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Welcome

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The topic for each action shows the Query API request parameters and the XML response. You can also view the XML request elements in the WSDL.

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- Amazon Elastic Compute Cloud Command Line Reference
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AllocateAddress

Description

Acquires an Elastic IP address for use with your AWS account.

An Elastic IP address is for use either in the EC2-Classic platform or in a VPC. For more information, see Elastic IP Addresses in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

Domain

Set to vpc to allocate the address for use with instances in a VPC.
Type: String
Valid values: vpc
Default: The address is for use in EC2-Classic.
Required: Conditional
Condition: Required when allocating the address for use in a VPC.

Response Elements

The following elements are returned in an AllocateAddressResponse element.

requestId

The ID of the request.
Type: xsd:string

publicIp

The Elastic IP address.
Type: xsd:string

domain

Specifies whether this Elastic IP address is for use with instances in EC2-Classic (standard) or instances in a VPC.
Type: xsd:string
Valid values: standard | vpc

allocationId

[EC2-VPC] The ID that AWS assigns to represent the allocation of the Elastic IP address for use with a VPC.
Type: xsd:string

Examples

Example Request

This example returns an Elastic IP address for use in EC2-Classic.

https://ec2.amazonaws.com/?Action=AllocateAddress
&AUTHPARAMS
Example Response

```xml
<AllocateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <publicIp>192.0.2.1</publicIp>
  <domain>standard</domain>
</AllocateAddressResponse>
```

Example Request

This example returns an Elastic IP address for use in a VPC.

```
https://ec2.amazonaws.com/?Action=AllocateAddress
Domain=vpc
&AUTHPARAMS
```

Example Response

```xml
<AllocateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <publicIp>198.51.100.1</publicIp>
  <domain>vpc</domain>
  <allocationId>eipalloc-5723d13e</allocationId>
</AllocateAddressResponse>
```

Related Actions

- DescribeAddresses (p. 169)
- ReleaseAddress (p. 383)
- AssociateAddress (p. 16)
- DisassociateAddress (p. 336)
AssignPrivateIpAddresses

Description

Assigns one or more secondary private IP addresses to the specified network interface. You can specify one or more specific secondary IP addresses, or you can specify the number of secondary IP addresses to be automatically assigned within the subnet's CIDR block range. The number of secondary IP addresses that you can assign to an instance varies by instance type. For information about instance types, see Available Instance Types in the Amazon Elastic Compute Cloud User Guide. For more information about Elastic IP addresses, see Elastic IP Addresses in the Amazon Elastic Compute Cloud User Guide.

This action is available only in EC2-VPC.

Request Parameters

NetworkInterfaceId
The network interface to which the IP address is assigned.
Type: String
Default: None
Required: Yes

PrivateIpAddress.n
The IP address to be assigned as a secondary private IP address to the network interface.
This option can be used multiple times to assign multiple secondary private IP addresses to the network interface.
Type: AssignPrivateIpAddressesSetItemRequestType (p. 444)
Default: None
Required: Conditional
Condition: You cannot specify this parameter when also specifying SecondaryPrivateIpAddressCount.

SecondaryPrivateIpAddressCount
The number of secondary IP addresses to assign to the network interface.
Type: Integer
Default: None
Required: Conditional
Condition: You cannot specify this parameter when also specifying PrivateIpAddress.n.

AllowReassignment
Specifies whether to allow an IP address that is already assigned to another network interface or instance to be reassigned to the specified network interface.
Type: Boolean
Default: False
Required: No

Response Elements

The following elements are returned in an AssignPrivateIpAddressesResponse element.

requestId
The ID of the request.
Type: xsd:string
Returns `true` if the request succeeds. Otherwise, returns an error.
Type: `xsd:boolean`

**Examples**

**Example Request**

This example assigns two secondary private IP addresses (10.0.2.1 and 10.0.2.11) to the specified network interface.

```xml
https://ec2.amazonaws.com/?Action=AssignPrivateIpAddresses
&NetworkInterfaceId=eni-d83388b1
&PrivateIpAddress.0=10.0.2.1
&PrivateIpAddress.1=10.0.2.11
&AUTHPARAMS
```

**Example Response**

```xml
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</AssignPrivateIpAddresses>
```

**Example Request**

This example assigns two secondary private IP addresses to the network interface. The IP addresses are automatically assigned from the available IP addresses within the subnet's CIDR block range.

```xml
https://ec2.amazonaws.com/?Action=AssignPrivateIpAddresses
&NetworkInterfaceId=eni-d83388b1
&SecondaryPrivateIpAddressCount=2
&AUTHPARAMS
```

**Example Response**

```xml
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</AssignPrivateIpAddresses>
```

**Related Actions**

- `DescribeAddresses` (p. 169)
- `ReleaseAddress` (p. 383)
- `AssociateAddress` (p. 16)
- `DisassociateAddress` (p. 336)
AssociateAddress

Description

Associates an Elastic IP address with an instance or a network interface. For more information about Elastic IP addresses, see Elastic IP Addresses in the Amazon Elastic Compute Cloud User Guide.

[EC2-Classic, default VPC] If the Elastic IP address is already associated with a different instance, it is disassociated from that instance and associated with the specified instance.

[EC2-VPC] If you don't specify a private IP address, the Elastic IP address is associated with the primary IP address. If the Elastic IP address is already associated with a different instance or a network interface, you get an error unless you specify the AllowReassociation parameter.

This is an idempotent operation. If you enter it more than once, Amazon EC2 does not return an error.

Request Parameters

PublicIp
The Elastic IP address.
Type: String
Default: None
Required: Conditional
Condition: Required for Elastic IP addresses for EC2-Classic.

InstanceId
The ID of the instance.
Type: String
Default: None
Required: Conditional
Condition: Required for EC2-Classic. For a VPC, you can specify either an instance ID or a network interface ID, but not both.

AllocationId
[EC2-VPC] The allocation ID.
Type: String
Default: None
Required: Conditional
Condition: Required for a VPC.

NetworkInterfaceId
[EC2-VPC] The ID of the network interface. Association fails when specifying an instance ID unless exactly one interface is attached.
Type: String
Default: None
Required: Conditional
Condition: If the instance has more than one network interface, you must specify a network interface ID.

PrivateIpAddress
[EC2-VPC] The primary or secondary private IP address to associate with the Elastic IP address. If no private IP address is specified, the Elastic IP address is associated with the primary private IP address.
Type: String
Default: None
Required: No

**AllowReassociation**

[EC2-VPC] Allows an Elastic IP address that is already associated with an instance or network interface to be re-associated with the specified instance or network interface. If the Elastic IP address is associated, and this option is not specified, the operation fails.

Type: Boolean
Default: false if not specified
Required: No

**Response Elements**

The following elements are returned in an `AssociateAddressResponse` element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **return**
  - Returns true if the request succeeds. Otherwise, returns an error.
  - Type: xsd:boolean

- **associationId**
  - [EC2-VPC] The ID that represents the association of the Elastic IP address with an instance.
  - Type: xsd:string

**Examples**

**Example Request**

This example associates an Elastic IP address with an instance in EC2-Classic.

https://ec2.amazonaws.com/?Action=AssociateAddress
&InstanceId=i-2ea64347
&PublicIp=192.0.2.1
&AUTHPARAMS

**Example Response**

```xml
<AssociateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</AssociateAddressResponse>
```

**Example Request**

This example associates a Elastic IP address with an instance in a VPC and allows the Elastic IP address to be re-assigned to this instance if it's currently assigned to another instance or network interface.

https://ec2.amazonaws.com/?Action=AssociateAddress
&InstanceId=i-4fd2431a
&AllocationId=eipalloc-5723d13e
Related Actions

- AllocateAddress (p. 12)
- DescribeAddresses (p. 169)
- ReleaseAddress (p. 383)
- DisassociateAddress (p. 336)
**AssociateDhcpOptions**

**Description**

Associates a set of DHCP options (that you've previously created) with the specified VPC. Or, associates no DHCP options with the VPC.

After you associate the options with the VPC, any existing instances and all new instances that you launch in that VPC use the options. You don’t need to restart or relaunch the instances. They automatically pick up the changes within a few hours, depending on how frequently the instance renews its DHCP lease. If you want, you can explicitly renew the lease using the operating system on the instance.

For more information about the supported DHCP options and using them with a VPC, see Using DHCP Options in Your VPC in the Amazon Virtual Private Cloud User Guide.

**Request Parameters**

- **DhcpOptionsId**
  - The ID of the DHCP options you want to associate with the VPC, or default if you want the VPC to use no DHCP options.
  - Type: String
  - Default: None
  - Required: Yes

- **VpcId**
  - The ID of the VPC to associate the DHCP options with.
  - Type: String
  - Default: None
  - Required: Yes

**Response Elements**

The following elements are returned in an AssociateDhcpOptionsResponse element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **return**
  - Returns true if the request succeeds. Otherwise, returns an error.
  - Type: xsd:boolean

**Examples**

**Example Request**

This example associates the DHCP options with ID dopt-7a8b9c2d with the VPC with ID vpc-1a2b3c4d.

```
https://ec2.amazonaws.com/?Action=AssociateDhcpOptions&DhcpOptionsId=dopt-7a8b9c2d
```
Example Response

```xml
<AssociateDhcpOptionsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"
    requestId="7a62c49f-347e-4fc4-9331-6e8eEXAMPLE">
    <return>true</return>
</AssociateDhcpOptionsResponse>
```

Example Request

This example changes the VPC with ID vpc-1a2b3c4d to use no DHCP options.

```
https://ec2.amazonaws.com/?Action=AssociateDhcpOptions
&DhcpOptionsId=default
&VpcId=vpc-1a2b3c4d
&AUTHPARAMS
```

Example Response

```xml
<AssociateDhcpOptionsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"
    requestId="7a62c49f-347e-4fc4-9331-6e8eEXAMPLE">
    <return>true</return>
</AssociateDhcpOptionsResponse>
```

Related Actions

- CreateDhcpOptions (p. 60)
- DescribeDhcpOptions (p. 184)
- DeleteDhcpOptions (p. 128)
AssociateRouteTable

Description

Associates a subnet with a route table. The subnet and route table must be in the same VPC. This association causes traffic originating from the subnet to be routed according to the routes in the route table. The action returns an association ID, which you need if you want to disassociate the route table from the subnet later. A route table can be associated with multiple subnets.

For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

Request Parameters

RouteTableId
The ID of the route table.
Type: String
Default: None
Required: Yes

SubnetId
The ID of the subnet.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in an AssociateRouteTableResponse element.

requestId
The ID of the request.
Type: xsd:string

associationId
The ID that AWS provides to represent the association of the route table and the subnet.
Type: xsd:string

Examples

Example Request

This example associates a route table with ID rtb-e4ad488d with a subnet with ID subnet-15ad487c.

https://ec2.amazonaws.com/?Action=AssociateRouteTable
&RouteTableId=rtb-e4ad488d
&SubnetId=subnet-15ad487c
Example Response

```xml
<AssociateRouteTableResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <associationId>rtbassoc-f8ad4891</associationId>
</AssociateRouteTableResponse>
```

Related Actions

- CreateRouteTable (p. 97)
- DisassociateRouteTable (p. 338)
- DescribeRouteTables (p. 266)
- ReplaceRouteTableAssociation (p. 392)
AttachInternetGateway

Description

Attaches an Internet gateway to a VPC, enabling connectivity between the Internet and the VPC. For more information about your VPC and Internet gateway, see the Amazon Virtual Private Cloud User Guide.

Request Parameters

**InternetGatewayId**
- The ID of the Internet gateway.
- Type: String
- Default: None
- Required: Yes

**VpcId**
- The ID of the VPC.
- Type: String
- Default: None
- Required: Yes

Response Elements

The following elements are returned in an AttachInternetGatewayResponse element.

**requestId**
- The ID of the request.
- Type: xsd:string

**return**
- Returns true if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request

The example attaches the Internet gateway with ID igw-eaad4883 to the VPC with ID vpc-11ad4878.

https://ec2.amazonaws.com/?Action=AttachInternetGateway
&InternetGatewayId=igw-eaad4883
&VpcId=vpc-11ad4878
&AUTHPARAMS

Example Response

<AttachInternetGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01">
<requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
<return>true</return>
</AttachInternetGatewayResponse>

Related Actions

- CreateInternetGateway (p. 69)
- DeleteInternetGateway (p. 130)
- DetachInternetGateway (p. 326)
- DescribeInternetGateways (p. 225)
**AttachNetworkInterface**

**Description**
Attaches a network interface to an instance.

**Request Parameters**

*NetworkInterfaceId*
- The ID of the network interface to attach.
  - Type: String
  - Default: None
  - Required: Yes

*InstanceId*
- The ID of the instance to attach to the network interface.
  - Type: String
  - Default: None
  - Required: Yes

*DeviceIndex*
- The index of the device for the network interface attachment.
  - Type: Integer
  - Default: None
  - Required: Yes

**Response Elements**
The following elements are returned in an `AttachNetworkInterfaceResponse` element.

*requestId*
- The ID of the attachment request.
  - Type: xsd:string

*attachmentId*
- The ID of the attachment.
  - Type: xsd:string

**Examples**

**Example Request**
This example attaches an elastic network interface (ENI) `eni-ffda3197` to the specified instance `i-9cc316fe`.

```
https://ec2.amazonaws.com/?Action=AttachNetworkInterface
&DeviceIndex=1
&InstanceId=i-9cc316fe
&NetworkInterfaceId=eni-ffda3197
&AUTHPARAMS
```
Example Response

```xml
<AttachNetworkInterfaceResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>ace8cd1e-e685-4e44-90fb-92014d907212</requestId>
  <attachmentId>eni-attach-d94b09b0</attachmentId>
</AttachNetworkInterfaceResponse>
```

Related Actions

- DetachNetworkInterface (p. 328)
- CreateNetworkInterface (p. 78)
- DeleteNetworkInterface (p. 137)
- DescribeNetworkInterfaceAttribute (p. 235)
- DescribeNetworkInterfaces (p. 237)
- ModifyNetworkInterfaceAttribute (p. 363)
- ResetNetworkInterfaceAttribute (p. 409)
AttachVolume

Description

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

For a list of supported device names, see Attaching the Volume to an Instance. Any device names that aren't reserved for instance store volumes can be used for Amazon EBS volumes. For more information, see Amazon EC2 Instance Store.

**Note**

If a volume has an AWS Marketplace product code:

- The volume can only be attached to the root device of a stopped instance.
- You must be subscribed to the AWS Marketplace code that is on the volume.
- The configuration (instance type, operating system) of the instance must support that specific AWS Marketplace code. For example, you cannot take a volume from a Windows instance and attach it to a Linux instance.
- AWS Marketplace product codes are copied from the volume to the instance.


For details on how to use the AWS Marketplace, see [AWS Marketplace](https://aws.amazon.com/marketplace).

Request Parameters

**VolumeId**

The ID of the Amazon EBS volume. The volume and instance must be within the same Availability Zone.

Type: String
Default: None
Required: Yes

**InstanceId**

The ID of the instance. The instance must be running.

Type: String
Default: None
Required: Yes

**Device**

The device name as exposed to the instance (for example, /dev/sdh, or xvdh).

Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in an AttachVolumeResponse element.

**requestId**

The ID of the request.

Type: xsd:string
volumeId
   The ID of the volume.
   Type: xsd:string

instanceId
   The ID of the instance.
   Type: xsd:string

device
   The device name as exposed to the instance (for example, /dev/sdh, or xvdh).
   Type: xsd:string

status
   The volume state.
   Type: xsd:string
   Valid values: attaching | attached | detaching | detached

attachTime
   The time stamp when the attachment initiated.
   Type: xsd:dateTime

Examples

Example Request

This example attaches volume vol-1a2b3c4d to instance i-1a2b3c4d and exposes it as /dev/sdh. For information on standard storage locations, see the Amazon Elastic Compute Cloud User Guide.

https://ec2.amazonaws.com/?Action=AttachVolume
&VolumeId=vol-1a2b3c4d
&InstanceId=i-1a2b3c4d
&Device=/dev/sdh
&AUTHPARAMS

Example Response

<AttachVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
   <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
   <volumeId>vol-1a2b3c4d</volumeId>
   <instanceId>i-1a2b3c4d</instanceId>
   <device>/dev/sdh</device>
   <status>attaching</status>
   <attachTime>YYYY-MM-DDTHH:MM:SS.000Z</attachTime>
</AttachVolumeResponse>

Related Actions

- CreateVolume (p. 110)
- DeleteVolume (p. 155)
- DescribeVolumes (p. 303)
- DetachVolume (p. 330)
AttachVpnGateway

Description

Attaches a virtual private gateway to a VPC. For more information, see Adding a Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

VpnGatewayId
  The ID of the virtual private gateway.
  Type: String
  Default: None
  Required: Yes

VpcId
  The ID of the VPC.
  Type: String
  Default: None
  Required: Yes

Response Elements

The following elements are returned in an AttachVpnGatewayResponse element.

requestId
  The ID of the request.
  Type: xsd:string

attachment
  Information about the attachment.
  Type: AttachmentType (p. 445)

Examples

Example Request

This example attaches the virtual private gateway with ID vgw-8db04f81 to the VPC with ID vpc-1a2b3c4d.

https://ec2.amazonaws.com/?Action=AttachVpnGateway
&VpnGatewayId=vgw-8db04f81
&VpcId=vpc-1a2b3c4d
&AUTHPARAMS

Example Response

<AttachVpnGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <attachment>
  
</AttachVpnGatewayResponse>
<vpcId>vpc-1a2b3c4d</vpcId>
<state>attaching</state>
</attachment>
</AttachVpnGatewayResponse>

Related Actions

- CreateVpnGateway (p. 124)
- DescribeVpnGateways (p. 323)
- DetachVpnGateway (p. 332)
- CreateVpc (p. 113)
- CreateVpnConnection (p. 115)
AuthorizeSecurityGroupEgress

Description

Adds one or more egress rules to a security group for use with a VPC. Specifically, this action permits instances to send traffic to one or more destination CIDR IP address ranges, or to one or more destination security groups for the same VPC.

Important
You can have up to 50 rules per security group (covering both ingress and egress rules).

A security group is for use with instances either in the EC2-Classic platform or in a specific VPC. This action doesn't apply to security groups for EC2-Classic. For more information, see Security Groups for Your VPC in the Amazon Virtual Private Cloud User Guide.

Each rule consists of the protocol (for example, TCP), plus either a CIDR range or a source group. For the TCP and UDP protocols, you must also specify the destination port or port range. For the ICMP protocol, you must also specify the ICMP type and code. You can use -1 for the type or code to mean all types or all codes.

Rule changes are propagated to affected instances as quickly as possible. However, a small delay might occur.

Request Parameters

GroupId
The ID of the security group to modify.
Type: String
Default: None
Required: Yes

IpPermissions.n.IpProtocol
The IP protocol name or number (see Protocol Numbers).

When you call DescribeSecurityGroups, the protocol value returned is the number. Exception: For TCP, UDP, and ICMP, the value returned is the name (for example, tcp, udp, or icmp).
Type: String
Valid values: tcp | udp | icmp or any protocol number (see Protocol Numbers). Use -1 to specify all.
Required: Yes

IpPermissions.n.FromPort
The start of port range for the TCP and UDP protocols, or an ICMP type number. For the ICMP type number, you can use -1 to specify all ICMP types.
Type: Integer
Default: None
Required: Conditional
Condition: Required for ICMP and any protocol that uses ports

IpPermissions.n.ToPort
The end of port range for the TCP and UDP protocols, or an ICMP code number. For the ICMP code number, you can use -1 to specify all ICMP codes for the given ICMP type.
Type: Integer
Default: None
Required: Conditional
Condition: Required for ICMP and any protocol that uses ports
IpPermissions.n.Groups.m.GroupId
The name of the destination security group. Cannot be used when specifying a CIDR IP address.
Type: String
Default: None
Condition: Required if modifying access for one or more destination security groups.
Required: Conditional

IpPermissions.n.IpRanges.m.CidrIp
The CIDR range. Cannot be used when specifying a destination security group.
Type: String
Default: None
Constraints: Valid CIDR IP address range.
Required: Conditional
Condition: Required if modifying access for one or more IP address ranges.

Response Elements
The following elements are returned in an AuthorizeSecurityGroupEgressResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request
This example grants your security group with the ID sg-1a2b3c4d access to the 192.0.2.0/24 and 198.51.100.0/24 address ranges on TCP port 80.

&GroupId=sg-1a2b3c4d
&IpPermissions.1.IpProtocol=tcp
&IpPermissions.1.FromPort=80
&IpPermissions.1.ToPort=80
&IpPermissions.1.IpRanges.1.CidrIp=192.0.2.0/24
&IpPermissions.1.IpRanges.2.CidrIp=198.51.100.0/24

Example Request
This example grants your security group with the ID sg-1a2b3c4d access to your security group with ID sg-9a8d7f5c on TCP port 1433.

&GroupId=sg-1a2b3c4d
&IpPermissions.1.IpProtocol=tcp
&lt;AuthorizeSecurityGroupEgressResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"
  &lt;requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE&lt;/requestId>
  &lt;return>true&lt;/return&gt;
&lt;/AuthorizeSecurityGroupEgressResponse&gt;

Related Actions

- CreateSecurityGroup (p. 99)
- DescribeSecurityGroups (p. 270)
- RevokeSecurityGroupEgress (p. 413)
- AuthorizeSecurityGroupIngress (p. 34)
- RevokeSecurityGroupIngress (p. 416)
- DeleteSecurityGroup (p. 145)
AuthorizeSecurityGroupIngress

Description

Adds one or more ingress rules to a security group.

Important

EC2-Classic: You can have up to 100 rules per group.
EC2-VPC: You can have up to 50 rules per group (covering both ingress and egress rules).

Rule changes are propagated to instances within the security group as quickly as possible. However, a small delay might occur.

A security group is for use with instances either in the EC2-Classic platform or in a specific VPC. For more information, see Amazon EC2 Security Groups in the Amazon Elastic Compute Cloud User Guide and Security Groups for Your VPC in the Amazon Virtual Private Cloud User Guide.

[EC2-Classic] This action gives one or more CIDR IP address ranges permission to access a security group in your account, or gives one or more security groups (called the source groups) permission to access a security group for your account. A source group can be for your own AWS account, or another.

[EC2-VPC] This action gives one or more CIDR IP address ranges permission to access a security group in your VPC, or gives one or more other security groups (called the source groups) permission to access a security group for your VPC. The security groups must all be for the same VPC.

Request Parameters

GroupId

The ID of the security group. The security group must belong to your AWS account.
Type: String
Default: None
Required: Conditional
Condition: Required for EC2-VPC; can be used instead of GroupName otherwise

GroupName

The name of the security group.
Type: String
Default: None
Required: Conditional
Condition: For EC2-Classic, can be used instead of GroupId.

IpPermissions.n.IpProtocol

The IP protocol name or number (see Protocol Numbers). For EC2-Classic, security groups can have rules only for TCP, UDP, and ICMP. For EC2-VPC, security groups can have rules assigned to any protocol number.

When you call DescribeSecurityGroups, the protocol value returned is the number. Exception: For TCP, UDP, and ICMP, the value returned is the name (for example, tcp, udp, or icmp).

Type: String
Valid values for EC2-Classic: tcp | udp | icmp or the corresponding protocol number (6 | 17 | 1).
Valid values for EC2-VPC: tcp | udp | icmp or any protocol number (see Protocol Numbers). Use -1 to specify all.
Required: Conditional
Condition: Required for EC2-VPC
**Response Elements**

The following elements are returned in an `AuthorizeSecurityGroupIngressResponse` element.

**requestId**
- The ID of the request.
  - Type: xsd:string
**Example Request**

This example is for an EC2 security group. The request grants the 192.0.2.0/24 and 198.51.100.0/24 address ranges access to your `websrv` security group on TCP port 80.

```plaintext
https://ec2.amazonaws.com/?Action=AuthorizeSecurityGroupIngress
&GroupName=websrv
&IpPermissions.1.IpProtocol=tcp
&IpPermissions.1.FromPort=80
&IpPermissions.1.ToPort=80
&IpPermissions.1.IpRanges.1.CidrIp=192.0.2.0/24
&IpPermissions.1.IpRanges.2.CidrIp=198.51.100.0/24
&AUTHPARAMS
```

**Example Request**

This example is for an EC2 security group. The request grants TCP port 80 access from the source group called `OtherAccountGroup` (in AWS account 111122223333) to your `websrv` security group.

```plaintext
https://ec2.amazonaws.com/?Action=AuthorizeSecurityGroupIngress
&GroupName=websrv
&IpPermissions.1.IpProtocol=tcp
&IpPermissions.1.FromPort=80
&IpPermissions.1.ToPort=80
&IpPermissions.1.Groups.1.GroupName=OtherAccountGroup
&IpPermissions.1.Groups.1.UserId=111122223333
&AUTHPARAMS
```

**Example Request**

This example is for a security group for EC2-VPC. The request grants TCP port 80 access from the source group called `OtherGroupInMyVPC` (sg-2a2b3c4d) to your `VpcWebServers` security group (sg-1a2b3c4d). The request requires the group IDs and not the group names. Your AWS account ID is 111122223333.

```plaintext
https://ec2.amazonaws.com/?Action=AuthorizeSecurityGroupIngress
&GroupId=sg-1a2b3c4d
&IpPermissions.1.IpProtocol=tcp
&IpPermissions.1.FromPort=80
&IpPermissions.1.ToPort=80
&IpPermissions.1.Groups.1.GroupId=sg-2a2b3c4d
&IpPermissions.1.Groups.1.UserId=111122223333
&AUTHPARAMS
```
Example Request

This example is for an EC2 security group. The request grants your local system the ability to use SSH (port 22) to connect to any instance in the default security group.

```
https://ec2.amazonaws.com/
?Action=AuthorizeSecurityGroupIngress
&GroupName=default
&IpPermissions.1.IpProtocol=tcp
&IpPermissions.1.FromPort=22
&IpPermissions.1.ToPort=22
&IpPermissions.1.IpRanges.1.CidrIp=your-local-system's-public-ip-address/32
```

Example Request

This example is for an EC2 security group. The request gives your local system the ability to use Remote Desktop (port 3389) to connect to any instance in the default security group.

```
https://ec2.amazonaws.com/
?Action=AuthorizeSecurityGroupIngress
&GroupName=default
&IpPermissions.1.IpProtocol=tcp
&IpPermissions.1.FromPort=3389
&IpPermissions.1.ToPort=3389
&IpPermissions.1.IpRanges.1.CidrIp=your-local-system's-public-ip-address/32
```

Example Response

```
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</AuthorizeSecurityGroupIngressResponse>
```

Related Actions

- CreateSecurityGroup (p. 99)
- DescribeSecurityGroups (p. 270)
- RevokeSecurityGroupIngress (p. 416)
- DeleteSecurityGroup (p. 145)
BundleInstance

Description

Bundles an Amazon instance store-backed Windows instance.

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

Note
This procedure is not applicable for Linux/UNIX instances or Windows instances that are backed by Amazon EBS.

Request Parameters

InstanceId
The ID of the instance to bundle.
Type: String
Default: None
Required: Yes

Storage.S3.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: String
Default: None
Required: Yes

Storage.S3.Prefix
The beginning of the file name of the AMI.
Type: String
Default: None
Required: Yes

Storage.S3.AWSAccessKeyId
The Access Key ID of the owner of the Amazon S3 bucket.
Type: String
Default: None
Required: Yes

Storage.S3.UploadPolicy
A Base64-encoded Amazon S3 upload policy that gives Amazon EC2 permission to upload items into Amazon S3 on your behalf.
Type: String
Default: None
Required: Yes

Storage.S3.UploadPolicySignature
The signature of the Base64 encoded JSON document.
Type: String
Default: None
Required: 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, see the sections about policy construction and signatures in the Amazon Simple Storage Service Developer Guide.

expiration
The expiration of the policy. We recommend 12 hours or longer.
Required: Yes

conditions
A list of restrictions on what can be uploaded to Amazon S3. Must contain the bucket and ACL conditions in this table.
Required: Yes

bucket
The bucket to store the AMI.
Required: Yes

acl
This must be set to ec2-bundle-read.
Required: Yes

Response Elements

The following elements are returned in a BundleInstanceResponse element.

requestId
The ID of the request.
Type: xsd:string

bundleInstanceTask
The bundle task.
Type: BundleInstanceTaskType (p. 449)

Examples

Example Request

This example bundles the i-e468cd8d instance.

https://ec2.amazonaws.com/?Action=BundleInstance
&InstanceId=i-e468cd8d
&Storage.S3.AWSAccessKeyId='AKIAIOSFODNN7EXAMPLE'
&Storage.S3.Bucket=myawsbucket
&Storage.S3.Prefix=winami
&Storage.S3.UploadPolicy=eyJleHBpcmF0aW9uIjogIjIwMDgtMDgtMzBUMDg6NDk6MDlaIiwgIiRl
rZXkiLCAibXktbmV3LWltdWd1L10seyJhY2wiOiAiZWRldW1lbmRsZWFkIn1dfEXAMPLE
&Storage.S3.UploadPolicySignature=fh5tyyyQD8W4C0Ethj3n1GNEXAMPLE
&AUTHPARAMS
Example Response

```xml
<BundleInstanceResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <bundleInstanceTask>
    <instanceId>i-12345678</instanceId>
    <bundleId>bun-cla540a8</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>myawsbucket</bucket>
        <prefix>winami</prefix>
      </S3>
    </storage>
  </bundleInstanceTask>
</BundleInstanceResponse>
```

Related Actions

- CancelBundleTask (p. 41)
- DescribeBundleTasks (p. 176)
- CreateImage (p. 63)
CancelBundleTask

Description
Cancels a bundling operation for an instance store-backed Windows instance.

Request Parameters

**BundleId**
The ID of the bundle task.
Type: String
Default: None
Required: Yes

Response Elements
The following elements are returned in a CancelBundleTaskResponse element.

**requestId**
The ID of the request.
Type: xsd:string

**bundleInstanceTask**
The bundle task.
Type: BundleInstanceTaskType (p. 449)

Examples

Example Request
This example cancels the bun-cla322b9 bundle task.

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

Example Response

```xml
<CancelBundleTaskResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">  
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <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/>
  </bundleInstanceTask>
</CancelBundleTaskResponse>
```
Related Actions

- BundleInstance (p. 38)
- DescribeBundleTasks (p. 176)
CancelConversionTask

Description
Cancels an active conversion task. The task can be the import of an instance or volume. The action
removes all artifacts of the conversion, including a partially uploaded volume or instance. If the conversion
is complete or is in the process of transferring the final disk image, the command fails and returns an
exception.

For more information, see Using the Command Line Tools to Import Your Virtual Machine to Amazon
EC2 in the Amazon Elastic Compute Cloud User Guide.

Request Parameters
ConversionTaskId
The ID of the task.
Type: String
Default: None
Required: Yes

Response Elements
requestId
The ID of the request.
Type: xsd:string
return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples
Example Request
This example cancels the conversion task with ID import-i-fh95npoc.

https://ec2.amazonaws.com/?Action=CancelConversionTask
&ConversionTaskId=import-i-fh95npoc
&AUTHPARAMS

Example Response

<CancelConversionTaskResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</CancelConversionTaskResponse>
Related Actions

- ImportInstance (p. 348)
- ImportVolume (p. 354)
- DescribeConversionTasks (p. 179)
CancelExportTask

Description
Cancels an active export task. The command removes all artifacts of the export, including any partially created Amazon S3 objects. If the export task is complete or is in the process of transferring the final disk image, the command fails and returns an error.

Request Parameters

ExportTaskId
The ID of the export task.
Type: String
Default: None
Required: Yes

Response Elements

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request
This example cancels the export task with ID export-i-1234wxyz.

https://ec2.amazonaws.com/?Action=CancelExportTask
&exportTaskId=export-i-1234wxyz
&AUTHPARAMS

Example Response

<?xml version="1.0" encoding="UTF-8"?>
<CancelExportTask xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</CancelExportTask>

Related Actions

- CreateInstanceExportTask (p. 66)
- DescribeExportTasks (p. 188)
CancelReservedInstancesListing

Description

Cancels the specified Reserved Instance listing in the Reserved Instance Marketplace.

For more information about Reserved Instance Marketplace, see Reserved Instance Marketplace in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

reservedInstancesListingId
  The ID of the Reserved Instance listing to be canceled.
  Type: String
  Default: None
  Required: Yes

Response Elements

The following elements are returned in a CancelReservedInstancesListingResponseType element.

requestId
  The ID of the request.
  Type: xsd:string

reservedInstancesListingsSet
  The Reserved Instance listing for cancellation. The listing information is wrapped in an item element.
  Type: DescribeReservedInstancesListingsResponseSetItemType (p. 456)

Examples

Example Request

This example cancels a Reserved Instance listing in the Reserved Instance Marketplace.

https://ec2.amazonaws.com/?Action=CancelReservedInstancesListing
&ReservedInstancesListingId=3ebe97b5-f273-43b6-a204-7a18cEXAMPLE
&AUTHPARAMS

Example Response

The response will show status is CANCELLED.

<CancelReservedInstancesListingResponse>
  <requestId>bec2cf62-98ef-434a-8a15-886fexample</requestId>
  <reservedInstancesListingsSet>
    <item>
      <reservedInstancesListingId>3ebe97b5-f273-43b6-a204-7a18cEXAMPLE</reservedInstancesListingId>
    </item>
  </reservedInstancesListingsSet>
</CancelReservedInstancesListingResponse>
<reservedInstancesId>e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE</reservedInstancesId>
<createDate>2012-07-12T16:55:28.000Z</createDate>
<updateDate>2012-07-12T16:55:28.000Z</updateDate>
<status>cancelled</status>
<statusMessage>CANCELLED</statusMessage>
<instanceCounts>
  <item>
    <state>Available</state>
    <instanceCount>0</instanceCount>
  </item>
  <item>
    <state>Sold</state>
    <instanceCount>0</instanceCount>
  </item>
  <item>
    <state>Cancelled</state>
    <instanceCount>1</instanceCount>
  </item>
  <item>
    <state>Pending</state>
    <instanceCount>0</instanceCount>
  </item>
</instanceCounts>
<priceSchedules>
  <item>
    <term>5</term>
    <price>166.64</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
  <item>
    <term>4</term>
    <price>133.32</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
  <item>
    <term>3</term>
    <price>99.99</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
  <item>
    <term>2</term>
    <price>66.66</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
  <item>
    <term>1</term>
    <price>33.33</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
</priceSchedules>
<tagSet/>
<clientToken>XqJIt1342112125076</clientToken>
Related Actions

- CreateReservedInstancesListing (p. 85)
- DescribeReservedInstancesListings (p. 253)
CancelSpotInstanceRequests

Description

Cancels one or more Spot Instance requests. Spot Instances are instances that Amazon EC2 starts on your behalf when the maximum price that you specify exceeds the current Spot Price. Amazon EC2 periodically sets the Spot Price based on available Spot Instance capacity and current Spot Instance requests. For more information about Spot Instances, see Spot Instances in the Amazon Elastic Compute Cloud User Guide.

Important
Canceling a Spot Instance request does not terminate running Spot Instances associated with the request.

Request Parameters

SpotInstanceRequestId.n
One or more Spot Instance request IDs.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a CancelSpotInstanceRequestsResponse element.

requestId
The ID of the request.
Type: xsd:string

spotInstanceRequestSet
A list of Spot Instance requests. Each request is wrapped in an item element.
Type: CancelSpotInstanceRequestsResponseSetItemType (p. 450)

Examples

Cancel a Spot Instance Request

To cancel Spot Instance requests

1. Construct the following Query request to view your open Spot Instance requests.

   https://ec2.amazonaws.com/?Action=DescribeSpotInstanceRequests
   &Filter.1.Name=state
   &Filter.1.Value.1=open
   &AUTHPARAMS

   The following is an example response.
<DescribeSpotInstanceRequestsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>8cd6486a-80e1-494d-8a4f-be36cEXAMPLE</requestId>
  <spotInstanceRequestSet>
    ...
    <item>
      <spotInstanceRequestId>sir-1a2b3c4d</spotInstanceRequestId>
      <spotPrice>0.002000</spotPrice>
      <type>one-time</type>
      <state>open</state>
      <status>
        <code>not-scheduled-yet</code>
        <updateTime>YYYY-MM-DDTHH:MM:SS.000Z</updateTime>
        <message>Your Spot request will not be evaluated until YYYY-MM-DDTHH:MM:SS+0000 due to your 'Valid From' constraint.</message>
      </status>
      <validFrom>YYYY-MM-DDTHH:MM:SS.000Z</validFrom>
      <validUntil>YYYY-MM-DDTHH:MM:SS.000Z</validUntil>
      <launchSpecification>
        <imageId>ami-1a2b3c4d</imageId>
        <keyName>my-security-group</keyName>
        <groupSet>
          <item>
            <groupId>sg-1a2b3c4d</groupId>
            <groupName>Linux</groupName>
          </item>
        </groupSet>
        <instanceType>t1.micro</instanceType>
        <blockDeviceMapping>
          <item>
            <deviceName>/dev/sda1</deviceName>
            <ebs>
              <volumeSize>8</volumeSize>
              <deleteOnTermination>true</deleteOnTermination>
              <volumeType>standard</volumeType>
            </ebs>
          </item>
        </blockDeviceMapping>
        <monitoring>
          <enabled>false</enabled>
        </monitoring>
      </launchSpecification>
      <createTime>2013-06-14T16:00:40.000Z</createTime>
      <productDescription>Linux/UNIX</productDescription>
    </item>
    ...
  </spotInstanceRequestSet>
</DescribeSpotInstanceRequestsResponse>

2. Construct a Query request to cancel the Spot Instance requests.

https://ec2.amazonaws.com/?Action=CancelSpotInstanceRequests
&SpotInstanceRequestId.1=sir-1a2b3c4d
&AUTHPARAMS

The following is an example response.
<CancelSpotInstanceRequestsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <spotInstanceRequestSet>
    <item>
      <spotInstanceRequestId>sir-1a2b3c4d</spotInstanceRequestId>
      <state>cancelled</state>
    </item>
  </spotInstanceRequestSet>
</CancelSpotInstanceRequestsResponse>

Tip
You can filter the list of Spot Instance requests to return only certain EC2 instance types. For more information about how to filter the results, go to DescribeSpotInstanceRequests in the Amazon Elastic Compute Cloud API Reference.

Related Actions

- DescribeSpotInstanceRequests (p. 282)
- RequestSpotInstances (p. 397)
- DescribeSpotPriceHistory (p. 290)
ConfirmProductInstance

Description

Determines whether a product code is associated with an instance. This action can only be used by the owner of the product code. It is useful when a product code owner needs to verify whether another EC2 user's instance is eligible for support.

Request Parameters

- **ProductCode**
  - The product code.
  - Type: String
  - Default: None
  - Required: Yes

- **InstanceId**
  - The instance.
  - Type: String
  - Default: None
  - Required: Yes

Response Elements

The following elements are returned in a ConfirmProductInstanceResponse element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **return**
  - Returns `true` if the request succeeds. Otherwise, returns an error.
  - Type: xsd:boolean

- **ownerId**
  - The instance owner's account ID. Only present if the product code is attached to the instance.
  - Type: xsd:string

Examples

Example Request

This example displays the product code that is associated with the instance.

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

```xml
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
  <ownerId>111122223333</ownerId>
</ConfirmProductInstanceResponse>
```

Related Actions

- DescribeInstances (p. 203)
- RunInstances (p. 419)
CopyImage

Description

Initiates the copy of an AMI from the specified source region to the region in which the API call is executed.

Request Parameters

SourceRegion
  The ID of the AWS region that contains the AMI to be copied (source).
  Type: String
  Default: None
  Required: Yes

SourceImageId
  The ID of the Amazon EC2 AMI to copy.
  Type: String
  Default: None
  Required: Yes

Name
  The name of the new AMI in the destination region.
  Type: String
  Default: Same name as the AMI being copied.
  Required: No

Description
  A description of the new AMI in the destination region.
  Type: String
  Default: Same description as the AMI being copied.
  Constraints: Up to 255 characters
  Required: No

ClientToken
  Unique, case-sensitive identifier you provide to ensure idempotency of the request. For more information, see How to Ensure Idempotency in the Amazon Elastic Compute Cloud User Guide.
  Type: String
  Default: None
  Constraints: Up to 255 characters
  Required: No

Response Elements

The following elements are returned in a CopyImage element.

requestId
  The ID of the request.
  Type: xsd:string

imageId
  The ID of the new AMI.
  Type: xsd:string
**Tip**
You can use the common option `--region` to specify the region against which the command is executed. For AMI Copy, this will be the destination region.

---

**Examples**

**Example Request**

This example copies the AMI `ami-1a2b3c4d` in us-west-2, giving the new AMI the name `My-Standard-AMI`:

```
https://ec2.amazonaws.com/?Action=CopyImage
&SourceRegion=us-west-2
&SourceImageId=ami-1a2b3c4d
&Name=My-Standard-AMI
&Description=This%20is%20the%20new%20version%20of%20My-Standard-AMI
&ClientToken=550e8400-e29b-41d4-a716-446655440000
&AUTHPARAMS
```

**Example Response**

```
<CopyImageResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>60bc441d-fa2c-494d-b155-5d6a3EXAMPLE</requestId>
  <imageId>ami-4d3c2b1a</imageId>
</CopyImageResponse>
```
CopySnapshot

Description

Copies a point-in-time snapshot of an Amazon Elastic Block Store (Amazon EBS) volume and stores it in Amazon Simple Storage Service (Amazon S3). You can copy the snapshot within the same region or from one region to another. You can use the snapshot to create new Amazon EBS volumes or Amazon Machine Images (AMIs). For more information about Amazon EBS, see Amazon Elastic Block Store (Amazon EBS).

Request Parameters

SourceRegion
The ID of the AWS region that contains the snapshot to be copied.
Type: String
Default: None
Required: Yes

SourceSnapshotId
The ID of the Amazon EBS snapshot to copy.
Type: String
Default: None
Required: Yes

Description
A description of the new Amazon EBS snapshot.
Type: String
Default: None
Constraints: Up to 255 characters
Required: No

Response Elements

The following elements are returned in a CopySnapshotResponse element.

requestId
The ID of the request.
Type: xsd:string

snapshotId
The ID of the new snapshot.
Type: xsd:string

Examples

Example Request

This example copies Amazon EBS snapshot snap-1a2b3c4d located in the us-west-1 region.
Example Response

```xml
<CopySnapshotResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>60bc441d-fa2c-494d-b155-5d6a3EXAMPLE</requestId>
  <snapshotId>snap-2a2b3c4d</snapshotId>
</CopySnapshotResponse>
```

Related Actions

- CreateSnapshot (p. 101)
- DeleteSnapshot (p. 147)
- DescribeSnapshots (p. 276)
CreateCustomerGateway

Description

Provides information to AWS about your VPN customer gateway device. The customer gateway is the appliance at your end of the VPN connection. (The device on the AWS side of the VPN connection is the virtual private gateway.) You must provide the Internet-routable IP address of the customer gateway's external interface. The IP address must be static and can't be behind a device performing network address translation (NAT).

You must provide the Internet-routable IP address of the customer gateway's external interface. The IP address must be static and can't be behind a device performing network address translation (NAT).

For devices that use Border Gateway Protocol (BGP), you can also provide the device's BGP Autonomous System Number (ASN). You can use an existing ASN assigned to your network. If you don't have an ASN already, you can use a private ASN (in the 64512 - 65534 range).

Note
Amazon EC2 supports all 2-byte ASN numbers in the range of 1 - 65534, with the exception of 7224, which is reserved in the US East Region, and 9059, which is reserved in the EU West Region.

For more information about ASNs, see the Wikipedia article.

For more information about VPN customer gateways, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

Type
The type of VPN connection this customer gateway supports.
Type: String
Default: None
Valid values: ipsec.1
Required: Yes

IpAddress
The Internet-routable IP address for the customer gateway's outside interface. The address must be static.
Type: String
Default: None
Required: Yes

BgpAsn
The customer gateway's Border Gateway Protocol (BGP) Autonomous System Number (ASN) for devices that support BGP.
Type: Integer
Default: 65000
Required: No

Response Elements

The following elements are returned in a CreateCustomerGatewayResponse element.
**Examples**

**Example Request**

This example passes information to AWS about the VPN customer gateway with IP address 12.1.2.3 and BGP ASN 65534.

```
https://ec2.amazonaws.com/?Action=CreateCustomerGateway
&Type=ipsec.1
&IpAddress=12.1.2.3
&BgpAsn=65534
&AUTHPARAMS
```

**Example Response**

```
<CreateCustomerGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <customerGateway>
    <customerGatewayId>cgw-b4dc3961</customerGatewayId>
    <state>pending</state>
    <type>ipsec.1</type>
    <ipAddress>12.1.2.3</ipAddress>
    <bgpAsn>65534</bgpAsn>
    <tagSet/>
  </customerGateway>
</CreateCustomerGatewayResponse>
```

**Related Actions**

- DescribeCustomerGateways (p. 181)
- DeleteCustomerGateway (p. 126)
CreateDhcpOptions

Description

Creates a set of DHCP options for your VPC. After creating the new set, you must associate it with the VPC, causing all existing and new instances that you launch in the VPC to use the new set of DHCP options. The following are the individual DHCP options you can specify. For more information about the options, see RFC 2132.

<table>
<thead>
<tr>
<th>DHCP Option Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>domain-name-servers</td>
<td>The IP addresses of up to four domain name servers, or . The default DHCP option set specifies .</td>
</tr>
<tr>
<td>domain-name</td>
<td>If you're using in US East (Northern Virginia) Region, specify compute-1.amazonaws.com. If you're using in another region, specify region.compute.amazonaws.com. Otherwise, specify a domain name (for example, MyCompany.com).</td>
</tr>
<tr>
<td>ntp-servers</td>
<td>The IP addresses of up to four Network Time Protocol (NTP) servers.</td>
</tr>
<tr>
<td>netbios-name-servers</td>
<td>The IP addresses of up to four NetBIOS name servers.</td>
</tr>
<tr>
<td>netbios-node-type</td>
<td>The NetBIOS node type (1, 2, 4, or 8). We recommend that you specify 2 (broadcast and multicast are not currently supported). For more information about these node types, see RFC 2132.</td>
</tr>
</tbody>
</table>

Important

Your VPC automatically starts out with a set of DHCP options that includes only a DNS server that we provide (AmazonProvidedDNS). If you create a new set of options, and if your VPC has an Internet gateway, make sure to set the domain-name-servers option either to AmazonProvidedDNS or to a domain name server of your choice.

For more information about DHCP options, see Using DHCP Options with Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

DhcpConfiguration.n.Key

The name of a DHCP option.

Type: String
Default: None
Required: Yes

DhcpConfiguration.n.Value.m

A value for the DHCP option.

Type: String
Default: None
Required: Yes
Response Elements

The following elements are returned in a `CreateDhcpOptionsResponse` element.

**requestId**
- The ID of the request.
- Type: `xsd:string`

**dhcpOptions**
- A set of DHCP options.
- Type: `DhcpOptionsType` (p. 463)

Examples

Example Request

This example creates a new set of DHCP options with a domain name example.com and two DNS servers (10.2.5.1 and 10.2.5.2).

```
https://ec2.amazonaws.com/?Action=CreateDhcpOptions
&DhcpConfiguration.1.Key=domain-name
&DhcpConfiguration.1.Value.1=example.com
&DhcpConfiguration.2.Key=domain-name-servers
&DhcpConfiguration.2.Value.1=10.2.5.1
&DhcpConfiguration.2.Value.2=10.2.5.2
&AUTHPARAMS
```

Example Response

```
<CreateDhcpOptionsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <dhcpOptions>
    <dhcpcOptionsId>dopt-7a8b9c2d</dhcpcOptionsId>
    <dhcpcConfigurationSet>
      <item>
        <key>domain-name</key>
        <valueSet>
          <item>
            <value>example.com</value>
          </item>
        </valueSet>
      </item>
      <item>
        <key>domain-name-servers</key>
        <valueSet>
          <item>
            <value>10.2.5.1</value>
          </item>
          <item>
            <value>10.2.5.2</value>
          </item>
        </valueSet>
      </item>
    </dhcpcConfigurationSet>
  </dhcpOptions>
</CreateDhcpOptionsResponse>
```
Related Actions

- AssociateDhcpOptions (p. 19)
- DescribeDhcpOptions (p. 184)
- DeleteDhcpOptions (p. 128)
CreateImage

Description

Creates an Amazon EBS-backed AMI from an Amazon EBS-backed instance that is either running or stopped. For more information about Amazon EBS-backed AMIs, see Storage for the Root Device.

Note

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

Request Parameters

InstanceId

The ID of the instance.
Type: String
Default: None
Required: Yes

Name

A name for the new image.
Type: String
Default: None
Constraints: 3-128 alphanumeric characters, parenthesis (()), commas (,), slashes (/), dashes (-), or underscores(_)
Required: Yes

Description

A description of the new image.
Type: String
Default: None
Constraints: Up to 255 characters
Required: No

NoReboot

By default this parameter is set to false, which means Amazon EC2 attempts to cleanly shut down the instance before image creation and then reboots the instance. When the parameter is set to true, Amazon EC2 does not shut down the instance before creating the image. When this option is used, file system integrity on the created image cannot be guaranteed.
Type: Boolean
Default: false
Required: No

BlockDeviceMapping.n.DeviceName

The device name exposed to the instance (for example, /dev/sdh or xvdh). For more information, see Block Device Mapping.
Type: String
Default: None
Required: Conditional
Condition: If you’re registering an Amazon EBS-backed AMI from a snapshot, you must specify DeviceName with the root device name (for example, /dev/sda1 or xvda), and BlockDeviceMapping.n.Ebs.SnapshotId with the snapshot ID
**BlockDeviceMapping.n.NoDevice**
Suppresses a device mapping.
Type: Boolean
Default: true
Required: No

**BlockDeviceMapping.n.VirtualName**
The name of the virtual device, ephemeral[0..3]. The number of instance store volumes depends on the instance type.
Type: String
Default: None
Required: No

**BlockDeviceMapping.n.Ebs.SnapshotId**
The ID of the snapshot.
Type: String
Default: None
Required: Conditional
Condition: If you’re registering an Amazon EBS-backed AMI from a snapshot, you must at least specify `SnapshotId` with the snapshot ID, and `BlockDeviceMapping.n.DeviceName` with the root device name.

**BlockDeviceMapping.n.Ebs.VolumeSize**
The size of the volume, in GiBs.
Type: Integer
Valid values: If the volume type is `io1`, the minimum size of the volume is 10 GiB.
Default: If you’re creating the volume from a snapshot and don’t specify a volume size, the default is the snapshot size.
Required: No

**BlockDeviceMapping.n.Ebs.DeleteOnTermination**
Whether the volume is deleted on instance termination.
Type: Boolean
Default: true
Required: No

**BlockDeviceMapping.n.Ebs.VolumeType**
The volume type.
Type: String
Valid values: `standard` | `io1`
Default: `standard`
Required: No

**BlockDeviceMapping.n.Ebs.Iops**
The number of I/O operations per second (IOPS) that the volume supports.
Type: Integer
Valid values: Range is 100 to 4000.
Default: None
Required: Required when the volume type is `io1`; not used with `standard` volumes.

---

## Response Elements

The following elements are returned in a `CreateImageResponse` element.
**Examples**

**Example Request**

This example creates an AMI from the i-10a64379 instance.

https://ec2.amazonaws.com/?Action=CreateImage
&Description=Standard+Web+Server+v1.0
&InstanceId=i-10a64379
&Name=standard-web-server-v1.0
&AUTHPARAMS

**Example Response**

```xml
<CreateImageResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <imageId>ami-4fa54026</imageId>
</CreateImageResponse>
```

**Related Actions**

- RunInstances (p. 419)
- DescribeInstances (p. 203)
- TerminateInstances (p. 434)
CreateInstanceExportTask

Description
Exports a running or stopped instance to an Amazon S3 bucket. For information about the supported operating systems, image formats, and known limitations for the types of instances you can export, see Exporting EC2 Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

Description
A description of the conversion task or the resource being exported.
Type: String
Default: None
Required: No

InstanceId
The ID of the instance being exported.
Type: String
Default: None
Required: Yes

TargetEnvironment
The target virtualization environment.
Type: String
Default: None
Valid values: vmware | citrix | microsoft
Required: Yes

ExportToS3.DiskImageFormat
The format for the exported image.
Type: String
Default: vmdk if TargetEnvironment = vmware, otherwise vhd
Valid values: vmdk | vhd
Required: No

ExportToS3.ContainerFormat
The container format used to combine disk images with metadata (such as OVF). If absent, only the disk image will be exported.
Type: String
Default: ova if TargetEnvironment = vmare, otherwise blank
Valid values: ova
Required: No

ExportToS3.S3Bucket
The Amazon S3 bucket for the destination image. The bucket must exist and grant write permissions to AWS account vm-import-export@amazon.com.
Type: String
Default: None
Required: Yes

ExportToS3.S3Prefix
The image is written to a single object in the Amazon S3 bucket at the S3 key s3prefix + exportTaskId + '.' +diskImageFormat.
Type: String
Default: None
Required: No

Response Elements
The following elements are returned in a CreateInstanceExportTaskResponse element.

requestId
The ID of the request.
Type: xsd:string

exportTask
The details of the created ExportVM task.
Type: ExportTaskResponseType (p. 467)

Examples

Example Request
This example creates an Export VM task that makes a Windows instance available as an OVA.

https://ec2.amazonaws.com/?Action=CreateInstanceExportTask
&Description=Example%20for%20docs
&InstanceId=i-12345678
&TargetEnvironment=VMWare
&ExportToS3.DiskImageFormat=VMDK
&ExportToS3.ContainerFormat=OVA
&ExportToS3.S3bucket=my-bucket-for-exported-vm
&ExportToS3.S3prefix=my-exports/

Example Response

<CreateInstanceExportTaskResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <exportTask>
    <exportTaskId>export-i-1234wxyz</exportTaskId>
    <description>Example for docs</description>
    <state>active</state>
    <statusMessage>Running</statusMessage>
    <instanceExport>
      <instanceId>i-12345678</instanceId>
      <targetEnvironment>VMWare</targetEnvironment>
    </instanceExport>
    <exportToS3>
      <diskImageFormat>VMDK</diskImageFormat>
      <containerFormat>OVA</containerFormat>
      <s3Bucket>my-bucket-for-exported-vm</s3Bucket>
      <s3Key>my-exports/ export-i-1234wxyz .ova</s3Key>
    </exportToS3>
  </exportTask>
</CreateInstanceExportTaskResponse>
Related Actions

- CancelExportTask (p. 45)
- DescribeExportTasks (p. 188)
CreateInternetGateway

Description

Creates a new Internet gateway for use with a VPC. After creating the Internet gateway, you attach it to a VPC using AttachInternetGateway (p. 23). For more information about your VPC and Internet gateway, see Amazon Virtual Private Cloud User Guide.

Request Parameters

This action has no request parameters.

Response Elements

The following elements are returned in a CreateInternetGatewayResponse element.

- requestId
  The ID of the request.
  Type: xsd:string

- internetGateway
  Information about the Internet gateway
  Type: InternetGatewayType (p. 486)

Examples

Example Request

This example creates an Internet gateway.

https://ec2.amazonaws.com/?Action=CreateInternetGateway
&AUTHPARAMS

Example Response

CreateInternetGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"

    <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
    <internetGateway>
      <internetGatewayId>igw-eaad4883</internetGatewayId>
      <attachmentSet/>
      <tagSet/>
    </internetGateway>

Related Actions

- DeleteInternetGateway (p. 130)
- AttachInternetGateway (p. 23)
- DetachInternetGateway (p. 326)
Related Actions

- DescribeInternetGateways (p. 225)
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 returned to you. 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.

You can have up to five thousand key pairs per region.

Tip
The key pair returned to you works only in the region you're using when you create the key pair. To create a key pair that works in all regions, use ImportKeyPair (p. 352).

Request Parameters

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

Response Elements

The following elements are returned in a CreateKeyPairResponse element.

requestId
The ID of the request.
Type: xsd:string

keyName
The key pair name you provided.
Type: xsd:string

keyFingerprint
A SHA-1 digest of the DER encoded private key.
Type: xsd:string

keyMaterial
An unencrypted PEM encoded RSA private key.
Type: xsd:string

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/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <keyName>gsg-keypair</keyName>
 <keyFingerprint>
 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
</keyFingerprint>
 <keyMaterial>----- BEGIN RSA PRIVATE KEY -----
MIICiTCCAfICCQD6m7oRw0uX0jANBgkqhkiG9w0BAQUFADCBiDELMAkGA1UEBhMC
VVMxCzAJBgNVBAYTAldBMRRAgDgYDVQQHEwdTZWFDdGx1M24fYDVQQKEwZBbWF6
b24fFDASBgNVBAsTC01BTSBDb25zb2xiM24fYDVQQDEw1UZWNQ21sYWxHzAd
BgkqhkiG9w0BCQEWEG5vb251QFtYXpvbi5jb20wHhcNMTEwNDAwMDAwNzA2MDAw
MTIwNTIxM0A0NTIxWjCBIDELMAkGA1UEBhMCVVMxCzAJBgNVBAsTC0lBTSBDb25z
b25zb2xiM24fYDVQQDEw1UZWNQ21sYWxHzAdBgkqhkiG9w0BCQEWEG5vb251QFt
YXpvbi5jb20wqgZwEDQYJKoZIhvcNAQEBBQADgY0AMIGJAoGBAo1OOGKJQ0d+44
2lUSfweEvkWRc2XAd24nB+BCYgYk60CpiwsZ3G93vUEI03YvHg/f0wIF8m9T
rDHudU2Zq3gX4waLG5M43q7Wgic/MbQITxOUSQv7c7ugFFDszQGBzZswY676m86gpE
Ibb3OhjNzcvcQAaRhidQMIgmentMBAAEwDQYJKoZIhvcNAQEBBQADgY0AMIGJAoGBA
----- END RSA PRIVATE KEY ------
</keyMaterial>
</CreateKeyPairResponse>
```
CreateNetworkAcl

Description

Creates a network ACL in a VPC. Network ACLs provide an optional layer of security (on top of security
groups) for the instances in your VPC. For more information about network ACLs, see Network ACLs in
the Amazon Virtual Private Cloud User Guide.

Request Parameters

**VpcId**

The ID of the VPC.

Type: String

Default: None

Required: Yes

Response Elements

The following elements are returned in a CreateNetworkAclResponse element.

**requestId**

The ID of the request.

Type: xsd:string

**networkAcl**

Information about the new network ACL.

Type: NetworkAclType (p. 493)

Examples

**Example Request**

The example creates a new network ACL in the VPC with ID vpc-11ad4878. Notice that the response
includes a default entry for egress, and another for ingress, each with a very high rule number. These
are the last entries we process to decide whether traffic is allowed in our out of an associated subnet. If
the traffic doesn’t match any rules with a lower rule number, then these default entries ultimately deny
the traffic.

https://ec2.amazonaws.com/?Action=CreateNetworkAcl
&VpcId=vpc-11ad4878
&AUTHPARAMS

**Example Response**

```
<CreateNetworkAclResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <networkAcl>
    <networkAclId>acl-5fb85d36</networkAclId>
    <vpcId>vpc-11ad4878</vpcId>
  </networkAcl>
</CreateNetworkAclResponse>
```
**Related Actions**

- [DeleteNetworkAcl](#) (p. 133)
- [DescribeNetworkAcls](#) (p. 230)
- [ReplaceNetworkAclAssociation](#) (p. 385)
CreateNetworkAclEntry

Description

Creates an entry (a rule) in a network ACL with the specified rule number. Each network ACL has a set of numbered ingress rules and a separate set of numbered egress rules. When determining whether a packet should be allowed in or out of a subnet associated with the ACL, we process the entries in the ACL according to the rule numbers, in ascending order. Each network ACL has a set of ingress rules and a separate set of egress rules.

Tip
We recommend that you leave room between the rule numbers (for example, 100, 110, 120, etc.), and not number them one right after the other (for example, 101, 102, 103, etc.). This makes it easier to add a new rule between existing ones without having to renumber the rules.

After you add an entry, you can't modify it; you must either replace it, or create a new entry and delete the old one.

For more information about network ACLs, see Network ACLs in the Amazon Virtual Private Cloud User Guide.

Request Parameters

NetworkAclId
The ID of the ACL.
Type: String
Default: None
Required: Yes

RuleNumber
The rule number to assign to the entry (for example, 100). ACL entries are processed in ascending order by rule number.
Type: Integer
Default: None
Constraints: Positive integer from 1 to 32766
Required: Yes

Protocol
The IP protocol the rule applies to. You can use -1 to mean all protocols.
Type: Integer
Valid values: -1 or a protocol number (see Protocol Numbers).
Required: Yes

RuleAction
Indicates whether to allow or deny traffic that matches the rule.
Type: String
Default: None
Valid values: allow | deny
Required: Yes

Egress
Indicates whether this rule applies to egress traffic from the subnet (true) or ingress traffic to the subnet (false).
Type: Boolean
Default: false
Valid values: true | false
Required: No

CidrBlock
The CIDR range to allow or deny, in CIDR notation (for example, 172.16.0.0/24).
Type: String
Default: None
Required: Yes

Icmp.Code
For the ICMP protocol, the ICMP code. You can use -1 to specify all ICMP codes for the given ICMP type.
Type: Integer
Default: None
Required: Conditional
Condition: Required if specifying 1 (ICMP) for the protocol.

Icmp.Type
For the ICMP protocol, the ICMP type. You can use -1 to specify all ICMP types.
Type: Integer
Default: None
Required: Conditional
Condition: Required if specifying 1 (ICMP) for the protocol.

PortRange.From
The first port in the range.
Type: Integer
Default: None
Required: Conditional
Condition: Required if specifying 6 (TCP) or 17 (UDP) for the protocol.

PortRange.To
The last port in the range.
Type: Integer
Default: None
Required: Conditional
Condition: Required if specifying 6 (TCP) or 17 (UDP) for the protocol.

Response Elements
The following elements are returned in a CreateNetworkAclEntryResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean
Examples

Example Request

This example creates an entry with rule number 110 in the network ACL with ID acl-2cb85d45. The rule allows ingress traffic from anywhere (0.0.0.0/0) on UDP port 53 into any associated subnet.

https://ec2.amazonaws.com/?Action=CreateNetworkAclEntry
&NetworkAclId=acl-2cb85d45
&RuleNumber=110
&Protocol=udp
&RuleAction=allow
&Egress=false
&CidrBlock=0.0.0.0/0
&PortRange.From=53
&PortRange.To=53
&AUTHPARAMS

Example Response

<CreateNetworkAclEntryResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</CreateNetworkAclEntryResponse>

Related Actions

- DeleteNetworkAclEntry (p. 135)
- ReplaceNetworkAclEntry (p. 387)
- DescribeNetworkAcls (p. 230)
CreateNetworkInterface

Description

Creates a network interface in the specified subnet.

Request Parameters

**SubnetId**

- The ID of the subnet to associate with the network interface.
- Type: String
- Default: None
- Required: Yes

**PrivateIpAddress**

- The primary private IP address of the network interface.
- Type: String
- Default: None
- Required: No

**PrivateIpAddresses.n.PrivateIpAddress**

- The private IP address of the specified network interface. This parameter can be used multiple times to specify explicit private IP addresses for a network interface, but only one private IP address can be designated as primary.
- You cannot specify this parameter with the `PrivateIpAddresses.n.Primary` value of true if you specify the `PrivateIpAddress` option.
- Type: String
- Default: None
- Required: No

**PrivateIpAddresses.n.Primary**

- Specifies whether the private IP address is the primary private IP address.
- Only one IP address can be designated as primary. You cannot specify this parameter with the value of true and the `PrivateIpAddresses.n.PrivateIpAddress` option if you specify the `PrivateIpAddress` option.
- Type: Boolean
- Default: false
- Required: No

**SecondaryPrivateIpAddressCount**

- The number of secondary private IP addresses to assign to a network interface. When you specify a number of secondary IP addresses, AWS automatically assigns these IP addresses within the subnet's range.
- The number of IP addresses you can assign to a network interface varies by instance type. For more information, see Available Instance Types in the Amazon Elastic Compute Cloud User Guide.
- For a single network interface, you cannot specify this option and specify more than one private IP address using `PrivateIpAddress.n`.
- Type: Integer
- Default: None
- Required: No

**Description**

- The description of the network interface.
- Type: String
Response Elements

The following elements are returned in a CreateNetworkInterfaceResponse element.

requestId
The ID of the request.
Type: xsd:string

networkInterface
The network interface that was created.
Type: NetworkInterfaceType (p. 496)

Examples

Example Request

This example creates an elastic network interface (ENI) in the specified subnet with a primary IP address that is automatically assigned to the network interface.

https://ec2.amazonaws.com/?Action=CreateNetworkInterface
&SubnetId=subnet-b2a249da
&AUTHPARAMS

Example Response

<CreateNetworkInterfaceResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
<requestId>8dbe591e-5a22-48cb-b948-dd0aadd55adf</requestId>
<networkInterface>
    <networkInterfaceId>eni-cfca76a6</networkInterfaceId>
    <subnetId>subnet-b2a249da</subnetId>
    <vpcId>vpc-c31dafaa</vpcId>
    <availabilityZone>ap-southeast-1b</availabilityZone>
    <description/>
    <ownerId>251839141158</ownerId>
    <requesterManaged>false</requesterManaged>
    <status>available</status>
    <macAddress>02:74:b0:79:61</macAddress>
    <privateIpAddress>10.0.2.157</privateIpAddress>
    <sourceDestCheck>true</sourceDestCheck>
    <groupSet>
        <item>
            <groupId>sg-1a2b3c4d</groupId>
        </item>
    </groupSet>
</networkInterface>
</CreateNetworkInterfaceResponse>
Example Request

This example creates an elastic network interface (ENI) in the specified subnet with a primary IP address of 10.0.2.140 and four secondary private IP addresses that are automatically assigned to the network interface.

https://ec2.amazonaws.com/?Action=CreateNetworkInterface
&PrivateIpAddresses.0.Primary=true
&PrivateIpAddresses.0.PrivateIpAddress=10.0.2.140
&SecondaryPrivateIpAddressCount=4
&SubnetId=subnet-a61dafcf
&AUTHPARAMS

Example Response

<CreateNetworkInterfaceResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>bd78c839-0895-4fac-a17f-98b559b6b630</requestId>
  <networkInterface>
    <networkInterfaceId>eni-1bcb7772</networkInterfaceId>
    <subnetId>subnet-a61dafcf</subnetId>
    <vpcId>vpc-c31dafa</vpcId>
    <availabilityZone>ap-southeast-1b</availabilityZone>
    <description/>
    <ownerId>251839141158</ownerId>
    <requesterManaged>false</requesterManaged>
    <status>pending</status>
    <macAddress>02:74:b0:70:7f:1a</macAddress>
    <privateIpAddress>10.0.2.140</privateIpAddress>
    <sourceDestCheck>true</sourceDestCheck>
    <groupSet>
      <item>
        <groupId>sg-1a2b3c4d</groupId>
        <groupName>default</groupName>
      </item>
    </groupSet>
  </networkInterface>
</CreateNetworkInterfaceResponse>
Example Request

The following requests creates a network interface with a primary private IP address of 10.0.2.130 and two secondary IP addresses of 10.0.2.132 and 10.0.2.133.

https://ec2.amazonaws.com/?Action=CreateNetworkInterface
&PrivateIpAddresses.0.Primary=true
&PrivateIpAddresses.0.PrivateIpAddress=10.0.2.130
&PrivateIpAddresses.1.Primary=false
&PrivateIpAddresses.1.PrivateIpAddress=10.0.2.132
&PrivateIpAddresses.2.Primary=false
&PrivateIpAddresses.2.PrivateIpAddress=10.0.2.133
&SubnetId=subnet-a61dafcf
&AUTHPARAMS

Example Response

<CreateNetworkInterfaceResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
<requestId>a9565f4c-f928-4113-859b-905886d11658</requestId>
<networkInterface>
  <networkInterfaceId>eni-41c47828</networkInterfaceId>
  <subnetId>subnet-a61dafcf</subnetId>
  <vpcId>vpc-c31dafaa</vpcId>
  <availabilityZone>ap-southeast-1b</availabilityZone>
  <description/>
  <ownerId>251839141158</ownerId>
  <requesterManaged>false</requesterManaged>
  <status>pending</status>
  <macAddress>02:74:b0:78:bf:ab</macAddress>
  <privateIpAddress>10.0.2.130</privateIpAddress>
  <sourceDestCheck>true</sourceDestCheck>
  <groupId>sg-188d9f74</groupId>
</networkInterface>
</CreateNetworkInterfaceResponse>
<groupName>default</groupName>
</item>
</groupSet>
<tagSet/>
<privateIpAddressesSet>
<item>
  <privateIpAddress>10.0.2.130</privateIpAddress>
  <primary>true</primary>
</item>
<item>
  <privateIpAddress>10.0.2.133</privateIpAddress>
  <primary>false</primary>
</item>
<item>
  <privateIpAddress>10.0.2.132</privateIpAddress>
  <primary>false</primary>
</item>
</privateIpAddressesSet>
</networkInterface>
</CreateNetworkInterfaceResponse>

Related Actions

- AttachNetworkInterface (p. 25)
- DetachNetworkInterface (p. 328)
- DeleteNetworkInterface (p. 137)
- DescribeNetworkInterfaceAttribute (p. 235)
- DescribeNetworkInterfaces (p. 237)
- ModifyNetworkInterfaceAttribute (p. 363)
- ResetNetworkInterfaceAttribute (p. 409)
CreatePlacementGroup

Description

Creates a placement group that you launch cluster instances into. You must give the group a name unique within the scope of your account. For more information about placement groups and cluster instances, see Using Cluster Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

GroupName
   A name for the placement group.
   Type: String
   Default: None
   Required: Yes

Strategy
   The placement group strategy.
   Type: String
   Valid values: cluster
   Required: Yes

Response Elements

The following elements are returned in a CreatePlacementGroupResponse element.

requestId
   The ID of the request.
   Type: xsd:string

return
   Returns true if the request succeeds. Otherwise, returns an error.
   Type: xsd:boolean

Examples

Example Request

This example creates a placement group named XYZ-cluster.

https://ec2.amazonaws.com/?Action=CreatePlacementGroup
&GroupName=XYZ-cluster
&Strategy=cluster
&AUTHPARAMS

Example Response

<CreatePlacementGroupResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01"/>
Related Actions

- DeletePlacementGroup (p. 139)
- DescribePlacementGroups (p. 243)
CreateReservedInstancesListing

Description

Creates a new listing for Amazon EC2 Reserved Instances that will be sold in the Reserved Instance Marketplace. You can submit one Reserved Instance listing at a time.

The Reserved Instance Marketplace matches sellers who want to resell Reserved Instance capacity that they no longer need with buyers who want to purchase additional capacity. Reserved Instances bought and sold through the Reserved Instance Marketplace work like any other Reserved Instances.

If you want to sell your Reserved Instances, you must first register as a Seller in the Reserved Instance Marketplace. After completing the registration process, you can create a Reserved Instance Marketplace listing of some or all of your Reserved Instances, and specify the upfront price you want to receive for them. Your Reserved Instance listings then become available for purchase.

For more information about Reserved Instance Marketplace, go to Reserved Instance Marketplace in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

reservedInstancesId
The ID of the Reserved Instance that will be listed.
Type: String
Default: None
Required: Yes

instanceCount
The number of instances that are a part of a Reserved Instance account that will be listed in the Reserved Instance Marketplace. This number should be less than or equal to the instance count associated with the Reserved Instance ID specified in this call.
Type: Integer
Default: None
Required: Yes

priceSchedules
A list specifying the price of the Reserved Instance for each month remaining in the Reserved Instance term.
Type: PriceScheduleRequestSetItemType (p. 500)
Required: Yes

clientToken
Unique, case-sensitive identifier you provide to ensure idempotency of your listings. This helps avoid duplicate listings. For more information, go to Ensuring Idempotency in the Amazon Elastic Compute Cloud User Guide.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a CreateReservedInstancesListingResponseType element.
requestId
The ID of the request.
Type: xsd:string

reservedInstancesListingSet
The Reserved Instances listing that was created. The listing information is wrapped in an item element.
Type: DescribeReservedInstancesListingsResponseSetItemType (p. 456)

Examples

Example Request
This example creates a Reserved Instance Marketplace listing from the existing Reserved Instance e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE, which has 11 months remaining in its term. In this example, we set the upfront price at $2.50, and the price drops over the course of the 11-month term if the instance is still not sold:

<table>
<thead>
<tr>
<th>Term (months)</th>
<th>Upfront Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>11, 10, 9</td>
<td>$2.50</td>
</tr>
<tr>
<td>8, 7, 6</td>
<td>$2.00</td>
</tr>
<tr>
<td>5, 4</td>
<td>$1.50</td>
</tr>
<tr>
<td>3, 2</td>
<td>$0.70</td>
</tr>
<tr>
<td>1</td>
<td>$0.10</td>
</tr>
</tbody>
</table>

https://ec2.amazonaws.com/?Action=CreateReservedInstancesListing
&ClientToken=myIdempToken1
&InstanceCount=1
&PriceSchedules.0.Price=2.5
&PriceSchedules.0.Term=11
&PriceSchedules.1.Price=2.0
&PriceSchedules.1.Term=8
&PriceSchedules.2.Price=1.5
&PriceSchedules.2.Term=5
&PriceSchedules.3.Price=0.7
&PriceSchedules.3.Term=3
&PriceSchedules.4.Price=0.1
&PriceSchedules.4.Term=1
&ReservedInstancesId=e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE
&AUTHPARAMS

Example Response

<CreateReservedInstancesListingResponse>
  <requestId>a42481af-335a-4e9e-b291-bd18dexample</requestId>
  <reservedInstancesListingsSet>
    <item>
      <reservedInstancesListingId>5ec28771-05ff-4b9b-aa31-
Amazon Elastic Compute Cloud API Reference

Examples

9e57dEXAMPLE</reservedInstancesListingId>
<reservedInstancesId>e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE</reservedInstancesId>
<createDate>2012-07-17T17:11:09.449Z</createDate>
<updateDate>2012-07-17T17:11:09.468Z</updateDate>
<status>active</status>
<statusMessage>ACTIVE</statusMessage>
<instanceCounts>
  <item>
    <state>Available</state>
    <instanceCount>1</instanceCount>
  </item>
  <item>
    <state>Sold</state>
    <instanceCount>0</instanceCount>
  </item>
  <item>
    <state>Cancelled</state>
    <instanceCount>0</instanceCount>
  </item>
  <item>
    <state>Pending</state>
    <instanceCount>0</instanceCount>
  </item>
</instanceCounts>
<priceSchedules>
  <item>
    <term>11</term>
    <price>2.5</price>
    <currencyCode>USD</currencyCode>
    <active>true</active>
  </item>
  <item>
    <term>10</term>
    <price>2.5</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
  <item>
    <term>9</term>
    <price>2.5</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
  <item>
    <term>8</term>
    <price>2.0</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
  <item>
    <term>7</term>
    <price>2.0</price>
    <currencyCode>USD</currencyCode>
    <active>false</active>
  </item>
  <item>
    <term>6</term>
  </item>
</priceSchedules>
List a Reserved Instance in the Reserved Instance Marketplace

To list a Reserved Instance in the Reserved Instance Marketplace

1. Get a list of your Reserved Instances by calling DescribeReservedInstances (p. 249).

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

The following is an example response.

```
<DescribeReservedInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01="/>
```
Note the Reserved Instance ID of the Reserved Instance that you want to list in the Reserved Instance Marketplace.

2. Create a listing for three Reserved Instances from Reserved Instance ID e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE and specify the following pricing schedule.

<table>
<thead>
<tr>
<th>Term (remaining months)</th>
<th>11</th>
<th>10</th>
<th>9</th>
<th>8</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price specified for period</td>
<td>2.5</td>
<td>2.0</td>
<td>1.5</td>
<td>0.7</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>1.5</td>
<td>1.5</td>
<td>0.7</td>
<td>0.7</td>
<td>0.1</td>
</tr>
</tbody>
</table>

The call should look like this example:

https://ec2.amazonaws.com/?Action=CreateReservedInstancesListing
&InstanceCount=3
&PriceSchedules.0.Price=2.5&PriceSchedules.0.Term=11
&PriceSchedules.1.Price=2.0&PriceSchedules.1.Term=8
&PriceSchedules.2.Price=1.5&PriceSchedules.2.Term=5
&PriceSchedules.3.Price=0.7&PriceSchedules.3.Term=3
&PriceSchedules.4.Price=0.1&PriceSchedules.4.Term=1

The following is an example response.

<CreateReservedInstancesListingResponse>
  <requestId>a42481af-335a-4e9e-b291-bd18dEXAMPLE</requestId>
  <reservedInstancesListingsSet>
</CreateReservedInstancesListingResponse>
3. To view the details of your Reserved Instance listing, run `DescribeReservedInstancesListings` (p. 253).

The command should look like this example:

https://ec2.amazonaws.com/?Action=DescribeReservedInstancesListings
&AUTHPARAMS

Following is an example response.

```xml
<DescribeReservedInstancesListingsResponse>
  <requestId>cec5c904-8f3a-4de5-8f5a-ff7f9EXAMPLE</requestId>
  <reservedInstancesListingsSet>
    <item>
      <term>6</term>
      <price>2.0</price>
      <currencyCode>USD</currencyCode>
      <active>false</active>
    </item>
    <item>
      <term>5</term>
      <price>1.5</price>
      <currencyCode>USD</currencyCode>
      <active>false</active>
    </item>
    <item>
      <term>4</term>
      <price>1.5</price>
      <currencyCode>USD</currencyCode>
      <active>false</active>
    </item>
    <item>
      <term>3</term>
      <price>0.7</price>
      <currencyCode>USD</currencyCode>
      <active>false</active>
    </item>
    <item>
      <term>2</term>
      <price>0.7</price>
      <currencyCode>USD</currencyCode>
      <active>false</active>
    </item>
    <item>
      <term>1</term>
      <price>0.1</price>
      <currencyCode>USD</currencyCode>
      <active>false</active>
    </item>
  </reservedInstancesListingsSet>
</DescribeReservedInstancesListingsResponse>
```
<item>
  <term>3</term>
  <price>180.0</price>
  <currencyCode>USD</currencyCode>
  <active>false</active>
</item>
<item>
  <term>2</term>
  <price>120.0</price>
  <currencyCode>USD</currencyCode>
  <active>false</active>
</item>
<item>
  <term>1</term>
  <price>60.0</price>
  <currencyCode>USD</currencyCode>
  <active>false</active>
</item>
</priceSchedules>
<tagSet/>
</item>
</reservedInstancesListingsSet>
</DescribeReservedInstancesListingsResponse>

Related Actions

- CancelReservedInstancesListing (p. 46)
- DescribeReservedInstancesListings (p. 253)
CreateRoute

Description

Creates a route in a route table within a VPC. The route's target can be either a gateway attached to the VPC or a NAT instance in the VPC.

When determining how to route traffic, we use the route with the most specific match. For example, let's say the traffic is destined for 192.0.2.3, and the route table includes the following two routes:

- 192.0.2.0/24 (goes to some target A)
- 192.0.2.0/28 (goes to some target B)

Both routes apply to the traffic destined for 192.0.2.3. However, the second route in the list covers a smaller number of IP addresses and is therefore more specific, so we use that route to determine where to target the traffic.

For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

Request Parameters

**RouteTableId**
The ID of the route table where the route will be added.
Type: String
Default: None
Required: Yes

**DestinationCidrBlock**
The CIDR address block used for the destination match. Routing decisions are based on the most specific match.
Type: String
Default: None
Required: Yes

**GatewayId**
The ID of a gateway attached to your VPC.
Type: String
Default: None
Required: Conditional
Condition: You must provide only one of the following: a GatewayId, InstanceId, or NetworkInterfaceId.

**InstanceId**
The ID of a NAT instance in your VPC.
Type: String
Default: None
Required: Conditional
Condition: You must provide only one of the following: a GatewayId, InstanceId, or NetworkInterfaceId.

**NetworkInterfaceId**
Allows the routing of network interface IDs. Exactly one interface must be attached when specifying an instance ID or it fails.
Response Elements

The following elements are returned in a `CreateRouteResponse` element.

**requestId**
- The ID of the request.
  - Type: `xsd:string`

**return**
- Returns `true` if the request succeeds. Otherwise, returns an error.
  - Type: `xsd:boolean`

Examples

Example Request

This example creates a route in the route table with ID rtb-e4ad488d. The route matches all traffic (0.0.0.0/0) and routes it to the Internet gateway with ID igw-eaad4883.

```
https://ec2.amazonaws.com/?Action=CreateRoute
&RouteTableId=rtb-e4ad488d
&DestinationCidrBlock=0.0.0.0/0
&GatewayId=igw-eaad4883
&AUTHPARAMS
```

Example Request

This example creates a route in the route table with ID rtb-g8ff4ea2. The route sends all traffic (0.0.0.0/0) to the NAT instance with ID i-1a2b3c4d.

```
https://ec2.amazonaws.com/?Action=CreateRoute
&RouteTableId=rtb-g8ff4ea2
&DestinationCidrBlock=0.0.0.0/0
&InstanceId=i-1a2b3c4d
&AUTHPARAMS
```

Example Response

```
<CreateRouteResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</CreateRouteResponse>
```
Related Actions

- DeleteRoute (p. 141)
- ReplaceRoute (p. 390)
- DescribeRouteTables (p. 266)
CreateRouteTable

Description

Creates a route table within a VPC. After you create a new route table, you can add routes and associate the table with a subnet. For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

Request Parameters

VpcId
The ID of the VPC.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a CreateRouteTableResponse element.

requestId
The ID of the request.
Type: xsd:string

routeTable
Information about the newly created route table.
Type: RouteTableType (p. 508)

Examples

Example Request

This example creates a route table within the VPC with ID of vpc-11ad4878.

https://ec2.amazonaws.com/?Action=CreateRouteTable
&VpcId=vpc-11ad4878
&AUTHPARAMS

Example Response

By default, every route table includes a local route that enables traffic to flow within the VPC. The following response shows that route.

CreateRouteTableResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <routeTable>
    <routeTableId>rtb-f9ad4890</routeTableId>
    <vpcId>vpc-11ad4878</vpcId>
    <routeSet>
<item>
   <destinationCidrBlock>10.0.0.0/22</destinationCidrBlock>
   <gatewayId>local</gatewayId>
   <state>active</state>
</item>
</routeSet>
<associationSet/>
<tagSet/>
</routeTable>
</CreateRouteTableResponse>

Related Actions

- AssociateRouteTable (p. 21)
- DisassociateRouteTable (p. 338)
- DescribeRouteTables (p. 266)
- DeleteRouteTable (p. 143)
- ReplaceRouteTableAssociation (p. 392)
- CreateRoute (p. 94)
CreateSecurityGroup

Description

Creates a security group.

Important

EC2-Classic: You create have up to 500 security groups.
EC2-VPC: You can create up to 100 security groups per VPC.

A security group is for use with instances either in the EC2-Classic platform or in a specific VPC. For more information, see Amazon EC2 Security Groups in the Amazon Elastic Compute Cloud User Guide and Security Groups for Your VPC in the Amazon Virtual Private Cloud User Guide.

When you create a security group, you specify a friendly name of your choice. You can have a security group for EC2-Classic with the same name as a security group for a VPC. However, you can't have two security groups for EC2-Classic with the same name or two security groups for a VPC with the same name.

You have a default security group for EC2-Classic and a default security group for your VPC. If you don't specify a security group when you launch an instance, the instance is launched into the appropriate default security group. A default security group includes a default rule that grants instances unrestricted network access to each other.

You can add or remove rules from your security groups using the AuthorizeSecurityGroupIngress, AuthorizeSecurityGroupEgress, RevokeSecurityGroupIngress, and RevokeSecurityGroupEgress actions.

Request Parameters

GroupName

The name of the security group.
Type: String
Default: None
Constraints: Up to 255 characters in length
Constraints for EC2-Classic: ASCII characters
Constraints for EC2-VPC: a-z, A-Z, 0-9, spaces, and _-./@\+=&;{}!$*
Required: Yes

GroupDescription

A description for the security group. This is informational only.
Type: String
Default: None
Constraints: Up to 255 characters in length
Constraints for EC2-Classic: ASCII characters
Constraints for EC2-VPC: a-z, A-Z, 0-9, spaces, and _-./@\+=&;{}!$*
Required: Yes

VpcId

[EC2-VPC] The ID of the VPC.
Type: String
Default: None
Required: Conditional
Condition: Required for EC2-VPC.
Response Elements

The following elements are returned in a CreateSecurityGroupResponse element.

**requestId**
The ID of the request.
Type: xsd:string

**return**
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

**groupId**
The ID that AWS assigns to the security group.
Type: xsd:string

Examples

Example Request

This example creates the websrv security group.

```
https://ec2.amazonaws.com/?Action=CreateSecurityGroup
&GroupName=websrv
&GroupDescription=Web Servers
&AUTHPARAMS
```

Example Response

```
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
  <groupId>sg-1a2b3c4d</groupId>
</CreateSecurityGroupResponse>
```

Related Actions

- RunInstances (p. 419)
- DescribeSecurityGroups (p. 270)
- AuthorizeSecurityGroupIngress (p. 34)
- RevokeSecurityGroupIngress (p. 416)
- DeleteSecurityGroup (p. 145)
CreateSnapshot

Description

Creates a snapshot of an Amazon EBS volume and stores it in Amazon S3. You can use snapshots for backups, to make copies of instance store volumes, and to save data before shutting down an instance. For more information about Amazon EBS, see Using Amazon Elastic Block Store.

When a snapshot is created, any AWS Marketplace product codes from the volume are propagated to the snapshot.

You can take a snapshot of an attached volume that is in use. However, snapshots only capture data that has been written to your Amazon EBS volume at the time the snapshot command is issued. This may exclude any data that has been cached by any applications or the operating system. If you can pause any file writes to the volume long enough to take a snapshot, your snapshot should be complete. However, if you cannot pause all file writes to the volume, you need to unmount the volume from within the instance, issue the snapshot command, and then remount the volume to ensure a consistent and complete snapshot.

To create a snapshot for Amazon EBS volumes that serve as root devices, you should stop the instance before taking the snapshot.

To unmount the volume in Linux/UNIX

- Enter the following command from the command line.

```bash
umount -d device_name
```

For example:

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

To unmount the volume in Windows

1. In Disk Management, right-click the volume to unmount, and select Change Drive Letter and Path.
2. Select the mount point to remove and click Remove.

Request Parameters

- **VolumeId**
  - Required: Yes
- **Description**
  - A description of the Amazon EBS snapshot.
  - Type: String
  - Default: None
  - Constraints: Up to 255 characters
  - Required: No
Response Elements

The following elements are returned in a CreateSnapshotResponse element.

requestId
The ID of the request.
Type: xsd:string

snapshotId
The ID of the snapshot.
Type: xsd:string

volumeId
The ID of the volume.
Type: xsd:string

status
The snapshot state.
Type: xsd:string
Valid values: pending | completed | error

startTime
The time stamp when the snapshot was initiated.
Type: xsd:dateTime

progress
The progress of the snapshot, as a percentage.
Type: xsd:string

ownerId
The AWS account ID of the Amazon EBS snapshot owner.
Type: xsd:string

volumeSize
The size of the volume, in GiB.
Type: xsd:string

description
A description of the snapshot.
Type: xsd:string

Examples

Example Request

This example creates a snapshot of volume vol-1a2b3c4d.

https://ec2.amazonaws.com/?Action=CreateSnapshot
&VolumeId=vol-1a2b3c4d
&Description=Daily+Backup
&AUTHPARAMS

Example Response

<CreateSnapshotResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
</CreateSnapshotResponse>
Related Actions

- DeleteSnapshot (p. 147)
- DescribeSnapshots (p. 276)
CreateSpotDatafeedSubscription

Description

Creates the datafeed for Spot Instances, enabling you to view Spot Instance usage logs. You can create one data feed per account. For more information about Spot Instances, see Spot Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

**Bucket**
- The Amazon S3 bucket in which to store the Spot Instance datafeed.
- Type: String
- Default: None
- Constraints: Must be a valid bucket associated with your account.
- Required: Yes

**Prefix**
- A prefix for the datafeed file names.
- Type: String
- Default: None
- Required: No

Response Elements

The following elements are returned in a CreateSpotDatafeedSubscriptionResponse element.

**requestId**
- The ID of the request.
- Type: xsd:string

**spotDatafeedSubscription**
- Type: SpotDatafeedSubscriptionType (p. 514)

Examples

Example Request

This example creates the data feed for the account.

https://ec2.amazonaws.com/?Action=CreateSpotDatafeedSubscription
&Bucket=myawsbucket
&AUTHPARAMS

Example Response

<CreateSpotDatafeedSubscriptionResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
</CreateSpotDatafeedSubscriptionResponse>
Related Actions

- DeleteSpotDatafeedSubscription (p. 149)
- DescribeSpotDatafeedSubscription (p. 281)
CreateSubnet

Description

Creates a subnet in an existing VPC. You can create up to 20 subnets in a VPC. If you add more than one subnet to a VPC, they're set up in a star topology with a logical router in the middle. If you need more than 20 subnets, you can request more by going to Request to Increase Amazon VPC Limits.

When you create each subnet, you provide the VPC ID and the CIDR block you want for the subnet. After you create a subnet, you can't change its CIDR block. The subnet's CIDR block can be the same as the VPC's CIDR block (assuming you want only a single subnet in the VPC), or a subset of the VPC's CIDR block. If you create more than one subnet in a VPC, the subnets' CIDR blocks must not overlap. The smallest subnet (and VPC) you can create uses a /28 netmask (16 IP addresses), and the largest uses a /16 netmask (65,536 IP addresses).

Important
AWS reserves both the first four and the last IP address in each subnet's CIDR block. They're not available for use.

If you launch an instance in a VPC using an Amazon EBS-backed AMI, the IP address doesn't change if you stop and restart the instance (unlike a similar instance launched outside a VPC, which gets a new IP address when restarted). It's therefore possible to have a subnet with no running instances (they're all stopped), but no remaining IP addresses available. For more information about Amazon EBS-backed AMIs, see AMI Basics in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

VpcId
The ID of the VPC.
Type: String
Default: None
Required: Yes

CidrBlock
The CIDR block for the subnet. For example, 10.0.0.0/24.
Type: String
Default: None
Required: Yes

AvailabilityZone
The Availability Zone for the subnet.
Type: String
Default: AWS selects a zone for you (recommended)
Required: No

Response Elements

The following elements are returned in a CreateSubnetResponse element.

requestId
The ID of the request.
Type: xsd:string
subnet

Information about the subnet.
Type: SubnetType (p. 519)

Examples

Example Request

This example creates a subnet with CIDR block 10.0.1.0/24 in the VPC with ID vpc-1a2b3c4d.

https://ec2.amazonaws.com/?Action=CreateSubnet
&VpcId=vpc-1a2b3c4d
&CidrBlock=10.0.1.0/24
&AUTHPARAMS

Example Response

<CreateSubnetResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <subnet>
    <subnetId>subnet-9d4a7b6c</subnetId>
    <state>pending</state>
    <vpcId>vpc-1a2b3c4d</vpcId>
    <cidrBlock>10.0.1.0/24</cidrBlock>
    <availableIpAddressCount>251</availableIpAddressCount>
    <availabilityZone>us-east-1a</availabilityZone>
    <tagSet/>
  </subnet>
</CreateSubnetResponse>

Related Actions

- DescribeSubnets (p. 294)
- DeleteSubnet (p. 150)
CreateTags

Description

Adds or overwrites one or more tags for the specified EC2 resource or resources. Each resource can have a maximum of 10 tags. Each tag consists of a key and optional value. Tag keys must be unique per resource.

For more information about tags, see Using Tags in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

ResourceId.n
The ID of a resource to tag. For example, ami-1a2b3c4d. You can specify multiple resources to assign the tags to.
Type: String
Default: None
Required: Yes

Tag.n.Key
The key for a tag.
Type: String
Default: None
Constraints: Tag keys are case sensitive and accept a maximum of 128 Unicode characters.
Required: Yes

Tag.n.Value
The value for a tag. If you don't want the tag to have a value, specify the parameter with no value, and we set the value to an empty string.
Type: String
Default: None
Constraints: Tag values are case sensitive and accept a maximum of 256 Unicode characters.
Required: Yes

Response Elements

The following elements are returned in a CreateTagsResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean
Examples

Example Request

This example adds (or overwrites) two tags for an AMI and an instance. One of the tags is just a key (webserver), with no value (we set the value to an empty string). The other consists of a key (stack) and value (Production).

```
https://ec2.amazonaws.com/?Action=CreateTags
&ResourceId.1=ami-1a2b3c4d
&ResourceId.2=i-7f4d3a2b
&Tag.1.Key=webserver
&Tag.1.Value=
&Tag.2.Key=stack
&Tag.2.Value=Production
&AUTHPARAMS
```

Example Response

```
<CreateTagsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <return>true</return>
</CreateTagsResponse>
```

Related Actions

- DescribeTags (p. 298)
- DeleteTags (p. 152)
CreateVolume

Description

Creates an Amazon EBS volume that can be attached to any Amazon EC2 instance in the same Availability Zone. Any AWS Marketplace product codes from the snapshot are propagated to the volume. For more information about Amazon EBS, see Amazon Elastic Block Store.

Request Parameters

Size
The size of the volume, in GiBs.
Type: String
Valid values: 1-1024
Valid values: If the volume type is io1, the minimum size of the volume is 10 GiB.
Default: If you're creating the volume from a snapshot and don't specify a volume size, the default is the snapshot size.
Required: No

SnapshotId
The snapshot from which to create the new volume.
Type: String
Default: None
Condition: Required if you are creating a volume from a snapshot.
Required: Conditional

AvailabilityZone
The Availability Zone for the new volume. Use DescribeAvailabilityZones (p. 173) to display Availability Zones that are currently available to your account.
Type: String
Default: None
Required: Yes

VolumeType
The volume type.
Type: String
Valid values: standard | io1
Default: standard
Required: No

Iops
The number of I/O operations per second (IOPS) that the volume supports.
Type: Integer
Valid values: Range is 100 to 4000.
Default: None
Required: Conditional
Condition: Required when the volume type is io1; not used with standard volumes.

Response Elements

The following elements are returned in a CreateVolumeResponse element.
**Examples**

**Example Request**

This example creates a new 80 GiB volume in Availability Zone **us-east-1a**.

https://ec2.amazonaws.com/?Action=CreateVolume
&Size=80
&AvailabilityZone=us-east-1a
&AUTHPARAMS

**Example Response**

```
<CreateVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4ec9-99ed-be587EXAMPLE</requestId>
  <volumeId>vol-1a2b3c4d</volumeId>
  <size>80</size>
</CreateVolumeResponse>
```
<snapshotId/>
<availabilityZone>us-east-1a</availabilityZone>
<status>creating</status>
<createTime>YYYY-MM-DDTHH:MM:SS.000Z</createTime>
<volumeType>standard</volumeType>
</CreateVolumeResponse>

Related Actions

- DeleteVolume (p. 155)
- DescribeVolumes (p. 303)
- AttachVolume (p. 27)
- DetachVolume (p. 330)
- DescribeAvailabilityZones (p. 173)
CreateVpc

Description

Creates a VPC with the specified CIDR block. The smallest VPC you can create uses a /28 netmask (16 IP addresses), and the largest uses a /16 netmask (65,536 IP addresses). To help you decide how big to make your VPC, see Your VPC and Subnets in the Amazon Virtual Private Cloud User Guide.

By default, each instance you launch in the VPC has the default DHCP options, which includes only a default DNS server that we provide (AmazonProvidedDNS). For more information about DHCP options, see Using DHCP Options with Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

**CidrBlock**

The CIDR block you want the VPC to cover (for example, `10.0.0.0/16`).

Type: String

Default: None

Required: Yes

**instanceTenancy**

The supported tenancy options for instances launched into the VPC. A value of `default` means that instances can be launched with any tenancy; a value of `dedicated` means all instances are launched as dedicated tenancy instances regardless of the tenancy assigned to the instance at launch. Setting the instance tenancy to `dedicated` runs your instance on single-tenant hardware.

Type: String

Default: `default`

Required: No

Response Elements

The following elements are returned in a CreateVpcResponse element.

**requestId**

The ID of the request.

Type: xsd:string

**vpc**

Information about the VPC.

Type: VpcType (p. 525)

Examples

Example Request

This example creates a VPC with CIDR block 10.0.0.0/16.

https://ec2.amazonaws.com/?Action=CreateVpc
&CidrBlock=10.0.0.0/16
&AUTHPARAMS
Example Response

```xml
<CreateVpcResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <vpc>
    <vpcId>vpc-1a2b3c4d</vpcId>
    <state>pending</state>
    <cidrBlock>10.0.0.0/16</cidrBlock>
    <dhcpOptionsId>dopt-1a2b3c4d2</dhcpOptionsId>
    <instanceTenancy>default</instanceTenancy>
  </vpc>
</CreateVpcResponse>
```

Example Request

This example creates a VPC with the dedicated tenancy option.

```url
https://ec2.amazonaws.com/?Action=CreateVpc
&InstanceId=vpc-1a2b3c4d
&CidrBlock=10.0.0.0/16
&InstanceTenancy=dedicated
&AUTHPARAMS
```

Example Response

```xml
<CreateVpcResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>a9e49797-a74f-4f68-b302-a134a51fd054</requestId>
  <vpc>
    <vpcId>vpc-11a63c78</vpcId>
    <state>pending</state>
    <cidrBlock>10.32.0.0/16</cidrBlock>
    <dhcpOptionsId>dopt-1a2b3c4d2</dhcpOptionsId>
    <instanceTenancy>dedicated</instanceTenancy>
  </vpc>
</CreateVpcResponse>
```

Related Actions

- DescribeVpcs (p. 316)
- DeleteVpc (p. 157)
- CreateDhcpOptions (p. 60)
- AssociateDhcpOptions (p. 19)
CreateVpnConnection

Description

Creates a VPN connection between an existing virtual private gateway and a VPN customer gateway. The only supported connection type is \texttt{ipsec.1}.

The response includes information that you need to configure your customer gateway, in XML format. We recommend that you use the command line version of this operation \texttt{(ec2-create-vpn-connection)}, which lets you get the configuration information formatted in a friendlier way. For information about the command, see \texttt{ec2-create-vpn-connection} in the \textit{Amazon Elastic Compute Cloud Command Line Reference}.

\textbf{Important}

We strongly recommend that you use HTTPS when calling this operation because the response contains sensitive cryptographic information for configuring your customer gateway.

If you shut down your VPN connection for any reason and later create a new VPN connection, you must reconfigure your customer gateway with the new information returned from CreateVpnConnection.

For more information about VPN connections, see \textit{Adding an IPsec Hardware Virtual Private Gateway to Your VPC} in the \textit{Amazon Virtual Private Cloud User Guide}.

Request Parameters

\textbf{Type}

The type of VPN connection.

- Type: String
- Default: None
- Valid values: \texttt{ipsec.1}
- Required: Yes

\textbf{CustomerGatewayId}

The ID of the customer gateway.

- Type: String
- Default: None
- Required: Yes

\textbf{VpnGatewayId}

The ID of the virtual private gateway.

- Type: String
- Default: None
- Required: Yes

\textbf{Options.StaticRoutesOnly}

Indicates whether the VPN connection requires static routes. If you are creating a VPN connection for a device that does not support BGP, you must specify \texttt{true}.

- Type: Boolean
- Default: \texttt{false}
- Required: No

Response Elements

The following elements are returned in a \texttt{CreateVpnConnectionResponse} element.
Examples

Example Request

This example creates a VPN connection between the virtual private gateway (VGW) with ID vgw-8db04f81 and the customer gateway with ID cgw-b4dc3961. The response includes configuration information for the VPN connection's customer gateway (in the native XML format, but escaped).

https://ec2.amazonaws.com/?Action=CreateVpnConnection&type=ipsec.1&CustomerGatewayId=cgw-b4dc3961&VpnGatewayId=vgw-8db04f81&AUTHPARAMS

Example Response

<table>
<thead>
<tr>
<th>CreateVpnConnectionResponse xmlns=&quot;<a href="http://ec2.amazonaws.com/doc/2013-02-01/">http://ec2.amazonaws.com/doc/2013-02-01/</a>&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;requestId&gt;7a62c49f-347e-4fc4-9331-6e8eEXAMPLE&lt;/requestId&gt;</td>
</tr>
<tr>
<td>&lt;vpnConnection&gt;</td>
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</tbody>
</table>
</tunnel_outside_address>
	<tunnel_inside_address>
		<ip_address>169.254.255.2</ip_address>
		<network_mask>255.255.255.252</network_mask>
		<network_cidr>30</network_cidr>
	</tunnel_inside_address>
</bgp>
</vpn_gateway>
</ike>
</ipsec>
</ipsec_tunnel>
</customer_gateway>
</vpn_gateway>
</ipsec_tunnel>
</customer_gateway>
</vpn_gateway>
</ike>
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</customer_gateway>
</vpn_gateway>
</ipsec_tunnel>
</customer_gateway>
</vpn_gateway>
</ike>
</ipsec>
</ipsec_tunnel>
</customer_gateway>
</vpn_gateway>
</ipsec_tunnel>
Example Request

This example creates a VPN connection with the static routes option between the virtual private gateway (VGW), with ID vgw-8db04f81, and the customer gateway, with ID cgw-b4dc3961, for a device that does not support the Border Gateway Protocol (BGP). The response includes configuration information for the VPN connection's customer gateway (in the native XML format, but escaped).

https://ec2.amazonaws.com/?Action=CreateVpnConnection
&Type=ipsec.1
&CustomerGatewayId=cgw-b4dc3961
&VpnGatewayId=vgw-8db04f81
&Options.StaticRoutesOnly=true
&AUTHPARAMS
Example Response

```xml
<CreateVpnConnectionResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>5cc7891f-1f3b-4fc4-a626-bdea8f63ff5a</requestId>
  <vpnConnection>
    <vpnConnectionId>vpn-83ad48ea</vpnConnectionId>
    <state>pending</state>
    <customerGatewayConfiguration>
      <customer_gateway_id>cgw-63ae4b0a</customer_gateway_id>
      <vpn_gateway_id>vgw-4ea04527</vpn_gateway_id>
      <vpn_connection_type>ipsec.1</vpn_connection_type>
      <vpn_connection_attributes>NoBGPVPNConnection</vpn_connection_attributes>
    </customerGatewayConfiguration>
    <ipsec_tunnel>
      <customer_gateway>
        <tunnel_outside_address>
          <ip_address>111.112.113.11</ip_address>
        </tunnel_outside_address>
        <tunnel_inside_address>
          <ip_address>169.254.200.18</ip_address>
          <network_mask>255.255.255.252</network_mask>
          <network_cidr>30</network_cidr>
        </tunnel_inside_address>
      </customer_gateway>
      <vpn_gateway>
        <tunnel_outside_address>
          <ip_address>92.168.1.2</ip_address>
        </tunnel_outside_address>
        <tunnel_inside_address>
          <ip_address>169.254.200.17</ip_address>
          <network_mask>255.255.255.252</network_mask>
          <network_cidr>30</network_cidr>
        </tunnel_inside_address>
      </vpn_gateway>
    </ipsec_tunnel>
    <ike>
      <authentication_protocol>sha1</authentication_protocol>
      <encryption_protocol>aes-128-cbc</encryption_protocol>
      <lifetime>28800</lifetime>
      <perfect_forward_secrecy>group2</perfect_forward_secrecy>
      <mode>main</mode>
      <pre_shared_key>UNoSTegjalhXF_Sc3iFyHeyPWvKLqlg4PF</pre_shared_key>
    </ike>
    <ipsec>
      <protocol>esp</protocol>
      <authentication_protocol>hmac-sha1-96</authentication_protocol>
      <encryption_protocol>aes-128-cbc</encryption_protocol>
      <lifetime>3600</lifetime>
      <perfect_forward_secrecy>group2</perfect_forward_secrecy>
      <mode>tunnel</mode>
    </ipsec>
    <dead_peer_detection>
      <interval>10</interval>
      <retries>3</retries>
    </dead_peer_detection>
  </vpnConnection>
</CreateVpnConnectionResponse>
```
Related Actions

- DescribeVpnConnections (p. 319)
- DeleteVpnConnection (p. 159)
- CreateVpc (p. 113)
- CreateSubnet (p. 106)
- AttachVpnGateway (p. 29)
CreateVpnConnectionRoute

**Description**

Creates a new static route associated with a VPN connection between an existing virtual private gateway and a VPN customer gateway. The static route allows traffic to be routed from the virtual private gateway to the VPN customer gateway.

**Important**

We strongly recommend you use HTTPS when calling this operation because the response contains sensitive cryptographic information for configuring your customer gateway.

For more information about VPN connections, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

**Request Parameters**

- **DestinationCidrBlock**
  - The CIDR block associated with the local subnet of the customer network.
  - Type: String
  - Default: None
  - Required: Yes

- **VpnConnectionId**
  - The ID of the VPN connection.
  - Type: String
  - Default: None
  - Required: Yes

**Response Elements**

The following elements are returned in an `CreateVpnConnectionRouteResponse` element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **return**
  - Returns `true` if the request succeeds. Otherwise, returns an error.
  - Type: xsd:boolean

**Examples**

**Example Request**

This example creates a static route to the VPN connection for the VPN connection ID vpn-83ad48ea to the destination CIDR block 11.12.0.0/16. Note that when using the Query API the "/" is denoted as "%2F".

```
https://ec2.amazonaws.com/?Action=CreateVpnConnectionRoute
&DestinationCidrBlock=11.12.0.0%2F16
```
Example Response

```
<CreateVpnConnectionRouteResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>4f35alb2-c2c3-4093-b51f-abb9d7311990</requestId>
  <return>true</return>
</CreateVpnConnectionRouteResponse>
```

Related Actions

- DeleteVpnConnectionRoute (p. 161)
- DeleteVpnConnection (p. 159)
- DescribeVpnConnections (p. 319)
- CreateVpc (p. 113)
- CreateSubnet (p. 106)
- AttachVpnGateway (p. 29)
CreateVpnGateway

Description

Creates a virtual private gateway. A virtual private gateway is the VPC-side endpoint for your VPN connection. You can create a virtual private gateway before creating the VPC itself.

For more information about virtual private gateways, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

Type

The type of VPN connection this virtual private gateway supports.
Type: String
Default: None
Valid values: ipsec.1
Required: Yes

Response Elements

The following elements are returned in a CreateVpnGatewayResponse element.

requestId

The ID of the request.
Type: xsd:string

vpnGateway

Information about the virtual private gateway.
Type: VpnGatewayType (p. 527)

Examples

Example Request

This example creates a virtual private gateway.

https://ec2.amazonaws.com/?Action=CreateVpnGateway
&Type=ipsec.1
&AUTHPARAMS

Example Response

<CreateVpnGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <vpnGateway>
    <vpnGatewayId>vgw-8db04f81</vpnGatewayId>
    <state>pending</state>
    <type>ipsec.1</type>
  </vpnGateway>
</CreateVpnGatewayResponse>
<availabilityZone>us-east-1a</availabilityZone>
<attachments/>
<tagSet/>
</vpnGateway>
</CreateVpnGatewayResponse>

Related Actions

- DescribeVpnGateways (p. 323)
- DeleteVpnGateway (p. 163)
- AttachVpnGateway (p. 29)
- DetachVpnGateway (p. 332)
DeleteCustomerGateway

Description

Deletes a VPN customer gateway. You must delete the VPN connection before deleting the customer gateway.

For more information about VPN customer gateways, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

CustomerGatewayId

The ID of the customer gateway.

Type: String

Default: None

Required: Yes

Response Elements

The following elements are returned in a DeleteCustomerGatewayResponse element.

requestId

The ID of the request.

Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.

Type: xsd:boolean

Examples

Example Request

This example deletes the customer gateway with ID cgw-b4dc3961.

https://ec2.amazonaws.com/?Action=DeleteCustomerGateway &CustomerGatewayId=cgw-b4dc3961 &AUTHPARAMS

Example Response

<DeleteCustomerGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
   <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
   <return>true</return>
</DeleteCustomerGatewayResponse>
Related Actions

- CreateCustomerGateway (p. 58)
- DescribeCustomerGateways (p. 181)
DeleteDhcpOptions

Description

Deletes a set of DHCP options that you specify. The API action returns an error if the set of options you specify is currently associated with a VPC. You can disassociate the set of options by associating either a new set of options or the default options with the VPC.

For more information about DHCP options sets, see Using DHCP Options with Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

DhcpOptionsId

- The ID of the DHCP options set.
- Type: String
- Default: None
- Required: Yes

Response Elements

The following elements are returned in a DeleteDhcpOptionsResponse element.

requestId

- The ID of the request.
- Type: xsd:string

return

- Returns true if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request

This example deletes the set of DHCP options with ID dopt-7a8b9c2d.

https://ec2.amazonaws.com/?Action=DeleteDhcpOptions
&DhcpOptionsId=dopt-7a8b9c2d
&AUTHPARAMS

Example Response

<DeleteDhcpOptionsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <return>true</return>
</DeleteDhcpOptionsResponse>
Related Actions

- AssociateDhcpOptions (p. 19)
- CreateDhcpOptions (p. 60)
- DescribeDhcpOptions (p. 184)
DeleteInternetGateway

Description

Deletes an Internet gateway from your AWS account. The gateway must not be attached to a VPC. For more information about your VPC and Internet gateway, see the Amazon Virtual Private Cloud User Guide.

Request Parameters

InternetGatewayId
  The ID of the Internet gateway.
  Type: String
  Default: None
  Required: Yes

Response Elements

The following elements are returned in a DeleteInternetGatewayResponse element.

requestId
  The ID of the request.
  Type: xsd:string

return
  Returns true if the request succeeds. Otherwise, returns an error.
  Type: xsd:boolean

Examples

Example Request

This example deletes the Internet gateway with ID igw-eaad4883.

https://ec2.amazonaws.com/?Action=DeleteInternetGateway
&InternetGatewayId=igw-eaad4883
AUTHPARAMS

Example Response

<?xml version="1.0" encoding="UTF-8"?>
<DeleteInternetGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeleteInternetGatewayResponse>
Related Actions

- CreateInternetGateway (p. 69)
- AttachInternetGateway (p. 23)
- DetachInternetGateway (p. 326)
- DescribeInternetGateways (p. 225)
DeleteKeyPair

Description

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

Request Parameters

KeyName

The name of the key pair.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a DeleteKeyPairResponse element.

requestId

The ID of the request.
Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

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/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeleteKeyPairResponse>

Related Actions

- CreateKeyPair (p. 71)
- DescribeKeyPairs (p. 228)
- ImportKeyPair (p. 352)
DeleteNetworkAcl

Description

Deletes a network ACL from a VPC. The ACL must not have any subnets associated with it. You can't delete the default network ACL. For more information about network ACLs, see Network ACLs in the Amazon Virtual Private Cloud User Guide.

Request Parameters

*NetworkAclId*
- The ID of the network ACL.
- Type: String
- Default: None
- Required: Yes

Response Elements

The following elements are returned in a `DeleteNetworkAclResponse` element.

*requestId*
- The ID of the request.
- Type: xsd:string

*return*
- Returns `true` if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request

This example deletes the network ACL with ID acl-2cb85d45.

```
https://ec2.amazonaws.com/?Action=DeleteNetworkAcl
&NetworkAclId=acl-2cb85d45
&AUTHPARAMS
```

Example Response

```
<DeleteNetworkAclResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeleteNetworkAclResponse>
```

Related Actions

- DeleteNetworkAcl (p. 133)
• DescribeNetworkAcls (p. 230)
• ReplaceNetworkAclAssociation (p. 385)
DeleteNetworkAclEntry

Description

Deletes an ingress or egress entry (i.e., rule) from a network ACL. For more information about network ACLs, see Network ACLs in the Amazon Virtual Private Cloud User Guide.

Request Parameters

- **NetworkAclId**
  - The ID of the network ACL.
  - Type: String
  - Default: None
  - Required: Yes
- **RuleNumber**
  - The rule number for the entry to delete.
  - Type: Integer
  - Default: None
  - Required: Yes
- **Egress**
  - Specifies whether the rule to delete is an egress rule (true) or ingress rule (false).
  - Type: Boolean
  - Default: false
  - Valid values: true | false
  - Required: No

Response Elements

The following elements are returned in a DeleteNetworkAclEntryResponse element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string
- **return**
  - Returns true if the request succeeds. Otherwise, returns an error.
  - Type: xsd:boolean

Examples

Example Request

This example deletes the ingress entry with rule number 100 from the network ACL with ID acl-2cb85d45.

https://ec2.amazonaws.com/?Action=DeleteNetworkAclEntry
&NetworkAclId=acl-2cb85d45
&RuleNumber=100
&AUTHPARAMS
Example Response

```
<DeleteNetworkAclEntryResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
    <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
    <return>true</return>
</DeleteNetworkAclEntryResponse>
```

Related Actions

- CreateNetworkAclEntry (p. 75)
- ReplaceNetworkAclEntry (p. 387)
- DescribeNetworkAcls (p. 230)
DeleteNetworkInterface

Description
Deletes the specified network interface.

Request Parameters

*NetworkInterfaceId*
- The ID of the network interface.
- Type: String
- Default: None
- Required: Yes

Response Elements
The following elements are returned in a `DeleteNetworkInterfaceResponse` element.

*requestId*
- The ID of the request.
- Type: xsd:string

$return$
- Returns true if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request
This example deletes an elastic network interface (ENI) `eni-ffda3197`.

https://ec2.amazonaws.com/?Action=DeleteNetworkInterface
&NetworkInterfaceId=eni-ffda3197
&AUTHPARAMS

Example Response

```xml
<DeleteNetworkInterfaceResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>e1c6d73b-edaa-4e62-9909-6611404e1739</requestId>
  <return>true</return>
</DeleteNetworkInterfaceResponse>
```

Related Actions

- AttachNetworkInterface (p. 25)
- DetachNetworkInterface (p. 328)
- CreateNetworkInterface (p. 78)
- DescribeNetworkInterfaceAttribute (p. 235)
- DescribeNetworkInterfaces (p. 237)
- ModifyNetworkInterfaceAttribute (p. 363)
- ResetNetworkInterfaceAttribute (p. 409)
DeletePlacementGroup

Description

Deletes a placement group from your account. You must terminate all instances in the placement group before deleting it. For more information about placement groups and cluster instances, see Using Cluster Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

GroupName

The name of the placement group.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a DeletePlacementGroupResponse element.

requestId

The ID of the request.
Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example deletes the placement group named XYZ-cluster.

https://ec2.amazonaws.com/?Action=DeletePlacementGroup&GroupName=XYZ-cluster&AUTHPARAMS

Example Response

<DeletePlacementGroupResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>d4904fd9-82c2-4ea5-adfe-a9cc3EXAMPLE</requestId>
  <return>true</return>
</DeletePlacementGroupResponse>
Related Actions

- CreatePlacementGroup (p. 83)
- DescribePlacementGroups (p. 243)
DeleteRoute

Description

Deletes a route from a route table in a VPC. For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

Request Parameters

RouteTableId
The ID of the route table.
Type: String
Default: None
Required: Yes

DestinationCidrBlock
The CIDR range for the route to delete. The value you specify must exactly match the CIDR for the route.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a ReplaceRouteResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example removes the route with destination CIDR 172.16.1.0/24 from the route table with ID rtb-e4ad488d.

https://ec2.amazonaws.com/?Action=DeleteRoute
&RouteTableId=rtb-e4ad488d
&DestinationCidrBlock=172.16.1.0/24
&AUTHPARMS
Example Response

```xml
<DeleteRouteResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
    <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
    <return>true</return>
</DeleteRouteResponse>
```

Related Actions

- CreateRoute (p. 94)
- ReplaceRoute (p. 390)
- DescribeRouteTables (p. 266)
DeleteRouteTable

Description

Deletes a route table from a VPC. The route table must not be associated with a subnet. You can't delete the main route table. For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

Request Parameters

RouteTableId
The ID of the route table.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a DeleteRouteTableResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example deletes the route table with ID rtb-e4ad488d.

https://ec2.amazonaws.com/?Action=DeleteRouteTable
&RouteTableId=rtb-e4ad488d
&AUTHPARAMS

Example Response

<DeleteRouteTableResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeleteRouteTableResponse>

Related Actions

• AssociateRouteTable (p. 21)
Related Actions

- DisassociateRouteTable (p. 338)
- DescribeRouteTables (p. 266)
- CreateRouteTable (p. 97)
- ReplaceRouteTableAssociation (p. 392)
DeleteSecurityGroup

Description

Deletes a security group.

Important
If you attempt to delete a security group that contains instances, or is referenced by another security group, the operation fails with InvalidGroup.InUse for EC2-Classic or DependencyViolation for EC2-VPC.

A security group is for use with instances either in the EC2-Classic platform or in a specific VPC. For more information, see Amazon EC2 Security Groups in the Amazon Elastic Compute Cloud User Guide and Security Groups for Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

GroupName
The name of the security group.
Type: String
Default: None
Required: Conditional
Condition: For EC2-Classic, default VPC, you can specify either GroupName or GroupId

GroupId
The ID of the security group.
Type: String
Default: None
Required: Conditional
Condition: Required for a nondefault VPC; for EC2-Classic, default VPC, you can specify either GroupName or GroupId

Response Elements

The following elements are returned in a DeleteSecurityGroupResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example deletes the security group for EC2-Classic named websrv.
Example Request

This example deletes the security group for EC2-VPC with the ID sg-1a2b3c4d.

Example Response

```
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeleteSecurityGroupResponse>
```

Related Actions

- CreateSecurityGroup (p. 99)
- DescribeSecurityGroups (p. 270)
- AuthorizeSecurityGroupIngress (p. 34)
- RevokeSecurityGroupIngress (p. 416)
DeleteSnapshot

Description

Deletes a snapshot of an Amazon EBS volume.

Note

If you make periodic snapshots of a volume, the snapshots are incremental so that only the blocks on the device that have changed since your last snapshot are incrementally saved in the new snapshot. Even though snapshots are saved incrementally, the snapshot deletion process is designed so that you need to retain only the most recent snapshot in order to restore the volume.

Request Parameters

SnapshotId

The ID of the Amazon EBS snapshot.

Type: String

Default: None

Required: Yes

Response Elements

The following elements are returned in a DeleteSnapshotResponse element.

requestId

The ID of the request.

Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.

Type: xsd:boolean

Examples

Example Request

This example deletes snapshot snap-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DeleteSnapshot
&SnapshotId.1=snap-1a2b3c4d
&AUTHPARAMS

Example Response

<DeleteSnapshotResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeleteSnapshotResponse>
Related Actions

- CreateSnapshot (p. 101)
- DescribeSnapshots (p. 276)
DeleteSpotDatafeedSubscription

Description

Deletes the datafeed for Spot Instances. For more information about Spot Instances, see Spot Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

The DeleteSpotDatafeedSubscription operation does not have any request parameters.

Response Elements

The following elements are returned in a DeleteSpotDatafeedSubscriptionResponse element.

requestId
  The ID of the request.
  Type: xsd:string

return
  Returns true if the request succeeds. Otherwise, returns an error.
  Type: xsd:boolean

Examples

Example Request

This example deletes the data feed for the account.

https://ec2.amazonaws.com/?Action=DeleteSpotDatafeedSubscription &AUTHPARAMS

Example Response

<DeleteSpotDatafeedSubscriptionResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeleteSpotDatafeedSubscriptionResponse>

Related Actions

• CreateSpotDatafeedSubscription (p. 104)
• DescribeSpotDatafeedSubscription (p. 281)
DeleteSubnet

Description

Deletes a subnet from a VPC. You must terminate all running instances in the subnet before deleting it, otherwise the API action returns an error.

Request Parameters

**SubnetId**

The ID of the subnet.

Type: String

Default: None

Required: Yes

Response Elements

The following elements are returned in a `DeleteSubnetResponse` element.

- **requestId**
  The ID of the request.
  Type: `xsd:string`

- **return**
  Returns `true` if the request succeeds. Otherwise, returns an error.
  Type: `xsd:boolean`

Examples

Example Request

This example deletes the subnet with ID subnet-9d4a7b6c.

```xml
https://ec2.amazonaws.com/?Action=DeleteSubnet
&SubnetId=subnet-9d4a7b6c
&AUTHPARAMS
```

Example Response

```xml
<DeleteSubnetResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <return>true</return>
</DeleteSubnetResponse>
```

Related Actions

- CreateSubnet (p. 106)
• **DescribeSubnets** (p. 294)
DeleteTags

Description

Deletes a specific set of tags from a specific set of resources. This call is designed to follow a DescribeTags call. You first determine what tags a resource has, and then you call DeleteTags with the resource ID and the specific tags you want to delete.

For more information about tags, see Using Tags in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

ResourceId.n
The ID of the resource. For example, ami-1a2b3c4d. You can specify more than one resource ID.
Type: String
Default: None
Required: Yes

Tag.n.Key
The tag's key. You can specify more than one tag to delete.
Type: String
Default: None
Required: Yes

Tag.n.Value
The tag's value.
Type: String
Default: If you omit this parameter, we delete the tag regardless of its value. If you specify this parameter with an empty string as the value, we delete the key only if its value is an empty string.
Required: No

Response Elements

The following elements are returned in a DeleteTagsResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example deletes the tags for the AMI with ID ami-1a2b3c4d. You first get a list of the tags.
Sample response:

```xml
<DescribeTagsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <tagSet>
    <item>
      <resourceId>ami-1a2b3c4d</resourceId>
      <resourceType>image</resourceType>
      <key>webserver</key>
      <value/>
    </item>
    <item>
      <resourceId>ami-1a2b3c4d</resourceId>
      <resourceType>image</resourceType>
      <key>stack</key>
      <value>Production</value>
    </item>
  </tagSet>
</DescribeTagsResponse>
```

Then you delete the tags. Specifying the value for the `stack` tag is optional.

Sample response:

```xml
<DeleteTagsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <return>true</return>
</DeleteTagsResponse>
```

**Example Request**

This example deletes the stack tag from two particular instances.

```html
https://ec2.amazonaws.com/?Action=DeleteTags
&ResourceId.1=i-5f4e3d2a
&Tag.1.Key=stack
&ResourceId.2=i-12345678
&Tag.2.Key=stack
&AUTHPARAMS
```

**Example Request**

This example deletes the stack and webserver tags for one particular instance.
Example Request

You can specify a tag key without a corresponding tag value if you want to delete the tag regardless of its value. This example deletes all tags whose key=Purpose, regardless of the tag value.

```
https://ec2.amazonaws.com/?Action=DeleteTags
&ResourceId.1=i-5f4e3d2a
&Tag.1.Key=stack
&ResourceId.2=i-5f4e3d2a
&Tag.2.Key=webserver
&AUTHPARAMS
```

Example Request

When you create a tag, you can set the tag value to the empty string. Correspondingly, you can delete only tags that have a specific key and whose value is the empty string. This example deletes all tags for the specified instance where key=Purpose and the tag value is the empty string.

```
https://ec2.amazonaws.com/?Action=DeleteTags
&ResourceId.1=i-5f4e3d2a
&Tag.1.Key=Purpose
&Tag.2.Value=
&AUTHPARAMS
```

Related Actions

- CreateTags (p. 108)
- DescribeTags (p. 298)
DeleteVolume

Description

Deletes an Amazon EBS volume. The volume must be in the available state (not attached to an instance). For more information about Amazon EBS, see Using Amazon Elastic Block Store in the Amazon Elastic Compute Cloud User Guide.

Note
The volume remains in the deleting state for several minutes after you call this action.

Request Parameters

VolumeId
The ID of the volume.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a DeleteVolumeResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example deletes volume vol-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DeleteVolume
&VolumeId=vol-1a2b3c4d
&AUTHPARAMS

Example Response

<DeleteVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eb9-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeleteVolumeResponse>
Related Actions

- CreateVolume (p. 110)
- DescribeVolumes (p. 303)
- AttachVolume (p. 27)
- DetachVolume (p. 330)
DeleteVpc

**Description**

Deletes a VPC. You must detach or delete all gateways or other objects that are dependent on the VPC first. For example, you must terminate all running instances, delete all security groups (except the default), delete all the route tables (except the default), and so on.

**Request Parameters**

**VpcId**
- The ID of the VPC.
- Type: String
- Default: None
- Required: Yes

**Response Elements**

The following elements are returned in a DeleteVpcResponse element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **return**
  - Returns true if the request succeeds. Otherwise, returns an error.
  - Type: xsd:boolean

**Examples**

**Example Request**

This example deletes the VPC with ID vpc-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DeleteVpc
&VpcId=vpc-1a2b3c4d
&AUTHPARAMS

**Example Response**

<DeleteVpcResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <return>true</return>
</DeleteVpcResponse>

**Related Actions**

- CreateVpc (p. 113)
• DescribeVpcs (p. 316)
DeleteVpnConnection

Description

Deletes a VPN connection. Use this if you want to delete a VPC and all its associated components. Another reason to use this operation is if you believe the tunnel credentials for your VPN connection have been compromised. In that situation, you can delete the VPN connection and create a new one that has new keys, without needing to delete the VPC or virtual private gateway. If you create a new VPN connection, you must reconfigure the customer gateway using the new configuration information returned with the new VPN connection ID.

If you're deleting the VPC and all its associated parts, we recommend you detach the virtual private gateway from the VPC and delete the VPC before deleting the VPN connection.

For more information about VPN connections, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

VpnConnectionId

The ID of the VPN connection.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a DeleteVpnConnectionResponse element.

requestId

The ID of the request.
Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example deletes the VPN connection with ID vpn-44a8938f.

https://ec2.amazonaws.com/?Action=DeleteVpnConnection
&VpnConnectionId=vpn-44a8938f
&AUTHPARAMS
Example Response

```xml
<DeleteVpnConnectionResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</RequestId>
  <return>true</return>
</DeleteVpnConnectionResponse>
```

Related Actions

- CreateVpnConnection (p. 115)
- DescribeVpnConnections (p. 319)
- DetachVpnGateway (p. 332)
- DeleteVpc (p. 157)
DeleteVpnConnectionRoute

Description

Deletes a static route associated with a VPN connection between an existing virtual private gateway and a VPN customer gateway. The static route allows traffic to be routed from the virtual private gateway to the VPN customer gateway.

Important

We strongly recommend you use HTTPS when calling this operation because the response contains sensitive cryptographic information for configuring your customer gateway.

For more information about VPN connections, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

DestinationCidrBlock

The CIDR block associated with the local subnet of the customer data center.
Type: String
Default: None
Required: Yes

VpnConnectionId

The ID of the VPN connection.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in an DeleteVpnConnectionRouteResponse element.

requestId

The ID of the request.
Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example deletes a static route to the destination CIDR block 11.12.0.0/16 associated with the VPN connection with ID vpn-83ad48ea. Note that when using the Query API the "/" is denoted as "%2F".

https://ec2.amazonaws.com/?Action=DeleteVpnConnectionRoute&DestinationCidrBlock=11.12.0.0%2F16
Example Response

```
<DeleteVpnConnectionRouteResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>4f35a1b2-c2c3-4093-b51f-abb9d7311990</requestId>
  <return>true</return>
</DeleteVpnConnectionRouteResponse>
```

Related Actions

- CreateVpnConnectionRoute (p. 122)
- DeleteVpnConnection (p. 159)
- DescribeVpnConnections (p. 319)
- CreateVpc (p. 113)
- CreateSubnet (p. 106)
- AttachVpnGateway (p. 29)
DeleteVpnGateway

Description

Deletes a virtual private gateway. Use this when you want to delete a VPC and all its associated components because you no longer need them. We recommend that before you delete a virtual private gateway, you detach it from the VPC and delete the VPN connection. Note that you don't need to delete the virtual private gateway if you just want to delete and recreate the VPN connection between your VPC and data center.

For more information about virtual private gateways, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VpnGatewayId</td>
<td>The ID of the virtual private gateway.</td>
</tr>
<tr>
<td></td>
<td>Type: String</td>
</tr>
<tr>
<td></td>
<td>Default: None</td>
</tr>
<tr>
<td></td>
<td>Required: Yes</td>
</tr>
</tbody>
</table>

Response Elements

The following elements are returned in a DeleteVpnGatewayResponse element.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>requestId</td>
<td>The ID of the request.</td>
</tr>
<tr>
<td></td>
<td>Type: xsd:string</td>
</tr>
<tr>
<td>return</td>
<td>Returns true if the request succeeds. Otherwise, returns an error.</td>
</tr>
<tr>
<td></td>
<td>Type: xsd:boolean</td>
</tr>
</tbody>
</table>

Examples

Example Request

This example deletes the virtual private gateway with ID vgw-8db04f81.

https://ec2.amazonaws.com/?Action=DeleteVpnGateway
&vpnGatewayId=vgw-8db04f81
&AUTHPARAMS

Example Response

<DeleteVpnGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
</DeleteVpnGatewayResponse>
<return>true</return>
</DeleteVpnGatewayResponse>

Related Actions

- CreateVpnGateway (p. 124)
- DescribeVpnGateways (p. 323)
- DeleteVpnConnection (p. 159)
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.

Request Parameters

ImageId
The ID of the AMI to deregister.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a DeregisterImageResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example deregisters the ami-4fa54026 AMI.

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

Example Response

  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DeregisterImageResponse>

Related Actions

- RegisterImage (p. 379)
• DescribeImages (p. 193)
DescribeAccountAttributes

Description

Describes the specified attribute of your AWS account.

The following are the supported account attributes.

**supported-platforms**
- Whether your account can launch instances into EC2-Classic and EC2-VPC, or only into EC2-VPC.
  - For more information, see Supported Platforms.

**default-vpc**
- The ID of the default VPC for your account, or none.
  - For more information, see Your Default VPC and Subnets.

Request Parameters

**AttributeName.**
- One or more account attribute names.
  - Type: String
  - Valid values: supported-platforms | default-vpc

Response Elements

The following elements are returned in a DescribeAccountAttributesResponse structure.

**requestId**
- The ID of the request.
  - Type: xsd:string

**accountAttributeSet**
- A list of the names and values of the requested attributes, each one wrapped in an item element.
  - Type: AccountAttributeSetItemType (p. 443)

Examples

Example Request

This request describes the platforms that are supported by your account.

https://ec2.amazonaws.com/?Action=DescribeAccountAttributes
&AttributeName.1=supported-platforms
&AUTHPARAMS

Example Response

The following is an example response for an account that must launch instances into EC2-VPC.
Example Response

The following is an example response for an account that can launch instances into EC2-Classic or EC2-VPC.

```xml
<DescribeAccountAttributesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <accountAttributeSet>
    <item>
      <attributeName>supported-platforms</attributeName>
      <attributeValueSet>
        <item>
          <attributeValue>EC2</attributeValue>
        </item>
        <item>
          <attributeValue>VPC</attributeValue>
        </item>
      </attributeValueSet>
    </item>
  </accountAttributeSet>
</DescribeAccountAttributesResponse>
```
DescribeAddresses

Description

Describes one or more of your Elastic IP addresses.

An Elastic IP address is for use in either the EC2-Classic platform or in a VPC. For more information, see Elastic IP Addresses in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

PublicIp.n
One or more EC2 Elastic IP addresses.
Type: String
Default: None
Required: No

AllocationId.n
One or more allocation IDs corresponding to the address or addresses to describe (VPC addresses only).
Type: String
Default: None
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain Elastic IP addresses. For example, you can use a filter to specify that you're interested in addresses that have a specific tag. You can specify multiple values for a filter. The response includes information for an address only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify addresses of a specific value that have a specific tag. The response includes information for an address only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "amazon\?\" searches for the literal string *amazon?\.

The following are the available filters.
domain
Indicates whether the address is for use in a VPC.

Type: String
Valid values: standard | vpc

instance-id
The instance the address is associated with (if any).

Type: String

public-ip
The Elastic IP address.

Type: String

allocation-id
The allocation ID for the address (VPC only).

Type: String

association-id
The association ID for the address (VPC only).

Type: String

network-interface-id
The network interface (if any) that the address is associated with (VPC only).

Type: String

network-interface-owner-id
The owner IID.

Type: String

private-ip-address
The private IP address associated with the Elastic IP address (VPC only).

Type: String

Response Elements

The following elements are returned in a DescribeAddressesResponse element.

requestId
The ID of the request.

Type: xsd:string

addressesSet
A list of IP addresses, each one wrapped in an item element.

Type: DescribeAddressesResponseItemType (p. 453)

Examples

Example Request

EC2-Classic: This example describes two specific Elastic IP addresses assigned to the account. Amazon EC2 returns information about 192.0.2.1, which is assigned to instance i-f15ebb98, and for 198.51.100.2, which is not assigned to an instance.

https://ec2.amazonaws.com/?Action=DescribeAddresses
&PublicIp.1=192.0.2.1
&PublicIp.2=198.51.100.2
&AUTHPARAMS
Example Response

<DescribeAddressesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <addressesSet>
    <item>
      <publicIp>192.0.2.1</publicIp>
      <domain>standard</domain>
      <instanceId>i-f15ebb98</instanceId>
    </item>
    <item>
      <publicIp>198.51.100.2</publicIp>
      <domain>standard</domain>
      <instanceId/>
    </item>
  </addressesSet>
</DescribeAddressesResponse>

Example Request

EC2-VPC: This example describes a specific Elastic IP address allocated to your account. You must use the allocation ID to specify the address.

https://ec2.amazonaws.com/?Action=DescribeAddresses
&AllocationId.1=eipalloc-08229861
&AUTHPARAMS

Example Response

<DescribeAddressesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>f7de5e98-491a-4c19-a92d-908d6EXAMPLE</requestId>
  <addressesSet>
    <item>
      <publicIp>203.0.113.41</publicIp>
      <allocationId>eipalloc-08229861</allocationId>
      <domain>vpc</domain>
      <instanceId>i-64600030</instanceId>
      <associationId>eipassoc-f0229899</associationId>
      <networkInterfaceId>eni-ef229886</networkInterfaceId>
      <networkInterfaceOwnerId>053230519467</networkInterfaceOwnerId>
      <privateIpAddress>10.0.0.228</privateIpAddress>
    </item>
  </addressesSet>
</DescribeAddressesResponse>

Example Request

EC2-VPC: This example lists all of your addresses for EC2-VPC, but none for EC2-Classic (assuming you have both types of addresses).

https://ec2.amazonaws.com/?Action=DescribeAddresses
&Filter.1.Name=domain
Related Actions

- AllocateAddress (p. 12)
- ReleaseAddress (p. 383)
- AssociateAddress (p. 16)
- DisassociateAddress (p. 336)
DescribeAvailabilityZones

Description

Describes one or more of the Availability Zones that are currently available to the account. The results include zones only for the region you're currently using.

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

ZoneName.n
One or more Availability Zones.
Type: String
Default: None
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain Availability Zones. For example, you can use a filter to specify that you're interested in Availability Zones in the available state. You can specify multiple values for a filter. The response includes information for an Availability Zone only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify Availability Zones that are in a particular region and are in the available state. The response includes information for an Availability Zone only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon\?\ searches for the literal string *amazon?\.

The following are the available filters.

message
Information about the Availability Zone.
Type: String
region-name
The region for the Availability Zone (for example, us-east-1).
Type: String

state
The state of the Availability Zone
Type: String
Valid values: available

zone-name
The name of the zone.
Type: String

Response Elements
The following elements are returned in a DescribeAvailabilityZonesResponse element.

requestId
The ID of the request.
Type: xsd:string

availabilityZoneInfo
A list of Availability Zones, each one wrapped in an item element.
Type: AvailabilityZoneItemType (p. 445)

Examples
Example Request
This example displays information about Availability Zones that are available to the account. The results includes zones only in the region (endpoint) you're currently using.

https://ec2.amazonaws.com/?Action=DescribeAvailabilityZones
&AUTHPARAMS

Example Response

<DescribeAvailabilityZonesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <availabilityZoneInfo>
    <item>
      <zoneName>us-east-1a</zoneName>
      <zoneState>available</zoneState>
      <regionName>us-east-1</regionName>
      <messageSet/>
    </item>
    <item>
      <zoneName>us-east-1b</zoneName>
      <zoneState>available</zoneState>
      <regionName>us-east-1</regionName>
      <messageSet/>
    </item>
  </availabilityZoneInfo>
</DescribeAvailabilityZonesResponse>
Related Actions

- RunInstances (p. 419)
- DescribeRegions (p. 246)
**DescribeBundleTasks**

**Description**

Describes one or more of your bundling tasks.

**Note**

Completed bundle tasks are listed for only a limited time. If your bundle task is no longer in the list, you can still register an AMI from it. Just use the `RegisterImage` action with the Amazon S3 bucket name and image manifest name you provided to the bundle task.

**Request Parameters**

- **BundleId.n**
  - One or more bundle task IDs.
  - Type: String
  - Default: If no ID is specified, all bundle tasks are described.
  - Required: No

- **Filter.n.Name**
  - The name of a filter. See the Supported Filters section for a list of supported filter names.
  - Type: String
  - Default: None
  - Required: No

- **Filter.n.Value.m**
  - A value for the filter. See the Supported Filters section for a list of supported values for each filter.
  - Type: String
  - Default: None
  - Required: No

**Supported Filters**

You can specify filters so that the response includes information for only certain bundle tasks. For example, you can use a filter to specify that you're interested in the bundle tasks in the `complete` state. You can specify multiple values for a filter. The response includes information for a bundle task only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify bundles that are stored in a specific Amazon S3 bucket and are in the `complete` state. The response includes information for a bundle task only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of `*amazon\?\` searches for the literal string `*amazon?\`.

The following are the available filters.

- **bundle-id**
  - The ID of the bundle task.
  - Type: String

- **error-code**
  - If the task failed, the error code returned.
Response Elements

The following elements are returned in a DescribeBundleTasksResponse element.

requestId
Type: xsd:string

bundleInstanceTasksSet
A list of bundle tasks, each one wrapped in an item element.
Type: BundleInstanceTaskType (p. 449)

Examples

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

https://ec2.amazonaws.com/?Action=DescribeBundleTasks
&bundleId.1=bun-c1a540a8
&AUTHPARAMS
Example Response

```xml
<DescribeBundleTasksResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <bundleInstanceTasksSet>
    <item>
      <instanceId>i-12345678</instanceId>
      <bundleId>bun-c1a540a8</bundleId>
      <state>cancelling</state>
      <startTime>2008-10-07T11:41:50.000Z</startTime>
      <updateTime>2008-10-07T11:51:50.000Z</updateTime>
      <storage>
        <S3>
          <bucket>myawsbucket</bucket>
          <prefix>winami</prefix>
        </S3>
      </storage>
      <progress>20%</progress>
    </item>
  </bundleInstanceTasksSet>
</DescribeBundleTasksResponse>
```

Example Request

This example filters the response to include only bundle tasks whose state is either complete or failed, and in addition are targeted for the Amazon S3 bucket called myawsbucket.

```plaintext
https://ec2.amazonaws.com/?Action=DescribeBundleTasks
&Filter.1.Name=s3-bucket
&Filter.1.Value.1=myawsbucket
&Filter.2.Name=state
&Filter.2.Name.1=complete
&Filter.2.Name.2=failed
&AUTHPARAMS
```

Related Actions

- BundleInstance (p. 38)
- CancelBundleTask (p. 41)
DescribeConversionTasks

Description

Describes one or more of your conversion tasks. For more information, see Using the Command Line Tools to Import Your Virtual Machine to Amazon EC2 in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

ConversionTaskId.n

- One or more conversion task IDs.
- Type: String
- Required: No

Response Elements

The following elements are returned in a DescribeConversionTasksResponse element.

conversionTasks

- A list of conversion tasks, each one wrapped in an item element.
- Type: ConversionTaskType (p. 450)

Examples

Example Request

This example describes all your conversion tasks.

https://ec2.amazonaws.com/?Action=DescribeConversionTasks
&AUTHPARAMS

Example Response

<DescribeConversionTasksResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"

<conversionTasks>
  <item>
    <conversionTask>
      <conversionTaskId>import-i-fh95npoc</conversionTaskId>
      <expirationTime>2010-12-22T12:01Z</expirationTime>
      <importVolume>
        <bytesConverted>1000</bytesConverted>
        <availabilityZone>us-east-1a</availabilityZone>
        <description/>
      </importVolume>
      <image>
        <format>VDMK</format>
        <size>128696320</size>
        <importManifestUrl>
          https://s3.amazonaws.com/myawsbucket/a3a5e1b6-590d-43cc-97c1-
Related Actions

- ImportInstance (p. 348)
- ImportVolume (p. 354)
- CancelConversionTask (p. 43)
DescribeCustomerGateways

Description

Describes one or more of your VPN customer gateways.

For more information about VPN customer gateways, see Adding a Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

CustomerGatewayId.n
   A customer gateway ID. You can specify more than one in the request.
   Type: String
   Default: Describes your customer gateways.
   Required: No

Filter.n.Name
   The name of a filter. See the Supported Filters section for a list of supported filter names.
   Type: String
   Default: None
   Required: No

Filter.n.Value.m
   A value for the filter. See the Supported Filters section for a list of supported values for each filter.
   Type: String
   Default: None
   Required: No

Supported Filters

You can specify filters so that the response includes information for only certain customer gateways. For example, you can use a filter to specify that you're interested in customer gateways in the pending or available state. You can specify multiple values for a filter. The response includes information for a customer gateway only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify customer gateways that have a specific IP address for the Internet-routable external interface and are in the pending or available state. The response includes information for a customer gateway only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of /*amazon\?\ searches for the literal string *amazon?\.

The following are the available filters.

bgp-asn
   The customer gateway's Border Gateway Protocol (BGP) Autonomous System Number (ASN).
   Type: String

customer-gateway-id
   The ID of the customer gateway.
   Type: String
ip-address
   The IP address of the customer gateway's Internet-routable external interface (for example, 12.1.2.3).
   Type: String

state
   The state of the customer gateway.
   Type: String
   Valid values: pending | available | deleting | deleted

type
   The type of customer gateway. Currently the only supported type is ipsec.1.
   Type: String
   Valid values: ipsec.1

tag-key
   The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
   For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
   Type: String

tag-value
   The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
   Type: String

tag: key
   Filters the response based on a specific tag/value combination.
   Example: To list just the resources that have been assigned tag Purpose=X, specify:
   Filter.1.Name=tag:Purpose
   Filter.1.Value.1=X
   Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
   Filter.1.Name=tag:Purpose
   Filter.1.Value.1=X
   Filter.1.Value.2=Y

Response Elements

The following elements are returned in a DescribeCustomerGatewaysResponse element.

requestId
   The ID of the request.
   Type: xsd:string

customerGatewaySet
   A list of customer gateways, each one wrapped in an item element.
   Type: CustomerGatewayType (p. 452)
Examples

Example Request

This example gives a description of the customer gateway with ID cgw-b4dc3961.

https://ec2.amazonaws.com/?Action=DescribeCustomerGateways
&CustomerGatewayId.1=cgw-b4dc3961
&AUTHPARAMS

Example Response

<DescribeCustomerGatewaysResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <customerGatewaySet>
    <item>
      <customerGatewayId>cgw-b4dc3961</customerGatewayId>
      <state>available</state>
      <type>ipsec.1</type>
      <ipAddress>12.1.2.3</ipAddress>
      <bgpAsn>65534</bgpAsn>
      <tagSet/>
    </item>
  </customerGatewaySet>
</DescribeCustomerGatewaysResponse>

Example Request

This example uses filters to give a description of any customer gateway you own whose IP address is 12.1.2.3, and whose state is either pending or available.

https://ec2.amazonaws.com/?Action=DescribeCustomerGateways
&Filter.1.Name=ip-address
&Filter.1.Value.1=12.1.2.3
&Filter.2.Name=state
&Filter.2.Value.1=pending
&Filter.2.Value.2=available
&AUTHPARAMS

Related Actions

- CreateCustomerGateway (p. 58)
- DeleteCustomerGateway (p. 126)
DescribeDhcpOptions

Description

Describes one or more of your sets of DHCP options.

For more information about DHCP options sets, see Using DHCP Options with Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

DhcpOptionsId.n
A DHCP options set ID. You can specify more than one in the request.
Type: String
Default: Describes your sets of DHCP options, or only those otherwise specified.
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain sets of DHCP options. For example, you can use a filter to specify that you're interested in sets of DHCP options with a particular value for the domain-name option. You can specify multiple values for a filter. The response includes information for a set of DHCP options only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify sets of DHCP options that have a specific value for the domain-name option and a specific tag. The response includes information for a set of DHCP options only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "*amazon\?" searches for the literal string "*amazon?".

The following are the available filters.

dhcp-options-id
The ID of a set of DHCP options.
Type: String

key
The key for one of the options (for example, domain-name).
Type: String
value
The value for one of the options.
Type: String

tag-key
The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String
tag-value
The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
Type: String
tag: key
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

Response Elements

The following elements are returned in a DescribeDhcpOptionsResponse element.

requestId
The ID of the request.
Type: xsd:string
dhcpOptionsSet
A list of DHCP options sets, each one wrapped in an item element.
Type: DhcpOptionsType (p. 463)

Examples

Example Request
This example gives a description of the DHCP options set with ID dopt-7a8b9c2d.

https://ec2.amazonaws.com/?Action=DescribeDhcpOptions
&DhcpOptionsIds.1=dopt-7a8b9c2d
&AUTHPARAMS
Example Response

```xml
<DescribeDhcpOptionsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <dhcpOptionsSet>
    <item>
      <dhcpOptionsId>dopt-7a8b9c2d</dhcpOptionsId>
      <dhcpConfigurationSet>
        <item>
          <key>domain-name</key>
          <valueSet>
            <item>
              <value>example.com</value>
            </item>
          </valueSet>
        </item>
        <item>
          <key>domain-name-servers</key>
          <valueSet>
            <item>
              <value>10.2.5.1</value>
            </item>
            <item>
              <value>10.2.5.2</value>
            </item>
          </valueSet>
        </item>
      </dhcpConfigurationSet>
      <tagSet/>
    </item>
  </dhcpOptionsSet>
</DescribeDhcpOptionsResponse>
```

Example Request

This example uses filters to give a description of any DHCP options set that includes a `domain-name` option whose value includes the string `example`.

https://ec2.amazonaws.com/?Action=DescribeDhcpOptions
&Filter.1.Name=key
&Filter.1.Value.1=domain-name
&Filter.2.Name=value
&Filter.2.Value.1=*example*
&AUTHPARAMS

Related Actions

- CreateDhcpOptions (p. 60)
- AssociateDhcpOptions (p. 19)
- DeleteDhcpOptions (p. 128)
DescribeExportTasks

Description

Describes one or more of your export tasks.

Request Parameters

ExportTaskId.n

One or more export task IDs. If no task IDs are provided, all active export tasks are described.
Type: String
Default: None
Required: No

Response Elements

The following elements are returned in a DescribeExportTasks element.

requestId

The ID of the request.
Type: xsd:string

exportTaskSet

A list of export tasks, each one wrapped in an item element.
Type: ExportTaskResponseType (p. 467)

Examples

Example Request

This example describes a single export task.

https://ec2.amazonaws.com/?Action=DescribeExportTasks
&exportTaskId.1=export-i-1234wxyz
&AUTHPARAMS

Example Response

<DescribeExportTasksResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <exportTaskSet>
    <item>
      <exportTaskId>export-i-1234wxyz</exportTaskId>
      <description>Example for docs</description>
      <state>active</state>
      <statusMessage>Running</statusMessage>
      <instanceExport>
        <instanceId>i-12345678</instanceId>
        <targetEnvironment>VMWare</targetEnvironment>
    </item>
  </exportTaskSet>
</DescribeExportTasksResponse>
Related Actions

- CancelExportTask (p. 45)
- CreateInstanceExportTask (p. 66)
DescribeImageAttribute

Description

Describes an attributes of an AMI. You can specify only one attribute at a time. These are the available attributes:

- **description**—Description of the AMI provided at image creation
- **kernel**—ID of the kernel associated with the AMI
- **ramdisk**—ID of the RAM disk associated with the AMI
- **launchPermission**—Launch permissions for the AMI
- **productCodes**—Product codes associated with the AMI (if any). Each product code contains a product code and a type.
- **blockDeviceMapping**—Block device mapping of the AMI

Request Parameters

**ImageId**

The ID of the AMI.
Type: String
Default: None
Required: Yes

**Attribute**

The AMI attribute.
Type: String
Default: None
Valid values: description | kernel | ramdisk | launchPermission | productCodes | blockDeviceMapping
Required: Yes

Response Elements

The following elements are returned in a DescribeImageAttributeResponse element.

**requestId**

The ID of the request.
Type: xsd:string

**imageId**

The ID of the AMI.
Type: xsd:string

**launchPermission**

A list of launch permissions, each one wrapped in an item element.
Type: LaunchPermissionItemType (p. 488)

**productCodes**

A list of product codes, each one wrapped in an item element that contains a product code and a product code type.
Type: ProductCodeItemType (p. 503)
kernel
The kernel ID, wrapped in a value element.
Type: xsd:string

ramdisk
The RAM disk ID, wrapped in a value element.
Type: xsd:string

description
A user-created description of the AMI, wrapped in a value element.
Type: xsd:string

blockDeviceMapping
One or more block device mapping entries, each one wrapped in an item element.
Type: BlockDeviceMappingItemType (p. 446)

Examples

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

https://ec2.amazonaws.com/?Action=DescribeImageAttribute
&ImageId=ami-61a54008
&Attribute=launchPermission
&AUTHPARAMS

Example Response

<DescribeImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <imageId>ami-61a54008</imageId>
  <launchPermission>
    <item>
      <group>all</group>
    </item>
  </launchPermission>
</DescribeImageAttributeResponse>

Example Request
This example lists the product code for the ami-2bb65342 AMI.

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

API Version 2013-02-01
191
Example Response

```xml
<DescribeImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/>
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <imageId>ami-2bb65342</imageId>
  <productCodes>
    <item>
      <productCode>a1b2c3d4e5f6g7h8i9j10k11</productCode>
      <type>marketplace</type>
    </item>
  </productCodes>
</DescribeImageAttributeResponse>
```

Related Actions

- DescribeImages (p. 193)
- ModifyImageAttribute (p. 357)
- ResetImageAttribute (p. 405)
Describes the images (AMIs, AKIs, and ARIs) available to you. Images available to you include public images, private images that you own, and private images owned by other AWS accounts but for which you have explicit launch permissions.

Launch permissions fall into three categories:

**public**
The owner of the AMI granted launch permissions for the AMI to the all group. All AWS accounts have launch permissions for these AMIs.

**explicit**
The owner of the AMI granted launch permissions to a specific AWS account.

**implicit**
An AWS account has implicit launch permissions for all the AMIs it owns.

The list of AMIs returned can be modified by specifying AMI IDs, AMI owners, or AWS accounts with launch permissions. If no options are specified, Amazon EC2 returns all AMIs for which you have 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, an error 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, or marketplace for AMIs from the AWS Marketplace.

**Note**

If you specify a list users with launch permissions, only AMIs with launch permissions for those users 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**

**ExecutableBy.n**
The AMIs for which the specified user ID has explicit launch permissions. The user ID can be an AWS account ID, self to return AMIs for which the sender of the request has explicit launch permissions, or all to return AMIs with public launch permissions.

- Type: String
- Default: None
- Required: No

**ImageId.n**
One or more AMI IDs.
Owner.n
The AMIs owned by the specified owner. Multiple owner values can be specified. The IDs amazon, aws-marketplace, and self can be used to include AMIs owned by Amazon, AWS Marketplace, or AMIs owned by you, respectively.
Type: String
Default: None
Valid values: amazon | aws-marketplace | self | AWS account ID | all
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain images. For example, you can use a filter to specify that you're interested in images that use a specific kernel. You can specify multiple values for a filter. The response includes information for an image only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify images that use a specific kernel and use an Amazon EBS volume as the root device. The response includes information for an image only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "*amazon?\" searches for the literal string "*amazon?\.

The following are the available filters.

architecture
The image architecture.
Type: String
Valid values: i386 | x86_64

block-device-mapping.delete-on-termination
Whether the Amazon EBS volume is deleted on instance termination.
Type: Boolean

block-device-mapping.device-name
The device name (for example, /dev/sdh) for the Amazon EBS volume.
Type: String

block-device-mapping.snapshot-id
The ID of the snapshot used for the Amazon EBS volume.
Type: String

`block-device-mapping.volume-size`
The volume size of the Amazon EBS volume, in GiB.
Type: Integer

`block-device-mapping.volume-type`
The volume type of the Amazon EBS volume.
Type: String
Valid values: `standard` | `io1`

`description`
The description of the image (provided during image creation).
Type: String

`image-id`
The ID of the image.
Type: String

`image-type`
The image type.
Type: String
Valid values: `machine` | `kernel` | `ramdisk`

`is-public`
Whether the image is public.
Type: Boolean

`kernel-id`
The kernel ID.
Type: String

`manifest-location`
The location of the image manifest.
Type: String

`name`
The name of the AMI (provided during image creation).
Type: String

`owner-alias`
The AWS account alias (for example, `amazon`).
Type: String

`owner-id`
The AWS account ID of the image owner.
Type: String

`platform`
The platform. To only list Windows-based AMIs, use `windows`. Otherwise, leave blank.
Type: String
Valid value: `windows`

`product-code`
The product code.
Type: String

`product-code.type`
The type of the product code.
Type: String
Valid values: `devpay` | `marketplace`

`ramdisk-id`
The RAM disk ID.
Type: String

**root-device-name**
The name of the root device volume (for example, /dev/sda1).
Type: String

**root-device-type**
The type of the root device volume.
Type: String
Valid values: ebs | instance-store

**state**
The state of the image.
Type: String
Valid values: available | pending | failed

**state-reason-code**
The reason code for the state change.
Type: String

**state-reason-message**
The message for the state change.
Type: String

**tag-key**
The key of a tag assigned to the resource. This filter is independent of the `tag-value` filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the `tag: key` filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String

**tag-value**
The value of a tag assigned to the resource. This filter is independent of the `tag-key` filter.
Type: String

**tag:**
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

**virtualization-type**
The virtualization type.
Type: String
Valid values: paravirtual | hvm

**hypervisor**
The hypervisor type.
Type: String
Valid values: ovm | xen
Response Elements

The following elements are returned in a DescribeImagesResponse element.

**requestId**
- The ID of the request.
- Type: xsd:string

**imagesSet**
- A list of images, each one wrapped in an item element.
- Type: DescribeImagesResponseItemType (p. 453)

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/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <imagesSet>
    <item>
      <imageId>ami-1a2b3c4d</imageId>
      <imageLocation>amazon/getting-started</imageLocation>
      <imageState>available</imageState>
      <imageOwnerId>111122223333</imageOwnerId>
      <isPublic>true</isPublic>
      <architecture>i386</architecture>
      <imageType>machine</imageType>
      <kernelId>aki-1a2b3c4d</kernelId>
      <ramdiskId>ari-1a2b3c4d</ramdiskId>
      <imageOwnerAlias>amazon</imageOwnerAlias>
      <name>getting-started</name>
      <description>Image Description</description>
      <rootDeviceType>ebs</rootDeviceType>
      <rootDeviceName>/dev/sda</rootDeviceName>
      <blockDeviceMapping>
        <item>
          <deviceName>/dev/sda1</deviceName>
          <ebs>
            <snapshotId>snap-1a2b3c4d</snapshotId>
            <volumeSize>15</volumeSize>
            <deleteOnTermination>false</deleteOnTermination>
            <volumeType>standard</volumeType>
          </ebs>
        </item>
      </blockDeviceMapping>
    </item>
  </imagesSet>
</DescribeImagesResponse>
```

API Version 2013-02-01
Example Request

This example filters the response to include only the public Windows images with an x86_64 architecture.

https://ec2.amazonaws.com/?Action=DescribeImages
&Filter.1.Name=is-public
&Filter.1.Value.1=true
&Filter.2.Name=architecture
&Filter.2.Value.1=x86_64
&Filter.3.Name=platform
&Filter.3.Value.1=windows
&AUTHPARAMS

Example Response

<DescribeImagesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <imagesSet>
    <item>
      <imageId>ami-1a2b3c4d</imageId>
      <imageLocation>ec2-public-windows-images/Server2003r2-x86_64-Win-v1.07.manifest.xml</imageLocation>
      <imageState>available</imageState>
      <imageOwnerId>111122223333</imageOwnerId>
      <isPublic>true</isPublic>
      <architecture>x86_64</architecture>
      <imageType>machine</imageType>
      <platform>windows</platform>
      <imageOwnerAlias>amazon</imageOwnerAlias>
      <rootDeviceType>instance-store</rootDeviceType>
      <blockDeviceMapping/>
      <virtualizationType>hvm</virtualizationType>
      <tagSet/>
      <hypervisor>xen</hypervisor>
    </item>
  ...
</imagesSet>
</DescribeImagesResponse>

Example Request

This example returns the results to display images where the owner is aws-marketplace.

https://ec2.amazonaws.com/?Action=DescribeImages
&Owner.0=aws-marketplace
&AUTHPARAMS
Example Response

```
<DescribeImagesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>4a4a27a2-2e7c-475d-b35b-ca822EXAMPLE</requestId>
  <imagesSet>
    <item>
      <imageId>ami-1a2b3c4d</imageId>
      <imageLocation>aws-marketplace/example-marketplace-amzn-ami.1</imageLocation>
      <imageState>available</imageState>
      <imageOwnerId>111122223333</imageOwnerId>
      <isPublic>true</isPublic>
      <productCodes>
        <item>
          <productCode>a1b2c3d4e5f6g7h8i9j10k11</productCode>
          <type>marketplace</type>
        </item>
      </productCodes>
      <architecture>i386</architecture>
      <imageType>machine</imageType>
      <kernelId>aki-1a2b3c4d</kernelId>
      <imageOwnerAlias>aws-marketplace</imageOwnerAlias>
      <name>example-marketplace-amzn-ami.1</name>
      <description>Amazon Linux AMI i386 EBS</description>
      <rootDeviceType>ebs</rootDeviceType>
      <rootDeviceName>/dev/sda1</rootDeviceName>
      <blockDeviceMapping>
        <item>
          <deviceName>/dev/sda1</deviceName>
          <ebs>
            <snapshotId>snap-1a2b3c4d</snapshotId>
            <volumeSize>8</volumeSize>
            <deleteOnTermination>true</deleteOnTermination>
          </ebs>
        </item>
      </blockDeviceMapping>
      <virtualizationType>paravirtual</virtualizationType>
      <hypervisor>xen</hypervisor>
    </item>
  ...
</imagesSet>
</DescribeImagesResponse>
```

Related Actions

- DescribeInstances (p. 203)
- DescribeImageAttribute (p. 190)
DescribeInstanceAttribute

Description

Describes an attribute of the specified instance. You can specify only one attribute at a time. These are the available attributes:

- **instanceType**—The instance type (for example, m1.small). See Available Instance Types for more information.
- **kernel**—The ID of the kernel associated with the instance
- **ramdisk**—The ID of the RAM disk associated with the instance
- **userData**—MIME, Base64-encoded user data provided to the instance
- **disableApiTermination**—Whether the instance can be terminated using the Amazon EC2 API (false means the instance can be terminated with the API)
- **instanceInitiatedShutdownBehavior**—Whether the instance stops or terminates when an instance shutdown is initiated (default is stop)
- **rootDeviceName**—The name of the root device volume.
- **blockDeviceMapping**—The block device mapping.
- **sourceDestCheck**—This attribute exists to enable a Network Address Translation (NAT) instance in a VPC to perform NAT. The attribute controls whether source/destination checking is enabled on the instance. A value of true means checking is enabled. The value must be false for the instance to perform NAT.
- **groupSet**—The security groups the instance belongs to.
- **productCodes**—The product codes associated with the instance. Each product code contains a product code and a type.
- **ebsOptimized**—Whether the instance is optimized for EBS I/O.

Request Parameters

**InstanceId**

The instance ID.

Type: String

Default: None

Required: Yes

**Attribute**

The instance attribute.

Type: String

Default: None

Valid values: instanceType | kernel | ramdisk | userData | disableApiTermination | instanceInitiatedShutdownBehavior | rootDeviceName | blockDeviceMapping | sourceDestCheck | groupSet | productCodes | ebsOptimized

Required: Yes

Response Elements

The following elements are returned in a DescribeInstanceAttributeResponse element.
requestId
  The ID of the request.
  Type: xsd:string

instanceId
  The ID of the instance.
  Type: xsd:string

instanceType
  The instance type (for example, m1.small), wrapped in a value element. See Available Instance Types for more information.
  Type: xsd:string

kernel
  The kernel ID, wrapped in a value element.
  Type: xsd:string

ramdisk
  The RAM disk ID, wrapped in a value element.
  Type: xsd:string

userData
  MIME, Base64-encoded user data, wrapped in a value element.
  Type: xsd:string

disableApiTermination
  Indicates whether the instance can be terminated through the Amazon EC2 API. The value is wrapped in a value element. A value of true means you can't terminate the instance using the API (i.e., the instance is "locked"); a value of false means you can. You must modify this attribute before you can terminate any "locked" instances using the API.
  Type: xsd:boolean

instanceInitiatedShutdownBehavior
  If an instance shutdown is initiated, this determines whether the instance stops or terminates. The value is wrapped in a value element.
  Type: xsd:string
  Valid values: stop | terminate

rootDeviceName
  The name of the root device (for example, /dev/sda1), wrapped in a value element.
  Type: xsd:string

blockDeviceMapping
  Type: InstanceBlockDeviceMappingResponseItemType (p. 474)

sourceDestCheck
  This attribute exists to enable a Network Address Translation (NAT) instance in a VPC to perform NAT. The attribute controls whether source/destination checking is enabled on the instance. A value of true means checking is enabled, and false means checking is disabled. The value must be false for the instance to perform NAT. For more information, see NAT Instances in the Amazon Virtual Private Cloud User Guide.
  Type: xsd:boolean

groupSet
  The security groups the instance belongs to. Each group's information is wrapped in an item element.
  Type: GroupItemType (p. 469)

productCodes
  A list of product codes, each one wrapped in an item element that contains a product code and a product code type.
  Type: ProductCodesSetItemType (p. 503)

ebsOptimized
  Whether the instance is optimized for EBS I/O.
Type: xsd:boolean

Examples

Example Request

This example lists the kernel ID of the i-10a64379 instance.

https://ec2.amazonaws.com/?Action=DescribeInstanceAttribute
&InstanceId=i-10a64379
&Attribute=kernel
&AUTHPARAMS

Example Response

<DescribeInstanceAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <instanceId>i-10a64379</instanceId>
  <kernel>
    <value>aki-f70657b2</value>
  </kernel>
</DescribeInstanceAttributeResponse>

Related Actions

• DescribeInstances (p. 203)
• ModifyInstanceAttribute (p. 360)
• ResetInstanceAttribute (p. 407)
**DescribeInstances**

**Description**

Describes one or more of your instances.

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, an error is returned. If you specify an instance that you do not own, it is not included in the returned results.

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

**Request Parameters**

- **InstanceId.n**
  - One or more instance IDs.
  - Type: String
  - Default: Returns all instances, or only those otherwise specified.
  - Required: No

- **Filter.n.Name**
  - The name of a filter. See the Supported Filters section for a list of supported filter names.
  - Type: String
  - Default: None
  - Required: No

- **Filter.n.Value.m**
  - A value for the filter. See the Supported Filters section for a list of supported values for each filter.
  - Type: String
  - Default: None
  - Required: No

**Supported Filters**

You can specify filters so that the response includes information for only certain instances. For example, you can use a filter to specify that you're interested in instances launched with a specific key pair. You can specify multiple values for a filter. The response includes information for an instance only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify instances that are launched with a specific key pair and use an Amazon EBS volume as the root device. The response includes information for an instance only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon\\ searches for the literal string *amazon?\.

The following are the available filters.

- **architecture**
  - The instance architecture.
Type: String
Valid values: i386 | x86_64

**availability-zone**
The Availability Zone of the instance.
Type: String

**block-device-mapping.attach-time**
The attach time for an Amazon EBS volume mapped to the instance (for example, 2010-09-15T17:15:20.000Z)
Type: DateTime

**block-device-mapping.delete-on-termination**
Indicates whether the Amazon EBS volume is deleted on instance termination.
Type: Boolean

**block-device-mapping.device-name**
The device name (for example, /dev/sdh) for the Amazon EBS volume.
Type: String

**block-device-mapping.status**
The status for the Amazon EBS volume.
Type: String
Valid values: attaching | attached | detaching | detached

**block-device-mapping.volume-id**
The volume ID of the Amazon EBS volume.
Type: String

**client-token**
The idempotency token you provided when you launched the instance.
Type: String

**dns-name**
The public DNS name of the instance.
Type: String

**group-id**
The ID of the security group for the instance. If the instance is in EC2-Classic or a default VPC, you can use **group-name** instead.
Type: String

**group-name**
The name of the security group for the instance. If the instance is in a nondefault VPC, you must use **group-id** instead.
Type: String

**image-id**
The ID of the image used to launch the instance.
Type: String

**instance-id**
The ID of the instance.
Type: String

**instance-lifecycle**
Indicates whether this is a Spot Instance.
Type: String
Valid values: spot

**instance-state-code**
The state of the instance. The high byte is an opaque internal value and should be ignored. The low byte is set based on the state represented.
Type: Integer (16-bit unsigned integer)
Valid values: 0 (pending) | 16 (running) | 32 (shutting-down) | 48 (terminated) | 64 (stopping) | 80 (stopped)

**instance-state-name**
The state of the instance.
Type: String
Valid values: pending | running | shutting-down | terminated | stopping | stopped

**instance-type**
The type of instance (for example, m1.small).
Type: String

**instance.group-id**
The ID of the security group for the instance. If the instance is in EC2-Classic or a default VPC, you can use `instance.group-name` instead.
Type: String

**instance.group-name**
The name of the security group for the instance. If the instance is in a nondefault VPC, you must use `instance.group-id` instead.
Type: String

**ip-address**
The public IP address of the instance.
Type: String

**kernel-id**
The kernel ID.
Type: String

**key-name**
The name of the key pair used when the instance was launched.
Type: String

**launch-index**
When launching multiple instances, this is the index for the instance in the launch group (for example, 0, 1, 2, and so on).
Type: String

**launch-time**
The time the instance was launched (for example, 2010-08-07T11:54:42.000Z).
Type: DateTime

**monitoring-state**
Indicates whether monitoring is enabled for the instance.
Type: String
Valid values: disabled | enabled

**owner-id**
The AWS account ID of the instance owner.
Type: String

**placement-group-name**
The name of the placement group for the instance.
Type: String

**platform**
The platform. Use `windows` if you have Windows based instances; otherwise, leave blank.
Type: String
Valid value: `windows`

**private-dns-name**
The private DNS name of the instance.
Type: String
private-ip-address
   The private IP address of the instance.
   Type: String

product-code
   The product code associated with the AMI used to launch the instance.
   Type: String

product-code.type
   The type of product code.
   Type: String
   Valid values: devpay | marketplace

ramdisk-id
   The RAM disk ID.
   Type: String

reason
   The reason for the current state of the instance (for example, shows "User Initiated [date]" when you
   stop or terminate the instance). Similar to the state-reason-code filter.
   Type: String

requester-id
   The ID of the entity that launched the instance on your behalf (for example, AWS Management
   Console, Auto Scaling, and so on)
   Type: String

reservation-id
   The ID of the instance's reservation. A reservation ID is created any time you launch an instance. A
   reservation ID has a one-to-one relationship with an instance launch request, but can be associated
   with more than one instance if you launch multiple instances using the same launch request. For
   example, if you launch one instance, you'll get one reservation ID. If you launch ten instances using
   the same launch request, you'll also get one reservation ID.
   Type: String

root-device-name
   The name of the root device for the instance (for example, /dev/sda1).
   Type: String

root-device-type
   The type of root device the instance uses.
   Type: String
   Valid values: ebs | instance-store

source-dest-check
   Indicates whether the instance performs source/destination checking. A value of true means that
   checking is enabled, and false means checking is disabled. The value must be false for the
   instance to perform network address translation (NAT) in your VPC.
   Type: Boolean

spot-instance-request-id
   The ID of the Spot Instance request.
   Type: String

state-reason-code
   The reason code for the state change.
   Type: String

state-reason-message
   A message that describes the state change.
   Type: String
subnet-id
The ID of the subnet for the instance.
Type: String

tag-key
The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String

tag-value
The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
Type: String

tag: key
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

virtualization-type
The virtualization type of the instance.
Type: String
Valid values: paravirtual | hvm

vpc-id
The ID of the VPC the instance is running in.
Type: String

hypervisor
The hypervisor type of the instance.
Type: String
Valid values: ovm | xen

network-interface.description
The description of the network interface.
Type: String

network-interface.subnet-id
The ID of the subnet for the network interface.
Type: String

network-interface.vpc-id
The ID of the VPC for the network interface.
Type: String

network-interface.network-interface.id
The ID of the network interface.
Type: String

network-interface.owner-id
The ID of the owner of the network interface.
Type: String
network-interface.availability-zone
   The availability zone for the network interface.
   Type: String

network-interface.requester-id
   The requester ID for the network interface.
   Type: String

network-interface.requester-managed
   Indicates whether the network interface is being managed by AWS.
   Type: Boolean

network-interface.status
   The status of the network interface.
   Type: String
   Valid values: available | in-use

network-interface.mac-address
   The MAC address of the network interface.
   Type: String
   Valid values: available | in-use

network-interface.private-dns-name
   The private DNS name of the network interface.
   Type: String

network-interface.source-destination-check
   Whether the network interface performs source/destination checking. A value of true means checking is enabled, and false means checking is disabled. The value must be false for the network interface to perform network address translation (NAT) in your VPC.
   Type: Boolean

network-interface.group-id
   The ID of a security group associated with the network interface.
   Type: String

network-interface.group-name
   The name of a security group associated with the network interface.
   Type: String

network-interface.attachment.attachment-id
   The ID of the interface attachment.
   Type: String

network-interface.attachment.instance-id
   The ID of the instance to which the network interface is attached.
   Type: String

network-interface.attachment.instance-owner-id
   The owner ID of the instance to which the network interface is attached.
   Type: String

network-interface.addresses.private-ip-address
   The private IP address associated with the network interface.
   Type: String

network-interface.attachment.device-index
   The device index to which the network interface is attached.
   Type: Integer

network-interface.attachment.status
   The status of the attachment.
   Type: String
   Valid values: attaching | attached | detaching | detached
network-interface.attachment.attach-time
  The time that the network interface was attached to an instance.
  Type: Date

network-interface.attachment.delete-on-termination
  Specifies whether the attachment is deleted when an instance is terminated.
  Type: Boolean

network-interface.addresses.primary
  Specifies whether the IP address of the network interface is the primary private IP address.
  Type: Boolean

network-interface.addresses.association.public-ip
  The ID of the association of an Elastic IP address with a network interface.
  Type: String

network-interface.addresses.association.ip-owner-id
  The owner ID of the private IP address associated with the network interface.
  Type: String

association.public-ip
  The address of the Elastic IP address bound to the network interface.
  Type: String

association.ip-owner-id
  The owner of the Elastic IP address associated with the network interface.
  Type: String

association.allocation-id
  The allocation ID that AWS returned when you allocated the Elastic IP address for your network interface.
  Type: String

association.association-id
  The association ID returned when the network interface was associated with an IP address.
  Type: String

Response Elements

The following elements are returned in a DescribeInstancesResponse element.

requestId
  The ID of the request.
  Type: xsd:string

reservationSet
  A list of reservations, each one wrapped in an item element.
  Type: ReservationInfoType (p. 505)

Examples

Example Request

This example describes the current state of the instances owned by your AWS account.

https://ec2.amazonaws.com/?Action=DescribeInstances
&AUTHPARAMS
Example Response

```
<DescribeInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>fdcdcab1-ae5c-489e-9c33-4637c5dda355</requestId>
  <reservationSet>
    <item>
      <reservationId>r-1a2b3c4d</reservationId>
      <ownerId>111122223333</ownerId>
      <groupSet>
        <item>
          <groupId>sg-1a2b3c4d</groupId>
          <groupName>my-security-group</groupName>
        </item>
      </groupSet>
      <instancesSet>
        <item>
          <instanceId>i-1a2b3c4d</instanceId>
          <imageId>ami-1a2b3c4d</imageId>
          <instanceState>
            <code>16</code>
            <name>running</name>
          </instanceState>
          <privateDnsName/>
          <dnsName/>
          <reason/>
          <keyName>gsg-keypair</keyName>
          <amiLaunchIndex>0</amiLaunchIndex>
          <productCodes/>
          <instanceType>c1.medium</instanceType>
          <launchTime>2023-11-28T09:12:34+00:00</launchTime>
          <placement>
            <availabilityZone>us-west-2a</availabilityZone>
            <groupName/>
            <tenancy>default</tenancy>
          </placement>
          <platform>windows</platform>
          <monitoring>
            <state>disabled</state>
          </monitoring>
          <subnetId>subnet-1a2b3c4d</subnetId>
          <vpcId>vpc-1a2b3c4d</vpcId>
          <privateIpAddress>10.0.0.12</privateIpAddress>
          <ipAddress>46.51.219.63</ipAddress>
          <sourceDestCheck>true</sourceDestCheck>
          <groupSet>
            <item>
              <groupId>sg-1a2b3c4d</groupId>
              <groupName>my-security-group</groupName>
            </item>
          </groupSet>
          <architecture>x86_64</architecture>
          <rootDeviceType>ebs</rootDeviceType>
          <rootDeviceName>/dev/sdal</rootDeviceName>
          <blockDeviceMapping>
            <item>
              <deviceName>/dev/sdal</deviceName>
              <ebs>
                <status>attached</status>
              </ebs>
            </item>
            <item>
              <deviceName>/dev/sdb</deviceName>
              <ebs>
                <status>attached</status>
              </ebs>
            </item>
          </blockDeviceMapping>
        </item>
      </instancesSet>
    </item>
  </reservationSet>
</DescribeInstancesResponse>
```
<volumeId>vol-1a2b3c4d</volumeId>
<status>attached</status>
<attachTime>YYYY-MM-DDTHH:MM:SS.SSSZ</attachTime>
<deleteOnTermination>true</deleteOnTermination>
</ebs>
</item>
</blockDeviceMapping>
<virtualizationType>vmm</virtualizationType>
<clientToken>ABCDE1234567890123</clientToken>
<tagSet>
  <item>
    <key>Name</key>
    <value>Windows Instance</value>
  </item>
</tagSet>
<hypervisor>xen</hypervisor>
<networkInterfaceSet>
  <item>
    <networkInterfaceId>eni-1a2b3c4d</networkInterfaceId>
    <subnetId>subnet-1a2b3c4d</subnetId>
    <vpcId>vpc-1a2b3c4d</vpcId>
    <description>Primary network interface</description>
    <ownerId>111122223333</ownerId>
    <status>in-use</status>
    <macAddress>1b:2b:3c:4d:5e:6f</macAddress>
    <privateIpAddress>10.0.0.12</privateIpAddress>
    <sourceDestCheck>true</sourceDestCheck>
    <groupSet>
      <item>
        <groupId>sg-1a2b3c4d</groupId>
        <groupName>my-security-group</groupName>
      </item>
    </groupSet>
    <attachment>
      <attachmentId>eni-attach-1a2b3c4d</attachmentId>
      <deviceIndex>0</deviceIndex>
      <status>attached</status>
      <attachTime>YYYY-MM-DDTHH:MM:SS+0000</attachTime>
      <deleteOnTermination>true</deleteOnTermination>
    </attachment>
    <association>
      <publicIp>198.51.100.63</publicIp>
      <ipOwnerId>111122223333</ipOwnerId>
    </association>
    <privateIpAddressesSet>
      <item>
        <privateIpAddress>10.0.0.12</privateIpAddress>
        <primary>true</primary>
        <association>
          <publicIp>198.51.100.63</publicIp>
          <ipOwnerId>111122223333</ipOwnerId>
        </association>
      </item>
      <item>
        <privateIpAddress>10.0.0.14</privateIpAddress>
        <primary>false</primary>
        <association>
          <publicIp>198.51.100.177</publicIp>
        </association>
      </item>
    </privateIpAddressesSet>
  </item>
</networkInterfaceSet>
Example Request

This example filters the response to include only the m1.small or m1.large instances that have an Amazon EBS volume that is both attached and set to delete on termination.

https://ec2.amazonaws.com/?Action=DescribeInstances
&Filter.1.Name=instance-type
&Filter.1.Value.1=m1.small
&Filter.1.Value.2=m1.large
&Filter.2.Name=block-device-mapping.status
&Filter.2.Value.1=attached
&Filter.3.Name=block-device-mapping.delete-on-termination
&Filter.3.Value.1=true
&AUTHPARAMS

Example Response

API Version 2013-02-01

Amazon Elastic Compute Cloud API Reference

Examples
<ownerId>111122223333</ownerId>

<groupSet>
  <item>
    <groupId>sg-2a2b3c4d</groupId>
    <groupName>my-security-group-2</groupName>
  </item>
</groupSet>

<instancesSet>
  <item>
    <instanceId>i-2a2b3c4d</instanceId>
    <imageId>ami-2a2b3c4d</imageId>
    <instanceState>
      <code>16</code>
      <name>running</name>
    </instanceState>
    <privateDnsName>ip-10-251-50-35.ec2.internal</privateDnsName>
    <dnsName>ec2-67-202-51-223.compute-1.amazonaws.com</dnsName>
    <keyName>gsg-keypair</keyName>
    <amiLaunchIndex>0</amiLaunchIndex>
    <instanceType>m1.large</instanceType>
    <launchTime>YYYY-MM-DDTHH:MM:SS+0000</launchTime>
    <placement>
      <availabilityZone>us-west-2b</availabilityZone>
      <groupName/>  
      <tenancy>default</tenancy>
    </placement>
    <platform>windows</platform>
    <monitoring>
      <state>disabled</state>
    </monitoring>
    <privateIpAddress>10.139.34.251</privateIpAddress>
    <ipAddress>122.248.233.255</ipAddress>
    <groupSet>
      <item>
        <groupId>sg-2a2b3c4d</groupId>
        <groupName>my-security-group-2</groupName>
      </item>
    </groupSet>
    <architecture>x86_64</architecture>
    <rootDeviceType>ebs</rootDeviceType>
    <rootDeviceName>/dev/sda1</rootDeviceName>
  </item>
</instancesSet>
Example Request

The following example describes an instance running in a VPC with instance ID i-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DescribeInstances
&Filter.1.Name=instance-id
&Filter.1.Value.1=i-1a2b3c4d
&AUTHPARAMS

Example Response

Example Request

The following example describes an instance running in a VPC with instance ID i-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DescribeInstances
&Filter.1.Name=instance-id
&Filter.1.Value.1=i-1a2b3c4d
&AUTHPARAMS

Example Response

Example Request

The following example describes an instance running in a VPC with instance ID i-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DescribeInstances
&Filter.1.Name=instance-id
&Filter.1.Value.1=i-1a2b3c4d
&AUTHPARAMS

Example Response

Example Request

The following example describes an instance running in a VPC with instance ID i-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DescribeInstances
&Filter.1.Name=instance-id
&Filter.1.Value.1=i-1a2b3c4d
&AUTHPARAMS

Example Response

Example Request

The following example describes an instance running in a VPC with instance ID i-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DescribeInstances
&Filter.1.Name=instance-id
&Filter.1.Value.1=i-1a2b3c4d
&AUTHPARAMS

Example Response
<placement>
<platform>windows</platform>
<monitoring>
  <state>disabled</state>
</monitoring>
<subnetId>subnet-1a2b3c4d</subnetId>
<vpcId>vpc-1a2b3c4d</vpcId>
<privateIpAddress>10.0.0.12</privateIpAddress>
<ipAddress>46.51.219.63</ipAddress>
<sourceDestCheck>true</sourceDestCheck>
<groupSet>
  <item>
    <groupId>sg-1a2b3c4d</groupId>
    <groupName>my-security-group</groupName>
  </item>
</groupSet>
<architecture>x86_64</architecture>
<rootDeviceType>ebs</rootDeviceType>
<rootDeviceName>/dev/sda1</rootDeviceName>
<blockDeviceMapping>
  <item>
    <deviceName>/dev/sda1</deviceName>
    <ebs>
      <volumeId>vol-1a2b3c4d</volumeId>
      <status>attached</status>
      <attachTime>YYYY-MM-DDTHH:MM:SS.SSSZ</attachTime>
      <deleteOnTermination>true</deleteOnTermination>
    </ebs>
  </item>
</blockDeviceMapping>
<virtualizationType>hvm</virtualizationType>
<clientToken>ABCDE1234567890123</clientToken>
<tagSet>
  <item>
    <key>Name</key>
    <value>Windows Instance</value>
  </item>
</tagSet>
<hypervisor>xen</hypervisor>
<networkInterfaceSet>
  <item>
    <networkInterfaceId>eni-1a2b3c4d</networkInterfaceId>
    <subnetId>subnet-1a2b3c4d</subnetId>
    <vpcId>vpc-1a2b3c4d</vpcId>
    <description>Primary network interface</description>
    <ownerId>111122223333</ownerId>
    <status>in-use</status>
    <macAddress>1b:2b:3c:4d:5e:6f</macAddress>
    <privateIpAddress>10.0.0.12</privateIpAddress>
    <sourceDestCheck>true</sourceDestCheck>
    <groupSet>
      <item>
        <groupId>sg-1a2b3c4d</groupId>
        <groupName>my-security-group</groupName>
      </item>
    </groupSet>
    <attachment>
      <attachmentId>eni-attach-1a2b3c4d</attachmentId>
    </attachment>
  </item>
</networkInterfaceSet>
<deviceIndex>0</deviceIndex>
<status>attached</status>
<attachTime>YYYY-MM-DDTHH:MM:SS+0000</attachTime>
<deleteOnTermination>true</deleteOnTermination>
</attachment>
<association>
<premiumIp>198.51.100.63</premiumIp>
<premiumDnsName>198.51.100.63</premiumDnsName>
<ipOwnerId>111122223333</ipOwnerId>
</association>
<privateIpAddressesSet>
<item>
<premiumIpAddress>10.0.0.12</premiumIpAddress>
<primary>true</primary>
<association>
<premiumIp>198.51.100.63</premiumIp>
<ipOwnerId>111122223333</ipOwnerId>
</association>
</item>
<item>
<premiumIpAddress>10.0.0.14</premiumIpAddress>
<primary>false</primary>
<association>
<premiumIp>198.51.100.177</premiumIp>
<ipOwnerId>111122223333</ipOwnerId>
</association>
</item>
</privateIpAddressesSet>
</networkInterfaceSet>
</reservationSet>
</instancesSet>
</reservationSet>
</DescribeInstancesResponse>

Related Actions

- RunInstances (p. 419)
- StopInstances (p. 432)
- StartInstances (p. 430)
- TerminateInstances (p. 434)
DescribeInstanceStatus

Description

Describes the status of one or more Amazon EC2 instances, including any scheduled events. Instance status has two main components:

- System Status reports impaired functionality that stems from issues related to the systems that support an instance, such as such as hardware failures and network connectivity problems. The DescribeInstanceStatus response elements report such problems as impaired reachability.
- Instance Status reports impaired functionality that arises from problems internal to the instance. The DescribeInstanceStatus response elements report such problems as impaired reachability.

Instance status provides information about four types of scheduled events for an instance that may require your attention:

- Scheduled Reboot: When Amazon EC2 determines that an instance must be rebooted, the instance's status will return one of two event codes: system-reboot or instance-reboot. System reboot commonly occurs if certain maintenance or upgrade operations require a reboot of the underlying host that supports an instance. Instance reboot commonly occurs if the instance must be rebooted, rather than the underlying host. Rebooting events include a scheduled start and end time.
- System Maintenance: When Amazon EC2 determines that an instance requires maintenance that requires power or network impact, the instance's status will return an event code called system-maintenance. System maintenance is either power maintenance or network maintenance. For power maintenance, your instance will be unavailable for a brief period of time and then rebooted. For network maintenance, your instance will experience a brief loss of network connectivity. System maintenance events include a scheduled start and end time. You will also be notified by email if one of your instances is set for system maintenance. The email message indicates when your instance is scheduled for maintenance.
- Scheduled Retirement: When Amazon EC2 determines that an instance must be shut down, the instance's status returns an event code called instance-retirement. Retirement commonly occurs when the underlying host is degraded and must be replaced. Retirement events include a scheduled start and end time. You will also be notified by email if one of your instances is set to retiring. The email message indicates when your instance will be permanently retired.
- Scheduled Stop: When Amazon EC2 determines that an instance must be shut down, the instance's status returns an event code called instance-stop. Stop events include a scheduled start and end time. You will also be notified by email if one of your instances is set to stop. The email message indicates when your instance will be stopped.

When your instance is retired, it will either be terminated (if its root device type is the instance-store) or stopped (if its root device type is an EBS volume). Instances stopped due to retirement will not be restarted, but you can do so manually. You can also avoid retirement of EBS-backed instances by manually restarting your instance when its event code is instance-retirement. This ensures that your instance is started on a different underlying host.

Request Parameters

InstanceId

The list of instance IDs. If not specified, all instances are described.

Type: String
Default: None
Constraints: Maximum 100 explicitly specified instance IDs.
Required: No

IncludeAllInstances
When true, returns the health status for all instances (for example, running, stopped, pending, shutting down). When false, returns only the health status for running instances.
Type: Boolean
Default: false
Required: No

MaxResults
The maximum number of paginated instance items per response.
Type: Integer
Default: 1000
Required: No

NextToken
The next paginated set of results to return.
Type: String
Default: None
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters
You can specify filters so that the response includes information for only certain instances. For example, you can use a filter to specify that you're interested in instances in a specific Availability Zone. You can specify multiple values for a filter. The response includes information for an instance only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify instances that are in a specific Availability Zone and have a status of retiring. The response includes information for an instance only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon\?\ searches for the literal string *amazon?\.

The following are the available filters.

availability-zone
The Availability Zone of the instance.
Type: String

event.code
Response Elements

The following elements are returned in a DescribeInstanceStatusResponse element.

requestId
  The ID of the request.
  Type: xsd:string

instanceStatusSet
  A list of instances status descriptions, each one wrapped in an item element.
  Type: InstanceStatusItemType (p. 484)
nextToken
The next paginated set of results to return.
Type: xsd:string

Examples

Example Request
This example returns instance status descriptions for all instances.

https://ec2.amazonaws.com/?
Action=DescribeInstanceStatus
&Version=2013-02-01
&AuthParams

Example Request
This example returns instance status descriptions for the specified instances.

https://ec2.amazonaws.com/?
Action=DescribeInstanceStatus
&InstanceId.0=i-1a2b3c4d
&InstanceId.1=i-2a2b3c4d
&Version=2013-02-01
&AuthParams

Example Request
This example returns instance status descriptions for all instances specified by supported
DescribeInstanceStatus filters.

https://ec2.amazonaws.com/?
Action=DescribeInstanceStatus
&Filter.0.Name=system-status.reachability
&Filter.0.Value.failed
&Version=2013-02-01
&AuthParams

Example Response

<DescribeInstanceStatusResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>3be1508e-c444-4fe9-89cc-0b1223c4f02fEXAMPLE</requestId>
  <instanceStatusSet>
    <item>
      <instanceId>i-1a2b3c4d</instanceId>
      <availabilityZone>us-east-1d</availabilityZone>
      <instanceState>
        <code>16</code>
        <name>running</name>
      </instanceState>
    </item>
  </instanceStatusSet>
</DescribeInstanceStatusResponse>
<systemStatus>
  <status>impaired</status>
  <details>
    <item>
      <name>reachability</name>
      <status>failed</status>
      <impairedSince>YYYY-MM-DDTHH:MM:SS.000Z</impairedSince>
    </item>
  </details>
</systemStatus>

<instanceStatus>
  <status>impaired</status>
  <details>
    <item>
      <name>reachability</name>
      <status>failed</status>
      <impairedSince>YYYY-MM-DDTHH:MM:SS.000Z</impairedSince>
    </item>
  </details>
</instanceStatus>

<eventsSet>
  <code>instance-retirement</code>
  <notBefore>YYYY-MM-DDTHH:MM:SS+0000</notBefore>
  <notAfter>YYYY-MM-DDTHH:MM:SS+0000</notAfter>
  <description>
    The instance is running on degraded hardware
  </description>
</eventsSet>

<item>
  <instanceId>i-2a2b3c4d</instanceId>
  <availabilityZone>us-east-1d</availabilityZone>
  <instanceState>
    <code>16</code>
    <name>running</name>
  </instanceState>
  <systemStatus>
    <status>ok</status>
    <details>
      <item>
        <name>reachability</name>
        <status>passed</status>
      </item>
    </details>
  </systemStatus>
</item>

<instanceStatus>
  <status>ok</status>
  <details>
    <item>
      <name>reachability</name>
      <status>passed</status>
    </item>
  </details>
</instanceStatus>

<eventsSet>
  <code>instance-reboot</code>
</eventsSet>
<notBefore>YYYY-MM-DDTHH:MM:SS+0000</notBefore>
<notAfter>YYYY-MM-DDTHH:MM:SS+0000</notAfter>
<description>
The instance is scheduled for a reboot
</description>
</eventsSet>
</item>
<br>

<item>
<instanceId>i-3a2b3c4d</instanceId>
<availabilityZone>us-east-1c</availabilityZone>
<instanceState>
<code>16</code>
,name>running</name>
</instanceState>
<systemStatus>
<status>ok</status>
<details>
<item>
<name>reachability</name>
<status>passed</status>
</item>
</details>
</systemStatus>
<instanceStatus>
<status>ok</status>
<details>
<item>
<name>reachability</name>
<status>passed</status>
</item>
</details>
</instanceStatus>
</item>
<br>

<item>
<instanceId>i-4a2b3c4d</instanceId>
<availabilityZone>us-east-1c</availabilityZone>
<instanceState>
<code>16</code>
,name>running</name>
</instanceState>
<systemStatus>
<status>ok</status>
<details>
<item>
<name>reachability</name>
<status>insufficient-data</status>
</item>
</details>
</systemStatus>
<instanceStatus>
<status>insufficient-data</status>
<details>
<item>
<name>reachability</name>
<status>insufficient-data</status>
</item>
</details>
</instanceStatus>
</item>
</instanceStatusSet>
</DescribeInstanceStatusResponse>
DescribeInternetGateways

Description

Describes one or more of your Internet gateways.

Request Parameters

InternetGatewayId.n
- One or more Internet gateway IDs.
  Type: String
  Default: None
  Required: No

Filter.n.Name
- The name of a filter. See the Supported Filters section for a list of supported filter names.
  Type: String
  Default: None
  Required: No

Filter.n.Value.m
- A value for the filter. See the Supported Filters section for a list of supported values for each filter.
  Type: String
  Default: None
  Required: No

Supported Filters

You can specify filters so that the response includes information for only certain Internet gateways. For example, you can use a filter to specify that you're interested in the Internet gateways with particular tags. You can specify multiple values for a filter. The response includes information for an Internet gateway only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify Internet gateways that are attached to a specific VPC and have a specific tag. The response includes information for an Internet gateway only if it matches all the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \\*amazon\?\ searches for the literal string *amazon?.

The following are the available filters.

attachment.state
- The current state of the attachment between the gateway and the VPC. Returned only if a VPC is attached.
  Type: String
  Valid value: available

attachment.vpc-id
- The ID of an attached VPC.
  Type: String
**internet-gateway-id**
The ID of the Internet gateway.
Type: String

**tag-key**
The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String

**tag-value**
The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
Type: String

**tag:** key
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

### Response Elements

The following elements are returned in a DescribeInternetGatewaysResponse element.

- **requestId**
The ID of the request.
  Type: xsd:string

- **internetGatewaySet**
  A list of Internet gateways, each one wrapped in an item element.
  Type: InternetGatewayType (p. 486)

### Examples

#### Example Request
This example describes your Internet gateways.

https://ec2.amazonaws.com/?Action=DescribeInternetGateways

#### Example Response

<DescribeInternetGatewaysResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">

API Version 2013-02-01
226
<requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
<internetGatewaySet>
  <item>
    <internetGatewayId>igw-eaad4883EXAMPLE</internetGatewayId>
    <attachmentSet>
      <item>
        <vpcId>vpc-11ad4878</vpcId>
        <state>available</state>
      </item>
    </attachmentSet>
    <tagSet/>
  </item>
</internetGatewaySet>
</DescribeInternetGatewaysResponse>

Related Actions

- CreateInternetGateway (p. 69)
- DeleteInternetGateway (p. 130)
- DetachInternetGateway (p. 23)
- DetachInternetGateway (p. 326)
DescribeKeyPairs

Description

Describes one or more of your key pairs.

Request Parameters

KeyName.n
One or more key pair names.
Type: String
Default: Describes all key pairs you own, or only those otherwise specified.
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain key pairs. For example, you can use a filter to specify that you're interested in key pairs whose names include the string Dave.

You can specify multiple values for a filter. The response includes information for a key pair only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify key pairs whose names include the string Dave and whose fingerprint is a specific value. The response includes information for a key pair only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "*amazon/?" searches for the literal string *amazon?.

The following are the available filters.

fingerprint
The fingerprint of the key pair.
Type: String

key-name
The name of the key pair.
Type: String
Response Elements

The following elements are returned in a DescribeKeyPairsResponse element.

```
requestId
   The ID of the request.
   Type: xsd:string

keySet
   A list of key pairs, each one wrapped in an item element.
   Type: DescribeKeyPairsResponseItemType (p. 455)
```

Examples

Example Request

This example describes the keypair with name gsg-keypair.

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

Example Response

```
<DescribeKeyPairsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <keySet>
    <item>
      <keyName>gsg-keypair</keyName>
      <keyFingerprint>
        00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
      </keyFingerprint>
    </item>
  </keySet>
</DescribeKeyPairsResponse>
```

Example Request

This example filters the response to include only key pairs whose names include the string Dave.

```
https://ec2.amazonaws.com/?Action=DescribeKeyPairs
&Filter.1.Name=key-name
&Filter.1.Value.1=*Dave*
&AUTHPARAMS
```

Related Actions

- CreateKeyPair (p. 71)
- ImportKeyPair (p. 352)
- DeleteKeyPair (p. 132)
DescribeNetworkAcls

Description

Describes the network ACLs in your VPC.

For more information about network ACLs, see Network ACLs in the Amazon Virtual Private Cloud User Guide.

Request Parameters

NetworkAclId.n

One or more network ACL IDs.

Type: String

Default: None

Required: No

Filter.n.Name

The name of a filter. See the Supported Filters section for a list of supported filter names.

Type: String

Default: None

Required: No

Filter.n.Value.m

A value for the filter. See the Supported Filters section for a list of supported values for each filter.

Type: String

Default: None

Required: No

Supported Filters

You can specify filters so that the response includes information for only certain ACLs. For example, you can use a filter to specify that you're interested in the ACLs associated with a particular subnet. You can specify multiple values for a filter. The response includes information for an ACL only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify ACLs that are associated with a specific subnet and have an egress entry that denies traffic to a specific port. The response includes information for an ACL only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon?\ searches for the literal string *amazon?.

The following are the available filters.

association.association-id

The ID of an association ID for the ACL.

Type: String

association.network-acl-id

The ID of the network ACL involved in the association.

Type: String
API Version 2013-02-01

Amazon Elastic Compute Cloud API Reference

Request Parameters

- **association_subnet-id**: The ID of the subnet involved in the association.
  - Type: String
- **default**: Indicates whether the ACL is the default network ACL for the VPC.
  - Type: Boolean
- **entry_cidr**: The CIDR range specified in the entry.
  - Type: String
- **entry_egress**: Indicates whether the entry applies to egress traffic.
  - Type: Boolean
- **entry_icmp_code**: The ICMP code specified in the entry, if any.
  - Type: Integer
- **entry_icmp_type**: The ICMP type specified in the entry, if any.
  - Type: Integer
- **entry_port_range_from**: The start of the port range specified in the entry.
  - Type: Integer
- **entry_port_range_to**: The end of the port range specified in the entry.
  - Type: Integer
- **entry_protocol**: The protocol specified in the entry.
  - Type: String
  - Valid values: tcp | udp | icmp or a protocol number
- **entry_rule_action**: Indicates whether the entry allows or denies the matching traffic.
  - Type: String
  - Valid values: allow | deny
- **entry_rule_number**: The number of an entry (in other words, rule) in the ACL's set of entries.
  - Type: Integer
- **network_acl-id**: The ID of the network ACL.
  - Type: String
- **tag_key**: The key of a tag assigned to the resource. This filter is independent of the tag_value filter. For example, if you use both the filter "tag_key=Purpose" and the filter "tag_value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag_key filter.
  - Type: String
  - For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
- **tag_value**: The value of a tag assigned to the resource. This filter is independent of the tag_key filter.
  - Type: String
**tag**: Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag `Purpose=X`, specify:
```xml
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
```
Example: To list just resources that have been assigned tag `Purpose=X OR Purpose=Y`, specify:
```xml
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y
```

**vpc-id**: The ID of the VPC for the network ACL.
Type: String

---

## Response Elements

The following elements are returned in a `DescribeNetworkAclsResponse` element.

**requestId**
The ID of the request.
Type: xsd:string

**networkAclSet**
A list of network ACLs, each one wrapped in an `item` element.
Type: `NetworkAclType` (p. 493)

---

## Examples

### Example Request

This example describes all the network ACLs in your VPC.

```xml
https://ec2.amazonaws.com/?Action=DescribeNetworkAcls
```

### Example Response

The first ACL in the returned list is the VPC's default ACL.

```xml
<DescribeNetworkAclsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <networkAclSet>
    <item>
      <networkAclId>acl-5566953c</networkAclId>
      <vpcId>vpc-5266953b</vpcId>
      <default>true</default>
      <entrySet>
        <item>
          <ruleNumber>100</ruleNumber>
          <protocol>all</protocol>
          <ruleAction>allow</ruleAction>
          <egress>true</egress>
        </item>
      </entrySet>
    </item>
  </networkAclSet>
</DescribeNetworkAclsResponse>
```
<item>
  <ruleNumber>32767</ruleNumber>
  <protocol>all</protocol>
  <ruleAction>deny</ruleAction>
  <egress>true</egress>
  <cidrBlock>0.0.0.0/0</cidrBlock>
</item>

<item>
  <ruleNumber>100</ruleNumber>
  <protocol>all</protocol>
  <ruleAction>allow</ruleAction>
  <egress>false</egress>
  <cidrBlock>0.0.0.0/0</cidrBlock>
</item>

<item>
  <ruleNumber>32767</ruleNumber>
  <protocol>all</protocol>
  <ruleAction>deny</ruleAction>
  <egress>false</egress>
  <cidrBlock>0.0.0.0/0</cidrBlock>
</item>

<item>
  <ruleNumber>110</ruleNumber>
  <protocol>6</protocol>
  <ruleAction>allow</ruleAction>
  <egress>true</egress>
  <cidrBlock>0.0.0.0/0</cidrBlock>
  <portRange>
    <from>49152</from>
    <to>65535</to>
  </portRange>
</item>

<item>
  <ruleNumber>32767</ruleNumber>
  <protocol>all</protocol>
  <ruleAction>deny</ruleAction>
  <egress>true</egress>
  <cidrBlock>0.0.0.0/0</cidrBlock>
</item>

<item>
  <ruleNumber>110</ruleNumber>
  <protocol>6</protocol>
  <ruleAction>allow</ruleAction>
  <egress>false</egress>
  <cidrBlock>0.0.0.0/0</cidrBlock>
  <portRange>
    <from>80</from>
  </portRange>
</item>
Related Actions

- CreateNetworkAcl (p. 73)
- DeleteNetworkAcl (p. 133)
- ReplaceNetworkAclAssociation (p. 385)
- CreateNetworkAclEntry (p. 75)
- DeleteNetworkAclEntry (p. 135)
- ReplaceNetworkAclEntry (p. 387)
DescribeNetworkInterfaceAttribute

Description

Describes a network interface attribute. You can specify only one attribute at a time.

Request Parameters

**NetworkInterfaceId**
- The ID of the network interface.
- Type: String
- Default: None
- Required: Yes

**Attribute**
- The attribute of the network interface.
- Type: String
- Default: None
- Valid values: description | groupSet | sourceDestCheck | attachment
- Required: Yes

Response Elements

The following elements are returned in a `DescribeNetworkInterfaceAttributeResponse` element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string
- **networkInterfaceId**
  - The ID of the network interface.
  - Type: xsd:string

Examples

Example Request

This example describes the attributes of a network interface.

```
https://ec2.amazonaws.com/?Action=DescribeNetworkInterfaceAttribute
&NetworkInterfaceId=eni-686ea200
&Attribute=sourceDestCheck
&AUTHPARAMS
```

Example Response

```
<DescribeNetworkInterfaceAttributeResponse
 xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
 <requestId>7a20c6b2-d71c-45fb-bba7-37306850544b</requestId>
</DescribeNetworkInterfaceAttributeResponse>
```
<networkInterfaceId>eni-686ea200</networkInterfaceId>
<sourceDestCheck>
  <value>true</value>
</sourceDestCheck>
</DescribeNetworkInterfaceAttributeResponse>

Related Actions

- AttachNetworkInterface (p. 25)
- DetachNetworkInterface (p. 328)
- CreateNetworkInterface (p. 78)
- DeleteNetworkInterface (p. 137)
- DescribeNetworkInterfaces (p. 237)
- ModifyNetworkInterfaceAttribute (p. 363)
- ResetNetworkInterfaceAttribute (p. 409)
DescribeNetworkInterfaces

Description

Describes one or more of your network interfaces.

Request Parameters

\textit{NetworkInterfaceId.n}

One or more network interface IDs.

Type: String

Default: None

Required: No

\textit{Filter.n.Name}

The name of a filter. See the Supported Filters section for a list of supported filter names.

Type: String

Default: None

Required: No

\textit{Filter.n.Value.m}

A value for the filter. See the Supported Filters section for a list of supported values for each filter.

Type: String

Default: None

Required: No

Supported Filters

You can specify filters so that the response includes information for only certain network interfaces. For example, you can use a filter to specify that you're interested in network interfaces launched in a specific Availability Zone. You can specify multiple values for a filter. The response includes information for a network interface only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify network interfaces in a specific Availability Zone, and that have a specific owner ID. The response includes information for a network interface only if it matches all the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon\?\ searches for the literal string *amazon?\.

The following are the available filters.

\textit{addresses.private-ip-address}

The private IP addresses associated with the network interface.

Type: String

\textit{addresses.primary}

Whether the private IP address is the primary IP address associated with the network interface.

Type: Boolean

Valid values: true \mid false

\textit{addresses.association.public-ip}

The association ID returned when the network interface was associated with the Elastic IP address.
addresses.association.owner-id
  The owner ID of the addresses associated with the network interface.
  Type: String

association.association-id
  The association ID returned when the network interface was associated with an IP address.
  Type: String

association.allocation-id
  The allocation ID that AWS returned when you allocated the Elastic IP address for your network interface.
  Type: String

association.ip-owner-id
  The owner of the Elastic IP address associated with the network interface.
  Type: String

association.public-ip
  The address of the Elastic IP address bound to the network interface.
  Type: String

attachment.attachment-id
  The ID of the interface attachment.
  Type: String

attachment.instance-id
  The ID of the instance to which the network interface is attached.
  Type: String

attachment.instance-owner-id
  The owner ID of the instance to which the network interface is attached.
  Type: String

attachment.device-index
  The device index to which the network interface is attached.
  Type: Integer

attachment.status
  The status of the attachment.
  Type: String
  Valid values: attaching | attached | detaching | detached

attachment.attach.time
  The time that the network interface was attached to an instance.
  Type: DateTime

attachment.delete-on-termination
  Indicates whether the attachment is deleted when an instance is terminated.
  Type: Boolean

availability-zone
  The Availability Zone of the network interface.
  Type: String

description
  The description of the network interface.
  Type: String

group-id
  The ID of a security group associated with the network interface.
  Type: String
group-name
The name of a security group associated with the network interface.
Type: String

mac-address
The MAC address of the network interface.
Type: String

network-interface-id
The ID of the network interface.
Type: String

owner-id
The AWS account ID of the network interface owner.
Type: String

private-ip-address
The private IP address or addresses of the network interface.
Type: String

private-dns-name
The private DNS name of the network interface.
Type: String

requester-id
The ID of the entity that launched the instance on your behalf (for example, AWS Management Console, Auto Scaling, and so on).
Type: String

requester-managed
Indicates whether the network interface is being managed by an AWS service (for example, AWS Management Console, Auto Scaling, and so on).
Type: Boolean

source-dest-check
Indicates whether the network interface performs source/destination checking. A value of true means checking is enabled, and false means checking is disabled. The value must be false for the network interface to perform Network Address Translation (NAT) in your VPC.
Type: Boolean

status
The status of the network interface. If the network interface is not attached to an instance, the status shows available; if a network interface is attached to an instance the status shows in-use.
Type: String
Valid values: available | in-use

subnet-id
The ID of the subnet for the network interface.
Type: String

tag-key
The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value x (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String

tag-value
The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
Type: String
tag: key
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

vpc-id
The ID of the VPC for the network interface.
Type: String

Response Elements
The following elements are returned in a DescribeNetworkInterfacesResponse element.

requestId
The ID of the request.
Type: xsd:string

networkInterfaceSet
Information about the network interfaces, each one wrapped in an item element.
Type: NetworkInterfaceType (p. 496)

Examples

Example Request
This example describes network interfaces.

https://ec2.amazonaws.com/?Action=DescribeNetworkInterfaces
&AUTHPARAMS

Example Response

<DescribeNetworkInterfacesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>fc45294c-006b-457b-bab9-012f5b3b0e40</requestId>
  <networkInterfaceSet>
    <item>
      <networkInterfaceId>eni-0f62d866</networkInterfaceId>
      <subnetId>subnet-c53c87ac</subnetId>
      <vpcId>vpc-cc3c87a5</vpcId>
      <availabilityZone>ap-southeast-1b</availabilityZone>
      <description/>
      <ownerId>053230519467</ownerId>
      <requesterManaged>false</requesterManaged>
      <status>in-use</status>
      <macAddress>02:81:60:cb:27:37</macAddress>
    </item>
  </networkInterfaceSet>
</DescribeNetworkInterfacesResponse>
<privateIpAddress>10.0.0.146</privateIpAddress>
<sourceDestCheck>true</sourceDestCheck>
<groupSet>
  <item>
    <groupId>sg-3f4b5653</groupId>
    <groupName>default</groupName>
  </item>
</groupSet>
<attachment>
  <attachmentId>eni-attach-6537fc0c</attachmentId>
  <instanceId>i-22197876</instanceId>
  <instanceOwnerId>053230519467</instanceOwnerId>
  <deviceIndex>0</deviceIndex>
  <status>attached</status>
  <attachTime>2012-07-01T21:45:27.000Z</attachTime>
  <deleteOnTermination>true</deleteOnTermination>
</attachment>
<tagSet/>
<privateIpAddressesSet>
  <item>
    <privateIpAddress>10.0.0.146</privateIpAddress>
    <primary>true</primary>
  </item>
  <item>
    <privateIpAddress>10.0.0.148</privateIpAddress>
    <primary>false</primary>
  </item>
  <item>
    <privateIpAddress>10.0.0.150</privateIpAddress>
    <primary>false</primary>
  </item>
</privateIpAddressesSet>
<item>
  <networkInterfaceId>eni-a66ed5cf</networkInterfaceId>
  <subnetId>subnet-cd8a35a4</subnetId>
  <vpcId>vpc-f28a359b</vpcId>
  <availabilityZone>ap-southeast-1b</availabilityZone>
  <description>Primary network interface</description>
  <ownerId>053230519467</ownerId>
  <requesterManaged>false</requesterManaged>
  <status>in-use</status>
  <macAddress>02:78:d7:00:8a:1e</macAddress>
  <privateIpAddress>10.0.1.233</privateIpAddress>
  <sourceDestCheck>true</sourceDestCheck>
</item>
<groupSet>
  <item>
    <groupId>sg-a2a0b2ce</groupId>
    <groupName>quick-start-1</groupName>
  </item>
</groupSet>
<attachment>
  <attachmentId>eni-attach-a99c57c0</attachmentId>
  <instanceId>i-886401dc</instanceId>
  <instanceOwnerId>053230519467</instanceOwnerId>
  <deviceIndex>0</deviceIndex>
  <status>attached</status>
  <attachTime>2012-06-27T20:08:44.000Z</attachTime>
</attachment>
Related Actions

- AttachNetworkInterface (p. 25)
- DetachNetworkInterface (p. 328)
- CreateNetworkInterface (p. 78)
- DeleteNetworkInterface (p. 137)
- DescribeNetworkInterfaceAttribute (p. 235)
- ModifyNetworkInterfaceAttribute (p. 363)
- ResetNetworkInterfaceAttribute (p. 409)
DescribePlacementGroups

Description

Describes one or more of your placement groups. For more information about placement groups and cluster instances, see Using Cluster Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

GroupName.n
One or more placement group names.
Type: String
Default: Describes all your placement groups, or only those otherwise specified.
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filter so that the response includes information for only certain placement groups. For example, you can use a filter to specify that you're interested in groups in the deleted state. You can specify multiple values for a filter. The response includes information for a placement group only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify group's that are in the deleted state and have a name that includes the string Project. The response includes information for a group only if it matches all your filters. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "*amazon\?\" searches for the literal string *amazon?\.

The following are the available filters.

group-name
The name of the placement group.
Type: String

state
The state of the placement group.
Type: String
Valid values: pending | available | deleting | deleted

strategy
The strategy of the placement group.
Response Elements

The following elements are returned in a DescribePlacementGroupsResponse element.

**requestID**
- The ID of the request.
- Type: xsd:string

**placementGroupSet**
- A list of placement groups, each one wrapped in an item element.
- Type: PlacementGroupInfoType (p. 497)

Examples

**Example Request**

This example describes the placement group named XYZ-cluster.

https://ec2.amazonaws.com/?Action=DescribePlacementGroups
&GroupName.1=XYZ-cluster
&AUTHPARAMS

**Example Response**

```
<DescribePlacementGroupsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestID>d4904fd9-82c2-4ea5-adfe-a9cc3EXAMPLE</requestID>
  <placementGroupSet>
    <item>
      <groupName>XYZ-cluster</groupName>
      <strategy>cluster</strategy>
      <state>available</state>
    </item>
  </placementGroupSet>
</DescribePlacementGroupsResponse>
```

**Example Request**

This example filters the response to include only placement groups that include the string Project in the name.

https://ec2.amazonaws.com/?Action=DescribePlacementGroups
&Filter.1.Name=group-name
&Filter.1.Value="Project"
&AUTHPARAMS
Related Actions

- CreatePlacementGroup (p. 83)
- DeletePlacementGroup (p. 139)
DescribeRegions

Description

Describes one or more regions that are currently available to you.

For a list of the regions supported by Amazon EC2, see Regions and Endpoints.

Request Parameters

*RegionName*.n
One or more region names.
Type: String
Default: Describes all regions available to the account.
Required: No

*Filter*.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

*Filter*.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain regions.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "*amazon\\?\" searches for the literal string "*amazon?\".

The following are the available filters.

*endpoint*
The endpoint of the region (for example, ec2.us-east-1.amazonaws.com).
Type: String

*region-name*
The name of the region.
Type: String

Response Elements

The following elements are returned in a DescribeRegionsResponse element.

*requestId*
The ID of the request.
Type: xsd:string
regionInfo
A list of regions, each one wrapped in an item element.
Type: RegionItemType (p. 505)

Examples

Example Request
This example displays information about all regions.

https://ec2.amazonaws.com/?Action=DescribeRegions
&AUTHPARAMS

Example Request
This example displays information about just the specified regions.

https://ec2.amazonaws.com/?Action=DescribeRegions
&RegionName.1=us-east-1
&RegionName.2=eu-west-1
&AUTHPARAMS

Example Response

<DescribeRegionsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <regionInfo>
    <item>
      <regionName>us-east-1</regionName>
      <regionEndpoint>ec2.us-east-1.amazonaws.com</regionEndpoint>
    </item>
    <item>
      <regionName>eu-west-1</regionName>
      <regionEndpoint>ec2.eu-west-1.amazonaws.com</regionEndpoint>
    </item>
  </regionInfo>
</DescribeRegionsResponse>

Example Request
This example displays information about all regions that have the string ap in the endpoint.

https://ec2.amazonaws.com/?Action=DescribeRegions
&Filter.1.Name=endpoint
&Filter.1.Value.1=*ap*
&AUTHPARAMS
Example Response

<DescribeRegionsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/" requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
<regionInfo>
  <item>
    <regionName>ap-southeast-1</regionName>
    <regionEndpoint>ec2.ap-southeast-1.amazonaws.com</regionEndpoint>
  </item>
</regionInfo>
</DescribeRegionsResponse>

Related Actions

- DescribeAvailabilityZones (p. 173)
- RunInstances (p. 419)
DescribeReservedInstances

Description

Describes one or more of the Reserved Instances that you purchased.

Starting with the 2011-11-01 API version, AWS expanded its offering of Amazon EC2 Reserved Instances to address a range of projected instance use. There are three types of Reserved Instances based on customer utilization levels: Heavy Utilization, Medium Utilization, and Light Utilization. You determine the type of the Reserved Instances offerings by including the optional offeringType parameter. The Medium Utilization offering type is equivalent to the Reserved Instance offering available before API version 2011-11-01. If you are using tools that predate the 2011-11-01 API version, you only have access to the Medium Utilization Reserved Instance offering type.

For more information about Reserved Instances, see Reserved Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

ReservedInstancesId.n
  One or more Reserved Instance IDs.
  Type: String
  Default: Describes all your Reserved Instances, or only those otherwise specified.
  Required: No

offeringType
  The Reserved Instance offering type.
  Type: String
  Valid values: Heavy Utilization | Medium Utilization | Light Utilization
  Required: No

Filter.n.Name
  The name of a filter. See the Supported Filters section for a list of supported filter names.
  Type: String
  Default: None
  Required: No

Filter.n.Value.m
  A value for the filter. See the Supported Filters section for a list of supported values for each filter.
  Type: String
  Default: None
  Required: No

Supported Filters

You can specify filter so that the response includes information for only certain Reserved Instances. For example, you can use a filter to specify that you’re interested in Reserved Instances in a specific Availability Zone. You can specify multiple values for a filter. The response includes information for a Reserved Instance only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify Reserved Instances that are in a specific Availability Zone and have a specific tag. The response includes information for a Reserved Instance only if it matches all of the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.
You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "*amazon??\" searches for the literal string "*amazon?\".

The following are the available filters.

**availability-zone**
- The Availability Zone where the Reserved Instance can be used.
  - Type: String

**duration**
- The duration of the Reserved Instance (one year or three years), in seconds.
  - Type: Long
  - Valid values: 31536000 | 94608000

**fixed-price**
- The purchase price of the Reserved Instance (for example, 9800.0)
  - Type: Double

**instance-type**
- The instance type on which the Reserved Instance can be used.
  - Type: String

**product-description**
- The product description of the Reserved Instance.
  - Type: String
  - Valid values: Linux/UNIX | Linux/UNIX (Amazon VPC) | Windows | Windows (Amazon VPC)

**reserved-instances-id**
- The ID of the Reserved Instance.
  - Type: String

**start**
- The time at which the Reserved Instance purchase request was placed (for example, 2010-08-07T11:54:42.000Z).
  - Type: DateTime

**state**
- The state of the Reserved Instance.
  - Type: String
  - Valid values: pending-payment | active | payment-failed | retired

**tag-key**
- The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value x (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
  - For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
  - Type: String

**tag-value**
- The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
  - Type: String

**tag:**key
- Filters the response based on a specific tag/value combination.
- Example: To list just the resources that have been assigned tag Purpose=X, specify:
  - Filter.1.Name=tag:Purpose
  - Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

**usage-price**
- The usage price of the Reserved Instance, per hour (for example, 0.84)
- Type: Double

## Response Elements

The following elements are returned in a `DescribeReservedInstancesResponse` element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **reservedInstancesSet**
  - A list of Reserved Instances, each one wrapped in an `item` element.
  - Type: `DescribeReservedInstancesResponseSetItemType` (p. 459)

## Examples

### Example Request

This example describes Reserved Instances owned by your account.

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

### Example Response

```
<DescribeReservedInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <reservedInstancesSet>
    ...
    <item>
      <reservedInstancesId>e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE</reservedInstancesId>
      <instanceType>m1.xlarge</instanceType>
      <availabilityZone>us-east-1b</availabilityZone>
      <duration>31536000</duration>
      <fixedPrice>61.0</fixedPrice>
      <usagePrice>0.034</usagePrice>
      <instanceCount>3</instanceCount>
      <productDescription>Linux/UNIX</productDescription>
      <state>active</state>
      <instanceTenancy>default</instanceTenancy>
      <currencyCode>USD</currencyCode>
      <offeringType>Light Utilization</offeringType>
      <recurringCharges/>
    </item>
  </reservedInstancesSet>
</DescribeReservedInstancesResponse>
```
Example Request

This example filters the response to include only one-year, m1.small Linux/UNIX Reserved Instances. If you want Linux/UNIX Reserved Instances specifically for use with a VPC, set the product description to Linux/UNIX (Amazon VPC).

https://ec2.amazonaws.com/?Action=DescribeReservedInstances
&Filter.1.Name=duration
&Filter.1.Value.1=31536000
&Filter.2.Name=instance-type
&Filter.2.Value.1=m1.small
&Filter.3.Name=product-description
&Filter.3.Value.1=Linux%2FUNIX
&AUTHPARAMS

Related Actions

- PurchaseReservedInstancesOffering (p. 372)
- DescribeReservedInstancesOfferings (p. 257)
DescribeReservedInstancesListings

**Description**

Describes your account’s Reserved Instance listings in the Reserved Instance Marketplace. This call returns information, such as the ID of the Reserved Instance to which a listing is associated.

The Reserved Instance Marketplace matches sellers who want to resell Reserved Instance capacity that they no longer need with buyers who want to purchase additional capacity. Reserved Instances bought and sold through the Reserved Instance Marketplace work like any other Reserved Instances.

As a seller, you choose to list some or all of your Reserved Instances, and you specify the upfront price you want to receive for them. Your Reserved Instances are then listed in the Reserved Instance Marketplace and are available for purchase.

As a buyer, you specify the configuration of the Reserved Instance you want to purchase, and the Marketplace will match what you’re searching for with what’s available. The Marketplace will first sell the lowest priced Reserved Instances to you, and continue to sell available Reserved Instance listings to you until your demand is met. You will be charged based on the total price of all of the listings that you purchase.

For more information about Reserved Instance Marketplace, go to Reserved Instance Marketplace in the Amazon Elastic Compute Cloud User Guide.

**Request Parameters**

**ReservedInstancesListingId.n**

The information about the Reserved Instance listing wrapped in an `item` element.

Type: `DescribeReservedInstancesListingSetItemType (p. 457)`

Default: None

Required: No

**ReservedInstancesId.n**

The set of Reserved Instances IDs which are used to see associated listings.

Type: `DescribeReservedInstancesSetItemType (p. 460)`

Default: None

Required: No

**Filter.n.Name**

The name of a filter. See the Supported Filters section for a list of supported filter names.

Type: `String`

Default: None

Required: No

**Filter.n.Value.m**

A value for the filter. See the Supported Filters section for a list of supported values for each filter.

Type: `String`

Default: None

Required: No
Supported Filters

Our policy is to provide filters for all `ec2-describe` calls so that you can limit the response to your specified criteria. Therefore, you can use filters to limit the response when describing Reserved Instances listings, even though you can use other options instead.

For example, you can use a filter or an option to get the listing of Reserved Instances that are in an active state. You can also specify multiple options or filters (for example, to limit the response to the Reserved Instances listings that are in the closed state with a specific status message). The response includes information for a listing only if it matches all options or filters. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of `*amazon\?\` searches for the literal string `*amazon?\`.

The following are the available filters.

**status**
- Status of the Reserved Instance listing.
  - Valid values: pending | active | cancelled | closed
  - Type: String

**status-message**
- Reason for the status.
  - Type: String

**reserved-instances-listing-id**
- The ID of the Reserved Instances listing.
  - Type: String

**reserved-instances-id**
- The ID of the Reserved Instances.
  - Type: String

Response Elements

The following elements are returned in a `DescribeReservedInstancesListingsResponseType` element.

**requestId**
- The ID of the request.
  - Type: `xsd:string`

**reservedInstancesListingsSet**
- The Reserved Instance listing information wrapped in an `item` element.
  - Type: `DescribeReservedInstancesListingsResponseSetItemType` (p. 456)

Examples

Example Request

This example shows all the listings associated with your account.
Example Response

<DescribeReservedInstancesListingsResponse>
  <requestId>cec5c904-8f3a-4de5-8f5a-ff7f9EXAMPLE</requestId>
  <reservedInstancesListingsSet>
    <item>
      <reservedInstancesListingId>253dfbf9-c335-4808-b956-d942cEXAMPLE</reservedInstancesListingId>
      <reservedInstancesId>e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE</reservedInstancesId>
      <createDate>2012-07-06T19:35:29.000Z</createDate>
      <updateDate>2012-07-06T19:35:30.000Z</updateDate>
      <status>active</status>
      <statusMessage>ACTIVE</statusMessage>
      <instanceCounts>
        <item>
          <state>Available</state>
          <instanceCount>20</instanceCount>
        </item>
        <item>
          <state>Sold</state>
          <instanceCount>0</instanceCount>
        </item>
        <item>
          <state>Cancelled</state>
          <instanceCount>0</instanceCount>
        </item>
        <item>
          <state>Pending</state>
          <instanceCount>0</instanceCount>
        </item>
      </instanceCounts>
      <priceSchedules>
        <item>
          <term>8</term>
          <price>480.0</price>
          <currencyCode>USD</currencyCode>
          <active>false</active>
        </item>
        <item>
          <term>7</term>
          <price>420.0</price>
          <currencyCode>USD</currencyCode>
          <active>false</active>
        </item>
        <item>
          <term>6</term>
          <price>360.0</price>
          <currencyCode>USD</currencyCode>
          <active>active</active>
        </item>
        <item>
          <term>5</term>
        </item>
      </priceSchedules>
    </item>
  </reservedInstancesListingsSet>
</DescribeReservedInstancesListingsResponse>
<item>
  <term>4</term>
  <price>240.0</price>
  <currencyCode>USD</currencyCode>
  <active>false</active>
</item>
</priceSchedules>
<tagSet/>
<clientToken>myclienttoken1</clientToken>
</item>
</reservedInstancesListingsSet>
</DescribeReservedInstancesListingsResponse>

Related Actions

- CancelReservedInstancesListing (p. 46)
- CreateReservedInstancesListing (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. During that time period you will not receive insufficient capacity errors, and you will pay a lower usage rate than the rate charged for On-Demand instances for the actual time used.

Starting with the 2011-11-01 API version, AWS expanded its offering of Amazon EC2 Reserved Instances to address a range of projected instance usage. There are three types of Reserved Instances based on customer utilization levels: Heavy Utilization, Medium Utilization, and Light Utilization. You determine the type of the Reserved Instances offerings by including the optional offeringType parameter when calling DescribeReservedInstancesOfferings. The Medium Utilization offering type is equivalent to the Reserved Instance offering available before API version 2011-11-01. If you are using tools that predate the 2011-11-01 API version, DescribeReservedInstancesOfferings will only list information about the Medium Utilization Reserved Instance offering type.

For information about Reserved Instances pricing, go to Understanding Reserved Instance Pricing Tiers in the Amazon Elastic Compute Cloud User Guide. For more information about Reserved Instances, go to Reserved Instances also in the Amazon Elastic Compute Cloud User Guide.

Starting with the 2012-08-15 API version, AWS offers the Reserved Instance Marketplace, where you can buy and sell Reserved Instances. The Reserved Instance Marketplace matches sellers who want to resell Reserved Instance capacity that they no longer need with buyers who want to purchase additional capacity. Reserved Instances bought and sold through the Reserved Instance Marketplace work like any other Reserved Instances.

By default, with the 2012-08-15 API version, DescribeReservedInstancesOfferings returns information about AWS and Reserved Instance Marketplace offerings. If you are using tools that predate the 2012-08-15 API version, DescribeReservedInstancesOfferings will only list information about the Amazon EC2 Reserved Instance offerings.

For more information about the Reserved Instance Marketplace, go to Reserved Instance Marketplace in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

ReservedInstancesOfferingId.n
- One or more Reserved Instances offering IDs.
  Type: String
  Default: None
  Required: No

InstanceType
- The Amazon EC2 instance type on which the Reserved Instance can be used. See Available Instance Types for more information.
  Type: String
  Default: None
  Required: No

AvailabilityZone
- The Availability Zone in which the Reserved Instance can be used.
  Type: String
  Default: None
Required: No

**ProductDescription**
The Reserved Instance description. Instances that include *(Amazon VPC)* in the description are for use with Amazon VPC.
Type: String
Valid Values: Linux/UNIX | Linux/UNIX (Amazon VPC) | Windows | Windows (Amazon VPC)
Default: None
Required: No

**Filter.n.Name**
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

**Filter.n.Value.m**
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

**InstanceTenancy**
The tenancy of the Reserved Instance offering. A Reserved Instance with tenancy of dedicated will run on single-tenant hardware and can only be launched within a VPC.
Type: String
Valid Values: default | dedicated
Default: default
Required: No

**OfferingType**
The Reserved Instance offering type.
Type: String
Valid values: Heavy Utilization | Medium Utilization | Light Utilization
Default: None
Required: No

**IncludeMarketplace**
Include Marketplace offerings in the response.
Type: Boolean
Default: true
Required: No

**MinDuration**
Minimum duration (in seconds) to filter when searching for offerings.
Type: Long
Default: 2592000 (1 month)
Required: No

**MaxDuration**
Maximum duration (in seconds) to filter when searching for offerings.
Type: Long
Default: 94608000 (3 years)
Required: No

**MaxInstanceCount**
Maximum number of instances to filter when searching for offerings.
Type: Integer
Default: 20
Required: No

**NextToken**
Token to use when requesting the next paginated set of offerings.
- Type: String
- Default: First page of results if the string is empty.
- Required: No

**MaxResults**
Maximum number of offerings to return.
- Type: Integer
- Default: 100
- Maximum: 100
- Required: No

## Supported Filters

Our policy is to provide filters for all `ec2-describe` calls so that you can limit the response to your specified criteria. Therefore, you can use filters to limit the response when describing Reserved Instances offerings, even though you can use other options instead.

For example, you could use an option or a filter to get the offerings for a specific instance type. You can specify multiple options or filters (for example, limit the response to the m2.xlarge instance type, and only for Windows instances). The response includes information for an offering only if it matches all options or filters. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of `\*amazon\?\` searches for the literal string `*amazon?\`.

The following are the available filters:

**availability-zone**
- The Availability Zone where the Reserved Instance can be used.
- Type: String

**duration**
- The duration of the Reserved Instance (for example, one year or three years), in seconds.
- Type: Long
- **Valid values:** 31536000 | 94608000

**fixed-price**
- The purchase price of the Reserved Instance (for example, 9800.0)
- Type: Double

**instance-type**
- The Amazon EC2 instance type on which the Reserved Instance can be used.
- Type: String

**marketplace**
- Set to `true` to show only Reserved Instance Marketplace offerings. When this filter is not used, which is the default behavior, all offerings from AWS and Reserved Instance Marketplace are listed.
- Type: Boolean

**product-description**
- The description of the Reserved Instance.
- Type: String
- **Valid values:** Linux/UNIX | Linux/UNIX (Amazon VPC) | Windows | Windows (Amazon VPC)
**Response Elements**

The following elements are returned in a `DescribeReservedInstancesOfferingsResponse` element.

- **requestId**
  - The ID of the request.
  - Type: `xsd:string`

- **reservedInstancesOfferingsSet**
  - A list of Reserved Instances offerings. Each offering’s information is wrapped in an `item` element.
  - Type: `DescribeReservedInstancesOfferingsResponseSetItemType`

- **nextToken**
  - The next paginated set of results to return.
  - Type: `String`

**Examples**

**Example Describing Reserved Instance Marketplace Offerings Only**

This example requests a list of Linux/UNIX, Light Utilization Reserved Instances that are available through the Reserved Instance Marketplace only.

```
https://ec2.amazonaws.com/?Action=DescribeReservedInstancesOfferings
&Filter.0.Name=marketplace
&Filter.0.Value.1=true
&IncludeMarketplace=true
&OfferingType=Light+Utilization
&ProductDescription=Linux%2FUNIX
&Version=2013-02-01

Note
When using the Query API, all strings must be URL-encoded.
```

This is the response listing Reserved Instance Marketplace offerings only.

```
<DescribeReservedInstancesOfferingsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>2bc7dafa-dafd-4257-bdf9-c0814EXAMPLE</requestId>
  <reservedInstancesOfferingsSet>
    <item>
      <reservedInstancesOfferingId>a6ce8269-7b8c-42cd-a7f5-0841cEXAMPLE</reservedInstancesOfferingId>
    </item>
  </reservedInstancesOfferingsSet>
</DescribeReservedInstancesOfferingsResponse>
```
Example Describing AWS Offerings Only

By default, with the 2012-08-15 API version, `DescribeReservedInstancesOfferings` returns information about AWS Reserved Instances and Reserved Instance Marketplace offerings. If you want a list of AWS offerings only, set `IncludeMarketplace` to `false`.

https://ec2.amazonaws.com/?Action=DescribeReservedInstancesOfferings &IncludeMarketplace=false
Example Using MaxResults and nextToken to Manage Results

API version 2012-08-15 provides pagination support, which means that you can query the results sequentially and in parts. Use MaxResults to specify the maximum number of results that will be returned in the response. Then each paginated response will contain a nextToken, which can be provided as input to a subsequent DescribeReservedInstancesOfferings call to fetch the next page.

https://ec2.amazonaws.com/?Action=DescribeReservedInstancesOfferings
&MaxResults=5
&Version=2013-02-01
&AUTHPARAMS

The response should look similar to the following example.

```
<DescribeReservedInstancesOfferingsResponse>
  <requestId>d072f652-cc57-458c-89e0-e6c02EXAMPLE</requestId>
  <reservedInstancesOfferingsSet>
    ...
    <item>
      <reservedInstancesOfferingId>649fd0c8-7846-46b8-8f84-a6400EXAMPLE</reservedInstancesOfferingId>
      <instanceType>m1.large</instanceType>
      <availabilityZone>us-east-1a</availabilityZone>
      <duration>94608000</duration>
      <fixedPrice>1200.0</fixedPrice>
      <usagePrice>0.0</usagePrice>
      <productDescription>Linux/UNIX (Amazon VPC)</productDescription>
      <instanceTenancy>default</instanceTenancy>
      <currencyCode>USD</currencyCode>
      <offeringType>Heavy Utilization</offeringType>
      <recurringCharges>
        <item>
          <frequency>Hourly</frequency>
          <amount>0.052</amount>
        </item>
      </recurringCharges>
      <marketplace>false</marketplace>
      <pricingDetailsSet/>
    </item>
    <item>
      <reservedInstancesOfferingId>e5a2ff3b-a4f3-477c-8928-dbd00EXAMPLE</reservedInstancesOfferingId>
      <instanceType>m1.large</instanceType>
      <availabilityZone>us-east-1a</availabilityZone>
      <duration>94608000</duration>
      <fixedPrice>1000.0</fixedPrice>
      <usagePrice>0.076</usagePrice>
      <productDescription>Linux/UNIX (Amazon VPC)</productDescription>
      <instanceTenancy>default</instanceTenancy>
      <currencyCode>USD</currencyCode>
      <offeringType>Medium Utilization</offeringType>
    </item>
  </reservedInstancesOfferingsSet>
</DescribeReservedInstancesOfferingsResponse>
```
Then, you can use the `NextToken` to fetch the next page. The request should look like the following example. Make sure that you URL encode the `NextToken` value.

```
https://ec2.amazonaws.com/?Action=DescribeReservedInstancesOfferings
&MaxResults=5
&NextToken=h%2FC8YKPQBHEjW8xKz1827%2FZzyb0VqsqkJRo3TqhFYeE%3D
&Version=2013-02-01
&AUTHPARAMS
```

The response should be similar to the following example.

```
<DescribeReservedInstancesOfferingsResponse>
  <requestId>652900ca-902c-42fa-b8ae-da67bEXAMPLE</requestId>
  <reservedInstancesOfferingsSet>
    ...
    <item>
      <reservedInstancesOfferingId>438012d3-496e-4ab3-b1f6-38ffeEXAMPLE</reservedInstancesOfferingId>
      <instanceType>m1.large</instanceType>
      <availabilityZone>us-east-1a</availabilityZone>
      <duration>94608000</duration>
      <fixedPrice>425.2</fixedPrice>
      <usagePrice>0.124</usagePrice>
      <productDescription>Linux/UNIX</productDescription>
      <instanceTenancy>default</instanceTenancy>
      <currencyCode>USD</currencyCode>
      <offeringType>Light Utilization</offeringType>
      <recurringCharges/>
      <marketplace>false</marketplace>
      <pricingDetailsSet/>
    </item>
    <item>
      <reservedInstancesOfferingId>248e7b75-579e-4599-a34d-cb6aaEXAMPLE</reservedInstancesOfferingId>
      <instanceType>m1.large</instanceType>
      <availabilityZone>us-east-1a</availabilityZone>
      <duration>31536000</duration>
      <fixedPrice>780.0</fixedPrice>
      <usagePrice>0.0</usagePrice>
      <productDescription>Linux/UNIX</productDescription>
      <instanceTenancy>default</instanceTenancy>
      <currencyCode>USD</currencyCode>
      <offeringType>Heavy Utilization</offeringType>
      <recurringCharges>
        <item>
          <frequency>Hourly</frequency>
          <amount>0.064</amount>
        </item>
      </recurringCharges>
      <marketplace>false</marketplace>
      <pricingDetailsSet/>
    </item>
  </reservedInstancesOfferingsSet>
</DescribeReservedInstancesOfferingsResponse>
```
Example Request

This example describes available Reserved Instance offerings.

https://ec2.amazonaws.com/?Action=DescribeReservedInstancesOfferings

Example Response

<DescribeReservedInstancesOfferingsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>48692a1d-3036-48fd-8c0e-d34681b97efdEXAMPLE</requestId>
  <reservedInstancesOfferingsSet>
    ...
    <item>
      <reservedInstancesOfferingId>248e7b75-c83a-48c1-bcf7-b7f03e9c43feEXAMPLE</reservedInstancesOfferingId>
      <instanceType>c1.medium</instanceType>
      <availabilityZone>us-east-1b</availabilityZone>
      <duration>94608000</duration>
      <fixedPrice>700.0</fixedPrice>
      <usagePrice>0.06</usagePrice>
      <productDescription>Linux/UNIX (Amazon VPC)</productDescription>
      <instanceTenancy>default</instanceTenancy>
      <currencyCode>USD</currencyCode>
      <offeringType>Medium Utilization</offeringType>
      <recurringCharges/>
    </item>
    ...
  </reservedInstancesOfferingsSet>
</DescribeReservedInstancesOfferingsResponse>

Example Request

This example filters the response to include only one-year, m1.small or m1.large Linux/UNIX Reserved Instances. If you want Linux/UNIX Reserved Instances specifically for use with a VPC, set the product description to Linux/UNIX (Amazon VPC).

https://ec2.amazonaws.com/?Action=DescribeReservedInstancesOfferings
  &Filter.1.Name=duration
  &Filter.1.Value.1=31536000
  &Filter.2.Name=instance-type
  &Filter.2.Value.1=m1.small

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Related Actions

- PurchaseReservedInstancesOffering (p. 372)
- DescribeReservedInstances (p. 249)
DescribeRouteTables

Description

Describes one or more of your route tables.

For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

Request Parameters

RouteTableId.n

One or more route table IDs.
Type: String
Default: Returns all route tables, or only those otherwise specified.
Required: No

Filter.n.Name

The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m

A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain tables. For example, you can use a filter to specify that you’re interested in the tables associated with a particular subnet. You can specify multiple values for a filter. The response includes information for a table only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify tables that have a specific route and are associated with a specific subnet. The response includes information for a table only if it matches all the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon\?\ searches for the literal string *amazon?.

The following are the available filters.

association.route-table-association-id

The ID of an association ID for the route table.
Type: String

association.route-table-id

The ID of the route table involved in the association.
Type: String
**association.subnet-id**
- The ID of the subnet involved in the association.
- Type: String

**association.main**
- Indicates whether the route table is the main route table for the VPC.
- Type: Boolean

**route-table-id**
- The ID of the route table.
- Type: String

**route.destination-cidr-block**
- The CIDR range specified in a route in the table.
- Type: String

**route.gateway-id**
- The ID of a gateway specified in a route in the table.
- Type: String

**route.instance-id**
- The ID of an instance specified in a route in the table.
- Type: String

**route.origin**
- Describes how the route was created.
- Type: String
- **Valid values:** CreateRouteTable | CreateRoute | EnableVgwRoutePropagation
  - CreateRouteTable indicates that route was automatically created when the route table was created.
  - CreateRoute indicates that the route was manually added to the route table.
  - EnableVgwRoutePropagation indicates that the route was propagated by route propagation.

**route.state**
- The state of a route in the route table. The *blackhole* state indicates that the route's target isn't available (for example, the specified gateway isn't attached to the VPC, the specified NAT instance has been terminated, and so on).
- Type: String
- **Valid values:** active | blackhole

**tag-key**
- The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value x (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
- For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
- Type: String

**tag-value**
- The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
- Type: String

**tag:** key
- Filters the response based on a specific tag/value combination.
- Example: To list just the resources that have been assigned tag Purpose=X, specify:
  - Filter.1.Name=tag:Purpose
  - Filter.1.Value.1=X
- Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
  - Filter.1.Name=tag:Purpose
vpc-id
The ID of the VPC for the route table.
Type: String

Response Elements
The following elements are returned in a DescribeRouteTablesResponse element.

requestId
The ID of the request.
Type: xsd:string
routeTableSet
A list of route tables, each one wrapped in an item element.
Type: RouteTableType (p. 508)

Examples

Example Request
This example describes all route tables in the VPC.

https://ec2.amazonaws.com/?Action=DescribeRouteTables

Example Response
The first route table in the returned list is the VPC's main route table. Its association ID represents the association between the table and the VPC.

```
<DescribeRouteTablesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>6f570b0b-9c18-4b07-bdec-73740dcf861a</requestId>
  <routeTableSet>
    <item>
      <routeTableId>rtb-13ad487a</routeTableId>
      <vpcId>vpc-11ad4878</vpcId>
      <routeSet>
        <item>
          <destinationCidrBlock>10.0.0.0/22</destinationCidrBlock>
          <gatewayId>local</gatewayId>
          <state>active</state>
          <origin>CreateRouteTable</origin>
        </item>
      </routeSet>
      <associationSet>
        <item>
          <routeTableAssociationId>rtbassoc-12ad487b</routeTableAssociationId>
          <routeTableId>rtb-13ad487a</routeTableId>
          <main>true</main>
        </item>
      </associationSet>
    </item>
  </routeTableSet>
</DescribeRouteTablesResponse>
```
</associationSet>
<tagSet/>
</item>
</routeTableSet>
</DescribeRouteTablesResponse>

**Related Actions**

- [AssociateRouteTable](p. 21)
- [DisassociateRouteTable](p. 338)
- [DeleteRouteTable](p. 143)
- [CreateRouteTable](p. 97)
- [ReplaceRouteTableAssociation](p. 392)
DescribeSecurityGroups

Description

A security group is for use with instances either in the EC2-Classic platform or in a specific VPC. For more information, see Amazon EC2 Security Groups in the Amazon Elastic Compute Cloud User Guide and Security Groups for Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

GroupName.n
One or more security group names.
Type: String
Default: Describes all your security groups, or only those otherwise specified.
Condition: For EC2-Classic, default VPC, you can specify either GroupName or GroupId
Required: No

GroupId.n
One or more security group IDs.
Type: String
Default: Describes all your security groups, or only those otherwise specified.
Condition: Required for a EC2-VPC; for EC2-Classic, default VPC, you can specify either GroupName or GroupId
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain security groups. For example, you can use a filter to specify that you're interested in groups whose name contains a specific string. You can specify multiple values for a filter. The response includes information for a security group only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify group's whose name contains a specific string, and that give permission to another security group with a different string in its name. The response includes information for a group only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

Important
Filters are based on literal strings only. This is important to remember when you want to use filters to return only security groups with access allowed on a specific port number or numbers. For example, suppose that you want to get all groups that have access on port 22, and that GroupA gives access on a range of ports using fromPort=20 and toPort=30. If you filter with
ip-permission.from-port=22 or ip-permission.to-port=22 (or both), the response does not contain information for GroupA. You get information for GroupA only if you specify ip-permission.from-port=20 or ip-permission.to-port=30 (or both).

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon\?\ searches for the literal string *amazon?\.

The following are the available filters.

description
  The description of the security group.
  Type: String

group-id
  The ID of the security group.
  Type: String

group-name
  The name of the security group.
  Type: String

ip-permission.cidr
  The CIDR range that has been granted the permission.
  Type: String

ip-permission.from-port
  The start of port range for the TCP and UDP protocols, or an ICMP type number.
  Type: String

ip-permission.group-name
  The name of security group that has been granted the permission.
  Type: String

ip-permission.protocol
  The IP protocol for the permission.
  Type: String

  Valid values: tcp | udp | icmp or a protocol number

ip-permission.to-port
  The end of port range for the TCP and UDP protocols, or an ICMP code.
  Type: String

ip-permission.user-id
  The ID of an AWS account that has been granted the permission.
  Type: String

owner-id
  The AWS account ID of the owner of the security group.
  Type: String

tag-key
  The key of a tag assigned to the security group.
  Type: String

tag-value
  The value of a tag assigned to the security group.
  Type: String

vpc-id
  Only return the security groups that belong to the specified EC2-VPC ID.
  Type: String
Response Elements

The following elements are returned in a DescribeSecurityGroupsResponse element.

**requestId**
- The ID of the request.
- Type: xsd:string

**securityGroupInfo**
- A list of security groups, each one wrapped in an `item` element.
- Type: SecurityGroupItemType (p. 513)

Examples

Example Request

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

```
&GroupName.1=WebServers
&GroupName.2=RangedPortsBySource
&AUTHPARAMS
```

Example Response

```
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <securityGroupInfo>
    <item>
      <ownerId>111122223333</ownerId>
      <groupId>sg-1a2b3c4d</groupId>
      <groupName>WebServers</groupName>
      <groupDescription>Web Servers</groupDescription>
      <vpcId/>
      <ipPermissions>
        <item>
          <ipProtocol>tcp</ipProtocol>
          <fromPort>80</fromPort>
          <toPort>80</toPort>
          <groups/>
          <ipRanges>
            <item>
              <cidrIp>0.0.0.0/0</cidrIp>
            </item>
          </ipRanges>
        </item>
      </ipPermissionsEgress/>
    </item>
    <item>
      <ownerId>111122223333</ownerId>
      <groupId>sg-2a2b3c4d</groupId>
```

Amazon Elastic Compute Cloud API Reference

Response Elements
Example Request

This example returns information about all security groups that grant access over TCP specifically on port 22 from instances in either the app_server_group or database_group.

&Filter.1.Name=ip-permission.protocol
&Filter.1.Value.1=tcp
&Filter.2.Name=ip-permission.from-port
&Filter.2.Value.1=22
&Filter.3.Name=ip-permission.to-port
&Filter.3.Value.1=22
&Filter.4.Name=ip-permission.group-name
&Filter.4.Value.1=app_server_group
&Filter.4.Value.2=database_group
&AUTHPARAMS

Related Actions

- CreateSecurityGroup (p. 99)
- AuthorizeSecurityGroupIngress (p. 34)
- RevokeSecurityGroupIngress (p. 416)
- DeleteSecurityGroup (p. 145)
DescribeSnapshotAttribute

Description

Describes an attribute of the specified snapshot. You can specify only one attribute at a time.

Request Parameters

SnapshotId
The ID of the Amazon EBS snapshot.
Type: String
Default: None
Required: Yes

Attribute
The snapshot attribute.
Type: String
Default: None
Valid values: createVolumePermission | productCodes
Required: Yes

Response Elements

The following elements are returned in a DescribeSnapshotAttributeResponse element.

requestId
The ID of the request.
Type: xsd:string

snapshotId
The ID of the Amazon EBS snapshot.
Type: xsd:string

createVolumePermission
A list of permissions for creating volumes from the snapshot. Each permission is wrapped in an item element.
Type: CreateVolumePermissionItemType (p. 451)

productCodes
A list of product codes. Each product code is wrapped in an item element type that contains a product code and a type.
Type: ProductCodesSetItemType (p. 503)

Examples

Example Request

This example describes permissions for the snap-1a2b3c4d snapshot.

https://ec2.amazonaws.com/?Action=DescribeSnapshotAttribute
&SnapshotId=snap-1a2b3c4d
Example Response

```xml
<DescribeSnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"
  requestId="59dbff89-35bd-4eac-99ed-be587EXAMPLE">
  <snapshotId>snap-1a2b3c4d</snapshotId>
  <createVolumePermission>
    <item>
      <group>all</group>
    </item>
  </createVolumePermission>
</DescribeSnapshotAttributeResponse>
```

Example Request

This example describes product codes associated with the snap-1a2b3c4d snapshot.

```xml
https://ec2.amazonaws.com/?Action=DescribeSnapshotAttribute
&SnapshotId=snap-1a2b3c4d
&Attribute=productCodes
&AUTHPARAMS
```

Example Response

```xml
<DescribeSnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"
  requestId="59dbff89-35bd-4eac-99ed-be587EXAMPLE">
  <snapshotId>snap-1a2b3c4d</snapshotId>
  <productCodes>
    <item>
      <productCode>a1b2c3d4e5f6g7h8i9j10k11</productCode>
      <type>marketplace</type>
    </item>
  </productCodes>
</DescribeSnapshotAttributeResponse>
```

Related Actions

- ModifySnapshotAttribute (p. 365)
- DescribeSnapshots (p. 276)
- ResetSnapshotAttribute (p. 411)
- CreateSnapshot (p. 101)
DescribeSnapshots

Description

Describes one or more of the Amazon EBS snapshots available to you. Snapshots available to you include public snapshots available for any AWS account to launch, private snapshots you own, and private snapshots owned by another AWS account but for which you've been given explicit create volume permissions.

The create volume permissions fall into 3 categories:

- **public**: The owner of the snapshot granted create volume permissions for the snapshot to the all group. All AWS accounts have create volume permissions for these snapshots.
- **explicit**: The owner of the snapshot granted create volume permissions to a specific AWS account.
- **implicit**: An AWS account has implicit create volume permissions for all snapshots it owns.

The list of snapshots returned can be modified by specifying snapshot IDs, snapshot owners, or AWS accounts with create volume permissions. If no options are specified, Amazon EC2 returns all snapshots for which you have 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, an error 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 snapshots with create snapshot permissions for those users 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

**SnapshotId.n**
- One or more snapshot IDs.
  - Type: String
  - Default: Describes snapshots for which you have launch permissions.
  - Required: No

**Owner.n**
- Returns the snapshots owned by the specified owner. Multiple owners can be specified.
  - Type: String
  - Valid values: `self`, `amazon`, `AWS Account ID`
  - Default: None
  - Required: No

**RestorableBy.n**
- One or more AWS accounts IDs that can create volumes from the snapshot.
  - Type: String
  - Default: None
**Filter.n.Name**
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

**Filter.n.Value.m**
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

**Supported Filters**
You can specify filters so that the response includes information for only certain snapshots. For example, you can use a filter to specify that you’re interested in snapshots whose status is `pending`. You can specify multiple values for a filter. The response includes information for a snapshot only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify snapshot's that have a `pending` status, and have a specific tag. The response includes information for a snapshot only if it matches all the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of `*amazon?\` searches for the literal string `*amazon?\`.

The following are the available filters.

**description**
A description of the snapshot.
Type: String

**owner-alias**
The AWS account alias (for example, `amazon`) that owns the snapshot.
Type: String

**owner-id**
The ID of the AWS account that owns the snapshot.
Type: String

**progress**
The progress of the snapshot, as a percentage (for example, 80%).
Type: String

**snapshot-id**
The snapshot ID.
Type: String

**start-time**
The time stamp when the snapshot was initiated.
Type: DateTime

**status**
The status of the snapshot.
Type: String
Valid values: `pending` | `completed` | `error`
tag-key

The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag’s value is), and the tag value X (regardless of what the tag’s key is). If you want to list only resources where Purpose is X, see the tag: key filter.

For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.

Type: String

tag-value

The value of a tag assigned to the resource. This filter is independent of the tag-key filter.

Type: String

tag: key

Filters the response based on a specific tag/value combination.

Example: To list just the resources that have been assigned tag Purpose=X, specify:

Filter.1.Name=tag:Purpose
Filter.1.Value.1=X

Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:

Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

volume-id

The ID of the volume the snapshot is for.

Type: String

volume-size

The size of the volume, in GiB (for example, 20).

Type: String

Response Elements

The following elements are returned in a DescribeSnapshotsResponse element.

requestId

The ID of the request.

Type: xsd:string

snapshotSet

A list of snapshots. Each snapshot is wrapped in an item element.

Type: DescribeSnapshotsSetItemResponseType (p. 461)

Examples

Example Request

This example describes snapshot snap-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DescribeSnapshots
&SnapshotId=snap-1a2b3c4d
&AUTHPARAMS
Example Response

```xml
<DescribeSnapshotsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <snapshotSet>
    <item>
      <snapshotId>snap-1a2b3c4d</snapshotId>
      <volumeId>vol-1a2b3c4d</volumeId>
      <status>pending</status>
      <startTime>YYYY-MM-DDTHH:MM:SS.SSSZ</startTime>
      <progress>80%</progress>
      <ownerId>111122223333</ownerId>
      <volumeSize>15</volumeSize>
      <description>Daily Backup</description>
      <tagSet/>
    </item>
  </snapshotSet>
</DescribeSnapshotsResponse>
```

Example Request

This example filters the response to include only snapshots with the `pending` status, and that are also tagged with a value that includes the string `db_`.

```
https://ec2.amazonaws.com/?Action=DescribeSnapshots
&Filter.1.Name=status
&Filter.1.Value.1=pending
&Filter.2.Name=tag-value
&Filter.2.Value.1=*db_*
&AUTHPARAMS
```

Example Response

```xml
<DescribeSnapshotsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <snapshotSet>
    <item>
      <snapshotId>snap-1a2b3c4d</snapshotId>
      <volumeId>vol-1a2b3c4d</volumeId>
      <status>pending</status>
      <startTime>YYYY-MM-DDTHH:MM:SS.SSSZ</startTime>
      <progress>30%</progress>
      <ownerId>111122223333</ownerId>
      <volumeSize>15</volumeSize>
      <description>Daily Backup</description>
      <tagSet>
        <item>
          <key>Purpose</key>
          <value>demo_db_14_backup</value>
        </item>
      </tagSet>
    </item>
  </snapshotSet>
</DescribeSnapshotsResponse>
```
Related Actions

- CreateSnapshot (p. 101)
- DeleteSnapshot (p. 147)
DescribeSpotDatafeedSubscription

Description

Describes the datafeed for Spot Instances. For more information about Spot Instances, see Spot Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

The DescribeSpotDatafeedSubscription operation does not have any request parameters.

Response Elements

The following elements are returned in a DescribeSpotDatafeedSubscriptionResponse element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **spotDatafeedSubscription**
  - The Spot Instance datafeed subscription.
  - Type: SpotDatafeedSubscriptionType (p. 514)

Examples

Example Request

This example describes the datafeed for the account.

https://ec2.amazonaws.com/?Action=DescribeSpotDatafeedSubscription

Example Response

```xml
<DescribeSpotDatafeedSubscriptionResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <spotDatafeedSubscription>
    <ownerId>111122223333</ownerId>
    <bucket>myawsbucket</bucket>
    <prefix>spotdata_</prefix>
    <state>Active</state>
  </spotDatafeedSubscription>
</DescribeSpotDatafeedSubscriptionResponse>
```

Related Actions

- CreateSpotDatafeedSubscription (p. 104)
- DeleteSpotDatafeedSubscription (p. 149)
DescribeSpotInstanceRequests

Description

Describes the Spot Instance requests that belong to your account. Spot Instances are instances that Amazon EC2 starts on your behalf when the maximum price that you specify exceeds the current Spot Price. Amazon EC2 periodically sets the Spot Price based on available Spot Instance capacity and current Spot Instance requests. For more information about Spot Instances, see Spot Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

SpotInstanceId.n
One or more Spot Instance request IDs.
Type: String
Default: None
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain Spot Instance requests. For example, you can use a filter to specify that you're interested in requests where the Spot Price is a specific value. (You can't use a greater than or less than comparison, however you can use * and ? wildcards.) You can specify multiple values for a filter. The response includes information for a Spot Instance request only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify that the Spot Price is a specific value, and that the instance type is m1.small. The response includes information for a request only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of /*amazon\?\ searches for the literal string *amazon?.

The following are the available filters.

availability-zone-group
The Availability Zone group. If you specify the same Availability Zone group for all Spot Instance requests, all Spot Instances are launched in the same Availability Zone.
Type: String
create-time
   The time stamp when the Spot Instance request was created.
   Type: String

fault-code
   The fault code related to the request.
   Type: String

fault-message
   The fault message related to the request.
   Type: String

instance-id
   The ID of the instance that fulfilled the request.
   Type: String

launch-group
   The Spot Instance launch group. Launch groups are Spot Instances that launch together and terminate together.
   Type: String

launch.block-device-mapping.delete-on-termination
   Whether the Amazon EBS volume is deleted on instance termination.
   Type: Boolean

launch.block-device-mapping.device-name
   The device name (for example, /dev/sdh) for the Amazon EBS volume.
   Type: String

launch.block-device-mapping.snapshot-id
   The ID of the snapshot used for the Amazon EBS volume.
   Type: String

launch.block-device-mapping.volume-size
   The volume size of the Amazon EBS volume, in GiB.
   Type: String

launch.block-device-mapping.volume-type
   The volume type of the Amazon EBS volume.
   Type: String
   Valid values: standard | io1

launch.group-id
   The security group for the instance.
   Type: String

launch.image-id
   The ID of the AMI.
   Type: String

launch.instance-type
   The type of instance (for example, m1.small).
   Type: String

launch.kernel-id
   The kernel ID.
   Type: String

launch.key-name
   The name of the key pair the instance launched with.
   Type: String

launch.monitoring-enabled
   Whether monitoring is enabled for the Spot Instance.
Type: Boolean

launch.ramdisk-id
The RAM disk ID.
Type: String

launch.network-interface.network-interface-id
The ID of the network interface.
Type: String

launch.network-interface.device-index
The index of the device for the network interface attachment on the instance.
Type: Integer

launch.network-interface.subnet-id
The ID of the subnet for the instance.
Type: String

launch.network-interface.description
A description of the network interface.
Type: String

launch.network-interface.private-ip-address
The primary private IP address of the network interface.
Type: String

launch.network-interface.delete-on-termination
Indicates whether the network interface is deleted when the instance is terminated.
Type: Boolean

launch.network-interface.group-id
The ID of the security group associated with the network interface.
Type: String

launch.network-interface.group-name
The name of the security group associated with the network interface.
Type: String

launch.network-interface.addresses.primary
Indicates whether the IP address is the primary private IP address.
Type: String

product-description
The product description associated with the instance.
Type: String

Valid values: Linux/UNIX | Windows

spot-instance-request-id
The Spot Instance request ID.
Type: String

spot-price
The maximum hourly price for any Spot Instance launched to fulfill the request.
Type: String

state
The state of the Spot Instance request. Spot bid status information can help you track your Amazon EC2 Spot Instance requests. For information, see Tracking Spot Requests with Bid Status Codes in the Amazon Elastic Compute Cloud User Guide.
Type: String

Valid values: open | active | closed | cancelled | failed

status-code
The short code describing the most recent evaluation of your Spot Instance request. For more information, see Spot Bid Status in the Amazon Elastic Compute Cloud User Guide.
Response Elements

The following elements are returned in a `DescribeSpotInstanceRequestsResponse` element.

**requestId**
- The ID of the request.
- Type: `xsd:string`

**spotInstanceRequestSet**
- A list of Spot Instance requests. Each request is wrapped in an `item` element.
- Type: `SpotInstanceRequestSetItemType (p. 515)`
networkInterfaceSet
Information about the network interface.
Type: InstanceNetworkInterfaceSetRequestType (p. 478)

Examples

Example Request
This example returns information about current Spot Instance requests.

https://ec2.amazonaws.com/?Action=DescribeSpotInstanceRequests
&AUTHPARAMS

Example Response

<DescribeSpotInstanceRequestsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <spotInstanceRequestSet>
    <item>
      <spotInstanceRequestId>sir-1a2b3c4d</spotInstanceRequestId>
      <spotPrice>0.09</spotPrice>
      <type>one-time</type>
      <state>active</state>
      <status>
        <code>fulfilled</code>
        <updateTime>YYYY-MM-DDTHH:MM:SS.000Z</updateTime>
        <message>Your Spot request is fulfilled.</message>
      </status>
      <launchSpecification>
        <imageId>ami-1a2b3c4d</imageId>
        <keyName>gsg-keypair</keyName>
        <groupSet>
          <item>
            <groupId>sg-1a2b3c4d</groupId>
            <groupName>websrv</groupName>
          </item>
        </groupSet>
        <instanceType>m1.small</instanceType>
        <monitoring>
          <enabled>false</enabled>
        </monitoring>
        <ebsOptimized>false</ebsOptimized>
      </launchSpecification>
      <instanceId>i-1a2b3c4d</instanceId>
      <createTime>YYYY-MM-DDTHH:MM:SS.000Z</createTime>
      <productDescription>Linux/UNIX</productDescription>
      <launchedAvailabilityZone>us-east-1a</launchedAvailabilityZone>
    </item>
  </spotInstanceRequestSet>
</DescribeSpotInstanceRequestsResponse>
Example Request

This example describes all persistent Spot Instance requests that have resulted in the launch of at least one m1.small instance, that has been fulfilled in the us-east-1a Availability Zone, and that also has monitoring enabled.

https://ec2.amazonaws.com/?Action=DescribeSpotInstanceRequests
&Filter.1.Name=type
&Filter.1.Value.1=persistent
&Filter.2.Name=instance-type
&Filter.2.Value.1=m1.small
&Filter.3.Name=monitoring-enabled
&Filter.3.Value.1=true
&Filter.4.Name=launched-availability-zone
&Filter.4.Value.1=us-east-1a
&AUTHPARAMS

Find Running Spot Instances

You can use DescribeSpotInstanceRequests to find a running Spot Instance by examining the response. If the status of the Spot Instance is fulfilled, the instanceId will appear in the response and contain the identifier of the instance.

Alternatively, you can use DescribeInstances (p. 203) and use a filter to look for instances where instanceLifecycle contains spot. The following is an example request.

https://ec2.amazonaws.com/
?Action=DescribeInstances
&Filter.1.Name=instance-lifecycle
&Filter.1.Value.1=spot
&AUTHPARAMS

The following is an example response.

<DescribeInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>b1719f2a-5334-4479-b2f1-26926EXAMPLE</requestId>
  <reservationSet>
    <item>
      <reservationId>r-1a2b3c4d</reservationId>
      <ownerId>111122223333</ownerId>
      <groupSet>
        <item>
          <groupId>sg-1a2b3c4d</groupId>
          <groupName>Linux</groupName>
        </item>
      </groupSet>
      <instancesSet>
        <item>
          <instanceId>i-1a2b3c4d</instanceId>
          <imageId>ami-1a2b3c4d</imageId>
          <instanceState>
            <code>16</code>
            <name>running</name>
          </instanceState>
          <privateDnsName>private_DNS_name</privateDnsName>
        </item>
      </instancesSet>
    </item>
  </reservationSet>
</DescribeInstancesResponse>
Related Actions

- RequestSpotInstances (p. 397)
- CancelSpotInstanceRequests (p. 49)
- DescribeSpotPriceHistory (p. 290)
DescribeSpotPriceHistory

Description

Describes the Spot Price history. Spot Instances are instances that Amazon EC2 starts on your behalf when the maximum price that you specify exceeds the current Spot Price. Amazon EC2 periodically sets the Spot Price based on available Spot Instance capacity and current Spot Instance requests. For more information about Spot Instances, see Spot Instances in the Amazon Elastic Compute Cloud User Guide.

When you use the availability-zone option, this command describes the price history for the specified Availability Zone with the most recent set of prices listed first. If you don’t specify an Availability Zone, the command returns the prices across all Availability Zones, starting with the most recent set. However, if you use this command with versions of the API earlier than the 2011-05-15 version, this command returns the lowest price across the region for the given time period. The prices returned are listed in chronological order — from the oldest to the most recent.

Request Parameters

StartTime
The start date and time of the Spot Instance price history data.
Type: DateTime
Default: None
Required: No

EndTime
The end date and time of the Spot Instance price history data.
Type: DateTime
Default: None
Required: No

InstanceType.n
The instance type to return.
Type: String
Valid values: t1.micro | m1.small | m1.medium | m1.large | m1.xlarge | m3.xlarge | m3.2xlarge | c1.medium | c1.xlarge | m2.xlarge | m2.2xlarge | m2.4xlarge | cr1.8xlarge | cc1.4xlarge | cc2.8xlarge | cg1.4xlarge. See Available Instance Types for more information.
Default: None
Required: No

ProductDescription.n
Filters the results by basic product description.
Type: String
Valid values: Linux/UNIX | SUSE Linux | Windows | Linux/UNIX (Amazon VPC) | SUSE Linux (Amazon VPC) | Windows (Amazon VPC)
Default: Returns all information
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

AvailabiltiyZone
Filters the results by availability zone.
Type: String
Valid values: us-east-1a, etc.
Default: None
Required: No

MaxResults
The number of rows to return.
Type: Integer
Default: None
Required: No

NextToken
The next set of rows to return.
Type: String
Valid values: A NextToken value returned by a previous call of the API.
Default: None
Required: No

Supported Filters

Note
Our policy is to provide filters for all ec2-describe calls so you can limit the response to your specified criteria. Therefore, you can use filters to limit the response when describing Spot Price histories, even though you can use the options instead.

For example, you could use an option or a filter to get the history for a particular instance type. You can specify multiple request parameters or filters (for example, limit the response to the m2.xlarge instance type, and only for Windows instances). The response includes information for a price history only if it matches all your options or filters. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon?\ searches for the literal string *amazon?.

The following are the available filters.

instance-type
The type of instance (for example, m1.small).
Type: String

product-description
The product description for the Spot Price.
Type: String

Valid values: Linux/UNIX | SUSE Linux | Windows | Linux/UNIX (Amazon VPC) | SUSE Linux (Amazon VPC) | Windows (Amazon VPC)

spot-price
The Spot Price. The value must match exactly (or use wildcards; greater than or less than comparison is not supported).
Type: String
timestamp
The timestamp of the Spot Price history (for example, 2010-08-16T05:06:11.000Z). You can use wildcards ("*" and "?"). Greater than or less than comparison is not supported.
Type: DateTime

availability-zone
The Availability Zone for which prices should be returned.
Type: String

Response Elements
The following elements are returned in a DescribeSpotPriceHistoryResponse element.

requestId
The ID of the request.
Type: xsd:string

spotPriceHistorySet
A list of historical Spot Prices. Each price is wrapped in an item element.
Type: SpotPriceHistorySetItemType (p. 517)

nextToken
The string marking the next set of results returned. Displays empty if there are no more results to be returned.
Type: xsd:string

Examples

Example Request
This example returns Spot Price history for a particular day in December 2009 for Availability Zone us-east-1a.

https://ec2.amazonaws.com/?Action=DescribeSpotPriceHistory
&StartTime=2009-12-04T00:00:00.000Z
&EndTime=2009-12-04T23:59:59.000Z
&AvailabilityZone=us-east-1a
&AUTHPARAMS

This request uses filters instead of regular request parameters to achieve the same results.

https://ec2.amazonaws.com/?Action=DescribeSpotPriceHistory
&Filter.1.Name=timestamp
&Filter.1.Value.1=2009-12-04*
&Filter.2.Name=availability-zone
&Filter.2.Value.1=us-east-1a
&AUTHPARAMS

Example Response

<DescribeSpotPriceHistoryResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
<requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
<spotPriceHistorySet>
  <item>
    <instanceType>m1.small</instanceType>
    <productDescription>Linux/UNIX</productDescription>
    <spotPrice>0.287</spotPrice>
    <timestamp>2009-12-04T20:56:05.000Z</timestamp>
    <availabilityZone>us-east-1a</availabilityZone>
  </item>
  <item>
    <instanceType>m1.small</instanceType>
    <productDescription>Windows</productDescription>
    <spotPrice>0.033</spotPrice>
    <timestamp>2009-12-04T22:33:47.000Z</timestamp>
    <availabilityZone>us-east-1a</availabilityZone>
  </item>
</spotPriceHistorySet>

Related Actions

- DescribeSpotInstanceRequests (p. 282)
- RequestSpotInstances (p. 397)
- CancelSpotInstanceRequests (p. 49)
DescribeSubnets

Description

Describes one or more of your subnets.

Request Parameters

SubnetId.n
A subnet ID. You can specify more than one in the request.
Type: String
Default: Describes all your subnets
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain subnets. For example, you can use a filter to specify that you're interested in the subnets in the available state. You can specify multiple values for a filter. The response includes information for a subnet only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify subnets that are in a specific VPC and are in the available state. The response includes information for a subnet only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "*amazon?\" searches for the literal string *amazon?\".

The following are the available filters.

availability-zone
The Availability Zone for the subnet.
Type: String

available-ip-address-count
The number of IP addresses in the subnet that are available.
Type: String

cidr
The CIDR block of the subnet. The CIDR block you specify must exactly match the subnet’s CIDR block for information to be returned for the subnet.
Type: String
Constraints: Must contain the slash followed by one or two digits (for example, /28)

defaultForAz
Indicates whether this is the default subnet for the Availability Zone.
Type: Boolean

state
The state of the subnet.
Type: String
Valid values: pending | available

subnet-id
The ID of the subnet.
Type: String

tag-key
The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String

tag-value
The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
Type: String

tag: key
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

vpc-id
The ID of the VPC for the subnet.
Type: String

Response Elements

The following elements are returned in a DescribeSubnetsResponse element.

requestId
The ID of the request.
Type: xsd:string

subnetSet
A list of subnets. Each subnet is wrapped in an item element.
Type: SubnetType (p. 519)
Examples

Example Request

This example gives a description of two subnets with IDs subnet-9d4a7b6c and subnet-6e7f829e.

https://ec2.amazonaws.com/?Action=DescribeSubnets
&SubnetId.1=subnet-9d4a7b6c
&SubnetId.2=subnet-6e7f829e
&AUTHPARAMS

Example Response

<DescribeSubnetsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <subnetSet>
    <item>
      <subnetId>subnet-9d4a7b6c</subnetId>
      <state>available</state>
      <vpcId>vpc-1a2b3c4d</vpcId>
      <cidrBlock>10.0.1.0/24</cidrBlock>
      <availableIpAddressCount>251</availableIpAddressCount>
      <availabilityZone>us-east-1a</availabilityZone>
      <defaultForAz>false</defaultForAz>
      <mapPublicIpOnLaunch>false</mapPublicIpOnLaunch>
      <tagSet/>
    </item>
    <item>
      <subnetId>subnet-6e7f829e</subnetId>
      <state>available</state>
      <vpcId>vpc-1a2b3c4d</vpcId>
      <cidrBlock>10.0.0.0/24</cidrBlock>
      <availableIpAddressCount>251</availableIpAddressCount>
      <availabilityZone>us-east-1a</availabilityZone>
      <defaultForAz>false</defaultForAz>
      <mapPublicIpOnLaunch>false</mapPublicIpOnLaunch>
      <tagSet/>
    </item>
  </subnetSet>
</DescribeSubnetsResponse>

Example Request

This example uses filters to give a description of any subnet you own that is in the VPC with ID vpc-1a2b3c4d or vpc-6e7f8a92, and whose state is available.

https://ec2.amazonaws.com/?Action=DescribeSubnets
&Filter.1.Name=vpc-id
&Filter.1.Value.1=vpc-1a2b3c4d
&Filter.1.Value.2=vpc-6e7f8a92
&Filter.2.Name=state
&Filter.2.Value.1=available
&AUTHPARAMS
Related Actions

- CreateSubnet (p. 106)
- DeleteSubnet (p. 150)
DescribeTags

Description

Describes one or more of the tags for your EC2 resources. For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

Filter.n.Name

The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m

A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters to limit the response when describing tags. For example, you can use a filter to get only the tags for a specific resource type. You can specify multiple values for a filter. The response includes information for a tag only if it matches at least one of the filter values that you specified.

You can specify multiple filters (for example, specify a specific resource type and tag values that contain the string database). The response includes information for a tag only if it matches all the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \\*amazon\\?\ searches for the literal string *amazon?.

The following are the available filters.

key

The tag key.
Type: String

resource-id

The resource ID.
Type: String

resource-type

The resource type.
Type: String

value

The tag value.
Response Elements

The following elements are returned in a DescribeTagsResponse element.

requestId
   The ID of the request.
   Type: xsd:string

tagSet
   A list of tags. Each tag is wrapped in an item element.
   Type: TagSetItemType (p. 520)

Examples

Example Request

This example describes all the tags in your account.

https://ec2.amazonaws.com/?Action=DescribeTags

Sample response:

<DescribeTagsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
   <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
   <tagSet>
      <item>
         <resourceId>ami-1a2b3c4d</resourceId>
         <resourceType>image</resourceType>
         <key>webserver</key>
         <value/>
      </item>
      <item>
         <resourceId>ami-1a2b3c4d</resourceId>
         <resourceType>image</resourceType>
         <key>stack</key>
         <value>Production</value>
      </item>
      <item>
         <resourceId>i-5f4e3d2a</resourceId>
         <resourceType>instance</resourceType>
         <key>webserver</key>
         <value/>
      </item>
      <item>
         <resourceId>i-5f4e3d2a</resourceId>
         <resourceType>instance</resourceType>
         <key>stack</key>
         <value>Production</value>
      </item>
      <item>
         <resourceId>i-5f4e3d2a</resourceId>
         <resourceType>instance</resourceType>
         <key>stack</key>
         <value>Production</value>
      </item>
   </tagSet>
</DescribeTagsResponse>
Example Request

This example describes only the tags for the AMI with ID ami-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DescribeTags
&Filter.1.Name=resource-id
&Filter.1.Value.1=ami-1a2b3c4d
&AUTHPARAMS

Sample response:

Example Request

This example describes the tags for all your instances.

https://ec2.amazonaws.com/?Action=DescribeTags
&Filter.1.Name=resource-type
&Filter.1.Value.1=instance
&AUTHPARAMS

Sample response:
Example Request

This example describes the tags for all your instances tagged with the key `webserver`. Note that you can use wildcards with filters. So you could specify the value as `?ebserver` to find tags with the key `webserver` or `Webserver`.

https://ec2.amazonaws.com/?Action=DescribeTags
&Filter.1.Name=key
&Filter.1.Value.1=webserver
&AUTHPARAMS

Sample response:

<DescribeTagsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <tagSet>
    <item>
      <resourceId>i-5f4e3d2a</resourceId>
      <resourceType>instance</resourceType>
      <key>webserver</key>
      <value/>
    </item>
    <item>
      <resourceId>i-5f4e3d2a</resourceId>
      <resourceType>instance</resourceType>
      <key>stack</key>
      <value>Production</value>
    </item>
    <item>
      <resourceId>i-12345678</resourceId>
      <resourceType>instance</resourceType>
      <key>database_server</key>
      <value/>
    </item>
    <item>
      <resourceId>i-12345678</resourceId>
      <resourceType>instance</resourceType>
      <key>stack</key>
      <value>Test</value>
    </item>
  </tagSet>
</DescribeTagsResponse>
Example Request

This example describes the tags for all your instances tagged with either stack=Test or stack=Production.

```xml
https://ec2.amazonaws.com/?Action=DescribeTags
&Filter.1.Name=resource-type
&Filter.1.Value.1=instance
&Filter.2.Name=key
&Filter.2.Value.1=stack
&Filter.3.Name=value
&Filter.3.Value.1=Test
&Filter.3.Value.2=Production
&AUTHPARAMS
```

Sample response:

```xml
<DescribeTagsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <tagSet>
    <item>
      <resourceId>i-5f4e3d2a</resourceId>
      <resourceType>instance</resourceType>
      <key>stack</key>
      <value>Production</value>
    </item>
    <item>
      <resourceId>i-12345678</resourceId>
      <resourceType>instance</resourceType>
      <key>stack</key>
      <value>Test</value>
    </item>
  </tagSet>
</DescribeTagsResponse>
```

Example Request

This example describes the tags for all your instances tagged with Purpose=[empty string].

```xml
https://ec2.amazonaws.com/?Action=DescribeTags
&Filter.1.Name=resource-type
&Filter.1.Value.1=instance
&Filter.2.Name=key
&Filter.2.Value.1=Purpose
&Filter.3.Name=value
&Filter.3.Value.1=
&AUTHPARAMS
```

Related Actions

- [CreateTags](p. 108)
- [DeleteTags](p. 152)
DescribeVolumes

Description

Describes one or more of your Amazon EBS volumes. For more information about Amazon EBS, see Amazon Elastic Block Store in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

VolumeId.n
One or more volume IDs.
Type: String
Default: Describes all volumes that you own, or only those otherwise specified.
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain volumes. For example, you can use a filter to specify that you’re interested in volumes whose status is available. You can specify multiple values for a filter. The response includes information for a volume only if it matches at least one of the filter values that you specified.

You can specify multiple filters (for example, specify that the volume is available, and has a specific tag. The response includes information for a volume only if it matches all the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \\*amazon\\ searches for the literal string *amazon?\.

The following are the available filters.

attachment.attach-time
The time stamp when the attachment initiated.
Type: DateTime

attachment.delete-on-termination
Whether the volume is deleted on instance termination.
Type: Boolean

attachment.device
The device name that is exposed to the instance (for example, /dev/sda1).
Type: String
attachment.instance-id
The ID of the instance the volume is attached to.
Type: String

attachment.status
The attachment state.
Type: String
Valid values: attaching | attached | detaching | detached

availability-zone
The Availability Zone in which the volume was created.
Type: String

create-time
The time stamp when the volume was created.
Type: DateTime

size
The size of the volume, in GiB (for example, 20).
Type: String

snapshot-id
The snapshot from which the volume was created.
Type: String

status
The status of the volume.
Type: String
Valid values: creating | available | in-use | deleting | deleted | error

tag-key
The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String

tag-value
The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
Type: String

tag: key
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

volume-id
The volume ID.
Type: String

volume-type
The Amazon EBS volume type. If the volume is an io1 volume, the response includes the IOPS as well.
Response Elements

The following elements are returned in a DescribeVolumesResponse element.

**requestId**
The ID of the request.
Type: xsd:string

**volumeSet**
A list of volumes. Each volume is wrapped in an *item* element.
Type: DescribeVolumesSetItemResponseType (p. 462)

Examples

Example Request

This example describes all volumes associated with your account.

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

Example Response

```xml
<DescribeVolumesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <volumeSet>
    <item>
      <volumeId>vol-1a2b3c4d</volumeId>
      <size>80</size>
      <snapshotId/>
      <availabilityZone>us-east-1a</availabilityZone>
      <status>in-use</status>
      <createTime>YYYY-MM-DDTHH:MM:SS.SSSZ</createTime>
      <attachmentSet>
        <item>
          <volumeId>vol-1a2b3c4d</volumeId>
          <instanceId>i-1a2b3c4d</instanceId>
          <device>/dev/sdh</device>
          <status>attached</status>
          <attachTime>YYYY-MM-DDTHH:MM:SS.SSSZ</attachTime>
          <deleteOnTermination>false</deleteOnTermination>
        </item>
      </attachmentSet>
      <volumeType>standard</volumeType>
    </item>
  </volumeSet>
</DescribeVolumesResponse>
```
Example Request

This example describes all volumes that are both attached to instance i-1a2b3c4d and also set to delete when the instance terminates.

```
https://ec2.amazonaws.com/?Action=DescribeVolumes
&Filter.1.Name=attachment.instance-id
&Filter.1.Value.1=i-1a2b3c4d
&Filter.2.Name=attachment.delete-on-termination
&Filter.2.Value.1=true
&AUTHPARAMS
```

Related Actions

- CreateVolume (p. 110)
- DeleteVolume (p. 155)
- AttachVolume (p. 27)
- DetachVolume (p. 330)
DescribeVolumeAttribute

Description

Describes an attribute of a volume. You can specify only one attribute at a time.

Currently, volumes have two attributes, `autoEnableIO` and `productCodes`.

Request Parameters

- **VolumeId**
  - The ID of the volume.
  - Type: String
  - Default: None
  - Required: Yes

- **Attribute**
  - The instance attribute.
  - Type: String
  - Default: None
  - Valid values: `autoEnableIO` | `productCodes`
  - Required: Yes

Response Elements

The following elements are returned in a `DescribeVolumeAttributeResponse` element.

- **requestId**
  - The ID of the request.
  - Type: String

- **volumeId**
  - The ID of the volume.
  - Type: String

- **autoEnableIO**
  - The state of `autoEnableIO` attribute.
  - Type: NullableAttributeBooleanValueType

- **productCodes**
  - A list of product codes. Each product code is wrapped in an `item` element that contains a product code and a type.
  - Type: `ProductCodesSetItemType` (p. 503)

Example

Example Request

This example describes the `autoEnableIO` attribute of the volume `vol-12345678`.
Example Response

<DescribeVolumeAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>5jkdf074-37ed-4004-8671-a78ee82bf1cbEXAMPLE</requestId>
  <volumeId>vol-12345678</volumeId>
  <autoEnableIO>
    <value>false</value>
  </autoEnableIO>
</DescribeVolumeAttributeResponse>

Example Request

This example describes the productCodes attribute of the volume vol-12345678.

Example Response

<DescribeVolumeAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>5jkdf074-37ed-4004-8671-a78ee82bf1cbEXAMPLE</requestId>
  <volumeId>vol-12345678</volumeId>
  <productCodes>
    <item>
      <productCode>a1b2c3d4e5f6g7h8i9j10k11</productCode>
      <type>marketplace</type>
    </item>
  </productCodes>
</DescribeVolumeAttributeResponse>

Related Actions

- DescribeVolumeStatus (p. 309)
- ModifyVolumeAttribute (p. 367)
DescribeVolumeStatus

Description

Describes the status of one or more volumes. Volume status provides the result of the checks performed on your volumes to determine events that can impair the performance of your volumes. The performance of a volume can be affected if an issue occurs on the volume’s underlying host. If the volume’s underlying host experiences a power outage or system issue, once the system is restored there could be data inconsistencies on the volume. Volume events notify you if this occurs. Volume actions notify you if any action needs to be taken in response to the event.

The DescribeVolumeStatus operation provides the following information about the specified volumes:

**Status:** Reflects the current status of the volume. The possible values are **ok**, **impaired**, **warning**, or **insufficient-data**. If all checks pass, the overall status of the volume is **ok**. If the check fails, the overall status is **impaired**. If the status is **insufficient-data**, then the checks may still be taking place on your volume at the time. We recommend you retry the request. For more information on volume status, see Monitoring the Status of Your Volumes.

**Events:** Reflect the cause of a volume status and may require you to take an action. For example, if your volume returns an **impaired** status, then the volume event might be **potential-data-inconsistency**. This means that your volume has been affected by an issue with the underlying host, has all I/O operations disabled, and may have inconsistent data.

**Actions:** Reflect the actions you may have to take in response to an event. For example, if the status of the volume is **impaired** and the volume event shows **potential-data-inconsistency**, then the action will show **enable-volume-io**. This means that you may want to enable the I/O operations for the volume by calling the EnableVolumeIO (p. 342) action and then check the volume for data consistency.

**Note**

Volume status is based on the volume status checks, and does not reflect the volume state. Therefore, volume status does not indicate volumes in the **error** state (for example, when a volume is incapable of accepting I/O.)

Request Parameters

**VolumeId.n**

One or more volume IDs.

Type: String

Default: Describes all volumes that you own, or only those otherwise specified.

Required: No

**Filter.n.Name**

The name of a filter. See the Supported Filters section for a list of supported filter names.

Type: String

Default: None

Required: No

**Filter.n.Value.m**

A value for the filter. See the Supported Filters section for a list of supported values for each filter.

Type: String

Default: None

Required: No

**MaxResults**

The maximum number of paginated volume items per response.
Supported Filters

You can specify filters so that the response includes information for only certain volumes. For example, you can use a filter to specify that you’re interested in volumes that have impaired status. You can specify multiple values for a filter. The response includes information for a volume only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify volumes that are in a specific Availability Zone and have the status impaired. The response includes information for a volume only if it matches all the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of "*amazon/?" searches for the literal string "*amazon?".

The following are the available filters.

availability-zone
  The Availability Zone of the instance.
  Type: String

volume-status.status
  The status of the volume.
  Type: String
  Valid values: ok | impaired | warning | insufficient-data

volume-status.details-name
  The cause for the volume-status.status.
  Type: String
  Valid values: io-enabled | io-performance

volume-status.details-status
  The status of the volume-status.details-name.
  Type: String
  Valid values for io-enabled: passed | failed
  Valid values for io-performance: normal | degraded | severely-degraded | stalled

event.description
  A description of the event.
  Type: String

event.not-after
  The latest end time for the event.
  Type: DateTime

event.not-before
  The earliest start time for the event.
  Type: DateTime
event.event-id
The event ID.
Type: String

event.event-type
The event type.
Type: String
Valid values for io-enabled: potential-data-inconsistency

action.code
The action code for the event, for example, enable-volume-io
Type: String

action.event-id
The event ID associated with the action.
Type: String

action.description
A description of the action.
Type: String

Response Elements

The following elements are returned in a DescribeVolumeStatusResponse element.

requestId
The ID of the request.
Type: xsd:string

volumeStatusSet
A list of volumes. Each volume is wrapped in an item element.
Type: VolumeStatusItemType (p. 522)

nextToken
A string specifying the next paginated set of results to return.
Type: xsd:string

Examples

Example Request

This example describes the status of all the volumes associated with your account.

https://ec2.amazonaws.com/?Action=DescribeVolumeStatus
&AUTHPARAMS

Example Response

<DescribeVolumeStatus xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>5jkd0f74-37ed-4004-8671-a78ee82bf1cbEXAMPLE</requestId>
  <volumeStatusSet>
    <item>
Example Request

This example describes all the volumes in the us-east-1d Availability Zone with failed io-enabled status.

https://ec2.amazonaws.com/?Action=DescribeVolumeStatus
&Filter.1.Name=availability-zone
&Filter.1.Value.1=us-east-1d
&Filter.2.Name=volume-status.details-name
&Filter.2.Value.1=io-enabled
&Filter.3.Name=volume-status.details-status


Related Actions

- ModifyVolumeAttribute (p. 367)
- DescribeVolumeAttribute (p. 307)
- EnableVolumeIO (p. 342)
DescribeVpcAttribute

Description

Describes the specify attribute of the specified VPC.

Request Parameters

VpcId
The ID of the VPC.
Type: String
Required: Yes

Attribute
The VPC attribute.
Type: String
Default: None
Valid values: enableDnsSupport | enableDnsHostnames
Required: Yes

Response Elements

The following elements are returned in a DescribeVpcAttributeResponse structure.

requestId
The ID of the request.
Type: xsd:string

enableDnsSupport
Specifies whether the Amazon DNS server provided by is enabled for the VPC.
Type: xsd:boolean

enableDnsHostnames
Specifies whether DNS hostnames are provided for the instances launched in this VPC.
Type: xsd:boolean

Examples

Example Request

This request describes the enableDnsSupport attribute of the VPC with the ID vpc-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DescribeVpcAttribute
&VpcId=vpc-1a2b3c4d
&Attribute=enableDnsSupport
&AUTHPARAMS

Example Response

This example response indicates that DNS resolution is supported.
Example Request

This request describes the `enableDnsHostnames` attribute of the VPC with the ID `vpc-1a2b3c4d`.

```
https://ec2.amazonaws.com/?Action=DescribeVpcAttribute
&VpcId=vpc-1a2b3c4d
&Attribute=enableDnsHostnames
&AUTHPARAMS
```

Example Response

This example response indicates that DNS hostnames are supported.

```
<DescribeVpcAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <vpcId>vpc-1a2b3c4d</vpcId>
  <enableDnsHostnames>
    <value>true</value>
  </enableDnsHostnames>
</DescribeVpcAttributeResponse>
```

Related Actions

- CreateVpc (p. 113)
- DeleteVpc (p. 157)
- ModifyVpcAttribute (p. 369)
DescribeVpcs

Description

Describes one or more of your VPCs.

Request Parameters

vpcId.n
One or more VPC IDs.
Type: String
Default: Describes your VPCs, or only those otherwise specified
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain VPCs. For example, you can use a filter to specify that you're interested in VPCs in the available state. You can specify multiple values for a filter. The response includes information for a VPC only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify VPCs that use one of several sets of DHCP options and are in the available state. The results include information for a VPC only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \*amazon\?\ searches for the literal string *amazon?\.

The following are the available filters.

cidr
The CIDR block of the VPC. The CIDR block you specify must exactly match the VPC's CIDR block for information to be returned for the VPC.
Type: String
Constraints: Must contain the slash followed by one or two digits (for example, /28)

dhcp-options-id
The ID of a set of DHCP options.
Type: String

isDefault
Indicates whether the VPC is the default VPC.
Type: Boolean

**state**
The state of the VPC.
Type: String
Valid values: pending | available

**tag-key**
The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value x (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the **tag：key** filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String

**tag-value**
The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
Type: String

**tag：key**
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y

**vpc-id**
The ID of the VPC.
Type: String

### Response Elements

The following elements are returned in a DescribeVpcsResponse element.

**requestId**
The ID of the request.
Type: xsd:string

**vpcSet**
A list of VPCs. Each VPC is wrapped in an item element.
Type: VpcType (p. 525)

### Examples

#### Example Request

This example gives a description of the VPC with ID vpc-1a2b3c4d.
Example Response

```xml
<DescribeVpcsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <vpcSet>
    <item>
      <vpcId>vpc-1a2b3c4d</vpcId>
      <state>available</state>
      <cidrBlock>10.0.0.0/23</cidrBlock>
      <dhcpOptionsId>dopt-7a8b9c2d</dhcpOptionsId>
      <instanceTenancy>default</instanceTenancy>
      <isDefault>false</isDefault>
      <tagSet/>
    </item>
  </vpcSet>
</DescribeVpcsResponse>
```

Example Request

This example uses filters to give a description of any VPC you own that uses the set of DHCP options with ID dopt-7a8b9c2d or dopt-2b2a3d3c and whose state is available.

```curl
https://ec2.amazonaws.com/?Action=DescribeVpcs
&Filter.1.Name=dhcp-options-id
&Filter.1.Value.1=dopt-7a8b9c2d
&Filter.1.Value.2=dopt-2b2a3d3c
&Filter.2.Name=state
&Filter.2.Value.1=available
&AUTHPARAMS
```

Related Actions

- CreateVpc (p. 113)
- DeleteVpc (p. 157)
- CreateDhcpOptions (p. 60)
- AssociateDhcpOptions (p. 19)
DescribeVpnConnections

Description

Describes one of more of your VPN connections.

Important
We strongly recommend that you use HTTPS when calling this operation because the response contains sensitive cryptographic information for configuring your customer gateway.

For more information about VPN connections, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Note
You can get the customer gateway configuration information in a friendly format by using the ec2-describe-vpn-connections command instead. For more information, see ec2-describe-vpn-connections.

Request Parameters

VpnConnectionId.n
A VPN connection ID. You can specify more than one in the request.
Type: String
Default: Describes your VPN connections
Required: No

Filter.n.Name
The name of a filter. See the Supported Filters section for a list of supported filter names.
Type: String
Default: None
Required: No

Filter.n.Value.m
A value for the filter. See the Supported Filters section for a list of supported values for each filter.
Type: String
Default: None
Required: No

Supported Filters

You can specify filters so that the response includes information for only certain VPN connections. For example, you can use a filter to specify that you're interested in the VPN connections in the pending or available state. You can specify multiple values for a filter. The response includes information for a VPN connection only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify VPN connections that are associated with a specific virtual private gateway, and the gateway is in the pending or available state. The response includes information for a VPN connection only if it matches all the filters that you specified. If there's no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of \\*amazon\\?\\ searches for the literal string *amazon?\.

The following are the available filters.
customer-gateway-configuration
    The configuration information for the customer gateway.
    Type: String

customer-gateway-id
    The ID of a customer gateway associated with the VPN connection.
    Type: String

state
    The state of the VPN connection.
    Type: String
    Valid values: pending | available | deleting | deleted

option.static-routes-only
    Indicates whether the connection has static routes only. Used for devices that do not support Border Gateway Protocol (BGP).
    Type: Boolean

route.destination-cidr-block
    The destination CIDR block. This corresponds to the subnet used in a customer data center.
    Type: String

bgp-asn
    The BGP Autonomous System Number (ASN) associated with a BGP device.
    Type: Integer

tag-key
    The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
    For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
    Type: String

tag-value
    The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
    Type: String

tag: key
    Filters the response based on a specific tag/value combination.
    Example: To list just the resources that have been assigned tag Purpose=X, specify:
    Filter.1.Name=tag:Purpose
    Filter.1.Value.1=X
    Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
    Filter.1.Name=tag:Purpose
    Filter.1.Value.1=X
    Filter.1.Value.2=Y

type
    The type of VPN connection. Currently the only supported type is ipsec.1.
    Type: String
    Valid values: ipsec.1

vpn-connection-id
    The ID of the VPN connection.
    Type: String

vpn-gateway-id
    The ID of a virtual private gateway associated with the VPN connection.
Response Elements

The following elements are returned in a DescribeVpnConnectionsResponse element.

**requestId**

The ID of the request.

*Type: xsd:string*

**vpnConnectionSet**

A list of VPN connections. Each VPN connection is wrapped in an *item* element.

*Type: VpnConnectionType (p. 526)*)

Examples

Example Request

This example describes the VPN connection with ID vpn-44a8938f. The response includes the customer gateway configuration information. Because it's a long set of information, we haven't displayed it here. You can see an example in the topic for CreateVpnConnection.

https://ec2.amazonaws.com/?Action=DescribeVpnConnections
&VpnConnectionId.1=vpn-44a8938f
&AUTHPARAMS

Example Response

```
<DescribeVpnConnectionsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <vpnConnectionSet>
    <item>
      <vpnConnectionId>vpn-44a8938f</vpnConnectionId>
      <state>available</state>
      <CustomerGatewayConfiguration>
        Customer gateway configuration data in escaped XML format...
        ...
      </CustomerGatewayConfiguration>
      <type>ipsec.1</type>
      <customerGatewayId>cgw-b4dc3961</customerGatewayId>
      <vpnGatewayId>vgw-8db04f81</vpnGatewayId>
      <tagSet/>
    </item>
  </vpnConnectionSet>
</DescribeVpnConnectionsResponse>
```

Example Request

This example describes any VPN connection you own that is associated with the customer gateway with ID cgw-b4dc3961, and whose state is either pending or available.
Related Actions

- CreateVpnConnection (p. 115)
- DeleteVpnConnection (p. 159)
DescribeVpnGateways

Description

Describes one or more of your virtual private gateways.

For more information about virtual private gateways, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

Request Parameters

VpnGatewayId.n
- A virtual private gateway ID. You can specify more than one in the request.
  - Type: String
  - Default: Describes your virtual private gateways.
  - Required: No

Filter.n.Name
- The name of a filter. See the Supported Filters section for a list of supported filter names.
  - Type: String
  - Default: None
  - Required: No

Filter.n.Value.m
- A value for the filter. See the Supported Filters section for a list of supported values for each filter.
  - Type: String
  - Default: None
  - Required: No

Supported Filters

You can specify filters so that the response includes information for only certain virtual private gateways. For example, you can use a filter to specify that you’re interested in the virtual private gateways in the pending or available state. You can specify multiple values for a filter. The response includes information for a virtual private gateway only if it matches at least one of the filter values that you specified.

You can specify multiple filters; for example, specify virtual private gateways that are in a specific Availability Zone and are in the pending or available state. The response includes information for a virtual private gateway only if it matches all the filters that you specified. If there’s no match, no special message is returned, the response is simply empty.

You can use wildcards in a filter value. An asterisk (*) matches zero or more characters, and a question mark (?) matches exactly one character. You can escape special characters using a backslash (\) before the character. For example, a value of */amazon/?\ searches for the literal string *amazon?\.

The following are the available filters.

attachment.state
- The current state of the attachment between the gateway and the VPC.
  - Type: String
  - Valid values: attaching | attached | detaching | detached

attachment.vpc-id
- The ID of an attached VPC.
availability-zone
The Availability Zone for the virtual private gateway.
Type: String

state
The state of the virtual private gateway.
Type: String
Valid values: pending | available | deleting | deleted

tag-key
The key of a tag assigned to the resource. This filter is independent of the tag-value filter. For example, if you use both the filter "tag-key=Purpose" and the filter "tag-value=X", you get any resources assigned both the tag key Purpose (regardless of what the tag's value is), and the tag value X (regardless of what the tag's key is). If you want to list only resources where Purpose is X, see the tag: key filter.
For more information about tags, see Tagging Your Resources in the Amazon Elastic Compute Cloud User Guide.
Type: String
tag-value
The value of a tag assigned to the resource. This filter is independent of the tag-key filter.
Type: String
tag: key
Filters the response based on a specific tag/value combination.
Example: To list just the resources that have been assigned tag Purpose=X, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Example: To list just resources that have been assigned tag Purpose=X OR Purpose=Y, specify:
Filter.1.Name=tag:Purpose
Filter.1.Value.1=X
Filter.1.Value.2=Y
type
The type of virtual private gateway. Currently the only supported type is ipsec.1.
Type: String
Valid values: ipsec.1

vpn-gateway-id
The ID of the virtual private gateway.
Type: String

Response Elements

The following elements are returned in a DescribeVpnGatewaysResponse element.

requestId
The ID of the request.
Type: xsd:string

vpnGatewaySet
A list of virtual private gateways. Each virtual private gateway is wrapped in an item element.
Type: VpnGatewayType (p. 527)
Examples

Example Request

This example gives a description of the virtual private gateway with ID vgw-8db04f81.

https://ec2.amazonaws.com/?Action=DescribeVpnGateways
&VpnGatewayId.1=vgw-8db04f81
&AUTHPARAMS

Example Response

<DescribeVpnGatewaysResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <vpnGatewaySet>
    <item>
      <vpnGatewayId>vgw-8db04f81</vpnGatewayId>
      <state>available</state>
      <type>ipsec.1</type>
      <availabilityZone>us-east-1a</availabilityZone>
      <attachments>
        <item>
          <vpcId>vpc-1a2b3c4d</vpcId>
          <state>attached</state>
        </item>
      </attachments>
      <tagSet/>
    </item>
  </vpnGatewaySet>
</DescribeVpnGatewaysResponse>

Example Request

This example uses filters to give a description of any virtual private gateway you own that is in the us-east-1a Availability Zone, and whose state is either pending or available.

https://ec2.amazonaws.com/?Action=DescribeVpnGateways
&Filter.1.Name=availability-zone
&Filter.1.Value.1=us-east-1a
&Filter.2.Name=state
&Filter.2.Value.1=pending
&Filter.2.Value.2=available
&AUTHPARAMS

Related Actions

• CreateVpnGateway (p. 124)
• DeleteVpnGateway (p. 163)
DetachInternetGateway

Description
Detaches an Internet gateway from a VPC, disabling connectivity between the Internet and the VPC. The VPC must not contain any running instances with Elastic IP addresses.

Request Parameters

InternetGatewayId
The ID of the Internet gateway.
Type: String
Default: None
Required: Yes

VpcId
The ID of the VPC.
Type: String
Default: None
Required: Yes

Response Elements
The following elements are returned in a DetachInternetGatewayResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request
The example detaches the Internet gateway with ID igw-eaad4883 from the VPC with ID vpc-11ad4878.

https://ec2.amazonaws.com/?Action=DetachInternetGateway
&InternetGatewayId=igw-eaad4883
&VpcId=vpc-11ad4878
&AUTHPARAMS

Example Response

<DetachInternetGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
</DetachInternetGatewayResponse>
<return>true</return>
</DetachInternetGatewayResponse>

Related Actions

- CreateInternetGateway (p. 69)
- DeleteInternetGateway (p. 130)
- DetachInternetGateway (p. 23)
- DescribeInternetGateways (p. 225)
DetachNetworkInterface

Description

Detaches a network interface from an instance.

Request Parameters

AttachmentId
- The ID of the attachment.
- Type: String
- Default: None
- Required: Yes

Force
- Set to true to force a detachment.
- Type: Boolean
- Default: None
- Required: No

Response Elements

The following elements are returned in a DetachNetworkInterfaceResponse element.

requestId
- The ID of the request.
- Type: xsd:string

return
- Returns true if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request

This example detaches an elastic network interface (ENI) eni-attach-d94b09b0.

https://ec2.amazonaws.com/?Action=DetachNetworkInterface
&AttachmentId=eni-attach-d94b09b0
&AUTHPARAMS

Example Response

<DetachNetworkInterfaceResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>ce540707-0635-46bc-97da-33a8a362a0e8</requestId>
  <return>true</return>
</DetachNetworkInterfaceResponse>
Related Actions

- AttachNetworkInterface (p. 25)
- CreateNetworkInterface (p. 78)
- DeleteNetworkInterface (p. 137)
- DescribeNetworkInterfaceAttribute (p. 235)
- DescribeNetworkInterfaces (p. 237)
- ModifyNetworkInterfaceAttribute (p. 363)
- ResetNetworkInterfaceAttribute (p. 409)
**DetachVolume**

**Description**

Detaches an Amazon EBS volume from an instance. Make sure to unmount any file systems on the device within your operating system before detaching the volume. Failure to do so will result in volume being stuck in "busy" state while detaching. For more information about Amazon EBS, see Using Amazon Elastic Block Store in the Amazon Elastic Compute Cloud User Guide.

**Note**

If an Amazon EBS volume is the root device of an instance, it cannot be detached while the instance is in the "running" state. To detach the root volume, stop the instance first.

If the root volume is detached from an instance with an AWS Marketplace product code, then the AWS Marketplace product codes from that volume are no longer associated with the instance.

**Request Parameters**

**VolumeId**

The ID of the volume.
Type: String
Default: None
Required: Yes

**InstanceId**

The ID of the instance.
Type: String
Default: None
Required: No

**Device**

The device name.
Type: String
Default: None
Required: No

**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 won't have an opportunity to flush file system caches or file system metadata. If you use this option, you must perform file system check and repair procedures.
Type: Boolean
Default: None
Required: No

**Response Elements**

The following elements are returned in a `DetachVolumeResponse` element.

**requestId**

The ID of the request.
Type: xsd:string
volumeId
  The ID of the volume.
  Type: xsd:string

instanceId
  The ID of the instance.
  Type: xsd:string

device
  The device name exposed to the instance.
  Type: xsd:string

status
  The attachment state.
  Type: xsd:string
  Valid values: attaching | attached | detaching | detached

attachTime
  The time stamp when the attachment initiated.
  Type: xsd:dateTime

Examples

Example Request

This example detaches volume vol-1a2b3c4d.

https://ec2.amazonaws.com/?Action=DetachVolume&VolumeId=vol-1a2b3c4d

Example Response

<DetachVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMP</requestId>
  <volumeId>vol-1a2b3c4d</volumeId>
  <instanceId>i-1a2b3c4d</instanceId>
  <device>/dev/sdh</device>
  <status>detaching</status>
  <attachTime>YYYY-MM-DDTHH:MM:SS.000Z</attachTime>
</DetachVolumeResponse>

Related Actions

- CreateVolume (p. 110)
- DeleteVolume (p. 155)
- DescribeVolumes (p. 303)
- AttachVolume (p. 27)
## DetachVpnGateway

### Description

Detaches a virtual private gateway from a VPC. You do this if you're planning to turn off the VPC and not use it anymore. You can confirm a virtual private gateway has been completely detached from a VPC by describing the virtual private gateway (any attachments to the virtual private gateway are also described).

You must wait for the attachment's state to switch to detached before you can delete the VPC or attach a different VPC to the virtual private gateway.

For more information about virtual private gateways, see Adding an IPsec Hardware Virtual Private Gateway to Your VPC in the Amazon Virtual Private Cloud User Guide.

### Request Parameters

- **VpnGatewayId**
  - The ID of the virtual private gateway.
  - Type: String
  - Default: None
  - Required: Yes

- **VpcId**
  - The ID of the VPC.
  - Type: String
  - Default: None
  - Required: Yes

### Response Elements

The following elements are returned in a DetachVpnGatewayResponse element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **return**
  - Returns true if the request succeeds. Otherwise, returns an error.
  - Type: xsd:boolean

### Examples

#### Example Request

This example detaches the virtual private gateway with ID vgw-8db04f81 from the VPC with VPC ID vpc-1a2b3c4d.

```
https://ec2.amazonaws.com/?Action=DetachVpnGateway
&VpnGatewayId=vgw-8db04f81
&VpcId=vpc-1a2b3c4d
&AUTHPARAMS
```
Example Response

```
<DetachVpnGatewayResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>7a62c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <return>true</return>
</DetachVpnGatewayResponse>
```

Related Actions

- AttachVpnGateway (p. 29)
- DescribeVpnGateways (p. 323)
DisableVgwRoutePropagation

Description

Disables a virtual private gateway (VGW) from propagating routes to the routing tables of a VPC.

Request Parameters

RouteTableId
The ID of the routing table.
Type: String
Default: None
Required: Yes

GatewayId
The ID of the virtual private gateway.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a DisableVgwRoutePropagationResponseType element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example disables the virtual private gateway vgw-d8e09e8a from automatically propagating routes to the routing table with ID rtb-c98a35a0.

https://ec2.amazonaws.com/?Action=DisableVgwRoutePropagationResponse
&RouteTableID=rtb-c98a35a0
&GatewayId=vgw-d8e09e8a
&AUTHPARAMS

Example Response

<DisableVgwRoutePropagationResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>4f35a1b2-c2c3-4093-b51f-abb9d7311990</requestId>
</DisableVgwRoutePropagationResponse>
<return>true</return>
</DisableVgwRoutePropagationResponse>

Related Actions

- DisableVgwRoutePropagation (p. 334)
DisassociateAddress

Description

Disassociates an Elastic IP address from the instance or network interface it's associated with.

An Elastic IP address is for use in either the EC2-Classic platform or in a VPC. For more information, see Elastic IP Addresses in the Amazon Elastic Compute Cloud User Guide.

This is an idempotent action. If you enter it more than once, Amazon EC2 does not return an error.

Request Parameters

PublicIp
[EC2-Classic] The Elastic IP address.
Type: String
Default: None
Required: Conditional
Condition: Required for EC2-Classic

AssociationId
[EC2-VPC] The association ID corresponding to the Elastic IP address.
Type: String
Default: None
Required: Conditional
Condition: Required for EC2-VPC

Response Elements

The following elements are returned in a DisassociateAddressResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example disassociates the EC2 Elastic IP address 67.202.55.255 from the instance to which it is assigned.

https://ec2.amazonaws.com/?Action=DisassociateAddress
&PublicIp=192.0.2.1
&AUTHPARAMS
Example Request

This example disassociates the Elastic IP address with association ID eipassoc-aa7486c3 from the instance in a VPC to which it is assigned.

https://ec2.amazonaws.com/?Action=DisassociateAddress
&AssociationID=eipassoc-aa7486c3
&AUTHPARAMS

Example Response

<DisassociateAddressResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DisassociateAddressResponse>

Related Actions

- AllocateAddress (p. 12)
- DescribeAddresses (p. 169)
- ReleaseAddress (p. 383)
- AssociateAddress (p. 16)
DisassociateRouteTable

**Description**

Disassociates a subnet from a route table.

After you perform this action, the subnet no longer uses the routes in the route table. Instead, it uses the routes in the VPC's main route table. For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

**Request Parameters**

*AssociationId*

The association ID representing the current association between the route table and subnet.

- **Type:** String
- **Default:** None
- **Required:** Yes

**Response Elements**

The following elements are returned in a `DisassociateRouteTableResponse` element.

*requestId*

The ID of the request.

- **Type:** xsd:string

*return*

Returns true if the request succeeds. Otherwise, returns an error.

- **Type:** xsd:boolean

**Examples**

**Example Request**

This example disassociates the route table with association ID rtbassoc-fdad4894 from the subnet it's associated to.

```
https://ec2.amazonaws.com/?Action=DisassociateRouteTable
&AssociationId=rtbassoc-fdad4894
&AUTHPARAMS
```

**Example Response**

```
<DisassociateRouteTableResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</DisassociateRouteTableResponse>
```
Related Actions

- CreateRouteTable (p. 97)
- AssociateRouteTable (p. 21)
- DeleteRouteTable (p. 143)
- DescribeRouteTables (p. 266)
- ReplaceRouteTableAssociation (p. 392)
EnableVgwRoutePropagation

Description

Enables a virtual private gateway (VGW) to propagate routes to the routing tables of a VPC.

Request Parameters

**RouteTableId**
- The ID of the routing table.
- Type: String
- Default: None
- Required: Yes

**GatewayId**
- The ID of the virtual private gateway.
- Type: String
- Default: None
- Required: Yes

Response Elements

The following elements are returned in an **EnableVgwRoutePropagationResponseType** element.

**requestId**
- The ID of the request.
- Type: xsd:string

**return**
- Returns true if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request

This example enables the virtual private gateway vgw-d8e09e8a to automatically propagate routes to the routing table with ID rtb-c98a35a0.

```
https://ec2.amazonaws.com/?Action=EnableVgwRoutePropagation
&RouteTableID=rtb-c98a35a0
&GatewayId=vgw-d8e09e8a
&AUTHPARAMS
```

Example Response

```
<EnableVgwRoutePropagation xmlns="http://ec2.amazonaws.com/doc/2013-02-01="/>
$requestId"4f35a1b2-c2c3-4093-b51f-abb9d7311990</requestId>
```
<return>true</return>
</EnableVgwRoutePropagation>

Related Actions

• DisableVgwRoutePropagation (p. 334)
EnableVolumeIO

Description

Enables I/O operations for a volume that had I/O operations disabled because the data on the volume was potentially inconsistent.

Request Parameters

*VolumeId*
- The volume ID.
- Type: String
- Default: None
- Required: Yes

Response Elements

The following elements are returned in an *EnableVolumeIOResponse* element.

*requestId*
- The ID of the request.
- Type: xsd:string

$return$
- Returns true if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request

This example enables the I/O operations of the volume vol-8888888.

https://ec2.amazonaws.com/?Action=EnableVolumeIO
&VolumeId=vol-8888888
&AUTHPARAMS

Example Response

<EnableVolumeIOResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</EnableVolumeIOResponse>

Related Actions

- DescribeVolumeStatus (p. 309)
- ModifyVolumeAttribute (p. 367)
• DescribeVolumeAttribute (p. 307)
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

TestId
   The ID of the instance.
   Type: String
   Default: None
   Required: Yes

Response Elements

The following elements are returned in a GetConsoleOutputResponse element.

requestId
   The ID of the request.
   Type: xsd:string

instanceId
   The instance ID.
   Type: xsd:string

timestamp
   The time the output was last updated.
   Type: xsd:dateTime

output
   The console output, Base64 encoded.
   Type: xsd:string

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

```xml
<GetConsoleOutputResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <instanceId>i-28a64341</instanceId>
  <timestamp>2010-10-14T01:12:41.000Z</timestamp>
  <output>TGludXggdmVyc2lvbiAyLjYuMTYteGVuVSAoYnVpbGR1ckBwYXRjaGJhdC5hbWF6b25zY9kgKgj
  YyB2ZXJzaW9uIGRvY2VuYSB0ZWFzdGlzIGJvbGFuZ3VzcyB0aGUgYmVzdGFuY2VzcyBzaXByZWN0aW9uIGJ
  vbm90ZWN0aW9uIHRoaXMgY29tbWljZSBzdXJuZXJlcyB0aGlzIGZvbGxlY3Rpb24gY29tcGxldGlvbiB0
  cml0Lg==</output>
</GetConsoleOutputResponse>
```

Related Actions

- RunInstances (p. 419)
GetPasswordData

Description

Retrieves the encrypted administrator password for an instance 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

InstanceId

A Windows instance ID.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a GetPasswordDataResponse element.

requestId

The ID of the request.
Type: xsd:string

instanceId

The ID of the instance.
Type: xsd:string

timestamp

The time the data was last updated.
Type: xsd:dateTime

passwordData

The password of the instance.
Type: xsd:string

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

```xml
<GetPasswordDataResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <instanceId>i-2574e22a</instanceId>
  <timestamp>2009-10-24 15:00:00</timestamp>
  <passwordData>TGludXggdmVyc2lvbiAAYnVpbGRlckBwYXRjaGJhdC5hWF6b25zYSkgKGdj</passwordData>
</GetPasswordDataResponse>
```

Related Actions

- RunInstances (p. 419)
ImportInstance

Description

Creates a new import instance task using metadata from the specified disk image. After importing the image, you then upload it using the `ec2-upload-disk-image` command in the EC2 command line tools. For more information, see Using the Command Line Tools to Import Your Virtual Machine to Amazon EC2 in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

**Description**

A description of the instance being imported.
- Type: String
- Default: None
- Required: No

**LaunchSpecification.Architecture**

The architecture of the instance.
- Type: String
- Default: None
- Valid values: i386 | x86_64
- Required: Yes

**LaunchSpecification.GroupName.n**

One or more security group names.
- Type: String
- Default: None
- Required: No

**LaunchSpecification.UserData**

User data to be made available to the instance.
- Type: String
- Default: None
- Required: No

**LaunchSpecification.InstanceType**

The instance type. See Available Instance Types for more information.
- Type: String
- Default: None
- Required: Yes

**LaunchSpecification.Placement.AvailabilityZone**

The Availability Zone to launch the instance into.
- Type: String
- Default: We choose a zone for you
- Required: No

**LaunchSpecification.Monitoring.Enabled**

Specifies whether to enable detailed monitoring for the instance.
- Type: Boolean
- Default: false
- Required: No
LaunchSpecification.SubnetId
[EC2-VPC] The ID of the subnet to launch the instance into.
Type: String
Default: None
Required: No

LaunchSpecification.InstanceInitiatedShutdownBehavior
Specifies whether the instance stops or terminates on instance-initiated shutdown.
Type: String
Valid values: stop | terminate
Default: stop
Required: No

LaunchSpecification.PrivateIpAddress
[EC2-VPC] You can optionally use this parameter to assign the instance a specific available IP address from the IP address range of the subnet.
Type: String
Default: We selects an IP address from the IP address range of subnet for the instance
Required: No

DiskImage.n.Image.Format
The file format of the disk image.
Type: String
Default: None
Valid values: VMDK | RAW | VHD
Required: Yes

DiskImage.n.Image.Bytes
The number of bytes in the disk image.
Type: Long
Default: None
Required: Yes

DiskImage.n.Image.ImportManifestUrl
The manifest for the disk image, stored in Amazon S3 and presented here as an Amazon S3 presigned URL. For information about creating a presigned URL for an Amazon S3 object, read the "Signing and Authenticating REST Requests" section of the Signing and Authenticating REST Requests topic in the Amazon Simple Storage Service Developer Guide.
Type: String
Default: None
Required: Yes

DiskImage.n.Image.Description
An optional description of the disk image.
Type: String
Default: None
Required: No

DiskImage.n.Volume.Size
The size, in GB (2^30 bytes), of the Amazon EBS volume that will hold the converted image.
Required: Yes

Platform
The instance operating system.
Type: String
Default: None
Valid value: Windows
Response Elements

The following elements are returned in an ImportInstanceResponse element.

**conversionTask**

Information about the import instance task.

Type: ConversionTaskType (p. 450)

Examples

Example Request

This example creates an import instance task that migrates a Windows Server 2008 SP2 (32-bit) VM into the AWS us-east-1 region.

```
https://ec2.amazonaws.com/?Action=ImportInstance
&LaunchSpecification.Architecture=x86_64
&LaunchSpecification.InstanceType=m1.xlarge
&DiskImage.1.Image.Format=VMDK
&DiskImage.1.Image.Bytes=1179593728
&DiskImage.1.Image.ImportManifestUrl=https://s3.amazonaws.com/myawsbucket/a3a5e1b6-590d-43cc-97c1-15c7325d3f41/Win_2008_Server_Data_Center_SP2_32-bit.vmdkmanifest.xml?AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE&Expires=1294855591&Signature=5snej01TtL0uR7KExtEXAMPLE%3D
&DiskImage.1.Volume.Size=12
&Platform=Windows
&AUTHPARAMS
```

Example Response

```
<ImportInstanceResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <conversionTask>
    <conversionTaskId>import-i-ffvko9js</conversionTaskId>
    <expirationTime>2010-12-22T12:01Z</expirationTime>
    <importInstance>
      <volumes>
        <item>
          <bytesConverted>0</bytesConverted>
          <availabilityZone>us-east-1a</availabilityZone>
          <image>
            <format>VMDK</format>
            <size>1179593728</size>
            <importManifestUrl>https://s3.amazonaws.com/myawsbucket/a3a5e1b6-590d-43cc-97c1-15c7325d3f41/Win_2008_Server_Data_Center_SP2_32-bit.vmdkmanifest.xml?AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE&Expires=1294855591&Signature=5snej01TtL0uR7KExtEXAMPLE%3D</importManifestUrl>
        </item>
      </volumes>
    </importInstance>
  </conversionTask>
</ImportInstanceResponse>
```
Related Actions

- ImportVolume (p. 354)
- DescribeConversionTasks (p. 179)
- CancelConversionTask (p. 43)
ImportKeyPair

Description

Imports the public key from an RSA key pair that you created with a third-party tool. Compare this with CreateKeyPair, in which AWS creates the key pair and gives the keys to you (AWS keeps a copy of the public key). With ImportKeyPair, you create the key pair and give AWS just the public key. The private key is never transferred between you and AWS.

You can easily create an RSA key pair on Windows and Linux using the `ssh-keygen` command line tool (provided with the standard OpenSSH installation). Standard library support for RSA key pair creation is also available in Java, Ruby, Python, and many other programming languages.

Supported formats:

- OpenSSH public key format (e.g., the format in `~/.ssh/authorized_keys`)
- Base64 encoded DER format
- SSH public key file format as specified in RFC4716

DSA keys are not supported. Make sure your key generator is set up to create RSA keys.

Supported lengths: 1024, 2048, and 4096.

Note that you can have up to five thousand key pairs per region.

Request Parameters

**KeyName**

A unique name for the key pair.

Type: String
Default: None
Required: Yes

**PublicKeyMaterial**

The public key. You must base64 encode the public key material before sending it to AWS.

Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in an ImportKeyPairResponse element.

**requestId**

The ID of the request.

Type: xsd:string

**keyName**

The key pair name you provided.

Type: xsd:string

**keyFingerprint**

The MD5 public key fingerprint as specified in section 4 of RFC4716.
Examples

Example Request

This example uploads the public key for a key pair you name gsg-keypair.

```
https://ec2.amazonaws.com/?Action=ImportKeyPair
&KeyName=gsg-keypair
&PublicKeyMaterial=LS0tLS1CRUdJTiBDRVFUJUSUZQ0FURS0tLS0tDQpNSU1DZHpDQ0tQ2dBd0lCQWdJR0FQa1RyR3pQ
TUEwRONTcudTSWIzRFFFQkJRUVFNRk14Q3pBSkKJnT1ZCQV1UDQpBbF2UTVJVn0D0VWUWUUVFLRXdw
QmJXrjZiMjR1WT15dE1rd3D211EV1FrTEv3TkJWMu14SVR2b2kJnT1ZCQV1UDQpHU2VYVX1CTWFX
MXBkR1zrTFVGemMzVn12VzVq1NRFFFQWVdzb3ZlRBM016RX1NVFezTXpWYU23MHhNREezDQpNekV5VTRM016vmFNrk14Q3pBskKJnT1ZCQV1UQWXwVE1STxDFU1EV1FROV3cEjiVoY2YjoXdvy
OXRUrn3DQpGU1EV1FRTV3NUJWMu10ukd3Wm1pXeH2jr125Y3pFvk1CTUdBMVFQXhNTJWJSSvNR
RXHzZW00MWVHujFNSUdM4p4NQTBHQ1NxR1NQjyJNEUUCVQFVQUEO05BRENCaVFLQmQrQl0dazBo
OytrecExBnap2yKYQc3U1TDU5bFmWUnI0DQp2ZEpam0RFaklpL0IwV22DSzhpS2hWYW1ltWiHSJnt
NDdmUHZ2CaFKWk9IeHUU0VXakFDNnlxbDJzK1LSXWVjDQpF2Xg0TjJ4I2lpC2GpOR1AzedEgwZ2Nw
WjdIx24aEBBrTcToRTdpZvmNiNMGWUhDhpHnRnPQ02TmdUSE92DE5DQoyR312h1VuyU3BDVFGC
UUI1EQVFQBm8xY3dWVIFPQmdOVkhROEJB2jhFqkFqkFN0QHJqXdG211EV1IweFRC9CQXd3DQpD211J
S3d2QkJRUVhBd013REF2FZSMFbBUnoqVqkJd0FEQWRc205SFEROU2nUUV1RVnuTU2ZudyTDNX
TUDLpdQqejMxVX25ThnMdhEUV1K529a3Why205BUUVQG1FRGd2RUFwjd211JWHR1WFMINNVq
bu5jOTR0NWN1e3kDpCm0Z3WVNNud4WU12eGqVUVWMTFLRVEy20hp2UDMU21jUWg4c2JXZTdt
KzcrMy90Nm2cU2HubLubU1jb1zKwTRDQpWRVFQ225qCetl1aE2Rod2pmaVpTU1CUG5VHnkVtVqS31T
TUDPvGxpDTmTTZmrR2J3cFU5Uzq3K21Gm2tsMGRmDQpZ11TbE15SWcrU3ROOTg9DqotLS0tLUVO
RCBDVFUJUSUZQ0FURS0tLS0tEXAMPLE
&AUTHPARAMS
```

Example Response

```
Example Request Response
xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"
  <requestId>7a82c49f-347e-4fc4-9331-6e8eEXAMPLE</requestId>
  <keyName>gsg-keypair</keyName>
  <keyFingerprint>
    00:00:00: 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
  </keyFingerprint>
</ImportKeyPairResponse>
```

Related Actions

- [CreateKeyPair](#)
- [DescribeKeyPairs](#)
- [DeleteKeyPair](#)
**ImportVolume**

**Description**

Creates a new import volume task using metadata from the specified disk image. After importing the image, you then upload it using the `ec2-upload-disk-image` command in the EC2 command line tools. For more information, see Using the Command Line Tools to Import Your Virtual Machine to Amazon EC2 in the Amazon Elastic Compute Cloud User Guide.

**Request Parameters**

- **AvailabilityZone**
  - The Availability Zone for the resulting Amazon EBS volume.
  - Type: String
  - Default: None
  - Required: Yes

- **Image.Format**
  - The file format of the disk image.
  - Type: String
  - Default: None
  - Valid values: VMDK | RAW | VHD
  - Required: Yes

- **Image.Bytes**
  - The number of bytes in the disk image.
  - Type: Long
  - Default: None
  - Required: Yes

- **Image.ImportManifestUrl**
  - The manifest for the disk image, stored in Amazon S3 and presented here as an Amazon S3 presigned URL. For information about creating a presigned URL for an Amazon S3 object, read the "Signing and Authenticating REST Requests" section of the Signing and Authenticating REST Requests topic in the Amazon Simple Storage Service Developer Guide.
  - Type: String
  - Default: None
  - Required: Yes

- **Description**
  - An optional description of the volume being imported.
  - Type: String
  - Default: None
  - Required: No

- **Volume.Size**
  - The size, in GB (2^30 bytes), of an Amazon EBS volume to hold the converted image.
  - Type: Integer
  - Default: None
  - Required: Yes
Response Elements

The following elements are returned in an ImportVolumeResponse element.

conversionTask
Information about the import volume task.
Type: ConversionTaskType (p. 450)

Examples

Example Request

This example creates an import volume task that migrates a Windows Server 2008 SP2 (32-bit) volume into the AWS us-east-1 region.

https://ec2.amazonaws.com/?Action=ImportVolume
&AvailabilityZone=us-east-1c
&Image.Format=VMDK
&Image.Bytes=128696320
&Image.ImportManifestUrl=https://s3.amazonaws.com/myawsbucket/a3a5e1b6-590d-43cc-97c1-15c7325d3f41/Win_2008_Server_Data_Center_SP2_32-bit.vmdkmanifest.xml?AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE&Expires=1294855591&Signature=5snej01TtL0uR7KExtEXAMPLe%3D
&VolumeSize=8
&AUTHPARAMS>

Example Response

<ImportVolumeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <conversionTask>
    <conversionTaskId>import-i-fh95npoc</conversionTaskId>
    <expirationTime>2010-12-22T12:01Z</expirationTime>
    <importVolume>
      <bytesConverted>0</bytesConverted>
      <availabilityZone>us-east-1c</availabilityZone>
      <description/>
      <image>
        <format>VDMK</format>
        <size>128696320</size>
        <importManifestUrl>https://s3.amazonaws.com/myawsbucket/a3a5e1b6-590d-43cc-97c1-15c7325d3f41/Win_2008_Server_Data_Center_SP2_32-bit.vmdkmanifest.xml?AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE&Expires=1294855591&Signature=5snej01TtL0uR7KExtEXAMPLe%3D</importManifestUrl>
        <checksum>ccb1b0536a4a70e86016b85229b5c6b10b14a4eb</checksum>
      </image>
      <volume>
        <size>8</size>
        <id>vol-34d8a2ff</id>
      </volume>
    </importVolume>
  </conversionTask>
  <state>active</state>
</ImportVolumeResponse>
<statusMessage/>
</conversionTask>
</ImportVolumeResponse>

Related Actions

- ImportInstance (p. 348)
- DescribeConversionTasks (p. 179)
- CancelConversionTask (p. 43)
ModifyImageAttribute

Description

Modifies an attribute of an AMI.

Note

AWS Marketplace product codes cannot be modified. Images with an AWS Marketplace product code cannot be made public.

Request Parameters

ImageId

The AMI ID.
Type: String
Default: None
Required: Yes

LaunchPermission.Add.n.UserId

Adds the specified AWS account ID to the AMI's list of launch permissions.
Type: String
Default: None
Required: No

LaunchPermission.Remove.n.UserId

Removes the specified AWS account ID from the AMI's list of launch permissions.
Type: String
Default: None
Required: No

LaunchPermission.Add.n.Group

Adds the specified group to the image's list of launch permissions. The only valid value is all.
Type: String
Valid value: all (for all EC2 users)
Default: None
Required: No

LaunchPermission.Remove.n.Group

Removes the specified group from the image's list of launch permissions. The only valid value is all.
Type: String
Valid value: all (for all EC2 users)
Default: None
Required: No

ProductCode.n

Adds the specified product code to the specified instance store-backed AMI. After you add a product code to an AMI, it can't be removed.
Type: String
Default: None
Required: No

Description.Value

Changes the AMI's description to the specified value.
Type: String


Response Elements

The following elements are returned in a `ModifyImageAttributeResponse` element.

- **requestId**
  - The ID of the request.
  - Type: `xsd:string`

- **return**
  - Returns `true` if the request succeeds. Otherwise, returns an error.
  - Type: `xsd:boolean`

Examples

Example Request

This example makes the AMI public (i.e., so any AWS account can launch it).

```
https://ec2.amazonaws.com/?Action=ModifyImageAttribute
&ImageId=ami-61a54008
&LaunchPermission.Add.1.Group=all
&AUTHPARAMS
```

Example Request

This example makes the AMI private (i.e., so only you as the owner can launch it).

```
https://ec2.amazonaws.com/?Action=ModifyImageAttribute
&ImageId=ami-61a54008
&LaunchPermission.Remove.1.Group=all
&AUTHPARAMS
```

Example Request

This example grants launch permission to the AWS account with ID 111122223333.

```
https://ec2.amazonaws.com/?Action=ModifyImageAttribute
&ImageId=ami-61a54008
&LaunchPermission.Add.1.UserID=111122223333
&AUTHPARAMS
```

Example Request

This example removes launch permission from the AWS account with ID 111122223333.

```
https://ec2.amazonaws.com/?Action=ModifyImageAttribute
&ImageId=ami-61a54008
```
Example Request

This example adds the 774F4FF8 product code to the ami-61a54008 AMI.

https://ec2.amazonaws.com/?Action=ModifyImageAttribute
&ImageId=ami-61a54008
&ProductCode.1=774F4FF8
&AUTHPARAMS

Example Request

This example changes the description of the AMI to New_Description

https://ec2.amazonaws.com/?Action=ModifyImageAttribute
&ImageId=ami-61a54008
&Description.Value=New_Description
&AUTHPARAMS

Example Response

<ModifyImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <return>true</return>
</ModifyImageAttributeResponse>

Related Actions

- ResetImageAttribute (p. 405)
- DescribeImageAttribute (p. 190)
ModifyInstanceAttribute

Description

Modifies the specified attribute of the specified instance. You can specify only one attribute at a time.

Note

To modify some attributes, the instance must be stopped. For more information, see Modifying Attributes of a Stopped Instance in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

InstanceId

The ID of the instance.
Type: String
Default: None
Required: Yes

InstanceType.Value

Changes the instance type to the specified value. See Available Instance Types for more information. An InvalidInstanceAttributeValue error will be returned if the instance type is not valid.
Type: String
Default: None
Required: No

Kernel.Value

Changes the instance's kernel to the specified value.
Type: String
Default: None
Required: No

Ramdisk.Value

Changes the instance's RAM disk to the specified value.
Type: String
Default: None
Required: No

UserData.Value

Changes the instance's user data to the specified value.
Type: String
Default: None
Required: No

DisableApiTermination.Value

Changes the instance's DisableApiTermination flag to the specified value. A value of true means you can't terminate the instance using the API (i.e., the instance is "locked"); a value of false means you can. You must modify this attribute before you can terminate any "locked" instances using the API.
Type: Boolean
Default: None
Required: No

InstanceInitiatedShutdownBehavior.Value

Changes the instance's InstanceInitiatedShutdownBehavior flag to the specified value.
Type: String
Default: None
Valid values: stop | terminate
Required: No

**BlockDeviceMapping.Value**
Modifies the DeleteOnTermination attribute for volumes that are currently attached. The volume must be owned by the caller. If no value is specified for DeleteOnTermination, the value defaults to true and the volume is deleted when the instance is terminated.

**Note**
To add instance store volumes to an Amazon EBS-backed instance, you must add them when you launch the instance. For more information, see **Updating the Block Device Mapping when Launching an Instance** in the *Amazon Elastic Compute Cloud User Guide*.

Type: InstanceBlockDeviceMappingItemType (p. 473)
Default: None

Example: &BlockDeviceMapping.1.Ebs.DeleteOnTermination=true
Required: No

**SourceDestCheck.Value**
Enables a network address translation (NAT) instance in a VPC to perform NAT. The attribute controls whether source/destination checking is enabled on the instance. A value of true means checking is enabled, and false means checking is disabled. The value must be false for the instance to perform NAT. For more information, see **NAT Instances** in the *Amazon Virtual Private Cloud User Guide*.

Type: Boolean
Default: None
Required: No

**GroupId.n**
[EC2-VPC] Changes the instance's security group. You must specify at least one security group, even if it's just the default security group for the VPC. You must specify the security group ID, not the security group name.

For example, if you want the instance to be in sg-1a1a1a1a and sg-9b9b9b9b, specify GroupId.1=sg-1a1a1a1a and GroupId.2=sg-9b9b9b9b.

Type: String
Default: None
Required: No

**EbsOptimized**
Whether the instance is optimized for EBS I/O. This optimization provides dedicated throughput to Amazon EBS and an optimized configuration stack to provide optimal EBS I/O performance. This optimization isn't available with all instance types. Additional usage charges apply when using an EBS Optimized instance.

Type: Boolean
Default: false
Required: No

**Response Elements**
The following elements are returned in a **ModifyInstanceAttributeResponse** element.

**requestId**
The ID of the request.
Type: xsd:string
return

Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example changes the kernel for the instance.

https://ec2.amazonaws.com/?Action=ModifyInstanceAttribute
&InstanceId=i-10a64379
&Kernel.Value=aki-f70657b2
&AUTHPARAMS

Example Response

<ModifyInstanceAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/"
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</ModifyInstanceAttributeResponse>

Related Actions

- ResetInstanceAttribute (p. 407)
- DescribeInstanceAttribute (p. 200)
ModifyNetworkInterfaceAttribute

Description

Modifies a network interface attribute. You can specify only one attribute at a time.

Request Parameters

**NetworkInterfaceId**
- The ID of the network interface.
- Type: String
- Default: None
- Required: Yes

**Description.Value**
- The description of the network interface.
- Type: String
- Default: None
- Required: No

**SecurityGroupId.n**
- Changes the security groups that a network interface is in. The new set of groups you specify replaces the current set. You must specify at least one group, even if it's just the default security group in the VPC. You must specify the group ID and not the group name.
- For example, if you want the instance to be in sg-1a1a1a1a and sg-9b9b9b9b, specify GroupId.1=sg-1a1a1a1a and GroupId.2=sg-9b9b9b9b.
- Type: String
- Default: None
- Required: No

**SourceDestCheck.Value**
- Enables a Network Address Translation (NAT) instance in a VPC to perform NAT. The attribute controls whether source/destination checking is enabled on the instance. A value of true means checking is enabled, and false means checking is disabled. The value must be false for the instance to perform NAT. For more information, see NAT Instances in the Amazon Virtual Private Cloud User Guide.
- Type: Boolean
- Default: None
- Required: No

**Attachment.AttachmentId**
- The ID of the interface attachment.
- Type: String
- Default: None
- Required: Conditional
- Condition: This parameter is required if you are modifying the **DeleteOnTermination** attribute of an interface attachment.

**Attachment.DeleteOnTermination**
- Specifies whether to delete the attachment when terminating the instance.
- Type: Boolean
- Default: None
- Required: Conditional
- Condition: You must specify a specific attachment ID to change this attribute.
Response Elements

The following elements are returned in a ModifyNetworkInterfaceAttributeResponse element.

**requestId**
- The ID of the request.
- Type: xsd:string

**return**
- Returns true if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request

This example sets source/destination checking to false for the elastic network interface (ENI) eni-ffda3197.

```
https://ec2.amazonaws.com/?Action=ModifyNetworkInterfaceAttribute
&NetworkInterfaceId=eni-ffda3197
&SourceDestCheck.Value=false
&AUTHPARAMS
```

Example Response

```
  <requestId>657a4623-5620-4232-b03b-427e852d71cf</requestId>
  <return>true</return>
</ModifyNetworkInterfaceAttributeResponse>
```

Related Actions

- AttachNetworkInterface (p. 25)
- DetachNetworkInterface (p. 328)
- CreateNetworkInterface (p. 78)
- DeleteNetworkInterface (p. 137)
- DescribeNetworkInterfaceAttribute (p. 235)
- DescribeNetworkInterfaces (p. 237)
- ResetNetworkInterfaceAttribute (p. 409)
ModifySnapshotAttribute

Description

Adds or remove permission settings for the specified snapshot.

Note
Snapshots with AWS Marketplace product codes cannot be made public.

Request Parameters

SnapshotId
The ID of the snapshot.
Type: String
Default: None
Required: Yes

CreateVolumePermission.Add.n.UserId
Adds the specified AWS account ID to the volume's list of create volume permissions.
Type: String
Default: None
Required: Yes

CreateVolumePermission.Add.n.Group
Adds the specified group to the volume's list of create volume permissions. The only valid value is all.
Type: String
Default: None
Required: Yes

CreateVolumePermission.Remove.n.UserId
Removes the specified AWS account ID from the volume's list of create volume permissions.
Type: String
Default: None
Required: No

CreateVolumePermission.Remove.n.Group
Removes the specified group from the volume's list of create volume permissions.
Type: String
Default: None
Required: No

Response Elements

The following elements are returned in a ModifySnapshotAttributeResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean
Examples

Example Request

This example makes the snap-la2b3c4d snapshot public, and gives the account with ID 111122223333 permission to create volumes from the snapshot.

```plaintext
https://ec2.amazonaws.com/?Action=ModifySnapshotAttribute
&snapshotId=snap-la2b3c4d
&CreateVolumePermission.Add.1.UserId=111122223333
&CreateVolumePermission.Add.1.Group=all
&AUTHPARAMS
```

This example makes the snap-la2b3c4d snapshot public, and removes the account with ID 111122223333 from the list of users with permission to create volumes from the snapshot.

```plaintext
https://ec2.amazonaws.com/?Action=ModifySnapshotAttribute
&snapshotId=snap-la2b3c4d
&CreateVolumePermission.Remove.1.UserId=111122223333
&CreateVolumePermission.Add.1.Group=all
&AUTHPARAMS
```

Example Response

```xml
<ModifySnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</ModifySnapshotAttributeResponse>
```

Related Actions

- DescribeSnapshotAttribute (p. 274)
- DescribeSnapshots (p. 276)
- ResetSnapshotAttribute (p. 411)
- CreateSnapshot (p. 101)
ModifyVolumeAttribute

Description

Modifies a volume attribute.

By default, all I/O operations for the volume are suspended when the data on the volume is determined to be potentially inconsistent, to prevent undetectable, latent data corruption. The I/O access to the volume can be resumed by first calling EnableVolumeIO (p. 342) action to enable I/O access and then checking the data consistency on your volume.

You can change the default behavior to resume I/O operations without calling EnableVolumeIO (p. 342) action by setting the AutoEnableIO attribute of the volume to true. We recommend that you change this attribute only for volumes that are stateless, or disposable, or for boot volumes.

Request Parameters

**VolumeId**
- The ID of the volume.
- Type: String
- Default: None
- Required: Yes

**AutoEnableIO.Value**
- This attribute exists to auto-enable the I/O operations to the volume.
- Type: Boolean
- Default: false
- Required: Yes

Response Elements

The following elements are returned in a ModifyVolumeAttributeResponse element.

**requestId**
- The ID of the request.
- Type: xsd:string

**return**
- Returns true if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean

Examples

Example Request

This example modifies the attribute of the volume vol-12345678

https://ec2.amazonaws.com/?Action=ModifyVolumeAttribute
&VolumeId=vol-12345678
&AutoEnableIO.Value=true
&AUTHPARAMS
Example Response

```xml
<ModifyVolumeAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>5jkdf074-37ed-4004-8671-a78ee82bf1cbEXAMPLE</requestId>
  <return>true</return>
</ModifyVolumeAttributeResponse>
```

Related Actions

- DescribeVolumeAttribute (p. 307)
- DescribeVolumeStatus (p. 309)
ModifyVpcAttribute

Description

Modifies the specified attribute of the specified VPC.

Request Parameters

VpcId

The ID of the VPC.
Type: String
Required: Yes

enableDnsSupport

Indicates whether the DNS resolution is supported for the VPC. If this attribute is true, the Amazon DNS server resolves DNS hostnames for your instances to their corresponding IP addresses; otherwise, it does not.
Type: Boolean
Required: No

enableDnsHostnames

Indicates whether the instances launched in the VPC get DNS hostnames. If this attribute is true, instances in the VPC get DNS hostnames; otherwise, they do not.
You can only set this attribute to true if you also set the EnableDnsSupport attribute to true.
Type: Boolean
Required: No

Response Elements

The following elements are returned in a ModifyVpcAttributeResponse structure.

requestId

The ID of the request.
Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This request disables support for DNS hostnames in the VPC with the ID vpc-1a2b3c4d.

https://ec2.amazonaws.com/?Action=ModifyVpcAttribute
&VpcId=vpc-1a2b3c4d
&EnableDnsHostnames.Value=false
&AUTHPARAMS
MonitorInstances

Description

Enables monitoring for a running instance. For more information about monitoring instances, see Monitoring Your Instances and Volumes in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

InstanceId.n
One or more instance IDs.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a MonitorInstancesResponse element.

requestId
The ID of the request.
Type: xsd:string

instancesSet
A list of instances. Each instance is wrapped in an item element.
Type: MonitorInstancesResponseSetItemType (p. 492)

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/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAPMLE</requestId>
  <instancesSet>
    <item>
      <instanceId>i-43a4412a</instanceId>
      <monitoring>
        <state>pending</state>
      </monitoring>
    </item>
  </instancesSet>
</MonitorInstancesResponse>
Related Actions

- UnmonitorInstances (p. 438)
- RunInstances (p. 419)
PurchaseReservedInstancesOffering

Description

Purchases a Reserved Instance for use with your account. With Amazon EC2 Reserved Instances, you obtain a capacity reservation for a certain instance configuration over a specified period of time. You pay a lower usage rate than with On-Demand instances for the time that you actually use the capacity reservation.

Starting with the 2011-11-01 API version, AWS expanded its offering of Reserved Instances to address a range of projected instance usage. There are three types of Reserved Instances based on customer utilization levels: Heavy Utilization, Medium Utilization, and Light Utilization.

The Medium Utilization offering type is equivalent to the Reserved Instance offering available before API version 2011-11-01. If you are using tools that predate the 2011-11-01 API version, DescribeReservedInstancesOfferings will only list information about the Medium Utilization Reserved Instance offering type.

For information about Reserved Instance pricing tiers, go to Understanding Reserved Instance pricing tiers in the Amazon Elastic Compute Cloud User Guide. For more information about Reserved Instances, go to Reserved Instances also in the Amazon Elastic Compute Cloud User Guide.

You determine the type of the Reserved Instances offerings by including the optional offeringType parameter when calling DescribeReservedInstancesOfferings. After you've identified the Reserved Instance with the offering type you want, specify its ReservedInstancesOfferingId when you call PurchaseReservedInstancesOffering.

Starting with the 2012-08-15 API version, you can also purchase Reserved Instances from the Reserved Instance Marketplace. The Reserved Instance Marketplace matches sellers who want to resell Reserved Instance capacity that they no longer need with buyers who want to purchase additional capacity. Reserved Instances bought and sold through the Reserved Instance Marketplace work like any other Reserved Instances.

By default, with the 2012-08-15 API version, DescribeReservedInstancesOfferings returns information about Amazon EC2 Reserved Instances available directly from AWS, plus instance offerings available on the Reserved Instance Marketplace. If you are using tools that predate the 2012-08-15 API version, the DescribeReservedInstancesOfferings action will only list information about Amazon EC2 Reserved Instances available directly from AWS.

For more information about the Reserved Instance Marketplace, go to Reserved Instance Marketplace in the Amazon Elastic Compute Cloud User Guide.

You determine the Reserved Instance Marketplace offerings by specifying true for the optional includeMarketplace parameter when calling DescribeReservedInstancesOfferings. After you've identified the Reserved Instance with the offering type you want, specify its reservedInstancesOfferingId when you call PurchaseReservedInstancesOffering.

Request Parameters

reservedInstancesOfferingId

The ID of the Reserved Instance offering you want to purchase.

Type: String
Default: None
Required: Yes
**instanceCount**
The number of Reserved Instances to purchase.
Type: Integer
Default: None
Required: Yes

**limitPrice**
Specified for Reserved Instance Marketplace offerings to limit the total order and ensure that the Reserved Instances are not purchased at unexpected prices.
Type: ReservedInstanceLimitPriceType (p. 506)
Required: No

## Response Elements

The following elements are returned in a `PurchaseReservedInstancesOfferingResponse` element.

**requestId**
The ID of the request.
Type: xsd:string

**reservedInstancesId**
The IDs of the purchased Reserved Instances.
Type: xsd:string

## Examples

### Set the limit price for Reserved Instance Marketplace purchase

This example uses `LimitPrice` to limit the total purchase order of Reserved Instances from Reserved Instance Marketplace.

```text
https://ec2.amazonaws.com/?Action=PurchaseReservedInstancesOffering
&ReservedInstancesOfferingId=4b2293b4-5813-4cc8-9ce3-1957fEXAMPLE
&LimitPrice.Amount=200
&InstanceCount=2
&AUTHPARAMS
```

The response looks like the following example.

```xml
<PurchaseReservedInstancesOfferingResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4ec8-99ed-be587EXAMPLE</requestId>
  <reservedInstancesId>e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE</reservedInstancesId>
</PurchaseReservedInstancesOfferingResponse>
```

## Example Request

This example illustrates a purchase of a Reserved Instances offering.
Find and Purchase a Reserved Instance

To find and purchase a Reserved Instance

1. Use DescribeReservedInstancesOfferings (p. 257) to get a list of Reserved Instance offerings that match your specifications. In this example, we'll request a list of Linux/UNIX, Light Utilization Reserved Instances that are available through the Reserved Instance Marketplace only.

https://ec2.amazonaws.com/?Action=DescribeReservedInstancesOfferings &Filter.0.Name=marketplace &Filter.0.Value.1=true &IncludeMarketplace=true &OfferingType=Light+Utilization &ProductDescription=Linux%2FUNIX &Version=2013-02-01 &AUTHPARAMS

Note
When using the Query API, all strings must be URL-encoded.

The following is an example response.

<DescribeReservedInstancesOfferingsResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>2bc7dafa-dafd-4257-bdf9-c0814EXAMPLE</requestId>
  <reservedInstancesOfferingsSet>
    <item>
      <reservedInstancesOfferingId>a6ce8269-7b8c-42cd-a7f5-0841cEXAMPLE</reservedInstancesOfferingId>
      <instanceType>m1.large</instanceType>
      <availabilityZone>us-east-1a</availabilityZone>
      <duration>90720000</duration>
      <fixedPrice>96.03</fixedPrice>
      <usagePrice>0.027</usagePrice>
      <productDescription>Linux/UNIX</productDescription>
      <instanceTenancy>default</instanceTenancy>
      <currencyCode>USD</currencyCode>
      <offeringType>Light Utilization</offeringType>
      <recurringCharges/>
      <marketplace>true</marketplace>
    </item>
  </reservedInstancesOfferingsSet>
</DescribeReservedInstancesOfferingsResponse>
2. From the list of available Reserved Instances in the previous example, select the marketplace offering and specify a limit price.

https://ec2.amazonaws.com/?Action=PurchaseReservedInstancesOffering
&ReservedInstancesOfferingId=2bc7dafa-dafd-4257-bdf9-c0814EXAMPLE
&InstanceCount=1
&LimitPrice.Amount=200
&AUTHPARAMS

The following is an example response.

<PurchaseReservedInstancesOfferingResponse xmlns="http://ec2.amazonaws.com/doc/2012-08-15/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <reservedInstancesId>e5a2ff3b-7d14-494f-90af-0b5d0EXAMPLE</reservedInstancesId>
</PurchaseReservedInstancesOfferingResponse>

3. To verify the purchase, check for your new Reserved Instance with DescribeReservedInstances (p. 249).
You can run your Reserved Instance any time after your purchase is complete. To run your Reserved Instance, you launch it in the same way you launch an On-Demand EC2 instance. Make sure to specify the same criteria that you specified for your Reserved Instance. AWS will automatically charge you the lower hourly rate.

**Related Actions**

- [DescribeReservedInstancesOfferings](#) (p. 257)
- [DescribeReservedInstances](#) (p. 249)
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

InstanceId.n

One or more instance IDs.

Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a RebootInstancesResponse element.

requestId

The ID of the request.

Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.

Type: xsd:boolean

Examples

Example Request

This example reboots two instances.

https://ec2.amazonaws.com/?Action=RebootInstances
&InstanceId.1=i-1la2b3c4d
&InstanceId.2=i-4d3acf62
&AUTHPARAMS

Example Response

<RebootInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</RebootInstancesResponse>
Related Actions

- RunInstances (p. 419)
RegisterImage

Description

Registers a new AMI with Amazon EC2. When you're creating an AMI, this is the final step you must complete before you can launch an instance from the AMI. For more information about creating AMIs, see Creating Your Own AMIs in the Amazon Elastic Compute Cloud User Guide.

Note

For Amazon EBS-backed instances, the CreateImage operation creates and registers the AMI in a single request, so you don't have to register the AMI yourself.

You can also use the RegisterImage action to create an EBS-backed AMI from a snapshot of a root device volume. For more information, see Launching an Instance from a Snapshot in the Amazon Elastic Compute Cloud User Guide.

If needed, you can deregister an AMI at any time. Any modifications you make to an AMI backed by instance store invalidates its registration. If you make changes to an image, deregister the previous image and register the new image.

Note

You cannot register an image where a secondary (non-root) snapshot has AWS Marketplace product codes.

Request Parameters

ImageLocation

The full path to your AMI manifest in Amazon S3 storage.
  Type: String
  Default: None
  Required: Conditional
  Condition: Required if registering an instance store-backed AMI

Name

A name for your AMI.
  Type: String
  Default: None
  Constraints: 3-128 alphanumeric characters, parenthesis (()), commas (,), slashes (/), dashes (-), or underscores(_)
  Required: Yes

Description

A description of the AMI.
  Type: String
  Default: None
  Constraints: Up to 255 characters.
  Required: No

Architecture

The architecture of the image.
  Type: String
  Valid values: i386 | x86_64
  Default: i386 for Amazon EBS-backed AMIs. Instance store-backed AMIs try to use the architecture specified in the manifest file.
  Required: No
**KernelId**
The ID of the kernel.
- Type: String
- Default: None
- Required: No

**RamdiskId**
The ID of the RAM disk. 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, refer to the Resource Center and search for the kernel ID.
- Type: String
- Default: None
- Required: No

**RootDeviceName**
The name of the root device (for example, /dev/sda1, or xvda).
- Type: String
- Default: None
- Required: Conditional
  - Condition: Required if registering an Amazon EBS-backed AMI

**BlockDeviceMapping.n.DeviceName**
The device name exposed to the instance (for example, /dev/sdh or xvdh). For more information, see Block Device Mapping.
- Type: String
- Default: None
- Required: Conditional
  - Condition: If you're registering an Amazon EBS-backed AMI from a snapshot, you must specify DeviceName with the root device name (for example, /dev/sda1 or xvda), and BlockDeviceMapping.n.Ebs.SnapshotId with the snapshot ID

**BlockDeviceMapping.n.NoDevice**
Suppresses a device mapping.
- Type: Boolean
- Default: true
- Required: No

**BlockDeviceMapping.n.VirtualName**
The name of the virtual device, ephemeral[0..3]. The number of instance store volumes depends on the instance type.
- Type: String
- Default: None
- Required: No

**BlockDeviceMapping.n.Ebs.SnapshotId**
The ID of the snapshot.
- Type: String
- Default: None
- Required: Conditional
  - Condition: If you're registering an Amazon EBS-backed AMI from a snapshot, you must at least specify SnapshotId with the snapshot ID, and BlockDeviceMapping.n.DeviceName with the root device name.

**BlockDeviceMapping.n.Ebs.VolumeSize**
The size of the volume, in GiBs.
- Type: Integer
- Valid values: If the volume type is io1, the minimum size of the volume is 10 GiB.
Default: If you're creating the volume from a snapshot and don't specify a volume size, the default is the snapshot size.
Required: Conditional
Condition: Required unless you're creating the volume from a snapshot.

**BlockDeviceMapping.n.Ebs.DeleteOnTermination**
Whether the volume is deleted on instance termination.
Type: Boolean
Default: true
Required: No

**BlockDeviceMapping.n.Ebs.VolumeType**
The volume type.
Type: String
Valid values: standard | io1
Default: standard
Required: No

**BlockDeviceMapping.n.Ebs.Iops**
The number of I/O operations per second (IOPS) that the volume supports.
Type: Integer
Valid values: Range is 100 to 4000.
Default: None
Required: Conditional
Condition: Required when the volume type is io1; not used with standard volumes.

### Response Elements

The following elements are returned in a RegisterImageResponse element.

- **requestId**
  - The ID of the request.
  - Type: xsd:string

- **imageId**
  - The ID of the newly registered AMI.
  - Type: xsd:string

### Examples

#### Example Request

This example registers the AMI specified in the `my-new-image.manifest.xml` manifest file, located in the bucket called `myawsbucket`.

```
https://ec2.amazonaws.com/?Action=RegisterImage
&ImageLocation=myawsbucket/my-new-image.manifest.xml
&AUTHPARAMS
```
Example Request

This example registers the AMI with an Amazon EBS snapshot as the root device, a separate snapshot as a secondary device, and an empty 100 GiB Amazon EBS volume as a storage device.

Example Response

Example Response

<RegisterImageResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <imageId>ami-1a2b3c4d</imageId>
</RegisterImageResponse>

Related Actions

- DescribeImages (p. 193)
- DeregisterImage (p. 165)
ReleaseAddress

Description

Releases an Elastic IP address allocated to your account.

Important

After releasing an Elastic IP address, it is released to the IP address pool and might be unavailable to you. Be sure to update your DNS records and any servers or devices that communicate with the address. If you attempt to release an Elastic IP address that you already released, you'll get an AuthFailure error if the address is already allocated to another AWS account.

An Elastic IP address is for use either in the EC2-Classic platform or in a VPC. For more information, see Elastic IP Addresses in the Amazon Elastic Compute Cloud User Guide.

[EC2-Classic, default VPC] Releasing an Elastic IP address automatically disassociates it from any instance that it's associated with. To disassociate an Elastic IP address without releasing it, use the ec2-diassociate-address command.

[nondefault VPC] You must use the ec2-diassociate-address command to disassociate the Elastic IP address before you try to release it. Otherwise, Amazon EC2 returns an error (InvalidIPAddress.InUse).

Request Parameters

PublicIp

[EC2-Classic] The Elastic IP address.
Type: String
Default: None
Required: Conditional
Condition: Required for EC2-Classic

AllocationId

[EC2-VPC] The allocation ID that AWS provided when you allocated the address for use with a VPC.
Type: String
Default: None
Required: Conditional
Condition: Required for EC2-VPC

Response Elements

The following elements are returned in a ReleaseAddressResponse element.

requestId

The ID of the request.
Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean
Examples

Example Request

This example releases an Elastic IP address (67.202.55.255).

https://ec2.amazonaws.com/?Action=ReleaseAddress
&PUBLICIP=192.0.2.1
&AUTHPARAMS

Example Request

This example releases an Elastic IP address with allocation ID eipalloc-5723d13e.

https://ec2.amazonaws.com/?Action=ReleaseAddress
&ALLOCATIONID=eipalloc-5723d13e
&AUTHPARAMS

Example Response

<ReleaseAddressResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</ReleaseAddressResponse>

Related Actions

- AllocateAddress (p. 12)
- DescribeAddresses (p. 169)
- AssociateAddress (p. 16)
- DisassociateAddress (p. 336)
ReplaceNetworkAclAssociation

**Description**

Changes which network ACL a subnet is associated with. By default when you create a subnet, it's automatically associated with the default network ACL. For more information about network ACLs, see Network ACLs in the Amazon Virtual Private Cloud User Guide.

**Request Parameters**

**AssociationId**

The ID representing the current association between the original network ACL and the subnet.
- Type: String
- Default: None
- Required: Yes

**NetworkAclId**

The ID of the new ACL to associate with the subnet.
- Type: String
- Default: None
- Required: Yes

**Response Elements**

The following elements are returned in a `ReplaceNetworkAclAssociationResponse` element.

**requestId**

The ID of the request.
- Type: xsd:string

**newAssociationId**

The ID of the new association.
- Type: xsd:string

**Examples**

**Example Request**

This example starts with a network ACL associated with a subnet, and a corresponding association ID `aclassoc-e5b95c8c`. You want to associate a different network ACL (`acl-5fb85d36`) with the subnet. The result is a new association ID representing the new association.

```
https://ec2.amazonaws.com/?Action=ReplaceNetworkAclAssociation
&AssociationId=aclassoc-e5b95c8c
&NetworkAclId=acl-5fb85d36
&AUTHPARAMS
```
Example Response

```
<ReplaceNetworkAclAssociationResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <newAssociationId>aclassoc-17b85d7e</newAssociationId>
</ReplaceNetworkAclAssociationResponse>
```

Related Actions

- CreateNetworkAcl (p. 73)
- DeleteNetworkAcl (p. 133)
- DescribeNetworkAcls (p. 230)
ReplaceNetworkAclEntry

Description

Replaces an entry (i.e., rule) in a network ACL. For more information about network ACLs, see Network ACLs in the Amazon Virtual Private Cloud User Guide.

Request Parameters

NetworkAclId
The ID of the ACL.
- Type: String
- Default: None
- Required: Yes

RuleNumber
The rule number of the entry to replace.
- Type: Integer
- Default: None
- Required: Yes

Protocol
The IP protocol the rule applies to. You can use -1 to mean all protocols.
- Type: Integer
- Valid values: -1 or a protocol number (see Protocol Numbers).
- Required: Yes

RuleAction
Indicates whether to allow or deny traffic that matches the rule.
- Type: String
- Default: None
- Valid values: allow | deny
- Required: Yes

Egress
Indicates whether this rule applies to egress traffic from the subnet (true) or ingress traffic to the subnet (false).
- Type: Boolean
- Default: false
- Valid values: true | false
- Required: No

CidrBlock
The CIDR range to allow or deny, in CIDR notation (for example, 172.16.0.0/24).
- Type: String
- Default: None
- Required: Yes

Icmp.Code
For the ICMP protocol, the ICMP code. You can use -1 to specify all ICMP codes for the given ICMP type.
- Type: Integer
- Default: None
- Required: Conditional
Condition: Required if specifying 1 (ICMP) for the protocol.

**Icmp.Type**
For the ICMP protocol, the ICMP type. You can use -1 to specify all ICMP types.
Type: Integer
Default: None
Required: Conditional
Condition: Required if specifying 1 (ICMP) for the protocol.

**PortRange.From**
The first port in the range.
Type: Integer
Default: None
Required: Conditional
Condition: Required if specifying 6 (TCP) or 17 (UDP) for the protocol.

**PortRange.To**
The last port in the range.
Type: Integer
Default: None
Required: Conditional
Condition: Required if specifying 6 (TCP) or 17 (UDP) for the protocol.

**Response Elements**
The following elements are returned in a `ReplaceNetworkAclEntryResponse` element.

**requestId**
The ID of the request.
Type: xsd:string

**return**
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

**Examples**

**Example Request**
This example replaces the egress entry numbered 110 in the network ACL with ID acl-2cb85d45. The new rule denies egress traffic destined for anywhere (0.0.0.0/0) on TCP port 139.

```
https://ec2.amazonaws.com/?Action=ReplaceNetworkAclEntry
&NetworkAclId=acl-2cb85d45
&Ru...
Example Response

```xml
<ReplaceNetworkAclEntryResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</ReplaceNetworkAclEntryResponse>
```

Related Actions

- CreateNetworkAclEntry (p. 75)
- DeleteNetworkAclEntry (p. 135)
- DescribeNetworkAcls (p. 230)
ReplaceRoute

Description

Replaces an existing route within a route table in a VPC. For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

Request Parameters

(RouteTableId)
The ID of the route table.
Type: String
Default: None
Required: Yes

(DestinationCidrBlock)
The CIDR address block used for the destination match. The value you provide must match the CIDR of an existing route in the table.
Type: String
Default: None
Required: Yes

(GatewayId)
The ID of a gateway attached to your VPC.
Type: String
Default: None
Required: Conditional
Condition: You must provide only one of the following: a GatewayId, InstanceId, or NetworkInterfaceId.

(InstanceId)
The ID of a NAT instance in your VPC.
Type: String
Default: None
Required: Conditional
Condition: You must provide only one of the following: a GatewayId, InstanceId, or NetworkInterfaceId.

(NetworkInterfaceId)
Allows routing to network interface attachments.
Type: String
Default: None
Required: Conditional
Condition: You must provide only one of the following: GatewayId, InstanceId, or NetworkInterfaceId.

Response Elements

The following elements are returned in a ReplaceRouteResponse element.

(requestId)
The ID of the request.
Type: xsd:string

**return**

Returns `true` if the request succeeds. Otherwise, returns an error.

Type: xsd:boolean

---

**Examples**

**Example Request**

This example replaces a route in the route table with ID rtb-e4ad488d. The new route matches the CIDR 10.0.0.0/8 and sends the traffic to the virtual private gateway with ID vgw-1d00376e.

```
https://ec2.amazonaws.com/?Action=ReplaceRoute
&RouteTableId=rtb-e4ad488d
&DestinationCidrBlock=10.0.0.0/8
&GatewayId=vgw-1d00376e
&AUTHPARAMS
```

**Example Response**

```
<ReplaceRouteResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</ReplaceRouteResponse>
```

**Related Actions**

- DeleteRoute (p. 141)
- CreateRoute (p. 94)
- DescribeRouteTables (p. 266)
ReplaceRouteTableAssociation

**Description**

Changes the route table associated with a given subnet in a VPC. After you execute this action, the subnet uses the routes in the new route table it's associated with. For more information about route tables, see Route Tables in the Amazon Virtual Private Cloud User Guide.

You can also use this action to change which table is the main route table in the VPC. You just specify the main route table's association ID and the route table that you want to be the new main route table.

**Request Parameters**

**AssociationId**
- The ID representing the current association between the original route table and the subnet.
- Type: String
- Default: None
- Required: Yes

**RouteTableId**
- The ID of the new route table to associate with the subnet.
- Type: String
- Default: None
- Required: Yes

**Response Elements**

The following elements are returned in a ReplaceRouteTableAssociationResponse element.

**requestId**
- The ID of the request.
- Type: xsd:string

**newAssociationId**
- The ID of the new association.
- Type: xsd:string

**Examples**

**Example Request**

This example starts with a route table associated with a subnet, and a corresponding association ID rtbassoc-f8ad4891. You want to associate a different route table (table rtb-f9ad4890) to the subnet. The result is a new association ID representing the new association.

```url
https://ec2.amazonaws.com/?Action=ReplaceRouteTableAssociation
&AssociationId=rtbassoc-f8ad4891
&RouteTableId=rtb-f9ad4890
&AUTHPARAMS
```
Example Response

```xml
<ReplaceRouteTableAssociationResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <newAssociationId>rtbassoc-faad4893</newAssociationId>
</ReplaceRouteTableAssociationResponse>
```

Related Actions

- CreateRouteTable (p. 97)
- DisassociateRouteTable (p. 338)
- DeleteRouteTable (p. 143)
- DescribeRouteTables (p. 266)
- AssociateRouteTable (p. 21)
ReportInstanceStatus

Description

Use this action to submit feedback about an instance’s status. This action works only for instances that are in the running state. If your experience with the instance differs from the instance status returned by the DescribeInstanceStatus action, use ReportInstanceStatus to report your experience with the instance. Amazon EC2 collects this information to improve the accuracy of status checks.

Note

Use of this action does not change the value returned by DescribeInstanceStatus.

To report an instance’s status, specify an instance ID with the InstanceId.n parameter and a reason code with the ReasonCode.n parameter that applies to that instance. The following table contains descriptions of all available reason codes.

<table>
<thead>
<tr>
<th>Reason Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>instance-stuck-in-state</td>
<td>My instance is stuck in a state.</td>
</tr>
<tr>
<td>unresponsive</td>
<td>My instance is unresponsive.</td>
</tr>
<tr>
<td>not-accepting-credentials</td>
<td>My instance is not accepting my credentials.</td>
</tr>
<tr>
<td>password-not-available</td>
<td>A password is not available for my instance.</td>
</tr>
<tr>
<td>performance-network</td>
<td>My instance is experiencing performance problems which I believe are network related.</td>
</tr>
<tr>
<td>performance-instance-store</td>
<td>My instance is experiencing performance problems which I believe are related to the instance stores.</td>
</tr>
<tr>
<td>performance-ebs-volume</td>
<td>My instance is experiencing performance problems which I believe are related to an EBS volume.</td>
</tr>
<tr>
<td>performance-other</td>
<td>My instance is experiencing performance problems.</td>
</tr>
<tr>
<td>other</td>
<td>Other, explained in the submitted description parameter.</td>
</tr>
</tbody>
</table>

Request Parameters

InstanceId.n

One or more instance IDs.

Type: String

Required: Yes

Status

The status of all instances listed in the InstanceId.n parameter.

Type: String

Valid values: ok | impaired

Required: Yes

StartTime

The time at which the reported instance health state began.

Type: DateTime

Required: No
EndTime
The time at which the reported instance health state ended.
Type: DateTime
Required: No

ReasonCode.n
A reason code that describes a specific instance’s health state. Each code you supply corresponds to an instance ID that you supply with the InstanceId.n parameter. See the Description (p. 394) section for descriptions of each reason code.
Type: String
Required: Yes

Description
Descriptive text about the instance health state.
Type: String
Default: None
Required: No

Response Elements

The following elements are returned in a ReportInstanceStatusResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example reports instance health state for two instances.

https://ec2.amazonaws.com/?Action=ReportInstanceStatus
&Status=impaired
&InstanceId.0=i-9440effb
&InstanceId.1=i-0cf27c63
&Version=2013-02-01
&AuthParams

Example Request

This example reports instance health state for two instances with reason codes.

https://ec2.amazonaws.com/?Action=ReportInstanceStatus
&Description=Description+of+my+issue.
&Status=impaired
&InstanceId.0=i-9440effb
&InstanceId.1=i-0cf27c63
&ReasonCode.0=instance-performance-network
&ReasonCode.1=instance-performance-disk
&Version=2013-02-01
&AuthParams

Example Response

<ReportInstanceStatusResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>b8131cff-dfbd-4277-bafe-be006fd0c4da</requestId>
  <return>true</return>
</ReportInstanceStatusResponse>
RequestSpotInstances

Description

Creates a Spot Instance request. Spot Instances are instances that Amazon EC2 starts on your behalf when the maximum price that you specify exceeds the current Spot Price. Amazon EC2 periodically sets the Spot Price based on available Spot Instance capacity and current Spot Instance requests. For more information about Spot Instances, see Using Spot Instances in the Amazon Elastic Compute Cloud User Guide.

Note
Users must be subscribed to the required product to run an instance with AWS Marketplace product codes.

Request Parameters

SpotPrice
The maximum hourly price for any Spot Instance launched to fulfill the request.
Type: String
Default: None
Required: Yes

InstanceCount
The maximum number of Spot Instances to launch.
Type: Integer
Default: 1
Required: No

Type
The Spot Instance request type.
Type: String
Valid values: one-time | persistent
Default: one-time
Required: No

ValidFrom
The start date of the request. If this is a one-time request, the request becomes active at this date and time and remains active until all instances launch, the request expires, or the request is canceled. If the request is persistent, the request becomes active at this date and time and remains active until it expires or is canceled.
Type: DateTime
Default: Request is effective independently
Required: No

ValidUntil
The end date of the request. If this is a one-time request, the request remains active until all instances launch, the request is canceled, or this date is reached. If the request is persistent, it remains active until it is canceled or this date and time is reached.
Type: DateTime
Default: Request is effective indefinitely
Required: No

LaunchGroup
The instance launch group. Launch groups are Spot Instances that launch together and terminate together.
Type: String
Default: Instances are launched and terminated individually
Required: No

AvailabilityZoneGroup
The user-specified name for a logical grouping of bids.

When you specify AvailabilityZoneGroup in a Spot Instance request, all Spot Instances in the request are launched in the same Availability Zone. Instance proximity is maintained with this parameter, but choice of Availability Zone is not. AvailabilityZoneGroup applies only to bids for Spot Instances of the same instance type. Any additional Spot Instance requests that are specified with the same AvailabilityZoneGroup name will be launched in that same Availability Zone, as long as at least one instance from the group is still active.

If there is no active instance running in the Availability Zone group that you specify for a new Spot Instance request (i.e., all instances are terminated, the bid is expired, or the bid falls below current market), then Amazon EC2 will launch the instance in any Availability Zone where the constraint can be met. Consequently, the subsequent set of Spot Instances could be placed in a different zone from the original request, even if the same AvailabilityZoneGroup name was specified.

To ensure that all Spot Instances across all bids are launched into a particular Availability Zone, specify LaunchSpecification.Placement.AvailabilityZone in the API or --availability-zone in the CLI.

Type: String
Default: Instances are launched in any available Availability Zone.
Required: No

LaunchSpecification.ImageId
The ID of the AMI.
Type: String
Default: None
Required: Yes

LaunchSpecification.KeyName
The name of the key pair.
Type: String
Default: None
Required: No

LaunchSpecification.SecurityGroupId.n
The ID of the security group.
Type: String
Default: The instance uses the default security group
Required: Conditional
Condition: If you want to specify one or more security groups, you can use either LaunchSpecification.SecurityGroupId.n or LaunchSpecification.SecurityGroup.n.

LaunchSpecification.SecurityGroup.n
[EC2-Classic, default VPC] The name of the security group.
Type: String
Default: The instance uses the default security group
Required: Conditional
Condition: If you want to specify one or more security groups, you can use either LaunchSpecification.SecurityGroupId.n or LaunchSpecification.SecurityGroup.n.

LaunchSpecification.UserData
The MIME, Base64-encoded user data to make available to the instances.
Type: String
Default: None
LaunchSpecification.InstanceType

The instance type.

Type: String

Valid values: t1.micro | m1.small | m1.medium | m1.large | m1.xlarge | m3.xlarge | m3.2xlarge | c1.medium | c1.xlarge | m2.xlarge | m2.2xlarge | m2.4xlarge | cr1.8xlarge | cc1.4xlarge | cc2.8xlarge | cg1.4xlarge. See Available Instance Types for more information.

Default: m1.small

Required: Yes

LaunchSpecification.Placement.AvailabilityZone

The placement constraint (for example, specific Availability Zone) for launching the instances.

Specify if you want all of the Spot Instances in all of your bids to be launched in a particular Availability Zone. Specifying this option requires Amazon EC2 to find capacity in the specified Availability Zone instead of letting Amazon EC2 pick the best Availability Zone available; this can potentially delay the fulfillment of your bid, and/or require a higher bid price.

Type: String

Default: Amazon EC2 selects an Availability Zone.

Required: No

LaunchSpecification.Placement.GroupName

The name of an existing placement group you want to launch the instance into (for cluster instances).

Type: String

Default: None.

Required: No

LaunchSpecification.KernelId

The ID of the kernel.

Type: String

Default: None

Required: No

LaunchSpecification.RamdiskId

The ID of the RAM disk. Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk and search for the kernel ID.

Type: String

Default: None

Required: No

LaunchSpecification.BlockDeviceMapping.n.DeviceName

The device named exposed to the instance (for example, /dev/sdh or xvdh). For more information, see Block Device Mapping.

Type: String

Default: None

Required: No

LaunchSpecification.BlockDeviceMapping.n.NoDevice

Suppresses the device mapping.

Type: Boolean

Default: true

Required: No

LaunchSpecification.BlockDeviceMapping.n.VirtualName

The name of the virtual device, ephemeral[0..3]. The number of instance store volumes depends on the instance type.

Type: String
Default: None
Required: No

The ID of the snapshot.
Type: String
Default: None
Required: No

The size of the volume, in GiBs.
Type: Integer
Valid values: If the volume type is io1, the minimum size of the volume is 10 GiB.
Default: If you're creating the volume from a snapshot and don't specify a volume size, the default is the snapshot size.
Required: No

Whether the volume is deleted on instance termination.
Type: Boolean
Default: true
Required: No

The volume type.
Type: String
Valid values: standard | io1
Default: standard
Required: No

The number of I/O operations per second (IOPS) that the volume supports.
Type: Integer
Valid values: Range is 100 to 4000.
Default: None
Required: Required when the volume type is io1, not used with standard volumes.

LaunchSpecification.Monitoring.Enabled
Enables monitoring for the instance.
Type: String
Default: Disabled
Required: No

LaunchSpecification.SubnetId
The ID of the subnet in which to launch the Spot Instance.
Type: String
Default: None
Required: No

LaunchSpecification.NetworkInterface.n.NetworkInterfaceId
[EC2-VPC] Attaches an existing interface to a single instance. Requires n=1 instances.
Type: String
Default:
Required: No

LaunchSpecification.NetworkInterface.n.DeviceIndex
[EC2-VPC] Applies to both attaching existing network interfaces and when creating new network interfaces.
Type: Integer
Default: No
Required: No

LaunchSpecification.NetworkInterface.n.SubnetId
[EC2-VPC] Applies only when creating new network interfaces.
Type: String
Default: None
Required: No

LaunchSpecification.NetworkInterface.n.Description
[EC2-VPC] Applies only when creating new network interfaces.
Type: String
Default: None
Required: No

LaunchSpecification.NetworkInterface.n.PrivateIpAddress
[EC2-VPC] The primary private IP address of the network interface. Applies only when creating new
network interfaces. Requires n=1 network interfaces in launch.
Only one private IP address can be designated as primary. Therefore, you cannot specify this
parameter if you are also specifying
LaunchSpecification.NetworkInterface.n.PrivateIpAddresses.n.Primary with a value
of true with the
option.
Type: String
Default: None
Required: No

[EC2-VPC] The primary private IP address of the network interface. Applies only when creating new
network interfaces. Requires n=1 network interfaces in launch.
Only one private IP address can be designated as primary. Therefore, you cannot specify this
parameter with
LaunchSpecification.NetworkInterface.n.PrivateIpAddresses.n.Primary with a value
of true if you are also specifying the
Type: String
Default: None
Required: No

LaunchSpecification.NetworkInterface.n.PrivateIpAddresses.n.Primary
[EC2-VPC] Whether the private IP address is the primary private IP address. Applies only when
creating new network interfaces. Requires n=1 network interfaces in launch.
Only one private IP address can be designated as primary. Therefore, you cannot specify this
parameter with a value of true with the
option if you specify the LaunchSpecification.NetworkInterface.n.PrivateIpAddress
option.
Type: String
Default: None
Required: No

[EC2-VPC] The number of secondary private IP addresses to assign to a network interface. When
you specify a number of secondary IP addresses, AWS automatically assigns these IP addresses
within the subnet's range.
The number of IP addresses you can assign to a network interface varies by instance type. For more information, go to Available Instance Types in the Amazon Elastic Compute Cloud User Guide.

For a single network interface, you cannot specify this option and specify more than one private IP address using LaunchSpecification.NetworkInterface.n.PrivatIpAddresses.n.PrivatIpAddress.

Type: Integer
Default: None
Required: No

LaunchSpecification.NetworkInterface.n.SecurityGroupId.n
The security group IDs to associate with the created instance. Applies only when creating new network interfaces.

Type: String
Default: None
Required: No

LaunchSpecification.NetworkInterface.n.DeleteOnTermination
Applies to all network interfaces.

Type: Boolean
Default: false
Required: No

LaunchSpecification.IamInstanceProfile.Arn
The Amazon resource name (ARN) of the IAM Instance Profile (IIP) to associate with the instances.

Type: String
Default: None
Required: No

LaunchSpecification.IamInstanceProfile.Name
The name of the IAM Instance Profile (IIP) to associate with the instances.

Type: String
Default: None
Required: No

LaunchSpecification.EbsOptimized
Whether the instance is optimized for EBS I/O. This optimization provides dedicated throughput to Amazon EBS and an optimized configuration stack to provide optimal EBS I/O performance. This optimization isn't available with all instance types. Additional usage charges apply when using an EBS Optimized instance.

Type: Boolean
Default: false
Required: No

Response Elements

The following elements are returned in a RequestSpotInstancesResponse element.

requestId
The ID of the request.
Type: xsd:string

spotInstanceRequestSet
Information about the Spot Instance request, wrapped in an item element.
Type: SpotInstanceRequestSetItemType (p. 515)
Examples

Example Request

This example creates a Spot Instances request for two m1.small instances and associates an IAM instance profile called s3access with them.

https://ec2.amazonaws.com/?Action=RequestSpotInstances
&SpotPrice=0.50
&InstanceCount=2
&type=one-time
&AvailabilityZoneGroup=MyAzGroup
&LaunchSpecification.ImageId=ami-1a2b3c4d
&LaunchSpecification.KeyName=gsg-keypair
&LaunchSpecification.SecurityGroup.1=websrv
&LaunchSpecification.InstanceType=m1.small
&LaunchSpecification.IamInstanceProfile.Name=s3access
&AUTHPARAMS

Example Response

<RequestSpotInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4ec9-99ed-be587EXAMPLE</requestId>
  <spotInstanceRequestSet>
    <item>
      <spotInstanceRequestId>sir-1a2b3c4d</spotInstanceRequestId>
      <spotPrice>0.5</spotPrice>
      <type>one-time</type>
      <state>open</state>
      <status>
        <code>pending-evaluation</code>
        <updateTime>YYYY-MM-DDTHH:MM:SS.000Z</updateTime>
        <message>Your Spot request has been submitted for review, and is pending evaluation.</message>
      </status>
      <availabilityZoneGroup>MyAzGroup</availabilityZoneGroup>
      <launchSpecification>
        <imageId>ami-1a2b3c4d</imageId>
        <keyName>gsg-keypair</keyName>
        <groupSet>
          <item>
            <groupId>sg-1a2b3c4d</groupId>
            <groupName>websrv</groupName>
          </item>
        </groupSet>
        <instanceType>m1.small</instanceType>
        <blockDeviceMapping/>
        <monitoring>
          <enabled>false</enabled>
        </monitoring>
        <ebsOptimized>false</ebsOptimized>
      </launchSpecification>
      <createTime>YYYY-MM-DDTHH:MM:SS.000Z</createTime>
      <productDescription>Linux/UNIX</productDescription>
    </item>
  </spotInstanceRequestSet>
</RequestSpotInstancesResponse>
</item>
</spotInstanceRequestSet>
</RequestSpotInstancesResponse>

Related Actions

- DescribeSpotInstanceRequests (p. 282)
- CancelSpotInstanceRequests (p. 49)
- DescribeSpotPriceHistory (p. 290)
ResetImageAttribute

Description

Resets an attribute of an AMI to its default value.

Note
The productCodes attribute cannot be reset.

Request Parameters

ImageId
The ID of the AMI.
Type: String
Default: None
Required: Yes

Attribute
The attribute to reset (currently you can only reset the launch permission attribute).
Type: String
Default: None
Valid value: launchPermission
Required: Yes

Response Elements

The following elements are returned in a ResetImageAttributeResponse element.

requestId
The ID of the request.
Type: xsd:string

return
Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example resets the launchPermission attribute for the specified AMI.

https://ec2.amazonaws.com/?Action=ResetImageAttribute
&ImageId=ami-61a54008
&Attribute=launchPermission
&AUTHPARAMS
Example Response

<ResetImageAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</ResetImageAttributeResponse>

Related Actions

• ModifyImageAttribute (p. 357)
• DescribeImageAttribute (p. 190)
ResetInstanceAttribute

Description

Resets an attribute of an instance to its default value. To reset the kernel or RAM disk, the instance must be in a stopped state. To reset the SourceDestCheck, the instance can be either running or stopped.

The SourceDestCheck attribute exists to enable a Network Address Translation (NAT) instance in a VPC to perform NAT. The attribute controls whether source/destination checking is enabled on the instance. The default value is true, which means checking is enabled. The value must be false for the instance to perform NAT. For more information, see NAT Instances in the Amazon Virtual Private Cloud User Guide.

Request Parameters

InstanceId

The ID of the instance.
Type: String
Default: None
Required: Yes

Attribute

The attribute to reset.
Type: String
Default: None
Valid values: kernel | ramdisk | sourceDestCheck
Required: Yes

Response Elements

The following elements are returned in a ResetInstanceAttributeResponse element.

requestId

The ID of the request.
Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.
Type: xsd:boolean

Examples

Example Request

This example resets the kernel attribute.

https://ec2.amazonaws.com/?Action=ResetInstanceAttribute
&InstanceId=i-1a2b3c4d
&Attribute=kernel
&AUTHPARAMS

API Version 2013-02-01
Example Response

```
<ResetInstanceAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPL</requestId>
  <return>true</return>
</ResetInstanceAttributeResponse>
```

Related Actions

- ModifyInstanceAttribute (p. 360)
- DescribeInstanceAttribute (p. 200)
ResetNetworkInterfaceAttribute

Description
Resets a network interface attribute. You can specify only one attribute at a time.

Request Parameters

NetworkInterfaceId
- The ID of the network interface.
  - Type: String
  - Default: None
  - Required: Yes

Attribute=[sourceDestCheck]
- The name of the attribute to reset; sourceDestCheck defaults to true.
  - Type: String
  - Default: None
  - Required: Yes

Response Elements

The following elements are returned in a ResetNetworkInterfaceAttributeResponse element.

requestId
- The ID of the request.
  - Type: xsd:string

return
- Returns true if the request succeeds. Otherwise, returns an error.
  - Type: xsd:boolean

Examples

Example Request
This example resets the sourceDestCheck attribute for the elastic network interface (ENI) eni-ffda3197.

https://ec2.amazonaws.com/?Action=ResetNetworkInterfaceAttribute&NetworkInterfaceId=eni-ffda3197&Attribute=sourceDestCheck&AUTHPARAMS

Example Response

```xml
  <requestId>5187642e-3f16-44a3-b05f-24c3848b5162</requestId>
  <return>true</return>
</ResetNetworkInterfaceAttributeResponse>
```
Related Actions

- AttachNetworkInterface (p. 25)
- DetachNetworkInterface (p. 328)
- CreateNetworkInterface (p. 78)
- DeleteNetworkInterface (p. 137)
- DescribeNetworkInterfaceAttribute (p. 235)
- DescribeNetworkInterfaces (p. 237)
- ModifyNetworkInterfaceAttribute (p. 363)
ResetSnapshotAttribute

Description

Resets permission settings for the specified snapshot.

Request Parameters

SnapshotId

The ID of the snapshot.

Type: String

Default: None

Required: Yes

Attribute

The attribute to reset (currently only the attribute for permission to create volumes can be reset)

Type: String

Default: None

Valid value: createVolumePermission

Required: Yes

Response Elements

The following elements are returned in a ResetSnapshotAttributeResponse element.

requestId

The ID of the request.

Type: xsd:string

return

Returns true if the request succeeds. Otherwise, returns an error.

Type: xsd:boolean

Examples

Example Request

This example resets the permissions for snap-1a2b3c4d, making it a private snapshot that can only be used by the account that created it.

https://ec2.amazonaws.com/?Action=ResetSnapshotAttribute
&SnapshotId=snap-1a2b3c4d
&Attribute=createVolumePermission
&AUTHPARAMS

Example Response

<ResetSnapshotAttributeResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
Related Actions

- ModifySnapshotAttribute (p. 365)
- DescribeSnapshotAttribute (p. 274)
- DescribeSnapshots (p. 276)
- CreateSnapshot (p. 101)
RevokeSecurityGroupEgress

Description

Removes one or more egress rules from a security group for EC2-VPC. The values that you specify in the revoke request (for example, ports) must match the existing rule’s values for the rule to be revoked.

Each rule consists of the protocol and the CIDR range or destination security group. For the TCP and UDP protocols, you must also specify the destination port or range of ports. For the ICMP protocol, you must also specify the ICMP type and code.

Rule changes are propagated to instances within the security group as quickly as possible. However, a small delay might occur.

For more information, see Security Groups in the Amazon Virtual Private Cloud User Guide.

Request Parameters

GroupId
The ID of the security group to modify.
Type: String
Default: None
Required: Yes

IpPermissions.n.IpProtocol
The IP protocol name or number (see Protocol Numbers).
When you call DescribeSecurityGroups, the protocol value returned is the number. Exception: For TCP, UDP, and ICMP, the value returned is the name (for example, tcp, udp, or icmp).
Type: String
Valid values: tcp | udp | icmp or any protocol number (see Protocol Numbers). Use -1 to specify all.
Required: Yes

IpPermissions.n.FromPort
The start of port range for the TCP and UDP protocols, or an ICMP type number. For the ICMP type number, you can use -1 to specify all ICMP types.
Type: Integer
Default: None
Required: Conditional
Condition: Required for ICMP and any protocol that uses ports

IpPermissions.n.ToPort
The end of port range for the TCP and UDP protocols, or an ICMP code number. For the ICMP code number, you can use -1 to specify all ICMP codes for the given ICMP type.
Type: Integer
Default: None
Required: Conditional
Condition: Required for ICMP and any protocol that uses ports

IpPermissions.n.Groups.m.GroupId
The name of the destination security group. Cannot be used when specifying a CIDR IP address.
Type: String
Default: None
Condition: Required if modifying access for one or more destination security groups.
Required: Conditional

**IpPermissions.n.IpRanges.m.CidrIp**

The CIDR range. Cannot be used when specifying a destination security group.

- Type: String
- Default: None
- Constraints: Valid CIDR IP address range.
- Required: Conditional
- Condition: Required if modifying access for one or more IP address ranges.

**Response Elements**

The following elements are returned in a `RevokeSecurityGroupEgressResponse` element.

- **requestId**
  - The ID of the request.
  - Type: `xsd:string`

- **return**
  - Returns `true` if the request succeeds. Otherwise, returns an error.
  - Type: `xsd:boolean`

**Examples**

**Example Request**

This example revokes the access that the `websrv` security group for EC-VPC (with ID `sg-1a2b3c4d`) has to the 205.192.0.0/16 and 205.159.0.0/16 address ranges on TCP port 80.

```
&GroupName=websrv
&GroupName=sg-1a2b3c4d
&IpPermissions.1.IpProtocol=tcp
&IpPermissions.1.FromPort=80
&IpPermissions.1.ToPort=80
&IpPermissions.1.IpRanges.1.CidrIp=205.192.0.0/16
&IpPermissions.1.IpRanges.2.CidrIp=205.159.0.0/16
&AUTHPARAMS
```

**Example Request**

This example revokes the access that the security group for EC2-VPC (with ID `sg-1a2b3c4d`) has to the security group for EC2-VPC with ID `sg-9a8d7f5c` on TCP port 1433.

```
&GroupId=sg-1a2b3c4d
&IpPermissions.1.IpProtocol=tcp
&IpPermissions.1.FromPort=1433
&IpPermissions.1.ToPort=1433
&IpPermissions.1.Groups.1.GroupId=sg-9a8d7f5c
&AUTHPARAMS
```
Example Response

  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</RevokeSecurityGroupEgressResponse>

Related Actions

- CreateSecurityGroup (p. 99)
- DescribeSecurityGroups (p. 270)
- AuthorizeSecurityGroupEgress (p. 31)
- AuthorizeSecurityGroupIngress (p. 34)
- AuthorizeSecurityGroupIngress (p. 416)
- DeleteSecurityGroup (p. 145)
RevokeSecurityGroupIngress

Description

Removes one or more ingress rules from a security group. The values that you specify in the revoke request (for example, ports) must match the existing rule’s values for the rule to be removed.

A security group is for use with instances either in the EC2-Classic platform or in a specific VPC. For more information, see Amazon EC2 Security Groups in the Amazon Elastic Compute Cloud User Guide and Security Groups for Your VPC in the Amazon Virtual Private Cloud User Guide.

Each rule consists of the protocol and the CIDR range or source security group. For the TCP and UDP protocols, you must also specify the destination port or range of ports. For the ICMP protocol, you must also specify the ICMP type and code.

Rule 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.

Request Parameters

GroupId
The ID of the security group. The security group must belong to your AWS account.
Type: String
Default: None
Required: Conditional
Condition: Required for EC2-VPC; can be used instead of GroupName otherwise

GroupName
The name of the security group.
Type: String
Default: None
Required: Conditional
Condition: For EC2-Classic, can be used instead of GroupId.

IpPermissions.n.IpProtocol
The IP protocol name or number (see Protocol Numbers). For EC2-Classic, security groups can have rules only for TCP, UDP, and ICMP. For EC2-VPC, security groups can have rules assigned to any protocol number.

When you call DescribeSecurityGroups, the protocol value returned is the number. Exception: For TCP, UDP, and ICMP, the value returned is the name (for example, tcp, udp, or icmp).
Type: String
Valid values for EC2-Classic: tcp | udp | icmp or the corresponding protocol number (6 | 17 | 1).
Valid values for EC2-VPC: tcp | udp | icmp or any protocol number (see Protocol Numbers). Use -1 to specify all.
Required: Conditional
Condition: Required for EC2-VPC

IpPermissions.n.FromPort
The start of port range for the TCP and UDP protocols, or an ICMP type number. For the ICMP type number, you can use -1 to specify all ICMP types.
Type: Integer
Default: None
Required: Conditional
Condition: Required for ICMP and any protocol that uses ports
**IpPermissions.n.ToPort**
The end of port range for the TCP and UDP protocols, or an ICMP code number. For the ICMP code number, you can use -1 to specify all ICMP codes for the given ICMP type.
- Type: Integer
- Default: None
- Required: Conditional
- Condition: Required for ICMP and any protocol that uses ports

**IpPermissions.n.Groups.m.UserId**
The AWS account ID that owns the source security group. Cannot be used when specifying a CIDR IP address.
- Type: String
- Default: None
- Required: Conditional
- Condition: For security groups in EC2-Classic only. Required if modifying access for one or more source security groups.

**IpPermissions.n.Groups.m.GroupName**
The name of the source security group. Cannot be used when specifying a CIDR IP address.
- Type: String
- Default: None
- Required: Conditional
- Condition: Required if modifying access for one or more source security groups.

**IpPermissions.n.Groups.m.GroupId**
The ID of the source security group. Cannot be used when specifying a CIDR IP address.
- Type: String
- Default: None
- Required: Conditional
- Condition: For EC2-VPC only. Required if modifying access for one or more source security groups.

**IpPermissions.n.IpRanges.m.CidrIp**
The CIDR range. Cannot be used when specifying a source security group.
- Type: String
- Default: None
- Constraints: Valid CIDR IP address range.
- Required: Conditional
- Condition: Required if modifying access for one or more IP address ranges.

**Response Elements**
The following elements are returned in a `RevokeSecurityGroupIngressResponse` element.

**requestId**
The ID of the request.
- Type: xsd:string

**return**
Returns `true` if the request succeeds. Otherwise, returns an error.
- Type: xsd:boolean
Examples

Example Request

This example revokes TCP port 80 access from the 205.192.0.0/16 address range for the security group named `websrv`. If the security group were for a VPC, you’d specify the ID of the security group instead of the name.

```xml
https://ec2.amazonaws.com/?Action=RevokeSecurityGroupIngress
&GroupName=websrv
&IpProtocol=tcp
&FromPort=80
&ToPort=80
&CidrIp=205.192.0.0/16
&AUTHPARAMS
```

Example Response

```xml
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</RevokeSecurityGroupIngressResponse>
```

Related Actions

- CreateSecurityGroup (p. 99)
- DescribeSecurityGroups (p. 270)
- AuthorizeSecurityGroupIngress (p. 34)
- DeleteSecurityGroup (p. 145)
RunInstances

Description

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

If capacity is insufficient to launch the maximum number of instances requested in one Availability Zone (the specified Availability Zone for targeted requests, or an Availability Zone chosen by EC2 for untargeted requests), Amazon EC2 launches the minimum number specified. If Amazon EC2 cannot launch the minimum number of instances requested in a single Availability Zone, no instances are launched.

Note

Every instance is launched in a security group (created using the CreateSecurityGroup operation). If you don't specify a security group in the RunInstances request, the "default" security group is used.

For Linux instances, you can provide an optional key pair ID in the launch request (created using the CreateKeyPair or ImportKeyPair operation). The instances will have access to the 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 (as part of rc.local) allowing for secure access without passwords.

You can provide optional user data in the launch request. All instances that collectively comprise the launch request have access to this data. For more information, see Instance Metadata in the Amazon Elastic Compute Cloud User Guide.

Note

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

Request Parameters

ImageId

The ID of the AMI.
Type: String
Default: None
Required: Yes

MinCount

The 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 (the default for each account is 20, but this limit can be increased).
Required: Yes

MaxCount

The 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.
Request Parameters

- **KeyId**
  - Type: Integer
  - Default: None
  - Constraints: Between 1 and the maximum number allowed for your account (the default for each account is 20, but this limit can be increased).
  - Required: Yes

- **KeyName**
  - The name of the key pair to use.
  - Type: String
  - Default: None
  - Required: No

- **SecurityGroupId.n**
  - One or more security group IDs.
  - Type: String
  - Default: None
  - Required: Conditional
  - Condition: Required for nondefault VPC; optional for EC2-Classic, default VPC

- **SecurityGroup.n**
  - [EC2-Classic, default VPC] One or more security group names.
  - Type: String
  - Default: None
  - Required: Conditional
  - Condition: For EC2-Classic, default VPC, you must specify either a group ID or a group name

- **UserData**
  - The Base64-encoded MIME user data to be made available to the instance(s) in this reservation.
  - Type: String
  - Default: None
  - Required: No

- **InstanceType**
  - The instance type. See Available Instance Types for more information.
  - Type: String
  - Valid values: t1.micro | m1.small | m1.medium | m1.large | m1.xlarge | m3.xlarge | m3.2xlarge | c1.medium | c1.xlarge | m2.xlarge | m2.2xlarge | m2.4xlarge | cr1.8xlarge | hi1.4xlarge | hs1.8xlarge | cc1.4xlarge | cc2.8xlarge | cgl1.4xlarge
  - Default: m1.small
  - Required: No

- **Placement.AvailabilityZone**
  - The Availability Zone to launch the instance into.
  - Type: String
  - Default: EC2 chooses a zone for you
  - Required: No

- **Placement.GroupName**
  - The name of an existing placement group you want to launch the instance into (for cluster instances).
  - Type: String
  - Default: None
  - Required: No

- **Placement.Tenancy**
  - The tenancy of the instance. An instance with a tenancy of dedicated runs on single-tenant hardware and can only be launched into a VPC.
  - Type: String
Default: default
Required: No

**KernelId**
The ID of the kernel with which to launch the instance.
Type: String
Default: None
Required: No

**RamdiskId**
The ID of the RAM disk. 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, refer to the Resource Center and search for the kernel ID.
Type: String
Default: None
Required: No

**BlockDeviceMapping.n.DeviceName**
The device name exposed to the instance (for example, /dev/sdh or xvdh). For more information, see Block Device Mapping.
Type: String
Default: None
Required: No

**BlockDeviceMapping.n.NoDevice**
Suppresses the device mapping.
Type: empty element
Default: None
Required: No

**BlockDeviceMapping.n.VirtualName**
The virtual device name, ephemeral[0..3]. The number of instance store volumes depends on the instance type.
Type: String
Default: None
Required: No

**BlockDeviceMapping.n.Ebs.SnapshotId**
The ID of the snapshot.
Type: String
Default: None
Required: No

**BlockDeviceMapping.n.Ebs.VolumeSize**
The size of the volume, in GiBs.
Type: Integer
Valid values: If the volume type is io1, the minimum size of the volume is 10 GiB.
Default: If you're creating the volume from a snapshot and don't specify a volume size, the default is the snapshot size.
Required: No

**BlockDeviceMapping.n.Ebs.DeleteOnTermination**
Whether the volume is deleted on instance termination.
Type: Boolean
Default: true
Required: No
**BlockDeviceMapping.n.Ebs.VolumeType**

The volume type.

- **Type:** String
- **Valid values:** standard | io1
- **Default:** standard
- **Required:** No

**BlockDeviceMapping.n.Ebs.Iops**

The number of I/O operations per second (IOPS) that the volume supports.

- **Type:** Integer
- **Valid values:** Range is 100 to 4000.
- **Default:** None
- **Required:** Required when the volume type is io1; not used with standard volumes.

**Monitoring.Enabled**

Enables monitoring for the instance.

- **Type:** Boolean
- **Default:** false
- **Required:** No

**SubnetId**

[EC2-VPC] The ID of the subnet to launch the instance into.

- **Type:** String
- **Default:** None
- **Required:** No

**DisableApiTermination**

Whether you can terminate the instance using the EC2 API. A value of true means you can't terminate the instance using the API (i.e., the instance is "locked"); a value of false means you can. If you set this to true, and you later want to terminate the instance, you must first change the disableApiTermination attribute's value to false using ModifyInstanceAttribute.

- **Type:** Boolean
- **Default:** false
- **Required:** No

**InstanceInitiatedShutdownBehavior**

Whether the instance stops or terminates on instance-initiated shutdown.

- **Type:** String
- **Valid values:** stop | terminate
- **Default:** stop
- **Required:** No

**PrivateIpAddress**

[EC2-VPC] You can optionally use this parameter to assign the instance a specific available IP address from the IP address range of the subnet as the primary IP address. Only one private IP address can be designated as primary. Therefore, you cannot specify this parameter if you are also specifying PrivateIpAddresses.n.Primary with a value of true with the PrivateIpAddresses.n.PrivateIpAddress option.

- **Type:** String
- **Default:** We select an IP address from the IP address range of the subnet for the instance
- **Required:** No

**ClientToken**

Unique, case-sensitive identifier you provide to ensure idempotency of the request. For more information, see How to Ensure Idempotency in the Amazon Elastic Compute Cloud User Guide.

- **Type:** String
- **Default:** None
Constraints: Maximum 64 ASCII characters
Required: No

**NetworkInterface.n.NetworkInterfaceId**
Attaches an existing interface to a single instance. Requires n=1 instances.
Type: String
Default: None
Required: No

**NetworkInterface.n.DeviceIndex**
Applies to both attaching existing network interfaces and when creating new network interfaces.
Type: Integer
Default: None
Required: No

**NetworkInterface.n.SubnetId**
Applies only when creating new network interfaces.
Type: String
Default: None
Required: No

**NetworkInterface.n.Description**
Applies only when creating new network interfaces.
Type: String
Default: None
Required: No

**NetworkInterface.n.PrivateIpAddress**
The primary private IP address of the network interface. Applies only when creating new network interfaces. Requires n=1 network interfaces in launch.
Type: String
Default: None
Required: No

**NetworkInterface.n.PrivateIpAddresses.n.PrivateIpAddress**
The private IP address of the specified network interface. This parameter can be used multiple times to specify explicit private IP addresses for a network interface, but only one private IP address can be designated as primary.

Only one private IP address can be designated as primary. Therefore, you cannot specify this parameter with the `NetworkInterface.n.PrivateIpAddresses.n.Primary` value of `true` if you designate a primary private IP address using the `NetworkInterface.n.PrivateIpAddress` option.
Type: String
Default: None
Required: No

**NetworkInterface.n.PrivateIpAddresses.n.Primary**
Whether the private IP address is the primary private IP address.
Only one private IP address can be designated as primary. Therefore, you cannot specify this parameter with the `NetworkInterface.n.PrivateIpAddresses.n.Primary` value of `true` and the `NetworkInterface.n.PrivateIpAddresses.n.PrivateIpAddress` option if you designate a primary private IP address using the `NetworkInterface.n.PrivateIpAddress` option.
Type: Boolean
Default: None
Required: No

**NetworkInterface.n.SecondaryPrivateIpAddressCount**
The number of private IP addresses to assign to a network interface.
For a single network interface, you cannot specify this option and specify more than one private IP address using `NetworkInterface.n.PrivateIpAddress`.

Required: No

`NetworkInterface.n.SecurityGroupId.n`
Applies only when creating new network interfaces.
Type: String
Default: None
Required: No

`NetworkInterface.n.DeleteOnTermination`
Applies to all network interfaces.
Type: Boolean
Default: None
Required: No

`IamInstanceProfile.Arn`
Amazon resource name (ARN) of the IAM Instance Profile (IIP) to associate with the instances.
Type: String
Default: None
Required: No

`IamInstanceProfile.Name`
The name of the IAM Instance Profile (IIP) to associate with the instances.
Type: String
Default: None
Required: No

`EbsOptimized`
Whether the instance is optimized for EBS I/O. This optimization provides dedicated throughput to Amazon EBS and an optimized configuration stack to provide optimal EBS I/O performance. This optimization isn't available with all instance types. Additional usage charges apply when using an EBS Optimized instance.
Type: Boolean
Default: false
Required: No

Response Elements

The following elements are returned in a `RunInstancesResponse` element.

`requestId`
The ID of the request.
Type: xsd:string

`reservationId`
The ID of the reservation.
Type: xsd:string

`ownerId`
The ID of the AWS account that owns the reservation.
Type: xsd:string

`groupSet`
A list of security groups the instance belongs to. Each group is wrapped in an `item` element.
Type: `GroupItemType` (p. 469)
instancesSet
A list of instances. Each instance is wrapped in an item element.
Type: RunningInstancesItemType (p. 510)

requesterId
The ID of the requester that launched the instances on your behalf (for example, AWS Management Console, Auto Scaling).
Type: xsd:string

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-1d
&Monitoring.Enabled=true
&AUTHPARAMS

Example Response

<RunInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <reservationId>r-47a5402e</reservationId>
  <ownerId>111122223333</ownerId>
  <groupSet>
    <item>
      <groupId>sg-245f6a01</groupId>
      <groupName>default</groupName>
    </item>
  </groupSet>
  <instancesSet>
    <item>
      <instanceId>i-2ba64342</instanceId>
      <imageId>ami-60a54009</imageId>
      <instanceState>
        <code>0</code>
        <name>pending</name>
      </instanceState>
      <privateDnsName/>
      <dnsName/>
      <reason/>
      <amiLaunchIndex>0</amiLaunchIndex>
      <instanceType>m1.small</instanceType>
      <launchTime>2007-08-07T11:51:50.000Z</launchTime>
      <placement>
        <availabilityZone>us-east-1d</availabilityZone>
        <groupName/>
        <tenancy>default</tenancy>
      </placement>
    </item>
  </instancesSet>
</RunInstancesResponse>
<monitoring>
  <state>enabled</state>
</monitoring>
<sourceDestCheck>true</sourceDestCheck>
<groupSet>
  <item>
    <groupId>sg-245f6a01</groupId>
    <groupName>default</groupName>
  </item>
</groupSet>
<virtualizationType>paravirtual</virtualizationType>
<hypervisor>xen</hypervisor>
ebsOptimized>false</ebsOptimized>
</item>
<item>
  <instanceId>i-2bc64242</instanceId>
  <imageId>ami-60a54009</imageId>
  <instanceState>
    <code>0</code>
    <name>pending</name>
  </instanceState>
  <AMILaunchIndex>1</AMILaunchIndex>
  <instanceType>m1.small</instanceType>
  <launchTime>2007-08-07T11:51:50.000Z</launchTime>
  <placement>
    <availabilityZone>us-east-1b</availabilityZone>
    <groupName/>
    <tenancy>default</tenancy>
  </placement>
  <monitoring>
    <state>enabled</state>
  </monitoring>
</item>
<item>
  <groupId>sg-245f6a01</groupId>
  <groupName>default</groupName>
</item>
</groupSet>
<virtualizationType>paravirtual</virtualizationType>
<hypervisor>xen</hypervisor>
ebsOptimized>false</ebsOptimized>
</item>
<item>
  <instanceId>i-2be64332</instanceId>
  <imageId>ami-60a54009</imageId>
  <instanceState>
    <code>0</code>
    <name>pending</name>
  </instanceState>
  <AMILaunchIndex>2</AMILaunchIndex>
  <instanceType>m1.small</instanceType>
  <launchTime>2007-08-07T11:51:50.000Z</launchTime>
</item>
Example Request

This example launches an instance of the ami-31814f58 AMI and attaches an elastic network interface to it.

https://ec2.amazonaws.com/?Action=RunInstances
ImageId=ami-31814f58
&InstanceType=m1.small
&MaxCount=1
&MinCount=1
&Monitoring.Enabled=false
&SubnetId=subnet-b2a249da
&AUTHPARAMS

Example Response

<RunInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01="/>
<requestId>e86ff3c8-2400-45e3-a4e7-f158a69283d4</requestId>
<reservationId>r-157ad274</reservationId>
<ownerId>111122223333</ownerId>
<groupSet/>
<instancesSet>
<item>
 <instanceId>i-0ee0356c</instanceId>
 <imageId>ami-31814f58</imageId>
 <instanceState>
  <code>0</code>
  <name>pending</name>
 </instanceState>
 <privateDnsName/>
 <dnsName/>
 <reason/>
 <amiLaunchIndex>0</amiLaunchIndex>
<productCodes/>
<instanceType>m1.small</instanceType>
.launchTime>2011-12-20T08:29:31.000Z</launchTime>
<placement>
    <availabilityZone>us-east-1b</availabilityZone>
    <groupName/>
    <tenancy>default</tenancy>
</placement>
<kernelId>aki-805ea7e9</kernelId>
<monitoring>
    <state>disabled</state>
</monitoring>
<subnetId>subnet-b2a249da</subnetId>
<vpcId>vpc-1ea24976</vpcId>
<privateIpAddress>10.0.0.142</privateIpAddress>
<sourceDestCheck>true</sourceDestCheck>
<groupSet>
    <item>
        <groupId>sg-050c1369</groupId>
        <groupName>default</groupName>
    </item>
</groupSet>
<stateReason>
    <code>pending</code>
    <message>pending</message>
</stateReason>
<architecture>i386</architecture>
<rootDeviceType>ebs</rootDeviceType>
<rootDeviceName>/dev/sda1</rootDeviceName>
<blockDeviceMapping/>
<virtualizationType>paravirtual</virtualizationType>
<clientToken/>
<hypervisor>xen</hypervisor>
<networkInterfaceSet>
    <item>
        <networkInterfaceId>eni-c6bb50ae</networkInterfaceId>
        <subnetId>subnet-b2a249da</subnetId>
        <vpcId>vpc-1ea24976</vpcId>
        <description/>
        <ownerId>111122223333</ownerId>
        <status>in-use</status>
        <privateIpAddress>10.0.0.142</privateIpAddress>
        <sourceDestCheck>true</sourceDestCheck>
        <groupSet>
            <item>
                <groupId>sg-050c1369</groupId>
                <groupName>default</groupName>
            </item>
        </groupSet>
        <attachment>
            <attachmentId>eni-attach-0326646a</attachmentId>
            <deviceIndex>0</deviceIndex>
            <status>attaching</status>
            <attachTime>2011-12-20T08:29:31.000Z</attachTime>
            <deleteOnTermination>true</deleteOnTermination>
        </attachment>
    </item>
</networkInterfaceSet>
Example Request

The following example launches an m1.large instance into a VPC in subnet subnet-a61dafcf with a single network interface, a primary private IP address of 10.0.2.106 and two secondary private IP addresses (10.0.2.107 and 10.0.2.108)

https://ec2.amazonaws.com/?Action=RunInstances
&ImageId=ami-beb0caec
&InstanceType=m1.large
&MaxCount=1
&MinCount=1
&Monitoring.Enabled=false
&NetworkInterface.0.DeviceIndex=0
&NetworkInterface.0.PrivateIpAddresses.0.Primary=true
&NetworkInterface.0.PrivateIpAddresses.0.PrivateIpAddress=10.0.2.106
&NetworkInterface.0.PrivateIpAddresses.1.Primary=false
&NetworkInterface.0.PrivateIpAddresses.1.PrivateIpAddress=10.0.2.107
&NetworkInterface.0.PrivateIpAddresses.2.Primary=false
&NetworkInterface.0.PrivateIpAddresses.2.PrivateIpAddress=10.0.2.108
&NetworkInterface.0.SubnetId=subnet-a61dafcf
&AUTHPARAMS

Example Request

This example launches a Dedicated Instance into a VPC.

https://ec2.amazonaws.com/?Action=RunInstances
&ImageId=ami-2a1fec43
&SubnetId=subnet-dea63cb7
&Placement.Tenancy=dedicated
&MinCount=1
&MaxCount=1
&AUTHPARAMS

Related Actions

- DescribeInstances (p. 203)
- StopInstances (p. 432)
- StartInstances (p. 430)
- TerminateInstances (p. 434)
- AuthorizeSecurityGroupIngress (p. 34)
- RevokeSecurityGroupIngress (p. 416)
- DescribeSecurityGroups (p. 270)
- CreateSecurityGroup (p. 99)
- CreateKeyPair (p. 71)
- ImportKeyPair (p. 352)
**StartInstances**

**Description**

Starts an Amazon EBS-backed AMI that you've previously stopped.

Instances that use Amazon EBS volumes as their root devices can be quickly stopped and started. When an instance is stopped, the compute resources are released and you are not billed for hourly instance usage. However, your root partition Amazon EBS volume remains, continues to persist your data, and you are charged for Amazon EBS volume usage. You can restart your instance at any time. Each time you transition an instance from stopped to started, we charge a full instance hour, even if transitions happen multiple times within a single hour.

**Note**

Before stopping an instance, make sure it is in a state from which it can be restarted. Stopping an instance does not preserve data stored in RAM. Performing this operation on an instance that uses an instance store as its root device returns an error.

For more information, see Using Amazon EBS-Backed AMIs and Instances.

**Request Parameters**

*InstanceId.n*

One or more instance IDs.

Type: String

Default: None

Required: Yes

**Response Elements**

The following elements are returned in a StartInstancesResponse element.

*requestId*

The ID of the request.

Type: xsd:string

*instancesSet*

A list of instance state changes. Each change is wrapped in an item element.

Type: InstanceStateChangeType (p. 481)

**Examples**

**Example Request**

This example starts the i-10a64379 instance.

https://ec2.amazonaws.com/?Action=StartInstances
&InstanceId.1=i-10a64379
&AUTHPARAMS
Example Response

```xml
<StartInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <instancesSet>
    <item>
      <instanceId>i-10a64379</instanceId>
      <currentState>
        <code>0</code>
        <name>pending</name>
      </currentState>
      <previousState>
        <code>80</code>
        <name>stopped</name>
      </previousState>
    </item>
  </instancesSet>
</StartInstancesResponse>
```

Related Actions

- StopInstances (p. 432)
- RunInstances (p. 419)
- DescribeInstances (p. 203)
- TerminateInstances (p. 434)
StopInstances

Description

Stops an Amazon EBS-backed instance. Each time you transition an instance from stopped to started, we charge a full instance hour, even if transitions happen multiple times within a single hour.

Important

Although Spot Instances can use Amazon EBS-backed AMIs, they don't support Stop/Start. In other words, you can't stop and start Spot Instances launched from an AMI with an Amazon EBS root device.

Instances that use Amazon EBS volumes as their root devices can be quickly stopped and started. When an instance is stopped, the compute resources are released and you are not billed for hourly instance usage. However, your root partition Amazon EBS volume remains, continues to persist your data, and you are charged for Amazon EBS volume usage. You can restart your instance at any time.

Note

Before stopping an instance, make sure it is in a state from which it can be restarted. Stopping an instance does not preserve data stored in RAM. Performing this operation on an instance that uses an instance store as its root device returns an error.

You can stop, start, and terminate EBS-backed instances. You can only terminate S3-backed instances. What happens to an instance differs if you stop it or terminate it. For example, when you stop an instance, the root device and any other devices attached to the instance persist. When you terminate an instance, the root device and any other devices attached during the instance launch are automatically deleted. For more information about the differences between stopping and terminating instances, see Stopping Instances in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

InstanceId.n

One or more instance IDs.
Type: String
Default: None
Required: Yes

Force

Forces the instance to stop. The instance will not have an opportunity to flush file system caches or file system metadata. If you use this option, you must perform file system check and repair procedures.
This option is not recommended for Windows instances.
Type: Boolean
Default: false
Required: No

Response Elements

The following elements are returned in a StopInstancesResponse element.

requestId
The ID of the request.
Type: xsd:string
instancesSet
A list of instance state changes. Each change is wrapped in an item element.
Type: InstanceStateChangeType (p. 481)

Examples

Example Request
This example stops the i-10a64379 instance without using the "force" option.

https://ec2.amazonaws.com/?Action=StopInstances
&InstanceId.1=i-10a64379

Example Response

<StopInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <instancesSet>
    <item>
      <instanceId>i-10a64379</instanceId>
      <currentState>
        <code>64</code>
        <name>stopping</name>
      </currentState>
      <previousState>
        <code>16</code>
        <name>running</name>
      </previousState>
    </item>
  </instancesSet>
</StopInstancesResponse>

Related Actions

- StartInstances (p. 430)
- RunInstances (p. 419)
- DescribeInstances (p. 203)
- TerminateInstances (p. 434)
Terminatelnstances

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).

Note

By default, Amazon EC2 deletes all Amazon EBS volumes that were attached when the instance launched. Amazon EBS volumes attached after instance launch continue running.

You can stop, start, and terminate EBS-backed instances. You can only terminate S3-backed instances. What happens to an instance differs if you stop it or terminate it. For example, when you stop an instance, the root device and any other devices attached to the instance persist. When you terminate an instance, the root device and any other devices attached during the instance launch are automatically deleted. For more information about the differences between stopping and terminating instances, see Stopping Instances in the Amazon Elastic Compute Cloud User Guide

Request Parameters

InstanceId.n

One or more instance IDs.
Type: String
Default: None
Required: Yes

Response Elements

The following elements are returned in a TerminateInstancesResponse element.

requestId

The ID of the request.
Type: xsd:string

instancesSet

A list of instance state changes. Each change is wrapped in an item element.
Type: InstanceStateChangeType (p. 481)

Examples

Example Request

This example terminates the i-3ea74257 instance.

https://ec2.amazonaws.com/?Action=TerminateInstances
&InstanceId.1=i-3ea74257
&AUTHPARAMS
Example Response

```xml
<TerminateInstancesResponse xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <instancesSet>
    <item>
      <instanceId>i-3ea74257</instanceId>
      <currentState>
        <code>32</code>
        <name>shutting-down</name>
      </currentState>
      <previousState>
        <code>16</code>
        <name>running</name>
      </previousState>
    </item>
  </instancesSet>
</TerminateInstancesResponse>
```

Related Actions

- DescribeInstances (p. 203)
- RunInstances (p. 419)
- StopInstances (p. 432)
- StartInstances (p. 430)
UnassignPrivateIpAddresses

Description

Unassigns one or more secondary private IP addresses from a network interface.

This command is only available in EC2-VPC.

Request Parameters

**NetworkInterfaceId**

The network interface from which the secondary private IP address will be unassigned.

Type: String

Default: None

Required: Yes

**PrivateIpAddress.n**

The secondary private IP addresses that you want to unassign from the network interface. You can specify this option multiple times to unassign more than one IP address.

Type: AssignPrivateIpAddressesSetItemRequestType (p. 444)

Default: None

Required: Yes

Response Elements

The following elements are returned in an `UnassignPrivateIpAddressesResponse` element.

**requestId**

The ID of the request.

Type: xsd:string

**return**

Returns `true` if the request succeeds. Otherwise, returns an error.

Type: xsd:boolean

Examples

Example Request

The following request unassigns two secondary private IP addresses from the specified network interface.

```
https://ec2.amazonaws.com/?Action=UnassignPrivateIpAddresses
&NetworkInterfaceId=eni-197d9972
&PrivateIpAddress.0=10.0.2.60
&PrivateIpAddress.1=10.0.2.65
&amp;
```

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Example Response

```xml
<UnassignPrivateIpAddresses xmlns="http://ec2.amazonaws.com/doc/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <return>true</return>
</UnassignPrivateIpAddresses>
```

Related Actions

- AssignPrivateIpAddresses (p. 14)
UnmonitorInstances

Description

Disables monitoring for a running instance. For more information about monitoring instances, see Monitoring Your Instances and Volumes in the Amazon Elastic Compute Cloud User Guide.

Request Parameters

InstanceId.n
- One or more instance IDs.
- Type: String
- Default: None
- Required: Yes

Response Elements

The following elements are returned in an UnmonitorInstancesResponse element.

requestId
- The ID of the request.
- Type: xsd:string

instancesSet
- A list of monitoring information for one or more instances. Each set of information is wrapped in an item element.
- Type: MonitorInstancesResponseSetItemType (p. 492)

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/2013-02-01/">
  <requestId>59dbff89-35bd-4eac-99ed-be587EXAMPLE</requestId>
  <instancesSet>
    <item>
      <instanceId>i-43a4412a</instanceId>
      <monitoring>
        <state>disabled</state>
      </monitoring>
    </item>
  </instancesSet>
</UnmonitorInstancesResponse>
Related Actions

- MonitorInstances (p. 370)
- RunInstances (p. 419)
Data Types

Topics

• AccountAttributeSetItemType (p. 443)
• AccountAttributeValueSetItemType (p. 443)
• AssignPrivateIpAddressesSetItemRequestType (p. 444)
• AttachmentSetItemResponseType (p. 444)
• AttachmentType (p. 445)
• AvailabilityZoneItemType (p. 445)
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• SpotInstanceStatusMessageType (p. 517)
• SpotPriceHistorySetItemType (p. 517)
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• SubnetType (p. 519)
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• UserDataType (p. 521)
• UserIdGroupPairType (p. 521)
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• VolumeStatusInfoType (p. 523)
• VolumeStatusDetailsItemType (p. 523)
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• VpcType (p. 525)
• VpnConnectionOptionsResponseType (p. 526)
• VpnConnectionType (p. 526)
• VpnGatewayType (p. 527)
AccountAttributeSetItemType

Contains a set of account attributes.

Ancestors

• AccountAttributeSetType

Relevant Operations

• DescribeAccountAttributes (p. 167)

Contents

attributeName
  The name of the attribute.
  Type: String

attributeValueSet
  A list of the values of the requested attributes, each one wrapped in an item element.
  Type: AccountAttributeValueSetItemType (p. 443)

AccountAttributeValueSetItemType

Describes the value of an account attribute.

Ancestors

• AccountAttributeSetItemType (p. 443)

Relevant Operations

• DescribeAccountAttributes (p. 167)

Contents

attributeValue
  The value of the attribute.
  Type: String
AssignPrivateIpAddressesSetItemRequestType

Describes a private IP address.

**Ancestors**

- AssignPrivateIpAddressesType

**Relevant Operations**

- AssignPrivateIpAddresses (p. 14)
- UnassignPrivateIpAddresses (p. 436)

**Contents**

- **privateIpAddress**
  - The private IP address.
  - Type: String

AttachmentSetItemResponseType

The AttachmentSetItemResponseType data type.

**Ancestors**

- AttachmentSetResponseType

**Relevant Operations**

- DescribeVolumes

**Contents**

- **volumeId**
  - The ID of the volume.
  - Type: String

- **instanceId**
  - The ID of the instance.
  - Type: String

- **device**
  - The device name exposed to the instance (e.g., /dev/sdh).
  - Type: String

- **status**
  - The attachment state.
AttachmentType

Describes an attachment between a virtual private gateway and a VPC.

Ancestors

• AttachmentSetType

Relevant Operations

• AttachVpnGateway (p. 29)
• CreateVpnGateway (p. 124)
• DescribeVpnGateways (p. 323)

Contents

vpcId

The ID of the VPC the virtual private gateway is attached to.
Type: String

state

The current state of the attachment.
Type: String
Valid values: attaching | attached | detaching | detached

AvailabilityZoneItemType

The AvailabilityZoneItemType data type.

Ancestors

• AvailabilityZoneSetType

Relevant Operations

• DescribeAvailabilityZones
Contents

zoneName
  The name of the Availability Zone.
  Type: String

zoneState
  The state of the Availability Zone.
  Type: String

regionName
  The name of the Region.
  Type: String

messageSet
  Any messages about the Availability Zone, each one wrapped in an item element.
  Type: AvailabilityZoneMessageType (p. 446)

AvailabilityZoneMessageType

  The AvailabilityZoneMessageType data type.

Ancestors

  • AvailabilityZoneMessageSetType

Relevant Operations

  • DescribeAvailabilityZones

Contents

message
  The message about the Availability Zone.
  Type: String

BlockDeviceMappingItemType

  Describes a block device mapping.

Ancestors

  • BlockDeviceMappingType

Relevant Operations

  • DescribeImageAttribute (p. 190)
• DescribeImages (p. 193)
• DescribeSpotInstanceRequests (p. 282)
• RegisterImage (p. 379)
• RequestSpotInstances (p. 397)
• RunInstances (p. 419)

Contents

deviceName
The device name exposed to the instance (for example, /dev/sdh).
Type: String

virtualName
The virtual device name.
Type: String

ebs
Parameters used to automatically set up Amazon EBS volumes when the instance is launched.
Type: EbsBlockDeviceType (p. 466)

noDevice
Include this empty element to suppress the specified device included in the block device mapping
of the AMI.

BundleInstanceS3StorageType

The BundleInstanceS3StorageType data type.

Ancestors

• BundleInstanceTaskStorageType (p. 448)

Relevant Operations

• BundleInstance
• DescribeBundleTasks
• CancelBundleTask
• BundleInstance

Contents

awsAccessKeyId
The Access Key ID of the owner of the Amazon S3 bucket.
Type: 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: String

**prefix**
The beginning of the file name of the AMI.
Type: 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: String

**uploadPolicySignature**
The signature of the Base64 encoded JSON document.
Type: String

---

**BundleInstanceTaskErrorType**

The BundleInstanceTaskErrorType data type.

**Ancestors**

- BundleInstanceTaskType (p. 449)

**Relevant Operations**

- BundleInstance
- DescribeBundleTasks
- CancelBundleTask

**Contents**

- **code**
The error code.
  Type: String

- **message**
The error message.
  Type: String

---

**BundleInstanceTaskStorageType**

The BundleInstanceTaskStorageType data type.

**Ancestors**

- BundleInstanceTaskType (p. 449)
Relevant Operations

• BundleInstance
• DescribeBundleTasks
• CancelBundleTask
• BundleInstance

Contents

s3
An Amazon S3 storage location.
Type: BundleInstanceS3StorageType (p. 447)

BundleInstanceTaskType

Describes a bundle task.

Ancestors

• BundleInstanceTasksSetType

Relevant Operations

• BundleInstance (p. 38)
• CancelBundleTask (p. 41)
• DescribeBundleTasks (p. 176)

Contents

instanceId
The ID of the instance associated with this bundle task.
Type: String

bundleId
The ID for this bundle task.
Type: String

state
The state of the task.
Type: String
Valid values: pending | waiting-for-shutdown | bundling | storing | cancelling | complete | failed

startTime
The time this task started.
Type: DateTime
**updateTime**
The time of the most recent update for the task.
Type: DateTime

**storage**
The Amazon S3 storage locations.
Type: BundleInstanceTaskStorageType (p. 448)

**progress**
The level of task completion, as a percent (for example, 20%).
Type: String

**error**
If the task fails, a description of the error.
Type: BundleInstanceTaskErrorType (p. 448)

### CancelSpotInstanceRequestsResponseSetItemType

The CancelSpotInstanceRequestsResponseSetItemType data type.

#### Ancestors

- CancelSpotInstanceRequestsResponseSetType

#### Relevant Operations

- CancelSpotInstanceRequests

#### Contents

**spotInstanceRequestId**
The ID of the Spot Instance request.
Type: String

**state**
The state of the Spot Instance request.
Type: String
Valid values: active | open | closed | cancelled | failed

### ConversionTaskType

The ConversionTaskType data type.

#### Ancestors

- ConversionTaskSetType
Relevant Operations

- DescribeConversionTasks
- ImportInstance
- ImportVolume

Contents

conversionTaskId
The ID of the conversion task
Type: String

durationTime
The time when the task expires. If the upload isn’t complete before the expiration time, we automatically cancel the task.
Type: String

importVolume
If the task is for importing a volume, this contains information about the import volume task.
Type: ImportVolumeTaskDetailsType (p. 473)

importInstance
If the task is for importing an instance, this contains information about the import instance task.
Type: ImportInstanceTaskDetailsType (p. 471)

state
The state of the conversion task.
Type: String
Valid values: active | cancelling | cancelled | completed

statusMessage
The status message related to the conversion task.
Type: String

CreateVolumePermissionItemType

The CreateVolumePermissionItemType data type.

Ancestors

- CreateVolumePermissionListType

Relevant Operations

- ModifySnapshotAttribute
- DescribeSnapshotAttribute
CustomerGatewayType

Describes a customer gateway.

Ancestors

- CustomerGatewaySetType

Relevant Operations

- CreateCustomerGateway (p. 58)
- DescribeCustomerGateways (p. 181)

Contents

- **customerGatewayId**
  - The ID of the customer gateway.
  - Type: String
- **state**
  - The current state of the customer gateway.
  - Type: String
  - **Valid values:** pending | available | deleting | deleted
- **type**
  - The type of VPN connection the customer gateway supports (ipsec.1).
  - Type: String
- **ipAddress**
  - The Internet-routable IP address of the customer gateway’s outside interface.
  - Type: String
- **bgpAsn**
  - The customer gateway's Border Gateway Protocol (BGP) Autonomous System Number (ASN).
  - Type: Integer
- **tagSet**
  - Any tags assigned to the resource, each one wrapped in an item element.
  - Type: ResourceTagSetItemType (p. 507)
DescribeAddressesResponseItemType

Describes an IP address.

Ancestors

• DescribeAddressesResponseInfoType

Relevant Operations

• DescribeAddresses (p. 169)

Contents

publicIp
The public IP address.
Type: String

allocationId
The ID representing the allocation of the address for use with EC2-VPC.
Type: String

domain
Whether this Elastic IP address is for instances in EC2-Classic or EC2-VPC.
Type: String
Valid values: standard | vpc

instanceId
The ID of the instance the address is associated with (if any).
Type: String

associationId
The ID representing the association of an Elastic IP address with an instance in a VPC.
Type: String

networkInterfaceId
The ID of the network interface.
Type: String

networkInterfaceOwnerId
The ID of the AWS account that owns the network interface.
Type: String

DescribeImagesResponseItemType

The DescribeImagesResponseItemType data type.

Ancestors

• DescribeImagesResponseInfoType
Relevant Operations

- DescribeImages

Contents

imageId
The ID of the AMI.
Type: String

imageLocation
The location of the AMI.
Type: String

imageState
Current state of the AMI. If the operation returns available, the image is successfully registered and available for launching.
Type: String
Valid values: available | pending | failed

imageOwnerId
AWS account ID of the image owner.
Type: String

isPublic
Whether the image has public launch permissions. The value is true if this image has public launch permissions or false if it has only implicit and explicit launch permissions.
Type: Boolean

productCodes
Any product codes associated with the AMI, each one wrapped in an item element.
Type: ProductCodesSetItemType (p. 503)

architecture
The architecture of the image.
Type: String

imageType
The type of image (machine, kernel, or RAM disk).
Type: String

kernelId
The kernel associated with the image, if any. Only applicable for machine images.
Type: String

ramdiskId
The RAM disk associated with the image, if any. Only applicable for machine images.
Type: String

platform
The value is Windows for Windows AMIs; otherwise blank.
Type: String

stateReason
The reason for the state change.
Type: StateReasonType (p. 518)

imageOwnerId
The AWS account alias (for example, amazon, self, etc.) or AWS account ID that owns the AMI.
Type: String
The name of the AMI that was provided during image creation.
  Type: String

description
  The description of the AMI that was provided during image creation.
  Type: String

rootDeviceType
  The type of root device used by the AMI. The AMI can use an Amazon EBS volume or an instance store volume.
  Type: String
  Valid values: ebs | instance-store

rootDeviceName
  The device name of the root device (for example, /dev/sda1, or xvda).
  Type: String

blockDeviceMapping
  Any block device mapping entries, each one wrapped in a item element.
  Type: BlockDeviceMappingItemType (p. 446)

virtualizationType
  The type of virtualization of the AMI.
  Type: String
  Valid values: paravirtual | hvm

tagSet
  Any tags assigned to the resource, each one wrapped in a item element.
  Type: ResourceTagSetItemType (p. 507)

hypervisor
  The image’s hypervisor type.
  Type: String
  Valid values: ovm | xen

DescribeKeyPairsResponseItemType

The DescribeKeyPairsResponseItemType data type.

Ancestors

• DescribeKeyPairsResponseInfoType

Relevant Operations

• DescribeKeyPairs

Contents

keyName
  The name of the key pair.
  Type: String
keyFingerprint

If you used CreateKeyPair to create the key pair, this is the SHA-1 digest of the DER encoded private key. If you used ImportKeyPair to provide AWS the public key, this is the MD5 public key fingerprint as specified in section 4 of RFC4716.

Type: String

DescribeReservedInstancesListingsResponseSetItemType

The DescribeReservedInstancesListingsResponseSetItemType data type.

Ancestors

• DescribeReservedInstancesListingsResponseType

Relevant Operations

• DescribeReservedInstancesListings

Contents

reservedInstancesListingId

The ID of the Reserved Instance listing.

Type: String

reservedInstancesId

The ID of the Reserved Instance.

Type: String

createDate

The time the listing is created.

Type: DateTime

updateDate

The last modified timestamp of the listing.

Type: DateTime

status

The status of the Reserved Instance listing.

Type: String

Valid values:
active | pending | cancelled | closed.

statusMessage

The reason for the current status of the Reserved Instance listing. The response can be blank.

Type: String

instanceCounts

The number of instances in this state.

Type: InstanceCountsSetType (p. 475)

priceSchedules

The price of the Reserved Instance listing.

Type: PriceScheduleSetType (p. 501)

tagSet

The tags assigned to the resource. Each tag's information is wrapped in an item element.
clientToken
   The idempotency token you provided when you created the listing.
   Type: String

DescribeReservedInstancesListingSetItemType

The DescribeReservedInstancesListingSetItemType data type.

Ancestors

• DescribeReservedInstancesListings

Relevant Operations

• DescribeReservedInstancesListings

Contents

reservedInstancesListingId
   The ID of the Reserved Instance listing.
   Type: String

DescribeReservedInstancesOfferingsResponseSetItemType

The DescribeReservedInstancesOfferingsResponseSetItemType data type.

Ancestors

• DescribeReservedInstancesOfferingsResponseSetType

Relevant Operations

• DescribeReservedInstancesOfferings

Contents

reservedInstancesOfferingId
   The ID of the Reserved Instance offering.
   Type: String

instanceType
   The instance type on which the Reserved Instance can be used.
   Type: String
availabilityZone
  The Availability Zone in which the Reserved Instance can be used.
  Type: String
duration
  The duration of the Reserved Instance, in seconds.
  Type: Long
fixedPrice
  The purchase price of the Reserved Instance.
  Type: Double
usagePrice
  The usage price of the Reserved Instance, per hour.
  Type: Double
productDescription
  The Reserved Instance description.
  Type: String
  Valid values: Linux/UNIX | Linux/UNIX (Amazon VPC) | Windows | Windows (Amazon VPC)
instanceTenancy
  The tenancy of the reserved instance.
  Type: String
currencyCode
  The currency of the Reserved Instance offering you are purchasing. It's specified using ISO 4217 standard currency codes (e.g., USD, JPY). At this time, the only supported currency is USD.
  Type: String
offeringType
  The Reserved Instance offering type.
  Type: String
recurringCharges
  The recurring charge tag assigned to the resource.
  Type: RecurringChargesSetItemType (p. 505)
marketplace
  Indicates if the offering is available through the Reserved Instance Marketplace (resale) or AWS. Returns true if it is a Marketplace offering.
  Type: Boolean
pricingDetailsSet
  The pricing details of the Reserved Instance offering wrapped in an item element.
  Type: PricingDetailsSetItemType (p. 502).

DescribeReservedInstancesOfferingsResponseType

The DescribeReservedInstancesOfferingsResponseType data type.

Ancestors

• DescribeReservedInstancesOfferings

Relevant Operations

• DescribeReservedInstancesOfferings
Contents

**requestId**
- The ID of the Reserved Instance offering request.
  - Type: String

**reservedInstancesOfferingsSet**
- The instance type on which the Reserved Instance can be used.
  - Type: DescribeReservedInstancesOfferingsResponseSetItemType (p. 457)

**nextToken**
- The next paginated set of results to return.
  - Type: String

---

**DescribeReservedInstancesResponseSetItemType**

The DescribeReservedInstancesResponseSetItemType data type.

**Ancestors**

- DescribeReservedInstancesResponseSetType

** Relevant Operations**

- DescribeReservedInstances

---

**Contents**

**reservedInstancesId**
- The ID of the Reserved Instance.
  - Type: String

**instanceType**
- The instance type on which the Reserved Instance can be used.
  - Type: String

**availabilityZone**
- The Availability Zone in which the Reserved Instance can be used.
  - Type: String

**start**
- The date and time the Reserved Instance started.
  - Type: DateTime

**duration**
- The duration of the Reserved Instance, in seconds.
  - Type: Long

**fixedPrice**
- The purchase price of the Reserved Instance.
  - Type: Double

**usagePrice**
- The usage price of the Reserved Instance, per hour.
**DescribeReservedInstancesSetItemType**

The DescribeReservedInstancesSetItemType data type.

**Ancestors**

- DescribeReservedInstancesListings

**Relevant Operations**

- DescribeReservedInstances

**Contents**

reservedInstancesId

The ID of the Reserved Instance.
DescribeSnapshotsSetItemResponseType

The DescribeSnapshotsSetItemResponseType data type.

Ancestors

• DescribeSnapshotsSetResponseType

Relevant Operations

• DescribeSnapshots

Contents

snapshotId
   The ID of the snapshot.
   Type: String

volumeId
   The ID of the volume.
   Type: String

status
   The snapshot state.
   Type: String
   Valid values: pending | completed | error

startTime
   The time stamp when the snapshot was initiated.
   Type: DateTime

progress
   The progress of the snapshot, as a percentage.
   Type: String

ownerId
   The ID of the AWS account that owns the snapshot.
   Type: String

volumeSize
   The size of the volume, in GiB.
   Type: String

description
   The description of the snapshot.
   Type: String

ownerAlias
   The AWS account alias (for example, amazon, self) or AWS account ID that owns the AMI.
   Type: String

tagSet
   Any tags assigned to the resource, each one wrapped in an item element.
DescribeVolumesSetItemType

The DescribeVolumesSetItemType data type.

**Ancestors**

- ItemType-DescribeVolumesSetResponseType

**Relevant Operations**

- DescribeVolumes

**Contents**

- **volumeId**
  - The ID of the volume.
  - Type: String

- **size**
  - The size of the volume, in GiBs.
  - Type: String

- **snapshotId**
  - The snapshot from which the volume was created (optional).
  - Type: String

- **availabilityZone**
  - The Availability Zone in which the volume was created.
  - Type: String

- **status**
  - The state of the volume.
  - Type: String
  - Valid values: creating | available | in-use | deleting | deleted | error

- **createTime**
  - The time stamp when volume creation was initiated.
  - Type: DateTime

- **attachmentSet**
  - Any volumes attached, each one wrapped in an item element.
  - Type: AttachmentSetItemType (p. 444)

- **tagSet**
  - Any tags assigned to the resource, each one wrapped in an item element.
  - Type: ResourceTagSetItemType (p. 507)

- **volumeType**
  - The volume type.
  - Type: String
  - Valid values: standard | io1
iops
   The number of I/O operations per second (IOPS) that the volume supports.
   Type: Integer
   Valid values: Range is 100 to 4000.

DhcpConfigurationItemType

Describes a DHCP configuration option.

Ancestors

• DhcpConfigurationItemSetType

Relevant Operations

• CreateDhcpOptions (p. 60)
• DescribeDhcpOptions (p. 184)

Contents

key
   The name of a DHCP option.
   Type: String

valueSet
   Any values for a DHCP option, each one wrapped in an item element.
   Type: DhcpValueType (p. 464)

DhcpOptionsType

Describes a set of DHCP options.

Ancestors

• DhcpOptionsSetType

Relevant Operations

• CreateDhcpOptions (p. 60)
• DescribeDhcpOptions (p. 184)
Contents

dhcpOptionsId
   The ID of the set of DHCP options.
   Type: String

dhcpConfigurationSet
   The options in the set. Each option's key and set of values are wrapped in an item element.
   Type: DhcpConfigurationItemType (p. 463)
tagSet
   Any tags assigned to the resource, each one wrapped in an item element.
   Type: ResourceTagSetItemType (p. 507)

DhcpValueType
   The DhcpValueType data type.

Ancestors
   • DhcpValueSetType

Relevant Operations
   • CreateDhcpOptions
   • CreateDhcpOptions
   • DescribeDhcpOptions

Contents

value
   A value for the DHCP option.
   Type: String

DiskImageDescriptionType
   The DiskImageDescriptionType data type.

Ancestors

   • ImportInstanceVolumeDetailItemType (p. 472)
   • ImportVolumeTaskDetailsType (p. 473)

Relevant Operations

   • DescribeConversionTasks
• ImportInstance
• ImportVolume

## Contents

**format**
The disk image format.
Type: String

**size**
The size of the disk image.
Type: Long

**importManifestUrl**
A presigned URL for the import manifest stored in Amazon S3. For information about creating a presigned URL for an Amazon S3 object, read the "Query String Request Authentication Alternative" section of the Authenticating REST Requests topic in the Amazon Simple Storage Service Developer Guide.
Type: String

**checksum**
The checksum computed for the disk image.
Type: String

## DiskImageVolumeDescriptionType

The DiskImageVolumeDescriptionType data type.

### Ancestors

- ImportInstanceVolumeDetailItemType (p. 472)
- ImportVolumeTaskDetailsType (p. 473)

### Relevant Operations

- DescribeConversionTasks
- ImportInstance
- ImportVolume

### Contents

**size**
The size of the volume.
Type: Integer

**id**
The volume identifier.
Type: String
Describe an Amazon EBS block device.

Ancestors

- BlockDeviceMappingItemType (p. 446)

Relevant Operations

- DescribeImageAttribute (p. 190)
- DescribeImages (p. 193)
- DescribeSpotInstanceRequests (p. 282)
- RegisterImage (p. 379)
- RequestSpotInstances (p. 397)
- RunInstances (p. 419)

Contents

- **snapshotId**
  The ID of the snapshot.
  Type: String

- **volumeSize**
  The size of the volume, in GiB.
  Type: Integer
  Valid values: If the volume type is io1, the minimum size of the volume is 10 GiB.
  Default: If you're creating the volume from a snapshot and don't specify a volume size, the default is the snapshot size.

- **deleteOnTermination**
  Whether the Amazon EBS volume is deleted on instance termination.
  Type: Boolean

- **volumeType**
  The volume type.
  Type: String
  Valid values: standard | io1
  Default: standard

- **iops**
  The number of I/O operations per second (IOPS) that the volume supports.
  Type: Integer
  Valid values: Range is 100 to 4000.
  Default: None
  Condition: Required when the volume type is io1; not used with standard volumes.
**EbsInstanceBlockDeviceMappingResponseType**

Describes parameter used to set up an Amazon EBS volume in a block device mapping.

**Ancestors**

- InstanceBlockDeviceMappingResponseType (p. 474)

**Relevant Operations**

- DescribeInstanceAttribute (p. 200)
- DescribeInstances (p. 203)
- RunInstances (p. 419)

**Contents**

- **volumeId**
  The ID of the Amazon EBS volume.
  Type: String

- **status**
  The attachment state.
  Type: String
  Valid values: attaching | attached | detaching | detached

- **attachTime**
  The time stamp when the attachment initiated.
  Type: DateTime

- **deleteOnTermination**
  Whether the Amazon EBS volume is deleted on instance termination.
  Type: Boolean

**ExportTaskResponseType**

The ExportTaskResponseType data type.

**Ancestors**

- CreateInstanceExportTaskResponseType
- DescribeExportTasksResponseType
- ExportTaskSetResponseType

**Relevant Operations**

- CreateInstanceExportTask
- DescribeExportTasks
Contents

exportTaskId
   The ID of the export task.
   Type: String

description
   A description of the resource being exported.
   Type: String

state
   The state of the conversion task.
   Type: String
   Valid values: active | cancelling | cancelled | completed

statusMessage
   The status message related to the export task.
   Type: String

instanceExport
   Information about the instance being exported.
   Type: InstanceExportTaskResponseType (p. 476)

exportToS3
   Information about the destination Amazon S3 bucket.
   Type: ExportToS3TaskResponseType (p. 468)

ExportToS3TaskResponseType
The ExportToS3TaskResponseType data type.

Ancestors

• CreateInstanceExportTaskResponseType
• DescribeExportTasksResponseType
• ExportTaskSetResponseType
• ExportTaskResponseType

Relevant Operations

• CreateInstanceExportTask
• DescribeExportTasks

Contents

diskImageFormat
   The format for the exported image.
   Type: String
   Valid values: vmdk | vhd
containerFormat
The container format used to combine disk images with metadata (such as OVF).
Type: String
Valid values: ova

s3Bucket
The Amazon S3 bucket for the destination image.
Type: String

s3Key
The image written to a single object in s3bucket at the S3 key s3prefix + exportTaskId + '.'
+diskImageFormat.
Type: String

**GroupItemType**

The GroupItemType data type.

**Ancestors**

- GroupSetType

**Relevant Operations**

- DescribeInstanceAttribute
- DescribeInstances
- RequestSpotInstances
- DescribeSpotInstanceRequests
- RequestSpotInstances
- RunInstances
- CreateNetworkInterface

**Contents**

**groupId**
The ID of the security group.
In API versions before 2011-01-01, this field returned the name of the security group.
Type: String

**groupName**
The name of the security group.
Type: String

**IamInstanceProfileRequestType**

The IamInstanceProfileRequestType data type.
Ancestors

- RunInstancesType
- LaunchSpecificationRequestType
- LaunchSpecificationResponseType

Relevant Operations

- RunInstances
- RequestSpotInstances

Contents

**arn**
The Amazon resource name (ARN) of the IAM Instance Profile (IIP) to associate with the instance.
Type: String

**name**
The name of the IAM Instance Profile (IIP) to associate with the instance.
Type: String

**iamInstanceProfileResponse**
The `iamInstanceProfileResponse` data type.

Ancestors

- RunningInstancesItem

Relevant Operations

- RunInstances
- RequestSpotInstances

Contents

**arn**
The Amazon resource name (ARN) of the IAM Instance Profile (IIP) to associate with the instance.
Type: String

**id**
The ID of the IAM Instance Profile ID (IIP) associated with the instance.
Type: String
**IcmpTypeCodeType**

Describes the ICMP type and code.

**Ancestors**

- NetworkAclEntryType (p. 493)

**Relevant Operations**

- CreateNetworkAcl (p. 73)
- DescribeNetworkAcls (p. 230)

**Contents**

- `code`
  The ICMP code. A value of -1 means all codes for the specified ICMP type.
  Type: Integer

- `type`
  The ICMP type. A value of -1 means all types.
  Type: Integer

**ImportInstanceTaskDetailsType**

The ImportInstanceTaskDetailsType data type.

**Ancestors**

- ConversionTaskType (p. 450)

**Relevant Operations**

- DescribeConversionTasks
- ImportInstance
- ImportVolume

**Contents**

- `volumes`
  Any instance volumes for import, each one wrapped in an item element.
  Type: ImportInstanceVolumeDetailItemType (p. 472)

- `instanceId`
  The ID of the resulting instance in Amazon EC2.
  Type: String
platform
  The instance operating system.
  Type: String
  Valid value: Windows

description
  An optional description of the instance.
  Type: String

ImportInstanceVolumeDetailItemType

The ImportInstanceVolumeDetailItemType data type.

Ancestors

• ImportInstanceVolumeDetailSetType

Relevant Operations

• DescribeConversionTasks
• ImportInstance
• ImportVolume

Contents

bytesConverted
  The number of bytes converted so far.
  Type: Long

availabilityZone
  The Availability Zone where the resulting instance will reside.
  Type: String

image
  The information about the image.
  Type: DiskImageDescriptionType (p. 464)

description
  The description you provided when starting the import instance task.
  Type: String

volume
  The information about the volume.
  Type: DiskImageVolumeDescriptionType (p. 465)

status
  The status of the import of this particular disk image.
  Type: String

statusMessage
  The status information or errors related to the disk image.
  Type: String
ImportVolumeTaskDetailsType

The ImportVolumeTaskDetailsType data type.

**Ancestors**

- ConversionTaskType (p. 450)

**Relevant Operations**

- DescribeConversionTasks
- ImportInstance
- ImportVolume

**Contents**

- **bytesConverted**
  - The number of bytes converted so far.
  - Type: Long
- **availabilityZone**
  - The Availability Zone where the resulting volume will reside.
  - Type: String
- **description**
  - The description you provided when starting the import volume task.
  - Type: String
- **image**
  - Information about the image.
  - Type: DiskImageDescriptionType (p. 464)
- **volume**
  - Information about the volume.
  - Type: DiskImageVolumeDescriptionType (p. 465)

InstanceBlockDeviceMappingItemType

Describes a block device mapping.

**Ancestors**

- InstanceBlockDeviceMappingType

**Relevant Operations**

- ModifyInstanceAttribute (p. 360)
InstanceBlockDeviceMappingResponseItemType

Describes a block device mapping.

Ancestors

- InstanceBlockDeviceMappingResponseType

Relevant Operations

- DescribeInstanceAttribute
- DescribeInstances
- RunInstances

Contents

deviceName
  The device name exposed to the instance (for example, /dev/sdh, or xvdh).
  Type: String

virtualName
  The virtual device name.
  Type: String

ebs
  Parameters used to automatically set up Amazon EBS volumes when the instance is launched.
  Type: InstanceEbsBlockDeviceType (p. 475)

noDevice
  Include this empty element to suppress the specified device included in the block device mapping of the AMI.

InstanceCountsSetItemType

The InstanceCountsSetItemType data type.

Ancestors

- DescribeReservedInstancesListingSetType

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InstanceCountsSetType

The InstanceCountsSetType data type.

Relevant Operations

- DescribeReservedInstancesListingsResponseType

Contents

state
The states of the listed Reserved Instances.
Type: String
Valid values: available | sold | cancelled | pending

instanceCount
The number of listed Reserved Instances in the state specified by the state.
Type: Integer

InstanceCountsSetType

The InstanceCountsSetType data type.

Ancestors

- DescribeReservedInstancesListingSetType

Relevant Operations

- DescribeReservedInstancesListingsResponseType

Contents

item
The Reserved Instance listing item.
Type: InstanceCountsSetItemType (p. 474)

InstanceEbsBlockDeviceType

Describes parameters used to set up an Amazon EBS volume.

Ancestors

- InstanceBlockDeviceMappingItemType (p. 473)
Relevant Operations

- ModifyInstanceAttribute (p. 360)

Contents

`deleteOnTermination`
Whether the Amazon EBS volume is deleted on instance termination.
Type: Boolean

`volumeId`
The ID of the Amazon EBS volume.
Type: String

**InstanceExportTaskResponseType**
The `InstanceExportTaskResponseType` data type.

**Ancestors**

- CreateInstanceExportTaskResponseType
- DescribeExportTasksResponseType
- ExportTaskSetResponseType
- ExportTaskResponseType

**Relevant Operations**

- CreateInstanceExportTask
- DescribeExportTasks

Contents

`instanceId`
The ID of the resource being exported.
Type: String

`targetEnvironment`
The target virtualization environment.
Type: String
Valid values: `vmware` | `citrix`

**InstanceMonitoringStateType**
Describes the monitoring information for an instance.
## Ancestors

- MonitorInstancesResponseSetItemType (p. 492)
- RunningInstancesItemType (p. 510)

## Relevant Operations

- MonitorInstances
- UnmonitorInstances
- DescribeInstances
- RunInstances

## Contents

### state

The state of monitoring for the instance. The `disabled` state means that Detailed Monitoring is disabled for the instance. The `enabled` state means that Detailed Monitoring is enabled for the instance. The `pending` state means that the instance is launching or that you recently enabled Detailed Monitoring for the instance.

Type: String

Valid values: disabled | enabled | pending

### InstanceNetworkInterfaceAssociationType

Describes association information for an Elastic IP address.

## Relevant Operations

- DescribeInstances (p. 203)
- RunInstances (p. 419)

## Contents

### publicIp

The address of the Elastic IP address bound to the network interface.

Type: String

### publicDnsName

The public DNS name.

Type: String

### ipOwnerId

The ID of the Elastic IP address owner.

Type: String
InstanceNetworkInterfaceAttachmentType

Describes a network interface attachment.

**Relevant Operations**

- DescribeInstances (p. 203)
- RunInstances (p. 419)

**Contents**

**attachmentID**
The ID of the network interface attachment.
Type: String

**deviceIndex**
The index of the device on the instance for the network interface attachment.
Type: Integer

**status**
The attachment state.
Type: String
Valid values: attaching | attached | detaching | detached

**attachTime**
The time stamp when the attachment initiated.
Type: DateTime

**deleteOnTermination**
Whether the network interface is deleted when the instance is terminated.
Type: Boolean

InstanceNetworkInterfaceSetItemRequestType

Describes a network interface.

**Ancestors**

- InstanceNetworkInterfaceSetRequestType

**Relevant Operations**

- DescribeNetworkInterfaces (p. 237)

**Contents**

**networkInterfaceId**
The ID of the network interface.
Type: String
deviceIndex
   Required. The index of the device on the instance for the network interface attachment.
   Type: Integer

subnetId
   The ID of the subnet associated with the network string.
   Type: String

description
   The description of the network interface.
   Type: String

privateIpAddress
   The private IP address of the network interface.
   Type: String

groupSet
   The group IDs for use by the network interface.
   Type: SecurityGroupIdSetItemType (p. 513)

deleteOnTermination
   If set to true, the interface is deleted when the instance is terminated.
   Type: Boolean

privateIpAddressesSet
   The list of IP addresses to assign to the network interface.
   Type: PrivateIpAddressesSetItemRequestType (p. 502)

secondaryPrivateIpAddressCount
   The number of secondary private IP addresses. You cannot specify this option with
   privateIpAddressSet.
   Type: Integer

InstanceNetworkInterfaceSetItemType

Describes a network interface.

Ancestors

- InstanceNetworkInterfaceSetType

Relevant Operations

- DescribeInstances (p. 203)
- RunInstances (p. 419)

Contents

networkInterfaceId
   The ID of the network interface.
   Type: String

subnetId
   The ID of the subnet.
   Type: String
vpcId
   The ID of the VPC.
   Type: String

description
   The description.
   Type: String

ownerId
   The ID of the customer who created the network interface.
   Type: String

status
   The network interface's status (available or in-use).
   Type: String

macAddress
   The MAC address.
   Type: String

privateIpAddress
   The IP address of the network interface within the subnet.
   Type: String

privateDnsName
   The private DNS name.
   Type: String

sourceDestCheck
   Whether to validate network traffic to or from this network interface.
   Type: Boolean

groupSet.item
   A security group.
   Type: GroupItemType (p. 469)

attachment
   The network interface attachment.
   Type: InstanceNetworkInterfaceAttachmentType (p. 478)

association
   The association information for an Elastic IP associated with the network interface.
   Type: InstanceNetworkInterfaceAssociationType (p. 477)

privateIpAddressesSet
   The private IP addresses associated with the network interface.
   Type: InstancePrivateIpAddressesSetItemType (p. 480)

---

**InstancePrivateIpAddressesSetItemType**

Describes a private IP address.

**Ancestors**

- InstancePrivateIpAddressesSetType
Relevant Operations

- DescribeInstances (p. 203)
- RunInstances (p. 419)

Contents

privateIpAddress
The private IP address of the network interface.
Type: String

privateDnsName
The private DNS name.
Type: String

primary
Whether this IP address is the primary private IP address of the network interface.
Type: Boolean

association
The association information for an Elastic IP address associated with the network interface.
Type: InstanceNetworkInterfaceAssociationType (p. 477)

InstanceStateChangeType

Describes an instance state change.

Ancestors

- InstanceStateChangeSetType

Relevant Operations

- StartInstances (p. 430)
- StopInstances (p. 432)
- TerminateInstances (p. 434)

Contents

instanceId
The instance ID.
Type: String

currentState
The current state of the instance.
Type: InstanceStateType (p. 482)

previousState
The previous state of the instance.
Type: InstanceStateType (p. 482)
InstanceStateType

Describes the current state of the instance.

Ancestors

- InstanceStateChangeType (p. 481)
- RunningInstancesItemType (p. 510)

Relevant Operations

- DescribeInstances (p. 203)
- DescribeInstanceStatus (p. 218)
- RunInstances (p. 419)
- StartInstances (p. 430)
- StopInstances (p. 432)
- TerminateInstances (p. 434)

Contents

code
The low byte represents the state. The high byte is an opaque internal value and should be ignored.
Type: Integer (16-bit unsigned)
Valid values: 0 (pending) | 16 (running) | 32 (shutting-down) | 48 (terminated) | 64 (stopping) | 80 (stopped)

name
The current state of the instance.
Type: String
Valid values: pending | running | shutting-down | terminated | stopping | stopped

InstanceStatusDetailsSetType

The InstanceStateType data type.

Ancestors

- InstanceStatusItemType (p. 484)
- InstanceStatusType (p. 485)

Relevant Operations

- DescribeInstanceStatus (p. 218)
Contents

name
The type of instance status detail.
Type: String
Valid values: reachability

status
The status.
Type: String
Valid values: passed | failed | insufficient-data

impairedSince
The time when a status check failed. For an instance that was launched and impaired, this is the time when the instance was launched.
Type: DateTime

InstanceStatusEventsSetType

Describes a set of events.

Relevant Operations

• DescribeInstanceStatus (p. 218)

Contents

item
Information about scheduled events for the instance.
Type: InstanceStatusEventType (p. 483)

InstanceStatusEventType

Describes an event.

Ancestors

• InstanceStatusEventsSetType (p. 483)

Relevant Operations

• DescribeInstanceStatus (p. 218)
Contents

code
The associated code of the event.
Type: String
Valid parameters: instance-reboot | system-reboot | instance-retirement
description
A description of the event.
Type: String
notBefore
The earliest scheduled start time for the event.
Type: DateTime
notAfter
The latest scheduled end time for the event.
Type: DateTime

InstanceStatusItemType

Describes the status of an instance.

Ancestors

• InstanceStatusSetType

Relevant Operations

• DescribeInstanceStatus (p. 218)

Contents

instanceId
The ID of the instance.
Type: String
availabilityZone
The Availability Zone of the instance.
Type: String
eventsSet
Extra information regarding events associated with the instance.
Type: InstanceStatusEventsSetType (p. 483)
instanceState
The intended state of the instance. Calls to DescribeInstanceStatus require that an instance be in the running state.
Type: InstanceStateType (p. 482)
systemStatus
Reports impaired functionality that stems from issues related to the systems that support an instance, such as hardware failures and network connectivity problems.
Type: InstanceStatusType (p. 485)

instanceStatus
Reports impaired functionality that arises from problems internal to the instance. The DescribeInstanceStatus (p. 218) response elements report such problems as impaired reachability.
Type: InstanceStatusType (p. 485)

InstanceStatusSetType

The InstanceStatusSetType data type.

Relevant Operations

• DescribeInstanceStatus (p. 218)

Contents

item
Information about the status of the instance.
Type: InstanceStatusItemType (p. 484)

InstanceStatusType

Describes the state of an instance.

Ancestors

• InstanceStatusItemType (p. 484)

Relevant Operations

• DescribeInstanceStatus (p. 218)

Contents

status
The status.
Type: String
Valid values: ok | impaired | insufficient-data | not-applicable
details
Information about system instance health or application instance health.
Type: InstanceStatusDetailsSetType (p. 482)
InternetGatewayAttachmentType

Describes the attachment of a VPC to an Internet gateway.

Ancestors

- InternetGatewayAttachmentSetType

Relevant Operations

- AttachInternetGateway (p. 23)
- CreateInternetGateway (p. 69)
- DescribeInternetGateways (p. 225)

Contents

vpcId
- The ID of the VPC.
  Type: String

state
- The current state of the attachment.
  Type: String
  Valid values: attaching | attached | detaching | detached

InternetGatewayType

Describes an Internet gateway.

Ancestors

- InternetGatewaySetType

Relevant Operations

- CreateInternetGateway (p. 69)
- DescribeInternetGateways (p. 225)

Contents

internetGatewayId
- The ID of the Internet gateway.
  Type: String

attachmentSet
- Any VPCs attached to the Internet gateway, each one wrapped in an item element.
IpPermissionType

The IpPermissionType data type.

Ancestors

- IpPermissionSetType

Relevant Operations

- AuthorizeSecurityGroupIngress
- RevokeSecurityGroupIngress
- DescribeSecurityGroups

Contents

- ipProtocol
  - The protocol.
  - When you call DescribeSecurityGroups, the protocol value returned is the number. Exception: For TCP, UDP, and ICMP, the value returned is the name (e.g., tcp, udp, or icmp). For a list of protocol numbers, see Protocol Numbers.
  - Type: String

- fromPort
  - The start of port range for the TCP and UDP protocols, or an ICMP type number. A value of -1 indicates all ICMP types.
  - Type: Integer

- toPort
  - The end of port range for the TCP and UDP protocols, or an ICMP code. A value of -1 indicates all ICMP codes for the given ICMP type.
  - Type: Integer

- groups
  - A list of security group and AWS account ID pairs. Each pair is wrapped in an item element.
  - Type: UserIdGroupPairType (p. 521)

- ipRanges
  - A list of IP ranges. Each range is wrapped in an item element.
  - Type: IpRangeItemType (p. 487)

IpRangeItemType

Describes an IP range.
Ancestors

- IpRangeSetType

Relevant Operations

- AuthorizeSecurityGroupIngress
- RevokeSecurityGroupIngress
- DescribeSecurityGroups

Contents

cidrIp

The CIDR range. Cannot be used when specifying a source security group.
Type: String

LaunchPermissionItemType

The LaunchPermissionItemType data type.

Ancestors

- LaunchPermissionListType

Relevant Operations

- DescribeImageAttribute
- ModifyImageAttribute

Contents

group

The name of the group.
Type: String
Valid value: all

userId

The AWS account ID.
Type: String

LaunchSpecificationRequestType

The LaunchSpecificationRequestType data type.
Ancestors

- RequestSpotInstancesType

Relevant Operations

- RequestSpotInstances

Contents

**imageId**
- The AMI ID.
- Type: String

**keyName**
- The name of the key pair.
- Type: String

**groupSet**
- A list of security groups. Each group is wrapped in an item element.
- Type: GroupItemType (p. 469)

**userData**
- Base64-encoded MIME user data made available to the instance(s) in the reservation.
- Type: UserDataType (p. 521)

**instanceType**
- The instance type.
- Type: String

**placement**
- The placement information for the instance.
- Type: PlacementRequestType (p. 498)

**kernelId**
- The ID of the kernel to select.
- Type: String

**ramdiskId**
- The ID of the RAM disk to select. Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk and search for the kernel ID.
- Type: String

**blockDeviceMapping**
- Any block device mapping entries for the instance. Each entry is wrapped in an item element.
- Type: BlockDeviceMappingItemType (p. 446)

**monitoring**
- The monitoring information for the instance.
- Type: MonitoringInstanceType (p. 491)

**subnetId**
- The ID of the subnet.
- Type: String

**networkInterfaceSet**
- The network interfaces associated with the instance.
- Type: InstanceNetworkInterfaceSetItemRequestType (p. 478)
iamInstanceProfile
The IAM Instance Profile (IIP) associated with the instance.
Type: iamInstanceProfileRequestType (p. 469)

ebsOptimized
Whether the instance is optimized for EBS I/O. This optimization provides dedicated throughput to Amazon EBS and an optimized configuration stack to provide optimal EBS I/O performance. This optimization isn’t available with all instance types. Additional usage charges apply when using an EBS Optimized instance.
Type: Boolean
Default: false

LaunchSpecificationResponseType
The LaunchSpecificationResponseType data type.

Ancestors
• SpotInstanceRequestSetItemType (p. 515)

 Relevant Operations
• DescribeSpotInstanceRequests

Contents

imageId
The AMI ID.
Type: String

keyName
The name of the key pair.
Type: String

groupSet
A list of security groups. Each group is wrapped in an item element.
Type: GroupItemType (p. 469)
instanceType
The instance type.
Type: String

placement
The placement information for the instance.
Type: PlacementRequestType (p. 498)

kernelId
The ID of the kernel to select.
Type: String

ramdiskId
The ID of the RAM disk to select. Some kernels require additional drivers at launch. Check the kernel requirements for information on whether you need to specify a RAM disk and search for the kernel ID.
Type: String

**blockDeviceMapping**

Any block device mapping entries for the instance. Each entry is wrapped in an *item* element.

Type: BlockDeviceMappingItemType (p. 446)

**monitoring**

The monitoring information for the instance.

Type: MonitoringInstanceType (p. 491)

**subnetId**

The ID of the subnet.

Type: String

**networkInterfaceSet**

The network interfaces for the instance.

Type: InstanceNetworkInterfaceSetItemRequestType (p. 478)

**iamInstanceProfile**

The IAM Instance Profile (IIP) associated with the instance.

Type: IamInstanceProfileRequestType (p. 469)

**ebsOptimized**

Whether the instance is optimized for EBS I/O. This optimization provides dedicated throughput to Amazon EBS and an optimized configuration stack to provide optimal EBS I/O performance. This optimization isn’t available with all instance types. Additional usage charges apply when using an EBS Optimized instance.

Type: Boolean

Default: false

---

**MonitoringInstanceType**

The MonitoringInstanceType data type.

**Ancestors**

- LaunchSpecificationRequestType (p. 488)
- LaunchSpecificationResponseType (p. 490)
- RunInstancesType

**Relevant Operations**

- RequestSpotInstances
- DescribeSpotInstanceRequests
- RequestSpotInstances
- RunInstances

**Contents**

**enabled**

Whether monitoring is enabled for the instance.

Type: Boolean
MonitorInstancesResponseSetItemType

The MonitorInstancesResponseSetItemType data type.

**Ancestors**

- MonitorInstancesResponseSetType

**Relevant Operations**

- MonitorInstances
- UnmonitorInstances

**Contents**

`instanceId`

The instance ID.
Type: String

`monitoring`

The monitoring information.
Type: InstanceMonitoringStateType (p. 476)

NetworkAclAssociationType

Describes an association between a network ACL and a subnet.

**Ancestors**

- NetworkAclAssociationSetType

**Relevant Operations**

- CreateNetworkAcl (p. 73)
- DescribeNetworkAcls (p. 230)

**Contents**

`networkAclAssociationId`

An identifier representing the association between a network ACL and a subnet.
Type: String

`networkAclId`

The ID of the network ACL.
Type: String
subnetId
The ID of the subnet.
Type: String

NetworkAclEntryType
Describes an entry in a network ACL.

Ancestors
- NetworkAclEntrySetType

Relevant Operations
- CreateNetworkAcl (p. 73)
- DescribeNetworkAcls (p. 230)

Contents

ruleNumber
The rule number for the entry. ACL entries are processed in ascending order by rule number.
Type: Integer

protocol
The protocol. A value of -1 means all protocols.
Type: Integer
Valid values: Any protocol number (see Protocol Numbers).

ruleAction
Whether to allow or deny the traffic that matches the rule.
Type: String

egress
Indicates an egress rule (rule is applied to traffic leaving the subnet). Value of true indicates egress.
Type: Boolean

cidrBlock
The network range to allow or deny, in CIDR notation.
Type: String

icmpTypeCode
ICMP protocol: The ICMP type and code.
Type: IcmpTypeCodeType (p. 471)

portRange
TCP or UDP protocols: The range of ports the rule applies to.
Type: PortRangeType (p. 499)

NetworkAclType
Describes a network ACL.
Ancestors

- NetworkAclSetType

Relevant Operations

- CreateNetworkAcl (p. 73)
- DescribeNetworkAcls (p. 230)

Contents

**networkAclId**
- The ID of the network ACL.
- Type: String

**vpcId**
- The ID of the VPC for the network ACL.
- Type: String

**default**
- Whether this is the default network ACL for the VPC.
- Type: Boolean

**entrySet**
- A list of entries (rules) in the network ACL. Each entry is wrapped in an item element.
- Type: NetworkAclEntryType (p. 493)

**associationSet**
- A list of associations between the network ACL and one or more subnets. Each association is wrapped in an item element.
- Type: NetworkAclAssociationType (p. 492)

**tagSet**
- Any tags assigned to the resource, each one wrapped in an item element.
- Type: ResourceTagSetItemType (p. 507)

NetworkInterfaceAssociationType

Describes association information for an Elastic IP address.

Ancestors

- InstanceNetworkInterfaceSetItemType

Relevant Operations

- CreateNetworkInterface (p. 78)
- DescribeNetworkInterfaces (p. 237)
Contents

**publicIp**
- The address of the Elastic IP address bound to the network interface.
- Type: String

**publicDnsName**
- The public DNS name.
- Type: String

**ipOwnerId**
- The ID of the Elastic IP address owner.
- Type: String

**allocationID**
- The allocation ID.
- Type: String

**associationID**
- The association ID.
- Type: String

**NetworkInterfaceAttachmentType**

Describes a network interface attachment.

**Relevant Operations**

- CreateNetworkInterface (p. 78)
- DescribeNetworkInterfaces (p. 237)

Contents

**attachmentID**
- The ID of the network interface attachment.
- Type: String

**instanceID**
- The ID of the instance.
- Type: String

**NetworkInterfacePrivateIpAddressesSetItemType**

Describes the private IP address of a network interface.

**Relevant Operations**

- DescribeNetworkInterfaces
Contents

privateIpAddress
   The private IP address of the network interface.
   Type: String

privateDnsName
   The private DNS name.
   Type: String

primary
   Whether this IP address is the primary private IP address of the network interface.
   Type: Boolean

association
   The association information for an Elastic IP address associated with the network interface.
   Type: NetworkInterfaceAssociationType (p. 494)

NetworkInterfaceType

Describes a network interface.

Ancestors

• NetworkInterfaceSetType

Relevant Operations

• CreateNetworkInterface (p. 78)
• DescribeNetworkInterfaces (p. 237)

Contents

networkInterfaceId
   The ID of the network interface.
   Type: String

subnetId
   The ID of the subnet.

networkInterfaceId
   The ID of the network interface.
   Type: String

subnetId
   The ID of the subnet.
   Type: String

vpcId
   The ID of the VPC.
   Type: String

availabilityZone
   The Availability Zone.
PlacementGroupInfoType

Describes a placement group.
Ancestors

• PlacementGroupSetType

Relevant Operations

• DeletePlacementGroup (p. 139)

Contents

groupName
  The name of the placement group.
  Type: String

strategy
  The placement strategy.
  Type: String
  Valid values: cluster

state
  The status of the placement group.
  Type: String
  Valid values: pending | available | deleting | deleted

PlacementRequestType

The PlacementRequestType data type.

Ancestors

• LaunchSpecificationRequestType (p. 488)
• LaunchSpecificationResponseType (p. 490)
• RunInstancesType

Relevant Operations

• RequestSpotInstances
• DescribeSpotInstanceRequests
• RequestSpotInstances
• RunInstances

Contents

availabilityZone
  The Availability Zone for launching the instance.
Type: String

groupName
The name of a placement group for the instance.
Type: String

PlacementResponseType

The PlacementResponseType data type.

Ancestors

• RunningInstancesItemType (p. 510)

Relevant Operations

• DescribeInstances
• RunInstances

Contents

availabilityZone
The Availability Zone of the instance.
Type: String
groupName
The name of the placement group the instance is in (for cluster compute instances).
Type: String
tenancy
The tenancy of the instance (if the instance is running within a VPC). An instance with a tenancy of dedicated runs on single-tenant hardware.
Type: String

PortRangeType

Describes a range of ports.

Ancestors

• NetworkAclEntryType (p. 493)

Relevant Operations

• DescribeNetworkAcls (p. 230)
Contents

from
  The first port in the range.
  Type: Integer

to
  The last port in the range.
  Type: Integer

PriceScheduleRequestSetItemType

The PriceScheduleRequestSetItemType data type.

Ancestors

• PriceScheduleRequestSetType

Relevant Operations

• CreateReservedInstancesListing

Contents

term
  The number of months remaining in the reservation. For example, 2 is the second to the last month
  before the capacity reservation expires.
  Type: Long

price
  The fixed price for the term.
  Type: Double

currencyCode
  The currency for transacting the Reserved Instance resale.
  Type: String
  Valid value: USD

PriceScheduleSetItemType

The PriceScheduleSetItemType data type.

Ancestors

• DescribeReservedInstancesListingsResponseSetItemType
• PriceScheduleSetType
Relevant Operations

- CreateReservedInstancesListing

Contents

term
- The number of months remaining in the reservation. For example, 2 is the second to the last month before the capacity reservation expires.
- Type: Long

price
- The fixed price for the term.
- Type: Double

currencyCode
- The currency for transacting the Reserved Instance resale.
- Type: String
- Valid value: USD

active
- The current price schedule, as determined by the term remaining for the Reserved Instance in the listing.
- A specific price schedule is always in effect, but only one price schedule can be active at any time. Take, for example, a Reserved Instance listing that has five months remaining in its term. When you specify price schedules for five months and two months, this means that schedule 1, covering the first three months of the remaining term, will be active during months 5, 4, and 3. Then schedule 2, covering the last two months of the term, will be active for months 2 and 1.
- Type: Boolean

PriceScheduleSetResponseType

The PriceScheduleSetResponseType data type.

Ancestors

- DescribeReservedInstancesListingSetType

Relevant Operations

- DescribeReservedInstancesListingsResponseType

Contents

item
- The Reserved Instance listing price schedule item.
- Type: PriceScheduleSetItemType (p. 500).
PricingDetailsSetItemType

The PricingDetailsSetItemType data type.

Ancestors

- DescribeReservedInstancesOfferings

Relevant Operations

- DescribeReservedInstancesOfferingsResponseType

Contents

price
The price per instance.
Type: Integer

count
The number of instances available for the price.
Type: Integer

PrivateIpAddressesSetItemRequestType

Describes a secondary private IP address for a network interface.

Ancestors

- PrivateIpAddressesSetRequestType

Relevant Operations

- AssignPrivateIpAddresses
- UnassignPrivateIpAddresses

Contents

privateIpAddressesSet
The list of private IP addresses.
Type: AssignPrivateIpAddressesSetItemRequestType (p. 444)

primary
Whether the private IP address is the primary private IP address.
Type: Boolean
ProductCodeItemType

The ProductCodeItemType data type.

**Ancestors**

- ProductCodeListType

**Relevant Operations**

- DescribeImageAttribute
- ModifyImageAttribute

**Contents**

productCode

The product code.
Type: String

ProductCodesSetItemType

The ProductCodesSetItemType data type.

**Ancestors**

- ProductCodesSetType

**Relevant Operations**

- DescribeImages
- DescribeImageAttribute
- DescribeInstances
- DescribeInstanceAttribute
- DescribeSnapshotAttribute
- DescribeVolumeAttribute
- RunInstances

**Contents**

productCode

The product code.
Type: String
type

The type of product code.

Type: String

Valid values: devpay | marketplace

ProductDescriptionSetItemType

The ProductDescriptionSetItemType data type.

**Ancestors**

- ProductDescriptionSetType

**Relevant Operations**

- DescribeSpotPriceHistory

**Contents**

productDescription

The description of the AMI.

Type: String

Valid values: Linux/UNIX | SUSE Linux | Windows

PropagatingVgwType

Describes a virtual private gateway propagating route.

**Ancestors**

- PropagatingVgwSetType

**Relevant Operations**

- CreateRouteTable (p. 97)
- DescribeRouteTables (p. 266)

**Contents**

gatewayID

The ID of the virtual private gateway (VGW).

Type: String
RecurringChargesSetItemType

The RecurringChargesSetItemType data type.

**Relevant Operations**

- DescribeReservedInstances
- DescribeReservedInstanceOfferings

**Contents**

- `frequency`  
  The frequency of the recurring charge.  
  Type: String  
  Valid value: Hourly

- `amount`  
  The amount of the recurring charge.  
  Type: Double

RegionItemType

Describes a region.

**Ancestors**

- RegionSetType

**Relevant Operations**

- DescribeRegions (p. 246)

**Contents**

- `regionName`  
  The name of the region.  
  Type: String

- `regionEndpoint`  
  The region service endpoint.  
  Type: String

ReservationInfoType

Describes a reservation.
Ancestors

- ReservationSetType

Relevant Operations

- DescribeInstances (p. 203)

Contents

reservationId
  The ID of the reservation.
  Type: String

ownerId
  The ID of the AWS account that owns the reservation.
  Type: String

groupSet
  A list of security groups. Each group is wrapped in an item element.
  Type: GroupItemType (p. 469)

instancesSet
  A list of instances. Each instance is wrapped in an item element.
  Type: RunningInstancesItemType (p. 510)

requesterId
  The ID of the requester that launched the instances on your behalf (for example, AWS Management Console or Auto Scaling).
  Type: String

ReservedInstanceLimitPriceType

The ReservedInstanceLimitPriceType data type.

Ancestors

- PurchaseReservedInstancesOfferings

Relevant Operations

- DescribeReservedInstancesOfferingsResponseType

Contents

amount
  Used for Reserved Instance Marketplace offerings. Specifies the limit price on the total order (instanceCount * price).
  Type: Double
currencyCode

Currency in which the limitPrice amount is specified. At this time, the only supported currency is USD.
Type: Double

ResourceTagSetItemType

Describes the tags assigned to an EC2 resource.

Ancestors

• ResourceTagSetType

Relevant Operations

• DescribeImages
• DescribeInstances
• DescribeVolumes
• DescribeSnapshots
• DescribeSpotInstanceRequests

Contents

key

The tag key.
Type: String

value

The tag value.
Type: String

RouteTableAssociationType

Describes an association between a route table and a subnet.

Ancestors

• RouteTableAssociationSetType

Relevant Operations

• CreateRouteTable (p. 97)
• DescribeRouteTables (p. 266)
Contents

routeTableAssociationId
   An identifier representing the association between a route table and a subnet.
   Type: String

routeTableId
   The ID of the route table.
   Type: String

subnetId
   The ID of the subnet.
   Type: String

main
   Whether this is the main route table.
   Type: Boolean

RouteTableType

Describes a route table.

Ancestors

- RouteTableSetType

Relevant Operations

- CreateRouteTable (p. 97)
- DescribeRouteTables (p. 266)

Contents

routeTableId
   The route table's ID.
   Type: String

vpcId
   The ID of the VPC for the route table.
   Type: String

routeSet
   A list of routes in the route table. Each route is wrapped in an item element.
   Type: RouteType (p. 509)

associationSet
   A list of associations between the route table and one or more subnets. Each association is wrapped in an item element.
   Type: RouteTableAssociationType (p. 507)

propagatingVgwSet
   The IDs of any virtual private gateways (VGW) propagating routes, each route wrapped in an item element.
RouteType

Describes a route in a route table.

Ancestors

- RouteSetType

Relevant Operations

- CreateRouteTable (p. 97)
- DescribeRouteTables (p. 266)

Contents

destinationCidrBlock
The CIDR address block used for the destination match.
Type: String
gatewayId
The ID of a gateway attached to your VPC.
Type: String
instanceId
The ID of a NAT instance in your VPC.
Type: String
instanceOwnerId
The owner of the instance.
Type: String
networkInterfaceId
The network interface ID.
Type: String
state
The state of the route. The blackhole state indicates that the route's target isn't available (for example, the specified gateway isn't attached to the VPC, or the specified NAT instance has been terminated).
Type: String
Valid values: active | blackhole
origin
Describes how the route was created.
Type: String
Valid values: Valid values: CreateRouteTable | CreateRoute | EnableVgwRoutePropagation
- CreateRouteTable indicates that route was automatically created when the route table was created.
• CreateRoute indicates that the route was manually added to the route table.
• EnableVgwRoutePropagation indicates that the route was propagated by route propagation.

RunningInstancesItemType

Describes a running instance.

**Ancestors**

• RunningInstancesSetType

**Relevant Operations**

• DescribeInstances (p. 203)
• RunInstances (p. 419)

**Contents**

instanceId
The ID of the instance launched.
Type: String

imageId
The ID of the AMI used to launch the instance.
Type: String

instanceState
The current state of the instance.
Type: InstanceStateType (p. 482)

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: String

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: String

reason
The reason for the most recent state transition. This might be an empty string.
Type: String

keyName
The key pair name, if this instance was launched with an associated key pair.
Type: String

amiLaunchIndex
The AMI launch index, which can be used to find this instance in the launch group.
Type: String

productCodes
The product codes attached to this instance. Each product code is wrapped in an item element.
Type: `ProductCodesSetItemType (p. 503)`

`instanceType`
- The instance type (for example, `m1.small`).
- Type: String

`launchTime`
- The time the instance was launched.
- Type: DateTime

`placement`
- The location where the instance launched.
- Type: `PlacementResponseType (p. 499)`

`kernelId`
- The kernel associated with this instance.
- Type: String

`ramdiskId`
- The RAM disk associated with this instance.
- Type: String

`platform`
- The platform of the instance (for example, Windows).
- Type: String

`monitoring`
- The monitoring information for the instance.
- Type: `InstanceMonitoringStateType (p. 476)`

`subnetId`
- The ID of the subnet in which the instance is running.
- Type: String

`vpcId`
- The ID of the VPC in which the instance is running.
- Type: String

`privateIpAddress`
- The private IP address assigned to the instance.
- Type: String

`ipAddress`
- The IP address of the instance.
- Type: String

`sourceDestCheck`
- Specifies whether to enable an instance launched in a VPC to perform NAT. This controls whether source/destination checking is enabled on the instance. A value of `true` means checking is enabled, and `false` means checking is disabled. The value must be `false` for the instance to perform NAT. For more information, go to NAT Instances in the Amazon Virtual Private Cloud User Guide.
- Type: Boolean

`groupSet`
- A list of the security groups for the instance. Each group is wrapped in an `item` element.
- Type: `GroupItemType (p. 469)`

`stateReason`
- The reason for the most recent state transition. See `StateReasonType (p. 518)` for a listing of supported state change codes.
- Type: `StateReasonType (p. 518)`

`architecture`
- The architecture of the image.
- Type: String
Valid values: i386 | x86_64

**rootDeviceType**
The root device type used by the AMI. The AMI can use an Amazon EBS or instance store root device.
Type: String
Valid values: ebs | instance-store

**rootDeviceName**
The root device name (for example, /dev/sda1).
Type: String

**blockDeviceMapping**
Any block device mapping entries for the instance, each one wrapped in an item element.
Type: InstanceBlockDeviceMappingResponseItemType (p. 474)

**instanceLifecycle**
Whether this is a Spot Instance.
Type: String
Valid values: spot | blank (no value)

**spotInstanceRequestId**
The ID of the Spot Instance request.
Type: String

**virtualizationType**
The instance's virtualization type.
Type: String
Valid values: paravirtual | hvm

**clientToken**
The idempotency token you provided when you launched the instance.
Type: String

**tagSet**
Any tags assigned to the resource, each one wrapped in an item element.
Type: ResourceTagSetItemType (p. 507)

**hypervisor**
The instance's hypervisor type.
Type: String
Valid values: ovf | xen

**networkInterfaceSet**
The network interfaces for the instance.
Type: InstanceNetworkInterfaceSetItemType (p. 479)

**iamInstanceProfile**
The IAM Instance Profile (IIP) associated with the instance.
Type: IamInstanceProfileResponseType (p. 470)

**ebsOptimized**
Whether the instance is optimized for EBS I/O. This optimization provides dedicated throughput to Amazon EBS and an optimized configuration stack to provide optimal EBS I/O performance. This optimization isn't available with all instance types. Additional usage charges apply when using an EBS Optimized instance.
Type: Boolean
Default: false
SecurityGroupIdSetItemType

The SecurityGroupIdSetItemType data type.

Ancestors

- LaunchSpecificationResponseType
- LaunchSpecificationRequestType
- InstanceNetworkInterfaceSetItemRequestType

Relevant Operations

- CreateNetworkInterface
- ModifyNetworkInterfaceAttribute
- ModifyInstanceAttribute
- RequestSpotInstances
- DescribeSpotInstanceRequests
- RunInstances

Contents

groupId

The ID of the security group associated with the network interface.
Type: String

SecurityGroupItemType

The SecurityGroupItemType data type.

Ancestors

- SecurityGroupSetType

Relevant Operations

- DescribeSecurityGroups

Contents

ownerId

The AWS account ID of the owner of the security group.
Type: String
groupId
The ID of the security group.
Type: String

groupName
The name of the security group.
Type: String

groupDescription
A description of the security group.
Type: String

vpcId
[EC2-VPC] The ID of the VPC for the security group.
Type: String

ipPermissions
A list of inbound rules associated with the security group. Each permission is wrapped in an item element.
Type: IpPermissionType (p. 487)

ipPermissionsEgress
[EC2-VPC] A list of outbound rules associated with the security group. Each permission is wrapped in an item element.
Type: IpPermissionType (p. 487)

tagSet
Any tags assigned to the resource, each one wrapped in an item element.
Type: ResourceTagSetItemType (p. 507)

SpotDatafeedSubscriptionType
The SpotDatafeedSubscriptionType data type.

Ancestors

• CreateSpotDatafeedSubscriptionResponseType
• DescribeSpotDatafeedSubscriptionResponseType

Relevant Operations

• CreateSpotDatafeedSubscription
• DescribeSpotDatafeedSubscription

Contents

ownerId
The AWS account ID of the account.
Type: String

bucket
The Amazon S3 bucket where the Spot Instance datafeed is located.
Type: String
prefix
    The prefix that is prepended to datafeed files.
    Type: String

state
    The state of the Spot Instance datafeed subscription.
    Type: String
    Valid values: Active | Inactive

fault
    The fault codes for the Spot Instance request, if any.
    Type: SpotInstanceStateFaultType (p. 516)

SpotInstanceRequestSetItemType

The SpotInstanceRequestSetItemType data type.

Ancestors

- SpotInstanceRequestSetType

Relevant Operations

- DescribeSpotInstanceRequests
- RequestSpotInstances

Contents

spotInstanceRequestId
    The ID of the Spot Instance request.
    Type: String

spotPrice
    The maximum hourly price for any Spot Instance launched to fulfill the request.
    Type: String

type
    The Spot Instance request type.
    Type: String
    Valid values: one-time | persistent

state
    The state of the Spot Instance request. Spot bid status information can help you track your Amazon EC2 Spot Instance requests. For information, see Tracking Spot Requests with Bid Status Codes in the Amazon Elastic Compute Cloud User Guide.
    Type: String
    Valid values: open | active | closed | cancelled | failed

fault
    The fault codes for the Spot Instance request, if any.
    Type: SpotInstanceStateFaultType (p. 516)

status
    The status code and status message describing the Spot Instance request.
validFrom
The start date of the request. If this is a one-time request, the request becomes active at this date and time and remains active until all instances launch, the request expires, or the request is canceled. If the request is persistent, the request becomes active at this date and time and remains active until it expires or is canceled.
Type: DateTime
validUntil
The end date of the request. If this is a one-time request, the request remains active until all instances launch, the request is canceled, or this date is reached. If the request is persistent, it remains active until it is canceled or this date is reached.
Type: DateTime
launchGroup
The instance launch group. Launch groups are Spot Instances that launch together and terminate together.
Type: String
availabilityZoneGroup
The Availability Zone group. If you specify the same Availability Zone group for all Spot Instance requests, all Spot Instances are launched in the same Availability Zone.
Type: String
launchedAvailabilityZone
The Availability Zone in which the bid is launched.
Type: String
launchSpecification
Additional information for launching instances.
Type: LaunchSpecificationResponseType (p. 490)
instanceId
The instance ID, if an instance has been launched to fulfill the Spot Instance request.
Type: String
createTime
The time stamp when the Spot Instance request was created.
Type: DateTime
productDescription
The product description associated with the Spot Instance.
Type: String
tagSet
Any tags assigned to the resource, each one wrapped in an item element.
Type: ResourceTagSetItemType (p. 507)

SpotInstanceStateFaultType

The SpotInstanceStateFaultType data type.

Ancestors

- SpotDatafeedSubscriptionType (p. 514)
- SpotInstanceRequestSetItemType (p. 515)
Relevant Operations

- CreateSpotDatafeedSubscription
- DescribeSpotDatafeedSubscription
- DescribeSpotInstanceRequests
- RequestSpotInstances

Contents

code
The reason code for the Spot Instance state change.
Type: String

message
The message for the Spot Instance state change.
Type: String

SpotInstanceStatusMessageType

The SpotInstanceStatusMessageType data type.

Ancestors

- SpotInstanceRequestSetItemType (p. 515)

Relevant Operations

- DescribeSpotInstanceRequests

Contents

code
The status code of the request.
Type: String

updateTime
The time the status was stated.
Type: DateTime

message
The description for the status code for the Spot request.
Type: String

SpotPriceHistorySetItemType

The SpotPriceHistorySetItemType data type.
Ancestors

- SpotPriceHistorySetType

Relevant Operations

- DescribeSpotPriceHistory

Contents

instanceType
The instance type.
Type: String

productDescription
A general description of the AMI.
Type: String
Valid values: Linux/UNIX | SUSE Linux | Windows

spotPrice
The maximum price you will pay to launch one or more Spot Instances.
Type: String

timestamp
The date and time the request was created.
Type: DateTime

availabilityZone
The Availability Zone.
Type: String

StateReasonType

The StateReasonType data type.

Ancestors

- DescribeImagesResponseItemType (p. 453)
- RunningInstancesItemType (p. 510)

Relevant Operations

- DescribeImages
- DescribeInstances
- RunInstances
The reason code for the state change. See the following table for a list of codes.
Type: String

message
The message for the state change.
Type: String

The following are the currently supported state reason codes.

Server.SpotInstanceTermination
A Spot Instance was terminated due to an increase in the market price.

Server.InternalError
An internal error occurred during instance launch, resulting in termination.

Server.InsufficientInstanceCapacity
There was insufficient instance capacity to satisfy the launch request.

Client.InternalError
A client error caused the instance to terminate on launch.

Client.InstanceInitiatedShutdown
The instance initiated shutdown by a shutdown -h command issued from inside the instance.

Client.UserInitiatedShutdown
The instance was shut down by a user via an API call.

Client.VolumeLimitExceeded
The volume limit was exceeded.

Client.InvalidSnapshot.NotFound
The specified snapshot was not found.

SubnetType
Describes a subnet.

Ancestors

• SubnetSetType

Relevant Operations

• CreateSubnet (p. 106)
• DescribeSubnets (p. 294)

Contents

subnetId
The ID of the subnet.
Type: String
state
  The current state of the subnet.
  Type: String

vpcId
  The ID of the VPC the subnet is in.
  Type: String

cidrBlock
  The CIDR block assigned to the subnet.
  Type: String

availableIpAddressCount
  The number of unused IP addresses in the subnet (the IP addresses for any stopped instances are
  considered unavailable).
  Type: Integer

availabilityZone
  The Availability Zone of the subnet.
  Type: String

defaultForAz
  Indicates whether this is the default subnet for the Availability Zone.
  Type: Boolean

mapPublicIpOnLaunch
  Indicates whether instances launched in this subnet receive a public IP address.
  Type: Boolean

tagSet
  Any tags assigned to the resource, each one wrapped in an item element.
  Type: ResourceTagSetItemType (p. 507)

TagSetItemType
  The TagSetItemType data type.

Relevant Operations
  • DescribeTags

Contents

resourceId
  The ID of the resource. For example, ami-1a2b3c4d.
  Type: String

resourceType
  The type of resource.
  Type: String


key
  The key of the tag.
UserDataType

The UserDataType data type.

Ancestors

- LaunchSpecificationRequestType (p. 488)

Relevant Operations

- RequestSpotInstances
- DescribeSpotInstanceRequests
- RequestSpotInstances
- RunInstances

Contents

data
The Base64-encoded MIME user data made available to the instance(s) in the reservation.
Type: String

UserIdGroupPairType

Describes a security group and AWS account ID pair.

Ancestors

- UserIdGroupPairSetType

Relevant Operations

- AuthorizeSecurityGroupEgress
- AuthorizeSecurityGroupIngress
- RevokeSecurityGroupEgress
- RevokeSecurityGroupIngress
- DescribeSecurityGroups
Contents

userId
  The ID of an AWS account. Cannot be used when specifying a CIDR IP address range.
  Type: String

groupId
  The ID of the security group in the specified AWS account. Cannot be used when specifying a CIDR
  IP address range.
  Type: String

groupName
  The name of the security group in the specified AWS account. Cannot be used when specifying a
  CIDR IP address range.
  Type: String

VolumeStatusItemType

The VolumeStatusItemType data type.

Ancestors

• VolumeStatusSetType

Relevant Operation

• DescribeVolumeStatus

Contents

volumeId
  The volume ID.
  Type: String

availabilityZone
  The Availability Zone of the volume.
  Type: String

volumeStatus
  The volume status. The status of each volume is wrapped in an item element.
  Type: VolumeStatusInfoType (p. 523).

eventSet
  A list of events associated with the volume. Each event is wrapped in an item element.
  Type: VolumeStatusEventItemType (p. 524).

actionSet
  The details of the action. Each action detail is wrapped in an item element.
  Type: VolumeStatusActionItemType (p. 524).
VolumeStatusInfoType

The VolumeStatusInfoType data type.

Ancestors

- VolumeStatusItemType

Relevant Operation

- DescribeVolumeStatus

Contents

status
The status of the volume.
Type: String
Valid values: ok | impaired | insufficient-data

details
The details of the volume status. Each volume status detail is wrapped in an item type.
Type: VolumeStatusDetailsItemType (p. 523).

VolumeStatusDetailsItemType

The VolumeStatusDetailsItemType data type.

Ancestors

- VolumeStatusInfoType

Relevant Operation

- DescribeVolumeStatus

Contents

name
The name of the volume's status.
Type: String

status
The intended status of the volume status.
Type: String
VolumeStatusEventItemType

The VolumeStatusEventItemType data type.

Ancestors

• VolumeStatusItemType

Relevant Operation

• DescribeVolumeStatus

Contents

eventType
The type of this event.
Type: String

eventId
The ID of this event.
Type: String

description
A description of the event.
Type: String

notBefore
The earliest start time of the event.
Type: DateTime

notAfter
The latest end time of the event.
Type: DateTime

VolumeStatusActionItemType

The VolumeStatusActionItemType data type.

Ancestors

• VolumeStatusItemType

Relevant Operation

• DescribeVolumeStatus
Contents

code
   The code identifying the action.
   Type: String

eventType
   The event type associated with this action.
   Type: String

eventId
   The ID of the event associated with this action.
   Type: String

description
   A description of the action.
   Type: String

VpcType

Describes a VPC.

Ancestors

• VpcSetType

Relevant Operations

• CreateVpc (p. 113)
• DescribeVpcs (p. 316)

Contents

vpcId
   The ID of the VPC.
   Type: String

state
   The current state of the VPC.
   Type: String
   Valid values: pending | available

cidrBlock
   The CIDR block for the VPC.
   Type: String

dhcpOptionsId
   The ID of the set of DHCP options you've associated with the VPC (or default if the default options are associated with the VPC).
   Type: String

tagSet
   Any tags assigned to the resource, each one wrapped in an item element.
VpnConnectionOptionsResponseType

Describes VPN connection options.

**Relevant Operations**

- CreateVpnConnection (p. 115)
- DescribeVpnConnections (p. 319)

**Contents**

staticRoutesOnly

Indicates whether the VPN connection uses static routes only. Static routes must be used for devices that don't support BGP.

Type: Boolean

VpnConnectionType

Describes a VPN connection.

**Ancestors**

- VpnConnectionSetType

**Relevant Operations**

- CreateVpnConnection (p. 115)
- DescribeVpnConnections (p. 319)

**Contents**

vpnConnectionId

The ID of the VPN connection.

Type: String

state

The current state of the VPN connection.
Type: String  
Valid values: pending | available | deleting | deleted

customerGatewayConfiguration
The configuration information for the VPN connection’s customer gateway (in the native XML format). This element is always present in the CreateVpnConnection response; however, it’s present in the DescribeVpnConnections response only if the VPN connection is in the pending or available state.  
Type: String
type
The type of VPN connection (ipsec.1).  
Type: String
customerGatewayId
The ID of the customer gateway at your end of the VPN connection.  
Type: String
vpnGatewayId
The ID of the virtual private gateway at the AWS side of the VPN connection.  
Type: String
tagSet
Any tags assigned to the resource, each one wrapped in an item element.  
Type: ResourceTagSetItemType (p. 507)
vgwTelemetry
Information about the virtual private gateway. Each gateway is wrapped in an item element.  
Type: VpnTunnelTelemetryType (p. 529)
options
The option set describing the VPN connection.  
Type: VpnConnectionOptionsResponseType (p. 526)
routes
The set of static routes associated with a VPN connection.  
Type: VpnStaticRouteType (p. 528)

VpnGatewayType

Describes a virtual private gateway.

Ancestors

- VpnGatewaySetType

Relevant Operations

- CreateVpnGateway (p. 124)
- DescribeVpnGateways (p. 323)

Contents

vpnGatewayId
The ID of the virtual private gateway.
VpnStaticRouteType

Describes a static route for a VPN connection.

Ancestors

• VpnStaticRoutesSetType

 Relevant Operations

• CreateVpnConnection (p. 115)
• DescribeVpnConnections (p. 319)

Contents

destinationCidrBlock
The CIDR block associated with the local subnet of the customer data center.
Type: String

source
Indicates how the routes were provided.
Type: String
Valid value: Static

state
The current state of the static route.
Type: String
Valid values: pending | available | deleting | deleted
VpnTunnelTelemetryType

Describes telemetry for a VPN tunnel.

**Ancestors**

- VgwTelemetryType

**Relevant Operations**

- CreateVpnConnection (p. 115)
- DescribeVpnConnections (p. 319)

**Contents**

- **outsideIpAddress**
  The Internet-routable IP address of the virtual private gateway's outside interface.
  Type: String

- **status**
  The status of the VPN tunnel.
  Type: String
  Valid values: **UP** | **DOWN**

- **lastStatusChange**
  The date and time of the last change in status.
  Type: DateTime

- **statusMessage**
  If an error occurs, a description of the error.
  Type: String

- **acceptedRouteCount**
  The number of accepted routes.
  Type: Integer
## Common Query Parameters

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Indicates the action to perform. Example: RunInstances</td>
<td>Yes</td>
</tr>
<tr>
<td>Version</td>
<td>The API version to use, as specified in the WSDL. Example: 2013-02-01</td>
<td>Yes</td>
</tr>
<tr>
<td>AWSAccessKeyId</td>
<td>The access key ID for the request sender. This identifies the account which will be charged for usage of the service. The account that's associated with the access key ID must be signed up for Amazon EC2, or the request isn't accepted. Example: AKIAIOSFODNN7EXAMPLE</td>
<td>Yes</td>
</tr>
<tr>
<td>Timestamp</td>
<td>The date and time at which the request is signed, in the format YYYY-MM-DDTh:mm:ssZ. For more information, see ISO 8601. Example: 2006-07-07T15:04:56Z</td>
<td>Yes</td>
</tr>
<tr>
<td>Expires</td>
<td>The date and time at which the signature included in the request expires, in the format YYYY-MM-DDTh:mm:ssZ. Example: 2006-07-07T15:04:56Z</td>
<td>Yes</td>
</tr>
<tr>
<td>SecurityToken</td>
<td>The temporary security token obtained through a call to AWS Security Token Service. For more information, see Using Temporary Security Credentials in the Amazon Elastic Compute Cloud User Guide. Default: None Type: String</td>
<td>No</td>
</tr>
<tr>
<td>Signature</td>
<td>The request signature. For more information, see Signature Version 2 Signing Process in the Amazon Web Services General Reference. Example: Qnp14Qk/7tINHzfXCiT7VEXAMPLE</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Required Description

**Name**: SignatureMethod  
**Description**: The hash algorithm you use to create the request signature. Valid values: HmacSHA256 | HmacSHA1. For more information, see Signature Version 2 Signing Process in the Amazon Web Services General Reference. Example: HmacSHA256  
**Required**: Yes

**Name**: SignatureVersion  
**Description**: The signature version you use to sign the request. Set this value to 2. For more information, see Signature Version 2 Signing Process in the Amazon Web Services General Reference. Example: 2  
**Required**: 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.
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 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 Query API, these errors are accompanied by a 500-series HTTP response code.
## Summary of Client Error Codes

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AddressLimitExceeded</td>
<td>You've reached the limit on the number of elastic IP addresses your account can have.</td>
<td>Each AWS account has an EC2 elastic IP address limit. For new accounts, this limit is 5. If you need more than 5 EC2 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. You have a separate limit for VPC elastic IP addresses (5). To request to increase the limit, complete the Amazon VPC Limits form.</td>
</tr>
<tr>
<td>AttachmentLimitExceeded</td>
<td>You've reached the limit on the number of Amazon EBS volumes that can be attached to a single instance.</td>
<td></td>
</tr>
<tr>
<td>AuthFailure</td>
<td>User not authorized.</td>
<td>You might be trying to run an AMI for which you do not have permission.</td>
</tr>
<tr>
<td>Blocked</td>
<td>The account is currently blocked.</td>
<td>Contact <a href="mailto:aws-verification@amazon.com">aws-verification@amazon.com</a> if you have questions.</td>
</tr>
<tr>
<td>CustomerGatewayLimitExceeded</td>
<td>You've reached the limit on the number of customer gateways you can create.</td>
<td></td>
</tr>
<tr>
<td>DependencyViolation</td>
<td>The specified object has dependent resources.</td>
<td></td>
</tr>
<tr>
<td>DiskImageSizeTooLarge</td>
<td>The disk image exceeds the allowed limit (for instance or volume import).</td>
<td></td>
</tr>
<tr>
<td>FilterLimitExceeded</td>
<td>Request uses too many filters or too many total filter values.</td>
<td></td>
</tr>
<tr>
<td>Gateway.NotAttached</td>
<td>Specified gateway isn't attached, so it can't be detached.</td>
<td></td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>IdempotentParameterMismatch</td>
<td>Request uses the same client token as a previous, but non-identical request.</td>
<td>Do not reuse a client token with different requests, unless the requests are identical.</td>
</tr>
<tr>
<td>IncorrectInstanceState</td>
<td>Instance is in an incorrect state so the attempted action cannot occur.</td>
<td></td>
</tr>
<tr>
<td>IncorrectState</td>
<td>The resource is in an incorrect state.</td>
<td>This error can occur if you are trying to attach a volume that is still being created, for example. Ensure the volume is in the 'available' state.</td>
</tr>
<tr>
<td>InstanceLimitExceeded</td>
<td>Account has maximum allowed concurrent running instances.</td>
<td>Each AWS account has a concurrent running instance limit. For new accounts, 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.</td>
</tr>
<tr>
<td>InsufficientInstanceCapacity</td>
<td>There is insufficient capacity available for the requested instance type.</td>
<td>The returned message gives guidance on how to solve the problem.</td>
</tr>
<tr>
<td>InsufficientReservedInstancesCapacity</td>
<td>Insufficient Reserved Instances capacity.</td>
<td></td>
</tr>
<tr>
<td>InternetGatewayLimitExceeded</td>
<td>You've reached the limit on the number of Internet gateways you can create.</td>
<td></td>
</tr>
<tr>
<td>InvalidAMIAttributeItemValue</td>
<td>The value of an item added to, or removed from, an image attribute is invalid.</td>
<td>If you are specifying a userId, check that it is in the form of an AWS account ID.</td>
</tr>
<tr>
<td>InvalidAMIID.Malformed</td>
<td>Specified AMI ID is not valid.</td>
<td></td>
</tr>
<tr>
<td>InvalidAMIID.NotFound</td>
<td>Specified AMI ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidAMIID.Unavailable</td>
<td>Specified AMI ID has been deregistered and is no longer available.</td>
<td></td>
</tr>
<tr>
<td>InvalidAssociationID.NotFound</td>
<td>Specified association ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidAttachment.NotFound</td>
<td>The instance cannot detach from a volume to which it is not attached.</td>
<td></td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>InvalidConversionTaskId</td>
<td>Specified conversion task ID (for instance or volume import) is invalid.</td>
<td></td>
</tr>
<tr>
<td>InvalidCustomerGateway.DuplicateIpAddress</td>
<td>Conflict among chosen gateway IP addresses.</td>
<td></td>
</tr>
<tr>
<td>InvalidCustomerGatewayID.NotFound</td>
<td>The specified customer gateway ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidDevice.InUse</td>
<td>The device to which you are trying to attach (i.e. /dev/sdh) is already in use on the instance.</td>
<td></td>
</tr>
<tr>
<td>InvalidDhcpOptionsID.NotFound</td>
<td>Specified DHCP options ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidFormat</td>
<td>Specified disk format (for instance or volume import) is invalid.</td>
<td></td>
</tr>
<tr>
<td>InvalidFilter</td>
<td>Specified filter is invalid.</td>
<td></td>
</tr>
<tr>
<td>InvalidGatewayID.NotFound</td>
<td>Specified gateway ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidGroup.Duplicate</td>
<td>Attempt to create a duplicate group.</td>
<td></td>
</tr>
<tr>
<td>InvalidGroupId.Malformed</td>
<td>Specified group ID is invalid.</td>
<td></td>
</tr>
<tr>
<td>InvalidGroup.InUse</td>
<td>Specified group cannot be deleted because it is in use.</td>
<td></td>
</tr>
<tr>
<td>InvalidGroup.NotFound</td>
<td>Specified security group does not exist.</td>
<td>This error may occur because the security group ID has not propagated through the system. For more information, see Eventual Consistency.</td>
</tr>
<tr>
<td>InvalidGroup.Reserved</td>
<td>Specified group name is a reserved name.</td>
<td></td>
</tr>
<tr>
<td>InvalidInstanceAttributeValue</td>
<td>The specified instance attribute value is not valid.</td>
<td>This error is most commonly encountered when trying to set the InstanceType--instance-type attribute to an unrecognized value.</td>
</tr>
<tr>
<td>InvalidInstanceId.Malformed</td>
<td>Specified instance ID is not valid.</td>
<td></td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>InvalidInstanceID.NotFound</td>
<td>Specified instance ID does not exist.</td>
<td>This error may occur because the instance ID has not propagated through the system. For more information, see Eventual Consistency.</td>
</tr>
<tr>
<td>InvalidInternetGatewayID.NotFound</td>
<td>Specified Internet gateway ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidIPAddress.InUse</td>
<td>Specified IP address is currently in use.</td>
<td></td>
</tr>
<tr>
<td>InvalidKeyPair.Duplicate</td>
<td>Attempt to create a duplicate key pair.</td>
<td></td>
</tr>
<tr>
<td>InvalidKeyPair.Format</td>
<td>Format of the public key you’ve attempted to import is invalid.</td>
<td></td>
</tr>
<tr>
<td>InvalidKeyPair.NotFound</td>
<td>Specified key pair name does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidManifest</td>
<td>Specified AMI has an unparsable manifest.</td>
<td></td>
</tr>
<tr>
<td>InvalidNetworkAclEntry.NotFound</td>
<td>Specified network ACL entry does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidNetworkAclID.NotFound</td>
<td>Specified network ACL ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidParameterCombination</td>
<td>Example: RunInstances was called with both minCount and maxCount set to 0, or minCount &gt; maxCount.</td>
<td></td>
</tr>
<tr>
<td>InvalidParameterValue</td>
<td>The value supplied for a parameter was invalid.</td>
<td>Requests that could cause this error include (for example) supplying an invalid image attribute to the DescribeImageAttribute request or an invalid version or encoding value for the userData in a RunInstances request.</td>
</tr>
<tr>
<td>InvalidPermission.Duplicate</td>
<td>Attempt to authorize a permission that has already been authorized.</td>
<td></td>
</tr>
<tr>
<td>InvalidPermission.Malformed</td>
<td>Specified permission is invalid.</td>
<td></td>
</tr>
<tr>
<td>InvalidReservationID.Malformed</td>
<td>Specified reservation ID is invalid.</td>
<td></td>
</tr>
<tr>
<td>InvalidReservationID.NotFound</td>
<td>Specified reservation ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>InvalidRoute.NotFound</td>
<td>Specified route does not exist in the route table.</td>
<td></td>
</tr>
<tr>
<td>InvalidRouteTableID.NotFound</td>
<td>Specified route table ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidSecurity.RequestHasExpired</td>
<td>The difference between the request timestamp and the AWS server time is greater than 5 minutes.</td>
<td>Ensure that your system clock is accurate and configured to use the correct time zone.</td>
</tr>
<tr>
<td>InvalidSnapshotID.Malformed</td>
<td>The snapshot ID that was passed as an argument was malformed.</td>
<td></td>
</tr>
<tr>
<td>InvalidSnapshot.InUse</td>
<td>The snapshot which you are trying to delete is in use by one or more AMIs.</td>
<td></td>
</tr>
<tr>
<td>InvalidSnapshot.NotFound</td>
<td>The specified snapshot does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidUserID.Malformed</td>
<td>The user ID is neither in the form of an AWS account ID or one of the special values accepted by the owner or executableBy flags in the DescribeImages call.</td>
<td></td>
</tr>
<tr>
<td>InvalidReservedInstancesId</td>
<td>Reserved Instances ID not found.</td>
<td></td>
</tr>
<tr>
<td>InvalidReservedInstancesOfferingId</td>
<td>Reserved Instances Offering ID not found.</td>
<td></td>
</tr>
<tr>
<td>InvalidSubnetID.NotFound</td>
<td>Specified subnet ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidVolumeID.Duplicate</td>
<td>Volume already exists in the system.</td>
<td></td>
</tr>
<tr>
<td>InvalidVolumeID.Malformed</td>
<td>Specified volume ID was malformed.</td>
<td></td>
</tr>
<tr>
<td>InvalidVolumeID.ZoneMismatch</td>
<td>Specified volume ID and instance ID are in different Availability Zones.</td>
<td></td>
</tr>
<tr>
<td>InvalidVolume.NotFound</td>
<td>Specified volume does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidVpcID.NotFound</td>
<td>Specified VPC ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidVpnConnectionID.NotFound</td>
<td>The specified VPN connection ID does not exist.</td>
<td></td>
</tr>
<tr>
<td>InvalidVpnGatewayID.NotFound</td>
<td>Specified virtual private gateway ID does not exist.</td>
<td></td>
</tr>
</tbody>
</table>
### Summary of Client Error Codes

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>InvalidZone.NotFound</td>
<td>The specified zone does not exist.</td>
<td></td>
</tr>
<tr>
<td>LegacySecurityGroup</td>
<td>You must delete the 2009-07-15-default security group before you can attach an Internet gateway.</td>
<td></td>
</tr>
<tr>
<td>MissingParameter</td>
<td>The request is missing a required parameter.</td>
<td></td>
</tr>
<tr>
<td>NetworkAclEntryAlreadyExists</td>
<td>Specified rule number already exists in this network ACL.</td>
<td></td>
</tr>
<tr>
<td>NetworkAclEntryLimitExceeded</td>
<td>You've reached the limit on the number of network ACL entries you can add to the ACL.</td>
<td></td>
</tr>
<tr>
<td>NetworkAclLimitExceeded</td>
<td>You've reached the limit on the number of network ACLs you can create.</td>
<td></td>
</tr>
<tr>
<td>NonEBSInstance</td>
<td>The instance specified does not support EBS.</td>
<td>Please restart the instance and try again. This will ensure that the code is run on an instance with updated code.</td>
</tr>
<tr>
<td>OptInRequired</td>
<td>You are not subscribed to this service.</td>
<td>This error message can apply to Amazon EC2 or individual AWS Marketplace product codes.</td>
</tr>
<tr>
<td>PendingSnapshotLimitExceeded</td>
<td>You've reached the limit on the number of Amazon EBS snapshots you can have in the pending state.</td>
<td></td>
</tr>
<tr>
<td>PendingVerification</td>
<td>The account is pending verification.</td>
<td>Contact <a href="mailto:aws-verification@amazon.com">aws-verification@amazon.com</a> if you have questions.</td>
</tr>
<tr>
<td>RequestLimitExceeded</td>
<td>The maximum request rate permitted by the Amazon EC2 APIs has been exceeded for your account.</td>
<td>For best results, use an increasing or variable sleep interval between requests. For more information, see Query API Request Rate.</td>
</tr>
<tr>
<td>ReservedInstancesLimitExceeded</td>
<td>Your current quota does not allow you to purchase the required number of reserved instances.</td>
<td></td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Resource.AlreadyAssociated</td>
<td>Specified gateway is already attached, or specified subnet is already associated with another object.</td>
<td></td>
</tr>
<tr>
<td>ResourceLimitExceeded</td>
<td>Exceeded an EC2 resource limit.</td>
<td>Example: You reached the maximum number of import conversion tasks allowed.</td>
</tr>
<tr>
<td>RouteAlreadyExists</td>
<td>A route for the specified CIDR block already exists in this route table.</td>
<td></td>
</tr>
<tr>
<td>RouteLimitExceeded</td>
<td>You've reached the limit on the number of routes you can add to a route table.</td>
<td></td>
</tr>
<tr>
<td>RouteTableLimitExceeded</td>
<td>You've reached the limit on the number of route tables you can create.</td>
<td></td>
</tr>
<tr>
<td>RulesPerSecurityGroupLimitExceed</td>
<td>You've reached the limit on the number of rules you can add to a security group.</td>
<td></td>
</tr>
<tr>
<td>SecurityGroupLimitExceeded</td>
<td>You've reached the limit on the number of security groups you can create.</td>
<td></td>
</tr>
<tr>
<td>SecurityGroupsPerInstanceLimitEx</td>
<td>You've reached the limit on the number of security groups you can put an instance into.</td>
<td></td>
</tr>
<tr>
<td>SnapshotLimitExceeded</td>
<td>You've reached the limit on the number of Amazon EBS snapshots you can create.</td>
<td></td>
</tr>
<tr>
<td>SubnetLimitExceeded</td>
<td>You've reached the limit on the number of subnets you can create for the VPC.</td>
<td></td>
</tr>
<tr>
<td>TagLimitExceeded</td>
<td>You've reached the limit on the number of tags you can assign to the specified resource.</td>
<td>For more information about tag restrictions and limits, see Tag Restrictions.</td>
</tr>
<tr>
<td>UnauthorizedOperation</td>
<td>You are not authorized to perform this operation.</td>
<td></td>
</tr>
<tr>
<td>UnknownParameter</td>
<td>An unknown or unrecognized parameter was supplied.</td>
<td>Requests that could cause this error include supplying a misspelled parameter or a parameter that is not supported for the specified API version.</td>
</tr>
</tbody>
</table>
### Summary of Server Error Codes

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>UnsupportedOperation</td>
<td>The instance type or feature is not supported in your requested Availability Zone or with the requested configuration.</td>
<td>The returned message gives guidance on how to solve the problem.</td>
</tr>
<tr>
<td>VolumeInUse</td>
<td>The specified volume is already attached to an instance.</td>
<td>Ensure that the specified volume is in an 'available' state, and not already in use by an instance.</td>
</tr>
<tr>
<td>VolumeLimitExceeded</td>
<td>You've reached the limit on the number of Amazon EBS volumes you can create.</td>
<td></td>
</tr>
<tr>
<td>VpcLimitExceeded</td>
<td>You've reached the limit on the number of VPCs you can create.</td>
<td></td>
</tr>
<tr>
<td>VpnConnectionLimitExceeded</td>
<td>You've reached the limit on the number of VPN connections you can create.</td>
<td></td>
</tr>
<tr>
<td>VpnGatewayAttachmentLimitExceeded</td>
<td>You've reached the limit on the number of VPCs that can be attached to the given virtual private gateway.</td>
<td></td>
</tr>
<tr>
<td>VpnGatewayLimitExceeded</td>
<td>You've reached the limit on the number of virtual private gateways you can create.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>InsufficientAddressCapacity</td>
<td>Not enough available addresses to satisfy your minimum request.</td>
<td>Reduce the number of addresses you are requesting or wait for additional capacity to become available.</td>
</tr>
<tr>
<td>InsufficientInstanceCapacity</td>
<td>Not enough available instances to satisfy your minimum request.</td>
<td>Reduce the number of instances in your request or wait for additional capacity to become available. The returned message might also give specific guidance on how to solve the problem.</td>
</tr>
</tbody>
</table>
### Error Code Description Notes

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>InsufficientReservedInstanceCapacity</td>
<td>Not enough available Reserved Instances to satisfy your minimum request.</td>
<td>Reduce the number of Reserved Instances in your request or wait for additional capacity to become available.</td>
</tr>
<tr>
<td>InternalError</td>
<td>Internal Error.</td>
<td>This error should not occur. If this persists, please contact us with details by posting a message on the AWS forums.</td>
</tr>
<tr>
<td>Unavailable</td>
<td>The server is overloaded and cannot handle the request.</td>
<td></td>
</tr>
</tbody>
</table>

## Request Error Response

The following shows the structure of a request error response.

```
<Response>
    <Errors>
        <Error>
            <Code>Error code text</Code>
            <Message>Error message</Message>
        </Error>
    </Errors>
    <RequestID>request ID</RequestID>
</Response>
```

## Example Error Response Request

The following shows an example of an error response.

```
<Response>
    <Errors>
        <Error>
            <Code>InvalidInstanceID.NotFound</Code>
            <Message>The instance ID 'i-4cbc822a' does not exist</Message>
        </Error>
    </Errors>
    <RequestID>ea966190-f9aa-478e-9ede-cb5432daacc0</RequestID>
</Response>
```
Eventual Consistency

The Amazon EC2 API follows an eventual consistency model, due to the distributed nature of the system supporting the API. This means that when you run an API command, the result may not be immediately visible to subsequent API commands, which can result in an error.

For more information about eventual consistency and how to manage it, see Eventual Consistency.