

Content Delivery Network

Statistics and Analysis

Product Introduction



Tencent
Cloud

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Contents

| | |
|----------------------------------|----|
| Documentation Legal Notice | 2 |
| Statistics and Analysis | 4 |
| Statistics Overview | 4 |
| Statistics of Usage | 5 |
| Statistics of Access | 10 |
| Statistics of Status Codes | 14 |
| Origin Server Statistics | 18 |
| Network Status Monitoring | 24 |
| OPS Monthly Report | 26 |

Statistics and Analysis

Statistics Overview

CDN provides the following six tools for data analysis and query to help you understand these factors more clearly: how users are accessing your business resources, the statistical analysis of data consumption generated by your business on CDN, the bandwidth generated by your origin server when receiving back-to-origin requests as well as the speed:

| Statistic | Description |
|--------------------------------|---|
| Usage | Query for real-time traffic and bandwidth consumption generated by projects and domains on CDN, provides TOP usage analysis regarding provinces and ISPs, provides analysis of popular URLs |
| Access | Query for real-time number of requests generated by projects and domains, provides TOP analysis for number of requests of provinces and ISPs, provides analysis of popular URLs |
| Status Code | Provides statistics of HTTP status codes returned by projects and domains, in response to user requests, including the statistics of 2XX, 3XX, 4XX, 5XX |
| Origin | Query for real-time back-to-origin traffic and bandwidth of projects and domains, as well as the speed for back-to-origin accesses |
| Global Status | Review the status of the entire CDN network |
| Monthly Report | Provides analytical report regarding monthly CDN usage |

Statistics of Usage

Log in to [CDN Console](#), and click "Usage" page under "Statistics" to review the curve graph of detailed real-time bandwidth and traffic consumption as well as other data including the analysis of ISPs, provinces and popular URLs. You can also query for historical data. Details will be described below.

Query Criteria

The usage statistics page includes the following query criteria:

CDN China Usage statistics

Overview
Domain Management
Purge Cache
Statistics
 Usage
 Access
 Status Code

Today Yesterday Last 7 days Last 15 days Last 30 days 2017-05-19

Projects All projects Domains All domains

Regions All regions Carrier All Carriers

Network layer Edge server Temporal granularity 5 minutes

Check

Note:

- Time range: The earliest selectable time is 2015-01-01, you can select a query time span of up to 90 days;
- Project: Query for usage data based on project is supported;
- Domain: Query for usage data based on specified domain is supported;
- Region: Query for usage data based on specified region is supported. Currently you cannot select both "Region" and "Carrier", when you select regions, the carrier will need to be "All carriers";
- Carrier: Query for usage data based on specified carrier is supported. Currently you cannot select both "Region" and "Carrier", when you select a carrier, the region will need to be "All regions";
- Network layer: Query for usage data of edge nodes or intermediate nodes is supported;
- Temporal granularity: This refers to the temporal granularity with which bandwidth and traffic data will be presented. This is related to the selected time span:

If the selected time span is 1 day, you can query data with a temporal granularity of 5 minutes, 15 minutes, 30 minutes, 2 hours or 4 hours;

If the selected time span is 2-3 days, you can query data with a temporal granularity of 15 minutes, 30 minutes, 2 hours or 4 hours;

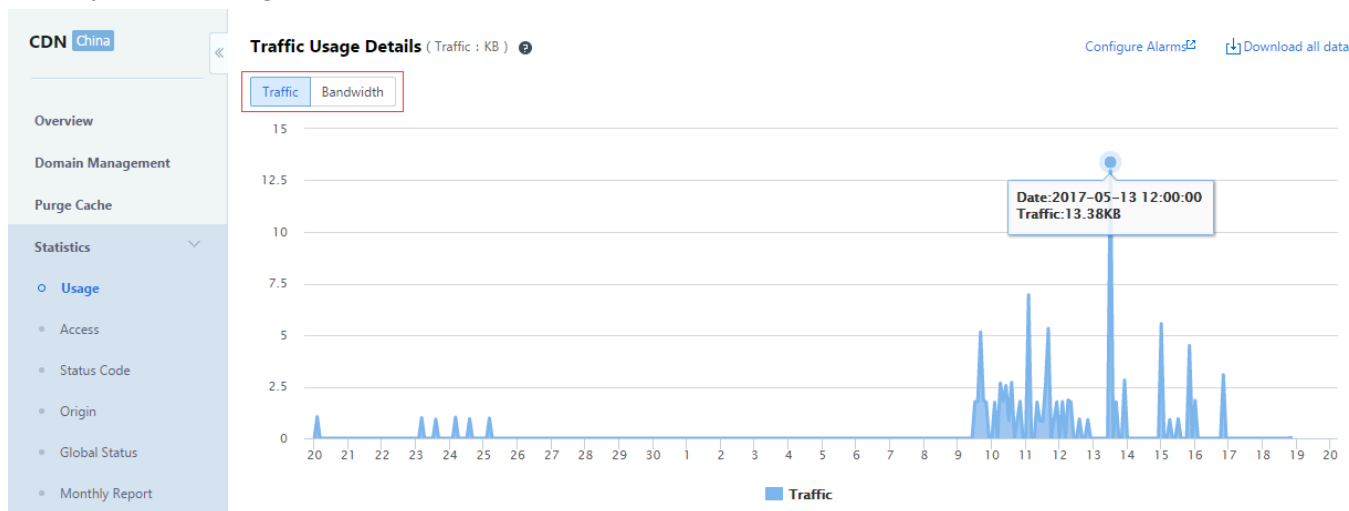
If the selected time span is 4-7 days, you can query data with a temporal granularity of 2 hours, 4 hours or 1 day;

If the selected time span is more than 30 days, you can only query data with a temporal granularity of 4 hours or 1 day;

Data Result Description

Statistics of Traffic and Bandwidth

Displays the curve graph of traffic and bandwidth statistical data:



Note:

- The minimum granularity for traffic and bandwidth statistics is five minutes, that is, the statistical data from 2016-10-25 15:00:00 to 15:04:59 will be shown at the statistical point of 2016-10-25 15:05:00;
- The latency of real-time data is about five minutes, that is, the statistical point of 2016-10-25 15:05:00 will appear around 2016-10-25 15:10:00;

- Accelerated domains that were once connected and then deleted will be displayed in gray in the "All domains" drop-down box;
- Note about statistics:

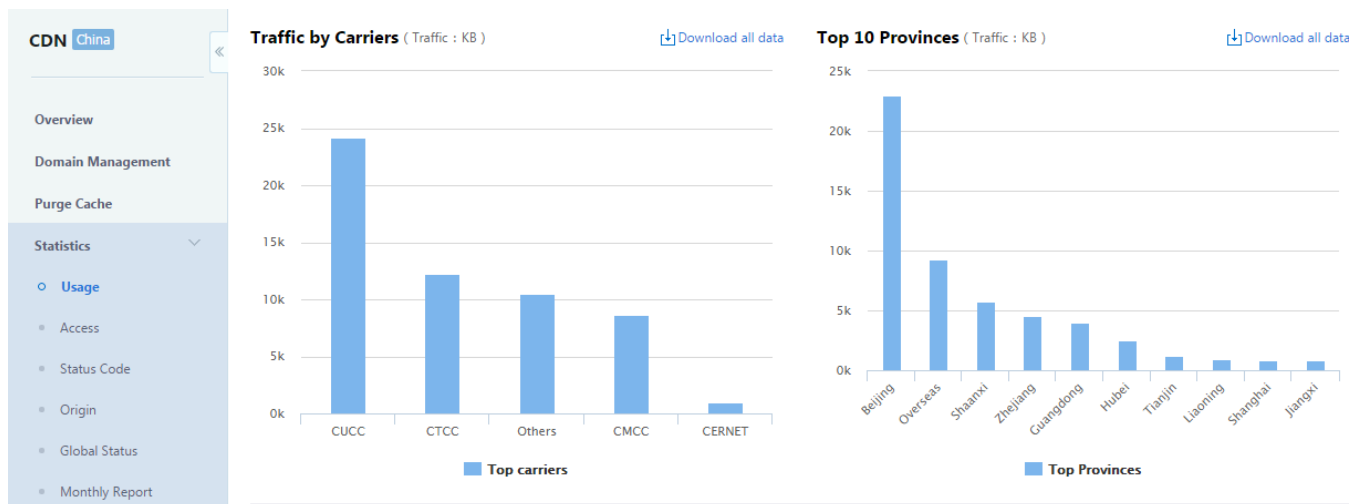
If the domain has not been connected to CDN for the specified time range, it will not be covered in statistics even if it is checked;

If the domain has been deleted for the specified time range, it will not be covered in statistics even if it is checked;

If the domain experienced three stages (not connected, connected and deleted) for the specified time range, the statistical data for unconnected and deleted time period will be filled by 0.

Carrier and Province Analysis

The usage statistics are ranked and analyzed based on provinces and carriers:



Note:

- Carrier and province data is analyzed through logs, thus the data belongs to application layer. There will be deviations between this data and the statistics of traffic and bandwidth NIC data in the previous figure;
- Latency of data statistics during peak hours is less than 30 minutes;

- The record of carrier and province data will only be kept for 90 days, if the query time range exceeds the limit of 90 days, the data will not be displayed.

Domain Bandwidth/Traffic Usage Details

Domains and their detailed traffic and bandwidth are displayed according to selected query criteria (sorted from high to low). You can click "Download all data" to download detailed data:

| Domain | Category | Traffic | Peak Bandwidth |
|--------|----------|---------|----------------|
| | | 96.07KB | 333bps |

Note:

- The details of domain bandwidth and traffic are statistics of NIC data;
- The record of detailed bandwidth and traffic data will only be kept for 90 days, if the query time range exceeds the limit of 90 days, the data will not be displayed.

TOP100 URL

TOP100 analysis for traffic usage and bandwidth usage towards individual URL resources is carried out according to the selected query criteria, to help you locate popular resources:

CDN China

Overview

Domain Management

Purge Cache

Statistics ▼

- Usage
- Access
- Status Code
- Origin
- Global Status
- Monthly Report

Logs

Traffic/Bandwidth usage Top100

[Download all data](#)

| URL | Traffic Usage | Bandwidth Usage |
|-----|---------------|-----------------|
| | 50.83KB | 1bps |
| | 861B | 0bps |
| | 802B | 0bps |
| | 396B | 0bps |
| | 396B | 0bps |
| | 396B | 0bps |

Total 13 items

Lines per page: 10 ◀ ◁ ▷ ▶

Note:

- TOP100 URL analysis is done through logs, there will be a latency of 1-2 hours;
- The record of TOP100 data will only be kept for 90 days, if the query time range exceeds the limit of 90 days, the data will not be displayed.

Statistics of Access

Log in to [CDN Console](#), and click "Access" page under "Statistics" to review real-time statistics of request quantity, number of IP visits, hit rates. You can check the historical record within 90 days.

Query Criteria Instruction

The following criteria are supported when querying access statistics:

CDN China << Access statistics

Overview
Domain Management
Purge Cache
Statistics
 Usage
 Access
 Status Code

Today Yesterday Last 7 days Last 15 days Last 30 days 2017-05-19 ▾

Projects All projects ▾ Domains All domains ▾

Regions All regions ▾ Carrier All Carriers ▾

Temporal granularity 5 minutes ▾

Check

Note:

- Time selection: The query for access statistics for the last 90 days is supported with a query span of up to 90 days.
- Project: Query for usage data based on project is supported;
- Domain: Query for usage data based on specified domain is supported;
- Region: Query for usage data based on specified region is supported. Currently you cannot select both "Region" and "Carrier", when you select regions, the carrier will need to be "All carriers";
- Carrier: Query for usage data based on specified carrier is supported. Currently you cannot select both "Region" and "Carrier", when you select a carrier, the region will need to be "All regions";
- Temporal granularity: This refers to the temporal granularity with which bandwidth and traffic data will be presented. This is related to the selected time span:

If the selected time span is 1 day, you can query data with a temporal granularity of 5 minutes, 15 minutes, 30 minutes, 2 hours or 4 hours;

If the selected time span is 2-3 days, you can query data with a temporal granularity of

15 minutes, 30 minutes, 2 hours or 4 hours;

If the selected time span is 4-7 days, you can query data with a temporal granularity of 2 hours, 4 hours or 1 day;

If the selected time span is more than 30 days, you can only query data with a temporal granularity of 4 hours or 1 day;

Data Result Description

Access Statistics

The figure shows the data under the specified query criteria:



- Network-wide statistics for number of requests of OC nodes;
- Statistics for number of IP visits: This statistic is obtained by calculating all request IPs within 5 minutes after removing duplicates;
- Hit rate: Hit rate (%) = (number of requests - number of back-to-origin requests) / number of requests.

Note:

- For access statistics, there is a statistical point every five minutes, that is, the statistical data from 2016-10-25 15:00:00 to 15:04:59 will be presented at the statistical point of 2016-10-25

15:05:00;

- The latency of real-time data is about five minutes, that is, the statistical point of 2016-10-25 15:05:00 will appear around 2016-10-25 15:10:00;
- All domains connected within 90 days will be covered in the "All Domains" drop-down box, including those that have been deleted;
- Note about statistics:

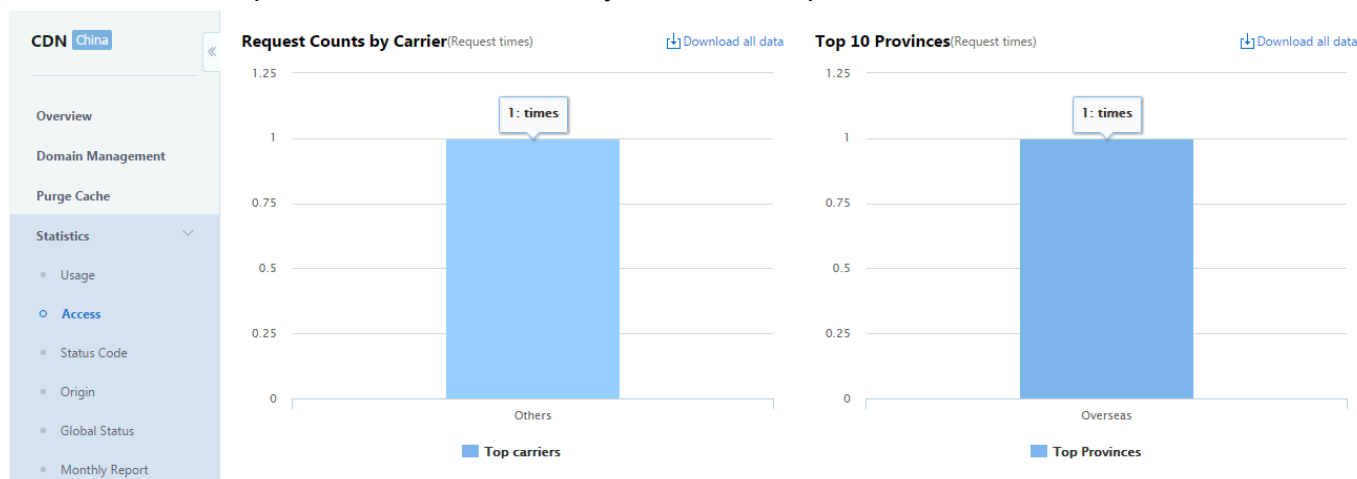
If the domain has not been connected to CDN for the specified time range, it will not be covered in statistics even if it is checked;

If the domain has been deleted for the specified time range, it will not be covered in statistics even if it is checked;

If the domain experienced three stages (not connected, connected and deleted) for the specified time range, the statistical data for unconnected and deleted time period will be filled by 0.

Carrier and Province Analysis

The number of requests are ranked and analyzed based on provinces and carriers:



Note:

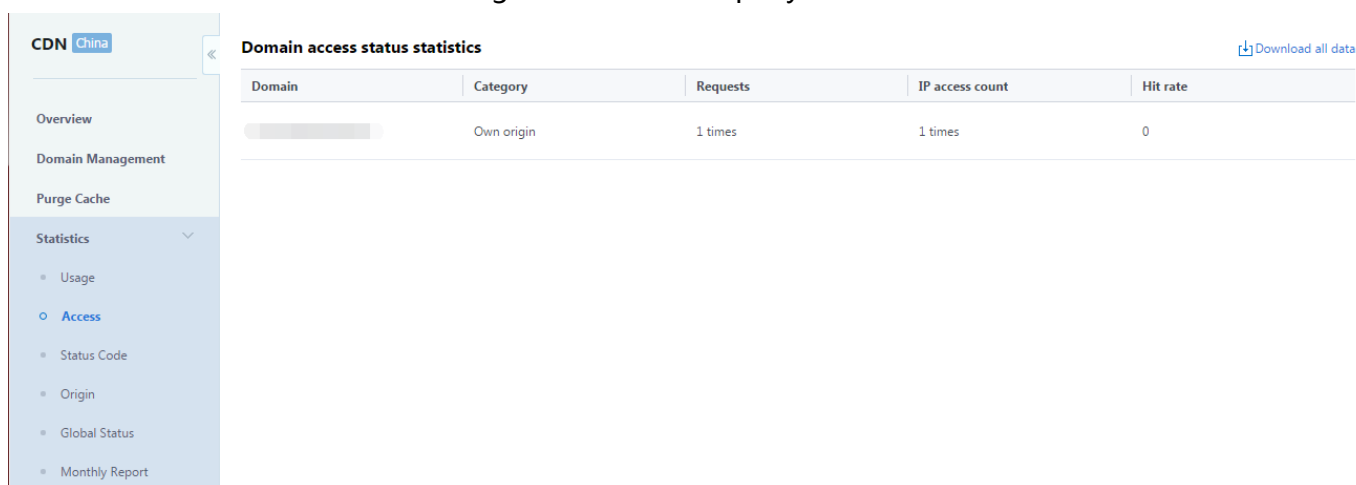
- Carrier and province data is analyzed through logs, thus the data belongs to application layer. There will be deviations between this data and the statistics of traffic and bandwidth NIC data

in the previous figure;

- Latency of data statistics during peak hours is less than 30 minutes;
- The record of carrier and province data will only be kept for 90 days, if the query time range exceeds the limit of 90 days, the data will not be displayed.

Domain Access Status Statistics

You can click "Download all data" to download detailed data about the domain, number of requests, number of IP visits, hit rate according to the selected query criteria:

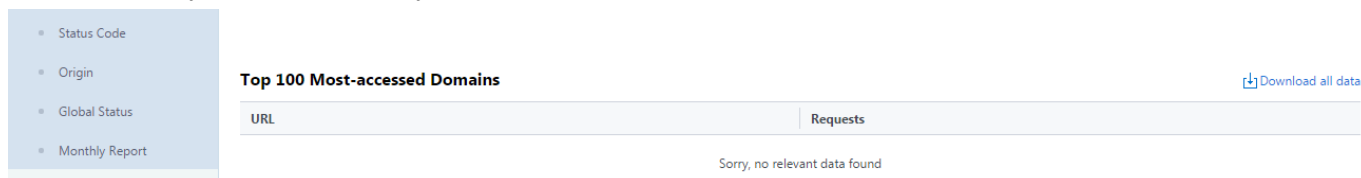


The screenshot shows the 'Domain access status statistics' page in the Tencent Cloud CDN console. On the left is a sidebar with navigation options: Overview, Domain Management, Purge Cache, and Statistics (expanded). Under Statistics, there are links for Usage, Access (selected), Status Code, Origin, Global Status, and Monthly Report. The main content area has a title 'Domain access status statistics' and a 'Download all data' link. Below the title is a table with the following data:

| Domain | Category | Requests | IP access count | Hit rate |
|--------|------------|----------|-----------------|----------|
| | Own origin | 1 times | 1 times | 0 |

TOP100 URL

TOP100 analysis for requests towards individual URL resources is carried out according to the selected query criteria to help you locate popular resources:



The screenshot shows the 'Top 100 Most-accessed Domains' page in the Tencent Cloud CDN console. On the left is a sidebar with navigation options: Status Code, Origin, Global Status, and Monthly Report. The main content area has a title 'Top 100 Most-accessed Domains' and a 'Download all data' link. Below the title is a table with the following data:

| URL | Requests |
|-------------------------------|----------|
| Sorry, no relevant data found | |

Note:

- TOP100 URL analysis is done through logs, there will be a latency of 1-2 hours;
- The record of TOP100 data will only be kept for 90 days, if the query time range exceeds the limit of 90 days, the data will not be displayed.

Statistics of Status Codes

Log in to [CDN Console](#), and click "Status Code" under "Statistics" to review statistics of 2XX, 3XX, 4XX, 5XX status codes.

Query Criteria Instruction

The following query criteria are supported when querying status code statistics:

The screenshot shows the 'Status code statistics' page in the Tencent Cloud CDN Console. The left sidebar contains the following menu items: Overview, Domain Management, Purge Cache, Statistics (expanded), Usage, Access, and Status Code. The main content area has a title 'Status code statistics' and a search bar. Below the search bar, there are several filters: 'Today', 'Yesterday', 'Last 7 days', 'Last 15 days', 'Last 30 days' (selected), and a date range '2017-04-20 To 2017-05-19'. There are also dropdown menus for 'Projects' (All projects), 'Domains' (All domains), 'Network layer' (Edge server), and 'Temporal granularity' (2 hours). A 'Check' button is located at the bottom left of the filter section.

Note:

- Time selection: The query for statistical data for the last 90 days is supported with a query span of up to 90 days.
- Project: Query for usage data based on project is supported;
- Domain: Query for usage data based on specified domain is supported;
- Network layer: Query for status code statistics of edge nodes or intermediate nodes is supported;
- Temporal granularity: This refers to the temporal granularity with which bandwidth and traffic data will be presented. This is related to the selected time span:

If the selected time span is 1 day, you can query data with a temporal granularity of 5 minutes, 15 minutes, 30 minutes, 2 hours or 4 hours;

If the selected time span is 2-3 days, you can query data with a temporal granularity of 15 minutes, 30 minutes, 2 hours or 4 hours;

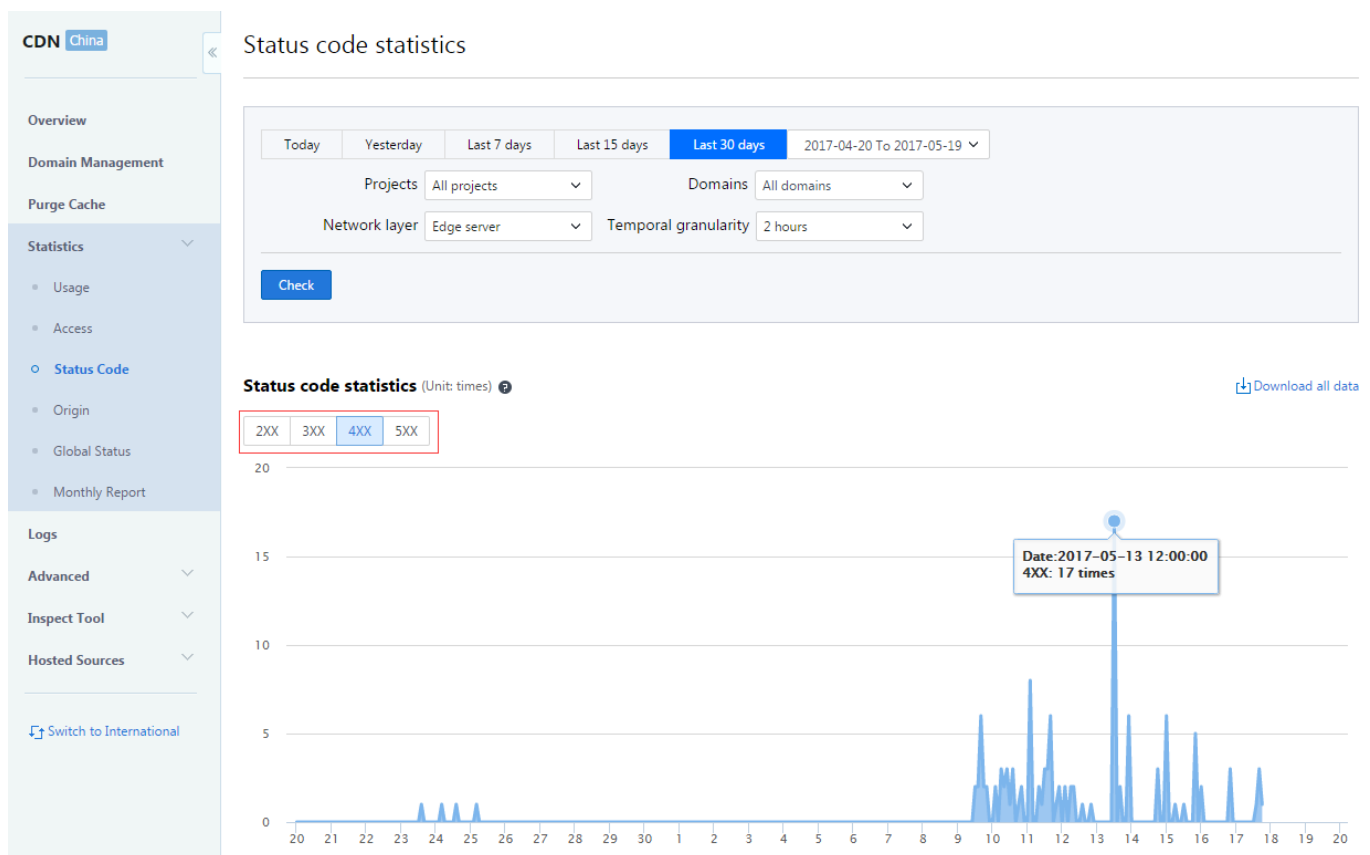
If the selected time span is 4-7 days, you can query data with a temporal granularity of 2 hours, 4 hours or 1 day;

If the selected time span is more than 30 days, you can only query data with a temporal granularity of 4 hours or 1 day;

Data Result Description

Status Code Statistics

Displays the statistical data curve graph of 2XX, 3XX, 4XX, 5XX status codes:



Statistics Instruction:

- 2XX: Statistics of status code 200 and 206;
- 3XX: Statistics of status code 304;
- 4XX: Statistics of status code 404 and 416;
- 5XX: Statistics of status code 500.

Note:

- The minimum granularity of status code statistics is five minutes, that is, the statistical data from 2016-10-25 15:00:00 to 15:04:59 will be shown at the statistical point of 2016-10-25 15:05:00;
- The latency of real-time data is about five minutes, that is, the statistical point of 2016-10-25 15:05:00 will appear around 2016-10-25 15:10:00;
- Domains added within 90 days by the user, including deleted domains, will be displayed in the "All domains" drop-down box;
- Note about statistics:

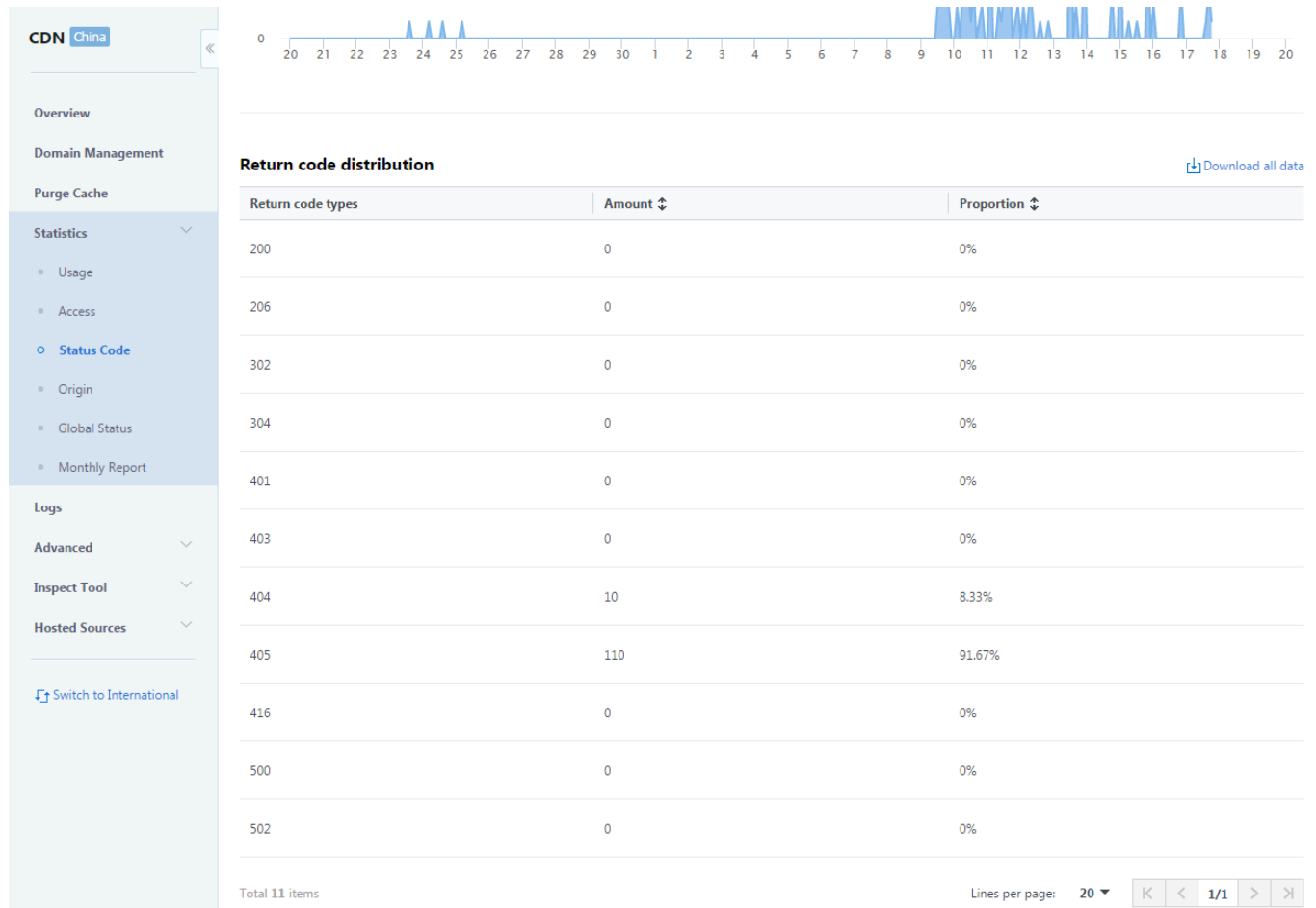
If the domain has not been connected to CDN for the specified time range, it will not be covered in statistics even if it is checked;

If the domain has been deleted for the specified time range, it will not be covered in statistics even if it is checked;

If the domain experienced three stages (not connected, connected and deleted) for the specified time range, the statistical data for unconnected and deleted time period will be filled by 0.

Status Code Distribution

Detailed statistics regarding the number and proportion of status codes:



Origin Server Statistics

Log in to [CDN Console](#), and click "Origin" page under "Statistics" to review statistical data such as back-to-origin bandwidth, back-to-origin traffic and back-to-origin speed.

Query Criteria Instruction

The following query criteria are supported when querying back-to-origin statistic data:

CDN China

Origin Server

Overview

Domain Management

Purge Cache

Statistics

- Usage
- Access
- Status Code
- Origin

Today Yesterday Last 7 days Last 15 days Last 30 days 2017-05-19

Projects All projects Domains All domains

Temporal granularity 5 minutes

Check

Origin-Pull Consumption Origin-Pull Failures 404 Status Code

Note:

- Project: Query for usage data based on project is supported;
- Domain: Query for usage data based on specified domain is supported;
- Temporal granularity: This refers to the temporal granularity with which bandwidth and traffic data will be presented. This is related to the selected time span:

If the selected time span is 1 day, you can query data with a temporal granularity of 5 minutes, 15 minutes, 30 minutes, 2 hours or 4 hours;

If the selected time span is 2-3 days, you can query data with a temporal granularity of 15 minutes, 30 minutes, 2 hours or 4 hours;

If the selected time span is 4-7 days, you can query data with a temporal granularity of 2 hours, 4 hours or 1 day;

If the selected time span is more than 30 days, you can only query data with a temporal granularity of 4 hours or 1 day;

- The minimum granularity of back-to-origin statistics is five minutes, that is, the statistical data from 2016-10-25 15:00:00 to 15:04:59 will be shown at the statistical point of 2016-10-25 15:05:00;
- The latency of real-time data is about five minutes, that is, the statistical point of 2016-10-25 15:05:00 will appear around 2016-10-25 15:10:00;
- All domains that have been connected by the user will be displayed in the "All domains" drop-down box; deleted domains are grayed out:

If the domain has not been connected to CDN for the specified time range, it will not be covered in statistics even if it is checked;

If the domain has been deleted for the specified time range, it will not be covered in statistics even if it is checked;

If the domain experienced three stages (not connected, connected and deleted) for the specified time range, the statistical data for unconnected and deleted time period will be filled by 0.

Data Result Description

Note about statistics:

Back-to-origin failure rate statistics, back-to-origin failure analysis, and 404 status code are obtained from the statistical analysis of logs, thus such data are collected from the hosting source dimension:

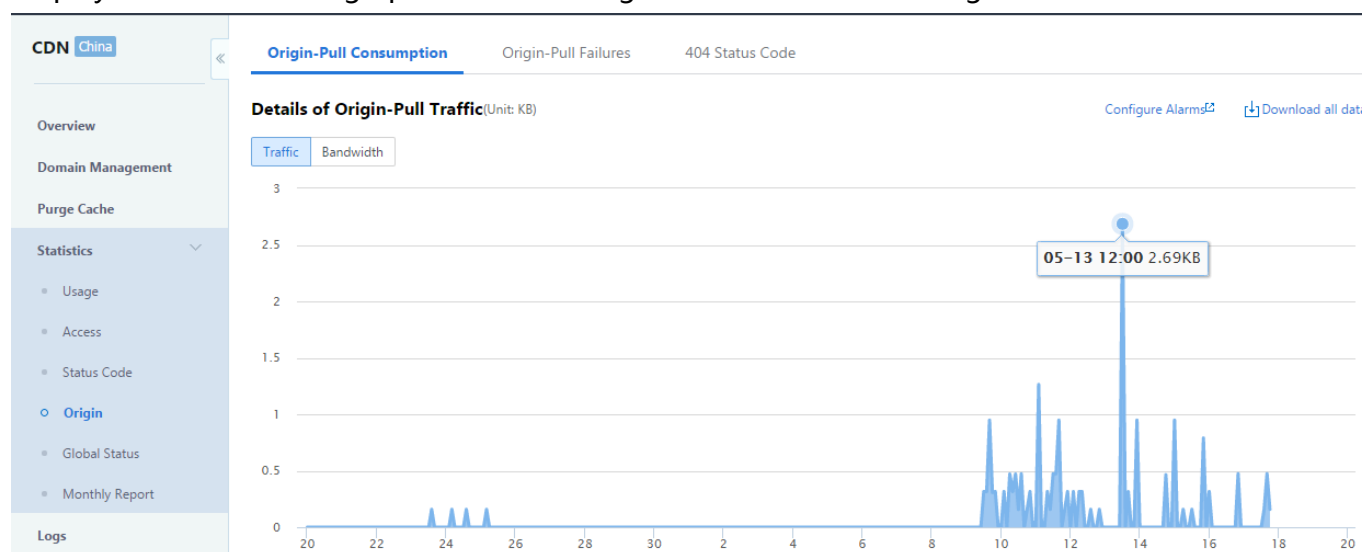
Connect the accelerated domain "www.a.com" and set its hosting source to "www.c.com";
Connect the accelerated domain "www.b.com", and set its hosting source to "www.c.com";

In this situation, the query results regarding relevant information of "www.a.com" or "www.b.com" are the same, which will be the statistics of the origin server "www.c.com".

The statistics of back-to-origin bandwidth and back-to-origin speed are collected independently without following the above logic.

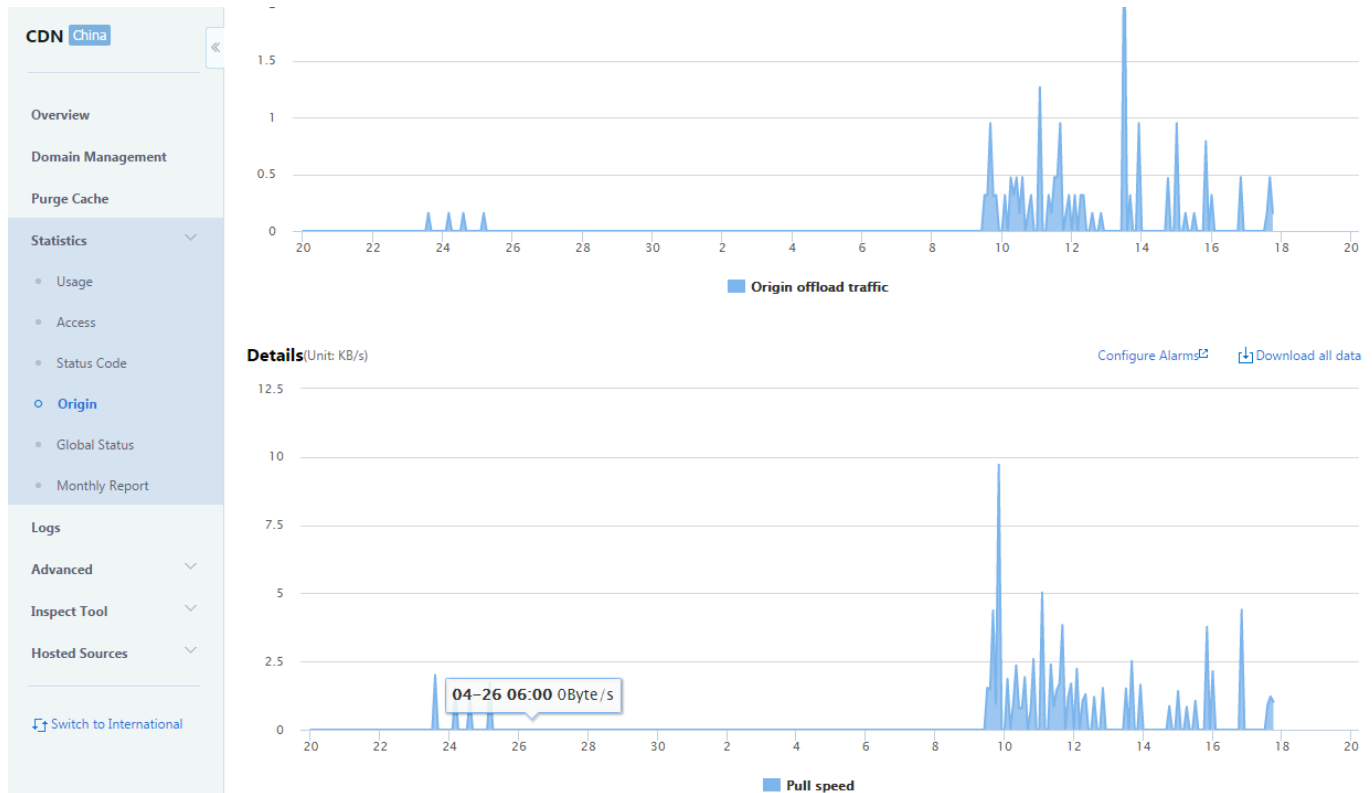
Back-to-origin Traffic and Bandwidth

Displays statistical curve graph of back-to-origin traffic and back-to-origin bandwidth:



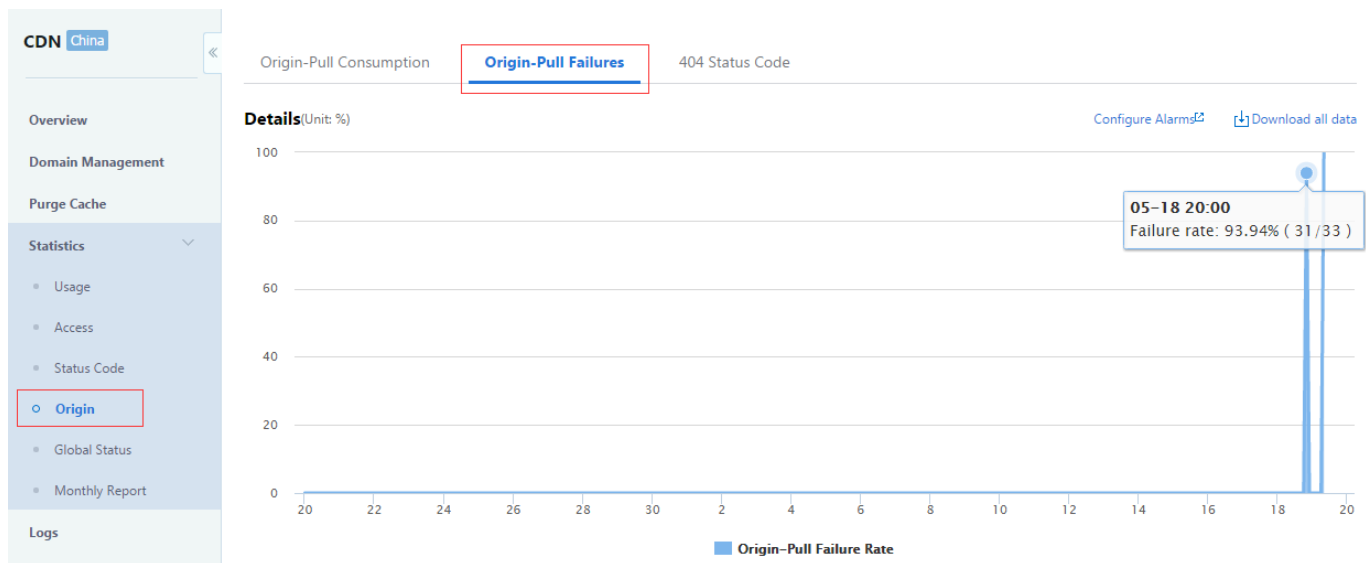
Back-to-origin Speed

CDN provides back-to-origin speed monitoring to give you a better understanding of the quality of back-to-origin links. Back-to-origin speed is calculated by dividing the total traffic of all back-to-origin requests with the time spent by all back-to-origin requests, during the statistical cycle.



Back-to-origin Failure Rate

Displays the statistical curve graph of real-time back-to-origin failure rate:



Note:

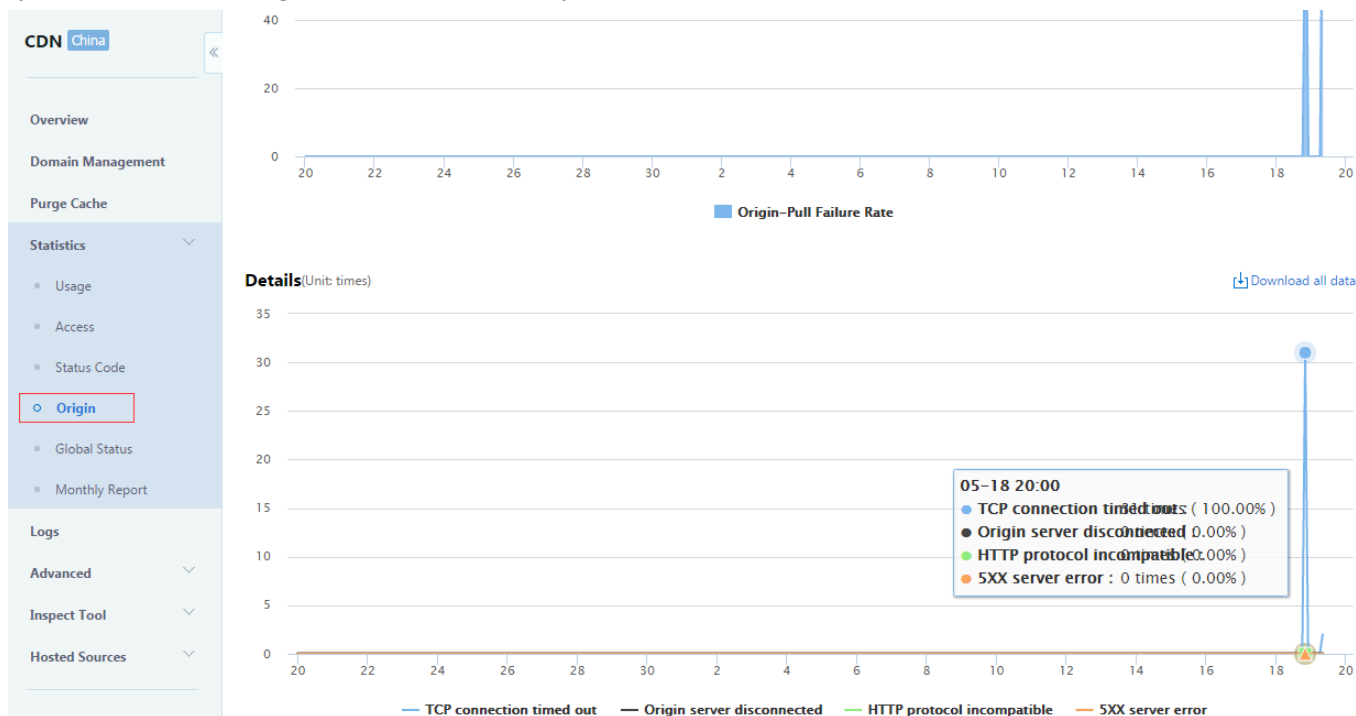
- Back-to-origin failure rate = number of failed back-to-origin requests / total number of back-

to-origin requests. Situations when a request is considered failed include TCP connection timeout, origin server disconnection, incompatible HTTP protocols and 5XX server error. For more details, please refer to the following "Details of Back-to-origin Failure";

- Statistical data regarding back-to-origin failure rate is provided starting from 2016-10-15. Currently you cannot query for data before this date;
- You can configure real-time alarms against back-to-origin failure rate for CDN domains and projects in [Cloud Monitoring](#).

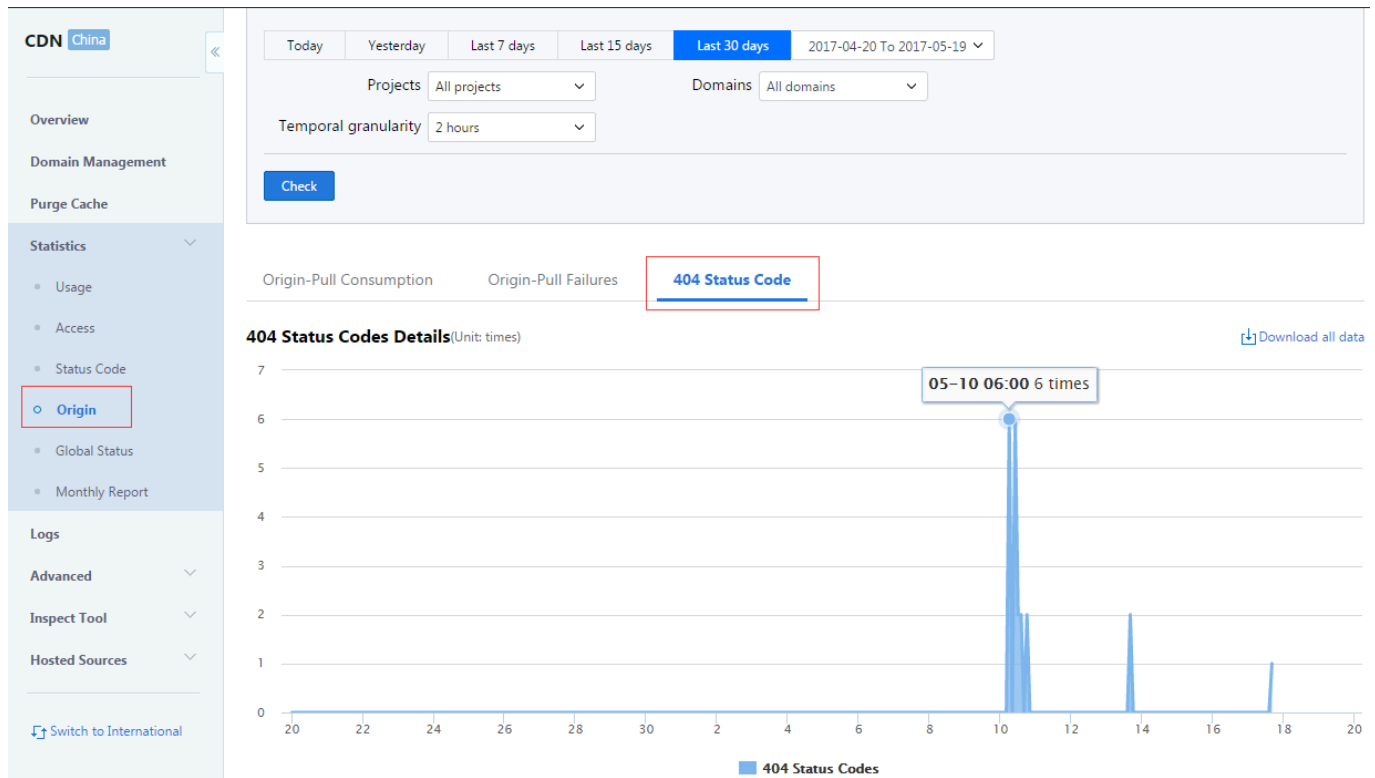
Details of Back-to-origin Failure Types

In correspondence with back-to-origin failure rate, real-time statistics and proportions of various types of back-to-origin failures are displayed:



404 Status Code Statistics

Provides statistics of 404 status codes that are generated for back-to-origin requests:



Note:

- Statistical data regarding 404 status codes is provided starting from 2016-10-15. Currently you cannot query for data before this date;

Network Status Monitoring

Log in to [CDN Console](#), and click "Global Status" page under "Statistics" to review the real-time status of carriers of the entire CDN network.

CDN keeps sending requests to monitor files according to monitor points from provinces and carriers across the country, to collect the response data of these requests and obtains latency and availability information of carriers in various provinces across the entire network.

Query of Real-time Network Status

The real-time status of the entire network is shown below:



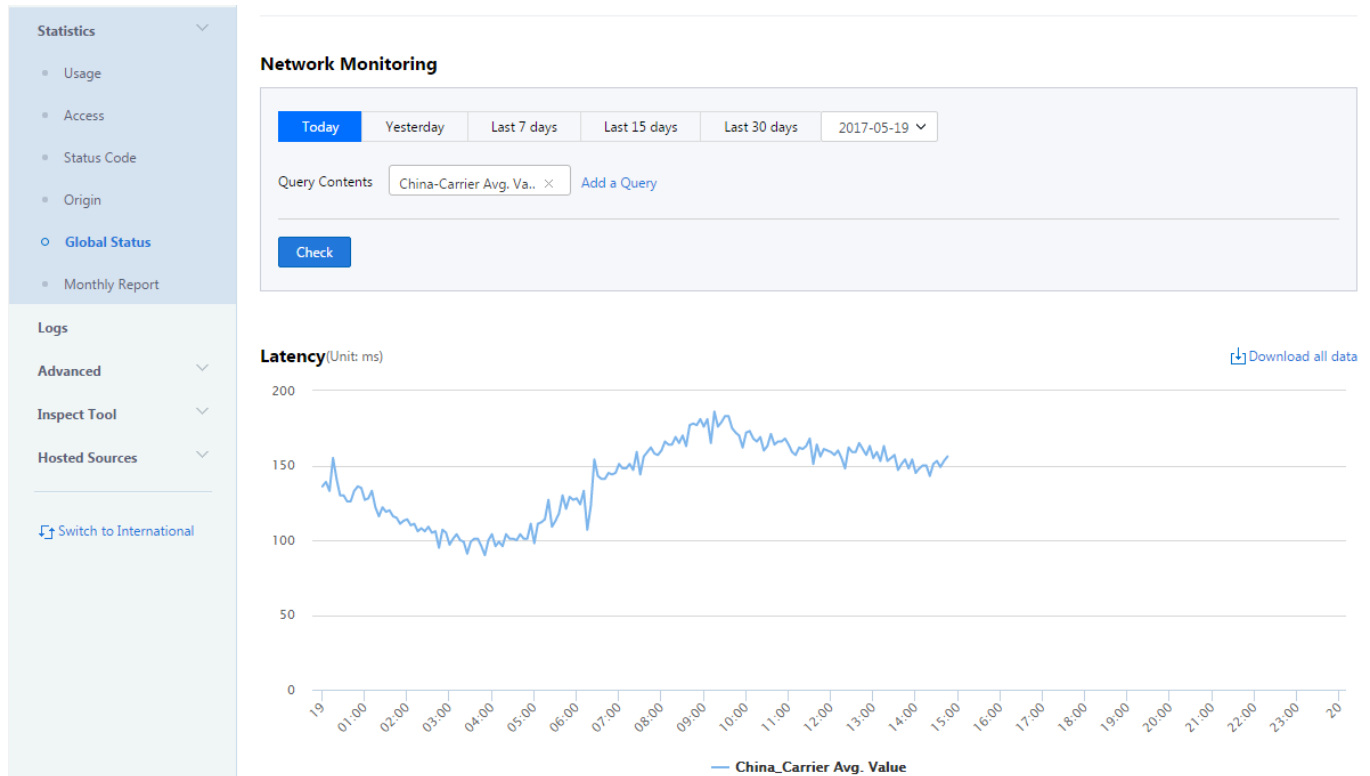
Note:

- Data of three major ISPs (China Mobile, China Unicom and China Telecom) is shown in the figure; small and medium sized ISPs are included when calculating the average latency or availability;

- In the figure, refresh time for real-time data is one minute.

Network Monitoring

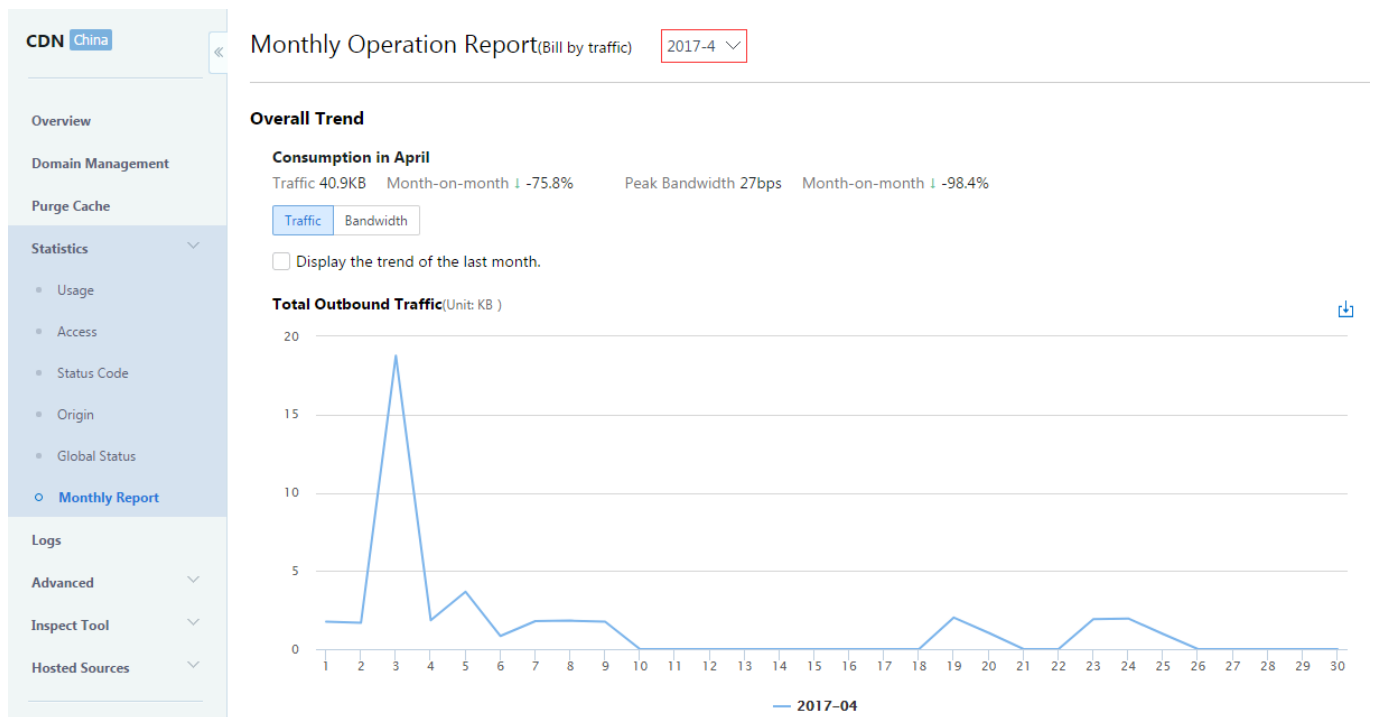
In this page, you can query for historical record of latency and availability curve graph of specified region and carrier in specified time range:



OPS Monthly Report

CDN provides monthly report feature which displays your business status in the form of a multi-dimensional report, to help you analyze business status in a month. Log in to [CDN Console](#), and click "Monthly Report" under "Statistics".

You can query the monthly operating report of a specific month (up till 2016-01):



A monthly operating report includes the following information:

- Overall Trend: Displays consumption details of specified month. You may switch the display between traffic and bandwidth, as well as make comparisons with the previous month;
- TOP Bandwidth Consumption Proportion: Displays consumption and proportion analytical details of TOP5 projects and domains from project dimension/domain dimension, respectively;
- TOP Bandwidth Consumption Comparison: Displays the TOP10 projects or domains with the highest consumption from project dimension/domain dimension, respectively, as well as the comparison with the previous month;
- Hit Rate Analysis: Displays the analytical result of average hit rate for the month and the comparison with that of the previous month. Displays details of the TOP3 domains with the lowest hit rates.