Amazon ElastiCache

API Reference

API Version 2015-02-02

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 setup, 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.

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Actions

The following actions are supported:

AddTagsToResource

The *AddTagsToResource* action adds up to 10 cost allocation tags to the named resource. A *cost allocation tag* is a key-value pair where the key and value are case-sensitive. Cost allocation tags can be used to categorize and track your AWS costs.

When you apply tags to your ElastiCache resources, AWS generates a cost allocation report as a comma-separated value (CSV) file with your usage and costs aggregated by your tags. You can apply tags that represent business categories (such as cost centers, application names, or owners) to organize your costs across multiple services. For more information, see Using Cost Allocation Tags in Amazon ElastiCache in the ElastiCache User Guide.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

ResourceName

The Amazon Resource Name (ARN) of the resource to which the tags are to be added, for example `arn:aws:elasticache:us-west-2:0123456789:cluster:myCluster` or `arn:aws:elasticache:us-west-2:0123456789:snapshot:mySnapshot`.

For more information on ARNs, go to Amazon Resource Names (ARNs) and AWS Service Namespaces.

Type: String

Required: Yes

Tags.Tag.N

A list of cost allocation tags to be added to this resource. A tag is a key-value pair. A tag key must be accompanied by a tag value.

Type: array of Tag (p. 151) objects

Required: Yes

Response Elements

The following element is returned by the service.

TagList.Tag.N

A list of cost allocation tags as key-value pairs.

Type: array of Tag (p. 151) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

CacheClusterNotFound

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

HTTP Status Code: 404

InvalidARN

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

SnapshotNotFoundFault

The requested snapshot name does not refer to an existing snapshot.

HTTP Status Code: 404

TagQuotaPerResourceExceeded

The request cannot be processed because it would cause the resource to have more than the allowed number of tags. The maximum number of tags permitted on a resource is 10.

HTTP Status Code: 400

Example

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=AddTagsToResource
    &ResourceName=arn:aws:elasticache:us-west-2:0123456789:cluster:myCluster
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Tags.member.1.Key=Service
    &Tags.member.1.Value=elasticache
    &Tags.member.2.Key=Region
    &Tags.member.2.Value=us-west-2
    &Version=2015-02-02
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

AuthorizeCacheSecurityGroupIngress

The *AuthorizeCacheSecurityGroupIngress* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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 element is returned by the service.

CacheSecurityGroup

Represents the output of one of the following actions:

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

Type: CacheSecurityGroup (p. 125) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=AuthorizeCacheSecurityGroupIngress
    &EC2SecurityGroupName=default
    &CacheSecurityGroupName=mygroup
    &EC2SecurityGroupOwnerId=1234-5678-1234
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Example

Sample Response

```
<AuthorizeCacheSecurityGroupIngressResponse xmlns="http://
elasticache.amazonaws.com/doc/2015-02-02/">
    <AuthorizeCacheSecurityGroupIngressResult>
        <CacheSecurityGroup>
            <EC2SecurityGroups>
                <EC2SecurityGroup>
                    <Status>authorizing</Status>
                    <EC2SecurityGroupName>default</EC2SecurityGroupName>
                    <EC2SecurityGroupOwnerId>565419523791</
EC2SecurityGroupOwnerId>
                </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>
```

CopySnapshot

The *CopySnapshot* action makes a copy of an existing snapshot.

> **Important**
> Users or groups that have permissions to use the *CopySnapshot* API can create their own Amazon S3 buckets and copy snapshots to it. To control access to your snapshots, use an IAM policy to control who has the ability to use the *CopySnapshot* API. For more information about using IAM to control the use of ElastiCache APIs, see Exporting Snapshots and Authentication & Access Control.

You could receive the following error messages.

Error Messages

- **Error Message:** The S3 bucket %s is outside of the region.

  Solution: Create an Amazon S3 bucket in the same region as your snapshot. For more information, see Step 1: Create an Amazon S3 Bucket in the ElastiCache User Guide.

- **Error Message:** The S3 bucket %s does not exist.

  Solution: Create an Amazon S3 bucket in the same region as your snapshot. For more information, see Step 1: Create an Amazon S3 Bucket in the ElastiCache User Guide.

- **Error Message:** The S3 bucket %s is not owned by the authenticated user.

  Solution: Create an Amazon S3 bucket in the same region as your snapshot. For more information, see Step 1: Create an Amazon S3 Bucket in the ElastiCache User Guide.

- **Error Message:** The authenticated user does not have sufficient permissions to perform the desired activity.

  Solution: Contact your system administrator to get the needed permissions.

- **Error Message:** The S3 bucket %s already contains an object with key %s.

  Solution: Give the *TargetSnapshotName* a new and unique value. If exporting a snapshot, you could alternatively create a new Amazon S3 bucket and use this same value for *TargetSnapshotName*.

- **Error Message:** ElastiCache has not been granted READ permissions %s on the S3 Bucket.

  Solution: Add List and Read permissions on the bucket. For more information, see Step 2: Grant ElastiCache Access to Your Amazon S3 Bucket in the ElastiCache User Guide.

- **Error Message:** ElastiCache has not been granted WRITE permissions %s on the S3 Bucket.

  Solution: Add Upload/Delete permissions on the bucket. For more information, see Step 2: Grant ElastiCache Access to Your Amazon S3 Bucket in the ElastiCache User Guide.

- **Error Message:** ElastiCache has not been granted READ_ACP permissions %s on the S3 Bucket.

  Solution: Add View Permissions on the bucket. For more information, see Step 2: Grant ElastiCache Access to Your Amazon S3 Bucket in the ElastiCache User Guide.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

SourceSnapshotName

The name of an existing snapshot from which to make a copy.

Type: String

Required: Yes

TargetSnapshotName

A name for the snapshot copy. ElastiCache does not permit overwriting a snapshot, therefore this name must be unique within its context - ElastiCache or an Amazon S3 bucket if exporting.

Type: String

Required: Yes

TargetBucket

The Amazon S3 bucket to which the snapshot will be exported. This parameter is used only when exporting a snapshot for external access.

When using this parameter to export a snapshot, be sure Amazon ElastiCache has the needed permissions to this S3 bucket. For more information, see Step 2: Grant ElastiCache Access to Your Amazon S3 Bucket in the Amazon ElastiCache User Guide.

For more information, see Exporting a Snapshot in the Amazon ElastiCache User Guide.

Type: String

Required: No

Response Elements

The following element is returned by the service.

Snapshot

Represents a copy of an entire cache cluster as of the time when the snapshot was taken.

Type: Snapshot (p. 147) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

InvalidSnapshotState

The current state of the snapshot does not allow the requested action to occur.

HTTP Status Code: 400

SnapshotAlreadyExistsFault

You already have a snapshot with the given name.

HTTP Status Code: 400

SnapshotNotFoundFault

The requested snapshot name does not refer to an existing snapshot.

HTTP Status Code: 404

SnapshotQuotaExceededFault

The request cannot be processed because it would exceed the maximum number of snapshots.

HTTP Status Code: 400

Example

Snapshot copy

The following example makes a copy of the snapshot `automatic.my-redis-primary-2016-04-27-03-15` named `my-snapshot-copy`.

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
```

```
?Action=CopySnapshot
&SourceSnapshotName=automatic.my-redis-primary-2016-04-27-03-15
&TargetSnapshotName=my-snapshot-copy
&SignatureVersion=4
&SignatureMethod=HmacSHA256
&Timestamp=20141201T220302Z
&Version=2015-02-02
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Date=20141201T220302Z
&X-Amz-SignedHeaders=Host
&X-Amz-Expires=20141201T220302Z
&X-Amz-Credential=<credential>
&X-Amz-Signature=<signature>
```

CreateCacheCluster

The *CreateCacheCluster* action creates a 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 parameters that are common to all actions, see Common Parameters (p. 152).

CacheClusterId

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

Constraints:

- A name must contain from 1 to 20 alphanumeric characters or hyphens.
- The first character must be a letter.
- A name cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Required: Yes

AutoMinorVersionUpgrade

This parameter is currently disabled.

Type: Boolean

Required: No

AZMode

Specifies whether the nodes in this Memcached node group are created in a single Availability Zone or created across multiple Availability Zones in the cluster's region.

This parameter is only supported for Memcached cache clusters.

If the `AZMode` and `PreferredAvailabilityZones` are not specified, ElastiCache assumes `single-az` mode.

Type: String

Valid Values: `single-az | cross-az`

Required: No

CacheNodeType

The compute and memory capacity of the nodes in the node group.

Valid node types are as follows:

- General purpose:
  - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`, `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`
  - Previous generation: `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`, `cache.m1.large`, `cache.m1.xlarge`
- Compute optimized: `cache.c1.xlarge`
- Memory optimized:
  - Current generation: `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`, `cache.r3.4xlarge`, `cache.r3.8xlarge`
  - Previous generation: `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).
- Redis backup/restore is not supported for t2 instances.
- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product Features and Details and Cache Node Type-Specific Parameters for Memcached or Cache Node Type-Specific Parameters for Redis.

Type: String

Required: No

CacheParameterGroupName

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

Type: String

Required: No

CacheSecurityGroupNames.CacheSecurityGroupName.N

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

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

Type: array of Strings

Required: No

CacheSubnetGroupName

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

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

> **Important**
> If you're going to launch your cluster in an Amazon VPC, you need to create a subnet group before you start creating a cluster. For more information, see Subnets and Subnet Groups.

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 cache cluster. To view the supported cache engine versions, use the *DescribeCacheEngineVersions* action.

Important: You can upgrade to a newer engine version (see Selecting a Cache Engine and Version), but you cannot downgrade to an earlier engine version. If you want to use an earlier engine version, you must delete the existing cache cluster or replication group and create it anew with the earlier engine version.

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 clusters running Redis, this value must be 1. For clusters running Memcached, this value must be between 1 and 20.

If you need more than 20 nodes for your Memcached cluster, please fill out the ElastiCache Limit Increase Request form at http://aws.amazon.com/contact-us/elasticache-node-limit-request/.

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 nodes belonging to this Memcached cache cluster are placed in the preferred Availability Zone. If you want to create your nodes across multiple Availability Zones, use `PreferredAvailabilityZones`.

Default: System chosen Availability Zone.

Type: String

Required: No

PreferredAvailabilityZones.PreferredAvailabilityZone.N

A list of the Availability Zones in which cache nodes will be created. The order of the zones in the list is not important.

This option is only supported on Memcached.

> **Note**
> If you are creating your cache cluster in an Amazon VPC (recommended) you can only locate nodes in Availability Zones that are associated with the subnets in the selected subnet group.
> The number of Availability Zones listed must equal the value of `NumCacheNodes`.

If you want all the nodes in the same Availability Zone, use `PreferredAvailabilityZone` instead, or repeat the Availability Zone multiple times in the list.

Default: System chosen Availability Zones.

Type: array of Strings

Required: No

PreferredMaintenanceWindow

Specifies the weekly time range during which maintenance on the cache cluster is performed. It is specified as a range in the format ddd:hh24:mi-ddd:hh24:mi (24H Clock UTC). The minimum maintenance window is a 60 minute period. Valid values for `ddd` are:

- `sun`
- `mon`
- `tue`
- `wed`
- `thu`
- `fri`
- `sat`

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

Type: String

Required: No

ReplicationGroupId

The ID of 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.

If the specified replication group is Multi-AZ enabled and the availability zone is not specified, the cache cluster will be created in availability zones that provide the best spread of read replicas across availability zones.

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

Type: String

Required: No

SecurityGroupIds.SecurityGroupId.N

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

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

Type: array of Strings

Required: No

SnapshotArns.SnapshotArn.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 node group. The Amazon S3 object name in the ARN cannot contain any commas.

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

Example of an Amazon S3 ARN: `arn:aws:s3:::my_bucket/snapshot1.rdb`

Type: array of Strings

Required: No

SnapshotName

The name of a snapshot from which to restore data into the new node group. The snapshot status changes to `restoring` while the new node group is being created.

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

Type: String

Required: No

SnapshotRetentionLimit

The number of days for which ElastiCache will retain automatic snapshots before deleting them. For example, if you set `SnapshotRetentionLimit` to 5, then a snapshot that was taken today will be retained for 5 days before being deleted.

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

Default: 0 (i.e., automatic backups are disabled for this cache cluster).

Type: Integer

Required: No

SnapshotWindow

The daily time range (in UTC) during which ElastiCache will begin taking a daily snapshot of your node group.

Example: `05:00-09:00`

If you do not specify this parameter, then ElastiCache will automatically choose an appropriate time range.

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

Type: String

Required: No

Tags.Tag.N

A list of cost allocation tags to be added to this resource. A tag is a key-value pair. A tag key must be accompanied by a tag value.

Type: array of Tag (p. 151) objects

Required: No

Response Elements

The following element is returned by the service.

CacheCluster

Contains all of the attributes of a specific cache cluster.

Type: CacheCluster (p. 114) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

CacheClusterAlreadyExists

You already have 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

CacheSubnetGroupNotFoundFault

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

InvalidVPCNetworkStateFault

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

ReplicationGroupNotFoundFault

The specified replication group does not exist.

HTTP Status Code: 404

TagQuotaPerResourceExceeded

The request cannot be processed because it would cause the resource to have more than the allowed number of tags. The maximum number of tags permitted on a resource is 10.

HTTP Status Code: 400

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
 ?Action=CreateCacheCluster
 &CacheClusterId=myMemcachedCluster
 &CacheNodeType=cache.m1.small
 &CacheSecurityGroupNames.member.1=default
 &Engine=memcached
 &NumCacheNodes=3
 &PreferredAvailabilityZones.member.1=us-west-2a
 &PreferredAvailabilityZones.member.2=us-west-2b
 &PreferredAvailabilityZones.member.3=us-west-2c
 &SignatureMethod=HmacSHA256
 &SignatureVersion=4
 &Version=2015-02-02
 &X-Amz-Algorithm=AWS4-HMAC-SHA256
 &X-Amz-Credential=[your-access-key-id]/20150202/us-west-2/elasticache/
aws4_request
 &X-Amz-Date=20150202T170651Z
 &X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-
amz-date
 &X-Amz-Signature=[signature-value]
```

Sample Response

```
<CreateCacheClusterResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <CreateCacheClusterResult>
    <CacheCluster>
      <CacheClusterId>russherm-api-test</CacheClusterId>
      <CacheClusterStatus>creating</CacheClusterStatus>
      <CacheParameterGroup>
        <CacheParameterGroupName>default.memcached1.4</
CacheParameterGroupName>
        <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        <CacheNodeIdsToReboot/>
      </CacheParameterGroup>
      <CacheNodeType>cache.m1.small</CacheNodeType>
      <Engine>memcached</Engine>
      <PendingModifiedValues/>
      <EngineVersion>1.4.14</EngineVersion>
      <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
      <PreferredMaintenanceWindow>sat:09:00-sat:10:00</
PreferredMaintenanceWindow>
      <ClientDownloadLandingPage>https://console.aws.amazon.com/elasticache/
home#client-download:</ClientDownloadLandingPage>
```

```
      <CacheSecurityGroups>
        <CacheSecurityGroup>
          <CacheSecurityGroupName>default</CacheSecurityGroupName>
          <Status>active</Status>
        </CacheSecurityGroup>
      </CacheSecurityGroups>
      <NumCacheNodes>3</NumCacheNodes>
    </CacheCluster>
  </CreateCacheClusterResult>
  <ResponseMetadata>
    <RequestId>69134921-10f9-11e4-81bb-d76bad68b8fd</RequestId>
  </ResponseMetadata>
</CreateCacheClusterResponse>
```

CreateCacheParameterGroup

The *CreateCacheParameterGroup* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

CacheParameterGroupFamily

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

Valid values are: `memcached1.4` | `redis2.6` | `redis2.8`

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 element is returned by the service.

CacheParameterGroup

Represents the output of a *CreateCacheParameterGroup* action.

Type: CacheParameterGroup (p. 123) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
   ?Action=CreateCacheParameterGroup
   &Description=My%20first%20cache%20parameter%20group
   &CacheParameterGroupFamily=memcached1.4
   &CacheParameterGroupName=mycacheparametergroup1
   &Version=2015-02-02
   &SignatureVersion=4
   &SignatureMethod=HmacSHA256
   &Timestamp=20150202T192317Z
   &X-Amz-Credential=<credential>
```

Sample Response

```
<CreateCacheParameterGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <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

The *CreateCacheSecurityGroup* action 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 cache cluster outside of an Amazon Virtual Private Cloud (VPC). If you are creating a cache cluster inside of a VPC, use a cache subnet group instead. For more information, see CreateCacheSubnetGroup.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

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. Cannot 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 element is returned by the service.

CacheSecurityGroup

Represents the output of one of the following actions:

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

Type: CacheSecurityGroup (p. 125) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

CacheSecurityGroupAlreadyExists

A cache security group with the specified name already exists.

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

QuotaExceeded.CacheSecurityGroup

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

HTTP Status Code: 400

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=CreateCacheSecurityGroup
    &CacheSecurityGroupName=mycachesecuritygroup
    &Description=My%20cache%20security%20group
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<CreateCacheSecurityGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <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

The *CreateCacheSubnetGroup* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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.SubnetIdentifier.N

A list of VPC subnet IDs for the cache subnet group.

Type: array of Strings

Required: Yes

Response Elements

The following element is returned by the service.

CacheSubnetGroup

Represents the output of one of the following actions:

- *CreateCacheSubnetGroup*
- *ModifyCacheSubnetGroup*

Type: CacheSubnetGroup (p. 127) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

CacheSubnetQuotaExceededFault

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

Example

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=CreateCacheSubnetGroup
    &CacheSubnetGroupName=myCachesubnetgroup
    &CacheSubnetGroupDescription=My%20new%20CacheSubnetGroup
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<CreateCacheSubnetGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <CreateCacheSubnetGroupResult>
        <CacheSubnetGroup>
            <VpcId>990524496922</VpcId>
                <CacheSubnetGroupDescription>My new CacheSubnetGroup</
CacheSubnetGroupDescription>
                <CacheSubnetGroupName>myCachesubnetgroup</CacheSubnetGroupName>
                <Subnets>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                        <SubnetIdentifier>subnet-7c5b4115</SubnetIdentifier>
                        <SubnetAvailabilityZone>
                            <Name>us-west-2c</Name>
                        </SubnetAvailabilityZone>
                    </Subnet>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                        <SubnetIdentifier>subnet-7b5b4112</SubnetIdentifier>
                        <SubnetAvailabilityZone>
                            <Name>us-west-2b</Name>
                        </SubnetAvailabilityZone>
                    </Subnet>
                    <Subnet>
                        <SubnetStatus>Active</SubnetStatus>
                        <SubnetIdentifier>subnet-3ea6bd57</SubnetIdentifier>
                        <SubnetAvailabilityZone>
                            <Name>us-west-2c</Name>
                        </SubnetAvailabilityZone>
                    </Subnet>
                </Subnets>
        </CacheSubnetGroup>
    </CreateCacheSubnetGroupResult>
    <ResponseMetadata>
        <RequestId>ed662948-a57b-11df-9e38-7ffab86c801f</RequestId>
```

```
        </ResponseMetadata>
    </CreateCacheSubnetGroupResponse>
```

CreateReplicationGroup

The *CreateReplicationGroup* action creates a replication group. A replication group is a collection of cache clusters, where one of the cache clusters is a read/write primary and the others 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.

> **Note**
> This action is valid only for Redis.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

ReplicationGroupDescription

A user-created description for the replication group.

Type: String

Required: Yes

ReplicationGroupId

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

Constraints:

- A name must contain from 1 to 20 alphanumeric characters or hyphens.

- The first character must be a letter.

- A name cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Required: Yes

AutomaticFailoverEnabled

Specifies whether a read-only replica will be automatically promoted to read/write primary if the existing primary fails.

If `true`, Multi-AZ is enabled for this replication group. If `false`, Multi-AZ is disabled for this replication group.

Default: false

> **Note**
> ElastiCache Multi-AZ replication groups is not supported on:
> - Redis versions earlier than 2.8.6.
> - T1 and T2 cache node types.

Type: Boolean

Required: No

AutoMinorVersionUpgrade

This parameter is currently disabled.

Type: Boolean

Required: No

CacheNodeType

The compute and memory capacity of the nodes in the node group.

Valid node types are as follows:

- General purpose:

    - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`, `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`

- **Previous generation:** `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`, `cache.m1.large`, `cache.m1.xlarge`
- Compute optimized: `cache.c1.xlarge`
- Memory optimized:
  - **Current generation:** `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`, `cache.r3.4xlarge`, `cache.r3.8xlarge`
  - **Previous generation:** `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).
- Redis backup/restore is not supported for t2 instances.
- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product Features and Details and Cache Node Type-Specific Parameters for Memcached or Cache Node Type-Specific Parameters for Redis.

Type: String

Required: No

CacheParameterGroupName

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

Type: String

Required: No

CacheSecurityGroupNames.CacheSecurityGroupName.N

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

Type: array of Strings

Required: No

CacheSubnetGroupName

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

> **Important**
>
> If you're going to launch your cluster in an Amazon VPC, you need to create a subnet group before you start creating a cluster. For more information, see Subnets and Subnet Groups.

Type: String

Required: No

Engine

The name of the cache engine to be used for the cache clusters in this replication group.

Default: redis

Type: String

Required: No

EngineVersion

The version number of the cache engine to be used for the cache clusters in this replication group. To view the supported cache engine versions, use the *DescribeCacheEngineVersions* action.

Important: You can upgrade to a newer engine version (see Selecting a Cache Engine and Version) in the *ElastiCache User Guide*, but you cannot downgrade to an earlier engine version. If you want to use an earlier engine version, you must delete the existing cache cluster or replication group and create it anew with the earlier engine version.

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

NumCacheClusters

The number of cache clusters this replication group will initially have.

If *Multi-AZ* is `enabled`, the value of this parameter must be at least 2.

The maximum permitted value for *NumCacheClusters* is 6 (primary plus 5 replicas). 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/.

Type: Integer

Required: No

Port

The port number on which each member of the replication group will accept connections.

Type: Integer

Required: No

PreferredCacheClusterAZs.AvailabilityZone.N

A list of EC2 availability zones in which the replication group's cache clusters will be created. The order of the availability zones in the list is not important.

Note

If you are creating your replication group in an Amazon VPC (recommended), you can only locate cache clusters in availability zones associated with the subnets in the selected subnet group.
The number of availability zones listed must equal the value of *NumCacheClusters*.

Default: system chosen availability zones.

Type: array of Strings

Required: No

PreferredMaintenanceWindow

Specifies the weekly time range during which maintenance on the cache cluster is performed. It is specified as a range in the format ddd:hh24:mi-ddd:hh24:mi (24H Clock UTC). The minimum maintenance window is a 60 minute period. Valid values for `ddd` are:

- `sun`
- `mon`
- `tue`
- `wed`
- `thu`
- `fri`
- `sat`

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

Type: String

Required: No

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*.

This parameter is not required if *NumCacheClusters* is specified.

Type: String

Required: No

SecurityGroupIds.SecurityGroupId.N

One or more Amazon VPC security groups associated with this replication group.

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

Type: array of Strings

Required: No

SnapshotArns.SnapshotArn.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 node group. The Amazon S3 object name in the ARN cannot contain any commas.

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

Example of an Amazon S3 ARN: `arn:aws:s3:::my_bucket/snapshot1.rdb`

Type: array of Strings

Required: No

SnapshotName

The name of a snapshot from which to restore data into the new node group. The snapshot status changes to `restoring` while the new node group is being created.

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

Type: String

Required: No

SnapshotRetentionLimit

The number of days for which ElastiCache will retain automatic snapshots before deleting them. For example, if you set `SnapshotRetentionLimit` to 5, then a snapshot that was taken today will be retained for 5 days before being deleted.

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

Default: 0 (i.e., automatic backups are disabled for this cache cluster).

Type: Integer

Required: No

SnapshotWindow

The daily time range (in UTC) during which ElastiCache will begin taking a daily snapshot of your node group.

Example: `05:00-09:00`

If you do not specify this parameter, then ElastiCache will automatically choose an appropriate time range.

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

Type: String

Required: No

Tags.Tag.N

A list of cost allocation tags to be added to this resource. A tag is a key-value pair. A tag key must be accompanied by a tag value.

Type: array of Tag (p. 151) objects

Required: No

Response Elements

The following element is returned by the service.

ReplicationGroup

Contains all of the attributes of a specific replication group.

Type: ReplicationGroup (p. 140) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

CacheSubnetGroupNotFoundFault

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

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

InvalidVPCNetworkStateFault

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

ReplicationGroupAlreadyExists

The specified replication group already exists.

HTTP Status Code: 400

TagQuotaPerResourceExceeded

The request cannot be processed because it would cause the resource to have more than the allowed number of tags. The maximum number of tags permitted on a resource is 10.

HTTP Status Code: 400

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=CreateReplicationGroup ?ReplicationGroupDescription=My
%20replication%20group
    &ReplicationGroupId=my-repgroup
    &PrimaryClusterId=my-redis-primary
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<CreateReplicationGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <CreateReplicationGroupResult>
        <ReplicationGroup>
            <SnapshottingClusterId>my-redis-primary</SnapshottingClusterId>
            <MemberClusters>
                <ClusterId>my-redis-primary</ClusterId>
            </MemberClusters>
            <ReplicationGroupId>my-repgroup</ReplicationGroupId>
            <Status>creating</Status>
            <PendingModifiedValues />
            <Description>My replication group</Description>
        </ReplicationGroup>
    </CreateReplicationGroupResult>
    <ResponseMetadata>
        <RequestId>f3b7b32d-b9d2-11e3-8a16-7978bb24ffdf</RequestId>
    </ResponseMetadata>
</CreateReplicationGroupResponse>
```

CreateSnapshot

The *CreateSnapshot* action creates a copy of an entire cache cluster at a specific moment in time.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

CacheClusterId
>   The identifier of an existing cache cluster. The snapshot will be created from this cache cluster.
>   Type: String
>   Required: Yes

SnapshotName
>   A name for the snapshot being created.
>   Type: String
>   Required: Yes

Response Elements

The following element is returned by the service.

Snapshot
>   Represents a copy of an entire cache cluster as of the time when the snapshot was taken.
>   Type: Snapshot (p. 147) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

SnapshotAlreadyExistsFault
>   You already have a snapshot with the given name.
>   HTTP Status Code: 400

SnapshotFeatureNotSupportedFault
>   You attempted one of the following actions:

>   • Creating a snapshot of a Redis cache cluster running on a *cache.t1.micro* cache node.

>   • Creating a snapshot of a cache cluster that is running Memcached rather than Redis.
>   Neither of these are supported by ElastiCache.
>   HTTP Status Code: 400

SnapshotQuotaExceededFault

    The request cannot be processed because it would exceed the maximum number of snapshots.

    HTTP Status Code: 400

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=CreateSnapshot
    &CacheClusterId=my-redis-primary
    &SnapshotName=my-manual-snapshot
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<CreateSnapshotResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <CreateSnapshotResult>
        <Snapshot>
            <CacheClusterId>my-redis-primary</CacheClusterId>
            <Port>6379</Port>
            <CacheNodeType>cache.m1.small</CacheNodeType>
            <CacheParameterGroupName>default.redis2.8</CacheParameterGroupName>
            <Engine>redis</Engine>
            <PreferredAvailabilityZone>us-west-2c</PreferredAvailabilityZone>
            <CacheClusterCreateTime>2015-02-02T18:46:57.972Z</
CacheClusterCreateTime>
            <EngineVersion>2.8.6</EngineVersion>
            <SnapshotSource>manual</SnapshotSource>
            <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
            <PreferredMaintenanceWindow>wed:09:00-wed:10:00</
PreferredMaintenanceWindow>
            <SnapshotName>my-manual-snapshot</SnapshotName>
            <SnapshotRetentionLimit>5</SnapshotRetentionLimit>
            <NodeSnapshots>
                <NodeSnapshot>
                    <CacheNodeCreateTime>2015-02-02T18:46:57.972Z</
CacheNodeCreateTime>
                    <CacheNodeId>0001</CacheNodeId>
                    <CacheSize />
                </NodeSnapshot>
            </NodeSnapshots>
            <SnapshotStatus>creating</SnapshotStatus>
            <NumCacheNodes>1</NumCacheNodes>
            <SnapshotWindow>07:30-08:30</SnapshotWindow>
        </Snapshot>
    </CreateSnapshotResult>
    <ResponseMetadata>
        <RequestId>faf5a232-b9ce-11e3-8a16-7978bb24ffdf</RequestId>
    </ResponseMetadata>
```

```
</CreateSnapshotResponse>
```

DeleteCacheCluster

The *DeleteCacheCluster* action 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 action, Amazon ElastiCache immediately begins deleting the cache cluster; you cannot cancel or revert this action.

This API cannot be used to delete a cache cluster that is the last read replica of a replication group that has Multi-AZ mode enabled.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

CacheClusterId

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

Type: String

Required: Yes

FinalSnapshotIdentifier

The user-supplied name of a final cache cluster snapshot. This is the unique name that identifies the snapshot. ElastiCache creates the snapshot, and then deletes the cache cluster immediately afterward.

Type: String

Required: No

Response Elements

The following element is returned by the service.

CacheCluster

Contains all of the attributes of a specific cache cluster.

Type: CacheCluster (p. 114) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

SnapshotAlreadyExistsFault

You already have a snapshot with the given name.

HTTP Status Code: 400

SnapshotFeatureNotSupportedFault

You attempted one of the following actions:

- Creating a snapshot of a Redis cache cluster running on a *cache.t1.micro* cache node.

- Creating a snapshot of a cache cluster that is running Memcached rather than Redis.
  Neither of these are supported by ElastiCache.

HTTP Status Code: 400

SnapshotQuotaExceededFault

The request cannot be processed because it would exceed the maximum number of snapshots.

HTTP Status Code: 400

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DeleteCacheCluster
    &CacheClusterId=simcoprod43
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DeleteCacheClusterResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <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-west-2b</PreferredAvailabilityZone>
            <CacheClusterCreateTime>2015-02-02T02:18:26.497Z</
CacheClusterCreateTime>
            <EngineVersion>1.4.5</EngineVersion>
            <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
            <PreferredMaintenanceWindow>mon:05:00-mon:06:00</
PreferredMaintenanceWindow>
            <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

The *DeleteCacheParameterGroup* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DeleteCacheParameterGroup
    &CacheParameterGroupName=myparametergroup
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DeleteCacheParameterGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
```

```
  <ResponseMetadata>
    <RequestId>d0a417cb-575b-11e0-8869-cd22b4f9d96f</RequestId>
  </ResponseMetadata>
</DeleteCacheParameterGroupResponse>
```

DeleteCacheSecurityGroup

The *DeleteCacheSecurityGroup* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
?Action=DeleteCacheSecurityGroup
&CacheSecurityGroupName=mycachesecuritygroup3
&Version=2015-02-02
&SignatureVersion=4
&SignatureMethod=HmacSHA256
&Timestamp=20150202T192317Z
&X-Amz-Credential=<credential>
```

Sample Response

```
<DeleteCacheSecurityGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <ResponseMetadata>
        <RequestId>c130cfb7-3650-11e0-ae57-f96cfe56749c</RequestId>
    </ResponseMetadata>
</DeleteCacheSecurityGroupResponse>
```

DeleteCacheSubnetGroup

The *DeleteCacheSubnetGroup* action 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 parameters that are common to all actions, see Common
Parameters (p. 152).

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. 154).

CacheSubnetGroupInUse
The requested cache subnet group is currently in use.

HTTP Status Code: 400

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

HTTP Status Code: 400

Example

Sample Request

```
https://elasticache.amazonaws.com/
   ?Action=DeleteCacheSubnetGroup
   &CacheSubnetGroupName=mysubnetgroup
   &Version=2015-02-02
   &SignatureVersion=4
   &SignatureMethod=HmacSHA256
   &Timestamp=20150202T192317Z
   &X-Amz-Credential=<credential>
```

Sample Response

```
<DeleteCacheSubnetGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <ResponseMetadata>
      <RequestId>5d013245-4172-11df-8520-e7e1e602a915</RequestId>
    </ResponseMetadata>
  </DeleteCacheSubnetGroupResponse>
```

DeleteReplicationGroup

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

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

ReplicationGroupId

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

Type: String

Required: Yes

FinalSnapshotIdentifier

The name of a final node group snapshot. ElastiCache creates the snapshot from the primary node in the cluster, rather than one of the replicas; this is to ensure that it captures the freshest data. After the final snapshot is taken, the cluster is immediately deleted.

Type: String

Required: No

RetainPrimaryCluster

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

Type: Boolean

Required: No

Response Elements

The following element is returned by the service.

ReplicationGroup

Contains all of the attributes of a specific replication group.

Type: ReplicationGroup (p. 140) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

ReplicationGroupNotFoundFault

The specified replication group does not exist.

HTTP Status Code: 404

SnapshotAlreadyExistsFault

You already have a snapshot with the given name.

HTTP Status Code: 400

SnapshotFeatureNotSupportedFault

You attempted one of the following actions:

- Creating a snapshot of a Redis cache cluster running on a *cache.t1.micro* cache node.

- Creating a snapshot of a cache cluster that is running Memcached rather than Redis.

Neither of these are supported by ElastiCache.

HTTP Status Code: 400

SnapshotQuotaExceededFault

The request cannot be processed because it would exceed the maximum number of snapshots.

HTTP Status Code: 400

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
   ?Action=DeleteReplicationGroup &RetainPrimaryCluster=false
   &FinalSnapshotIdentifier=my-final-snapshot
   &ReplicationGroupId=my-repgroup
   &Version=2015-02-02
   &SignatureVersion=4
   &SignatureMethod=HmacSHA256
   &Timestamp=20150202T192317Z
   &X-Amz-Credential=<credential>
```

Sample Response

```
<DeleteReplicationGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
   <DeleteReplicationGroupResult>
      <ReplicationGroup>
         <SnapshottingClusterId>my-redis-primary</SnapshottingClusterId>
         <ReplicationGroupId>my-repgroup</ReplicationGroupId>
         <Status>deleting</Status>
         <PendingModifiedValues />
         <Description>My replication group</Description>
      </ReplicationGroup>
   </DeleteReplicationGroupResult>
   <ResponseMetadata>
      <RequestId>93eb37db-b9d7-11e3-8a16-7978bb24ffdf</RequestId>
   </ResponseMetadata>
</DeleteReplicationGroupResponse>
```

DeleteSnapshot

The *DeleteSnapshot* action deletes an existing snapshot. When you receive a successful response from this action, ElastiCache immediately begins deleting the snapshot; you cannot cancel or revert this action.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

SnapshotName

> The name of the snapshot to be deleted.
>
> Type: String
>
> Required: Yes

Response Elements

The following element is returned by the service.

Snapshot

> Represents a copy of an entire cache cluster as of the time when the snapshot was taken.
>
> Type: Snapshot (p. 147) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

InvalidParameterCombination

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

InvalidParameterValue

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

InvalidSnapshotState

> The current state of the snapshot does not allow the requested action to occur.
>
> HTTP Status Code: 400

SnapshotNotFoundFault

> The requested snapshot name does not refer to an existing snapshot.
>
> HTTP Status Code: 404

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
   ?Action=DeleteSnapshot
   &SnapshotName=my-manual-snapshot
   &Version=2015-02-02
   &SignatureVersion=4
   &SignatureMethod=HmacSHA256
```

```
&Timestamp=20150202T192317Z
&X-Amz-Credential=<credential>
```

Sample Response

```
<DeleteSnapshotResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <DeleteSnapshotResult>
        <Snapshot>
            <CacheClusterId>my-redis-primary</CacheClusterId>
            <Port>6379</Port>
            <CacheNodeType>cache.m1.small</CacheNodeType>
            <CacheParameterGroupName>default.redis2.8</CacheParameterGroupName>
            <Engine>redis</Engine>
            <PreferredAvailabilityZone>us-west-2c</PreferredAvailabilityZone>
            <CacheClusterCreateTime>2015-02-02T18:46:57.972Z</
CacheClusterCreateTime>
            <EngineVersion>2.8.6</EngineVersion>
            <SnapshotSource>manual</SnapshotSource>
            <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
            <PreferredMaintenanceWindow>wed:09:00-wed:10:00</
PreferredMaintenanceWindow>
            <SnapshotName>my-manual-snapshot</SnapshotName>
            <SnapshotRetentionLimit>5</SnapshotRetentionLimit>
            <NodeSnapshots>
                <NodeSnapshot>
                    <SnapshotCreateTime>2015-02-02T18:54:12Z</SnapshotCreateTime>
                    <CacheNodeCreateTime>2015-02-02T18:46:57.972Z</
CacheNodeCreateTime>
                    <CacheNodeId>0001</CacheNodeId>
                    <CacheSize>3 MB</CacheSize>
                </NodeSnapshot>
            </NodeSnapshots>
            <SnapshotStatus>deleting</SnapshotStatus>
            <NumCacheNodes>1</NumCacheNodes>
            <SnapshotWindow>07:30-08:30</SnapshotWindow>
        </Snapshot>
    </DeleteSnapshotResult>
    <ResponseMetadata>
        <RequestId>694d7017-b9d2-11e3-8a16-7978bb24ffdf</RequestId>
    </ResponseMetadata>
</DeleteSnapshotResponse>
```

DescribeCacheClusters

The *DescribeCacheClusters* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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 action. 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 by the service.

CacheClusters.CacheCluster.N
> A list of cache clusters. Each item in the list contains detailed information about one cache cluster.
>
> Type: array of CacheCluster (p. 114) objects

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. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DescribeCacheClusters
    &MaxRecords=100
    &ShowCacheNodeInfo=false
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeCacheClustersResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <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-west-2c</PreferredAvailabilityZone>
        <CacheClusterCreateTime>2015-02-02T01:21:46.607Z</
CacheClusterCreateTime>
        <EngineVersion>1.4.5</EngineVersion>
        <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
        <PreferredMaintenanceWindow>fri:08:30-fri:09:30</
PreferredMaintenanceWindow>
        <CacheSecurityGroups>
          <CacheSecurityGroup>
            <CacheSecurityGroupName>default</CacheSecurityGroupName>
            <Status>active</Status>
          </CacheSecurityGroup>
        </CacheSecurityGroups>
        <NotificationConfiguration>
          <TopicStatus>active</TopicStatus>
          <TopicArn>arn:aws:sns:us-
west-2:123456789012:ElastiCacheNotifications</TopicArn>
        </NotificationConfiguration>
        <NumCacheNodes>6</NumCacheNodes>
      </CacheCluster>
    </CacheClusters>
  </DescribeCacheClustersResult>
  <ResponseMetadata>
    <RequestId>f270d58f-b7fb-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</DescribeCacheClustersResponse>
```

DescribeCacheEngineVersions

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

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 action. 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 by the service.

CacheEngineVersions.CacheEngineVersion.N

> A list of cache engine version details. Each element in the list contains detailed information about one cache engine version.
>
> Type: array of CacheEngineVersion (p. 117) objects

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. 154).

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
   ?Action=DescribeCacheEngineVersions
   &MaxRecords=100
   &Version=2015-02-02
   &SignatureVersion=4
   &SignatureMethod=HmacSHA256
   &Timestamp=20150202T192317Z
   &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeCacheEngineVersionsResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <DescribeCacheEngineVersionsResult>
    <CacheEngineVersions>
      <CacheEngineVersion>
        <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
        <Engine>memcached</Engine>
        <CacheEngineVersionDescription>memcached version 1.4.14</
CacheEngineVersionDescription>
        <CacheEngineDescription>memcached</CacheEngineDescription>
        <EngineVersion>1.4.14</EngineVersion>
      </CacheEngineVersion>
      <CacheEngineVersion>
        <CacheParameterGroupFamily>memcached1.4</CacheParameterGroupFamily>
        <Engine>memcached</Engine>
        <CacheEngineVersionDescription>memcached version 1.4.5</
CacheEngineVersionDescription>
        <CacheEngineDescription>memcached</CacheEngineDescription>
        <EngineVersion>1.4.5</EngineVersion>
      </CacheEngineVersion>
    </CacheEngineVersions>
  </DescribeCacheEngineVersionsResult>
  <ResponseMetadata>
    <RequestId>a6ac9ad2-f8a4-11e1-a4d1-a345e5370093</RequestId>
  </ResponseMetadata>
</DescribeCacheEngineVersionsResponse>
```

DescribeCacheParameterGroups

The *DescribeCacheParameterGroups* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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 action. 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 by the service.

CacheParameterGroups.CacheParameterGroup.N

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

Type: array of CacheParameterGroup (p. 123) objects

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. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DescribeCacheParameterGroups
    &MaxRecords=100
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeCacheParameterGroupsResponse xmlns="http://
elasticache.amazonaws.com/doc/2015-02-02/">
  <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

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

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 action. 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 by the service.

CacheNodeTypeSpecificParameters.CacheNodeTypeSpecificParameter.N

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

Type: array of CacheNodeTypeSpecificParameter (p. 120) objects

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

Parameters.Parameter.N

A list of Parameter (p. 136) instances.

Type: array of Parameter (p. 136) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

Example

Some of the output has been omitted for brevity.

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
   ?Action=DescribeCacheParameters
   &CacheParameterGroupName=default.memcached1.4
   &MaxRecords=100
   &Version=2015-02-02
   &SignatureVersion=4
   &SignatureMethod=HmacSHA256
   &Timestamp=20150202T192317Z
   &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeCacheParametersResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <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

The *DescribeCacheSecurityGroups* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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 action. 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 by the service.

CacheSecurityGroups.CacheSecurityGroup.N

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

Type: array of CacheSecurityGroup (p. 125) objects

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. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DescribeCacheSecurityGroups
    &MaxRecords=100
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeCacheSecurityGroupsResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <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

The *DescribeCacheSubnetGroups* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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 action. 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 by the service.

CacheSubnetGroups.CacheSubnetGroup.N

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

Type: array of CacheSubnetGroup (p. 127) objects

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. 154).

CacheSubnetGroupNotFoundFault

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

HTTP Status Code: 400

Example

Some of the output has been omitted for brevity.

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=DescribeCacheSubnetGroups
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeCacheSubnetGroupsResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
        <DescribeCacheSubnetGroupsResult>
            <CacheSubnetGroups>
                <CacheSubnetGroup>
                    <VpcId>990524496922</VpcId>
                    <CacheSubnetGroupDescription>description</
CacheSubnetGroupDescription>
                    <CacheSubnetGroupName>subnet_grp1</CacheSubnetGroupName>
                    <Subnets>
                        <Subnet>
                            <SubnetStatus>Active</SubnetStatus>
                            <SubnetIdentifier>subnet-7c5b4115</
SubnetIdentifier>
                            <SubnetAvailabilityZone>
                                <Name>us-west-2c</Name>
                            </SubnetAvailabilityZone>
                        </Subnet>
                        <Subnet>
                            <SubnetStatus>Active</SubnetStatus>
                            <SubnetIdentifier>subnet-7b5b4112</
SubnetIdentifier>
                            <SubnetAvailabilityZone>
                                <Name>us-west-2b</Name>
                            </SubnetAvailabilityZone>
                        </Subnet>
                        <Subnet>
                            <SubnetStatus>Active</SubnetStatus>
                            <SubnetIdentifier>subnet-3ea6bd57</
SubnetIdentifier>
                            <SubnetAvailabilityZone>
                                <Name>us-west-2c</Name>
                            </SubnetAvailabilityZone>
                        </Subnet>
                    </Subnets>
                </CacheSubnetGroup>

 (...output omitted...)

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

DescribeEngineDefaultParameters

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

CacheParameterGroupFamily

The name of the cache parameter group family. Valid values are: `memcached1.4` | `redis2.6` | `redis2.8`

Type: String

Required: Yes

Marker

An optional marker returned from a prior request. Use this marker for pagination of results from this action. 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 element is returned by the service.

EngineDefaults

Represents the output of a *DescribeEngineDefaultParameters* action.

Type: EngineDefaults (p. 130) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

Example

Some of the output has been omitted for brevity.

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DescribeEngineDefaultParameters
    &CacheParameterGroupFamily=memcached1.4
    &MaxRecords=100
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeEngineDefaultParametersResponse xmlns="http://
elasticache.amazonaws.com/doc/2015-02-02/">
  <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

The *DescribeEvents* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

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: Timestamp

Required: No

Marker

An optional marker returned from a prior request. Use this marker for pagination of results from this action. 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: Timestamp

Required: No

Response Elements

The following elements are returned by the service.

Events.Event.N

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

Type: array of Event (p. 131) objects

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. 154).

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

Example

Some of the output has been omitted for brevity.

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DescribeEvents
    &MaxRecords=100
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeEventsResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <DescribeEventsResult>
        <Events>
            <Event>
                <Message>Cache cluster created</Message>
                <SourceType>cache-cluster</SourceType>
                <Date>2015-02-02T18:22:18.202Z</Date>
                <SourceIdentifier>my-redis-primary</SourceIdentifier>
            </Event>

 (...output omitted...)
```

```
            </Events>
        </DescribeEventsResult>
        <ResponseMetadata>
            <RequestId>e21c81b4-b9cd-11e3-8a16-7978bb24ffdf</RequestId>
        </ResponseMetadata>
</DescribeEventsResponse>
```

DescribeReplicationGroups

The *DescribeReplicationGroups* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

Marker

An optional marker returned from a prior request. Use this marker for pagination of results from this action. 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 by the service.

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

ReplicationGroups.ReplicationGroup.N

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

Type: array of ReplicationGroup (p. 140) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

InvalidParameterCombination

Two or more incompatible parameters were specified.

HTTP Status Code: 400

InvalidParameterValue

The value for a parameter is invalid.

HTTP Status Code: 400

ReplicationGroupNotFoundFault

The specified replication group does not exist.

HTTP Status Code: 404

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DescribeReplicationGroups
    &MaxRecords=100
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeReplicationGroupsResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <DescribeReplicationGroupsResult>
        <ReplicationGroups>
            <ReplicationGroup>
                <SnapshottingClusterId>my-redis-primary</SnapshottingClusterId>
                <MemberClusters>
                    <ClusterId>my-redis-primary</ClusterId>
                </MemberClusters>
                <NodeGroups>
                    <NodeGroup>
                        <NodeGroupId>0001</NodeGroupId>
                        <PrimaryEndpoint>
                            <Port>6379</Port>
                            <Address>my-repgroup.q68zge.ng.0001.use1devo.elmo-
dev.amazonaws.com</Address>
                        </PrimaryEndpoint>
                        <Status>available</Status>
                        <NodeGroupMembers>
                            <NodeGroupMember>
                                <CacheClusterId>my-redis-primary</CacheClusterId>
                                <ReadEndpoint>
                                    <Port>6379</Port>
                                    <Address>my-redis-
primary.q68zge.0001.use1devo.elmo-dev.amazonaws.com</Address>
                                </ReadEndpoint>
                                <PreferredAvailabilityZone>us-west-2c</
PreferredAvailabilityZone>
                                <CacheNodeId>0001</CacheNodeId>
                                <CurrentRole>primary</CurrentRole>
                            </NodeGroupMember>
                        </NodeGroupMembers>
                    </NodeGroup>
                </NodeGroups>
                <ReplicationGroupId>my-repgroup</ReplicationGroupId>
                <Status>available</Status>
```

```
            <PendingModifiedValues />
            <Description>My replication group</Description>
        </ReplicationGroup>
      </ReplicationGroups>
  </DescribeReplicationGroupsResult>
  <ResponseMetadata>
      <RequestId>144745b0-b9d3-11e3-8a16-7978bb24ffdf</RequestId>
  </ResponseMetadata>
</DescribeReplicationGroupsResponse>
```

DescribeReservedCacheNodes

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

CacheNodeType

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

Valid node types are as follows:

- General purpose:
  - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`, `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`
  - Previous generation: `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`, `cache.m1.large`, `cache.m1.xlarge`
- Compute optimized: `cache.c1.xlarge`
- Memory optimized:
  - Current generation: `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`, `cache.r3.4xlarge`, `cache.r3.8xlarge`
  - Previous generation: `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).
- Redis backup/restore is not supported for t2 instances.
- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product Features and Details and Cache Node Type-Specific Parameters for Memcached or Cache Node Type-Specific Parameters for Redis.

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 action. 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 by the service.

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

ReservedCacheNodes.ReservedCacheNode.N

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

Type: array of ReservedCacheNode (p. 142) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

Example

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=DescribeReservedCacheNodes
    &ReservedCacheNodeId=customerSpecifiedID
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeReservedCacheNodesResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <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>
  </DescribeReservedCacheNodesResult>
  <ResponseMetadata>
    <RequestId>c695119b-2961-11e1-bd06-6fe008f046c3</RequestId>
  </ResponseMetadata>
</DescribeReservedCacheNodesResponse>
```

DescribeReservedCacheNodesOfferings

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

Request Parameters

For information about the parameters that are common to all actions, see Common
Parameters (p. 152).

CacheNodeType

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

Valid node types are as follows:

- General purpose:
    - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`,
      `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`
    - Previous generation: `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`,
      `cache.m1.large`, `cache.m1.xlarge`
- Compute optimized: `cache.c1.xlarge`
- Memory optimized:
    - Current generation: `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`,
      `cache.r3.4xlarge`, `cache.r3.8xlarge`
    - Previous generation: `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).
- Redis backup/restore is not supported for t2 instances.
- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product
Features and Details and Cache Node Type-Specific Parameters for Memcached or Cache Node
Type-Specific Parameters for Redis.

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 action. 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 by the service.

Marker

Provides an identifier to allow retrieval of paginated results.

Type: String

ReservedCacheNodesOfferings.ReservedCacheNodesOffering.N

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

Type: array of ReservedCacheNodesOffering (p. 144) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

Example

Sample Request

```
https://elasticache.amazonaws.com/
```

```
?Action=DescribeReservedCacheNodesOfferings
&ReservedCacheNodesOfferingId=438012d3-4052-4cc7-b2e3-8d3372e0e706
&Version=2015-02-02
&SignatureVersion=4
&SignatureMethod=HmacSHA256
&Timestamp=20150202T192317Z
&X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeReservedCacheNodesOfferingsResponse xmlns="http://
elasticache.amazonaws.com/doc/2015-02-02/">
  <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</
ReservedCacheNodesOfferingId>
        <CacheNodeType>cache.m1.small</CacheNodeType>
      </ReservedCacheNodesOffering>
    </ReservedCacheNodesOfferings>
  </DescribeReservedCacheNodesOfferingsResult>
  <ResponseMetadata>
    <RequestId>521b420a-2961-11e1-bd06-6fe008f046c3</RequestId>
  </ResponseMetadata>
</DescribeReservedCacheNodesOfferingsResponse>
```

DescribeSnapshots

The *DescribeSnapshots* action returns information about cache cluster snapshots. By default, *DescribeSnapshots* lists all of your snapshots; it can optionally describe a single snapshot, or just the snapshots associated with a particular cache cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

CacheClusterId

A user-supplied cluster identifier. If this parameter is specified, only snapshots associated with that specific cache cluster will be described.

Type: String

Required: No

Marker

An optional marker returned from a prior request. Use this marker for pagination of results from this action. 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: 50

Constraints: minimum 20; maximum 50.

Type: Integer

Required: No

SnapshotName

A user-supplied name of the snapshot. If this parameter is specified, only this snapshot will be described.

Type: String

Required: No

SnapshotSource

If set to `system`, the output shows snapshots that were automatically created by ElastiCache. If set to `user` the output shows snapshots that were manually created. If omitted, the output shows both automatically and manually created snapshots.

Type: String

Required: No

Response Elements

The following elements are returned by the service.

Marker

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

Type: String

Snapshots.Snapshot.N

A list of snapshots. Each item in the list contains detailed information about one snapshot.

Type: array of Snapshot (p. 147) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

SnapshotNotFoundFault
>   The requested snapshot name does not refer to an existing snapshot.
>
>   HTTP Status Code: 404

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=DescribeSnapshots
    &MaxRecords=50
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<DescribeSnapshotsResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <DescribeSnapshotsResult>
        <Snapshots>
            <Snapshot>
                <CacheClusterId>my-redis-primary</CacheClusterId>
                <Port>6379</Port>
                <CacheNodeType>cache.m1.small</CacheNodeType>
                <CacheParameterGroupName>default.redis2.8</
CacheParameterGroupName>
                <Engine>redis</Engine>
                <PreferredAvailabilityZone>us-west-2c</
PreferredAvailabilityZone>
                <CacheClusterCreateTime>2015-02-02T18:46:57.972Z</
CacheClusterCreateTime>
                <EngineVersion>2.8.6</EngineVersion>
                <SnapshotSource>manual</SnapshotSource>
                <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
```

```
            <PreferredMaintenanceWindow>wed:09:00-wed:10:00</
PreferredMaintenanceWindow>
            <SnapshotName>my-manual-snapshot</SnapshotName>
            <SnapshotRetentionLimit>5</SnapshotRetentionLimit>
            <NodeSnapshots>
               <NodeSnapshot>
                  <SnapshotCreateTime>2015-02-02T18:54:12Z</
SnapshotCreateTime>
                  <CacheNodeCreateTime>2015-02-02T18:46:57.972Z</
CacheNodeCreateTime>
                  <CacheNodeId>0001</CacheNodeId>
                  <CacheSize>3 MB</CacheSize>
               </NodeSnapshot>
            </NodeSnapshots>
            <SnapshotStatus>creating</SnapshotStatus>
            <NumCacheNodes>1</NumCacheNodes>
            <SnapshotWindow>07:30-08:30</SnapshotWindow>
         </Snapshot>
      </Snapshots>
   </DescribeSnapshotsResult>
   <ResponseMetadata>
      <RequestId>51b0b25e-b9cf-11e3-8a16-7978bb24ffdf</RequestId>
   </ResponseMetadata>
</DescribeSnapshotsResponse>
```

ListAllowedNodeTypeModifications

The `ListAllowedNodeTypeModifications` action lists all available node types that you can scale your Redis cluster's or replication group's current node type up to.

When you use the `ModifyCacheCluster` or `ModifyReplicationGroup` APIs to scale up your cluster or replication group, the value of the *CacheNodeType* parameter must be one of the node types returned by this action.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

CacheClusterId

The name of the cache cluster you want to scale up to a larger node instanced type. ElastiCache uses the cluster id to identify the current node type of this cluster and from that to create a list of node types you can scale up to.

> **Important**
> You must provide a value for either the *CacheClusterId* or the *ReplicationGroupId*.

Type: String

Required: No

ReplicationGroupId

The name of the replication group want to scale up to a larger node type. ElastiCache uses the replication group id to identify the current node type being used by this replication group, and from that to create a list of node types you can scale up to.

> **Important**
> You must provide a value for either the *CacheClusterId* or the *ReplicationGroupId*.

Type: String

Required: No

Response Elements

The following element is returned by the service.

ScaleUpModifications.member.N

A string list, each element of which specifies a cache node type which you can use to scale your cache cluster or replication group.

When scaling up a Redis cluster or replication group using `ModifyCacheCluster` or `ModifyReplicationGroup`, use a value from this list for the *CacheNodeType* parameter.

Type: array of Strings

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

ReplicationGroupNotFoundFault

The specified replication group does not exist.

HTTP Status Code: 404

Examples

Example

The following example request a list of node types you can use to scale `myCluster` up.

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
   ?Action=ListAllowedNodeTypeModifications
   &CacheClusterId=mycachecluster
   &SignatureVersion=4
   &SignatureMethod=HmacSHA256
   &Version=2015-02-02
   &Timestamp=20150202T192317Z
   &X-Amz-Credential=<credential>
```

Example

The following example requests a list of node types you can use to scale `myReplGroup` up.

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
   ?Action=ListAllowedNodeTypeModifications
   &ReplicationGroupId=myreplgroup
   &SignatureVersion=4
   &SignatureMethod=HmacSHA256
   &Version=2015-02-02
   &Timestamp=20150202T192317Z
   &X-Amz-Credential=<credential>
```

ListTagsForResource

The *ListTagsForResource* action lists all cost allocation tags currently on the named resource. A *cost allocation tag* is a key-value pair where the key is case-sensitive and the value is optional. Cost allocation tags can be used to categorize and track your AWS costs.

You can have a maximum of 10 cost allocation tags on an ElastiCache resource. For more information, see Using Cost Allocation Tags in Amazon ElastiCache.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

ResourceName

The Amazon Resource Name (ARN) of the resource for which you want the list of tags, for example `arn:aws:elasticache:us-west-2:0123456789:cluster:myCluster` or `arn:aws:elasticache:us-west-2:0123456789:snapshot:mySnapshot`.

For more information on ARNs, go to Amazon Resource Names (ARNs) and AWS Service Namespaces.

Type: String

Required: Yes

Response Elements

The following element is returned by the service.

TagList.Tag.N

A list of cost allocation tags as key-value pairs.

Type: array of Tag (p. 151) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

CacheClusterNotFound

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

HTTP Status Code: 404

InvalidARN

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

SnapshotNotFoundFault

The requested snapshot name does not refer to an existing snapshot.

HTTP Status Code: 404

Example

Sample Request

```
https://elasticache.us-east-1.amazonaws.com/
    ?Action=ListTagsForResource
    &ResourceName=arn:aws:elasticache:us-west-2:0123456789:cluster:myCluster
```

```
&SignatureVersion=4
&SignatureMethod=HmacSHA256
&Version=2015-02-02
&Timestamp=20150202T192317Z
&X-Amz-Credential=<credential>
```

ModifyCacheCluster

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

CacheClusterId

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

Type: String

Required: Yes

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.

> **Important**
> If you perform a `ModifyCacheCluster` before a pending modification is applied, the pending modification is replaced by the newer modification.

Valid values: `true` | `false`

Default: `false`

Type: Boolean

Required: No

AutoMinorVersionUpgrade

This parameter is currently disabled.

Type: Boolean

Required: No

AZMode

Specifies whether the new nodes in this Memcached cache cluster are all created in a single Availability Zone or created across multiple Availability Zones.

Valid values: `single-az` | `cross-az`.

This option is only supported for Memcached cache clusters.

> **Note**
> You cannot specify `single-az` if the Memcached cache cluster already has cache nodes in different Availability Zones. If `cross-az` is specified, existing Memcached nodes remain in their current Availability Zone.
> Only newly created nodes will be located in different Availability Zones. For instructions on how to move existing Memcached nodes to different Availability Zones, see the **Availability Zone Considerations** section of Cache Node Considerations for Memcached.

Type: String

Valid Values: `single-az` | `cross-az`

Required: No

CacheNodeIdsToRemove.CacheNodeId.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 or pending cache nodes, whichever is greater, and the value of *NumCacheNodes* in the request.

For example: If you have 3 active cache nodes, 7 pending cache nodes, and the number of cache nodes in this `ModifyCacheCluser` call is 5, you must list 2 (7 - 5) cache node IDs to remove.

Type: array of Strings

Required: No

CacheNodeType

A valid cache node type that you want to scale this cache cluster up to.

Type: String

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.CacheSecurityGroupName.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: array of Strings

Required: No

EngineVersion

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

Important: You can upgrade to a newer engine version (see Selecting a Cache Engine and Version), but you cannot downgrade to an earlier engine version. If you want to use an earlier engine version, you must delete the existing cache cluster and create it anew with the earlier engine version.

Type: String

Required: No

NewAvailabilityZones.PreferredAvailabilityZone.N

The list of Availability Zones where the new Memcached cache nodes will be created.

This parameter is only valid when *NumCacheNodes* in the request is greater than the sum of the number of active cache nodes and the number of cache nodes pending creation (which may be zero). The number of Availability Zones supplied in this list must match the cache nodes being added in this request.

This option is only supported on Memcached clusters.

Scenarios:

- **Scenario 1:** You have 3 active nodes and wish to add 2 nodes. Specify `NumCacheNodes=5` (3 + 2) and optionally specify two Availability Zones for the two new nodes.
- **Scenario 2:** You have 3 active nodes and 2 nodes pending creation (from the scenario 1 call) and want to add 1 more node. Specify `NumCacheNodes=6` ((3 + 2) + 1) and optionally specify an Availability Zone for the new node.
- **Scenario 3:** You want to cancel all pending actions. Specify `NumCacheNodes=3` to cancel all pending actions.

The Availability Zone placement of nodes pending creation cannot be modified. If you wish to cancel any nodes pending creation, add 0 nodes by setting `NumCacheNodes` to the number of current nodes.

If `cross-az` is specified, existing Memcached nodes remain in their current Availability Zone. Only newly created nodes can be located in different Availability Zones. For guidance on how

to move existing Memcached nodes to different Availability Zones, see the **Availability Zone Considerations** section of Cache Node Considerations for Memcached.

Impact of new add/remove requests upon pending requests

- Scenario-1
  - Pending Action: Delete
  - New Request: Delete
  - Result: The new delete, pending or immediate, replaces the pending delete.
- Scenario-2
  - Pending Action: Delete
  - New Request: Create
  - Result: The new create, pending or immediate, replaces the pending delete.
- Scenario-3
  - Pending Action: Create
  - New Request: Delete
  - Result: The new delete, pending or immediate, replaces the pending create.
- Scenario-4
  - Pending Action: Create
  - New Request: Create
  - Result: The new create is added to the pending create.

> **Important**
> **Important:** If the new create request is **Apply Immediately - Yes**, all creates are performed immediately. If the new create request is **Apply Immediately - No**, all creates are pending.

Type: array of Strings

Required: No

NotificationTopicArn

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

> **Note**
> The Amazon 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 sum of the number of current cache nodes and the number of cache nodes pending creation (which may be zero), then more nodes will be added. If the value is less than the number of existing cache nodes, then nodes will be removed. If the value is equal to the number of current cache nodes, then any pending add or remove requests are canceled.

If you are removing cache nodes, you must use the `CacheNodeIdsToRemove` parameter to provide the IDs of the specific cache nodes to remove.

For clusters running Redis, this value must be 1. For clusters running Memcached, this value must be between 1 and 20.

> **Note**
> Adding or removing Memcached cache nodes can be applied immediately or as a pending action. See `ApplyImmediately`.

A pending action to modify the number of cache nodes in a cluster during its maintenance window, whether by adding or removing nodes in accordance with the scale out architecture, is not queued. The customer's latest request to add or remove nodes to the cluster overrides any previous pending actions to modify the number of cache nodes in the cluster. For example, a request to remove 2 nodes would override a previous pending action to remove 3 nodes. Similarly, a request to add 2 nodes would override a previous pending action to remove 3 nodes and vice versa. As Memcached cache nodes may now be provisioned in different Availability Zones with flexible cache node placement, a request to add nodes does not automatically override a previous pending action to add nodes. The customer can modify the previous pending action to add more nodes or explicitly cancel the pending request and retry the new request. To cancel pending actions to modify the number of cache nodes in a cluster, use the `ModifyCacheCluster` request and set *NumCacheNodes* equal to the number of cache nodes currently in the cache cluster.

Type: Integer

Required: No

PreferredMaintenanceWindow

Specifies the weekly time range during which maintenance on the cache cluster is performed. It is specified as a range in the format ddd:hh24:mi-ddd:hh24:mi (24H Clock UTC). The minimum maintenance window is a 60 minute period. Valid values for `ddd` are:

- `sun`

- `mon`

- `tue`

- `wed`

- `thu`

- `fri`

- `sat`

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

Type: String

Required: No

SecurityGroupIds.SecurityGroupId.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: array of Strings

Required: No

SnapshotRetentionLimit

The number of days for which ElastiCache will retain automatic cache cluster snapshots before deleting them. For example, if you set *SnapshotRetentionLimit* to 5, then a snapshot that was taken today will be retained for 5 days before being deleted.

> **Note**
> If the value of SnapshotRetentionLimit is set to zero (0), backups are turned off.

Type: Integer

Required: No

SnapshotWindow

The daily time range (in UTC) during which ElastiCache will begin taking a daily snapshot of your cache cluster.

Type: String

Required: No

Response Elements

The following element is returned by the service.

CacheCluster

Contains all of the attributes of a specific cache cluster.

Type: CacheCluster (p. 114) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

InsufficientCacheClusterCapacity

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

HTTP Status Code: 400

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

InvalidVPCNetworkStateFault

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=ModifyCacheCluster
    NumCacheNodes=5
    &CacheClusterId=simcoprod01
    &ApplyImmediately=true
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<ModifyCacheClusterResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <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-west-2b</PreferredAvailabilityZone>
      <CacheClusterCreateTime>2015-02-02T23:45:20.937Z</
CacheClusterCreateTime>
      <EngineVersion>1.4.5</EngineVersion>
      <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
      <PreferredMaintenanceWindow>fri:04:30-fri:05:30</
PreferredMaintenanceWindow>
      <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

The *ModifyCacheParameterGroup* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

CacheParameterGroupName

The name of the cache parameter group to modify.

Type: String

Required: Yes

ParameterNameValues.ParameterNameValue.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: array of ParameterNameValue (p. 137) objects

Required: Yes

Response Elements

The following element is returned by the service.

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. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=ModifyCacheParameterGroup
    &ParameterNameValues.member.1.ParameterName=chunk_size_growth_factor
    &ParameterNameValues.member.1.ParameterValue=1.02
    &CacheParameterGroupName=mycacheparametergroup
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<ModifyCacheParameterGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
  <ModifyCacheParameterGroupResult>
    <CacheParameterGroupName>mycacheparametergroup</CacheParameterGroupName>
  </ModifyCacheParameterGroupResult>
  <ResponseMetadata>
    <RequestId>fcedeef2-b7ff-11e0-9326-b7275b9d4a6c</RequestId>
  </ResponseMetadata>
</ModifyCacheParameterGroupResponse>
```

ModifyCacheSubnetGroup

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

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

CacheSubnetGroupDescription

A description for the cache subnet group.

Type: String

Required: No

SubnetIds.SubnetIdentifier.N

The EC2 subnet IDs for the cache subnet group.

Type: array of Strings

Required: No

Response Elements

The following element is returned by the service.

CacheSubnetGroup

Represents the output of one of the following actions:

- *CreateCacheSubnetGroup*
- *ModifyCacheSubnetGroup*

Type: CacheSubnetGroup (p. 127) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

CacheSubnetGroupNotFoundFault

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

HTTP Status Code: 400

CacheSubnetQuotaExceededFault

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

Example

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=ModifyCacheSubnetGroup
    &CacheSubnetGroupName=myCachesubnetgroup
    &CacheSubnetGroupDescription=My%20modified%20CacheSubnetGroup
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<ModifyCacheSubnetGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <ModifyCacheSubnetGroupResult>
            <CacheSubnetGroup>
                <VpcId>990524496922</VpcId>
                <CacheSubnetGroupDescription>My modified CacheSubnetGroup</
CacheSubnetGroupDescription>
                <CacheSubnetGroupName>myCachesubnetgroup</
CacheSubnetGroupName>
                    <Subnets>
                        <Subnet>
                            <SubnetStatus>Active</SubnetStatus>
                            <SubnetIdentifier>subnet-7c5b4115</SubnetIdentifier>
                            <SubnetAvailabilityZone>
                                <Name>us-west-2c</Name>
                            </SubnetAvailabilityZone>
                        </Subnet>
                        <Subnet>
                            <SubnetStatus>Active</SubnetStatus>
                            <SubnetIdentifier>subnet-7b5b4112</SubnetIdentifier>
                            <SubnetAvailabilityZone>
                                <Name>us-west-2b</Name>
                            </SubnetAvailabilityZone>
                        </Subnet>
                        <Subnet>
                            <SubnetStatus>Active</SubnetStatus>
                            <SubnetIdentifier>subnet-3ea6bd57</SubnetIdentifier>
                            <SubnetAvailabilityZone>
                                <Name>us-west-2c</Name>
                            </SubnetAvailabilityZone>
                        </Subnet>
                    </Subnets>
            </CacheSubnetGroup>
        </ModifyCacheSubnetGroupResult>
        <ResponseMetadata>
            <RequestId>ed662948-a57b-11df-9e38-7ffab86c801f</RequestId>
        </ResponseMetadata>
    </ModifyCacheSubnetGroupResponse>
```

ModifyReplicationGroup

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

ReplicationGroupId

The identifier of the replication group to modify.

Type: String

Required: Yes

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

AutomaticFailoverEnabled

Whether a read replica will be automatically promoted to read/write primary if the existing primary encounters a failure.

Valid values: `true` | `false`

> **Note**
> ElastiCache Multi-AZ replication groups are not supported on:
> - Redis versions earlier than 2.8.6.
> - T1 and T2 cache node types.

Type: Boolean

Required: No

AutoMinorVersionUpgrade

This parameter is currently disabled.

Type: Boolean

Required: No

CacheNodeType

A valid cache node type that you want to scale this replication group to.

Type: String

Required: No

CacheParameterGroupName

The name of the cache parameter group to apply to all of the clusters 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.CacheSecurityGroupName.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 group 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: array of Strings

Required: No

EngineVersion

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

Important: You can upgrade to a newer engine version (see Selecting a Cache Engine and Version), but you cannot downgrade to an earlier engine version. If you want to use an earlier engine version, you must delete the existing replication group and create it anew with the earlier engine version.

Type: String

Required: No

NotificationTopicArn

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

> **Note**
>
> The Amazon 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

Specifies the weekly time range during which maintenance on the cache cluster is performed. It is specified as a range in the format ddd:hh24:mi-ddd:hh24:mi (24H Clock UTC). The minimum maintenance window is a 60 minute period. Valid values for `ddd` are:

- `sun`
- `mon`
- `tue`
- `wed`
- `thu`
- `fri`
- `sat`

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

Type: String

Required: No

PrimaryClusterId

If this parameter is specified, ElastiCache will promote the specified cluster in the specified replication group 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

SecurityGroupIds.SecurityGroupId.N

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

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

Type: array of Strings

Required: No

SnapshotRetentionLimit

The number of days for which ElastiCache will retain automatic node group snapshots before deleting them. For example, if you set *SnapshotRetentionLimit* to 5, then a snapshot that was taken today will be retained for 5 days before being deleted.

Important If the value of SnapshotRetentionLimit is set to zero (0), backups are turned off.

Type: Integer

Required: No

SnapshottingClusterId

The cache cluster ID that will be used as the daily snapshot source for the replication group.

Type: String

Required: No

SnapshotWindow

The daily time range (in UTC) during which ElastiCache will begin taking a daily snapshot of the node group specified by *SnapshottingClusterId*.

Example: `05:00-09:00`

If you do not specify this parameter, then ElastiCache will automatically choose an appropriate time range.

Type: String

Required: No

Response Elements

The following element is returned by the service.

ReplicationGroup

Contains all of the attributes of a specific replication group.

Type: ReplicationGroup (p. 140) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

InsufficientCacheClusterCapacity

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

HTTP Status Code: 400

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

InvalidVPCNetworkStateFault

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

ReplicationGroupNotFoundFault

The specified replication group does not exist.

HTTP Status Code: 404

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=ModifyReplicationGroup
    &ApplyImmediately=false
    &ReplicationGroupId=my-repgroup
    &PrimaryClusterId=my-replica-1
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<ModifyReplicationGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <ModifyReplicationGroupResult>
        <ReplicationGroup>
            <SnapshottingClusterId>my-redis-primary</SnapshottingClusterId>
            <MemberClusters>
```

```
            <ClusterId>my-redis-primary</ClusterId>
            <ClusterId>my-replica-1</ClusterId>
        </MemberClusters>
        <NodeGroups>
            <NodeGroup>
                <NodeGroupId>0001</NodeGroupId>
                <PrimaryEndpoint>
                    <Port>6379</Port>
                    <Address>my-repgroup.q68zge.ng.0001.use1devo.elmo-
dev.amazonaws.com</Address>
                </PrimaryEndpoint>
                <Status>available</Status>
                <NodeGroupMembers>
                    <NodeGroupMember>
                        <CacheClusterId>my-redis-primary</CacheClusterId>
                        <ReadEndpoint>
                            <Port>6379</Port>
                            <Address>my-redis-primary.q68zge.0001.use1devo.elmo-
dev.amazonaws.com</Address>
                        </ReadEndpoint>
                        <PreferredAvailabilityZone>us-west-2c</
PreferredAvailabilityZone>
                        <CacheNodeId>0001</CacheNodeId>
                        <CurrentRole>primary</CurrentRole>
                    </NodeGroupMember>
                    <NodeGroupMember>
                        <CacheClusterId>my-replica-1</CacheClusterId>
                        <ReadEndpoint>
                            <Port>6379</Port>
                            <Address>my-replica-1.q68zge.0001.use1devo.elmo-
dev.amazonaws.com</Address>
                        </ReadEndpoint>
                        <PreferredAvailabilityZone>us-west-2b</
PreferredAvailabilityZone>
                        <CacheNodeId>0001</CacheNodeId>
                        <CurrentRole>replica</CurrentRole>
                    </NodeGroupMember>
                </NodeGroupMembers>
            </NodeGroup>
        </NodeGroups>
        <ReplicationGroupId>my-repgroup</ReplicationGroupId>
        <Status>available</Status>
        <PendingModifiedValues>
            <PrimaryClusterId>my-replica-1</PrimaryClusterId>
        </PendingModifiedValues>
        <Description>My replication group</Description>
    </ReplicationGroup>
  </ModifyReplicationGroupResult>
  <ResponseMetadata>
    <RequestId>6fd0aad6-b9d7-11e3-8a16-7978bb24ffdf</RequestId>
  </ResponseMetadata>
</ModifyReplicationGroupResponse>
```

PurchaseReservedCacheNodesOffering

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

ReservedCacheNodesOfferingId

The ID of the reserved cache node offering to purchase.

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

Type: String

Required: Yes

CacheNodeCount

The number of cache node instances to reserve.

Default: `1`

Type: Integer

Required: No

ReservedCacheNodeId

A customer-specified identifier to track this reservation.

> **Note**
> The Reserved Cache Node ID is an unique customer-specified identifier to track this reservation. If this parameter is not specified, ElastiCache automatically generates an identifier for the reservation.

Example: myreservationID

Type: String

Required: No

Response Elements

The following element is returned by the service.

ReservedCacheNode

Represents the output of a *PurchaseReservedCacheNodesOffering* action.

Type: ReservedCacheNode (p. 142) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

You already have 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

Example

Sample Request

```
https://elasticache.amazonaws.com/
    ?Action=PurchaseReservedCacheNodesOffering
    &ReservedCacheNodeId=myreservationID
    &ReservedCacheNodesOfferingId=438012d3-4052-4cc7-b2e3-8d3372e0e706
    &CacheNodeCount=1
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<PurchaseReservedCacheNodesOfferingResponse xmlns="http://
elasticache.amazonaws.com/doc/2015-02-02/">
  <PurchaseReservedCacheNodesOfferingResult>
    <ReservedCacheNode>
      <OfferingType>Medium Utilization</OfferingType>
      <RecurringCharges/>
      <ProductDescription>memcached</ProductDescription>
      <ReservedCacheNodesOfferingId> 438012d3-4052-4cc7-b2e3-8d3372e0e706</
ReservedCacheNodesOfferingId>
      <State>payment-pending</State>
      <ReservedCacheNodeId>myreservationID</ReservedCacheNodeId>
      <CacheNodeCount>10</CacheNodeCount>
      <StartTime>2015-02-02T23:24:56.577Z</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

The *RebootCacheCluster* action reboots some, or all, of the cache 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 node being rebooted) to be lost.

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

CacheClusterId
> The cache cluster identifier. This parameter is stored as a lowercase string.
> Type: String
> Required: Yes

CacheNodeIdsToReboot.CacheNodeId.N
> A list of cache 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 node IDs.
> Type: array of Strings
> Required: Yes

Response Elements

The following element is returned by the service.

CacheCluster
> Contains all of the attributes of a specific cache cluster.
> Type: CacheCluster (p. 114) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
   ?Action=RebootCacheCluster
   &CacheClusterId=mycache
   &CacheNodeIdsToReboot.member.1=0001
```

```
&CacheNodeIdsToReboot.member.2=0002
&CacheNodeIdsToReboot.member.3=0003
&Version=2015-02-02
&SignatureVersion=4
&SignatureMethod=HmacSHA256
&Timestamp=20150202T192317Z
&X-Amz-Credential=<credential>
```

Sample Response

```
<RebootCacheClusterResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <RebootCacheClusterResult>
        <CacheCluster>
            <CacheClusterStatus>rebooting cache cluster nodes</
CacheClusterStatus>
            <CacheParameterGroup>
                <CacheParameterGroupName>default.memcached1.4</
CacheParameterGroupName>
                <ParameterApplyStatus>in-sync</ParameterApplyStatus>
                <CacheNodeIdsToReboot />
            </CacheParameterGroup>
            <CacheClusterId>mycache</CacheClusterId>
            <ConfigurationEndpoint>
                <Port>11211</Port>
                <Address>mycache.q68zge.cfg.use1devo.elmo-dev.amazonaws.com</
Address>
            </ConfigurationEndpoint>
            <CacheNodeType>cache.m1.small</CacheNodeType>
            <Engine>memcached</Engine>
            <PendingModifiedValues />
            <PreferredAvailabilityZone>us-west-2b</PreferredAvailabilityZone>
            <CacheClusterCreateTime>2015-02-02T19:04:12.812Z</
CacheClusterCreateTime>
            <EngineVersion>1.4.17</EngineVersion>
            <AutoMinorVersionUpgrade>true</AutoMinorVersionUpgrade>
            <PreferredMaintenanceWindow>wed:09:00-wed:10:00</
PreferredMaintenanceWindow>
            <ClientDownloadLandingPage>https://console.aws.amazon.com/
elasticache/home#client-download:</ClientDownloadLandingPage>
            <CacheSecurityGroups>
                <CacheSecurityGroup>
                    <CacheSecurityGroupName>default</CacheSecurityGroupName>
                    <Status>active</Status>
                </CacheSecurityGroup>
            </CacheSecurityGroups>
            <NumCacheNodes>3</NumCacheNodes>
        </CacheCluster>
    </RebootCacheClusterResult>
    <ResponseMetadata>
        <RequestId>cf7e6fc4-b9d1-11e3-8a16-7978bb24ffdf</RequestId>
    </ResponseMetadata>
</RebootCacheClusterResponse>
```

RemoveTagsFromResource

The *RemoveTagsFromResource* action removes the tags identified by the `TagKeys` list from the named resource.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

ResourceName

The Amazon Resource Name (ARN) of the resource from which you want the tags removed, for example `arn:aws:elasticache:us-west-2:0123456789:cluster:myCluster` or `arn:aws:elasticache:us-west-2:0123456789:snapshot:mySnapshot`.

For more information on ARNs, go to Amazon Resource Names (ARNs) and AWS Service Namespaces.

Type: String

Required: Yes

TagKeys.member.N

A list of `TagKeys` identifying the tags you want removed from the named resource.

Type: array of Strings

Required: Yes

Response Elements

The following element is returned by the service.

TagList.Tag.N

A list of cost allocation tags as key-value pairs.

Type: array of Tag (p. 151) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

CacheClusterNotFound

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

HTTP Status Code: 404

InvalidARN

The requested Amazon Resource Name (ARN) does not refer to an existing resource.

HTTP Status Code: 400

SnapshotNotFoundFault

The requested snapshot name does not refer to an existing snapshot.

HTTP Status Code: 404

TagNotFound

The requested tag was not found on this resource.

HTTP Status Code: 404

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=RemoveTagsFromResource
    &ResourceName=arn:aws:elasticache:us-west-2:0123456789:cluster:myCluster
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &TagKeys.member.1=service
    &TagKeys.member.2=organization
    &Version=2015-02-02
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

ResetCacheParameterGroup

The *ResetCacheParameterGroup* action 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 parameters that are common to all actions, see Common Parameters (p. 152).

CacheParameterGroupName

The name of the cache parameter group to reset.

Type: String

Required: Yes

ParameterNameValues.ParameterNameValue.N

An array of parameter names to reset to their default values. If *ResetAllParameters* is *true*, do not use *ParameterNameValues*. If *ResetAllParameters* is *false*, you must specify the name of at least one parameter to reset.

Type: array of ParameterNameValue (p. 137) objects

Required: No

ResetAllParameters

If *true*, all parameters in the cache parameter group will be reset to their default values. If *false*, only the parameters listed by *ParameterNameValues* are reset to their default values.

Valid values: `true|false`

Type: Boolean

Required: No

Response Elements

The following element is returned by the service.

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. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=ResetCacheParameterGroup
    &ResetAllParameters=true
    &CacheParameterGroupName=mycacheparametergroup1
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<ResetCacheParameterGroupResponse xmlns="http://elasticache.amazonaws.com/
doc/2015-02-02/">
    <ResetCacheParameterGroupResult>
        <CacheParameterGroupName>mycacheparametergroup1</
CacheParameterGroupName>
    </ResetCacheParameterGroupResult>
    <ResponseMetadata>
        <RequestId>cb7cc855-b9d2-11e3-8a16-7978bb24ffdf</RequestId>
    </ResponseMetadata>
</ResetCacheParameterGroupResponse>
```

RevokeCacheSecurityGroupIngress

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 152).

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 element is returned by the service.

CacheSecurityGroup

Represents the output of one of the following actions:

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

Type: CacheSecurityGroup (p. 125) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 154).

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

Example

Sample Request

```
https://elasticache.us-west-2.amazonaws.com/
    ?Action=RevokeCacheSecurityGroupIngress
    &EC2SecurityGroupName=default
    &CacheSecurityGroupName=mygroup
    &EC2SecurityGroupOwnerId=1234-5678-1234
    &Version=2015-02-02
    &SignatureVersion=4
    &SignatureMethod=HmacSHA256
    &Timestamp=20150202T192317Z
    &X-Amz-Credential=<credential>
```

Sample Response

```
<RevokeCacheSecurityGroupIngressResponse xmlns="http://
elasticache.amazonaws.com/doc/2015-02-02/">
    <RevokeCacheSecurityGroupIngressResult>
        <CacheSecurityGroup>
            <EC2SecurityGroups>
                <EC2SecurityGroup>
                    <Status>revoking</Status>
                    <EC2SecurityGroupName>default</EC2SecurityGroupName>
                    <EC2SecurityGroupOwnerId>123456781234</
EC2SecurityGroupOwnerId>
                </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 a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

AvailabilityZone

Describes an Availability Zone in which the cache cluster is launched.

Contents

Note

In the following list, the required parameters are described first.

Name

The name of the Availability Zone.

Type: String

Required: No

CacheCluster

Contains all of the attributes of a specific cache cluster.

Contents

Note
In the following list, the required parameters are described first.

AutoMinorVersionUpgrade

This parameter is currently disabled.

Type: Boolean

Required: No

CacheClusterCreateTime

The date and time when the cache cluster was created.

Type: Timestamp

Required: No

CacheClusterId

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

Type: String

Required: No

CacheClusterStatus

The current state of this cache cluster, one of the following values: *available*, *creating*, *deleted*, *deleting*, *incompatible-network*, *modifying*, *rebooting cache cluster nodes*, *restore-failed*, or *snapshotting*.

Type: String

Required: No

CacheNodes.CacheNode.N

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

Type: array of CacheNode (p. 118) objects

Required: No

CacheNodeType

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

Valid node types are as follows:

- General purpose:
    - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`, `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`
    - Previous generation: `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`, `cache.m1.large`, `cache.m1.xlarge`
- Compute optimized: `cache.c1.xlarge`
- Memory optimized:
    - Current generation: `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`, `cache.r3.4xlarge`, `cache.r3.8xlarge`
    - Previous generation: `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).
- Redis backup/restore is not supported for t2 instances.
- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product Features and Details and Cache Node Type-Specific Parameters for Memcached or Cache Node Type-Specific Parameters for Redis.

Type: String

Required: No

CacheParameterGroup

The status of the cache parameter group.

Type: CacheParameterGroupStatus (p. 124) object

Required: No

CacheSecurityGroups.CacheSecurityGroup.N

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

Type: array of CacheSecurityGroupMembership (p. 126) objects

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. 129) object

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 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. 135) object

Required: No

NumCacheNodes

The number of cache nodes in the cache cluster.

For clusters running Redis, this value must be 1. For clusters running Memcached, this value must be between 1 and 20.

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. 138) object

Required: No

PreferredAvailabilityZone

The name of the Availability Zone in which the cache cluster is located or "Multiple" if the cache nodes are located in different Availability Zones.

Type: String

Required: No

PreferredMaintenanceWindow

Specifies the weekly time range during which maintenance on the cache cluster is performed. It is specified as a range in the format ddd:hh24:mi-ddd:hh24:mi (24H Clock UTC). The minimum maintenance window is a 60 minute period. Valid values for `ddd` are:

- `sun`
- `mon`
- `tue`
- `wed`
- `thu`
- `fri`
- `sat`

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

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.member.N

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

Type: array of SecurityGroupMembership (p. 146) objects

Required: No

SnapshotRetentionLimit

The number of days for which ElastiCache will retain automatic cache cluster snapshots before deleting them. For example, if you set *SnapshotRetentionLimit* to 5, then a snapshot that was taken today will be retained for 5 days before being deleted.

> **Important**
>
> If the value of SnapshotRetentionLimit is set to zero (0), backups are turned off.

Type: Integer

Required: No

SnapshotWindow

The daily time range (in UTC) during which ElastiCache will begin taking a daily snapshot of your cache cluster.

Example: `05:00-09:00`

Type: String

Required: No

CacheEngineVersion

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

Contents

Note
In the following list, the required parameters are described first.

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

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.

Valid node types are as follows:

- General purpose:
  - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`, `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`
  - Previous generation: `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`, `cache.m1.large`, `cache.m1.xlarge`
- Compute optimized: `cache.c1.xlarge`
- Memory optimized:
  - Current generation: `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`, `cache.r3.4xlarge`, `cache.r3.8xlarge`
  - Previous generation: `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).
- Redis backup/restore is not supported for t2 instances.
- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product Features and Details and either Cache Node Type-Specific Parameters for Memcached or Cache Node Type-Specific Parameters for Redis.

Contents

Note

In the following list, the required parameters are described first.

CacheNodeCreateTime

The date and time when the cache node was created.

Type: Timestamp

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

CustomerAvailabilityZone

The Availability Zone where this node was created and now resides.

Type: String

Required: No

Endpoint

The hostname for connecting to this cache node.

Type: Endpoint (p. 129) object

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

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

Note

In the following list, the required parameters are described first.

AllowedValues

The valid range of values for the parameter.

Type: String

Required: No

CacheNodeTypeSpecificValues.CacheNodeTypeSpecificValue.N

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

Type: array of CacheNodeTypeSpecificValue (p. 122) objects

Required: No

ChangeType

ChangeType indicates whether a change to the parameter will be applied immediately or requires a reboot for the change to be applied. You can force a reboot or wait until the next maintenance window's reboot. For more information, see Rebooting a Cluster.

Type: String

Valid Values: `immediate | requires-reboot`

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

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

Contents

Note

In the following list, the required parameters are described first.

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

Represents the output of a *CreateCacheParameterGroup* action.

Contents

Note

In the following list, the required parameters are described first.

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

The status of the cache parameter group.

Contents

Note

In the following list, the required parameters are described first.

CacheNodeIdsToReboot.CacheNodeId.N

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: array of Strings

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

Represents the output of one of the following actions:

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

Contents

Note
In the following list, the required parameters are described first.

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.EC2SecurityGroup.N
A list of Amazon EC2 security groups that are associated with this cache security group.

Type: array of EC2SecurityGroup (p. 128) objects

Required: No

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

Type: String

Required: No

CacheSecurityGroupMembership

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

Contents

Note

In the following list, the required parameters are described first.

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

Represents the output of one of the following actions:

- *CreateCacheSubnetGroup*
- *ModifyCacheSubnetGroup*

Contents

Note

In the following list, the required parameters are described first.

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.Subnet.N

A list of subnets associated with the cache subnet group.

Type: array of Subnet (p. 150) objects

Required: No

VpcId

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

Type: String

Required: No

EC2SecurityGroup

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

Contents

Note

In the following list, the required parameters are described first.

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

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

Contents

Note

In the following list, the required parameters are described first.

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

Represents the output of a *DescribeEngineDefaultParameters* action.

Contents

Note

In the following list, the required parameters are described first.

CacheNodeTypeSpecificParameters.CacheNodeTypeSpecificParameter.N

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

Type: array of CacheNodeTypeSpecificParameter (p. 120) objects

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.Parameter.N

Contains a list of engine default parameters.

Type: array of Parameter (p. 136) objects

Required: No

Event

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

Note

In the following list, the required parameters are described first.

Date

The date and time when the event occurred.

Type: Timestamp

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

NodeGroup

Represents a collection of cache nodes in a replication group.

Contents

Note

In the following list, the required parameters are described first.

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.NodeGroupMember.N

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

Type: array of NodeGroupMember (p. 133) objects

Required: No

PrimaryEndpoint

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

Type: Endpoint (p. 129) object

Required: No

Status

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

Type: String

Required: No

NodeGroupMember

Represents a single node within a node group.

Contents

Note

In the following list, the required parameters are described first.

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. 129) object

Required: No

NodeSnapshot

Represents an individual cache node in a snapshot of a cache cluster.

Contents

Note

In the following list, the required parameters are described first.

CacheNodeCreateTime

The date and time when the cache node was created in the source cache cluster.

Type: Timestamp

Required: No

CacheNodeId

The cache node identifier for the node in the source cache cluster.

Type: String

Required: No

CacheSize

The size of the cache on the source cache node.

Type: String

Required: No

SnapshotCreateTime

The date and time when the source node's metadata and cache data set was obtained for the snapshot.

Type: Timestamp

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).

Contents

Note

In the following list, the required parameters are described first.

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

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

Contents

Note

In the following list, the required parameters are described first.

AllowedValues

The valid range of values for the parameter.

Type: String

Required: No

ChangeType

ChangeType indicates whether a change to the parameter will be applied immediately or requires a reboot for the change to be applied. You can force a reboot or wait until the next maintenance window's reboot. For more information, see Rebooting a Cluster.

Type: String

Valid Values: `immediate | requires-reboot`

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

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

Contents

Note
In the following list, the required parameters are described first.

ParameterName
The name of the parameter.

Type: String

Required: No

ParameterValue
The value of the parameter.

Type: String

Required: No

PendingModifiedValues

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

Contents

Note

In the following list, the required parameters are described first.

CacheNodeIdsToRemove.CacheNodeId.N

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: array of Strings

Required: No

CacheNodeType

The cache node type that this cache cluster or replication group will be scaled to.

Type: String

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.

For clusters running Redis, this value must be 1. For clusters running Memcached, this value must be between 1 and 20.

Type: Integer

Required: No

RecurringCharge

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

Contents

Note

In the following list, the required parameters are described first.

RecurringChargeAmount

The monetary amount of the recurring charge.

Type: Double

Required: No

RecurringChargeFrequency

The frequency of the recurring charge.

Type: String

Required: No

ReplicationGroup

Contains all of the attributes of a specific replication group.

Contents

Note

In the following list, the required parameters are described first.

AutomaticFailover

Indicates the status of Multi-AZ for this replication group.

> **Note**
>
> ElastiCache Multi-AZ replication groups are not supported on:
> - Redis versions earlier than 2.8.6.
> - T1 and T2 cache node types.

Type: String

Valid Values: `enabled | disabled | enabling | disabling`

Required: No

Description

The description of the replication group.

Type: String

Required: No

MemberClusters.ClusterId.N

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

Type: array of Strings

Required: No

NodeGroups.NodeGroup.N

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

Type: array of NodeGroup (p. 132) objects

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. 141) object

Required: No

ReplicationGroupId

The identifier for the replication group.

Type: String

Required: No

SnapshottingClusterId

The cache cluster ID that is used as the daily snapshot source for the replication group.

Type: String

Required: No

Status

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

Type: String

Required: No

ReplicationGroupPendingModifiedValues

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

Contents

Note

In the following list, the required parameters are described first.

AutomaticFailoverStatus

Indicates the status of Multi-AZ for this replication group.

> **Note**
>
> ElastiCache Multi-AZ replication groups are not supported on:
>
> - Redis versions earlier than 2.8.6.
>
> - T1 and T2 cache node types.

Type: String

Valid Values: `enabled | disabled`

Required: No

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

Represents the output of a *PurchaseReservedCacheNodesOffering* action.

Contents

Note

In the following list, the required parameters are described first.

CacheNodeCount

The number of cache nodes that have been reserved.

Type: Integer

Required: No

CacheNodeType

The cache node type for the reserved cache nodes.

Valid node types are as follows:

- General purpose:

    - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`, `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`

    - Previous generation: `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`, `cache.m1.large`, `cache.m1.xlarge`

- Compute optimized: `cache.c1.xlarge`

- Memory optimized:

    - Current generation: `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`, `cache.r3.4xlarge`, `cache.r3.8xlarge`

    - Previous generation: `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).

- Redis backup/restore is not supported for t2 instances.

- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product Features and Details and Cache Node Type-Specific Parameters for Memcached or Cache Node Type-Specific Parameters for Redis.

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.RecurringCharge.N

The recurring price charged to run this reserved cache node.

Type: array of RecurringCharge (p. 139) objects

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: Timestamp

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

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

Contents

Note

In the following list, the required parameters are described first.

CacheNodeType

The cache node type for the reserved cache node.

Valid node types are as follows:

- General purpose:
  - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`, `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`
  - Previous generation: `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`, `cache.m1.large`, `cache.m1.xlarge`
- Compute optimized: `cache.c1.xlarge`
- Memory optimized:
  - Current generation: `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`, `cache.r3.4xlarge`, `cache.r3.8xlarge`
  - Previous generation: `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).
- Redis backup/restore is not supported for t2 instances.
- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product Features and Details and Cache Node Type-Specific Parameters for Memcached or Cache Node Type-Specific Parameters for Redis.

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.RecurringCharge.N

The recurring price charged to run this reserved cache node.

Type: array of RecurringCharge (p. 139) objects

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

SecurityGroupMembership

Represents a single cache security group and its status.

Contents

Note

In the following list, the required parameters are described first.

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

Snapshot

Represents a copy of an entire cache cluster as of the time when the snapshot was taken.

Contents

Note

In the following list, the required parameters are described first.

AutoMinorVersionUpgrade

This parameter is currently disabled.

Type: Boolean

Required: No

CacheClusterCreateTime

The date and time when the source cache cluster was created.

Type: Timestamp

Required: No

CacheClusterId

The user-supplied identifier of the source cache cluster.

Type: String

Required: No

CacheNodeType

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

Valid node types are as follows:

- General purpose:
  - Current generation: `cache.t2.micro`, `cache.t2.small`, `cache.t2.medium`, `cache.m3.medium`, `cache.m3.large`, `cache.m3.xlarge`, `cache.m3.2xlarge`
  - Previous generation: `cache.t1.micro`, `cache.m1.small`, `cache.m1.medium`, `cache.m1.large`, `cache.m1.xlarge`
- Compute optimized: `cache.c1.xlarge`
- Memory optimized:
  - Current generation: `cache.r3.large`, `cache.r3.xlarge`, `cache.r3.2xlarge`, `cache.r3.4xlarge`, `cache.r3.8xlarge`
  - Previous generation: `cache.m2.xlarge`, `cache.m2.2xlarge`, `cache.m2.4xlarge`

Notes:

- All t2 instances are created in an Amazon Virtual Private Cloud (VPC).
- Redis backup/restore is not supported for t2 instances.
- Redis Append-only files (AOF) functionality is not supported for t1 or t2 instances.

For a complete listing of cache node types and specifications, see Amazon ElastiCache Product Features and Details and Cache Node Type-Specific Parameters for Memcached or Cache Node Type-Specific Parameters for Redis.

Type: String

Required: No

CacheParameterGroupName

The cache parameter group that is associated with the source cache cluster.

Type: String

Required: No

CacheSubnetGroupName

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

Type: String

Required: No

Engine

The name of the cache engine (*memcached* or *redis*) used by the source cache cluster.

Type: String

Required: No

EngineVersion

The version of the cache engine version that is used by the source cache cluster.

Type: String

Required: No

NodeSnapshots.NodeSnapshot.N

A list of the cache nodes in the source cache cluster.

Type: array of NodeSnapshot (p. 134) objects

Required: No

NumCacheNodes

The number of cache nodes in the source cache cluster.

For clusters running Redis, this value must be 1. For clusters running Memcached, this value must be between 1 and 20.

Type: Integer

Required: No

Port

The port number used by each cache nodes in the source cache cluster.

Type: Integer

Required: No

PreferredAvailabilityZone

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

Type: String

Required: No

PreferredMaintenanceWindow

Specifies the weekly time range during which maintenance on the cache cluster is performed. It is specified as a range in the format ddd:hh24:mi-ddd:hh24:mi (24H Clock UTC). The minimum maintenance window is a 60 minute period. Valid values for `ddd` are:

- `sun`
- `mon`
- `tue`
- `wed`
- `thu`
- `fri`
- `sat`

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

Type: String

Required: No

SnapshotName

The name of a snapshot. For an automatic snapshot, the name is system-generated; for a manual snapshot, this is the user-provided name.

Type: String

Required: No

SnapshotRetentionLimit

For an automatic snapshot, the number of days for which ElastiCache will retain the snapshot before deleting it.

For manual snapshots, this field reflects the *SnapshotRetentionLimit* for the source cache cluster when the snapshot was created. This field is otherwise ignored: Manual snapshots do not expire, and can only be deleted using the *DeleteSnapshot* action.

Important If the value of SnapshotRetentionLimit is set to zero (0), backups are turned off.

Type: Integer

Required: No

SnapshotSource

Indicates whether the snapshot is from an automatic backup (`automated`) or was created manually (`manual`).

Type: String

Required: No

SnapshotStatus

The status of the snapshot. Valid values: `creating` | `available` | `restoring` | `copying` | `deleting`.

Type: String

Required: No

SnapshotWindow

The daily time range during which ElastiCache takes daily snapshots of the source cache cluster.

Type: String

Required: No

TopicArn

The Amazon Resource Name (ARN) for the topic used by the source cache cluster for publishing notifications.

Type: String

Required: No

VpcId

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

Type: String

Required: No

Subnet

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

Note
In the following list, the required parameters are described first.

SubnetAvailabilityZone
The Availability Zone associated with the subnet.

Type: AvailabilityZone (p. 113) object

Required: No

SubnetIdentifier
The unique identifier for the subnet.

Type: String

Required: No

Tag

A cost allocation Tag that can be added to an ElastiCache cluster or replication group. Tags are composed of a Key/Value pair. A tag with a null Value is permitted.

Contents

Note
In the following list, the required parameters are described first.

Key
The key for the tag.
Type: String
Required: No

Value
The tag's value. May not be null.
Type: String
Required: No

Common Parameters

The following table lists the parameters that all actions use for signing Signature Version 4 requests. Any action-specific parameters are listed in the topic for that action. To view sample requests, see Examples of Signed Signature Version 4 Requests or Signature Version 4 Test Suite in the *Amazon Web Services General Reference*.

Action
> The action to be performed.
>
> Type: string
>
> Required: Yes

Version
> The API version that the request is written for, expressed in the format YYYY-MM-DD.
>
> Type: string
>
> Required: Yes

X-Amz-Algorithm
> The hash algorithm that you used to create the request signature.
>
> Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.
>
> Type: string
>
> Valid Values: `AWS4-HMAC-SHA256`
>
> Required: Conditional

X-Amz-Credential
> The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: *access_key*/*YYYYMMDD*/*region*/*service*/aws4_request.
>
> For more information, see Task 2: Create a String to Sign for Signature Version 4 in the *Amazon Web Services General Reference*.
>
> Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.
>
> Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: `20120325T120000Z`.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Handling Dates in Signature Version 4 in the *Amazon Web Services General Reference*.

Type: string

Required: Conditional

X-Amz-Security-Token

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*.

Condition: If you're using temporary security credentials from the AWS Security Token Service, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see Task 1: Create a Canonical Request For Signature Version 4 in the *Amazon Web Services General Reference*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

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
The AWS query string is malformed or 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

The 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

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400