CloudWatch RUM

API Reference

API Version 2018-05-10

CloudWatch RUM: API Reference

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Welcome

With Amazon CloudWatch RUM, you can perform real-user monitoring to collect client-side data about your web application performance from actual user sessions in real time. The data collected includes page load times, client-side errors, and user behavior. When you view this data, you can see it all aggregated together and also see breakdowns by the browsers and devices that your customers use.

You can use the collected data to quickly identify and debug client-side performance issues. CloudWatch RUM helps you visualize anomalies in your application performance and find relevant debugging data such as error messages, stack traces, and user sessions. You can also use RUM to understand the range of end-user impact including the number of users, geolocations, and browsers used.

This document was last published on June 2, 2022.

Actions

The following actions are supported:

CreateAppMonitor

Creates a Amazon CloudWatch RUM app monitor, which collects telemetry data from your application and sends that data to RUM. The data includes performance and reliability information such as page load time, client-side errors, and user behavior.

You use this operation only to create a new app monitor. To update an existing app monitor, use UpdateAppMonitor instead.

After you create an app monitor, sign in to the CloudWatch RUM console to get the JavaScript code snippet to add to your web application. For more information, see How do I find a code snippet that I've already generated?

Request Syntax

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

{
   "AppMonitorConfiguration": {
      "AllowCookies": boolean,
      "EnableXRay": boolean,
      "ExcludedPages": [ "string" ],
      "FavoritePages": [ "string" ],
      "GuestRoleArn": "string",
      "IdentityPoolId": "string",
      "IncludedPages": [ "string" ],
      "SessionSampleRate": number,
      "Telemetries": [ "string" ]
   },
   "CwLogEnabled": boolean,
   "Domain": "string",
   "Name": "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.

AppMonitorConfiguration (p. 3)

A structure that contains much of the configuration data for the app monitor. If you are using Amazon Cognito for authorization, you must include this structure in your request, and it must include the ID of the Amazon Cognito identity pool to use for authorization. If you don't include `AppMonitorConfiguration`, you must set up your own authorization method. For more information, see Authorize your application to send data to AWS.

If you omit this argument, the sample rate used for RUM is set to 10% of the user sessions.

Type: AppMonitorConfiguration (p. 34) object

Required: No

CwLogEnabled (p. 3)

Data collected by RUM is kept by RUM for 30 days and then deleted. This parameter specifies whether RUM sends a copy of this telemetry data to Amazon CloudWatch Logs in your account. This enables you to keep the telemetry data for more than 30 days, but it does incur Amazon CloudWatch Logs charges.

If you omit this parameter, the default is `false`.

Type: Boolean

Required: No

Domain (p. 3)

The top-level internet domain name for which your application has administrative authority.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(localhost)|^((25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.){3}(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)$|^(?![-.])([A-Za-z0-9-\.\-]{0,63})((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))\.(?![-])[A-Za-z-0-9]{1,63}((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))|^(*\.)(?![-.])([A-Za-z0-9-\.\-]{0,63})((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))\.(?![-])[A-Za-z-0-9]{1,63}((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))`

Required: Yes

Name (p. 3)

A name for the app monitor.

Type: String

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

Pattern: `^(?!\.)[\.\-_#A-Za-z0-9]+$`

Required: Yes

Tags (p. 3)

Assigns one or more tags (key-value pairs) to the app monitor.

Tags can help you organize and categorize your resources. You can also use them to scope user permissions by granting a user permission to access or change only resources with certain tag values.

Tags don't have any semantic meaning to AWS and are interpreted strictly as strings of characters.

You can associate as many as 50 tags with an app monitor.

For more information, see Tagging AWS resources.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

Response Syntax

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

{
   "Id": "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.

Id (p. 5)

The unique ID of the new app monitor.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$`

Errors

For information about the errors that are common to all actions, see Common Errors (p. 48).

AccessDeniedException

You don't have sufficient permissions to perform this action.

HTTP Status Code: 403

ConflictException

This operation attempted to create a resource that already exists.

HTTP Status Code: 409

InternalServerException

Internal service exception.

HTTP Status Code: 500

ServiceQuotaExceededException

This request exceeds a service quota.

HTTP Status Code: 402

ThrottlingException

The request was throttled because of quota limits.

HTTP Status Code: 429

ValidationException

One of the arguments for the request is not valid.

HTTP Status Code: 400

Examples

Example

The following example creates an app monitor.

Sample Request

```
{
    "AppMonitorConfiguration": {
        "AllowCookies": true,
        "EnableXRay": true,
        "ExcludedPages": [
            "https://www.example.com/pageB"
        ],
        "GuestRoleArn": "arn:aws:iam::123456789012:role/RUM-EXAMPLE-us-west-2-
[account]-0000000000000-Unauth",
        "IdentityPoolId": "us-west-2: EXAMPLE-4811-4e5a-8a94-EXAMPLEec1",
        "SessionSampleRate": 0.1,
        "Telemetries": [
            "performance"
        ]
    },
    "CwLogEnabled": true,
    "Domain": "example.com",
    "Name": "appMonitor",
    "Tags": {
        "KeyName": "tagValue"
     }
}
```

Sample Response

```
{
    "Id": “a0abf0c2-a736-4819-8371-4d90108265df”
}
```

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

DeleteAppMonitor

Deletes an existing app monitor. This immediately stops the collection of data.

Request Syntax

```
DELETE /appmonitor/Name HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Name (p. 8)

The name of the app monitor to delete.

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

Pattern: `^(?!\.)[\.\-_#A-Za-z0-9]+$`

Required: Yes

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. 48).

AccessDeniedException

You don't have sufficient permissions to perform this action.

HTTP Status Code: 403

ConflictException

This operation attempted to create a resource that already exists.

HTTP Status Code: 409

InternalServerException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

ThrottlingException

The request was throttled because of quota limits.

HTTP Status Code: 429

ValidationException

One of the arguments for the request is not valid.

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

GetAppMonitor

Retrieves the complete configuration information for one app monitor.

Request Syntax

```
GET /appmonitor/Name HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

Name (p. 10)

The app monitor to retrieve information for.

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

Pattern: `^(?!\.)[\.\-_#A-Za-z0-9]+$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AppMonitor": {
      "AppMonitorConfiguration": {
         "AllowCookies": boolean,
         "EnableXRay": boolean,
         "ExcludedPages": [ "string" ],
         "FavoritePages": [ "string" ],
         "GuestRoleArn": "string",
         "IdentityPoolId": "string",
         "IncludedPages": [ "string" ],
         "SessionSampleRate": number,
         "Telemetries": [ "string" ]
      },
      "Created": "string",
      "DataStorage": {
         "CwLog": {
            "CwLogEnabled": boolean,
            "CwLogGroup": "string"
         }
      },
      "Domain": "string",
      "Id": "string",
      "LastModified": "string",
      "Name": "string",
      "State": "string",
```

```
      "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.

AppMonitor (p. 10)

A structure containing all the configuration information for the app monitor.

Type: AppMonitor (p. 31) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 48).

AccessDeniedException

You don't have sufficient permissions to perform this action.

HTTP Status Code: 403

InternalServerException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

ThrottlingException

The request was throttled because of quota limits.

HTTP Status Code: 429

ValidationException

One of the arguments for the request is not valid.

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
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- AWS SDK for Java V2
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAppMonitorData

Retrieves the raw performance events that RUM has collected from your web application, so that you can do your own processing or analysis of this data.

Request Syntax

```
POST /appmonitor/Name/data HTTP/1.1
Content-type: application/json

{
   "Filters": [
      {
         "Name": "string",
         "Values": [ "string" ]
      }
   ],
   "MaxResults": number,
   "NextToken": "string",
   "TimeRange": {
      "After": number,
      "Before": number
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

Name (p. 13)

The name of the app monitor that collected the data that you want to retrieve.

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

Pattern: `^(?!\.)[\.\-_#A-Za-z0-9]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Filters (p. 13)

An array of structures that you can use to filter the results to those that match one or more sets of key-value pairs that you specify.

Type: Array of QueryFilter (p. 42) objects

Required: No

MaxResults (p. 13)

The maximum number of results to return in one operation.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: No

NextToken (p. 13)

Use the token returned by the previous operation to request the next page of results.

Type: String

Required: No

TimeRange (p. 13)

A structure that defines the time range that you want to retrieve results from.

Type: TimeRange (p. 44) object

Required: Yes

Response Syntax

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

{
   "Events": [ "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.

Events (p. 14)

The events that RUM collected that match your request.

Type: Array of strings

NextToken (p. 14)

A token that you can use in a subsequent operation to retrieve the next set of results.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 48).

AccessDeniedException

You don't have sufficient permissions to perform this action.

HTTP Status Code: 403

InternalServerException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

ThrottlingException

The request was throttled because of quota limits.

HTTP Status Code: 429

ValidationException

One of the arguments for the request is not valid.

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++
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- AWS SDK for Python
- AWS SDK for Ruby V3

ListAppMonitors

Returns a list of the Amazon CloudWatch RUM app monitors in the account.

Request Syntax

```
POST /appmonitors?maxResults=MaxResults&nextToken=NextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

MaxResults (p. 16)

The maximum number of results to return in one operation.

NextToken (p. 16)

Use the token returned by the previous operation to request the next page of results.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "AppMonitorSummaries": [
      {
         "Created": "string",
         "Id": "string",
         "LastModified": "string",
         "Name": "string",
         "State": "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.

AppMonitorSummaries (p. 16)

An array of structures that contain information about the returned app monitors.

Type: Array of AppMonitorSummary (p. 38) objects

NextToken (p. 16)

A token that you can use in a subsequent operation to retrieve the next set of results.

Type: String

Errors

For information about the errors that are common to all actions, see Common Errors (p. 48).

AccessDeniedException

You don't have sufficient permissions to perform this action.

HTTP Status Code: 403

InternalServerException

Internal service exception.

HTTP Status Code: 500

ThrottlingException

The request was throttled because of quota limits.

HTTP Status Code: 429

ValidationException

One of the arguments for the request is not valid.

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

Displays the tags associated with a CloudWatch RUM resource.

Request Syntax

```
GET /tags/ResourceArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

ResourceArn (p. 18)

The ARN of the resource that you want to see the tags of.

Pattern: `arn:[^:]*:[^:]*:[^:]*:[^:]*:.*`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "ResourceArn": "string",
   "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.

ResourceArn (p. 18)

The ARN of the resource that you are viewing.

Type: String

Pattern: `arn:[^:]*:[^:]*:[^:]*:[^:]*:.*`

Tags (p. 18)

The list of tag keys and values associated with the resource you specified.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 48).

InternalServerException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

ValidationException

One of the arguments for the request is not valid.

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

PutRumEvents

Sends telemetry events about your application performance and user behavior to CloudWatch RUM. The code snippet that RUM generates for you to add to your application includes `PutRumEvents` operations to send this data to RUM.

Each `PutRumEvents` operation can send a batch of events from one user session.

Request Syntax

```
POST /appmonitors/Id/ HTTP/1.1
Content-type: application/json

{
   "AppMonitorDetails": {
      "id": "string",
      "name": "string",
      "version": "string"
   },
   "BatchId": "string",
   "RumEvents": [
      {
         "details": "string",
         "id": "string",
         "metadata": "string",
         "timestamp": number,
         "type": "string"
      }
   ],
   "UserDetails": {
      "sessionId": "string",
      "userId": "string"
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

Id (p. 20)

The ID of the app monitor that is sending this data.

Length Constraints: Fixed length of 36.

Pattern: `^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

AppMonitorDetails (p. 20)

A structure that contains information about the app monitor that collected this telemetry information.

Type: AppMonitorDetails (p. 37) object

Required: Yes

BatchId (p. 20)

A unique identifier for this batch of RUM event data.

Type: String

Required: Yes

RumEvents (p. 20)

An array of structures that contain the telemetry event data.

Type: Array of RumEvent (p. 43) objects

Required: Yes

UserDetails (p. 20)

A structure that contains information about the user session that this batch of events was collected from.

Type: UserDetails (p. 45) object

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. 48).

AccessDeniedException

You don't have sufficient permissions to perform this action.

HTTP Status Code: 403

InternalServerException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

ThrottlingException

The request was throttled because of quota limits.

HTTP Status Code: 429

ValidationException

One of the arguments for the request is not valid.

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

Assigns one or more tags (key-value pairs) to the specified CloudWatch RUM resource. Currently, the only resources that can be tagged app monitors.

Tags can help you organize and categorize your resources. You can also use them to scope user permissions by granting a user permission to access or change only resources with certain tag values.

Tags don't have any semantic meaning to AWS and are interpreted strictly as strings of characters.

You can use the `TagResource` action with a resource that already has tags. If you specify a new tag key for the resource, this tag is appended to the list of tags associated with the alarm. If you specify a tag key that is already associated with the resource, the new tag value that you specify replaces the previous value for that tag.

You can associate as many as 50 tags with a resource.

For more information, see Tagging AWS resources.

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. 23)

The ARN of the CloudWatch RUM resource that you're adding tags to.

Pattern: `arn:[^:]*:[^:]*:[^:]*:[^:]*:.*`

Required: Yes

Request Body

The request accepts the following data in JSON format.

Tags (p. 23)

The list of key-value pairs to associate with the resource.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

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. 48).

InternalServerException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

ValidationException

One of the arguments for the request is not valid.

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

UntagResource

Removes one or more 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. 25)

The ARN of the CloudWatch RUM resource that you're removing tags from.

Pattern: `arn:[^:]*:[^:]*:[^:]*:[^:]*:.*`

Required: Yes

TagKeys (p. 25)

The list of tag keys to remove from the resource.

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

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

Required: Yes

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. 48).

InternalServerException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

ValidationException

One of the arguments for the request is not valid.

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

UpdateAppMonitor

Updates the configuration of an existing app monitor. When you use this operation, only the parts of the app monitor configuration that you specify in this operation are changed. For any parameters that you omit, the existing values are kept.

You can't use this operation to change the tags of an existing app monitor. To change the tags of an existing app monitor, use TagResource.

To create a new app monitor, use CreateAppMonitor.

After you update an app monitor, sign in to the CloudWatch RUM console to get the updated JavaScript code snippet to add to your web application. For more information, see How do I find a code snippet that I've already generated?

Request Syntax

```
PATCH /appmonitor/Name HTTP/1.1
Content-type: application/json

{
   "AppMonitorConfiguration": {
      "AllowCookies": boolean,
      "EnableXRay": boolean,
      "ExcludedPages": [ "string" ],
      "FavoritePages": [ "string" ],
      "GuestRoleArn": "string",
      "IdentityPoolId": "string",
      "IncludedPages": [ "string" ],
      "SessionSampleRate": number,
      "Telemetries": [ "string" ]
   },
   "CwLogEnabled": boolean,
   "Domain": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

Name (p. 27)

The name of the app monitor to update.

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

Pattern: `^(?!\.)[\.\-_#A-Za-z0-9]+$`

Required: Yes

Request Body

The request accepts the following data in JSON format.

AppMonitorConfiguration (p. 27)

A structure that contains much of the configuration data for the app monitor. If you are using Amazon Cognito for authorization, you must include this structure in your request, and it must

include the ID of the Amazon Cognito identity pool to use for authorization. If you don't include `AppMonitorConfiguration`, you must set up your own authorization method. For more information, see Authorize your application to send data to AWS.

Type: AppMonitorConfiguration (p. 34) object

Required: No

CwLogEnabled (p. 27)

Data collected by RUM is kept by RUM for 30 days and then deleted. This parameter specifies whether RUM sends a copy of this telemetry data to Amazon CloudWatch Logs in your account. This enables you to keep the telemetry data for more than 30 days, but it does incur Amazon CloudWatch Logs charges.

Type: Boolean

Required: No

Domain (p. 27)

The top-level internet domain name for which your application has administrative authority.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(localhost)|^((25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.){3}(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)$|^(?![-.])([A-Za-z0-9-\.\-]{0,63})((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))\.(?![-])[A-Za-z-0-9]{1,63}((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))|^(*\.)(?![-.])([A-Za-z0-9-\.\-]{0,63})((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))\.(?![-])[A-Za-z-0-9]{1,63}((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))`

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. 48).

AccessDeniedException

You don't have sufficient permissions to perform this action.

HTTP Status Code: 403

ConflictException

This operation attempted to create a resource that already exists.

HTTP Status Code: 409

InternalServerException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

ThrottlingException

The request was throttled because of quota limits.

HTTP Status Code: 429

ValidationException

One of the arguments for the request is not valid.

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 CloudWatch RUM 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:

AppMonitor

A RUM app monitor collects telemetry data from your application and sends that data to RUM. The data includes performance and reliability information such as page load time, client-side errors, and user behavior.

Contents

AppMonitorConfiguration

A structure that contains much of the configuration data for the app monitor.

Type: AppMonitorConfiguration (p. 34) object

Required: No

Created

The date and time that this app monitor was created.

Type: String

Length Constraints: Fixed length of 19.

Pattern: `/d{4}-[01]/d-[0-3]/dT[0-2]/d:[0-5]/d:[0-5]/d/./d+([+-][0-2]/d:[0-5]/d|Z)`

Required: No

DataStorage

A structure that contains information about whether this app monitor stores a copy of the telemetry data that RUM collects using CloudWatch Logs.

Type: DataStorage (p. 41) object

Required: No

Domain

The top-level internet domain name for which your application has administrative authority.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(localhost)|^((25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.){3}(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)$|^(?![-.])([A-Za-z0-9-\.\-]{0,63})((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))\.(?![-])[A-Za-z-0-9]{1,63}((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))|^(*\.)(?![-.])([A-Za-z0-9-\.\-]{0,63})((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))\.(?![-])[A-Za-z-0-9]{1,63}((?![-])([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))`

Required: No

Id

The unique ID of this app monitor.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$`

Required: No

LastModified

The date and time of the most recent changes to this app monitor's configuration.

Type: String

Length Constraints: Fixed length of 19.

Pattern: `/d{4}-[01]/d-[0-3]/dT[0-2]/d:[0-5]/d:[0-5]/d/./d+([+-][0-2]/d:[0-5]/d|Z)`

Required: No

Name

The name of the app monitor.

Type: String

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

Pattern: `^(?!\.)[\.\-_#A-Za-z0-9]+$`

Required: No

State

The current state of the app monitor.

Type: String

Valid Values: `CREATED | DELETING | ACTIVE`

Required: No

Tags

The list of tag keys and values associated with this app monitor.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `^(?!aws:)[a-zA-Z+-=._:/]+$`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

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

AppMonitorConfiguration

This structure contains much of the configuration data for the app monitor.

Contents

AllowCookies

If you set this to `true`, the RUM web client sets two cookies, a session cookie and a user cookie. The cookies allow the RUM web client to collect data relating to the number of users an application has and the behavior of the application across a sequence of events. Cookies are stored in the top-level domain of the current page.

Type: Boolean

Required: No

EnableXRay

If you set this to `true`, RUM enables AWS X-Ray tracing for the user sessions that RUM samples. RUM adds an X-Ray trace header to allowed HTTP requests. It also records an X-Ray segment for allowed HTTP requests. You can see traces and segments from these user sessions in the X-Ray console and the CloudWatch ServiceLens console. For more information, see What is AWS X-Ray?

Type: Boolean

Required: No

ExcludedPages

A list of URLs in your website or application to exclude from RUM data collection.

You can't include both `ExcludedPages` and `IncludedPages` in the same operation.

Type: Array of strings

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

Length Constraints: Minimum length of 1. Maximum length of 1260.

Pattern: `https?:\/\/(www\.)?[-a-zA-Z0-9@:%._\+~#=]{1,256}\.[a-zA-Z0-9()]{1,6}\b([-a-zA-Z0-9()@:%_\+.~#?&//=]*)`

Required: No

FavoritePages

A list of pages in your application that are to be displayed with a "favorite" icon in the CloudWatch RUM console.

Type: Array of strings

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

Required: No

GuestRoleArn

The ARN of the guest IAM role that is attached to the Amazon Cognito identity pool that is used to authorize the sending of data to RUM.

Type: String

Pattern: `arn:[^:]*:[^:]*:[^:]*:[^:]*:.*`

Required: No

IdentityPoolId

The ID of the Amazon Cognito identity pool that is used to authorize the sending of data to RUM.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 55.

Pattern: `[\w-]+:[0-9a-f-]+`

Required: No

IncludedPages

If this app monitor is to collect data from only certain pages in your application, this structure lists those pages.

You can't include both `ExcludedPages` and `IncludedPages` in the same operation.

Type: Array of strings

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

Length Constraints: Minimum length of 1. Maximum length of 1260.

Pattern: `https?:\/\/(www\.)?[-a-zA-Z0-9@:%._\+~#=]{1,256}\.[a-zA-Z0-9()]{1,6}\b([-a-zA-Z0-9()@:%_\+.~#?&//=]*)`

Required: No

SessionSampleRate

Specifies the portion of user sessions to use for RUM data collection. Choosing a higher portion gives you more data but also incurs more costs.

The range for this value is 0 to 1 inclusive. Setting this to 1 means that 100% of user sessions are sampled, and setting it to 0.1 means that 10% of user sessions are sampled.

If you omit this parameter, the default of 0.1 is used, and 10% of sessions will be sampled.

Type: Double

Valid Range: Minimum value of 0. Maximum value of 1.

Required: No

Telemetries

An array that lists the types of telemetry data that this app monitor is to collect.

- `errors` indicates that RUM collects data about unhandled JavaScript errors raised by your application.
- `performance` indicates that RUM collects performance data about how your application and its resources are loaded and rendered. This includes Core Web Vitals.
- `http` indicates that RUM collects data about HTTP errors thrown by your application.

Type: Array of strings

Valid Values: `errors | performance | http`

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

AppMonitorDetails

A structure that contains information about the RUM app monitor.

Contents

id

The unique ID of the app monitor.

Type: String

Required: No

name

The name of the app monitor.

Type: String

Required: No

version

The version of the app monitor.

Type: String

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

AppMonitorSummary

A structure that includes some data about app monitors and their settings.

Contents

Created

The date and time that the app monitor was created.

Type: String

Length Constraints: Fixed length of 19.

Pattern: `/d{4}-[01]/d-[0-3]/dT[0-2]/d:[0-5]/d:[0-5]/d/./d+([+-][0-2]/d:[0-5]/d|Z)`

Required: No

Id

The unique ID of this app monitor.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$`

Required: No

LastModified

The date and time of the most recent changes to this app monitor's configuration.

Type: String

Length Constraints: Fixed length of 19.

Pattern: `/d{4}-[01]/d-[0-3]/dT[0-2]/d:[0-5]/d:[0-5]/d/./d+([+-][0-2]/d:[0-5]/d|Z)`

Required: No

Name

The name of this app monitor.

Type: String

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

Pattern: `^(?!\.)[\.\-_#A-Za-z0-9]+$`

Required: No

State

The current state of this app monitor.

Type: String

Valid Values: `CREATED | DELETING | ACTIVE`

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

CwLog

A structure that contains the information about whether the app monitor stores copies of the data that RUM collects in CloudWatch Logs. If it does, this structure also contains the name of the log group.

Contents

CwLogEnabled

Indicated whether the app monitor stores copies of the data that RUM collects in CloudWatch Logs.

Type: Boolean

Required: No

CwLogGroup

The name of the log group where the copies are stored.

Type: String

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

DataStorage

A structure that contains information about whether this app monitor stores a copy of the telemetry data that RUM collects using CloudWatch Logs.

Contents

CwLog

A structure that contains the information about whether the app monitor stores copies of the data that RUM collects in CloudWatch Logs. If it does, this structure also contains the name of the log group.

Type: CwLog (p. 40) object

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

QueryFilter

A structure that defines a key and values that you can use to filter the results. The only performance events that are returned are those that have values matching the ones that you specify in one of your `QueryFilter` structures.

For example, you could specify `Browser` as the `Name` and specify `Chrome,Firefox` as the `Values` to return events generated only from those browsers.

Specifying `Invert` as the `Name` works as a "not equal to" filter. For example, specify `Invert` as the `Name` and specify `Chrome` as the value to return all events except events from user sessions with the Chrome browser.

Contents

Name

The name of a key to search for. The filter returns only the events that match the `Name` and `Values` that you specify.

Valid values for `Name` are `Browser` | `Device` | `Country` | `Page` | `OS` | `EventType` | `Invert`

Type: String

Required: No

Values

The values of the `Name` that are to be be included in the returned results.

Type: Array of strings

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

RumEvent

A structure that contains the information for one performance event that RUM collects from a user session with your application.

Contents

details

A string containing details about the event.

Type: String

Required: Yes

id

A unique ID for this event.

Type: String

Required: Yes

metadata

Metadata about this event, which contains a JSON serialization of the identity of the user for this session. The user information comes from information such as the HTTP user-agent request header and document interface.

Type: String

Required: No

timestamp

The exact time that this event occurred.

Type: Timestamp

Required: Yes

type

The JSON schema that denotes the type of event this is, such as a page load or a new session.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TimeRange

A structure that defines the time range that you want to retrieve results from.

Contents

After

The beginning of the time range to retrieve performance events from.

Type: Long

Required: Yes

Before

The end of the time range to retrieve performance events from. If you omit this, the time range extends to the time that this operation is performed.

Type: Long

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

UserDetails

A structure that contains information about the user session that this batch of events was collected from.

Contents

sessionId

The session ID that the performance events are from.

Type: String

Required: No

userId

The ID of the user for this user session. This ID is generated by RUM and does not include any personally identifiable information about the user.

Type: String

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

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'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: `20120325T120000Z`.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is

not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Handling Dates in Signature Version 4 in the *Amazon Web Services General Reference*.

Type: string

Required: Conditional

X-Amz-Security-Token

The temporary security token that was obtained through a call to AWS Security Token Service (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