



API Reference

CloudWatch RUM



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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 July 4, 2024.

Actions

The following actions are supported:

- [BatchCreateRumMetricDefinitions](#)
- [BatchDeleteRumMetricDefinitions](#)
- [BatchGetRumMetricDefinitions](#)
- [CreateAppMonitor](#)
- [DeleteAppMonitor](#)
- [DeleteRumMetricsDestination](#)
- [GetAppMonitor](#)
- [GetAppMonitorData](#)
- [ListAppMonitors](#)
- [ListRumMetricsDestinations](#)
- [ListTagsForResource](#)
- [PutRumEvents](#)
- [PutRumMetricsDestination](#)
- [TagResource](#)
- [UntagResource](#)
- [UpdateAppMonitor](#)
- [UpdateRumMetricDefinition](#)

BatchCreateRumMetricDefinitions

Specifies the extended metrics and custom metrics that you want a CloudWatch RUM app monitor to send to a destination. Valid destinations include CloudWatch and Evidently.

By default, RUM app monitors send some metrics to CloudWatch. These default metrics are listed in [CloudWatch metrics that you can collect with CloudWatch RUM](#).

In addition to these default metrics, you can choose to send extended metrics, custom metrics, or both.

- Extended metrics let you send metrics with additional dimensions that aren't included in the default metrics. You can also send extended metrics to both Evidently and CloudWatch. The valid dimension names for the additional dimensions for extended metrics are `BrowserName`, `CountryCode`, `DeviceType`, `FileType`, `OSName`, and `PageId`. For more information, see [Extended metrics that you can send to CloudWatch and CloudWatch Evidently](#).
- Custom metrics are metrics that you define. You can send custom metrics to CloudWatch, CloudWatch Evidently, or both. With custom metrics, you can use any metric name and namespace. To derive the metrics, you can use any custom events, built-in events, custom attributes, or default attributes.

You can't send custom metrics to the `AWS/RUM` namespace. You must send custom metrics to a custom namespace that you define. The namespace that you use can't start with `AWS/`. CloudWatch RUM prepends `RUM/CustomMetrics/` to the custom namespace that you define, so the final namespace for your metrics in CloudWatch is `RUM/CustomMetrics/your-custom-namespace`.

The maximum number of metric definitions that you can specify in one `BatchCreateRumMetricDefinitions` operation is 200.

The maximum number of metric definitions that one destination can contain is 2000.

Extended metrics sent to CloudWatch and RUM custom metrics are charged as CloudWatch custom metrics. Each combination of additional dimension name and dimension value counts as a custom metric. For more information, see [Amazon CloudWatch Pricing](#).

You must have already created a destination for the metrics before you send them. For more information, see [PutRumMetricsDestination](#).

If some metric definitions specified in a BatchCreateRumMetricDefinitions operations are not valid, those metric definitions fail and return errors, but all valid metric definitions in the same operation still succeed.

Request Syntax

```
POST /rummetrics/AppMonitorName/metrics HTTP/1.1
Content-type: application/json
```

```
{
  "Destination": "string",
  "DestinationArn": "string",
  "MetricDefinitions": [
    {
      "DimensionKeys": {
        "string": "string"
      },
      "EventPattern": "string",
      "Name": "string",
      "Namespace": "string",
      "UnitLabel": "string",
      "ValueKey": "string"
    }
  ]
}
```

URI Request Parameters

The request uses the following URI parameters.

AppMonitorName

The name of the CloudWatch RUM app monitor that is to send the metrics.

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.

Destination

The destination to send the metrics to. Valid values are CloudWatch and Evidently. If you specify Evidently, you must also specify the Amazon Resource Name (ARN) of the CloudWatchEvidently experiment that will receive the metrics and an IAM role that has permission to write to the experiment.

Type: String

Valid Values: CloudWatch | Evidently

Required: Yes

DestinationArn

This parameter is required if Destination is Evidently. If Destination is CloudWatch, do not use this parameter.

This parameter specifies the ARN of the Evidently experiment that is to receive the metrics. You must have already defined this experiment as a valid destination. For more information, see [PutRumMetricsDestination](#).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

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

Required: No

MetricDefinitions

An array of structures which define the metrics that you want to send.

Type: Array of [MetricDefinitionRequest](#) objects

Required: Yes

Response Syntax

HTTP/1.1 200

Content-type: application/json

```
{
  "Errors": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "MetricDefinition": {
        "DimensionKeys": {
          "string" : "string"
        },
        "EventPattern": "string",
        "Name": "string",
        "Namespace": "string",
        "UnitLabel": "string",
        "ValueKey": "string"
      }
    }
  ],
  "MetricDefinitions": [
    {
      "DimensionKeys": {
        "string" : "string"
      },
      "EventPattern": "string",
      "MetricDefinitionId": "string",
      "Name": "string",
      "Namespace": "string",
      "UnitLabel": "string",
      "ValueKey": "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.

Errors

An array of error objects, if the operation caused any errors.

Type: Array of [BatchCreateRumMetricDefinitionsError](#) objects

MetricDefinitions

An array of structures that define the extended metrics.

Type: Array of [MetricDefinition](#) objects

Errors

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

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

InternalServerErrorException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

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 extended metrics with dimensions `Browser:Chrome`, `Browser:Safari`, and `CountryCode=US`.

```
{
  AppMonitorName: "app-monitor-name",
  Destination: "CloudWatch",
  MetricDefinitionId: "guid2",
  MetricDefinition: {
    Name: "NavigationToleratedTransaction",
    DimensionKeys: [{
      Key: "metadata.browserName",
      Value: "BrowserName"
    }, {
      Key: "metadata.countryCode",
      Value: "CountryCode"
    }],
    EventPattern: '{
      "event_type": ["com.amazon.rum.performance_navigation_event"],
      "metadata": {
        "browserName": [ "Chrome", "Safari" ],
        "countryCode": [ "US" ]
      },
      "event_details": {
        "duration": [{
          "numeric": [ ">=", 2000, "<", 8000 ]
        }]
      }
    }
  }
}
```



```
    },  
    UnitLabel: 'Count'  
  }  
}
```

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

BatchDeleteRumMetricDefinitions

Removes the specified metrics from being sent to an extended metrics destination.

If some metric definition IDs specified in a BatchDeleteRumMetricDefinitions operations are not valid, those metric definitions fail and return errors, but all valid metric definition IDs in the same operation are still deleted.

The maximum number of metric definitions that you can specify in one BatchDeleteRumMetricDefinitions operation is 200.

Request Syntax

```
DELETE /rummetrics/AppMonitorName/metrics?  
destination=Destination&destinationArn=DestinationArn&metricDefinitionIds=MetricDefinitionIds  
HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

AppMonitorName

The name of the CloudWatch RUM app monitor that is sending these metrics.

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

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

Required: Yes

Destination

Defines the destination where you want to stop sending the specified metrics. Valid values are CloudWatch and Evidently. If you specify Evidently, you must also specify the ARN of the CloudWatchEvidently experiment that is to be the destination and an IAM role that has permission to write to the experiment.

Valid Values: CloudWatch | Evidently

Required: Yes

DestinationArn

This parameter is required if Destination is Evidently. If Destination is CloudWatch, do not use this parameter.

This parameter specifies the ARN of the Evidently experiment that was receiving the metrics that are being deleted.

Length Constraints: Minimum length of 0. Maximum length of 2048.

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

MetricDefinitionIds

An array of structures which define the metrics that you want to stop sending.

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

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
  "Errors": [
    {
      "ErrorCode": "string",
      "ErrorMessage": "string",
      "MetricDefinitionId": "string"
    }
  ],
  "MetricDefinitionIds": [ "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.

Errors

An array of error objects, if the operation caused any errors.

Type: Array of [BatchDeleteRumMetricDefinitionsError](#) objects

MetricDefinitionIds

The IDs of the metric definitions that were deleted.

Type: Array of strings

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

Errors

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

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

InternalServerError

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

BatchGetRumMetricDefinitions

Retrieves the list of metrics and dimensions that a RUM app monitor is sending to a single destination.

Request Syntax

```
GET /rummetrics/AppMonitorName/metrics?  
destination=Destination&destinationArn=DestinationArn&maxResults=MaxResults&nextToken=NextToken  
HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

AppMonitorName

The name of the CloudWatch RUM app monitor that is sending the metrics.

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

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

Required: Yes

Destination

The type of destination that you want to view metrics for. Valid values are CloudWatch and Evidently.

Valid Values: CloudWatch | Evidently

Required: Yes

DestinationArn

This parameter is required if Destination is Evidently. If Destination is CloudWatch, do not use this parameter.

This parameter specifies the ARN of the Evidently experiment that corresponds to the destination.

Length Constraints: Minimum length of 0. Maximum length of 2048.

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

MaxResults

The maximum number of results to return in one operation. The default is 50. The maximum that you can specify is 100.

To retrieve the remaining results, make another call with the returned `NextToken` value.

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

NextToken

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

{
  "MetricDefinitions": [
    {
      "DimensionKeys": {
        "string" : "string"
      },
      "EventPattern": "string",
      "MetricDefinitionId": "string",
      "Name": "string",
      "Namespace": "string",
      "UnitLabel": "string",
      "ValueKey": "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.

MetricDefinitions

An array of structures that display information about the metrics that are sent by the specified app monitor to the specified destination.

Type: Array of [MetricDefinition](#) objects

NextToken

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](#).

AccessDeniedException

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

HTTP Status Code: 403

InternalServerError

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

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" ]
  },
  "CustomEvents": {
    "Status": "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

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](#) object

Required: No

CustomEvents

Specifies whether this app monitor allows the web client to define and send custom events. If you omit this parameter, custom events are DISABLED.

For more information about custom events, see [Send custom events](#).

Type: [CustomEvents](#) object

Required: No

CwLogEnabled

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

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-z0-9]{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-z0-9]{1,63})((?![-]) ([a-zA-Z0-9]{1}|^[a-zA-Z0-9]{0,1}))`

Required: Yes

Name

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

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](#)

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](#).

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

InternalServerErrorException

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

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]-00000000000000-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 v2](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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

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](#).

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

InternalServerErrorException

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteRumMetricsDestination

Deletes a destination for CloudWatch RUM extended metrics, so that the specified app monitor stops sending extended metrics to that destination.

Request Syntax

```
DELETE /rummetrics/AppMonitorName/metricsdestination?  
destination=Destination&destinationArn=DestinationArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

AppMonitorName

The name of the app monitor that is sending metrics to the destination that you want to delete.

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

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

Required: Yes

Destination

The type of destination to delete. Valid values are CloudWatch and Evidently.

Valid Values: CloudWatch | Evidently

Required: Yes

DestinationArn

This parameter is required if Destination is Evidently. If Destination is CloudWatch, do not use this parameter. This parameter specifies the ARN of the Evidently experiment that corresponds to the destination to delete.

Length Constraints: Minimum length of 0. Maximum length of 2048.

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

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](#).

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

InternalServerError

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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

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",
  "CustomEvents": {
    "Status": "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](#)

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

Type: [AppMonitor](#) object

Errors

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

AccessDeniedException

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

HTTP Status Code: 403

InternalServerErrorException

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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

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

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](#) objects

Required: No

MaxResults

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

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

Type: String

Required: No

TimeRange

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

Type: [TimeRange](#) 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

The events that RUM collected that match your request.

Type: Array of strings

NextToken

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](#).

AccessDeniedException

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

HTTP Status Code: 403

InternalServerError

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [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

The maximum number of results to return in one operation. The default is 50. The maximum that you can specify is 100.

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

NextToken

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](#)

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

Type: Array of [AppMonitorSummary](#) objects

[NextToken](#)

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](#).

AccessDeniedException

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

HTTP Status Code: 403

InternalServerErrorException

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ListRumMetricsDestinations

Returns a list of destinations that you have created to receive RUM extended metrics, for the specified app monitor.

For more information about extended metrics, see [AddRumMetrics](#).

Request Syntax

```
GET /rummetrics/AppMonitorName/metricsdestination?  
maxResults=MaxResults&nextToken=NextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

AppMonitorName

The name of the app monitor associated with the destinations that you want to retrieve.

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

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

Required: Yes

MaxResults

The maximum number of results to return in one operation. The default is 50. The maximum that you can specify is 100.

To retrieve the remaining results, make another call with the returned `NextToken` value.

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

NextToken

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

{
  "Destinations": [
    {
      "Destination": "string",
      "DestinationArn": "string",
      "IamRoleArn": "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.

[Destinations](#)

The list of CloudWatch RUM extended metrics destinations associated with the app monitor that you specified.

Type: Array of [MetricDestinationSummary](#) objects

[NextToken](#)

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](#).

AccessDeniedException

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

HTTP Status Code: 403

InternalServerErrorException

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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

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

The ARN of the resource that you are viewing.

Type: String

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

Tags

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](#).

InternalServerError

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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

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

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

Type: [AppMonitorDetails](#) object

Required: Yes

BatchId

A unique identifier for this batch of RUM event data.

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: Yes

RumEvents

An array of structures that contain the telemetry event data.

Type: Array of [RumEvent](#) objects

Required: Yes

UserDetails

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

Type: [UserDetails](#) 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](#).

AccessDeniedException

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

HTTP Status Code: 403

InternalServerError

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

PutRumMetricsDestination

Creates or updates a destination to receive extended metrics from CloudWatch RUM. You can send extended metrics to CloudWatch or to a CloudWatch Evidently experiment.

For more information about extended metrics, see [BatchCreateRumMetricDefinitions](#).

Request Syntax

```
POST /rummetrics/AppMonitorName/metricsdestination HTTP/1.1
Content-type: application/json

{
  "Destination": "string",
  "DestinationArn": "string",
  "IamRoleArn": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

[AppMonitorName](#)

The name of the CloudWatch RUM app monitor that will send the metrics.

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.

[Destination](#)

Defines the destination to send the metrics to. Valid values are CloudWatch and Evidently. If you specify Evidently, you must also specify the ARN of the CloudWatchEvidently experiment that is to be the destination and an IAM role that has permission to write to the experiment.

Type: String

Valid Values: CloudWatch | Evidently

Required: Yes

DestinationArn

Use this parameter only if `Destination` is `Evidently`. This parameter specifies the ARN of the Evidently experiment that will receive the extended metrics.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

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

Required: No

IamRoleArn

This parameter is required if `Destination` is `Evidently`. If `Destination` is `CloudWatch`, don't use this parameter.

This parameter specifies the ARN of an IAM role that RUM will assume to write to the Evidently experiment that you are sending metrics to. This role must have permission to write to that experiment.

If you specify this parameter, you must be signed on to a role that has [PassRole](#) permissions attached to it, to allow the role to be passed. The [CloudWatchAmazonCloudWatchRUMFullAccess](#) policy doesn't include `PassRole` permissions.

Type: String

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

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](#).

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

InternalServerError

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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 are 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 resource. 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

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

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](#).

InternalServerErrorException

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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

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

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

Required: Yes

TagKeys

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](#).

InternalServerErrorException

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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" ]
  },
  "CustomEvents": {
    "Status": "string"
  },
  "CwLogEnabled": boolean,
  "Domain": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

Name

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

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](#) object

Required: No

CustomEvents

Specifies whether this app monitor allows the web client to define and send custom events. The default is for custom events to be DISABLED.

For more information about custom events, see [Send custom events](#).

Type: [CustomEvents](#) object

Required: No

CwLogEnabled

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

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-z0-9]{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-z0-9]{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](#).

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

InternalServerErrorException

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

UpdateRumMetricDefinition

Modifies one existing metric definition for CloudWatch RUM extended metrics. For more information about extended metrics, see [BatchCreateRumMetricsDefinitions](#).

Request Syntax

```
PATCH /rummetrics/AppMonitorName/metrics HTTP/1.1
Content-type: application/json
```

```
{
  "Destination": "string",
  "DestinationArn": "string",
  "MetricDefinition": {
    "DimensionKeys": {
      "string" : "string"
    },
    "EventPattern": "string",
    "Name": "string",
    "Namespace": "string",
    "UnitLabel": "string",
    "ValueKey": "string"
  },
  "MetricDefinitionId": "string"
}
```

URI Request Parameters

The request uses the following URI parameters.

AppMonitorName

The name of the CloudWatch RUM app monitor that sends these metrics.

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.

Destination

The destination to send the metrics to. Valid values are CloudWatch and Evidently. If you specify Evidently, you must also specify the ARN of the CloudWatchEvidently experiment that will receive the metrics and an IAM role that has permission to write to the experiment.

Type: String

Valid Values: CloudWatch | Evidently

Required: Yes

DestinationArn

This parameter is required if Destination is Evidently. If Destination is CloudWatch, do not use this parameter.

This parameter specifies the ARN of the Evidently experiment that is to receive the metrics. You must have already defined this experiment as a valid destination. For more information, see [PutRumMetricsDestination](#).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

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

Required: No

MetricDefinition

A structure that contains the new definition that you want to use for this metric.

Type: [MetricDefinitionRequest](#) object

Required: Yes

MetricDefinitionId

The ID of the metric definition to update.

Type: String

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

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](#).

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

InternalServerError

Internal service exception.

HTTP Status Code: 500

ResourceNotFoundException

Resource not found.

HTTP Status Code: 404

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

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 v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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](#)
- [AppMonitorConfiguration](#)
- [AppMonitorDetails](#)
- [AppMonitorSummary](#)
- [BatchCreateRumMetricDefinitionsError](#)
- [BatchDeleteRumMetricDefinitionsError](#)
- [CustomEvents](#)
- [CwLog](#)
- [DataStorage](#)
- [MetricDefinition](#)
- [MetricDefinitionRequest](#)
- [MetricDestinationSummary](#)
- [QueryFilter](#)
- [RumEvent](#)
- [TimeRange](#)
- [UserDetails](#)

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](#) object

Required: No

Created

The date and time that this app monitor was created.

Type: String

Length Constraints: Fixed length of 19.

Required: No

CustomEvents

Specifies whether this app monitor allows the web client to define and send custom events.

For more information about custom events, see [Send custom events](#).

Type: [CustomEvents](#) object

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](#) 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-z0-9]{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-z0-9]{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.

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 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.

Note

It is possible that an app monitor does not have a value for `GuestRoleArn`. For example, this can happen when you use the console to create an app monitor and you allow CloudWatch RUM to create a new identity pool for Authorization. In this case, `GuestRoleArn` is not present in the [GetAppMonitor](#) response because it is not stored by the service.

If this issue affects you, you can take one of the following steps:

- Use the AWS Cloud Development Kit (AWS CDK) to create an identity pool and the associated IAM role, and use that for your app monitor.
- Make a separate [GetIdentityPoolRoles](#) call to Amazon Cognito to retrieve the `GuestRoleArn`.

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 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 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.

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.

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

BatchCreateRumMetricDefinitionsError

A structure that defines one error caused by a [BatchCreateRumMetricsDefinitions](#) operation.

Contents

ErrorCode

The error code.

Type: String

Required: Yes

ErrorMessage

The error message for this metric definition.

Type: String

Required: Yes

MetricDefinition

The metric definition that caused this error.

Type: [MetricDefinitionRequest](#) object

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

BatchDeleteRumMetricDefinitionsError

A structure that defines one error caused by a [BatchCreateRumMetricsDefinitions](#) operation.

Contents

ErrorCode

The error code.

Type: String

Required: Yes

ErrorMessage

The error message for this metric definition.

Type: String

Required: Yes

MetricDefinitionId

The ID of the metric definition that caused this error.

Type: String

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

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

CustomEvents

A structure that contains information about custom events for this app monitor.

Contents

Status

Specifies whether this app monitor allows the web client to define and send custom events. The default is for custom events to be DISABLED.

Type: String

Valid Values: ENABLED | DISABLED

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

MetricDefinition

A structure that displays the definition of one extended metric that RUM sends to CloudWatch or CloudWatch Evidently. For more information, see [Additional metrics that you can send to CloudWatch and CloudWatch Evidently](#).

Contents

MetricDefinitionId

The ID of this metric definition.

Type: String

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

Required: Yes

Name

The name of the metric that is defined in this structure.

Type: String

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

Required: Yes

DimensionKeys

This field is a map of field paths to dimension names. It defines the dimensions to associate with this metric in CloudWatch. The value of this field is used only if the metric destination is CloudWatch. If the metric destination is Evidently, the value of DimensionKeys is ignored.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 29 items.

Key Length Constraints: Minimum length of 1. Maximum length of 280.

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

Value Pattern: `^(?!:).*[^\s].*`

Required: No

EventPattern

The pattern that defines the metric. RUM checks events that happen in a user's session against the pattern, and events that match the pattern are sent to the metric destination.

If the metrics destination is CloudWatch and the event also matches a value in `DimensionKeys`, then the metric is published with the specified dimensions.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 4000.

Required: No

Namespace

If this metric definition is for a custom metric instead of an extended metric, this field displays the metric namespace that the custom metric is published to.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 237.

Pattern: `[a-zA-Z0-9-._/#:]+$`

Required: No

UnitLabel

Use this field only if you are sending this metric to CloudWatch. It defines the CloudWatch metric unit that this metric is measured in.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

ValueKey

The field within the event object that the metric value is sourced from.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 280.

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

MetricDefinitionRequest

Use this structure to define one extended metric or custom metric that RUM will send to CloudWatch or CloudWatch Evidently. For more information, see [Custom metrics and extended metrics that you can send to CloudWatch and CloudWatch Evidently](#).

This structure is validated differently for extended metrics and custom metrics. For extended metrics that are sent to the AWS/RUM namespace, the following validations apply:

- The Namespace parameter must be omitted or set to AWS/RUM.
- Only certain combinations of values for Name, ValueKey, and EventPattern are valid. In addition to what is displayed in the following list, the EventPattern can also include information used by the DimensionKeys field.
 - If Name is PerformanceNavigationDuration, then ValueKey must be event_details.duration and the EventPattern must include {"event_type": ["com.amazon.rum.performance_navigation_event"]}
 - If Name is PerformanceResourceDuration, then ValueKey must be event_details.duration and the EventPattern must include {"event_type": ["com.amazon.rum.performance_resource_event"]}
 - If Name is NavigationSatisfiedTransaction, then ValueKey must be null and the EventPattern must include { "event_type": ["com.amazon.rum.performance_navigation_event"], "event_details": { "duration": [{ "numeric": [">", 2000] }] } }
 - If Name is NavigationToleratedTransaction, then ValueKey must be null and the EventPattern must include { "event_type": ["com.amazon.rum.performance_navigation_event"], "event_details": { "duration": [{ "numeric": [">=", 2000, "<" 8000] }] } }
 - If Name is NavigationFrustratedTransaction, then ValueKey must be null and the EventPattern must include { "event_type": ["com.amazon.rum.performance_navigation_event"], "event_details": { "duration": [{ "numeric": [">=", 8000] }] } }
 - If Name is WebVitalsCumulativeLayoutShift, then ValueKey must be event_details.value and the EventPattern must include {"event_type": ["com.amazon.rum.cumulative_layout_shift_event"]}

- If Name is `WebVitalsFirstInputDelay`, then ValueKey must be `event_details.value` and the EventPattern must include `{"event_type": ["com.amazon.rum.first_input_delay_event"]}`
- If Name is `WebVitalsLargestContentfulPaint`, then ValueKey must be `event_details.value` and the EventPattern must include `{"event_type": ["com.amazon.rum.largest_contentful_paint_event"]}`
- If Name is `JsErrorCount`, then ValueKey must be null and the EventPattern must include `{"event_type": ["com.amazon.rum.js_error_event"]}`
- If Name is `HttpErrorCount`, then ValueKey must be null and the EventPattern must include `{"event_type": ["com.amazon.rum.http_event"]}`
- If Name is `SessionCount`, then ValueKey must be null and the EventPattern must include `{"event_type": ["com.amazon.rum.session_start_event"]}`
- If Name is `PageViewCount`, then ValueKey must be null and the EventPattern must include `{"event_type": ["com.amazon.rum.page_view_event"]}`
- If Name is `Http4xxCount`, then ValueKey must be null and the EventPattern must include `{"event_type": ["com.amazon.rum.http_event"], "event_details": {"response": {"status": [{"numeric": [">=", 400, "<", 500]}]}}`
- If Name is `Http5xxCount`, then ValueKey must be null and the EventPattern must include `{"event_type": ["com.amazon.rum.http_event"], "event_details": {"response": {"status": [{"numeric": [">=", 500, "<=", 599]}]}}`

For custom metrics, the following validation rules apply:

- The namespace can't be omitted and can't be `AWS/RUM`. You can use the `AWS/RUM` namespace only for extended metrics.
- All dimensions listed in the `DimensionKeys` field must be present in the value of `EventPattern`.
- The values that you specify for `ValueKey`, `EventPattern`, and `DimensionKeys` must be fields in RUM events, so all first-level keys in these fields must be one of the keys in the list later in this section.
- If you set a value for `EventPattern`, it must be a JSON object.
- For every non-empty `event_details`, there must be a non-empty `event_type`.
- If `EventPattern` contains an `event_details` field, it must also contain an `event_type`. For every built-in `event_type` that you use, you must use a value for `event_details` that

corresponds to that `event_type`. For information about event details that correspond to event types, see [RUM event details](#).

- In `EventPattern`, any JSON array must contain only one value.

Valid key values for first-level keys in the `ValueKey`, `EventPattern`, and `DimensionKeys` fields:

- `account_id`
- `application_Id`
- `application_version`
- `application_name`
- `batch_id`
- `event_details`
- `event_id`
- `event_interaction`
- `event_timestamp`
- `event_type`
- `event_version`
- `log_stream`
- `metadata`
- `sessionId`
- `user_details`
- `userId`

Contents

Name

The name for the metric that is defined in this structure. For custom metrics, you can specify any name that you like. For extended metrics, valid values are the following:

- `PerformanceNavigationDuration`
- `PerformanceResourceDuration`
- `NavigationSatisfiedTransaction`

- `NavigationToleratedTransaction`
- `NavigationFrustratedTransaction`
- `WebVitalsCumulativeLayoutShift`
- `WebVitalsFirstInputDelay`
- `WebVitalsLargestContentfulPaint`
- `JsErrorCount`
- `HttpErrorCount`
- `SessionCount`

Type: String

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

Required: Yes

DimensionKeys

Use this field only if you are sending the metric to CloudWatch.

This field is a map of field paths to dimension names. It defines the dimensions to associate with this metric in CloudWatch. For extended metrics, valid values for the entries in this field are the following:

- `"metadata.pageId": "PageId"`
- `"metadata.browserName": "BrowserName"`
- `"metadata.deviceType": "DeviceType"`
- `"metadata.osName": "OSName"`
- `"metadata.countryCode": "CountryCode"`
- `"event_details.fileType": "FileType"`

For both extended metrics and custom metrics, all dimensions listed in this field must also be included in `EventPattern`.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 29 items.

Key Length Constraints: Minimum length of 1. Maximum length of 280.

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

Value Pattern: `^(?!:).*[^\s].*`

Required: No

EventPattern

The pattern that defines the metric, specified as a JSON object. RUM checks events that happen in a user's session against the pattern, and events that match the pattern are sent to the metric destination.

When you define extended metrics, the metric definition is not valid if EventPattern is omitted.

Example event patterns:

- `'{ "event_type": ["com.amazon.rum.js_error_event"], "metadata": { "browserName": ["Chrome", "Safari"], } }'`
- `'{ "event_type": ["com.amazon.rum.performance_navigation_event"], "metadata": { "browserName": ["Chrome", "Firefox"] }, "event_details": { "duration": [{ "numeric": ["<", 2000] }] } }'`
- `'{ "event_type": ["com.amazon.rum.performance_navigation_event"], "metadata": { "browserName": ["Chrome", "Safari"], "countryCode": ["US"] }, "event_details": { "duration": [{ "numeric": [">=", 2000, "<", 8000] }] } }'`

If the metrics destination is CloudWatch and the event also matches a value in DimensionKeys, then the metric is published with the specified dimensions.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 4000.

Required: No

Namespace

If this structure is for a custom metric instead of an extended metrics, use this parameter to define the metric namespace for that custom metric. Do not specify this parameter if this structure is for an extended metric.

You cannot use any string that starts with AWS/ for your namespace.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 237.

Pattern: `[a-zA-Z0-9-._/#:]+$`

Required: No

UnitLabel

The CloudWatch metric unit to use for this metric. If you omit this field, the metric is recorded with no unit.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

ValueKey

The field within the event object that the metric value is sourced from.

If you omit this field, a hardcoded value of 1 is pushed as the metric value. This is useful if you want to count the number of events that the filter catches.

If this metric is sent to CloudWatch Evidently, this field will be passed to Evidently raw. Evidently will handle data extraction from the event.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 280.

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

MetricDestinationSummary

A structure that displays information about one destination that CloudWatch RUM sends extended metrics to.

Contents

Destination

Specifies whether the destination is CloudWatch or Evidently.

Type: String

Valid Values: CloudWatch | Evidently

Required: No

DestinationArn

If the destination is Evidently, this specifies the ARN of the Evidently experiment that receives the metrics.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

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

Required: No

IamRoleArn

This field appears only when the destination is Evidently. It specifies the ARN of the IAM role that is used to write to the Evidently experiment that receives the metrics.

Type: String

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

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 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 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 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

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

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

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

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 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 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

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

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

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

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 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 [Signing AWS API requests](#) in the *IAM User Guide*.

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 [Create a signed AWS API request](#) in the *IAM User Guide*.

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 [Elements of an AWS API request signature](#) in the *IAM User Guide*.

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 STS, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, 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 [Create a signed AWS API request](#) in the *IAM User Guide*.

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: 403

ExpiredTokenException

The security token included in the request is expired

HTTP Status Code: 403

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 403

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

MalformedHttpRequestException

Problems with the request at the HTTP level, e.g. we can't decompress the body according to the decompression algorithm specified by the content-encoding.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 401

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestAbortedException

Convenient exception that can be used when a request is aborted before a reply is sent back (e.g. client closed connection).

HTTP Status Code: 400

RequestEntityTooLargeException

Problems with the request at the HTTP level. The request entity is too large.

HTTP Status Code: 413

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

RequestTimeoutException

Problems with the request at the HTTP level. Reading the Request timed out.

HTTP Status Code: 408

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

UnrecognizedClientException

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

UnknownOperationException

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 404

ValidationError

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

HTTP Status Code: 400