
Routing Control API Reference Guide

Welcome

API Version 2019-12-02



Routing Control API Reference Guide: Welcome

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Welcome

Welcome to the Routing Control (Recovery Cluster) API Reference Guide for Amazon Route 53 Application Recovery Controller.

With Recovery Cluster in Application Recovery Controller, you can use routing control with extreme reliability that enables you to recover applications by rerouting traffic, for example, across Availability Zones or AWS Regions. Routing controls are simple on/off switches hosted on a cluster in Application Recovery Controller. A cluster is a set of five redundant Regional endpoints against which you can run API calls to update or get the state of routing controls. To implement failover, you turn one routing control on and another one off, to reroute traffic from one Availability Zone or AWS Region to another.

This API guide includes information about the API operations for how to get and update routing control states in Application Recovery Controller.

Be aware that you must specify Regional endpoints when you work with API cluster operations to get or update routing control states in Application Recovery Controller.

For more information about Application Recovery Controller and working with recovery cluster, see the following:

- To create clusters, routing controls, and control panels by using the control plane API for routing control, see the [Recovery Control Configuration API Reference Guide for Amazon Route 53 Application Recovery Controller](#).
- Learn about the components in recovery control configuration, including clusters, routing controls, and control panels. For more information, see [Recovery control components](#) in the Amazon Route 53 Application Recovery Controller Developer Guide.
- Application Recovery Controller also provides readiness checks that run continually to ensure that your applications are scaled to handle failover traffic. For more information about the related API actions, see the [Recovery Readiness API Reference Guide for Amazon Route 53 Application Recovery Controller](#).
- For more information about creating resilient applications and preparing for recovery readiness with Application Recovery Controller, see the [Amazon Route 53 Application Recovery Controller Developer Guide](#).

This document was last published on January 20, 2022.

Actions

The following actions are supported:

- [GetRoutingControlState \(p. 3\)](#)
- [UpdateRoutingControlState \(p. 6\)](#)
- [UpdateRoutingControlStates \(p. 8\)](#)

GetRoutingControlState

Get the state for a routing control. A routing control is a simple on/off switch that you can use to route traffic to cells. When the state is On, traffic flows to a cell. When it's Off, traffic does not flow.

Before you can create a routing control, you first must create a cluster to host the control in a control panel. For more information, see [Create routing control structures](#) in the Amazon Route 53 Application Recovery Controller Developer Guide. Then you access one of the endpoints for the cluster to get or update the routing control state to redirect traffic.

You must specify Regional endpoints when you work with API cluster operations to get or update routing control states in Application Recovery Controller.

Learn more about [Viewing and updating routing control states](#), or learn more about [Working with routing controls overall](#) in the Amazon Route 53 Application Recovery Controller Developer Guide.

To see a code example for getting a routing control state, including accessing Regional cluster endpoints in sequence, see [API examples](#) in the Amazon Route 53 Application Recovery Controller Developer Guide.

Request Syntax

```
{  
  "RoutingControlArn": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 13\)](#).

The request accepts the following data in JSON format.

RoutingControlArn (p. 3)

The Amazon Resource Number (ARN) for the routing control that you want to get the state for.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[A-Za-z0-9:\/_-]*$`

Required: Yes

Response Syntax

```
{  
  "RoutingControlArn": "string",  
  "RoutingControlState": "string"  
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

RoutingControlArn (p. 3)

The Amazon Resource Number (ARN) of the response.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[A-Za-z0-9:\/_-]*$`

RoutingControlState (p. 3)

The state of the routing control.

Type: String

Valid Values: `On` | `Off`

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 15\)](#).

AccessDeniedException

You don't have sufficient permissions to query the routing control state.

HTTP Status Code: 400

EndpointTemporarilyUnavailableException

The cluster endpoint isn't available. Try another cluster endpoint.

HTTP Status Code: 400

InternalServerErrorException

There was an unexpected error during processing of the request.

HTTP Status Code: 500

ResourceNotFoundException

The request references a routing control that was not found.

HTTP Status Code: 400

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 400

ValidationException

There was a validation error on the request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

UpdateRoutingControlState

Set the state of the routing control to reroute traffic. You can set the value to be On or Off. When the state is On, traffic flows to a cell. When it's Off, traffic does not flow.

You must specify Regional endpoints when you work with API cluster operations to get or update routing control states in Application Recovery Controller.

Learn more about [viewing and updating routing control states](#), or learn more about [working with routing controls overall](#) in the Amazon Route 53 Application Recovery Controller Developer Guide.

To see a code example for getting a routing control state, including accessing Regional cluster endpoints in sequence, see [API examples](#) in the Amazon Route 53 Application Recovery Controller Developer Guide.

Request Syntax

```
{  
  "RoutingControlArn": "string",  
  "RoutingControlState": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 13\)](#).

The request accepts the following data in JSON format.

RoutingControlArn (p. 6)

The Amazon Resource Number (ARN) for the routing control that you want to update the state for.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[A-Za-z0-9:\/_-]*$`

Required: Yes

RoutingControlState (p. 6)

The state of the routing control. You can set the value to be On or Off.

Type: String

Valid Values: `On` | `Off`

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 15\)](#).

AccessDeniedException

You don't have sufficient permissions to query the routing control state.

HTTP Status Code: 400

ConflictException

There was a conflict with this request. Try again.

HTTP Status Code: 400

EndpointTemporarilyUnavailableException

The cluster endpoint isn't available. Try another cluster endpoint.

HTTP Status Code: 400

InternalServerErrorException

There was an unexpected error during processing of the request.

HTTP Status Code: 500

ResourceNotFoundException

The request references a routing control that was not found.

HTTP Status Code: 400

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 400

ValidationException

There was a validation error on the request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

UpdateRoutingControlStates

Set multiple routing control states. You can set the value for each state to be On or Off. When the state is On, traffic flows to a cell. When it's Off, traffic does not flow.

You must specify Regional endpoints when you work with API cluster operations to get or update routing control states in Application Recovery Controller.

Learn more about [viewing and updating routing control states](#), or learn more about [working with routing controls overall](#) in the Amazon Route 53 Application Recovery Controller Developer Guide.

To see a code example for updating a routing control state, including accessing Regional cluster endpoints in sequence, see [API examples](#) in the Amazon Route 53 Application Recovery Controller Developer Guide.

Request Syntax

```
{
  "UpdateRoutingControlStateEntries": [
    {
      "RoutingControlArn": "string",
      "RoutingControlState": "string"
    }
  ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 13\)](#).

The request accepts the following data in JSON format.

UpdateRoutingControlStateEntries (p. 8)

A set of routing control entries that you want to update.

Type: Array of [UpdateRoutingControlStateEntry \(p. 11\)](#) objects

Required: Yes

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 15\)](#).

AccessDeniedException

You don't have sufficient permissions to query the routing control state.

HTTP Status Code: 400

ConflictException

There was a conflict with this request. Try again.

HTTP Status Code: 400

EndpointTemporarilyUnavailableException

The cluster endpoint isn't available. Try another cluster endpoint.

HTTP Status Code: 400

InternalServerErrorException

There was an unexpected error during processing of the request.

HTTP Status Code: 500

ResourceNotFoundException

The request references a routing control that was not found.

HTTP Status Code: 400

ThrottlingException

The request was denied because of request throttling.

HTTP Status Code: 400

ValidationException

There was a validation error on the request.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

Data Types

The Route53 Recovery Cluster 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:

- [UpdateRoutingControlStateEntry](#) (p. 11)
- [ValidationExceptionField](#) (p. 12)

UpdateRoutingControlStateEntry

A routing control state entry.

Contents

RoutingControlArn

The Amazon Resource Number (ARN) for a routing control state entry.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^[A-Za-z0-9:\/_-]*$`

Required: Yes

RoutingControlState

The routing control state in a set of routing control state entries.

Type: String

Valid Values: `On` | `Off`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

ValidationExceptionField

There was a validation error on the request.

Contents

message

Information about the validation exception.

Type: String

Required: Yes

name

The field that had the validation exception.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- [AWS SDK for C++](#)
- [AWS SDK for Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signature Version 4 Signing Process](#) 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'THHMMSS'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 (AWS STS). For a list of services that support temporary security credentials from AWS Security Token Service, go to [AWS Services That Work with IAM](#) in the *IAM User Guide*.

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 errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

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

NotAuthorized

You do not have permission to perform this action.

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

ThrottlingException

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