
Amazon Elastic Compute Cloud

API Reference

API Version 2009-08-15



Amazon Elastic Compute Cloud: API Reference

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Welcome

Topics

- [Who Should Read This Guide \(p. 1\)](#)
- [Reader Feedback \(p. 2\)](#)
- [How This Guide Is Organized \(p. 2\)](#)
- [Amazon EC2 Resources \(p. 2\)](#)

This is the *Amazon Elastic Compute Cloud* API Reference Guide. 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 for programmers that need detailed information about the Amazon EC2 SOAP and Query APIs.

Required Knowledge and Skills

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

- XML (For an overview, go to the [W3 Schools XML Tutorial](#))
- Basic understanding of web services (go to [W3 Schools Web Services Tutorial](#))
- Query or SOAP
- One or more programming languages

You should also have worked through the [Amazon Elastic Compute Cloud Getting Started Guide](#), set up your development environment, and have a general understanding of the service. Additionally, you should refer to the [Amazon Elastic Compute Cloud Developer Guide](#) for high level concepts and examples of how to use major Amazon EC2 features.

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!



How This Guide Is Organized

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

Information	Relevant Sections
Overview of the APIs and conventions.	API Overview (p. 5)
Comprehensive reference to the SOAP APIs.	Amazon EC2 SOAP API (p. 144)
Comprehensive reference to the Query APIs.	Amazon EC2 Query API (p. 8)
Comprehensive reference to the SOAP data types.	Data Types (p. 297)
Error code information.	API Error Codes (p. 408)
Amazon EC2 terms.	Glossary (p. 413)
Typographic and symbol conventions.	Document Conventions (p. 416)

Amazon EC2 Resources

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

Resource	Description
Amazon Elastic Compute Cloud Getting Started Guide	The Getting Started Guide provides a quick tutorial of the service based on a simple use case. Examples and instructions are included.
Amazon Elastic Compute Cloud User Guide	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.
Amazon Elastic Compute Cloud Developer Guide	The Developer Guide provides conceptual information about Amazon EC2 and describes how to use Amazon EC2 features using the SOAP and Query APIs.
Amazon Elastic Compute Cloud Command Line Reference	The Command Line Tools Reference contains a comprehensive description of all the command line tools and their options.

Resource	Description
Amazon EC2 Technical FAQ	The FAQ covers the top questions developers have asked about this product.
Amazon EC2 Release Notes	The Release Notes give a high-level overview of the current release. They specifically note any new features, corrections, and known issues.
AWS Developer Resource Center	A central starting point to find documentation, code samples, release notes, and other information to help you build innovative applications with AWS.
AWS Management Console	The console allows you to perform most of the functions of Amazon EC2 and other AWS products without programming.
Discussion Forums	A community-based forum for developers to discuss technical questions related to Amazon Web Services.
AWS Support Center	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).
AWS Premium Support Information	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.
Amazon EC2 Product Information	The primary web page for information about Amazon EC2.
Form for questions related to your AWS account: Contact Us	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 2009-08-15 release of Amazon EC2. This guide was last updated on November 10, 2009.

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

Change	Description	Release Date
High-Memory Instance Types	Amazon EC2 now supports High-Memory instance types. Instances of this family offer large memory sizes for high throughput applications, including database and memory caching applications.	26 October 2009
Consolidation of Windows AMIs	Amazon EC2 no longer differentiates between Amazon EC2 running Windows and Amazon EC2 running Windows with Authentication Services. New and existing Windows instances can now run Authentication Services, such as LDAP and Kerberos, at no additional charge. Additionally, any currently running Windows with Authentication Services instances are now charged the same price as Windows instances. Existing Windows AMIs will be removed starting October 15. If you need the current version of a Windows AMI, please rebundle it as described in the Amazon Elastic Compute Cloud Developer Guide .	1 October 2009
Shared Snapshots	Amazon EC2 now supports shared snapshots, which enables users to launch Amazon EBS volumes from your snapshots. Using shared snapshots, you can grant access to specific users or make your snapshots public.	15 September 2009

API Overview

Topics

- [API Actions \(p. 5\)](#)
- [Data Types and the Amazon EC2 WSDL \(p. 5\)](#)
- [API Versioning \(p. 6\)](#)
- [Available Libraries \(p. 7\)](#)

Amazon EC2 provides two APIs: SOAP and Query.

This section discusses the operations available in the Amazon EC2 APIs, their semantics, and their required parameters. Examples of requests and responses are also provided.



Note

The same XML body is returned in both the Query API and SOAP API.

For detailed information about Amazon EC2 features and their associated APIs, refer to the [Amazon Elastic Compute Cloud Developer Guide](#).

API Actions

Actions encapsulate the possible interactions with Amazon EC2. These can be viewed as remote procedure calls and consist of a request and response message pair. Requests must be signed, allowing Amazon EC2 to authenticate them. For clarity, the sample requests and responses illustrating each of the operations described in this reference are not signed.

Data Types and the Amazon EC2 WSDL

The current version of the Amazon EC2 WSDL is available at: <http://ec2.amazonaws.com/doc/2009-08-15/AmazonEC2.wsdl>. Some libraries can generate code directly from the WSDL. Other libraries require a little more work on your part.

Values provided as parameters to the various operations must be of the indicated type. Standard XSD types (like `string`, `boolean`, `int`) are prefixed with `xsd:`. Complex types defined by the Amazon EC2 WSDL are prefixed with `ec2:`.

Parameters that consist of lists of information are defined within our WSDL to require `<info>` tags around each member. Throughout the API, type references for parameters that accept such a list of values are specified using the notation type[] The type referred to in these instances is the type *nested within the <info> tag* (for Amazon EC2 types this is defined in the WSDL).

For example, the `<imagesSet>` element in the following XML snippet is of type `xsd:string[]`.

```
<imagesSet>
  <item>
    <imageId>ami-61a54008</imageId>
  </item>
  <item>
    <imageId>ami-61b54608</imageId>
  </item>
</imagesSet>
```

The `<instancesSet>` element in the following XML snippet is of type `xsd:string[]`.

```
<instancesSet>
  <item>
    <imageId>ami-60a54009</imageId>
    <minCount>10</minCount>
    <maxCount>30</maxCount>
  </item>
  <item>
    <imageId>ami-60b54209</imageId>
    <minCount>5</minCount>
    <maxCount>20</maxCount>
  </item>
</instancesSet>
```

API Versioning

Because features and changes can introduce incompatible API changes, all Amazon EC2 API updates are versioned. By including a version in the request, clients receive responses they can process.

Each API revision is assigned a version in date form (the current API version is 2009-08-15). This version is included in the request as part of the document namespace when using our SOAP API and as a `Version` parameter when using our Query API. The response that Amazon EC2 returns honors the version included in the request.

SOAP clients that retrieve the Amazon EC2 WSDL at runtime and generate their requests dynamically using that WSDL should reference the WSDL for the version of the API that the client was developed against. This ensures that the client software continues to work even if backward incompatible API changes are introduced. The WSDL for each supported API version is available from the following URI:

<http://ec2.amazonaws.com/doc/<api-version>/AmazonEC2.wsdl>

The WSDL for latest version of our API is available from the following URI:

<http://ec2.amazonaws.com/doc/2009-08-15/AmazonEC2.wsdl>



Note

The WSDL should be treated as a moving target as it will always map to the latest release of the Amazon EC2 SOAP API. If your software depends on retrieving the WSDL at runtime, we strongly recommend you reference the specific version of the WSDL you are developing against.

Available Libraries

AWS provides libraries, sample code, tutorials, and other resources for software developers who prefer to build applications using language-specific APIs instead of SOAP and Query. These libraries provide basic functions (not included in the APIs), such as request authentication, request retries, and error handling so that it is easier to get started. Libraries and resources are available for the following languages:

- [Java](#)
- [PHP](#)
- [Ruby](#)
- [Windows and .NET](#)

For libraries and sample code in all languages, go to [Sample Code & Libraries](#).

Amazon EC2 Query API

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Common Query Parameters

All Query operations share a set of common parameters that must be present in each call.

Name	Description	Required
<i>Action</i>	Indicates the action to perform. Example: RunInstances	Yes
<i>Version</i>	The API version to use, as specified in the WSDL. Example: 2009-08-15	Yes
<i>AWSSecretAccessKey</i>	The Access Key ID for the request sender. This identifies the account which will be charged for usage of the service. The account with which the Access Key ID is associated must be signed up for Amazon EC2, or requests will not be accepted. AKIADQKE4SARGYLE	Yes
<i>Timestamp</i>	The date and time at which the request is signed, in the format YYYY-MM-DDThh:mm:ssZ. For more information, go to ISO 8601 . Example: 2006-07-07T15:04:56Z	Yes
<i>Expires</i>	The date and time at which the signature included in the request expires, in the format YYYY-MM-DDThh:mm:ssZ. Example: 2006-07-07T15:04:56Z	Yes
<i>Signature</i>	The request signature. For more information, go to the Amazon Elastic Compute Cloud Developer Guide . Example: Qnp14Qk/7tINHzfXCiT7VbBatDA=	Yes

Name	Description	Required
<i>SignatureMethod</i>	The hash algorithm you use to create the request signature. Valid values: HmacSHA256 HmacSHA1. For more information, go to the Amazon Elastic Compute Cloud Developer Guide . Example: HmacSHA256	Yes
<i>SignatureVersion</i>	The signature version you use to sign the request. Set this value to 2. For more information, go to the Amazon Elastic Compute Cloud Developer Guide . Example: 2	Yes



Note

The *Timestamp* parameter can be used instead of *Expires*. Requests must include either *Timestamp* or *Expires*, but cannot contain both.

Parameter values must be URL-encoded. This is true for any Query parameter passed to Amazon EC2 and is typically necessary in the *Signature* parameter. Some clients do this automatically, but this is not the norm.

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Amazon DevPay

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AllocateAddress

Description

Acquires an elastic IP address for use with your account.

Request Parameters

The AllocateAddress operation does not have any request parameters.

Response Elements

Name	Description
AllocateAddressResponseType	AllocateAddressResponseType element. Type: AllocateAddressResponseType (p. 302) Ancestor: None Children: requestId, publicIp
requestId	The ID of the request. Type: xsd:string Ancestor: AllocateAddressResponseType Children: None
publicIp	IP address for use with your account. Type: xsd:string Ancestor: AllocateAddressResponseType Children: None

Examples

Example Request

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

`https://ec2.amazonaws.com/?Action=AllocateAddress&AuthParams`

Example Response

```
<AllocateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <publicIp>67.202.55.255</publicIp>
</AllocateAddressResponse>
```

Related Operations

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- [ReleaseAddress](#) (p. 121)
- [AssociateAddress](#) (p. 15)
- [DisassociateAddress](#) (p. 103)

AssociateAddress

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.

Request Parameters

Name	Description	Required
<i>PublicIp</i>	IP address that you are assigning to the instance. Type: String Default: None	Yes
<i>InstanceId</i>	The instance to associate with the IP address. Type: String Default: None	Yes

Response Elements

Name	Description
AssociateAddressResponseType	AssociateAddressResponseType element. Type: AssociateAddressResponseType (p. 302) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: AssociateAddressResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: AssociateAddressResponseType Children: None

Examples

Example Request

This example associates an IP address with an instance.

```
https://ec2.amazonaws.com/?Action=AssociateAddress
&InstanceId=i-2ea64347
&PublicIp=67.202.55.255
&AuthParams
```

Example Response

```
<AssociateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</AssociateAddressResponse>
```

Related Operations

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- [DescribeAddresses](#) (p. 54)
- [ReleaseAddress](#) (p. 121)
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AttachVolume

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](#).

Request Parameters

Name	Description	Required
<i>VolumeId</i>	The ID of the Amazon EBS volume. The volume and instance must be within the same Availability Zone and the instance must be running. Type: String Default: None	Yes
<i>InstanceId</i>	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. Type: String Default: None	Yes
<i>Device</i>	Specifies how the device is exposed to the instance (e.g., /dev/sdh). Type: String Default: None	Yes

Response Elements

Name	Description
AttachVolumeResponseType	AttachVolumeResponseType element. Type: AttachVolumeResponseType (p. 304) Ancestor: None Children: requestId, volumeId, instanceId, device, status, and attachTime
requestId	The ID of the request. Type: xsd:string Ancestor: AttachVolumeResponseType Children: None

Name	Description
volumeId	The ID of the volume. Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
device	The device as it is exposed to the instance. Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
status	Volume state (e.g., Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
attachTime	Time stamp when the attachment was initiated. Type: xsd:dateTime Ancestor: AttachVolumeResponseType Children: None

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](#).

```
https://ec2.amazonaws.com/?Action=AttachVolume&VolumeId=vol-4d826724
&InstanceId=i-6058a509
&Device=/dev/sdh&AuthParams
```

Example Response

```
<AttachVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <instanceId>i-6058a509</instanceId>
  <device>/dev/sdh</device>
  <status>attaching</status>
  <attachTime>2008-05-07T11:51:50.000Z</attachTime>
</AttachVolumeResponse>
```

Related Operations

- [CreateVolume](#) (p. 41)
- [DeleteVolume](#) (p. 50)

- [DescribeVolumes](#) (p. 97)
- [DetachVolume](#) (p. 100)

AuthorizeSecurityGroupIngress

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.

Request Parameters

Name	Description	Required
<i>UserId</i>	AWS Access Key ID. Type: String Default: None	Yes
<i>GroupName</i>	Name of the group to modify. The name must be valid and belong to the account Type: String Default: None	Yes
<i>IpProtocol</i>	IP protocol. Type: String Valid Values: tcp udp icmp Default: None	Yes
<i>FromPort</i>	Start of port range for the TCP and UDP protocols, or an ICMP type number. An ICMP type number of -1 indicates a wildcard (i.e., any ICMP type number). Type: Integer Default: None	Yes
<i>ToPort</i>	End of port range for the TCP and UDP protocols, or an ICMP code. An ICMP code of -1 indicates a wildcard (i.e., any ICMP code). Type: Integer Default: None	Yes
<i>SourceSecurityGroupOwnerId</i>	AWS User ID of an account. Cannot be used when specifying a CIDR IP address. Type: String Default: None	Yes

Name	Description	Required
<i>SourceSecurityGroupName</i>	Name of the security group. Cannot be used when specifying a CIDR IP address. Type: String Default: None	Yes
<i>CidrIp</i>	CIDR range. Type: String Default: None Constraints: Valid CIDR IP address range.	Yes

Response Elements

Name	Description
<i>AuthorizeSecurityGroupIngressResponse</i>	AuthorizeSecurityGroupIngressResponseType element. Type: AuthorizeSecurityGroupIngressResponseType (p. 306) Ancestor: None Children: requestId, return
<i>requestId</i>	The ID of the request. Type: xsd:string Ancestor: AuthorizeSecurityGroupIngressResponseType Children: None
<i>return</i>	Returns Type: xsd:boolean Ancestor: AuthorizeSecurityGroupIngressResponseType Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?
Action=AuthorizeSecurityGroupIngress&GroupName=webserv
&IpProtocol=tcp
&FromPort=80
&ToPort=80
&CidrIp=205.192.0.0/16
&AuthParams
```

Example Response

```
<AuthorizeSecurityGroupIngressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</AuthorizeSecurityGroupIngressResponse>
```

Related Operations

- [CreateSecurityGroup](#) (p. 36)
- [DescribeSecurityGroups](#) (p. 88)
- [RevokeSecurityGroupIngress](#) (p. 127)
- [DeleteSecurityGroup](#) (p. 46)

BundleInstance

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.

Request Parameters

Name	Description	Required
<i>InstanceId</i>	The ID of the instance to bundle. Type: String Default: None	Yes
<i>Storage.S3.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	Yes
<i>Storage.S3.Prefix</i>	Specifies the beginning of the file name of the AMI. Type: String Default: None	Yes
<i>Storage.S3.AWAccessKeyId</i>	The Access Key ID of the owner of the Amazon S3 bucket. Type: String Default: None	Yes
<i>Storage.S3.UploadPolicy</i>	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: String Default: None	Yes
<i>Storage.S3.UploadPolicySignature</i>	The signature of the Base64 encoded JSON document. Type: String Default: None	Yes

JSON Parameters

The upload policy gives Amazon EC2 limited permission to upload items into your Amazon S3 bucket. The following table describes the required parameters for the upload policy JSON document.

Parameter names are case sensitive. For more information about upload policies and how to sign them, go to the [Amazon Elastic Compute Cloud Developer Guide](#).

Name	Description	Required
expiration	The expiration of the policy. We recommend 12 hours or longer.	Yes
conditions	A list of restrictions on what can be uploaded to Amazon S3. Must contain the bucket and ACL conditions in this table.	Yes
bucket	The bucket to store the AML.	Yes
acl	This must be set to ec2-bundle-read.	Yes

Response Elements

Name	Description
BundleInstanceResponseType	BundleInstanceResponseType element. Type: BundleInstanceResponseType (p. 310) Ancestor: None Children: requestId, bundleInstanceTask
requestId	The ID of the request. Type: xsd:string Ancestor: BundleInstanceResponseType Children: None
bundleInstanceTask	Bundle task. Type: BundleInstanceTaskType (p. 313) Ancestor: BundleInstanceResponseType Children: instanceId, bundleId, state, startTime, updateTime, storage, progress, and error
instanceId	Instance associated with this bundle task. Type: xsd:string Ancestor: bundleInstanceTask Children: None
bundleId	Identifier for this task. Type: xsd:string Ancestor: bundleInstanceTask Children: None
state	The state of the task. Type: xsd:string Valid Values: pending waiting-for-shutdown storing canceling complete failed Ancestor: bundleInstanceTask Children: None

Name	Description
startTime	The time this task started. Type: xsd:dateTime Ancestor: bundleInstanceTask Children: None
updateTime	The time of the most recent update for the task. Type: xsd:dateTime Ancestor: bundleInstanceTask Children: None
storage	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312) Ancestor: bundleInstanceTask Children: S3
S3	Amazon S3 storage location. Type: BundleInstanceS3StorageType (p. 311) Ancestor: storage Children: bucket, prefix, awsAccessKeyId, uploadPolicy, and uploadPolicySignature
bucket	The bucket in which to store the AML. 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: xsd:string Ancestor: S3 Children: None
prefix	Specifies the beginning of the file name of the AML. Type: xsd:string Ancestor: S3 Children: None
awsAccessKeyId	The Access Key ID of the owner of the Amazon S3 bucket. Type: xsd:string Ancestor: S3 Children: None
uploadPolicy	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: xsd:string Ancestor: S3 Children: None
uploadPolicySignature	The signature of the Base64 encoded JSON document. Type: xsd:string Ancestor: S3 Children: None

Name	Description
progress	The level of task completion, in percent (e.g., 20%). Type: xsd:string Ancestor: bundleInstanceTask Children: None
error	If the task fails, a description of the error. Type: BundleInstanceTaskErrorType (p. 311) Ancestor: bundleInstanceTask Children: code, message
code	Error code. Type: xsd:string Ancestor: error Children: None
message	Error message. Type: xsd:string Ancestor: error Children: None

Examples

Example Request

This example bundles the i-e468cd8d instance.

```
https://ec2.amazonaws.com/?Action=BundleInstance&InstanceId=-i-e468cd8d
&Storage.S3.AWSSecretAccessKey=10QMXFEV71ZS32XQFTR2
&Storage.S3.Bucket=my-bucket
&Storage.S3.Prefix=winami
&Storage.S3.UploadPolicy=eyJleHBpcmF0aw9uIjogIjIwMDgtMDgtMzBUMDg6NDk6MDlaIiwuY29uZGl0aw9ucy
%3D%3D
&Storage.S3.UploadPolicySignature=fh5tyyyQD8W4C0Ethj3n1GntJMU%3D
&AuthParams
```

Example Response

```
<BundleInstanceResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <requestId>bun-c1a540a8</requestId>
  <bundleInstanceTask>
    <instanceId>i-12345678</instanceId>
    <bundleId>bun-c1a540a8</bundleId>
    <state>bundling</state>
    <startTime>2008-10-07T11:41:50.000Z</startTime>
    <updateTime>2008-10-07T11:51:50.000Z</updateTime>
    <progress>70%</progress>
    <storage>
      <S3>
        <bucket>my-bucket</bucket>
        <prefix>winami</prefix>
      </S3>
    </storage>
  </bundleInstanceTask>
</BundleInstanceResponse>
```

```
</bundleInstanceTask>  
</BundleInstanceResponse>
```

Related Operations

- [CancelBundleTask](#) (p. 28)
- [DescribeBundleTasks](#) (p. 59)

CancelBundleTask

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](#).

Request Parameters

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

Response Elements

Name	Description
CancelBundleTaskResponseType	CancelBundleTaskResponseType element. Type: CancelBundleTaskResponseType (p. 314) Ancestor: None Children: requestId, bundleInstanceTask
requestId	The ID of the request. Type: xsd:string Ancestor: CancelBundleTaskResponseType Children: None
bundleInstanceTask	Bundle task to cancel. Type: BundleInstanceTaskType (p. 313) Ancestor: CancelBundleTaskResponseType Children: instanceId, bundleId, state, startTime, updateTime, storage, progress, and error
instanceId	Instance associated with this bundle task. Type: xsd:string Ancestor: bundleInstanceTask Children: None
bundleId	Identifier for this task. Type: xsd:string Ancestor: bundleInstanceTask Children: None

Name	Description
state	The state of the task. Type: xsd:string Valid Values: pending waiting-for-shutdown storing canceling complete failed Ancestor: bundleInstanceTask Children: None
startTime	The time this task started. Type: xsd:dateTime Ancestor: bundleInstanceTask Children: None
updateTime	The time of the most recent update for the task. Type: xsd:dateTime Ancestor: bundleInstanceTask Children: None
storage	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312) Ancestor: bundleInstanceTask Children: S3
S3	Amazon S3 storage location. Type: BundleInstanceS3StorageType (p. 311) Ancestor: storage Children: bucket, prefix, awsAccessKeyId, uploadPolicy, and uploadPolicySignature
bucket	The bucket in which to store the AML. 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: xsd:string Ancestor: S3 Children: None
prefix	Specifies the beginning of the file name of the AML. Type: xsd:string Ancestor: S3 Children: None
awsAccessKeyId	The Access Key ID of the owner of the Amazon S3 bucket. Type: xsd:string Ancestor: S3 Children: None

Name	Description
uploadPolicy	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: xsd:string Ancestor: S3 Children: None
uploadPolicySignature	The signature of the Base64 encoded JSON document. Type: xsd:string Ancestor: S3 Children: None
progress	The level of task completion, in percent (e.g., 20%). Type: xsd:string Ancestor: bundleInstanceTask Children: None
error	If the task fails, a description of the error. Type: BundleInstanceTaskErrorType (p. 311) Ancestor: bundleInstanceTask Children: code, message
code	Error code. Type: xsd:string Ancestor: error Children: None
message	Error message. Type: xsd:string Ancestor: error Children: None

Examples

Example Request

This example cancels the bun-cla322b9 bundle task.

`https://ec2.amazonaws.com/?Action=CancelBundleTask&BundleId=bun-cla322b9&AuthParams`

Example Response

```
<CancelBundleTaskResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <bundleInstanceTask>
    <instanceId>i-12345678</instanceId>
    <bundleId>bun-cla322b9</bundleId>
    <state>canceling</state>
    <startTime>2008-10-07T11:41:50.000Z</startTime>
    <updateTime>2008-10-07T11:51:50.000Z</updateTime>
    <progress>20%</progress>
```

```
<storage>
  <S3>
    <bucket>my-bucket</bucket>
    <prefix>my-new-image</prefix>
  </S3>
</storage>
</bundleInstanceTask>
</CancelBundleTaskResponse>
```

Related Operations

- [BundleInstance](#) (p. 23)
- [DescribeBundleTasks](#) (p. 59)

ConfirmProductInstance

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.

Request Parameters

Name	Description	Required
<i>ProductCode</i>	The product code to confirm. Type: String Default: None	Yes
<i>InstanceId</i>	The instance to confirm. Type: String Default: None	Yes

Response Elements

Name	Description
ConfirmProductInstanceResponse	ConfirmProductInstanceResponseType element. Type: ConfirmProductInstanceResponseType (p. 315) Ancestor: None Children: requestId, return, and ownerId
requestId	The ID of the request. Type: xsd:string Ancestor: ConfirmProductInstanceResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: ConfirmProductInstanceResponseType Children: None
ownerId	The instance owner's account ID. Only present if the product code is attached to the instance. Type: xsd:string Ancestor: ConfirmProductInstanceResponseType Children: None

Examples

Example Request

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

https://ec2.amazonaws.com/?
Action=ConfirmProductInstance&ProductCode=774F4FF8&InstanceId=i-10a64379&AuthParams

Example Response

```
<ConfirmProductInstanceResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
  <ownerId>254933287430</ownerId>
</ConfirmProductInstanceResponse>
```

Related Operations

- [DescribeInstances](#) (p. 71)
- [RunInstances](#) (p. 130)

CreateKeyPair

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.

Request Parameters

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

Response Elements

Name	Description
CreateKeyPairResponseType	CreateKeyPairResponseType element. Type: CreateKeyPairResponseType (p. 316) Ancestor: None Children: requestId, keyName, keyFingerprint, and keyMaterial
requestId	The ID of the request. Type: xsd:string Ancestor: CreateKeyPairResponseType Children: None
keyName	The key pair name provided in the original request. Type: xsd:string Ancestor: CreateKeyPairResponseType Children: None
keyFingerprint	A SHA-1 digest of the DER encoded private key. Type: xsd:string Ancestor: CreateKeyPairResponseType Children: None
keyMaterial	An unencrypted PEM encoded RSA private key. Type: xsd:string Ancestor: CreateKeyPairResponseType Children: None

Examples

Example Request

This example creates a key pair named gsg-keypair.

```
https://ec2.amazonaws.com/?Action=CreateKeyPair&KeyName=gsg-keypair&AuthParams
```

Example Response

```
<CreateKeyPairResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <keyName>gsg-keypair</keyName>

  <keyFingerprint>1f:51:ae:28:bf:89:e9:d8:1f:25:5d:37:2d:7d:b8:ca:9f:f5:f1:6f</keyFingerprint>
  <keyMaterial>-----BEGIN RSA PRIVATE KEY-----
MIIEoQIBAAKCAQBULFg5ujHrtm1jnutSuo08Xe56LlT+HM8v/xkaa39EstM3/aFxTHgElQiJLChp
HungXQ29VTc8rc1bw0lkdi230H5eqkMHGhvEwqa0HWASUM1l4o3o/IX+0f2UcPoKCOVUR+jx71Sg
5AU52EQfanIn3ZQ8lFW7Edp5a3q4DhjG1UKToHVbicL5E+g45zfB95wIyywWZfew/UUF3LpGZyq/
ebIUlq1qTbHkLbCC2r7RTn8vpQWp47BGVYgtGSBMpTRP5hnbzzuqj3itkiLHjU39S2sJCJ0TrJx5
i8BygR4s3mHKBj8l+ePQxG1kGbF6R4yg6sECmXn17MRQVXODNHZbAgMBAAECggEAY1tsiUsIwD15
91CXirkYGuVfLylLflXenxfI50mDFms/mumTqloH07tr0oriHDR5K7wMcY/YY5YkcXNo7mvUVD1pM
ZNUJs7rw9gZRTTrf7LylaJ58k0cyaJw8TsC4e4LPbFaHwS1d6K8rXh64o6Wgw4SrsB6ICmr1kGQI7
3wcfgt5ecIu4TZf00E9IHjn+2eRlSrjBdeORi7KiUNC/pAG23I6MdDOFEQRcCSigCj+4/mciFUSA
SWS4dMbrpb9FNSIcf9dcLxVM7/6KxgJNfZc9XWzUw77Jg8x92Zd0fVhH0ux5IZC+UvSKWB4dyfcI
tE8C3p9bbU9VGyY5vLCAiIb4qQKBgQDLi024GXrIkswF32YtBBMuVgLGcWU9h9H109mKAc2m8Cm1
jUE5IpzRjTedc9I2qiIMUTwtgnw42auSCzbUeYMURPtDqyQ7p6AjMujp9EPemcSVOK9vXYL0Ptco
xW9MC0dtv6iPkCN7g0qiZXPRKaFbWADp16p8UAIvS/a5XXk5jwKBgQCKkphi2EISH1uRkxh1jyWC
iDCiK6JBRsMvpLbc0v5dKwP5alo1fmdR5PJaV2qvZSj5CYNpMay1/EDNTY50SIJU+0KFmQbyhsbm
rdLNLDL4+TcnT7c62/aH01ohYaf/VCbRhtLlBfGqGoC7+sAc8vmKkesnF7CqCEKDyF/dhrxYdQKB
gC0iZzzNAapayz1+JcVTwwEid6j9JqNXbBc+Z2YwMi+T0Fv/P/hwkX/ype0XnIUcw0Ih/YtGBVAC
DQbsz7LcY1HqXiHKYNWNVxGww0+oiChjxvEkSdsTTIfnK4VSCvU9BxDbQHjdindJbL6oar92UN7V
rBYvChJZF7LvUH4YmVpHAoGAbZ2X7XvOE0+uZ58/BGK0IGHByHBDiXtzMhdJr15HTYjxK70gTZm
gK+8zp4L9IbvLGDMJ08vft32XPEWuvI8twCzFH+CswLQADZMZKSsBas0Z/h1FwhdMgCMcY+Qlzd4
JZKjTSu3i7vhvx6RzdSedXEMNTZWN4qlIx3kR5aHcukCgYA9T+ZrvM1F0seQPbLknn7EqhXIjBaT
P8TTvW/6bdPi23ExzxZn7K0drfc1YRph1LHmpA0Nv/x2xALIf91UB+v5ohy1oDoasL0gij1houRe
2ERKKdwz0ZL9Sqw6VTdhr/5G994CK72fy5WhyERbdJUIdHak3M849JJuf8cSrvSb4g==
-----END RSA PRIVATE KEY-----</keyMaterial>
</CreateKeyPairResponse>
```

Related Operations

- [RunInstances](#) (p. 130)
- [DescribeKeyPairs](#) (p. 78)
- [DeleteKeyPair](#) (p. 44)

CreateSecurityGroup

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.

Request Parameters

Name	Description	Required
<i>GroupName</i>	Name of the security group. Type: String Default: None Constraints: Accepts alphanumeric characters, spaces, dashes, and underscores.	Yes
<i>GroupDescription</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.	Yes

Response Elements

Name	Description
CreateSecurityGroupResponseType	CreateSecurityGroupResponseType element. Type: CreateSecurityGroupResponseType (p. 317) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: CreateSecurityGroupResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: CreateSecurityGroupResponseType Children: None

Examples

Example Request

This example creates the webserv security group.

```
https://ec2.amazonaws.com/?  
Action=CreateSecurityGroup&GroupName=webserv&GroupDescription='Web  
Servers'&AuthParams
```

Example Response

```
<CreateSecurityGroupResponse xmlns="http://ec2.amazonaws.com/  
doc/2009-08-15/">  
  <return>true</return>  
</CreateSecurityGroupResponse>
```

Related Operations

- [RunInstances](#) (p. 130)
- [DescribeSecurityGroups](#) (p. 88)
- [AuthorizeSecurityGroupIngress](#) (p. 20)
- [RevokeSecurityGroupIngress](#) (p. 127)
- [DeleteSecurityGroup](#) (p. 46)

CreateSnapshot

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.

For Linux/UNIX, enter the following command from the command line.

```
umount -d /dev/sdh
```

For Windows, open Disk Management, right-click the volume to unmount, and select Change Drive Letter and Path. Then, select the mount point to remove and click Remove.

Request Parameters

Name	Description	Required
<i>VolumeId</i>	The ID of the Amazon EBS volume of which to take a snapshot. Type: String Default: None	Yes
<i>Description</i>	Description of the Amazon EBS snapshot. Type: String Default: None Constraints: 256 characters.	No

Response Elements

Name	Description
CreateSnapshotResponseType	CreateSnapshotResponseType element. Type: CreateSnapshotResponseType (p. 318) Ancestor: None Children: requestId, snapshotId, volumeId, status, startTime, progress, ownerId, volumeSize, and description
requestId	The ID of the request. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None

Name	Description
snapshotId	The ID of the snapshot. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
status	Snapshot state (e.g., Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
startTime	Time stamp when the snapshot was initiated. Type: xsd:dateTime Ancestor: CreateSnapshotResponseType Children: None
progress	The progress of the snapshot, in percentage. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
ownerId	The AWS account ID of the Amazon EBS snapshot owner. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
volumeSize	The size of the volume, in GiB. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
description	Description of the snapshot. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?
Action=CreateSnapshot&VolumeId=vol-4d826724&Description=Daily
+Backup&AuthParams&AuthParams
```

Example Response

```
<CreateSnapshotResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotId>snap-78a54011</snapshotId>
  <volumeId>vol-4d826724</volumeId>
  <volumeSize>10</volumeSize>
  <status>pending</status>
  <startTime>2008-05-07T12:51:50.000Z</startTime>
  <progress>60%</progress>
  <ownerId>213457642086</ownerId>
  <description>Daily Backup</description>
</CreateSnapshotResponse>
```

Related Operations

- [DeleteSnapshot](#) (p. 48)
- [DescribeSnapshots](#) (p. 94)

CreateVolume

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.

Request Parameters

Name	Description	Required
<i>Size</i>	The size of the volume, in GiBs. Required if you are not creating a volume from a snapshot. Type: String Valid Values: 1 -1024 Default: None	Yes
<i>SnapshotId</i>	The snapshot from which to create the new volume. Type: String Default: None	No
<i>AvailabilityZone</i>	The Availability Zone in which to create the new volume. Type: String Default: None	Yes

Response Elements

Name	Description
CreateVolumeResponseType	CreateVolumeResponseType element. Type: CreateVolumeResponseType (p. 321) Ancestor: None Children: requestId, volumeId, size, snapshotId, availabilityZone, status, and createTime
requestId	The ID of the request. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None

Name	Description
size	The size of the volume, in GiBs. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
snapshotId	Snapshot from which the volume was created, if applicable. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
availabilityZone	Availability Zone in which the volume was created. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
status	Volume state (e.g., Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
createTime	Time stamp when volume creation was initiated. Type: xsd:dateTime Ancestor: CreateVolumeResponseType Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?Action=CreateVolume&Size=800&AvailabilityZone=us-east-1a&AuthParams
```

Example Response

```
<CreateVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <size>800</size>
  <status>creating</status>
  <createTime>2008-05-07T11:51:50.000Z</createTime>
  <availabilityZone>us-east-1a</availabilityZone>
  <snapshotId></snapshotId>
</CreateVolumeResponse>
```

Related Operations

- [DeleteVolume](#) (p. 50)
- [DescribeVolumes](#) (p. 97)
- [AttachVolume](#) (p. 17)

- [DetachVolume](#) (p. 100)
- [DescribeAvailabilityZones](#) (p. 56)

DeleteKeyPair

Description

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

Request Parameters

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

Response Elements

Name	Description
DeleteKeyPairResponseType	DeleteKeyPairResponseType element. Type: DeleteKeyPairResponseType (p. 323) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeleteKeyPairResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeleteKeyPairResponseType Children: None

Examples

Example Request

This example deletes the gsg-keypair key pair.

```
https://ec2.amazonaws.com/?Action=DeleteKeyPair&KeyName=gsg-keypair&AuthParams
```

Example Response

```
<DeleteKeyPairResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <return>true</return>  
</DeleteKeyPairResponse>
```

Related Operations

- [CreateKeyPair](#) (p. 34)
- [DescribeKeyPairs](#) (p. 78)

DeleteSecurityGroup

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.

Request Parameters

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

Response Elements

Name	Description
DeleteSecurityGroupResponseType	DeleteSecurityGroupResponseType element. Type: DeleteSecurityGroupResponseType (p. 324) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeleteSecurityGroupResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeleteSecurityGroupResponseType Children: None

Examples

Example Request

This example deletes the webserv security group.

```
https://ec2.amazonaws.com/?  
Action=DeleteSecurityGroup&GroupName=webserv&AuthParams
```

Example Response

```
<DeleteSecurityGroupResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</DeleteSecurityGroupResponse>
```

Related Operations

- [CreateSecurityGroup](#) (p. 36)
- [DescribeSecurityGroups](#) (p. 88)
- [AuthorizeSecurityGroupIngress](#) (p. 20)
- [RevokeSecurityGroupIngress](#) (p. 127)

DeleteSnapshot

Description

Deletes a snapshot of an Amazon EBS volume that you own. For more information, go to the [Amazon Elastic Compute Cloud Developer Guide](#).

Request Parameters

Name	Description	Required
<i>SnapshotId</i>	The ID of the Amazon EBS snapshot to delete. Type: String Default: None	Yes

Response Elements

Name	Description
DeleteSnapshotResponseType	DeleteSnapshotResponseType element. Type: DeleteSnapshotResponseType (p. 324) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeleteSnapshotResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeleteSnapshotResponseType Children: None

Examples

Example Request

This example deletes snapshot snap-78a54011.

```
https://ec2.amazonaws.com/?  
Action=DeleteSnapshot&SnapshotId.1=snap-78a54011&AuthParams
```

Example Response

```
<DeleteSnapshotResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <return>true</return>  
</DeleteSnapshotResponse>
```

Related Operations

- [CreateSnapshot](#) (p. 38)
- [DescribeSnapshots](#) (p. 94)

DeleteVolume

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.

Request Parameters

Name	Description	Required
<i>VolumeId</i>	The ID of the volume to delete. The volume remains in the Type: String Default: None	Yes

Response Elements

Name	Description
DeleteVolumeResponseType	DeleteVolumeResponseType element. Type: DeleteVolumeResponseType (p. 325) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeleteVolumeResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeleteVolumeResponseType Children: None

Examples

Example Request

This example deletes volume vol-4282672b.

```
https://ec2.amazonaws.com/?  
Action=DeleteVolume&VolumeId=vol-4282672b&AuthParams
```

Example Response

```
<DeleteVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</DeleteVolumeResponse>
```

Related Operations

- [CreateVolume](#) (p. 41)
- [DescribeVolumes](#) (p. 97)
- [AttachVolume](#) (p. 17)
- [DetachVolume](#) (p. 100)

DeregisterImage

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.

Request Parameters

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

Response Elements

Name	Description
DeregisterImageResponseType	DeregisterImageResponseType element. Type: DeregisterImageResponseType (p. 326) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeregisterImageResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeregisterImageResponseType Children: None

Examples

Example Request

This example deregisters the ami-4fa54026 AMI.

```
https://ec2.amazonaws.com/?  
Action=DeregisterImage&ImageId=ami-4fa54026&AuthParams
```

Example Response

```
<DeregisterImageResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
```

```
<return>true</return>  
</DeregisterImageResponse>
```

Related Operations

- [RegisterImage](#) (p. 119)
- [DescribeImages](#) (p. 67)

DescribeAddresses

Description

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

Request Parameters

Name	Description	Required
<i>PublicIp.n</i>	Elastic IP address to describe. Type: String Default: None	No

Response Elements

Name	Description
DescribeAddressesResponse	DescribeAddressesResponseType element. Type: DescribeAddressesResponseType (p. 329) Ancestor: None Children: requestId, addressesSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeAddressesResponseType Children: None
addressesSet	The set of IP addresses. Type: DescribeAddressesResponseInfoType (p. 328) Ancestor: DescribeAddressesResponseType Children: item
item	Information about an instance. Type: DescribeAddressesResponseItemType (p. 329) Ancestor: addressesSet Children: publicIp, instanceId
publicIp	The public IP address. Type: xsd:string Ancestor: item Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: item Children: None

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.

`https://ec2.amazonaws.com/?Action=DescribeAddresses&PublicIp.1=67.202.55.255&PublicIp.1=67.202.55.233&AuthParams`

Example Response

```
<DescribeAddressesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <addressesSet>
    <item>
      <instanceId>i-f15ebb98</instanceId>
      <publicIp>67.202.55.255</publicIp>
    </item>
    <item>
      <publicIp>67.202.55.233</publicIp>
    </item>
  </addressesSet>
</DescribeAddressesResponse>
```

Related Operations

- [AllocateAddress](#) (p. 13)
- [ReleaseAddress](#) (p. 121)

DescribeAvailabilityZones

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.

Request Parameters

Name	Description	Required
<i>ZoneName</i>	Availability Zone name. Type: String Default: None	No

Response Elements

Name	Description
DescribeAvailabilityZonesResponse	DescribeAvailabilityZonesResponse element. Type: DescribeAvailabilityZonesResponseType (p. 330) Ancestor: None Children: requestId, availabilityZoneInfo
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeAvailabilityZonesResponseType Children: None
availabilityZoneInfo	Availability Zone information. Type: AvailabilityZoneSetType (p. 309) Ancestor: DescribeAvailabilityZonesResponseType Children: item
item	Information for one Availability Zone. Type: AvailabilityZoneItemType (p. 307) Ancestor: availabilityZoneInfo Children: zoneName, zoneState, regionName, and messageSet
zoneName	Name of the Availability Zone. Type: xsd:string Ancestor: item Children: None

Name	Description
zoneState	State of the Availability Zone. Type: xsd:string Valid Values: available Ancestor: item Children: None
regionName	Name of the region. Type: xsd:string Ancestor: item Children: None
messageSet	Message set. Type: AvailabilityZoneMessageSetType (p. 308) Ancestor: item Children: item
item	Availability Zone message set. Type: AvailabilityZoneMessageType (p. 308) Ancestor: messageSet Children: message
message	The Availability Zone message. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?Action=DescribeAvailabilityZones&ZoneName.0=us-east-1a&ZoneName.1=us-east-1b&ZoneName.2=us-east-1c&ZoneName.3=us-east-1d&AuthParams
```

Example Response

```
<DescribeAvailabilityZonesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <availabilityZoneInfo>
    <item>
      <zoneName>us-east-1a</zoneName>
      <zoneState>available</zoneState>
    </item>
    <item>
      <zoneName>us-east-1b</zoneName>
      <zoneState>available</zoneState>
    </item>
    <item>
      <zoneName>us-east-1c</zoneName>
```

```
    <zoneState>available</zoneState>
  </item>
  <item>
    <zoneName>us-east-1d</zoneName>
    <zoneState>available</zoneState>
  </item>
</availabilityZoneInfo>
</DescribeAvailabilityZonesResponse>
```

Related Operations

- [RunInstances](#) (p. 130)
- [DescribeRegions](#) (p. 80)

DescribeBundleTasks

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](#).

Request Parameters

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

Response Elements

Name	Description
DescribeBundleTasksResponse	DescribeBundleTasksResponseType element. Type: DescribeBundleTasksResponseType (p. 333) Ancestor: None Children: requestId, bundleInstanceTasksSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeBundleTasksResponseType Children: None
bundleInstanceTasksSet	Bundle task set. Type: BundleInstanceTasksSetType (p. 312) Ancestor: DescribeBundleTasksResponseType Children: item
item	Bundle task. Type: BundleInstanceTaskType (p. 313) Ancestor: bundleInstanceTasksSet Children: instanceId, bundleId, state, startTime, updateTime, storage, progress, and error
instanceId	Instance associated with this bundle task. Type: xsd:string Ancestor: item Children: None
bundleId	Identifier for this task. Type: xsd:string Ancestor: item Children: None

Name	Description
state	The state of the task. Type: xsd:string Valid Values: pending waiting-for-shutdown storing canceling complete failed Ancestor: item Children: None
startTime	The time this task started. Type: xsd:dateTime Ancestor: item Children: None
updateTime	The time of the most recent update for the task. Type: xsd:dateTime Ancestor: item Children: None
storage	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312) Ancestor: item Children: S3
S3	Amazon S3 storage location. Type: BundleInstanceS3StorageType (p. 311) Ancestor: storage Children: bucket, prefix, awsAccessKeyId, uploadPolicy, and uploadPolicySignature
bucket	The bucket in which to store the AML. 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: xsd:string Ancestor: S3 Children: None
prefix	Specifies the beginning of the file name of the AML. Type: xsd:string Ancestor: S3 Children: None
awsAccessKeyId	The Access Key ID of the owner of the Amazon S3 bucket. Type: xsd:string Ancestor: S3 Children: None

Name	Description
uploadPolicy	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: xsd:string Ancestor: S3 Children: None
uploadPolicySignature	The signature of the Base64 encoded JSON document. Type: xsd:string Ancestor: S3 Children: None
progress	The level of task completion, in percent (e.g., 20%). Type: xsd:string Ancestor: item Children: None
error	If the task fails, a description of the error. Type: BundleInstanceTaskErrorType (p. 311) Ancestor: item Children: code, message
code	Error code. Type: xsd:string Ancestor: error Children: None
message	Error message. Type: xsd:string Ancestor: error Children: None

Examples

Example Request

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

`https://ec2.amazonaws.com/?Action=DescribeBundleTasks&bundleId.0=bun-c1a540a8&AuthParams`

Example Response

```
<DescribeBundleTasksResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <bundleInstanceTasksSet>
    <item>
      <instanceId>i-12345678</instanceId>
      <bundleId>bun-c1a540a8</bundleId>
      <state>canceling</state>
      <startTime>2008-10-07T11:41:50.000Z</startTime>
    </item>
  </bundleInstanceTasksSet>
</DescribeBundleTasksResponse>
```

```
<updateTime>2008-10-07T11:51:50.000Z</updateTime>
<progress>20%</progress>
<storage>
  <S3>
    <bucket>my-bucket</bucket>
    <prefix>winami</prefix>
  </S3>
</storage>
</item>
<bundleInstanceTasksSet>
</DescribeBundleTasksResponse>
```

Related Operations

- [BundleInstance](#) (p. 23)
- [CancelBundleTask](#) (p. 28)

DescribeImageAttribute

Description

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

Request Parameters

Name	Description	Required
<i>ImageId</i>	The ID of the AMI for which an attribute will be described. Type: String Default: None	Yes
<i>Attribute=launchPermissions</i>	Describes the launch permissions of the AMI. Type: String Default: None	No
<i>Attribute=productCodes</i>	Describes the product code associated with the AMI. Type: String Default: None	No
<i>Attribute=kernel</i>	Describes the ID of the kernel associated with the AMI. Type: String Default: None	No
<i>Attribute=ramdisk</i>	Describes the ID of the RAM disk associated with the AMI. Type: String Default: None	No
<i>Attribute=blockDeviceMapping</i>	Describes the mapping that defines native device names to use when exposing virtual devices. Type: String Default: None	No
<i>Attribute=platform</i>	Describes the operating system platform. Type: String Default: None	No

Response Elements

Name	Description
DescribeImageAttributeResponse	DescribeImageAttributeResponseType element. Type: DescribeImageAttributeResponseType (p. 334) Ancestor: None Children: requestId, imageId, launchPermission, productCodes, kernel, ramdisk, and blockDeviceMapping

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeImageAttributeResponseType Children: None
imageId	The ID of the AML. Type: xsd:string Ancestor: DescribeImageAttributeResponseType Children: None
launchPermission	Launch permissions set. Type: LaunchPermissionListType (p. 377) Ancestor: DescribeImageAttributeResponseType Children: item
item	Information for launch permissions. Type: LaunchPermissionItemType (p. 376) Ancestor: launchPermission Children: userId, group
userId	AWS Access Key ID. Type: xsd:string Ancestor: item Children: None
group	Name of the group. Currently supports "all." Type: xsd:string Ancestor: item Children: None
productCodes	Product codes set. Type: ProductCodeListType (p. 385) Ancestor: DescribeImageAttributeResponseType Children: item
item	Information for one product code. Type: ProductCodeItemType (p. 385) Ancestor: productCodes Children: productCode
productCode	Product code. Type: xsd:string Ancestor: item Children: None
kernel	Kernel set. Type: NullableAttributeValueType (p. 383) Ancestor: DescribeImageAttributeResponseType Children: value

Name	Description
value	ID of the kernel or RAM disk. Type: xsd:string Ancestor: kernel Children: None
ramdisk	RAM disk set. Type: NullableAttributeValue (p. 383) Ancestor: DescribeImageAttributeResponseType Children: value
value	ID of the kernel or RAM disk. Type: xsd:string Ancestor: ramdisk Children: None
blockDeviceMapping	Block device mapping set. Type: BlockDeviceMappingType (p. 310) Ancestor: DescribeImageAttributeResponseType Children: item
item	Information for one block device mapping. Type: BlockDeviceMappingItemType (p. 309) Ancestor: blockDeviceMapping Children: virtualName, deviceName
virtualName	The virtual name. Type: xsd:string Ancestor: item Children: None
deviceName	The device name (e.g., /dev/sdh). Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?
Action=DescribeImageAttribute&ImageId=ami-2bb65342&Attribute=launchPermission&AuthParams
```

Example Response

```
<DescribeImageAttributeResponse xmlns="http://ec2.amazonaws.com/
doc/2009-08-15/">
  <imageId>ami-61a54008</imageId>
  <launchPermission>
    <item>
```

```
<group>all</group>
</item>
<item>
  <userId>495219933132</userId>
</item>
</launchPermission>
</DescribeImageAttributeResponse>
```

Example Request

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

```
https://ec2.amazonaws.com/?
Action=DescribeImageAttribute&ImageId=ami-2bb65342&Attribute=productCodes&AuthParams
```

Example Response

```
<DescribeImageAttributeResponse xmlns="http://ec2.amazonaws.com/
doc/2009-08-15/">
  <imageId>ami-61a54008</imageId>
  <productCodes>
    <item>
      <productCode>774F4FF8</productCode>
    </item>
  </productCodes>
</DescribeImageAttributeResponse>
```

Related Operations

- [DescribeImages](#) (p. 67)
- [ModifyImageAttribute](#) (p. 109)
- [ResetImageAttribute](#) (p. 123)

DescribeImages

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 <code>all</code> 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.

Request Parameters

Name	Description	Required
<i>ExecutableBy</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	No
<i>ImageId</i>	AMI IDs to describe. Type: String Default: Returns all AMIs.	No

Name	Description	Required
<i>Owner</i>	Returns AMIs owned by the specified owner. Multiple owners can be specified. The IDs Type: String Default: None	No

Response Elements

Name	Description
DescribeImagesResponseType	DescribeImagesResponseType element. Type: DescribeImagesResponseType (p. 340) Ancestor: None Children: requestId, imagesSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeImagesResponseType Children: None
imagesSet	Image set. Type: DescribeImagesResponseInfoType (p. 339) Ancestor: DescribeImagesResponseType Children: item
item	Information for one image. Type: DescribeImagesResponseItemType (p. 339) Ancestor: imagesSet Children: imageId, imageLocation, imageState, imageOwnerId, isPublic, productCodes, architecture, imageType, kernelId, ramdiskId, and platform
imageId	The ID of the AMI. Type: xsd:string Ancestor: item Children: None
imageLocation	The location of the AMI. Type: xsd:string Ancestor: item Children: None
imageState	Current state of the AMI. If the operation returns Type: xsd:string Ancestor: item Children: None
imageOwnerId	AWS Access Key ID of the image owner. Type: xsd:string Ancestor: item Children: None

Name	Description
isPublic	Returns Type: xsd:boolean Ancestor: item Children: None
productCodes	Product codes of the AML. Type: ProductCodesSetType (p. 386) Ancestor: item Children: item
item	Information for one product code. Type: ProductCodesSetItemType (p. 386) Ancestor: productCodes Children: productCode
productCode	Product code. Type: xsd:string Ancestor: item Children: None
architecture	The architecture of the image (Type: xsd:string Ancestor: item Children: None
imageType	The type of image (Type: xsd:string Ancestor: item Children: None
kernelId	The kernel associated with the image, if any. Only applicable for machine images. Type: xsd:string Ancestor: item Children: None
ramdiskId	The RAM disk associated with the image, if any. Only applicable for machine images. Type: xsd:string Ancestor: item Children: None
platform	The operating platform of the instance. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example describes the ami-be3adfd7 AMI.

`https://ec2.amazonaws.com/?Action=DescribeImages&ImageId.1=ami-be3adfd7&AuthParams`

Example Response

```
<DescribeImagesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imagesSet>
    <item>
      <imageId>ami-be3adfd7</imageId>
      <imageLocation>ec2-public-images/fedora-8-i386-base-v1.04.manifest.xml
      </imageLocation>
      <imageState>available</imageState>
      <imageOwnerId>206029621532</imageOwnerId>
      <isPublic>false</isPublic>
      <architecture>i386</architecture>
      <imageType>machine</imageType>
      <kernelId>aki-4438dd2d</kernelId>
      <ramdiskId>ari-4538dd2c</ramdiskId>
    </item>
  </imagesSet>
</DescribeImagesResponse>
```

Related Operations

- [DescribeInstances](#) (p. 71)
- [DescribeImageAttribute](#) (p. 63)

DescribeInstances

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.

Request Parameters

Name	Description	Required
<i>InstanceId.n</i>	Instance IDs to describe. Type: String Default: Returns all instances.	No

Response Elements

Name	Description
DescribeInstancesResponse	DescribeInstancesResponseType element. Type: DescribeInstancesResponseType (p. 342) Ancestor: None Children: requestId, reservationSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeInstancesResponseType Children: None
reservationSet	Reservation set. Type: ReservationSetType (p. 393) Ancestor: DescribeInstancesResponseType Children: item
item	Information for a reservation. Type: ReservationInfoType (p. 392) Ancestor: reservationSet Children: reservationId, ownerId, groupSet, instancesSet, and requesterId
reservationId	Unique ID of the reservation. Type: xsd:string Ancestor: item Children: None

Name	Description
ownerId	AWS Access Key ID of the user who owns the reservation. Type: xsd:string Ancestor: item Children: None
groupSet	Group set. Type: GroupSetType (p. 372) Ancestor: item Children: item
item	Group set item. Type: GroupItem (p. 371) Ancestor: groupSet Children: groupId
groupId	Name of the security group. Type: xsd:string Ancestor: item Children: None
instancesSet	Instance set. Type: RunningInstancesSetType (p. 401) Ancestor: item Children: item
item	Running instance set item. Type: RunningInstancesItemType (p. 399) Ancestor: instancesSet Children: instanceId, imageId, instanceState, privateDnsName, dnsName, reason, keyName, amiLaunchIndex, productCodes, instanceType, launchTime, placement, kernelId, ramdiskId, platform, monitoring, subnetId, vpcId, privateIpAddress, and ipAddress
instanceId	Unique ID of the instance launched. Type: xsd:string Ancestor: item Children: None
imageId	Image ID of the AMI used to launch the instance. Type: xsd:string Ancestor: item Children: None
instanceState	The current state of the instance. Type: InstanceStateType (p. 373) Ancestor: item Children: code, name

Name	Description
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: Type: xsd:int Ancestor: instanceState Children: None
name	The current state of the instance. Type: xsd:string Ancestor: instanceState Children: None
privateDnsName	The private DNS name assigned to the instance. This DNS name can only be used inside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string Ancestor: item Children: None
dnsName	The public DNS name assigned to the instance. This DNS name is contactable from outside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string Ancestor: item Children: None
reason	Reason for the most recent state transition. This might be an empty string. Type: xsd:string Ancestor: item Children: None
keyName	If this instance was launched with an associated key pair, this displays the key pair name. Type: xsd:string Ancestor: item Children: None
amiLaunchIndex	The AMI launch index, which can be used to find this instance within the launch group. For more information, go to the Metadata section of the Type: xsd:string Ancestor: item Children: None
productCodes	Product codes attached to this instance. Type: ProductCodesSetType (p. 386) Ancestor: item Children: item

Name	Description
item	Information for one product code. Type: ProductCodesSetItemType (p. 386) Ancestor: productCodes Children: productCode
productCode	Product code. Type: xsd:string Ancestor: item Children: None
instanceType	The instance type. Type: xsd:string Ancestor: item Children: None
launchTime	The time the instance launched. Type: xsd:dateTime Ancestor: item Children: None
placement	The location where the instance launched. Type: PlacementResponseType (p. 384) Ancestor: item Children: availabilityZone
availabilityZone	Returns the Availability Zones of the instances. Type: xsd:string Ancestor: placement Children: None
kernelId	Optional. Kernel associated with this instance. Type: xsd:string Ancestor: item Children: None
ramdiskId	Optional. RAM disk associated with this instance. Type: xsd:string Ancestor: item Children: None
platform	Platform of the instance (e.g., Windows). Type: xsd:string Ancestor: item Children: None
monitoring	Specifies whether monitoring is enabled for the instance. Type: InstanceMonitoringStateType (p. 372) Ancestor: item Children: state

Name	Description
state	State of monitoring for the instance. Type: xsd:string Valid Values: monitoring-enabled (enabled) monitoring-pending (pending) monitoring-disabled (disabled) Ancestor: monitoring Children: None
subnetId	Specifies the subnet ID in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string Ancestor: item Children: None
vpcId	Specifies the VPC in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string Ancestor: item Children: None
privateIpAddress	Specifies the private IP address that is assigned to the instance (Amazon VPC). Type: xsd:string Ancestor: item Children: None
ipAddress	Specifies the IP address of the instance. Type: xsd:string Ancestor: item Children: None
requesterId	ID of the requester. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

<https://ec2.amazonaws.com/?Action=DescribeInstances&AuthParams>

Example Response

```
<DescribeInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservationSet>
    <item>
      <reservationId>r-44a5402d</reservationId>
      <ownerId>UYY3TLBUXIE0N5NQVUUX60MPWBZIQNFM</ownerId>
```

```
<groupSet>
  <item>
    <groupId>default</groupId>
  </item>
</groupSet>
<instancesSet>
  <item>
    <instanceId>i-28a64341</instanceId>
    <imageId>ami-6ea54007</imageId>
    <instanceState>
      <code>0</code>
      <name>running</name>
    </instanceState>
    <privateDnsName>10-251-50-132.ec2.internal</privateDnsName>
    <dnsName>ec2-72-44-33-4.compute-1.amazonaws.com</dnsName>
    <keyName>example-key-name</keyName>
    <amiLaunchIndex>23</amiLaunchIndex>
    <productCodesSet>
      <item><productCode>774F4FF8</productCode></item>
    </productCodesSet>
    <instanceType>m1.large</instanceType>
    <launchTime>2007-08-07T11:54:42.000Z</launchTime>
    <placement>
      <availabilityZone>us-east-1b</availabilityZone>
    </placement>
    <kernelId>aki-ba3adfd3</kernelId>
    <ramdiskId>ari-badbad00</ramdiskId>
  </item>
  <item>
    <instanceId>i-28a64435</instanceId>
    <imageId>ami-6ea54007</imageId>
    <instanceState>
      <code>0</code>
      <name>running</name>
    </instanceState>
    <privateDnsName>10-251-50-134.ec2.internal</privateDnsName>
    <dnsName>ec2-72-44-33-6.compute-1.amazonaws.com</dnsName>
    <keyName>example-key-name</keyName>
    <amiLaunchIndex>23</amiLaunchIndex>
    <productCodesSet>
      <item><productCode>774F4FF8</productCode></item>
    </productCodesSet>
    <instanceType>m1.large</instanceType>
    <launchTime>2007-08-07T11:54:42.000Z</launchTime>
    <placement>
      <availabilityZone>us-east-1b</availabilityZone>
    </placement>
    <kernelId>aki-ba3adfd3</kernelId>
    <ramdiskId>ari-badbad00</ramdiskId>
  </item>
</instancesSet>
</reservationSet>
</DescribeInstancesResponse>
```

Related Operations

- [RunInstances](#) (p. 130)

- [TerminateInstances](#) (p. 139)

DescribeKeyPairs

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.

Request Parameters

Name	Description	Required
<i>KeyName.n</i>	Key pair to describe. Type: String Default: Describes all key pairs available to the account.	No

Response Elements

Name	Description
DescribeKeyPairsResponseType	DescribeKeyPairsResponseType element. Type: DescribeKeyPairsResponseType (p. 345) Ancestor: None Children: requestId, keySet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeKeyPairsResponseType Children: None
keySet	Information for a key pair. Type: DescribeKeyPairsResponseInfoType (p. 344) Ancestor: DescribeKeyPairsResponseType Children: item
item	Information for a key pair. Type: DescribeKeyPairsResponseItemType (p. 345) Ancestor: keySet Children: keyName, keyFingerprint
keyName	The key pair name provided in the original request. Type: xsd:string Ancestor: item Children: None
keyFingerprint	A SHA-1 digest of the DER encoded private key. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?Action=DescribeKeyPairs&KeyName.1=gsg-  
keypair&AuthParams
```

Example Response

```
<DescribeKeyPairsResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <keySet>  
    <item>  
      <keyName>gsg-keypair</keyName>  
  
      <keyFingerprint>1f:51:ae:28:bf:89:e9:d8:1f:25:5d:37:2d:7d:b8:ca:9f:f5:f1:6f</  
keyFingerprint>  
    </item>  
  </keySet>  
</DescribeKeyPairsResponse>
```

Related Operations

- [DescribeAvailabilityZones](#) (p. 56)
- [RunInstances](#) (p. 130)

DescribeRegions

Description

Describes regions that are currently available to the account.

Request Parameters

Name	Description	Required
<i>RegionName.n</i>	Name of a region. Type: String Default: Describes all regions available to the account.	No

Response Elements

Name	Description
DescribeRegionsResponseType	DescribeRegionsResponseType element. Type: DescribeRegionsResponseType (p. 346) Ancestor: None Children: requestId, regionInfo
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeRegionsResponseType Children: None
regionInfo	Region set. Type: RegionSetType (p. 390) Ancestor: DescribeRegionsResponseType Children: item
item	Information for a region. Type: RegionItemType (p. 390) Ancestor: regionInfo Children: regionName, regionEndpoint
regionName	Name of the region. Type: xsd:string Ancestor: item Children: None
regionEndpoint	Region service endpoint. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example displays regions that are available to the account.

```
https://ec2.amazonaws.com/?Action=DescribeRegions&RegionName.0=us-east-1&RegionName.1=eu-west-1&AuthParams
```

Example Response

```
<DescribeRegionsResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <regionInfo>
    <item>
      <regionName>us-east-1</regionName>
      <regionEndpoint>us-east-1.ec2.amazonaws.com</regionEndpoint>
    </item>
    <item>
      <regionName>eu-west-1</regionName>
      <regionUrl>eu-west-1.ec2.amazonaws.com</regionUrl>
    </item>
  </regionInfo>
</DescribeRegionsResponse>
```

Related Operations

- [DescribeAvailabilityZones](#) (p. 56)
- [RunInstances](#) (p. 130)

DescribeReservedInstances

Description

Describes Reserved Instances that you purchased. For more information about Reserved Instances, go to the [Amazon Elastic Compute Cloud Developer Guide](#).

Request Parameters

Name	Description	Required
<i>ReservedInstancesId.n</i>	IDs of the Reserved Instance to describe. Type: String Default: None	No

Response Elements

Name	Description
DescribeReservedInstancesResponse	DescribeReservedInstancesResponseType element. Type: DescribeReservedInstancesResponseType (p. 353) Ancestor: None Children: requestId, reservedInstancesSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeReservedInstancesResponseType Children: None
reservedInstancesSet	Reserved Instances set. Type: DescribeReservedInstancesResponseSetType (p. 352) Ancestor: DescribeReservedInstancesResponseType Children: item
item	Reserved Instance set. Type: DescribeReservedInstancesResponseSetItemType (p. 351) Ancestor: reservedInstancesSet Children: reservedInstancesId, instanceType, availabilityZone, start, duration, fixedPrice, usagePrice, instanceCount, productDescription, and state
reservedInstancesId	The ID of the Reserved Instance. Type: xsd:string Ancestor: item Children: None

Name	Description
instanceType	The instance type on which the Reserved Instance can be used. Type: xsd:string Ancestor: item Children: None
availabilityZone	The Availability Zone in which the Reserved Instance can be used. Type: xsd:string Ancestor: item Children: None
start	The date and time the Reserved Instance started. Type: xsd:dateTime Ancestor: item Children: None
duration	The duration of the Reserved Instance, in seconds. Type: xs:long Ancestor: item Children: None
fixedPrice	The purchase price of the Reserved Instance. Type: xs:double Ancestor: item Children: None
usagePrice	The usage price of the Reserved Instance, per hour. Type: xs:double Ancestor: item Children: None
instanceCount	The number of Reserved Instances purchased. Type: xs:integer Ancestor: item Children: None
productDescription	The Reserved Instance description. Type: xsd:string Ancestor: item Children: None
state	The state of the Reserved Instance purchase. Type: xsd:string Valid Values: pending-payment active payment-failed retired Ancestor: item Children: None

Examples

Example Request

This example describes Reserved Instances owned by the account.

`https://ec2.amazonaws.com/?Action=DescribeReservedInstances&AuthParams`

Example Response

```
<DescribeReservedInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservedInstancesSet>
    <item>
      <reservedInstancesId>4b2293b4-5813-4cc8-9ce3-1957fc1dcfc8</reservedInstancesId>
      <instanceType>m1.small</instanceType>
      <availabilityZone>us-east-1a</availabilityZone>
      <duration>12</duration>
      <usagePrice>0.00</usagePrice>
      <fixedPrice>0.00</fixedPrice>
      <instanceCount>19</instanceCount>
      <productDescription>m1.small offering in us-east-1a</productDescription>
      <state>Active</state>
    </item>
  </reservedInstancesSet>
</DescribeReservedInstancesResponse>
```

Related Operations

- [PurchaseReservedInstancesOffering](#) (p. 115)
- [DescribeReservedInstancesOfferings](#) (p. 85)

DescribeReservedInstancesOfferings

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](#).

Request Parameters

Name	Description	Required
<i>ReservedInstancesOfferingId</i>	The ID of the Reserved Instances to describe. Type: String Default: None	No
<i>InstanceType</i>	The instance type on which the Reserved Instance can be used. Type: String Default: None	No
<i>AvailabilityZone</i>	The Availability Zone in which the Reserved Instance can be used. Type: String Default: None	No
<i>ProductDescription</i>	The Reserved Instance description. Type: String Default: None	No

Response Elements

Name	Description
DescribeReservedInstancesOfferingsResponse	The DescribeReservedInstancesOfferingsResponseType element. Type: DescribeReservedInstancesOfferingsResponseType (p. 349) Ancestor: None Children: requestId, reservedInstancesOfferingsSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeReservedInstancesOfferingsResponseType Children: None

Name	Description
reservedInstancesOfferingsSet	Reserved Instances offerings set. Type: DescribeReservedInstancesOfferingsResponseType (p. 349) Ancestor: DescribeReservedInstancesOfferingsResponseType Children: item
item	Reserved Instance offerings set. Type: DescribeReservedInstancesOfferingsResponseSetItemType (p. 348) Ancestor: reservedInstancesOfferingsSet Children: reservedInstancesOfferingId, instanceType, availabilityZone, duration, fixedPrice, usagePrice, and productDescription
reservedInstancesOfferingId	The ID of the Reserved Instance offering. Type: xsd:string Ancestor: item Children: None
instanceType	The instance type on which the Reserved Instance can be used. Type: xsd:string Ancestor: item Children: None
availabilityZone	The Availability Zone in which the Reserved Instance can be used. Type: xsd:string Ancestor: item Children: None
duration	The duration of the Reserved Instance, in seconds. Type: xs:long Ancestor: item Children: None
fixedPrice	The purchase price of the Reserved Instance. Type: xs:double Ancestor: item Children: None
usagePrice	The usage price of the Reserved Instance, per hour. Type: xs:double Ancestor: item Children: None
productDescription	The Reserved Instance description. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example describes available Reserved Instance offerings.

```
https://ec2.amazonaws.com/?  
Action=DescribeReservedInstancesOfferings&AuthParams
```

Example Response

```
<DescribeReservedInstancesOfferingsResponse xmlns="http://ec2.amazonaws.com/  
doc/2009-08-15/">  
  <reservedInstancesOfferingsSet>  
    <item>  
      <reservedInstancesOfferingId>4b2293b4-5813-4cc8-9ce3-1957fc1dcfc8</  
reservedInstancesOfferingId>  
      <instanceType>m1.small</instanceType>  
      <availabilityZone>us-east-1a</availabilityZone>  
      <duration>12</duration>  
      <fixedPrice>0.00</fixedPrice>  
      <usagePrice>0.00</usagePrice>  
      <productDescription>m1.small offering in us-east-1a</  
productDescription>  
    </item>  
  </reservedInstancesOfferingsSet>  
</DescribeReservedInstancesOfferingsResponse>
```

Related Operations

- [PurchaseReservedInstancesOffering](#) (p. 115)
- [DescribeReservedInstances](#) (p. 82)

DescribeSecurityGroups

Description

Returns information about security groups that you own.

Request Parameters

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

Response Elements

Name	Description
DescribeSecurityGroupsResponse	DescribeSecurityGroupsResponseType element. Type: DescribeSecurityGroupsResponseType (p. 355) Ancestor: None Children: requestId, securityGroupInfo
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeSecurityGroupsResponseType Children: None
securityGroupInfo	Security group set. Type: SecurityGroupSetType (p. 402) Ancestor: DescribeSecurityGroupsResponseType Children: item
item	Information for a security group. Type: SecurityGroupItemType (p. 402) Ancestor: securityGroupInfo Children: ownerId, groupName, groupDescription, and ipPermissions
ownerId	AWS Access Key ID of the owner of the security group. Type: xsd:string Ancestor: item Children: None
groupName	Name of the security group. Type: xsd:string Ancestor: item Children: None

Name	Description
groupDescription	Description of the security group. Type: xsd:string Ancestor: item Children: None
ipPermissions	Set of IP permissions associated with the security group. Type: IpPermissionSetType (p. 374) Ancestor: item Children: item
item	Set of IP permissions. Type: IpPermissionType (p. 375) Ancestor: ipPermissions Children: ipProtocol, fromPort, toPort, groups, and ipRanges
ipProtocol	IP protocol. Type: xsd:string Valid Values: tcp udp icmp Ancestor: item Children: None
fromPort	Start of port range for the TCP and UDP protocols, or an ICMP type number. An ICMP type number of -1 indicates a wildcard (i.e., any ICMP type number). Type: xsd:int Ancestor: item Children: None
toPort	End of port range for the TCP and UDP protocols, or an ICMP code. An ICMP code of -1 indicates a wildcard (i.e., any ICMP code). Type: xsd:int Ancestor: item Children: None
groups	List of security group and user ID pairs. Type: UserIdGroupPairSetType (p. 406) Ancestor: item Children: item
item	Information for one security group. Type: UserIdGroupPairType (p. 406) Ancestor: groups Children: userId, groupName
userId	AWS User ID of an account. Cannot be used when specifying a CIDR IP address. Type: xsd:string Ancestor: item Children: None

Name	Description
groupName	Name of the security group. Cannot be used when specifying a CIDR IP address. Type: xsd:string Ancestor: item Children: None
ipRanges	IP ranges. Type: IpRangeSetType (p. 376) Ancestor: item Children: item
item	Information for one IP range. Type: IpRangeItemType (p. 375) Ancestor: ipRanges Children: cidrIp
cidrIp	CIDR range. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

`https://ec2.amazonaws.com/?`

`Action=DescribeSecurityGroups&GroupName.1=WebServers&GroupName.2=RangedPortsBySource&AuthPa`

Example Response

```
<DescribeSecurityGroupsResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <securityGroupInfo>
    <item>
      <ownerId>UYY3TLBUXIE0N5NQVUUX60MPWBZIQNFM</ownerId>
      <groupName>WebServers</groupName>
      <groupDescription>Web Servers</groupDescription>
      <ipPermissions>
        <item>
          <ipProtocol>tcp</ipProtocol>
          <fromPort>80</fromPort>
          <toPort>80</toPort>
        </item>
      </ipPermissions>
    </item>
  </securityGroupInfo>
</DescribeSecurityGroupsResponse>
```

```
</item>
<item>
  <ownerId>UYY3TLBUXIE0N5NQVUUX60MPWBZIQNFM</ownerId>
  <groupName>RangedPortsBySource</groupName>
  <groupDescription>Group A</groupDescription>
  <ipPermissions>
    <item>
      <ipProtocol>tcp</ipProtocol>
      <fromPort>6000</fromPort>
      <toPort>7000</toPort>
      <groups/>
      <ipRanges/>
    </item>
  </ipPermissions>
</item>
</securityGroupInfo>
</DescribeSecurityGroupsResponse>
```

Related Operations

- [CreateSecurityGroup](#) (p. 36)
- [AuthorizeSecurityGroupIngress](#) (p. 20)
- [RevokeSecurityGroupIngress](#) (p. 127)
- [DeleteSecurityGroup](#) (p. 46)

DescribeSnapshotAttribute

Description

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

Request Parameters

Name	Description	Required
<i>SnapshotId.n</i>	The ID of the Amazon EBS snapshot. Type: String Default: None	No
<i>Attribute=createVolumePermissions</i>	Describes the create volume permissions of the snapshot. Type: String Default: None	Yes

Response Elements

Name	Description
DescribeSnapshotAttributeResponse	DescribeSnapshotAttributeResponseType element. Type: DescribeSnapshotAttributeResponseType (p. 357) Ancestor: None Children: requestId, snapshotId, and createVolumePermission
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeSnapshotAttributeResponseType Children: None
snapshotId	The ID of the Amazon EBS snapshot. Type: xsd:string Ancestor: DescribeSnapshotAttributeResponseType Children: None
createVolumePermission	Create volume permission element. Type: CreateVolumePermissionListType (p. 320) Ancestor: DescribeSnapshotAttributeResponseType Children: item
item	Volume permission item. Type: CreateVolumePermissionItemType (p. 320) Ancestor: createVolumePermission Children: userId, group

Name	Description
userId	User ID of a user that can create volumes from the snapshot. Type: xsd:string Ancestor: item Children: None
group	Group that is allowed to create volumes from the snapshot (currently supports "all"). Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example describes permissions for the snap-78a54011 snapshot.

```
https://ec2.amazonaws.com/?  
Action=DescribeSnapshotAttribute&SnapshotId=snap-78a54011&Attribute=createVolumePermission&
```

Example Response

```
<DescribeSnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/  
doc/2009-08-15/">  
  <snapshotId></snapshotId>  
  <createVolumePermission>  
    <item>  
      <group>all</group>  
    </item>  
  </createVolumePermission>  
</DescribeSnapshotAttributeResponse>
```

Related Operations

- [ModifySnapshotAttribute](#) (p. 111)
- [DescribeSnapshots](#) (p. 94)
- [ResetSnapshotAttribute](#) (p. 125)
- [CreateSnapshot](#) (p. 38)

DescribeSnapshots

Description

Returns information about Amazon EBS snapshots available to the user. Information returned includes volume ID, status, start time, progress, owner ID, volume size, and description. Snapshots available to the user include public snapshots available for any user to launch, private snapshots owned by the user making the request, and private snapshots owned by other users for which the user granted explicit create volume permissions.

The create volume permissions fall into 3 categories:

Permission	Description
public	The owner of the snapshot granted create volume permissions for the snapshot to the all group. All users have create volume permissions for these snapshots.
explicit	The owner of the snapshot granted create volume permissions to a specific user.
implicit	A user has implicit create volume permissions for all snapshots he or she owns.

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

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

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

If you specify a list of restorable users, only users that have create snapshot permissions for the snapshots are returned. You can specify AWS Account IDs (if you own the snapshot(s)), self for snapshots for which you own or have explicit permissions, or all for public snapshots.

Request Parameters

Name	Description	Required
<i>SnapshotId.n</i>	The ID of the Amazon EBS snapshot. Type: String Default: Describes snapshots for which you have launch permissions.	No
<i>Owner</i>	Returns snapshots owned by the specified owner. Multiple owners can be specified. Type: String Valid Values: self amazon AWS Account ID Default: None	No

Name	Description	Required
<i>RestorableBy</i>	Account ID of a user that can create volumes from the snapshot. Type: String Default: None	No

Response Elements

Name	Description
DescribeSnapshotsResponse	DescribeSnapshotsResponseType element. Type: DescribeSnapshotsResponseType (p. 359) Ancestor: None Children: requestId, snapshotSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeSnapshotsResponseType Children: None
snapshotSet	Snapshot set. Type: DescribeSnapshotsSetResponseType (p. 362) Ancestor: DescribeSnapshotsResponseType Children: item
item	Information for a snapshot. Type: DescribeSnapshotsSetItemResponseType (p. 360) Ancestor: snapshotSet Children: snapshotId, volumeId, status, startTime, progress, ownerId, and description
snapshotId	The ID of the snapshot. Type: xsd:string Ancestor: item Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: item Children: None
status	Snapshot state (e.g., Type: xsd:string Ancestor: item Children: None
startTime	Time stamp when the snapshot was initiated. Type: xsd:dateTime Ancestor: item Children: None

Name	Description
progress	The progress of the snapshot, in percentage. Type: xsd:string Ancestor: item Children: None
ownerId	AWS Access Key ID of the user who owns the snapshot. Type: xsd:string Ancestor: item Children: None
description	Description of the snapshot. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example describes snapshot snap-78a54011.

```
https://ec2.amazonaws.com/?  
Action=DescribeSnapshots&SnapshotId=snap-78a54011&AuthParams
```

Example Response

```
<DescribeSnapshotsResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <snapshotSet>  
    <item>  
      <snapshotId>snap-78a54011</snapshotId>  
      <volumeId>vol-4d826724</volumeId>  
      <status>pending</status>  
      <startTime>2008-05-07T12:51:50.000Z</startTime>  
      <progress>80%</progress>  
      <ownerId>218213537122</ownerId>  
      <volumeSize>10</volumeSize>  
      <description>Daily Backup</description>  
    </item>  
  </snapshotSet>  
</DescribeSnapshotsResponse>
```

Related Operations

- [CreateSnapshot](#) (p. 38)
- [DeleteSnapshot](#) (p. 48)

DescribeVolumes

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](#).

Request Parameters

Name	Description	Required
<i>VolumeId.n</i>	The ID of the volume to list. Type: String Default: Describes all volumes that you own.	No

Response Elements

Name	Description
DescribeVolumesResponseType	DescribeVolumesResponseType element. Type: DescribeVolumesResponseType (p. 363) Ancestor: None Children: requestId, volumeSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeVolumesResponseType Children: None
volumeSet	Volume set. Type: DescribeVolumesSetResponseType (p. 365) Ancestor: DescribeVolumesResponseType Children: item
item	Information for a volume. Type: DescribeVolumesSetItemResponseType (p. 363) Ancestor: volumeSet Children: volumeId, size, snapshotId, availabilityZone, status, createTime, and attachmentSet
volumeId	The ID of the volume. Type: xsd:string Ancestor: item Children: None
size	The size of the volume, in GiBs. Type: xsd:string Ancestor: item Children: None

Name	Description
snapshotId	Snapshot from which the volume was created (optional). Type: xsd:string Ancestor: item Children: None
availabilityZone	Availability Zone in which the volume was created. Type: xsd:string Ancestor: item Children: None
status	Volume state (e.g., Type: xsd:string Ancestor: item Children: None
createTime	Time stamp when volume creation was initiated. Type: xsd:dateTime Ancestor: item Children: None
attachmentSet	Attachment set. Type: AttachmentSetResponseType (p. 304) Ancestor: item Children: item
item	Information for a attachment set. Type: AttachmentSetItemResponseType (p. 303) Ancestor: attachmentSet Children: volumeId, instanceId, device, status, and attachTime
volumeId	The ID of the volume. Type: xsd:string Ancestor: item Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: item Children: None
device	Specifies how the device is exposed to the instance (e.g., /dev/sdh). Type: xsd:string Ancestor: item Children: None

Name	Description
status	Attachment state. Type: xsd:string Valid Values: attaching attached detaching detached Ancestor: item Children: None
attachTime	Time stamp when the association was created. Type: xsd:dateTime Ancestor: item Children: None

Examples

Example Request

This example describes all volumes associated with your account.

`https://ec2.amazonaws.com/?Action=DescribeVolumes&AuthParams`

Example Response

```
<DescribeVolumesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeSet>
    <item>
      <volumeId>vol-4282672b</volumeId>
      <size>800</size>
      <snapshotId/>
      <availabilityZone>us-east-1a</availabilityZone>
      <status>in-use</status>
      <createTime>2008-05-07T11:51:50.000Z</createTime>
      <attachmentSet>
        <item>
          <volumeId>vol-4282672b</volumeId>
          <instanceId>i-6058a509</instanceId>
          <device>/dev/sdh</device>
          <status>attached</status>
          <attachTime>2008-05-07T12:51:50.000Z</attachTime>
        </item>
      </attachmentSet>
    </item>
  </volumeSet>
</DescribeVolumesResponse>
```

Related Operations

- [CreateSnapshot](#) (p. 38)
- [DeleteSnapshot](#) (p. 48)

DetachVolume

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.

Request Parameters

Name	Description	Required
<i>VolumeId</i>	The ID of the volume. Type: String Default: None	Yes
<i>InstanceId</i>	The ID of the instance. Type: String Default: None	No
<i>Device</i>	The device name. Type: String Default: None	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: Boolean Default: None	No

Response Elements

Name	Description
DetachVolumeResponseType	DetachVolumeResponseType element. Type: DetachVolumeResponseType (p. 366) Ancestor: None Children: requestId, volumeId, instanceId, device, status, and attachTime

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
device	The device as it is exposed to the instance. Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
status	Attachment state (e.g., Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
attachTime	Time stamp when the association was created. Type: xsd:dateTime Ancestor: DetachVolumeResponseType Children: None

Examples

Example Request

This example detaches volume vol-4d826724.

```
https://ec2.amazonaws.com/?Action=DetachVolume&VolumeId=vol-4d826724
&InstanceId=i-6058a509&AuthParams
```

Example Response

```
<DetachVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <instanceId>i-6058a509</instanceId>
  <device>/dev/sdh</device>
  <status>detaching</status>
  <attachTime>2008-05-08T11:51:50.000Z</attachTime>
</DetachVolumeResponse>
```

Related Operations

- [CreateVolume](#) (p. 41)
- [DeleteVolume](#) (p. 50)
- [DescribeVolumes](#) (p. 97)
- [AttachVolume](#) (p. 17)

DisassociateAddress

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.

Request Parameters

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

Response Elements

Name	Description
DisassociateAddressResponse	DisassociateAddressResponseType element. Type: DisassociateAddressResponseType (p. 368) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DisassociateAddressResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DisassociateAddressResponseType Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?
Action=DisassociateAddress&PublicIp=67.202.55.255&AuthParams
```

Example Response

```
<DisassociateAddressResponse xmlns="http://ec2.amazonaws.com/
doc/2009-08-15/">
  <return>true</return>
</DisassociateAddressResponse>
```

Related Operations

- [AllocateAddress](#) (p. 13)
- [DescribeAddresses](#) (p. 54)
- [ReleaseAddress](#) (p. 121)
- [AssociateAddress](#) (p. 15)

GetConsoleOutput

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.

Request Parameters

Name	Description	Required
<i>InstanceId</i>	ID of the instance for which you want console output. Type: String Default: None	Yes

Response Elements

Name	Description
GetConsoleOutputResponseType	GetConsoleOutputResponseType element. Type: GetConsoleOutputResponseType (p. 369) Ancestor: None Children: requestId, instanceId, timestamp, and output
requestId	The ID of the request. Type: xsd:string Ancestor: GetConsoleOutputResponseType Children: None
instanceId	The instance ID. Type: xsd:string Ancestor: GetConsoleOutputResponseType Children: None
timestamp	The time the output was last updated. Type: xsd:dateTime Ancestor: GetConsoleOutputResponseType Children: None
output	The console output, Base64 encoded. Type: xsd:string Ancestor: GetConsoleOutputResponseType Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?  
Action=GetConsoleOutput&InstanceId=i-10a64379&AuthParams
```

Example Response

```
<GetConsoleOutputResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <instanceId>i-28a64341</instanceId>  
  <timestamp>2007-01-03 15:00:00</timestamp>  
  
  <output>TGludXggdmVyc2lvbiAyLjYuMTYteGVuVSAoYnVpbGRlckBwYXRjaGJhdC5hbWwF6b25zYSkgKGdj  
YyB2ZXJzaW9uIDQuMC4xIDIwMDUwNzI3IChSZWQgSGF0IDQuMC4xLTUpKSAjMSBTTVAgVGh1IE9j  
dCAyNiAwODo0MToyNiBTQVNUIDIwMDYKQklPUy1wcm92aWRlZCBwaHlzaWwNhbcBSQU0gbWwFw0gpY  
ZW46IDAwMDAwMDAwMDAwMDAwMDAgLSAwMDAwMDAwMDZhNDAwMDAwIC1c2FibGUpcjk4ME1CIEhJ  
R0hNRU0gYXZhaWxhYmx1Lgo3MjdNQiBMT1dNRU0gYXZhaWxhYmx1Lgp0WCAoRXhlY3V0ZSBEaXNh  
Ymx1KSBwcm90ZWNoaw9u0iBhY3RpdmUKSVJRIGxvY2t1cCBkZXRLY3Rpb24gZGlzYWJsZWQKQnVp  
bHQgMSB6b25lbGlzdHMKs2VybmVsIGNvbW1hbmQgbGluZTogcm9vdD0vZGV2L3NkYTEgcm8gNApF  
bmFibGluZyBmYXN0IEZQVSBzYXZlIGFuZCBYZXN0b3JlLi4uIGRvbmUuCG==</output>  
</GetConsoleOutputResponse>
```

Related Operations

- [RunInstances](#) (p. 130)

GetPasswordData

Description

Retrieves the encrypted administrator password for the instances running Windows.



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.

Request Parameters

Name	Description	Required
<i>InstanceId</i>	The ID of the instance for which to get the password. Type: String Default: None	Yes

Response Elements

Name	Description
GetPasswordDataResponseType	GetPasswordDataResponseType element. Type: GetPasswordDataResponseType (p. 370) Ancestor: None Children: requestId, instanceId, timestamp, and passwordData
requestId	The ID of the request. Type: xsd:string Ancestor: GetPasswordDataResponseType Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: GetPasswordDataResponseType Children: None
timestamp	The time the data was last updated. Type: xsd:dateTime Ancestor: GetPasswordDataResponseType Children: None
passwordData	The password of the instance. Type: xsd:string Ancestor: GetPasswordDataResponseType Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?  
Action=GetPasswordData&InstanceId=i-10a64379&AuthParams
```

Example Response

```
<GetPasswordDataResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <instanceId>i-2574e22a</instanceId>  
  <timestamp>2009-10-24 15:00:00</timestamp>  
  
  <passwordData>TGludXggdmVyc2lubiAyLjYuMTYteGVuVSAoYnVpbGRlckBwYXRjaGJhdC5hbWV6b25zYSkgKGdj  
passwordData</GetPasswordDataResponse>
```

Related Operations

- [RunInstances](#) (p. 130)

ModifyImageAttribute

Description

Modifies an attribute of an AMI.

Request Parameters

Name	Description	Required
<i>ImageId</i>	The AMI ID. Type: String Default: None	Yes
<i>UserId</i>	AWS Access Key ID. Type: String Default: None	Yes
<i>UserGroup</i>	Name of the group. Currently supports "all." Type: String Default: None	Yes
<i>ProductCode.n</i>	Product code. Type: String Default: None	No
<i>Attribute</i>	Specifies the attribute to modify. Type: String Valid Values: launchPermission productCodes Default: None	
<i>OperationType</i>	Specifies the operation to perform on the attribute. Type: String Valid Values: add remove Default: None	

Response Elements

Name	Description
ModifyImageAttributeResponse	ModifyImageAttributeResponseType element. Type: ModifyImageAttributeResponseType (p. 378) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: ModifyImageAttributeResponseType Children: None

Name	Description
return	Returns Type: xsd:boolean Ancestor: ModifyImageAttributeResponseType Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?  
Action=ModifyImageAttribute&snapshotId=snap-78a54011&Attribute=createVolumePermission&Opera
```

Example Response

```
<ModifyImageAttributeResponse xmlns="http://ec2.amazonaws.com/  
doc/2009-08-15/">  
  <return>true</return>  
</ModifyImageAttributeResponse>
```

Example Request

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

```
https://ec2.amazonaws.com/?Action=ModifyImageAttribute?  
Action=ModifyImageAttribute&ImageId=ami-78a54011&Attribute=launchPermission&operationType=a
```

Example Response

```
<ModifyImageAttributeResponse xmlns="http://ec2.amazonaws.com/  
doc/2009-08-15/">  
  <return>true</return>  
</ModifyImageAttributeResponse>
```

Related Operations

- [ResetImageAttribute](#) (p. 123)
- [DescribeImageAttribute](#) (p. 63)

ModifySnapshotAttribute

Description

Adds or remove permission settings for the specified snapshot.

Request Parameters

Name	Description	Required
<i>SnapshotId</i>	The ID of the snapshot. Type: String Default: None	Yes
<i>UserId</i>	User ID of a user that can create volumes from the snapshot. Type: String Default: None	No
<i>UserGroup</i>	Group that is allowed to create volumes from the snapshot (currently supports "all"). Type: String Default: None	No
<i>Attribute</i>	Specifies the attribute to modify. Type: String Valid Values: createVolumePermission Default: None	Yes
<i>OperationType</i>	Specifies the operation to perform on the attribute. Type: String Valid Values: add remove Default: None	Yes
<i>Attribute=createVolumePermission</i>	Modifies the create volume permissions of the snapshot. Type: String Default: None	Yes

Response Elements

Name	Description
ModifySnapshotAttributeResponse	ModifySnapshotAttributeResponseType element. Type: ModifySnapshotAttributeResponseType (p. 379) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: ModifySnapshotAttributeResponseType Children: None

Name	Description
return	Returns Type: xsd:boolean Ancestor: ModifySnapshotAttributeResponseType Children: None

Examples

Example Request

This example makes the snap-78a54011 snapshot public.

`https://ec2.amazonaws.com/?`

`Action=ModifySnapshotAttribute&snapshotId=snap-78a54011&Attribute=createVolumePermission&Op`

Example Response

```
<ModifySnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</ModifySnapshotAttributeResponse>
```

Related Operations

- [DescribeSnapshotAttribute](#) (p. 92)
- [DescribeSnapshots](#) (p. 94)
- [ResetSnapshotAttribute](#) (p. 125)
- [CreateSnapshot](#) (p. 38)

MonitorInstances

Description

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

Request Parameters

Name	Description	Required
<i>InstanceId.n</i>	Instance ID. Type: String Default: None	Yes

Response Elements

Name	Description
MonitorInstancesResponseType	MonitorInstancesResponseType element. Type: MonitorInstancesResponseType (p. 381) Ancestor: None Children: requestId, instancesSet
requestId	The ID of the request. Type: xsd:string Ancestor: MonitorInstancesResponseType Children: None
instancesSet	Monitor instance response set. Type: MonitorInstancesResponseSetType (p. 381) Ancestor: MonitorInstancesResponseType Children: item
item	Instance Item. Type: MonitorInstancesResponseSetItemType (p. 380) Ancestor: instancesSet Children: instanceId, monitoring
instanceId	Instance ID. Type: xsd:string Ancestor: item Children: None
monitoring	Monitoring information. Type: InstanceMonitoringStateType (p. 372) Ancestor: item Children: state

Name	Description
state	State of monitoring for the instance. Type: xsd:string Valid Values: monitoring-enabled (enabled) monitoring-pending (pending) monitoring-disabled (disabled) Ancestor: monitoring Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?  
Action=MonitorInstances&InstanceId.1=i-43a4412a&InstanceId.2=i-23a3397d&AuthParams
```

Example Response

```
<MonitorInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <instancesSet>  
    <item>  
      <instanceId>i-43a4412a</instanceId>  
      <monitoring>  
        <state>pending</state>  
      </monitoring>  
    </item>  
    <item>  
      <instanceId>i-23a3397d</instanceId>  
      <monitoring>  
        <state>pending</state>  
      </monitoring>  
    </item>  
  </instancesSet>  
</MonitorInstancesResponse>
```

Related Operations

- [UnmonitorInstances](#) (p. 142)
- [RunInstances](#) (p. 130)

PurchaseReservedInstancesOffering

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](#).

Request Parameters

Name	Description	Required
<i>ReservedInstancesOfferingId</i>	The offering ID of the Reserved Instance to purchase. Type: String Default: None	Yes
<i>InstanceCount</i>	The number of Reserved Instances to purchase. Type: Integer Default: 1	No

Response Elements

Name	Description
PurchaseReservedInstancesOfferingResponse	The response from the PurchaseReservedInstancesOffering operation. Type: PurchaseReservedInstancesOfferingResponseType (p. 387) Ancestor: None Children: requestId, reservedInstancesId
requestId	The ID of the request. Type: xsd:string Ancestor: PurchaseReservedInstancesOfferingResponseType Children: None
reservedInstancesId	The IDs of the purchased Reserved Instances. Type: xsd:string Ancestor: PurchaseReservedInstancesOfferingResponseType Children: None

Examples

Example Request

This example purchases Reserved Instances.

`https://ec2.amazonaws.com/?`

`Action=PurchaseReservedInstancesOffering&OfferingId.1=offering-12345678&instanceCount.1=2&A`

Example Response

```
<PurchaseReservedInstancesOfferingResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservedInstancesId>reservation-1001001</reservedInstancesId>
</PurchaseReservedInstancesOfferingResponse>
```

Related Operations

- [DescribeReservedInstancesOfferings](#) (p. 85)
- [DescribeReservedInstances](#) (p. 82)

RebootInstances

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.

Request Parameters

Name	Description	Required
<i>InstanceId.n</i>	One or more instance IDs. Type: String Default: None	Yes

Response Elements

Name	Description
RebootInstancesResponseType	RebootInstancesResponseType element. Type: RebootInstancesResponseType (p. 389) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: RebootInstancesResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: RebootInstancesResponseType Children: None

Examples

Example Request

This example reboots an instance.

`https://ec2.amazonaws.com/?Action=RebootInstances&AuthParams`

Example Response

```
<RebootInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <return>true</return>  
</RebootInstancesResponse>
```

Related Operations

- [RunInstances](#) (p. 130)

RegisterImage

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.

Request Parameters

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

Response Elements

Name	Description
<code>RegisterImageResponseType</code>	<code>RegisterImageResponseType</code> element. Type: RegisterImageResponseType (p. 391) Ancestor: None Children: <code>requestId</code> , <code>imageId</code>
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code> Ancestor: <code>RegisterImageResponseType</code> Children: None
<code>imageId</code>	Unique ID of the newly registered machine image. Type: <code>xsd:string</code> Ancestor: <code>RegisterImageResponseType</code> Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?Action=RegisterImage&ImageLocation=mybucket-myimage.manifest.xml&AuthParams
```

Example Response

```
<RegisterImageResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-61a54008</imageId>
</RegisterImageResponse>
```

Related Operations

- [DescribeImages](#) (p. 67)
- [DeregisterImage](#) (p. 52)

ReleaseAddress

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.

Request Parameters

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

Response Elements

Name	Description
<code>ReleaseAddressResponseType</code>	<code>ReleaseAddressResponseType</code> element. Type: ReleaseAddressResponseType (p. 391) Ancestor: None Children: <code>requestId</code> , <code>return</code>
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code> Ancestor: <code>ReleaseAddressResponseType</code> Children: None
<code>return</code>	Returns Type: <code>xsd:boolean</code> Ancestor: <code>ReleaseAddressResponseType</code> Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?  
Action=ReleaseAddress&PublicIp=67.202.55.255&AuthParams
```

Example Response

```
<ReleaseAddressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <return>true</return>  
</ReleaseAddressResponse>
```

Related Operations

- [AllocateAddress](#) (p. 13)
- [DescribeAddresses](#) (p. 54)
- [AssociateAddress](#) (p. 15)
- [DisassociateAddress](#) (p. 103)

ResetImageAttribute

Description

Resets an attribute of an AMI to its default value.



Note

The productCodes attribute cannot be reset.

Request Parameters

Name	Description	Required
<i>ImageId</i>	ID of the AMI on which the attribute will be reset. Type: String Default: None	Yes
<i>Attribute</i>	Specifies the attribute to reset. Type: String Valid Values: launchPermission productCodes Default: None	

Response Elements

Name	Description
ResetImageAttributeResponse	ResetImageAttributeResponseType element. Type: ResetImageAttributeResponseType (p. 393) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: ResetImageAttributeResponseType Children: None
return	Indicates whether the attribute successfully reset. Type: xsd:boolean Ancestor: ResetImageAttributeResponseType Children: None

Examples

Example Request

This example resets the launchPermission attribute.

`https://ec2.amazonaws.com/?`

`Action=ResetImageAttribute&ImageId=ami-61a54008&Attribute=launchPermission&AuthParams`

Example Response

```
<ResetImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</ResetImageAttributeResponse>
```

Related Operations

- [ModifyImageAttribute](#) (p. 109)
- [DescribeImageAttribute](#) (p. 63)

ResetSnapshotAttribute

Description

Resets permission settings for the specified snapshot.

Request Parameters

Name	Description	Required
<i>SnapshotId</i>	The ID of the snapshot. Type: String Default: None	No
<i>Attribute=createVolumePermission</i>	Resets the create volume permissions of the snapshot. Type: String Default: None	Yes

Response Elements

Name	Description
ResetSnapshotAttributeResponse	ResetSnapshotAttributeResponseType element. Type: ResetSnapshotAttributeResponseType (p. 395) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: ResetSnapshotAttributeResponseType Children: None
return	Specifies whether the snapshot permissions were reset. Type: xsd:boolean Ancestor: ResetSnapshotAttributeResponseType Children: None

Examples

Example Request

This example resets the permissions for snap-78a54011, making it a private snapshot that can only be used by the account that created it.

```
https://ec2.amazonaws.com/?  
Action=ResetSnapshotAttribute&SnapshotId.1=snap-78a54011&Attribute=createVolumePermission&A
```

Example Response

```
<ResetSnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/  
doc/2009-08-15/">
```

```
<return>true</return>  
</ResetSnapshotAttributeResponse>
```

Related Operations

- [ModifySnapshotAttribute](#) (p. 111)
- [DescribeSnapshotAttribute](#) (p. 92)
- [DescribeSnapshots](#) (p. 94)
- [CreateSnapshot](#) (p. 38)

RevokeSecurityGroupIngress

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.

Request Parameters

Name	Description	Required
<i>UserId</i>	AWS Access Key ID. Type: String Default: None	Yes
<i>GroupName</i>	Name of the group to modify. Type: String Default: None	Yes
<i>IpProtocol</i>	IP protocol. Type: String Valid Values: tcp udp icmp Default: None	Yes
<i>FromPort</i>	Start of port range for the TCP and UDP protocols, or an ICMP type number. An ICMP type number of -1 indicates a wildcard (i.e., any ICMP type number). Type: Integer Default: None	Yes
<i>ToPort</i>	End of port range for the TCP and UDP protocols, or an ICMP code. An ICMP code of -1 indicates a wildcard (i.e., any ICMP code). Type: Integer Default: None	Yes
<i>SourceSecurityGroupName</i>	AWS User ID of an account. Cannot be used when specifying a CIDR IP address. Type: String Default: None	Yes
<i>SourceSecurityGroupId</i>	Name of the security group. Cannot be used when specifying a CIDR IP address. Type: String Default: None	Yes

Name	Description	Required
<i>CidrIp</i>	CIDR range. Type: String Default: None Constraints: Valid CIDR IP address range.	Yes

Response Elements

Name	Description
RevokeSecurityGroupIngressResponse	RevokeSecurityGroupIngressResponseType element. Type: RevokeSecurityGroupIngressResponseType (p. 396) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: RevokeSecurityGroupIngressResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: RevokeSecurityGroupIngressResponseType Children: None

Examples

Example Request

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

`https://ec2.amazonaws.com/?`

`Action=RevokeSecurityGroupIngress&IpProtocol=tcp&FromPort=80&ToPort=80&CidrIp=205.192.0.0/16&AuthParams`

Example Response

```
<RevokeSecurityGroupIngressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</RevokeSecurityGroupIngressResponse>
```

Related Operations

- [CreateSecurityGroup](#) (p. 36)
- [DescribeSecurityGroups](#) (p. 88)
- [AuthorizeSecurityGroupIngress](#) (p. 20)
- [DeleteSecurityGroup](#) (p. 46)

RunInstances

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 High-CPU and High-Memory 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](#).

Request Parameters

Name	Description	Required
<i>ImageId</i>	Unique ID of a machine image, returned by a call to Type: String Default: None	Yes
<i>MinCount</i>	Minimum number of instances to launch. If the value is more than Amazon EC2 can launch, no instances are launched at all. Type: Integer Default: None Constraints: Between 1 and the maximum number allowed for your account (default: 20).	Yes
<i>MaxCount</i>	Maximum number of instances to launch. If the value is more than Amazon EC2 can launch, the largest possible number above minCount will be launched instead. Type: Integer Default: None Constraints: Between 1 and the maximum number allowed for your account (default: 20).	Yes
<i>KeyName</i>	The name of the key pair. Type: String Default: None	No
<i>SecurityGroup</i>	Name of the security group. Type: String Default: None	No
<i>AdditionalInfo</i>	Specifies additional information to make available to the instance(s). Type: String Default: None	No
<i>UserData</i>	MIME, Base64-encoded user data. Type: String Default: None	No

Amazon Elastic Compute Cloud API Reference
Request Parameters

Name	Description	Required
<i>AddressingType</i>	Deprecated. Type: String Default: None	No
<i>InstanceType</i>	Specifies the instance type. Type: String Valid Values: m1.small m1.large m1.xlarge c1.medium c1.xlarge m2.2xlarge m2.4xlarge Default: m1.small	No
<i>Placement.AvailabilityZone</i>	Specifies the placement constraints (Availability Zones) for launching the instances. Type: String Default: Amazon EC2 selects an Availability Zone.	No
<i>KernelId</i>	The ID of the kernel with which to launch the instance. Type: String Default: None	No
<i>RamdiskId</i>	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. Type: String Default: None	No
<i>BlockDeviceMapping.VirtualName</i>	The virtual name. Type: String Default: None	No
<i>BlockDeviceMapping.DeviceName</i>	The device name (e.g., /dev/sdh). Type: String Default: None	No
<i>Monitoring.Enabled</i>	Enables monitoring for the instance. Type: Boolean Default: Disabled	No
<i>SubnetId</i>	Specifies the subnet ID within which to launch the instance(s) for Amazon Virtual Private Cloud. Type: String Default: None	No

Response Elements

Name	Description
RunInstancesResponseType	RunInstancesResponseType element. Type: RunInstancesResponseType (p. 397) Ancestor: None Children: requestId, reservationId, ownerId, groupSet, instancesSet, and requesterId
requestId	The ID of the request. Type: xsd:string Ancestor: RunInstancesResponseType Children: None
reservationId	Unique ID of the reservation. Type: xsd:string Ancestor: RunInstancesResponseType Children: None
ownerId	AWS Access Key ID of the user who owns the reservation. Type: xsd:string Ancestor: RunInstancesResponseType Children: None
groupSet	Group set. Type: GroupSetType (p. 372) Ancestor: RunInstancesResponseType Children: item
item	Group set item. Type: GroupItem (p. 371) Ancestor: groupSet Children: groupId
groupId	Name of the security group. Type: xsd:string Ancestor: item Children: None
instancesSet	Instance set. Type: RunningInstancesSetType (p. 401) Ancestor: RunInstancesResponseType Children: item

Name	Description
item	Running instance set item. Type: RunningInstancesItemType (p. 399) Ancestor: instancesSet Children: instanceId, imageId, instanceState, privateDnsName, dnsName, reason, keyName, amiLaunchIndex, productCodes, instanceType, launchTime, placement, kernelId, ramdiskId, platform, monitoring, subnetId, vpcId, privateIpAddress, and ipAddress
instanceId	Unique ID of the instance launched. Type: xsd:string Ancestor: item Children: None
imageId	Image ID of the AMI used to launch the instance. Type: xsd:string Ancestor: item Children: None
instanceState	The current state of the instance. Type: InstanceStateType (p. 373) Ancestor: item Children: code, name
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: Type: xsd:int Ancestor: instanceState Children: None
name	The current state of the instance. Type: xsd:string Ancestor: instanceState Children: None
privateDnsName	The private DNS name assigned to the instance. This DNS name can only be used inside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string Ancestor: item Children: None
dnsName	The public DNS name assigned to the instance. This DNS name is contactable from outside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string Ancestor: item Children: None

Name	Description
reason	Reason for the most recent state transition. This might be an empty string. Type: xsd:string Ancestor: item Children: None
keyName	If this instance was launched with an associated key pair, this displays the key pair name. Type: xsd:string Ancestor: item Children: None
amiLaunchIndex	The AMI launch index, which can be used to find this instance within the launch group. For more information, go to the Metadata section of the Type: xsd:string Ancestor: item Children: None
productCodes	Product codes attached to this instance. Type: ProductCodesSetType (p. 386) Ancestor: item Children: item
item	Information for one product code. Type: ProductCodesSetItemType (p. 386) Ancestor: productCodes Children: productCode
productCode	Product code. Type: xsd:string Ancestor: item Children: None
instanceType	The instance type. Type: xsd:string Ancestor: item Children: None
launchTime	The time the instance launched. Type: xsd:dateTime Ancestor: item Children: None
placement	The location where the instance launched. Type: PlacementResponseType (p. 384) Ancestor: item Children: availabilityZone

Name	Description
availabilityZone	Returns the Availability Zones of the instances. Type: xsd:string Ancestor: placement Children: None
kernelId	Optional. Kernel associated with this instance. Type: xsd:string Ancestor: item Children: None
ramdiskId	Optional. RAM disk associated with this instance. Type: xsd:string Ancestor: item Children: None
platform	Platform of the instance (e.g., Windows). Type: xsd:string Ancestor: item Children: None
monitoring	Specifies whether monitoring is enabled for the instance. Type: InstanceMonitoringStateType (p. 372) Ancestor: item Children: state
state	State of monitoring for the instance. Type: xsd:string Valid Values: monitoring-enabled (enabled) monitoring-pending (pending) monitoring-disabled (disabled) Ancestor: monitoring Children: None
subnetId	Specifies the subnet ID in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string Ancestor: item Children: None
vpcId	Specifies the VPC in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string Ancestor: item Children: None
privateIpAddress	Specifies the private IP address that is assigned to the instance (Amazon VPC). Type: xsd:string Ancestor: item Children: None

Name	Description
ipAddress	Specifies the IP address of the instance. Type: xsd:string Ancestor: item Children: None
requesterId	ID of the requester. Type: xsd:string Ancestor: RunInstancesResponseType Children: None

Examples

Example Request

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

`https://ec2.amazonaws.com/?`

`Action=RunInstances&ImageId=ami-60a54009&MaxCount=3&MinCount=1&Placement.AvailabilityZone=us-east-1b&Monitoring.Enabled=true&AuthParams`

Example Response

```
<RunInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservationId>r-47a5402e</reservationId>
  <ownerId>AIDADH4IGTRXXKCD</ownerId>
  <groupSet>
    <item>
      <groupId>default</groupId>
    </item>
  </groupSet>
  <instancesSet>
    <item>
      <instanceId>i-2ba64342</instanceId>
      <imageId>ami-60a54009</imageId>
      <instanceState>
        <code>0</code>
        <name>pending</name>
      </instanceState>
      <privateDnsName></privateDnsName>
      <dnsName></dnsName>
      <keyName>example-key-name</keyName>
      <amiLaunchIndex>0</amiLaunchIndex>
      <instanceType>m1.small</instanceType>
      <launchTime>2007-08-07T11:51:50.000Z</launchTime>
      <placement>
        <availabilityZone>us-east-1b</availabilityZone>
      </placement>
      <monitoring>
        <enabled>true</enabled>
      </monitoring>
    </item>
  </instancesSet>
</RunInstancesResponse>
```

```
<instanceId>i-2bc64242</instanceId>
<imageId>ami-60a54009</imageId>
<instanceState>
  <code>0</code>
  <name>pending</name>
</instanceState>
<privateDnsName></privateDnsName>
<dnsName></dnsName>
<keyName>example-key-name</keyName>
<amiLaunchIndex>1</amiLaunchIndex>
<instanceType>m1.small</instanceType>
<launchTime>2007-08-07T11:51:50.000Z</launchTime>
<placement>
<availabilityZone>us-east-1b</availabilityZone>
</placement>
<monitoring>
  <enabled>true</enabled>
</monitoring>
</item>
<item>
  <instanceId>i-2be64332</instanceId>
  <imageId>ami-60a54009</imageId>
  <instanceState>
    <code>0</code>
    <name>pending</name>
  </instanceState>
  <privateDnsName></privateDnsName>
  <dnsName></dnsName>
  <keyName>example-key-name</keyName>
  <amiLaunchIndex>2</amiLaunchIndex>
  <instanceType>m1.small</instanceType>
  <launchTime>2007-08-07T11:51:50.000Z</launchTime>
  <placement>
  <availabilityZone>us-east-1b</availabilityZone>
  </placement>
  <monitoring>
    <enabled>true</enabled>
  </monitoring>
</item>
</instancesSet>
</RunInstancesResponse>
```

Related Operations

- [DescribeInstances](#) (p. 71)
- [TerminateInstances](#) (p. 139)
- [AuthorizeSecurityGroupIngress](#) (p. 20)
- [RevokeSecurityGroupIngress](#) (p. 127)
- [DescribeSecurityGroups](#) (p. 88)
- [CreateSecurityGroup](#) (p. 36)
- [CreateKeyPair](#) (p. 34)

TerminateInstances

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).

Request Parameters

Name	Description	Required
<i>InstanceId.n</i>	Instance ID to terminate. Type: String Default: None	Yes

Response Elements

Name	Description
TerminateInstancesResponse	TerminateInstancesResponseType element. Type: TerminateInstancesResponseType (p. 405) Ancestor: None Children: requestId, instancesSet
requestId	The ID of the request. Type: xsd:string Ancestor: TerminateInstancesResponseType Children: None
instancesSet	Instances set. Type: TerminateInstancesResponseInfoType (p. 404) Ancestor: TerminateInstancesResponseType Children: item
item	Response item. Type: TerminateInstancesResponseItemType (p. 404) Ancestor: instancesSet Children: instanceId, shutdownState, and previousState
instanceId	Instance ID. Type: xsd:string Ancestor: item Children: None
shutdownState	Shutdown state. Type: InstanceStateType (p. 373) Ancestor: item Children: code, name

Name	Description
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: Type: xsd:int Ancestor: shutdownState Children: None
name	The current state of the instance. Type: xsd:string Ancestor: shutdownState Children: None
previousState	Previous state. Type: InstanceStateType (p. 373) Ancestor: item Children: code, name
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: Type: xsd:int Ancestor: previousState Children: None
name	The current state of the instance. Type: xsd:string Ancestor: previousState Children: None

Examples

Example Request

This example terminates the i-3ea74257 instance.

`https://ec2.amazonaws.com/?
Action=TerminateInstances&InstanceId.1=i-3ea74257&AuthParams`

Example Response

```
<TerminateInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet>
    <item>
      <instanceId>i-3ea74257</instanceId>
      <shutdownState>
        <code>32</code>
        <name>shutting-down</name>
      </shutdownState>
      <previousState>
        <code>16</code>
        <name>running</name>
      </previousState>
    </item>
  </instancesSet>
</TerminateInstancesResponse>
```

```
    </item>  
  </instancesSet>  
</TerminateInstancesResponse>
```

Related Operations

- [DescribeInstances](#) (p. 71)

UnmonitorInstances

Description

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

Request Parameters

Name	Description	Required
<i>InstanceId.n</i>	Instance ID. Type: String Default: None	Yes

Response Elements

Name	Description
MonitorInstancesResponseType	MonitorInstancesResponseType element. Type: MonitorInstancesResponseType (p. 381) Ancestor: None Children: requestId, instancesSet
requestId	The ID of the request. Type: xsd:string Ancestor: MonitorInstancesResponseType Children: None
instancesSet	Monitor instance response set. Type: MonitorInstancesResponseSetType (p. 381) Ancestor: MonitorInstancesResponseType Children: item
item	Instance Item. Type: MonitorInstancesResponseSetItemType (p. 380) Ancestor: instancesSet Children: instanceId, monitoring
instanceId	Instance ID. Type: xsd:string Ancestor: item Children: None
monitoring	Monitoring information. Type: InstanceMonitoringStateType (p. 372) Ancestor: item Children: state

Name	Description
state	State of monitoring for the instance. Type: xsd:string Valid Values: monitoring-enabled (enabled) monitoring-pending (pending) monitoring-disabled (disabled) Ancestor: monitoring Children: None

Examples

Example Request

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

```
https://ec2.amazonaws.com/?  
Action=UnmonitorInstances&InstanceId.1=i-43a4412a&InstanceId.2=i-23a3397d&AuthParams
```

Example Response

```
<UnmonitorInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <instancesSet>  
    <item>  
      <instanceId> i-43a4412a</instanceId>  
      <monitoring>  
        <state>pending</state>  
      </monitoring>  
    </item>  
    <item>  
      <instanceId>i-23a3397d</instanceId>  
      <monitoring>  
        <state>pending</state>  
      </monitoring>  
    </item>  
  </instancesSet>  
</UnmonitorInstancesResponse>
```

Related Operations

- [MonitorInstances](#) (p. 113)
- [RunInstances](#) (p. 130)

Amazon EC2 SOAP API

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- [AllocateAddress \(p. 148\)](#)
- [AssociateAddress \(p. 150\)](#)
- [AttachVolume \(p. 152\)](#)
- [AuthorizeSecurityGroupIngress \(p. 155\)](#)
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- [CreateKeyPair \(p. 171\)](#)
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AllocateAddress

Description

Acquires an elastic IP address for use with your account.

Request Parameters

The AllocateAddress operation does not have any request parameters.

Response Elements

Name	Description
AllocateAddressResponseType	AllocateAddressResponseType element. Type: AllocateAddressResponseType (p. 302) Ancestor: None Children: requestId, publicIp
requestId	The ID of the request. Type: xsd:string Ancestor: AllocateAddressResponseType Children: None
publicIp	IP address for use with your account. Type: xsd:string Ancestor: AllocateAddressResponseType Children: None

Examples

Example Request

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

```
<AllocateAddress xmlns="http://ec2.amazonaws.com/doc/2009-08-15/"></AllocateAddress>
```

Example Response

```
<AllocateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <publicIp>67.202.55.255</publicIp>  
</AllocateAddressResponse>
```

Related Operations

- [DescribeAddresses](#) (p. 192)
- [ReleaseAddress](#) (p. 270)
- [AssociateAddress](#) (p. 150)
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AssociateAddress

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.

Request Parameters

Name	Description	Required
AssociateAddressType	AssociateAddressType element. Type: AssociateAddressType (p. 303) Ancestor: None Children: publicIp, instanceId	
publicIp	IP address that you are assigning to the instance. Type: xsd:string Default: None Ancestor: AssociateAddressType Children: None	Yes
instanceId	The instance to associate with the IP address. Type: xsd:string Default: None Ancestor: AssociateAddressType Children: None	Yes

Response Elements

Name	Description
AssociateAddressResponseType	AssociateAddressResponseType element. Type: AssociateAddressResponseType (p. 302) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: AssociateAddressResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: AssociateAddressResponseType Children: None

Examples

Example Request

This example associates an IP address with an instance.

```
<AssociateAddress xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instanceId>i-28a64341</instanceId>
  <publicIp>67.202.55.255</publicIp>
</AssociateAddress>
```

Example Response

```
<AssociateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</AssociateAddressResponse>
```

Related Operations

- [AllocateAddress](#) (p. 148)
- [DescribeAddresses](#) (p. 192)
- [ReleaseAddress](#) (p. 270)
- [DisassociateAddress](#) (p. 249)

AttachVolume

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](#).

Request Parameters

Name	Description	Required
AttachVolumeType	AttachVolumeType element. Type: AttachVolumeType (p. 305) Ancestor: None Children: volumeId, instanceId, and device	
volumeId	The ID of the Amazon EBS volume. The volume and instance must be within the same Availability Zone and the instance must be running. Type: xsd:string Default: None Ancestor: AttachVolumeType Children: None	Yes
instanceId	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. Type: xsd:string Default: None Ancestor: AttachVolumeType Children: None	Yes
device	Specifies how the device is exposed to the instance (e.g., /dev/sdh). Type: xsd:string Default: None Ancestor: AttachVolumeType Children: None	Yes

Response Elements

Name	Description
AttachVolumeResponseType	AttachVolumeResponseType element. Type: AttachVolumeResponseType (p. 304) Ancestor: None Children: requestId, volumeId, instanceId, device, status, and attachTime
requestId	The ID of the request. Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
device	The device as it is exposed to the instance. Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
status	Volume state (e.g., Type: xsd:string Ancestor: AttachVolumeResponseType Children: None
attachTime	Time stamp when the attachment was initiated. Type: xsd:dateTime Ancestor: AttachVolumeResponseType Children: None

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](#).

```
<AttachVolume xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <instanceId>i-6058a509</instanceId>
  <device>/dev/sdh</device>
```

</AttachVolume>

Example Response

```
<AttachVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <instanceId>i-6058a509</instanceId>
  <device>/dev/sdh</device>
  <status>attaching</status>
  <attachTime>2008-05-07T11:51:50.000Z</attachTime>
</AttachVolumeResponse>
```

Related Operations

- [CreateVolume](#) (p. 179)
- [DeleteVolume](#) (p. 188)
- [DescribeVolumes](#) (p. 242)
- [DetachVolume](#) (p. 246)

AuthorizeSecurityGroupIngress

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.

Request Parameters

Name	Description	Required
AuthorizeSecurityGroupIngressType	AuthorizeSecurityGroupIngressType element. Type: AuthorizeSecurityGroupIngressType (p. 306) Ancestor: None Children: userId, groupName, and ipPermissions	
userId	AWS Access Key ID. Type: xsd:string Default: None Ancestor: AuthorizeSecurityGroupIngressType Children: None	Yes
groupName	Name of the group to modify. The name must be valid and belong to the account Type: xsd:string Default: None Ancestor: AuthorizeSecurityGroupIngressType Children: None	Yes
ipPermissions	Set of permissions. Type: IpPermissionSetType (p. 374) Ancestor: AuthorizeSecurityGroupIngressType Children: item	Yes
item	Set of IP permissions. Type: IpPermissionType (p. 375) Ancestor: ipPermissions Children: ipProtocol, fromPort, toPort, groups, and ipRanges	Yes

Name	Description	Required
ipProtocol	IP protocol. Type: xsd:string Valid Values: tcp udp icmp Default: None Ancestor: item Children: None	Yes
fromPort	Start of port range for the TCP and UDP protocols, or an ICMP type number. An ICMP type number of -1 indicates a wildcard (i.e., any ICMP type number). Type: xsd:int Default: None Ancestor: item Children: None	Yes
toPort	End of port range for the TCP and UDP protocols, or an ICMP code. An ICMP code of -1 indicates a wildcard (i.e., any ICMP code). Type: xsd:int Default: None Ancestor: item Children: None	Yes
groups	List of security group and user ID pairs. Type: UserIdGroupPairSetType (p. 406) Ancestor: item Children: item	Yes
item	Information for one security group. Type: UserIdGroupPairType (p. 406) Ancestor: groups Children: userId, groupName	Yes
userId	AWS User ID of an account. Cannot be used when specifying a CIDR IP address. Type: xsd:string Default: None Ancestor: item Children: None	Yes
groupName	Name of the security group. Cannot be used when specifying a CIDR IP address. Type: xsd:string Default: None Ancestor: item Children: None	Yes

Name	Description	Required
ipRanges	IP ranges. Type: IpRangeSetType (p. 376) Ancestor: item Children: item	Yes
item	Information for one IP range. Type: IpRangeItemType (p. 375) Ancestor: ipRanges Children: cidrIp	Yes
cidrIp	CIDR range. Type: xsd:string Default: None Constraints: Valid CIDR IP address range. Ancestor: item Children: None	Yes

Response Elements

Name	Description
AuthorizeSecurityGroupIngress	AuthorizeSecurityGroupIngressResponseType element. Type: AuthorizeSecurityGroupIngressResponseType (p. 306) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: AuthorizeSecurityGroupIngressResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: AuthorizeSecurityGroupIngressResponseType Children: None

Examples

Example Request

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

```
<AuthorizeSecurityGroupIngress xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <userId/>
  <groupName>webserv</groupName>
  <ipPermissions>
    <item>
```

```
<ipProtocol>tcp</ipProtocol>
<fromPort>80</fromPort>
<toPort>80</toPort>
<groups/>
<ipRanges>
  <item>
    <cidrIp>205.192.0.0/16</cidrIp>
  </item>
</ipRanges>
</item>
</ipPermissions>
</AuthorizeSecurityGroupIngress>
```

Example Response

```
<AuthorizeSecurityGroupIngressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</AuthorizeSecurityGroupIngressResponse>
```

Related Operations

- [CreateSecurityGroup](#) (p. 174)
- [DescribeSecurityGroups](#) (p. 231)
- [RevokeSecurityGroupIngress](#) (p. 276)
- [DeleteSecurityGroup](#) (p. 184)

BundleInstance

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.

Request Parameters

Name	Description	Required
BundleInstanceType	BundleInstanceType element. Type: BundleInstanceType (p. 314) Ancestor: None Children: instanceId, storage	
instanceId	The ID of the instance to bundle. Type: xsd:string Default: None Ancestor: BundleInstanceType Children: None	Yes
storage	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312) Ancestor: BundleInstanceType Children: S3	Yes
S3	Amazon S3 storage location. Type: BundleInstanceS3StorageType (p. 311) Ancestor: storage Children: bucket, prefix, awsAccessKeyId, uploadPolicy, and uploadPolicySignature	Yes
bucket	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: xsd:string Default: None Ancestor: S3 Children: None	Yes

Name	Description	Required
prefix	Specifies the beginning of the file name of the AMI. Type: xsd:string Default: None Ancestor: S3 Children: None	Yes
awsAccessKeyId	The Access Key ID of the owner of the Amazon S3 bucket. Type: xsd:string Default: None Ancestor: S3 Children: None	Yes
uploadPolicy	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: xsd:string Default: None Ancestor: S3 Children: None	Yes
uploadPolicySignature	The signature of the Base64 encoded JSON document. Type: xsd:string Default: None Ancestor: S3 Children: None	Yes

JSON Parameters

The upload policy gives Amazon EC2 limited permission to upload items into your Amazon S3 bucket. The following table describes the required parameters for the upload policy JSON document. Parameter names are case sensitive. For more information about upload policies and how to sign them, go to the [Amazon Elastic Compute Cloud Developer Guide](#).

Name	Description	Required
expiration	The expiration of the policy. We recommend 12 hours or longer.	Yes
conditions	A list of restrictions on what can be uploaded to Amazon S3. Must contain the bucket and ACL conditions in this table.	Yes
bucket	The bucket to store the AMI.	Yes
acl	This must be set to ec2-bundle-read.	Yes

Response Elements

Name	Description
BundleInstanceResponseType	BundleInstanceResponseType element. Type: BundleInstanceResponseType (p. 310) Ancestor: None Children: requestId, bundleInstanceTask
requestId	The ID of the request. Type: xsd:string Ancestor: BundleInstanceResponseType Children: None
bundleInstanceTask	Bundle task. Type: BundleInstanceTaskType (p. 313) Ancestor: BundleInstanceResponseType Children: instanceId, bundleId, state, startTime, updateTime, storage, progress, and error
instanceId	Instance associated with this bundle task. Type: xsd:string Ancestor: bundleInstanceTask Children: None
bundleId	Identifier for this task. Type: xsd:string Ancestor: bundleInstanceTask Children: None
state	The state of the task. Type: xsd:string Valid Values: pending waiting-for-shutdown storing canceling complete failed Ancestor: bundleInstanceTask Children: None
startTime	The time this task started. Type: xsd:dateTime Ancestor: bundleInstanceTask Children: None
updateTime	The time of the most recent update for the task. Type: xsd:dateTime Ancestor: bundleInstanceTask Children: None
storage	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312) Ancestor: bundleInstanceTask Children: S3

Name	Description
S3	Amazon S3 storage location. Type: BundleInstanceS3StorageType (p. 311) Ancestor: storage Children: bucket, prefix, awsAccessKeyId, uploadPolicy, and uploadPolicySignature
bucket	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: xsd:string Ancestor: S3 Children: None
prefix	Specifies the beginning of the file name of the AMI. Type: xsd:string Ancestor: S3 Children: None
awsAccessKeyId	The Access Key ID of the owner of the Amazon S3 bucket. Type: xsd:string Ancestor: S3 Children: None
uploadPolicy	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: xsd:string Ancestor: S3 Children: None
uploadPolicySignature	The signature of the Base64 encoded JSON document. Type: xsd:string Ancestor: S3 Children: None
progress	The level of task completion, in percent (e.g., 20%). Type: xsd:string Ancestor: bundleInstanceTask Children: None
error	If the task fails, a description of the error. Type: BundleInstanceTaskErrorType (p. 311) Ancestor: bundleInstanceTask Children: code, message
code	Error code. Type: xsd:string Ancestor: error Children: None

Name	Description
message	Error message. Type: xsd:string Ancestor: error Children: None

Examples

Example Request

This example bundles the i-e468cd8d instance.

```
<BundleInstance xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instanceId>i-e468cd8d</instanceId>
  <storage>
    <S3>
      <bucket>my-bucket</bucket>
      <prefix>winami</prefix>
      <awsAccessKeyId>10QMXFEV71ZS32XQFTR2</awsAccessKeyId>

      <uploadPolicy>eyJleHBpcmF0aw9uIjogIjIwMDgtMDgtMzBUMDg6NDk6MDlaIiwuY29uZGl0aw9ucyI6IFt7Im
        J1Y2tldCI6ICJteS1idWNrZXQifSxbInN0YXJ0cy13aXRoIiwgIiRrZXkiLCAibXktbmV3LWltYWdlIi1ldfQ==</
      uploadPolicy>
      <uploadPolicySignature>w6BZu2oxGsiiLZnoBmQSErotuMA=</
    uploadPolicySignature>
    </S3>
  </storage>
</BundleInstance>
```

Example Response

```
<BundleInstanceResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <requestId>bun-c1a540a8</requestId>
  <bundleInstanceTask>
    <instanceId>i-12345678</instanceId>
    <bundleId>bun-c1a540a8</bundleId>
    <state>bundling</state>
    <startTime>2008-10-07T11:41:50.000Z</startTime>
    <updateTime>2008-10-07T11:51:50.000Z</updateTime>
    <progress>70%</progress>
    <storage>
      <S3>
        <bucket>my-bucket</bucket>
        <prefix>winami</prefix>
      </S3>
    </storage>
  </bundleInstanceTask>
</BundleInstanceResponse>
```

Related Operations

- [CancelBundleTask](#) (p. 165)
- [DescribeBundleTasks](#) (p. 198)

CancelBundleTask

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](#).

Request Parameters

Name	Description	Required
CancelBundleTaskType	CancelBundleTaskType element. Type: CancelBundleTaskType (p. 315) Ancestor: None Children: bundleId	
bundleId	The ID of the bundle task to cancel. Type: xsd:string Default: None Ancestor: CancelBundleTaskType Children: None	Yes

Response Elements

Name	Description
CancelBundleTaskResponseType	CancelBundleTaskResponseType element. Type: CancelBundleTaskResponseType (p. 314) Ancestor: None Children: requestId, bundleInstanceTask
requestId	The ID of the request. Type: xsd:string Ancestor: CancelBundleTaskResponseType Children: None
bundleInstanceTask	Bundle task to cancel. Type: BundleInstanceTaskType (p. 313) Ancestor: CancelBundleTaskResponseType Children: instanceId, bundleId, state, startTime, updateTime, storage, progress, and error
instanceId	Instance associated with this bundle task. Type: xsd:string Ancestor: bundleInstanceTask Children: None

Name	Description
<code>bundleId</code>	Identifier for this task. Type: <code>xsd:string</code> Ancestor: <code>bundleInstanceTask</code> Children: None
<code>state</code>	The state of the task. Type: <code>xsd:string</code> Valid Values: <code>pending</code> <code>waiting-for-shutdown</code> <code>storing</code> <code>canceling</code> <code>complete</code> <code>failed</code> Ancestor: <code>bundleInstanceTask</code> Children: None
<code>startTime</code>	The time this task started. Type: <code>xsd:dateTime</code> Ancestor: <code>bundleInstanceTask</code> Children: None
<code>updateTime</code>	The time of the most recent update for the task. Type: <code>xsd:dateTime</code> Ancestor: <code>bundleInstanceTask</code> Children: None
<code>storage</code>	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312) Ancestor: <code>bundleInstanceTask</code> Children: <code>S3</code>
<code>S3</code>	Amazon S3 storage location. Type: BundleInstanceS3StorageType (p. 311) Ancestor: <code>storage</code> Children: <code>bucket</code> , <code>prefix</code> , <code>awsAccessKeyId</code> , <code>uploadPolicy</code> , and <code>uploadPolicySignature</code>
<code>bucket</code>	The bucket in which to store the AML. 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: <code>xsd:string</code> Ancestor: <code>S3</code> Children: None
<code>prefix</code>	Specifies the beginning of the file name of the AML. Type: <code>xsd:string</code> Ancestor: <code>S3</code> Children: None
<code>awsAccessKeyId</code>	The Access Key ID of the owner of the Amazon S3 bucket. Type: <code>xsd:string</code> Ancestor: <code>S3</code> Children: None

Name	Description
uploadPolicy	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: xsd:string Ancestor: S3 Children: None
uploadPolicySignature	The signature of the Base64 encoded JSON document. Type: xsd:string Ancestor: S3 Children: None
progress	The level of task completion, in percent (e.g., 20%). Type: xsd:string Ancestor: bundleInstanceTask Children: None
error	If the task fails, a description of the error. Type: BundleInstanceTaskErrorType (p. 311) Ancestor: bundleInstanceTask Children: code, message
code	Error code. Type: xsd:string Ancestor: error Children: None
message	Error message. Type: xsd:string Ancestor: error Children: None

Examples

Example Request

This example cancels the bun-cla322b9 bundle task.

```
<CancelBundleTask xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <bundleId>bun-cla322b9</bundleId>
</CancelBundleTask>
```

Example Response

```
<CancelBundleTaskResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <bundleInstanceTask>
    <instanceId>i-12345678</instanceId>
    <bundleId>bun-cla322b9</bundleId>
    <state>canceling</state>
    <startTime>2008-10-07T11:41:50.000Z</startTime>
    <updateTime>2008-10-07T11:51:50.000Z</updateTime>
```

```
<progress>20%</progress>
<storage>
  <S3>
    <bucket>my-bucket</bucket>
    <prefix>my-new-image</prefix>
  </S3>
</storage>
</bundleInstanceTask>
</CancelBundleTaskResponse>
```

Related Operations

- [BundleInstance](#) (p. 159)
- [DescribeBundleTasks](#) (p. 198)

ConfirmProductInstance

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.

Request Parameters

Name	Description	Required
ConfirmProductInstanceType	ConfirmProductInstanceType element. Type: ConfirmProductInstanceType (p. 316) Ancestor: None Children: productCode, instanceId	
productCode	The product code to confirm. Type: xsd:string Default: None Ancestor: ConfirmProductInstanceType Children: None	Yes
instanceId	The instance to confirm. Type: xsd:string Default: None Ancestor: ConfirmProductInstanceType Children: None	Yes

Response Elements

Name	Description
ConfirmProductInstanceResponseType	ConfirmProductInstanceResponseType element. Type: ConfirmProductInstanceResponseType (p. 315) Ancestor: None Children: requestId, return, and ownerId
requestId	The ID of the request. Type: xsd:string Ancestor: ConfirmProductInstanceResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: ConfirmProductInstanceResponseType Children: None

Name	Description
ownerId	The instance owner's account ID. Only present if the product code is attached to the instance. Type: xsd:string Ancestor: ConfirmProductInstanceResponseType Children: None

Examples

Example Request

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

```
<ConfirmProductInstance xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <productCode>774F4FF8</productCode>
  <instanceId>i-10a64379</instanceId>
</ConfirmProductInstance>
```

Example Response

```
<ConfirmProductInstanceResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
  <ownerId>254933287430</ownerId>
</ConfirmProductInstanceResponse>
```

Related Operations

- [DescribeInstances](#) (p. 212)
- [RunInstances](#) (p. 280)

CreateKeyPair

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.

Request Parameters

Name	Description	Required
CreateKeyPairType	CreateKeyPairType element. Type: CreateKeyPairType (p. 317) Ancestor: None Children: keyName	
keyName	A unique name for the key pair. Type: xsd:string Default: None Constraints: Accepts alphanumeric characters, spaces, dashes, and underscores. Ancestor: CreateKeyPairType Children: None	Yes

Response Elements

Name	Description
CreateKeyPairResponseType	CreateKeyPairResponseType element. Type: CreateKeyPairResponseType (p. 316) Ancestor: None Children: requestId, keyName, keyFingerprint, and keyMaterial
requestId	The ID of the request. Type: xsd:string Ancestor: CreateKeyPairResponseType Children: None
keyName	The key pair name provided in the original request. Type: xsd:string Ancestor: CreateKeyPairResponseType Children: None
keyFingerprint	A SHA-1 digest of the DER encoded private key. Type: xsd:string Ancestor: CreateKeyPairResponseType Children: None

Name	Description
keyMaterial	An unencrypted PEM encoded RSA private key. Type: xsd:string Ancestor: CreateKeyPairResponseType Children: None

Examples

Example Request

This example creates a key pair named gsg-keypair.

```
<CreateKeyPair xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <keyName>gsg-keypair</keyName>
</CreateKeyPair>
```

Example Response

```
<CreateKeyPairResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <keyName>gsg-keypair</keyName>

  <keyFingerprint>1f:51:ae:28:bf:89:e9:d8:1f:25:5d:37:2d:7d:b8:ca:9f:f5:f1:6f</
keyFingerprint>
  <keyMaterial>-----BEGIN RSA PRIVATE KEY-----
MIIEoQIBAAKCAQBULFg5UjHrtm1jnutSuo08Xe56LlT+HM8v/xkaa39EstM3/aFxTHgElQiJLChp
HungXQ29VTc8rc1bW0lkdi230H5eqkMHGhvEwqa0HWASUMl14o3o/IX+0f2UcPoKCOVUR+jx71Sg
5AU52EQfanIn3ZQ8lFW7Edp5a3q4DhjGluKToHVbicL5E+g45zfB95wIyywWZfew/UUF3LpGZyq/
ebIUlq1qTbHkLbCC2r7RTn8vpQWp47BGVYgtGSBMpTRP5hnbzzuqj3itkiLHjU39S2sJCJ0TrJx5
i8BygR4s3mHKBj8l+ePQxG1kGbF6R4yg6sECmXn17MRQVXODNHZbAgMBAAECggEAY1tsiUsIwDl5
91CXirkYGuVfLyLflXenxfI50mDFms/mumTqloH07tr0oriHDR5K7wMcY/YY5YkcXNo7mvUVD1pM
ZNUJs7rw9gZRTrf7LylaJ58k0cyajw8TsC4e4LPbFaHwS1d6K8rXh64o6WgW4SrsB6ICmr1kGQI7
3wcfgt5ecIu4TZf00E9IHjn+2eRlsrjBde0Ri7KiUNC/pAG23I6MdD0FEQRcCSigCj+4/mciFUSA
SWS4dMbrpb9FNSIcf9dcLxVM7/6KxgJNfZc9XWzUw77Jg8x92Zd0fVhH0ux5IZC+UvSKWB4dyfcI
tE8C3p9bbU9VGyY5vLCAiIb4qQKBgQDLi024GXrIkswF32YtBBMuVgLGcWu9h9Hl09mKAc2m8Cm1
jUE5IpzRjTedc9I2qiIMUTwtgnw42auSCzbUeYMURPtDqyQ7p6AjMujp9EPemcSVOK9vXYL0Ptco
xW9MC0dtV6iPkCN7g0qiZXPRKaFbWADp16p8UAIVS/a5XXk5jwKBgQCKkphI2EISH1uRkxh1jyWC
iDCiK6JBRSMvplbc0v5dKwP5a1o1fmdR5PJaV2qvZSj5CYNpMAy1/EDNTY50SIJU+0KFmQbyhsbm
rdLNLDL4+TcnT7c62/aH01ohYaf/VcBhRtLlBfqGoQc7+sAc8vmKkesnF7CqCEKdyF/dhrxYdQKB
gC0iZzzNAapayz1+JcVTwwEid6j9JqNXbBc+Z2YwMi+T0Fv/P/hwkX/ype0XnIUcw0Ih/YtGBVAC
DQbsz7LcY1HqXiHKYNWvXgww0+oiChjxvEksDsTTIfnK4VSCvU9BxDbQHjdINDJbL6oar92UN7V
rBYvChJZF7LvUH4YmVpHAoGAbZ2X7XvoeE0+uZ58/BGKOIGHByHBDiXtZMhdJr15HTYjxK70gTZm
gK+8zp4L9IbVLGDMJ08vft32XPEWuvI8twCzFH+CsWLQADZMZKSsBasOZ/h1FwhdMgCMcY+Qlzd4
JZKjTSu3i7vhvX6RzdSedXEMNTZWn4qlIx3kR5aHcukCgYA9T+Zrvm1F0seQPbLknn7EqhXIjBaT
P8TTvW/6bdPi23ExzxZn7K0drfc1YRph1LHMPA0Nv/x2xALIf91UB+v5ohy1oDoasL0gij1houRe
2ERKKdwz0ZL9Swq6VTdhr/5G994CK72fy5WhyERbDjUIIdHaK3M849JJuf8cSrvSb4g==
-----END RSA PRIVATE KEY-----</keyMaterial>
</CreateKeyPairResponse>
```

Related Operations

- [RunInstances](#) (p. 280)
- [DescribeKeyPairs](#) (p. 219)
- [DeleteKeyPair](#) (p. 182)

CreateSecurityGroup

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.

Request Parameters

Name	Description	Required
CreateSecurityGroupType	CreateSecurityGroupType element. Type: CreateSecurityGroupType (p. 318) Ancestor: None Children: groupName, groupDescription	
groupName	Name of the security group. Type: xsd:string Default: None Constraints: Accepts alphanumeric characters, spaces, dashes, and underscores. Ancestor: CreateSecurityGroupType Children: None	Yes
groupDescription	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: xsd:string Default: None Constraints: Accepts alphanumeric characters, spaces, dashes, and underscores. Ancestor: CreateSecurityGroupType Children: None	Yes

Response Elements

Name	Description
CreateSecurityGroupResponseType	CreateSecurityGroupResponseType element. Type: CreateSecurityGroupResponseType (p. 317) Ancestor: None Children: requestId, return

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: CreateSecurityGroupResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: CreateSecurityGroupResponseType Children: None

Examples

Example Request

This example creates the webserv security group.

```
<CreateSecurityGroup xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <groupName>webserv</groupName>
  <groupDescription>Web Servers</groupDescription>
</CreateSecurityGroup>
```

Example Response

```
<CreateSecurityGroupResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</CreateSecurityGroupResponse>
```

Related Operations

- [RunInstances](#) (p. 280)
- [DescribeSecurityGroups](#) (p. 231)
- [AuthorizeSecurityGroupIngress](#) (p. 155)
- [RevokeSecurityGroupIngress](#) (p. 276)
- [DeleteSecurityGroup](#) (p. 184)

CreateSnapshot

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.

For Linux/UNIX, enter the following command from the command line.

```
umount -d /dev/sdh
```

For Windows, open Disk Management, right-click the volume to unmount, and select Change Drive Letter and Path. Then, select the mount point to remove and click Remove.

Request Parameters

Name	Description	Required
CreateSnapshotType	CreateSnapshotType element. Type: CreateSnapshotType (p. 319) Ancestor: None Children: volumeId, description	
volumeId	The ID of the Amazon EBS volume of which to take a snapshot. Type: xsd:string Default: None Ancestor: CreateSnapshotType Children: None	Yes
description	Description of the Amazon EBS snapshot. Type: xsd:string Default: None Constraints: 256 characters. Ancestor: CreateSnapshotType Children: None	No

Response Elements

Name	Description
CreateSnapshotResponseType	CreateSnapshotResponseType element. Type: CreateSnapshotResponseType (p. 318) Ancestor: None Children: requestId, snapshotId, volumeId, status, startTime, progress, ownerId, volumeSize, and description
requestId	The ID of the request. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
snapshotId	The ID of the snapshot. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
status	Snapshot state (e.g., Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
startTime	Time stamp when the snapshot was initiated. Type: xsd:dateTime Ancestor: CreateSnapshotResponseType Children: None
progress	The progress of the snapshot, in percentage. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
ownerId	The AWS account ID of the Amazon EBS snapshot owner. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None
volumeSize	The size of the volume, in GiB. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None

Name	Description
description	Description of the snapshot. Type: xsd:string Ancestor: CreateSnapshotResponseType Children: None

Examples

Example Request

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

```
<CreateSnapshot xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <description>Daily Backup</description>
</CreateSnapshot>
```

Example Response

```
<CreateSnapshotResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotId>snap-78a54011</snapshotId>
  <volumeId>vol-4d826724</volumeId>
  <volumeSize>10</volumeSize>
  <status>pending</status>
  <startTime>2008-05-07T12:51:50.000Z</startTime>
  <progress>60%</progress>
  <ownerId>213457642086</ownerId>
  <description>Daily Backup</description>
</CreateSnapshotResponse>
```

Related Operations

- [DeleteSnapshot](#) (p. 186)
- [DescribeSnapshots](#) (p. 238)

CreateVolume

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.

Request Parameters

Name	Description	Required
CreateVolumeType	CreateVolumeType element. Type: CreateVolumeType (p. 322) Ancestor: None Children: size, snapshotId, and availabilityZone	
size	The size of the volume, in GiBs. Required if you are not creating a volume from a snapshot. Type: xsd:string Valid Values: 1 -1024 Default: None Ancestor: CreateVolumeType Children: None	Yes
snapshotId	The snapshot from which to create the new volume. Type: xsd:string Default: None Ancestor: CreateVolumeType Children: None	No
availabilityZone	The Availability Zone in which to create the new volume. Type: xsd:string Default: None Ancestor: CreateVolumeType Children: None	Yes

Response Elements

Name	Description
CreateVolumeResponseType	CreateVolumeResponseType element. Type: CreateVolumeResponseType (p. 321) Ancestor: None Children: requestId, volumeId, size, snapshotId, availabilityZone, status, and createTime
requestId	The ID of the request. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
size	The size of the volume, in GiBs. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
snapshotId	Snapshot from which the volume was created, if applicable. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
availabilityZone	Availability Zone in which the volume was created. Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
status	Volume state (e.g., Type: xsd:string Ancestor: CreateVolumeResponseType Children: None
createTime	Time stamp when volume creation was initiated. Type: xsd:dateTime Ancestor: CreateVolumeResponseType Children: None

Examples

Example Request

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

```
<CreateVolume xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
```

```
<size>800</size>
<availabilityZone>us-east-1a</availabilityZone>
</CreateVolume>
```

Example Response

```
<CreateVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <size>800</size>
  <status>creating</status>
  <createTime>2008-05-07T11:51:50.000Z</createTime>
  <availabilityZone>us-east-1a</availabilityZone>
  <snapshotId></snapshotId>
</CreateVolumeResponse>
```

Related Operations

- [DeleteVolume](#) (p. 188)
- [DescribeVolumes](#) (p. 242)
- [AttachVolume](#) (p. 152)
- [DetachVolume](#) (p. 246)
- [DescribeAvailabilityZones](#) (p. 195)

DeleteKeyPair

Description

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

Request Parameters

Name	Description	Required
DeleteKeyPairType	DeleteKeyPairType element. Type: DeleteKeyPairType (p. 323) Ancestor: None Children: keyName	
keyName	Name of the key pair to delete. Type: xsd:string Default: None Ancestor: DeleteKeyPairType Children: None	Yes

Response Elements

Name	Description
DeleteKeyPairResponseType	DeleteKeyPairResponseType element. Type: DeleteKeyPairResponseType (p. 323) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeleteKeyPairResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeleteKeyPairResponseType Children: None

Examples

Example Request

This example deletes the gsg-keypair key pair.

```
<DeleteKeyPair xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <keyName>gsg-keypair</keyName>
```

```
</DeleteKeyPair>
```

Example Response

```
<DeleteKeyPairResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</DeleteKeyPairResponse>
```

Related Operations

- [CreateKeyPair](#) (p. 171)
- [DescribeKeyPairs](#) (p. 219)

DeleteSecurityGroup

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.

Request Parameters

Name	Description	Required
DeleteSecurityGroupType	DeleteSecurityGroupType element. Type: DeleteSecurityGroupType (p. 324) Ancestor: None Children: groupName	
groupName	Name of the security group to delete. Type: xsd:string Default: None Ancestor: DeleteSecurityGroupType Children: None	Yes

Response Elements

Name	Description
DeleteSecurityGroupResponseType	DeleteSecurityGroupResponseType element. Type: DeleteSecurityGroupResponseType (p. 324) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeleteSecurityGroupResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeleteSecurityGroupResponseType Children: None

Examples

Example Request

This example deletes the webserv security group.

```
<DeleteSecurityGroup xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <groupName>webserv</groupName>
</DeleteSecurityGroup>
```

Example Response

```
<DeleteSecurityGroupResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</DeleteSecurityGroupResponse>
```

Related Operations

- [CreateSecurityGroup](#) (p. 174)
- [DescribeSecurityGroups](#) (p. 231)
- [AuthorizeSecurityGroupIngress](#) (p. 155)
- [RevokeSecurityGroupIngress](#) (p. 276)

DeleteSnapshot

Description

Deletes a snapshot of an Amazon EBS volume that you own. For more information, go to the [Amazon Elastic Compute Cloud Developer Guide](#).

Request Parameters

Name	Description	Required
DeleteSnapshotType	DeleteSnapshotType element. Type: DeleteSnapshotType (p. 325) Ancestor: None Children: snapshotId	
snapshotId	The ID of the Amazon EBS snapshot to delete. Type: xsd:string Default: None Ancestor: DeleteSnapshotType Children: None	Yes

Response Elements

Name	Description
DeleteSnapshotResponseType	DeleteSnapshotResponseType element. Type: DeleteSnapshotResponseType (p. 324) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeleteSnapshotResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeleteSnapshotResponseType Children: None

Examples

Example Request

This example deletes snapshot snap-78a54011.

```
<DeleteSnapshot xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotId>snap-78a54011</snapshotId>
```

</DeleteSnapshot>

Example Response

```
<DeleteSnapshotResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</DeleteSnapshotResponse>
```

Related Operations

- [CreateSnapshot](#) (p. 176)
- [DescribeSnapshots](#) (p. 238)

DeleteVolume

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.

Request Parameters

Name	Description	Required
DeleteVolumeType	DeleteVolumeType element. Type: DeleteVolumeType (p. 326) Ancestor: None Children: volumeId	
volumeId	The ID of the volume to delete. The volume remains in the Type: xsd:string Default: None Ancestor: DeleteVolumeType Children: None	Yes

Response Elements

Name	Description
DeleteVolumeResponseType	DeleteVolumeResponseType element. Type: DeleteVolumeResponseType (p. 325) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeleteVolumeResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeleteVolumeResponseType Children: None

Examples

Example Request

This example deletes volume vol-4282672b.

```
<DeleteVolume xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4282672b</volumeId>
</DeleteVolume>
```

Example Response

```
<DeleteVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</DeleteVolumeResponse>
```

Related Operations

- [CreateVolume](#) (p. 179)
- [DescribeVolumes](#) (p. 242)
- [AttachVolume](#) (p. 152)
- [DetachVolume](#) (p. 246)

DeregisterImage

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.

Request Parameters

Name	Description	Required
DeregisterImageType	DeregisterImageType element. Type: DeregisterImageType (p. 327) Ancestor: None Children: imageId	
imageId	Unique ID of the AMI which was assigned during registration. To register an AMI, use Type: xsd:string Default: None Ancestor: DeregisterImageType Children: None	Yes

Response Elements

Name	Description
DeregisterImageResponseType	DeregisterImageResponseType element. Type: DeregisterImageResponseType (p. 326) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DeregisterImageResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DeregisterImageResponseType Children: None

Examples

Example Request

This example deregisters the ami-4fa54026 AMI.

```
<DeregisterImage xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-4fa54026</imageId>
</DeregisterImage>
```

Example Response

```
<DeregisterImageResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</DeregisterImageResponse>
```

Related Operations

- [RegisterImage](#) (p. 268)
- [DescribeImages](#) (p. 207)

DescribeAddresses

Description

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

Request Parameters

Name	Description	Required
DescribeAddressesType	DescribeAddressesType element. Type: DescribeAddressesType (p. 330) Ancestor: None Children: publicIpsSet	
publicIpsSet	Set of elastic IP addresses. Type: DescribeAddressesInfoType (p. 327) Ancestor: DescribeAddressesType Children: item	Yes, but can be empty
item	Information for one elastic IP address. Type: DescribeAddressesItemType (p. 328) Ancestor: publicIpsSet Children: publicIp	
publicIp	Elastic IP address to describe. Type: xsd:string Default: None Ancestor: item Children: None	Yes, but can be empty

Response Elements

Name	Description
DescribeAddressesResponseType	DescribeAddressesResponseType element. Type: DescribeAddressesResponseType (p. 329) Ancestor: None Children: requestId, addressesSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeAddressesResponseType Children: None
addressesSet	The set of IP addresses. Type: DescribeAddressesResponseInfoType (p. 328) Ancestor: DescribeAddressesResponseType Children: item

Name	Description
item	Information about an instance. Type: DescribeAddressesResponseItem (p. 329) Ancestor: addressesSet Children: publicIp, instanceId
publicIp	The public IP address. Type: xsd:string Ancestor: item Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: item Children: None

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.

```
<DescribeAddresses xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <publicIpsSet>
    <item>
      <publicIp>67.202.55.255</publicIp>
    </item>
    <item>
      <publicIp>67.202.55.233</publicIp>
    </item>
  </publicIpsSet>
</DescribeAddresses>
```

Example Response

```
<DescribeAddressesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <addressesSet>
    <item>
      <instanceId>i-f15ebb98</instanceId>
      <publicIp>67.202.55.255</publicIp>
    </item>
    <item>
      <publicIp>67.202.55.233</publicIp>
    </item>
  </addressesSet>
</DescribeAddressesResponse>
```

Related Operations

- [AllocateAddress](#) (p. 148)
- [ReleaseAddress](#) (p. 270)

DescribeAvailabilityZones

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.

Request Parameters

Name	Description	Required
DescribeAvailabilityZones	DescribeAvailabilityZonesType element. Type: DescribeAvailabilityZonesType (p. 332) Ancestor: None Children: availabilityZoneSet	
availabilityZoneSet	Set of Availability Zones. Type: DescribeAvailabilityZonesSetType (p. 331) Ancestor: DescribeAvailabilityZonesType Children: item	No
item	Information for one Availability Zone. Type: DescribeAvailabilityZonesSetItemType (p. 331) Ancestor: availabilityZoneSet Children: zoneName	
zoneName	Availability Zone name. Type: xsd:string Default: None Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeAvailabilityZonesResponse	DescribeAvailabilityZonesResponseType element. Type: DescribeAvailabilityZonesResponseType (p. 330) Ancestor: None Children: requestId, availabilityZoneInfo
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeAvailabilityZonesResponseType Children: None

Name	Description
availabilityZoneInfo	Availability Zone information. Type: AvailabilityZoneSetType (p. 309) Ancestor: DescribeAvailabilityZonesResponseType Children: item
item	Information for one Availability Zone. Type: AvailabilityZoneItemType (p. 307) Ancestor: availabilityZoneInfo Children: zoneName, zoneState, regionName, and messageSet
zoneName	Name of the Availability Zone. Type: xsd:string Ancestor: item Children: None
zoneState	State of the Availability Zone. Type: xsd:string Valid Values: available Ancestor: item Children: None
regionName	Name of the region. Type: xsd:string Ancestor: item Children: None
messageSet	Message set. Type: AvailabilityZoneMessageSetType (p. 308) Ancestor: item Children: item
item	Availability Zone message set. Type: AvailabilityZoneMessageType (p. 308) Ancestor: messageSet Children: message
message	The Availability Zone message. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

```
<DescribeAvailabilityZones xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <availabilityZoneSet/>
```

</DescribeAvailabilityZones>

Example Response

```
<DescribeAvailabilityZonesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <availabilityZoneInfo>
    <item>
      <zoneName>us-east-1a</zoneName>
      <zoneState>available</zoneState>
    </item>
    <item>
      <zoneName>us-east-1b</zoneName>
      <zoneState>available</zoneState>
    </item>
    <item>
      <zoneName>us-east-1c</zoneName>
      <zoneState>available</zoneState>
    </item>
    <item>
      <zoneName>us-east-1d</zoneName>
      <zoneState>available</zoneState>
    </item>
  </availabilityZoneInfo>
</DescribeAvailabilityZonesResponse>
```

Related Operations

- [RunInstances](#) (p. 280)
- [DescribeRegions](#) (p. 221)

DescribeBundleTasks

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](#).

Request Parameters

Name	Description	Required
DescribeBundleTasksType	DescribeBundleTasksType element. Type: DescribeBundleTasksType (p. 333) Ancestor: None Children: bundlesSet	
bundlesSet	Set of bundle tasks. Type: DescribeBundleTasksInfoType (p. 332) Ancestor: DescribeBundleTasksType Children: item	
item	Information for one bundle task. Type: DescribeBundleTasksItemType (p. 332) Ancestor: bundlesSet Children: bundleId	
bundleId	The ID of the bundle task to describe. Type: xsd:string Default: If no ID is specified, all bundle tasks are described. Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeBundleTasksResponseType	DescribeBundleTasksResponseType element. Type: DescribeBundleTasksResponseType (p. 333) Ancestor: None Children: requestId, bundleInstanceTasksSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeBundleTasksResponseType Children: None

Name	Description
bundleInstanceTasksSet	Bundle task set. Type: BundleInstanceTasksSetType (p. 312) Ancestor: DescribeBundleTasksResponseType Children: item
item	Bundle task. Type: BundleInstanceTaskType (p. 313) Ancestor: bundleInstanceTasksSet Children: instanceId, bundleId, state, startTime, updateTime, storage, progress, and error
instanceId	Instance associated with this bundle task. Type: xsd:string Ancestor: item Children: None
bundleId	Identifier for this task. Type: xsd:string Ancestor: item Children: None
state	The state of the task. Type: xsd:string Valid Values: pending waiting-for-shutdown storing canceling complete failed Ancestor: item Children: None
startTime	The time this task started. Type: xsd:dateTime Ancestor: item Children: None
updateTime	The time of the most recent update for the task. Type: xsd:dateTime Ancestor: item Children: None
storage	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312) Ancestor: item Children: S3
S3	Amazon S3 storage location. Type: BundleInstanceS3StorageType (p. 311) Ancestor: storage Children: bucket, prefix, awsAccessKeyId, uploadPolicy, and uploadPolicySignature

Name	Description
bucket	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: xsd:string Ancestor: S3 Children: None
prefix	Specifies the beginning of the file name of the AMI. Type: xsd:string Ancestor: S3 Children: None
awsAccessKeyId	The Access Key ID of the owner of the Amazon S3 bucket. Type: xsd:string Ancestor: S3 Children: None
uploadPolicy	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: xsd:string Ancestor: S3 Children: None
uploadPolicySignature	The signature of the Base64 encoded JSON document. Type: xsd:string Ancestor: S3 Children: None
progress	The level of task completion, in percent (e.g., 20%). Type: xsd:string Ancestor: item Children: None
error	If the task fails, a description of the error. Type: BundleInstanceTaskErrorType (p. 311) Ancestor: item Children: code, message
code	Error code. Type: xsd:string Ancestor: error Children: None
message	Error message. Type: xsd:string Ancestor: error Children: None

Examples

Example Request

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

```
<DescribeBundleTasks xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <bundlesSet>
    <item>
      <bundleId>bun-57a5403e</bundleId>
    </item>
  </bundlesSet>
</DescribeBundleTasks>
```

Example Response

```
<DescribeBundleTasksResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <bundleInstanceTasksSet>
    <item>
      <instanceId>i-12345678</instanceId>
      <bundleId>bun-c1a540a8</bundleId>
      <state>canceling</state>
      <startTime>2008-10-07T11:41:50.000Z</startTime>
      <updateTime>2008-10-07T11:51:50.000Z</updateTime>
      <progress>20%</progress>
      <storage>
        <S3>
          <bucket>my-bucket</bucket>
          <prefix>winami</prefix>
        </S3>
      </storage>
    </item>
  </bundleInstanceTasksSet>
</DescribeBundleTasksResponse>
```

Related Operations

- [BundleInstance](#) (p. 159)
- [CancelBundleTask](#) (p. 165)

DescribeImageAttribute

Description

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

Request Parameters

Name	Description	Required
DescribeImageAttributeType	DescribeImageAttributeType element. Type: DescribeImageAttributeType (p. 335) Ancestor: None Children: imageId, DescribeImageAttributesGroup	
imageId	The ID of the AMI for which an attribute will be described. Type: xsd:string Default: None Ancestor: DescribeImageAttributeType Children: None	Yes
DescribeImageAttributesGroup	The image attributes group. Type: DescribeImageAttributesGroup (p. 335) Ancestor: DescribeImageAttributeType Children: launchPermission, productCodes, kernel, ramdisk, and blockDeviceMapping	
launchPermission	Describes the launch permissions associated with the AMI. Type: EmptyElementType (p. 369) Ancestor: DescribeImageAttributesGroup Children: none	No
none	These element contains no options. Type: xsd:string Default: None Ancestor: launchPermission Children: None	No
productCodes	Describes the product code associated with the AMI. Type: EmptyElementType (p. 369) Ancestor: DescribeImageAttributesGroup Children: none	No
none	These element contains no options. Type: xsd:string Default: None Ancestor: productCodes Children: None	No

Name	Description	Required
kernel	Describes the ID of the kernel associated with the AMI. Type: EmptyElementType (p. 369) Ancestor: DescribeImageAttributesGroup Children: none	No
none	These element contains no options. Type: xsd:string Default: None Ancestor: kernel Children: None	No
ramdisk	Describes the ID of the RAM disk associated with the AMI. Type: EmptyElementType (p. 369) Ancestor: DescribeImageAttributesGroup Children: none	No
none	These element contains no options. Type: xsd:string Default: None Ancestor: ramdisk Children: None	No
blockDeviceMapping	Describes the mapping that defines native device names to use when exposing virtual devices. Type: EmptyElementType (p. 369) Ancestor: DescribeImageAttributesGroup Children: none	No
none	These element contains no options. Type: xsd:string Default: None Ancestor: blockDeviceMapping Children: None	No

Response Elements

Name	Description
DescribeImageAttributeResponse	Describes the DescribeImageAttributeResponseType element. Type: DescribeImageAttributeResponseType (p. 334) Ancestor: None Children: requestId, imageId, launchPermission, productCodes, kernel, ramdisk, and blockDeviceMapping
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeImageAttributeResponseType Children: None

Name	Description
imageId	The ID of the AML. Type: xsd:string Ancestor: DescribeImageAttributeResponseType Children: None
launchPermission	Launch permissions set. Type: LaunchPermissionListType (p. 377) Ancestor: DescribeImageAttributeResponseType Children: item
item	Information for launch permissions. Type: LaunchPermissionItemType (p. 376) Ancestor: launchPermission Children: userId, group
userId	AWS Access Key ID. Type: xsd:string Ancestor: item Children: None
group	Name of the group. Currently supports "all." Type: xsd:string Ancestor: item Children: None
productCodes	Product codes set. Type: ProductCodeListType (p. 385) Ancestor: DescribeImageAttributeResponseType Children: item
item	Information for one product code. Type: ProductCodeItemType (p. 385) Ancestor: productCodes Children: productCode
productCode	Product code. Type: xsd:string Ancestor: item Children: None
kernel	Kernel set. Type: NullableAttributeValueType (p. 383) Ancestor: DescribeImageAttributeResponseType Children: value
value	ID of the kernel or RAM disk. Type: xsd:string Ancestor: kernel Children: None

Name	Description
ramdisk	RAM disk set. Type: NullableAttributeValue (p. 383) Ancestor: DescribeImageAttributeResponseType Children: value
value	ID of the kernel or RAM disk. Type: xsd:string Ancestor: ramdisk Children: None
blockDeviceMapping	Block device mapping set. Type: BlockDeviceMappingType (p. 310) Ancestor: DescribeImageAttributeResponseType Children: item
item	Information for one block device mapping. Type: BlockDeviceMappingItemType (p. 309) Ancestor: blockDeviceMapping Children: virtualName, deviceName
virtualName	The virtual name. Type: xsd:string Ancestor: item Children: None
deviceName	The device name (e.g., /dev/sdh). Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

```
<DescribeImageAttribute xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>&exampleamiid;</imageId>
  <launchPermission/>
</DescribeImageAttribute>
```

Example Response

```
<DescribeImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-61a54008</imageId>
  <launchPermission>
    <item>
      <group>all</group>
    </item>
    <item>
```

```
        <userId>495219933132</userId>
      </item>
    </launchPermission>
  </DescribeImageAttributeResponse>
```

Example Request

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

```
<DescribeImageAttribute xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>&exampleamiid;</imageId>
  <productCodes/>
</DescribeImageAttribute>
```

Example Response

```
<DescribeImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-61a54008</imageId>
  <productCodes>
    <item>
      <productCode>774F4FF8</productCode>
    </item>
  </productCodes>
</DescribeImageAttributeResponse>
```

Related Operations

- [DescribeImages](#) (p. 207)
- [ModifyImageAttribute](#) (p. 255)
- [ResetImageAttribute](#) (p. 272)

DescribeImages

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 <code>all</code> 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.

Request Parameters

Name	Description	Required
DescribeImagesType	DescribeImagesType element. Type: DescribeImagesType (p. 341) Ancestor: None Children: <code>executableBySet</code> , <code>imagesSet</code> , and <code>ownersSet</code>	

Name	Description	Required
executableBySet	Executable set. Type: DescribeImagesExecutableBySetType (p. 336) Ancestor: DescribeImagesType Children: item	Yes, but can be empty
item	Information for one user. Type: DescribeImagesExecutableByType (p. 336) Ancestor: executableBySet Children: user	No
user	Returns AMIs for which the specified user has explicit launch permissions. The user ID can be a user's account ID, Type: xsd:string Default: None Ancestor: item Children: None	No
imagesSet	Image set. Type: DescribeImagesInfoType (p. 337) Ancestor: DescribeImagesType Children: item	Yes, but can be empty
item	Information for one image. Type: DescribeImagesItemType (p. 337) Ancestor: imagesSet Children: imageId	No
imageId	AMI IDs to describe. Type: xsd:string Default: Returns all AMIs. Ancestor: item Children: None	No
ownersSet	Information about an owner. Type: DescribeImagesOwnersType (p. 338) Ancestor: DescribeImagesType Children: item	Yes, but can be empty
item	Information for one owner. Type: DescribeImagesOwnerType (p. 338) Ancestor: ownersSet Children: owner	No
owner	Returns AMIs owned by the specified owner. Multiple owners can be specified. The IDs Type: xsd:string Default: None Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeImagesResponseType	DescribeImagesResponseType element. Type: DescribeImagesResponseType (p. 340) Ancestor: None Children: requestId, imagesSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeImagesResponseType Children: None
imagesSet	Image set. Type: DescribeImagesResponseInfoType (p. 339) Ancestor: DescribeImagesResponseType Children: item
item	Information for one image. Type: DescribeImagesResponseItemType (p. 339) Ancestor: imagesSet Children: imageId, imageLocation, imageState, imageOwnerId, isPublic, productCodes, architecture, imageType, kernelId, ramdiskId, and platform
imageId	The ID of the AMI. Type: xsd:string Ancestor: item Children: None
imageLocation	The location of the AMI. Type: xsd:string Ancestor: item Children: None
imageState	Current state of the AMI. If the operation returns Type: xsd:string Ancestor: item Children: None
imageOwnerId	AWS Access Key ID of the image owner. Type: xsd:string Ancestor: item Children: None
isPublic	Returns Type: xsd:boolean Ancestor: item Children: None

Name	Description
productCodes	Product codes of the AMI. Type: ProductCodesSetType (p. 386) Ancestor: item Children: item
item	Information for one product code. Type: ProductCodesSetItemType (p. 386) Ancestor: productCodes Children: productCode
productCode	Product code. Type: xsd:string Ancestor: item Children: None
architecture	The architecture of the image (Type: xsd:string Ancestor: item Children: None
imageType	The type of image (Type: xsd:string Ancestor: item Children: None
kernelId	The kernel associated with the image, if any. Only applicable for machine images. Type: xsd:string Ancestor: item Children: None
ramdiskId	The RAM disk associated with the image, if any. Only applicable for machine images. Type: xsd:string Ancestor: item Children: None
platform	The operating platform of the instance. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example describes the ami-be3adfd7 AMI.

```
<DescribeImages xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <executableBySet>
```

```
<item>
  <user>all</user>
</item>
</executableBySet>
<ownersSet/>
<imagesSet>
  <item>
    <imageId>ami-be3adfd7</imageId>
  </item>
</imagesSet>
</DescribeImages>
```

Example Response

```
<DescribeImagesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imagesSet>
    <item>
      <imageId>ami-be3adfd7</imageId>
      <imageLocation>ec2-public-images/fedora-8-i386-base-v1.04.manifest.xml
      </imageLocation>
      <imageState>available</imageState>
      <imageOwnerId>206029621532</imageOwnerId>
      <isPublic>false</isPublic>
      <architecture>i386</architecture>
      <imageType>machine</imageType>
      <kernelId>aki-4438dd2d</kernelId>
      <ramdiskId>ari-4538dd2c</ramdiskId>
    </item>
  </imagesSet>
</DescribeImagesResponse>
```

Related Operations

- [DescribeInstances](#) (p. 212)
- [DescribeImageAttribute](#) (p. 202)

DescribeInstances

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.

Request Parameters

Name	Description	Required
DescribeInstancesType	DescribeInstancesType element. Type: DescribeInstancesType (p. 343) Ancestor: None Children: instancesSet	
instancesSet	Instances set. Type: DescribeInstancesInfoType (p. 341) Ancestor: DescribeInstancesType Children: item	Yes, but can be empty
item	Information for one instance set. Type: DescribeInstancesItemType (p. 342) Ancestor: instancesSet Children: instanceId	No
instanceId	Instance IDs to describe. Type: xsd:string Default: Returns all instances. Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeInstancesResponseType	DescribeInstancesResponseType element. Type: DescribeInstancesResponseType (p. 342) Ancestor: None Children: requestId, reservationSet

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeInstancesResponseType Children: None
reservationSet	Reservation set. Type: ReservationSetType (p. 393) Ancestor: DescribeInstancesResponseType Children: item
item	Information for a reservation. Type: ReservationInfoType (p. 392) Ancestor: reservationSet Children: reservationId, ownerId, groupSet, instancesSet, and requesterId
reservationId	Unique ID of the reservation. Type: xsd:string Ancestor: item Children: None
ownerId	AWS Access Key ID of the user who owns the reservation. Type: xsd:string Ancestor: item Children: None
groupSet	Group set. Type: GroupSetType (p. 372) Ancestor: item Children: item
item	Group set item. Type: GroupItemType (p. 371) Ancestor: groupSet Children: groupId
groupId	Name of the security group. Type: xsd:string Ancestor: item Children: None
instancesSet	Instance set. Type: RunningInstancesSetType (p. 401) Ancestor: item Children: item

Name	Description
item	Running instance set item. Type: RunningInstancesItemType (p. 399) Ancestor: instancesSet Children: instanceId, imageId, instanceState, privateDnsName, dnsName, reason, keyName, amiLaunchIndex, productCodes, instanceType, launchTime, placement, kernelId, ramdiskId, platform, monitoring, subnetId, vpcId, privateIpAddress, and ipAddress
instanceId	Unique ID of the instance launched. Type: xsd:string Ancestor: item Children: None
imageId	Image ID of the AMI used to launch the instance. Type: xsd:string Ancestor: item Children: None
instanceState	The current state of the instance. Type: InstanceStateType (p. 373) Ancestor: item Children: code, name
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: Type: xsd:int Ancestor: instanceState Children: None
name	The current state of the instance. Type: xsd:string Ancestor: instanceState Children: None
privateDnsName	The private DNS name assigned to the instance. This DNS name can only be used inside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string Ancestor: item Children: None
dnsName	The public DNS name assigned to the instance. This DNS name is contactable from outside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string Ancestor: item Children: None

Name	Description
reason	Reason for the most recent state transition. This might be an empty string. Type: xsd:string Ancestor: item Children: None
keyName	If this instance was launched with an associated key pair, this displays the key pair name. Type: xsd:string Ancestor: item Children: None
amiLaunchIndex	The AMI launch index, which can be used to find this instance within the launch group. For more information, go to the Metadata section of the Type: xsd:string Ancestor: item Children: None
productCodes	Product codes attached to this instance. Type: ProductCodesSetType (p. 386) Ancestor: item Children: item
item	Information for one product code. Type: ProductCodesSetItemType (p. 386) Ancestor: productCodes Children: productCode
productCode	Product code. Type: xsd:string Ancestor: item Children: None
instanceType	The instance type. Type: xsd:string Ancestor: item Children: None
launchTime	The time the instance launched. Type: xsd:dateTime Ancestor: item Children: None
placement	The location where the instance launched. Type: PlacementResponseType (p. 384) Ancestor: item Children: availabilityZone

Name	Description
availabilityZone	Returns the Availability Zones of the instances. Type: xsd:string Ancestor: placement Children: None
kernelId	Optional. Kernel associated with this instance. Type: xsd:string Ancestor: item Children: None
ramdiskId	Optional. RAM disk associated with this instance. Type: xsd:string Ancestor: item Children: None
platform	Platform of the instance (e.g., Windows). Type: xsd:string Ancestor: item Children: None
monitoring	Specifies whether monitoring is enabled for the instance. Type: InstanceMonitoringStateType (p. 372) Ancestor: item Children: state
state	State of monitoring for the instance. Type: xsd:string Valid Values: monitoring-enabled (enabled) monitoring-pending (pending) monitoring-disabled (disabled) Ancestor: monitoring Children: None
subnetId	Specifies the subnet ID in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string Ancestor: item Children: None
vpcId	Specifies the VPC in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string Ancestor: item Children: None
privateIpAddress	Specifies the private IP address that is assigned to the instance (Amazon VPC). Type: xsd:string Ancestor: item Children: None

Name	Description
ipAddress	Specifies the IP address of the instance. Type: xsd:string Ancestor: item Children: None
requesterId	ID of the requester. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

```
<DescribeInstances xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet/>
</DescribeInstances>
```

Example Response

```
<DescribeInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservationSet>
    <item>
      <reservationId>r-44a5402d</reservationId>
      <ownerId>UYY3TLBUXIEON5NQVUUX6OMPWBZIQNFM</ownerId>
      <groupSet>
        <item>
          <groupId>default</groupId>
        </item>
      </groupSet>
      <instancesSet>
        <item>
          <instanceId>i-28a64341</instanceId>
          <imageId>ami-6ea54007</imageId>
          <instanceState>
            <code>0</code>
            <name>running</name>
          </instanceState>
          <privateDnsName>10-251-50-132.ec2.internal</privateDnsName>
          <dnsName>ec2-72-44-33-4.compute-1.amazonaws.com</dnsName>
          <keyName>example-key-name</keyName>
          <amiLaunchIndex>23</amiLaunchIndex>
          <productCodesSet>
            <item><productCode>774F4FF8</productCode></item>
          </productCodesSet>
          <instanceType>m1.large</instanceType>
          <launchTime>2007-08-07T11:54:42.000Z</launchTime>
          <placement>
            <availabilityZone>us-east-1b</availabilityZone>
          </placement>
          <kernelId>aki-ba3adfd3</kernelId>
        </item>
      </instancesSet>
    </item>
  </reservationSet>
</DescribeInstancesResponse>
```

```
<ramdiskId>ari-badbad00</ramdiskId>
</item>
<item>
  <instanceId>i-28a64435</instanceId>
  <imageId>ami-6ea54007</imageId>
  <instanceState>
    <code>0</code>
    <name>running</name>
  </instanceState>
  <privateDnsName>10-251-50-134.ec2.internal</privateDnsName>
  <dnsName>ec2-72-44-33-6.compute-1.amazonaws.com</dnsName>
  <keyName>example-key-name</keyName>
  <amiLaunchIndex>23</amiLaunchIndex>
  <productCodesSet>
    <item><productCode>774F4FF8</productCode></item>
  </productCodesSet>
  <instanceType>m1.large</instanceType>
  <launchTime>2007-08-07T11:54:42.000Z</launchTime>
  <placement>
    <availabilityZone>us-east-1b</availabilityZone>
  </placement>
  <kernelId>aki-ba3adfd3</kernelId>
  <ramdiskId>ari-badbad00</ramdiskId>
</item>
</instancesSet>
</reservationSet>
</DescribeInstancesResponse>
```

Related Operations

- [RunInstances](#) (p. 280)
- [TerminateInstances](#) (p. 291)

DescribeKeyPairs

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.

Request Parameters

Name	Description	Required
DescribeKeyPairsType	DescribeKeyPairsType element. Type: DescribeKeyPairsType (p. 346) Ancestor: None Children: keySet	
keySet	Set of key pairs. Type: DescribeKeyPairsInfoType (p. 343) Ancestor: DescribeKeyPairsType Children: item	Yes, but can be empty
item	Information for a key pair. Type: DescribeKeyPairsItemType (p. 344) Ancestor: keySet Children: keyName	No
keyName	Key pair to describe. Type: xsd:string Default: Describes all key pairs available to the account. Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeKeyPairsResponseType	DescribeKeyPairsResponseType element. Type: DescribeKeyPairsResponseType (p. 345) Ancestor: None Children: requestId, keySet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeKeyPairsResponseType Children: None
keySet	Information for a key pair. Type: DescribeKeyPairsResponseInfoType (p. 344) Ancestor: DescribeKeyPairsResponseType Children: item

Name	Description
item	Information for a key pair. Type: DescribeKeyPairsResponseItemType (p. 345) Ancestor: keySet Children: keyName, keyFingerprint
keyName	The key pair name provided in the original request. Type: xsd:string Ancestor: item Children: None
keyFingerprint	A SHA-1 digest of the DER encoded private key. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

```
<DescribeKeyPairs xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <keySet>
    <item>
      <keyName>gsg-keypair</keyName>
    </item>
  </keySet>
</DescribeKeyPairs>
```

Example Response

```
<DescribeKeyPairsResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <keySet>
    <item>
      <keyName>gsg-keypair</keyName>

      <keyFingerprint>1f:51:ae:28:bf:89:e9:d8:1f:25:5d:37:2d:7d:b8:ca:9f:f5:f1:6f</
keyFingerprint>
    </item>
  </keySet>
</DescribeKeyPairsResponse>
```

Related Operations

- [DescribeAvailabilityZones](#) (p. 195)
- [RunInstances](#) (p. 280)

DescribeRegions

Description

Describes regions that are currently available to the account.

Request Parameters

Name	Description	Required
DescribeRegionsType	DescribeRegionsType element. Type: DescribeRegionsType (p. 347) Ancestor: None Children: regionSet	
regionSet	Set of regions. Type: DescribeRegionsSetType (p. 347) Ancestor: DescribeRegionsType Children: item	
item	Information for a region. Type: DescribeRegionsSetItemType (p. 346) Ancestor: regionSet Children: regionName	
regionName	Name of a region. Type: xsd:string Default: Describes all regions available to the account. Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeRegionsResponseType	DescribeRegionsResponseType element. Type: DescribeRegionsResponseType (p. 346) Ancestor: None Children: requestId, regionInfo
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeRegionsResponseType Children: None
regionInfo	Region set. Type: RegionSetType (p. 390) Ancestor: DescribeRegionsResponseType Children: item

Name	Description
item	Information for a region. Type: RegionItemType (p. 390) Ancestor: regionInfo Children: regionName, regionEndpoint
regionName	Name of the region. Type: xsd:string Ancestor: item Children: None
regionEndpoint	Region service endpoint. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example displays regions that are available to the account.

```
<DescribeRegions xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <regionSet/>
</DescribeRegions>
```

Example Response

```
<DescribeRegionsResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <regionInfo>
    <item>
      <regionName>us-east-1</regionName>
      <regionEndpoint>us-east-1.ec2.amazonaws.com</regionEndpoint>
    </item>
    <item>
      <regionName>eu-west-1</regionName>
      <regionUrl>eu-west-1.ec2.amazonaws.com</regionUrl>
    </item>
  </regionInfo>
</DescribeRegionsResponse>
```

Related Operations

- [DescribeAvailabilityZones](#) (p. 195)
- [RunInstances](#) (p. 280)

DescribeReservedInstances

Description

Describes Reserved Instances that you purchased. For more information about Reserved Instances, go to the [Amazon Elastic Compute Cloud Developer Guide](#).

Request Parameters

Name	Description	Required
DescribeReservedInstances	DescribeReservedInstancesType element. Type: DescribeReservedInstancesType (p. 354) Ancestor: None Children: reservedInstancesSet	
reservedInstancesSet	Set of Reserved Instances. Type: DescribeReservedInstancesSetType (p. 354) Ancestor: DescribeReservedInstancesType Children: item	No
item	Reserved Instances item. Type: DescribeReservedInstancesSetItemType (p. 353) Ancestor: reservedInstancesSet Children: reservedInstancesId	No
reservedInstancesId	IDs of the Reserved Instance to describe. Type: xsd:string Default: None Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeReservedInstancesResponse	DescribeReservedInstancesResponseType element. Type: DescribeReservedInstancesResponseType (p. 353) Ancestor: None Children: requestId, reservedInstancesSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeReservedInstancesResponseType Children: None

Name	Description
reservedInstancesSet	Reserved Instances set. Type: DescribeReservedInstancesResponseSetType (p. 352) Ancestor: DescribeReservedInstancesResponseType Children: item
item	Reserved Instance set. Type: DescribeReservedInstancesResponseSetItemType (p. 351) Ancestor: reservedInstancesSet Children: reservedInstancesId, instanceType, availabilityZone, start, duration, fixedPrice, usagePrice, instanceCount, productDescription, and state
reservedInstancesId	The ID of the Reserved Instance. Type: xsd:string Ancestor: item Children: None
instanceType	The instance type on which the Reserved Instance can be used. Type: xsd:string Ancestor: item Children: None
availabilityZone	The Availability Zone in which the Reserved Instance can be used. Type: xsd:string Ancestor: item Children: None
start	The date and time the Reserved Instance started. Type: xsd:dateTime Ancestor: item Children: None
duration	The duration of the Reserved Instance, in seconds. Type: xs:long Ancestor: item Children: None
fixedPrice	The purchase price of the Reserved Instance. Type: xs:double Ancestor: item Children: None
usagePrice	The usage price of the Reserved Instance, per hour. Type: xs:double Ancestor: item Children: None

Name	Description
instanceCount	The number of Reserved Instances purchased. Type: xs:integer Ancestor: item Children: None
productDescription	The Reserved Instance description. Type: xsd:string Ancestor: item Children: None
state	The state of the Reserved Instance purchase. Type: xsd:string Valid Values: pending-payment active payment-failed retired Ancestor: item Children: None

Examples

Example Request

This example describes Reserved Instances owned by the account.

```
<DescribeReservedInstances xmlns="http://ec2.amazonaws.com/doc/2009-08-15/"></DescribeReservedInstances>
```

Example Response

```
<DescribeReservedInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservedInstancesSet>
    <item>
      <reservedInstancesId>4b2293b4-5813-4cc8-9ce3-1957fc1dcfc8</reservedInstancesId>
      <instanceType>m1.small</instanceType>
      <availabilityZone>us-east-1a</availabilityZone>
      <duration>12</duration>
      <usagePrice>0.00</usagePrice>
      <fixedPrice>0.00</fixedPrice>
      <instanceCount>19</instanceCount>
      <productDescription>m1.small offering in us-east-1a</productDescription>
      <state>Active</state>
    </item>
  </reservedInstancesSet>
</DescribeReservedInstancesResponse>
```

Related Operations

- [PurchaseReservedInstancesOffering](#) (p. 264)
- [DescribeReservedInstancesOfferings](#) (p. 227)

DescribeReservedInstancesOfferings

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](#).

Request Parameters

Name	Description	Required
DescribeReservedInstancesOfferings	Describes Reserved Instance offerings that are available for purchase. This is the root element. Type: DescribeReservedInstancesOfferingsType (p. 351) Ancestor: None Children: reservedInstancesOfferingsSet, instanceType, availabilityZone, and productDescription	
reservedInstancesOfferingsSet	Set of Reserved Instances. Type: DescribeReservedInstancesOfferingsSetType (p. 350) Ancestor: DescribeReservedInstancesOfferingsType Children: item	No
item	Reserved Instances item. Type: DescribeReservedInstancesOfferingsSetItemType (p. 350) Ancestor: reservedInstancesOfferingsSet Children: reservedInstancesOfferingId	No
reservedInstancesOfferingId	ID of the Reserved Instances to describe. Type: xsd:string Default: None Ancestor: item Children: None	No
instanceType	The instance type on which the Reserved Instance can be used. Type: xsd:string Default: None Ancestor: DescribeReservedInstancesOfferingsType Children: None	No

Name	Description	Required
availabilityZone	The Availability Zone in which the Reserved Instance can be used. Type: xsd:string Default: None Ancestor: DescribeReservedInstancesOfferingsType Children: None	No
productDescription	The Reserved Instance description. Type: xsd:string Default: None Ancestor: DescribeReservedInstancesOfferingsType Children: None	No

Response Elements

Name	Description
DescribeReservedInstancesOfferingsResponseType	DescribeReservedInstancesOfferingsResponseType element. Type: DescribeReservedInstancesOfferingsResponseType (p. 349) Ancestor: None Children: requestId, reservedInstancesOfferingsSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeReservedInstancesOfferingsResponseType Children: None
reservedInstancesOfferingsSet	Reserved Instances offerings set. Type: DescribeReservedInstancesOfferingsResponseSetType (p. 349) Ancestor: DescribeReservedInstancesOfferingsResponseType Children: item
item	Reserved Instance offerings set. Type: DescribeReservedInstancesOfferingsResponseSetItemType (p. 348) Ancestor: reservedInstancesOfferingsSet Children: reservedInstancesOfferingId, instanceType, availabilityZone, duration, fixedPrice, usagePrice, and productDescription

Name	Description
reservedInstancesOfferingId	The ID of the Reserved Instance offering. Type: xsd:string Ancestor: item Children: None
instanceType	The instance type on which the Reserved Instance can be used. Type: xsd:string Ancestor: item Children: None
availabilityZone	The Availability Zone in which the Reserved Instance can be used. Type: xsd:string Ancestor: item Children: None
duration	The duration of the Reserved Instance, in seconds. Type: xs:long Ancestor: item Children: None
fixedPrice	The purchase price of the Reserved Instance. Type: xs:double Ancestor: item Children: None
usagePrice	The usage price of the Reserved Instance, per hour. Type: xs:double Ancestor: item Children: None
productDescription	The Reserved Instance description. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example describes available Reserved Instance offerings.

```
<DescribeReservedInstancesOfferings xmlns="http://ec2.amazonaws.com/doc/2009-08-15/"></DescribeReservedInstancesOfferings>
```

Example Response

```
<DescribeReservedInstancesOfferingsResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">  
  <reservedInstancesOfferingsSet>  
    <item>
```

```
<reservedInstancesOfferingId>4b2293b4-5813-4cc8-9ce3-1957fc1dcfc8</reservedInstancesOfferingId>
  <instanceType>m1.small</instanceType>
  <availabilityZone>us-east-1a</availabilityZone>
  <duration>12</duration>
  <fixedPrice>0.00</fixedPrice>
  <usagePrice>0.00</usagePrice>
  <productDescription>m1.small offering in us-east-1a</productDescription>
</item>
</reservedInstancesOfferingsSet>
</DescribeReservedInstancesOfferingsResponse>
```

Related Operations

- [PurchaseReservedInstancesOffering](#) (p. 264)
- [DescribeReservedInstances](#) (p. 223)

DescribeSecurityGroups

Description

Returns information about security groups that you own.

Request Parameters

Name	Description	Required
DescribeSecurityGroups	DescribeSecurityGroupsType element. Type: DescribeSecurityGroupsType (p. 356) Ancestor: None Children: securityGroupSet	
securityGroupSet	Set of security groups. Type: DescribeSecurityGroupsSetType (p. 356) Ancestor: DescribeSecurityGroupsType Children: item	
item	Information for a security group. Type: DescribeSecurityGroupsSetItemType (p. 355) Ancestor: securityGroupSet Children: groupName	
groupName	Name of the security group. Type: xsd:string Default: Describes all groups within the account. Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeSecurityGroupsResponse	DescribeSecurityGroupsResponseType element. Type: DescribeSecurityGroupsResponseType (p. 355) Ancestor: None Children: requestId, securityGroupInfo
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeSecurityGroupsResponseType Children: None
securityGroupInfo	Security group set. Type: SecurityGroupSetType (p. 402) Ancestor: DescribeSecurityGroupsResponseType Children: item

Name	Description
item	Information for a security group. Type: SecurityGroupItemType (p. 402) Ancestor: securityGroupInfo Children: ownerId, groupName, groupDescription, and ipPermissions
ownerId	AWS Access Key ID of the owner of the security group. Type: xsd:string Ancestor: item Children: None
groupName	Name of the security group. Type: xsd:string Ancestor: item Children: None
groupDescription	Description of the security group. Type: xsd:string Ancestor: item Children: None
ipPermissions	Set of IP permissions associated with the security group. Type: IpPermissionSetType (p. 374) Ancestor: item Children: item
item	Set of IP permissions. Type: IpPermissionType (p. 375) Ancestor: ipPermissions Children: ipProtocol, fromPort, toPort, groups, and ipRanges
ipProtocol	IP protocol. Type: xsd:string Valid Values: tcp udp icmp Ancestor: item Children: None
fromPort	Start of port range for the TCP and UDP protocols, or an ICMP type number. An ICMP type number of -1 indicates a wildcard (i.e., any ICMP type number). Type: xsd:int Ancestor: item Children: None
toPort	End of port range for the TCP and UDP protocols, or an ICMP code. An ICMP code of -1 indicates a wildcard (i.e., any ICMP code). Type: xsd:int Ancestor: item Children: None

Name	Description
groups	List of security group and user ID pairs. Type: UserIdGroupPairSetType (p. 406) Ancestor: item Children: item
item	Information for one security group. Type: UserIdGroupPairType (p. 406) Ancestor: groups Children: userId, groupName
userId	AWS User ID of an account. Cannot be used when specifying a CIDR IP address. Type: xsd:string Ancestor: item Children: None
groupName	Name of the security group. Cannot be used when specifying a CIDR IP address. Type: xsd:string Ancestor: item Children: None
ipRanges	IP ranges. Type: IpRangeSetType (p. 376) Ancestor: item Children: item
item	Information for one IP range. Type: IpRangeItemType (p. 375) Ancestor: ipRanges Children: cidrIp
cidrIp	CIDR range. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

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

```
<DescribeSecurityGroups xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <securityGroupSet>
    <item>
      <groupName>WebServers</groupName>
    </item>
    <item>
      <groupName>RangedPortsBySource</groupName>
    </item>
  </securityGroupSet>
</DescribeSecurityGroups>
```

```
</securityGroupSet>  
</DescribeSecurityGroups>
```

Example Response

```
<DescribeSecurityGroupsResponse xmlns="http://ec2.amazonaws.com/  
doc/2009-08-15/">  
  <securityGroupInfo>  
    <item>  
      <ownerId>UYY3TLBUXIE0N5NQVUUX60MPWBZIQNFM</ownerId>  
      <groupName>WebServers</groupName>  
      <groupDescription>Web Servers</groupDescription>  
      <ipPermissions>  
        <item>  
          <ipProtocol>tcp</ipProtocol>  
          <fromPort>80</fromPort>  
          <toPort>80</toPort>  
        </item>  
      </ipPermissions>  
    </item>  
    <item>  
      <ownerId>UYY3TLBUXIE0N5NQVUUX60MPWBZIQNFM</ownerId>  
      <groupName>RangedPortsBySource</groupName>  
      <groupDescription>Group A</groupDescription>  
      <ipPermissions>  
        <item>  
          <ipProtocol>tcp</ipProtocol>  
          <fromPort>6000</fromPort>  
          <toPort>7000</toPort>  
        </item>  
      </ipPermissions>  
    </item>  
  </securityGroupInfo>  
</DescribeSecurityGroupsResponse>
```

Related Operations

- [CreateSecurityGroup](#) (p. 174)
- [AuthorizeSecurityGroupIngress](#) (p. 155)
- [RevokeSecurityGroupIngress](#) (p. 276)
- [DeleteSecurityGroup](#) (p. 184)

DescribeSnapshotAttribute

Description

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

Request Parameters

Name	Description	Required
DescribeSnapshotAttributeType	DescribeSnapshotAttributeType element. Type: DescribeSnapshotAttributeType (p. 358) Ancestor: None Children: snapshotId, DescribeSnapshotAttributesGroup	
snapshotId	The ID of the Amazon EBS snapshot. Type: xsd:string Default: None Ancestor: DescribeSnapshotAttributeType Children: None	No
DescribeSnapshotAttributesGroup	DescribeSnapshotAttributesGroup element. Type: DescribeSnapshotAttributesGroup (p. 357) Ancestor: DescribeSnapshotAttributeType Children: createVolumePermission	
createVolumePermission	Describes the snapshot attributes group. Type: EmptyElementType (p. 369) Ancestor: DescribeSnapshotAttributesGroup Children: none	
none	These element contains no options. Type: xsd:string Default: None Ancestor: createVolumePermission Children: None	No

Response Elements

Name	Description
DescribeSnapshotAttributeResponse	DescribeSnapshotAttributeResponseType element. Type: DescribeSnapshotAttributeResponseType (p. 357) Ancestor: None Children: requestId, snapshotId, and createVolumePermission

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeSnapshotAttributeResponseType Children: None
snapshotId	The ID of the Amazon EBS snapshot. Type: xsd:string Ancestor: DescribeSnapshotAttributeResponseType Children: None
createVolumePermission	Create volume permission element. Type: CreateVolumePermissionListType (p. 320) Ancestor: DescribeSnapshotAttributeResponseType Children: item
item	Volume permission item. Type: CreateVolumePermissionItemType (p. 320) Ancestor: createVolumePermission Children: userId, group
userId	User ID of a user that can create volumes from the snapshot. Type: xsd:string Ancestor: item Children: None
group	Group that is allowed to create volumes from the snapshot (currently supports "all"). Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example describes permissions for the snap-78a54011 snapshot.

```
<DescribeSnapshotAttribute xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotId>snap-78a54011</snapshotId>
  <createVolumePermission />
</DescribeSnapshotAttribute>
```

Example Response

```
<DescribeSnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotId></snapshotId>
  <createVolumePermission>
    <item>
      <group>all</group>
    </item>
```

```
</createVolumePermission>  
</DescribeSnapshotAttributeResponse>
```

Related Operations

- [ModifySnapshotAttribute](#) (p. 259)
- [DescribeSnapshots](#) (p. 238)
- [ResetSnapshotAttribute](#) (p. 274)
- [CreateSnapshot](#) (p. 176)

DescribeSnapshots

Description

Returns information about Amazon EBS snapshots available to the user. Information returned includes volume ID, status, start time, progress, owner ID, volume size, and description. Snapshots available to the user include public snapshots available for any user to launch, private snapshots owned by the user making the request, and private snapshots owned by other users for which the user granted explicit create volume permissions.

The create volume permissions fall into 3 categories:

Permission	Description
public	The owner of the snapshot granted create volume permissions for the snapshot to the all group. All users have create volume permissions for these snapshots.
explicit	The owner of the snapshot granted create volume permissions to a specific user.
implicit	A user has implicit create volume permissions for all snapshots he or she owns.

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

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

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

If you specify a list of restorable users, only users that have create snapshot permissions for the snapshots are returned. You can specify AWS Account IDs (if you own the snapshot(s)), self for snapshots for which you own or have explicit permissions, or all for public snapshots.

Request Parameters

Name	Description	Required
DescribeSnapshotsType	DescribeSnapshotsType element. Type: DescribeSnapshotsType (p. 362) Ancestor: None Children: snapshotSet, ownersSet, and restorableBySet	
snapshotSet	Set of snapshots. Type: DescribeSnapshotsSetType (p. 362) Ancestor: DescribeSnapshotsType Children: item	

Name	Description	Required
item	Information for a snapshot. Type: DescribeSnapshotsSetItemType (p. 361) Ancestor: snapshotSet Children: snapshotId	
snapshotId	The ID of the Amazon EBS snapshot. Type: xsd:string Default: Describes snapshots for which you have launch permissions. Ancestor: item Children: None	No
ownersSet	Set of owners that can create volumes from the instance. Type: DescribeSnapshotsOwnersType (p. 358) Ancestor: DescribeSnapshotsType Children: item	
item	Describe snapshot item. Type: DescribeSnapshotsOwnerType (p. 358) Ancestor: ownersSet Children: owner	
owner	Returns snapshots owned by the specified owner. Multiple owners can be specified. Type: xsd:string Valid Values: self amazon AWS Account ID Default: None Ancestor: item Children: None	No
restorableBySet	Set of users that can create volumes from the snapshot. Type: DescribeSnapshotsRestorableBySetType (p. 359) Ancestor: DescribeSnapshotsType Children: item	
item	Restorable by set type item. Type: DescribeSnapshotsRestorableByType (p. 360) Ancestor: restorableBySet Children: user	
user	Account ID of a user that can create volumes from the snapshot. Type: xsd:string Default: None Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeSnapshotsResponse	DescribeSnapshotsResponseType element. Type: DescribeSnapshotsResponseType (p. 359) Ancestor: None Children: requestId, snapshotSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeSnapshotsResponseType Children: None
snapshotSet	Snapshot set. Type: DescribeSnapshotsSetResponseType (p. 362) Ancestor: DescribeSnapshotsResponseType Children: item
item	Information for a snapshot. Type: DescribeSnapshotsSetItemResponseType (p. 360) Ancestor: snapshotSet Children: snapshotId, volumeId, status, startTime, progress, ownerId, and description
snapshotId	The ID of the snapshot. Type: xsd:string Ancestor: item Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: item Children: None
status	Snapshot state (e.g., Type: xsd:string Ancestor: item Children: None
startTime	Time stamp when the snapshot was initiated. Type: xsd:dateTime Ancestor: item Children: None
progress	The progress of the snapshot, in percentage. Type: xsd:string Ancestor: item Children: None

Name	Description
ownerId	AWS Access Key ID of the user who owns the snapshot. Type: xsd:string Ancestor: item Children: None
description	Description of the snapshot. Type: xsd:string Ancestor: item Children: None

Examples

Example Request

This example describes snapshot snap-78a54011.

```
<DescribeSnapshots xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotSet>
    <item>
      <snapshotId>snap-78a54011</snapshotId>
    </item>
  </snapshotSet>
</DescribeSnapshots>
```

Example Response

```
<DescribeSnapshotsResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotSet>
    <item>
      <snapshotId>snap-78a54011</snapshotId>
      <volumeId>vol-4d826724</volumeId>
      <status>pending</status>
      <startTime>2008-05-07T12:51:50.000Z</startTime>
      <progress>80%</progress>
      <ownerId>218213537122</ownerId>
      <volumeSize>10</volumeSize>
      <description>Daily Backup</description>
    </item>
  </snapshotSet>
</DescribeSnapshotsResponse>
```

Related Operations

- [CreateSnapshot](#) (p. 176)
- [DeleteSnapshot](#) (p. 186)

DescribeVolumes

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](#).

Request Parameters

Name	Description	Required
DescribeVolumesType	DescribeVolumesType element. Type: DescribeVolumesType (p. 366) Ancestor: None Children: volumeSet	
volumeSet	Set of volumes. Type: DescribeVolumesSetType (p. 365) Ancestor: DescribeVolumesType Children: item	
item	Information for a volume. Type: DescribeVolumesSetItemType (p. 364) Ancestor: volumeSet Children: volumeId	
volumeId	The ID of the volume to list. Type: xsd:string Default: Describes all volumes that you own. Ancestor: item Children: None	No

Response Elements

Name	Description
DescribeVolumesResponseType	DescribeVolumesResponseType element. Type: DescribeVolumesResponseType (p. 363) Ancestor: None Children: requestId, volumeSet
requestId	The ID of the request. Type: xsd:string Ancestor: DescribeVolumesResponseType Children: None

Name	Description
volumeSet	Volume set. Type: DescribeVolumesSetResponseType (p. 365) Ancestor: DescribeVolumesResponseType Children: item
item	Information for a volume. Type: DescribeVolumesSetItemResponseType (p. 363) Ancestor: volumeSet Children: volumeId, size, snapshotId, availabilityZone, status, createTime, and attachmentSet
volumeId	The ID of the volume. Type: xsd:string Ancestor: item Children: None
size	The size of the volume, in GiBs. Type: xsd:string Ancestor: item Children: None
snapshotId	Snapshot from which the volume was created (optional). Type: xsd:string Ancestor: item Children: None
availabilityZone	Availability Zone in which the volume was created. Type: xsd:string Ancestor: item Children: None
status	Volume state (e.g., Type: xsd:string Ancestor: item Children: None
createTime	Time stamp when volume creation was initiated. Type: xsd:dateTime Ancestor: item Children: None
attachmentSet	Attachment set. Type: AttachmentSetResponseType (p. 304) Ancestor: item Children: item
item	Information for a attachment set. Type: AttachmentSetItemResponseType (p. 303) Ancestor: attachmentSet Children: volumeId, instanceId, device, status, and attachTime

Name	Description
volumeId	The ID of the volume. Type: xsd:string Ancestor: item Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: item Children: None
device	Specifies how the device is exposed to the instance (e.g., /dev/sdh). Type: xsd:string Ancestor: item Children: None
status	Attachment state. Type: xsd:string Valid Values: attaching attached detaching detached Ancestor: item Children: None
attachTime	Time stamp when the association was created. Type: xsd:dateTime Ancestor: item Children: None

Examples

Example Request

This example describes all volumes associated with your account.

```
<DescribeVolumes xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  DescribeVolumes>
```

Example Response

```
<DescribeVolumesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeSet>
    <item>
      <volumeId>vol-4282672b</volumeId>
      <size>800</size>
      <snapshotId/>
      <availabilityZone>us-east-1a</availabilityZone>
      <status>in-use</status>
      <createTime>2008-05-07T11:51:50.000Z</createTime>
      <attachmentSet>
        <item>
          <volumeId>vol-4282672b</volumeId>
          <instanceId>i-6058a509</instanceId>
```

```
<device>/dev/sdh</device>
<status>attached</status>
<attachTime>2008-05-07T12:51:50.000Z</attachTime>
</item>
</attachmentSet>
</item>
</DescribeVolumesResponse>
```

Related Operations

- [CreateSnapshot](#) (p. 176)
- [DeleteSnapshot](#) (p. 186)

DetachVolume

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.

Request Parameters

Name	Description	Required
DetachVolumeType	DetachVolumeType element. Type: DetachVolumeType (p. 367) Ancestor: None Children: volumeId, instanceId, device, and force	
volumeId	The ID of the volume. Type: xsd:string Default: None Ancestor: DetachVolumeType Children: None	Yes
instanceId	The ID of the instance. Type: xsd:string Default: None Ancestor: DetachVolumeType Children: None	No
device	The device name. Type: xsd:string Default: None Ancestor: DetachVolumeType Children: None	No

Name	Description	Required
force	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: xsd:boolean Default: None Ancestor: DetachVolumeType Children: None	No

Response Elements

Name	Description
DetachVolumeResponseType	DetachVolumeResponseType element. Type: DetachVolumeResponseType (p. 366) Ancestor: None Children: requestId, volumeId, instanceId, device, status, and attachTime
requestId	The ID of the request. Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
volumeId	The ID of the volume. Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
device	The device as it is exposed to the instance. Type: xsd:string Ancestor: DetachVolumeResponseType Children: None
status	Attachment state (e.g., Type: xsd:string Ancestor: DetachVolumeResponseType Children: None

Name	Description
attachTime	Time stamp when the association was created. Type: xsd:dateTime Ancestor: DetachVolumeResponseType Children: None

Examples

Example Request

This example detaches volume vol-4d826724.

```
<DetachVolume xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <instanceId>i-6058a509</instanceId>
</DetachVolume>
```

Example Response

```
<DetachVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <volumeId>vol-4d826724</volumeId>
  <instanceId>i-6058a509</instanceId>
  <device>/dev/sdh</device>
  <status>detaching</status>
  <attachTime>2008-05-08T11:51:50.000Z</attachTime>
</DetachVolumeResponse>
```

Related Operations

- [CreateVolume](#) (p. 179)
- [DeleteVolume](#) (p. 188)
- [DescribeVolumes](#) (p. 242)
- [AttachVolume](#) (p. 152)

DisassociateAddress

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.

Request Parameters

Name	Description	Required
DisassociateAddressType	DisassociateAddressType element. Type: DisassociateAddressType (p. 368) Ancestor: None Children: publicIp	
publicIp	IP address that you are disassociating from the instance. Type: xsd:string Default: None Ancestor: DisassociateAddressType Children: None	Yes

Response Elements

Name	Description
DisassociateAddressResponse	DisassociateAddressResponseType element. Type: DisassociateAddressResponseType (p. 368) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: DisassociateAddressResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: DisassociateAddressResponseType Children: None

Examples

Example Request

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

```
<DisassociateAddress xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <publicIp>67.202.55.255</publicIp>
```

```
</DisassociateAddress>
```

Example Response

```
<DisassociateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</DisassociateAddressResponse>
```

Related Operations

- [AllocateAddress](#) (p. 148)
- [DescribeAddresses](#) (p. 192)
- [ReleaseAddress](#) (p. 270)
- [AssociateAddress](#) (p. 150)

GetConsoleOutput

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.

Request Parameters

Name	Description	Required
GetConsoleOutputType	GetConsoleOutputType element. Type: GetConsoleOutputType (p. 370) Ancestor: None Children: instanceId	
instanceId	ID of the instance for which you want console output. Type: xsd:string Default: None Ancestor: GetConsoleOutputType Children: None	Yes

Response Elements

Name	Description
GetConsoleOutputResponseType	GetConsoleOutputResponseType element. Type: GetConsoleOutputResponseType (p. 369) Ancestor: None Children: requestId, instanceId, timestamp, and output
requestId	The ID of the request. Type: xsd:string Ancestor: GetConsoleOutputResponseType Children: None
instanceId	The instance ID. Type: xsd:string Ancestor: GetConsoleOutputResponseType Children: None
timestamp	The time the output was last updated. Type: xsd:dateTime Ancestor: GetConsoleOutputResponseType Children: None

Name	Description
output	The console output, Base64 encoded. Type: xsd:string Ancestor: GetConsoleOutputResponseType Children: None

Examples

Example Request

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

```
<GetConsoleOutput xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instanceId>i-28a64341</instanceId>
</GetConsoleOutput>
```

Example Response

```
<GetConsoleOutputResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instanceId>i-28a64341</instanceId>
  <timestamp>2007-01-03 15:00:00</timestamp>

  <output>TG1udXggdmVyc2lvdiaYlJyMTYteGVuVSaOYnVpbGRlckBwYXRjaGJhdC5hbWwF6b25zYSkgKGdj
YyB2ZXJzaw9uIDQuMC4xIDIwMDUwNzI3IChSZWQgSGF0IDQuMC4xLUtpKSAjMSBTTVAgVGH1IE9j
dCAyNiAwODo0MT0yNiBTQVNUIDwMDYKQk1PUy1wcm92aWRlZCBwaHlzaWwNhbCBSQU0gbWwFwGpY
ZW46IDAwdAwMDAwMDAwMDAwMDAgLSAwMDAwMDAwMDZhdAwMDAwICh1c2FibGUpCjJk4ME1CIEhJ
R0hNRU0gYXZhaWxhYmxlLGo3MjdNQiBMT1dNRU0gYXZhaWxhYmxlLGP0WCAoRXhlY3V0ZSBEdXNh
YmxlKSBCwcm90ZWNoaw9uOiBhY3RpdmdUKSVJRIGxvY2t1cCBkZXRLY3Rpb24qZG1zYWJsZWQKQnVp
bHQgMSB6b25lbG1zdHMKS2VybmVsIGNvbWw1bhmQgbGluZTogcm9vdD0vZGV2L3NkYTEGcm8gNAPF
bmFibGluZyBmYXN0IEZQVSBzYXZlIGFuZCBYXN0b3JlLi4uIGRvbmUuCG==</output>
</GetConsoleOutputResponse>
```

Related Operations

- [RunInstances](#) (p. 280)

GetPasswordData

Description

Retrieves the encrypted administrator password for the instances running Windows.



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.

Request Parameters

Name	Description	Required
GetPasswordDataType	GetPasswordDataType element. Type: GetPasswordDataType (p. 371) Ancestor: None Children: instanceId	
instanceId	The ID of the instance for which to get the password. Type: xsd:string Default: None Ancestor: GetPasswordDataType Children: None	Yes

Response Elements

Name	Description
GetPasswordDataResponseType	GetPasswordDataResponseType element. Type: GetPasswordDataResponseType (p. 370) Ancestor: None Children: requestId, instanceId, timestamp, and passwordData
requestId	The ID of the request. Type: xsd:string Ancestor: GetPasswordDataResponseType Children: None
instanceId	The ID of the instance. Type: xsd:string Ancestor: GetPasswordDataResponseType Children: None

Name	Description
timestamp	The time the data was last updated. Type: xsd:dateTime Ancestor: GetPasswordDataResponseType Children: None
passwordData	The password of the instance. Type: xsd:string Ancestor: GetPasswordDataResponseType Children: None

Examples

Example Request

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

```
<GetPasswordData xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instanceId>i-2574e22a</instanceId>
</GetPasswordData>
```

Example Response

```
<GetPasswordDataResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instanceId>i-2574e22a</instanceId>
  <timestamp>2009-10-24 15:00:00</timestamp>

  <passwordData>TGludXggdmVyc2lubiAyLjYuMTYteGVuVSAoYnVpbGRlckBwYXRjaGJhdC5hbWFF6b25zYSkgKGdj
passwordData</GetPasswordDataResponse>
```

Related Operations

- [RunInstances](#) (p. 280)

ModifyImageAttribute

Description

Modifies an attribute of an AMI.

Request Parameters

Name	Description	Required
ModifyImageAttributeType	ModifyImageAttributeType element. Type: ModifyImageAttributeType (p. 378) Ancestor: None Children: imageId, launchPermission, and productCodes	
imageId	The AMI ID. Type: xsd:string Default: None Ancestor: ModifyImageAttributeType Children: None	Yes
launchPermission	Launch permission set. Type: LaunchPermissionOperationType (p. 377) Ancestor: ModifyImageAttributeType Children: add, remove	
add	Adds permission. Type: LaunchPermissionListType (p. 377) Ancestor: launchPermission Children: item	
item	Information for launch permissions. Type: LaunchPermissionItemType (p. 376) Ancestor: add Children: userId, group	
userId	AWS Access Key ID. Type: xsd:string Default: None Ancestor: item Children: None	Yes
group	Name of the group. Currently supports "all." Type: xsd:string Default: None Ancestor: item Children: None	Yes

Name	Description	Required
remove	Remove permission. Type: LaunchPermissionListType (p. 377) Ancestor: launchPermission Children: item	
item	Information for launch permissions. Type: LaunchPermissionItemType (p. 376) Ancestor: remove Children: userId, group	
userId	AWS Access Key ID. Type: xsd:string Default: None Ancestor: item Children: None	Yes
group	Name of the group. Currently supports "all." Type: xsd:string Default: None Ancestor: item Children: None	Yes
productCodes	Product code set. Type: ProductCodeListType (p. 385) Ancestor: ModifyImageAttributeType Children: item	
item	Information for one product code. Type: ProductCodeItemType (p. 385) Ancestor: productCodes Children: productCode	
productCode	Product code. Type: xsd:string Default: None Ancestor: item Children: None	No

Response Elements

Name	Description
ModifyImageAttributeResponse	ModifyImageAttributeResponseType element. Type: ModifyImageAttributeResponseType (p. 378) Ancestor: None Children: requestId, return

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: ModifyImageAttributeResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: ModifyImageAttributeResponseType Children: None

Examples

Example Request

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

```
<ModifyImageAttribute xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-61a54008</imageId>
  <launchPermission>
    <add>
      <item>
        <group>all</group>
      </item>
      <item>
        <userId>495219933132</userId>
      </item>
    </add>
  </launchPermission>
</ModifyImageAttribute>
```

Example Response

```
<ModifyImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</ModifyImageAttributeResponse>
```

Example Request

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

```
<ModifyImageAttribute xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-61a54008</imageId>
  <productCodes>
    <item>
      <productCode>774F4FF8</productCode>
    </item>
  </productCodes>
</ModifyImageAttribute>
```

Example Response

```
<ModifyImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
```

```
<return>true</return>  
</ModifyImageAttributeResponse>
```

Related Operations

- [ResetImageAttribute](#) (p. 272)
- [DescribeImageAttribute](#) (p. 202)

ModifySnapshotAttribute

Description

Adds or remove permission settings for the specified snapshot.

Request Parameters

Name	Description	Required
ModifySnapshotAttribute	ModifySnapshotAttributeType element. Type: ModifySnapshotAttributeType (p. 379) Ancestor: None Children: snapshotId, createVolumePermission	
snapshotId	The ID of the snapshot. Type: xsd:string Default: None Ancestor: ModifySnapshotAttributeType Children: None	Yes
createVolumePermission	Create volume permission element. Type: ??? Ancestor: ModifySnapshotAttributeType Children:	CreateVolumePermissionOperation

Response Elements

Name	Description
ModifySnapshotAttributeResponse	ModifySnapshotAttributeResponseType element. Type: ModifySnapshotAttributeResponseType (p. 379) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: ModifySnapshotAttributeResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: ModifySnapshotAttributeResponseType Children: None

Examples

Example Request

This example makes the snap-78a54011 snapshot public.

```
<ModifySnapshotAttribute xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotId>snap-78a54011</snapshotId>
  <createVolumePermission>
    <add>
      <item>
        <group>all</group>
      </item>
    </add>
  </createVolumePermission>
</ModifySnapshotAttribute>
```

Example Response

```
<ModifySnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</ModifySnapshotAttributeResponse>
```

Related Operations

- [DescribeSnapshotAttribute](#) (p. 235)
- [DescribeSnapshots](#) (p. 238)
- [ResetSnapshotAttribute](#) (p. 274)
- [CreateSnapshot](#) (p. 176)

MonitorInstances

Description

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

Request Parameters

Name	Description	Required
MonitorInstancesType	MonitorInstancesType element. Type: MonitorInstancesType (p. 383) Ancestor: None Children: instancesSet	
instancesSet	Set of instances. Type: MonitorInstancesSetType (p. 382) Ancestor: MonitorInstancesType Children: item	
item	Instance set. Type: MonitorInstancesSetItemType (p. 382) Ancestor: instancesSet Children: instanceId	
instanceId	Instance ID. Type: xsd:string Default: None Ancestor: item Children: None	Yes

Response Elements

Name	Description
MonitorInstancesResponseType	MonitorInstancesResponseType element. Type: MonitorInstancesResponseType (p. 381) Ancestor: None Children: requestId, instancesSet
requestId	The ID of the request. Type: xsd:string Ancestor: MonitorInstancesResponseType Children: None
instancesSet	Monitor instance response set. Type: MonitorInstancesResponseSetType (p. 381) Ancestor: MonitorInstancesResponseType Children: item

Name	Description
item	Instance Item. Type: MonitorInstancesResponseSetItemType (p. 380) Ancestor: instancesSet Children: instanceId, monitoring
instanceId	Instance ID. Type: xsd:string Ancestor: item Children: None
monitoring	Monitoring information. Type: InstanceMonitoringStateType (p. 372) Ancestor: item Children: state
state	State of monitoring for the instance. Type: xsd:string Valid Values: monitoring-enabled (enabled) monitoring-pending (pending) monitoring-disabled (disabled) Ancestor: monitoring Children: None

Examples

Example Request

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

```
<MonitorInstances xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet>
    <instanceId>i-43a4412a</instanceId>
    <instanceId>i-23a3397d</instanceId>
  </instancesSet>
</MonitorInstances>
```

Example Response

```
<MonitorInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet>
    <item>
      <instanceId>i-43a4412a</instanceId>
      <monitoring>
        <state>pending</state>
      </monitoring>
    </item>
    <item>
      <instanceId>i-23a3397d</instanceId>
      <monitoring>
        <state>pending</state>
      </monitoring>
    </item>
  </instancesSet>
</MonitorInstancesResponse>
```

```
</instancesSet>  
</MonitorInstancesResponse>
```

Related Operations

- [UnmonitorInstances](#) (p. 294)
- [RunInstances](#) (p. 280)

PurchaseReservedInstancesOffering

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](#).

Request Parameters

Name	Description	Required
PurchaseReservedInstancesOfferingType	The type of Reserved Instance to purchase. Type: PurchaseReservedInstancesOfferingType (p. 387) Ancestor: None Children: reservedInstancesOfferingId, instanceCount	
reservedInstancesOfferingId	The offering ID of the Reserved Instance to purchase. Type: xsd:string Default: None Ancestor: PurchaseReservedInstancesOfferingType Children: None	Yes
instanceCount	The number of Reserved Instances to purchase. Type: xsd:int Default: 1 Ancestor: PurchaseReservedInstancesOfferingType Children: None	No

Response Elements

Name	Description
PurchaseReservedInstancesOfferingResponse	The response from the PurchaseReservedInstancesOffering operation. Type: PurchaseReservedInstancesOfferingResponseType (p. 387) Ancestor: None Children: requestId, reservedInstancesId
requestId	The ID of the request. Type: xsd:string Ancestor: PurchaseReservedInstancesOfferingResponseType Children: None

Name	Description
reservedInstancesId	The IDs of the purchased Reserved Instances. Type: xsd:string Ancestor: PurchaseReservedInstancesOfferingResponseType Children: None

Examples

Example Request

This example purchases Reserved Instances.

```
<PurchaseReservedInstancesOffering xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservedInstancesOfferingId>4b2293b4-5813-4cc8-9ce3-1957fc1dcfc8</reservedInstancesOfferingId>
  <instanceCount>19</instanceCount>
</PurchaseReservedInstancesOffering>
```

Example Response

```
<PurchaseReservedInstancesOfferingResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservedInstancesId>reservation-1001001</reservedInstancesId>
</PurchaseReservedInstancesOfferingResponse>
```

Related Operations

- [DescribeReservedInstancesOfferings](#) (p. 227)
- [DescribeReservedInstances](#) (p. 223)

RebootInstances

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.

Request Parameters

Name	Description	Required
RebootInstancesType	RebootInstancesType element. Type: RebootInstancesType (p. 389) Ancestor: None Children: instancesSet	
instancesSet	Launch permission set. Type: RebootInstancesInfoType (p. 388) Ancestor: RebootInstancesType Children: item	
item	Information for an instance. Type: RebootInstancesItemType (p. 388) Ancestor: instancesSet Children: instanceId	
instanceId	One or more instance IDs. Type: xsd:string Default: None Ancestor: item Children: None	Yes

Response Elements

Name	Description
RebootInstancesResponseType	RebootInstancesResponseType element. Type: RebootInstancesResponseType (p. 389) Ancestor: None Children: requestId, return

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: RebootInstancesResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: RebootInstancesResponseType Children: None

Examples

Example Request

This example reboots an instance.

```
<RebootInstances xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet>
    <item>
      <instanceId>i-28a64341</instanceId>
    </item>
  </instancesSet>
</RebootInstances>
```

Example Response

```
<RebootInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</RebootInstancesResponse>
```

Related Operations

- [RunInstances](#) (p. 280)

RegisterImage

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.

Request Parameters

Name	Description	Required
RegisterImageType	RegisterImageType element. Type: RegisterImageType (p. 391) Ancestor: None Children: imageLocation	
imageLocation	Full path to your AMI manifest in Amazon S3 storage. Type: xsd:string Default: None Ancestor: RegisterImageType Children: None	Yes

Response Elements

Name	Description
RegisterImageResponseType	RegisterImageResponseType element. Type: RegisterImageResponseType (p. 391) Ancestor: None Children: requestId, imageId
requestId	The ID of the request. Type: xsd:string Ancestor: RegisterImageResponseType Children: None
imageId	Unique ID of the newly registered machine image. Type: xsd:string Ancestor: RegisterImageResponseType Children: None

Examples

Example Request

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

```
<RegisterImage xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageLocation>/mybucket/myimage.manifest.xml</imageLocation>
</RegisterImage>
```

Example Response

```
<RegisterImageResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-61a54008</imageId>
</RegisterImageResponse>
```

Related Operations

- [DescribeImages](#) (p. 207)
- [DeregisterImage](#) (p. 190)

ReleaseAddress

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.

Request Parameters

Name	Description	Required
ReleaseAddressType	ReleaseAddressType element. Type: ReleaseAddressType (p. 392) Ancestor: None Children: publicIp	
publicIp	The IP address that you are releasing from your account. Type: xsd:string Default: None Ancestor: ReleaseAddressType Children: None	Yes

Response Elements

Name	Description
ReleaseAddressResponseType	ReleaseAddressResponseType element. Type: ReleaseAddressResponseType (p. 391) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: ReleaseAddressResponseType Children: None

Name	Description
return	Returns Type: xsd:boolean Ancestor: ReleaseAddressResponseType Children: None

Examples

Example Request

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

```
<ReleaseAddress xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <publicIp>67.202.55.255</publicIp>
</ReleaseAddress>
```

Example Response

```
<ReleaseAddressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</ReleaseAddressResponse>
```

Related Operations

- [AllocateAddress](#) (p. 148)
- [DescribeAddresses](#) (p. 192)
- [AssociateAddress](#) (p. 150)
- [DisassociateAddress](#) (p. 249)

ResetImageAttribute

Description

Resets an attribute of an AMI to its default value.



Note

The productCodes attribute cannot be reset.

Request Parameters

Name	Description	Required
ResetImageAttributeType	ResetImageAttributeType element. Type: ResetImageAttributeType (p. 394) Ancestor: None Children: imageId, ResetImageAttributesGroup	
imageId	ID of the AMI on which the attribute will be reset. Type: xsd:string Default: None Ancestor: ResetImageAttributeType Children: None	Yes
ResetImageAttributesGroup	The reset image attribute group. Type: ResetImageAttributesGroup (p. 394) Ancestor: ResetImageAttributeType Children: launchPermission	
launchPermission	Resets the launch permission attribute. Type: EmptyElementType (p. 369) Ancestor: ResetImageAttributesGroup Children: none	
none	These element contains no options. Type: xsd:string Default: None Ancestor: launchPermission Children: None	No

Response Elements

Name	Description
ResetImageAttributeResponseType	ResetImageAttributeResponseType element. Type: ResetImageAttributeResponseType (p. 393) Ancestor: None Children: requestId, return

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: ResetImageAttributeResponseType Children: None
return	Indicates whether the attribute successfully reset. Type: xsd:boolean Ancestor: ResetImageAttributeResponseType Children: None

Examples

Example Request

This example resets the launchPermission attribute.

```
<ResetImageAttribute xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-6ba54002</imageId>
  <launchPermission/>
</ResetImageAttribute>
```

Example Response

```
<ResetImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</ResetImageAttributeResponse>
```

Related Operations

- [ModifyImageAttribute](#) (p. 255)
- [DescribeImageAttribute](#) (p. 202)

ResetSnapshotAttribute

Description

Resets permission settings for the specified snapshot.

Request Parameters

Name	Description	Required
ResetSnapshotAttributeType	ResetSnapshotAttributeType element. Type: ResetSnapshotAttributeType (p. 396) Ancestor: None Children: snapshotId, ResetSnapshotAttributesGroup	
snapshotId	The ID of the snapshot. Type: xsd:string Default: None Ancestor: ResetSnapshotAttributeType Children: None	No
ResetSnapshotAttributesGroup	Snapshot group. Type: ResetSnapshotAttributesGroup (p. 395) Ancestor: ResetSnapshotAttributeType Children: createVolumePermission	
createVolumePermission	Create volume permission type. Type: EmptyElementType (p. 369) Ancestor: ResetSnapshotAttributesGroup Children: none	
none	These element contains no options. Type: xsd:string Default: None Ancestor: createVolumePermission Children: None	No

Response Elements

Name	Description
ResetSnapshotAttributeResponseType	ResetSnapshotAttributeResponseType element. Type: ResetSnapshotAttributeResponseType (p. 395) Ancestor: None Children: requestId, return

Name	Description
requestId	The ID of the request. Type: xsd:string Ancestor: ResetSnapshotAttributeResponseType Children: None
return	Specifies whether the snapshot permissions were reset. Type: xsd:boolean Ancestor: ResetSnapshotAttributeResponseType Children: None

Examples

Example Request

This example resets the permissions for snap-78a54011, making it a private snapshot that can only be used by the account that created it.

```
<ResetSnapshotAttribute xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <snapshotId>snap-78a54011</snapshotId>
  <createVolumePermission\>
</ResetSnapshotAttribute>
```

Example Response

```
<ResetSnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</ResetSnapshotAttributeResponse>
```

Related Operations

- [ModifySnapshotAttribute](#) (p. 259)
- [DescribeSnapshotAttribute](#) (p. 235)
- [DescribeSnapshots](#) (p. 238)
- [CreateSnapshot](#) (p. 176)

RevokeSecurityGroupIngress

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.

Request Parameters

Name	Description	Required
RevokeSecurityGroupIngress	RevokeSecurityGroupIngressType element. Type: RevokeSecurityGroupIngressType (p. 397) Ancestor: None Children: <code>userId</code> , <code>groupName</code> , and <code>ipPermissions</code>	
<code>userId</code>	AWS Access Key ID. Type: <code>xsd:string</code> Default: None Ancestor: <code>RevokeSecurityGroupIngressType</code> Children: None	Yes
<code>groupName</code>	Name of the group to modify. Type: <code>xsd:string</code> Default: None Ancestor: <code>RevokeSecurityGroupIngressType</code> Children: None	Yes
<code>ipPermissions</code>	Set of permissions to add to the group. Type: IpPermissionSetType (p. 374) Ancestor: <code>RevokeSecurityGroupIngressType</code> Children: <code>item</code>	Yes
<code>item</code>	Set of IP permissions. Type: IpPermissionType (p. 375) Ancestor: <code>ipPermissions</code> Children: <code>ipProtocol</code> , <code>fromPort</code> , <code>toPort</code> , <code>groups</code> , and <code>ipRanges</code>	Yes
<code>ipProtocol</code>	IP protocol. Type: <code>xsd:string</code> Valid Values: <code>tcp</code> <code>udp</code> <code>icmp</code> Default: None Ancestor: <code>item</code> Children: None	Yes

Name	Description	Required
fromPort	Start of port range for the TCP and UDP protocols, or an ICMP type number. An ICMP type number of -1 indicates a wildcard (i.e., any ICMP type number). Type: <code>xsd:int</code> Default: None Ancestor: <code>item</code> Children: None	Yes
toPort	End of port range for the TCP and UDP protocols, or an ICMP code. An ICMP code of -1 indicates a wildcard (i.e., any ICMP code). Type: <code>xsd:int</code> Default: None Ancestor: <code>item</code> Children: None	Yes
groups	List of security group and user ID pairs. Type: UserIdGroupPairSetType (p. 406) Ancestor: <code>item</code> Children: <code>item</code>	Yes
item	Information for one security group. Type: UserIdGroupPairType (p. 406) Ancestor: <code>groups</code> Children: <code>userId</code> , <code>groupName</code>	Yes
userId	AWS User ID of an account. Cannot be used when specifying a CIDR IP address. Type: <code>xsd:string</code> Default: None Ancestor: <code>item</code> Children: None	Yes
groupName	Name of the security group. Cannot be used when specifying a CIDR IP address. Type: <code>xsd:string</code> Default: None Ancestor: <code>item</code> Children: None	Yes
ipRanges	IP ranges. Type: IpRangeSetType (p. 376) Ancestor: <code>item</code> Children: <code>item</code>	Yes
item	Information for one IP range. Type: IpRangeItemType (p. 375) Ancestor: <code>ipRanges</code> Children: <code>cidrIp</code>	Yes

Name	Description	Required
cidrIp	CIDR range. Type: xsd:string Default: None Constraints: Valid CIDR IP address range. Ancestor: item Children: None	Yes

Response Elements

Name	Description
RevokeSecurityGroupIngressResponse	RevokeSecurityGroupIngressResponseType element. Type: RevokeSecurityGroupIngressResponseType (p. 396) Ancestor: None Children: requestId, return
requestId	The ID of the request. Type: xsd:string Ancestor: RevokeSecurityGroupIngressResponseType Children: None
return	Returns Type: xsd:boolean Ancestor: RevokeSecurityGroupIngressResponseType Children: None

Examples

Example Request

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

```
<RevokeSecurityGroupIngress xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <userId/>
  <groupName>webserv</groupName>
  <ipPermissions>
    <item>
      <ipProtocol>tcp</ipProtocol>
      <fromPort>80</fromPort>
      <toPort>80</toPort>
    </item>
  </ipPermissions>
</RevokeSecurityGroupIngress>
```

Example Response

```
<RevokeSecurityGroupIngressResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <return>true</return>
</RevokeSecurityGroupIngressResponse>
```

Related Operations

- [CreateSecurityGroup](#) (p. 174)
- [DescribeSecurityGroups](#) (p. 231)
- [AuthorizeSecurityGroupIngress](#) (p. 155)
- [DeleteSecurityGroup](#) (p. 184)

RunInstances

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 High-CPU and High-Memory 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](#).

Request Parameters

Name	Description	Required
RunInstancesType	RunInstancesType element. Type: RunInstancesType (p. 398) Ancestor: None Children: imageId, minCount, maxCount, keyName, groupSet, additionalInfo, userData, addressingType, instanceType, placement, kernelId, ramdiskId, blockDeviceMapping, monitoring, and subnetId	
imageId	Unique ID of a machine image, returned by a call to Type: xsd:string Default: None Ancestor: RunInstancesType Children: None	Yes
minCount	Minimum number of instances to launch. If the value is more than Amazon EC2 can launch, no instances are launched at all. Type: xsd:int Default: None Constraints: Between 1 and the maximum number allowed for your account (default: 20). Ancestor: RunInstancesType Children: None	Yes
maxCount	Maximum number of instances to launch. If the value is more than Amazon EC2 can launch, the largest possible number above minCount will be launched instead. Type: xsd:int Default: None Constraints: Between 1 and the maximum number allowed for your account (default: 20). Ancestor: RunInstancesType Children: None	Yes

Name	Description	Required
keyName	The name of the key pair. Type: xsd:string Default: None Ancestor: RunInstancesType Children: None	No
groupSet	Group set. Type: GroupSetType (p. 372) Ancestor: RunInstancesType Children: item	
item	Group set item. Type: GroupItemType (p. 371) Ancestor: groupSet Children: groupId	
groupId	Name of the security group. Type: xsd:string Default: None Ancestor: item Children: None	No
additionalInfo	Specifies additional information to make available to the instance(s). Type: xsd:string Default: None Ancestor: RunInstancesType Children: None	No
userData	MIME, Base64-encoded user data. Type: UserDataTypes (p. 405) Ancestor: RunInstancesType Children: data	
data	MIME, Base64-encoded user data. Type: xsd:string Default: None Ancestor: userData Children: None	No
addressingType	Deprecated. Type: xsd:string Default: None Ancestor: RunInstancesType Children: None	No

Name	Description	Required
instanceType	Specifies the instance type. Type: xsd:string Valid Values: m1.small m1.large m1.xlarge c1.medium c1.xlarge m2.2xlarge m2.4xlarge Default: m1.small Ancestor: RunInstancesType Children: None	No
placement	Placement item. Type: PlacementRequestType (p. 384) Ancestor: RunInstancesType Children: availabilityZone	No
availabilityZone	Specifies the placement constraints (Availability Zones) for launching the instances. Type: xsd:string Default: Amazon EC2 selects an Availability Zone. Ancestor: placement Children: None	No
kernelId	The ID of the kernel with which to launch the instance. Type: xsd:string Default: None Ancestor: RunInstancesType Children: None	No
ramdiskId	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. Type: xsd:string Default: None Ancestor: RunInstancesType Children: None	No
blockDeviceMapping	Specifies how block devices are exposed to the instance. Each mapping is made up of a virtualName and a deviceName. Type: BlockDeviceMappingType (p. 310) Ancestor: RunInstancesType Children: item	No
item	Information for one block device mapping. Type: BlockDeviceMappingItemType (p. 309) Ancestor: blockDeviceMapping Children: virtualName, deviceName	

Name	Description	Required
virtualName	The virtual name. Type: xsd:string Default: None Ancestor: item Children: None	No
deviceName	The device name (e.g., /dev/sdh). Type: xsd:string Default: None Ancestor: item Children: None	No
monitoring	Specifies whether to enable monitoring for the instance. Type: MonitoringInstanceType (p. 380) Ancestor: RunInstancesType Children: enabled	No
enabled	Enables monitoring for the instance. Type: xsd:boolean Default: Disabled Ancestor: monitoring Children: None	No
subnetId	Specifies the subnet ID within which to launch the instance(s) for Amazon Virtual Private Cloud. Type: xsd:string Default: None Ancestor: RunInstancesType Children: None	No

Response Elements

Name	Description
RunInstancesResponseType	RunInstancesResponseType element. Type: RunInstancesResponseType (p. 397) Ancestor: None Children: requestId, reservationId, ownerId, groupSet, instancesSet, and requesterId
requestId	The ID of the request. Type: xsd:string Ancestor: RunInstancesResponseType Children: None
reservationId	Unique ID of the reservation. Type: xsd:string Ancestor: RunInstancesResponseType Children: None

Name	Description
ownerId	AWS Access Key ID of the user who owns the reservation. Type: xsd:string Ancestor: RunInstancesResponseType Children: None
groupSet	Group set. Type: GroupSetType (p. 372) Ancestor: RunInstancesResponseType Children: item
item	Group set item. Type: GroupItem (p. 371) Ancestor: groupSet Children: groupId
groupId	Name of the security group. Type: xsd:string Ancestor: item Children: None
instancesSet	Instance set. Type: RunningInstancesSetType (p. 401) Ancestor: RunInstancesResponseType Children: item
item	Running instance set item. Type: RunningInstancesItemType (p. 399) Ancestor: instancesSet Children: instanceId, imageId, instanceState, privateDnsName, dnsName, reason, keyName, amiLaunchIndex, productCodes, instanceType, launchTime, placement, kernelId, ramdiskId, platform, monitoring, subnetId, vpcId, privateIpAddress, and ipAddress
instanceId	Unique ID of the instance launched. Type: xsd:string Ancestor: item Children: None
imageId	Image ID of the AMI used to launch the instance. Type: xsd:string Ancestor: item Children: None
instanceState	The current state of the instance. Type: InstanceStateType (p. 373) Ancestor: item Children: code, name

Name	Description
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: Type: xsd:int Ancestor: instanceState Children: None
name	The current state of the instance. Type: xsd:string Ancestor: instanceState Children: None
privateDnsName	The private DNS name assigned to the instance. This DNS name can only be used inside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string Ancestor: item Children: None
dnsName	The public DNS name assigned to the instance. This DNS name is contactable from outside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string Ancestor: item Children: None
reason	Reason for the most recent state transition. This might be an empty string. Type: xsd:string Ancestor: item Children: None
keyName	If this instance was launched with an associated key pair, this displays the key pair name. Type: xsd:string Ancestor: item Children: None
amiLaunchIndex	The AMI launch index, which can be used to find this instance within the launch group. For more information, go to the Metadata section of the Type: xsd:string Ancestor: item Children: None
productCodes	Product codes attached to this instance. Type: ProductCodesSetType (p. 386) Ancestor: item Children: item

Name	Description
item	Information for one product code. Type: ProductCodesSetItemType (p. 386) Ancestor: productCodes Children: productCode
productCode	Product code. Type: xsd:string Ancestor: item Children: None
instanceType	The instance type. Type: xsd:string Ancestor: item Children: None
launchTime	The time the instance launched. Type: xsd:dateTime Ancestor: item Children: None
placement	The location where the instance launched. Type: PlacementResponseType (p. 384) Ancestor: item Children: availabilityZone
availabilityZone	Returns the Availability Zones of the instances. Type: xsd:string Ancestor: placement Children: None
kernelId	Optional. Kernel associated with this instance. Type: xsd:string Ancestor: item Children: None
ramdiskId	Optional. RAM disk associated with this instance. Type: xsd:string Ancestor: item Children: None
platform	Platform of the instance (e.g., Windows). Type: xsd:string Ancestor: item Children: None
monitoring	Specifies whether monitoring is enabled for the instance. Type: InstanceMonitoringStateType (p. 372) Ancestor: item Children: state

Name	Description
state	State of monitoring for the instance. Type: xsd:string Valid Values: monitoring-enabled (enabled) monitoring-pending (pending) monitoring-disabled (disabled) Ancestor: monitoring Children: None
subnetId	Specifies the subnet ID in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string Ancestor: item Children: None
vpcId	Specifies the VPC in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string Ancestor: item Children: None
privateIpAddress	Specifies the private IP address that is assigned to the instance (Amazon VPC). Type: xsd:string Ancestor: item Children: None
ipAddress	Specifies the IP address of the instance. Type: xsd:string Ancestor: item Children: None
requesterId	ID of the requester. Type: xsd:string Ancestor: RunInstancesResponseType Children: None

Examples

Example Request

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

```
<RunInstances xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <imageId>ami-60a54009</imageId>
  <minCount>1</minCount>
  <maxCount>3</maxCount>
  <keyName>example-key-name</keyName>
  <groupSet/>
  <placement>
    <availabilityZone>us-east-1b</availabilityZone>
  </placement>
```

```
<kernelId>aki-ba3adfd3</kernelId>
<ramdiskId>ari-badbad00</ramdiskId>
<blockDeviceMapping>
  <item>
    <virtualName>ami</virtualName>
    <deviceName>sda1</deviceName>
  </item>
  <item>
    <virtualName>root</virtualName>
    <deviceName>/dev/sda1</deviceName>
  </item>
  <item>
    <virtualName>instancestore0</virtualName>
    <deviceName>sdb</deviceName>
  </item>
  <item>
    <virtualName>instance1</virtualName>
    <deviceName>sdc</deviceName>
  </item>
</blockDeviceMapping>
<userData version="1.0"
encoding="base64"><data>"VGhpcyBpcyBiYXNlIDY0IQ==</data></userData>
<addressingType>public</addressingType>
<monitoring>enabled</monitoring></RunInstances>
```

Example Response

```
<RunInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <reservationId>r-47a5402e</reservationId>
  <ownerId>AIDADH4IGTRXXKCD</ownerId>
  <groupSet>
    <item>
      <groupId>default</groupId>
    </item>
  </groupSet>
  <instancesSet>
    <item>
      <instanceId>i-2ba64342</instanceId>
      <imageId>ami-60a54009</imageId>
      <instanceState>
        <code>0</code>
        <name>pending</name>
      </instanceState>
      <privateDnsName></privateDnsName>
      <dnsName></dnsName>
      <keyName>example-key-name</keyName>
      <amiLaunchIndex>0</amiLaunchIndex>
      <instanceType>m1.small</instanceType>
      <launchTime>2007-08-07T11:51:50.000Z</launchTime>
      <placement>
        <availabilityZone>us-east-1b</availabilityZone>
      </placement>
      <monitoring>
        <enabled>true</enabled>
      </monitoring>
    </item>
    <item>
      <instanceId>i-2bc64242</instanceId>
```

```
<imageId>ami-60a54009</imageId>
<instanceState>
  <code>0</code>
  <name>pending</name>
</instanceState>
<privateDnsName></privateDnsName>
<dnsName></dnsName>
<keyName>example-key-name</keyName>
<amiLaunchIndex>1</amiLaunchIndex>
<instanceType>m1.small</instanceType>
<launchTime>2007-08-07T11:51:50.000Z</launchTime>
<placement>
<availabilityZone>us-east-1b</availabilityZone>
</placement>
<monitoring>
  <enabled>true</enabled>
</monitoring>
</item>
<item>
  <instanceId>i-2be64332</instanceId>
  <imageId>ami-60a54009</imageId>
  <instanceState>
    <code>0</code>
    <name>pending</name>
  </instanceState>
  <privateDnsName></privateDnsName>
  <dnsName></dnsName>
  <keyName>example-key-name</keyName>
  <amiLaunchIndex>2</amiLaunchIndex>
  <instanceType>m1.small</instanceType>
  <launchTime>2007-08-07T11:51:50.000Z</launchTime>
  <placement>
  <availabilityZone>us-east-1b</availabilityZone>
  </placement>
  <monitoring>
    <enabled>true</enabled>
  </monitoring>
</item>
</instancesSet>
</RunInstancesResponse>
```

Related Operations

- [DescribeInstances](#) (p. 212)
- [TerminateInstances](#) (p. 291)
- [AuthorizeSecurityGroupIngress](#) (p. 155)
- [RevokeSecurityGroupIngress](#) (p. 276)
- [DescribeSecurityGroups](#) (p. 231)
- [CreateSecurityGroup](#) (p. 174)
- [CreateKeyPair](#) (p. 171)

TerminateInstances

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).

Request Parameters

Name	Description	Required
TerminateInstancesType	TerminateInstancesType element. Type: TerminateInstancesType (p. 405) Ancestor: None Children: instancesSet	
instancesSet	Set of instances. Type: TerminateInstancesInfoType (p. 403) Ancestor: TerminateInstancesType Children: item	Yes
item	Information for a instance. Type: TerminateInstancesItemType (p. 403) Ancestor: instancesSet Children: instanceId	Yes
instanceId	Instance ID to terminate. Type: xsd:string Default: None Ancestor: item Children: None	Yes

Response Elements

Name	Description
TerminateInstancesResponseType	TerminateInstancesResponseType element. Type: TerminateInstancesResponseType (p. 405) Ancestor: None Children: requestId, instancesSet
requestId	The ID of the request. Type: xsd:string Ancestor: TerminateInstancesResponseType Children: None

Name	Description
instancesSet	Instances set. Type: TerminateInstancesResponseInfoType (p. 404) Ancestor: TerminateInstancesResponseType Children: item
item	Response item. Type: TerminateInstancesResponseItemType (p. 404) Ancestor: instancesSet Children: instanceId, shutdownState, and previousState
instanceId	Instance ID. Type: xsd:string Ancestor: item Children: None
shutdownState	Shutdown state. Type: InstanceStateType (p. 373) Ancestor: item Children: code, name
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: Type: xsd:int Ancestor: shutdownState Children: None
name	The current state of the instance. Type: xsd:string Ancestor: shutdownState Children: None
previousState	Previous state. Type: InstanceStateType (p. 373) Ancestor: item Children: code, name
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: Type: xsd:int Ancestor: previousState Children: None
name	The current state of the instance. Type: xsd:string Ancestor: previousState Children: None

Examples

Example Request

This example terminates the i-3ea74257 instance.

```
<TerminateInstances xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet>
    <item>
      <instanceId>i-3ea74257</instanceId>
    </item>
  </instancesSet>
</TerminateInstances>
```

Example Response

```
<TerminateInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet>
    <item>
      <instanceId>i-3ea74257</instanceId>
      <shutdownState>
        <code>32</code>
        <name>shutting-down</name>
      </shutdownState>
      <previousState>
        <code>16</code>
        <name>running</name>
      </previousState>
    </item>
  </instancesSet>
</TerminateInstancesResponse>
```

Related Operations

- [DescribeInstances](#) (p. 212)

UnmonitorInstances

Description

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

Request Parameters

Name	Description	Required
MonitorInstancesType	MonitorInstancesType element. Type: MonitorInstancesType (p. 383) Ancestor: None Children: instancesSet	
instancesSet	Set of instances. Type: MonitorInstancesSetType (p. 382) Ancestor: MonitorInstancesType Children: item	
item	Instance set. Type: MonitorInstancesSetItemType (p. 382) Ancestor: instancesSet Children: instanceId	
instanceId	Instance ID. Type: xsd:string Default: None Ancestor: item Children: None	Yes

Response Elements

Name	Description
MonitorInstancesResponseType	MonitorInstancesResponseType element. Type: MonitorInstancesResponseType (p. 381) Ancestor: None Children: requestId, instancesSet
requestId	The ID of the request. Type: xsd:string Ancestor: MonitorInstancesResponseType Children: None
instancesSet	Monitor instance response set. Type: MonitorInstancesResponseSetType (p. 381) Ancestor: MonitorInstancesResponseType Children: item

Name	Description
item	Instance Item. Type: MonitorInstancesResponseSetItemType (p. 380) Ancestor: instancesSet Children: instanceId, monitoring
instanceId	Instance ID. Type: xsd:string Ancestor: item Children: None
monitoring	Monitoring information. Type: InstanceMonitoringStateType (p. 372) Ancestor: item Children: state
state	State of monitoring for the instance. Type: xsd:string Valid Values: monitoring-enabled (enabled) monitoring-pending (pending) monitoring-disabled (disabled) Ancestor: monitoring Children: None

Examples

Example Request

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

```
<UnmonitorInstances xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet>
    <instanceId> i-43a4412a</instanceId>
    <instanceId>i-23a3397d</instanceId>
  </instancesSet>
</UnmonitorInstances>
```

Example Response

```
<UnmonitorInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2009-08-15/">
  <instancesSet>
    <item>
      <instanceId> i-43a4412a</instanceId>
      <monitoring>
        <state>pending</state>
      </monitoring>
    </item>
    <item>
      <instanceId>i-23a3397d</instanceId>
      <monitoring>
        <state>pending</state>
      </monitoring>
    </item>
  </instancesSet>
</UnmonitorInstancesResponse>
```

```
</instancesSet>  
</UnmonitorInstancesResponse>
```

Related Operations

- [MonitorInstances](#) (p. 261)
- [RunInstances](#) (p. 280)

Data Types

Topics

- [AllocateAddressResponseType](#) (p. 302)
- [AssociateAddressResponseType](#) (p. 302)
- [AssociateAddressType](#) (p. 303)
- [AttachmentSetItemResponseType](#) (p. 303)
- [AttachmentSetResponseType](#) (p. 304)
- [AttachVolumeResponseType](#) (p. 304)
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- [AuthorizeSecurityGroupIngressResponseType](#) (p. 306)
- [AuthorizeSecurityGroupIngressType](#) (p. 306)
- [AvailabilityZoneItemType](#) (p. 307)
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- [BlockDeviceMappingItemType](#) (p. 309)
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- [ProductCodeItemType](#) (p. 385)
- [ProductCodeListType](#) (p. 385)
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- [PurchaseReservedInstancesOfferingResponseType](#) (p. 387)
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- [RebootInstancesInfoType](#) (p. 388)
- [RebootInstancesItemType](#) (p. 388)
- [RebootInstancesResponseType](#) (p. 389)
- [RebootInstancesType](#) (p. 389)
- [RegionItemType](#) (p. 390)
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- [RegisterImageResponseType](#) (p. 391)
- [RegisterImageType](#) (p. 391)
- [ReleaseAddressResponseType](#) (p. 391)
- [ReleaseAddressType](#) (p. 392)
- [ReservationInfoType](#) (p. 392)
- [ReservationSetType](#) (p. 393)
- [ResetImageAttributeResponseType](#) (p. 393)
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- [RevokeSecurityGroupIngressResponseType](#) (p. 396)
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- [RunInstancesResponseType](#) (p. 397)
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- [SecurityGroupItemType](#) (p. 402)
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- [TerminateInstancesInfoType](#) (p. 403)
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- [TerminateInstancesResponseInfoType](#) (p. 404)
- [TerminateInstancesResponseItemType](#) (p. 404)
- [TerminateInstancesResponseType](#) (p. 405)
- [TerminateInstancesType](#) (p. 405)
- [UserData](#) (p. 405)
- [UserIdGroupPairSetType](#) (p. 406)
- [UserIdGroupPairType](#) (p. 406)

AllocateAddressResponseType

The AllocateAddressResponseType data type.

Ancestors

None

Relevant Operations

- AllocateAddress

Contents

The following table describes the elements contained in AllocateAddressResponseType.

Name	Description
publicIp	IP address for use with your account. Type: xsd:string
requestId	The ID of the request. Type: xsd:string

AssociateAddressResponseType

The AssociateAddressResponseType data type.

Ancestors

None

Relevant Operations

- AssociateAddress

Contents

The following table describes the elements contained in AssociateAddressResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
return	Returns true if instance and IP address successfully associated. Otherwise, returns an error. Type: xsd:boolean

AssociateAddressType

The AssociateAddressType data type.

Ancestors

None

Relevant Operations

- AssociateAddress

Contents

The following table describes the elements contained in AssociateAddressType.

Name	Description
instanceId	The instance to associate with the IP address. Type: xsd:string
publicIp	IP address that you are assigning to the instance. Type: xsd:string

AttachmentSetItemTypeResponse

The AttachmentSetItemTypeResponse data type.

Ancestors

- [AttachmentSetResponse](#) (p. 304)

Relevant Operations

- DescribeVolumes

Contents

The following table describes the elements contained in AttachmentSetItemTypeResponse.

Name	Description
attachTime	Time stamp when the association was created. Type: dateTime
device	Specifies how the device is exposed to the instance (e.g., /dev/sdh). Type: xsd:string

Name	Description
instanceId	The ID of the instance. Type: xsd:string
status	Attachment state. Type: xsd:string
volumeId	The ID of the volume. Type: xsd:string

AttachmentSetResponseType

The AttachmentSetResponseType data type.

Ancestors

- [DescribeVolumesSetItemResponseType](#) (p. 363)

Relevant Operations

- DescribeVolumes

Contents

The following table describes the elements contained in AttachmentSetResponseType.

Name	Description
item	Information for a attachment set. Type: AttachmentSetItemResponseType (p. 303)

AttachVolumeResponseType

The AttachVolumeResponseType data type.

Ancestors

None

Relevant Operations

- AttachVolume

Contents

The following table describes the elements contained in AttachVolumeResponseType.

Name	Description
attachTime	Time stamp when the attachment was initiated. Type: dateTime
device	The device as it is exposed to the instance. Type: xsd:string
instanceId	The ID of the instance. Type: xsd:string
requestId	The ID of the request. Type: xsd:string
status	Volume state (e.g., attaching, attached). Type: xsd:string
volumeId	The ID of the volume. Type: xsd:string

AttachVolumeType

The AttachVolumeType data type.

Ancestors

None

Relevant Operations

- AttachVolume

Contents

The following table describes the elements contained in AttachVolumeType.

Name	Description
device	Specifies how the device is exposed to the instance (e.g., /dev/sdh). Type: xsd:string
instanceId	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. Type: xsd:string
volumeId	The ID of the Amazon EBS volume. The volume and instance must be within the same Availability Zone and the instance must be running. Type: xsd:string

AttributeValueType

The AttributeValueType data type.

Ancestors

None

Relevant Operations

-

Contents

The following table describes the elements contained in AttributeValueType.

Name	Description
value	ID of the item. Type: xsd:string

AuthorizeSecurityGroupIngressResponseType

The AuthorizeSecurityGroupIngressResponseType data type.

Ancestors

None

Relevant Operations

- AuthorizeSecurityGroupIngress

Contents

The following table describes the elements contained in AuthorizeSecurityGroupIngressResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
return	Returns true if request is successful. Otherwise, returns an error. Type: xsd:boolean

AuthorizeSecurityGroupIngressType

The AuthorizeSecurityGroupIngressType data type.

Ancestors

None

Relevant Operations

- [AuthorizeSecurityGroupIngress](#)

Contents

The following table describes the elements contained in `AuthorizeSecurityGroupIngressType`.

Name	Description
groupName	Name of the group to modify. The name must be valid and belong to the account Type: <code>xsd:string</code>
ipPermissions	Set of permissions. Type: IpPermissionSetType (p. 374)
userId	AWS Access Key ID. Type: <code>xsd:string</code>

AvailabilityZoneItemType

The `AvailabilityZoneItemType` data type.

Ancestors

- [AvailabilityZoneSetType](#) (p. 309)

Relevant Operations

- [DescribeAvailabilityZones](#)

Contents

The following table describes the elements contained in `AvailabilityZoneItemType`.

Name	Description
messageSet	Message set. Type: AvailabilityZoneMessageType (p. 308)
regionName	Name of the region. Type: <code>xsd:string</code>
zoneName	Name of the Availability Zone. Type: <code>xsd:string</code>

Name	Description
zoneState	State of the Availability Zone. Type: xsd:string

AvailabilityZoneMessageSetType

The AvailabilityZoneMessageSetType data type.

Ancestors

- [AvailabilityZoneItemType](#) (p. 307)

Relevant Operations

- DescribeAvailabilityZones

Contents

The following table describes the elements contained in AvailabilityZoneMessageSetType.

Name	Description
item	Availability Zone message set. Type: AvailabilityZoneMessageType (p. 308)

AvailabilityZoneMessageType

The AvailabilityZoneMessageType data type.

Ancestors

- [AvailabilityZoneMessageSetType](#) (p. 308)

Relevant Operations

- DescribeAvailabilityZones

Contents

The following table describes the elements contained in AvailabilityZoneMessageType.

Name	Description
message	The Availability Zone message. Type: xsd:string

AvailabilityZoneSetType

The AvailabilityZoneSetType data type.

Ancestors

- [DescribeAvailabilityZonesResponseType](#) (p. 330)

Relevant Operations

- DescribeAvailabilityZones

Contents

The following table describes the elements contained in AvailabilityZoneSetType.

Name	Description
item	Information for one Availability Zone. Type: AvailabilityZoneItemType (p. 307)

BlockDeviceMappingItemType

The BlockDeviceMappingItemType data type.

Ancestors

- [BlockDeviceMappingType](#) (p. 310)

Relevant Operations

- DescribeImageAttribute
- RunInstances

Contents

The following table describes the elements contained in BlockDeviceMappingItemType.

Name	Description
deviceName	The device name (e.g., /dev/sdh). Type: xsd:string
virtualName	The virtual name. Type: xsd:string

BlockDeviceMappingType

The BlockDeviceMappingType data type.

Ancestors

- [DescribeImageAttributeResponseType](#) (p. 334)
- [RunInstancesType](#) (p. 398)

Relevant Operations

- DescribeImageAttribute
- RunInstances

Contents

The following table describes the elements contained in BlockDeviceMappingType.

Name	Description
item	Information for one block device mapping. Type: BlockDeviceMappingItemType (p. 309)

BundleInstanceResponseType

The BundleInstanceResponseType data type.

Ancestors

None

Relevant Operations

- BundleInstance

Contents

The following table describes the elements contained in BundleInstanceResponseType.

Name	Description
bundleInstanceTask	Bundle task. Type: BundleInstanceTaskType (p. 313)
requestId	The ID of the request. Type: xsd:string

BundleInstanceS3StorageType

The BundleInstanceS3StorageType data type.

Ancestors

- [BundleInstanceTaskStorageType](#) (p. 312)

Relevant Operations

- BundleInstance
- DescribeBundleTasks
- CancelBundleTask
- BundleInstance

Contents

The following table describes the elements contained in BundleInstanceS3StorageType.

Name	Description
awsAccessKeyId	The Access Key ID of the owner of the Amazon S3 bucket. Type: xsd:string
bucket	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: xsd:string
prefix	Specifies the beginning of the file name of the AMI. Type: xsd:string
uploadPolicy	A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on the user's behalf. Type: xsd:string
uploadPolicySignature	The signature of the Base64 encoded JSON document. Type: xsd:string

BundleInstanceTaskErrorType

The BundleInstanceTaskErrorType data type.

Ancestors

- [BundleInstanceTaskType](#) (p. 313)

Relevant Operations

- [BundleInstance](#)
- [DescribeBundleTasks](#)
- [CancelBundleTask](#)

Contents

The following table describes the elements contained in `BundleInstanceTaskErrorType`.

Name	Description
code	Error code. Type: xsd:string
message	Error message. Type: xsd:string

BundleInstanceTasksSetType

The `BundleInstanceTasksSetType` data type.

Ancestors

- [DescribeBundleTasksResponseType](#) (p. 333)

Relevant Operations

- [DescribeBundleTasks](#)

Contents

The following table describes the elements contained in `BundleInstanceTasksSetType`.

Name	Description
item	Bundle task. Type: BundleInstanceTaskType (p. 313)

BundleInstanceTaskStorageType

The `BundleInstanceTaskStorageType` data type.

Ancestors

- [BundleInstanceTaskType](#) (p. 313)
- [BundleInstanceType](#) (p. 314)

Relevant Operations

- [BundleInstance](#)
- [DescribeBundleTasks](#)
- [CancelBundleTask](#)
- [BundleInstance](#)

Contents

The following table describes the elements contained in `BundleInstanceTaskStorageType`.

Name	Description
S3	Amazon S3 storage location. Type: BundleInstanceS3StorageType (p. 311)

BundleInstanceTaskType

The `BundleInstanceTaskType` data type.

Ancestors

- [BundleInstanceResponseType](#) (p. 310)
- [BundleInstanceTasksSetType](#) (p. 312)
- [CancelBundleTaskResponseType](#) (p. 314)

Relevant Operations

- [BundleInstance](#)
- [DescribeBundleTasks](#)
- [CancelBundleTask](#)

Contents

The following table describes the elements contained in `BundleInstanceTaskType`.

Name	Description
<code>bundleId</code>	Identifier for this task. Type: <code>xsd:string</code>
<code>error</code>	If the task fails, a description of the error. Type: BundleInstanceTaskErrorType (p. 311)
<code>instanceId</code>	Instance associated with this bundle task. Type: <code>xsd:string</code>

Name	Description
progress	The level of task completion, in percent (e.g., 20%). Type: xsd:string
startTime	The time this task started. Type: dateTime
state	The state of the task. Type: xsd:string
storage	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312)
updateTime	The time of the most recent update for the task. Type: dateTime

BundleInstanceType

The BundleInstanceType data type.

Ancestors

None

Relevant Operations

- [BundleInstance](#)

Contents

The following table describes the elements contained in BundleInstanceType.

Name	Description
instanceId	The ID of the instance to bundle. Type: xsd:string
storage	Amazon S3 storage locations. Type: BundleInstanceTaskStorageType (p. 312)

CancelBundleTaskResponseType

The CancelBundleTaskResponseType data type.

Ancestors

None

Relevant Operations

- `CancelBundleTask`

Contents

The following table describes the elements contained in `CancelBundleTaskResponseType`.

Name	Description
<code>bundleInstanceTask</code>	Bundle task to cancel. Type: BundleInstanceTaskType (p. 313)
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>

CancelBundleTaskType

The `CancelBundleTaskType` data type.

Ancestors

None

Relevant Operations

- `CancelBundleTask`

Contents

The following table describes the elements contained in `CancelBundleTaskType`.

Name	Description
<code>bundleId</code>	The ID of the bundle task to cancel. Type: <code>xsd:string</code>

ConfirmProductInstanceResponseType

The `ConfirmProductInstanceResponseType` data type.

Ancestors

None

Relevant Operations

- `ConfirmProductInstance`

Contents

The following table describes the elements contained in `ConfirmProductInstanceResponseType`.

Name	Description
<code>ownerId</code>	The instance owner's account ID. Only present if the product code is attached to the instance. Type: <code>xsd:string</code>
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>return</code>	Returns <code>true</code> if the product code is attached to the instance. Otherwise, returns an error. Type: <code>xsd:boolean</code>

ConfirmProductInstanceType

The `ConfirmProductInstanceType` data type.

Ancestors

None

Relevant Operations

- `ConfirmProductInstance`

Contents

The following table describes the elements contained in `ConfirmProductInstanceType`.

Name	Description
<code>instanceId</code>	The instance to confirm. Type: <code>xsd:string</code>
<code>productCode</code>	The product code to confirm. Type: <code>xsd:string</code>

CreateKeyPairResponseType

The `CreateKeyPairResponseType` data type.

Ancestors

None

Relevant Operations

- `CreateKeyPair`

Contents

The following table describes the elements contained in `CreateKeyPairResponseType`.

Name	Description
<code>keyFingerprint</code>	A SHA-1 digest of the DER encoded private key. Type: <code>xsd:string</code>
<code>keyMaterial</code>	An unencrypted PEM encoded RSA private key. Type: <code>xsd:string</code>
<code>keyName</code>	The key pair name provided in the original request. Type: <code>xsd:string</code>
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>

CreateKeyPairType

The `CreateKeyPairType` data type.

Ancestors

None

Relevant Operations

- `CreateKeyPair`

Contents

The following table describes the elements contained in `CreateKeyPairType`.

Name	Description
<code>keyName</code>	A unique name for the key pair. Type: <code>xsd:string</code>

CreateSecurityGroupResponseType

The `CreateSecurityGroupResponseType` data type.

Ancestors

None

Relevant Operations

- `CreateSecurityGroup`

Contents

The following table describes the elements contained in `CreateSecurityGroupResponseType`.

Name	Description
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>return</code>	Returns <code>true</code> if creation succeeded. Otherwise, returns an error. Type: <code>xsd:boolean</code>

CreateSecurityGroupType

The `CreateSecurityGroupType` data type.

Ancestors

None

Relevant Operations

- `CreateSecurityGroup`

Contents

The following table describes the elements contained in `CreateSecurityGroupType`.

Name	Description
<code>groupDescription</code>	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: <code>xsd:string</code>
<code>groupName</code>	Name of the security group. Type: <code>xsd:string</code>

CreateSnapshotResponseType

The `CreateSnapshotResponseType` data type.

Ancestors

None

Relevant Operations

- CreateSnapshot

Contents

The following table describes the elements contained in CreateSnapshotResponseType.

Name	Description
description	Description of the snapshot. Type: xsd:string
ownerId	The AWS account ID of the Amazon EBS snapshot owner. Type: xsd:string
progress	The progress of the snapshot, in percentage. Type: xsd:string
requestId	The ID of the request. Type: xsd:string
snapshotId	The ID of the snapshot. Type: xsd:string
startTime	Time stamp when the snapshot was initiated. Type: dateTime
status	Snapshot state (e.g., pending, completed, or error) Type: xsd:string
volumeId	The ID of the volume. Type: xsd:string
volumeSize	The size of the volume, in GiB. Type: xsd:string

CreateSnapshotType

The CreateSnapshotType data type.

Ancestors

None

Relevant Operations

- CreateSnapshot

Contents

The following table describes the elements contained in CreateSnapshotType.

Name	Description
description	Description of the Amazon EBS snapshot. Type: xsd:string
volumeId	The ID of the Amazon EBS volume of which to take a snapshot. Type: xsd:string

CreateVolumePermissionItemType

The CreateVolumePermissionItemType data type.

Ancestors

- [CreateVolumePermissionListType](#) (p. 320)

Relevant Operations

-
- DescribeSnapshotAttribute

Contents

The following table describes the elements contained in CreateVolumePermissionItemType.

Name	Description
group	Group that is allowed to create volumes from the snapshot (currently supports "all"). Type: xsd:string
userId	User ID of a user that can create volumes from the snapshot. Type: xsd:string

CreateVolumePermissionListType

The CreateVolumePermissionListType data type.

Ancestors

- [CreateVolumePermissionOperationType](#) (p. 321)
- [CreateVolumePermissionOperationType](#) (p. 321)
- [DescribeSnapshotAttributeResponseType](#) (p. 357)

Relevant Operations

-

- DescribeSnapshotAttribute

Contents

The following table describes the elements contained in CreateVolumePermissionListType.

Name	Description
item	Volume permission item. Type: CreateVolumePermissionItemType (p. 320)

CreateVolumePermissionOperationType

The CreateVolumePermissionOperationType data type.

Ancestors

None

Relevant Operations

-

Contents

The following table describes the elements contained in CreateVolumePermissionOperationType.

Name	Description
add	Add permission. Type: CreateVolumePermissionListType (p. 320)
remove	Remove permission. Type: CreateVolumePermissionListType (p. 320)

CreateVolumeResponseType

The CreateVolumeResponseType data type.

Ancestors

None

Relevant Operations

- CreateVolume

Contents

The following table describes the elements contained in CreateVolumeResponseType.

Name	Description
availabilityZone	Availability Zone in which the volume was created. Type: xsd:string
createTime	Time stamp when volume creation was initiated. Type: dateTime
requestId	The ID of the request. Type: xsd:string
size	The size of the volume, in GiBs. Type: xsd:string
snapshotId	Snapshot from which the volume was created, if applicable. Type: xsd:string
status	Volume state (e.g., creating, available) Type: xsd:string
volumeId	The ID of the volume. Type: xsd:string

CreateVolumeType

The CreateVolumeType data type.

Ancestors

None

Relevant Operations

- CreateVolume

Contents

The following table describes the elements contained in CreateVolumeType.

Name	Description
availabilityZone	The Availability Zone in which to create the new volume. Type: xsd:string
size	The size of the volume, in GiBs. Required if you are not creating a volume from a snapshot. Type: xsd:string

Name	Description
snapshotId	The snapshot from which to create the new volume. Type: xsd:string

DeleteKeyPairResponseType

The DeleteKeyPairResponseType data type.

Ancestors

None

Relevant Operations

- DeleteKeyPair

Contents

The following table describes the elements contained in DeleteKeyPairResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
return	Returns true if deletion succeeded. Otherwise, returns an error. Type: xsd:boolean

DeleteKeyPairType

The DeleteKeyPairType data type.

Ancestors

None

Relevant Operations

- DeleteKeyPair

Contents

The following table describes the elements contained in DeleteKeyPairType.

Name	Description
keyName	Name of the key pair to delete. Type: xsd:string

DeleteSecurityGroupResponseType

The DeleteSecurityGroupResponseType data type.

Ancestors

None

Relevant Operations

- DeleteSecurityGroup

Contents

The following table describes the elements contained in DeleteSecurityGroupResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
return	Returns true if deletion succeeded. Otherwise, returns an error. Type: xsd:boolean

DeleteSecurityGroupType

The DeleteSecurityGroupType data type.

Ancestors

None

Relevant Operations

- DeleteSecurityGroup

Contents

The following table describes the elements contained in DeleteSecurityGroupType.

Name	Description
groupName	Name of the security group to delete. Type: xsd:string

DeleteSnapshotResponseType

The DeleteSnapshotResponseType data type.

Ancestors

None

Relevant Operations

- DeleteSnapshot

Contents

The following table describes the elements contained in DeleteSnapshotResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
return	Returns true if deletion succeeded. Otherwise, returns an error. Type: xsd:boolean

DeleteSnapshotType

The DeleteSnapshotType data type.

Ancestors

None

Relevant Operations

- DeleteSnapshot

Contents

The following table describes the elements contained in DeleteSnapshotType.

Name	Description
snapshotId	The ID of the Amazon EBS snapshot to delete. Type: xsd:string

DeleteVolumeResponseType

The DeleteVolumeResponseType data type.

Ancestors

None

Relevant Operations

- DeleteVolume

Contents

The following table describes the elements contained in DeleteVolumeResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
return	Returns true if deletion succeeded. Otherwise, returns an error. Type: xsd:boolean

DeleteVolumeType

The DeleteVolumeType data type.

Ancestors

None

Relevant Operations

- DeleteVolume

Contents

The following table describes the elements contained in DeleteVolumeType.

Name	Description
volumeId	The ID of the volume to delete. The volume remains in the deleting state for several minutes after entering this command. Type: xsd:string

DeregisterImageResponseType

The DeregisterImageResponseType data type.

Ancestors

None

Relevant Operations

- DeregisterImage

Contents

The following table describes the elements contained in `DeregisterImageResponseType`.

Name	Description
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>return</code>	Returns <code>true</code> if deregistration succeeded. Otherwise, returns an error. Type: <code>xsd:boolean</code>

DeregisterImageType

The `DeregisterImageType` data type.

Ancestors

None

Relevant Operations

- `DeregisterImage`

Contents

The following table describes the elements contained in `DeregisterImageType`.

Name	Description
<code>imageId</code>	Unique ID of the AMI which was assigned during registration. To register an AMI, use <code>RegisterImage</code> . To view the AMI IDs of AMIs that belong to your account, use <code>DescribeImages</code> . Type: <code>xsd:string</code>

DescribeAddressesInfoType

The `DescribeAddressesInfoType` data type.

Ancestors

- [DescribeAddressesType](#) (p. 330)

Relevant Operations

- `DescribeAddresses`

Contents

The following table describes the elements contained in DescribeAddressesInfoType.

Name	Description
item	Information for one elastic IP address. Type: DescribeAddressesItemType (p. 328)

DescribeAddressesItemType

The DescribeAddressesItemType data type.

Ancestors

- [DescribeAddressesInfoType](#) (p. 327)

Relevant Operations

- DescribeAddresses

Contents

The following table describes the elements contained in DescribeAddressesItemType.

Name	Description
publicIp	Elastic IP address to describe. Type: xsd:string

DescribeAddressesResponseInfoType

The DescribeAddressesResponseInfoType data type.

Ancestors

- [DescribeAddressesResponseType](#) (p. 329)

Relevant Operations

- DescribeAddresses

Contents

The following table describes the elements contained in DescribeAddressesResponseInfoType.

Name	Description
item	Information about an instance. Type: DescribeAddressesResponseItemType (p. 329)

DescribeAddressesResponseItemType

The DescribeAddressesResponseItemType data type.

Ancestors

- [DescribeAddressesResponseInfoType](#) (p. 328)

Relevant Operations

- DescribeAddresses

Contents

The following table describes the elements contained in DescribeAddressesResponseItemType.

Name	Description
instanceId	The ID of the instance. Type: xsd:string
publicIp	The public IP address. Type: xsd:string

DescribeAddressesResponseType

The DescribeAddressesResponseType data type.

Ancestors

None

Relevant Operations

- DescribeAddresses

Contents

The following table describes the elements contained in DescribeAddressesResponseType.

Name	Description
addressesSet	The set of IP addresses. Type: DescribeAddressesResponseInfoType (p. 328)
requestId	The ID of the request. Type: xsd:string

DescribeAddressesType

The DescribeAddressesType data type.

Ancestors

None

Relevant Operations

- DescribeAddresses

Contents

The following table describes the elements contained in DescribeAddressesType.

Name	Description
publicIpsSet	Set of elastic IP addresses. Type: DescribeAddressesInfoType (p. 327)

DescribeAvailabilityZonesResponseType

The DescribeAvailabilityZonesResponseType data type.

Ancestors

None

Relevant Operations

- DescribeAvailabilityZones

Contents

The following table describes the elements contained in DescribeAvailabilityZonesResponseType.

Name	Description
availabilityZoneInfo	Availability Zone information. Type: AvailabilityZoneSetType (p. 309)

Name	Description
requestId	The ID of the request. Type: xsd:string

DescribeAvailabilityZonesSetItemType

The DescribeAvailabilityZonesSetItemType data type.

Ancestors

- [DescribeAvailabilityZonesSetType](#) (p. 331)

Relevant Operations

- DescribeAvailabilityZones

Contents

The following table describes the elements contained in DescribeAvailabilityZonesSetItemType.

Name	Description
zoneName	Availability Zone name. Type: xsd:string

DescribeAvailabilityZonesSetType

The DescribeAvailabilityZonesSetType data type.

Ancestors

- [DescribeAvailabilityZonesType](#) (p. 332)

Relevant Operations

- DescribeAvailabilityZones

Contents

The following table describes the elements contained in DescribeAvailabilityZonesSetType.

Name	Description
item	Information for one Availability Zone. Type: DescribeAvailabilityZonesSetItemType (p. 331)

DescribeAvailabilityZonesType

The DescribeAvailabilityZonesType data type.

Ancestors

None

Relevant Operations

- DescribeAvailabilityZones

Contents

The following table describes the elements contained in DescribeAvailabilityZonesType.

Name	Description
availabilityZoneSet	Set of Availability Zones. Type: DescribeAvailabilityZonesSetType (p. 331)

DescribeBundleTasksInfoType

The DescribeBundleTasksInfoType data type.

Ancestors

- [DescribeBundleTasksType](#) (p. 333)

Relevant Operations

- DescribeBundleTasks

Contents

The following table describes the elements contained in DescribeBundleTasksInfoType.

Name	Description
item	Information for one bundle task. Type: DescribeBundleTasksItemType (p. 332)

DescribeBundleTasksItemType

The DescribeBundleTasksItemType data type.

Ancestors

- [DescribeBundleTasksInfoType](#) (p. 332)

Relevant Operations

- [DescribeBundleTasks](#)

Contents

The following table describes the elements contained in [DescribeBundleTasksItemType](#).

Name	Description
<code>bundleId</code>	The ID of the bundle task to describe. Type: <code>xsd:string</code>

DescribeBundleTasksResponseType

The [DescribeBundleTasksResponseType](#) data type.

Ancestors

None

Relevant Operations

- [DescribeBundleTasks](#)

Contents

The following table describes the elements contained in [DescribeBundleTasksResponseType](#).

Name	Description
<code>bundleInstanceTasksSet</code>	Bundle task set. Type: BundleInstanceTasksSetType (p. 312)
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>

DescribeBundleTasksType

The [DescribeBundleTasksType](#) data type.

Ancestors

None

Relevant Operations

- [DescribeBundleTasks](#)

Contents

The following table describes the elements contained in `DescribeBundleTasksType`.

Name	Description
<code>bundlesSet</code>	Set of bundle tasks. Type: DescribeBundleTasksInfoType (p. 332)

DescribeImageAttributeResponseType

The `DescribeImageAttributeResponseType` data type.

Ancestors

None

Relevant Operations

- [DescribeImageAttribute](#)

Contents

The following table describes the elements contained in `DescribeImageAttributeResponseType`.

Name	Description
<code>blockDeviceMapping</code>	Block device mapping set. Type: BlockDeviceMappingType (p. 310)
<code>imageId</code>	The ID of the AMI. Type: <code>xsd:string</code>
<code>kernel</code>	Kernel set. Type: NullableAttributeValueType (p. 383)
<code>launchPermission</code>	Launch permissions set. Type: LaunchPermissionListType (p. 377)
<code>productCodes</code>	Product codes set. Type: ProductCodeListType (p. 385)
<code>ramdisk</code>	RAM disk set. Type: NullableAttributeValueType (p. 383)
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>

DescribeImageAttributesGroup

The DescribeImageAttributesGroup data type.

Ancestors

- [DescribeImageAttributeType](#) (p. 335)

Relevant Operations

- DescribeImageAttribute

Contents

The following table describes the elements contained in DescribeImageAttributesGroup.

Name	Description
blockDeviceMapping	Describes the mapping that defines native device names to use when exposing virtual devices. Type: EmptyElementType (p. 369)
kernel	Describes the ID of the kernel associated with the AMI. Type: EmptyElementType (p. 369)
launchPermission	Describes the launch permissions associated with the AMI. Type: EmptyElementType (p. 369)
productCodes	Describes the product code associated with the AMI. Type: EmptyElementType (p. 369)
ramdisk	Describes the ID of the RAM disk associated with the AMI. Type: EmptyElementType (p. 369)

DescribeImageAttributeType

The DescribeImageAttributeType data type.

Ancestors

None

Relevant Operations

- DescribeImageAttribute

Contents

The following table describes the elements contained in DescribeImageAttributeType.

Name	Description
DescribeImageAttributesGroup	The image attributes group. Type: DescribeImageAttributesGroup (p. 335)
imageId	The ID of the AMI for which an attribute will be described. Type: xsd:string

DescribeImagesExecutableBySetType

The DescribeImagesExecutableBySetType data type.

Ancestors

- [DescribeImagesType](#) (p. 341)

Relevant Operations

- DescribeImages

Contents

The following table describes the elements contained in DescribeImagesExecutableBySetType.

Name	Description
item	Information for one user. Type: DescribeImagesExecutableByType (p. 336)

DescribeImagesExecutableByType

The DescribeImagesExecutableByType data type.

Ancestors

- [DescribeImagesExecutableBySetType](#) (p. 336)

Relevant Operations

- DescribeImages

Contents

The following table describes the elements contained in DescribeImagesExecutableByType.

Name	Description
user	Returns AMIs for which the specified user has explicit launch permissions. The user ID can be a user's account ID, <code>self</code> to return AMIs for which the sender of the request has explicit launch permissions, or <code>all</code> to return AMIs with public launch permissions. Type: <code>xsd:string</code>

DescribeImagesInfoType

The DescribeImagesInfoType data type.

Ancestors

- [DescribeImagesType](#) (p. 341)

Relevant Operations

- DescribeImages

Contents

The following table describes the elements contained in DescribeImagesInfoType.

Name	Description
item	Information for one image. Type: DescribeImagesItemType (p. 337)

DescribeImagesItemType

The DescribeImagesItemType data type.

Ancestors

- [DescribeImagesInfoType](#) (p. 337)

Relevant Operations

- DescribeImages

Contents

The following table describes the elements contained in DescribeImagesItemType.

Name	Description
imageId	AMI IDs to describe. Type: xsd:string

DescribeImagesOwnersType

The DescribeImagesOwnersType data type.

Ancestors

- [DescribeImagesType](#) (p. 341)

Relevant Operations

- DescribeImages

Contents

The following table describes the elements contained in DescribeImagesOwnersType.

Name	Description
item	Information for one owner. Type: DescribeImagesOwnerType (p. 338)

DescribeImagesOwnerType

The DescribeImagesOwnerType data type.

Ancestors

- [DescribeImagesOwnersType](#) (p. 338)

Relevant Operations

- DescribeImages

Contents

The following table describes the elements contained in DescribeImagesOwnerType.

Name	Description
owner	Returns AMIs owned by the specified owner. Multiple owners can be specified. The IDs <code>amazon</code> , <code>self</code> , and <code>explicit</code> can be used to include AMIs owned by Amazon, AMIs owned by the user, and AMIs for which the user has explicit launch permissions, respectively. Type: <code>xsd:string</code>

DescribeImagesResponseInfoType

The `DescribeImagesResponseInfoType` data type.

Ancestors

- [DescribeImagesResponseType](#) (p. 340)

Relevant Operations

- `DescribeImages`

Contents

The following table describes the elements contained in `DescribeImagesResponseInfoType`.

Name	Description
item	Information for one image. Type: DescribeImagesResponseItemType (p. 339)

DescribeImagesResponseItemType

The `DescribeImagesResponseItemType` data type.

Ancestors

- [DescribeImagesResponseInfoType](#) (p. 339)

Relevant Operations

- `DescribeImages`

Contents

The following table describes the elements contained in `DescribeImagesResponseItemType`.

Name	Description
architecture	The architecture of the image (i386 or x86_64). Type: xsd:string
imageId	The ID of the AMI. Type: xsd:string
imageLocation	The location of the AMI. Type: xsd:string
imageOwnerId	AWS Access Key ID of the image owner. Type: xsd:string
imageState	Current state of the AMI. If the operation returns available, the image is successfully registered and available for launching. If the operation returns deregistered, the image is deregistered and no longer available for launching. Type: xsd:string
imageType	The type of image (machine, kernel, or ramdisk). Type: xsd:string
isPublic	Returns true if this image has public launch permissions. Returns false if it only has implicit and explicit launch permissions. Type: xsd:boolean
kernelId	The kernel associated with the image, if any. Only applicable for machine images. Type: xsd:string
platform	The operating platform of the instance. Type: xsd:string
productCodes	Product codes of the AMI. Type: ProductCodesSetType (p. 386)
ramdiskId	The RAM disk associated with the image, if any. Only applicable for machine images. Type: xsd:string

DescribeImagesResponseType

The DescribeImagesResponseType data type.

Ancestors

None

Relevant Operations

- [DescribeImages](#)

Contents

The following table describes the elements contained in `DescribeImagesResponseType`.

Name	Description
<code>imagesSet</code>	Image set. Type: DescribeImagesResponseInfoType (p. 339)
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>

DescribeImagesType

The `DescribeImagesType` data type.

Ancestors

None

Relevant Operations

- `DescribeImages`

Contents

The following table describes the elements contained in `DescribeImagesType`.

Name	Description
<code>executableBySet</code>	Executable set. Type: DescribeImagesExecutableBySetType (p. 336)
<code>imagesSet</code>	Image set. Type: DescribeImagesInfoType (p. 337)
<code>ownersSet</code>	Information about an owner. Type: DescribeImagesOwnersType (p. 338)

DescribeInstancesInfoType

The `DescribeInstancesInfoType` data type.

Ancestors

- [DescribeInstancesType](#) (p. 343)

Relevant Operations

- `DescribeInstances`

Contents

The following table describes the elements contained in `DescribeInstancesInfoType`.

Name	Description
item	Information for one instance set. Type: DescribeInstancesItemType (p. 342)

DescribeInstancesItemType

The `DescribeInstancesItemType` data type.

Ancestors

- [DescribeInstancesInfoType](#) (p. 341)

Relevant Operations

- `DescribeInstances`

Contents

The following table describes the elements contained in `DescribeInstancesItemType`.

Name	Description
instanceId	Instance IDs to describe. Type: <code>xsd:string</code>

DescribeInstancesResponseType

The `DescribeInstancesResponseType` data type.

Ancestors

None

Relevant Operations

- `DescribeInstances`

Contents

The following table describes the elements contained in `DescribeInstancesResponseType`.

Name	Description
requestId	The ID of the request. Type: xsd:string
reservationSet	Reservation set. Type: ReservationSetType (p. 393)

DescribeInstancesType

The DescribeInstancesType data type.

Ancestors

None

Relevant Operations

- [DescribeInstances](#)

Contents

The following table describes the elements contained in DescribeInstancesType.

Name	Description
instancesSet	Instances set. Type: DescribeInstancesInfoType (p. 341)

DescribeKeyPairsInfoType

The DescribeKeyPairsInfoType data type.

Ancestors

- [DescribeKeyPairsType](#) (p. 346)

Relevant Operations

- [DescribeKeyPairs](#)

Contents

The following table describes the elements contained in DescribeKeyPairsInfoType.

Name	Description
item	Information for a key pair. Type: DescribeKeyPairsItemType (p. 344)

DescribeKeyPairsItemType

The DescribeKeyPairsItemType data type.

Ancestors

- [DescribeKeyPairsInfoType](#) (p. 343)

Relevant Operations

- DescribeKeyPairs

Contents

The following table describes the elements contained in DescribeKeyPairsItemType.

Name	Description
keyName	Key pair to describe. Type: xsd:string

DescribeKeyPairsResponseInfoType

The DescribeKeyPairsResponseInfoType data type.

Ancestors

- [DescribeKeyPairsResponseType](#) (p. 345)

Relevant Operations

- DescribeKeyPairs

Contents

The following table describes the elements contained in DescribeKeyPairsResponseInfoType.

Name	Description
item	Information for a key pair. Type: DescribeKeyPairsResponseItemType (p. 345)

DescribeKeyPairsResponseItem

The DescribeKeyPairsResponseItem data type.

Ancestors

- [DescribeKeyPairsResponseInfoType](#) (p. 344)

Relevant Operations

- DescribeKeyPairs

Contents

The following table describes the elements contained in DescribeKeyPairsResponseItem.

Name	Description
keyFingerprint	A SHA-1 digest of the DER encoded private key. Type: xsd:string
keyName	The key pair name provided in the original request. Type: xsd:string

DescribeKeyPairsResponseType

The DescribeKeyPairsResponseType data type.

Ancestors

None

Relevant Operations

- DescribeKeyPairs

Contents

The following table describes the elements contained in DescribeKeyPairsResponseType.

Name	Description
keySet	Information for a key pair. Type: DescribeKeyPairsResponseInfoType (p. 344)
requestId	The ID of the request. Type: xsd:string

DescribeKeyPairsType

The DescribeKeyPairsType data type.

Ancestors

None

Relevant Operations

- DescribeKeyPairs

Contents

The following table describes the elements contained in DescribeKeyPairsType.

Name	Description
keySet	Set of key pairs. Type: DescribeKeyPairsInfoType (p. 343)

DescribeRegionsResponseType

The DescribeRegionsResponseType data type.

Ancestors

None

Relevant Operations

- DescribeRegions

Contents

The following table describes the elements contained in DescribeRegionsResponseType.

Name	Description
regionInfo	Region set. Type: RegionSetType (p. 390)
requestId	The ID of the request. Type: xsd:string

DescribeRegionsSetItemType

The DescribeRegionsSetItemType data type.

Ancestors

- [DescribeRegionsSetType](#) (p. 347)

Relevant Operations

- [DescribeRegions](#)

Contents

The following table describes the elements contained in [DescribeRegionsSetItemType](#).

Name	Description
regionName	Name of a region. Type: xsd:string

DescribeRegionsSetType

The [DescribeRegionsSetType](#) data type.

Ancestors

- [DescribeRegionsType](#) (p. 347)

Relevant Operations

- [DescribeRegions](#)

Contents

The following table describes the elements contained in [DescribeRegionsSetType](#).

Name	Description
item	Information for a region. Type: DescribeRegionsSetItemType (p. 346)

DescribeRegionsType

The [DescribeRegionsType](#) data type.

Ancestors

None

Relevant Operations

- DescribeRegions

Contents

The following table describes the elements contained in DescribeRegionsType.

Name	Description
regionSet	Set of regions. Type: DescribeRegionsSetType (p. 347)

DescribeReservedInstancesOfferingsResponseSetItem

The DescribeReservedInstancesOfferingsResponseSetItemType data type.

Ancestors

- [DescribeReservedInstancesOfferingsResponseType](#) (p. 349)

Relevant Operations

- DescribeReservedInstancesOfferings

Contents

The following table describes the elements contained in DescribeReservedInstancesOfferingsResponseSetItemType.

Name	Description
availabilityZone	The Availability Zone in which the Reserved Instance can be used. Type: xsd:string
duration	The duration of the Reserved Instance, in seconds. Type: xs:long
fixedPrice	The purchase price of the Reserved Instance. Type: xs:double
instanceType	The instance type on which the Reserved Instance can be used. Type: xsd:string
productDescription	The Reserved Instance description. Type: xsd:string
reservedInstancesOfferingId	The ID of the Reserved Instance offering. Type: xsd:string

Name	Description
usagePrice	The usage price of the Reserved Instance, per hour. Type: xs:double

DescribeReservedInstancesOfferingsResponseSetType

The DescribeReservedInstancesOfferingsResponseSetType data type.

Ancestors

- [DescribeReservedInstancesOfferingsResponseType](#) (p. 349)

Relevant Operations

- DescribeReservedInstancesOfferings

Contents

The following table describes the elements contained in DescribeReservedInstancesOfferingsResponseSetType.

Name	Description
item	Reserved Instance offerings set. Type: DescribeReservedInstancesOfferingsResponseSetItemType (p. 348)

DescribeReservedInstancesOfferingsResponseType

The DescribeReservedInstancesOfferingsResponseType data type.

Ancestors

None

Relevant Operations

- DescribeReservedInstancesOfferings

Contents

The following table describes the elements contained in DescribeReservedInstancesOfferingsResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
reservedInstancesOfferingsSet	Reserved Instances offerings set. Type: DescribeReservedInstancesOfferingsResponseType (p. 349)

DescribeReservedInstancesOfferingsSetItemType

The DescribeReservedInstancesOfferingsSetItemType data type.

Ancestors

- [DescribeReservedInstancesOfferingsSetType](#) (p. 350)

Relevant Operations

- DescribeReservedInstancesOfferings

Contents

The following table describes the elements contained in DescribeReservedInstancesOfferingsSetItemType.

Name	Description
reservedInstancesOfferingId	ID of the Reserved Instances to describe. Type: xsd:string

DescribeReservedInstancesOfferingsSetType

The DescribeReservedInstancesOfferingsSetType data type.

Ancestors

- [DescribeReservedInstancesOfferingsType](#) (p. 351)

Relevant Operations

- DescribeReservedInstancesOfferings

Contents

The following table describes the elements contained in DescribeReservedInstancesOfferingsSetType.

Name	Description
item	Reserved Instances item. Type: DescribeReservedInstancesOfferingsSetItemType (p. 350)

DescribeReservedInstancesOfferingsType

The DescribeReservedInstancesOfferingsType data type.

Ancestors

None

Relevant Operations

- [DescribeReservedInstancesOfferings](#)

Contents

The following table describes the elements contained in DescribeReservedInstancesOfferingsType.

Name	Description
availabilityZone	The Availability Zone in which the Reserved Instance can be used. Type: xsd:string
instanceType	The instance type on which the Reserved Instance can be used. Type: xsd:string
productDescription	The Reserved Instance description. Type: xsd:string
reservedInstancesOfferings	Set of Reserved Instances. Type: DescribeReservedInstancesOfferingsSetType (p. 350)

DescribeReservedInstancesResponseSetItemType

The DescribeReservedInstancesResponseSetItemType data type.

Ancestors

- [DescribeReservedInstancesResponseSetType](#) (p. 352)

Relevant Operations

- [DescribeReservedInstances](#)

Contents

The following table describes the elements contained in DescribeReservedInstancesResponseSetItemType.

Name	Description
availabilityZone	The Availability Zone in which the Reserved Instance can be used. Type: xs:string
duration	The duration of the Reserved Instance, in seconds. Type: xs:long
fixedPrice	The purchase price of the Reserved Instance. Type: xs:double
instanceCount	The number of Reserved Instances purchased. Type: xs:integer
instanceType	The instance type on which the Reserved Instance can be used. Type: xs:string
productDescription	The Reserved Instance description. Type: xs:string
reservedInstancesId	The ID of the Reserved Instance. Type: xs:string
start	The date and time the Reserved Instance started. Type: dateTime
state	The state of the Reserved Instance purchase. Type: xs:string
usagePrice	The usage price of the Reserved Instance, per hour. Type: xs:double

DescribeReservedInstancesResponseSetType

The DescribeReservedInstancesResponseSetType data type.

Ancestors

- [DescribeReservedInstancesResponseType](#) (p. 353)

Relevant Operations

- DescribeReservedInstances

Contents

The following table describes the elements contained in DescribeReservedInstancesResponseType.

Name	Description
item	Reserved Instance set. Type: DescribeReservedInstancesResponseSetItemType (p. 351)

DescribeReservedInstancesResponseType

The DescribeReservedInstancesResponseType data type.

Ancestors

None

Relevant Operations

- DescribeReservedInstances

Contents

The following table describes the elements contained in DescribeReservedInstancesResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
reservedInstancesSet	Reserved Instances set. Type: DescribeReservedInstancesResponseSetType (p. 352)

DescribeReservedInstancesSetItemType

The DescribeReservedInstancesSetItemType data type.

Ancestors

- [DescribeReservedInstancesSetType](#) (p. 354)

Relevant Operations

- DescribeReservedInstances

Contents

The following table describes the elements contained in DescribeReservedInstancesSetItemType.

Name	Description
reservedInstancesId	IDs of the Reserved Instance to describe. Type: xsd:string

DescribeReservedInstancesSetType

The DescribeReservedInstancesSetType data type.

Ancestors

- [DescribeReservedInstancesType](#) (p. 354)

Relevant Operations

- DescribeReservedInstances

Contents

The following table describes the elements contained in DescribeReservedInstancesSetType.

Name	Description
item	Reserved Instances item. Type: DescribeReservedInstancesSetItemType (p. 353)

DescribeReservedInstancesType

The DescribeReservedInstancesType data type.

Ancestors

None

Relevant Operations

- DescribeReservedInstances

Contents

The following table describes the elements contained in DescribeReservedInstancesType.

Name	Description
reservedInstancesSet	Set of Reserved Instances. Type: DescribeReservedInstancesSetType (p. 354)

DescribeSecurityGroupsResponseType

The DescribeSecurityGroupsResponseType data type.

Ancestors

None

Relevant Operations

- DescribeSecurityGroups

Contents

The following table describes the elements contained in DescribeSecurityGroupsResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
securityGroupInfo	Security group set. Type: SecurityGroupSetType (p. 402)

DescribeSecurityGroupsSetItemType

The DescribeSecurityGroupsSetItemType data type.

Ancestors

- [DescribeSecurityGroupsSetType](#) (p. 356)

Relevant Operations

- DescribeSecurityGroups

Contents

The following table describes the elements contained in DescribeSecurityGroupsSetItemType.

Name	Description
groupName	Name of the security group. Type: xsd:string

DescribeSecurityGroupsSetType

The DescribeSecurityGroupsSetType data type.

Ancestors

- [DescribeSecurityGroupsType](#) (p. 356)

Relevant Operations

- DescribeSecurityGroups

Contents

The following table describes the elements contained in DescribeSecurityGroupsSetType.

Name	Description
item	Information for a security group. Type: DescribeSecurityGroupsSetItemType (p. 355)

DescribeSecurityGroupsType

The DescribeSecurityGroupsType data type.

Ancestors

None

Relevant Operations

- DescribeSecurityGroups

Contents

The following table describes the elements contained in DescribeSecurityGroupsType.

Name	Description
securityGroupSet	Set of security groups. Type: DescribeSecurityGroupsSetType (p. 356)

DescribeSnapshotAttributeResponseType

The DescribeSnapshotAttributeResponseType data type.

Ancestors

None

Relevant Operations

- DescribeSnapshotAttribute

Contents

The following table describes the elements contained in DescribeSnapshotAttributeResponseType.

Name	Description
createVolumePermission	Create volume permission element. Type: CreateVolumePermissionListType (p. 320)
requestId	The ID of the request. Type: xsd:string
snapshotId	The ID of the Amazon EBS snapshot. Type: xsd:string

DescribeSnapshotAttributesGroup

The DescribeSnapshotAttributesGroup data type.

Ancestors

- [DescribeSnapshotAttributeType](#) (p. 358)

Relevant Operations

- DescribeSnapshotAttribute

Contents

The following table describes the elements contained in DescribeSnapshotAttributesGroup.

Name	Description
createVolumePermission	Describes the snapshot attributes group. Type: EmptyElementType (p. 369)

DescribeSnapshotAttributeType

The DescribeSnapshotAttributeType data type.

Ancestors

None

Relevant Operations

- DescribeSnapshotAttribute

Contents

The following table describes the elements contained in DescribeSnapshotAttributeType.

Name	Description
DescribeSnapshotAttributes	Describe snapshot attribute element. Type: DescribeSnapshotAttributesGroup (p. 357)
snapshotId	The ID of the Amazon EBS snapshot. Type: xsd:string

DescribeSnapshotsOwnersType

The DescribeSnapshotsOwnersType data type.

Ancestors

- [DescribeSnapshotsType](#) (p. 362)

Relevant Operations

- DescribeSnapshots

Contents

The following table describes the elements contained in DescribeSnapshotsOwnersType.

Name	Description
item	Describe snapshot item. Type: DescribeSnapshotsOwnerType (p. 358)

DescribeSnapshotsOwnerType

The DescribeSnapshotsOwnerType data type.

Ancestors

- [DescribeSnapshotsOwnersType](#) (p. 358)

Relevant Operations

- DescribeSnapshots

Contents

The following table describes the elements contained in DescribeSnapshotsOwnerType.

Name	Description
owner	Returns snapshots owned by the specified owner. Multiple owners can be specified. Type: xsd:string

DescribeSnapshotsResponseType

The DescribeSnapshotsResponseType data type.

Ancestors

None

Relevant Operations

- DescribeSnapshots

Contents

The following table describes the elements contained in DescribeSnapshotsResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
snapshotSet	Snapshot set. Type: DescribeSnapshotsSetResponseType (p. 362)

DescribeSnapshotsRestorableBySetType

The DescribeSnapshotsRestorableBySetType data type.

Ancestors

- [DescribeSnapshotsType](#) (p. 362)

Relevant Operations

- DescribeSnapshots

Contents

The following table describes the elements contained in DescribeSnapshotsRestorableBySetType.

Name	Description
item	Restorable by set type item. Type: DescribeSnapshotsRestorableByType (p. 360)

DescribeSnapshotsRestorableByType

The DescribeSnapshotsRestorableByType data type.

Ancestors

- [DescribeSnapshotsRestorableBySetType](#) (p. 359)

Relevant Operations

- DescribeSnapshots

Contents

The following table describes the elements contained in DescribeSnapshotsRestorableByType.

Name	Description
user	Account ID of a user that can create volumes from the snapshot. Type: xsd:string

DescribeSnapshotsSetItemTypeResponse

The DescribeSnapshotsSetItemTypeResponse data type.

Ancestors

- [DescribeSnapshotsSetResponseType](#) (p. 362)

Relevant Operations

- [DescribeSnapshots](#)

Contents

The following table describes the elements contained in `DescribeSnapshotsSetItemResponseType`.

Name	Description
<code>description</code>	Description of the snapshot. Type: <code>xsd:string</code>
<code>ownerId</code>	AWS Access Key ID of the user who owns the snapshot. Type: <code>xsd:string</code>
<code>progress</code>	The progress of the snapshot, in percentage. Type: <code>xsd:string</code>
<code>snapshotId</code>	The ID of the snapshot. Type: <code>xsd:string</code>
<code>startTime</code>	Time stamp when the snapshot was initiated. Type: <code>dateTime</code>
<code>status</code>	Snapshot state (e.g., pending, completed, or error). Type: <code>xsd:string</code>
<code>volumeId</code>	The ID of the volume. Type: <code>xsd:string</code>

DescribeSnapshotsSetItemType

The `DescribeSnapshotsSetItemType` data type.

Ancestors

- [DescribeSnapshotsSetType](#) (p. 362)

Relevant Operations

- [DescribeSnapshots](#)

Contents

The following table describes the elements contained in `DescribeSnapshotsSetItemType`.

Name	Description
<code>snapshotId</code>	The ID of the Amazon EBS snapshot. Type: <code>xsd:string</code>

DescribeSnapshotsSetResponseType

The DescribeSnapshotsSetResponseType data type.

Ancestors

- [DescribeSnapshotsResponseType](#) (p. 359)

Relevant Operations

- DescribeSnapshots

Contents

The following table describes the elements contained in DescribeSnapshotsSetResponseType.

Name	Description
item	Information for a snapshot. Type: DescribeSnapshotsSetItemResponseType (p. 360)

DescribeSnapshotsSetType

The DescribeSnapshotsSetType data type.

Ancestors

- [DescribeSnapshotsType](#) (p. 362)

Relevant Operations

- DescribeSnapshots

Contents

The following table describes the elements contained in DescribeSnapshotsSetType.

Name	Description
item	Information for a snapshot. Type: DescribeSnapshotsSetItemType (p. 361)

DescribeSnapshotsType

The DescribeSnapshotsType data type.

Ancestors

None

Relevant Operations

- [DescribeSnapshots](#)

Contents

The following table describes the elements contained in `DescribeSnapshotsType`.

Name	Description
<code>ownersSet</code>	Set of owners that can create volumes from the instance. Type: DescribeSnapshotsOwnersType (p. 358)
<code>restorableBySet</code>	Set of users that can create volumes from the snapshot. Type: DescribeSnapshotsRestorableBySetType (p. 359)
<code>snapshotSet</code>	Set of snapshots. Type: DescribeSnapshotsSetType (p. 362)

DescribeVolumesResponseType

The `DescribeVolumesResponseType` data type.

Ancestors

None

Relevant Operations

- [DescribeVolumes](#)

Contents

The following table describes the elements contained in `DescribeVolumesResponseType`.

Name	Description
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>volumeSet</code>	Volume set. Type: DescribeVolumesSetResponseType (p. 365)

DescribeVolumesSetItemResponseType

The `DescribeVolumesSetItemResponseType` data type.

Ancestors

- [DescribeVolumesSetResponseType](#) (p. 365)

Relevant Operations

- DescribeVolumes

Contents

The following table describes the elements contained in DescribeVolumesSetItemResponseType.

Name	Description
attachmentSet	Attachment set. Type: AttachmentSetResponseType (p. 304)
availabilityZone	Availability Zone in which the volume was created. Type: xsd:string
createTime	Time stamp when volume creation was initiated. Type: dateTime
size	The size of the volume, in GiBs. Type: xsd:string
snapshotId	Snapshot from which the volume was created (optional). Type: xsd:string
status	Volume state (e.g., creating, available) Type: xsd:string
volumeId	The ID of the volume. Type: xsd:string

DescribeVolumesSetItemType

The DescribeVolumesSetItemType data type.

Ancestors

- [DescribeVolumesSetType](#) (p. 365)

Relevant Operations

- DescribeVolumes

Contents

The following table describes the elements contained in DescribeVolumesSetItemType.

Name	Description
volumeId	The ID of the volume to list. Type: xsd:string

DescribeVolumesSetResponseType

The DescribeVolumesSetResponseType data type.

Ancestors

- [DescribeVolumesResponseType](#) (p. 363)

Relevant Operations

- DescribeVolumes

Contents

The following table describes the elements contained in DescribeVolumesSetResponseType.

Name	Description
item	Information for a volume. Type: DescribeVolumesSetItemType (p. 363)

DescribeVolumesSetType

The DescribeVolumesSetType data type.

Ancestors

- [DescribeVolumesType](#) (p. 366)

Relevant Operations

- DescribeVolumes

Contents

The following table describes the elements contained in DescribeVolumesSetType.

Name	Description
item	Information for a volume. Type: DescribeVolumesSetItemType (p. 364)

DescribeVolumesType

The DescribeVolumesType data type.

Ancestors

None

Relevant Operations

- DescribeVolumes

Contents

The following table describes the elements contained in DescribeVolumesType.

Name	Description
volumeSet	Set of volumes. Type: DescribeVolumesSetType (p. 365)

DetachVolumeResponseType

The DetachVolumeResponseType data type.

Ancestors

None

Relevant Operations

- DetachVolume

Contents

The following table describes the elements contained in DetachVolumeResponseType.

Name	Description
attachTime	Time stamp when the association was created. Type: dateTime

Name	Description
device	The device as it is exposed to the instance. Type: xsd:string
instanceId	The ID of the instance. Type: xsd:string
requestId	The ID of the request. Type: xsd:string
status	Attachment state (e.g., attaching, attached, detaching, or detached). Type: xsd:string
volumeId	The ID of the volume. Type: xsd:string

DetachVolumeType

The DetachVolumeType data type.

Ancestors

None

Relevant Operations

- DetachVolume

Contents

The following table describes the elements contained in DetachVolumeType.

Name	Description
device	The device name. Type: xsd:string
force	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: xsd:boolean
instanceId	The ID of the instance. Type: xsd:string

Name	Description
volumeId	The ID of the volume. Type: xsd:string

DisassociateAddressResponseType

The DisassociateAddressResponseType data type.

Ancestors

None

Relevant Operations

- DisassociateAddress

Contents

The following table describes the elements contained in DisassociateAddressResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
return	Returns true if the IP address is disassociated from the instance. Otherwise, returns an error. Type: xsd:boolean

DisassociateAddressType

The DisassociateAddressType data type.

Ancestors

None

Relevant Operations

- DisassociateAddress

Contents

The following table describes the elements contained in DisassociateAddressType.

Name	Description
publicIp	IP address that you are disassociating from the instance. Type: xsd:string

EmptyElementType

The EmptyElementType data type.

Ancestors

- [DescribeImageAttributesGroup](#) (p. 335)
- [DescribeImageAttributesGroup](#) (p. 335)
- [DescribeImageAttributesGroup](#) (p. 335)
- [DescribeImageAttributesGroup](#) (p. 335)
- [DescribeImageAttributesGroup](#) (p. 335)
- [DescribeImageAttributesGroup](#) (p. 335)
- [DescribeSnapshotAttributesGroup](#) (p. 357)
- [ResetImageAttributesGroup](#) (p. 394)
- [ResetImageAttributesGroup](#) (p. 394)
- [ResetSnapshotAttributesGroup](#) (p. 395)

Relevant Operations

- [DescribeImageAttribute](#)
- [DescribeSnapshotAttribute](#)
- [ResetImageAttribute](#)
- [ResetSnapshotAttribute](#)

Contents

The following table describes the elements contained in EmptyElementType.

Name	Description
none	These element contains no options. Type: xsd:string

GetConsoleOutputResponseType

The GetConsoleOutputResponseType data type.

Ancestors

None

Relevant Operations

- [GetConsoleOutput](#)

Contents

The following table describes the elements contained in `GetConsoleOutputResponseType`.

Name	Description
<code>instanceId</code>	The instance ID. Type: <code>xsd:string</code>
<code>output</code>	The console output, Base64 encoded. Type: <code>xsd:string</code>
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>timestamp</code>	The time the output was last updated. Type: <code>dateTime</code>

GetConsoleOutputType

The `GetConsoleOutputType` data type.

Ancestors

None

Relevant Operations

- [GetConsoleOutput](#)

Contents

The following table describes the elements contained in `GetConsoleOutputType`.

Name	Description
<code>instanceId</code>	ID of the instance for which you want console output. Type: <code>xsd:string</code>

GetPasswordDataResponseType

The `GetPasswordDataResponseType` data type.

Ancestors

None

Relevant Operations

- [GetPasswordData](#)

Contents

The following table describes the elements contained in `GetPasswordDataResponseType`.

Name	Description
<code>instanceId</code>	The ID of the instance. Type: <code>xsd:string</code>
<code>passwordData</code>	The password of the instance. Type: <code>xsd:string</code>
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>timestamp</code>	The time the data was last updated. Type: <code>dateTime</code>

GetPasswordDataType

The `GetPasswordDataType` data type.

Ancestors

None

Relevant Operations

- [GetPasswordData](#)

Contents

The following table describes the elements contained in `GetPasswordDataType`.

Name	Description
<code>instanceId</code>	The ID of the instance for which to get the password. Type: <code>xsd:string</code>

GroupItemType

The `GroupItemType` data type.

Ancestors

- [GroupSetType](#) (p. 372)

Relevant Operations

- [DescribeInstances](#)
- [RunInstances](#)
- [RunInstances](#)

Contents

The following table describes the elements contained in `GroupItemType`.

Name	Description
<code>groupId</code>	Name of the security group. Type: <code>xsd:string</code>

GroupSetType

The `GroupSetType` data type.

Ancestors

- [ReservationInfoType](#) (p. 392)
- [RunInstancesResponseType](#) (p. 397)
- [RunInstancesType](#) (p. 398)

Relevant Operations

- [DescribeInstances](#)
- [RunInstances](#)
- [RunInstances](#)

Contents

The following table describes the elements contained in `GroupSetType`.

Name	Description
<code>item</code>	Group set item. Type: GroupItemType (p. 371)

InstanceMonitoringStateType

The `InstanceMonitoringStateType` data type.

Ancestors

- [MonitorInstancesResponseSetItemType](#) (p. 380)
- [RunningInstancesItemType](#) (p. 399)

Relevant Operations

- MonitorInstances
- UnmonitorInstances
- DescribeInstances
- RunInstances

Contents

The following table describes the elements contained in InstanceMonitoringStateType.

Name	Description
state	State of monitoring for the instance. Type: xsd:string

InstanceStateType

The InstanceStateType data type.

Ancestors

- [RunningInstancesItemType](#) (p. 399)
- [TerminateInstancesResponseItemType](#) (p. 404)
- [TerminateInstancesResponseItemType](#) (p. 404)

Relevant Operations

- DescribeInstances
- RunInstances
- TerminateInstances

Contents

The following table describes the elements contained in InstanceStateType.

Name	Description
code	A 16-bit unsigned integer. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented: • 0: pending • 16: running • 32: shutting-down • 48: terminated Type: integer
name	The current state of the instance. • pending: the instance is in the process of being launched • running: the instance launched (although the boot process might not be completed) • shutting-down: the instance started shutting down • terminated: the instance terminated Type: xsd:string

IpPermissionSetType

The IpPermissionSetType data type.

Ancestors

- [AuthorizeSecurityGroupIngressType](#) (p. 306)
- [RevokeSecurityGroupIngressType](#) (p. 397)
- [SecurityGroupItemType](#) (p. 402)

Relevant Operations

- AuthorizeSecurityGroupIngress
- RevokeSecurityGroupIngress
- DescribeSecurityGroups

Contents

The following table describes the elements contained in IpPermissionSetType.

Name	Description
item	Set of IP permissions. Type: IpPermissionType (p. 375)

IpPermissionType

The IpPermissionType data type.

Ancestors

- [IpPermissionSetType](#) (p. 374)

Relevant Operations

- AuthorizeSecurityGroupIngress
- RevokeSecurityGroupIngress
- DescribeSecurityGroups

Contents

The following table describes the elements contained in IpPermissionType.

Name	Description
fromPort	Start of port range for the TCP and UDP protocols, or an ICMP type number. An ICMP type number of -1 indicates a wildcard (i.e., any ICMP type number). Type: integer
groups	List of security group and user ID pairs. Type: UserIdGroupPairSetType (p. 406)
ipProtocol	IP protocol. Type: xsd:string
ipRanges	IP ranges. Type: IpRangeSetType (p. 376)
toPort	End of port range for the TCP and UDP protocols, or an ICMP code. An ICMP code of -1 indicates a wildcard (i.e., any ICMP code). Type: integer

IpRangeItemType

The IpRangeItemType data type.

Ancestors

- [IpRangeSetType](#) (p. 376)

Relevant Operations

- [AuthorizeSecurityGroupIngress](#)
- [RevokeSecurityGroupIngress](#)
- [DescribeSecurityGroups](#)

Contents

The following table describes the elements contained in `IpRangeItemType`.

Name	Description
<code>cidrIp</code>	CIDR range. Type: <code>xsd:string</code>

IpRangeSetType

The `IpRangeSetType` data type.

Ancestors

- [IpPermissionType](#) (p. 375)

Relevant Operations

- [AuthorizeSecurityGroupIngress](#)
- [RevokeSecurityGroupIngress](#)
- [DescribeSecurityGroups](#)

Contents

The following table describes the elements contained in `IpRangeSetType`.

Name	Description
<code>item</code>	Information for one IP range. Type: IpRangeItemType (p. 375)

LaunchPermissionItemType

The `LaunchPermissionItemType` data type.

Ancestors

- [LaunchPermissionListType](#) (p. 377)

Relevant Operations

- [DescribeImageAttribute](#)
- [ModifyImageAttribute](#)

Contents

The following table describes the elements contained in `LaunchPermissionItemType`.

Name	Description
group	Name of the group. Currently supports "all." Type: xsd:string
userId	AWS Access Key ID. Type: xsd:string

LaunchPermissionListType

The `LaunchPermissionListType` data type.

Ancestors

- [DescribeImageAttributeResponseType](#) (p. 334)
- [LaunchPermissionOperationType](#) (p. 377)
- [LaunchPermissionOperationType](#) (p. 377)
- [LaunchPermissionOperationType](#) (p. 377)

Relevant Operations

- [DescribeImageAttribute](#)
- [ModifyImageAttribute](#)

Contents

The following table describes the elements contained in `LaunchPermissionListType`.

Name	Description
item	Information for launch permissions. Type: LaunchPermissionItemType (p. 376)

LaunchPermissionOperationType

The `LaunchPermissionOperationType` data type.

Ancestors

- [ModifyImageAttributeType](#) (p. 378)

Relevant Operations

- [ModifyImageAttribute](#)

Contents

The following table describes the elements contained in `LaunchPermissionOperationType`.

Name	Description
add	Adds permission. Type: LaunchPermissionListType (p. 377)
remove	Remove permission. Type: LaunchPermissionListType (p. 377)

ModifyImageAttributeResponseType

The `ModifyImageAttributeResponseType` data type.

Ancestors

None

Relevant Operations

- [ModifyImageAttribute](#)

Contents

The following table describes the elements contained in `ModifyImageAttributeResponseType`.

Name	Description
requestId	The ID of the request. Type: <code>xsd:string</code>
return	Returns <code>true</code> if successful. Otherwise, returns an error. Type: <code>xsd:boolean</code>

ModifyImageAttributeType

The `ModifyImageAttributeType` data type.

Ancestors

None

Relevant Operations

- [ModifyImageAttribute](#)

Contents

The following table describes the elements contained in `ModifyImageAttributeType`.

Name	Description
<code>imageId</code>	The AMI ID. Type: <code>xsd:string</code>
<code>launchPermission</code>	Launch permission set. Type: LaunchPermissionOperationType (p. 377)
<code>productCodes</code>	Product code set. Type: ProductCodeListType (p. 385)

ModifySnapshotAttributeResponseType

The `ModifySnapshotAttributeResponseType` data type.

Ancestors

None

Relevant Operations

- [ModifySnapshotAttribute](#)

Contents

The following table describes the elements contained in `ModifySnapshotAttributeResponseType`.

Name	Description
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>return</code>	Returns <code>true</code> if successful. Otherwise, returns an error. Type: <code>xsd:boolean</code>

ModifySnapshotAttributeType

The `ModifySnapshotAttributeType` data type.

Ancestors

None

Relevant Operations

- [ModifySnapshotAttribute](#)

Contents

The following table describes the elements contained in `ModifySnapshotAttributeType`.

Name	Description
<code>createVolumePermission</code>	Create volume permission element. Type: ???
<code>snapshotId</code>	The ID of the snapshot. Type: <code>xsd:string</code>

MonitoringInstanceType

The `MonitoringInstanceType` data type.

Ancestors

- [RunInstancesType](#) (p. 398)

Relevant Operations

- [RunInstances](#)

Contents

The following table describes the elements contained in `MonitoringInstanceType`.

Name	Description
<code>enabled</code>	Enables monitoring for the instance. Type: <code>xsd:boolean</code>

MonitorInstancesResponseSetItemType

The `MonitorInstancesResponseSetItemType` data type.

Ancestors

- [MonitorInstancesResponseSetType](#) (p. 381)

Relevant Operations

- [MonitorInstances](#)
- [UnmonitorInstances](#)

Contents

The following table describes the elements contained in [MonitorInstancesResponseSetItemType](#).

Name	Description
instanceId	Instance ID. Type: xsd:string
monitoring	Monitoring information. Type: InstanceMonitoringStateType (p. 372)

MonitorInstancesResponseSetType

The [MonitorInstancesResponseSetType](#) data type.

Ancestors

- [MonitorInstancesResponseType](#) (p. 381)

Relevant Operations

- [MonitorInstances](#)
- [UnmonitorInstances](#)

Contents

The following table describes the elements contained in [MonitorInstancesResponseSetType](#).

Name	Description
item	Instance Item. Type: MonitorInstancesResponseSetItemType (p. 380)

MonitorInstancesResponseType

The [MonitorInstancesResponseType](#) data type.

Ancestors

None

Relevant Operations

- [MonitorInstances](#)
- [UnmonitorInstances](#)

Contents

The following table describes the elements contained in `MonitorInstancesResponseType`.

Name	Description
<code>instancesSet</code>	Monitor instance response set. Type: MonitorInstancesResponseSetType (p. 381)
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>

MonitorInstancesSetItemType

The `MonitorInstancesSetItemType` data type.

Ancestors

- [MonitorInstancesSetType](#) (p. 382)

Relevant Operations

- [MonitorInstances](#)
- [UnmonitorInstances](#)

Contents

The following table describes the elements contained in `MonitorInstancesSetItemType`.

Name	Description
<code>instanceId</code>	Instance ID. Type: <code>xsd:string</code>

MonitorInstancesSetType

The `MonitorInstancesSetType` data type.

Ancestors

- [MonitorInstancesType](#) (p. 383)

Relevant Operations

- [MonitorInstances](#)
- [UnmonitorInstances](#)

Contents

The following table describes the elements contained in `MonitorInstancesSetType`.

Name	Description
<code>item</code>	Instance set. Type: MonitorInstancesSetItemType (p. 382)

MonitorInstancesType

The `MonitorInstancesType` data type.

Ancestors

None

Relevant Operations

- [MonitorInstances](#)
- [UnmonitorInstances](#)

Contents

The following table describes the elements contained in `MonitorInstancesType`.

Name	Description
<code>instancesSet</code>	Set of instances. Type: MonitorInstancesSetType (p. 382)

NullableAttributeValueType

The `NullableAttributeValueType` data type.

Ancestors

- [DescribeImageAttributeResponseType](#) (p. 334)
- [DescribeImageAttributeResponseType](#) (p. 334)

Relevant Operations

- `DescribeImageAttribute`

Contents

The following table describes the elements contained in `NullableAttributeValue`.

Name	Description
<code>value</code>	ID of the kernel or RAM disk. Type: <code>xsd:string</code>

PlacementRequestType

The `PlacementRequestType` data type.

Ancestors

- [RunInstancesType](#) (p. 398)

Relevant Operations

- `RunInstances`

Contents

The following table describes the elements contained in `PlacementRequestType`.

Name	Description
<code>availabilityZone</code>	Specifies the placement constraints (Availability Zones) for launching the instances. Type: <code>xsd:string</code>

PlacementResponseType

The `PlacementResponseType` data type.

Ancestors

- [RunningInstancesItemType](#) (p. 399)

Relevant Operations

- `DescribeInstances`

- [RunInstances](#)

Contents

The following table describes the elements contained in `PlacementResponseType`.

Name	Description
<code>availabilityZone</code>	Returns the Availability Zones of the instances. Type: <code>xsd:string</code>

ProductCodeItemType

The `ProductCodeItemType` data type.

Ancestors

- [ProductCodeListType](#) (p. 385)

Relevant Operations

- `DescribeImageAttribute`
- `ModifyImageAttribute`

Contents

The following table describes the elements contained in `ProductCodeItemType`.

Name	Description
<code>productCode</code>	Product code. Type: <code>xsd:string</code>

ProductCodeListType

The `ProductCodeListType` data type.

Ancestors

- [DescribeImageAttributeResponseType](#) (p. 334)
- [ModifyImageAttributeType](#) (p. 378)

Relevant Operations

- `DescribeImageAttribute`
- `ModifyImageAttribute`

Contents

The following table describes the elements contained in ProductCodeListType.

Name	Description
item	Information for one product code. Type: ProductCodeItemType (p. 385)

ProductCodesSetItemType

The ProductCodesSetItemType data type.

Ancestors

- [ProductCodesSetType](#) (p. 386)

Relevant Operations

- DescribeImages
- DescribeInstances
- RunInstances

Contents

The following table describes the elements contained in ProductCodesSetItemType.

Name	Description
productCode	Product code. Type: xsd:string

ProductCodesSetType

The ProductCodesSetType data type.

Ancestors

- [DescribeImagesResponseItemType](#) (p. 339)
- [RunningInstancesItemType](#) (p. 399)

Relevant Operations

- DescribeImages
- DescribeInstances
- RunInstances

Contents

The following table describes the elements contained in ProductCodesSetType.

Name	Description
item	Information for one product code. Type: ProductCodesSetItemType (p. 386)

PurchaseReservedInstancesOfferingResponseType

The PurchaseReservedInstancesOfferingResponseType data type.

Ancestors

None

Relevant Operations

- [PurchaseReservedInstancesOffering](#)

Contents

The following table describes the elements contained in PurchaseReservedInstancesOfferingResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
reservedInstancesId	The IDs of the purchased Reserved Instances. Type: xsd:string

PurchaseReservedInstancesOfferingType

The PurchaseReservedInstancesOfferingType data type.

Ancestors

None

Relevant Operations

- [PurchaseReservedInstancesOffering](#)

Contents

The following table describes the elements contained in PurchaseReservedInstancesOfferingType.

Name	Description
instanceCount	The number of Reserved Instances to purchase. Type: integer
reservedInstancesOfferingId	The offering ID of the Reserved Instance to purchase. Type: xsd:string

RebootInstancesInfoType

The RebootInstancesInfoType data type.

Ancestors

- [RebootInstancesType](#) (p. 389)

Relevant Operations

- RebootInstances

Contents

The following table describes the elements contained in RebootInstancesInfoType.

Name	Description
item	Information for an instance. Type: RebootInstancesItemType (p. 388)

RebootInstancesItemType

The RebootInstancesItemType data type.

Ancestors

- [RebootInstancesInfoType](#) (p. 388)

Relevant Operations

- RebootInstances

Contents

The following table describes the elements contained in RebootInstancesItemType.

Name	Description
instanceId	One or more instance IDs. Type: xsd:string

RebootInstancesResponseType

The RebootInstancesResponseType data type.

Ancestors

None

Relevant Operations

- RebootInstances

Contents

The following table describes the elements contained in RebootInstancesResponseType.

Name	Description
requestId	The ID of the request. Type: xsd:string
return	Returns true if successful. Otherwise, returns an error. Type: xsd:boolean

RebootInstancesType

The RebootInstancesType data type.

Ancestors

None

Relevant Operations

- RebootInstances

Contents

The following table describes the elements contained in RebootInstancesType.

Name	Description
instancesSet	Launch permission set. Type: RebootInstancesInfoType (p. 388)

RegionItemType

The RegionItemType data type.

Ancestors

- [RegionSetType](#) (p. 390)

Relevant Operations

- DescribeRegions

Contents

The following table describes the elements contained in RegionItemType.

Name	Description
regionEndpoint	Region service endpoint. Type: xsd:string
regionName	Name of the region. Type: xsd:string

RegionSetType

The RegionSetType data type.

Ancestors

- [DescribeRegionsResponseType](#) (p. 346)

Relevant Operations

- DescribeRegions

Contents

The following table describes the elements contained in RegionSetType.

Name	Description
item	Information for a region. Type: RegionItemType (p. 390)

RegisterImageResponseType

The RegisterImageResponseType data type.

Ancestors

None

Relevant Operations

- RegisterImage

Contents

The following table describes the elements contained in RegisterImageResponseType.

Name	Description
imageId	Unique ID of the newly registered machine image. Type: xsd:string
requestId	The ID of the request. Type: xsd:string

RegisterImageType

The RegisterImageType data type.

Ancestors

None

Relevant Operations

- RegisterImage

Contents

The following table describes the elements contained in RegisterImageType.

Name	Description
imageLocation	Full path to your AMI manifest in Amazon S3 storage. Type: xsd:string

ReleaseAddressResponseType

The ReleaseAddressResponseType data type.

Ancestors

None

Relevant Operations

- [ReleaseAddress](#)

Contents

The following table describes the elements contained in `ReleaseAddressResponseType`.

Name	Description
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>return</code>	Returns <code>true</code> if successful. Otherwise, returns an error. Type: <code>xsd:boolean</code>

ReleaseAddressType

The `ReleaseAddressType` data type.

Ancestors

None

Relevant Operations

- [ReleaseAddress](#)

Contents

The following table describes the elements contained in `ReleaseAddressType`.

Name	Description
<code>publicIp</code>	The IP address that you are releasing from your account. Type: <code>xsd:string</code>

ReservationInfoType

The `ReservationInfoType` data type.

Ancestors

- [ReservationSetType](#) (p. 393)

Relevant Operations

- [DescribeInstances](#)

Contents

The following table describes the elements contained in `ReservationInfoType`.

Name	Description
<code>groupSet</code>	Group set. Type: GroupSetType (p. 372)
<code>instancesSet</code>	Instance set. Type: RunningInstancesSetType (p. 401)
<code>ownerId</code>	AWS Access Key ID of the user who owns the reservation. Type: <code>xsd:string</code>
<code>requesterId</code>	ID of the requester. Type: <code>xsd:string</code>
<code>reservationId</code>	Unique ID of the reservation. Type: <code>xsd:string</code>

ReservationSetType

The `ReservationSetType` data type.

Ancestors

- [DescribeInstancesResponseType](#) (p. 342)

Relevant Operations

- [DescribeInstances](#)

Contents

The following table describes the elements contained in `ReservationSetType`.

Name	Description
<code>item</code>	Information for a reservation. Type: ReservationInfoType (p. 392)

ResetImageAttributeResponseType

The `ResetImageAttributeResponseType` data type.

Ancestors

None

Relevant Operations

- [ResetImageAttribute](#)

Contents

The following table describes the elements contained in `ResetImageAttributeResponseType`.

Name	Description
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>return</code>	Indicates whether the attribute successfully reset. Type: <code>xsd:boolean</code>

ResetImageAttributesGroup

The `ResetImageAttributesGroup` data type.

Ancestors

- [ResetImageAttributeType](#) (p. 394)

Relevant Operations

- [ResetImageAttribute](#)

Contents

The following table describes the elements contained in `ResetImageAttributesGroup`.

Name	Description
<code>launchPermission</code>	Resets the launch permission attribute. Type: EmptyElementType (p. 369)

ResetImageAttributeType

The `ResetImageAttributeType` data type.

Ancestors

None

Relevant Operations

- [ResetImageAttribute](#)

Contents

The following table describes the elements contained in `ResetImageAttributeType`.

Name	Description
<code>imageId</code>	ID of the AMI on which the attribute will be reset. Type: <code>xsd:string</code>
<code>ResetImageAttributesGroup</code>	The reset image attribute group. Type: ResetImageAttributesGroup (p. 394)

ResetSnapshotAttributeResponseType

The `ResetSnapshotAttributeResponseType` data type.

Ancestors

None

Relevant Operations

- [ResetSnapshotAttribute](#)

Contents

The following table describes the elements contained in `ResetSnapshotAttributeResponseType`.

Name	Description
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>return</code>	Specifies whether the snapshot permissions were reset. Type: <code>xsd:boolean</code>

ResetSnapshotAttributesGroup

The `ResetSnapshotAttributesGroup` data type.

Ancestors

- [ResetSnapshotAttributeType](#) (p. 396)

Relevant Operations

- [ResetSnapshotAttribute](#)

Contents

The following table describes the elements contained in `ResetSnapshotAttributesGroup`.

Name	Description
<code>createVolumePermission</code>	Create volume permission type. Type: EmptyElementType (p. 369)

ResetSnapshotAttributeType

The `ResetSnapshotAttributeType` data type.

Ancestors

None

Relevant Operations

- [ResetSnapshotAttribute](#)

Contents

The following table describes the elements contained in `ResetSnapshotAttributeType`.

Name	Description
<code>ResetSnapshotAttributesGroup</code>	Snapshot group. Type: ResetSnapshotAttributesGroup (p. 395)
<code>snapshotId</code>	The ID of the snapshot. Type: <code>xsd:string</code>

RevokeSecurityGroupIngressResponseType

The `RevokeSecurityGroupIngressResponseType` data type.

Ancestors

None

Relevant Operations

- [RevokeSecurityGroupIngress](#)

Contents

The following table describes the elements contained in `RevokeSecurityGroupIngressResponseType`.

Name	Description
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>return</code>	Returns <code>true</code> if the request is successful. Otherwise, returns an error. Type: <code>xsd:boolean</code>

RevokeSecurityGroupIngressType

The `RevokeSecurityGroupIngressType` data type.

Ancestors

None

Relevant Operations

- `RevokeSecurityGroupIngress`

Contents

The following table describes the elements contained in `RevokeSecurityGroupIngressType`.

Name	Description
<code>groupName</code>	Name of the group to modify. Type: <code>xsd:string</code>
<code>ipPermissions</code>	Set of permissions to add to the group. Type: IpPermissionSetType (p. 374)
<code>userId</code>	AWS Access Key ID. Type: <code>xsd:string</code>

RunInstancesResponseType

The `RunInstancesResponseType` data type.

Ancestors

None

Relevant Operations

- `RunInstances`

Contents

The following table describes the elements contained in `RunInstancesResponseType`.

Name	Description
<code>groupSet</code>	Group set. Type: GroupSetType (p. 372)
<code>instancesSet</code>	Instance set. Type: RunningInstancesSetType (p. 401)
<code>ownerId</code>	AWS Access Key ID of the user who owns the reservation. Type: <code>xsd:string</code>
<code>requesterId</code>	ID of the requester. Type: <code>xsd:string</code>
<code>requestId</code>	The ID of the request. Type: <code>xsd:string</code>
<code>reservationId</code>	Unique ID of the reservation. Type: <code>xsd:string</code>

RunInstancesType

The `RunInstancesType` data type.

Ancestors

None

Relevant Operations

- `RunInstances`

Contents

The following table describes the elements contained in `RunInstancesType`.

Name	Description
<code>additionalInfo</code>	Specifies additional information to make available to the instance(s). Type: <code>xsd:string</code>
<code>addressingType</code>	Deprecated. Type: <code>xsd:string</code>
<code>blockDeviceMapping</code>	Specifies how block devices are exposed to the instance. Each mapping is made up of a <code>virtualName</code> and a <code>deviceName</code> . Type: BlockDeviceMappingType (p. 310)

Name	Description
groupSet	Group set. Type: GroupSetType (p. 372)
imageId	Unique ID of a machine image, returned by a call to <code>RegisterImage</code> . Type: <code>xsd:string</code>
instanceType	Specifies the instance type. Type: <code>xsd:string</code>
kernelId	The ID of the kernel with which to launch the instance. Type: <code>xsd:string</code>
keyName	The name of the key pair. Type: <code>xsd:string</code>
maxCount	Maximum number of instances to launch. If the value is more than Amazon EC2 can launch, the largest possible number above <code>minCount</code> will be launched instead. Type: <code>integer</code>
minCount	Minimum number of instances to launch. If the value is more than Amazon EC2 can launch, no instances are launched at all. Type: <code>integer</code>
monitoring	Specifies whether to enable monitoring for the instance. Type: MonitoringInstanceType (p. 380)
placement	Placement item. Type: PlacementRequestType (p. 384)
ramdiskId	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. Type: <code>xsd:string</code>
subnetId	Specifies the subnet ID within which to launch the instance(s) for Amazon Virtual Private Cloud. Type: <code>xsd:string</code>
userData	MIME, Base64-encoded user data. Type: UserDataTypes (p. 405)

RunningInstancesItemType

The `RunningInstancesItemType` data type.

Ancestors

- [RunningInstancesSetType](#) (p. 401)

Relevant Operations

- [DescribeInstances](#)
- [RunInstances](#)

Contents

The following table describes the elements contained in `RunningInstancesItemType`.

Name	Description
<code>amiLaunchIndex</code>	The AMI launch index, which can be used to find this instance within the launch group. For more information, go to the Metadata section of the Amazon Elastic Compute Cloud Developer Guide . Type: <code>xsd:string</code>
<code>dnsName</code>	The public DNS name assigned to the instance. This DNS name is contactable from outside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: <code>xsd:string</code>
<code>imageId</code>	Image ID of the AMI used to launch the instance. Type: <code>xsd:string</code>
<code>instanceId</code>	Unique ID of the instance launched. Type: <code>xsd:string</code>
<code>instanceState</code>	The current state of the instance. Type: InstanceStateType (p. 373)
<code>instanceType</code>	The instance type. Type: <code>xsd:string</code>
<code>ipAddress</code>	Specifies the IP address of the instance. Type: <code>xsd:string</code>
<code>kernelId</code>	Optional. Kernel associated with this instance. Type: <code>xsd:string</code>
<code>keyName</code>	If this instance was launched with an associated key pair, this displays the key pair name. Type: <code>xsd:string</code>
<code>launchTime</code>	The time the instance launched. Type: <code>dateTime</code>
<code>monitoring</code>	Specifies whether monitoring is enabled for the instance. Type: InstanceMonitoringStateType (p. 372)
<code>placement</code>	The location where the instance launched. Type: PlacementResponseType (p. 384)
<code>platform</code>	Platform of the instance (e.g., Windows). Type: <code>xsd:string</code>

Name	Description
privateDnsName	The private DNS name assigned to the instance. This DNS name can only be used inside the Amazon EC2 network. This element remains empty until the instance enters a running state. Type: xsd:string
privateIpAddress	Specifies the private IP address that is assigned to the instance (Amazon VPC). Type: xsd:string
productCodes	Product codes attached to this instance. Type: ProductCodesSetType (p. 386)
ramdiskId	Optional. RAM disk associated with this instance. Type: xsd:string
reason	Reason for the most recent state transition. This might be an empty string. Type: xsd:string
subnetId	Specifies the subnet ID in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string
vpcId	Specifies the VPC in which the instance is running (Amazon Virtual Private Cloud). Type: xsd:string

RunningInstancesSetType

The RunningInstancesSetType data type.

Ancestors

- [ReservationInfoType](#) (p. 392)
- [RunInstancesResponseType](#) (p. 397)

Relevant Operations

- [DescribeInstances](#)
- [RunInstances](#)

Contents

The following table describes the elements contained in RunningInstancesSetType.

Name	Description
item	Running instance set item. Type: RunningInstancesItemType (p. 399)

SecurityGroupItemType

The SecurityGroupItemType data type.

Ancestors

- [SecurityGroupSetType](#) (p. 402)

Relevant Operations

- DescribeSecurityGroups

Contents

The following table describes the elements contained in SecurityGroupItemType.

Name	Description
groupDescription	Description of the security group. Type: xsd:string
groupName	Name of the security group. Type: xsd:string
ipPermissions	Set of IP permissions associated with the security group. Type: IpPermissionSetType (p. 374)
ownerId	AWS Access Key ID of the owner of the security group. Type: xsd:string

SecurityGroupSetType

The SecurityGroupSetType data type.

Ancestors

- [DescribeSecurityGroupsResponseType](#) (p. 355)

Relevant Operations

- DescribeSecurityGroups

Contents

The following table describes the elements contained in SecurityGroupSetType.

Name	Description
item	Information for a security group. Type: SecurityGroupItemType (p. 402)

TerminateInstancesInfoType

The TerminateInstancesInfoType data type.

Ancestors

- [TerminateInstancesType](#) (p. 405)

Relevant Operations

- TerminateInstances

Contents

The following table describes the elements contained in TerminateInstancesInfoType.

Name	Description
item	Information for a instance. Type: TerminateInstancesItemType (p. 403)

TerminateInstancesItemType

The TerminateInstancesItemType data type.

Ancestors

- [TerminateInstancesInfoType](#) (p. 403)

Relevant Operations

- TerminateInstances

Contents

The following table describes the elements contained in TerminateInstancesItemType.

Name	Description
instanceId	Instance ID to terminate. Type: xsd:string

TerminateInstancesResponseInfoType

The TerminateInstancesResponseInfoType data type.

Ancestors

- [TerminateInstancesResponseType](#) (p. 405)

Relevant Operations

- TerminateInstances

Contents

The following table describes the elements contained in TerminateInstancesResponseInfoType.

Name	Description
item	Response item. Type: TerminateInstancesResponseItemType (p. 404)

TerminateInstancesResponseItemType

The TerminateInstancesResponseItemType data type.

Ancestors

- [TerminateInstancesResponseInfoType](#) (p. 404)

Relevant Operations

- TerminateInstances

Contents

The following table describes the elements contained in TerminateInstancesResponseItemType.

Name	Description
instanceId	Instance ID. Type: xsd:string
previousState	Previous state. Type: InstanceStateType (p. 373)
shutdownState	Shutdown state. Type: InstanceStateType (p. 373)

TerminateInstancesResponseType

The TerminateInstancesResponseType data type.

Ancestors

None

Relevant Operations

- TerminateInstances

Contents

The following table describes the elements contained in TerminateInstancesResponseType.

Name	Description
instancesSet	Instances set. Type: TerminateInstancesResponseInfoType (p. 404)
requestId	The ID of the request. Type: xsd:string

TerminateInstancesType

The TerminateInstancesType data type.

Ancestors

None

Relevant Operations

- TerminateInstances

Contents

The following table describes the elements contained in TerminateInstancesType.

Name	Description
instancesSet	Set of instances. Type: TerminateInstancesInfoType (p. 403)

UserDataType

The UserData type data type.

Ancestors

- [RunInstancesType](#) (p. 398)

Relevant Operations

- [RunInstances](#)

Contents

The following table describes the elements contained in UserData type.

Name	Description
data	MIME, Base64-encoded user data. Type: xsd:string

UserIdGroupPairSetType

The UserIdGroupPairSetType data type.

Ancestors

- [IpPermissionType](#) (p. 375)

Relevant Operations

- [AuthorizeSecurityGroupIngress](#)
- [RevokeSecurityGroupIngress](#)
- [DescribeSecurityGroups](#)

Contents

The following table describes the elements contained in UserIdGroupPairSetType.

Name	Description
item	Information for one security group. Type: UserIdGroupPairType (p. 406)

UserIdGroupPairType

The UserIdGroupPairType data type.

Ancestors

- [UserIdGroupPairSetType](#) (p. 406)

Relevant Operations

- AuthorizeSecurityGroupIngress
- RevokeSecurityGroupIngress
- DescribeSecurityGroups

Contents

The following table describes the elements contained in UserIdGroupPairType.

Name	Description
groupName	Name of the security group. Cannot be used when specifying a CIDR IP address. Type: xsd:string
userId	AWS User ID of an account. Cannot be used when specifying a CIDR IP address. Type: xsd:string

API Error Codes

Overview

There are two types of error codes: client and server.

Client error codes suggest that the error was caused by something the client did, such as an authentication failure or an invalid AMI identifier. In the SOAP API, These error codes are prefixed with `Client.` For example: `Client.AuthFailure`. In the Query API, these errors are accompanied by a 400-series HTTP response code.

Server error codes suggest a server-side issue caused the error and should be reported. In the SOAP API, these error codes are prefixed with `Server.` For example: `Server.Unavailable`. In the Query API, these errors are accompanied by a 500-series HTTP response code.

Summary of Client Error Codes

Error Code	Description	Notes
<code>AddressLimitExceeded</code>	User has the maximum number of allowed IP addresses.	Each user has an IP address limit. For new users, this limit is 5. If you need more than 5 Elastic IP addresses, please complete the Amazon EC2 Elastic IP Address Request Form . We will ask you to think through your use case and help us understand your need for additional addresses.
<code>AttachmentLimitExceeded</code>	The limit on the number of Amazon EBS volumes attached to one instance has been exceeded.	
<code>AuthFailure</code>	User not authorized.	You might be trying to run an AMI for which you do not have permission.

Amazon Elastic Compute Cloud API Reference
Summary of Client Error Codes

Error Code	Description	Notes
IncorrectState	Volume is in incorrect state	To attach to an instance, it must be in the 'available' state.
InstanceLimitExceeded	User has max allowed concurrent running instances.	Each user has a concurrent running instance limit. For new users, this limit is 20. If you need more than 20 instances, please complete the Amazon EC2 Instance Request Form and your request will be considered.
InvalidAMIAttributeItemValue	The value of an item added to, or removed from, an image attribute is invalid.	If you are specifying a user Id, check that it is in the form of an AWS account ID.
InvalidAMIID.Malformed	Specified AMI ID is not valid.	
InvalidAMIID.NotFound	Specified AMI ID does not exist.	
InvalidAMIID.Unavailable	Specified AMI ID has been deregistered and is no longer available.	
InvalidAttachment.NotFound	The instance cannot detach from a volume to which it is not attached.	
InvalidDevice.InUse	The device to which you are trying to attach (i.e. /dev/sdh) is already in use on the instance.	
InvalidInstanceID.Malformed	Specified instance ID is not valid.	
InvalidInstanceID.NotFound	Specified instance ID does not exist.	
InvalidKeyPair.NotFound	Specified key pair name does not exist.	
InvalidKeyPair.Duplicate	Attempt to create a duplicate key pair.	
InvalidGroup.NotFound	Specified group name does not exist.	
InvalidGroup.Duplicate	Attempt to create a duplicate group.	

Amazon Elastic Compute Cloud API Reference
Summary of Client Error Codes

Error Code	Description	Notes
<code>InvalidGroup.InUse</code>	Specified group cannot be deleted because it is in use.	
<code>InvalidGroup.Reserved</code>	Specified group name is a reserved name.	
<code>InvalidManifest</code>	Specified AMI has an unparsable Manifest.	
<code>InvalidParameterCombination</code>	<code>RunInstances</code> was called with <code>minCount</code> and <code>maxCount</code> set to 0 or <code>minCount</code> > <code>maxCount</code> .	
<code>InvalidParameterValue</code>	The value supplied for a parameter was invalid.	Requests that could cause this error include (for example) supplying an invalid image attribute to the <code>DescribeImageAttribute</code> request or an invalid version or encoding value for the <code>userData</code> in a <code>RunInstances</code> request.
<code>InvalidPermission.Duplicate</code>	Attempt to authorize a permission that has already been authorized.	
<code>InvalidPermission.Malformed</code>	Specified permission is invalid.	
<code>InvalidReservationID.Malformed</code>	Specified reservation ID is invalid.	
<code>InvalidReservationID.NotFound</code>	Specified reservation ID does not exist.	
<code>InvalidSnapshotID.Malformed</code>	The snapshot ID that was passed as an argument was malformed.	
<code>InvalidSnapshotID.NotFound</code>	The specified snapshot does not exist.	
<code>InvalidUserID.Malformed</code>	The user ID is neither in the form of an AWS account ID or one of the special values accepted by the owner or <code>executableBy</code> flags in the <code>DescribeImages</code> call.	
<code>InvalidReservedInstancesId</code>	Reserved Instances ID not found.	

Amazon Elastic Compute Cloud API Reference
Summary of Client Error Codes

Error Code	Description	Notes
InvalidReservedInstancesOfferingId	Reserved Instances Offering ID not found.	
InvalidVolumeID.Malformed	The volume ID that was passed as an argument was malformed.	
InvalidVolumeID.NotFound	The volume specified does not exist.	
InvalidVolumeID.Duplicate	The volume already exists in the system.	
InvalidVolumeID.ZoneMismatch	The specified volume ID and instance ID are in different Availability Zones.	
InvalidZone.NotFound	The specified zone does not exist.	
InsufficientReservedInstancesCapacity	Insufficient Reserved Instances capacity.	
NonEBSInstance	The instance specified does not support EBS.	Please restart the instance and try again. This will ensure that the code is run on an instance with updated code.
PendingSnapshotLimitExceeded	The limit on the number of Amazon EBS snapshots in the pending state has been exceeded.	
ReservedInstancesLimitExceeded	Your current quota does not allow you to purchase the required number of reserved instances.	
SnapshotLimitExceeded	The limit on the number of Amazon EBS snapshots has been exceeded.	
UnknownParameter	An unknown or unrecognized parameter was supplied.	Requests that could cause this error include supplying a misspelled parameter or a parameter that is not supported for the specified API version.
VolumeLimitExceeded	The limit on the number of Amazon EBS volumes has been exceeded.	

Summary of Server Error Codes

Error Code	Description	Notes
InternalError	Internal Error.	This error should not occur. If this persists, please contact us with details by posting a message on the AWS forums .
InsufficientAddressCapacity	Not enough available addresses to satisfy your minimum request.	Reduce the number of addresses you are requesting or wait for additional capacity to become available.
InsufficientInstanceCapacity	Not enough available instances to satisfy your minimum request.	Reduce the number of instances in your request or wait for additional capacity to become available.
InsufficientReservedInstanceCapacity	Not enough available Reserved Instances to satisfy your minimum request.	Reduce the number of Reserved Instances in your request or wait for additional capacity to become available.
Unavailable	The server is overloaded and cannot handle the request.	

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 <i>instance store</i> .
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 <i>Amazon machine image</i> .
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 <i>Amazon DevPay Developer Guide</i> .
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	A call-out is a number in the body text to give you a visual reference. The reference point is for further discussion elsewhere. You can use this resource regularly. 1
Code in text	Inline code samples (including XML) and commands are identified with a special font. You can use the command <code>java -version</code>.
Code blocks	Blocks of sample code are set apart from the body and marked accordingly. <pre># ls -l /var/www/html/index.html -rw-rw-r-- 1 root root 1872 Jun 21 09:33 /var/www/html/ index.html # date Wed Jun 21 09:33:42 EDT 2006</pre>
Emphasis	Unusual or important words and phrases are marked with a special font. You <i>must</i> sign up for an account before you can use the service.
Internal cross references	References to a section in the same document are marked. See Document Conventions (p. 416).
Logical values, constants, and regular expressions, abstracta	A special font is used for expressions that are important to identify, but are not code. If the value is <code>null</code>, the returned response will be <code>false</code>.

Convention	Description/Example
Product and feature names	Named AWS products and features are identified on first use. Create an <i>Amazon Machine Image</i> (AMI).
Operations	In-text references to operations. Use the <code>GetHITResponse</code> operation.
Parameters	In-text references to parameters. 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 MyPassword .
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. % ec2-register <your-s3-bucket>/image.manifest See also Symbol Conventions (p. 418) .

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. <code>% data = hdfread (start stride edge)</code>
Optional parameters XML variable text	[square brackets]	Within a code description, square brackets denote completely optional commands or parameters. <code>% sed [-n, -quiet]</code> Use square brackets in XML examples to differentiate them from tags. <code><CustomerId>[ID]</CustomerId></code>
Variables	<arrow brackets>	Within a code sample, arrow brackets denote a variable that must be replaced with a valid value. <code>% ec2-register <your-s3-bucket>/image.manifest</code>

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