	<p>The ID of the kernel to select.</p> <p>Example: <code>--kernel aki-ba3adfd3</code></p>	No
<code>--ramdisk <i>ramdisk_id</i></code>	<p>The ID of the RAM disk to select.</p> <p>Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk. To find the kernel requirements, go to the</p>	

[Resource Center](#) and search for the kernel ID.

Example: `--ramdisk ari-badbad00`

No

`--block-device-mapping mappings`

Default block-device-mapping scheme with which to launch the AMI. This defines how block devices are exposed to an instance of this AMI if the instance type supports the specified device.

The scheme is a comma-separated list of key=value pairs, where each key is a virtual name and each value is the



desired device name. Virtual names include:

- **ami**—The root file system device, as seen by the instance
- **root**—The root file system device, as seen by the kernel
- **swap**—The swap device, as seen by the instance
- **ephemeralN**—The Nth ephemeral store

Example: `--block-device-mapping  
ami=sda1,root=/dev/sda1,ephemeral0=sda2,swap=sd`

Example: `--block-device-mapping  
ami=0,root=/dev/dsk/c0d0s0,ephemeral0=1`

No

# **Output**

Status messages describing the stages and status of the bundling.

## Example

This example creates a bundled AMI by compressing, encrypting and signing a snapshot of the local machine's root file system.

```
$ ec2-bundle-vol -d /mnt -k pk-HKZYKTAIG2ECMXIYIBH3HXV4
  Copying / into the image file /mnt/image.img...
  Excluding:
    sys
    dev/shm
    proc
    dev/pts
    proc/sys/fs/binfmt_misc
    dev
    media
    mnt
    proc
    sys
    tmp/image.img
    mnt/img-mnt
  1+0 records in
  1+0 records out
  mke2fs 1.38 (30-Jun-2005)
  warning: 256 blocks unused.

  Splitting /mnt/image.gz.crypt...
  Created image.part.00
  Created image.part.01
  Created image.part.02
  Created image.part.03
  ...
  Created image.part.22
  Created image.part.23
  Generating digests for each part...
  Digests generated.
  Creating bundle manifest...
  Bundle Volume complete.
```



## Related Topics

- [ec2-bundle-image](#)
- [ec2-unbundle](#)
- [ec2-upload-bundle](#)
- [ec2-download-bundle](#)
- [ec2-delete-bundle](#)

# **ec2-delete-bundle**

## **Description**

Deletes the specified bundle from Amazon S3 storage.

## Syntax

```
ec2-delete-bundle -b s3_bucket -a access_key_id -s  
secret_key [-m manifest_path] [-p ami_prefix] [--url  
url] [--retry] [-y] [--clear]
```



# Options

Option	Description	Required
<code>-b, --bucket</code> <i>s3_bucket</i>	The name of the Amazon S3 bucket containing the bundled AMI, followed by an optional '/'-delimited path prefix  Example: <code>-b ec2-cracker-ami-bucket</code>	Yes
<code>-a, --access-key</code> <i>access_key_id</i>	The AWS access key ID.  Example: <code>-a AKIADQKE4SARGYLE</code>	Yes
<code>-s, --secret-key</code> <i>secret_key</i>	The AWS secret access key.  Example: <code>-s ew91dHVizS5jb20vd2F0Y2g/dj1SU3NKMT1zeTNKSQ==</code>	Yes
<code>-m, --manifest</code> <i>manifest_path</i>	The path to the unencrypted manifest file.  Example: <code>-m /var/spool/my-first-bundle/Manifest</code>  Condition: You must specify <code>--prefix</code> or <code>--manifest</code>	Conditional
<code>-p, --prefix</code> <i>ami_prefix</i>	The bundled AMI filename prefix.  Example: <code>-p eos-</code>  Condition: You must specify <code>--prefix</code> or <code>--manifest</code>	Conditional
<code>--url url</code>	The Amazon S3 service URL.  Default: <code>https://s3.amazonaws.com</code>  Example: <code>--url https://s3.amazonaws.ie</code>	No
<code>--retry</code>	Automatically retries on all Amazon S3 errors, up to five times per operation.  Example: <code>--retry</code>	No
<code>-y, --yes</code>	Automatically assumes the answer to all prompts is 'yes'.  Example: <code>-y</code>	No
<code>--clear</code>	Deletes the specified bundle from the Amazon S3 bucket and deletes the bucket, if empty.  Example: <code>--clear</code>	No

## **Output**

Amazon EC2 displays status messages indicating the stages and status of the delete process.

## Example

This example deletes a bundle from Amazon S3.

```
$ ec2-delete-bundle -b my-s3-bucket -a AKIADQKE4SARGYL
Deleting files:
my-s3-bucket/fred.manifest.xml
my-s3-bucket/fred.part.00
my-s3-bucket/fred.part.01
my-s3-bucket/fred.part.02
my-s3-bucket/fred.part.03
my-s3-bucket/fred.part.04
my-s3-bucket/fred.part.05
my-s3-bucket/fred.part.06
Continue? [y/n]
y
Deleted my-s3-bucket/fred.manifest.xml
Deleted my-s3-bucket/fred.part.00
Deleted my-s3-bucket/fred.part.01
Deleted my-s3-bucket/fred.part.02
Deleted my-s3-bucket/fred.part.03
Deleted my-s3-bucket/fred.part.04
Deleted my-s3-bucket/fred.part.05
Deleted my-s3-bucket/fred.part.06
ec2-delete-bundle complete.
```

## Related Topics

- 

[ec2-bundle-image](#)

- [ec2-bundle-vol](#)
- [ec2-unbundle](#)
- [ec2-upload-bundle](#)
- [ec2-download-bundle](#)

# **ec2-download-bundle**

## **Description**

Download the specified bundles from S3 storage.

## Syntax

```
ec2-download-bundle -b s3_bucket [-m manifest] -a  
access_key_id -s secret_key -k private_key [-p  
ami_prefix] [-d directory] [--url url]
```

# Options

Option	Description	Required
<code>-b, --bucket s3_bucket</code>	The name of the Amazon S3 bucket where the bundle is located, followed by an optional '/'-delimited path prefix.  Example: <code>-b ec2-cracked</code>	Yes
<code>-m, --manifest manifest</code>	The manifest path and filename.  Example: <code>-m /var/spool/my-first-bundle/Manifest</code>	No
<code>-a, --access-key access_key_id</code>	Your AWS access key ID.  Example: <code>-a AKIADQKE4SARGYLE</code>	Yes
<code>-s, --secret-key secret_key</code>	Your AWS secret access key.  Example: <code>-s ew91dHViZS5jb20vd2F0Y2g/dj1SU3NKMT1zeTNKSQ==</code>	Yes
<code>-k, --privatekey private_key</code>	The private key used to decrypt the manifest.  Example: <code>-k pk-HKZYKTAIG2ECMXYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-p, --prefix ami_prefix</code>	The filename prefix for the bundled AMI files.  Default: <code>image</code>  Example: <code>-p my-image</code>	No
<code>-d, --directory directory</code>	The directory where the downloaded bundle is saved. The directory must exist.  Default: The current working directory  Example: <code>-d /tmp/my-downloaded-bundle</code>	No
<code>--retry</code>	Automatically retries on all Amazon S3 errors, up to five times per operation.  Example: <code>--retry</code>	No
<code>--url url</code>	The S3 service URL.  Default: <code>https://s3.amazonaws.com</code>  Example: <code>--url https://s3.amazonaws.ie</code>	No



# **Output**

Status messages indicating the various stages of the download process are displayed.

## Example

This example creates the `bundled` directory and downloads the bundle from the `my-s3-bucket` Amazon S3 bucket.

```
$ mkdir bundled
$ ec2-download-bundle -b my-s3-bucket -m fred.manifest
downloading manifest https://s3.amazonaws.com/my-s3-bucket/image.ma
downloading part https://s3.amazonaws.com/my-s3-bucket/image.part.0
Downloaded image.part.00 from https://s3.amazonaws.com/my-s3-bucket
downloading part https://s3.amazonaws.com/my-s3-bucket/image.part.0
Downloaded image.part.01 from https://s3.amazonaws.com/my-s3-bucket
downloading part https://s3.amazonaws.com/my-s3-bucket/image.part.0
Downloaded image.part.02 from https://s3.amazonaws.com/my-s3-bucket
downloading part https://s3.amazonaws.com/my-s3-bucket/image.part.0
Downloaded image.part.03 from https://s3.amazonaws.com/my-s3-bucket
downloading part https://s3.amazonaws.com/my-s3-bucket/image.part.0
Downloaded image.part.04 from https://s3.amazonaws.com/my-s3-bucket
downloading part https://s3.amazonaws.com/my-s3-bucket/image.part.0
Downloaded image.part.05 from https://s3.amazonaws.com/my-s3-bucket
downloading part https://s3.amazonaws.com/my-s3-bucket/image.part.0
Downloaded image.part.06 from https://s3.amazonaws.com/my-s3-bucket
Download Bundle complete.
```



### Note

This example uses the Linux and UNIX `mkdir` command.

## Related Topics

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[ec2-bundle-image](#)

- [ec2-bundle-vol](#)
- [ec2-unbundle](#)
- [ec2-upload-bundle](#)
- [ec2-delete-bundle](#)

# **ec2-migrate-bundle**

# Description

Copy a bundled AMI from one region to another. For information on regions, go to the

[Amazon Elastic Compute Cloud User Guide](#).



## Note

After copying a bundled AMI to a new region, make sure to register it as a new AMI.

During migration, Amazon EC2 replaces the kernel and RAM disk in the manifest file with a kernel and RAM disk designed for the destination region. Unless the `--no-mapping` parameter is given, `ec2-migrate-bundle` might use the Amazon EC2 `DescribeRegions` and `DescribeImages` operations to perform automated mappings.

## Syntax

```
ec2-migrate-bundle -k private_key -c cert -a  
access_key_id -s secret_key --bucket  
source_s3_bucket --destination-bucket  
destination_s3_bucket --manifest manifest_path --  
location {US | EU} --ec2cert ec2_cert_path [--kernel  
kernel-id] [--ramdisk ramdisk_id] [--no-mapping] --  
region mapping_region_name
```

# Options

Option	Description	Required
<code>-k, --privatekey private_key</code>	The path to the user's PEM-encoded RSA key file.  Example: <code>-k pk-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-c, --cert cert</code>	The user's PEM encoded RSA public key certificate file.  Example: <code>-c cert-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-a, --access-key access_key_id</code>	The AWS access key ID.  Example: <code>-a AKIADQKE4SARGYLE</code>	Yes
<code>-s, --secret-key secret_key</code>	The AWS secret access key.  Example: <code>-s ew91dHVizS5jb20vd2F0Y2g/dj1SU3NKMT1zeTNKSQ==</code>	Yes
<code>--bucket source_s3_bucket</code>	The source Amazon S3 bucket where the AMI is located, followed by an optional '/'-delimited path prefix.  Default: None  Example: <code>--bucket my-us-bucket</code>	Yes
<code>--destination-bucket destination_s3_bucket</code>	The destination Amazon S3 bucket, followed by an optional '/'-delimited path prefix. If the destination bucket does not exist, it is created.  Default: None  Example: <code>--destination-bucket my-eu-bucket</code>	Yes
<code>--manifest manifest</code>	The location of the Amazon S3 source manifest.  Default: None  Example: <code>--manifest my-ami.manifest.xml</code>	Yes
<code>--location {US   EU}</code>	The location of the destination Amazon S3 bucket.  If the bucket exists and the location is specified, the tool exits with an error. if the specified location does not match the actual location. If the bucket exists and no location is specified, the tool uses the bucket's location. If the bucket does not exist and the location is specified, the tool creates the bucket in the specified location. If the bucket does not exist and location is not specified, the tool creates the bucket without a location constraint (in the US).  Default: None	No

	Example: <code>--location EU</code>	
<code>--acl <i>acl</i></code>	<p>The access control list policy of the bundled image.</p> <p>Valid Values: <code>public-read</code>   <code>aws-exec-read</code></p> <p>Default: <code>aws-exec-read</code></p> <p>Example: <code>--acl public-read</code></p>	No
<code>--retry</code>	<p>Automatically retries on all Amazon S3 errors, up to five times per operation.</p> <p>Example: <code>--retry</code></p>	No
<code>--kernel <i>kernel_id</i></code>	<p>The ID of the kernel to select.</p> <p>Example: <code>--kernel aki-ba3adfd3</code></p>	No
<code>--ramdisk <i>ramdisk_id</i></code>	<p>The ID of the RAM disk to select.</p> <p>Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk. To find kernel requirements, go to the <a href="#">Resource Center</a> and search for the kernel ID.</p> <p>Example: <code>--ramdisk ari-badbad00</code></p>	No
<code>--no-mapping</code>	<p>Disables automatic mapping of kernels and RAM disks.</p> <p>Example: <code>--no-mapping</code></p>	No
<code>--region</code>	<p>Region to look up in the mapping file. If no region is specified, Amazon EC2 attempts to determine the region from the location of the Amazon S3 bucket.</p> <p>Example: <code>--region eu-west-1</code></p>	No



# **Output**

Status messages describing the stages and status of the bundling process.

## Example

This example copies the AMI specified in the `my-ami.manifest.xml` manifest from the US to the EU.

```
$ ec2-migrate-bundle --cert cert-THUMBPRINT.pem --priv
Downloading manifest my-ami.manifest.xml from my-us-bucket to /tmp/
Copying 'my-ami.part.00'...
Copying 'my-ami.part.01'...
Copying 'my-ami.part.02'...
Copying 'my-ami.part.03'...
Copying 'my-ami.part.04'...
Copying 'my-ami.part.05'...
Copying 'my-ami.part.06'...
Copying 'my-ami.part.07'...
Copying 'my-ami.part.08'...
Copying 'my-ami.part.09'...
Copying 'my-ami.part.10'...
Your new bundle is in S3 at the following location:
my-eu-bucket/my-ami.manifest.xml
```

## Related Topics

- [ec2-register](#)
- [ec2-run-instances](#)

# **ec2-migrate-manifest**

## Description

Modify a bundled AMI to work in a new region. For information on regions, go to the

[Amazon Elastic Compute Cloud User Guide](#).

You must use this command if you are bundling in one region for use in another or if you copy a bundled AMI out of band (without using `ec2-migrate-bundle`) and want to use it in a different region.



### Note

This command replaces the kernel and RAM disk in the manifest file with a kernel and RAM disk designed for the destination region.

## Syntax

```
ec2-migrate-manifest -k private_key -c cert -a  
access_key_id -s secret_key --manifest  
manifest_path --ec2cert ec2_cert_path [--kernel  
kernel-id] [--ramdisk ramdisk_id] {--no-mapping} --  
region mapping_region_name
```

# Options

Option	Description	Required
<code>-k, --privatekey private_key</code>	The path to the user's PEM-encoded RSA key file. Example: <code>-k pk-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-c, --cert cert</code>	The user's PEM encoded RSA public key certificate file. Example: <code>-c cert-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>	Yes
<code>-a, --access-key access_key_id</code>	The AWS access key ID. Example: <code>-a AKIADQKE4SARGYLE</code>	Yes
<code>-s, --secret-key secret_key</code>	The AWS secret access key. Example: <code>-s ew91dHVizS5jb20vd2F0Y2g/dj1SU3NKMT1zeTNKSQ==</code>	Yes
<code>--manifest manifest</code>	The location of the Amazon S3 source manifest. Default: None Example: <code>--manifest my-ami.manifest.xml</code>	Yes
<code>--kernel kernel_id</code>	The ID of the kernel to select. Example: <code>--kernel aki-ba3adfd3</code>	No
<code>--ramdisk ramdisk_id</code>	The ID of the RAM disk to select.  Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk. To find kernel requirements, go to the <a href="#">Resource Center</a> and search for the kernel ID.  Example: <code>--ramdisk ari-badbad00</code>	No
<code>--mapping-file mapping_file</code>	Overrides the file containing kernel and RAM disk region mappings. Example: <code>--mapping-file eu-mappings</code>	No
<code>--mapping-url url</code>	Overrides the file containing kernel and RAM disk region mappings from the specified hostname portion of a URL.  Example: <code>--mapping-url mysite.com/eu-mappings</code>	No
<code>--no-mapping</code>	Disables automatic mapping of kernels and RAM disks.  Example: <code>--mapping-file mysite.com/eu-mappings</code>	No
<code>--region</code>	Region to look up in the mapping file. If no region is specified, The tool attempts to determine the region from the location of the Amazon S3 bucket.	No

	Example: <code>--region eu-west-1</code>	
--	--	--



# **Output**

Status messages describing the stages and status of the bundling process.

## Example

This example copies the AMI specified in the `my-ami.manifest.xml` manifest from the US to the EU.

```
$ ec2-migrate-manifest --manifest my-ami.manifest.xml
```

```
Backing up manifest...
```

```
Successfully migrated my-ami.manifest.xml It is now suitable for us
```

## Related Topics

- [ec2-register](#)
- [ec2-run-instances](#)

# **ec2-unbundle**

## **Description**

Recreates the AMI from the bundled AMI parts.

## Syntax

```
ec2-unbundle -m manifest -k private_key [-d  
destination_directory] [-s source_directory]
```

# Options

Option	Description	Required
<code>-m, --manifest <i>manifest</i></code>	The path to the unencrypted AMI manifest file.  Example: <code>-m /var/spool/my-first-bundle/Manifest</code>	Yes
<code>-k, --privatekey <i>private_key</i></code>	The path to your PEM-encoded RSA key file.  Example: <code>-k \$HOME/pk-234242DEADCAFE.pem</code>	Yes
<code>-d, --destination <i>destination_directory</i></code>	The directory in which to unbundle the AMI. The destination directory must exist.  Default: The current directory  Example: <code>-d /tmp/my-image</code>	No
<code>-s, --source <i>source_directory</i></code>	The directory containing the bundled AMI parts.  Default: The current directory  Example: <code>-s /tmp/my-bundled-image</code>	No

## Example

This Linux and UNIX example unbundles the AMI specified in the `fred.manifest.xml` file.

```
$ mkdir unbundled
$ ec2-unbundle -m fred.manifest.xml -s bundled -d unbu
cat bundled/fred.part.00 bundled/fred.part.01 bundled/fred.part.02
Unbundle complete.
$ ls -l unbundled
total 1025008
-rw-r--r-- 1 root root 1048578048 Aug 25 23:46 fred.img
```



## **Output**

Status messages indicating the various stages of the unbundling process are displayed.

## Related Topics

- 

[ec2-bundle-image](#)

- [ec2-bundle-vol](#)
- [ec2-upload-bundle](#)
- [ec2-download-bundle](#)
- [ec2-delete-bundle](#)

# **ec2-upload-bundle**

## **Description**

Upload a bundled AMI to Amazon S3 storage.

## Syntax

```
ec2-upload-bundle -b s3_bucket -m manifest -a  
access_key_id -s secret_key [--acl acl] [--ec2cert  
certificate] [-d directory] [--part part] [--url url] [--  
location {US | EU}] [--retry] [--skipmanifest]
```

# Options

Option	Description	Required
<code>-b, --bucket s3_bucket</code>	<p>The name of the Amazon S3 bucket in which to store the bundle, followed by an optional '/'-delimited path prefix. If the bucket doesn't exist it will be created (if the bucket name is available).</p> <p>Example: <code>-b ec2-cracker-ami</code></p>	Yes
<code>-m, --manifest manifest</code>	<p>The path to the manifest file. The manifest file is created during the bundling process and can be found in the directory containing the bundle.</p> <p>Example: <code>-m /var/spool/my-first-bundle/Manifest</code></p>	Yes
<code>-a, --access-key access_key_id</code>	<p>Your AWS access key ID.</p> <p>Example: <code>-a AKIADQKE4SARGYLE</code></p>	Yes
<code>-s, --secret-key secret_key</code>	<p>Your AWS secret access key.</p> <p>Example: <code>-s ew91dHVizS5jb20vd2F0Y2g/dj1SU3NKMT1zeTNKSQ==</code></p>	Yes
<code>--acl acl</code>	<p>The access control list policy of the bundled image.</p> <p>Valid Values: <code>public-read   aws-exec-read</code></p> <p>Default: <code>aws-exec-read</code></p> <p>Example: <code>--acl public-read</code></p>	No
<code>--ec2cert certificate</code>	<p>The path to the Amazon EC2 X.509 public key certificate.</p> <p>Default: <code>/etc/ec2/amiutils/cert-ec2.pem</code> (varies, depending on tools)</p> <p>Example: <code>--ec2cert /etc/ec2/amiutil/cert-ec2.pem</code></p>	No
<code>-d, --directory directory</code>	<p>The directory containing the bundled AMI parts.</p> <p>Default: The directory containing the manifest file (see the <code>-m</code> option).</p> <p>Example: <code>-d /var/run/my-bundle</code></p>	No
<code>--part part</code>	<p>Starts uploading the specified part and all subsequent parts.</p> <p>Example: <code>--part</code></p>	No
<code>--location {US   EU}</code>	<p>The location of the destination Amazon S3 bucket.</p> <p>If the bucket exists and the location is specified, the tool exits with an error. If the specified location does not match the actual location. If the bucket exists and no location is specified, the tool uses the bucket's location. If the bucket does not exist and the location is specified, the tool creates the bucket in the</p>	No

	<p>specified location. If the bucket does not exist and location is not specified, the tool creates the bucket without a location constraint (in the US).</p> <p>Default: None</p> <p>Example: <code>--location EU</code></p>	
<code>--url url</code>	<p>The S3 service URL.</p> <p>Default: <code>https://s3.amazonaws.com</code></p> <p>Example: <code>--url https://s3.amazonaws.ie</code></p>	No
<code>--retry</code>	<p>Automatically retries on all Amazon S3 errors, up to five times per operation.</p> <p>Example: <code>--retry</code></p>	No
<code>--skipmanifest</code>	<p>Does not upload the manifest.</p> <p>Example: <code>--skipmanifest</code></p>	No

## **Output**

Amazon EC2 displays status messages that indicate the stages and status of the upload process.



## Example

This example uploads the bundle specified by the `bundled/fred.manifest.xml` manifest.

```
$ ec2-upload-bundle -b my-s3-bucket -m bundled/fred.ma
Creating bucket...
Uploading bundled image parts to the S3 bucket my-s3-bucket ...
Uploaded fred.part.00
Uploaded fred.part.01
Uploaded fred.part.02
Uploaded fred.part.03
Uploaded fred.part.04
Uploaded fred.part.05
Uploaded fred.part.06
Uploaded fred.part.07
Uploaded fred.part.08
Uploaded fred.part.09
Uploaded fred.part.10
Uploaded fred.part.11
Uploaded fred.part.12
Uploaded fred.part.13
Uploaded fred.part.14
Uploading manifest ...
Uploaded manifest.
Bundle upload completed.
```

## Related Topics

- 

[ec2-bundle-image](#)

- [ec2-bundle-vol](#)
- [ec2-unbundle](#)
- [ec2-download-bundle](#)
- [ec2-delete-bundle](#)

# API Command Line Tools Reference

## Topics

- [Common Options for API Tools](#)
- [List of Command Line Operations by Function](#)
- [ec2-add-group](#)
- [ec2-add-keypair](#)
- [ec2-allocate-address](#)
- [ec2-associate-address](#)
- [ec2-attach-volume](#)
- [ec2-authorize](#)
- [ec2-bundle-instance](#)
- [ec2-cancel-bundle-task](#)
- [ec2-confirm-product-instance](#)
- [ec2-create-snapshot](#)
- [ec2-create-volume](#)
- [ec2-delete-group](#)
- [ec2-delete-keypair](#)
- [ec2-delete-snapshot](#)
- [ec2-delete-volume](#)
- [ec2-deregister](#)
- [ec2-describe-addresses](#)
- [ec2-describe-availability-zones](#)

- [ec2-describe-bundle-tasks](#)
- [ec2-describe-group](#)
- [ec2-describe-image-attribute](#)
- [ec2-describe-images](#)
- [ec2-describe-instances](#)
- [ec2-describe-keypairs](#)
- [ec2-describe-regions](#)
- [ec2-describe-reserved-instances](#)
- [ec2-describe-reserved-instances-offerings](#)
- [ec2-describe-snapshots](#)
- [ec2-describe-volumes](#)
- [ec2-detach-volume](#)
- [ec2-disassociate-address](#)
- [ec2-fingerprint-key](#)
- [ec2-get-console-output](#)
- [ec2-get-password](#)
- [ec2-migrate-bundle](#)
- [ec2-migrate-image](#)
- [ec2-modify-image-attribute](#)
- [ec2-monitor-instances](#)
- [ec2-purchase-reserved-instance-offering](#)
- [ec2-reboot-instances](#)
- [ec2-register](#)
- [ec2-release-address](#)
- [ec2-reset-image-attribute](#)
- [ec2-revoke](#)
- [ec2-run-instances](#)

- [ec2-terminate-instances](#)
- [ec2-unmonitor-instances](#)

# Common Options for API Tools

Most API tools described in this section accept the set of optional parameters described in the following table.

Option	Description
<code>--region region</code>	Overrides the region specified in the <code>EC2_URL</code> environment variable.  Default: The <code>EC2_URL</code> environment variable, or <code>us-east-1</code> if the environment variable is not set.  Example: <code>--region eu-west-1</code>
<code>-U URL</code>	<code>URL</code> is the uniform resource locator of the Amazon EC2 web service entry point.  Default: The <code>EC2_URL</code> environment variable, or <code>https://ec2.amazonaws.com</code> if the environment variable is not set.  Example: <code>-U https://ec2.amazonaws.com</code>
<code>-K EC2-PRIVATE-KEY</code>	The private key to use when constructing requests to Amazon EC2.  Default: The value of the <code>EC2_PRIVATE_KEY</code> environment variable.  Example: <code>-K pk-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>
<code>-C EC2-CERT</code>	The X.509 certificate to use when constructing requests to Amazon EC2.  Default: The value of the <code>EC2_CERT</code> environment variable.  Example: <code>-C cert-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</code>
<code>-v</code>	Displays verbose output by showing the SOAP request and response on the command line. This is particularly useful if you are building tools to talk directly to our SOAP API.
<code>--show-empty-fields</code>	Shows empty columns as <code>(nil)</code> .
<code>--debug</code>	Prints internal debugging information. This is useful to assist us when troubleshooting problems.
<code>-?</code>	Displays help.
<code>-</code>	If <code>-</code> is specified as an argument to one of the parameters, a list of arguments are read from

standard input. This is useful for piping the output of one command into the input of another.

```
Example: ec2-describe-instances | grep running | cut -f 2 | ec2-terminate-  
instances -i -
```

# List of Command Line Operations by Function

## Amazon DevPay

- 

[ec2-confirm-product-instance](#)

## AMIs

- [ec2-deregister](#)
- [ec2-describe-image-attribute](#)
- [ec2-describe-images](#)
- [ec2-migrate-bundle](#)
- [ec2-migrate-image](#)
- [ec2-modify-image-attribute](#)

## Availability Zones and Regions

- [ec2-describe-availability-zones](#)



- [ec2-describe-regions](#)

## **Elastic Block Store**

- [ec2-attach-volume](#)
- [ec2-create-snapshot](#)
- [ec2-create-volume](#)
- [ec2-delete-snapshot](#)
- [ec2-delete-volume](#)
- [ec2-describe-snapshots](#)
- [ec2-describe-volumes](#)
- [ec2-detach-volume](#)

## **Elastic IP Addresses**

- [ec2-allocate-address](#)
- [ec2-associate-address](#)
- [ec2-describe-addresses](#)
- [ec2-disassociate-address](#)

- [ec2-release-address](#)

## **General**

- [ec2-get-console-output](#)

## **Images**

- [ec2-register](#)
- [ec2-reset-image-attribute](#)

## **Instances**

- [ec2-describe-instances](#)
- [ec2-reboot-instances](#)
- [ec2-run-instances](#)
- [ec2-terminate-instances](#)

## **Key Pairs**

- [ec2-add-keypair](#)
- [ec2-delete-keypair](#)
- [ec2-describe-keypairs](#)

- [ec2-fingerprint-key](#)

## **Monitoring**

- [ec2-monitor-instances](#)
- [ec2-unmonitor-instances](#)

## **Reserved Instances**

- [ec2-describe-reserved-instances](#)
- [ec2-describe-reserved-instances-offerings](#)
- [ec2-purchase-reserved-instance-offering](#)

## **Security Groups**

- [ec2-add-group](#)
- [ec2-authorize](#)
- [ec2-delete-group](#)
- [ec2-describe-group](#)
- [ec2-revoke](#)

## **Windows**

- [ec2-bundle-instance](#)
- [ec2-cancel-bundle-task](#)
- [ec2-describe-bundle-tasks](#)
- [ec2-get-password](#)

**ec2-add-group**

## Description

Creates a new security group. Group names must be unique per account.

Every instance is launched in a security group. If no security group is specified during launch, the instances are launched in the default security group. Instances within the same security group have unrestricted network access to each other. Instances will reject network access attempts from other instances in a different security group. As the owner of instances you can grant or revoke specific permissions using the `AuthorizeSecurityGroupIngress` and `RevokeSecurityGroupIngress` operations.

## Syntax

**ec2-add-group** *group* -d *description*

# Options

Name	Description	Required
<i>group</i>	Name of the security group.  Type: String  Default: None  Constraints: Accepts alphanumeric characters, spaces, dashes, and underscores.  Example: webserv	Yes
<i>-d description</i>	Description of the group. This is informational only. If the description contains spaces, you must enclose it in single quotes (') or URL-encode it.  Type: String  Default: None  Constraints: Accepts alphanumeric characters, spaces, dashes, and underscores.  Example: -d 'Web servers'	Yes



## Output

The command returns a table that contains the following information:

- GROUP identifier
- Group name
- Group description

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example creates the webserv security group.

```
PROMPT> ec2-add-group webserv -d 'Web Servers'  
GROUP webserv Web Servers
```

## Related Operations

- 

[ec2-run-instances](#)

- [ec2-describe-group](#)
- [ec2-authorize](#)
- [ec2-revoke](#)
- [ec2-delete-group](#)

**ec2-add-keypair**

## **Description**

Creates a new 2048-bit RSA key pair with the specified name. The public key is stored by Amazon EC2 and the private key is displayed on the console. The private key is returned as an unencrypted PEM encoded PKCS#8 private key. If a key with the specified name already exists, Amazon EC2 returns an error.

# Syntax

**ec2-add-keypair** *key*

# Options

Name	Description	Required
<i>key</i>	A unique name for the key pair.  Type: String  Default: None  Constraints: Accepts alphanumeric characters, spaces, dashes, and underscores.  Example: mysecretkey	Yes

## Output

The command returns a table that contains the following information:

- KEYPAIR identifier
- Key pair name
- Private key fingerprint
- Private key. This value is displayed on a new line

Amazon EC2 displays errors on stderr.



# Examples

## Example Request

This example creates a key pair named `gsg-keypair`.

```
PROMPT> ec2-add-keypair gsg-keypair
KEYPAIR gsg-keypair1f:51:ae:28:bf:89:e9:d8:1f:25:5d:37:2d:7d:b8:ca:
MIIEoQIBAAKCAQBULFg5ujHrtm1jnutSuo08Xe56LlT+HM8v/xkaa39EstM3/aFXTHg
HungXQ29VTc8rc1bw0lkdi230H5eqkMHGhvEwqa0HWASUMl14o3o/IX+0f2UcPoKCOV
5AU52EQfanIn3ZQ8lFW7Edp5a3q4DhjG1UKT0HVbicL5E+g45zfB95wIyywWZfEW/UU
ebIUlq1qTbHkLbCC2r7RTn8vpQWp47BGVYGtGSBMPTRP5hnbzzuqj3itkiLHjU39S2s
i8BygR4s3mHKBj8l+ePQxG1kGbF6R4yg6sECmXn17MRQVXODNHZbAgMBAACggEAY1t
91CXirkYGuVfLyLflXenxfI50mDFms/mumTqloH07tr0oriHDR5K7wMcY/YY5YkcXNo
ZNUJs7rw9gZRTrf7LyJaJ58k0cyajw8TsC4e4LPbFaHwS1d6K8rXh64o6Wgw4SrsB6I
3wcfgt5ecIu4TZf00E9IHjn+2eRlSrjBdeORi7KiUNC/pAG23I6MdD0FEQRcCSigCj+
SWS4dMbrpb9FNsIcf9dcLxVM7/6KxgJNfZc9XWzUw77Jg8x92Zd0fVhH0ux5IZC+UvS
tE8C3p9bbU9VGyY5vLCAiIb4qQKBgQDLi024GXrIkswF32YtBBMuVgLGcWU9h9H109m
jUE5IpzRjTedc9I2qiIMUTwtgnw42auSCzbUeYMURPtDqyQ7p6AjMujp9EPemcSV0K9
xw9MC0dtV6iPkCN7g0qiZXPRKaFbWADp16p8UAiVs/a5XXk5jwKBgQCKkphi2EISh1u
iDCiK6JBRsMvpLbc0v5dKwP5alo1fmdR5PJaV2qvZSj5CYNpMAy1/EDNTY50SIJU+0K
rdLNLDL4+TcnT7c62/aH01ohYaf/VcBRhtLlBfqGoQc7+sAc8vmKkesnF7CqCEKDyF/
gC0iZzzNAapayz1+JcVTwwEid6j9JqNXbBc+Z2YwMi+T0Fv/P/hwkX/ype0XnIUcw0I
DQbsz7LcY1HqXiHKYNWNvXgww0+oiChjxvEkSdsTTIfnK4VScvU9BxDBQHjdiNDJbL6
rBYvChJZF7LvUH4YmVpHAoGAbZ2X7XvoeE0+uZ58/BGK0IGHByHBDiXtzMhdJr15HTY
gK+8zp4L9IbvLGDMJ08vft32XPEUuvI8twCzFH+CsWLQADZMzKSSBas0Z/h1FwhdMgC
JZKjTSu3i7vhvx6RzdSedXEMNTZWN4q1Ix3kR5aHcukCgYA9T+Zrvm1F0seQPbLknn7
P8TTvW/6bdPi23ExzxZn7K0drfcLYRph1LHMpAONv/x2xALIf91UB+v5ohy1oDoasL0
2ERKKdwz0ZL9Swq6VTdhr/5G994CK72fy5whyERbdjUIIdHaK3M849JJuf8cSrvSb4g=
-----END RSA PRIVATE KEY-----
```

## Related Operations

- 

[ec2-run-instances](#)

- [ec2-describe-keypairs](#)
- [ec2-delete-keypair](#)

**ec2-allocate-address**

## **Description**

Acquires an elastic IP address for use with your account.

# Syntax

**ec2-allocate-address**

## **Options**

This command does not have any options.

## Output

The command returns a table that contains the following information:

- Output type identifier ("ADDRESS")
- Elastic IP address for use with your account

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example returns an elastic IP address for use with the account.

```
PROMPT> ec2-allocate-address  
ADDRESS 67.202.55.255
```



## Related Operations

- 

[ec2-describe-addresses](#)

- [ec2-release-address](#)
- [ec2-associate-address](#)
- [ec2-disassociate-address](#)

**ec2-associate-address**

## **Description**

Associates an elastic IP address with an instance. If the IP address is currently assigned to another instance, the IP address is assigned to the new instance. This is an idempotent operation. If you enter it more than once, Amazon EC2 does not return an error.

## Syntax

**ec2-associate-address** -i *instance\_id* *ip\_address*

# Options

Name	Description	Required
<i>instance_id</i>	The instance to associate with the IP address. Type: String Default: None Example: i-43a4412a	Yes
<i>ip_address</i>	IP address that you are assigning to the instance. Type: String Default: None Example: 67.202.55.255	Yes

## Output

The command returns a table that contains the following information:

- Output type identifier ("ADDRESS")
- Elastic IP address that you are assigning to the instance
- Instance to which the IP address is assigned

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example associates an IP address with an instance.

```
PROMPT> ec2-associate-address -i i-43a4412a 67.202.55.  
ADDRESS 67.202.55.255    i-43a4412a
```

## Related Operations

- 

[ec2-allocate-address](#)

- [ec2-describe-addresses](#)
- [ec2-release-address](#)
- [ec2-disassociate-address](#)



**ec2-attach-volume**

# Description

Attaches an Amazon EBS volume to a running instance and exposes it as the specified device.



## Note

Windows instances currently support devices xvda through xvdp. Devices xvda and xvdb are reserved by the operating system, xvdc is assigned to drive C:\, and, depending on the instance type, devices xvdd through xvde might be reserved by the instance stores. Any device that is not reserved can be attached to an Amazon EBS volume. For a list of devices that are reserved by the instance stores, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).

## Syntax

```
ec2-attach-volume volume_id --instance instance_id -  
-device device
```

# Options

Name	Description	Required
<i>volume_id</i>	<p>The ID of the Amazon EBS volume. The volume and instance must be within the same Availability Zone and the instance must be running.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: vol-4d826724</p>	Yes
<i>--instance instance_id</i>	<p>The ID of the instance to which the volume attaches. The volume and instance must be within the same Availability Zone and the instance must be running.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: i-6058a509</p>	Yes
<i>--device device</i>	<p>Specifies how the device is exposed to the instance (e.g., /dev/sdh).</p> <p>Type: String</p> <p>Default: None</p> <p>Example: /dev/sdf (Linux and UNIX) or xvdf (Windows)</p>	Yes

## Output

The command returns a table that contains the following information:

- ATTACHMENT identifier
- ID of the volume
- ID of the instance
- The device as it is exposed to the instance
- Volume state (e.g., attaching, attached)
- Time stamp when attachment initiated

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example attaches volume `vol-4d826724` to instance `i-6058a509` and exposes it as `/dev/sdh`. For information on standard storage locations, go to the [Amazon Elastic Compute Cloud Developer Guide](#).

```
PROMPT> ec2-attach-volume vol-4d826724 --instance i-6058a509  
ATTACHMENT vol-4d826724 i-6058a509 /dev/sdh attaching 2008-02-14T00:00:00Z
```

## Related Operations

- [ec2-create-volume](#)
- [ec2-delete-volume](#)
- [ec2-describe-volumes](#)
- [ec2-detach-volume](#)

**ec2-authorize**



## Description

Adds permissions to a security group.

Permissions are specified by the IP protocol (TCP, UDP or ICMP), the source of the request (by IP range or an Amazon EC2 user-group pair), the source and destination port ranges (for TCP and UDP), and the ICMP codes and types (for ICMP). When authorizing ICMP, -1 can be used as a wildcard in the type and code fields.

Permission changes are propagated to instances within the security group as quickly as possible. However, depending on the number of instances, a small delay might occur.

When authorizing a user/group pair permission, *GroupName*, *SourceSecurityGroupName* and *SourceSecurityGroupOwnerId* must be specified. When authorizing a CIDR IP permission, *GroupName*, *IpProtocol*, *FromPort*, *ToPort* and *CidrIp* must be specified. Mixing these two types of parameters is not allowed.

## Syntax

```
ec2-authorize group [-P protocol] (-p port_range | -t  
icmp_type_code) [-u source_group_user ...] [-o  
source_group ...] [-s source_subnet ...]
```

# Options

Name	Description	Required
<i>group</i>	Name of the group to modify. The name must be valid and belong to the account  Type: String  Default: None  Example: webserv	Yes
<i>-P protocol</i>	IP protocol.  Type: String  Default: None  Valid Values: tcp   udp   icmp  Example: udp	Yes
<i>-t icmp_type_code</i>	For the ICMP protocol, the ICMP type and code must be specified. This must be specified in the format type:code where both are integers. Type, code, or both can be specified as -1, which is a wildcard.  Type: String  Default: None  Valid Values: tcp   udp   icmp  Example: 2:5	Yes
<i>-p port_range</i>	For the TCP or UDP protocols, this specifies the range of ports to allow.  Type: String  Default: None  Constraints: A single integer or a range (min-max).  Example: 80-84	Yes
<i>-u source_group_user</i>	AWS User ID of an account.  Type: String  Default: None  Example: 495219933132	Yes

<p><code>-o source_group</code></p>	<p>Name of the security group.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: headoffice</p>	<p>Yes</p>
<p><code>-s source_subnet</code></p>	<p>CIDR range.</p> <p>Type: String</p> <p>Default: None</p> <p>Constraints: Valid CIDR IP address range.</p> <p>Example: 205.192.8.45/24</p>	<p>Yes</p>

## Output

The command returns a table that contains the following information:

- Output type identifier ("GROUP", "PERMISSION")
- Group name. Currently, this will report an empty string
- Type of rule. Currently, only ALLOW rules are supported
- Protocol to allow
- Start of port range
- End of port range
- FROM
- Source

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example grants TCP port 80 access from the 205.192.0.0/16 address range to the webserv security group.

```
PROMPT> ec2-authorize webserv -P tcp -p 80 -s 205.192.0.0/16  
GROUP webserv "" PERMISSION webserv ALLWS tcp 80 80 FROM CIDR 205.192.0.0/16
```

## Related Operations

- 

[ec2-add-group](#)

- [ec2-describe-group](#)
- [ec2-revoke](#)
- [ec2-delete-group](#)

**ec2-bundle-instance**



## Description

Bundles the Windows instance. This procedure is not applicable for Linux and UNIX instances. For more information, go to the

[Amazon Elastic Compute Cloud Developer Guide](#) or [Amazon Elastic Compute Cloud Getting Started Guide](#).



### Note

During bundling, only the root store (C:\) is bundled. Data on other instance stores is not preserved.

## Syntax

```
ec2-bundle-instance instance -b bucket -p prefix -o  
access-key-id {-c policy | -w secret-access-key}  
[options]
```

# Options

Name	Description	Required
<i>instance</i>	The ID of the instance to bundle.  Type: String  Default: None  Example: i-5e73d509	Yes
<i>-o access-key-id</i>	The Access Key ID of the owner of the Amazon S3 bucket.  Type: String  Default: None  Example: 157SZTMZQT516NAZ7CR2	Yes
<i>-b bucket</i>	The bucket in which to store the AMI. You can specify a bucket that you already own or a new bucket that Amazon EC2 creates on your behalf. If you specify a bucket that belongs to someone else, Amazon EC2 returns an error.  Type: String  Default: None  Example: mybucket	Yes
<i>-p prefix</i>	Specifies the beginning of the file name of the AMI.  Type: String  Default: None  Example: winami	Yes
<i>-c policy</i>	An Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. For more information on bundling in Windows, go to the  Type: String  Default: None  Example: upload-policy	Yes
<i>-v secret-access-key</i>	The bucket in which to store the AMI. You can specify a bucket that you already own or a new bucket that Amazon EC2 creates on your behalf. If you specify a bucket that belongs to someone else, Amazon EC2 returns an error.  Type: String	Yes

Default: None

Example: eW91dHViZS5jb20vd2F0Y2g/dj1SU3NKMTlzeTNKSQ==

## Output

The command returns a table that contains the following information:

- BUNDLE identifier
- ID of the bundle
- ID of the instance
- Bucket name
- Bundle prefix
- Bundle status
- Bundle start time

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example bundles the `i-e468cd8d` instance.

```
PROMPT> ec2-bundle-instance i-12345 -b mybucket -p wi  
BUNDLE bun-c1a540a8 i-12345 mybucket winami pending 2008-09-1
```

## Related Operations

- [ec2-cancel-bundle-task](#)
- [ec2-describe-bundle-tasks](#)

# **ec2-cancel-bundle-task**



## Description

Cancels an Amazon EC2 bundling operation. For more information on bundling instances, go to the

[Amazon Elastic Compute Cloud Developer Guide](#) or [Amazon Elastic Compute Cloud Getting Started Guide](#).

# Syntax

**ec2-cancel-bundle-task** *bundle*

# Options

Name	Description	Required
<i>bundle</i>	The ID of the bundle task to cancel. Type: String Default: None Example: bun-cla432a3	Yes

## Output

The command returns a table that contains the following information:

- BUNDLE identifier
- ID of the bundle
- ID of the instance
- Bucket name
- Cancel status
- Bundle start time
- Error message, if any

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example cancels the bun-cla322b9 bundle task.

```
PROMPT> ec2-cancel-bundle-task bun-cla322b9  
BUNDLE bun-cla322b9 i-2674d22r mybucket winami canceling 2008
```

## Related Operations

- [ec2-bundle-instance](#)
- [ec2-describe-bundle-tasks](#)

# **ec2-confirm-product- instance**

## **Description**

Verifies whether a Amazon DevPay product code is associated with an instance. This can only be executed by the owner of the AMI and is useful when an AMI owner wants to verify whether a user's instance is eligible for support.



## Syntax

**ec2-confirm-product-instance** *product\_code* -i  
*instance\_id*

# Options

Name	Description	Required
<i>product_code</i>	The product code to confirm. Type: String Default: None Example: 774F4FF8	Yes
<i>instance_id</i>	The instance to confirm. Type: String Default: None Example: i-10a64379	Yes

## Output

The command returns a table that contains the following information:

- Product code
- Instance ID
- Boolean value indicating if the product code is attached to the instance
- The instance owner's account ID (if the product code is attached)

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes the confirms the product code is associated with the instance.

```
PROMPT> ec2-confirm-product-instance 774F4FF8 -i i-10a64379  
774F4FF8i-10a64379 true
```

## Related Operations

- 

[ec2-describe-instances](#)

- [ec2-run-instances](#)

# **ec2-create-snapshot**

## Description

Creates a snapshot of an Amazon EBS volume and stores it in Amazon S3. You can use snapshots for backups, to make identical copies of instance devices, and to save data before shutting down an instance. For more information about Amazon EBS, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).

When taking a snapshot of a file system, we recommend unmounting it first. This ensures the file system metadata is in a consistent state, that the 'mounted indicator' is cleared, and that all applications using that file system are stopped and in a consistent state. Some file systems, such as xfs, can freeze and unfreeze activity so a snapshot can be made without unmounting.

# Syntax

**ec2-create-snapshot** *volume\_id*



# Options

Name	Description	Required
<i>volume_id</i>	The ID of the Amazon EBS volume to take a snapshot of. Type: String Default: None Example: vol-4d826724	Yes

## Output

The command returns a table that contains the following information:

- SNAPSHOT identifier
- ID of the snapshot
- ID of the volume
- Snapshot state (e.g., pending, completed)
- Time stamp when snapshot initiated

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example creates a snapshot of volume vol-4d826724.

```
PROMPT> ec2-create-snapshot vol-4d826724 --instance i-  
SNAPSHOT snap-78a54011 vol-4d826724 pending 2008-05-07T12:51:50+000
```

## Related Operations

- [ec2-delete-snapshot](#)
- [ec2-describe-snapshots](#)

# **ec2-create-volume**

## Description

Creates a new Amazon EBS volume to which any Amazon EC2 instance can attach within the same Availability Zone. For more information about Amazon EBS, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).



### Note

You must specify an Availability Zone when creating a volume. The volume and the instance to which it attaches must be in the same Availability Zone.

## Syntax

```
ec2-create-volume [--size size | --snapshot snapshot] --  
availability-zone zone
```

# Options

Name	Description	Required
<code>--size size</code>	<p>The size of the volume, in GiBs. Required if you are not creating a volume from a snapshot.</p> <p>Type: String</p> <p>Default: None</p> <p>Valid Values: 1 -1024</p> <p>Example: 800</p>	Yes
<code>--snapshot snapshot</code>	<p>The snapshot from which to create the new volume.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: snap-78a54011</p>	No
<code>--availability-zone zone</code>	<p>The Availability Zone in which to create the new volume.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: us-east-1a</p>	Yes



## Output

The command returns a table that contains the following information:

- VOLUME identifier
- ID of the volume
- Size of the volume, in GiBs
- Snapshot from which the volume was created, if applicable
- Availability Zone in which the volume was created
- Volume state (e.g., creating, available)
- Time stamp when volume creation was initiated

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example creates a new 800 GiB volume in Availability Zone us-east-1a.

```
PROMPT> ec2-create-volume --size 800 --availability-z  
VOLUME vol-4d826724 800 us-east-1a creating 2008-05-07T11:51:50+000
```

## Related Operations

- [ec2-delete-volume](#)
- [ec2-describe-volumes](#)
- [ec2-attach-volume](#)
- [ec2-detach-volume](#)
- [ec2-describe-availability-zones](#)

**ec2-delete-group**

# Description

Deletes a security group that you own.



## Note

If you attempt to delete a security group that contains instances, a fault is returned.

If you attempt to delete a security group that is referenced by another security group, a fault is returned. For example, if security group B has a rule that allows access from security group A, security group A cannot be deleted until the allow rule is removed.

# Syntax

**ec2-delete-group** *group*

# Options

Name	Description	Required
<i>group</i>	Name of the security group to delete.  Type: String  Default: None  Example: webserv	Yes

## Output

The command returns a table that contains the following information:

- GROUP identifier
- Name of the deleted security group

Amazon EC2 displays errors on stderr.



# Examples

## Example Request

This example deletes the webserv security group.

```
PROMPT> ec2-delete-group webserv  
GROUP webserv
```

## Related Operations

- 

[ec2-add-group](#)

- [ec2-describe-group](#)
- [ec2-authorize](#)
- [ec2-revoke](#)

**ec2-delete-keypair**

## **Description**

Deletes the specified key pair, by removing the public key from Amazon EC2. You must own the key pair.

# Syntax

**ec2-delete-keypair** *key\_pair*

# Options

Name	Description	Required
<i>key_pair</i>	Name of the key pair to delete. Type: String Default: None Example: primary_keypair	Yes

## Output

The command returns a table that contains the following information:

- KEYPAIR identifier
- Name of the deleted key pair
- Private key fingerprint

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example deletes the `gsg-keypair` key pair.

```
PROMPT> ec2-delete-keypair gsg-keypair  
KEYPAIR gsg-keypair
```



## Related Operations

- 

[ec2-add-keypair](#)

- [ec2-describe-keypairs](#)

# **ec2-delete-snapshot**

## **Description**

Deletes a snapshot of an Amazon EBS volume that you own. For more information, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).

# Syntax

**ec2-delete-snapshot** *snapshot\_id*

# Options

Name	Description	Required
<i>snapshot_id</i>	The ID of the Amazon EBS snapshot to delete.  Type: String  Default: None  Example: snap-78a54011	Yes

## Output

The command returns a table that contains the following information:

- SNAPSHOT identifier
- ID of the snapshot

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example deletes snapshot snap-78a54011.

```
PROMPT> ec2-delete-snapshot snap-78a54011  
SNAPSHOT snap-78a54011
```

## Related Operations

- [ec2-create-snapshot](#)
- [ec2-describe-snapshots](#)



**ec2-delete-volume**

## Description

Deletes an Amazon EBS volume that you own. For more information about Amazon EBS, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).



**Note**

The volume remains in the deleting state for several minutes after you enter this command.

# Syntax

**ec2-delete-volume** *volume\_id*

# Options

Name	Description	Required
<i>volume_id</i>	The ID of the volume to delete. The volume remains in the  Type: String  Default: None  Example: vol-4282672b	Yes

## Output

The command returns a table that contains the following information:

- VOLUME identifier
- ID of the volume you deleted

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example deletes volume vol-4282672b.

```
PROMPT> ec2-delete-volume vol-4282672b  
VOLUME vol-4282672b
```

## Related Operations

- [ec2-create-volume](#)
- [ec2-describe-volumes](#)
- [ec2-attach-volume](#)
- [ec2-detach-volume](#)

# ec2-deregister



# Description

Deregisters the specified AMI. Once deregistered, the AMI cannot be used to launch new instances.



**Note**

This command does not delete the AMI from Amazon S3.

# Syntax

**ec2-deregister** *ami\_id*

# Options

Name	Description	Required
<i>ami_id</i>	Unique ID of the AMI which was assigned during registration. To register an AMI, use  Type: String  Default: None  Example: ami-4fa54026	Yes

## Output

The command returns a table that contains the following information:

- IMAGE identifier
- The ID of the AMI that was deregistered

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example deregisters the ami-4fa54026 AMI.

```
PROMPT> ec2-deregister ami-4fa54026  
IMAGE ami-4fa54026
```

## Related Operations

- 

[ec2-register](#)

- [ec2-describe-images](#)

# **ec2-describe-addresses**

## **Description**

Lists elastic IP addresses assigned to your account or provides information about a specific address.



## Syntax

**ec2-describe-addresses** [public\_ip ...]

# Options

Name	Description	Required
<i>public_ip</i>	Elastic IP address to describe. Type: String Default: None Example: 67.202.55.255	No

## Output

The command returns a table that contains the following information:

- Output type identifier ("ADDRESS")
- Elastic IP address assigned to your account
- Instance ID to which the IP address is assigned

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes elastic IP addresses assigned to the account. Amazon EC2 returns 67.202.55.255 which is assigned to instance i-f15ebb98 and 67.202.55.233 which is not assigned to an instance.

```
PROMPT> ec2-describe-addresses  
ADDRESS 67.202.55.255 i-f15ebb98  
ADDRESS 67.202.55.233
```

## Related Operations

- 

[ec2-allocate-address](#)

- [ec2-release-address](#)

# **ec2-describe-availability- zones**

# Description

Displays Availability Zones that are currently available to the account and their states.



## Note

Availability Zones are not the same across accounts. The Availability Zone us-east-1a for account A is not necessarily the same as us-east-1a for account B. Zone assignments are mapped independently for each account.

## Syntax

**ec2-describe-availability-zones** [*zone\_name...*]



# Options

Name	Description	Required
<i>zone-name</i>	Availability Zone name. Type: String Default: None Example: us-east-1a	No

## Output

The command returns a table that contains the following information:

- AVAILABILITYZONE identifier
- Availability Zone name
- State

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example displays information about Availability Zones that are available to the account.

```
PROMPT> ec2-describe-availability-zones  
AVAILABILITYZONE      us-east-1a    available  
AVAILABILITYZONE      us-east-1b    available  
AVAILABILITYZONE      us-east-1c    available  
AVAILABILITYZONE      us-east-1d    available
```

## Related Operations

- 

[ec2-run-instances](#)

- [ec2-describe-regions](#)

# **ec2-describe-bundle-tasks**

## Description

Describes current bundling tasks. For more information on bundling instances, go to the

[Amazon Elastic Compute Cloud Developer Guide](#) or [Amazon Elastic Compute Cloud Getting Started Guide](#).

# Syntax

**ec2-describe-bundle-tasks** [*bundle...*]

# Options

Name	Description	Required
<i>bundle</i>	The ID of the bundle task to describe.  Type: String  Default: If no ID is specified, all bundle tasks are described.  Example: bun-cla432a3	No



## Output

The command returns a table that contains the following information:

- BUNDLE identifier
- ID of the bundle
- ID of the instance
- Bucket name
- Bundle status
- Bundle start time
- Error message, if any

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes the status of the bun-57a5403e bundle task.

```
PROMPT> ec2-describe-bundle-tasks bun-c1a540a8  
BUNDLE bun-c1a540a8 i-2674d22r mybucket winami pending 2008-0
```

## Related Operations

- [ec2-bundle-instance](#)
- [ec2-cancel-bundle-task](#)

# **ec2-describe-group**

## **Description**

Returns information about security groups that you own.

# Syntax

**ec2-describe-group** [*group* ...]

# Options

Name	Description	Required
<i>group</i>	Name of the security group.  Type: String  Default: Describes all groups within the account.  Example: webserv	No

## Output

The command returns a table that contains the following information:

- Output type identifier ("GROUP", "PERMISSION")
- User ID of security group owner
- Security group name
- Description of the security group
- Firewall rule

Amazon EC2 displays errors on stderr.



# Examples

## Example Request

This example returns information about two security groups that are configured for the account.

```
PROMPT> ec2-describe-group  
GROUP AIDADH4IGTRXXKCD WebServers Web Servers  
GROUP AIDADH4IGTRXXKCD RangedPortsBySource Group A
```

## Related Operations

- 

[ec2-add-group](#)

- [ec2-authorize](#)
- [ec2-revoke](#)
- [ec2-delete-group](#)

# **ec2-describe-image- attribute**

## **Description**

Returns information about an attribute of an AMI. Only one attribute can be specified per call.

## Syntax

**ec2-describe-image-attribute** *ami\_id* {-l | -p | -B | --kernel | --ramdisk}

# Options

Name	Description	Required
<code>ami_id</code>	The ID of the AMI for which an attribute will be described.  Type: String  Default: None  Example: ami-4fa54026	Yes
<code>-l --launch-permission</code>	Describes the launch permissions of the AMI.  Type: String  Default: None  Example: -l	No
<code>-p --product-code</code>	Describes the product code associated with the AMI.  Type: String  Default: None  Example: -p	No
<code>--kernel</code>	Describes the ID of the kernel associated with the AMI.  Type: String  Default: None  Example: --kernel	No
<code>--ramdisk</code>	Describes the ID of the RAM disk associated with the AMI.  Type: String  Default: None  Example: --ramdisk	No
<code>-B --block-device-mapping</code>	Describes the mapping that defines native device names to use when exposing virtual devices.  Type: String  Default: None  Example: -B	No
<code>--platform</code>		

	<p>Describes the operating system platform.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: --platform</p>	No
--	---	----

## Output

The command returns a table that contains the following information:

- Attribute type identifier
- ID of the AMI
- Attribute value type or attribute list item value type
- Attribute or attribute list item value

Amazon EC2 displays errors on stderr.



# Examples

## Example Request

This example lists the launch permissions for the ami-61a54008 AMI

```
PROMPT> ec2-describe-image-attribute ami-2bb65342 -l  
launchPermission ami-2bb65342 group all  
launchPermission ami-2bb65342 userId 495219933132
```

## Example Request

This example lists the product code for the ami-2bb65342AMI.

```
PROMPT> ec2-describe-image-attribute ami-2bb65342 -p  
productCodes ami-2bb65342 productCode 774F4FF8
```

## Related Operations

- 

[ec2-describe-images](#)

- [ec2-modify-image-attribute](#)
- [ec2-reset-image-attribute](#)

# **ec2-describe-images**

## Description

Returns information about AMIs, AKIs, and ARIs. This includes image type, product codes, architecture, and kernel and RAM disk IDs. Images available to you include public images, private images that you own, and private images owned by other users for which you have explicit launch permissions.

Launch permissions fall into three categories:

Launch Permission	Description
public	The owner of the AMI granted launch permissions for the AMI to the a11 group. All users have launch permissions for these AMIs.
explicit	The owner of the AMI granted launch permissions to a specific user.
implicit	A user has implicit launch permissions for all AMIs he or she owns.

The list of AMIs returned can be modified by specifying AMI IDs, AMI owners, or users with launch permissions. If no options are specified, Amazon EC2 returns all AMIs for which the user has launch permissions.

If you specify one or more AMI IDs, only AMIs that have the specified IDs are returned. If you specify an invalid AMI ID, a fault is returned. If you specify an AMI ID for which you do not have access, it will not be

included in the returned results.

If you specify one or more AMI owners, only AMIs from the specified owners and for which you have access are returned. The results can include the account IDs of the specified owners, *amazon* for AMIs owned by Amazon or *self* for AMIs that you own.

If you specify a list of executable users, only users that have launch permissions for the AMIs are returned. You can specify account IDs (if you own the AMI(s)), *self* for AMIs for which you own or have explicit permissions, or *all* for public AMIs.



**Note**

Deregistered images are included in the returned results for an unspecified interval after deregistration.

## Syntax

```
ec2-describe-images [ami_id ...] [-a] [-o owner ...] [-x  
user_id]
```

# Options

Name	Description	Required
<code>-x</code> <i>user_id</i>	Returns AMIs for which the specified user has explicit launch permissions. The user ID can be a user's account ID,  Type: String  Default: None  Example: <code>-x self</code>	No
<i>ami_id</i>	AMI IDs to describe.  Type: String  Default: Returns all AMIs.  Example: <code>ami-78a54011</code>	No
<code>-a</code>	Describes all AMIs.  Type: String  Default: None  Example: <code>-a</code>	No
<code>-o</code> <i>owner</i>	Returns AMIs owned by the specified owner. Multiple owners can be specified. The IDs  Type: String  Default: None  Example: <code>-o 157SZTMZQT516NAZ7CR2</code>	No

# Output

The command returns a table that contains the following information:

- IMAGE identifier
- Image identifier
- Manifest location
- User identifier of the user that registered the image
- Image status
- Image visibility (public or private)
- Product codes, if any, that are attached to the instance
- Image architecture (i386 or x86\_64)
- Image type (machine, kernel, or ramdisk)
- ID of the kernel associated with the image (machine images only)
- ID of the RAM disk associated with the image



(machine images only)

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes the ami-be3adfd7 AMI.

```
PROMPT> ec2-describe-images ami-be3adfd7  
IMAGE ami-78a54011 powerdns/image.manifest.xml AIDADH4IGTRXXKCD ava
```

## Related Operations

- 

[ec2-describe-instances](#)

- [ec2-describe-image-attribute](#)

# **ec2-describe-instances**

## **Description**

Returns information about instances that you own.

If you specify one or more instance IDs, Amazon EC2 returns information for those instances. If you do not specify instance IDs, Amazon EC2 returns information for all relevant instances. If you specify an invalid instance ID, a fault is returned. If you specify an instance that you do not own, it will not be included in the returned results.

Recently terminated instances might appear in the returned results. This interval is usually less than one hour.

# Syntax

**ec2-describe-instances**

[*instance\_id|availability\_zone ...*]

# Options

Name	Description	Required
<i>instance_id</i>	Instance IDs to describe. Type: String Default: Returns all instances. Example: r-15a4417c	No

## Output

The command returns a table that contains the following information:

- Output type identifier ("RESERVATION", "INSTANCE")
- Instance ID for each running instance
- AMI ID of the image on which the instance is based
- Public DNS name associated with the instance. This is only present for instances in the running state
- Private DNS name associated with the instance. This is only present for instances in the running state
- Instance state
- Key name. If a key was associated with the instance at launch, its name will appear
- AMI launch index
- Product codes attached to the instance



- Instance type. The type of the instance
- Instance launch time. The time the instance launched
- Availability Zone. The Availability Zone in which the instance is located
- Monitoring state

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes the current state of the instances owned by this user.

```
PROMPT> ec2-describe-instances  
RESERVATION r-15a4417c AIDADH4IGTRXXKCD INSTANCE i-3ea74257 ami-6ba  
RESERVATION r-1c65b675 262355691199 default INSTANCE
```

## Related Operations

- 

[ec2-run-instances](#)

- [ec2-terminate-instances](#)

# **ec2-describe-keypairs**

## **Description**

Returns information about key pairs available to you. If you specify key pairs, information about those key pairs is returned. Otherwise, information for all registered key pairs is returned.

## Syntax

**ec2-describe-keypairs** [*key\_id* ...]

# Options

Name	Description	Required
<i>key_id</i>	Key pair to describe.  Type: String  Default: Describes all key pairs available to the account.  Example: gsg-keypair	No

## Output

The command returns a table that contains the following information:

- KEYPAIR identifier
- Key pair identifier
- Private key fingerprint

Amazon EC2 displays errors on stderr.



# Examples

## Example Request

This example describes the state of the `gsg-keypair` key.

```
PROMPT> ec2-describe-keypairs gsg-keypair  
KEYPAIR gsg-keypair1f:51:ae:28:bf:89:e9:d8:1f:25:5d:37:2d:7d:b8:ca:
```

## Related Operations

- 

[ec2-describe-availability-zones](#)

- [ec2-run-instances](#)

# **ec2-describe-regions**

## **Description**

Describes regions that are currently available to the account.

# Syntax

**ec2-describe-regions** [*region...*]

# Options

Name	Description	Required
<i>region</i>	Name of a region.  Type: String  Default: Describes all regions available to the account.  Example: eu-west-1	No

## Output

The command returns a table that contains the following information:

- REGION identifier
- Region name
- Service endpoint to which you make requests

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example displays regions that are available to the account.

```
PROMPT> ec2-describe-regions  
REGION  us-east-1  us-east-1.ec2.amazonaws.com  
REGION  eu-west-1  eu-west-1.ec2.amazonaws.com
```



## Related Operations

- 

[ec2-describe-availability-zones](#)

- [ec2-run-instances](#)

# **ec2-describe-reserved- instances**

## **Description**

Describes Reserved Instances that you purchased. For more information about Reserved Instances, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).

## Syntax

**ec2-describe-reserved-instances** [*reservation\_id* ...]

# Options

Name	Description	Required
<i>reservation_id</i>	IDs of the Reserved Instance to describe.  Type: String  Default: None  Example: 4b2293b4-5813-4cc8-9ce3-1957fc1dcfc8	No

## Output

The command returns a table that contains the following information:

- RESERVEDINSTANCES identifier
- ID of the Reserved Instance
- The instance type
- The Availability Zone in which the Reserved Instance can be used
- The duration of the Reserved Instance
- The usage price of the Reserved Instance, per hour
- The purchase price of the Reserved Instance
- The number of Reserved Instance purchased
- The Reserved Instance description
- The state of the Reserved Instance purchase (pending-payment, active, payment-failed)

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes Reserved Instances owned by the account.

```
PROMPT> ec2-describe-reserved-instances  
RESERVEDINSTANCE 1ba8e2e3-2538-4a35-b749-1f4442d50744 us-east-1a m1  
af9f760e-c1c1-449b-8128-1342d3a6927d us-east-1a m1.xlarge 1y 0.00 0
```



## Related Operations

- [ec2-purchase-reserved-instance-offering](#)
- [ec2-describe-reserved-instances-offerings](#)

# **ec2-describe-reserved- instances-offerings**

## Description

Describes Reserved Instance offerings that are available for purchase. With Amazon EC2 Reserved Instances, you purchase the right to launch Amazon EC2 instances for a period of time (without getting insufficient capacity errors) and pay a lower usage rate for the actual time used. For more information about Reserved Instances, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).

# Syntax

**ec2-describe-reserved-instances-offerings**

*offering\_id* ...] [--type*instance\_type* ...] [--  
availability-zone*zone* ...] [--  
description*description* ...]

# Options

Name	Description	Required
<code>--type <i>instance_type</i></code>	The instance type on which the Reserved Instance can be used.  Type: String  Default: None  Example: m1.small	No
<code>--availability-zone <i>zone</i></code>	The Availability Zone in which the Reserved Instance can be used.  Type: String  Default: None  Example: us-east-1a	No
<code>--description <i>description</i></code>	The Reserved Instance description.  Type: String  Default: None  Example: m1.small offering in us-east-1a	No

## Output

The command returns a table that contains the following information:

- OFFERING identifier
- ID of the offer
- The instance type
- The Availability Zone in which the Reserved Instance can be used
- The duration of the Reserved Instance
- The purchase price of the Reserved Instance
- The usage price of the Reserved Instance, per hour
- The Reserved Instance description

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes available Reserved Instance offerings.

```
PROMPT> ec2-describe-reserved-instances-offerings  
OFFERING 4b2293b4-5813-4cc8-9ce3-1957fc1dcfc8 m1.small us-east-1a 1
```

## Related Operations

- [ec2-purchase-reserved-instance-offering](#)
- [ec2-describe-reserved-instances](#)



# **ec2-describe-snapshots**

## **Description**

Describes the status of Amazon EBS snapshots. If no snapshots are specified, Amazon EBS returns information about all snapshots owned by the account. For more information about Amazon EBS, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).

## Syntax

**ec2-describe-snapshots** [*snapshot\_id* ...]

# Options

Name	Description	Required
<i>snapshot_id</i>	The ID of the Amazon EBS snapshot.  Type: String  Default: Describes all snapshots that you own.  Example: snap-78a54011	No

## Output

The command returns a table that contains the following information:

- SNAPSHOT identifier
- ID of the snapshot
- ID of the volume
- Snapshot state (e.g., pending, completed)
- Time stamp when snapshot initiated
- Percentage of completion

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes snapshot snap-78a54011.

```
PROMPT> ec2-describe-snapshots snap-78a54011  
SNAPSHOT snap-78a54011 vol-4d826724 pending 2008-02-15T09:03:58+000
```

## Related Operations

- [ec2-create-snapshot](#)
- [ec2-delete-snapshot](#)

# **ec2-describe-volumes**



## **Description**

Describes the specified Amazon EBS volumes that you own. If you do not specify one or more volume IDs, Amazon EBS describes all volumes that you own. For more information about Amazon EBS, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).

## Syntax

**ec2-describe-volumes** [*volume\_id* ...]

# Options

Name	Description	Required
<i>volume_id</i>	The ID of the volume to list.  Type: String  Default: Describes all volumes that you own.  Example: vol-4282672b	No

## Output

The command returns a table that contains the following information:

- VOLUME identifier
- ID of the volume
- Size of the volume, in GiBs
- Snapshot from which the volume was created, if applicable
- Availability Zone in which the volume launched
- Volume state (e.g., creating, available, in-use)
- Time stamp when volume creation initiated

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example describes all volumes associated with your account.

```
PROMPT> ec2-describe-volumes  
VOLUME vol-4d826724 800 us-east-1a in-use 2008-02-14T00:00:00+0000  
ATTACHMENT vol-4d826724 i-6058a509 /dev/sdh attached 2008-02-14T00:  
VOLUME vol-50957039 13 us-east-1a available 2008-02-09T00:00:00+00  
VOLUME vol-6682670f 1 us-east-1a in-use 2008-02-11T12:00:00+0000  
ATTACHMENT vol-6682670f i-69a54000 /dev/sdh attached 2008-02-11T13:
```

## Related Operations

- [ec2-create-snapshot](#)
- [ec2-delete-snapshot](#)

# **ec2-detach-volume**

# Description

Detaches an Amazon EBS volume from an instance. For more information about Amazon EBS, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).



## **Important**

Make sure to unmount any file systems on the device within your operating system before detaching the volume. Failure to unmount file systems, or otherwise properly release the device from use, can result in lost data and will corrupt the file system.



## Syntax

```
ec2-detach-volume volume_id [--instance instance_id  
[--device device]] [--force]
```

# Options

Name	Description	Required
<i>volume_id</i>	The ID of the volume.  Type: String  Default: None  Example: vol-4282672b	Yes
<i>--instance instance_id</i>	The ID of the instance.  Type: String  Default: None  Example: i-6058a509	No
<i>--device device</i>	The device name.  Type: String  Default: None  Example: /dev/sdh	No
<i>--force</i>	Forces detachment if the previous detachment attempt did not occur cleanly (logging into an instance, unmounting the volume, and detaching normally). This option can lead to data loss or a corrupted file system. Use this option only as a last resort to detach a volume from a failed instance. The instance will not have an opportunity to flush file system caches nor file system meta data. If you use this option, you must perform file system check and repair procedures.  Type: String  Default: None  Example: None	No

## Output

The command returns a table that contains the following information:

- ATTACHMENT identifier
- ID of the volume
- ID of the instance
- Device as which the volume is exposed within the instance
- Attachment state (e.g., detaching)
- Time stamp when detaching was initiated

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example detaches volume vol-4d826724.

```
PROMPT> ec2-detach-volume vol-4d826724  
ATTACHMENT vol-4d826724 i-6058a509 /dev/sdh detaching 2008-02-14T00
```

## Related Operations

- [ec2-create-volume](#)
- [ec2-delete-volume](#)
- [ec2-describe-volumes](#)
- [ec2-attach-volume](#)

**ec2-disassociate-address**

## **Description**

Disassociates the specified elastic IP address from the instance to which it is assigned. This is an idempotent operation. If you enter it more than once, Amazon EC2 does not return an error.

# Syntax

**ec2-disassociate-address** *ip\_address*



# Options

Name	Description	Required
<i>ip_address</i>	IP address that you are disassociating from the instance.  Type: String  Default: None  Example: 67.202.55.255	Yes

## Output

The command returns a table that contains the following information:

- Output type identifier ("ADDRESS")
- Elastic IP address you are disassociating from the instance

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example disassociates the 67.202.55.255 IP address from the instance to which it is assigned.

```
PROMPT> ec2-disassociate-address 67.202.55.255  
ADDRESS 67.202.55.255
```

## Related Operations

- 

[ec2-allocate-address](#)

- [ec2-describe-addresses](#)
- [ec2-release-address](#)
- [ec2-associate-address](#)

**ec2-fingerprint-key**

## **Description**

Retrieves console output for the specified instance.

Instance console output is buffered and posted shortly after instance boot, reboot, and termination. Amazon EC2 preserves the most recent 64 KB output which will be available for at least one hour after the most recent post.

# Syntax

**ec2-fingerprint-key** *keyfile*

# Options

Name	Description	Required
<i>keyfile</i>	The path to a file containing an unencrypted PEM-encoded PKCS#8 private key. Type: String Default: None Example: mykey.pem	Yes



## Output

The command returns a table that contains the following information:

- A key fingerprint. This is formatted as a hash digest with each octet separated by a colon

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example computes and displays the fingerprint for the mykey.pem private key.

```
PROMPT> ec2-fingerprint-key mykey.pem  
1f:51:ae:28:bf:89:e9:d8:1f:25:5d:37:2d:7d:b8:ca:9f:f5:f1:6f
```

## Related Operations

- 

[ec2-describe-keypairs](#)

**ec2-get-console-output**

## **Description**

Retrieves console output for the specified instance.

Instance console output is buffered and posted shortly after instance boot, reboot, and termination. Amazon EC2 preserves the most recent 64 KB output which will be available for at least one hour after the most recent post.

## Syntax

**ec2-get-console-output** *instance\_id* [-r]

# Options

Name	Description	Required
<i>instance_id</i>	ID of the instance for which you want console output. Type: String Default: None Example: i-10a64379	Yes
<i>-r</i>	Raw output. Do not escape the output to facilitate reading. Type: String Default: None Example: -r	Yes

## Output

The command returns a table that contains the following information:

- A timestamp indicating the time of the last update
- The instance console output. By default the ^ESC character is escaped and duplicate new-lines are removed to facilitate reading

Amazon EC2 displays errors on stderr.



# Examples

## Example Request

This example retrieves the console output for the i-10a64379 Linux and UNIX instance.

```
PROMPT> ec2-get-console-output i-10a64379
2007-01-03 12:00:00
Linux version 2.6.16-xenU (builder@patchbat.amazonsa) (gcc version 4.1.1) #1 SMP Tue Aug 14 22:03:12 PDT 2006
BIOS-provided physical RAM map:
Xen: 0000000000000000 - 000000006a400000 (usable)
980MB HIGHMEM available.
727MB LOWMEM available.
NX (Execute Disable) protection: active
IRQ lockup detection disabled
Built 1 zonelists
Kernel command line: root=/dev/sda1 ro 4
Enabling fast FPU save and restore... done.
...
ec2: -----BEGIN SSH HOST KEY FINGERPRINTS-----
ec2: 2048 bc:89:29:c6:45:4b:b3:e2:c1:41:81:22:cb:3c:77:54 /etc/ssh/
ec2: 2048 fc:8d:0c:eb:0e:a6:4a:6a:61:50:00:c4:d2:51:78:66 /etc/ssh/
ec2: 1024 b5:cd:88:6a:18:7f:83:9d:1f:3b:80:03:10:17:7b:f5 /etc/ssh/
ec2: -----END SSH HOST KEY FINGERPRINTS-----

Fedora release 8 (Werewolf)
Kernel 2.6.21.7-2.fc8xen on an i686
```

## Related Operations

- 

[ec2-run-instances](#)

**ec2-get-password**

# Description

Retrieves and decrypts the administrator password for the instances running Windows.

You must specify the key pair used to launch the instance.



## Note

The Windows password is only generated the first time an AMI is launched. It is not generated for rebundled AMIs or after the password is changed on an instance.

The password is encrypted using the key pair that you provided and stored within the <password> tags of the console output.

There is no SOAP or Query version of the `ec2-get-password` command.

## Syntax

**ec2-get-password** *instanceId* -k *windows\_keypair*

# Options

Name	Description	Required
<i>instance_id</i>	An instance ID returned from a previous call to  Type: String  Default: None  Example: i-9b76d0f3	Yes
<i>windows_keypair</i>	The file that contains the private key used to launch the instance.  Type: String  Default: None  Example: MyWindowsKeypair	Yes

## Output

The command returns a table that contains the following information:

- The Windows administrator password

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example returns the administrator password for the i-2574e22a instance.

```
PROMPT> ec2-get-password i-2574e22a -k windows-keypair  
q96A40B9w
```



## Related Operations

- 

[ec2-run-instances](#)

- [ec2-describe-instances](#)

# **ec2-migrate-bundle**

# Description

Copy a bundled AMI from one region to another. For information on regions, see

???.



## Note

After copying a bundled AMI to a new region, make sure to register it as a new AMI.

During migration, Amazon EC2 replaces the kernel and RAM disk in the manifest file with a kernel and RAM disk designed for the destination region. Unless the `--no-mapping` parameter is given, `ec2-migrate-bundle` might use the Amazon `EC2DescribeRegions` and `DescribeImages` operations to perform automated mappings.

This tool is being deprecated and replaced by `ec2-migrate-image`.

## Syntax

```
ec2-migrate-bundle -K private_key -k private_key -c  
cert -a access_key_id -s secret_key --bucket  
source_s3_bucket --destination-bucket  
destination_s3_bucket --manifest manifest_path --  
location {US | EU} --ec2cert ec2_cert_path [--kernel  
kernel-id] [--ramdisk ramdisk_id] [--no-mapping] --  
region mapping_region_name
```

# Options

Name	Description	Required
<code>-K, --private-key private_key</code>	<p>The path your PEM-encoded RSA key file.</p> <p>Type: String</p> <p>Default: Uses EC2_PRIVATE_KEY environment variable</p> <p>Example: None</p>	No
<code>-C, --cert cert</code>	<p>The user's PEM encoded RSA public key certificate file.</p> <p>Type: String</p> <p>Default: Uses EC2_CERT environment variable</p> <p>Example: cert-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem</p>	No
<code>-U, --url url</code>	<p>Specifies the URL to use as the web service URL.</p> <p>Type: String</p> <p>Default: https://ec2.amazonaws.com</p> <p>Example: https://ec2.amazonaws.com</p>	No
<code>-o, --owner-akid access_key_id</code>	<p>Access key ID of the bucket owner.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: 157SZTMZQT516NAZ7CR2</p>	Yes
<code>-w, --owner-sak secret_access_key</code>	<p>Secret access key of the bucket owner.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: eW91dHVhZS5jb20vd2F0Y2g/dj1SU3NKMTlzeTNKSQ==</p>	Yes
<code>--bucket source_s3_bucket</code>	<p>The source Amazon S3 bucket where the AMI is located, followed by an optional '/'-delimited path prefix.</p> <p>Type: String</p> <p>Default: None</p>	Yes

	Example: my-us-bucket	
<code>--destination-bucket</code> <i>destination_s3_bucket</i>	<p>The destination Amazon S3 bucket, followed by an optional '/'-delimited path prefix. If the destination bucket does not exist, it is created.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: my-eu-bucket</p>	Yes
<code>--manifest</code> <i>manifest</i>	<p>The location of the Amazon S3 source manifest.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: my-ami.manifest.xml</p>	Yes
<code>--location</code> {US   EU}	<p>The location of the destination Amazon S3 bucket.</p> <p>Type: String</p> <p>Default: US</p> <p>Valid Values: US   EU</p> <p>Example: EU</p>	No
<code>--acl</code> <i>acl</i>	<p>The access control list policy of the bundled image.</p> <p>Type: String</p> <p>Default: None</p> <p>Valid Values: public-read   aws-exec-read</p> <p>Example: public-read</p>	Yes
<code>--kernel</code>	<p>The ID of the kernel to select.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: aki-ba3adfd3</p>	No
<code>--ramdisk</code>	<p>The ID of the RAM disk to select. Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk. To find kernel requirements, go to the</p> <p>Type: String</p> <p>Default: None</p> <p>Example: ari-badbad00</p>	No

<code>--no-mapping</code>	Disables automatic mapping of kernels and RAM disks.  Type: String  Default: Mapping is enabled.  Example: my-ami.manifest.xml	No
<code>--region <i>region</i></code>	Region to look up in the mapping file.  Type: String  Default: Amazon EC2 attempts to determine the region from the location of the Amazon S3 bucket.  Example: eu-west-1	No

## Output

The command returns a table that contains the following information:

- Status messages describing the stages and status of the migration

Amazon EC2 displays errors on stderr.



# Examples

## Example Request

This example copies the AMI specified in the `my-ami.manifest.xml` manifest from the US to the EU.

```
PROMPT> ec2-migrate-bundle --cert cert-THUMBPRINT.pem  
Copying 'my-ami.part.00'...  
Copying 'my-ami.part.01'...  
Copying 'my-ami.part.02'...  
Copying 'my-ami.part.03'...  
Copying 'my-ami.part.04'...  
Copying 'my-ami.part.05'...  
Copying 'my-ami.part.06'...  
Copying 'my-ami.part.07'...  
Copying 'my-ami.part.08'...  
Copying 'my-ami.part.09'...  
Copying 'my-ami.part.10'...  
Your new bundle is in S3 at the following location:  
my-eu-bucket/my-ami.manifest.xml
```

## Related Operations

- [ec2-register](#)
- [ec2-run-instances](#)
- [ec2-migrate-image](#)

# **ec2-migrate-image**

## Description

Copies a bundled AMI from one region to another. For information on regions, see

[???](#).

This tool replaces [ec2-migrate-bundle](#).

## Syntax

```
ec2-migrate-image -K private_key -C cert -U url -o  
access_key_id -w secret_access_key --bucket  
source_s3_bucket --destination-bucket  
destination_s3_bucket --manifest manifest_path --  
location {US | EU} --ec2cert ec2_cert_path [--kernel  
kernel-id] [--ramdisk ramdisk_id] [--no-mapping] --  
region mapping_region_name
```

# Options

Name	Description	Required
<code>-K, --private-key private_key</code>	The path to your PEM-encoded RSA key file.  Type: String  Default: Uses EC2_PRIVATE_KEY environment variable  Example: None	No
<code>-C, --cert cert</code>	The user's PEM encoded RSA public key certificate file.  Type: String  Default: Uses EC2_CERT environment variable  Example: cert-HKZYKTAIG2ECMXIYIBH3HXV4ZBZQ55CLO.pem	No
<code>-U, --url url</code>	Specifies the URL to use as the web service URL.  Type: String  Default: https://ec2.amazonaws.com  Example: https://ec2.amazonaws.com	No
<code>-o, --owner-akid access_key_id</code>	Access key ID of the bucket owner.  Type: String  Default: None  Example: 157SZTMZQT516NAZ7CR2	Yes
<code>-w, --owner-sak secret_access_key</code>	Secret access key of the bucket owner.  Type: String  Default: None  Example: eW91dHVlZS5jb20vd2F0Y2g/dj1SU3NKMTlzeTNKSQ==	Yes
<code>--bucket source_s3_bucket</code>	The source Amazon S3 bucket where the AMI is located, followed by an optional '/'-delimited path prefix.  Type: String  Default: None	Yes

	Example: my-us-bucket	
<code>--destination-bucket</code> <i>destination_s3_bucket</i>	<p>The destination Amazon S3 bucket, followed by an optional '/'-delimited path prefix. If the destination bucket does not exist, it is created.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: my-eu-bucket</p>	Yes
<code>--manifest</code> <i>manifest</i>	<p>The location of the Amazon S3 source manifest.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: my-ami.manifest.xml</p>	Yes
<code>--location</code> {US   EU}	<p>The location of the destination Amazon S3 bucket.</p> <p>Type: String</p> <p>Default: US</p> <p>Valid Values: US   EU</p> <p>Example: EU</p>	No
<code>--acl</code> <i>acl</i>	<p>The access control list policy of the bundled image.</p> <p>Type: String</p> <p>Default: None</p> <p>Valid Values: public-read   aws-exec-read</p> <p>Example: public-read</p>	Yes
<code>--kernel</code>	<p>The ID of the kernel to select.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: aki-ba3adfd3</p>	No
<code>--ramdisk</code>	<p>The ID of the RAM disk to select. Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk. To find kernel requirements, go to the</p> <p>Type: String</p> <p>Default: None</p> <p>Example: ari-badbad00</p>	No

<code>--no-mapping</code>	Disables automatic mapping of kernels and RAM disks.  Type: String  Default: Mapping is enabled.  Example: my-ami.manifest.xml	No
<code>--region <i>region</i></code>	Region to look up in the mapping file.  Type: String  Default: Amazon EC2 attempts to determine the region from the location of the Amazon S3 bucket.  Example: eu-west-1	No



## Output

The command returns a table that contains the following information:

- Status messages describing the stages and status of the migration

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example copies the AMI specified in the `my-ami.manifest.xml` manifest from the US to the EU.

```
PROMPT> ec2-migrate-image --cert cert-THUMBPRINT.pem -  
Copying 'my-ami.part.00'...  
Copying 'my-ami.part.01'...  
Copying 'my-ami.part.02'...  
Copying 'my-ami.part.03'...  
Copying 'my-ami.part.04'...  
Copying 'my-ami.part.05'...  
Copying 'my-ami.part.06'...  
Copying 'my-ami.part.07'...  
Copying 'my-ami.part.08'...  
Copying 'my-ami.part.09'...  
Copying 'my-ami.part.10'...  
Your new bundle is in S3 at the following location:  
my-eu-bucket/my-ami.manifest.xml
```

## Related Operations

- [ec2-register](#)
- [ec2-run-instances](#)

# **ec2-modify-image-attribute**

## **Description**

Modifies an attribute of an AMI.

## Syntax

```
ec2-modify-image-attribute ami_id -l (-a item_value |  
-r item_value)
```

# Options

Name	Description	Required
<i>ami_id</i>	The AMI ID. Type: String Default: None Example: ami-2bb65342	Yes
<i>-p product_code</i>	Amazon DevPay product code. Currently only one product code can be associated with an AMI. Once set, the product code cannot be changed or reset. Type: String Default: None Example: 774F4FF8	

## Output

The command returns a table that contains the following information:

- Attribute type identifier
- ID of the AMI on which attributes are being modified
- Action performed on the attribute
- Attribute or attribute list item value type
- Attribute or attribute list item value

Amazon EC2 displays errors on stderr.



# Examples

## Example Request

This example makes this a public AMI and grants specific permissions to a user.

```
PROMPT> ec2-modify-image-attribute ami-2bb65342 -l -a  
launchPermission ami-2bb65342 ADD userId AIDADH4IGTRXXKCD
```

## Example Request

The following example adds the 774F4FF8 product code to the ami-2bb65342 AMI:

```
PROMPT> ec2-modify-image-attribute ami-2bb65342 -p 774  
productCodes ami-2bb65342 productCode 774F4FF8
```

## Related Operations

- 

[ec2-reset-image-attribute](#)

- [ec2-describe-image-attribute](#)

# **ec2-monitor-instances**

## **Description**

Enables monitoring for a running instance. For more information, refer to the *Amazon CloudWatch Developer Guide*.

## Syntax

**ec2-monitor-instances** *instance\_id* [*instance\_id*...]

# Options

Name	Description	Required
<i>instance_id</i>	Instance ID. Type: String Default: None Example: i-43a4412a	Yes

## Output

The command returns a table that contains the following information:

- Instance ID
- Monitoring state

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example enables monitoring for i-43a4412a and i-23a3397d.

```
PROMPT> ec2-monitor-instances i-43a4412a i-23a3397d  
i-43a4412a monitoring-pending  
i-23a3397d monitoring-pending
```



## Related Operations

- 

[ec2-unmonitor-instances](#)

- [ec2-run-instances](#)

# **ec2-purchase-reserved- instance-offering**

## Description

Purchases a Reserved Instance for use with your account. With Amazon EC2 Reserved Instances, you purchase the right to launch Amazon EC2 instances for a period of time (without getting insufficient capacity errors) and pay a lower usage rate for the actual time used. For more information about Reserved Instances, go to the

[Amazon Elastic Compute Cloud Developer Guide](#).

# Syntax

```
ec2-purchase-reserved-instance-offering --offering  
offering --instance-count count
```

# Options

Name	Description	Required
<i>offering</i>	The offering ID of the Reserved Instance to purchase. Type: String Default: None Example: 4b2293b4-5813-4cc8-9ce3-1957fc1dcfc8	Yes
<i>count</i>	The number of Reserved Instances to purchase. Type: Integer Default: 1 Example: 5	No

## Output

The command returns a table that contains the following information:

- RESERVEDINSTANCES identifier
- The ID(s) of the purchased Reserved Instances

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example purchases Reserved Instances.

```
PROMPT> ec2-purchase-reserved-instance-offering --offe  
RESERVEDINSTANCES b847fa93-0c31-405b-b745-b6bf00032333 b847fa93-0c3
```

## Related Operations

- [ec2-describe-reserved-instances-offerings](#)
- [ec2-describe-reserved-instances](#)



# **ec2-reboot-instances**

# Description

Requests a reboot of one or more instances. This operation is asynchronous; it only queues a request to reboot the specified instance(s). The operation will succeed if the instances are valid and belong to you. Requests to reboot terminated instances are ignored.



## Note

If a Linux/UNIX instance does not cleanly shut down within four minutes, Amazon EC2 will perform a hard reboot.

## Syntax

**ec2-reboot-instances** *instance\_id* [*instance\_id* ...]

# Options

Name	Description	Required
<i>instance_id</i>	One or more instance IDs.  Type: String  Default: None  Example: i-3ea74257	Yes

## Output

The command returns a table that contains the following information:

- This command displays no output on success

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example reboots an instance.

```
PROMPT> ec2-reboot-instances &InstanceId.1=i-3ea74257
```

## Related Operations

- 

[ec2-run-instances](#)

**ec2-register**



## **Description**

Registers an AMI with Amazon EC2. Images must be registered before they can be launched. To launch instances, use the `RunInstances` operation.

Each AMI is associated with a unique ID which is provided by the Amazon EC2 service through the `RegisterImage` operation. During registration, Amazon EC2 retrieves the specified image manifest from Amazon S3 and verifies that the image is owned by the user registering the image.

The image manifest is retrieved once and stored within the Amazon EC2. Any modifications to an image in Amazon S3 invalidates this registration. If you make changes to an image, deregister the previous image and register the new image. To deregister an image, use the `DeregisterImage` operation.

# Syntax

**ec2-register** *manifest*

# Options

Name	Description	Required
<i>manifest</i>	Full path to your AMI manifest in Amazon S3 storage.  Type: String  Default: None  Example: mybucket/image.manifest.xml	Yes

## Output

The command returns a table that contains the following information:

- IMAGE identifier
- Unique ID of the newly registered machine image

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example registers the AMI specified in the `image.manifest.xml` manifest file.

```
PROMPT> ec2-register mybucket/image.manifest.xml  
IMAGE ami-78a54011
```

## Related Operations

- 

[ec2-describe-images](#)

- [ec2-deregister](#)

**ec2-release-address**

# Description

Releases an elastic IP address associated with your account.

If you run this operation on an elastic IP address that is already released, the address might be assigned to another account which will cause Amazon EC2 to return an error.



## Note

Releasing an IP address automatically disassociates it from any instance with which it is associated. To disassociate an IP address without releasing it, use the `DisassociateAddress` operation.



## Important

After releasing an elastic IP address, it is released to the IP address pool and might no longer be available to your account. Make sure to update your DNS records and any servers or devices that communicate with the address.



# Syntax

**ec2-release-address** *ip\_address*

# Options

Name	Description	Required
<i>ip_address</i>	The IP address that you are releasing from your account. Type: String Default: None Example: 67.202.55.255	Yes

## Output

The command returns a table that contains the following information:

- Output type identifier ("ADDRESS")
- Elastic IP address that you are releasing

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example releases an elastic IP address associated with the account.

```
PROMPT> ec2-release-address 67.202.55.255  
ADDRESS 67.202.55.255
```

## Related Operations

- 

[ec2-allocate-address](#)

- [ec2-describe-addresses](#)
- [ec2-associate-address](#)
- [ec2-disassociate-address](#)

# **ec2-reset-image-attribute**

# Description

Resets an attribute of an AMI to its default value.



**Note**

The productCodes attribute cannot be reset.

## Syntax

**ec2-reset-image-attribute** *ami\_id* -l



# Options

Name	Description	Required
<i>ami_id</i>	ID of the AMI on which the attribute will be reset.  Type: String  Default: None  Example: r-15a4417c	Yes

## Output

The command returns a table that contains the following information:

- Attribute type identifier
- ID of the AMI on which the attribute is being reset
- Action identifier ("RESET")

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example resets the `launchPermission` attribute.

```
PROMPT> ec2-reset-image-attribute ami-6ba54002 -l  
launchPermission ami-6ba54002 RESET
```

## Related Operations

- 

[ec2-modify-image-attribute](#)

- [ec2-describe-image-attribute](#)

**ec2-revoke**

## **Description**

Revokes permissions from a security group. The permissions used to revoke must be specified using the same values used to grant the permissions.

Permissions are specified by IP protocol (TCP, UDP, or ICMP), the source of the request (by IP range or an Amazon EC2 user-group pair), the source and destination port ranges (for TCP and UDP), and the ICMP codes and types (for ICMP).

Permission changes are quickly propagated to instances within the security group. However, depending on the number of instances in the group, a small delay is might occur.

## Syntax

```
ec2-revoke group [-P protocol] (-p port_range | -t  
icmp_type_code) [-u source_group_user ...] [-o  
source_group ...] [-s source_subnet ...]
```

# Options

Name	Description	Required
<i>group</i>	Name of the group to modify. Type: String Default: None Example: webserv	Yes



## Output

The command returns a table that contains the following information:

- Output type identifier ("GROUP", "PERMISSION")
- Group name. Currently, this will report an empty string
- Type of rule. Currently, only ALLOW rules are supported
- Protocol to allow
- Start of port range
- End of port range
- FROM
- Source

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example revokes TCP port 80 access from the 205.192.0.0/16 address range for the webserv security group.

```
PROMPT> ec2-revoke webserv -P tcp -p 80 -s 205.192.0.0/  
GROUP webserv "" PERMISSION webserv ALLows tcp 80 80 FROM CIDR 205.19
```

## Related Operations

- 

[ec2-add-group](#)

- [ec2-describe-group](#)
- [ec2-authorize](#)
- [ec2-delete-group](#)

# **ec2-run-instances**

## Description

Launches a specified number of instances of an AMI for which you have permissions.

If Amazon EC2 cannot launch the minimum number AMIs you request, no instances will be launched. If there is insufficient capacity to launch the maximum number of AMIs you request, Amazon EC2 launches the minimum number specified for each AMI and allocate the remaining available instances using round robin.

In the following example, Libby generates a request to launch two images (database and web\_server):

1. Libby runs the RunInstances operation to launch database instances (min. 10, max. 15) and web\_server instances (min. 30, max. 40).

Because there are currently 30 instances available and Libby needs a minimum of 40, no instances are launched.

2. Libby adjusts the number of instances she needs and runs the RunInstances operation to launch database instances (min. 5, max. 10) and web\_server instances (min. 20, max. 40).

Amazon EC2 launches the minimum number of instances for each AMI (5 database, 20 web\_server).

The remaining 5 instances are allocated using round robin.

3. Libby adjusts the number of instances she needs and runs the RunInstances operation again to launch database instances (min. 5, max. 10) and web\_server instances (min. 20, max. 40).



**Note**

Every instance is launched in a security group (created using the CreateSecurityGroup operation).

You can provide an optional key pair ID for each image in the launch request (created using the CreateKeyPair operation). All instances that are created from images that use this key pair will have access to the associated public key at boot. You can use this key to provide secure access to an instance of an image on a per-instance basis.

Amazon EC2 public images use this feature to provide secure access without passwords.



**Important**

Launching public images without a key pair ID will leave them inaccessible.

The public key material is made available to the instance

at boot time by placing it in the `openssh_id.pub` file on a logical device that is exposed to the instance as `/dev/sda2` (the instance store). The format of this file is suitable for use as an entry within `~/.ssh/authorized_keys` (the OpenSSH format). This can be done at boot (e.g., as part of `rc.local`) allowing for secure access without passwords.

Optional user data can be provided in the launch request. All instances that collectively comprise the launch request have access to this data. For more information, go the

## [Amazon Elastic Compute Cloud Developer Guide.](#)



### **Note**

If any of the AMIs have a product code attached for which the user has not subscribed, the `RunInstances` call will fail.



### **Important**

We strongly recommend using the 2.6.18 Xen stock kernel with the `c1.medium` and `c1.xlarge` instances. Although the default Amazon EC2 kernels will work, the new kernels provide greater stability and performance for these instance types. For more information about kernels, go the [Amazon Elastic Compute Cloud Developer Guide.](#)

## Syntax

```
ec2-run-instances ami_id [-n instance_count] [-g group [-g group ...]] [-k keyname] [-d user_data | -f user_data_file] [ --addressing addressing_type] [ --type instance_type] [ --availability-zone zone] [ --kernel kernel_id] [ --ramdisk ramdisk_id] [ --block-device-mapping block_device_mapping]
```



# Options

Name	Description	Required
<i>ami_id</i>	Unique ID of a machine image, returned by a call to  Type: String  Default: None  Example: r-15a4417c	Yes
<i>-n instance_count</i>	The number of instances to launch. If Amazon EC2 cannot launch the specified number of instances, no instances will launch. If this is specified as a range (min-max), Amazon EC2 will try to launch the maximum number, but no fewer than the minimum number.  Type: String  Default: None  Constraints: Between 1 and the maximum number allowed for your account (default: 20).  Example: 5-10	Yes
<i>-k keyname</i>	The name of the key pair.  Type: String  Default: None  Example: MyKeyPair	No
<i>group</i>	Name of the security group.  Type: String  Default: default  Example: webserv	No
<i>-d user_data</i>	The user data.  Type: String  Default: None  Example: my user data	No
<i>--type instance_type</i>	Specifies the instance type.  Type: String	No

	<p>Default: m1.small</p> <p>Valid Values: m1.small   m1.large   m1.xlarge   c1.medium   c1.xlarge</p> <p>Example: m1.large</p>	
<code>--availability-zone zone</code>	<p>Specifies the placement constraints (Availability Zones) for launching the instances.</p> <p>Type: String</p> <p>Default: Amazon EC2 selects an Availability Zone.</p> <p>Example: us-east-1b</p>	No
<code>kernel</code>	<p>The ID of the kernel with which to launch the instance.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: aki-ba3adfd3</p>	No
<code>ramdisk</code>	<p>The ID of the RAM disk with which to launch the instance. Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk. To find kernel requirements, go to the Resource Center and search for the kernel ID.</p> <p>Type: String</p> <p>Default: None</p> <p>Example: ari-badbad00</p>	No
<code>--block-device-mapping mapping</code>	<p>The virtual name.</p> <p>Type: String</p> <p>Default: None</p> <p>Example:</p>	No
<code>--block-device-mapping mapping</code>	<p>The device name (e.g., /dev/sdh).</p> <p>Type: String</p> <p>Default: None</p> <p>Example: /dev/sdh</p>	No
<code>--monitoring</code>	<p>Enables monitoring for the instance.</p> <p>Type: Boolean</p> <p>Default: Disabled</p> <p>Example: --monitoring</p>	No

# Output

The command returns a table that contains the following information:

- Output type identifier ("INSTANCE")
- Instance ID which uniquely identifies each running instance
- AMI ID of the image on which the instance(s) are based
- DNS name associated with the instance (only present for instances in the running state)
- Instance state. This is usually pending, which indicates that the instance(s) are preparing to launch
- Key name. If a key was associated with the instance at launch its name is displayed
- AMI launch index
- Instance type. Specifies the instance type (CPU and memory configuration)

- Instance launch time. Specifies when the instance launched
- Availability Zone. Specifies the zone in which the instance launched

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example launches three instances of the ami-60a54009 AMI.

```
PROMPT> ec2-run-instances ami-60a54009 -n 3 --availabi
```

RESERVATION	r-237fed4a	853279305796	default			
INSTANCE	i-d9add0b0	ami-60a54009	pending	0	m1.small	2009-05-
INSTANCE	i-dbadd0b2	ami-60a54009	pending	1	m1.small	2009-05-
INSTANCE	i-ddadd0b4	ami-60a54009	pending	2	m1.small	2009-05-

## Related Operations

- [ec2-describe-instances](#)
- [ec2-terminate-instances](#)
- [ec2-authorize](#)
- [ec2-revoke](#)
- [ec2-describe-group](#)
- [ec2-add-group](#)
- [ec2-add-keypair](#)

**ec2-terminate-instances**

## **Description**

Shuts down one or more instances. This operation is idempotent; if you terminate an instance more than once, each call will succeed.

Terminated instances will remain visible after termination (approximately one hour).



## Syntax

**ec2-terminate-instances** *instance\_id* [*instance\_id* ...]

# Options

Name	Description	Required
<i>instance_id</i>	Instance ID to terminate.  Type: String  Default: None  Example: i-3ea74257	Yes

## Output

The command returns a table that contains the following information:

- INSTANCE identifier
- The instance ID of the instance being terminated
- The state of the instance prior to being terminated
- The new state of the instance

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example terminates the `i-3ea74257` instance.

```
PROMPT> ec2-terminate-instances i-3ea74257  
INSTANCE i-3ea74257 running shutting-down
```

## Related Operations

- 

[ec2-describe-instances](#)

**ec2-unmonitor-instances**

## **Description**

Disables monitoring for a running instance. For more information, refer to the *Amazon CloudWatch Developer Guide*.

## Syntax

**ec2-unmonitor-instances** *instance\_id* [*instance\_id*...]



# Options

Name	Description	Required
<i>instance_id</i>	Instance ID. Type: String Default: None Example: i-43a4412a	Yes

## Output

The command returns a table that contains the following information:

- Instance ID
- Monitoring state

Amazon EC2 displays errors on stderr.

# Examples

## Example Request

This example disables monitoring for i-43a4412a and i-23a3397d.

```
PROMPT> ec2-unmonitor-instances i-43a4412a i-23a3397d  
i-43a4412a monitoring-disabling  
i-23a3397d monitoring-disabling
```

## Related Operations

- 

[ec2-monitor-instances](#)

- [ec2-run-instances](#)

# Glossary

## Amazon machine image (AMI)

An Amazon Machine Image (AMI) is an encrypted machine image stored in Amazon S3. It contains all the information necessary to boot instances of your software.

## Amazon EBS

A type of storage that enables you to create volumes that can be mounted as devices by Amazon EC2 instances. Amazon EBS volumes behave like raw unformatted external block devices. They have user supplied device names and provide a block device interface. You can load a file system on top of Amazon EBS volumes, or use them just as you would use a block device.

## Availability Zone

A distinct location within a region that is engineered to be insulated from failures in other Availability Zones and provides inexpensive, low latency network connectivity to other Availability Zones in the same region.

compute unit

An Amazon-generated measure that enables you to evaluate the CPU capacity of different Amazon EC2 instance types.

## EBS

See [\*Amazon EBS\*](#).

## Elastic Block Store

See [\*Amazon EBS\*](#).

## elastic IP address

A static public IP address designed for dynamic cloud computing. Elastic IP addresses are associated with your account, not specific instances. Any elastic IP addresses that you associate with your account remain associated with your account until you explicitly release them. Unlike traditional static IP addresses, however, elastic IP addresses allow you to mask instance or Availability Zone failures by rapidly remapping your public IP addresses to any instance in your account.

## ephemeral store

See *instance store*.

explicit launch permission

Launch permission granted to a specific user.

group

See [\*security group\*](#).

instance store

Every instance includes a fixed amount of storage space on which you can store data. This is not designed to be a permanent storage solution. If you need a permanent storage system, use Amazon EBS.

instance type

A specification that defines the memory, CPU, storage capacity, and hourly cost for an instance. Some instance types are designed for standard applications while others are designed for CPU-intensive applications.

gibibyte (GiB)

a contraction of giga binary byte, a gibibyte is  $2^{30}$  bytes or 1,073,741,824 bytes. A gigabyte is  $10^9$  or 1,000,000,000 bytes. So yes, Amazon has bigger



bytes.

image

See *Amazon machine image*.

instance

Once an AMI has been launched, the resulting running system is referred to as an instance. All instances based on the same AMI start out identical and any information on them is lost when the instances are terminated or fail.

instance store

The disk storage associated with an instance. In the event an instance fails or is terminated (not simply rebooted), all content on the instance store is deleted.

group

Also known as a security group, groups define firewall rules that can be shared among a group of instances that have similar security requirements. The group is specified at instance launch.

launch permission

AMI attribute allowing users to launch an AMI

Linux

Amazon EC2 instances are available for many operating platforms, including Linux, Solaris, Windows, and others.

paid AMI

An AMI that you sell to other Amazon EC2 users. For more information, refer to the *Amazon DevPay Developer Guide*.

private IP address

All Amazon EC2 instances are assigned two IP addresses at launch: a private address (RFC 1918) and a public address that are directly mapped to each other through Network Address Translation (NAT).

public AMI

An AMI that all users have launch permissions for.

public data sets

Sets of large public data sets that can be seamlessly

integrated into AWS cloud-based applications. Amazon stores the data sets at no charge to the community and, like all AWS services, users pay only for the compute and storage they use for their own applications. These data sets currently include data from the Human Genome Project, the U.S. Census, Wikipedia, and other sources.

public IP address

All Amazon EC2 instances are assigned two IP addresses at launch: a private address (RFC 1918) and a public address that are directly mapped to each other through Network Address Translation (NAT).

region

A geographical area in which you can launch instances (e.g., US, EU).

reservation

A collection of instances started as part of the same launch request.

Reserved Instance

An additional Amazon EC2 pricing option. With

Reserved Instances, you can make a low one-time payment for each instance to reserve and receive a significant discount on the hourly usage charge for that instance.

## security group

A security group is a named collection of access rules. These access rules specify which ingress (i.e., incoming) network traffic should be delivered to your instance. All other ingress traffic will be discarded.

## shared AMI

AMIs that developers build and make available for other AWS developers to use.

## Solaris

Amazon EC2 instances are available for many operating platforms, including Linux, Solaris, Windows, and others.

## snapshot

Amazon EBS provides the ability to create snapshots or backups of your Amazon EBS volumes and store them in Amazon S3. You can use these snapshots as

the starting point for new Amazon EBS volumes and to protect your data for long term durability.

supported AMIs

These AMIs are similar to paid AMIs, except that you charge for software or a service that customers use with their own AMIs.

tebibyte (TiB)

a contraction of tera binary byte, a tebibyte is  $2^{40}$  bytes or 1,099,511,627,776 bytes. A terabyte is  $10^{12}$  or 1,000,000,000,000 bytes. So yes, Amazon has bigger bytes.

UNIX

Amazon EC2 instances are available for many operating platforms, including Linux, Solaris, Windows, and others.

Windows

Amazon EC2 instances are available for many operating platforms, including Linux, Solaris, Windows, and others.

# Document Conventions

This section lists the common typographical and symbol use conventions for AWS technical publications.

# Typographical Conventions

This section describes common typographical use conventions.

Convention	Description/Example
Call-outs	<p>A call-out is a number in the body text to give you a visual reference. The reference point is for further discussion elsewhere.</p> <p>You can use this resource regularly. <b>1</b></p>
Code in text	<p>Inline code samples (including XML) and commands are identified with a special font.</p> <p>You can use the command <code>java -version</code>.</p>
Code blocks	<p>Blocks of sample code are set apart from the body and marked accordingly.</p> <pre># ls -l /var/www/html/index.html -rw-rw-r-- 1 root root 1872 Jun 21 09:33 /var/www/html/index.htm # date Wed Jun 21 09:33:42 EDT 2006</pre>
Emphasis	<p>Unusual or important words and phrases are marked with a special font.</p> <p>You <i>must</i> sign up for an account before you can use the service.</p>
Internal cross references	<p>References to a section in the same document are marked.</p> <p>See <a href="#">Document Conventions</a>.</p>
Logical values, constants, and regular expressions, abstracta	<p>A special font is used for expressions that are important to identify, but are not code.</p> <p>If the value is <code>null</code>, the returned response will be <code>false</code>.</p>
Product and feature names	<p>Named AWS products and features are identified on first use.</p> <p>Create an <i>Amazon Machine Image</i> (AMI).</p>
Operations	<p>In-text references to operations.</p> <p>Use the <code>GetHitResponse</code> operation.</p>
Parameters	<p>In-text references to parameters.</p>

	The operation accepts the parameter <i>AccountID</i> .
Response elements	In-text references to responses. A container for one <code>CollectionParent</code> and one or more <code>CollectionItems</code> .
Technical publication references	References to other AWS publications. If the reference is hyperlinked, it is also underscored. For detailed conceptual information, see the <i>Amazon Mechanical Turk Developer Guide</i> .
User entered values	A special font marks text that the user types. At the password prompt, type <code>MyPassword</code> .
User interface controls and labels	Denotes named items on the UI for easy identification. On the File menu, click Properties.
Variables	When you see this style, you must change the value of the content when you copy the text of a sample to a command line. <code>% ec2-register &lt;your-s3-bucket&gt;/image.manifest</code> See also <a href="#">Symbol Conventions</a> .



# Symbol Conventions

This section describes the common use of symbols.

Convention	Symbol	Description/Example
Mutually exclusive parameters	(Parentheses   and   vertical   bars)	Within a code description, bar separators denote options from which one must be chosen. <pre>% data = hdfread (start   stride   edge)</pre>
Optional parameters XML variable text	[square brackets]	Within a code description, square brackets denote completely optional commands or parameters. <pre>% sed [-n, -quiet]</pre> <p>Use square brackets in XML examples to differentiate them from tags.</p> <pre>&lt;CustomerId&gt;[ID]&lt;/CustomerId&gt;</pre>
Variables	<arrow brackets>	Within a code sample, arrow brackets denote a variable that must be replaced with a valid value. <pre>% ec2-register &lt;your-s3-bucket&gt;/image.manifest</pre>

# Index

## A

adding key pairs, [ec2-add-keypair](#)

adding security groups, [ec2-add-group](#)

AllocateAddress

Command Line, [ec2-allocate-address](#)

AMI tools

ec2-add-keypair, [ec2-upload-bundle](#)

ec2-bundle-image, [ec2-bundle-image](#)

ec2-bundle-vol, [ec2-bundle-vol](#)

ec2-delete-bundle, [ec2-delete-bundle](#)

ec2-download-bundle, [ec2-download-bundle](#)

ec2-migrate-bundle, [ec2-migrate-bundle](#)

ec2-migrate-manifest, [ec2-migrate-manifest](#)

ec2-unbundle, [ec2-unbundle](#)

AMIs

deregistering, [ec2-deregister](#)

describing attributes, [ec2-describe-image-attribute](#)

describing images, [ec2-describe-images](#)

migrating, [ec2-migrate-bundle](#), [ec2-migrate-image](#)

registering, [ec2-register](#)

resetting attributes, [ec2-reset-image-attribute](#)

API list

Command Line, [List of Command Line Operations by](#)

## Function

AssociateAddress

Command Line, [ec2-associate-address](#)  
attaching volumes, [ec2-attach-volume](#)

AttachVolume

Command Line, [ec2-attach-volume](#)  
audience, [Who Should Read This Guide](#)

AuthorizeSecurityGroupIngress

Command Line, [ec2-authorize](#)  
authorizing security group ingress, [ec2-authorize](#)

Availability Zones

describing, [ec2-describe-availability-zones](#)

## **B**

block storage

create snapshot, [ec2-create-snapshot](#), [ec2-delete-snapshot](#)

bundle task

canceling, [ec2-cancel-bundle-task](#)  
describing, [ec2-describe-bundle-tasks](#)

BundleInstance

Command Line, [ec2-bundle-instance](#)  
bundling Windows password, [ec2-bundle-instance](#)

## **C**

## Calls

Command Line, [List of Command Line Operations by Function](#)

## CancelBundleTask

Command Line, [ec2-cancel-bundle-task](#)

canceling Windows bundling, [ec2-cancel-bundle-task](#)

changes to Amazon EC2, [What's New](#)

## CLI

ec2-add-keypair, [ec2-upload-bundle](#)

ec2-bundle-image, [ec2-bundle-image](#)

ec2-bundle-vol, [ec2-bundle-vol](#)

ec2-delete-bundle, [ec2-delete-bundle](#)

ec2-download-bundle, [ec2-download-bundle](#)

ec2-migrate-bundle, [ec2-migrate-bundle](#)

ec2-migrate-manifest, [ec2-migrate-manifest](#)

ec2-unbundle, [ec2-unbundle](#)

## Command Line

AllocateAddress, [ec2-allocate-address](#)

AssociateAddress, [ec2-associate-address](#)

AttachVolume, [ec2-attach-volume](#)

AuthorizeSecurityGroupIngress, [ec2-authorize](#)

BundleInstance, [ec2-bundle-instance](#)

CancelBundleTask, [ec2-cancel-bundle-task](#)

ConfirmProductInstance, [ec2-confirm-product-instance](#)

CreateKeyPair, [ec2-add-keypair](#)

CreateSecurityGroup, [ec2-add-group](#)

CreateSnapshot, [ec2-create-snapshot](#)  
CreateVolume, [ec2-create-volume](#)  
DeleteKeyPair, [ec2-delete-keypair](#)  
DeleteSecurityGroup, [ec2-delete-group](#)  
DeleteSnapshot, [ec2-delete-snapshot](#)  
DeleteVolume, [ec2-delete-volume](#)  
DeregisterImage, [ec2-deregister](#)  
DescribeAddresses, [ec2-describe-addresses](#)  
DescribeAvailabilityZones, [ec2-describe-availability-zones](#)  
DescribeBundleTasks, [ec2-describe-bundle-tasks](#)  
DescribeImageAttribute, [ec2-describe-image-attribute](#)  
DescribeImages, [ec2-describe-images](#)  
DescribeInstances, [ec2-describe-instances](#)  
DescribeKeyPairs, [ec2-describe-keypairs](#)  
DescribeRegions, [ec2-describe-regions](#)  
DescribeReservedInstances, [ec2-describe-reserved-instances](#)  
DescribeReservedInstancesOfferings, [ec2-describe-reserved-instances-offerings](#)  
DescribeSecurityGroups, [ec2-describe-group](#)  
DescribeSnapshots, [ec2-describe-snapshots](#)  
DescribeVolumes, [ec2-describe-volumes](#)  
DetachVolume, [ec2-detach-volume](#)  
DisassociateAddress, [ec2-disassociate-address](#)  
FingerprintKey, [ec2-fingerprint-key](#)  
GetConsoleOutput, [ec2-get-console-output](#)

GetPassword, [ec2-get-password](#)  
list of operations, [List of Command Line Operations by Function](#)  
MigrateBundle, [ec2-migrate-bundle](#)  
MigrateImage, [ec2-migrate-image](#)  
ModifyImageAttribute, [ec2-modify-image-attribute](#)  
MonitorInstances, [ec2-monitor-instances](#)  
PurchaseReservedInstancesOffering, [ec2-purchase-reserved-instance-offering](#)  
RebootInstances, [ec2-reboot-instances](#)  
RegisterImage, [ec2-register](#)  
ReleaseAddress, [ec2-release-address](#)  
ResetImageAttribute, [ec2-reset-image-attribute](#)  
RevokeSecurityGroupIngress, [ec2-revoke](#)  
RunInstances, [ec2-run-instances](#)  
TerminateInstances, [ec2-terminate-instances](#)  
UnmonitorInstances, [ec2-unmonitor-instances](#)  
confirming instances, [ec2-confirm-product-instance](#)  
ConfirmProductInstance  
    Command Line, [ec2-confirm-product-instance](#)  
console output  
    getting, [ec2-get-console-output](#)  
CreateKeyPair  
    Command Line, [ec2-add-keypair](#)  
CreateSecurityGroup  
    Command Line, [ec2-add-group](#)  
CreateSnapshot

Command Line, [ec2-create-snapshot](#)  
CreateVolume

Command Line, [ec2-create-volume](#)  
creating EBS snapshots, [ec2-create-snapshot](#), [ec2-delete-snapshot](#)

creating key pairs, [ec2-add-keypair](#)

creating security groups, [ec2-add-group](#)

creating volumes, [ec2-create-volume](#)

## D

DeleteKeyPair

Command Line, [ec2-delete-keypair](#)

DeleteSecurityGroup

Command Line, [ec2-delete-group](#)

DeleteSnapshot

Command Line, [ec2-delete-snapshot](#)

DeleteVolume

Command Line, [ec2-delete-volume](#)

deleting

key pairs, [ec2-delete-keypair](#)

security groups, [ec2-delete-group](#)

deleting volumes, [ec2-delete-volume](#)

DeregisterImage

Command Line, [ec2-deregister](#)

deregistering AMIs, [ec2-deregister](#)

DescribeAddresses

Command Line, [ec2-describe-addresses](#)

DescribeAvailabilityZones

Command Line, [ec2-describe-availability-zones](#)

DescribeBundleTasks

Command Line, [ec2-describe-bundle-tasks](#)

DescribeImageAttribute

Command Line, [ec2-describe-image-attribute](#)

DescribeImages

Command Line, [ec2-describe-images](#)

DescribeInstances

Command Line, [ec2-describe-instances](#)

DescribeKeyPairs

Command Line, [ec2-describe-keypairs](#)

DescribeRegions

Command Line, [ec2-describe-regions](#)

DescribeReservedInstances

Command Line, [ec2-describe-reserved-instances](#)

DescribeReservedInstancesOfferings

Command Line, [ec2-describe-reserved-instances-offerings](#)

DescribeSecurityGroups

Command Line, [ec2-describe-group](#)

DescribeSnapshots

Command Line, [ec2-describe-snapshots](#)

DescribeVolumes

Command Line, [ec2-describe-volumes](#)

describing AMI attributes, [ec2-describe-image-attribute](#)



describing Availability Zones, [ec2-describe-availability-zones](#)

describing elastic IP addresses, [ec2-describe-addresses](#)

describing images, [ec2-describe-images](#)

describing instances, [ec2-describe-instances](#)

describing key pairs, [ec2-describe-keypairs](#)

describing regions, [ec2-describe-regions](#)

describing Reserved Instance offerings, [ec2-describe-reserved-instances-offerings](#)

describing Reserved Instances, [ec2-describe-reserved-instances](#)

describing security groups, [ec2-describe-group](#)

describing snapshots, [ec2-describe-snapshots](#)

describing volumes, [ec2-describe-volumes](#)

describing Windows bundling tasks, [ec2-describe-bundle-tasks](#)

detaching volumes, [ec2-detach-volume](#)

DetachVolume

Command Line, [ec2-detach-volume](#)

DisassociateAddress

Command Line, [ec2-disassociate-address](#)

disassociating elastic IP addresses, [ec2-disassociate-address](#)

## E

ec2-add-keypair, [ec2-upload-bundle](#)

ec2-bundle-image, [ec2-bundle-image](#)  
ec2-bundle-vol, [ec2-bundle-vol](#)  
ec2-delete-bundle, [ec2-delete-bundle](#)  
ec2-download-bundle, [ec2-download-bundle](#)  
ec2-migrate-bundle, [ec2-migrate-bundle](#)  
ec2-migrate-manifest, [ec2-migrate-manifest](#)  
ec2-unbundle, [ec2-unbundle](#)  
elastic block storage  
    create snapshot, [ec2-create-snapshot](#), [ec2-delete-snapshot](#)  
elastic IP addresses  
    associating, [ec2-associate-address](#)  
    describing, [ec2-describe-addresses](#)  
    disassociating, [ec2-disassociate-address](#)  
    releasing, [ec2-reboot-instances](#), [ec2-release-address](#)

## EU

migrating AMIs, [ec2-migrate-bundle](#), [ec2-migrate-image](#)

## F

fingerprint key, [ec2-fingerprint-key](#)  
FingerprintKey  
    Command Line, [ec2-fingerprint-key](#)  
firewall, [ec2-add-group](#)  
function list  
    Command Line, [List of Command Line Operations by](#)

## Function

### **G**

GetConsoleOutput

Command Line, [ec2-get-console-output](#)

GetPassword

Command Line, [ec2-get-password](#)

getting console output, [ec2-get-console-output](#)

getting password, [ec2-get-password](#)

glossary, [Glossary](#)

groups

creating, [ec2-add-group](#)

describing, [ec2-describe-group](#)

revoking access, [ec2-revoke](#), [ec2-run-instances](#)

### **I**

image attributes

describing, [ec2-describe-image-attribute](#)

images

deregistering, [ec2-deregister](#)

describing, [ec2-describe-images](#)

modifying attributes, [ec2-modify-image-attribute](#)

registering, [ec2-register](#)

resetting attributes, [ec2-reset-image-attribute](#)

instance

bundling Windows, [ec2-bundle-instance](#)  
instances  
accessing, [ec2-allocate-address](#)  
confirming, [ec2-confirm-product-instance](#)  
describing, [ec2-describe-instances](#)  
monitoring, [ec2-monitor-instances](#)  
    disabling, [ec2-unmonitor-instances](#)  
rebooting, [ec2-reboot-instances](#)  
terminating, [ec2-terminate-instances](#)

#### IP addresses

associating, [ec2-associate-address](#)  
describing, [ec2-describe-addresses](#)  
disassociating, [ec2-disassociate-address](#)  
releasing, [ec2-release-address](#)

## K

#### key

    fingerprint, [ec2-fingerprint-key](#)

#### key pairs

    creating, [ec2-add-keypair](#)  
    deleting, [ec2-delete-keypair](#)  
    describing, [ec2-describe-keypairs](#)

killing instances, [ec2-terminate-instances](#)

## M

MigrateBundle

Command Line, [ec2-migrate-bundle](#)

MigrateImage

Command Line, [ec2-migrate-image](#)

migrating AMIs, [ec2-migrate-bundle](#), [ec2-migrate-image](#)

ModifyImageAttribute

Command Line, [ec2-modify-image-attribute](#)

modifying image attributes, [ec2-modify-image-attribute](#)

monitoring instances, [ec2-monitor-instances](#)

disabling, [ec2-unmonitor-instances](#)

MonitorInstances

Command Line, [ec2-monitor-instances](#)

**N**

new features, [What's New](#)

**O**

operation list

Command Line, [List of Command Line Operations by Function](#)

**P**

password

getting Windows, [ec2-get-password](#)

PurchaseReservedInstancesOffering

Command Line, [ec2-purchase-reserved-instance-offering](#)  
purchasing Reserved Instances, [ec2-purchase-reserved-instance-offering](#)

## R

rebooting instances, [ec2-reboot-instances](#)  
RebootInstances

Command Line, [ec2-reboot-instances](#)

regions

describing, [ec2-describe-regions](#)

RegisterImage

Command Line, [ec2-register](#)

registering AMIs, [ec2-register](#)

ReleaseAddress

Command Line, [ec2-release-address](#)

releasing elastic IP addresses, [ec2-release-address](#)

Remote Desktop, [ec2-allocate-address](#)

required knowledge, [Required Knowledge and Skills](#)

Reserved Instances

describing, [ec2-describe-reserved-instances](#)

describing offerings, [ec2-describe-reserved-instances-offerings](#)

purchasing, [ec2-purchase-reserved-instance-offering](#)

ResetImageAttribute

Command Line, [ec2-reset-image-attribute](#)

resetting image attributes, [ec2-reset-image-attribute](#)  
resources, [Amazon EC2 Resources](#)

RevokeSecurityGroupIngress

Command Line, [ec2-revoke](#)

revoking access, [ec2-revoke](#), [ec2-run-instances](#)

RunInstances

Command Line, [ec2-run-instances](#)

## S

security groups

authorizing ingress, [ec2-authorize](#)

creating, [ec2-add-group](#)

deleting, [ec2-delete-group](#)

describing, [ec2-describe-group](#)

revoking access, [ec2-revoke](#), [ec2-run-instances](#)

shutting down instances, [ec2-terminate-instances](#)

snapshots

describing, [ec2-describe-snapshots](#)

## T

TerminateInstances

Command Line, [ec2-terminate-instances](#)

terminating instances, [ec2-terminate-instances](#)

## U

## UnmonitorInstances

Command Line, [ec2-unmonitor-instances](#)

## V

verifying instances, [ec2-confirm-product-instance](#)

### volumes

attaching, [ec2-attach-volume](#)

creating, [ec2-create-volume](#)

deleting, [ec2-delete-volume](#)

describing, [ec2-describe-volumes](#)

detaching, [ec2-detach-volume](#)

## W

### Windows

bundling instance, [ec2-bundle-instance](#)

canceling bundle task, [ec2-cancel-bundle-task](#)

describing bundle tasks, [ec2-describe-bundle-tasks](#)

getting password, [ec2-get-password](#)

## Z

### zones

describing, [ec2-describe-availability-zones](#)