

Real User Monitoring

Operation Guide

Product Documentation



Copyright Notice

©2013-2019 Tencent Cloud. All rights reserved.

Copyright in this document is exclusively owned by Tencent Cloud. You must not reproduce, modify, copy or distribute in any way, in whole or in part, the contents of this document without Tencent Cloud's the prior written consent.

Trademark Notice



All trademarks associated with Tencent Cloud and its services are owned by Tencent Cloud Computing (Beijing) Company Limited and its affiliated companies. Trademarks of third parties referred to in this document are owned by their respective proprietors.

Service Statement

This document is intended to provide users with general information about Tencent Cloud's products and services only and does not form part of Tencent Cloud's terms and conditions. Tencent Cloud's products or services are subject to change. Specific products and services and the standards applicable to them are exclusively provided for in Tencent Cloud's applicable terms and conditions.

Contents

Operation Guide

Data Overview

Application Connection

Page Performance

Exception Analysis

Page View

Offline Log

API Monitoring

Static Resource

Custom Speed Test

Custom Event

Application Management

Application Settings

Business System

Allowlist Management

Access Management

Overview

Policy Syntax

Granting Policy

Resource Tag

Alarm Policy

Creating Alarm

Viewing Alarm

Operation Guide

Data Overview

Last updated : 2022-08-05 17:14:49

This document describes how to view the data overview.

Prerequisites

You have [connected your application](#).

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **Data Overview** to enter the data overview page.
3. On the data overview page, you can view the key metric information and overall application score, including PV, FMP, JavaScript errors/error rate, as well as success rate, failure rate, and duration of API or static resource requests.

You can click the star on the left of the score to favorite the application panel and view all favorited panels quickly. The panels are sorted by the favorite time.

Data Analysis Dashboard



On the data overview page, you can click the line chart icon in each project module to view the data analysis dashboard.

Scoring rules

The scoring rules and percentage vary by metric as detailed below:

Applicable Scope	Scoring Metric	Scoring Rules	Percentage
------------------	----------------	---------------	------------

Applicable Scope	Scoring Metric	Scoring Rules	Percentage
Web, mini program, Hippy, and React Native	Page error rate (page errors/page opens)	<ol style="list-style-type: none"> If the error rate is less than or equal to 0.5%, the score will be 100. If the error rate is greater than 0.5% but less than 10%, the score will be $100 - 10 * \text{error rate}$. If the error rate is greater than or equal to 10%, the score will be 0. 	30%
Web, mini program, Hippy, and React Native	Average page open duration	<ol style="list-style-type: none"> If the duration is less than or equal to 1,000 ms, the score will be 100. If the duration is greater than 1,000 ms by N 100 ms, the score will be $100 - 10 * N$, and the lowest score can be 0. 	10%
Web, mini program, Hippy, and React Native	API success rate (successful API access requests/total access requests)	Same as the rules for the page error rate.	30%
Web, mini program, Hippy, and React Native	Average API access duration	Same as the rules for the average page open duration.	5%
Web, mini program, Hippy, and React Native	Static resource success rate (successful static resource requests/total requests)	Same as the rules for the page error rate.	20%
Web, mini program, Hippy, and React Native	Average static resource request duration	Same as the rules for the average page open duration.	5%

Descriptions of key application metric colors

Metric Name	Green	Orange	Red
firstScreenTime	Duration \leq 1000 ms	$1000 \text{ ms} \leq \text{duration} \leq 3000 \text{ ms}$	Duration $>$ 3000 ms
JavaScript error rate	Error rate \leq 0.5%	$0.5\% < \text{error rate} < 10\%$	Error rate \geq 10%

Metric Name	Green	Orange	Red
API success rate	Success rate > 99.5%	$90\% \leq \text{success rate} \leq 99.5\%$	Success rate < 90%
Static resource success rate	Success rate > 99.5%	$90\% \leq \text{success rate} \leq 99.5\%$	Success rate < 90%

Application Connection

Last updated : 2022-08-05 17:17:32

RUM can be connected to web, mini program (WeChat and QQ), Hippy, Weex, React Native, and Flutter applications. This document describes how to connect an application.

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **Data Overview**.
3. On the data overview page, click **Application Connection** and configure the application information as detailed below:

Configuration Item	Description
Application Name	Enter a custom application name, which identifies the application in the RUM console.
Application Description	Enter an application description such as usage and overview, which helps other users better understand this application.
Application Type	RUM can be connected to web, mini program (WeChat and QQ), Hippy, Weex, React Native, and Flutter applications.
Application Repository Address (optional)	Enter the address of your application repository, which is optional.
Business System	This feature is used to manage your connected applications by category. For example, you can categorize your applications by conditions such as development team, business logic, and application type. If you have no available teams, click **Create** on the right, enter the relevant information, and click **OK** to create one.

4. After completing the configuration, click **Next** and select a method to install the SDK as detailed below:

- Install the SDK through **npm** (supported for all application types). The following steps use a web application as an example to describe how to connect to the SDK through npm.
 - i. On the connection guide page, copy the first command line to import the npm package.
 - ii. On the connection guide page, copy the provided code to initialize the SDK.
- Connect to the SDK by **importing the `<script>` tag** (supported only for web applications).
 - i. On the connection guide page, copy the provided `<script>` tag code.
 - ii. Import the code below **`<script>` tag import** into the `<head></head>` tags.

After completing the above steps for connection, you can use the data overview, page performance, exception analysis, page view (PV and UV), API monitoring, and static resource features. If you want to use the log query, offline log, custom speed test, and custom event features, you need to report the data as instructed in the connection guide.

Page Performance

Last updated : 2022-08-05 17:19:39

This document describes how to use the page performance feature. It allows you to use performance change trend chart, page loading waterfall plot, region view, and other dimensions to analyze key page performance metrics, such as `firstScreenTime` and request response.

Prerequisites

You have [connected your application](#).

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **Page Performance**.
3. On the page performance page, you can view the page performance metrics.

Performance view

It displays the change trends of key page performance metrics.

- You can click a legend above the chart to hide or show the corresponding data.
- You can display the trend for the specified time period or the past 14 days.
- You can drag the curve to display the FMP at a specific time point.
- You can drag the round buttons left and right to adjust the time span of the chart.

Page loading waterfall plot

You can use the page loading waterfall plot to view the duration of each phase and optimize the page performance accordingly.

The complete page loading duration is the sum of the TCP connection, DNS query, SSL connection, TTFB, DOM parsing, and resource loading durations.

Core Web Vitals

Core Web Vitals reflect user experience from perspectives of loading speed, interactivity, and visual stability, and grade pages into three levels of "Good", "Needs Improvement", and "Poor", helping you comprehensively optimize the user experience.

Core Web Vitals include three core basic metrics: LCP, FID, and CLS.

Metric Acronym	Metric Name	Description
LCP	Largest Contentful Paint	It is the duration between when the user requests the website address and when the largest visible content element is rendered in the visible window. The element is usually an image, video, or a large block-level text element.
FID	First Input Delay	It is the duration between when the user interacts with (clicks a link or button on) the page for the first time and when the browser responds to the interaction. The object of this metric is any interactive element that is clicked by the user for the first time.
CLS	Cumulative Layout Shift	It is the total score of all accidental layout shifts throughout the entire lifecycle of the page, which is between 0 and any positive number. 0 indicates that there are no shifts, and the higher the value, the greater the website layout shift.

Metric level

Metric Level	Description
Good	The performance is good.
Needs Improvement	The performance needs to be optimized.
Poor	The performance is poor.

Other views

View Name	Description
Top underperformed pages view	It displays the top five pages with the poorest performance, including firstScreenTime, page loading duration, and day-over-day comparison, in order to help you understand the conditions of poorly performing pages and quickly find performance bottlenecks.
Network/Platform view	It uses a pie chart to display the number of exceptions, percentage, and firstScreenTime of pages from each network type/platform, such as 3G, 4G, and Wi-Fi networks as well as macOS, Windows, and iOS platforms.
ISP view	It uses a pie chart to display the number of exceptions, percentage, and firstScreenTime of pages from each ISP such as China Mobile, China Telecom, and China Unicom.
Region view	It uses a pie chart to display the number of exceptions, percentage, and firstScreenTime of pages from each region.
Brand/Model view	It uses a pie chart to display the number of exceptions, percentage, and firstScreenTime of pages from each mobile phone brand/model.

View Name	Description
Browser view	It uses a pie chart to display the number of exceptions, percentage, and firstScreenTime of pages from each browser.
Version view	It uses a pie chart to display the number of exceptions, percentage, and firstScreenTime of pages from each application version. You can use <code>new Aegis</code> to pass in <code>version</code> during application connection to customize the version information related to development. The SDK version is used by default.
ext1/ext2/ext3 views	They are custom views. You can customize their parameters passed in during reporting.

Metric description

Metric Name	Unit	Description
First Meaningful Paint (FMP)	ms	It is the duration between when the user requests to open a new page and when the browser renders the first meaningful paint.
Complete page loading duration	ms	It is the duration between when the user requests to open a new page and when the browser completely renders the corresponding page. Complete page loading duration = TCP connection + DNS query + SSL connection + TTFB + DOM parsing + resource loading durations
Time to First Byte (TTFB)	ms	It is the duration in milliseconds between when a page request is sent and when the first byte of the response data is received.
DOM Parse	ms	It is the DOM parsing duration.
DOM Ready	ms	It is the time it takes to completely load and parse the initial HTML document.
DNS	ms	It is the DNS query duration.
TCP	ms	It is the TCP connection duration.
SSL	ms	It is the secure SSL connection duration.
Request response	ms	It is the request response duration.
Resource download	ms	It is the resource loading duration.
Content download	ms	It is the duration between when the browser receives the first byte and when it receives the last byte.

Exception Analysis

Last updated : 2022-08-05 17:20:04

This document describes how to use the exception analysis feature. It can analyze various exceptions, such as JavaScript errors, Promise errors, Ajax request exceptions, JavaScript loading exceptions, and API return code exceptions.

Exception Analysis

It is used to display the change trend of exceptions in each type.

- You can switch to display exceptions for the specified time period or by day.
- You can drag the two round buttons below the trend chart left and right to adjust the time span.
- You can click a legend above the chart to hide or display the corresponding data.

JavaScript Error Rankings

It displays the content and number of occurrences of JavaScript errors. You need to specify the time period first before viewing the error information.

Other Views

View Name	Description
Network/Platform view	It uses a pie chart to display the number and percentage of exceptions from each network type/platform, such as 3G, 4G, and Wi-Fi networks as well as macOS, Windows, and iOS platforms.
ISP view	It uses a pie chart to display the number and percentage of exceptions from each ISP such as China Mobile, China Telecom, and China Unicom.
Region view	It uses a pie chart to display the number and percentage of exceptions from each region.
Brand/Model view	It uses a pie chart to display the number and percentage of exceptions from each mobile phone brand/model.
Browser view	It uses a pie chart to display the number and percentage of exceptions from each browser.
Version view	It uses a pie chart to display the number and percentage of exceptions from each application version. You can use <code>new Aegis</code> to pass in <code>version</code> during application connection to customize the version information related to development. The SDK version is used by default.
ext1/ext2/ext3 views	They are custom views. You can customize their parameters passed in during reporting.

Page View

Last updated : 2022-08-05 17:21:06

This document describes how to use the page view feature. It displays page view metrics (UV and PV) and supports multidimensional page view analysis.

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **Page View**.
3. On the page view page, view the page view metrics.

Advanced filters

You can filter data by business system, page address, time, ISP, network type, and platform.

Data analysis

It displays the data analysis menu by default where only the PV change trend chart is displayed.

- You can click **Data Export** in the top-right corner to export the PV data for the specified time period.
- You can drag the two round buttons below the trend chart left and right to adjust the time span.

PV and UV

It displays the PV and UV change trends.

- You can click the PV/UV legends to hide or show the PV/UV curves.
- You can drag the two round buttons below the trend chart left and right to adjust the time span.

Top pages view

It displays the top page URLs with the highest page views. Up to 1,000 page URLs can be displayed.

Other views

View Name	Description
ISP view	It uses a pie chart to display the number and percentage of visits from each ISP such as China Mobile, China Telecom, and China Unicom.

View Name	Description
Network/Platform view	It uses a pie chart to display the number and percentage of visits from each network type/platform, such as 3G, 4G, and Wi-Fi networks as well as macOS, Windows, and iOS platforms.
Region view	It uses a pie chart to display the number and percentage of visits from each region.
Brand/Model view	It uses a pie chart to display the number and percentage of visits from each mobile phone brand/model.
Browser view	It uses a pie chart to display the number and percentage of visits from each browser.
Version view	It uses a pie chart to display the number and percentage of visits from each application version. You can use <code>new Aegis</code> to pass in <code>version</code> during application connection to customize the version information related to development. The SDK version is used by default.
ext1/ext2/ext3 views	They are custom views. You can customize their parameters passed in during reporting.

Offline Log

Last updated : 2022-08-05 17:22:40

This document describes how to use the offline log feature.

Prerequisites

You have [connected your application](#).

Directions

1. Enable offline log when initializing the SDK.

```
new Aegis({
  id: 'xxxxx',
  uin: '123456',
  offlineLog: true, // Enable offline log (disabled by default)
})
```

The offline log feature stores the user data in `localStorage` and therefore may slightly compromise the user business performance. You can enable it based on your actual conditions.

2. Log in to the RUM console.
3. On the left sidebar, click **Offline Log** to enter the offline log page.
4. You need to listen on the user, so that when the user enters the page next time, the locally stored offline logs will be reported to the server in batches.
5. After getting the user's reported data, you can search for relevant logs.

Field

You can select the fields to be displayed in the offline log list.

Advanced search

- You can filter logs by project, log type, and time.
- You can filter logs by UIN, `sessionid`, `aid`, keyword, and blocked keyword.
- You can set offline listening, so that the system will automatically pull the offline logs under the specified `uin` / `aid` after offline log is configured.

Log list

Long log collapsing: if collapsing is disabled, all information of a log will be displayed on one line. After it is enabled, up to 8 lines of information of a long log will be displayed.

API Monitoring

Last updated : 2022-08-05 17:25:46

This document describes how to use API monitoring to monitor API call conditions, such as HTTP code success rate and API request duration.

Prerequisites

You have [connected your application](#).

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **API Monitoring**.
3. On the API monitoring page, you can view the API performance metrics.

Aggregated analysis

It displays the change trends of key API performance metrics, including API request duration and success rate.

- You can click a legend above the chart to hide or show the corresponding data.
- You can display the trend for the specified time period or the past 14 days.
- You can drag the curve to display the API duration at a specific time point.
- You can drag the round buttons left and right to adjust the time span of the chart.

Page analysis

It displays the average API request duration on each page.

Top view

- Top API requests view: it displays the top API requests with the highest number of samples. Up to 1,000 APIs can be displayed.
- Top APIs with HTTP status code 40x view: it displays the top APIs with the highest numbers of HTTP status codes 40x. Up to 1,000 APIs can be displayed.
- Top APIs with HTTP status code 50x view: it displays the top APIs with the highest numbers of HTTP status codes 50x. Up to 1,000 APIs can be displayed.

Other views

View Name	Description
Network/Platform view	It uses a pie chart to display the number, percentage, and average duration of API requests from each network type/platform, such as 3G, 4G, and Wi-Fi networks as well as macOS, Windows, and iOS platforms.
HTTP response code view	It uses a pie chart to display the number of errors, percentage, and average duration of each HTTP response code.
<code>retcode</code> view	It uses a pie chart to display the number of errors, percentage, and average duration of each <code>retcode</code> .
ISP view	It uses a pie chart to display the number, percentage, and average duration of API requests from each ISP such as China Mobile, China Telecom, and China Unicom.
Region view	It uses a pie chart to display the number, percentage, and average duration of API requests from each region.
Brand/Model view	It uses a pie chart to display the number, percentage, and average duration of API requests from each mobile phone brand/model.
Browser view	It uses a pie chart to display the number, percentage, and average duration of API requests from each browser.
Version view	It uses a pie chart to display the number, percentage, and average duration of API requests from each application version. You can use <code>new Aegis</code> to pass in <code>version</code> during application connection to customize the version information related to development. The SDK version is used by default.
ext1/ext2/ext3 views	They are custom views. You can customize their parameters passed in during reporting.

Static Resource

Last updated : 2022-08-05 17:26:57

This document describes how to monitor static resources. Static resources in a frontend HTML page include JavaScript, CSS, and image files. If the loading of such files takes too long or fails, it will directly affect or even paralyze the page. Static resource monitoring helps you analyze the frontend static resource conditions.

Prerequisites

You have [connected your application](#).

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **Static Resource**.
3. On the static resource page, you can view the static resource metrics.

Aggregated analysis

It displays the change trends of key static resource performance metrics, including static resource request duration and success rate.

- You can click a legend above the chart to hide or show the corresponding data.
- You can display the trend for the specified time period or the past 14 days.
- You can drag the curve to display the static resource duration at a specific time point.
- You can drag the round buttons left and right to adjust the time span of the chart.

Page analysis

It displays the average loading duration of all static resources on all pages.

Top view

- Top resources view: it displays the top static resources with the highest number of requests. Up to 1,000 static resources can be displayed.
- Top resource failures view: it displays the top static resources with the highest number of failed requests. Up to 1,000 static resources can be displayed.

Other views

View Name	Description
Network/Platform view	It uses a pie chart to display the number, percentage, average duration, success rate, TCP connection time, and DNS query time of static resources from each network type/platform, such as 3G, 4G, and Wi-Fi networks as well as macOS, Windows, and iOS platforms.
ISP view	It uses a pie chart to display the number, percentage, average duration, success rate, TCP connection time, and DNS query time of static resources from each ISP such as China Mobile, China Telecom, and China Unicom.
Region view	It uses a pie chart to display the number, percentage, average duration, success rate, TCP connection time, and DNS query time of static resources from each region.
Brand/Model view	It uses a pie chart to display the number, percentage, average duration, success rate, TCP connection time, and DNS query time of static resources from each mobile phone brand/model.
Browser view	It uses a pie chart to display the number, percentage, average duration, success rate, TCP connection time, and DNS query time of static resources from each browser.
Version view	It uses a pie chart to display the number, percentage, average duration, success rate, TCP connection time, and DNS query time of static resources from each application version. You can use <code>new Aegis</code> to pass in <code>version</code> during application connection to customize the version information related to development. The SDK version is used by default.
ext1/ext2/ext3 views	They are custom views. You can customize their parameters passed in during reporting.

Custom Speed Test

Last updated : 2022-08-05 17:37:57

The custom speed test feature allows you to customize breakpoints to report data and collects, calculates, and displays the reported data. For example, if you want to know the execution time of a function or page mounted time, you can use this module to get the information you need.

Prerequisites

- You have connected your application as instructed in [Application Connection](#).
- Select an application connection method as instructed in Connection Guide. Then, use the **reportTime** or **time and timeEnd** method to customize breakpoints to report data as instructed in **Instance Method**.

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **Custom Speed Test**.
3. On the custom speed test page, you can view the performance metrics of reported resources.

Aggregated analysis

It displays the change trend of the reported resource duration, including duration and percentage in different time periods.

- You can click a legend above the chart to hide or show the corresponding data.
- You can display the trend for the specified time period or the past 14 days.
- You can drag the curve to display the duration at a specific time point.
- You can drag the round buttons left and right to adjust the time span of the chart.

Top resources view

It displays the top reported resources with the longest average duration. Up to 1,000 reported resources can be displayed. You can also download the report of top resources for custom speed test by clicking the download icon in the top-right corner.

Other views

View Name	Description
ISP view	It uses a pie chart to display the number, percentage, and average duration of resources for custom speed test from each ISP such as China Mobile, China Telecom, and China Unicom.
Network/Platform view	It uses a pie chart to display the number, percentage, and average duration of resources for custom speed test from each network type/platform, such as 3G, 4G, and Wi-Fi networks as well as macOS, Windows, and iOS platforms.
Region view	It uses a pie chart to display the number, percentage, and average duration of resources for custom speed test from each region.
Brand/Model view	It uses a pie chart to display the number, percentage, and average duration of resources for custom speed test from each mobile phone brand/model.
Browser view	It uses a pie chart to display the number, percentage, and average duration of resources for custom speed test from each browser.
Version view	It uses a pie chart to display the number, percentage, and average duration of resources for custom speed test from each application version. You can use <code>new Aegis</code> to pass in <code>version</code> during application connection to customize the version information related to development. The SDK version is used by default.
ext1/ext2/ext3 views	They are custom views. You can customize their parameters passed in during reporting.

Custom Event

Last updated : 2022-08-05 17:39:07

RUM's custom event module allows you to customize the events to be reported and then collects, calculates, and visually displays the data of each reported event metric. For example, if you want to know the number of times a button or link has been clicked, you can use this module to get the information you need.

Prerequisites

- You have connected your application as instructed in [Application Connection](#).
- Select an application connection method as instructed in Connection Guide. Then, use the **reportEvent** method to report the custom event as instructed in **Instance Method**.

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **Custom Event**.
3. Enter the custom event page to view the performance of the reported event.

Aggregated analysis

It displays the change trend of triggers of the reported events.

- You can drag the curve to display the number of event triggers at a certain time point.
- You can drag the round buttons left and right to adjust the time span of the chart.

Top custom events view

It displays the top reported events with the highest number of triggers. Up to 1,000 reported events can be displayed. You can also download the top custom events report by clicking the download icon in the upper-right corner.

View Name	Description
ISP view	It uses a pie chart to display the number and percentage of events from each ISP such as China Mobile, China Telecom, and China Unicom.

View Name	Description
Network/Platform view	It uses a pie chart to display the number and percentage of events from each network type/platform, such as 3G, 4G, and Wi-Fi networks as well as macOS, Windows, and iOS platforms.
Region view	It uses a pie chart to display the number and percentage of events from each region.
Brand/Model view	It uses a pie chart to display the number and percentage of events from each mobile phone brand/model.
Browser view	It uses a pie chart to display the number and percentage of events from each browser.
Version view	It uses a pie chart to display the number and percentage of events from each application version. You can use <code>new Aegis</code> to pass in <code>version</code> during application connection to customize the version information related to development. The SDK version is used by default.
ext1/ext2/ext3 views	They are custom views. You can customize their parameters passed in during reporting.

Application Management

Application Settings

Last updated : 2022-08-05 17:40:16

This document describes how to use the application management feature. The application settings page is where you can create, delete, and edit connected applications. It also displays the report change trend and total number of reporting requests for each application, helping you avoid unnecessary fees incurred by excessive reporting traffic.

Directions

Note :

You can connect an application as instructed in [Application Connection](#).

Deleting application

1. Log in to the RUM console.
2. On the left sidebar, click **Application Management** > **Application Settings** to enter the application management page.
3. Find the target application, click **Delete** in the **Operation** column, and click **OK** in the pop-up window.

Editing application

1. Log in to the RUM console.
2. On the left sidebar, click **Application Management** > **Application Settings** to enter the application management page.
3. Click **Edit** in the **Operation** column. Then, edit the information and click **OK** in the pop-up window.

Report statistics

In the application list, you can click **Report Statistics** in the **Operation** column to view the report change trend and total number of reporting requests of each application. If a value is high, you can take appropriate measures to avoid unnecessary fees incurred by excessive reporting traffic.

Business System

Last updated : 2022-08-05 17:41:09

This document describes how to use the business system feature. You can use business systems to manage your connected applications by group.

Directions

Creating business system

1. Log in to the RUM console.
2. On the left sidebar, click **Application Management > Business System**.
3. On the business system page, click **Create Business System**.
4. In the pop-up window, enter the business name and indicate your consent to the agreement.

Editing business system

You can click **Edit** in the **Operation** column to edit the business system name and description.

Tag

A tag is used to manage and control whether a sub-account user can access a business system connected to RUM.

For detailed directions, see [Resource Tag](#).

Allowlist Management

Last updated : 2022-08-05 17:41:57

This document describes how to use allowlist management. This feature is used to allow specified users to report more information. Users in the allowlist will report all API request information, including API request and response.

Directions

Adding to allowlist

1. Log in to the RUM console.
2. On the left sidebar, click **Application Management > Allowlist Management** to enter the allowlist management page.
3. Click **Add to Allowlist** in the top-left corner and enter the user UIN and remarks in the pop-up window.

Removing from allowlist

Find the UIN of the target user in the allowlist and click **Delete** in the **Operation** column.

Access Management

Overview

Last updated : 2022-02-09 16:16:21

If you have multiple users managing the RUM service, and they all share your Tencent Cloud account access key, you may face the following problems:

- The risk of your key being compromised is high since multiple users are sharing it.
- Your users might introduce security risks from maloperations due to the lack of user access control.

You can avoid the above problems by allowing different users to manage different services through sub-accounts. By default, sub-accounts have no permissions to use RUM. Therefore, you need to create a policy to grant different permissions to sub-accounts.

Overview

[Cloud Access Management \(CAM\)](#) is a web-based Tencent Cloud service that helps you securely manage and control access permissions of your Tencent Cloud resources. Using CAM, you can create, manage, and terminate users (groups), and control the Tencent Cloud resources that can be used by the specified user through identity and policy management.

When using CAM, you can associate a policy with a user or user group to allow or forbid them to use specified resources to complete specified tasks. For more information on CAM policies, see [Policy](#).

Authorization Method

RUM supports two authorization methods: resource-level authorization and authorization by tag.

- Resource-Level authorization: you can use policy syntax or the default policy to grant sub-accounts permissions to manage individual resources. For more information, see [Policy Syntax](#) and [Granting Policy](#).
- Authorization by tag: you can tag resources and grant sub-accounts permissions to manage resources with particular tags. For more information, see [Resource Tag](#).

You can skip this section if you don't need to manage permissions of RUM resources for sub-accounts. This won't affect your understanding and use of the other sections of the document.

Policy Syntax

Last updated : 2022-02-09 16:16:21

Overview

Access policies can be used to grant access to RUM. They use JSON-based access policy syntax. You can authorize specified principals to perform specified operations on specified RUM resources through the access policy syntax.

The access policy syntax describes the basic elements and usage of the policy. For the description of the policy syntax, see [Permission](#).

Policy Syntax

CAM policy:

```
{
  "version": "2.0",
  "statement": [
    {
      "effect": "effect",
      "action": ["action"],
      "resource": ["resource"],
      "condition": {"key": {"value": {}}}
    }
  ]
}
```

Element usage

- **version** is required. Currently, only the value "2.0" is allowed.
- **statement** describes the details of one or more permissions. It contains a permission or permission set of multiple other elements such as `effect` , `action` , `resource` , and `condition` . One policy has only one `statement` .
 - i. **effect** describes whether the statement result is an "allow" or "explicit deny", which is required.
 - ii. **action** describes the allowed or denied action (operation). An operation can be an API (prefixed with "name") or a feature set (a set of specific APIs prefixed with "permid"). This element is required.
 - iii. **resource** describes the details of authorization. A resource is described in a six-segment format. Detailed resource definitions vary by product. For more information on how to specify resources, see the product

documentation corresponding to the resource statement you are writing. This element is required.

- iv. **condition** describes the condition for the policy to take effect. A condition consists of operator, action key, and action value. A condition value may contain information such as time and IP address. Some services allow you to specify additional values in a condition. This element is optional.

Specifying effect

If access to a resource is not explicitly granted (allowed), then it is implicitly denied. It can also be explicitly denied, which ensures that users cannot access the resource even if they are granted the access permission by other policies. Below is an example of specifying the "allow" effect:

```
"effect" : "allow"
```

Specifying action

RUM defines console operations that can be specified in a policy. The specified operations are divided into reading part of APIs (apm:Describe*) and all APIs (apm:*) according to the operation nature.

Below is an example of specifying the allowed operations:

```
"action": [
  "name/apm:Describe*"
]
```

Specifying resource

The `resource` element describes one or more operation objects, such as RUM resources. All resources can use the following six-segment format:

```
qcs:project_id:service_type:region:account:resource
```

The parameters are as detailed below:

Parameter	Description	Required
qcs	Tencent Cloud service abbreviation, which indicates a service of Tencent Cloud	Yes
project_id	Project information, which is only used to enable compatibility with legacy CAM logic and generally can be left empty	No
service_type	Product abbreviation, which is <code>rum</code> here	Yes
region	Region information	Yes

Parameter	Description	Required
account	Root account information of the resource owner, i.e., root account ID in the format of <code>uin/\${OwnerUin}</code> , such as <code>uin/100000000001</code>	Yes
resource	Resource details prefixed with <code>instance</code>	Yes

Below is a sample six-segment description of a RUM resource:

```
"resource": ["qcs::rum::uin/1250000000:Instance/rum-vpasY123"]
```

Use Cases

Grant the read and write permissions of specified resources based on resource ID. The root account ID is

```
1250000000 :
```

Sample: granting the sub-user the permission to query the business system (ID: rum-vpasY123).

```
{
  "version": "2.0",
  "statement": [
    {
      "effect": "allow",
      "action": [
        "rum:DescribeTawInstances"
      ],
      "resource": [
        "qcs::rum::uin/1250000000:Instance/rum-vpasY123"
      ]
    }
  ]
}
```

List of APIs supporting resource-level authorization

API	Description
DescribeData	Gets <code>QueryData</code>
DescribeError	Gets homepage error information
DescribeLogList	Gets the list of CLS logs

API	Description
DescribeOfflineLogConfigs	Gets the configured offline log listening configuration
DescribeOfflineLogRecords	Gets all offline logs
DescribeOfflineLogs	Gets the specified offline log
DescribeProjects	Gets the list of projects
DescribePvList	Gets the list of PVs
DescribeScores	Gets the list of homepage scores
DescribeTawAreas	Queries area information
DescribeTawInstances	Queries business systems
DescribeUvList	Gets the list of UVs
DescribeWhitelists	Gets allowlist
CreateOfflineLogConfig	Creates offline log listening
CreateProject	Creates project
CreateStarProject	Creates starred project
CreateTawInstance	Creates business system
CreateWhitelist	Creates allowlist
DeleteOfflineLogConfig	Deletes RUM offline log listening
DeleteOfflineLogRecord	Deletes offline log

Granting Policy

Last updated : 2022-08-05 17:43:45

A sub-account has no RUM permissions by default and can access RUM resources only after being granted relevant permissions by the root account.

Prerequisites

Log in to the Tencent Cloud console with the root account or a sub-account with the `QcloudCamFullAccess` permission and create a sub-account as instructed in [Creating Sub-user](#).

Custom Policy

1. Use the root account or a sub-account with the `QcloudCamFullAccess` permission to log in to the **CAM** console and go to the **Policies** page.
2. Click **Create Custom Policy** > **Create by Policy Syntax** and select **Blank Template**. Edit the policy as instructed in [Policy Syntax Description](#).

Policy Authorization

Note :

RUM creates default permission policies `QcloudRUMFullAccess` (full access to RUM) and `QcloudRUMReadOnlyAccess` (read-only access to RUM) for you. You can search for a default policy for quick authorization. You can also use a custom policy for authorization. Then, the sub-account can access the relevant resources.

1. Use the root account or a sub-account with the `QcloudCamFullAccess` permission to log in to the **CAM** console and go to the **Policies** page.
2. Go to the policy management page and enter a policy name in the policy search box.
3. Select `QcloudRUMReadOnlyAccess` or `QcloudRUMFullAccess` and click **Associate Users/Groups** in the **Operation** column.
4. In the pop-up window, select the target user and click **OK**.

Resource Tag

Last updated : 2022-08-05 17:47:05

RUM can be used with the Tencent Cloud resource tag feature to perform tag-based sub-account authorization and cost allocation.

Resource tag is a resource management tool provided by Tencent Cloud, which has two parts: tag key and tag value. One tag key can correspond to multiple tag values. You can use tags for cost allocation and authorization in the following steps.

Use Cases

A company has multiple business systems connected to RUM, which are developed and operated separately by departments A and B. You want to create tags, bind resources, and grant permissions to the two departments as follows:

- Create tag A and bind it to all business systems of department A.
- Create tag B and bind it all business systems of department B.

Authorization by tag

User A is a developer in department A and is responsible for the development of all business systems in the department. You want to grant tag A's permission to user A.

Cost allocation by tag

User B is a company accountant responsible for the separate accounting of the financial expenditures of departments A and B. You want to grant user B the permissions of tags A and B to allocate costs by tag.

Preparations

Step 1. Create a tag

Create tags A and B respectively in the following steps:

1. Go to the [Tag List](#) page.
2. Click **Create** to enter the tag creation page and enter the tag key and the corresponding tag value.
3. Click **OK**.

Step 2. Assign tags to resources

Bind tag A to all business systems in department A and tag B to all business systems in department B in the following steps:

1. Log in to the RUM console and go to the Business System page.
2. Click **Create Business System**. In the pop-up window, enter the information and bind a tag. You can also find an existing business system in the list, click **Edit** in the **Operation** column, and select a tag.

Authorization by Tag

Grant user A the permission of tag A and user B the permission of tags A and B according to the tag authorization policy in the following steps:

1. Go to the [Policies](#) page and click **Create Custom Policy** in the top-left corner.
2. In the creation method selection window that pops up, click **Authorize by Tag** to enter the **Authorize by Tag** page.
3. On the **Authorize by Tag** page, select the following information and click **Next** to enter the check page.
 - **Authorized Users/User Groups**: select the user to be authorized (user A or B).
 - **Bound Tag Key**: select the tag key to be authorized (tag key of tag A or B).
 - **Bound Tag Value**: select the tag value to be authorized (tag value of tag A or B).
 - **Service Resource**: select `rum` and select all or part of operations as needed.
4. Click **Next**, check the policy (which can be renamed), and click **Complete**.

Cost Allocation by Tag

Step 1. Set a cost allocation tag

Set tags A and B as cost allocation tags in the following steps:

1. To use the tag feature for bills, you need to go to the [Billing Center](#) and select **Bills** > **** Cost Allocation Tags**** on the left sidebar. The tag key set as a cost allocation tag will be displayed as a separate column of the bill. You can filter and categorize bills based on this tag key.
2. On this page, you can view the list of created tag keys. Select the tag key to be displayed and click **Set as Cost Allocation Tag** to set the tag key as a cost allocation tag in the bill.

Note :

You can set 5 cost allocation tags at most. A small number of such tags makes it easier for you to manage your costs.

Step 2. Display bills by tag

You can view and click the new option **By Tag** on the [Bill Overview](#) page. Then, you can select a specific **tag key** to view the column chart and list of relevant resources aggregated by the tag key.

Alarm Policy

Creating Alarm

Last updated : 2022-08-05 17:49:24

This document describes how to set an alarm for a key frontend performance metric, so that you can receive timely notifications when the metric is exceptional.

Directions

1. Log in to the RUM console.
2. On the left sidebar, click **Alarm Configuration** to enter the alarm policy configuration page.
3. Click **Add** and configure a new alarm policy as shown below:

Configuration Type	Configuration Item	Description
Basic Info	Policy Name	Custom policy name.
	Remarks	Custom policy remarks.
	Monitoring Type	Select the application performance monitoring type.
	Policy Type	The following policy types are supported: error log, page performance, static resource, API monitoring, custom event, and custom speed test.
Alarm Policy	Filter Condition (AND)	You can filter objects that meet filter conditions for alarming, and the relationship between these conditions is AND. Only objects with reported data will be displayed after filtering. You can select the alarm object as needed.
	Alarm Object Dimension	You can customize the alarm objects displayed in the alarm notification. Suppose you select business system, application, and call role, the following alarm objects will be displayed: business system=xxx, application=xxx, call role=xxx.
	Trigger Condition	You can specify whether to trigger an alarm when any condition or all conditions are met.
Alarm Notification	Notification Template	The system provides default notification templates. You can also create a custom one as instructed in Creating Notification Template .

Advanced Configuration	Auto Scaling	After this option is enabled and configured successfully, an auto scaling policy will be triggered for scaling when the alarm condition is met.
------------------------	--------------	---

4. After configuring the above information, click **Save**. When a metric is exceptional, alarm notifications will be sent through the alarm channels you configured.

Viewing Alarm

Last updated : 2022-08-05 17:50:29

This document describes how to view RUM alarm records.

Viewing Alarm Records

1. Log in to the CM console and go to the [Alarm Records](#) page.
2. Click **Advanced Filter**, select **RUM** as the monitoring type, and click **Query**.
3. You can also click the time filter button in the top-left corner to filter the time period in which to view alarm records.