Amazon ElastiCache

API Reference

API Version 2013-06-15

Amazon ElastiCache: API Reference

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Welcome

Amazon ElastiCache is a web service that makes it easier to set up, operate, and scale a distributed cache in the cloud.

With ElastiCache, customers gain all of the benefits of a high-performance, in-memory cache with far less of the administrative burden of launching and managing a distributed cache. The service makes set-up, scaling, and cluster failure handling much simpler than in a self-managed cache deployment.

In addition, through integration with Amazon CloudWatch, customers get enhanced visibility into the key performance statistics associated with their cache and can receive alarms if a part of their cache runs hot.

This document was last updated on October 22, 2013.

Actions

The following actions are supported:

AuthorizeCacheSecurityGroupIngress

Description

The *AuthorizeCacheSecurityGroupIngress* operation allows network ingress to a cache security group. Applications using ElastiCache must be running on Amazon EC2, and Amazon EC2 security groups are used as the authorization mechanism.

> **Note**
> You cannot authorize ingress from an Amazon EC2 security group in one Region to an ElastiCache cluster in another Region.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSecurityGroupName
The cache security group which will allow network ingress.

Type: String

Required: Yes

EC2SecurityGroupName
The Amazon EC2 security group to be authorized for ingress to the cache security group.

Type: String

Required: Yes

EC2SecurityGroupOwnerId
The AWS account number of the Amazon EC2 security group owner. Note that this is not the same thing as an AWS access key ID - you must provide a valid AWS account number for this parameter.

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `CacheSecurityGroup`.

CacheSecurityGroupName
The name of the cache security group.

Type: String

Description
The description of the cache security group.

Type: String

EC2SecurityGroups
A list of Amazon EC2 security groups that are associated with this cache security group.

Type: EC2SecurityGroup (p. 106) list

OwnerId
The AWS account ID of the cache security group owner.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

AuthorizationAlreadyExists
The specified Amazon EC2 security group is already authorized for the specified cache security group.

HTTP Status Code: 400

CacheSecurityGroupNotFound
The requested cache security group name does not refer to an existing cache security group.

HTTP Status Code: 404

InvalidCacheSecurityGroupState
The current state of the cache security group does not allow deletion.

HTTP Status Code: 400

InvalidParameterCombination
Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue
The value for a parameter is invalid.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=AuthorizeCacheSecurityGroupIngress
    &EC2SecurityGroupName=default
    &CacheSecurityGroupName=mygroup
    &EC2SecurityGroupOwnerId=1234-5678-1234
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-02-12T01%3A29%3A15.746Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<AuthorizeCacheSecurityGroupIngressResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
    <AuthorizeCacheSecurityGroupIngressResult>
        <CacheSecurityGroup>
```

```
            <EC2SecurityGroups>
                <EC2SecurityGroup>
                    <Status>authorizing</Status>
                    <EC2SecurityGroupName>default</EC2SecurityGroupName>
                   <EC2SecurityGroupOwnerId>565419523791</EC2SecurityGroupOwn
erId>
                </EC2SecurityGroup>
            </EC2SecurityGroups>
            <CacheSecurityGroupName>mygroup</CacheSecurityGroupName>
            <OwnerId>123456781234</OwnerId>
            <Description>My security group</Description>
        </CacheSecurityGroup>
    </AuthorizeCacheSecurityGroupIngressResult>
    <ResponseMetadata>
        <RequestId>817fa999-3647-11e0-ae57-f96cfe56749c</RequestId>
    </ResponseMetadata>
</AuthorizeCacheSecurityGroupIngressResponse>
```

CreateCacheCluster

Description

The *CreateCacheCluster* operation creates a new cache cluster. All nodes in the cache cluster run the same protocol-compliant cache engine software - either Memcached or Redis.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

AutoMinorVersionUpgrade
Determines whether minor engine upgrades will be applied automatically to the cache cluster during the maintenance window. A value of `true` allows these upgrades to occur; `false` disables automatic upgrades.

Default: `true`

Type: Boolean

Required: No

CacheClusterId
The cache cluster identifier. This parameter is stored as a lowercase string.

Constraints:
- Must contain from 1 to 20 alphanumeric characters or hyphens.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Required: Yes

CacheNodeType
The compute and memory capacity of the nodes in the cache cluster.

Valid values for Memcached:

`cache.t1.micro|cache.m1.small|cache.m1.medium|cache.m1.large|cache.m1.xlarge | cache.m3.xlarge | cache.m3.2xlarge | cache.m2.xlarge | cache.m2.2xlarge | cache.m2.4xlarge | cache.c1.xlarge`

Valid values for Redis:

`cache.t1.micro|cache.m1.small|cache.m1.medium|cache.m1.large|cache.m1.xlarge | cache.m2.xlarge | cache.m2.2xlarge | cache.m2.4xlarge | cache.c1.xlarge`

For a complete listing of cache node types and specifications, see http://aws.amazon.com/elasticache/.

Type: String

Required: No

CacheParameterGroupName
The name of the cache parameter group to associate with this cache cluster. If this argument is omitted, the default cache parameter group for the specified engine will be used.

Type: String

Required: No

CacheSecurityGroupNames.member.N

A list of cache security group names to associate with this cache cluster.

Use this parameter only when you are creating a cluster outside of an Amazon Virtual Private Cloud (VPC).

Type: String list

Required: No

CacheSubnetGroupName

The name of the cache subnet group to be used for the cache cluster.

Use this parameter only when you are creating a cluster in an Amazon Virtual Private Cloud (VPC).

Type: String

Required: No

Engine

The name of the cache engine to be used for this cache cluster.

Valid values for this parameter are:

```
memcached | redis
```

Type: String

Required: No

EngineVersion

The version number of the cache engine to be used for this cluster. To view the supported cache engine versions, use the *DescribeCacheEngineVersions* operation.

Type: String

Required: No

NotificationTopicArn

The Amazon Resource Name (ARN) of the Amazon Simple Notification Service (SNS) topic to which notifications will be sent.

> **Note**
> The Amazon SNS topic owner must be the same as the cache cluster owner.

Type: String

Required: No

NumCacheNodes

The initial number of cache nodes that the cache cluster will have.

For a Memcached cluster, valid values are between 1 and 20. If you need to exceed this limit, please fill out the ElastiCache Limit Increase Request form at http://aws.amazon.com/contact-us/elasticache-node-limit-request/ .

For Redis, only single-node cache clusters are supported at this time, so the value for this parameter must be 1.

Type: Integer

Required: No

Port

The port number on which each of the cache nodes will accept connections.

Type: Integer

Required: No

PreferredAvailabilityZone

The EC2 Availability Zone in which the cache cluster will be created.

All cache nodes belonging to a cache cluster are placed in the preferred availability zone.

Default: System chosen availability zone.

Type: String

Required: No

PreferredMaintenanceWindow

The weekly time range (in UTC) during which system maintenance can occur.

Example: `sun:05:00-sun:09:00`

Type: String

Required: No

ReplicationGroupId

The replication group to which this cache cluster should belong. If this parameter is specified, the cache cluster will be added to the specified replication group as a read replica; otherwise, the cache cluster will be a standalone primary that is not part of any replication group.

Type: String

Required: No

SecurityGroupIds.member.N

One or more VPC security groups associated with the cache cluster.

Use this parameter only when you are creating a cluster in an Amazon Virtual Private Cloud (VPC).

Type: String list

Required: No

SnapshotArns.member.N

A single-element string list containing an Amazon Resource Name (ARN) that uniquely identifies a Redis RDB snapshot file stored in Amazon S3. The snapshot file will be used to populate the Redis cache in the new cache cluster. The Amazon S3 object name in the ARN cannot contain any commas.

Here is an example of an Amazon S3 ARN: `arn:aws:s3:::my_bucket/snapshot1.rdb`

Note: This parameter is only valid if the `Engine` parameter is `redis`.

Type: String list

Required: No

Response Elements

The following elements are returned in a structure named `CacheCluster`.

AutoMinorVersionUpgrade

If `true`, then minor version patches are applied automatically; if `false`, then automatic minor version patches are disabled.

Type: Boolean

CacheClusterCreateTime

The date and time the cache cluster was created.

Type: DateTime

CacheClusterId

The user-supplied identifier of the cache cluster. This is a unique key that identifies a cache cluster.

Type: String

CacheClusterStatus

The current state of this cache cluster - *creating*, *available*, etc.

Type: String

CacheNodeType

The name of the compute and memory capacity node type for the cache cluster.

Type: String

CacheNodes

A list of cache nodes that are members of the cache cluster.

Type: CacheNode (p. 96) list

CacheParameterGroup

The status of the cache parameter group.

Type: CacheParameterGroupStatus (p. 99)

CacheSecurityGroups

A list of cache security group elements, composed of name and status sub-elements.

Type: CacheSecurityGroupMembership (p. 100) list

CacheSubnetGroupName

The name of the cache subnet group associated with the cache cluster.

Type: String

ClientDownloadLandingPage

The URL of the web page where you can download the latest ElastiCache client library.

Type: String

ConfigurationEndpoint

Represents the information required for client programs to connect to a cache node.

Type: Endpoint (p. 107)

Engine

The name of the cache engine (*memcached* or *redis*) to be used for this cache cluster.

Type: String

EngineVersion

The version of the cache engine version that is used in this cache cluster.

Type: String

NotificationConfiguration

Describes a notification topic and its status. Notification topics are used for publishing ElastiCache events to subscribers using Amazon Simple Notification Service (SNS).

Type: NotificationConfiguration (p. 110)

NumCacheNodes
The number of cache nodes in the cache cluster.

Type: Integer

PendingModifiedValues
A group of settings that will be applied to the cache cluster in the future, or that are currently being applied.

Type: PendingModifiedValues (p. 112)

PreferredAvailabilityZone
The name of the Availability Zone in which the cache cluster is located.

Type: String

PreferredMaintenanceWindow
The time range (in UTC) during which weekly system maintenance can occur.

Type: String

ReplicationGroupId
The replication group to which this cache cluster belongs. If this field is empty, the cache cluster is not associated with any replication group.

Type: String

SecurityGroups
A list of VPC Security Groups associated with the cache cluster.

Type: SecurityGroupMembership (p. 117) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheClusterAlreadyExists
This user already has a cache cluster with the given identifier.

HTTP Status Code: 400

CacheParameterGroupNotFound
The requested cache parameter group name does not refer to an existing cache parameter group.

HTTP Status Code: 404

CacheSecurityGroupNotFound
The requested cache security group name does not refer to an existing cache security group.

HTTP Status Code: 404

CacheSubnetGroupNotFound
The requested cache subnet group name does not refer to an existing cache subnet group.

HTTP Status Code: 400

ClusterQuotaForCustomerExceeded
The request cannot be processed because it would exceed the allowed number of cache clusters per customer.

HTTP Status Code: 400

InsufficientCacheClusterCapacity
The requested cache node type is not available in the specified Availability Zone.

HTTP Status Code: 400

InvalidParameterCombination
Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue
The value for a parameter is invalid.

HTTP Status Code: 400

InvalidReplicationGroupState
The requested replication group is not in the *available* state.

HTTP Status Code: 400

InvalidVPCNetworkState
The VPC network is in an invalid state.

HTTP Status Code: 400

NodeQuotaForClusterExceeded
The request cannot be processed because it would exceed the allowed number of cache nodes in a single cache cluster.

HTTP Status Code: 400

NodeQuotaForCustomerExceeded
The request cannot be processed because it would exceed the allowed number of cache nodes per customer.

HTTP Status Code: 400

ReplicationGroupNotFound
The specified replication group does not exist.

HTTP Status Code: 404

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=CreateCacheCluster
    &NumCacheNodes=3
    &CacheClusterId=mycache
    &Engine=memcached
    &CacheSecurityGroupNames.member.1=default
    &CacheNodeType=cache.m1.large
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-07-27T00%3A33%3A09.322Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<CreateCacheClusterResponse xmlns="http://elasticache.amazonaws.com/doc/2013-
06-15/">
    <CreateCacheClusterResult>
        <CacheCluster>
            <CacheClusterStatus>creating</CacheClusterStatus>
            <NumCacheNodes>3</NumCacheNodes>
            <Engine>memcached</Engine>
            <PendingModifiedValues/>
            <EngineVersion>1.4.5</EngineVersion>
            <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
            <PreferredMaintenanceWindow>sun:08:00-sun:09:00</PreferredMainten
anceWindow>
                <CacheNodeType>cache.m1.large</CacheNodeType>
                <CacheSecurityGroups>
                    <CacheSecurityGroup>
                      <CacheSecurityGroupName>default</CacheSecurityGroupName>

                        <Status>active</Status>
                    </CacheSecurityGroup>
                </CacheSecurityGroups>
                <CacheClusterId>mycache</CacheClusterId>
        </CacheCluster>
    </CreateCacheClusterResult>
    <ResponseMetadata>
        <RequestId>aaf2e796-363f-11e0-a564-8f11342c56b0</RequestId>
    </ResponseMetadata>
</CreateCacheClusterResponse>
```

CreateCacheParameterGroup

Description

The *CreateCacheParameterGroup* operation creates a new cache parameter group. A cache parameter group is a collection of parameters that you apply to all of the nodes in a cache cluster.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheParameterGroupFamily
The name of the cache parameter group family the cache parameter group can be used with.

Valid values are: `memcached1.4 | redis2.6`

Type: String

Required: Yes

CacheParameterGroupName
A user-specified name for the cache parameter group.

Type: String

Required: Yes

Description
A user-specified description for the cache parameter group.

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `CacheParameterGroup`.

CacheParameterGroupFamily
The name of the cache parameter group family that this cache parameter group is compatible with.

Type: String

CacheParameterGroupName
The name of the cache parameter group.

Type: String

Description
The description for this cache parameter group.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheParameterGroupAlreadyExists

A cache parameter group with the requested name already exists.

HTTP Status Code: 400

CacheParameterGroupQuotaExceeded

The request cannot be processed because it would exceed the maximum number of cache security groups.

HTTP Status Code: 400

InvalidCacheParameterGroupState

The current state of the cache parameter group does not allow the requested action to occur.

HTTP Status Code: 400

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
   ?Action=CreateCacheParameterGroup
   &Description=My%20first%20cache%20parameter%20group
   &CacheParameterGroupFamily=memcached1.4
   &CacheParameterGroupName=mycacheparametergroup1
   &Version=2013-06-15
   &SignatureVersion=2
   &SignatureMethod=HmacSHA256
   &Timestamp=2011-07-27T02%3A34%3A47.462Z
   &AWSAccessKeyId=YOUR-ACCESS-KEY
   &Signature=YOUR-SIGNATURE
```

Sample Response

```
<CreateCacheParameterGroupResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <CreateCacheParameterGroupResult>
    <CacheParameterGroup>
     <CacheParameterGroupName>mycacheparametergroup3</CacheParameterGroupName>

     <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
     <Description>My first cache parameter group</Description>
    </CacheParameterGroup>
  </CreateCacheParameterGroupResult>
```

```
  <ResponseMetadata>
    <RequestId>05699541-b7f9-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</CreateCacheParameterGroupResponse>
```

CreateCacheSecurityGroup

Description

The *CreateCacheSecurityGroup* operation creates a new cache security group. Use a cache security group to control access to one or more cache clusters.

Cache security groups are only used when you are creating a cluster outside of an Amazon Virtual Private Cloud (VPC). If you are creating a cluster inside of a VPC, use a cache subnet group instead. For more information, see *CreateCacheSubnetGroup*.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSecurityGroupName
A name for the cache security group. This value is stored as a lowercase string.

Constraints: Must contain no more than 255 alphanumeric characters. Must not be the word "Default".

Example: `mysecuritygroup`

Type: String

Required: Yes

Description
A description for the cache security group.

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `CacheSecurityGroup`.

CacheSecurityGroupName
The name of the cache security group.

Type: String

Description
The description of the cache security group.

Type: String

EC2SecurityGroups
A list of Amazon EC2 security groups that are associated with this cache security group.

Type: EC2SecurityGroup (p. 106) list

OwnerId
The AWS account ID of the cache security group owner.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheSecurityGroupAlreadyExists
    A cache security group with the specified name already exists.

    HTTP Status Code: 400

CacheSecurityGroupQuotaExceeded
    The request cannot be processed because it would exceed the allowed number of cache security groups.

    HTTP Status Code: 400

InvalidParameterCombination
    Two or more incompatible parameters were specified.

    HTTP Status Code: 400

InvalidParameterValue
    The value for a parameter is invalid.

    HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=CreateCacheSecurityGroup
    &CacheSecurityGroupName=mycachesecuritygroup
    &Description=My%20cache%20security%20group
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-07-27T02%3A43%3A10.703Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<CreateCacheSecurityGroupResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <CreateCacheSecurityGroupResult>
    <CacheSecurityGroup>
      <EC2SecurityGroups/>
      <CacheSecurityGroupName>mycachesecuritygroup</CacheSecurityGroupName>
      <OwnerId>123456789012</OwnerId>
      <Description>My cache security group</Description>
    </CacheSecurityGroup>
  </CreateCacheSecurityGroupResult>
  <ResponseMetadata>
    <RequestId>2b1c8035-b7fa-11e0-9326-b7275b9d4a6c</RequestId>
```

```
    </ResponseMetadata>
</CreateCacheSecurityGroupResponse>
```

CreateCacheSubnetGroup

Description

The *CreateCacheSubnetGroup* operation creates a new cache subnet group.

Use this parameter only when you are creating a cluster in an Amazon Virtual Private Cloud (VPC).

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSubnetGroupDescription
    A description for the cache subnet group.

    Type: String

    Required: Yes

CacheSubnetGroupName
    A name for the cache subnet group. This value is stored as a lowercase string.

    Constraints: Must contain no more than 255 alphanumeric characters or hyphens.

    Example: `mysubnetgroup`

    Type: String

    Required: Yes

SubnetIds.member.N
    A list of VPC subnet IDs for the cache subnet group.

    Type: String list

    Required: Yes

Response Elements

The following elements are returned in a structure named `CacheSubnetGroup`.

CacheSubnetGroupDescription
    The description of the cache subnet group.

    Type: String

CacheSubnetGroupName
    The name of the cache subnet group.

    Type: String

Subnets
    A list of subnets associated with the cache subnet group.

    Type: Subnet (p. 118) list

VpcId
    The Amazon Virtual Private Cloud identifier (VPC ID) of the cache subnet group.

    Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheSubnetGroupAlreadyExists
  The requested cache subnet group name is already in use by an existing cache subnet group.

  HTTP Status Code: 400

CacheSubnetGroupQuotaExceeded
  The request cannot be processed because it would exceed the allowed number of cache subnet groups.

  HTTP Status Code: 400

CacheSubnetQuotaExceeded
  The request cannot be processed because it would exceed the allowed number of subnets in a cache subnet group.

  HTTP Status Code: 400

InvalidSubnet
  An invalid subnet identifier was specified.

  HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=CreateCacheSubnetGroup
    &CacheSubnetGroupName=myCachesubnetgroup
    &CacheSubnetGroupDescription=My%20new%20CacheSubnetGroup
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-02-15T18%3A14%3A49.482Z
    &AWSAccessKeyId=<AWS Access Key ID>
    &Signature=<Signature>
```

Sample Response

```
<CreateCacheSubnetGroupResponse xmlns="http://elasticache.amazonaws.com/doc/2013-
06-15/">
    <CreateCacheSubnetGroupResult>
            <CacheSubnetGroup>
                <VpcId>990524496922</VpcId>
              <CacheSubnetGroupDescription>My new CacheSubnetGroup</CacheSub
netGroupDescription>
                <CacheSubnetGroupName>myCachesubnetgroup</CacheSubnetGroupName>

              <Subnets>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                        <SubnetIdentifier>subnet-7c5b4115</SubnetIdentifier>
```

```
                        <SubnetAvailabilityZone>
                            <Name>us-east-1c</Name>
                        </SubnetAvailabilityZone>
                    </Subnet>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                        <SubnetIdentifier>subnet-7b5b4112</SubnetIdentifier>
                        <SubnetAvailabilityZone>
                            <Name>us-east-1b</Name>
                        </SubnetAvailabilityZone>
                    </Subnet>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                        <SubnetIdentifier>subnet-3ea6bd57</SubnetIdentifier>
                        <SubnetAvailabilityZone>
                            <Name>us-east-1d</Name>
                        </SubnetAvailabilityZone>
                    </Subnet>
                </Subnets>
            </CacheSubnetGroup>
        </CreateCacheSubnetGroupResult>
        <ResponseMetadata>
            <RequestId>ed662948-a57b-11df-9e38-7ffab86c801f</RequestId>
        </ResponseMetadata>
    </CreateCacheSubnetGroupResponse>
```

CreateReplicationGroup

Description

The *CreateReplicationGroup* operation creates a replication group. A replication group is a collection of cache clusters, where one of the clusters is a read/write primary and the other clusters are read-only replicas. Writes to the primary are automatically propagated to the replicas.

When you create a replication group, you must specify an existing cache cluster that is in the primary role. When the replication group has been successfully created, you can add one or more read replica replicas to it, up to a total of five read replicas.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

PrimaryClusterId
The identifier of the cache cluster that will serve as the primary for this replication group. This cache cluster must already exist and have a status of *available*.

Type: String

Required: Yes

ReplicationGroupDescription
A user-specified description for the replication group.

Type: String

Required: Yes

ReplicationGroupId
The replication group identifier. This parameter is stored as a lowercase string.

Constraints:
- Must contain from 1 to 20 alphanumeric characters or hyphens.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `ReplicationGroup`.

Description
The description of the replication group.

Type: String

MemberClusters
The names of all the cache clusters that are part of this replication group.

Type: String list

NodeGroups

A single element list with information about the nodes in the replication group.

Type: NodeGroup (p. 109) list

PendingModifiedValues

A group of settings to be applied to the replication group, either immediately or during the next maintenance window.

Type: ReplicationGroupPendingModifiedValues (p. 114)

ReplicationGroupId

The identifier for the replication group.

Type: String

Status

The current state of this replication group - *creating*, *available*, etc.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheClusterNotFound

The requested cache cluster ID does not refer to an existing cache cluster.

HTTP Status Code: 404

InvalidCacheClusterState

The requested cache cluster is not in the *available* state.

HTTP Status Code: 400

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

ReplicationGroupAlreadyExists

The specified replication group already exists.

HTTP Status Code: 400

DeleteCacheCluster

Description

The *DeleteCacheCluster* operation deletes a previously provisioned cache cluster. *DeleteCacheCluster* deletes all associated cache nodes, node endpoints and the cache cluster itself. When you receive a successful response from this operation, Amazon ElastiCache immediately begins deleting the cache cluster; you cannot cancel or revert this operation.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheClusterId
    The cache cluster identifier for the cluster to be deleted. This parameter is not case sensitive.

    Type: String

    Required: Yes

Response Elements

The following elements are returned in a structure named `CacheCluster`.

AutoMinorVersionUpgrade
    If `true`, then minor version patches are applied automatically; if `false`, then automatic minor version patches are disabled.

    Type: Boolean

CacheClusterCreateTime
    The date and time the cache cluster was created.

    Type: DateTime

CacheClusterId
    The user-supplied identifier of the cache cluster. This is a unique key that identifies a cache cluster.

    Type: String

CacheClusterStatus
    The current state of this cache cluster - *creating*, *available*, etc.

    Type: String

CacheNodeType
    The name of the compute and memory capacity node type for the cache cluster.

    Type: String

CacheNodes
    A list of cache nodes that are members of the cache cluster.

    Type: CacheNode (p. 96) list

CacheParameterGroup
    The status of the cache parameter group.

    Type: CacheParameterGroupStatus (p. 99)

CacheSecurityGroups

A list of cache security group elements, composed of name and status sub-elements.

Type: CacheSecurityGroupMembership (p. 100) list

CacheSubnetGroupName

The name of the cache subnet group associated with the cache cluster.

Type: String

ClientDownloadLandingPage

The URL of the web page where you can download the latest ElastiCache client library.

Type: String

ConfigurationEndpoint

Represents the information required for client programs to connect to a cache node.

Type: Endpoint (p. 107)

Engine

The name of the cache engine (*memcached* or *redis*) to be used for this cache cluster.

Type: String

EngineVersion

The version of the cache engine version that is used in this cache cluster.

Type: String

NotificationConfiguration

Describes a notification topic and its status. Notification topics are used for publishing ElastiCache events to subscribers using Amazon Simple Notification Service (SNS).

Type: NotificationConfiguration (p. 110)

NumCacheNodes

The number of cache nodes in the cache cluster.

Type: Integer

PendingModifiedValues

A group of settings that will be applied to the cache cluster in the future, or that are currently being applied.

Type: PendingModifiedValues (p. 112)

PreferredAvailabilityZone

The name of the Availability Zone in which the cache cluster is located.

Type: String

PreferredMaintenanceWindow

The time range (in UTC) during which weekly system maintenance can occur.

Type: String

ReplicationGroupId

The replication group to which this cache cluster belongs. If this field is empty, the cache cluster is not associated with any replication group.

Type: String

SecurityGroups

A list of VPC Security Groups associated with the cache cluster.

Type: SecurityGroupMembership (p. 117) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheClusterNotFound
The requested cache cluster ID does not refer to an existing cache cluster.

HTTP Status Code: 404

InvalidCacheClusterState
The requested cache cluster is not in the *available* state.

HTTP Status Code: 400

InvalidParameterCombination
Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue
The value for a parameter is invalid.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
   ?Action=DeleteCacheCluster
   &CacheClusterId=simcoprod43&Version=2013-06-15
   &SignatureVersion=2
   &SignatureMethod=HmacSHA256
   &Timestamp=2011-07-27T02%3A46%3A46.129Z
   &AWSAccessKeyId=YOUR-ACCESS-KEY
   &Signature=YOUR-SIGNATURE
```

Sample Response

```
<DeleteCacheClusterResponse xmlns="http://elasticache.amazonaws.com/doc/2013-
06-15/">
  <DeleteCacheClusterResult>
    <CacheCluster>
      <CacheParameterGroup>
        <ParameterApplyStatus>in-sync</ParameterApplyStatus>
       <CacheParameterGroupName>default.memcached1.4</CacheParameterGroupName>

        <CacheNodeIdsToReboot/>
      </CacheParameterGroup>
      <CacheClusterId>simcoprod43</CacheClusterId>
      <CacheClusterStatus>deleting</CacheClusterStatus>
      <ConfigurationEndpoint>
        <Port>11211</Port>
        <Address>simcoprod43.m2st2p.cfg.cache.amazonaws.com</Address>
```

```
        </ConfigurationEndpoint>
        <CacheNodeType>cache.m1.large</CacheNodeType>
        <Engine>memcached</Engine>
        <PendingModifiedValues/>
        <PreferredAvailabilityZone>us-east-1b</PreferredAvailabilityZone>
      <CacheClusterCreateTime>2011-07-27T02:18:26.497Z</CacheClusterCreateTime>

        <EngineVersion>1.4.5</EngineVersion>
        <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
      <PreferredMaintenanceWindow>mon:05:00-mon:05:30</PreferredMaintenanceWin
dow>
      <CacheSecurityGroups>
        <CacheSecurityGroup>
          <CacheSecurityGroupName>default</CacheSecurityGroupName>
          <Status>active</Status>
        </CacheSecurityGroup>
      </CacheSecurityGroups>
      <NumCacheNodes>3</NumCacheNodes>
    </CacheCluster>
  </DeleteCacheClusterResult>
  <ResponseMetadata>
    <RequestId>ab84aa7e-b7fa-11e0-9b0b-a9261be2b354</RequestId>
  </ResponseMetadata>
</DeleteCacheClusterResponse>
```

DeleteCacheParameterGroup

Description

The *DeleteCacheParameterGroup* operation deletes the specified cache parameter group. You cannot delete a cache parameter group if it is associated with any cache clusters.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheParameterGroupName
    The name of the cache parameter group to delete.

> **Note**
> The specified cache security group must not be associated with any cache clusters.

    Type: String

    Required: Yes

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheParameterGroupNotFound
    The requested cache parameter group name does not refer to an existing cache parameter group.

    HTTP Status Code: 404

InvalidCacheParameterGroupState
    The current state of the cache parameter group does not allow the requested action to occur.

    HTTP Status Code: 400

InvalidParameterCombination
    Two or more incompatible parameters were specified.

    HTTP Status Code: 400

InvalidParameterValue
    The value for a parameter is invalid.

    HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
   ?Action=DeleteCacheParameterGroup
   &CacheParameterGroupName=myparametergroup
   &Version=2013-06-15
   &SignatureVersion=2
```

```
&SignatureMethod=HmacSHA256
&Timestamp=2011-07-25T21%3A16%3A39.166Z
&AWSAccessKeyId=YOUR-ACCESS-KEY
&Signature=YOUR-SIGNATURE
```

Sample Response

```
<DeleteCacheParameterGroupResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <ResponseMetadata>
    <RequestId>d0a417cb-575b-11e0-8869-cd22b4f9d96f</RequestId>
  </ResponseMetadata>
</DeleteCacheParameterGroupResponse>
```

DeleteCacheSecurityGroup

Description

The *DeleteCacheSecurityGroup* operation deletes a cache security group.

> **Note**
> You cannot delete a cache security group if it is associated with any cache clusters.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSecurityGroupName
The name of the cache security group to delete.

> **Note**
> You cannot delete the default security group.

Type: String

Required: Yes

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheSecurityGroupNotFound
The requested cache security group name does not refer to an existing cache security group.

HTTP Status Code: 404

InvalidCacheSecurityGroupState
The current state of the cache security group does not allow deletion.

HTTP Status Code: 400

InvalidParameterCombination
Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue
The value for a parameter is invalid.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=DeleteCacheSecurityGroup
    &CacheSecurityGroupName=mycachesecuritygroup3
```

```
&Version=2013-06-15
&SignatureVersion=2
&SignatureMethod=HmacSHA256
&Timestamp=2011-07-27T02%3A54%3A12.418Z
&AWSAccessKeyId=YOUR-ACCESS-KEY
&Signature=YOUR-SIGNATURE
```

Sample Response

```
<DeleteCacheSecurityGroupResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
    <ResponseMetadata>
        <RequestId>c130cfb7-3650-11e0-ae57-f96cfe56749c</RequestId>
    </ResponseMetadata>
</DeleteCacheSecurityGroupResponse>
```

DeleteCacheSubnetGroup

Description

The *DeleteCacheSubnetGroup* operation deletes a cache subnet group.

> **Note**
> You cannot delete a cache subnet group if it is associated with any cache clusters.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSubnetGroupName
The name of the cache subnet group to delete.

Constraints: Must contain no more than 255 alphanumeric characters or hyphens.

Type: String

Required: Yes

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheSubnetGroupInUse
The requested cache subnet group is currently in use.

HTTP Status Code: 400

CacheSubnetGroupNotFound
The requested cache subnet group name does not refer to an existing cache subnet group.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=DeleteCacheSubnetGroup
    &CacheSubnetGroupName=mysubnetgroup
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-02-15T17%3A48%3A21.746Z
    &AWSAccessKeyId=<AWS Access Key ID>
    &Signature=<Signature>
```

Sample Response

```
<DeleteCacheSubnetGroupResponse xmlns="http://elasticache.amazonaws.com/doc/2013-
06-15/">
      <ResponseMetadata>
        <RequestId>5d013245-4172-11df-8520-e7e1e602a915</RequestId>
      </ResponseMetadata>
    </DeleteCacheSubnetGroupResponse>
```

DeleteReplicationGroup

Description

The *DeleteReplicationGroup* operation deletes an existing replication group. By default, this operation deletes the entire replication group, including the primary cache cluster and all of the read replicas. You can optionally delete only the read replicas, while retaining the primary cache cluster.

When you receive a successful response from this operation, Amazon ElastiCache immediately begins deleting the selected resources; you cannot cancel or revert this operation.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

ReplicationGroupId
   The identifier for the replication group to be deleted. This parameter is not case sensitive.

   Type: String

   Required: Yes

RetainPrimaryCluster
   If set to *true*, all of the read replicas will be deleted, but the primary cache cluster will be retained.

   Type: Boolean

   Required: No

Response Elements

The following elements are returned in a structure named `ReplicationGroup`.

Description
   The description of the replication group.

   Type: String

MemberClusters
   The names of all the cache clusters that are part of this replication group.

   Type: String list

NodeGroups
   A single element list with information about the nodes in the replication group.

   Type: NodeGroup (p. 109) list

PendingModifiedValues
   A group of settings to be applied to the replication group, either immediately or during the next maintenance window.

   Type: ReplicationGroupPendingModifiedValues (p. 114)

ReplicationGroupId
   The identifier for the replication group.

   Type: String

Status

The current state of this replication group - *creating*, *available*, etc.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

InvalidReplicationGroupState

The requested replication group is not in the *available* state.

HTTP Status Code: 400

ReplicationGroupNotFound

The specified replication group does not exist.

HTTP Status Code: 404

DescribeCacheClusters

Description

The *DescribeCacheClusters* operation returns information about all provisioned cache clusters if no cache cluster identifier is specified, or about a specific cache cluster if a cache cluster identifier is supplied.

By default, abbreviated information about the cache clusters(s) will be returned. You can use the optional *ShowDetails* flag to retrieve detailed information about the cache nodes associated with the cache clusters. These details include the DNS address and port for the cache node endpoint.

If the cluster is in the CREATING state, only cluster level information will be displayed until all of the nodes are successfully provisioned.

If the cluster is in the DELETING state, only cluster level information will be displayed.

If cache nodes are currently being added to the cache cluster, node endpoint information and creation time for the additional nodes will not be displayed until they are completely provisioned. When the cache cluster state is *available*, the cluster is ready for use.

If cache nodes are currently being removed from the cache cluster, no endpoint information for the removed nodes is displayed.

Request Parameters

For information about the common parameters that all actions use, see .

CacheClusterId
 The user-supplied cluster identifier. If this parameter is specified, only information about that specific cache cluster is returned. This parameter isn't case sensitive.

 Type: String

 Required: No

Marker
 An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

 Type: String

 Required: No

MaxRecords
 The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

 Default: 100

 Constraints: minimum 20; maximum 100.

 Type: Integer

 Required: No

ShowCacheNodeInfo
 An optional flag that can be included in the DescribeCacheCluster request to retrieve information about the individual cache nodes.

Type: Boolean

Required: No

Response Elements

The following elements are returned in a structure named `DescribeCacheClustersResult`.

CacheClusters
>   A list of cache clusters. Each item in the list contains detailed information about one cache cluster.

>   Type: CacheCluster (p. 93) list

Marker
>   Provides an identifier to allow retrieval of paginated results.

>   Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheClusterNotFound
>   The requested cache cluster ID does not refer to an existing cache cluster.

>   HTTP Status Code: 404

InvalidParameterCombination
>   Two or more incompatible parameters were specified.

>   HTTP Status Code: 400

InvalidParameterValue
>   The value for a parameter is invalid.

>   HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
   ?Action=DescribeCacheClusters
   &MaxRecords=100
   &Version=2013-06-15
   &ShowCacheNodeInfo=false
   &SignatureVersion=2
   &SignatureMethod=HmacSHA256
   &Timestamp=2011-07-27T02%3A55%3A54.654Z
   &AWSAccessKeyId=YOUR-ACCESS-KEY
   &Signature=YOUR-SIGNATURE
```

Sample Response

```
<DescribeCacheClustersResponse xmlns="http://elasticache.amazonaws.com/doc/2013-
06-15/">
  <DescribeCacheClustersResult>
    <CacheClusters>
      <CacheCluster>
        <CacheParameterGroup>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
          <CacheParameterGroupName>default.memcached1.4</CacheParameterGroupName>

          <CacheNodeIdsToReboot/>
        </CacheParameterGroup>
        <CacheClusterId>simcoprod42</CacheClusterId>
        <CacheClusterStatus>available</CacheClusterStatus>
        <ConfigurationEndpoint>
          <Port>11211</Port>
          <Address>simcoprod42.m2st2p.cfg.cache.amazonaws.com</Address>
        </ConfigurationEndpoint>
        <ClientDownloadLandingPage>
          https://console.aws.amazon.com/elasticache/home#client-download:
        </ClientDownloadLandingPage>
        <CacheNodeType>cache.m1.large</CacheNodeType>
        <Engine>memcached</Engine>
        <PendingModifiedValues/>
        <PreferredAvailabilityZone>us-east-1d</PreferredAvailabilityZone>
        <CacheClusterCreateTime>2011-07-26T01:21:46.607Z</CacheClusterCreateTime>

        <EngineVersion>1.4.5</EngineVersion>
        <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
        <PreferredMaintenanceWindow>fri:08:30-fri:09:00</PreferredMaintenanceWin
dow>
        <CacheSecurityGroups>
          <CacheSecurityGroup>
            <CacheSecurityGroupName>default</CacheSecurityGroupName>
            <Status>active</Status>
          </CacheSecurityGroup>
        </CacheSecurityGroups>
        <NotificationConfiguration>
          <TopicStatus>active</TopicStatus>
          <TopicArn>arn:aws:sns:us-east-1:123456789012:ElastiCacheNotifica
tions</TopicArn>
        </NotificationConfiguration>
        <NumCacheNodes>6</NumCacheNodes>
      </CacheCluster>
    </CacheClusters>
  </DescribeCacheClustersResult>
  <ResponseMetadata>
    <RequestId>f270d58f-b7fb-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</DescribeCacheClustersResponse>
```

DescribeCacheEngineVersions

Description

The *DescribeCacheEngineVersions* operation returns a list of the available cache engines and their versions.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheParameterGroupFamily
The name of a specific cache parameter group family to return details for.

Constraints:
- Must be 1 to 255 alphanumeric characters
- First character must be a letter
- Cannot end with a hyphen or contain two consecutive hyphens

Type: String

Required: No

DefaultOnly
If *true*, specifies that only the default version of the specified engine or engine and major version combination is to be returned.

Type: Boolean

Required: No

Engine
The cache engine to return. Valid values: `memcached` | `redis`

Type: String

Required: No

EngineVersion
The cache engine version to return.

Example: `1.4.14`

Type: String

Required: No

Marker
An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

Type: String

Required: No

MaxRecords
The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

Default: 100

Constraints: minimum 20; maximum 100.

Type: Integer

Required: No

Response Elements

The following elements are returned in a structure named `DescribeCacheEngineVersionsResult`.

CacheEngineVersions
 A list of cache engine version details. Each element in the list contains detailed information about once cache engine version.

 Type: CacheEngineVersion (p. 96) list
Marker
 Provides an identifier to allow retrieval of paginated results.

 Type: String

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=DescribeCacheEngineVersions
    &MaxRecords=100
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-05-23T07%3A34%3A17.435Z
    &AWSAccessKeyId=<AWS Access Key ID>
    &Signature=<Signature>
```

Sample Response

```
<DescribeCacheEngineVersionsResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <DescribeCacheEngineVersionsResult>
    <CacheEngineVersions>
      <CacheEngineVersion>
        <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
        <Engine>memcached</Engine>
        <CacheEngineVersionDescription>memcached version 1.4.14</CacheEngineV
ersionDescription>
        <CacheEngineDescription>memcached</CacheEngineDescription>
        <EngineVersion>1.4.14</EngineVersion>
      </CacheEngineVersion>
      <CacheEngineVersion>
```

```
            <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
            <Engine>memcached</Engine>
          <CacheEngineVersionDescription>memcached version 1.4.5</CacheEngineVer
sionDescription>
            <CacheEngineDescription>memcached</CacheEngineDescription>
            <EngineVersion>1.4.5</EngineVersion>
        </CacheEngineVersion>
      </CacheEngineVersions>
  </DescribeCacheEngineVersionsResult>
  <ResponseMetadata>
    <RequestId>a6ac9ad2-f8a4-11e1-a4d1-a345e5370093</RequestId>
  </ResponseMetadata>
</DescribeCacheEngineVersionsResponse>
```

DescribeCacheParameterGroups

Description

The *DescribeCacheParameterGroups* operation returns a list of cache parameter group descriptions. If a cache parameter group name is specified, the list will contain only the descriptions for that group.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheParameterGroupName
   The name of a specific cache parameter group to return details for.

   Type: String

   Required: No

Marker
   An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

   Type: String

   Required: No

MaxRecords
   The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

   Default: 100

   Constraints: minimum 20; maximum 100.

   Type: Integer

   Required: No

Response Elements

The following elements are returned in a structure named `DescribeCacheParameterGroupsResult`.

CacheParameterGroups
   A list of cache parameter groups. Each element in the list contains detailed information about one cache parameter group.

   Type: CacheParameterGroup (p. 99) list

Marker
   Provides an identifier to allow retrieval of paginated results.

   Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheParameterGroupNotFound
 The requested cache parameter group name does not refer to an existing cache parameter group.

 HTTP Status Code: 404

InvalidParameterCombination
 Two or more incompatible parameters were specified.

 HTTP Status Code: 400

InvalidParameterValue
 The value for a parameter is invalid.

 HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=DescribeCacheParameterGroups
    &MaxRecords=100
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-07-27T01%3A34%3A31.045Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<DescribeCacheParameterGroupsResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <DescribeCacheParameterGroupsResult>
    <CacheParameterGroups>
      <CacheParameterGroup>
       <CacheParameterGroupName>default.memcached1.4</CacheParameterGroupName>

        <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
        <Description>Default parameter group for memcached1.4</Description>
      </CacheParameterGroup>
      <CacheParameterGroup>
       <CacheParameterGroupName>mycacheparametergroup</CacheParameterGroupName>

        <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
        <Description>My cache parameter group</Description>
      </CacheParameterGroup>
      <CacheParameterGroup>
       <CacheParameterGroupName>mycacheparametergroup1</CacheParameterGroupName>
```

```
        <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
         <Description>My first cache parameter group</Description>
      </CacheParameterGroup>
      <CacheParameterGroup>
       <CacheParameterGroupName>mycacheparametergroup3</CacheParameterGroupName>

         <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
         <Description>My first cache parameter group</Description>
      </CacheParameterGroup>
    </CacheParameterGroups>
  </DescribeCacheParameterGroupsResult>
  <ResponseMetadata>
    <RequestId>7193fbb8-b7fc-11e0-9b0b-a9261be2b354</RequestId>
  </ResponseMetadata>
</DescribeCacheParameterGroupsResponse>
```

DescribeCacheParameters

Description

The *DescribeCacheParameters* operation returns the detailed parameter list for a particular cache parameter group.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheParameterGroupName
The name of a specific cache parameter group to return details for.

Type: String

Required: Yes

Marker
An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

Type: String

Required: No

MaxRecords
The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

Default: 100

Constraints: minimum 20; maximum 100.

Type: Integer

Required: No

Source
The parameter types to return.

Valid values: `user` | `system` | `engine-default`

Type: String

Required: No

Response Elements

The following elements are returned in a structure named `DescribeCacheParametersResult`.

CacheNodeTypeSpecificParameters
A list of parameters specific to a particular cache node type. Each element in the list contains detailed information about one parameter.

Type: CacheNodeTypeSpecificParameter (p. 97) list

Marker
>
> Provides an identifier to allow retrieval of paginated results.
>
> Type: String

Parameters
>
> A list of Parameter (p. 111) instances.
>
> Type: Parameter (p. 111) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheParameterGroupNotFound
>
> The requested cache parameter group name does not refer to an existing cache parameter group.
>
> HTTP Status Code: 404

InvalidParameterCombination
>
> Two or more incompatible parameters were specified.
>
> HTTP Status Code: 400

InvalidParameterValue
>
> The value for a parameter is invalid.
>
> HTTP Status Code: 400

Examples

Some of the output has been omitted for brevity.

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=DescribeCacheParameters
    &CacheParameterGroupName=default.memcached1.4
    &MaxRecords=100
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-07-27T03%3A07%3A23.039Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<DescribeCacheParametersResponse xmlns="http://elasticache.amazonaws.com/doc/201
1-07-15/">
  <DescribeCacheParametersResult>
    <CacheNodeTypeSpecificParameters>
      <CacheNodeTypeSpecificParameter>
        <CacheNodeTypeSpecificValues>
```

```
              <CacheNodeTypeSpecificValue>
                <CacheNodeType>cache.c1.xlarge</CacheNodeType>
                <Value>6000</Value>
              </CacheNodeTypeSpecificValue>

(...output omitted...)

          </CacheNodeTypeSpecificValues>
          <DataType>integer</DataType>
          <Source>system</Source>
          <IsModifiable>false</IsModifiable>
          <Description>The maximum configurable amount of memory to use to store
items, in megabytes.</Description>
          <AllowedValues>1-100000</AllowedValues>
          <ParameterName>max_cache_memory</ParameterName>
          <MinimumEngineVersion>1.4.5</MinimumEngineVersion>
        </CacheNodeTypeSpecificParameter>
        <CacheNodeTypeSpecificParameter>

(...output omitted...)

        </CacheNodeTypeSpecificParameter>
      </CacheNodeTypeSpecificParameters>
      <Parameters>
        <Parameter>
          <ParameterValue>1024</ParameterValue>
          <DataType>integer</DataType>
          <Source>system</Source>
          <IsModifiable>false</IsModifiable>
          <Description>The backlog queue limit.</Description>
          <AllowedValues>1-10000</AllowedValues>
          <ParameterName>backlog_queue_limit</ParameterName>
          <MinimumEngineVersion>1.4.5</MinimumEngineVersion>
        </Parameter>

(...output omitted...)

      </Parameters>
  </DescribeCacheParametersResult>
  <ResponseMetadata>
    <RequestId>0c507368-b7fe-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</DescribeCacheParametersResponse>
```

DescribeCacheSecurityGroups

Description

The *DescribeCacheSecurityGroups* operation returns a list of cache security group descriptions. If a cache security group name is specified, the list will contain only the description of that group.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSecurityGroupName
    The name of the cache security group to return details for.

    Type: String

    Required: No

Marker
    An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

    Type: String

    Required: No

MaxRecords
    The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

    Default: 100

    Constraints: minimum 20; maximum 100.

    Type: Integer

    Required: No

Response Elements

The following elements are returned in a structure named `DescribeCacheSecurityGroupsResult`.

CacheSecurityGroups
    A list of cache security groups. Each element in the list contains detailed information about one group.

    Type: CacheSecurityGroup (p. 100) list

Marker
    Provides an identifier to allow retrieval of paginated results.

    Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheSecurityGroupNotFound

The requested cache security group name does not refer to an existing cache security group.

HTTP Status Code: 404

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=DescribeCacheSecurityGroups
    &Version=2013-06-15
    &MaxRecords=100
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-07-27T01%3A22%3A48.381Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<DescribeCacheSecurityGroupsResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <DescribeCacheSecurityGroupsResult>
    <CacheSecurityGroups>
      <CacheSecurityGroup>
        <EC2SecurityGroups/>
        <CacheSecurityGroupName>default</CacheSecurityGroupName>
        <OwnerId>123456789012</OwnerId>
        <Description>default</Description>
      </CacheSecurityGroup>
      <CacheSecurityGroup>
        <EC2SecurityGroups/>
        <CacheSecurityGroupName>mycachesecuritygroup</CacheSecurityGroupName>
        <OwnerId>123456789012</OwnerId>
        <Description>My Security Group</Description>
      </CacheSecurityGroup>
    </CacheSecurityGroups>
  </DescribeCacheSecurityGroupsResult>
  <ResponseMetadata>
    <RequestId>a95360ae-b7fc-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</DescribeCacheSecurityGroupsResponse>
```

DescribeCacheSubnetGroups

Description

The *DescribeCacheSubnetGroups* operation returns a list of cache subnet group descriptions. If a subnet group name is specified, the list will contain only the description of that group.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSubnetGroupName
The name of the cache subnet group to return details for.

Type: String

Required: No

Marker
An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

Type: String

Required: No

MaxRecords
The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

Default: 100

Constraints: minimum 20; maximum 100.

Type: Integer

Required: No

Response Elements

The following elements are returned in a structure named `DescribeCacheSubnetGroupsResult`.

CacheSubnetGroups
A list of cache subnet groups. Each element in the list contains detailed information about one group.

Type: CacheSubnetGroup (p. 101) list

Marker
Provides an identifier to allow retrieval of paginated results.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheSubnetGroupNotFound

The requested cache subnet group name does not refer to an existing cache subnet group.

HTTP Status Code: 400

Examples

Some of the output has been omitted for brevity.

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=DescribeCacheSubnetGroups
    &Version=2013-06-15
    &MaxRecords=100
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-02-15T19%3A40%3A19.926Z
    &AWSAccessKeyId=<AWS Access Key ID>
    &Signature=<Signature>
```

Sample Response

```
<DescribeCacheSubnetGroupsResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
        <DescribeCacheSubnetGroupsResult>
          <CacheSubnetGroups>
            <CacheSubnetGroup>
                <VpcId>990524496922</VpcId>
                <CacheSubnetGroupDescription>description</CacheSubnetGroup
Description>
                <CacheSubnetGroupName>subnet_grp1</CacheSubnetGroupName>
                <Subnets>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                      <SubnetIdentifier>subnet-7c5b4115</SubnetIdentifier>

                        <SubnetAvailabilityZone>
                            <Name>us-east-1c</Name>
                        </SubnetAvailabilityZone>
                    </Subnet>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                      <SubnetIdentifier>subnet-7b5b4112</SubnetIdentifier>

                        <SubnetAvailabilityZone>
                            <Name>us-east-1b</Name>
                        </SubnetAvailabilityZone>
                    </Subnet>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                      <SubnetIdentifier>subnet-3ea6bd57</SubnetIdentifier>

                        <SubnetAvailabilityZone>
                            <Name>us-east-1d</Name>
```

```
                               </SubnetAvailabilityZone>
                          </Subnet>
                     </Subnets>
                </CacheSubnetGroup>

(...output omitted...)

           </CacheSubnetGroups>
      </DescribeCacheSubnetGroupsResult>
      <ResponseMetadata>
          <RequestId>31d0faee-229b-11e1-81f1-df3a2a803dad</RequestId>
      </ResponseMetadata>
   </DescribeCacheSubnetGroupsResponse>
```

DescribeEngineDefaultParameters

Description

The *DescribeEngineDefaultParameters* operation returns the default engine and system parameter information for the specified cache engine.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheParameterGroupFamily
   The name of the cache parameter group family. Valid values are: `memcached1.4` | `redis2.6`

   Type: String

   Required: Yes

Marker
   An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

   Type: String

   Required: No

MaxRecords
   The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

   Default: 100

   Constraints: minimum 20; maximum 100.

   Type: Integer

   Required: No

Response Elements

The following elements are returned in a structure named `EngineDefaults`.

CacheNodeTypeSpecificParameters
   A list of parameters specific to a particular cache node type. Each element in the list contains detailed information about one parameter.

   Type: CacheNodeTypeSpecificParameter (p. 97) list

CacheParameterGroupFamily
   Specifies the name of the cache parameter group family to which the engine default parameters apply.

   Type: String

Marker
   Provides an identifier to allow retrieval of paginated results.

   Type: String

Parameters

Contains a list of engine default parameters.

Type: Parameter (p. 111) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

Examples

Some of the output has been omitted for brevity.

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=DescribeEngineDefaultParameters
    &CacheParameterGroupFamily=memcached1.4
    &MaxRecords=100
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-07-27T01%3A34%3A31.045Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<DescribeEngineDefaultParametersResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <DescribeEngineDefaultParametersResult>
    <EngineDefaults>
      <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
      <Parameters>
        <Parameter>
          <ParameterValue>1024</ParameterValue>
          <DataType>integer</DataType>
          <Source>system</Source>
          <IsModifiable>false</IsModifiable>
          <Description>The backlog queue limit.</Description>
          <AllowedValues>1-10000</AllowedValues>
          <ParameterName>backlog_queue_limit</ParameterName>
```

```
            <MinimumEngineVersion>1.4.5</MinimumEngineVersion>
        </Parameter>
        <Parameter>

(...output omitted...)

        </Parameter>
      </Parameters>
      <CacheNodeTypeSpecificParameters>
        <CacheNodeTypeSpecificParameter>
          <CacheNodeTypeSpecificValues>
            <CacheNodeTypeSpecificValue>
              <CacheNodeType>cache.c1.xlarge</CacheNodeType>
              <Value>6000</Value>
            </CacheNodeTypeSpecificValue>

(...output omitted...)

          </CacheNodeTypeSpecificValues>
          <DataType>integer</DataType>
          <Source>system</Source>
          <IsModifiable>false</IsModifiable>
          <Description>The maximum configurable amount of memory to use to store

 items, in megabytes.</Description>
          <AllowedValues>1-100000</AllowedValues>
          <ParameterName>max_cache_memory</ParameterName>
          <MinimumEngineVersion>1.4.5</MinimumEngineVersion>
        </CacheNodeTypeSpecificParameter>

(...output omitted...)

      </CacheNodeTypeSpecificParameters>
    </EngineDefaults>
  </DescribeEngineDefaultParametersResult>
  <ResponseMetadata>
    <RequestId>061282fe-b7fd-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</DescribeEngineDefaultParametersResponse>
```

DescribeEvents

Description

The *DescribeEvents* operation returns events related to cache clusters, cache security groups, and cache parameter groups. You can obtain events specific to a particular cache cluster, cache security group, or cache parameter group by providing the name as a parameter.

By default, only the events occurring within the last hour are returned; however, you can retrieve up to 14 days' worth of events if necessary.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

Duration

The number of minutes' worth of events to retrieve.

Type: Integer

Required: No

EndTime

The end of the time interval for which to retrieve events, specified in ISO 8601 format.

Type: DateTime

Required: No

Marker

An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

Type: String

Required: No

MaxRecords

The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

Default: 100

Constraints: minimum 20; maximum 100.

Type: Integer

Required: No

SourceIdentifier

The identifier of the event source for which events will be returned. If not specified, then all sources are included in the response.

Type: String

Required: No

SourceType

The event source to retrieve events for. If no value is specified, all events are returned.

Valid values are: `cache-cluster` | `cache-parameter-group` | `cache-security-group` | `cache-subnet-group`

Type: String

Valid Values: `cache-cluster` | `cache-parameter-group` | `cache-security-group` | `cache-subnet-group`

Required: No

StartTime
The beginning of the time interval to retrieve events for, specified in ISO 8601 format.

Type: DateTime

Required: No

Response Elements

The following elements are returned in a structure named `DescribeEventsResult`.

Events
A list of events. Each element in the list contains detailed information about one event.

Type: Event (p. 108) list

Marker
Provides an identifier to allow retrieval of paginated results.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

InvalidParameterCombination
Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue
The value for a parameter is invalid.

HTTP Status Code: 400

DescribeReplicationGroups

Description

The *DescribeReplicationGroups* operation returns information about a particular replication group. If no identifier is specified, *DescribeReplicationGroups* returns information about all replication groups.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

Marker
> An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

> Type: String

> Required: No

MaxRecords
> The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

> Default: 100

> Constraints: minimum 20; maximum 100.

> Type: Integer

> Required: No

ReplicationGroupId
> The identifier for the replication group to be described. This parameter is not case sensitive.

> If you do not specify this parameter, information about all replication groups is returned.

> Type: String

> Required: No

Response Elements

The following elements are returned in a structure named `DescribeReplicationGroupsResult`.

Marker
> Provides an identifier to allow retrieval of paginated results.

> Type: String

ReplicationGroups
> A list of replication groups. Each item in the list contains detailed information about one replication group.

> Type: ReplicationGroup (p. 113) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

InvalidParameterCombination
Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue
The value for a parameter is invalid.

HTTP Status Code: 400

ReplicationGroupNotFound
The specified replication group does not exist.

HTTP Status Code: 404

DescribeReservedCacheNodes

Description

The *DescribeReservedCacheNodes* operation returns information about reserved cache nodes for this account, or about a specified reserved cache node.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheNodeType
The cache node type filter value. Use this parameter to show only those reservations matching the specified cache node type.

Type: String

Required: No

Duration
The duration filter value, specified in years or seconds. Use this parameter to show only reservations for this duration.

Valid Values: `1 | 3 | 31536000 | 94608000`

Type: String

Required: No

Marker
An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.

Type: String

Required: No

MaxRecords
The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.

Default: 100

Constraints: minimum 20; maximum 100.

Type: Integer

Required: No

OfferingType
The offering type filter value. Use this parameter to show only the available offerings matching the specified offering type.

Valid values: `"Light Utilization" | "Medium Utilization" | "Heavy Utilization"`

Type: String

Required: No

ProductDescription
> The product description filter value. Use this parameter to show only those reservations matching the specified product description.

> Type: String

> Required: No

ReservedCacheNodeId
> The reserved cache node identifier filter value. Use this parameter to show only the reservation that matches the specified reservation ID.

> Type: String

> Required: No

ReservedCacheNodesOfferingId
> The offering identifier filter value. Use this parameter to show only purchased reservations matching the specified offering identifier.

> Type: String

> Required: No

Response Elements

The following elements are returned in a structure named `DescribeReservedCacheNodesResult`.

Marker
> Provides an identifier to allow retrieval of paginated results.

> Type: String

ReservedCacheNodes
> A list of reserved cache nodes. Each element in the list contains detailed information about one node.

> Type: ReservedCacheNode (p. 114) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

InvalidParameterCombination
> Two or more incompatible parameters were specified.

> HTTP Status Code: 400

InvalidParameterValue
> The value for a parameter is invalid.

> HTTP Status Code: 400

ReservedCacheNodeNotFound
> The requested reserved cache node was not found.

> HTTP Status Code: 404

Examples

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=DescribeReservedCacheNodes
    &ReservedCacheNodeId=customerSpecifiedID
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2012-12-18T18%3A31%3A36.118Z
    &AWSAccessKeyId=<AWS Access Key ID>
    &Signature=<Signature>
```

Sample Response

```
<DescribeReservedCacheNodesResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <DescribeReservedCacheNodesResult>
    <ReservedCacheNodes>
      <ReservedCacheNode>
        <OfferingType>Medium Utilization</OfferingType>
        <RecurringCharges/>
        <ProductDescription>memcached</ProductDescription>
        <ReservedCacheNodesOfferingId>649fd0c8-cf6d-47a0-bfa6-
060f8e75e95f</ReservedCacheNodesOfferingId>
        <State>payment-failed</State>
        <ReservedCacheNodeId>myreservationid</ReservedCacheNodeId>
        <CacheNodeCount>1</CacheNodeCount>
        <StartTime>2010-12-15T00:25:14.131Z</StartTime>
        <Duration>31536000</Duration>
        <FixedPrice>227.5</FixedPrice>
        <UsagePrice>0.046</UsagePrice>
        <CacheNodeType>cache.m1.small</CacheNodeType>
      </ReservedCacheNode>
    </ReservedCacheNodes>
  </DescribeReservedCacheNodesResult>
  <ResponseMetadata>
    <RequestId>c695119b-2961-11e1-bd06-6fe008f046c3</RequestId>
  </ResponseMetadata>
</DescribeReservedCacheNodesResponse>
```

DescribeReservedCacheNodesOfferings

Description

The *DescribeReservedCacheNodesOfferings* operation lists available reserved cache node offerings.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheNodeType
> The cache node type filter value. Use this parameter to show only the available offerings matching the specified cache node type.
>
> Type: String
>
> Required: No

Duration
> Duration filter value, specified in years or seconds. Use this parameter to show only reservations for a given duration.
>
> Valid Values: `1 | 3 | 31536000 | 94608000`
>
> Type: String
>
> Required: No

Marker
> An optional marker returned from a prior request. Use this marker for pagination of results from this operation. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by *MaxRecords*.
>
> Type: String
>
> Required: No

MaxRecords
> The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a marker is included in the response so that the remaining results can be retrieved.
>
> Default: 100
>
> Constraints: minimum 20; maximum 100.
>
> Type: Integer
>
> Required: No

OfferingType
> The offering type filter value. Use this parameter to show only the available offerings matching the specified offering type.
>
> Valid Values: `"Light Utilization" | "Medium Utilization" | "Heavy Utilization"`
>
> Type: String
>
> Required: No

ProductDescription
> The product description filter value. Use this parameter to show only the available offerings matching the specified product description.
>
> Type: String
>
> Required: No

ReservedCacheNodesOfferingId
> The offering identifier filter value. Use this parameter to show only the available offering that matches the specified reservation identifier.
>
> Example: `438012d3-4052-4cc7-b2e3-8d3372e0e706`
>
> Type: String
>
> Required: No

Response Elements

The following elements are returned in a structure named `DescribeReservedCacheNodesOfferingsResult`.

Marker
> Provides an identifier to allow retrieval of paginated results.
>
> Type: String

ReservedCacheNodesOfferings
> A list of reserved cache node offerings. Each element in the list contains detailed information about one offering.
>
> Type: ReservedCacheNodesOffering (p. 116) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

InvalidParameterCombination
> Two or more incompatible parameters were specified.
>
> HTTP Status Code: 400

InvalidParameterValue
> The value for a parameter is invalid.
>
> HTTP Status Code: 400

ReservedCacheNodesOfferingNotFound
> The requested cache node offering does not exist.
>
> HTTP Status Code: 404

Examples

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=DescribeReservedCacheNodesOfferings
    &ReservedCacheNodesOfferingId=438012d3-4052-4cc7-b2e3-8d3372e0e706
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-12-18T18%3A31%3A36.118Z
    &AWSAccessKeyId=<AWS Access Key ID>
    &Signature=<Signature>
```

Sample Response

```
<DescribeReservedCacheNodesOfferingsResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <DescribeReservedCacheNodesOfferingsResult>
    <ReservedCacheNodesOfferings>
      <ReservedCacheNodesOffering>
        <Duration>31536000</Duration>
        <OfferingType>Heavy Utilization</OfferingType>
        <RecurringCharges>
          <RecurringCharge>
            <RecurringChargeFrequency>Hourly</RecurringChargeFrequency>
            <RecurringChargeAmount>0.123</RecurringChargeAmount>
          </RecurringCharge>
        </RecurringCharges>
        <FixedPrice>162.0</FixedPrice>
        <ProductDescription>memcached</ProductDescription>
        <UsagePrice>0.0</UsagePrice>
        <ReservedCacheNodesOfferingId>SampleOfferingId</ReservedCacheNodesOf
feringId>
        <CacheNodeType>cache.m1.small</CacheNodeType>
      </ReservedCacheNodesOffering>
    </ReservedCacheNodesOfferings>
  </DescribeReservedCacheNodesOfferingsResult>
  <ResponseMetadata>
    <RequestId>521b420a-2961-11e1-bd06-6fe008f046c3</RequestId>
  </ResponseMetadata>
</DescribeReservedCacheNodesOfferingsResponse>
```

ModifyCacheCluster

Description

The *ModifyCacheCluster* operation modifies the settings for a cache cluster. You can use this operation to change one or more cluster configuration parameters by specifying the parameters and the new values.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

ApplyImmediately

If `true`, this parameter causes the modifications in this request and any pending modifications to be applied, asynchronously and as soon as possible, regardless of the *PreferredMaintenanceWindow* setting for the cache cluster.

If `false`, then changes to the cache cluster are applied on the next maintenance reboot, or the next failure reboot, whichever occurs first.

Valid values: `true` | `false`

Default: `false`

Type: Boolean

Required: No

AutoMinorVersionUpgrade

If `true`, then minor engine upgrades will be applied automatically to the cache cluster during the maintenance window.

Valid values: `true` | `false`

Default: `true`

Type: Boolean

Required: No

CacheClusterId

The cache cluster identifier. This value is stored as a lowercase string.

Type: String

Required: Yes

CacheNodeIdsToRemove.member.N

A list of cache node IDs to be removed. A node ID is a numeric identifier (0001, 0002, etc.). This parameter is only valid when NumCacheNodes is less than the existing number of cache nodes. The number of cache node IDs supplied in this parameter must match the difference between the existing number of cache nodes in the cluster and the value of *NumCacheNodes* in the request.

Type: String list

Required: No

CacheParameterGroupName

The name of the cache parameter group to apply to this cache cluster. This change is asynchronously applied as soon as possible for parameters when the *ApplyImmediately* parameter is specified as *true* for this request.

Type: String

Required: No

CacheSecurityGroupNames.member.N
A list of cache security group names to authorize on this cache cluster. This change is asynchronously applied as soon as possible.

This parameter can be used only with clusters that are created outside of an Amazon Virtual Private Cloud (VPC).

Constraints: Must contain no more than 255 alphanumeric characters. Must not be "Default".

Type: String list

Required: No

EngineVersion
The upgraded version of the cache engine to be run on the cache cluster nodes.

Type: String

Required: No

NotificationTopicArn
The Amazon Resource Name (ARN) of the SNS topic to which notifications will be sent.

> **Note**
> The SNS topic owner must be same as the cache cluster owner.

Type: String

Required: No

NotificationTopicStatus
The status of the Amazon SNS notification topic. Notifications are sent only if the status is *active*.

Valid values: `active | inactive`

Type: String

Required: No

NumCacheNodes
The number of cache nodes that the cache cluster should have. If the value for *NumCacheNodes* is greater than the existing number of cache nodes, then more nodes will be added. If the value is less than the existing number of cache nodes, then cache nodes will be removed.

If you are removing cache nodes, you must use the *CacheNodeIdsToRemove* parameter to provide the IDs of the specific cache nodes to be removed.

Type: Integer

Required: No

PreferredMaintenanceWindow
The weekly time range (in UTC) during which system maintenance can occur. Note that system maintenance may result in an outage. This change is made immediately. If you are moving this window to the current time, there must be at least 120 minutes between the current time and end of the window to ensure that pending changes are applied.

Type: String

Required: No

SecurityGroupIds.member.N
>   Specifies the VPC Security Groups associated with the cache cluster.
>
>   This parameter can be used only with clusters that are created in an Amazon Virtual Private Cloud (VPC).
>
>   Type: String list
>
>   Required: No

Response Elements

The following elements are returned in a structure named `CacheCluster`.

AutoMinorVersionUpgrade
>   If `true`, then minor version patches are applied automatically; if `false`, then automatic minor version patches are disabled.
>
>   Type: Boolean

CacheClusterCreateTime
>   The date and time the cache cluster was created.
>
>   Type: DateTime

CacheClusterId
>   The user-supplied identifier of the cache cluster. This is a unique key that identifies a cache cluster.
>
>   Type: String

CacheClusterStatus
>   The current state of this cache cluster - *creating*, *available*, etc.
>
>   Type: String

CacheNodeType
>   The name of the compute and memory capacity node type for the cache cluster.
>
>   Type: String

CacheNodes
>   A list of cache nodes that are members of the cache cluster.
>
>   Type: CacheNode (p. 96) list

CacheParameterGroup
>   The status of the cache parameter group.
>
>   Type: CacheParameterGroupStatus (p. 99)

CacheSecurityGroups
>   A list of cache security group elements, composed of name and status sub-elements.
>
>   Type: CacheSecurityGroupMembership (p. 100) list

CacheSubnetGroupName
>   The name of the cache subnet group associated with the cache cluster.
>
>   Type: String

ClientDownloadLandingPage
>   The URL of the web page where you can download the latest ElastiCache client library.
>
>   Type: String

ConfigurationEndpoint

Represents the information required for client programs to connect to a cache node.

Type: Endpoint (p. 107)

Engine

The name of the cache engine (*memcached* or *redis*) to be used for this cache cluster.

Type: String

EngineVersion

The version of the cache engine version that is used in this cache cluster.

Type: String

NotificationConfiguration

Describes a notification topic and its status. Notification topics are used for publishing ElastiCache events to subscribers using Amazon Simple Notification Service (SNS).

Type: NotificationConfiguration (p. 110)

NumCacheNodes

The number of cache nodes in the cache cluster.

Type: Integer

PendingModifiedValues

A group of settings that will be applied to the cache cluster in the future, or that are currently being applied.

Type: PendingModifiedValues (p. 112)

PreferredAvailabilityZone

The name of the Availability Zone in which the cache cluster is located.

Type: String

PreferredMaintenanceWindow

The time range (in UTC) during which weekly system maintenance can occur.

Type: String

ReplicationGroupId

The replication group to which this cache cluster belongs. If this field is empty, the cache cluster is not associated with any replication group.

Type: String

SecurityGroups

A list of VPC Security Groups associated with the cache cluster.

Type: SecurityGroupMembership (p. 117) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheClusterNotFound

The requested cache cluster ID does not refer to an existing cache cluster.

HTTP Status Code: 404

CacheParameterGroupNotFound

The requested cache parameter group name does not refer to an existing cache parameter group.

HTTP Status Code: 404

CacheSecurityGroupNotFound

    The requested cache security group name does not refer to an existing cache security group.

    HTTP Status Code: 404

InvalidCacheClusterState

    The requested cache cluster is not in the *available* state.

    HTTP Status Code: 400

InvalidCacheSecurityGroupState

    The current state of the cache security group does not allow deletion.

    HTTP Status Code: 400

InvalidParameterCombination

    Two or more incompatible parameters were specified.

    HTTP Status Code: 400

InvalidParameterValue

    The value for a parameter is invalid.

    HTTP Status Code: 400

InvalidVPCNetworkState

    The VPC network is in an invalid state.

    HTTP Status Code: 400

NodeQuotaForClusterExceeded

    The request cannot be processed because it would exceed the allowed number of cache nodes in a single cache cluster.

    HTTP Status Code: 400

NodeQuotaForCustomerExceeded

    The request cannot be processed because it would exceed the allowed number of cache nodes per customer.

    HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
   ?Action=ModifyCacheCluster
   &NumCacheNodes=5
   &CacheClusterId=simcoprod01
   &Version=2013-06-15
   &ApplyImmediately=true
   &SignatureVersion=2
   &SignatureMethod=HmacSHA256
   &Timestamp=2011-07-27T03%3A16%3A34.601Z
   &AWSAccessKeyId=YOUR-ACCESS-KEY
   &Signature=YOUR-SIGNATURE
```

Sample Response

```
<ModifyCacheClusterResponse xmlns="http://elasticache.amazonaws.com/doc/2013-
06-15/">
  <ModifyCacheClusterResult>
    <CacheCluster>
      <CacheParameterGroup>
        <ParameterApplyStatus>in-sync</ParameterApplyStatus>
       <CacheParameterGroupName>default.memcached1.4</CacheParameterGroupName>

        <CacheNodeIdsToReboot/>
      </CacheParameterGroup>
      <CacheClusterId>simcoprod01</CacheClusterId>
      <CacheClusterStatus>available</CacheClusterStatus>
      <ConfigurationEndpoint>
        <Port>11211</Port>
        <Address>simcoprod01.m2st2p.cfg.cache.amazonaws.com</Address>
      </ConfigurationEndpoint>
      <CacheNodeType>cache.m1.large</CacheNodeType>
      <Engine>memcached</Engine>
      <PendingModifiedValues>
        <NumCacheNodes>5</NumCacheNodes>
      </PendingModifiedValues>
      <PreferredAvailabilityZone>us-east-1b</PreferredAvailabilityZone>
     <CacheClusterCreateTime>2011-07-26T23:45:20.937Z</CacheClusterCreateTime>

      <EngineVersion>1.4.5</EngineVersion>
      <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
     <PreferredMaintenanceWindow>fri:04:30-fri:05:00</PreferredMaintenanceWin
dow>
      <CacheSecurityGroups>
        <CacheSecurityGroup>
          <CacheSecurityGroupName>default</CacheSecurityGroupName>
          <Status>active</Status>
        </CacheSecurityGroup>
      </CacheSecurityGroups>
      <NumCacheNodes>3</NumCacheNodes>
    </CacheCluster>
  </ModifyCacheClusterResult>
  <ResponseMetadata>
    <RequestId>d5786c6d-b7fe-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</ModifyCacheClusterResponse>
```

ModifyCacheParameterGroup

Description

The *ModifyCacheParameterGroup* operation modifies the parameters of a cache parameter group. You can modify up to 20 parameters in a single request by submitting a list parameter name and value pairs.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheParameterGroupName
The name of the cache parameter group to modify.

Type: String

Required: Yes

ParameterNameValues.member.N
An array of parameter names and values for the parameter update. You must supply at least one parameter name and value; subsequent arguments are optional. A maximum of 20 parameters may be modified per request.

Type: ParameterNameValue (p. 112) list

Required: Yes

Response Elements

The following element is returned in a structure named `ModifyCacheParameterGroupResult`.

CacheParameterGroupName
The name of the cache parameter group.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheParameterGroupNotFound
The requested cache parameter group name does not refer to an existing cache parameter group.

HTTP Status Code: 404

InvalidCacheParameterGroupState
The current state of the cache parameter group does not allow the requested action to occur.

HTTP Status Code: 400

InvalidParameterCombination
Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue
The value for a parameter is invalid.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=ModifyCacheParameterGroup
    ?ParameterNameValues.member.1.ParameterName=chunk_size_growth_factor
    &ParameterNameValues.member.1.ParameterValue=1.02
    &CacheParameterGroupName=mycacheparametergroup
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-07-27T03%3A24%3A50.203Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<ModifyCacheParameterGroupResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <ModifyCacheParameterGroupResult>
    <CacheParameterGroupName>mycacheparametergroup</CacheParameterGroupName>
  </ModifyCacheParameterGroupResult>
  <ResponseMetadata>
    <RequestId>fcedeef2-b7ff-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</ModifyCacheParameterGroupResponse>
```

ModifyCacheSubnetGroup

Description

The *ModifyCacheSubnetGroup* operation modifies an existing cache subnet group.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSubnetGroupDescription
> A description for the cache subnet group.

> Type: String

> Required: No

CacheSubnetGroupName
> The name for the cache subnet group. This value is stored as a lowercase string.

> Constraints: Must contain no more than 255 alphanumeric characters or hyphens.

> Example: `mysubnetgroup`

> Type: String

> Required: Yes

SubnetIds.member.N
> The EC2 subnet IDs for the cache subnet group.

> Type: String list

> Required: No

Response Elements

The following elements are returned in a structure named `CacheSubnetGroup`.

CacheSubnetGroupDescription
> The description of the cache subnet group.

> Type: String

CacheSubnetGroupName
> The name of the cache subnet group.

> Type: String

Subnets
> A list of subnets associated with the cache subnet group.

> Type: Subnet (p. 118) list

VpcId
> The Amazon Virtual Private Cloud identifier (VPC ID) of the cache subnet group.

> Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheSubnetGroupNotFound
The requested cache subnet group name does not refer to an existing cache subnet group.

HTTP Status Code: 400

CacheSubnetQuotaExceeded
The request cannot be processed because it would exceed the allowed number of subnets in a cache subnet group.

HTTP Status Code: 400

InvalidSubnet
An invalid subnet identifier was specified.

HTTP Status Code: 400

SubnetInUse
The requested subnet is being used by another cache subnet group.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=ModifyCacheSubnetGroup
    &CacheSubnetGroupName=myCachesubnetgroup
    &CacheSubnetGroupDescription=My%20modified%20CacheSubnetGroup
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-02-15T18%3A14%3A49.482Z
    &AWSAccessKeyId=<AWS Access Key ID>
    &Signature=<Signature>
```

Sample Response

```
<ModifyCacheSubnetGroupResponse xmlns="http://elasticache.amazonaws.com/doc/2013-
06-15/">
    <ModifyCacheSubnetGroupResult>
            <CacheSubnetGroup>
                <VpcId>990524496922</VpcId>
                <CacheSubnetGroupDescription>My modified CacheSubnet
Group</CacheSubnetGroupDescription>
                <CacheSubnetGroupName>myCachesubnetgroup</CacheSubnetGroupName>

              <Subnets>
                  <Subnet>
                      <SubnetStatus>Active</SubnetStatus>
                      <SubnetIdentifier>subnet-7c5b4115</SubnetIdentifier>
                      <SubnetAvailabilityZone>
```

```
                <Name>us-east-1c</Name>
            </SubnetAvailabilityZone>
        </Subnet>
        <Subnet>
            <SubnetStatus>Active</SubnetStatus>
            <SubnetIdentifier>subnet-7b5b4112</SubnetIdentifier>
            <SubnetAvailabilityZone>
                <Name>us-east-1b</Name>
            </SubnetAvailabilityZone>
        </Subnet>
        <Subnet>
            <SubnetStatus>Active</SubnetStatus>
            <SubnetIdentifier>subnet-3ea6bd57</SubnetIdentifier>
            <SubnetAvailabilityZone>
                <Name>us-east-1d</Name>
            </SubnetAvailabilityZone>
        </Subnet>
      </Subnets>
    </CacheSubnetGroup>
  </ModifyCacheSubnetGroupResult>
  <ResponseMetadata>
    <RequestId>ed662948-a57b-11df-9e38-7ffab86c801f</RequestId>
  </ResponseMetadata>
</ModifyCacheSubnetGroupResponse>
```

ModifyReplicationGroup

Description

The *ModifyReplicationGroup* operation modifies the settings for a replication group.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

ApplyImmediately
If `true`, this parameter causes the modifications in this request and any pending modifications to be applied, asynchronously and as soon as possible, regardless of the *PreferredMaintenanceWindow* setting for the replication group.

If `false`, then changes to the nodes in the replication group are applied on the next maintenance reboot, or the next failure reboot, whichever occurs first.

Valid values: `true` | `false`

Default: `false`

Type: Boolean

Required: No

AutoMinorVersionUpgrade
Determines whether minor engine upgrades will be applied automatically to all of the cache nodes in the replication group during the maintenance window. A value of `true` allows these upgrades to occur; `false` disables automatic upgrades.

Type: Boolean

Required: No

CacheParameterGroupName
The name of the cache parameter group to apply to all of the cache nodes in this replication group. This change is asynchronously applied as soon as possible for parameters when the *ApplyImmediately* parameter is specified as *true* for this request.

Type: String

Required: No

CacheSecurityGroupNames.member.N
A list of cache security group names to authorize for the clusters in this replication group. This change is asynchronously applied as soon as possible.

This parameter can be used only with replication groups containing cache clusters running outside of an Amazon Virtual Private Cloud (VPC).

Constraints: Must contain no more than 255 alphanumeric characters. Must not be "Default".

Type: String list

Required: No

EngineVersion
The upgraded version of the cache engine to be run on the nodes in the replication group..

Type: String

Required: No

NotificationTopicArn

The Amazon Resource Name (ARN) of the SNS topic to which notifications will be sent.

> **Note**
> The SNS topic owner must be same as the replication group owner.

Type: String

Required: No

NotificationTopicStatus

The status of the Amazon SNS notification topic for the replication group. Notifications are sent only if the status is *active*.

Valid values: `active` | `inactive`

Type: String

Required: No

PreferredMaintenanceWindow

The weekly time range (in UTC) during which replication group system maintenance can occur. Note that system maintenance may result in an outage. This change is made immediately. If you are moving this window to the current time, there must be at least 120 minutes between the current time and end of the window to ensure that pending changes are applied.

Type: String

Required: No

PrimaryClusterId

If this parameter is specified, ElastiCache will promote each of the nodes in the specified cache cluster to the primary role. The nodes of all other clusters in the replication group will be read replicas.

Type: String

Required: No

ReplicationGroupDescription

A description for the replication group. Maximum length is 255 characters.

Type: String

Required: No

ReplicationGroupId

The identifier of the replication group to modify.

Type: String

Required: Yes

SecurityGroupIds.member.N

Specifies the VPC Security Groups associated with the cache clusters in the replication group.

This parameter can be used only with replication groups containing cache clusters running in an Amazon Virtual Private Cloud (VPC).

Type: String list

Required: No

Response Elements

The following elements are returned in a structure named `ReplicationGroup`.

Description
    The description of the replication group.

    Type: String

MemberClusters
    The names of all the cache clusters that are part of this replication group.

    Type: String list

NodeGroups
    A single element list with information about the nodes in the replication group.

    Type: NodeGroup (p. 109) list

PendingModifiedValues
    A group of settings to be applied to the replication group, either immediately or during the next
    maintenance window.

    Type: ReplicationGroupPendingModifiedValues (p. 114)

ReplicationGroupId
    The identifier for the replication group.

    Type: String

Status
    The current state of this replication group - *creating*, *available*, etc.

    Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheClusterNotFound
    The requested cache cluster ID does not refer to an existing cache cluster.

    HTTP Status Code: 404

CacheParameterGroupNotFound
    The requested cache parameter group name does not refer to an existing cache parameter group.

    HTTP Status Code: 404

CacheSecurityGroupNotFound
    The requested cache security group name does not refer to an existing cache security group.

    HTTP Status Code: 404

InvalidCacheClusterState
    The requested cache cluster is not in the *available* state.

    HTTP Status Code: 400

InvalidCacheSecurityGroupState
    The current state of the cache security group does not allow deletion.

HTTP Status Code: 400

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

InvalidReplicationGroupState

The requested replication group is not in the *available* state.

HTTP Status Code: 400

InvalidVPCNetworkState

The VPC network is in an invalid state.

HTTP Status Code: 400

ReplicationGroupNotFound

The specified replication group does not exist.

HTTP Status Code: 404

PurchaseReservedCacheNodesOffering

Description

The *PurchaseReservedCacheNodesOffering* operation allows you to purchase a reserved cache node offering.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheNodeCount
The number of cache node instances to reserve.

Default: `1`

Type: Integer

Required: No

ReservedCacheNodeId
A customer-specified identifier to track this reservation.

Example: myreservationID

Type: String

Required: No

ReservedCacheNodesOfferingId
The ID of the reserved cache node offering to purchase.

Example: 438012d3-4052-4cc7-b2e3-8d3372e0e706

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `ReservedCacheNode`.

CacheNodeCount
The number of cache nodes that have been reserved.

Type: Integer

CacheNodeType
The cache node type for the reserved cache nodes.

Type: String

Duration
The duration of the reservation in seconds.

Type: Integer

FixedPrice
The fixed price charged for this reserved cache node.

Type: Double

OfferingType
> The offering type of this reserved cache node.

> Type: String

ProductDescription
> The description of the reserved cache node.

> Type: String

RecurringCharges
> The recurring price charged to run this reserved cache node.

> Type: RecurringCharge (p. 113) list

ReservedCacheNodeId
> The unique identifier for the reservation.

> Type: String

ReservedCacheNodesOfferingId
> The offering identifier.

> Type: String

StartTime
> The time the reservation started.

> Type: DateTime

State
> The state of the reserved cache node.

> Type: String

UsagePrice
> The hourly price charged for this reserved cache node.

> Type: Double

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

InvalidParameterCombination
> Two or more incompatible parameters were specified.

> HTTP Status Code: 400

InvalidParameterValue
> The value for a parameter is invalid.

> HTTP Status Code: 400

ReservedCacheNodeAlreadyExists
> This user already has a reservation with the given identifier.

> HTTP Status Code: 404

ReservedCacheNodeQuotaExceeded
> The request cannot be processed because it would exceed the user's cache node quota.

> HTTP Status Code: 400

ReservedCacheNodesOfferingNotFound
The requested cache node offering does not exist.

HTTP Status Code: 404

Examples

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=PurchaseReservedCacheNodesOffering
    &ReservedCacheNodeId=myreservationID
    &ReservedCacheNodesOfferingId=438012d3-4052-4cc7-b2e3-8d3372e0e706
    &CacheNodeCount=1
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-05-10T18%3A31%3A36.118Z
    &AWSAccessKeyId=<AWS Access Key ID>
    &Signature=<Signature>
```

Sample Response

```
<PurchaseReservedCacheNodesOfferingResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
  <PurchaseReservedCacheNodesOfferingResult>
    <ReservedCacheNode>
      <OfferingType>Medium Utilization</OfferingType>
      <RecurringCharges/>
      <ProductDescription>memcached</ProductDescription>
      <ReservedCacheNodesOfferingId> 438012d3-4052-4cc7-b2e3-8d3372e0e706</Re
servedCacheNodesOfferingId>
      <State>payment-pending</State>
      <ReservedCacheNodeId>myreservationID</ReservedCacheNodeId>
      <CacheNodeCount>10</CacheNodeCount>
      <StartTime>2011-12-18T23:24:56.577Z</StartTime>
      <Duration>31536000</Duration>
      <FixedPrice>123.0</FixedPrice>
      <UsagePrice>0.123</UsagePrice>
      <CacheNodeType>cache.m1.small</CacheNodeType>
    </ReservedCacheNode>
  </PurchaseReservedCacheNodesOfferingResult>
  <ResponseMetadata>
    <RequestId>7f099901-29cf-11e1-bd06-6fe008f046c3</RequestId>
  </ResponseMetadata>
</PurchaseReservedCacheNodesOfferingResponse>
```

RebootCacheCluster

Description

The *RebootCacheCluster* operation reboots some, or all, of the cache cluster nodes within a provisioned cache cluster. This API will apply any modified cache parameter groups to the cache cluster. The reboot action takes place as soon as possible, and results in a momentary outage to the cache cluster. During the reboot, the cache cluster status is set to REBOOTING.

The reboot causes the contents of the cache (for each cache cluster node being rebooted) to be lost.

When the reboot is complete, a cache cluster event is created.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheClusterId
    The cache cluster identifier. This parameter is stored as a lowercase string.

    Type: String

    Required: Yes

CacheNodeIdsToReboot.member.N
    A list of cache cluster node IDs to reboot. A node ID is a numeric identifier (0001, 0002, etc.). To reboot an entire cache cluster, specify all of the cache cluster node IDs.

    Type: String list

    Required: Yes

Response Elements

The following elements are returned in a structure named `CacheCluster`.

AutoMinorVersionUpgrade
    If `true`, then minor version patches are applied automatically; if `false`, then automatic minor version patches are disabled.

    Type: Boolean

CacheClusterCreateTime
    The date and time the cache cluster was created.

    Type: DateTime

CacheClusterId
    The user-supplied identifier of the cache cluster. This is a unique key that identifies a cache cluster.

    Type: String

CacheClusterStatus
    The current state of this cache cluster - *creating*, *available*, etc.

    Type: String

CacheNodeType
    The name of the compute and memory capacity node type for the cache cluster.

Type: String

CacheNodes

A list of cache nodes that are members of the cache cluster.

Type: CacheNode (p. 96) list

CacheParameterGroup

The status of the cache parameter group.

Type: CacheParameterGroupStatus (p. 99)

CacheSecurityGroups

A list of cache security group elements, composed of name and status sub-elements.

Type: CacheSecurityGroupMembership (p. 100) list

CacheSubnetGroupName

The name of the cache subnet group associated with the cache cluster.

Type: String

ClientDownloadLandingPage

The URL of the web page where you can download the latest ElastiCache client library.

Type: String

ConfigurationEndpoint

Represents the information required for client programs to connect to a cache node.

Type: Endpoint (p. 107)

Engine

The name of the cache engine (*memcached* or *redis*) to be used for this cache cluster.

Type: String

EngineVersion

The version of the cache engine version that is used in this cache cluster.

Type: String

NotificationConfiguration

Describes a notification topic and its status. Notification topics are used for publishing ElastiCache events to subscribers using Amazon Simple Notification Service (SNS).

Type: NotificationConfiguration (p. 110)

NumCacheNodes

The number of cache nodes in the cache cluster.

Type: Integer

PendingModifiedValues

A group of settings that will be applied to the cache cluster in the future, or that are currently being applied.

Type: PendingModifiedValues (p. 112)

PreferredAvailabilityZone

The name of the Availability Zone in which the cache cluster is located.

Type: String

PreferredMaintenanceWindow

The time range (in UTC) during which weekly system maintenance can occur.

Type: String

ReplicationGroupId

The replication group to which this cache cluster belongs. If this field is empty, the cache cluster is not associated with any replication group.

Type: String

SecurityGroups

A list of VPC Security Groups associated with the cache cluster.

Type: SecurityGroupMembership (p. 117) list

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheClusterNotFound

The requested cache cluster ID does not refer to an existing cache cluster.

HTTP Status Code: 404

InvalidCacheClusterState

The requested cache cluster is not in the *available* state.

HTTP Status Code: 400

ResetCacheParameterGroup

Description

The *ResetCacheParameterGroup* operation modifies the parameters of a cache parameter group to the engine or system default value. You can reset specific parameters by submitting a list of parameter names. To reset the entire cache parameter group, specify the *ResetAllParameters* and *CacheParameterGroupName* parameters.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheParameterGroupName
The name of the cache parameter group to reset.

Type: String

Required: Yes

ParameterNameValues.member.N
An array of parameter names to be reset. If you are not resetting the entire cache parameter group, you must specify at least one parameter name.

Type: ParameterNameValue (p. 112) list

Required: Yes

ResetAllParameters
If *true*, all parameters in the cache parameter group will be reset to default values. If *false*, no such action occurs.

Valid values: `true` | `false`

Type: Boolean

Required: No

Response Elements

The following element is returned in a structure named `ResetCacheParameterGroupResult`.

CacheParameterGroupName
The name of the cache parameter group.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

CacheParameterGroupNotFound
The requested cache parameter group name does not refer to an existing cache parameter group.

HTTP Status Code: 404

InvalidCacheParameterGroupState

The current state of the cache parameter group does not allow the requested action to occur.

HTTP Status Code: 400

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

RevokeCacheSecurityGroupIngress

Description

The *RevokeCacheSecurityGroupIngress* operation revokes ingress from a cache security group. Use this operation to disallow access from an Amazon EC2 security group that had been previously authorized.

Request Parameters

For information about the common parameters that all actions use, see Common Parameters (p. 119).

CacheSecurityGroupName
The name of the cache security group to revoke ingress from.

Type: String

Required: Yes

EC2SecurityGroupName
The name of the Amazon EC2 security group to revoke access from.

Type: String

Required: Yes

EC2SecurityGroupOwnerId
The AWS account number of the Amazon EC2 security group owner. Note that this is not the same thing as an AWS access key ID - you must provide a valid AWS account number for this parameter.

Type: String

Required: Yes

Response Elements

The following elements are returned in a structure named `CacheSecurityGroup`.

CacheSecurityGroupName
The name of the cache security group.

Type: String

Description
The description of the cache security group.

Type: String

EC2SecurityGroups
A list of Amazon EC2 security groups that are associated with this cache security group.

Type: EC2SecurityGroup (p. 106) list

OwnerId
The AWS account ID of the cache security group owner.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 121).

AuthorizationNotFound
The specified Amazon EC2 security group is not authorized for the specified cache security group.

HTTP Status Code: 404

CacheSecurityGroupNotFound
The requested cache security group name does not refer to an existing cache security group.

HTTP Status Code: 404

InvalidCacheSecurityGroupState
The current state of the cache security group does not allow deletion.

HTTP Status Code: 400

InvalidParameterCombination
Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue
The value for a parameter is invalid.

HTTP Status Code: 400

Examples

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=RevokeCacheSecurityGroupIngress
    &EC2SecurityGroupName=default
    &CacheSecurityGroupName=mygroup
    &EC2SecurityGroupOwnerId=1234-5678-1234
    &Version=2013-06-15
    &SignatureVersion=2
    &SignatureMethod=HmacSHA256
    &Timestamp=2011-07-27T02%3A30%3A08.444Z
    &AWSAccessKeyId=YOUR-ACCESS-KEY
    &Signature=YOUR-SIGNATURE
```

Sample Response

```
<RevokeCacheSecurityGroupIngressResponse xmlns="http://elasticache.amazon
aws.com/doc/2013-06-15/">
    <RevokeCacheSecurityGroupIngressResult>
        <CacheSecurityGroup>
            <EC2SecurityGroups>
                <EC2SecurityGroup>
                    <Status>revoking</Status>
                    <EC2SecurityGroupName>default</EC2SecurityGroupName>
```

```
                    <EC2SecurityGroupOwnerId>123456781234</EC2SecurityGroupOwn
erId>
                </EC2SecurityGroup>
            </EC2SecurityGroups>
            <CacheSecurityGroupName>mygroup</CacheSecurityGroupName>
            <OwnerId>123456789012</OwnerId>
            <Description>My security group</Description>
        </CacheSecurityGroup>
    </RevokeCacheSecurityGroupIngressResult>
    <ResponseMetadata>
        <RequestId>02ae3699-3650-11e0-a564-8f11342c56b0</RequestId>
    </ResponseMetadata>
</RevokeCacheSecurityGroupIngressResponse>
```

Data Types

The Amazon ElastiCache API contains several data types that various actions use. This section describes each data type in detail.

> **Note**
> The order of each element in the response is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

AvailabilityZone

Description

Describes an availability zone in which the cache cluster is launched.

Contents

Name
The name of the availability zone.

Type: String

Required: No

CacheCluster

Description

Contains all of the attributes of a specific cache cluster.

Contents

AutoMinorVersionUpgrade
If `true`, then minor version patches are applied automatically; if `false`, then automatic minor version patches are disabled.

Type: Boolean

Required: No

CacheClusterCreateTime
The date and time the cache cluster was created.

Type: DateTime

Required: No

CacheClusterId
The user-supplied identifier of the cache cluster. This is a unique key that identifies a cache cluster.

Type: String

Required: No

CacheClusterStatus
The current state of this cache cluster - *creating*, *available*, etc.

Type: String

Required: No

CacheNodeType
The name of the compute and memory capacity node type for the cache cluster.

Type: String

Required: No

CacheNodes
A list of cache nodes that are members of the cache cluster.

Type: CacheNode (p. 96) list

Required: No

CacheParameterGroup
The status of the cache parameter group.

Type: CacheParameterGroupStatus (p. 99)

Required: No

CacheSecurityGroups
A list of cache security group elements, composed of name and status sub-elements.

Type: CacheSecurityGroupMembership (p. 100) list

Required: No

CacheSubnetGroupName
The name of the cache subnet group associated with the cache cluster.

Type: String

Required: No

ClientDownloadLandingPage
The URL of the web page where you can download the latest ElastiCache client library.

Type: String

Required: No

ConfigurationEndpoint
Represents the information required for client programs to connect to a cache node.

Type: Endpoint (p. 107)

Required: No

Engine

The name of the cache engine (*memcached* or *redis*) to be used for this cache cluster.

Type: String

Required: No

EngineVersion

The version of the cache engine version that is used in this cache cluster.

Type: String

Required: No

NotificationConfiguration

Describes a notification topic and its status. Notification topics are used for publishing ElastiCache events to subscribers using Amazon Simple Notification Service (SNS).

Type: NotificationConfiguration (p. 110)

Required: No

NumCacheNodes

The number of cache nodes in the cache cluster.

Type: Integer

Required: No

PendingModifiedValues

A group of settings that will be applied to the cache cluster in the future, or that are currently being applied.

Type: PendingModifiedValues (p. 112)

Required: No

PreferredAvailabilityZone

The name of the Availability Zone in which the cache cluster is located.

Type: String

Required: No

PreferredMaintenanceWindow

The time range (in UTC) during which weekly system maintenance can occur.

Type: String

Required: No

ReplicationGroupId

The replication group to which this cache cluster belongs. If this field is empty, the cache cluster is not associated with any replication group.

Type: String

Required: No

SecurityGroups

A list of VPC Security Groups associated with the cache cluster.

Type: SecurityGroupMembership (p. 117) list

Required: No

CacheEngineVersion

Description

Provides all of the details about a particular cache engine version.

Contents

CacheEngineDescription
   The description of the cache engine.

   Type: String

   Required: No

CacheEngineVersionDescription
   The description of the cache engine version.

   Type: String

   Required: No

CacheParameterGroupFamily
   The name of the cache parameter group family associated with this cache engine.

   Type: String

   Required: No

Engine
   The name of the cache engine.

   Type: String

   Required: No

EngineVersion
   The version number of the cache engine.

   Type: String

   Required: No

CacheNode

Description

Represents an individual cache node within a cache cluster. Each cache node runs its own instance of the cluster's protocol-compliant caching software - either Memcached or Redis.

Contents

CacheNodeCreateTime
   The date and time the cache node was created.

   Type: DateTime

Required: No

CacheNodeId

The cache node identifier. A node ID is a numeric identifier (0001, 0002, etc.). The combination of cluster ID and node ID uniquely identifies every cache node used in a customer's AWS account.

Type: String

Required: No

CacheNodeStatus

The current state of this cache node.

Type: String

Required: No

Endpoint

The hostname and IP address for connecting to this cache node.

Type: Endpoint (p. 107)

Required: No

ParameterGroupStatus

The status of the parameter group applied to this cache node.

Type: String

Required: No

SourceCacheNodeId

The ID of the primary node to which this read replica node is synchronized. If this field is empty, then this node is not associated with a primary cache cluster.

Type: String

Required: No

CacheNodeTypeSpecificParameter

Description

A parameter that has a different value for each cache node type it is applied to. For example, in a Redis cache cluster, a *cache.m1.large* cache node type would have a larger *maxmemory* value than a *cache.m1.small* type.

Contents

AllowedValues

The valid range of values for the parameter.

Type: String

Required: No

CacheNodeTypeSpecificValues

A list of cache node types and their corresponding values for this parameter.

Type: CacheNodeTypeSpecificValue (p. 98) list

Required: No

DataType

The valid data type for the parameter.

Type: String

Required: No

Description

A description of the parameter.

Type: String

Required: No

IsModifiable

Indicates whether (`true`) or not (`false`) the parameter can be modified. Some parameters have security or operational implications that prevent them from being changed.

Type: Boolean

Required: No

MinimumEngineVersion

The earliest cache engine version to which the parameter can apply.

Type: String

Required: No

ParameterName

The name of the parameter.

Type: String

Required: No

Source

The source of the parameter value.

Type: String

Required: No

CacheNodeTypeSpecificValue

Description

A value that applies only to a certain cache node type.

Contents

CacheNodeType

The cache node type for which this value applies.

Type: String

Required: No

Value

The value for the cache node type.

Type: String

Required: No

CacheParameterGroup

Description

Represents the output of a *CreateCacheParameterGroup* operation.

Contents

CacheParameterGroupFamily
The name of the cache parameter group family that this cache parameter group is compatible with.

Type: String

Required: No

CacheParameterGroupName
The name of the cache parameter group.

Type: String

Required: No

Description
The description for this cache parameter group.

Type: String

Required: No

CacheParameterGroupStatus

Description

The status of the cache parameter group.

Contents

CacheNodeIdsToReboot
A list of the cache node IDs which need to be rebooted for parameter changes to be applied. A node ID is a numeric identifier (0001, 0002, etc.).

Type: String list

Required: No

CacheParameterGroupName
The name of the cache parameter group.

Type: String

Required: No

ParameterApplyStatus
> The status of parameter updates.
>
> Type: String
>
> Required: No

CacheSecurityGroup

Description

Represents the output of one of the following operations:

- *AuthorizeCacheSecurityGroupIngress*
- *CreateCacheSecurityGroup*
- *RevokeCacheSecurityGroupIngress*

Contents

CacheSecurityGroupName
> The name of the cache security group.
>
> Type: String
>
> Required: No

Description
> The description of the cache security group.
>
> Type: String
>
> Required: No

EC2SecurityGroups
> A list of Amazon EC2 security groups that are associated with this cache security group.
>
> Type: EC2SecurityGroup (p. 106) list
>
> Required: No

OwnerId
> The AWS account ID of the cache security group owner.
>
> Type: String
>
> Required: No

CacheSecurityGroupMembership

Description

Represents a cache cluster's status within a particular cache security group.

Contents

CacheSecurityGroupName

The name of the cache security group.

Type: String

Required: No

Status

The membership status in the cache security group. The status changes when a cache security group is modified, or when the cache security groups assigned to a cache cluster are modified.

Type: String

Required: No

CacheSubnetGroup

Description

Represents the output of one of the following operations:

- *CreateCacheSubnetGroup*
- *ModifyCacheSubnetGroup*

Contents

CacheSubnetGroupDescription

The description of the cache subnet group.

Type: String

Required: No

CacheSubnetGroupName

The name of the cache subnet group.

Type: String

Required: No

Subnets

A list of subnets associated with the cache subnet group.

Type: Subnet (p. 118) list

Required: No

VpcId

The Amazon Virtual Private Cloud identifier (VPC ID) of the cache subnet group.

Type: String

Required: No

DescribeCacheClustersResult

Description

Represents the output of a *DescribeCacheClusters* operation.

Contents

CacheClusters
A list of cache clusters. Each item in the list contains detailed information about one cache cluster.

Type: CacheCluster (p. 93) list

Required: No

Marker
Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

DescribeCacheEngineVersionsResult

Description

Represents the output of a DescribeCacheEngineVersions (p. 39) operation.

Contents

CacheEngineVersions
A list of cache engine version details. Each element in the list contains detailed information about once cache engine version.

Type: CacheEngineVersion (p. 96) list

Required: No

Marker
Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

DescribeCacheParameterGroupsResult

Description

Represents the output of a *DescribeCacheParameterGroups* operation.

Contents

CacheParameterGroups
A list of cache parameter groups. Each element in the list contains detailed information about one cache parameter group.

Type: CacheParameterGroup (p. 99) list

Required: No

Marker
Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

DescribeCacheParametersResult

Description

Represents the output of a *DescribeCacheParameters* operation.

Contents

CacheNodeTypeSpecificParameters
A list of parameters specific to a particular cache node type. Each element in the list contains detailed information about one parameter.

Type: CacheNodeTypeSpecificParameter (p. 97) list

Required: No

Marker
Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

Parameters
A list of Parameter (p. 111) instances.

Type: Parameter (p. 111) list

Required: No

DescribeCacheSecurityGroupsResult

Description

Represents the output of a *DescribeCacheSecurityGroups* operation.

Contents

CacheSecurityGroups

A list of cache security groups. Each element in the list contains detailed information about one group.

Type: CacheSecurityGroup (p. 100) list

Required: No

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

DescribeCacheSubnetGroupsResult

Description

Represents the output of a *DescribeCacheSubnetGroups* operation.

Contents

CacheSubnetGroups

A list of cache subnet groups. Each element in the list contains detailed information about one group.

Type: CacheSubnetGroup (p. 101) list

Required: No

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

DescribeEventsResult

Description

Represents the output of a *DescribeEvents* operation.

Contents

Events

A list of events. Each element in the list contains detailed information about one event.

Type: Event (p. 108) list

Required: No

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

DescribeReplicationGroupsResult

Description

Represents the output of a *DescribeReplicationGroups* operation.

Contents

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

ReplicationGroups

A list of replication groups. Each item in the list contains detailed information about one replication group.

Type: ReplicationGroup (p. 113) list

Required: No

DescribeReservedCacheNodesOfferingsResult

Description

Represents the output of a *DescribeReservedCacheNodesOfferings* operation.

Contents

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

ReservedCacheNodesOfferings

A list of reserved cache node offerings. Each element in the list contains detailed information about one offering.

Type: ReservedCacheNodesOffering (p. 116) list

Required: No

DescribeReservedCacheNodesResult

Description

Represents the output of a *DescribeReservedCacheNodes* operation.

Contents

Marker
   Provides an identifier to allow retrieval of paginated results.

   Type: String

   Required: No

ReservedCacheNodes
   A list of reserved cache nodes. Each element in the list contains detailed information about one node.

   Type: ReservedCacheNode (p. 114) list

   Required: No

EC2SecurityGroup

Description

Provides ownership and status information for an Amazon EC2 security group.

Contents

EC2SecurityGroupName
   The name of the Amazon EC2 security group.

   Type: String

   Required: No

EC2SecurityGroupOwnerId
   The AWS account ID of the Amazon EC2 security group owner.

   Type: String

   Required: No

Status
   The status of the Amazon EC2 security group.

   Type: String

   Required: No

Endpoint

Description

Represents the information required for client programs to connect to a cache node.

Contents

Address
The DNS hostname of the cache node.

Type: String

Required: No

Port
The port number that the cache engine is listening on.

Type: Integer

Required: No

EngineDefaults

Description

Represents the output of a *DescribeEngineDefaultParameters* operation.

Contents

CacheNodeTypeSpecificParameters
A list of parameters specific to a particular cache node type. Each element in the list contains detailed information about one parameter.

Type: CacheNodeTypeSpecificParameter (p. 97) list

Required: No

CacheParameterGroupFamily
Specifies the name of the cache parameter group family to which the engine default parameters apply.

Type: String

Required: No

Marker
Provides an identifier to allow retrieval of paginated results.

Type: String

Required: No

Parameters
Contains a list of engine default parameters.

Type: Parameter (p. 111) list

Required: No

Event

Description

Represents a single occurrence of something interesting within the system. Some examples of events are creating a cache cluster, adding or removing a cache node, or rebooting a node.

Contents

Date
> The date and time when the event occurred.
>
> Type: DateTime
>
> Required: No

Message
> The text of the event.
>
> Type: String
>
> Required: No

SourceIdentifier
> The identifier for the source of the event. For example, if the event occurred at the cache cluster level, the identifier would be the name of the cache cluster.
>
> Type: String
>
> Required: No

SourceType
> Specifies the origin of this event - a cache cluster, a parameter group, a security group, etc.
>
> Type: String
>
> Valid Values: `cache-cluster` | `cache-parameter-group` | `cache-security-group` | `cache-subnet-group`
>
> Required: No

ModifyCacheParameterGroupResult

Description

Represents the output of one of the following operations:

- *ModifyCacheParameterGroup*
- *ResetCacheParameterGroup*

Contents

CacheParameterGroupName
The name of the cache parameter group.

Type: String

Required: No

NodeGroup

Description

Represents a collection of cache nodes in a replication group.

Contents

NodeGroupId
The identifier for the node group. A replication group contains only one node group; therefore, the node group ID is 0001.

Type: String

Required: No

NodeGroupMembers
A list containing information about individual nodes within the node group.

Type: NodeGroupMember (p. 109) list

Required: No

PrimaryEndpoint
Represents the information required for client programs to connect to a cache node.

Type: Endpoint (p. 107)

Required: No

Status
The current state of this replication group - *creating*, *available*, etc.

Type: String

Required: No

NodeGroupMember

Description

Represents a single node within a node group.

Contents

CacheClusterId

The ID of the cache cluster to which the node belongs.

Type: String

Required: No

CacheNodeId

The ID of the node within its cache cluster. A node ID is a numeric identifier (0001, 0002, etc.).

Type: String

Required: No

CurrentRole

The role that is currently assigned to the node - *primary* or *replica*.

Type: String

Required: No

PreferredAvailabilityZone

The name of the Availability Zone in which the node is located.

Type: String

Required: No

ReadEndpoint

Represents the information required for client programs to connect to a cache node.

Type: Endpoint (p. 107)

Required: No

NotificationConfiguration

Description

Describes a notification topic and its status. Notification topics are used for publishing ElastiCache events to subscribers using Amazon Simple Notification Service (SNS).

Contents

TopicArn

The Amazon Resource Name (ARN) that identifies the topic.

Type: String

Required: No

TopicStatus

The current state of the topic.

Type: String

Required: No

Parameter

Description

Describes an individual setting that controls some aspect of ElastiCache behavior.

Contents

AllowedValues
The valid range of values for the parameter.

Type: String

Required: No
DataType
The valid data type for the parameter.

Type: String

Required: No
Description
A description of the parameter.

Type: String

Required: No
IsModifiable
Indicates whether (`true`) or not (`false`) the parameter can be modified. Some parameters have
security or operational implications that prevent them from being changed.

Type: Boolean

Required: No
MinimumEngineVersion
The earliest cache engine version to which the parameter can apply.

Type: String

Required: No
ParameterName
The name of the parameter.

Type: String

Required: No
ParameterValue
The value of the parameter.

Type: String

Required: No
Source
The source of the parameter.

Type: String

Required: No

ParameterNameValue

Description

Describes a name-value pair that is used to update the value of a parameter.

Contents

ParameterName
The name of the parameter.

Type: String

Required: No

ParameterValue
The value of the parameter.

Type: String

Required: No

PendingModifiedValues

Description

A group of settings that will be applied to the cache cluster in the future, or that are currently being applied.

Contents

CacheNodeIdsToRemove
A list of cache node IDs that are being removed (or will be removed) from the cache cluster. A node ID is a numeric identifier (0001, 0002, etc.).

Type: String list

Required: No

EngineVersion
The new cache engine version that the cache cluster will run.

Type: String

Required: No

NumCacheNodes
The new number of cache nodes for the cache cluster.

Type: Integer

Required: No

RecurringCharge

Description

Contains the specific price and frequency of a recurring charges for a reserved cache node, or for a reserved cache node offering.

Contents

RecurringChargeAmount
The monetary amount of the recurring charge.

Type: Double

Required: No

RecurringChargeFrequency
The frequency of the recurring charge.

Type: String

Required: No

ReplicationGroup

Description

Contains all of the attributes of a specific replication group.

Contents

Description
The description of the replication group.

Type: String

Required: No

MemberClusters
The names of all the cache clusters that are part of this replication group.

Type: String list

Required: No

NodeGroups
A single element list with information about the nodes in the replication group.

Type: NodeGroup (p. 109) list

Required: No

PendingModifiedValues
A group of settings to be applied to the replication group, either immediately or during the next maintenance window.

Type: ReplicationGroupPendingModifiedValues (p. 114)

Required: No

ReplicationGroupId
The identifier for the replication group.

Type: String

Required: No

Status
The current state of this replication group - *creating*, *available*, etc.

Type: String

Required: No

ReplicationGroupPendingModifiedValues

Description

The settings to be applied to the replication group, either immediately or during the next maintenance window.

Contents

PrimaryClusterId
The primary cluster ID which will be applied immediately (if `--apply-immediately` was specified), or during the next maintenance window.

Type: String

Required: No

ReservedCacheNode

Description

Represents the output of a *PurchaseReservedCacheNodesOffering* operation.

Contents

CacheNodeCount
The number of cache nodes that have been reserved.

Type: Integer

Required: No

CacheNodeType
The cache node type for the reserved cache nodes.

Type: String

Required: No

Duration

The duration of the reservation in seconds.

Type: Integer

Required: No

FixedPrice

The fixed price charged for this reserved cache node.

Type: Double

Required: No

OfferingType

The offering type of this reserved cache node.

Type: String

Required: No

ProductDescription

The description of the reserved cache node.

Type: String

Required: No

RecurringCharges

The recurring price charged to run this reserved cache node.

Type: RecurringCharge (p. 113) list

Required: No

ReservedCacheNodeId

The unique identifier for the reservation.

Type: String

Required: No

ReservedCacheNodesOfferingId

The offering identifier.

Type: String

Required: No

StartTime

The time the reservation started.

Type: DateTime

Required: No

State

The state of the reserved cache node.

Type: String

Required: No

UsagePrice

The hourly price charged for this reserved cache node.

Type: Double

Required: No

ReservedCacheNodesOffering

Description

Describes all of the attributes of a reserved cache node offering.

Contents

CacheNodeType
The cache node type for the reserved cache node.

Type: String

Required: No

Duration
The duration of the offering. in seconds.

Type: Integer

Required: No

FixedPrice
The fixed price charged for this offering.

Type: Double

Required: No

OfferingType
The offering type.

Type: String

Required: No

ProductDescription
The cache engine used by the offering.

Type: String

Required: No

RecurringCharges
The recurring price charged to run this reserved cache node.

Type: RecurringCharge (p. 113) list

Required: No

ReservedCacheNodesOfferingId
A unique identifier for the reserved cache node offering.

Type: String

Required: No

UsagePrice
>The hourly price charged for this offering.
>
>Type: Double
>
>Required: No

ResetCacheParameterGroupResult

Description

Represents the output of one of the following operations:

- *ModifyCacheParameterGroup*
- *ResetCacheParameterGroup*

Contents

CacheParameterGroupName
>The name of the cache parameter group.
>
>Type: String
>
>Required: No

SecurityGroupMembership

Description

Represents a single cache security group and its status..

Contents

SecurityGroupId
>The identifier of the cache security group.
>
>Type: String
>
>Required: No

Status
>The status of the cache security group membership. The status changes whenever a cache security group is modified, or when the cache security groups assigned to a cache cluster are modified.
>
>Type: String
>
>Required: No

Subnet

Description

Represents the subnet associated with a cache cluster. This parameter refers to subnets defined in Amazon Virtual Private Cloud (Amazon VPC) and used with ElastiCache.

Contents

SubnetAvailabilityZone
The Availability Zone associated with the subnet

Type: AvailabilityZone (p. 93)

Required: No

SubnetIdentifier
The unique identifier for the subnet

Type: String

Required: No

Common Parameters

This section lists the request parameters that all actions use. Any action-specific parameters are listed in the topic for the action.

Action
The action to be performed.

Default: None

Type: string

Required: Yes

AuthParams
The parameters that are required to authenticate a Conditional request. Contains:

- AWSAccessKeyID
- SignatureVersion
- Timestamp
- Signature

Default: None

Required: Conditional

AWSAccessKeyId
The access key ID that corresponds to the secret access key that you used to sign the request.

Default: None

Type: string

Required: Yes

Expires
The date and time when the request signature expires, expressed in the format YYYY-MM-DDThh:mm:ssZ, as specified in the ISO 8601 standard.

Condition: Requests must include either *Timestamp* or *Expires*, but not both.

Default: None

Type: string

Required: Conditional

SecurityToken

The temporary security token that was obtained through a call to AWS Security Token Service. For a list of services that support AWS Security Token Service, go to Using Temporary Security Credentials to Access AWS in **Using Temporary Security Credentials**.

Default: None

Type: string

Required: No

Signature

The digital signature that you created for the request. For information about generating a signature, go to the service's developer documentation.

Default: None

Type: string

Required: Yes

SignatureMethod

The hash algorithm that you used to create the request signature.

Default: None

Type: string

Valid Values: `HmacSHA256 | HmacSHA1`

Required: Yes

SignatureVersion

The signature version you use to sign the request. Set this to the value that is recommended for your service.

Default: None

Type: string

Required: Yes

Timestamp

The date and time when the request was signed, expressed in the format YYYY-MM-DDThh:mm:ssZ, as specified in the ISO 8601 standard.

Condition: Requests must include either *Timestamp* or *Expires*, but not both.

Default: None

Type: string

Required: Conditional

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Default: None

Type: string

Required: Yes

Common Errors

This section lists the common errors that all actions return. Any action-specific errors are listed in the topic for the action.

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

InvalidClientTokenId

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

AWS query string is malformed, does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

Request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

ServiceUnavailable

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

Throttling

Request was denied due to request throttling.

HTTP Status Code: 400