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# AWS Fault Injection Simulator

## API Reference

**API Version 2020-12-01**



## **AWS Fault Injection Simulator: API Reference**

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# Welcome

AWS Fault Injection Simulator is a managed service that enables you to perform fault injection experiments on your AWS workloads. For more information, see the [AWS Fault Injection Simulator User Guide](#).

This document was last published on October 6, 2021.

# Actions

The following actions are supported:

- [CreateExperimentTemplate](#) (p. 3)
- [DeleteExperimentTemplate](#) (p. 9)
- [GetAction](#) (p. 12)
- [GetExperiment](#) (p. 14)
- [GetExperimentTemplate](#) (p. 17)
- [ListActions](#) (p. 20)
- [ListExperiments](#) (p. 22)
- [ListExperimentTemplates](#) (p. 24)
- [ListTagsForResource](#) (p. 26)
- [StartExperiment](#) (p. 28)
- [StopExperiment](#) (p. 32)
- [TagResource](#) (p. 35)
- [UntagResource](#) (p. 37)
- [UpdateExperimentTemplate](#) (p. 39)



# CreateExperimentTemplate

Creates an experiment template.

An experiment template includes the following components:

- **Targets:** A target can be a specific resource in your AWS environment, or one or more resources that match criteria that you specify, for example, resources that have specific tags.
- **Actions:** The actions to carry out on the target. You can specify multiple actions, the duration of each action, and when to start each action during an experiment.
- **Stop conditions:** If a stop condition is triggered while an experiment is running, the experiment is automatically stopped. You can define a stop condition as a CloudWatch alarm.

For more information, see [Experiment templates](#) in the *AWS Fault Injection Simulator User Guide*.

## Request Syntax

```
POST /experimentTemplates HTTP/1.1
Content-type: application/json
```

```
{
  "actions": {
    "string" : {
      "actionId": "string",
      "description": "string",
      "parameters": {
        "string" : "string"
      },
      "startAfter": [ "string" ],
      "targets": {
        "string" : "string"
      }
    }
  },
  "clientToken": "string",
  "description": "string",
  "roleArn": "string",
  "stopConditions": [
    {
      "source": "string",
      "value": "string"
    }
  ],
  "tags": {
    "string" : "string"
  },
  "targets": {
    "string" : {
      "filters": [
        {
          "path": "string",
          "values": [ "string" ]
        }
      ],
      "resourceArns": [ "string" ],
      "resourceTags": {
        "string" : "string"
      },
      "resourceType": "string",
      "selectionMode": "string"
    }
  }
}
```

```
}  
  }  
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### **actions** (p. 3)

The actions for the experiment.

Type: String to [CreateExperimentTemplateActionInput](#) (p. 50) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: Yes

### **clientToken** (p. 3)

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: [ \S ]+

Required: Yes

### **description** (p. 3)

A description for the experiment template.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: Yes

### **roleArn** (p. 3)

The Amazon Resource Name (ARN) of an IAM role that grants the AWS FIS service permission to perform service actions on your behalf.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \S ]+

Required: Yes

### **stopConditions** (p. 3)

The stop conditions.

Type: Array of [CreateExperimentTemplateStopConditionInput](#) (p. 52) objects

Required: Yes

### **tags** (p. 3)

The tags to apply to the experiment template.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [`\s\S`]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [`\s\S`]\*

Required: No

### **targets** (p. 3)

The targets for the experiment.

Type: String to [CreateExperimentTemplateTargetInput](#) (p. 53) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [`\S`]+

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experimentTemplate": {
    "actions": {
      "string": {
        "actionId": "string",
        "description": "string",
        "parameters": {
          "string": "string"
        },
        "startAfter": [ "string" ],
        "targets": {
          "string": "string"
        }
      }
    },
    "creationTime": number,
    "description": "string",
    "id": "string",
    "lastUpdateTime": number,
```

```
"roleArn": "string",
"stopConditions": [
  {
    "source": "string",
    "value": "string"
  }
],
"tags": {
  "string" : "string"
},
"targets": {
  "string" : {
    "filters": [
      {
        "path": "string",
        "values": [ "string" ]
      }
    ],
    "resourceArns": [ "string" ],
    "resourceTags": {
      "string" : "string"
    },
    "resourceType": "string",
    "selectionMode": "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.

### **experimentTemplate** (p. 5)

Information about the experiment template.

Type: [ExperimentTemplate](#) (p. 68) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

### **ConflictException**

The request could not be processed because of a conflict.

HTTP Status Code: 409

### **ResourceNotFoundException**

The specified resource cannot be found.

HTTP Status Code: 404

### **ServiceQuotaExceededException**

You have exceeded your service quota.

HTTP Status Code: 402

### ValidationException

The specified input is not valid, or fails to satisfy the constraints for the request.

HTTP Status Code: 400

## Examples

### Terminate EC2 instances

The following example terminates three instances in the specified VPC with the tag `env=test`.

#### Sample Request

```
{
  "description": "Test instance termination",
  "targets": {
    "to-terminate": {
      "resourceType": "aws:ec2:instance",
      "resourceTags": {
        "env": "test"
      },
      "filters": [
        {
          "path": "VpcId",
          "values": [
            "vpc-1234567890abcdef0"
          ]
        }
      ],
      "selectionMode": "COUNT(3)"
    }
  },
  "actions": {
    "TerminateInstances": {
      "actionId": "aws:ec2-terminate-instances",
      "description": "terminate instances",
      "targets": {
        "Instances": "to-terminate"
      }
    }
  },
  "stopConditions": [
    {
      "source": "none"
    }
  ],
  "roleArn": "arn:aws:iam:123456789012:role/ExperimentRole",
}
```

## 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](#)

# DeleteExperimentTemplate

Deletes the specified experiment template.

## Request Syntax

```
DELETE /experimentTemplates/id HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### **id** (p. 9)

The ID of the experiment template.

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experimentTemplate": {
    "actions": {
      "string": {
        "actionId": "string",
        "description": "string",
        "parameters": {
          "string": "string"
        },
        "startAfter": [ "string" ],
        "targets": {
          "string": "string"
        }
      }
    },
    "creationTime": number,
    "description": "string",
    "id": "string",
    "lastUpdateTime": number,
    "roleArn": "string",
    "stopConditions": [
      {
        "source": "string",
        "value": "string"
      }
    ]
  }
}
```

```
    ],
    "tags": {
      "string" : "string"
    },
    "targets": {
      "string" : {
        "filters": [
          {
            "path": "string",
            "values": [ "string" ]
          }
        ],
        "resourceArns": [ "string" ],
        "resourceTags": {
          "string" : "string"
        },
        "resourceType": "string",
        "selectionMode": "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.

### **experimentTemplate** (p. 9)

Information about the experiment template.

Type: [ExperimentTemplate](#) (p. 68) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

### **ResourceNotFoundException**

The specified resource cannot be found.

HTTP Status Code: 404

### **ValidationException**

The specified input is not valid, or fails to satisfy the constraints for 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](#)

# GetAction

Gets information about the specified AWS FIS action.

## Request Syntax

```
GET /actions/id HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### **id** (p. 12)

The ID of the action.

Length Constraints: Maximum length of 128.

Pattern: [*\S*]+

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "action": {
    "description": "string",
    "id": "string",
    "parameters": {
      "string" : {
        "description": "string",
        "required": boolean
      }
    },
    "tags": {
      "string" : "string"
    },
    "targets": {
      "string" : {
        "resourceType": "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.

**action** (p. 12)

Information about the action.

Type: [Action](#) (p. 44) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

**ResourceNotFoundException**

The specified resource cannot be found.

HTTP Status Code: 404

**ValidationException**

The specified input is not valid, or fails to satisfy the constraints for 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](#)

# GetExperiment

Gets information about the specified experiment.

## Request Syntax

```
GET /experiments/id HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### **id** (p. 14)

The ID of the experiment.

Length Constraints: Maximum length of 64.

Pattern: [`\S`]+

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experiment": {
    "actions": {
      "string": {
        "actionId": "string",
        "description": "string",
        "parameters": {
          "string": "string"
        },
        "startAfter": [ "string" ],
        "state": {
          "reason": "string",
          "status": "string"
        },
        "targets": {
          "string": "string"
        }
      }
    },
    "creationTime": number,
    "endTime": number,
    "experimentTemplateId": "string",
    "id": "string",
    "roleArn": "string",
```

```

    "startTime": number,
    "state": {
      "reason": "string",
      "status": "string"
    },
    "stopConditions": [
      {
        "source": "string",
        "value": "string"
      }
    ],
    "tags": {
      "string" : "string"
    },
    "targets": {
      "string" : {
        "filters": [
          {
            "path": "string",
            "values": [ "string" ]
          }
        ],
        "resourceArns": [ "string" ],
        "resourceTags": {
          "string" : "string"
        },
        "resourceType": "string",
        "selectionMode": "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.

### experiment (p. 14)

Information about the experiment.

Type: [Experiment](#) (p. 55) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

### ResourceNotFoundException

The specified resource cannot be found.

HTTP Status Code: 404

### ValidationException

The specified input is not valid, or fails to satisfy the constraints for 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](#)

# GetExperimentTemplate

Gets information about the specified experiment template.

## Request Syntax

```
GET /experimentTemplates/id HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### **id** (p. 17)

The ID of the experiment template.

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experimentTemplate": {
    "actions": {
      "string": {
        "actionId": "string",
        "description": "string",
        "parameters": {
          "string": "string"
        },
        "startAfter": [ "string" ],
        "targets": {
          "string": "string"
        }
      }
    },
    "creationTime": number,
    "description": "string",
    "id": "string",
    "lastUpdateTime": number,
    "roleArn": "string",
    "stopConditions": [
      {
        "source": "string",
        "value": "string"
      }
    ]
  }
}
```

```
    ],
    "tags": {
      "string" : "string"
    },
    "targets": {
      "string" : {
        "filters": [
          {
            "path": "string",
            "values": [ "string" ]
          }
        ],
        "resourceArns": [ "string" ],
        "resourceTags": {
          "string" : "string"
        },
        "resourceType": "string",
        "selectionMode": "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.

### **experimentTemplate** (p. 17)

Information about the experiment template.

Type: [ExperimentTemplate](#) (p. 68) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

### **ResourceNotFoundException**

The specified resource cannot be found.

HTTP Status Code: 404

### **ValidationException**

The specified input is not valid, or fails to satisfy the constraints for 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](#)

# ListActions

Lists the available AWS FIS actions.

## Request Syntax

```
GET /actions?maxResults=maxResults&nextToken=nextToken HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### **maxResults** (p. 20)

The maximum number of results to return with a single call. To retrieve the remaining results, make another call with the returned *nextToken* value.

Valid Range: Minimum value of 1. Maximum value of 100.

### **nextToken** (p. 20)

The token for the next page of results.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: [*\S*]+

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "actions": [
    {
      "description": "string",
      "id": "string",
      "tags": {
        "string" : "string"
      },
      "targets": {
        "string" : {
          "resourceType": "string"
        }
      }
    }
  ],
  "nextToken": "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.

**actions** (p. 20)

The actions.

Type: Array of [ActionSummary](#) (p. 47) objects

**nextToken** (p. 20)

The token to use to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[\S]+`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

**ValidationException**

The specified input is not valid, or fails to satisfy the constraints for 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](#)

# ListExperiments

Lists your experiments.

## Request Syntax

```
GET /experiments?maxResults=maxResults&nextToken=nextToken HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### **maxResults** (p. 22)

The maximum number of results to return with a single call. To retrieve the remaining results, make another call with the returned `nextToken` value.

Valid Range: Minimum value of 1. Maximum value of 100.

### **nextToken** (p. 22)

The token for the next page of results.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[\S]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experiments": [
    {
      "creationTime": number,
      "experimentTemplateId": "string",
      "id": "string",
      "state": {
        "reason": "string",
        "status": "string"
      },
      "tags": {
        "string" : "string"
      }
    }
  ],
  "nextToken": "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.

**experiments** (p. 22)

The experiments.

Type: Array of [ExperimentSummary](#) (p. 63) objects

**nextToken** (p. 22)

The token to use to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[\S]+`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

**ValidationException**

The specified input is not valid, or fails to satisfy the constraints for 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](#)

# ListExperimentTemplates

Lists your experiment templates.

## Request Syntax

```
GET /experimentTemplates?maxResults=maxResults&nextToken=nextToken HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### **maxResults** (p. 24)

The maximum number of results to return with a single call. To retrieve the remaining results, make another call with the returned `nextToken` value.

Valid Range: Minimum value of 1. Maximum value of 100.

### **nextToken** (p. 24)

The token for the next page of results.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[\S]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experimentTemplates": [
    {
      "creationTime": number,
      "description": "string",
      "id": "string",
      "lastUpdateTime": number,
      "tags": {
        "string" : "string"
      }
    }
  ],
  "nextToken": "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.

**experimentTemplates** (p. 24)

The experiment templates.

Type: Array of [ExperimentTemplateSummary](#) (p. 73) objects

**nextToken** (p. 24)

The token to use to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[\S]+`

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

**ValidationException**

The specified input is not valid, or fails to satisfy the constraints for 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](#)

# ListTagsForResource

Lists the tags for the specified resource.

## Request Syntax

```
GET /tags/resourceArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### **resourceArn** (p. 26)

The Amazon Resource Name (ARN) of the resource.

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [`\S`]+

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "tags": {
    "string" : "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.

### **tags** (p. 26)

The tags for the resource.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [`\s\S`]+



Value Length Constraints: Maximum length of 256.

Value Pattern: [`\s\S`]\*

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 86\)](#).

## 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](#)

# StartExperiment

Starts running an experiment from the specified experiment template.

## Request Syntax

```
POST /experiments HTTP/1.1
Content-type: application/json

{
  "clientToken": "string",
  "experimentTemplateId": "string",
  "tags": {
    "string" : "string"
  }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### **clientToken** (p. 28)

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: [ \S ]+

Required: Yes

### **experimentTemplateId** (p. 28)

The ID of the experiment template.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: Yes

### **tags** (p. 28)

The tags to apply to the experiment.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [\s\S]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [\s\S]\*

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experiment": {
    "actions": {
      "string" : {
        "actionId": "string",
        "description": "string",
        "parameters": {
          "string" : "string"
        },
        "startAfter": [ "string" ],
        "state": {
          "reason": "string",
          "status": "string"
        },
        "targets": {
          "string" : "string"
        }
      }
    },
    "creationTime": number,
    "endTime": number,
    "experimentTemplateId": "string",
    "id": "string",
    "roleArn": "string",
    "startTime": number,
    "state": {
      "reason": "string",
      "status": "string"
    },
    "stopConditions": [
      {
        "source": "string",
        "value": "string"
      }
    ],
    "tags": {
      "string" : "string"
    },
    "targets": {
      "string" : {
        "filters": [
          {
            "path": "string",
            "values": [ "string" ]
          }
        ],
        "resourceArns": [ "string" ],
        "resourceTags": {
          "string" : "string"
        }
      }
    }
  }
}
```

```
    "resourceType": "string",  
    "selectionMode": "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.

### **experiment** (p. 29)

Information about the experiment.

Type: [Experiment](#) (p. 55) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

### **ConflictException**

The request could not be processed because of a conflict.

HTTP Status Code: 409

### **ResourceNotFoundException**

The specified resource cannot be found.

HTTP Status Code: 404

### **ServiceQuotaExceededException**

You have exceeded your service quota.

HTTP Status Code: 402

### **ValidationException**

The specified input is not valid, or fails to satisfy the constraints for 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](#)

# StopExperiment

Stops the specified experiment.

## Request Syntax

```
DELETE /experiments/id HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### *id* (p. 32)

The ID of the experiment.

Length Constraints: Maximum length of 64.

Pattern: [*\S*]+

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experiment": {
    "actions": {
      "string": {
        "actionId": "string",
        "description": "string",
        "parameters": {
          "string": "string"
        },
        "startAfter": [ "string" ],
        "state": {
          "reason": "string",
          "status": "string"
        },
        "targets": {
          "string": "string"
        }
      }
    },
    "creationTime": number,
    "endTime": number,
    "experimentTemplateId": "string",
    "id": "string",
    "roleArn": "string",
```

```

    "startTime": number,
    "state": {
      "reason": "string",
      "status": "string"
    },
    "stopConditions": [
      {
        "source": "string",
        "value": "string"
      }
    ],
    "tags": {
      "string" : "string"
    },
    "targets": {
      "string" : {
        "filters": [
          {
            "path": "string",
            "values": [ "string" ]
          }
        ],
        "resourceArns": [ "string" ],
        "resourceTags": {
          "string" : "string"
        },
        "resourceType": "string",
        "selectionMode": "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.

### experiment (p. 32)

Information about the experiment.

Type: [Experiment](#) (p. 55) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

### ResourceNotFoundException

The specified resource cannot be found.

HTTP Status Code: 404

### ValidationException

The specified input is not valid, or fails to satisfy the constraints for 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](#)



# TagResource

Applies the specified tags to the specified resource.

## Request Syntax

```
POST /tags/resourceArn HTTP/1.1
Content-type: application/json

{
  "tags": {
    "string" : "string"
  }
}
```

## URI Request Parameters

The request uses the following URI parameters.

### **resourceArn** (p. 35)

The Amazon Resource Name (ARN) of the resource.

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \S ]+

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### **tags** (p. 35)

The tags for the resource.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## 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 \(p. 86\)](#).

## 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](#)

# UntagResource

Removes the specified tags from the specified resource.

## Request Syntax

```
DELETE /tags/resourceArn?tagKeys=tagKeys HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### [resourceArn \(p. 37\)](#)

The Amazon Resource Name (ARN) of the resource.

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `[\S]+`

Required: Yes

### [tagKeys \(p. 37\)](#)

The tag keys to remove.

Length Constraints: Maximum length of 128.

Pattern: `[\s\S]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

## 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 \(p. 86\)](#).

## 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](#)

# UpdateExperimentTemplate

Updates the specified experiment template.

## Request Syntax

```
PATCH /experimentTemplates/id HTTP/1.1  
Content-type: application/json
```

```
{  
  "actions": {  
    "string" : {  
      "actionId": "string",  
      "description": "string",  
      "parameters": {  
        "string" : "string"  
      },  
      "startAfter": [ "string" ],  
      "targets": {  
        "string" : "string"  
      }  
    }  
  },  
  "description": "string",  
  "roleArn": "string",  
  "stopConditions": [  
    {  
      "source": "string",  
      "value": "string"  
    }  
  ],  
  "targets": {  
    "string" : {  
      "filters": [  
        {  
          "path": "string",  
          "values": [ "string" ]  
        }  
      ],  
      "resourceArns": [ "string" ],  
      "resourceTags": {  
        "string" : "string"  
      },  
      "resourceType": "string",  
      "selectionMode": "string"  
    }  
  }  
}
```

## URI Request Parameters

The request uses the following URI parameters.

### **id** (p. 39)

The ID of the experiment template.

Length Constraints: Maximum length of 64.

Pattern: [ \S ] +

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### **actions** (p. 39)

The actions for the experiment.

Type: String to [UpdateExperimentTemplateActionInputItem](#) (p. 79) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: No

### **description** (p. 39)

A description for the template.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### **roleArn** (p. 39)

The Amazon Resource Name (ARN) of an IAM role that grants the AWS FIS service permission to perform service actions on your behalf.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \S ]+

Required: No

### **stopConditions** (p. 39)

The stop conditions for the experiment.

Type: Array of [UpdateExperimentTemplateStopConditionInput](#) (p. 81) objects

Required: No

### **targets** (p. 39)

The targets for the experiment.

Type: String to [UpdateExperimentTemplateTargetInput](#) (p. 82) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "experimentTemplate": {
    "actions": {
      "string": {
        "actionId": "string",
        "description": "string",
        "parameters": {
          "string": "string"
        },
        "startAfter": [ "string" ],
        "targets": {
          "string": "string"
        }
      }
    },
    "creationTime": number,
    "description": "string",
    "id": "string",
    "lastUpdateTime": number,
    "roleArn": "string",
    "stopConditions": [
      {
        "source": "string",
        "value": "string"
      }
    ],
    "tags": {
      "string": "string"
    },
    "targets": {
      "string": {
        "filters": [
          {
            "path": "string",
            "values": [ "string" ]
          }
        ],
        "resourceArns": [ "string" ],
        "resourceTags": {
          "string": "string"
        },
        "resourceType": "string",
        "selectionMode": "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.

### **experimentTemplate** (p. 41)

Information about the experiment template.

Type: [ExperimentTemplate](#) (p. 68) object

## Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 86).

### **ResourceNotFoundException**

The specified resource cannot be found.

HTTP Status Code: 404

### **ServiceQuotaExceededException**

You have exceeded your service quota.

HTTP Status Code: 402

### **ValidationException**

The specified input is not valid, or fails to satisfy the constraints for 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 AWS Fault Injection Simulator 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:

- [Action](#) (p. 44)
- [ActionParameter](#) (p. 46)
- [ActionSummary](#) (p. 47)
- [ActionTarget](#) (p. 49)
- [CreateExperimentTemplateActionInput](#) (p. 50)
- [CreateExperimentTemplateStopConditionInput](#) (p. 52)
- [CreateExperimentTemplateTargetInput](#) (p. 53)
- [Experiment](#) (p. 55)
- [ExperimentAction](#) (p. 58)
- [ExperimentActionState](#) (p. 60)
- [ExperimentState](#) (p. 61)
- [ExperimentStopCondition](#) (p. 62)
- [ExperimentSummary](#) (p. 63)
- [ExperimentTarget](#) (p. 65)
- [ExperimentTargetFilter](#) (p. 67)
- [ExperimentTemplate](#) (p. 68)
- [ExperimentTemplateAction](#) (p. 70)
- [ExperimentTemplateStopCondition](#) (p. 72)
- [ExperimentTemplateSummary](#) (p. 73)
- [ExperimentTemplateTarget](#) (p. 75)
- [ExperimentTemplateTargetFilter](#) (p. 77)
- [ExperimentTemplateTargetInputFilter](#) (p. 78)
- [UpdateExperimentTemplateActionInputItem](#) (p. 79)
- [UpdateExperimentTemplateStopConditionInput](#) (p. 81)
- [UpdateExperimentTemplateTargetInput](#) (p. 82)

## Action

Describes an action. For more information, see [AWS FIS actions](#) in the *AWS Fault Injection Simulator User Guide*.

### Contents

#### description

The description for the action.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

#### id

The ID of the action.

Type: String

Length Constraints: Maximum length of 128.

Pattern: [ \S ]+

Required: No

#### parameters

The action parameters, if applicable.

Type: String to [ActionParameter](#) (p. 46) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: No

#### tags

The tags for the action.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: No

#### targets

The supported targets for the action.

Type: String to [ActionTarget](#) (p. 49) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: No

## 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](#)

# ActionParameter

Describes a parameter for an action.

## Contents

### description

The parameter description.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### required

Indicates whether the parameter is required.

Type: Boolean

Required: No

## 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](#)

# ActionSummary

Provides a summary of an action.

## Contents

### description

The description for the action.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### id

The ID of the action.

Type: String

Length Constraints: Maximum length of 128.

Pattern: [ \S ]+

Required: No

### tags

The tags for the action.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: No

### targets

The targets for the action.

Type: String to [ActionTarget](#) (p. 49) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: No

## 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](#)

# ActionTarget

Describes a target for an action.

## Contents

### **resourceType**

The resource type of the target.

Type: String

Length Constraints: Maximum length of 128.

Pattern: [ \S ]+

Required: No

## 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](#)

# CreateExperimentTemplateActionInput

Specifies an action for an experiment template.

For more information, see [Actions](#) in the *AWS Fault Injection Simulator User Guide*.

## Contents

### **actionId**

The ID of the action. The format of the action ID is: `aws:service-name:action-type`.

Type: String

Length Constraints: Maximum length of 128.

Pattern: `[ \S ]+`

Required: Yes

### **description**

A description for the action.

Type: String

Length Constraints: Maximum length of 512.

Pattern: `[ \s\S ]+`

Required: No

### **parameters**

The parameters for the action, if applicable.

Type: String to string map

Key Length Constraints: Maximum length of 64.

Key Pattern: `[ \S ]+`

Value Length Constraints: Maximum length of 1024.

Value Pattern: `[ \S ]+`

Required: No

### **startAfter**

The name of the action that must be completed before the current action starts. Omit this parameter to run the action at the start of the experiment.

Type: Array of strings

Length Constraints: Maximum length of 64.

Pattern: `[ \S ]+`

Required: No

### **targets**

The targets for the action.



Type: String to string map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Value Length Constraints: Maximum length of 64.

Value Pattern: [ \S ]+

Required: No

## 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](#)

# CreateExperimentTemplateStopConditionInput

Specifies a stop condition for an experiment template.

## Contents

### source

The source for the stop condition. Specify `aws:cloudwatch:alarm` if the stop condition is defined by a CloudWatch alarm. Specify `none` if there is no stop condition.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `[\S]+`

Required: Yes

### value

The Amazon Resource Name (ARN) of the CloudWatch alarm. This is required if the source is a CloudWatch alarm.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `[\s\S]+`

Required: No

## 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](#)

# CreateExperimentTemplateTargetInput

Specifies a target for an experiment. You must specify at least one Amazon Resource Name (ARN) or at least one resource tag. You cannot specify both ARNs and tags.

For more information, see [Targets](#) in the *AWS Fault Injection Simulator User Guide*.

## Contents

### filters

The filters to apply to identify target resources using specific attributes.

Type: Array of [ExperimentTemplateTargetInputFilter](#) (p. 78) objects

Required: No

### resourceArns

The Amazon Resource Names (ARNs) of the resources.

Type: Array of strings

Array Members: Maximum number of 5 items.

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `[\S]+`

Required: No

### resourceTags

The tags for the target resources.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: `[\s\S]+`

Value Length Constraints: Maximum length of 256.

Value Pattern: `[\s\S]*`

Required: No

### resourceType

The AWS resource type. The resource type must be supported for the specified action.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `[\S]+`

Required: Yes

### **selectionMode**

Scopes the identified resources to a specific count of the resources at random, or a percentage of the resources. All identified resources are included in the target.

- ALL - Run the action on all identified targets. This is the default.
- COUNT(n) - Run the action on the specified number of targets, chosen from the identified targets at random. For example, COUNT(1) selects one of the targets.
- PERCENT(n) - Run the action on the specified percentage of targets, chosen from the identified targets at random. For example, PERCENT(25) selects 25% of the targets.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

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](#)

# Experiment

Describes an experiment.

## Contents

### **actions**

The actions for the experiment.

Type: String to [ExperimentAction](#) (p. 58) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: No

### **creationTime**

The time the experiment was created.

Type: Timestamp

Required: No

### **endTime**

The time that the experiment ended.

Type: Timestamp

Required: No

### **experimentTemplateId**

The ID of the experiment template.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **id**

The ID of the experiment.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **roleArn**

The Amazon Resource Name (ARN) of an IAM role that grants the AWS FIS service permission to perform service actions on your behalf.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \S ]+

Required: No

**startTime**

The time that the experiment was started.

Type: Timestamp

Required: No

**state**

The state of the experiment.

Type: [ExperimentState](#) (p. 61) object

Required: No

**stopConditions**

The stop conditions for the experiment.

Type: Array of [ExperimentStopCondition](#) (p. 62) objects

Required: No

**tags**

The tags for the experiment.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: No

**targets**

The targets for the experiment.

Type: String to [ExperimentTarget](#) (p. 65) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: No

## 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](#)

# ExperimentAction

Describes the action for an experiment.

## Contents

### **actionId**

The ID of the action.

Type: String

Length Constraints: Maximum length of 128.

Pattern: [ \S ]+

Required: No

### **description**

The description for the action.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### **parameters**

The parameters for the action.

Type: String to string map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Value Length Constraints: Maximum length of 1024.

Value Pattern: [ \S ]+

Required: No

### **startAfter**

The name of the action that must be completed before this action starts.

Type: Array of strings

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **state**

The state of the action.

Type: [ExperimentActionState](#) (p. 60) object



Required: No

**targets**

The targets for the action.

Type: String to string map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Value Length Constraints: Maximum length of 64.

Value Pattern: [ \S ]+

Required: No

## 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](#)

# ExperimentActionState

Describes the state of an action.

## Contents

### **reason**

The reason for the state.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### **status**

The state of the action.

Type: String

Valid Values: `pending` | `initiating` | `running` | `completed` | `cancelled` | `stopping` | `stopped` | `failed`

Required: No

## 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](#)

# ExperimentState

Describes the state of an experiment.

## Contents

### **reason**

The reason for the state.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### **status**

The state of the experiment.

Type: String

Valid Values: `pending` | `initiating` | `running` | `completed` | `stopping` | `stopped` | `failed`

Required: No

## 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](#)

# ExperimentStopCondition

Describes the stop condition for an experiment.

## Contents

### source

The source for the stop condition.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### value

The Amazon Resource Name (ARN) of the CloudWatch alarm, if applicable.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \s\S ]+

Required: No

## 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](#)

# ExperimentSummary

Provides a summary of an experiment.

## Contents

### **creationTime**

The time that the experiment was created.

Type: Timestamp

Required: No

### **experimentTemplateId**

The ID of the experiment template.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **id**

The ID of the experiment.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **state**

The state of the experiment.

Type: [ExperimentState](#) (p. 61) object

Required: No

### **tags**

The tags for the experiment.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: No

## 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](#)

# ExperimentTarget

Describes a target for an experiment.

## Contents

### **filters**

The filters to apply to identify target resources using specific attributes.

Type: Array of [ExperimentTargetFilter](#) (p. 67) objects

Required: No

### **resourceArns**

The Amazon Resource Names (ARNs) of the resources.

Type: Array of strings

Array Members: Maximum number of 5 items.

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \S ]+

Required: No

### **resourceTags**

The tags for the target resources.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: No

### **resourceType**

The resource type.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **selectionMode**

Scopes the identified resources to a specific count or percentage.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `[\S]+`

Required: No

## 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](#)



# ExperimentTargetFilter

Describes a filter used for the target resources in an experiment.

## Contents

### path

The attribute path for the filter.

Type: String

Length Constraints: Maximum length of 256.

Pattern: [ \S ]+

Required: No

### values

The attribute values for the filter.

Type: Array of strings

Length Constraints: Maximum length of 128.

Pattern: [ \S ]+

Required: No

## 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](#)

# ExperimentTemplate

Describes an experiment template.

## Contents

### actions

The actions for the experiment.

Type: String to [ExperimentTemplateAction](#) (p. 70) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Required: No

### creationTime

The time the experiment template was created.

Type: Timestamp

Required: No

### description

The description for the experiment template.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### id

The ID of the experiment template.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### lastUpdateTime

The time the experiment template was last updated.

Type: Timestamp

Required: No

### roleArn

The Amazon Resource Name (ARN) of an IAM role.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `[\S]+`

Required: No

#### **stopConditions**

The stop conditions for the experiment.

Type: Array of [ExperimentTemplateStopCondition](#) (p. 72) objects

Required: No

#### **tags**

The tags for the experiment template.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: `[\s\S]+`

Value Length Constraints: Maximum length of 256.

Value Pattern: `[\s\S]*`

Required: No

#### **targets**

The targets for the experiment.

Type: String to [ExperimentTemplateTarget](#) (p. 75) object map

Key Length Constraints: Maximum length of 64.

Key Pattern: `[\S]+`

Required: No

## 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](#)

# ExperimentTemplateAction

Describes an action for an experiment template.

## Contents

### **actionId**

The ID of the action.

Type: String

Length Constraints: Maximum length of 128.

Pattern: [ \S ]+

Required: No

### **description**

A description for the action.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### **parameters**

The parameters for the action.

Type: String to string map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Value Length Constraints: Maximum length of 1024.

Value Pattern: [ \S ]+

Required: No

### **startAfter**

The name of the action that must be completed before the current action starts.

Type: Array of strings

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **targets**

The targets for the action.

Type: String to string map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Value Length Constraints: Maximum length of 64.

Value Pattern: [ \S ]+

Required: No

## 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](#)

# ExperimentTemplateStopCondition

Describes a stop condition for an experiment template.

## Contents

### source

The source for the stop condition.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### value

The Amazon Resource Name (ARN) of the CloudWatch alarm, if applicable.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \s\S ]+

Required: No

## 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](#)

# ExperimentTemplateSummary

Provides a summary of an experiment template.

## Contents

### **creationTime**

The time that the experiment template was created.

Type: Timestamp

Required: No

### **description**

The description of the experiment template.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### **id**

The ID of the experiment template.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **lastUpdateTime**

The time that the experiment template was last updated.

Type: Timestamp

Required: No

### **tags**

The tags for the experiment template.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: No

## 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](#)



# ExperimentTemplateTarget

Describes a target for an experiment template.

## Contents

### **filters**

The filters to apply to identify target resources using specific attributes.

Type: Array of [ExperimentTemplateTargetFilter](#) (p. 77) objects

Required: No

### **resourceArns**

The Amazon Resource Names (ARNs) of the targets.

Type: Array of strings

Array Members: Maximum number of 5 items.

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \S ]+

Required: No

### **resourceTags**

The tags for the target resources.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: No

### **resourceType**

The resource type.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **selectionMode**

Scopes the identified resources to a specific count or percentage.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `[\S]+`

Required: No

## 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](#)

# ExperimentTemplateTargetFilter

Describes a filter used for the target resources in an experiment template.

## Contents

### path

The attribute path for the filter.

Type: String

Length Constraints: Maximum length of 256.

Pattern: [ \S ]+

Required: No

### values

The attribute values for the filter.

Type: Array of strings

Length Constraints: Maximum length of 128.

Pattern: [ \S ]+

Required: No

## 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](#)

# ExperimentTemplateTargetInputFilter

Specifies a filter used for the target resource input in an experiment template.

For more information, see [Resource filters](#) in the *AWS Fault Injection Simulator User Guide*.

## Contents

### path

The attribute path for the filter.

Type: String

Length Constraints: Maximum length of 256.

Pattern: [`\S`]+

Required: Yes

### values

The attribute values for the filter.

Type: Array of strings

Length Constraints: Maximum length of 128.

Pattern: [`\S`]+

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](#)

# UpdateExperimentTemplateActionInputItem

Specifies an action for an experiment template.

## Contents

### **actionId**

The ID of the action.

Type: String

Length Constraints: Maximum length of 128.

Pattern: [ \S ]+

Required: No

### **description**

A description for the action.

Type: String

Length Constraints: Maximum length of 512.

Pattern: [ \s\S ]+

Required: No

### **parameters**

The parameters for the action, if applicable.

Type: String to string map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Value Length Constraints: Maximum length of 1024.

Value Pattern: [ \S ]+

Required: No

### **startAfter**

The name of the action that must be completed before the current action starts. Omit this parameter to run the action at the start of the experiment.

Type: Array of strings

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: No

### **targets**

The targets for the action.

Type: String to string map

Key Length Constraints: Maximum length of 64.

Key Pattern: [ \S ]+

Value Length Constraints: Maximum length of 64.

Value Pattern: [ \S ]+

Required: No

## 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](#)

# UpdateExperimentTemplateStopConditionInput

Specifies a stop condition for an experiment. You can define a stop condition as a CloudWatch alarm.

## Contents

### source

The source for the stop condition. Specify `aws:cloudwatch:alarm` if the stop condition is defined by a CloudWatch alarm. Specify `none` if there is no stop condition.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `[\S]+`

Required: Yes

### value

The Amazon Resource Name (ARN) of the CloudWatch alarm.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `[\s\S]+`

Required: No

## 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](#)

# UpdateExperimentTemplateTargetInput

Specifies a target for an experiment. You must specify at least one Amazon Resource Name (ARN) or at least one resource tag. You cannot specify both.

## Contents

### **filters**

The filters to apply to identify target resources using specific attributes.

Type: Array of [ExperimentTemplateTargetInputFilter](#) (p. 78) objects

Required: No

### **resourceArns**

The Amazon Resource Names (ARNs) of the targets.

Type: Array of strings

Array Members: Maximum number of 5 items.

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: [ \S ]+

Required: No

### **resourceTags**

The tags for the target resources.

Type: String to string map

Map Entries: Maximum number of 50 items.

Key Length Constraints: Maximum length of 128.

Key Pattern: [ \s\S ]+

Value Length Constraints: Maximum length of 256.

Value Pattern: [ \s\S ]\*

Required: No

### **resourceType**

The AWS resource type. The resource type must be supported for the specified action.

Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

Required: Yes

### **selectionMode**

Scopes the identified resources to a specific count or percentage.



Type: String

Length Constraints: Maximum length of 64.

Pattern: [ \S ]+

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