Application Operation Management

FAQs

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1 Overview

This chapter describes FAQs about Application Operations Management (AOM).

- Dashboard
- Alarm Management
- Log Analysis
- Prometheus Monitoring
- Container Insights
- Application Monitoring
- CMDB
- O&M Management
- Collection Management
- Other FAQs

2 Dashboard

2.1 Can I Import Grafana Views to AOM Dashboards?

Symptom

Can I import Grafana views to AOM dashboards?

Solution

No. However, you can obtain the Prometheus statement of a Grafana view and then create a graph in AOM by using the Prometheus statement.

Procedure:

- **Step 1** Log in to Grafana and obtain the Prometheus statement of a Grafana view.
- **Step 2** Log in to the AOM 2.0 console.
- **Step 3** In the navigation pane, choose **Metric Analysis** > **Metric Browsing**.
- **Step 4** Select a target Prometheus instance from the drop-down list.
- **Step 5** Click **Prometheus statement** and enter the Prometheus statement obtained in **Step 1**.
- **Step 6** Select a metric and click $\frac{1}{4}$ in the upper right corner of the metric list.
- **Step 7** In the **Add to Dashboard** dialog box, select a dashboard, set a graph name, and click **Confirm**.

Then you can view the Grafana view in AOM.

For details about how to manage dashboards, see **Dashboard**.

----End

3 Alarm Management

3.1 How Do I Distinguish Alarms from Events?

Similarities Between Alarms and Events

Both alarms and events are the information reported to AOM when the status of AOM or an external service (such as ServiceStage or CCE) changes.

Differences Between Alarms and Events

- Alarms are reported when AOM or an external service (such as ServiceStage or CCE) is abnormal or may cause exceptions. Alarms must be handled.
 Otherwise, service exceptions may occur.
- Events generally carry some important information. They are reported when AOM or an external service (such as ServiceStage or CCE) has some changes. Such changes do not necessarily cause service exceptions. Events do not need to be handled.

4 Log Analysis

4.1 Does AOM Display Logs in Real Time?

The logs displayed on Application Operations Management (AOM) are near realtime logs, of which the latency is in seconds.

There is a time interval between log collection and processing. If the number of logs is small, the latency is about 10s. If the number of logs is large, the latency is much longer.

4.2 How Do I Check Which Application Generates Logs in AOM?

Symptom

A large number of logs are generated everyday. How do I check which application generates specific logs?

Solution

AOM does not show the applications to which logs belong. To view that, ingest all logs to LTS and use its resource statistics function.

Procedure:

- **Step 1** Create a log group and stream for your application. For details, see **Creating Log Groups and Log Streams**.
- **Step 2** Log in to the LTS console and view detailed resource statistics of top 100 log groups or streams using the **resource statistics** function.

----End

5 Prometheus Monitoring

5.1 How Do I Connect Prometheus Data to AOM?

To connect Prometheus data to AOM, do as follows:

Step 1 Create a Prometheus instance.

For details, see:

- Prometheus Instance for ECS
- Prometheus Instance for CCE
- Prometheus Instance for Remote Write
- **Step 2** Report native Prometheus metrics to AOM through the remote write address. For details, see:

Reporting Prometheus Data to AOM

----End

5.2 How Do I Distinguish Basic Metrics from Custom Metrics When Using Prometheus Monitoring?

Log in to the AOM console, go to the Prometheus instance details page, and view the types of metrics that are collected.

Only the default Prometheus instance, and Prometheus instance for CCE or cloud services support the function of viewing metrics.

Procedure:

- **Step 1** Log in to the AOM 2.0 console.
- **Step 2** In the navigation pane on the left, choose **Prometheus Monitoring** > **Instances**.
- **Step 3** In the instance list, click a desired Prometheus instance. The instance details page is displayed.

Step 4 In the navigation pane on the left, choose **Service Discovery**. On the **Metrics** tab page, view the metric names and types of the current Prometheus instance.

----End

6 Container Insights

6.1 Why Can't AOM Detect Workloads After the Pod YAML File Is Deployed Using Helm?

Symptom

After the pod YAML file is deployed using Helm, AOM cannot detect workloads.

Possible Cause

Compare the YAML file deployed using Helm with that deployed on the CCE console. Environment parameters are found missing in the file deployed using Helm.

Figure 6-1 Comparing YAML files



Solution

- **Step 1** Log in to the CCE console and click a target cluster.
- **Step 2** Choose **Workloads** in the navigation pane, and select the type of workload whose metrics are to be reported to AOM.
- **Step 3** Choose **More** > **Edit YAML** in the **Operation** column where the target workload is located.
- **Step 4** In the displayed dialog box, locate **spec.template.spec.containers**.
- **Step 5** Add environment parameters to the end of the **image** field, as shown in **Figure** 6-2.

Figure 6-2 Adding environment parameters

Step 6 Click Confirm.

----End

Application Monitoring

7.1 What Are the Differences Between Application Monitoring Under Application Insights and that Under Process Monitoring?

The monitored objects vary depending on the navigation path.

- Application Insights > Application Monitoring:
 Resources and applications managed using CMDB. You can learn about the resource usage, status, and alarms of applications to quickly respond to requests and ensure smooth system running.
- Process Monitoring > Application Monitoring:
 Applications discovered based on application discovery rules.

8 CMDB (Retiring)

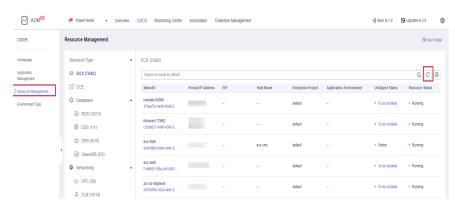
8.1 Why Are Resources Not Displayed on the Resource Management Page?

If you have purchased resources, choose **Resources** > **My Resources** on the top to check whether your resources exist. If your resources are displayed in **My Resources**, click the refresh icon on the **Resource Management** page to view them.

Figure 8-1 Viewing resources



Figure 8-2 Refreshing the resource management page



8.2 Why Are Deleted Resources Still Displayed on the Console?

For resources bound to CMDB environments, CMDB will not directly clear them when you delete them. Instead, it displays their status as **Destroyed**.

To clear such resources, manually unbind them from CMDB environments first. CMDB will then clear them in the early morning. Resources that are not bound to any CMDB environment will be cleared upon your deletion.

8.3 Why Are Resources Displayed on the CMDB Resource Management Page But Not Found When I Bind Environments?

CMDB checks whether resources are in the same enterprise project and region as environments. If they are inconsistent, resources will not be displayed.

If the preceding conditions are met but the corresponding resource is still not displayed, the resource has been bound to the environment and will not be displayed on the resource association page by default. You can set **Status** to **Bound** to view the resources that have been bound.

A resource can be bound to multiple environments by **transferring resources**. Repeated binding is not supported on the resource binding page.

8.4 Why Is "AOM.11007006: get policy list failed." Displayed?

Symptom

The system displays "AOM.11007006: get policy list failed" during resource search on the CMDB homepage.

Possible Causes

Your account is in arrears or frozen.

Solution

- If your account is in arrears, top it up by referring to Top-Up and Repayment.
- If your account is frozen or suspended but is still in the retention period, renew or top up your account by referring to Can Frozen Resources Be Unsubscribed from, Released, or Deleted?

9 O&M Management (Retiring)

9.1 How Can I Obtain the OBS Permission for Installing Packages?

To obtain packages from OBS, obtain an access credential first. Go to the Automation console, choose **Settings** > **Access Credentials**, and check whether there is an access credential. If no access credential is available, create one.

If you still do not have the OBS permission after creating an access credential, obtain the permission by referring to **How Can I Control Access to OBS**.

9.2 Why Can't Scheduled Tasks Be Triggered?

Symptom

After scheduled tasks are created, operations (such as script execution and file/scenario/job management) cannot be triggered at a specified time or periodically.

Possible Causes

Your account may be in arrears, frozen, or suspended.

Solution

- If your account is in arrears, top it up by referring to **Top-Up and Repayment**.
- If your account is frozen or suspended but is still in the retention period, renew or top up your account by referring to Can Frozen Resources Be Unsubscribed from, Released, or Deleted?

After your account is restored, the scheduled tasks can be triggered.

9.3 Can I Specify Script Parameters and Hosts During Job Execution?

Yes. You can set global parameters and reference them in job steps.

Procedure

- **Step 1** Log in to the AOM 2.0 console. In the navigation pane, choose **Automation** (Retiring).
- **Step 2** In the navigation pane, choose **Jobs** and click **Create Job** in the upper right corner.
- **Step 3** On the displayed page, click **Add Global Parameter**, add **param1** whose parameter type is **String** and **param2** whose parameter type is **Host**, and save the settings.
- **Step 4** Add a job step. For **Script Parameters**, use **\${param1}** to reference the string parameter. For **Target Instances**, select **Global Parameter** and then select **param2** from the drop-down list. Next, save the settings.
- **Step 5** When executing a job plan, specify **param1** and **param2** (instances to be executed) as required.

----End

9.4 Why Is a Parameter Error Displayed When I Create a Scheduled Task Using a Cron Expression?

Symptom

When a scheduled O&M task is created using a cron expression, the system shows that there is a parameter error.

Possible Causes

- The cron expression does not comply with the Spring cron syntax.
- The interval for triggering a scheduled task is less than 30 minutes.

Procedure

- **Step 1** Ensure that the cron expression complies with the Spring cron syntax.
- **Step 2** Ensure that the interval for triggering a scheduled task is greater than or equal to 30 minutes.

----End

9.5 How Can I Set a Review for an Execution Plan?

No review can be set for an execution plan. However, the plan can inherit the job's review settings.

Solution

When you create a job, enable **Review**. By default, this option is disabled. If it is enabled, the job's execution plan will need to be reviewed before being executed. For details about how to create a job, see **Jobs**.

9.6 Why Is "delete success:{}" Displayed (Files Cannot Be Deleted) During Disk Clearance?

Symptom

During disk clearance, message "delete success:{}" is displayed, indicating that the files in the specified directory cannot be deleted.

Possible Causes

- The directory or file to be cleared does not exist.
- The result of the current time minus the last modification time of the target file or directory is less than the file retention time specified in the clearing rule.

Solution

Check whether the directory or file to be cleared exists. If they exist, ensure that the result of the current time minus the last modification time of the file or directory is greater than the file retention time specified in the clearing rule.

Example: To delete files generated one day ago, ensure that the result of the current time minus the last modification time of the file or directory is greater than 24 hours.

9.7 What Can I Do If the Execution Plan Is Not Updated After I Modify the Job?

After a job is modified, its execution plan is not automatically updated.

Solution

Create an execution plan for the job again. For details about how to create an execution plan, see **Jobs**.

9.8 What Can I Do If "agent not found" Is Displayed?

Symptom

Message "agent not found" is displayed when I execute a script on an ECS.

Possible Causes

- The UniAgent is not properly installed.
- The UniAgent is not in the Running state.

Solution

Check the UniAgent status and perform operations by following the instructions below:

- **Error**: The UniAgent is not working. Contact technical support.
- **Installing**: The UniAgent is being installed. The installation takes about 1 minute to complete.
- **Installation failed**: The UniAgent fails to be installed. Install it again.
- Not installed: The UniAgent has not been installed. Install it by referring to Installing a UniAgent.

After the UniAgent status changes to **Running**, execute the script on the ECS again.

9.9 Why Are the Hosts Listed in Execution Logs Inconsistent with Those I Configured for a Task?

Possible Causes

If the hosts configured in the task have been deleted or you do not have permission to use them, these hosts will be ignored and will not be displayed in the execution logs.

Solution

Ensure that all hosts configured in the task are valid.

9.10 Why Did a Task Fail to Execute?

Symptom

When a resource is selected from CMDB to execute a task, message "Access denied, The *{ECS Instance/RDS Instance/Workload}* does not belong to the current project, *{ECS Instance/RDS Instance/Workload}* ID is *{Instance ID}*" is displayed.

Possible Causes

The system will check whether the resource to be operated is under the selected sub-project. If it is not under the sub-project, operations will not be performed on it

Solution

Ensure that the resource to be operated is under the selected sub-project. If it is not under the sub-project, add it to the current sub-project or select another sub-project. For details about how to view resource information, see **Resource**Management.

10 Collection Management

10.1 Are ICAgent and UniAgent the Same?

ICAgent is a plug-in, but UniAgent is not.

 UniAgent is an Agent for unified data collection and serves as the base of the cloud service O&M system. It delivers instructions, such as script delivery and execution, and integrates plug-ins (such as ICAgent, Cloud Eye, and Telescope) and maintains their status. UniAgent provides middleware and custom metric collection capabilities, and provides operations channels for Cloud Operations Center (COC) and Cloud Auto Stress Test (CAST).

UniAgent does not collect O&M data; instead, collection plug-ins do that.

• ICAgent collects metrics and logs for AOM and LTS.

Figure 10-1 ICAgent and UniAgent



10.2 What Can I Do If an ICAgent Is Offline?

After an ICAgent is installed, its status is offline.

Problem Analysis

- Cause: The AK/SK are incorrect or ports 30200 and 30201 are disconnected.
- Impact: The ICAgent cannot work.

Solution

- **Step 1** Log in to the server where the ICAgent is installed as the **root** user.
- **Step 2** Run the following command to check whether the AK/SK configuration is correct: cat /var/ICAgent/oss.icAgent.trace | grep proxyworkflow.go
 - If no command output is displayed, the AK/SK configuration is incorrect. Go to Step 3.
 - If a command output is displayed, the AK/SK configuration is correct. Go to **Step 4**.
- **Step 3** After configuring the AK/SK, reinstall the ICAgent. If the installation still fails, go to **Step 4**.
- **Step 4** Check port connectivity.
 - 1. Run the following command to obtain the access IP address: cat /opt/oss/servicemgr/ICAgent/envs/ICProbeAgent.properties | grep ACCESS_IP
 - 2. Run the following command to respectively check the connectivity of ports 30200 and 30201:

curl -k https://ACCESS_IP:30200 curl -k https://ACCESS_IP:30201

- If 404 is displayed, the port is connected. In this case, contact technical support.
- If the command output is not 404, the port is not connected. Contact the network administrator to open the port and reinstall the ICAgent. If the installation still fails, contact technical support.

----End

10.3 Why Is an Installed ICAgent Displayed as "Abnormal" on the Agent Management Page?

The AK/SK is invalid, or no agency is set when **Installation Mode** is set to **Create Agency**. Obtain an AK and SK by referring to **How Do I Obtain the AK/SK by Creating an Agency** and install the ICAgent again.

10.4 Why Can't I View the ICAgent Status After It Is Installed?

Symptom

After the ICAgent is installed, its status cannot be viewed on the console.

Possible Cause

The virtual NIC is used on the user side. To obtain the ICAgent status, modify the script according to the following procedure.

Solution

- **Step 1** Log in to a host where the ICAgent has been installed as the **root** user.
- **Step 2** Check the host IP address in use, as shown in **Figure 10-2**:

```
netstat -nap | grep establish -i
```

Figure 10-2 Checking the host IP address

```
[root@lts-auto-test-wushan-wudong-99404 home]# netstat -nap | grep establish -i
tablished)
10.247.0.1:443
192.168.0.125:41932
                                                         vers and esta
5:58216
                                                                                                                         ESTABLISHED 2122201/icagent
ESTABLISHED 2548046/kubelet
ESTABLISHED 2548046/kubelet
                                                          5:10255
                                                                              192.168.0.79:60966
127.0.0.1:28001
                                                          5:10250
                                                                                                                            STABLISHED 2122160/rsyslogd
STABLISHED 2122201/icagent
STABLISHED 2122201/icagent
                                                          )38
                                                                              100.79.29.98:8149
127.0.0.1:41038
                                                          5:40082
                                                                                                                            TABLISHED 2122201/icagent
TABLISHED 6345/node-problem
STABLISHED 2122201/icagent
                                                          5:34294
5:19901
                                                                              100.79.29.98:30201
192.168.0.9:57414
192.168.0.125:10255
                                0 192.168.0
0 192.168.0
                   0
                                                      125:41932
```

Step 3 Check the NIC corresponding to the IP address, as shown in Figure 10-3:

```
ifconfig | grep IP address -B1
```

Figure 10-3 Checking the NIC corresponding to the IP address

```
[root@lts-auto-test-wushan-wudong-99404 home]# ifconfig | grep 192.168.0.125 -B1
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.125 netmask 255.255.255.0 broadcast 192.168.0.255
[root@lts-auto-test-wushan-wudong-99404 home]#
```

- **Step 4** Go to the /sys/devices/virtual/net/ directory and check whether the NIC name exists.
 - If it exists, it is a virtual NIC. Then go to **Step 5**.
 - If it does not exist, it is not a virtual NIC. Then contact technical support.
- **Step 5** Modify the ICAgent startup script:
 - 1. Open the **icagent_mgr.sh** file (command varies depending on the ICAgent version).

```
version):
vi /opt/oss/servicemgr/ICAgent/bin/manual/icagent_mgr.sh
Or
```

vi /var/opt/oss/servicemgr/ICAgent/bin/manual/icagent_mgr.sh

2. Modify the script file:

Add **export IC_NET_CARD=** *NIC name* to the file, as shown in **Figure 10-4**.

Figure 10-4 Modifying the script

```
ICAGENT_CURRENT_PATH=$(cd $(dirname $BASH_SOURCE) && pwd)
APP_ROOT=$ICAGENT_CURRENT_PATH/../..
export APP_ROOT
export ConfFilePath="/opt/oss/servicemgr/ICAgent/envs"
export GODEBUG=netdns=go
export IC_NET_CARD="eff_1"
```

Step 6 Restart the ICAgent (commands vary depending on the ICAgent version):

sh /opt/oss/servicemgr/ICAgent/bin/manual/mstop.sh sh /opt/oss/servicemgr/ICAgent/bin/manual/mstart.sh

Or

sh /opt/oss/servicemgr/ICAgent/bin/manual/mstop.sh sh /var/opt/oss/servicemgr/ICAgent/bin/manual/mstop.sh

- **Step 7** Log in to the AOM console, choose **Collection Management**, and check whether the ICAgent status is displayed.
 - If the ICAgent status is displayed, no further action is required.
 - If the ICAgent status is still not displayed, contact technical support.

----End

10.5 Why Can't AOM Monitor CPU and Memory Usage After ICAgent Is Installed?

Symptom

AOM cannot monitor information (such as CPU and memory usage) after the ICAgent is installed.

Possible Cause

- Port 8149 is not connected.
- The node time on the user side is inconsistent with the time of the current time zone.

Solution

- **Step 1** Log in to the server where the ICAgent is installed as the **root** user.
- **Step 2** Check whether the ICAgent can report metrics:

cat /var/ICAgent/oss.icAgent.trace | grep httpsend | grep MONITOR

- If the command output contains **failed**, the ICAgent cannot report metrics. In this case, go to **Step 3**.
- If the command output does not contain **failed**, the ICAgent can report metrics. In this case, go to **Step 4**.
- **Step 3** Check whether the port is connected.
 - Obtain the access IP address: cat /opt/oss/servicemgr/ICAqent/envs/ICProbeAqent.properties | grep ACCESS IP
 - 2. Check the connectivity of port 8149: curl -k https://ACCESS_IP:*8149*
 - If 404 is returned, the port is connected. In this case, contact technical support.
 - If 404 is not returned, the port is not connected. In this case, contact the network administrator to open the port and reinstall the ICAgent. If the installation still fails, contact technical support.

Step 4 Check the node time on the user side:

date

- If the queried time is the same as the time of the current time zone, contact technical support.
- If they are different, go to **Step 4**.

Step 5 Reconfigure the node time on the user side:

date -s Time of the current time zone (for example, 12:34:56)

----End

10.6 How Do I Obtain an AK/SK?

Each user can create a maximum of two Access Key ID/Secret Access Key (AK/SK) pairs. Once they are generated, they are permanently valid.

- AK: unique ID associated with the SK. It is used together with the SK to sign requests.
- SK: secret access key used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

Procedure

- Log in to the management console, hover the mouse pointer over the username in the upper right corner, and select My Credentials from the dropdown list.
- On the My Credentials page, click the Access Keys tab.
- 3. Click **Create Access Key** above the list, and enter the verification code or password.
- 4. Click **OK** to download the generated AK/SK.

You can obtain the AK from the access key list and SK from the downloaded CSV file.

○ NOTE

- Keep the CSV file properly. You can only download the file right after the access key is created. If you cannot find the file, you can create an access key again.
- Open the CSV file in the lower left corner, or choose **Downloads** in the upper right corner of the browser and open the CSV file.
- Keep your access keys secure and change them periodically for security purposes.

10.7 FAQs About ICAgent Installation

- What Can I Do If the Network Between the ICAgent Installation Host and Target Host Is Disconnected ("[warn] ssh connect failed, 1.2.1.2:22")?
 Check network connectivity before installing an Agent, and select an installation host that is accessible from the Internet.
- 2. What Can I Do If the Heartbeat Detection and Registration Fail and the Network Is Disconnected After I Install an ICAgent?

- Run the **telnet** *proxy IP address* command on the target host to check whether the network between the proxy and target host is normal.
- 3. Ports 8149, 8102, 8923, 30200, 30201, and 80 need to be enabled during ICAgent installation. Can port 80 be disabled after ICAgent is installed?

 Port 80 is used only for pulling Kubernetes software packages. You can disable it after installing the ICAgent.
- 4. Will the ICAgent installed in a Kubernetes cluster be affected after the cluster version is upgraded?

After the cluster version is upgraded, the system will restart the ICAgent and upgrade it to the latest version.

10.8 How Do I Enable the Nginx stub_status Module?

Nginx Prometheus Exporter monitors the Nginx service using the stub_status module. Ensure that this module is enabled. Perform the following operations:

1. Log in to the node where the Nginx service is deployed and run the following command in the /usr/local/nginx/sbin/nginx directory to check whether the stub status module is enabled:

nginx -V 2>&1 | grep -o with-http_stub_status_module

- If with-http_stub_status_module is returned, the stub_status module is enabled.
- If no result is returned, enable the stub_status module by setting --withhttp_stub_status_module in the configuration file. Example:

```
//configure \
## Add the --with-http_stub_status_module parameter.
--with-http_stub_status_module
make
sudo make install
```

2. After the stub_status module is enabled, add the following content to the **nginx.conf** file in the **/usr/local/nginx/conf** directory: Example:

```
server {
listen 8080; # Listening port. Set this parameter based on service requirements.
listen [::]:8080; # IPv6 listening port. Set this parameter based on service requirements.
server_name localhost; # Set this parameter based on service requirements.
location = /stub_status { # Path. Set this parameter based on service requirements.
    stub_status on;
    access_log off;
    allow 127.0.0.1;
}
```

3. Restart the Nginx service.

10.9 Why Does Metric Data Collection Fail?

- 1. You can view metric data several minutes after you connect Agents.
- 2. If data collection is stopped, the possible causes are as follows:
 - Instance level: Agents are stopped on the Instance tab page.
 - Monitoring item level: Monitoring items are manually disabled on the Monitoring Item tab page.
 - Global level: The Stop Collecting Data Through Bytecode
 Instrumentation option is enabled on the General Configuration page.

- 3. If no data is collected for a long time, the possible causes are as follows:
 - Java 9 prompts that the **sql.time** class cannot be found.
 - Cause analysis: Agents are developed using JDK 1.7. However, after Java 9 modularization, no SQL package is provided by default.
 - Occurrence probability: This problem occurs under certain conditions.
 - Workaround: Ensure that the component can proactively import **java.sql** to **module-info.java**.
 - Java 11 prompts that "Caused by: java.lang.NoClassDefFoundError: sun/ misc/Unsafe class cannot be found."
 - Cause analysis: Agents are developed using JDK 1.7, but the Java 11 Unsafe class is categorized to a different package.
 - Occurrence probability: This problem occurs inevitably.
 - Workaround: Ensure that the application can proactively import **jdk.unsupported** to **module-info.java**.
 - Java 9 reports an illegal reflective access alarm. (This problem will be solved in versions later than Java 9.)
 - Workaround: Set --illegal-access to warn or delete this option.

11 Other FAQs

11.1 Comparison Between AOM 1.0 and AOM 2.0

Do I Need to Be Authorized to Use AOM 2.0 While I Already Have AOM 1.0 Permissions?

AOM 2.0 billing is different from that of AOM 1.0. If you switch from AOM 1.0 to AOM 2.0 for the first time, apply for the permission to use AOM 2.0 by referring to **Subscribing to AOM 2.0**.

What Are the Function Differences Between AOM 2.0 and AOM 1.0?

Based on AOM 1.0 functions and common application monitoring, AOM 2.0 collects and monitors more metrics and log data, and displays monitoring results in a visualized manner. In addition, the Automation service makes routine O&M operations servitized and automated, reducing repeated operations. For details, see Comparison Between AOM 1.0 and AOM 2.0.

As AOM 1.0 functions are gradually replaced by AOM 2.0, AOM 1.0 will be brought offline soon. You are advised to upgrade AOM 1.0 to AOM 2.0. For details, see **Upgrading to AOM 2.0**.

11.2 What Are the Differences Between AOM and APM?

AOM and Application Performance Management (APM) belong to the multi-dimensional O&M solution and share the ICAgent collector. AOM provides application-level fault analysis, alarm management, and log collection and analysis capabilities, which effectively prevent problems and help O&M personnel quickly locate faults, reducing O&M costs. APM provides user experience management, distributed performance tracing, and transaction analysis capabilities, which help O&M personnel quickly locate and resolve faults and performance bottlenecks in a distributed architecture, optimizing user experience. AOM provides basic O&M capabilities. APM is a supplement to AOM. AOM integrates with some APM functions for unified O&M. You can also use these functions on the APM console.

Figure 11-1 Multi-dimensional O&M solution

11.3 What Are the Differences Between the Log Functions of AOM and LTS?

AOM is a one-stop platform for Huawei Cloud service observability analysis. It integrates the log functions of **Log Tank Service (LTS)**. Charging data records (CDRs) are reported by LTS instead of AOM. You will not be billed twice. To stop billing, see **How Can I Stop Log Collection When My Free Quota Is Used Up to Avoid Extra Expenses?**

11.4 How Do I Create the apm_admin_trust Agency?

Procedure

- **Step 1** Log in to the IAM console.
- **Step 2** In the navigation pane, choose **Agencies**.
- **Step 3** On the page that is displayed, click **Create Agency** in the upper right corner. The **Create Agency** page is displayed.
- **Step 4** Set parameters based on **Table 11-1**.

Table 11-1 Parameters for creating an agency

Parameter	Description	Example
Agency Name	Set an agency name. NOTICE The agency name must be apm_admin_trust.	-
Agency Type	Select Cloud service .	Cloud service
Cloud Service	Select Application Operations Management (AOM).	-

Parameter	Description	Example
Validity Period	Select Unlimited .	Unlimited
Description	(Optional) Provide details about the agency.	-

- **Step 5** On the **Permissions** area, click **Assign Permissions**.
- **Step 6** Select the **DMS UserAccess** permission, and select the projects where you want the configuration to take effect.
- Step 7 Click OK.

----End