



Cloud Eye

Service Overview

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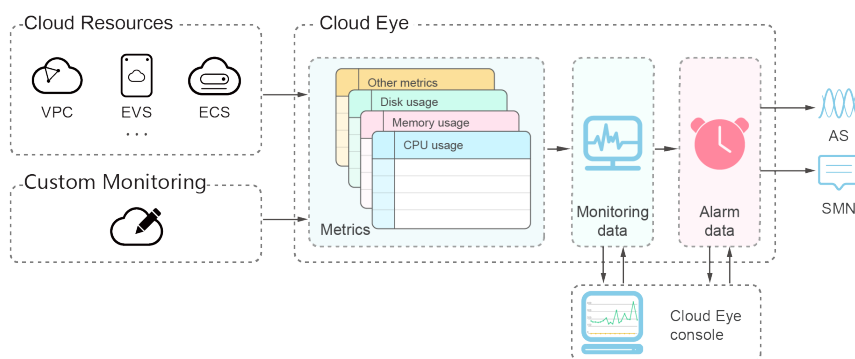
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1 What Is Cloud Eye?

Cloud Eye is a multi-dimensional resource monitoring platform. You can use Cloud Eye to monitor the utilization of service resources, track the running status of cloud services, configure alarm rules and notifications, and quickly respond to resource changes. [Figure 1-1](#) shows the Cloud Eye architecture.

Figure 1-1 Cloud Eye architecture



Cloud Eye provides the following functions:

- **Automatic Monitoring:** Monitoring starts automatically after you create Elastic Cloud Servers (ECSs) or Auto Scaling (AS) groups. After deploying a cloud service, you can view the service running status and set alarm rules on the Cloud Eye console.
- **Server Monitoring:** After installing the Agent (Telescope) on an ECS or BMS, you can collect 60-second granularity ECS or BMS monitoring data in real-time. 40 metrics, such as CPU, memory, and disk metrics, are provided. For details, see [Introduction to Server Monitoring](#).
- **Flexible Alarm Rule Configuration:** You can create alarm rules for multiple resources at the same time. After an alarm rule is created, you can flexibly manage it, for example at any time you can modify, enable, disable, or delete it.
- **Real-time Notification:** You can enable Simple Message Notification (SMN) when creating alarm rules. When the cloud service status changes and the monitoring data of the metric reaches the threshold specified in an alarm rule, Cloud Eye notifies you by emails, or by sending messages to server addresses. In this way, you can monitor the cloud resource status and changes in real time.

- **Monitoring Panel:** The panel enables you to view cross-service and cross-dimension monitoring data. It displays key metrics centrally, providing an overview of the service operating status and allowing monitoring details to be checked when troubleshooting.
- **Resource Groups:** This function enables management of resources based on services, including management of ECSs, EVS disks, elastic IP addresses, bandwidth, and databases. Resources of different types, alarm rules, and alarm history are managed based on service, which helps to improve O&M efficiency.

2 Advantages

Automatic Provisioning

After registration on the cloud platform, Cloud Eye is enabled automatically. After deploying a cloud service, you can view the service running status and set alarm rules on the Cloud Eye console.

Real-time and Reliable Monitoring

Raw data is reported to Cloud Eye in real time for monitoring of cloud services.

Alarms are generated and notifications are sent to you in real time.

Monitoring Visualization

Cloud Eye monitoring panels provide you with rich monitoring graphs supporting automatic data refresh and multi-metric comparison, meeting your requirements for monitoring data virtualization.

Multiple Notification Types

You can enable the SMN service when creating alarm rules. When the metric data reaches the threshold specified in an alarm rule, Cloud Eye notifies you by emails, allowing you to keep track of the running status of cloud services. Cloud Eye can also send HTTP/HTTPS requests to an IP address of your choice, helping you build smart alarm handling programs.

Alarm Rule Creation in Batches

Alarm templates allow you to quickly create alarm rules for multiple cloud services.

3 Application Scenarios

Cloud Eye provides various application scenarios.

Cloud Service Monitoring

After enabling a cloud service supported by Cloud Eye, you can conveniently view the running status of the cloud service, usage of each metric, and create alarm rules for metrics on the Cloud Eye console.

Server Monitoring

By monitoring the ECS or BMS metrics, such as CPU usage, memory usage, and disk usage, you can ensure stable running of the ECS or BMS to prevent service interruption caused by overuse of resources.

Resource Exception

Based on the alarm rule, Cloud Eye generates an alarm and uses the SMN service to send notifications when the metric data reaches the alarm policy. In this way, you can obtain the exception notification and query the exception cause in time.

Capacity Expansion

After creating alarm rules for metrics such as CPU usage, memory usage, and disk usage, you can track the running status of a cloud service. When you receive an alarm notification or the service volume increases, you can manually expand the capacity or use AS for capacity expansion.

Custom Monitoring

Custom monitoring supplements cloud service monitoring. If Cloud Eye does not provide the required metrics, you can use custom monitoring and report the collected monitoring data to Cloud Eye. Cloud Eye helps to display those monitoring data in graphs and allows you to create alarm rules for those custom metrics.

4 Cloud Eye and Other Services

Once you start to use Cloud Eye, the system automatically identifies cloud services enabled on the current cloud platform, captures their key metrics, and reports monitoring data of these metrics to Cloud Eye.

At present, Cloud Eye supports automatic monitoring of the following metrics:

Computing

- [ECS Metrics](#)
- [ECS Metrics Under OS Monitoring](#)
- [BMS Metrics](#)



The Agent is required.

- [AS Metrics](#)

Storage

- [EVS Metrics](#)
- [OBS Metrics](#)
- [SFS Metrics](#)

Network

- [EIP and Bandwidth Metrics](#)
- [ELB Metrics](#)
- [NAT Gateway Metrics](#)

Application

[DMS Metrics](#)

Database

- [RDS Metrics](#)
- [DDS Metrics](#)
- [DCS Metrics](#)

Enterprise Application

- **Workspace Metrics**

5 Basic Concepts

The following concepts are central to your understanding and use of Cloud Eye:

- [Metrics](#)
- [Rollup](#)
- [Monitoring Panels](#)
- [Topics](#)
- [Alarm Rules](#)
- [Alarm Templates](#)
- [Projects](#)

Metrics

Metrics are the core concept in Cloud Eye. A metric refers to a quantized value of a resource dimension on the cloud platform, such as the ECS CPU usage and memory usage. A metric is a time-dependent variable that generates a series of monitoring data over time. It helps you understand the metric changes over a specified period of time.

Rollup

Rollup is the process in which Cloud Eye calculates the average, maximum, minimum, sum, or variance value based on sample raw data reported by each cloud service in specific periods. The calculation period is called rollup period. Currently, Cloud Eye supports the following rollup periods: 5 minutes, 20 minutes, 1 hour, 4 hours, and 24 hours.

Monitoring Panels

Monitoring panels allow you to view monitoring data of custom metrics of different services and dimensions. It displays metrics of key services in a centralized way, so that you can get an overview of the service running status and check monitoring details when troubleshooting.

Topics

A topic is used to publish messages and subscribe to notifications. Topics provide you with one-to-many publish subscription and message notification functions. You can send messages to different types of endpoints with only one message request. With SMN, Cloud Eye uses

various methods to notify you of cloud service resource changes, helping you track running status of cloud services in a timely manner.

Alarm Rules

In an alarm rule, you can set the threshold for a cloud service metric. When the status (such as **Alarm** and **OK**) of the alarm rule changes, Cloud Eye notifies you by sending emails, or by sending HTTP/HTTPS requests, avoiding service loss due to resource problems.

Alarm Templates

An alarm template contains one or more alarm rules for a specific service. It can help you quickly create alarm rules for multiple cloud services. This also improves the working efficiency of the O&M personnel.

Projects

A project is used to group and isolate OpenStack resources, such as computing, storage, and network resources. A project can either be a department or a project team. Multiple projects can be created for a single account.

6 Constraints

Table 6-1 lists Cloud Eye resource limits for a user.

Table 6-1 User resource limits

Quota Type	Default Limit
Number of alarm rules that can be created	100
Number of custom alarm templates that can be created	50
Number of alarm rules that can be added to an alarm template	20
Number of monitoring panels that can be created	20
The number of graphs that can be added to a monitoring panel	24
Number of instances that can be selected for single alarm rule creation	50
Number of alarm rules that can be created at a time	1000 NOTE If you select 50 monitored objects and 20 alarm templates, the number of alarm rules that can be created is 1000.
Number of topics that can be selected	5
Number of monitoring data records exported at a time	400 NOTE If the number of monitored objects is 400, the number of metrics is 1. If the number of monitored objects is 80, the number of metrics is 5.

7 Region and AZ

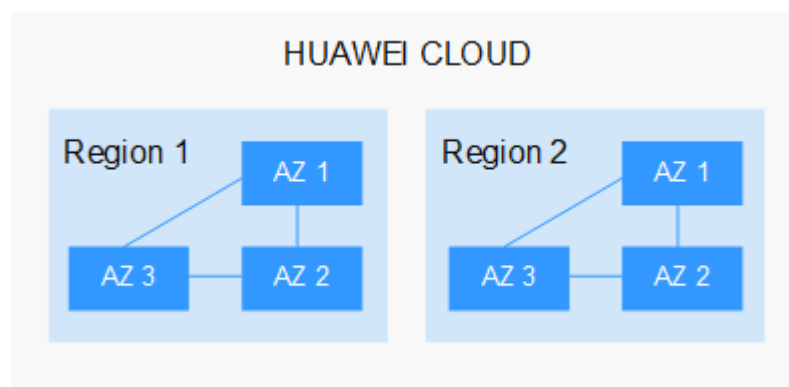
Concept

A region and availability zone (AZ) identify the location of a data center. You can create resources in a specific region and AZ.

- Regions are divided from the dimensions of geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified as universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides services of the same type only or for specific tenants.
- An AZ contains one or multiple physical data centers. Each AZ has independent cooling, fire extinguishing, moisture-proof, and electricity facilities. Within an AZ, computing, network, storage, and other resources are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ high-availability systems.

Figure 7-1 shows the relationship between regions and AZs.

Figure 7-1 Regions and AZs



HUAWEI CLOUD provides services in many regions around the world. You can select a region and AZ as needed. For more information, see [HUAWEI CLOUD Global Regions](#).

How to Select a Region?

When selecting a region, consider the following factors:

- Location

You are advised to select a region close to you or your target users. This reduces network latency and improves access rate. However, Chinese mainland regions provide basically the same infrastructure, BGP network quality, as well as operations and configurations on resources. Therefore, if you or your target users are in the Chinese mainland, you do not need to consider the network latency differences when selecting a region.

The countries and regions outside the Chinese mainland, such as Bangkok and Hong Kong, provide services for users outside the Chinese mainland. If you or your target users are in the Chinese mainland, these regions are not recommended due to high access latency.

- If you or your target users are in Asia Pacific excepting the Chinese mainland, select the **AP-Hong Kong**, **AP-Bangkok**, or **AP-Singapore** region.
- If you or your target users are in Africa, select the **AF-Johannesburg** region.
- If you or your target users are in Europe, select the **EU-Paris** region.
- If you or your target users are in Latin America, select the **LA-Santiago** region.

 **NOTE**

The **LA-Santiago** region is located in Chile.

- Resource price

Resource prices may vary in different regions. For details, see [Product Pricing Details](#).

How to Select an AZ?

When determining whether to deploy resources in the same AZ, consider your applications' requirements on disaster recovery (DR) and network latency.

- For high DR capability, deploy resources in different AZs in the same region.
- For low network latency, deploy resources in the same AZ.

Regions and Endpoints

Before using an API to call resources, specify its region and endpoint. For more details, see [Regions and Endpoints](#).