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智能接入网关

Monitoring and alarms

Document Version: 20211014

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Document conventions

Style	Description	Example
Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	**Danger:** Resetting will result in the loss of user configuration data.
Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	**Warning:** Restarting will cause business interruption. About 10 minutes are required to restart an instance.
Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	**Notice:** If the weight is set to 0, the server no longer receives new requests.
Note	A note indicates supplemental instructions, best practices, tips, and other content.	**Note:** You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click **Settings**> **Network**> **Set network type**.
Bold	Bold formatting is used for buttons , menus, page names, and other UI elements.	Click **OK**.
`Courier font`	Courier font is used for commands	Run the `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`
{} or {a|b}	This format is used for a required value, where only one item can be selected.	`switch {active|stand}`

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1.Monitor the status of an SAG device

After you purchase a Smart Access Gateway (SAG) device in the SAG console, Alibaba Cloud creates an SAG instance for you to manage network configurations. You can view the status of the SAG device in the SAG console.

Procedure

1. Log on to the SAG console.
2. In the left-side navigation pane, click **Smart Access Gateway**. On the **Smart Access Gateway** page, view the **Status** of the target SAG instance.
3. View the status of an SAG instance.

   The following table describes different states of an SAG instance.

Status	Description
Order Placed	The order has been placed and the package is not dispatched.
Order Shipped	The package has been dispatched. After you receive the package, sign for it and activate the SAG instance.
Not Associated	The SAG device is not associated with a Cloud Connect Network (CCN) instance or a virtual border router (VBR).
Disconnected	The SAG device is not connected to Alibaba Cloud. **Note** You can configure the SAG device to access the Internet. After you associate the device with a CCN instance, the status of the device automatically changes to Ready.
Ready	The SAG device is running normally. **Note** Assume that an SAG instance is associated with an active SAG device and a standby SAG device. If the active SAG device is connected to Alibaba Cloud and the standby SAG device is disconnected from Alibaba Cloud, the status of the SAG instance is Ready.
Overdue Payment	The SAG device is unavailable due to overdue payments.

2.Monitor traffic

In the SAG console, you can view monitoring data of an SAG instance based on different metrics, such as traffic, data packets, latency, and packet loss.

The following table lists the monitoring metrics of an SAG device.

Metric	Description
Alibaba Cloud-facing Traffic	
Bandwidth	Bandwidth information is classified into the following types: • Inbound bandwidth (bit/s): the bandwidth used by external networks to access the SAG device. • Outbound bandwidth (bit/s): the bandwidth used by the SAG device to access external networks.
Packet Rate	Packet rate information is classified into the following types: • Inbound packet rate (packet/s): the number of packets that the SAG device receives per second. • Outbound packet rate (packet/s): the number of packets that are transmitted from the SAG device per second.
Packet Loss Rate	Packet loss rate (packet/s): the number of dropped packets per second.
Tests	
Packet Loss Test	Tested packet loss (packet/s): the number of packets dropped per second in the tested connection.
Latency Test	Tested packet loss (ms): the response latency of the tested connection.

3.View traffic monitoring data of applications

This topic describes how to view the traffic monitoring data of applications.

Prerequisites

The deep packet inspection (DPI)-based monitoring feature of Smart Access Gateway (SAG) is enabled. For more information, see Manage DPI.

View traffic distribution of applications

1. Log on to the SAG console.
2. In the top navigation bar, select the region where the SAG instance is deployed.
3. On the **Smart Access Gateway** page, click the ID of the SAG instance.
4. On the instance details page, click the **Monitoring** tab.
5. On the **Monitoring** tab, click **DPI Statistics on Applications**.
6. On the **DPI Statistics on Applications** tab, you can view the following information:
   - **DPI Statistics by Application Group**: displays the traffic percentage of each application group for the current SAG instance by default.
   - **DPI Statistics by Application**: displays the traffic percentage of each application by default.
   - **DPI Statistics by Request Source**: displays the traffic percentage of each application by request source by default.

View traffic distribution of specific applications

On the **DPI Statistics on Applications** tab, you can set the following conditions to filter traffic monitoring data. For example, you can view the traffic percentages of applications during a specified time period or traffic percentages of specified applications.

- **topN**: queries the traffic information about the top 10, top 50, top 100, or top 500 applications, application groups, or application request sources that have the highest percentages of traffic.
- **Time**: Click **Select** in the upper-right corner of the tab to select a time period for querying traffic distribution of applications.

  You can set the time period in the following formats:

  - **Relative**: queries traffic distribution of applications from the current time to a specified time in the past.

    For example, you can select **5 Minutes** and the current time is 14:33:38 (UTC+8) on November 26, 2020. In this case, the traffic distribution from 14:28:38 (UTC+8) on November 26, 2020 to 14:33:38 (UTC+8) on November 26, 2020 is queried.

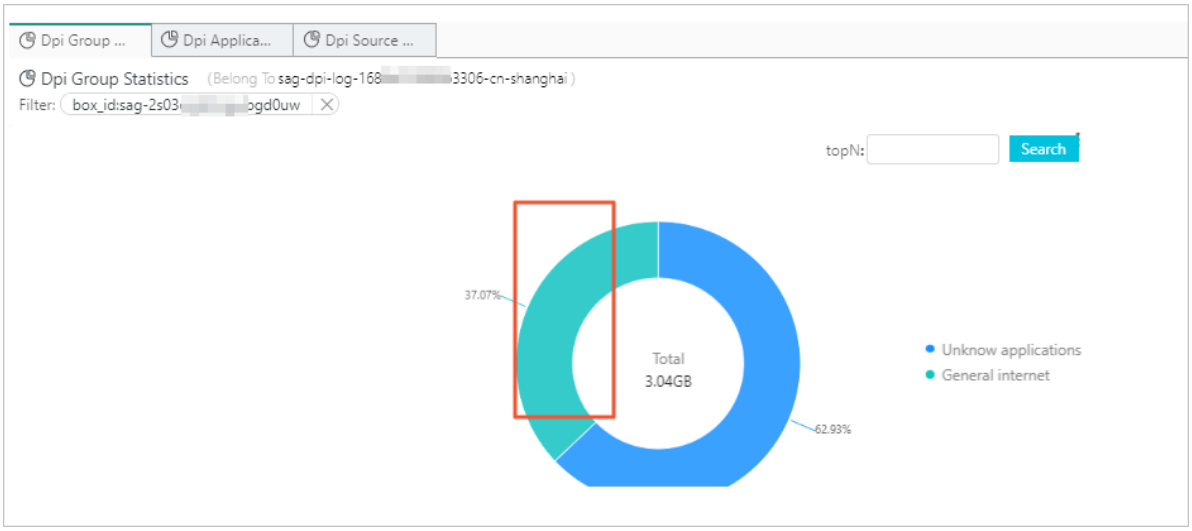
  - **Rounded to Hour**: queries traffic distribution of applications from the beginning of the current hour to a specified time in the past.

    For example, you can select **1 Hour** and the current time is 14:33:38 (UTC+8) on November 26, 2020. In this case, the traffic distribution from 13:00:00 (UTC+8) on November 26, 2020 to 14:00:00 (UTC+8) on November 26, 2020 is queried.

  - **Custom**: queries traffic distribution of applications during a custom time period.

- **Specified Applications**: queries traffic distribution of applications in specified application groups or of specified applications.

  For example, the following figure shows the traffic percentage of each application for a specified SAG instance. The information is displayed on the **DPI Statistics by Application Group** tab. If you click the green area in the ring diagram, you are redirected to the **DPI Statistics on Applications** tab. This tab displays the traffic distribution of each application in the **General internet** group.



4.View monitoring information about bandwidth resources for application acceleration

This topic describes how to view monitoring information about bandwidth resources for application acceleration.

View monitoring information about the bandwidth of an application acceleration plan

View monitoring information about the bandwidth and traffic of an application acceleration plan.

1. Log on to the SAG console.
2. In the top navigation bar, select the region.
3. In the left-side navigation pane, click **Application Acceleration Plan**.
4. On the **Application Acceleration Plan** page, find the application acceleration plan and click its ID.
5. On the details page, click the **Monitoring** tab to view monitoring information about the application acceleration plan.

   By default, the system displays metrics within the last hour. You can select other time ranges from the **Time** drop-down list in the upper-left corner of the **Monitoring** page. Supported time ranges are 3 hours, 6 hours, and 12 hours. You can also specify a custom time range.

Metric	Description
Bandwidth Monitoring	
Inbound Bandwidth Monitoring of Application Acceleration Bandwidth Plan	The bandwidth that is used for application acceleration when the client accesses the application. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Outbound Bandwidth Monitoring of Application Acceleration Bandwidth Plan	The bandwidth that is used for application acceleration when the application sends response data to the client. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Traffic Monitoring	
Inbound Traffic Monitoring of Application Acceleration Bandwidth Plan	The amount of data that is transferred when the client accesses the application. Unit: bytes.

Metric	Description
Outbound Traffic Monitoring of Application Acceleration Bandwidth Plan	The amount of data that is transferred when the application sends response data to the client. Unit: bytes.

View monitoring information about bandwidth resources for application acceleration of an application

After you add an application acceleration rule, you can view monitoring information about bandwidth resources for application acceleration of each application.

1. Log on to the SAG console.
2. In the top navigation bar, select the region.
3. In the left-side navigation pane, click **Application Acceleration Plan**.
4. On the **Application Acceleration Plan** page, find the application acceleration plan and click its ID.
5. On the details page, click the **Application Acceleration Rules** tab.
6. Find the application and click in the **Monitoring** column.

   By default, the system displays metrics within the last hour. You can select other time ranges from the **Time** drop-down list in the upper-left corner of the **Monitoring** page. Supported time ranges are 3 hours, 6 hours, and 12 hours. You can also specify a custom time range.

Metric	Description
Bandwidth Value of Application Acceleration Bandwidth Plan	
Monitoring of Inbound Application Acceleration Bandwidth	The bandwidth that is used for application acceleration when the client accesses the application. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Monitoring of Outbound Application Acceleration Bandwidth	The bandwidth that is used for application acceleration when the destination application sends response data to the client. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Traffic of Application Acceleration Bandwidth Plan	
Inbound Traffic Monitoring of Application Acceleration Bandwidth	The amount of data that is transferred when the client accesses the destination application. Unit: bytes.
Outbound Traffic Monitoring of Application Acceleration Bandwidth	The amount of data that is transferred when the destination application sends response data to the client. Unit: bytes.

Metric	Description
Packets Dropped due to Bandwidth Throttling of Application Acceleration Bandwidth Plan	The number of packets dropped per second due to bandwidth throttling when the client accesses the destination application. Unit: pps.

View monitoring information about bandwidth resources for application acceleration of an SAG instance

- View monitoring information about bandwidth resources for application acceleration of a Smart Access Gateway (SAG) CPE instance
  i. Log on to the SAG console.
  ii. In the top navigation bar, select the region where the SAG instance is deployed.
  iii. In the left-side navigation pane, click **Smart Access Gateway**.
  iv. On the **Smart Access Gateway** page, click the ID of the SAG instance.
  v. On the details page, choose **Monitoring > Application Acceleration Bandwidth** to view monitoring information about the bandwidth resources for application acceleration of the SAG instance.

  By default, the system displays metrics within the last hour. You can select other time ranges from the **Time** drop-down list in the upper-left corner of the **Monitoring** page. Supported time ranges are 3 hours, 6 hours, and 12 hours. You can also specify a custom time range.

Metric	Description
Bandwidth Value of Application Acceleration Bandwidth Plan for SAG Instance	
Inbound Application Acceleration Bandwidth of SAG Instance	The bandwidth that is used for application acceleration when the client that is associated with the SAG instance accesses the application. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Outbound Application Acceleration Bandwidth of SAG Instance	The bandwidth that is used for application acceleration when the application sends response data to the client associated with the SAG instance. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Traffic of Application Acceleration Bandwidth Plan for SAG Instance	
Inbound Traffic of Application Acceleration Bandwidth Plan for SAG Instance	The amount of data that is transferred when the client associated with the SAG instance accesses the application. Unit: bytes.

Metric	Description
Outbound Traffic of Application Acceleration Bandwidth Plan for SAG Instance	The amount of data that is transferred when the application sends response data to the client associated with the SAG instance. Unit: bytes.
Packets Dropped due to Bandwidth Throttling of Application Acceleration Bandwidth Plan for SAG Instance	The number of packets dropped per second due to bandwidth throttling when the client associated with the SAG instance accesses the application. Unit: pps.

- View monitoring information about bandwidth resources for application acceleration of an SAG app instance
  i. Log on to the SAG console.
  ii. In the top navigation bar, select the region where the SAG app instance is deployed.
  iii. In the left-side navigation pane, choose **Smart Access Gateway APP > SAG APP Instances**.
  iv. On the **SAG APP Instances** page, find the SAG app instance and click in the **Monitoring** column to view monitoring information about the bandwidth resources for application acceleration.

  By default, the system displays metrics within the last hour. You can select other time ranges from the **Time** drop-down list in the upper-left corner of the **Monitoring** page. Supported time ranges are 3 hours, 6 hours, and 12 hours. You can also specify a custom time range.

  > **Note** The following table describes only metrics of bandwidth resources for application acceleration. For more information about other metrics, see View the traffic monitoring data of an SAG APP instance.

Metric	Description
Bandwidth Value of Application Acceleration Bandwidth Plan for SAG Instance	
Inbound Application Acceleration Bandwidth of SAG Instance	The bandwidth that is used for application acceleration when the client that is associated with the SAG app instance accesses the application. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Outbound Application Acceleration Bandwidth of SAG Instance	The bandwidth that is used for application acceleration when the application sends response data to the client associated with the SAG app instance. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Traffic of Application Acceleration Bandwidth Plan for SAG Instance	

Metric	Description
Inbound Traffic of Application Acceleration Bandwidth Plan for SAG Instance	The amount of data that is transferred when the client associated with the SAG app instance accesses the application. Unit: bytes.
Outbound Traffic of Application Acceleration Bandwidth Plan for SAG Instance	The amount of data that is transferred when the application sends response data to the client associated with the SAG app instance. Unit: bytes.
Packets Dropped due to Bandwidth Throttling of Application Acceleration Bandwidth Plan for SAG Instance	The number of packets dropped per second due to bandwidth throttling when the client associated with the SAG app instance accesses the application. Unit: pps.

View monitoring information about bandwidth resources for application acceleration of a client account

You can view monitoring information about bandwidth resources for application acceleration of each client account that belongs to an SAG app instance.

1. Log on to the SAG console.
2. In the top navigation bar, select the region.
3. In the left-side navigation pane, choose **Smart Access Gateway APP > SAG APP Instances**.
4. On the **SAG APP Instances** page, click the ID of the SAG app instance.
5. On the details page, click the **Client Accounts** tab.
6. Find the client account and click  in the **Monitoring** column to view monitoring information about bandwidth resources for application acceleration of the client account.

   By default, the system displays metrics within the last hour. You can select other time ranges from the **Time** drop-down list in the upper-left corner of the **Monitoring** page. Supported time ranges are 3 hours, 6 hours, and 12 hours. You can also specify a custom time range.

> **Note** The following table describes only metrics of bandwidth resources for application acceleration. For more information about other metrics, see View the traffic monitoring data of an SAG APP instance.

Metric	Description
Application Acceleration Bandwidth of SAG Instance	
Inbound Bandwidth Monitoring of Application Acceleration Bandwidth Plan for SAG Instance	The bandwidth that is used for application acceleration when the client accesses the application. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.

Metric	Description
Outbound Bandwidth Monitoring of Application Acceleration Bandwidth Plan for SAG Instance	The bandwidth that is used for application acceleration when the application sends response data to the client. Unit: bit/s. You can also change the unit to Kbit/s, Mbit/s, or Gbit/s from the drop-down list next to the metric.
Traffic Monitoring of Application Acceleration Bandwidth Plan for SAG Instance	
Inbound Traffic Monitoring of Application Acceleration Bandwidth Plan for SAG Instance	The amount of data that is transferred when the client accesses the application. Unit: bytes.
Outbound Traffic Monitoring of Application Acceleration Bandwidth Plan for SAG Instance	The amount of data that is transferred when the application sends response data to the client. Unit: bytes.
Packets Dropped due to Bandwidth Throttling of Application Acceleration Bandwidth Plan for SAG Instance	The number of packets dropped per second due to bandwidth throttling when the client accesses the destination application. Unit: pps.