Application Operation Management

FAQs

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Contents

1 Overview

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

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 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  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.

----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 real-time 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**
- **Common Prometheus Instance**

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.

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 **Metric Management**. On the **Metrics** tab page, view the metric names and types of the current Prometheus instance.

----End

6 Infrastructure Monitoring

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

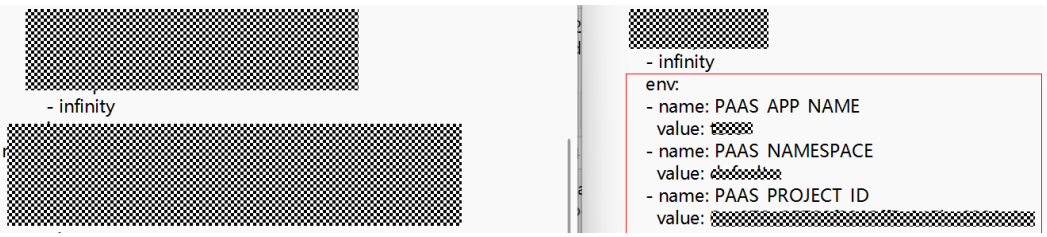
Symptom

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.

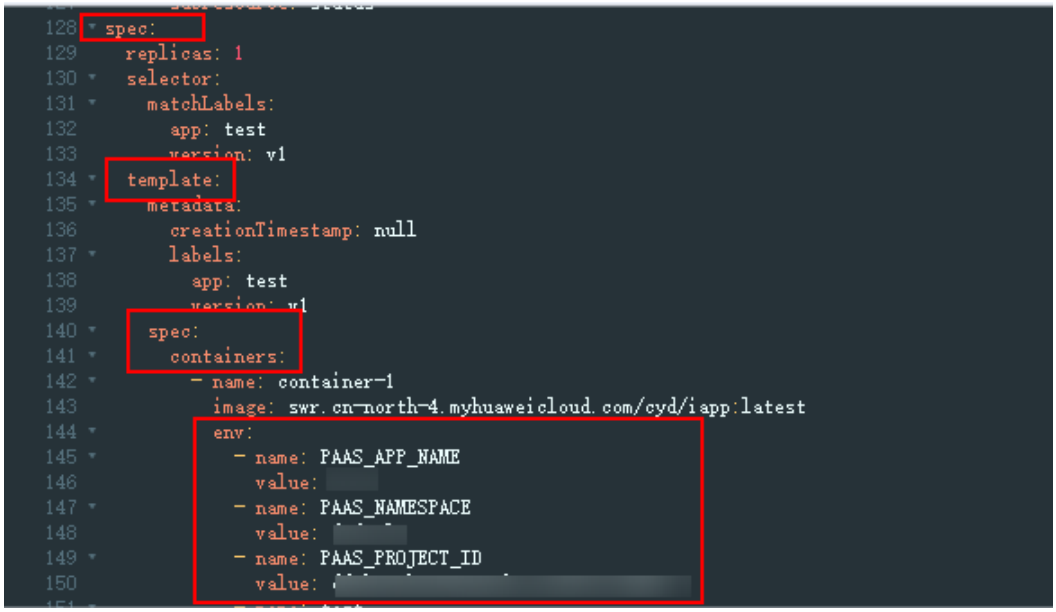
Step 2 Choose **Workloads** in the navigation pane, and select the type of workload whose metrics are to be reported to AOM.

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

7 Collection Management

7.1 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).

  NOTE

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

- ICAgent collects metrics and logs for AOM and LTS.

Figure 7-1 ICAgent and UniAgent

7.2 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

7.3 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 and install the ICAgent again.

7.4 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.

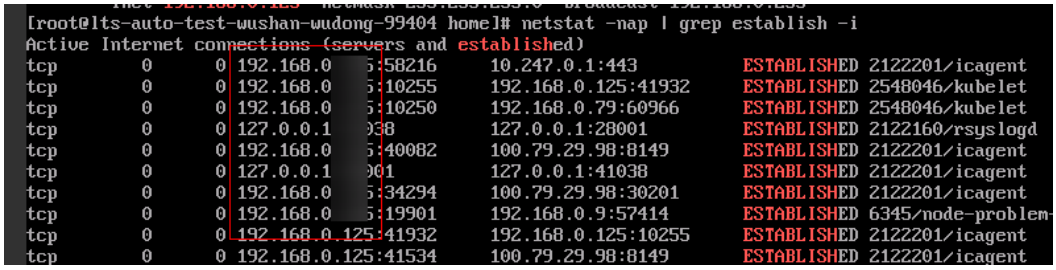
Solution

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 7-2**:

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

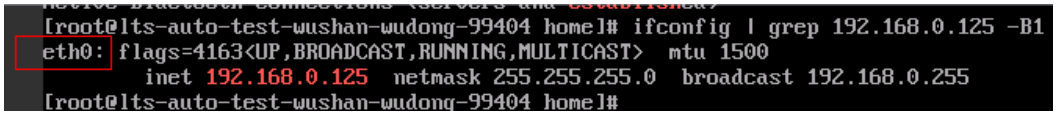
Figure 7-2 Checking the host IP address



Step 3 Check the NIC corresponding to the IP address, as shown in **Figure 7-3**:

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

Figure 7-3 Checking the NIC corresponding to the IP address



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):

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

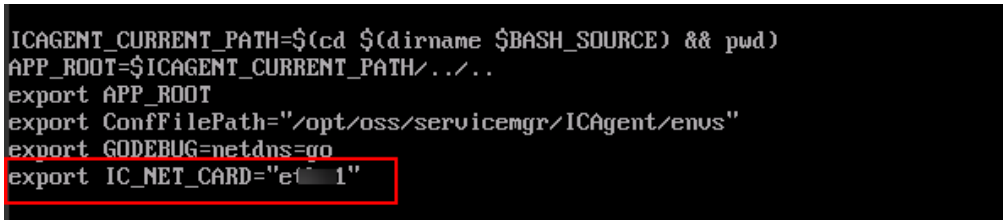
   Or

   ```
   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 7-4**.

   Figure 7-4 Modifying the script

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

7.5 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.

1. Obtain the access IP address:
   ```
   cat /opt/oss/servicemgr/ICAgent/envs/ICProbeAgent.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

7.6 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

1. Log in to the management console, hover the mouse pointer over the username in the upper right corner, and select **My Credentials** from the drop-down list.
2. 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.

7.7 FAQs About ICAgent Installation

1. 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.

7.8 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 **--with-http_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.

8 Other FAQs

8.1 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. 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**.

8.2 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.

8.3 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 by referring to **Table 8-1**.

Table 8-1 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)**.	-
Validity Period	Select **Unlimited**.	Unlimited
Description	(Optional) Provide details about the agency.	-

Step 5 Click **Next**. The **Authorize Agency** page is displayed.

Step 6 On the **Select Policy/Role** tab page, select **DMS UserAccess** and click **Next**.

DMS UserAccess: Common user permissions for DMS, excluding permissions for creating, modifying, deleting, scaling up instances and dumping.

Step 7 On the **Select Scope** tab page, set **Scope** to **Region-specific Projects** and select target projects under **Project [Region]**.

Step 8 Click **OK**.

----End

