
Amazon Data Lifecycle Manager

API Reference

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Amazon Data Lifecycle Manager: API Reference

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Welcome

With Amazon Data Lifecycle Manager, you can manage the lifecycle of your AWS resources. You create lifecycle policies, which are used to automate operations on the specified resources.

Amazon DLM supports Amazon EBS volumes and snapshots. For information about using Amazon DLM with Amazon EBS, see [Automating the Amazon EBS Snapshot Lifecycle](#) in the *Amazon EC2 User Guide*.

This document was last published on May 17, 2019.

Actions

The following actions are supported:

- [CreateLifecyclePolicy](#) (p. 3)
- [DeleteLifecyclePolicy](#) (p. 6)
- [GetLifecyclePolicies](#) (p. 8)
- [GetLifecyclePolicy](#) (p. 11)
- [UpdateLifecyclePolicy](#) (p. 14)

CreateLifecyclePolicy

Creates a policy to manage the lifecycle of the specified AWS resources. You can create up to 100 lifecycle policies.

Request Syntax

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

{
  "Description": "string",
  "ExecutionRoleArn": "string",
  "PolicyDetails": {
    "ResourceTypes": [ "string" ],
    "Schedules": [
      {
        "CopyTags": boolean,
        "CreateRule": {
          "Interval": number,
          "IntervalUnit": "string",
          "Times": [ "string" ]
        },
        "Name": "string",
        "RetainRule": {
          "Count": number
        },
        "TagsToAdd": [
          {
            "Key": "string",
            "Value": "string"
          }
        ]
      }
    ],
    "TargetTags": [
      {
        "Key": "string",
        "Value": "string"
      }
    ]
  },
  "State": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

Description (p. 3)

A description of the lifecycle policy. The characters `^[0-9A-Za-z _-]+$` are supported.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 500.

Required: Yes

[ExecutionRoleArn \(p. 3\)](#)

The Amazon Resource Name (ARN) of the IAM role used to run the operations specified by the lifecycle policy.

Type: String

Required: Yes

[PolicyDetails \(p. 3\)](#)

The configuration details of the lifecycle policy.

Target tags cannot be re-used across lifecycle policies.

Type: [PolicyDetails \(p. 22\)](#) object

Required: Yes

[State \(p. 3\)](#)

The desired activation state of the lifecycle policy after creation.

Type: String

Valid Values: `ENABLED` | `DISABLED`

Required: Yes

Response Syntax

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

{
  "PolicyId": "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.

[PolicyId \(p. 4\)](#)

The identifier of the lifecycle policy.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 29\)](#).

InternalServerErrorException

The service failed in an unexpected way.

HTTP Status Code: 500

InvalidRequestException

Bad request. The request is missing required parameters or has invalid parameters.

HTTP Status Code: 400

LimitExceededException

The request failed because a limit was exceeded.

HTTP Status Code: 429

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DeleteLifecyclePolicy

Deletes the specified lifecycle policy and halts the automated operations that the policy specified.

Request Syntax

```
DELETE /policies/policyId/ HTTP/1.1
```

URI Request Parameters

The request requires the following URI parameters.

PolicyId (p. 6)

The identifier of the lifecycle policy.

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 \(p. 29\)](#).

InternalServerErrorException

The service failed in an unexpected way.

HTTP Status Code: 500

LimitExceededException

The request failed because a limit was exceeded.

HTTP Status Code: 429

ResourceNotFoundException

A requested resource was not found.

HTTP Status Code: 404

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

GetLifecyclePolicies

Gets summary information about all or the specified data lifecycle policies.

To get complete information about a policy, use [GetLifecyclePolicy \(p. 11\)](#).

Request Syntax

```
GET /policies?  
policyIds=PolicyIds&resourceTypes=ResourceTypes&state=State&tagsToAdd=TagsToAdd&targetTags=TargetTags  
HTTP/1.1
```

URI Request Parameters

The request requires the following URI parameters.

PolicyIds (p. 8)

The identifiers of the data lifecycle policies.

ResourceTypes (p. 8)

The resource type.

Array Members: Fixed number of 1 item.

Valid Values: VOLUME

State (p. 8)

The activation state.

Valid Values: ENABLED | DISABLED | ERROR

TagsToAdd (p. 8)

The tags to add to objects created by the policy.

Tags are strings in the format `key=value`.

These user-defined tags are added in addition to the AWS-added lifecycle tags.

Array Members: Minimum number of 0 items. Maximum number of 50 items.

TargetTags (p. 8)

The target tag for a policy.

Tags are strings in the format `key=value`.

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
  "Policies": [
    {
      "Description": "string",
      "PolicyId": "string",
      "State": "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.

Policies (p. 8)

Summary information about the lifecycle policies.

Type: Array of [LifecyclePolicySummary \(p. 21\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 29\)](#).

InternalServerErrorException

The service failed in an unexpected way.

HTTP Status Code: 500

InvalidRequestException

Bad request. The request is missing required parameters or has invalid parameters.

HTTP Status Code: 400

LimitExceededException

The request failed because a limit was exceeded.

HTTP Status Code: 429

ResourceNotFoundException

A requested resource was not found.

HTTP Status Code: 404

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

GetLifecyclePolicy

Gets detailed information about the specified lifecycle policy.

Request Syntax

```
GET /policies/policyId/ HTTP/1.1
```

URI Request Parameters

The request requires the following URI parameters.

PolicyId (p. 11)

The identifier of the lifecycle policy.

Request Body

The request does not have a request body.

Response Syntax

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

{
  "Policy": {
    "DateCreated": number,
    "DateModified": number,
    "Description": "string",
    "ExecutionRoleArn": "string",
    "PolicyDetails": {
      "ResourceTypes": [ "string" ],
      "Schedules": [
        {
          "CopyTags": boolean,
          "CreateRule": {
            "Interval": number,
            "IntervalUnit": "string",
            "Times": [ "string" ]
          },
          "Name": "string",
          "RetainRule": {
            "Count": number
          },
          "TagsToAdd": [
            {
              "Key": "string",
              "Value": "string"
            }
          ]
        }
      ]
    },
    "TargetTags": [
      {
        "Key": "string",
```

```
        "Value": "string"
      }
    ],
    "PolicyId": "string",
    "State": "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.

Policy (p. 11)

Detailed information about the lifecycle policy.

Type: [LifecyclePolicy](#) (p. 19) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 29).

InternalServerErrorException

The service failed in an unexpected way.

HTTP Status Code: 500

LimitExceededException

The request failed because a limit was exceeded.

HTTP Status Code: 429

ResourceNotFoundException

A requested resource was not found.

HTTP Status Code: 404

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V2](#)

UpdateLifecyclePolicy

Updates the specified lifecycle policy.

Request Syntax

```
PATCH /policies/policyId HTTP/1.1
Content-type: application/json

{
  "Description": "string",
  "ExecutionRoleArn": "string",
  "PolicyDetails": {
    "ResourceTypes": [ "string" ],
    "Schedules": [
      {
        "CopyTags": boolean,
        "CreateRule": {
          "Interval": number,
          "IntervalUnit": "string",
          "Times": [ "string" ]
        },
        "Name": "string",
        "RetainRule": {
          "Count": number
        },
        "TagsToAdd": [
          {
            "Key": "string",
            "Value": "string"
          }
        ]
      }
    ],
    "TargetTags": [
      {
        "Key": "string",
        "Value": "string"
      }
    ]
  },
  "State": "string"
}
```

URI Request Parameters

The request requires the following URI parameters.

PolicyId (p. 14)

The identifier of the lifecycle policy.

Request Body

The request accepts the following data in JSON format.

Description (p. 14)

A description of the lifecycle policy.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 500.

Required: No

ExecutionRoleArn (p. 14)

The Amazon Resource Name (ARN) of the IAM role used to run the operations specified by the lifecycle policy.

Type: String

Required: No

PolicyDetails (p. 14)

The configuration of the lifecycle policy.

Target tags cannot be re-used across policies.

Type: [PolicyDetails \(p. 22\)](#) object

Required: No

State (p. 14)

The desired activation state of the lifecycle policy after creation.

Type: String

Valid Values: `ENABLED` | `DISABLED`

Required: No

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 \(p. 29\)](#).

InternalServerErrorException

The service failed in an unexpected way.

HTTP Status Code: 500

InvalidRequestException

Bad request. The request is missing required parameters or has invalid parameters.

HTTP Status Code: 400

LimitExceededException

The request failed because a limit was exceeded.

HTTP Status Code: 429

ResourceNotFoundException

A requested resource was not found.

HTTP Status Code: 404

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

Data Types

The Amazon Data Lifecycle Manager 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:

- [CreateRule](#) (p. 18)
- [LifecyclePolicy](#) (p. 19)
- [LifecyclePolicySummary](#) (p. 21)
- [PolicyDetails](#) (p. 22)
- [RetainRule](#) (p. 23)
- [Schedule](#) (p. 24)
- [Tag](#) (p. 26)

CreateRule

Specifies when to create snapshots of EBS volumes.

Contents

Interval

The interval between snapshots. The supported values are 2, 3, 4, 6, 8, 12, and 24.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

IntervalUnit

The interval unit.

Type: String

Valid Values: HOURS

Required: Yes

Times

The time, in UTC, to start the operation. The supported format is hh:mm.

The operation occurs within a one-hour window following the specified time.

Type: Array of strings

Array Members: Maximum number of 1 item.

Pattern: `^([0-9]|0[0-9]|1[0-9]|2[0-3]):[0-5][0-9]$`

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

LifecyclePolicy

Detailed information about a lifecycle policy.

Contents

DateCreated

The local date and time when the lifecycle policy was created.

Type: Timestamp

Required: No

DateModified

The local date and time when the lifecycle policy was last modified.

Type: Timestamp

Required: No

Description

The description of the lifecycle policy.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 500.

Required: No

ExecutionRoleArn

The Amazon Resource Name (ARN) of the IAM role used to run the operations specified by the lifecycle policy.

Type: String

Required: No

PolicyDetails

The configuration of the lifecycle policy

Type: [PolicyDetails \(p. 22\)](#) object

Required: No

PolicyId

The identifier of the lifecycle policy.

Type: String

Required: No

State

The activation state of the lifecycle policy.

Type: String

Valid Values: `ENABLED` | `DISABLED` | `ERROR`

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

LifecyclePolicySummary

Summary information about a lifecycle policy.

Contents

Description

The description of the lifecycle policy.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 500.

Required: No

PolicyId

The identifier of the lifecycle policy.

Type: String

Required: No

State

The activation state of the lifecycle policy.

Type: String

Valid Values: `ENABLED` | `DISABLED` | `ERROR`

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

PolicyDetails

Specifies the configuration of a lifecycle policy.

Contents

ResourceTypes

The resource type.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `VOLUME`

Required: No

Schedules

The schedule of policy-defined actions.

Type: Array of [Schedule \(p. 24\)](#) objects

Array Members: Fixed number of 1 item.

Required: No

TargetTags

The single tag that identifies targeted resources for this policy.

Type: Array of [Tag \(p. 26\)](#) objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

RetainRule

Specifies the number of snapshots to keep for each EBS volume.

Contents

Count

The number of snapshots to keep for each volume, up to a maximum of 1000.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1000.

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Schedule

Specifies a schedule.

Contents

CopyTags

Copy all user-defined tags on a source volume to snapshots of the volume created by this policy.

Type: Boolean

Required: No

CreateRule

The create rule.

Type: [CreateRule \(p. 18\)](#) object

Required: No

Name

The name of the schedule.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 500.

Required: No

RetainRule

The retain rule.

Type: [RetainRule \(p. 23\)](#) object

Required: No

TagsToAdd

The tags to apply to policy-created resources. These user-defined tags are in addition to the AWS-added lifecycle tags.

Type: Array of [Tag \(p. 26\)](#) objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

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 Go - Pilot](#)
- [AWS SDK for Java](#)

- [AWS SDK for Ruby V2](#)

Tag

Specifies a tag for a resource.

Contents

Key

The tag key.

Type: String

Required: Yes

Value

The tag value.

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 Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

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

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

Logging Amazon Data Lifecycle Manager API Calls Using AWS CloudTrail

Amazon Data Lifecycle Manager (Amazon DLM) is integrated with AWS CloudTrail, a service that provides a record of actions taken by a user, role, or an AWS service in Amazon DLM. CloudTrail captures all API calls for Amazon DLM as events, including calls from the Amazon DLM console and from code calls to the Amazon DLM APIs. If you create a trail, you can enable continuous delivery of CloudTrail events to an Amazon S3 bucket, including events for Amazon DLM. If you don't configure a trail, you can still view the most recent events in the CloudTrail console in **Event history**. Using the information collected by CloudTrail, you can determine the request that was made to Amazon DLM, the IP address from which the request was made, who made the request, when it was made, and additional details.

To learn more about CloudTrail, see the [AWS CloudTrail User Guide](#).

Amazon DLM Information in CloudTrail

CloudTrail is enabled on your AWS account when you create the account. When activity occurs in Amazon DLM, that activity is recorded in a CloudTrail event along with other AWS service events in **Event history**. You can view, search, and download recent events in your AWS account. For more information, see [Viewing Events with CloudTrail Event History](#).

For an ongoing record of events in your AWS account, including events for Amazon DLM, create a trail. A trail enables CloudTrail to deliver log files to an Amazon S3 bucket. By default, when you create a trail in the console, the trail applies to all regions. The trail logs events from all regions in the AWS partition and delivers the log files to the Amazon S3 bucket that you specify. Additionally, you can configure other AWS services to further analyze and act upon the event data collected in CloudTrail logs. For more information, see:

- [Overview for Creating a Trail](#)
- [CloudTrail Supported Services and Integrations](#)
- [Configuring Amazon SNS Notifications for CloudTrail](#)
- [Receiving CloudTrail Log Files from Multiple Regions](#) and [Receiving CloudTrail Log Files from Multiple Accounts](#)

All Amazon DLM actions are logged by CloudTrail. For example, calls to the `CreateLifecyclePolicy` and `DeleteLifecyclePolicy` actions generate entries in the CloudTrail log files. For the complete list of actions, see [Actions \(p. 2\)](#).

Every event or log entry contains information about who generated the request. The identity information helps you determine the following:

- Whether the request was made with root or IAM user credentials.
- Whether the request was made with temporary security credentials for a role or federated user.
- Whether the request was made by another AWS service.

For more information, see the [CloudTrail userIdentity Element](#).

Understanding Amazon DLM Log File Entries

A trail is a configuration that enables delivery of events as log files to an Amazon S3 bucket that you specify. CloudTrail log files contain one or more log entries. An event represents a single request from any source and includes information about the requested action, the date and time of the action, request parameters, and so on. CloudTrail log files are not an ordered stack trace of the public API calls, so they do not appear in any specific order.

Example Example: CreateLifecyclePolicy

The following is an example CloudTrail log entry for the CreateLifecyclePolicy action.

```
{
  "eventVersion": "1.05",
  "userIdentity": {
    "type": "Root",
    "principalId": "123456789012",
    "arn": "arn:aws:iam::123456789012:root",
    "accountId": "123456789012",
    "accessKeyId": "AKIAJA2ELRVCPEXAMPLE",
    "userName": "user",
    "sessionContext": {
      "attributes": {
        "mfaAuthenticated": "false",
        "creationDate": "2018-07-24T18:01:05Z"
      }
    }
  },
  "eventTime": "2018-07-24T18:20:28Z",
  "eventSource": "dlm.amazonaws.com",
  "eventName": "CreateLifecyclePolicy",
  "awsRegion": "us-west-2",
  "sourceIPAddress": "54.240.230.179",
  "userAgent": "console.ec2.amazonaws.com",
  "requestParameters": {
    "ExecutionRoleArn": "arn:aws:iam::123456789012:role/service-role/AWSDataLifecycleManagerServiceRole",
    "PolicyDetails": {
      "ResourceTypes": [
        "VOLUME"
      ],
      "Schedules": [
        {
          "CreateRule": {
            "Interval": 12,
            "IntervalUnit": "HOURS",
            "Times": [
              "09:00"
            ]
          },
          "Name": "Default Schedule",
          "RetainRule": {
            "Count": 3
          },
          "TagsToAdd": [
            {
              "Key": "Name",
              "Value": "backup-my-volume"
            }
          ]
        }
      ]
    }
  }
}
```

```

        ]
      },
      "TargetTags": [
        {
          "Key": "Name",
          "Value": "my-volume"
        }
      ]
    },
    "Description": "test-cloudtrail",
    "State": "DISABLED"
  },
  "responseElements": {
    "PolicyId": "policy-04ff8755fce0599eb"
  },
  "requestID": "3d714ca6-8f6e-11e8-92a4-35fd765427f0",
  "eventID": "28ab3121-6040-4a40-80c7-ae59b3adf405",
  "readOnly": false,
  "eventType": "AwsApiCall",
  "recipientAccountId": "123456789012"
}

```

Example Example: DeleteLifecyclePolicy

The following is an example CloudTrail log entry for the DeleteLifecyclePolicy action.

```

{
  "eventVersion": "1.05",
  "userIdentity": {
    "type": "Root",
    "principalId": "123456789012",
    "arn": "arn:aws:iam:123456789012:root",
    "accountId": "123456789012",
    "accessKeyId": "AKIAJA2ELRVCPEXAMPLE",
    "userName": "user",
    "sessionContext": {
      "attributes": {
        "mfaAuthenticated": "false",
        "creationDate": "2018-07-24T18:01:05Z"
      }
    }
  },
  "eventTime": "2018-07-24T19:33:33Z",
  "eventSource": "dlm.amazonaws.com",
  "eventName": "DeleteLifecyclePolicy",
  "awsRegion": "us-west-2",
  "sourceIPAddress": "54.240.230.241",
  "userAgent": "console.ec2.amazonaws.com",
  "requestParameters": {
    "policyId": "policy-04ff8755fce0599eb"
  },
  "responseElements": null,
  "requestID": "73260971-8f78-11e8-a156-598016e53fb2",
  "eventID": "3740f2fb-0d6a-4712-a7ad-eb9f17103fb2",
  "readOnly": false,
  "eventType": "AwsApiCall",
  "recipientAccountId": "123456789012"
}

```