# Alibaba Cloud Apsara Stack Enterprise

Apsara Big Data Manager User Guide

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> > C-J Alibaba Cloud

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### **Document conventions**

Style	Description	Example
<u>↑</u> 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.
O 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.
C) 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 listinstanceid 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.What is Apsara Big Data Manager?

Apsara Big Data Manager (ABM) is an operations and maintenance (O&M) platform tailored for big data services.

ABM supports the following services:

- MaxCompute
- Dat aWorks
- Realtime Compute
- Quick Bl
- Dat a Hub

ABM supports O&M on big data services from the perspectives of business, services, clusters, and hosts. ABM also allows you to update big data services, customize alert configurations, and view the O&M history.

Onsite Apsara Stack engineers can use ABM to easily manage big data services. For example, they can view metrics, check and handle alerts, and modify configurations.

# 2.Common operations

The data tables and legends in the ABM console facilitate operations. This topic uses MaxCompute and DataHub as examples to describe the common operations.

#### Search for a project

You can perform a quick search for a project by project name.

- 1. On the MaxCompute page, click O&M in the upper-right corner, and then click the Business tab. The Project List page under Projects appears.
- 2. In the **Project** field, enter a keyword of the project name. Auto-suggestion is supported. Select the target project from the drop-down list, or select the project by using the up and down arrow keys, and then press **Enter**.

**?** Note When a project is matched, the region of the project appears before the project name.

Quick Search:	admin								
Filter	cn-	admin_ta							
Project		Cluster	Quota Group	Physical Storage	Logical Storage	File Count	Jobs	Owner	Created At
			QuotaGroup95eb6831556!	14.32 M	4.77 M			ALIYUN:	2019-04-30 09:23:17
			odps_quota	3.58 K	1.19 K			ALIYUN	2019-03-05 00:03:47
			odps_quota					ALIYUN	2019-03-05 00:10:41
			BCCDTCENTERAPITESTCRE	25.24 M	8.41 M	2157		ALIYUN	2019-03-05 00:10:41
			odps_quota					ALIYUN:	2019-06-21 00:06:14

The following figure shows the search result.

Quick Search:	cn- admin_ta	ask_p									
Filter											Refresh
Project	Cluster	Quota Group	Physical Storage	Logical Storage	File Count	Jobs	Owner	Created At	Description	Actions	
admin_task_proje		odps_quota					ALIYUN\$	2019-03-05 00:03:47			
										1 to 1 of 1	

#### Filter projects

You can set filter conditions for multiple columns at the same time to filter projects and find the target projects.

- 1. On the MaxCompute page, click O&M in the upper-right corner, and then click the Business tab. The Project List page under Projects appears.
- 2. On the **Project List** page, click **Filter** in the upper-left corner of the list. A field for setting filter conditions appears for each column.
- 3. Click the icon next to each field for setting filter conditions and select the filtering method. The default method is **Contains**.

ç	uick Search:							
	Filter							
	Project	Cluster	Quota Group	Physical Storage	Logical Storage	File Count	Jobs	Owner
			⊽	▽	⊽		▽	
		Contains	vtaGroup95eb6831556!	14.32 M	4.77 M	2971		ALIYUN\$
		Equals Not equal	·s_quota	3.58 K	1.19 K			ALIYUN\$
		Starts with Ends with	ps_quota					ALIYUN\$
	adsmr	Contains Not contains	CDTCENTERAPITESTCRE	25.24 M	8.41 M	2157		ALIYUN\$
		HYBRIDODPSCLUSTER-A-2	odps_quota					ALIYUN\$
			odps_quota					ALIYUNS

You can select one of the following filtering methods:

- Equals
- Not equal
- Starts with
- $\circ \;\; \text{Ends with} \;\;$
- Contains
- Not contains
- 4. After you select the filtering method, enter the filter condition. The projects that meet the filter condition appear.

Quick Search:										
Filter										Refresh
Project ⊽	≡ Cluster	Quota Group	Physical Storage	Logical Storage	File Count	Jobs	Owner	Created At	Description	Actions
ad			▽	▽	▽	▽	▽	▽ ▽	▽	□ 7
admin_task_projec	Contains	▼ s_quota					ALIYUN	2019-03-05 00:03:47		
ads	ad	s_quota					ALIYUNS	2019-03-05 00:10:41		
adsmr		BCCDTCENTERAPITESTCRE		8.41 M			ALIYUN	2019-03-05 00:10:41		
bigdatademo		odps_quota					ALIYUN	2019-04-24 18:52:10		

5. If the filtering result is not accurate, you can continue performing this operation on other columns.

Quick Search:										
Filter										Refresh
Project ⊽	Cluster	Quota Group ⊽	Physical Storage	Logical Storage	File Count	Jobs	Owner	Created At	Description	Actions
ad 🗸 🗸	▼	odps 🗸 🗸	<b>v</b>	<b>v</b>	▽	<b>v</b>	<b>v</b>	▽	▼	▼
admin_task_project		odps_quota	3.58 K				ALIYUN\$	2019-03-05 00:03:47		
ads		odps_quota					ALIYUN\$	2019-03-05 00:10:41		
bigdatademo		odps_quota					ALIYUN\$	2019-04-24 18:52:10		

After you set the filter conditions for the projects, the **Filter** button is highlighted. If you need to cancel filtering, click the highlighted **Filter** button.

#### Search for an item

You can search for an item in a table by column, which is similar to filtering projects. For example, you can perform the following steps to search for a checker:

- 1. On the MaxCompute page, click O&M in the upper-right corner, and then click the Clusters tab. On the Clusters page, click the Health Status tab.
- 2. In the checker list, click the Filter icon in a column and enter a keyword in the search box.

#### User Guide • Common operations

Checke	Checker											
	Checker 💠	⊽ Source		Critical 🜲	A	Warning 🜲		Exception 🜲	V 1	Actions 🔶 🛛 🖓		
	eodps_check_meta	tcheck	Search cou	intCritical		0				Details		
	bcc_disk_usage_checker	tcheck	Q Search	Rerun						Details		
+	eodps_check_fuximaster_auto_stop_work_item_timeout	tcheck		0						Details		
+	bcc_check_ntp	tcheck								Details		
+	eodps_tubo_coredump_check	tcheck								Details		
+	eodps_check_apsara_coredump	tcheck								Details		
+	eodps_check_nuwa_zookeeper_log	tcheck								Details		
+	eodps_check_nuwa_server_disk	tcheck								Details		
+	eodps_check_pangumaster_memory	tcheck								Details		
+	eodps_check_pangu_master_log_content	tcheck								Details		
									1 2	3456>		

- 3. Click Search. The checkers that meet the requirements appear.
- 4. If the search result is not accurate, you can continue performing this operation on other columns.

#### Customize a column

You can customize columns in the list. For example, you can set the column position or column width, and determine whether to display a column. You can also set filter conditions for columns.

On the **Project List** page, you can drag a column to change its position.

0	Quick Search:							
(	Filter							
I	Project	Cluster	Quota Group	Physical Ste 🕂 Physical	Storage Storage	File Count	Jobs	Owner
			odps_quota					ALIYUN\$
			odps_quota					ALIYUN\$
			odps_quota					ALIYUN\$
			odps_quota					ALIYUN\$
Ī			QuotaGroup8102aa61561					ALIYUN\$
	base_test01_dev	HYBRIDODPSCLUSTER-A-2	BCCDTCENTERAPITESTCR	E 0	0	0		ALIYUN\$

You can click in a column heading to customize the column.

(	Quick Search:					
(	Filter					
	Project	Cluster	Quota Group ↓	= 7 III	ical Storage	File Count
			pai_gpu_quota	🖉 Pin Column >		
		HYBRIDODPSCLUSTER-A-2	odps_quota	Autosize This Column	ж	1
		HYBRIDODPSCLUSTER-A-2	odps_quota	Autosize All Columns		
		HYBRIDODPSCLUSTER-A-2	odps_quota	Reset Columns		
		HYBRIDODPSCLUSTER-A-2	odps_quota	✓ Tool Panel		
		HYBRIDODPSCLUSTER-A-2	odps_quota	0 0		
		HYBRIDODPSCLUSTER-A-2	odps_quota	371.28 G 12	23.76 G	33230
		HYBRIDODPSCLUSTER-A-2	odps_quota			
		HYBRIDODPSCLUSTER-A-2	odps_quota			
		HYBRIDODPSCLUSTER-A-2	odps_quota	89.62 M 29	9.87 M	978

- **Pin Column**: allows you to fix a column to the rightmost or leftmost of the list. Unless being pinned, a column appears at the default position.
- Autosize This Column: allows you to adjust the width of a column automatically.
- Autosize All Columns: allows you to adjust the width of all columns automatically.
- Reset Columns: allows you to reset a column to its initial status.
- Tool Panel:

Click r in a column heading and set a filter condition to filter projects based on the column.

Quick Search:							
Project	Cluster	Quota Group ↓	= 🔽 IIII	ical Storage	File Count	Jobs	Owner
		pai_gpu_quota	Contains	▼			ALIYUN\$
		odps_quota	Filter	iκ			ALIYUN\$
		odps_quota					ALIYUN\$
		odps_quota					ALIYUN\$
		odps_quota					ALIYUN\$
aliyuntestvpc	HYBRIDODPSCLUSTER-A-2	odps_quota	0	0	0		ALIYUN\$

Click in a column heading and select the columns to display.

Quick Search:					
Filter					
Project	Cluster	Quota Group 🔱		ical Storage	File Count
newprivalegetest		pai_gpu_quota	Project		
admin_task_project	HYBRIDODPSCLUSTER-A-2	odps_quota	<ul> <li>✓ Cluster</li> <li>✓ Quota Group</li> </ul>	νк	
ads		odps_quota	Physical Storage		
algo_market	HYBRIDODPSCLUSTER-A-2	odps_quota	✓ Edgical Storage ✓ File Count		
algo_public	HYBRIDODPSCLUSTER-A-2	odps_quota	<ul> <li>✓ Jobs</li> <li>✓ Owner</li> </ul>		
aliyuntestvpc	HYBRIDODPSCLUSTER-A-2	odps_quota	Created At		
base_meta	HYBRIDODPSCLUSTER-A-2	odps_quota	<ul> <li>Description</li> <li>Actions</li> </ul>	.76 G	33230
bigdatademo	HYBRIDODPSCLUSTER-A-2	odps_quota			
cosmo_pully	HYBRIDODPSCLUSTER-A-2	odps_quota			
dataphin_meta	HYBRIDODPSCLUSTER-A-2	odps_quota		J7 M	978

If you select the check box of a column name, the column appears. Otherwise, the column is hidden.

#### Show the tool panel

After the tool panel appears, it is attached to the right of the list so that you can set the columns to display.

On the **Project List** page, click in a column heading and select **Tool Panel**. The tool panel is then attached to the right of the list.

Quick Search:					
Filter					
Project	Cluster	Quota Group ↓	= 7 III	ical Storage	File Count
		pai_gpu_quota	🖈 Pin Column		
	HYBRIDODPSCLUSTER-A-2	odps_quota	Autosize This Column	×	1
	HYBRIDODPSCLUSTER-A-2	odps_quota	Autosize All Columns		
	HYBRIDODPSCLUSTER-A-2	odps_quota	Reset Columns		
	HYBRIDODPSCLUSTER-A-2	odps_quota	✓ Tool Panel		
	HYBRIDODPSCLUSTER-A-2	odps_quota		0	
	HYBRIDODPSCLUSTER-A-2	odps_quota	371.28 G	123.76 G	33230
	HYBRIDODPSCLUSTER-A-2	odps_quota		0	
	HYBRIDODPSCLUSTER-A-2	odps_quota		0	
	HYBRIDODPSCLUSTER-A-2	odps_quota	89.62 M	29.87 M	978

#### Apsara Big Data Manager

					Refresh
File Count	Jobs	Owner	Created At	Description	<ul> <li>✓ Project</li> <li>✓ Cluster</li> </ul>
		ALIYUN\$	2019-03-29 18:25:01		Quota Group
1		ALIYUN\$	2019-03-05 00:03:47		Logical Storage
0		ALIYUN\$	2019-03-05 00:10:41		✓ File Count
0		ALIYUN\$	2019-06-21 00:06:14		✓ Soss ✓ Owner
0		ALIYUN\$	2019-03-05 00:10:40		Created At Description
0		ALIYUN\$	2019-03-26 14:52:12		Actions
33230		ALIYUN\$	2019-03-05 00:10:40		⊡Row Groups Drag here to set row groups
0		ALIYUN\$	2019-04-24 18:52:10		<sup>[2]</sup> Values
0		ALIYUN\$	2019-03-06 18:19:24		Drag here to aggregate
978		ALIYUN\$	2019-03-05 00:10:40		
			1 to 10 c	of 144 < 🗋	2 3 4 5 15 >

#### Sort projects based on a column

You can sort projects based on a column in ascending or descending order.

On the **Project List** page, click a column heading in the list. When you click the column heading for the first time, the projects are sorted based on the column in ascending order. When you click the column heading for the second time, the projects are sorted in descending order. When you click the column heading for the third time, the default sorting is restored.

C	Quick Search:					
	Filter					
	Project ↑	Cluster	Quota Group	Physical Storage	Logical Storage	File Count
		HYBRIDODPSCLUSTER-A-2	QuotaGroup95eb6831556!	14.32 M	4.77 M	2971
		HYBRIDODPSCLUSTER-A-2	odps_quota	3.58 K	1.19 K	
		HYBRIDODPSCLUSTER-A-2	odps_quota			
		HYBRIDODPSCLUSTER-A-2	BCCDTCENTERAPITESTCRE	25.24 M	8.41 M	2157
		HYBRIDODPSCLUSTER-A-2	odps_quota			
		HYBRIDODPSCLUSTER-A-2	odps_quota			
		HYBRIDODPSCLUSTER-A-2	odps_quota			
		HYBRIDODPSCLUSTER-A-2	QuotaGroup8102aa61561(			
		HYBRIDODPSCLUSTER-A-2	odps_quota	371.28 G	123.76 G	33230
		HYBRIDODPSCLUSTER-A-2	QuotaGroup5f77f1c155324	3.68 M	1.22 M	24

#### Sort items based on a column

You can sort items based on a column in ascending or descending order. The procedure and display method are different from those described in Sort projects based on a column.

1. On the MaxCompute page, click O&M in the upper-right corner, and then click the Clusters tab.

On the Clusters page, click the Health Status tab.

2. In the checker list, click a column heading or the Sort icon in the column heading to sort checkers in ascending order or descending order.

Checke	Thecker										
	Checker 🜲		Source 🗢 🖓		Critical 🜲		Warning 🚖	A	Exception 🚖		Actions 🔶
+	bcc_check_ntp		tcheck				10				Details
+	bcc_disk_usage_checker		tcheck								
+	eodps_check_fuximaster_auto_stop_work_item_timeout		tcheck								
+	eodps_check_meta		tcheck								
+	eodps_tubo_coredump_check		tcheck								
+	eodps_check_apsara_coredump		tcheck								
+	eodps_check_nuwa_zookeeper_log		tcheck								
+	eodps_check_nuwa_server_disk		tcheck								
+	eodps_check_pangumaster_memory		tcheck								
+	eodps_check_pangu_master_log_content		tcheck								
										< 1	2345

The highlighted up arrow indicates that the checkers are sorted in ascending order. The highlighted down arrow indicates that the checkers are sorted in descending order.

#### View the trend charts for a MaxCompute cluster

On the **MaxCompute** page, click **O&M** in the upper-right corner, and then click the **Clusters** tab. On the Clusters page, you can view relevant metrics, such as CPU and memory usage, of the selected cluster.



Take CPU usage as an example. The trend chart displays the trend lines of the total CPU usage (cpu), CPU usage for executing code in kernel space (sys), and CPU usage for executing code in user space (user) for the specified cluster over time in different colors.

Click in the upper-right corner of the chart to zoom in the chart.



You can specify the start time and end time in the upper-left corner of the enlarged chart to view the CPU usage of the cluster in the specified period.

#### View the trend charts for a DataHub cluster

- 1. On the **DataHub** page, click **O&M** in the upper-right corner, and then click the **Services** tab. In the left-side navigation pane of the Services tab, click **Manage Service**.
- 2. On the **Overview** page, you can view the trend charts of resource usage for the specified cluster.



The trend charts, such as the trend charts of the read/write latency and the number of read/write records, appear in the Trend for Resource Usage section. Each chart displays the trend lines of the metrics over time in different colors. You can customize the metrics to display. You can click the name of a metric under the chart to determine whether to display the corresponding trend line in the chart. A highlighted metric name indicates that the corresponding trend line is visible, whereas a dimmed metric name indicates that the corresponding trend line is hidden.

# **3.Quick start** 3.1. Log on to the ABM console

This topic describes how to log on to the Apsara Big Data Manager (ABM) console.

#### Prerequisites

• The endpoint of the Apsara Uni-manager Operations Console and the username and password used to log on to the console are obtained from the deployment personnel or an administrator.

The endpoint of the Apsara Uni-manager Operations Console is in the following format: *region-id*.ops.console.*intranet-domain-id*.

• A browser is available. We recommend that you use Google Chrome.

#### Procedure

- 1. Open your Chrome browser.
- 2. In the address bar, enter the endpoint of the Apsara Uni-manager Operations Console. Press the Enter key.



**?** Note You can select a language from the drop-down list in the upper-right corner of the page.

#### 3. Enter your username and password.

Obtain the username and password used to log on to the Apsara Uni-manager Operations Console from the deployment personnel or an administrator.

When you log on to the Apsara Uni-manager Operations Console for the first time, you must change the password of your username.

For security reasons, your password must meet the following requirements:

- The password contains uppercase and lowercase letters.
- The password contains digits.
- $\circ~$  The password contains the following special characters: ! @ # \$ %

- The password must be 10 to 20 characters in length.
- 4. Click Log On.
- 5. In the top navigation bar of the Apsara Uni-manager Operations Console, click **Products**.
- 6. In the **Big Data** section, click **Apsara Bigdata Manager** to go to the homepage of the ABM console.

# 3.2. Set the theme of the console

You can set the theme of the Apsara Big Data Manager (ABM) console to dark or bright based on your preferences. By default, the dark theme is used.

#### Prerequisites

An ABM account and the corresponding password are obtained.

#### Procedure

- 1. Log on to the ABM console.
- 2. Set the theme of the ABM console to dark or bright based on your preferences.

Theme	Description
Bright	If the dark theme is used, you can move the pointer over the username in the upper-right corner and turn off the switch to change to the bright theme.
Dark	If the bright theme is used, you can move the pointer over the username in the upper-right corner and turn on the switch to change to the dark theme.

# 3.3. View the trace dashboards

The dashboard is used to display the key running metrics of MaxCompute, DataWorks, RealtimeCompute, and DataHub products, as well as alarms of all big data products. This allows you to understand the running status of big data products as a whole.

#### Prerequisites

Your ABM account is granted the required permissions on services on which you want to perform O&M.

#### **Background information**

The dashboard is a feature of the ABM console. As the homepage of the ABM console, the dashboard allows you to view the overall running information about all big data services.

#### Procedure

1. Log on to the ABM console.

After logging in to the Apsara Big Data Manager, the default display **Dashboard** page. If you are currently on another page, you can click **=** the icon and select **ABM** products to enter **Dashboard** page.

2. View and clear service alerts.

In the alert list, view the number of alerts for all big data products. **Critical** and **Warning** type alarms must be fixed in a timely manner.

i. In the **Dashboard On the** page, click the **Critical** or **Warning** quantity, into the product **Cluster O&M > Health** page.

Odps	ComputeCluster	Actions ~	Overviev	v .	Health Status	_	Servers				
	Checker 🜲	7 S	Source 🗢		Critical ≑		Warning 🜲	Exception 🜲		Actions 🜲	
	eodps_check_nuwa		check								
	eodps_check_aas		check								
	bcc_check_ntp		check								
	eodps_check_schedulerpoolsize		check								
	bcc_tsar_tcp_checker		check								
	bcc_kernel_thread_count_checker		check								
	bcc_host_live_check		check								
	bcc_process_thread_count_checker		check								
	bcc_check_load_high		check								
	bcc_network_tcp_connections_checker		check								
									<	1 2 3 4 5	>

In the **Health** On the page that appears, you can view all check items of the product.

ii. Click the **Details** to view the details of the check item and the alert solution of the check item, and press **Solution The steps in** to handle alerts.

Details					Х				
Name:	bcc_disk_usage_checker	Source:	tche	ck					
Alias:	Disk Usage Check	Application:	bcc						
Type:	system	Scheduling:		Enable					
Data Coll	Data Collection: Enable								
Default E	Default Execution Interval: 0 0/5 * * * ?								
Descripti	on:								
This check triggered	ter checks the storage usage by using this command: df -lh. A when the usage exceeds 90%. Reason: User operations. Old le	warning is trigger og data is not dele	red wh ted. Lo	en the usage exceeds 80% and a critical alert is ogrorate is not working. Fix:					
1. Log	on to the server and list all partitions by executing this comr	nand: df -lh							
2. Exe	cute the following command on each partition to find the dir	ectory where the e	rror o	ccurred: du -sh *					
3. Det	3. Determine the cause of the issue and find a solution. You can create a task to clear log data periodically.								
> Show	More								

iii. Log on to the hosts on which the alerts are detected to handle the alerts.

Click in front of the check item that has an alarm. Fold icon, and then click the Logon icon.

Che	sker				
	Checker 🜲	♥ Source 🜩	♡ Critical 🗲	⊽ Warning <b>≑</b> ⊽ Exceptio	on ¢ ♡ Actions ¢ ♡
	bcc_check_ntp	tcheck			
	Host 🔺	⊽ Status ≜		▲ 🛛 🖓 Status Updated At 🔺	ଟ Actions ≜ ହ
	a56	WARNING	Jul 8, 2019, 09:25:	07 Jul 4, 2019, 18:55:10	
		WARNING	Jul 8, 2019, 09:25:	05 Jul 4, 2019, 18:55:09	
		WARNING	Jul 8, 2019, 09:20:	07 Jul 4, 2019, 18:55:08	
		WARNING	Jul 8, 2019, 09:20:	09 Jul 4, 2019, 18:55:08	
		WARNING	Jul 8, 2019, 09:20:	33 Jul 4, 2019, 18:55:08	
		WARNING	Jul 8, 2019, 09:20:	03 Jul 4, 2019, 18:55:07	
	a56	WARNING	Jul 8, 2019, 09:25:	07 Jul 4, 2019, 18:55:07	

iv. In the newly opened **TerminalService** On the page that appears, select a host on the left to log on.

TerminalService terminal service to reflect shell to web		
~		all vm
.d vm	Ð	[admin@vm /home/admin] s

3. In the Dashboard On the page that appears, click the MaxCompute , view MaxCompute .

✓ MaxCompute							
HybridOdpsCluster	CPU Allocation			HybridOdpsCluster-	Memory Allo	cation	
CPU (Core) 63.6 % Total 507	Avail 18	able : 4	SQL Acceleration	Memory (Bytes) 55.2 % Total 2.26 T	Avc Li	silable S DL T	QL Acceleration 2.16 G
HybridOdpsCluster	CPU Usage			HybridOdpsCluster	Memory Usag	ge	
СРИ				MEMORY			
10 8 4 4 2 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3	ладов 25, 2019, <b>1</b> 4:13:80	алад Чалтуралтур алад Чалтуралтур мі 25, 2019, 143760	на Манарана Санарана на Манарарана Санарана ми 25, 2019, İSoloo ми	137k - 117k - 97.7k - 78.1k - 39.1k - 19.5k - 0 - Jul 25, 2019	, 1349400 Jul 25, 2019, 14:1	400 Jul 25, 2019, 14:39:00	) Jul 25, 2019, 15:04:00
Jobs				HybridOdpsCluster	Storage		
All 0	Running O	Waiting for Resources 0	Waiting for Scheduling 0	Storage 0.1 % Total 397.95	Ava T 397	ailable 1.65 T	Recycle Bin 5.98 T

**MaxCompute The** section displays the job running overview, control system saturation, data import traffic, computing resource usage, storage resource usage, and the logical and physical CPU usage trend charts of the MaxCompute cluster.

4. In the Dashboard On the page that appears, click the DataWorks, view DataWorks.

∨ DataWorks										
Nodes						Slot Usage				
Successful Instances 2836	Stopped 702	Wait Time 419	Running 4	Failed Instances 32	Waiting for Resources 0	Watermark 28.8 %				
						Total Slots 500	Used 4	Unavailable 140	Idle 356	

**DataWorks The** section displays the node scheduling overview, slot resource overview, and the cumulative trend chart of task completion in the DataWorks cluster.

5. In the Dashboard On the page that appears, click the RealtimeCompute , view RealtimeCompute .

✓ StreamCompute	
BlinkCluster- CPU Usage	BlinkCluster- Memory Usage
СРО	MEMORY
<sup>3</sup> 2 2 1 1 0.5 1 1 1 1 1 1 1 1 1 1 1 1 1	244k - 195k - 146k - 97.7k - 48.8k - 0 Jul 25, 2019, 13:49:00 Jul 25, 2019, 14:14:00 Jul 25, 2019, 14:39:00 Jul 25, 2019, 15:00

**RealtimeCompute The** section displays the trend charts of TPS and FAILOVER for RealtimeCompute cluster jobs, and the trend charts of CPU and memory usage.

6. In the Dashboard On the page that appears, click the DataHub , view DataHub .



**Dat aHub** section displays the trend charts of read /write latency, number of read /write records, read /write QPS, read /write byte traffic, CPU level, and memory level of the DataHub cluster.

# 3.4. View the cluster running status

Apsara Big Data Manager (ABM) provides you with several operation metrics of clusters, such as CPU usage, memory usage, load, storage, and health check result. This helps you understand the running status of clusters at any time. Based on relevant metrics, you can evaluate whether the selected cluster has operation risks.

#### Prerequisites

Your ABM account is granted the required permissions to perform O&M operations on the corresponding service.

#### Context

In the ABM console, the procedures of viewing the cluster running status for different services are the same. This topic uses one of the services as an example.

#### Procedure

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner and then click a service.
- 3. On the page that appears, click **O&M** in the upper-right corner, and then click the **Clusters** tab.
- 4. On the **Clusters** page, select a cluster in the left-side navigation pane. The **Overview** page for the cluster appears.



On the **Overview** page, you can view the host status, service status, health check result, and health check history of the selected cluster. You can also view the trend charts of CPU usage, disk usage, memory usage, load, and packet transmission for the cluster.

#### What's next

You can evaluate the operation risks of a cluster based on the metrics such as the service status, CPU usage, disk usage, memory usage, and load.

If the cluster has any Critical, Warning, or Exception alerts, you need to check and clear them in a timely manner. You need to pay special attention to the Critical and Warning alerts. For more information, see View and clear cluster alerts.

### 3.5. View and clear cluster alerts

If you find alerts on the cluster overview page, go to the cluster health status page to view and clear the alerts. This topic uses one Apsara Big Data Manager (ABM) service as an example to describe how to view and clear alerts.

#### Prerequisites

Your ABM account is granted the required permissions to perform O&M operations on the corresponding service.

#### Context

In the ABM console, the procedures of viewing and clearing alerts for different services are the same. If a service has alerts, especially the Critical and Warning alerts, pay attention to them and clear them in a timely manner to make sure that the cluster can run properly.

#### Procedure

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner and then click a service.
- 3. On the **Clusters** page, select a cluster in the left-side navigation pane, and then click the **Health Status** tab. The Health Status page for the cluster appears.

нų,	ingention community	Actions ~	Overviev	v .	Health Status	Servers			
	Checker 🜲	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ource 🜲		Critical 🜲	Warning 💲	Exception \$		Actions 🔹 🛛 🖓
	eodps_check_nuwa	te	check						
	eodps_check_aas	te	check						
	bcc_check_ntp	te	check						
	eodps_check_schedulerpoolsize	te	check						
	bcc_tsar_tcp_checker	te	check						
	bcc_kernel_thread_count_checker	te	check						
	bcc_host_live_check	te	check						
	bcc_process_thread_count_checker	te	check						
	bcc_check_load_high	te	check						
	bcc_network_tcp_connections_checker	te	check						
								<	1 2 3 4 5 >

4. On the Health Status page, click + to expand a checker with alerts. You can view all hosts where the checker is run.

Checl	xer								
	Checker 🜲	Source 🜲	Critical 🗢 👘	9 W	arning ¢		n 😄 🛛 🖓	Actions 🜲	
·	bcc_check_ntp	tcheck		19					
	Host 🔺	Status 🔺	Last Reported At 🔺			Status Updated At 🔺		Actions 🔺	
	a56	WARNING	Jul 8, 2019, 09:25:07			Jul 4, 2019, 18:55:10			
	a56	WARNING	Jul 8, 2019, 09:25:05			Jul 4, 2019, 18:55:09			
		WARNING	Jul 8, 2019, 09:20:07			Jul 4, 2019, 18:55:08			
		WARNING	Jul 8, 2019, 09:20:09			Jul 4, 2019, 18:55:08			
		WARNING	Jul 8, 2019, 09:20:33			Jul 4, 2019, 18:55:08			
		WARNING	Jul 8, 2019, 09:20:03			Jul 4, 2019, 18:55:07			
		WARNING	Jul 8, 2019, 09:25:07			Jul 4, 2019, 18:55:07			
		WARNING	Jul 8, 2019, 09:25:03			Jul 4, 2019, 18:55:07			
		WARNING	Jul 8, 2019, 09:25:05			Jul 4, 2019, 18:55:07			
		WARNING	Jul 8, 2019, 09:25:05			Jul 4, 2019, 18:55:06			
				То	tal Items:	32 < 1 2 3	4 > 10 / pag	e 🗸 🛛 Goto	

5. Click a host name. In the dialog box that appears, click **Details** in the Actions column of a check result to view the alert causes.



6. On the **Health Status** page, click **Details** in the Actions column of the checker to view the schemes to clear the alerts.

Details					Х							
Name:	bcc_disk_usage_checker	Source:	tche	ck								
Alias:	Disk Usage Check	Application:	bcc									
Туре:	system	Scheduling:		Enable								
Data Coll	ection: Enable											
Default E	Default Execution Interval: 0 0/5 * * * ?											
Description	on:											
This check triggered	er checks the storage usage by using this command: df -lh. A when the usage exceeds 90%. Reason: User operations. Old le	warning is trigge og data is not dele	red wh eted. Lo	en the usage exceeds 80% and a critical alert is ogrorate is not working. Fix:								
1. Log	on to the server and list all partitions by executing this comr	nand: df -lh										
2. Exe	cute the following command on each partition to find the dir	ectory where the e	error o	ccurred: du -sh *								
3. Det	3. Determine the cause of the issue and find a solution. You can create a task to clear log data periodically.											
> Show	More											

7. Clear the alerts according to the schemes.

To log on to a host with alerts for related operations, click the **Log On** icon next to the name of the host. On the **TerminalService** page that appears, click the hostname on the left to log on to the host.

Check						
	Checker 🜲	♡ Source 🜩	′ Critical 💠 🛛 🖓 Warning	<b>1≑</b> ⊽	Exception 🔶 💦	☑ Actions 🔶 🛛 🖓
	bcc_check_ntp	tcheck				
	Host 🔺	⊽ Status ≜	Last Reported At 🔺	∵ Status Upda	ted At ≜ ⊽	Actions ≜ 🛛 🖓
	a56	WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 1	.8:55:10	
		WARNING	Jul 8, 2019, 09:25:05	Jul 4, 2019, 1	.8:55:09	
		WARNING	Jul 8, 2019, 09:20:07	Jul 4, 2019, 1	.8:55:08	
		WARNING	Jul 8, 2019, 09:20:09	Jul 4, 2019, 1	.8:55:08	
		WARNING	Jul 8, 2019, 09:20:33	Jul 4, 2019, 1	8:55:08	
		WARNING	Jul 8, 2019, 09:20:03	Jul 4, 2019, 1	8:55:07	
	a56	WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 1	8:55:07	Refresh
Tern termina	ninalService service to reflect shell to web					
~	Contraction of Party States	a56	 ×			
a	a56	[admin@a56	<pre>/home/admin]</pre>			
		\$ <u></u>				

8. After you clear an alert for a host, click **Refresh** in the Actions column of the host to run the checker again for the host. In this way, you can check whether the alert is cleared.

Checke	r			
	Checker 💠	∀ Source 🗲	' Critical 🗢 🛛 🖓 Warning 🗢 🆙 Ex	ception 🔶 🛛 🖓 Actions 🔶 ♡
	bcc_check_ntp	tcheck		Details
	Host 🔺	∀ Status ≜	Last Reported At 🔺 🖓 Status Updated :	At 🔺 🛛 🗑 Actions 📥 🖓
		WARNING	Jul 8, 2019, 09:25:07 Jul 4, 2019, 18:55	:10 Refresh
		WARNING	Jul 8, 2019, 09:25:05 Jul 4, 2019, 18:55	:09 Refresh
		WARNING	Jul 8, 2019, 09:20:07 Jul 4, 2019, 18:55	:08 Refresh
		WARNING	Jul 8, 2019, 09:20:09 Jul 4, 2019, 18:55	:08 Refresh
		WARNING	Jul 8, 2019, 09:20:33 Jul 4, 2019, 18:55	:08 Refresh
		WARNING	Jul 8, 2019, 09:20:03 Jul 4, 2019, 18:55	:07 Refresh
		WARNING	Jul 8, 2019, 09:25:07 Jul 4, 2019, 18:55	:07 Refresh

# 4.ABM 4.1. ABM dashboard

The Apsara Bigdata Manager (ABM) dashboard shows the key indicators of MaxCompute, DataWorks, Realtime Compute for Apache Flink, and DataHub. The dashboard also provides information about the alerts for all big data services and helps you understand the overall status of these services. The dashboard supports auto-refresh and full-screen display.

#### Go to the Dashboard tab

After you log on to the ABM console, the **Dashboard** tab appears by default. To return to the **Dashboard** tab, click the **i** icon in the upper-left corner and click **ABM**.

房 Apsara Big Data Manager 🛛	ABM 🗄				☑ Monitor 18 O&M	Management	
			Dashboard Rep	ository Reports			
cn-qingdao-env25-d02							
(				ABM			
© 657							0 0
G GraphCompute		D DataWorks					
Ø 156							
> DataWorks							
> MaxCompute							
> DataHub							

In the upper-left corner of the **Dashboard** tab, you can select a region from the drop-down list to view the cluster status of each big data service in the region.

#### View and handle the alerts of various services

In the Overview section, you can view the numbers of **Critical**, **Warning**, and **Exception** alerts that are reported for each big data service. If a service has alerts, especially **Critical** or **Warning** alerts, handle these alerts on time.

1. On the **Dashboard** tab, find the check item of a service that you want to query, and click the number in the **Critical** or **Warning** column of the service. The **Health Status** page for the service appears on the **Clusters** tab.

Odps	ComputeCluster	Actions ~	Overview	N	Health Status	 Servers			
Checl	ker								
	Checker 🜲	Q 2	Source 🖕		Critical 🜲	Warning 🜲	Exception 🜲	Actions 🜲	
	eodps_check_nuwa	t	tcheck						
	eodps_check_aas	t	tcheck						
+	bcc_check_ntp	t	tcheck						
+	eodps_check_schedulerpoolsize	t	tcheck						
+	bcc_tsar_tcp_checker	t	tcheck						
+	bcc_kernel_thread_count_checker	t	tcheck						
+	bcc_host_live_check	t	tcheck						
	bcc_process_thread_count_checker	t	tcheck						
+	bcc_check_load_high	t	tcheck						
	bcc_network_tcp_connections_checker	t	tcheck						

On the Health Status page, you can view all the check items of the service.

2. Click **Details** in the Actions column of a check item for which alerts are reported. In the Details dialog box, view the details of the check item and the descriptions to handle the alerts. Perform the steps provided in the **Description** section to handle the alerts.

lans										
Name:	bcc_disk_usage_checker	Source:	tcheck							
Alias:	Disk Usage Check	Application:	bcc							
Туре:	system	Scheduling:	Enable							
Data Coll	ection: Enable									
Default E	xecution Interval: 0 0/5 * * * ?									
Description	ən:									
Description: This checker checks the storage usage by using this command: df -lh. A warning is triggered when the usage exceeds 80% and a critical alert is triggered when the usage exceeds 90%. Reason: User operations. Old log data is not deleted. Logrorate is not working. Fix:										
1. Log on to the server and list all partitions by executing this command: df -lh 2. Execute the following command on each partitions to find the directory where the error accurred; du, ch *										
1. Log 2. Exe	on to the server and list all partitions by executing this cute the following command on each partition to find	s command: df -lh the directory where the e	error occurred: du -sh *							

3. Log on to the hosts on which the alerts are detected to handle the alerts.

Click the plus sign (+) to expand a check item with alerts, and click the **Log On** icon next to the name of a host with alerts. On the TerminalService page that appears, click the host name on the left to log on to the host.

Charles				
Checker 🜩	∀ Source 🖨	♀ Critical 💠 🛛 🖓	Warning 🗢 🛛 🖓 Exception 🖨	; ⊽ Actions 🗢 🛛 🖓
- bcc_check_ntp	tcheck			
Host 🔺	⊽ Status ≜		🖓 Status Updated At 🔺	ত Actions ≜ ত
a56	WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 18:55:10	
a56	WARNING	Jul 8, 2019, 09:25:05	Jul 4, 2019, 18:55:09	
	WARNING	Jul 8, 2019, 09:20:07	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:09	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:33	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:03	Jul 4, 2019, 18:55:07	
a56	WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 18:55:07	Refresh
TerminalService terminal service to reflect shell to web				
TerminalService terminal service to reflect shell to web	ad vm	×		
TerminalService terminal service to reflect shell to web	€ [admin s∏	× l@vm	/home/admin]	
TerminalService terminal service to reflect shell to web	€	× 1¢vm	/home/admin]	
TerminalService terminal service to reflect shell to web	€ [admin \$]	× I&vm	/home/admin]	
TerminalService terminal service to reflect shell to web	€ [admin \$	¥ I€vm	/home/admin]	
TerminalService terminal service to reflect shell to web	€ [admin s]	iê vm	/home/admin]	
TerminalService terminal service to reflect shell to web	€ [admin \$	Kevm ∎evm	/home/admin]	

### View key indicators of MaxCompute

The ABM dashboard shows the key indicators of MaxCompute. On the **Dashboard** tab, click **MaxCompute** to view the information.

✓ MaxCompute					
HybridOdpsCluster	CPU Allocation			HybridOdpsCluster- Memory Allocation	
CPU (Core) 63.6 % Total 507	Avail 18	able 4	SQL Acceleration	Memory (Bytes) 55.2 % Total Available SQL Acce 2.26 T 1.01 T 2.16	Heration G
HybridOdpsCluster	CPU Usage			HybridOdpsCluster Memory Usage	
СРИ				MEMORY	
10 8 4 4 10 10 2 10 2 10 2 10 2 10 2 10 10 10 10 10 10 10 10 10 10 10 10 10	ладарана и инализация мартикали мартикали мартикали мартикали мартикали мартикали мартикали мар	цааа Алиалалалар цааса Алиалар Алиалар ми 25, 2019, 143760	аа, // Цата, Ларан Цане Цане Цане аац, / Maraa, Magaa Lane Lane Lane Lane ма 25, 2019, İS 01.00 ма	137k - 117k - 97.7k - 78.1k - 58.6k - 19.5k - 0 Jul 25, 2019, 13:49:00 Jul 25, 2019, 14:14:00 Jul 25, 2019, 14:39:00 Jul	al 25, 2019, 15:04:00
Jobs				HybridOdpsCluster Storage	
All O	Running 0	Waiting for Resources 0	Waiting for Scheduling 0	Storage 0.1 %	
				Total Available Recyc 397.95 T 397.65 T 5.98	e Bin T

In the **MaxCompute** section, you can view the job status, the real-time capacity for the control system, computing resource usage, and storage resource usage. You can also view the trend charts of imported data traffic, logical CPU utilization, and physical CPU utilization.

#### View key indicators of DataWorks

The ABM dashboard shows key indicators of DataWorks. On the **Dashboard** tab, click **DataWorks** in the **Monitoring** column to view the information.

✓ DataWorks										
Nodes						Slot Usage				
Successful Instances 2836	Stopped 702	Wait Time 419	Running 4	Failed Instances 32	Waiting for Resources 0	Watermark 28.8 %				_
						Total Slots 500	Used 4	Unavailable 140	Idle 356	

In the **DataWorks** section, you can view the node scheduling and slot usage of a DataWorks cluster. You can also view the trend chart of the total number of daily finished tasks.

#### View key indicators of Realtime Compute for Apache Flink

The ABM dashboard shows key indicators of Realtime Compute for Apache Flink. On the **Dashboard** tab, click **Realtime Compute** in the **Monitoring** column to view the information.

∨ StreamCompute	
BlinkCluster CPU Usage	BlinkCluster Memory Usage
СРО 2	MEMORY 2
3 2 2 1 1 0.5 0 ли 25, 2019, із:49:00 ли 25, 2019, і4:13:00 ли 25, 2019, і4:37:00 ли 25, 2019, і5:01:00	244k

In the **Realtime Compute** section, you can view the trend charts of the transactions per second (TPS), failover rate, CPU utilization, and memory usage for a Realtime Compute for Apache Flink cluster.

#### View key indicators of DataHub

The ABM dashboard shows key indicators of DataHub. On the **Dashboard** tab, click **DataHub** in the **Monitoring** column to view the information.

l ∨ DataHub	
DataHubCluster- CPU Usage	DataHubCluster Memory Usage
СРИ	MEMORY
12 10 8 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -	176k 146k 177k 87.9k 58.6k 29.3k 0 Jul 25, 2019, 13:49:00 Jul 25, 2019, 14:14:00 Jul 25, 2019, 14:39:00 Jul 25, 2019, 14:39:00 Jul 25, 2019, 15:04:

In the **Dat aHub** section, you can view the trend charts of the read/write latency, read/write records, read/write queries per second (QPS), and read/write throughput. You can also view the trend charts of CPU utilization and memory usage of a DataHub cluster.

#### Enable and disable auto-refresh

By default, auto-refresh is disabled on the Dashboard tab, and the statistics of cluster metrics from the last two days are displayed on this page. You can specify a time range to view the metric statistics. If you enable auto-refresh, the system automatically updates the metric data of clusters based on the specified interval.

- 1. At the top of the **Dashboard** tab, click tab, click tab, c
- 2. In the dialog box that appears, configure the **Refreshing every** and **Refreshing range** parameters.

The **Refreshing range** parameter specifies a time period for the trend charts, such as those for the CPU utilization and memory usage of each cluster.

3. After you configure these parameters, click **OK** to enable auto-refresh.

If auto-refresh is enabled, the 📷 icon is replaced with the 📷 icon. The system automatically

updates all data on the dashboard based on the specified time interval.

If you want to disable auto-refresh, click the 📷 icon.

#### Display the dashboard in full-screen

The dashboard supports full-screen display. This feature allows you to view the status of big data services.

At the top of the **Dashboard** tab, click the **m** icon to display the **Dashboard** tab in full-screen mode.

### 4.2. ABM repository

The Repository page in the Apsara Big Data Manager (ABM) console displays the resource usage in MaxCompute, DataWorks, and DataHub. This topic describes the features of the ABM repository and how to access the Repository page.

#### Entry

1. Log on to the ABM console.

⑦ Note

By default, the **Dashboard** page appears. To return to the **Dashboard** page from any other page, click in the upper-left corner and then click **ABM**.

2. On the Dashboard page, click the Repository tab. The Repository page appears.

C-) Apsara Big Data	I Manager   ABM ₩		🗹 Monitor 縄 O&M 稔 Management  💮 🛄
		Dashboard Repository	
Repository 🖻	Nov 22, 2019, 16:04:25 ~ Dec 6, 2019, 16:04:25		
ిం MaxCompute	CU Usage 📃	CU Usage	Idle CUs
a, DataWorks	600	total $\clubsuit$ $\forall$ free $\diamondsuit$ $\forall$ used $\diamondsuit$ $\forall$ collect_time $\diamondsuit$	
یڈ, DataHub	400	550 CU 476 CU 73 CU 2019-11-23 03:00:15	Idle CUs
		550 CU 476 CU 73 CU 2019-11-24 03:00:16	71.3%
	200	550 CU 476 CU 73 CU 2019-11-25 03:00:15	
		Total Items: $14 < 12$	
	0 24. Nov 26. Nov 28. Nov 30. Nov 2. Dec 4. Dec 6. Dec	10 / page V Goto	
	— Total CUs — Used CUs — Idle CUs		
	Storage Usage 🔳	Storage Usage	Idle Storage
		total \$ ₽ free \$ ₽ used \$ ₽ collect_time \$	
		85 GB 84 GB 0 GB 2019-11-23 03:00	Idle Storage
		85 GB 84 GB 0 GB 2019-11-24 03:00	86.8%
		85 GB 84 GB 0 GB 2019-11-25 03:00	k15
0		85 GB 84 GB 0 GB 2019-11-26 03:00	k17
	24. Nov 26. Nov 28. Nov 30. Nov 2. Dec 4. Dec 6. Dec	85 GB 84 GB 0 GB 2019-11-27 03:00	k17
	— Total Storage (TB)    — Used Storage (TB) — Idle Storage (TB)	85 GB 84 GB 1 GB 2019-11-28 03:00	k18
		85 GB 84 GB 1 GB 2019-11-29 03:00	15

View the resource usage in MaxCompute

In the left-side navigation pane of the **Repository** page, click **MaxCompute**. On the page that appears, you can view the resource usage in MaxCompute.

Nov 13, 2019, 14:07:21 ~ Nov 27, 2019, 14:07:21 📋		
CU Usage	CU Usage total ≎ ♡ free ≎ ♡ used ≎ ♡ collect_time ∻ ♡	Idle CUs
400 200 0	550 CU       487 CU       62 CU       2019-11-14 03:00:16         550 CU       485 CU       64 CU       2019-11-15 03:00:11         550 CU       480 CU       69 CU       2019-11-16 03:00:18         550 CU       480 CU       69 CU       2019-11-16 03:00:18         Total Items: 14       <1       2       >10 / page ∨       Goto	Idle CDx 70.9%
Storage Usage 📃	Storage Usage	Idle Storage
0 16. Nov 18. Nov 20. Nov 22. Nov 24. Nov 26. Nov 16. Nov 18. Nov 20. Nov 22. Nov 24. Nov 26. Nov — Total Storage (TB) — Idle Storage (TB)	total ↓         ♥         free ↓         ♥         used ↓         ♥         collect,time ↓         ♥           85 GB         84 GB         0 GB         2019-11-14 03:00:16           85 GB         84 GB         0 GB         2019-11-15 03:00:11           85 GB         84 GB         0 GB         2019-11-16 03:00:18           85 GB         84 GB         0 GB         2019-11-17 03:00:18           85 GB         84 GB         0 GB         2019-11-18 03:00:15           85 GB         84 GB         0 GB         2019-11-19 03:00:17           85 GB         83 GB         1 GB         2019-11-20 03:00:15	Idle Storage 98.9%
	85 GB     84 GB     1 GB     2019-11-21 03:00:14       85 GB     84 GB     0 GB     2019-11-22 03:00:15       85 GB     84 GB     0 GB     2019-11-23 03:00:15       Total Items: 14     1     2     > 10 / page ∨ Goto	

For MaxCompute, the Repository page displays the trend charts of CU and storage usage, records of CU and storage usage, and proportions of idle CUs and storage.

#### View the resource usage in DataWorks

In the left-side navigation pane of the **Repository** page, click **DataWorks**. On the page that appears, you can view the resource usage in DataWorks.

Nov 13, 2019, 14:10:29 ~ Nov 27, 2019, 14:10:29		
Slot Usage 📃	Slot Usage	Idie Slots
600	total $\diamondsuit$ $\forall$ free $\diamondsuit$ $\forall$ used $\diamondsuit$ $\forall$ collect_time $\diamondsuit$ $\forall$	
400	463 451 12 2019-11-14 03:00:16	Idle Slots
	463 451 12 2019-11-15 03:00:11	97.41%
200	463 451 12 2019-11-16 03:00:18	
0	Total Items: 14 < 1 2 > 10 / page $\lor$ Goto	
— Total Slots — Used Slots — Idle Slots		

For DataWorks, the Repository page displays the trend chart of slot usage, records of slot usage, and proportion of idle slots.

#### View the resource usage in DataHub

In the left-side navigation pane of the **Repository** page, click **DataHub**. On the page that appears, you can view the resource usage in DataHub.

Nov 1	Nov 13, 2019, 14:10:53 ~ Nov 27, 2019, 14:10:53 📋												
	Storage Usage		Storage U	sage					Idle Stora	je			
40			total 🜲		free ✿ ♡	used 🗢		collect_time				_	
			34 GB		34 GB	0 GB		2019-11-14 03:00:16			Idle Storage		
20 —			34 GB		34 GB	0 GB		2019-11-15 03:00:11			100%		
			34 GB		34 GB	0 GB		2019-11-16 03:00:18					
o ——	0		34 GB		34 GB	0 GB		2019-11-17 03:00:18					
		ov	34 GB		34 GB	0 GB		2019-11-18 03:00:15					
			34 GB		34 GB	0 GB		2019-11-19 03:00:17					
			34 GB		34 GB	0 GB		2019-11-20 03:00:15					
			34 GB		34 GB	0 GB		2019-11-21 03:00:14					
			34 GB		34 GB	0 GB		2019-11-22 03:00:15					
			34 GB		34 GB	0 GB		2019-11-23 03:00:15					
			Total Ite	ems:	14 < 1	2 > 10/	pa	ge 🗸 Goto					

For DataHub, the Repository page displays the trend chart of storage usage, records of storage usage, and proportion of idle storage.

#### Other operations

You can filter or sort records of CU, storage, and slot usage based on a column to facilitate information retrieval. For more information, see Common operations.

### 4.3. O&M overview

This topic describes the O&M modules of Apsara Big Data Manager (ABM) and how to go to the O&M page of ABM.

#### O&M modules

The O&M page of ABM provides the following modules: Business, Clusters, and Hosts. The following table describes these modules.

Module	Submodule or feature	Description
Environment O&M	Single-Host Basic Components	Shows the status of single-host basic components within a cluster.
	Overview	Shows the trend charts of CPU usage, disk usage, memory usage, load, packet transmission, TCP connection, and root disk usage for a cluster.
Clusters	Health Status	Shows all check items of a cluster, including the check item details, check results for the hosts in the cluster, and schemes to clear alerts. You can also log on to a host and manually check the host.

Module	Submodule or feature	Description
Hosts	Overview	Displays the overall running and health check information about a host. On this page, you can view the root disk usage, total usage, 1-minute load, 5-minute load, 15-minute load, health check result, and health check history of the host. You can also view the trend charts of CPU usage, disk usage, memory usage, load, packet transmission, TCP connection, and root disk usage for the host.

#### Go to the O&M page

- 1. Log on to the ABM console
- 2. In the upper-left corner of the ABM console, click the 📑 icon and click ABM.
- 3. In the upper-right corner of the ABM page, click **O&M**. On the page that appears, click the **Business** tab to go to the Business page.

😑   🍖 Apsara Big Data Manage	r   ABM		🗹 Monitor	∺≣ <b>0&amp;</b> M © ।	Management 🛛 📀 op	osad
		Business Clusters Hosts				
Search by keywor Q	Overview Health Status			i≡ Execution	n History 🕸 Actio	ns v
Clusters	CPU	Z DISK				1
・ 品 cn-1	0.12 0.1 0.08 0.08 0.04 0.02 0 Jun 28, 2022, 13:32:00 Jun 29, 2022, 14:10:00	→	Jun 28, 2022, 13:32:00 Jun 26	9, 2022, 14:10:00	) Jun 29, 2022, 14:48:00	Jun :
	LOAD 0.4 0.2 0.1 0.1 0.2 0.1 0.1 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.1 0.2 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	MEMOR 33.4M 23.6M 13.1M 13.1M 14.3M 9.20 1.01 2	¥Υ	9, 2022, 14:11:00	Jun 29, 2022, 14-50-00	

The **O&M** page includes the following modules: **Business**, **Clusters**, and **Hosts**.

## 4.4. Service O&M

### 4.4.1. Service overview

The Overview page lists all Apsara Big Data Manager (ABM) services in a cluster. You can view the trend charts of CPU usage, disk usage, memory usage, load, packet transmission, TCP connection, and root disk usage for each service.

#### Entry

On the **Services** page, select a cluster above the left-side service list, select a service in the service list, and then click the **Overview** tab. The **Overview** page for the service appears.

#### Apsara Big Data Manager



On the Overview page, you can view the trend charts of CPU usage, disk usage, memory usage, load, packet transmission, TCP connection, and root disk usage for the selected service.

#### CPU

This chart displays the trend lines of the total CPU usage (cpu), CPU usage for executing code in kernel space (sys), and CPU usage for executing code in user space (user) for the selected service over time in different colors.

Click **w** in the upper-right corner of the chart to zoom in the chart.

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the CPU usage of the service in the specified period.



#### DISK

This chart displays the trend lines of the storage space usage on the /, /boot, /home/admin, and /home directories for the selected service over time in different colors.

 $\operatorname{Click}$  in the upper-right corner of the chart to zoom in the chart.

()	DISK	Jul 8, 2019, 09:33:00 • /: 19.07
	Start date ~ End date 🛱	<ul> <li>/boot: 31.35</li> <li>/home/admin: 0.53</li> <li>/home: 0</li> </ul>
	30 - 25 - 20 -	
	15 - 10 - 5 -	
	0 1 8, 2019, 08:42:00 Jul 8, 2019, 09:00:00 Jul 8, 2019, 09:18:00	Jul 8, 2019, 09:36:00 Jul 8, 2019, 09:54:00 Jul 8, 2019, 10:12:00 Jul 8, 2019, 10:30:00
		ок

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the storage space usage of the service in the specified period.

#### LOAD

This chart displays the trend lines of the 1-minute, 5-minute, and 15-minute load averages for the selected service over time in different colors.

LOAD Start date End date Jul 8, 2019, 09:21:00 3 Ioad1: 1.21 Ioad5: 1.43 d15: 1.51 \*\*\*\*\*\* Jul 8, 2019, 09:36:00 8, 2019, 08:42:00 Jul 8, 2019, 09:00:00 Jul 8, 2019, 09:18:00 Jul 8, 2019, 09:54:00 Jul 8, 2019, 10:12:00 Jul 8, 2019, 10:30:00

Click  $\mathbb{Z}$  in the upper-right corner of the chart to zoom in the chart.

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the 1-minute, 5-minute, and 15-minute load averages of the selected service in the specified period.

#### MEMORY

This chart displays the trend lines of the memory usage (mem), total memory size (total), used memory size (used), size of memory used by kernel buffers (buff), size of memory used by the page cache (cach), and available memory size (free) for the selected service over time in different colors.

Click in the upper-right corner of the chart to zoom in the chart.

() MEMORY				
		Jul 8, 2019, 09:32:00		
Start date ~ End date		• mem: 12.55		
		• total: /3,801.61		
78.1k		• used: 8,641.47		
68.4k -	·····	• buff: 2,487.82	••••••	•••••
58.6k -		cach: 52,600.98		
48.8k -	·····	• free: 10,071.33	••••••	•••••
39.1k -				
29.3k -				
19.5k -				
9.776-		* * * * * * * * * * * * * * * * * * * *		*****************
Jul 8, 2019, 08:43:00 Jul 8, 2019, 09:01:00	Jul 8, 2019, 09:19:00 Jul 8, 20	19, 09:37:00 Jul 8, 2019, 09:55:00	Jul 8, 2019, 10:13:00	Jul 8, 2019, 10:31:00
				ОК

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the memory usage of the selected service in the specified period.

#### PACKAGE

This chart displays the trend lines of the number of dropped packets (drop), that of error packets (error), that of received packets (in), and that of sent packets (out) for the selected service over time in different colors. These trend lines reflect the data transmission status of the service.

Click **v** in the upper-right corner of the chart to zoom in the chart.



You can specify the start time and end time in the upper-left corner of the enlarged chart to view the data transmission status of the selected service in the specified period.

#### ТСР

This chart displays the trend lines of the number of failed TCP connection attempts (atmp\_fail), that of the times of resetting TCP connections in the ESTABLISHED state (est\_reset), that of active TCP connections (active), that of passive TCP connections (pasive), that of received TCP packets (iseg), and that of sent TCP packets (outseg) for the selected service over time in different colors. These trend lines reflect the TCP connection status of the service.

Click **w** in the upper-right corner of the chart to zoom in the chart.

TCP Start date ~ End date 🗎 250 200 150 100 50 0	Sep 2, 2019, 15:29:00 • atmp_fail: 0 • est_reset: 0 • active: 0.53 • iseg: 187.83 • outseg: 188.33 • pasive: 0.1
Sep 2, 2019, 14:31:00 Sep 2, 2019, 14:51:00 Sep 2, 2019, 1	5:11:00 Sep 2, 2019, 15:31:00 Sep 2, 2019, 15:51:00 Sep 2, 2019, 16:11:00

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the TCP connection status of the selected service in the specified period.

#### **DISK ROOT**

This chart displays the trend line of the average root disk usage (avg) for the selected service over time.

(i)	DISK ROOT					
	Start date ~	End date				
	5- 4-		•••••	•••••	•••••••••••••••••••••••••••••••••••••••	
	3 - 2 -			Sep 2, 2019, 15:36: • avg: 4.13	00	
	1-					
	Sep 2, 2019, 14:30:00	Sep 2, 2019, 14:51:00	Sep 2, 2019, 15:12:00	Sep 2, 2019, 15:33:00 Sep	2, 2019, 15:54:00	Sep 2, 2019, 16:15:
						ОК

Click in the upper-right corner of the chart to zoom in the chart.

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the average root disk usage of the selected service in the specified period.

### 4.4.2. Service hosts

Apsara Big Data Manager (ABM) allows you to view the host list of each ABM service so that you can understand the service deployment on hosts.

On the **Services** page, select a cluster above the left-side service list, select a service in the service list, and then click the **Server** tab. The **Server** page for the service appears.

			Services	Clusters	Hosts
bcc 🗸 🗸 🗸	bcc-api.Controller#	Overview	Server		
یڈ, bcc-api.Controller#	Hostname 🜲				
ిం, bcc-api.MiniSa#	vn				
, bcc-api.ServiceTest#	vn dc				
💩 bcc-api.TeslaMiddle	dc				
, bcc-web.Controller#					
ిం, bcc-web.ServiceTest#					

On the Server page, you can view the hosts where the selected service is run.

# 4.5. Cluster O&M

### 4.5.1. Cluster overview

The cluster overview page displays the trend charts of CPU usage, disk usage, memory usage, load, packet transmission, TCP connection, and root disk usage for a cluster.

#### Entry

On the **Clusters** page, select a cluster in the left-side navigation pane, and then click the **Overview** tab. The Overview page for the cluster appears.



The cluster overview page displays the trend charts of CPU usage, memory usage, and load for a cluster. The trend charts are described as follows:

#### CPU

This chart shows the trend lines of the total CPU utilization (cpu), CPU utilization for executing code in kernel space (sys), and CPU utilization for executing code in user space (user) for the cluster in different colors.

In the upper-right corner of the chart, click the 🗾 icon to zoom in the chart.

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the CPU utilization of the cluster in the specified period.



#### MEMORY

This chart shows the trend lines of the memory usage (mem), total memory size (total), used memory size (used), size of memory used by buffers (buff), size of memory used by the page cache (cach), and available memory size (free) for the cluster in different colors.

In the upper-right corner of the chart, click the **z** icon to zoom in the chart.

$\bigcirc$		
U	MEMORY	
		Jul 8, 2019, 09:32:00
		• mem: 12.55
	Start date ~ End date	• total: 73,801.61
	78.1k -	• used: 8,641.47
	68.4k -	••• • buff: 2,487.82 ••••
	58.6k -	cach: 52,600.98
	48.8k -	••••• free: 10,071.33
	39.1k -	
	29.3k -	
	19.5k -	
	9.77k -	<b>9</b> ************************************
	Jul 8, 2019, 08:43:00 Jul 8, 2019, 09:01:00 Jul 8, 2019, 09:19:00 Ju	1 8, 2019, 09:37:00 Jul 8, 2019, 09:55:00 Jul 8, 2019, 10:13:00 Jul 8, 2019, 10:31:00

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the memory usage of the cluster in the specified period.

#### LOAD

This chart shows the trend lines of the 1-minute, 5-minute, and 15-minute load averages for the cluster in different colors.

In the upper-right corner of the chart, click the **z** icon to zoom in the chart.

()	LOAD
	Start date ~ End date 🗎
	3 3- 3- 3-
	2- 2- 2- 2- 2- 2- 2- 2- 2- 2- 2- 2- 2- 2
	0 L

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the 1-minute, 5-minute, and 15-minute load averages of the cluster in the specified period.

### 4.5.2. Cluster health

On the cluster health status page, you can view all checkers of a cluster, including the checker details, check results for the hosts in the cluster, and schemes to clear alerts (if any). In addition, you can log on to a host and perform manual checks on the host.

#### Entry

On the **Clusters** page, select a cluster in the left-side navigation pane, and then click the **Health Status** tab. The Health Status page for the cluster appears.

		Services Clusters Hosts		
Search by keyword. Q	Application + EXECUTE	Overview Health Status		
▼ Bacn-				
	Checker 💠	ଟ Source 💠 େଟ Critical 🖕	♡ Warning 🔶 ♡ Exception 🖕	; ♡ Actions 🔶 ♡
	+ bcc_check_ntp	tcheck 0		
	+ bcc_tsar_tcp_checker	tcheck 0		
	+ bcc_kernel_thread_count_checker	tcheck 0		
	+ bcc_network_tcp_connections_checker	tcheck 0		
	+ bcc_disk_usage_checker	tcheck 0		
	+ bcc_host_live_check	tcheck 0		
	+ bcc_process_thread_count_checker	tcheck 0		
	+ bcc_check_load_high	tcheck 0		
Recently Selected				

On the **Health Status** tab, you can view all checkers for the cluster and the check results for the hosts in the cluster. The following alerts may be reported on a host: **CRITICAL**, **WARNING**, and **EXCEPTION**. The alerts are represented in different colors. You must handle the alerts in a timely manner, especially the **CRITICAL** and **WARNING** alerts.

#### View checker details

1. On the Health Status tab, click **Details** in the Actions column of a checker. On the Details page, view checker details.

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Details     X       Name:     bcc_tsar_tcp_checker     Source:     tcheck       Alias:     TCP Retransmission Check     Application:     bcc						
Name:     bcc_tsar_tcp_checker     Source:     tcheck       Alias:     TCP Retransmission Check     Application:     bcc	Details					Х
Name:     bcc_tsar_tcp_checker     Source:     tcheck       Alias:     TCP Retransmission Check     Application:     bcc						
Alias: TCP Retransmission Check Application: bcc	Name:	bcc_tsar_tcp_checker	Source:	tche	ck	
	Alias:	TCP Retransmission Check	Application:	bcc		
Type: system Scheduling: Enable	Type:	system	Scheduling:		Enable	
Data Collection: Enable	Data Col	lection: Enable				
Default Execution Interval: 0 0/5 * * * ?	Default E	execution Interval: 0 0/5 * * * ?				
Description:	Descripti	on:				
This checker uses tsar commands to test the retransmission rate. Reason: Server overloads or network fluctuations. Fix:	This chec	ker uses tsar commands to test the retransmission rate. Reaso	n: Server overloads	s or ne	twork fluctuations. Fix:	
1. Check whether multiple alerts are triggered for other services on the current server. If yes, follow the instructions on the details pages of corresponding checkers to fix the issues.	1. Ch coi					
2. If alerts are triggered on multiple servers, submit a ticket.	2. If a	lerts are triggered on multiple servers, submit a ticket.				
3. Log on to the server and execute the following command to check whether the situation is getting better. tsartcp -i 1   tail -10	3. Log					
4. If not, submit a ticket.	4. If n	ot, submit a ticket.				
> Show More	> Shov	/ More				

The checker details include Name, Source, Alias, Application, Type, Scheduling, Data Collection, Default Execution Interval, and Description. The schemes to clear alerts are provided in the description.

2. Click Show More to view more information about the checker.

Details					Х			
Name:	bcc_tsar_tcp_checker	Source:	tche	ck				
Alias:	TCP Retransmission Check	Application:	bcc					
Туре:	system	Scheduling:		Enable				
Data Colle	ction: Enable							
Default Ex	ecution Interval: 0 0/5 * * * ?							
Descriptio	n:							
This checke	er uses tsar commands to test the retransmission rate. Reasor	: Server overloads	or ne	twork fluctuations. Fix:				
1. Cheo corre	ck whether multiple alerts are triggered for other services on esponding checkers to fix the issues.	the current server.	If yes,	follow the instructions on the details pages of				
2. If ale	erts are triggered on multiple servers, submit a ticket.							
3. Log	3. Log on to the server and execute the following command to check whether the situation is getting better. tsartcp -i 1   tail -10							
	4. Il not, sudmit a ticket.							
> Show More								

You can view information about Script, Target (TianJi), Default Threshold, and Mount Point.

#### View the hosts for which alerts are reported and causes for the alerts

You can view the check history and check results of a checker on a host.

1. On the Health Status tab, click + to expand a checker for which alerts are reported. You can view all hosts where the checker is run.

Checker				
Checker 💠	∀ Source \$	중 Critical 💠 🛛 Warnin	ng ✿	ম Actions <b>‡</b> মি
- bcc_check_ntp	tcheck			
Host 🔺	∵ 🖉 Status 🔺	☑ Last Reported At 🔺	⊽ Status Updated At ≜	ଟ Actions ≜ ହ
a56	WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 18:55:10	
a56	WARNING	Jul 8, 2019, 09:25:05	Jul 4, 2019, 18:55:09	
a56	WARNING	Jul 8, 2019, 09:20:07	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:09	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:33	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:03	Jul 4, 2019, 18:55:07	
a56	WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 18:55:07	
a56.	WARNING	Jul 8, 2019, 09:25:03	Jul 4, 2019, 18:55:07	
a56	WARNING	Jul 8, 2019, 09:25:05	Jul 4, 2019, 18:55:07	
a56	WARNING	Jul 8, 2019, 09:25:05	Jul 4, 2019, 18:55:06	
		Total I	tems: 32 < 1 2 3 4 > 🗄	L0 / page 🗸 Goto

2. Click a host name. In the panel that appears, click **Details** in the Actions column of a check result to view the cause of the alert.

а	56		Histo	ory St	tatus			X
	Status 🔶 🕚	Q	Status Updated At 💲	Q	Actions 🔶	Å	1562549106 sync=0 offset=0.001994	
	WARNING		Jul 4, 2019, 18:55:10		Details			

#### **Clear alerts**

On the Health Status tab, click **Details** in the Actions column of a checker for which alerts are reported. On the Details page, view the schemes to clear alerts.

cans							
Name:	bcc_disk_usage_checker	Source:	tcheck				
Alias:	Disk Usage Check	Application:	ЬСС				
Туре:	system	Scheduling:	Enable				
Data Col	lection: Enable						
Default E	execution Interval: 0 0/5 * * * ?						
Descripti	on:						
This checker checks the storage usage by using this command: df -lh. A warning is triggered when the usage exceeds 80% and a critical alert is triggered when the usage exceeds 90%. Reason: User operations. Old log data is not deleted. Logrorate is not working. Fix:							
1. Log on to the server and list all partitions by executing this command: df -lh							
I. LO	2. Execute the following command on each partition to find the directory where the error occurred: du -sh *						
1. Log 2. Exe	ecute the following command on each partition to find	the directory where the e	error occurred: du -sh *				

#### Log on to a host

You may need to log on to a host to handle alerts or other issues that occurred on the host.

1. On the Health Status tab, click + to expand a checker for which alerts are reported.

Checker				
Checker 🜲	♡ Source 🜩			⊽ Actions 💠 ি 🖓
- bcc_check_ntp	tcheck			
Host 🔺	♡ Status ≜	ଟ Last Reported At ≜ ଟ	Status Updated At 🔺	♥     Actions ▲     ♥
a56	WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 18:55:10	
a56	WARNING	Jul 8, 2019, 09:25:05	Jul 4, 2019, 18:55:09	
a56	WARNING	Jul 8, 2019, 09:20:07	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:09	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:33	Jul 4, 2019, 18:55:08	
a56	WARNING	Jul 8, 2019, 09:20:03	Jul 4, 2019, 18:55:07	
256	WARNING	Jul 8, 2019, 09:25:07	Jul 4 2019 18:55:07	

2. Click the Login in icon of a host. The TerminalService page appears.



3. On the **TerminalService** page, click the hostname in the left-side navigation pane to log on to the host.



#### Run a checker again

After you clear an alert for a host, click **Refresh** in the Actions column of the host to run the checker again for the host. This way, you can check whether the alert is cleared.

Check	er				
	Checker 🗲	♡ Source 🜩	♡ Critical ✿ ♡ Warni	ing ¢ ♡ Exception ¢	⊽ Actions 💠 ি 🖓
	bcc_check_ntp	tcheck			
	Host 🔺	∀ Status ≜	∵ 🛛 🖓 🖓 🖓 🖓 🖓 🖓 🖓 🖓 🖓 🖓 🖓 🖓 🖓	⊽ Status Updated At 🔺	ত্ব Actions ≜ ত
		WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 18:55:10	Refresh
		WARNING	Jul 8, 2019, 09:25:05	Jul 4, 2019, 18:55:09	Refresh
		WARNING	Jul 8, 2019, 09:20:07	Jul 4, 2019, 18:55:08	
		WARNING	Jul 8, 2019, 09:20:09	Jul 4, 2019, 18:55:08	
		WARNING	Jul 8, 2019, 09:20:33	Jul 4, 2019, 18:55:08	
		WARNING	Jul 8, 2019, 09:20:03	Jul 4, 2019, 18:55:07	
		WARNING	Jul 8, 2019, 09:25:07	Jul 4, 2019, 18:55:07	

### 4.5.3. Restore environment settings

If a host in the cluster encounters RPMDB errors, Apsara Big Data Manager (ABM) allows you to restore environment settings.

#### Prerequisites

bigdata-sre is installed on the machine that you want to manage. If the machine is a Docker container, make sure that the staragent process runs in the container.

#### Restore environment settings

- 1. Log on to the ABM console.
- 2. In the upper-left corner, click the icon and then click **ABM**.
- 3. In the top navigation bar of the ABM page, click **O&M**. Then, click the **Clusters** tab.
- 4. In the left-side navigation pane of the **Clusters** tab, select a cluster. Then, click the **Health**

Status tab. The Health Status tab appears.

5. In the upper-right corner of the tab, click **Actions** and select **Restore Environment Settings**. In the **Restore Environment Settings** pane, enter a hostname. If you enter multiple hostnames, separate them with commas (,).

Restore Environment Settings		Х
* Hosts (Comma-separated):		
	Cancel Run	

- 6. Click Run.
- 7. Check the execution status.

Click Actions and select Execution History next to Restore Environment Settings to view the execution history.



It requires a long time to restore environment settings. **RUNNING** indicates that the execution is in progress. **SUCCESS** indicates that the execution succeeded. **FAILED** indicates that the execution failed.

Execution History							×
✓ Running Submitted by Me All							
Operation Name 💠 🛛 🖓	Operation ID 🜲 🐴	🛛 Current Status 💲	♥         Submitted At ◆         ♥	Started At 🜲 🛛 🗑 Ended	At <b>‡</b> ∀ Operator <b>‡</b>	∀ Type ‡ ୪	Parameters Details
Restore Environment Settings	abı	RUNNING	Sep 4, 2020, 17:42:44	Sep 4, 2020, 17:42:44		JOB	View Details
					Total Items:	1 < 1 > 10/	′page ∨ Goto

8. If the status is RUNNING, click **Details** in the Details column to view the steps and progress of restoration.

Restore Environment Settings				
		Parameter Configuration $\vee$	Download Execution Details	Refresh
	Basic Configuration			
Job Name: Restore Environment Settings	Execution Status: Success			
Created At: Sep 4, 2020, 17:42:45	Modified At: Sep 4, 2020, 17:43:01			
	Steps			
Restore Environment Settings Success				
Automatic Manual Success				
> 📀 🚥 = 1			Started At Sep 4, 2020, 17	7:42:45

9. If the status is FAILED, click Details in the Details column to identify the cause of the failure. For more information, see Identify the cause of the failure to restore environment settings.

#### Identify the cause of the failure to restore environment settings

This section describes how to identify the cause of the failure to restore environment settings.

- 1. In the upper-right corner of the **Clusters** tab, click **Actions** and select **Execution History** next to **Restore Environment Settings** to view the execution history.
- 2. Click **Details** in the Details column of a failed record to identify the cause of the failure.

You can also view information about parameter settings, host details, script, and runtime parameters to identify the cause of the failure.

# 4.6. Host O&M

### 4.6.1. Host overview

The host overview page displays the overall running information about a host in an Apsara Big Data Manager (ABM) cluster. On this page, you can view the root disk usage, total usage, 1-minute load, 5-minute load, 15-minute load, health check result, and health check history of the host. You can also view the trend charts of CPU usage, disk usage, memory usage, load, packet transmission, TCP connection, and root disk usage for the host.

#### Entry

On the **Hosts** page, select a host in the left-side navigation pane. The **Overview** page for the host appears.



#### Root Disk Usage, Total, and 1-Minute Load

These sections display the root disk usage, total usage, and 1-minute load for the selected host. The Root Disk Usage section provides the usage of the */tmp* directory. The Total section provides the system usage and user usage. The 1-Minute Load section provides the 1-minute, 5-minute, and 15-minute load averages.



#### CPU

The CPU chart shows the trend lines of the total CPU utilization (cpu), CPU utilization for executing code in kernel space (sys), and CPU utilization for executing code in user space (user) of the host over time in different colors.



In the upper-right corner of the chart, click the 🗾 icon to zoom in the chart.

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the CPU utilization of the host in the specified period.

#### DISK

The DISK chart shows the trend lines of the storage usage in the /, /boot, /home/admin, and /home directories for the host over time in different colors.

()	DISK Start date ~ End date 🛱	Jul 8, 2019, 09:33:00 • /: 19.07 • /boot: 31.35 • /home/admin: 0.53 • /home: 0		
	30- 25- 20- 15- 10- 5-	•••		
	0 I 8, 2019, 08:42:00 Jul 8, 2019, 09:00:00 Jul 8, 2019, 09:18:00 Jul 8	8, 2019, 09:36:00 Jul 8, 2019, 09:54:00 Jul 8, 2019, 10:12:00 Jul 8, 2019, 10:30:00		

In the upper-right corner of the chart, click the 🗾 icon to zoom in the chart.

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the storage usage of the host in the specified period.

#### MEMORY

The MEMORY chart shows the trend lines of the memory usage (mem), total memory size (total), used memory size (used), size of memory used by kernel buffers (buff), size of memory used by the page cache (cach), and available memory size (free) for the host over time in different colors.

<b>(</b> )	MEMORY			Jul 8, 2019, 09	:32:00			
	Start date	~ End date		<ul> <li>mem: 12.55</li> <li>total: 73,80</li> <li>used: 8,641</li> </ul>	l.61 47			
	68.4k - 58.6k - 48.8k -	•••••	••••••	••••••••••••••••••••••••••••••••••••••	32 ).98 .33		••••••	••
	39.1k - 29.3k - 19.5k - 0.77k							
	0_Jul 8, 2019, 08:43:00	Jul 8, 2019, 09:01:00	Jul 8, 2019, 09:19:00	Jul 8, 2019, 09:37:00	Jul 8, 2019, 09:55:00	Jul 8, 2019, 10:13:00	Jul 8, 2019, 10:31:00	# <b>1</b>
								OK

In the upper-right corner of the chart, click the 🗾 icon to zoom in the chart.

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the memory usage of the host in the specified period.

#### LOAD

The LOAD chart shows the trend lines of the 1-minute, 5-minute, and 15-minute load averages for the host over time in different colors.

In the upper-right corner of the chart, click the 🗾 icon to zoom in the chart.



You can specify the start time and end time in the upper-left corner of the enlarged chart to view the 1-minute, 5-minute, and 15-minute load averages of the host in the specified period.

#### PACKAGE

The PACKAGE chart shows the trend lines of the number of dropped packets (drop), that of error packets (error), that of received packets (in), and that of sent packets (out) for the host over time in different colors. These trend lines reflect the data transmission status of the host.

In the upper-right corner of the chart, click the 🗾 icon to zoom in the chart.

()	PACKAGE			Jul 8. 2	0010 00-28-00		
	Start date	~ End date		• drop • erro	<ul> <li>drop: 0.37</li> <li>error: 0</li> </ul>		
	400 - 300 -	<b>`**</b> ** <sup>*</sup> **** <sup>*</sup> *****	<sub>4</sub> ^ <sub>66</sub> +4 <sup>4</sup> 6+4 <sup>4</sup> 6644 <sup>4</sup>	• In: 3	41 335 •••••	\***** <sub>*</sub> *** <sub>**</sub> ***	****^***
	200 -						
	100 - 0	Jul 8, 2019, 09:01:00	Jul 8, 2019, 09:19:00	Jul 8, 2019, 09:37:00	Jul 8, 2019, 09:55:00	Jul 8, 2019, 10:13:00	Jul 8, 2019, 10:31:00
							ок

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the data transmission status of the host in the specified period.

#### ТСР

This chart displays the trend lines of the number of failed TCP connection attempts (atmp\_fail), that of the times of resetting TCP connections in the ESTABLISHED state (est\_reset), that of active TCP connections (active), that of passive TCP connections (pasive), that of received TCP packets (iseg), and that of sent TCP packets (outseg) for the host over time in different colors. These trend lines reflect the TCP connection status of the host.

Click in the upper-right corner of the chart to zoom in the chart.

~ End date 📋		active: 0.53		
		iseg: 187.83		
		outseg: 188.33		
*****	******	pasive: 0.1	***************************************	$\wedge$ $\sim$
	*********			·····
31:00 Sep 2, 2019, 14:51:00	Sep 2, 2019, 15:11:00	Sep 2, 2019, 15:31:00	Sep 2, 2019, 15:51:00	Sep 2, 2019, 16:11:00
				ОК
	31:00 Sep 2, 2019, 14:51:00	31:00 Sep 2, 2019, 14:51:00 Sep 2, 2019, 15:11:00	• OUTSeg: 188.33 • pasive: 0.1 • pasive: 0.1 • 31:00 Sep 2, 2019, 14:51:00 Sep 2, 2019, 15:31:00	● outseg: 188.33 ● pasive: 0.1 ■ 31:00 Sep 2, 2019, 14:51:00 Sep 2, 2019, 15:11:00 Sep 2, 2019, 15:31:00 Sep 2, 2019, 15:51:00

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the TCP connection status of the host in the specified period.

#### **DISK ROOT**

This chart displays the trend line of the average usage of the root disk (/) for the host over time.

Click in the upper-right corner of the chart to zoom in the chart.

(i)						
Ŭ	DISK ROOT					
	Start date ~	End date				
	5					
	4-	•••••	•••••	•••••	•••••	•••••
	3_			Sep 2, 2019, 15:3	6:00	
	2-			• avg: 4.13		
	1-					
	0 Sep 2 2019 14:30:00	Sen 2 2019 14:51:00	Sen 2 2019 15:12:00	Sen 2 2019 15:33:00 S	en 2 2019 15-54-00	Sen 2 2019 16:15:
	30p 2, 2013, 1 <del>1</del> .30.00	56 2, 2013, 14.31.00	5cp 2, 2013, 13.12.00		cp 2, 2013, 13.3 <del>1</del> .00	569 2, 2013, 10.15
						ОК

You can specify the start time and end time in the upper-left corner of the enlarged chart to view the average root disk usage of the host in the specified period.

#### Health Check

This section displays the number of checkers deployed for the host and the respective number of Critical, Warning, and Exception alerts.

Health Check	
Currently, 9 checkers are deployed on the service. 2 critical, 0 exception, and 0 warning alerts are reported.	

Click **View Details** to go to the Health Status page. On this page, you can view the health check details. For more information, see Host health.

#### Health Check History

This section displays a record of the health checks performed on the host.

Health Check History		View Details
Time	Event Content	
Recently		
		< 1 >

Click **View Details** to go to the Health Status page. On this page, you can view the health check details. For more information, see Host health.

You can click the event content of a check to view the exception items.

Details				×
Checker 🜲	익 Host 🛊	Q Status 🔷 Q	Status Updated At 🖕	
bcc_host_live_check			Jul 7, 2019, 18:35:30	

# 5.Management 5.1. Overview

The management module is the configuration and software management center of Apsara Big Data Manager (ABM). It is an important functional module that supports and customizes O&M items for services.

The management module supports the following features:

- Job execution and management: You can generate jobs based on the scheme library to perform O&M operations on services.
- Patch management: You can deploy upgrade patches for various services.
- Hot upgrade: You can perform hot upgrades on the monitoring configuration and monitoring items of ABM so that services are not interrupted during the upgrade process.
- Health management: You can create health checkers and apply them to service hosts.
- Operation audit: You can view the records of job execution and other service O&M operations in ABM.

# 5.2. Jobs

### 5.2.1. Overview

This topic describes the UIs for job management and terms related to jobs in Apsara Big Data Manager (ABM).

ABM allows you to run jobs to perform O&M operations on big data services. Jobs in ABM are run to perform O&M operations on physical devices in a cluster. The Jobs page contains the **Job Execution** page.

#### Terms

Terms related to jobs include:

- Ordinary job: A job that can only be manually run. No timer is set.
- Cron job: A job that is automatically run based on timer settings.

#### Job Execution page

⊙Job Execution				
Jobs (13) Cron Jobs (13) Exe	ecution History			
All Created by Me Releva	Int to Me Job Name	Start date -> End	d date	Advanced Search 🔻
Job Name	Тад	Created At	Modified At	Actions
collect_channel_task_host_usage	PRIVATE-V3.12	Sep 8, 2020, 10:37:40	Jun 28, 2022, 15:27:03	Run   History   More ∨
collect_channel_task_usage	PRIVATE-V3.12	Sep 8, 2020, 10:37:46	Jun 28, 2022, 15:27:03	Run History More ∨
collect_es_indices	PRIVATE-V3.12	Sep 8, 2020, 10:38:09	Jun 28, 2022, 15:27:03	Run History More ⊻
collect_productops_usage	PRIVATE-V3.12	Sep 8, 2020, 10:38:25	Jun 28, 2022, 15:27:03	Run History More ∨
collect_tkgone_usage	PRIVATE-V3.12	Sep 8, 2020, 10:38:40	Jun 28, 2022, 15:27:03	Run History More ⊻
collect_taskplatform_status	PRIVATE-V3.12	Sep 10, 2020, 02:09:06	Jun 28, 2022, 15:27:03	Run History More ∨
collect_taskplatform_statistics	PRIVATE-V3.12	Sep 10, 2020, 02:09:53	Jun 28, 2022, 15:27:03	Run   History   More ∨
file_upload_object_storage	PRIVATE-V3.12	Mar 16, 2021, 11:50:42	Jun 28, 2022, 15:27:03	Run History More ↔

The **Job Execution** page contains the following tabs:

• Jobs

You can view and run ordinary jobs, and view their execution history.

You can search for a specific ordinary job.

• Cron Jobs

You can enable, disable, view, or run cron jobs, and view their execution history.

You can search for a specific cron job.

• Execution History

You can view the execution history of ordinary and cron jobs.

You can specify multiple filter conditions to search for a specific job and view the execution history of the specific job.

### 5.2.2. Jobs

### 5.2.2.1. Enable or disable a cron job

When a cron job is generated from a scheme, the job is disabled by default. You must manually enable it. If you do not need the cron job to run during a specified time period, you can manually disable it.

#### Prerequisites

You must have an ABM administrator account.

#### Procedure

- 1. Log on to the ABM console.
- 2. Click **Management** in the upper-right corner. On the page that appears, click **Jobs** in the left-side navigation pane.
- 3. On the Job Execution page, click Cron Jobs.

#### User Guide Management

Open (1)       Open (1) <th< th=""><th>Job Execution</th><th></th><th></th><th></th><th></th><th></th></th<>	Job Execution					
Al         Created by Me         Relevant to Me         Job Name         Start date ~         End date         Manne destances           Lob Name         Ender a con segression         Top         Starts         Lat Schwide Status         Orested A         Modine A         Actional	Jobs (13) Cron J	Jobs (16) Execution History				
Job Name       Final concorportation       Final       Statuto       Lest Schaduld AL       Lest Schaduld AL       Control       Control       Action       Action         De cuisdiacuasciputation       Onder 1	All Created by Me					
bcc_disd_ukasgq_checker       0018+**?       model2_com       fee 24, 2022, 14150       Godes       Feb 22, 2022, 03600       Feb 23, 2022, 18050       Godes	Job Name					
Instanting,data_collect       0 0 0 * 7 * 1       Instanting, data_collect       0 n n 1, 2021, 180100       0 n n 1, 2021, 180100       0 n n 1, 2021, 180100       0 n n 1, 2022, 144600       0 n n 1, 2021, 180100       0 n n 1, 2022, 144600       0 n n 1, 2022, 144700       0 n n 1, 2022, 14470	bcc_disk_usage_checker	0 0/15 * * * ? monitor_cron	Active	Success		
dam_unit       0 0 ··· · · ·       Tecci       Feb 24, 2022, 1400 10       Tecritoria       Dec 17, 2021, 190.065 1       Jan 12, 2022, 1440.50       Ginable 1 // Hettery 1         bccclean_lisb_dir       0 0 3 ·· · · ·       Ginable 1 // Color · · · ·       Feb 23, 2022, 030.006       Fec 24, 2022, 1400.10       Dec 17, 2021, 190.065 1       Feb 24, 2022, 1442.90       Ginable 1 // Hettery 1         bcculpdide_db_blean       0 52 ·· · · ·       Feb 23, 2022, 020.001       Excertioria       Dec 17, 2021, 190.065 1       Jan 12, 2022, 1442.91       Ginable 1 // Hettery 1         bcculpdide_db_blean       0 53 00 · · · · ·       Feb 24, 2022, 122.500       Excertioria       Dec 17, 2021, 190.065 1       Jan 12, 2022, 1442.91       Ginable 1 // Hettery 1         bcculpdide_dbc_glean_productopa.       0 0 · · · · · ·       Feb 24, 2022, 122.500       Excertioria       Dec 17, 2021, 190.065 1       Jan 12, 2022, 144.91       Ginable 1 // Wet 1 // Hettery 1         bcculpdide_glecount_to       0 0 · · · · · ·       Feb 24, 2022, 122.500       Excertioria       Dec 17, 2021, 190.065 1       Jan 12, 2022, 144.91       Ginable 1 // Wet 1 // Hettery 1         bcculpdide_alcount_to       0 750 · · · · · · · · · · · · · · · · · · ·	timachine_data_collect	0 0 6 * * ? * PRIVATE-V3.12	Active	Failure		
bcc_dead_ldt_df       0.03 ****       Feb 23, 2022, 08.0008       Exception       Dec 17, 2021, 19.08.64       Feb 24, 2022, 14.22:38       Feb 24, 2022, 14.23:38       Feb 24, 2022, 14.23:38       Feb 24, 2022, 14.23:38       <	dam_init		Active	Running		
boc_update_bbc_ase         0.52 ***         Feb 23, 202, 02060         Feb 23, 202, 02060         Feb 23, 202, 02060         Feb 24, 202, 122500         Feb 24, 202, 2140011         Feb 24, 202, 2140011         F	bcc_clean_job_dir		Inactive	Exception		
Industry         Dot 0/6 ***         Dec 0/2 0/6 ***         Dec 0/6 ***         Dec 0/6 ****         Dec 0/6 **** <t< th=""><th>bcc_update_db_clean</th><th></th><th>Active</th><th>Success</th><th></th><th></th></t<>	bcc_update_db_clean		Active	Success		
bcc_update_productops         0 0***?*         Dec 17, 2021, 190840         Jan 12, 2022, 144.611         Disable   Vew   History   More v           bcc_update_productops         0 25 0/2**?*         Dec 17, 2021, 190840         Jan 12, 2022, 144.617         Disable   Vew   History   More v           bcc_update_miningLas         0 25 0/2**?*         Dec 17, 2021, 190840         Jan 12, 2022, 144.617         Disable   Vew   History   More v           bcc_update_miningLas         0 43 0**?*         Dec 17, 2021, 190840         Jan 12, 2022, 144.617         Disable   Vew   History   More v           bigdata_stock_collect         0 0 3 **?*         Dec 17, 2021, 190840         Jan 12, 2022, 144.617         Disable   Vew   History   More v           bigdata_stock_collect         0 0 3 **?*         Dec 17, 2021, 190845         Jan 12, 2022, 144.617         Disable   Vew   History   More v           construct         Feb 23, 2022, 03:0:10         Dec 17, 2021, 190845         Jan 12, 2022, 144.711         Disable   Vew   History   More v	update_bcc_application		Active	Exception		
bcc_update_minids_ba_         0.25 0/2 **?*         Jackse         Feb 24, 2022, 122506         Tackset         Dec 17, 2021, 190849         Jan 12, 2022, 1447:10         Disable   Wew   History   More >           bcc_update_account_to_         0*/30 ***?*         Jackset         Feb 24, 2022, 122606         Tackset         Dec 17, 2021, 190849         Jan 12, 2022, 1447:10         Disable   Wew   History   More >           bigdsta_stock_collect         0*/30 ***?*         Jackset         Feb 23, 2022, 03:00:10         Tackset         Dec 17, 2021, 190845         Jan 12, 2022, 1447:11         Disable   Wew   History   More >           bigdsta_stock_collect         0:0 3 **?*         Jackset         Feb 23, 2022, 03:00:10         Tackset         Dec 17, 2021, 190845         Jan 12, 2022, 1447:11         Disable   Wew   History   More >	bcc_update_productops		Active	Running		
boc_update_account_ta_         0 */30 *** ?*         Tester         Feb 24, 2022, 1400:11         Constant         Dec 17, 2021, 19:08:49         Jan 12, 2022, 14:46:47         Disable More V         View         History           bigdata_stock_collect         0 :3 ** ?*         Feb 23, 2022, 03:00:10         Feb 23, 2022, 03:00:10         Feb 23, 2022, 14:00:11         Feb 23, 2022, 14:00:11         Feb 23, 2022, 14:00:11         Feb 23, 2022, 14:00:11         Feb 24, 2022, 14:00:11         Feb 23, 2022, 14:00:11         Feb 24, 2022, 14:00:11         Feb 23, 2022, 14:0	bcc_update_minirds_ba		Active	Exception		
Digdsta_stock_collect         0 0 3 ** 7*         Jackee         Feb 23, 2022, 0 3 00:10         Scoresta         Dec 17, 2021, 19 08:45         Jan 12, 2022, 14:47:11         Disable   View   History   More v           Total 10 items < 1         2         >	bcc_update_account_to		Active	Exception		
Total 16 items < 1 2 >	bigdata_stock_collect		Active	Success		

- 4. On the Cron Jobs page, you can enable or disable a cron job.
  - To enable a cron job in the inactive status, click **Enable** in the Actions column of the cron job. After a cron job is enabled, its **status** changes to **Active**. The **Enable** button is replaced by **Disable**.
  - To disable a cron job in the active status, click **Disable** in the Actions column of the cron job.

After a cron job is disabled, its **status** changes to **Inactive**. The **Disable** button is replaced by **Enable**.

### 5.2.2.2. Manually run a job

After you have created an ordinary job, you must manually run the job in order to perform O&M operations on the product. You can also manually run a cron job.

#### Prerequisites

You must have an ABM administrator account.

#### Procedure

- 1. Log on to the ABM console.
- 2. Click **Management** in the upper-right corner. On the page that appears, click **Jobs** in the left-side navigation pane.
- 3. Click Ordinary Jobs on the Job Execution page.

If you need to manually run a cron job, click **Cron Jobs**. The procedure to manually run a cron job is the same as that of an ordinary job. This topic takes ordinary jobs as an example.

Ordinary Jobs	Cron Jobs	Execution History		٩
Job Name	Created At		Modified At	Actions
Pangu start balance	Jul 9, 2019, 18:28	20	Jul 9, 2019, 18:28:20	View Run History
OdpsService_stop	Jul 9, 2019, 15:49	.28	Jul 9, 2019, 15:49:28	
				Total 2 items < 1 >

- 4. In the Ordinary Jobs list, click Run in the Actions column of a job.
- 5. Confirm the job risks in the dialog box that appears, and click Confirm.



After you have confirmed, a record is automatically generated on the **Execution History** page. For more information, see View the execution history.

6. On the job execution page, click **Start** at the top to start the execution.

Back	Start Cancel	Parameter Configuration $\vee$	Download Execution Details	Refresh
	Basic Configuratio	n		
Job Name: Pangu start balance_1562667162	Executi	on Status: Pending		
Created At: Jul 9, 2019, 18:16:35	Modifie	ed At: Jul 9, 2019, 18:16:35		
	Steps			
	oreps			
Pangu start balance_1562667162 Pending				
Pending				
> 🕔 Soire Start Pangu Rebalance				

You can find the record about a job on the **Execution History** page, and click **View** to go to the detailed execution page.

### 5.2.2.3. View the execution history of a job

Apsara Big Data Manager (ABM) allows you to view the execution history of a specific job to learn the execution status of it.

#### Prerequisites

An ABM administrator account is obtained.

#### Context

After you confirm to run a job, ABM generates logs for the job execution. You can learn the execution status by using the log data.

The Execution History page provides the following features:

- Provides information such as the trigger mode, current status, start time, and end time of each job.
- Provides job execution details and parameter setting information, and allows you to download execution details.
- Allows you to perform certain operations depending on the job status. For example, you can run a job that is in the **Pending** state or retry the execution of a job that is in the **Exception** state.

This topic describes how to view the execution history of an ordinary job. You can follow a similar procedure to view the execution history of a cron job.

#### Procedure

- 1. Log on to the ABM console.
- 2. Click **Management** in the upper-right corner. On the page that appears, click **Jobs** in the left-side navigation pane.
- 3. Click the Ordinary Jobs tab on the Job Execution page.
- 4. On the **Ordinary Jobs** page, click **History** in the Actions column of an ordinary job. The **Execution History** page appears.

You can view the execution history of this job on the **Execution History** page. For more information, see View the execution history.

### 5.2.3. View the execution history

Apsara Big Data Manager (ABM) allows you to view the execution history of jobs and schemes so that you can learn about their execution details.

#### Prerequisites

An ABM administrator account is obtained.

#### Context

After you have confirmed the execution of a job, a record is automatically generated on the Execution History page.

The **Execution History** page provides the following features:

- Provides information such as the trigger mode, current status, start time, and end time of each job.
- Provides job execution details and parameter setting information, and allows you to download execution details.
- Allows you to perform certain operations depending on the job status. For example, you can run a job that is in the **Pending** state or retry the execution of a job that is in the **Exception** state.

#### Procedure

- 1. Log on to the ABM console.
- 2. Click **Management** in the upper-right corner. On the page that appears, click **Jobs** in the left-side navigation pane.
- 3. Click the **Execution History** tab on the **Job Execution** page.

Ordinary Jobs	Cron Jobs	Execution History				
Job Name	Jul 7, 2019, 18:33	:28 ~ Jul 9, 2019, 18:33:28 🛱	Execution Status	٩		
Job Name		Trigger Mode	Started At	Ended At	Status	Actions
odps_collect_realtim	ne_instance_quota	Auto	Jul 7, 2019, 18:40:00	Jul 7, 2019, 18:40:07	Failure	
odps_collect_project	t_meta	Auto	Jul 7, 2019, 18:40:00	Jul 7, 2019, 18:40:52	Success	
odps_collect_cluster	_quota_collect	Auto	Jul 7, 2019, 18:38:05	Jul 7, 2019, 18:38:16	Success	
odps_collect_realtim	ne_instance_quota	Auto	Jul 7, 2019, 18:38:00	Jul 7, 2019, 18:38:02	Failure	
odps_collect_cluster	_quota_collect	Auto	Jul 7, 2019, 18:36:05	Jul 7, 2019, 18:36:16	Success	
odps_collect_realtim	ne_instance_quota	Auto	Jul 7, 2019, 18:36:00	Jul 7, 2019, 18:36:01	Failure	
odps_collect_cluster	_quota_collect	Auto	Jul 7, 2019, 18:34:05	Jul 7, 2019, 18:34:16	Success	
odps_collect_realtim	ne_instance_quota	Auto	Jul 7, 2019, 18:34:00	Jul 7, 2019, 18:34:02	Failure	
			Total 3478 items	< 1 ··· 344 345	346 347 348	$>$ 10 / page $\vee$

- 4. If there are too many execution records, filter them by a combination of one or more of the following filter conditions: job name, creator, execution status, and time range. Then, click to search for required records.
- 5. Click **View** in the Actions column of a record to view the execution details.

The following table lists the operations that you can perform on records in different states.

Execution status	Feature	Operation
	View the parameter configuration	Click <b>Parameter Configuration</b> at the top, and select <b>Context Parameters</b> or <b>Global Parameters</b> to view the context parameters or global parameters of the task.
	Download execution details	Click <b>Download Execution Details</b> at the top to download the job execution details to the local device. Save it into a TXT file. The execution details record the JSON and raw data of job execution.
	View the execution details of steps	• On the <b>Servers</b> page of a step, click <b>View Details</b> in the Actions column of a certain server. The execution details of the step on the server, including the execution output, appear in the Execution Details section.
All statuses		<ul> <li>If the step includes a script, the Script Content and Execution Parameters pages will appear, where you can view the script content and the script execution parameters.</li> </ul>
		<ul> <li>If the step includes a command, the Commands and Execution Parameters pages will appear, where you can view the command content and the command execution parameters.</li> </ul>

Execution status	Feature	Operation
	Refresh the page	If the task is in progress, you can click <b>Refresh</b> at the top to view the latest execution status.
Donding	Start the execution	Click <b>Start</b> at the top to start the execution.
Pending	Cancel the execution	Click <b>Cancel</b> at the top to cancel the execution.
	Complete the manual operation	At the manual step to be operated, follow the instructions and click <b>OK</b> to go to the next step.
Unconfirmed	Roll back to the complete status of the previous step	At the manual step to be operated, click <b>Rollback</b> to roll back to the complete status of the previous step.
	Cancel the execution	Click <b>Cancel</b> to cancel the execution.
	Retry the step with exceptions	At the step with exceptions, click <b>Retry</b> to execute the step again.
	Skip the step with exceptions	At the step with exceptions, click <b>Skip</b> to skip this step and execute the subsequent steps.
	Roll back to the complete status of the previous step	At the step with exceptions, click <b>Rollback</b> to roll back to the complete status of the previous step.
	Reset the step with exceptions to the Pending state	At the step with exceptions, click <b>Reset</b> to reset the step to the <b>Pending</b> state. When the step with exceptions is reset to the Not Started state, the execution status becomes <b>Paused</b> . You can click <b>Continue</b> at the top to execute the step again.
Exception		

Execution status	Feature	Operation
	View the execution details	<ul> <li>On the Servers page of a step, click View Details in the Actions column of a certain server. The execution details of the step on the server, including the execution output and error message, appear in the Execution Details section.</li> <li>After you have viewed the details of the server with exceptions during the execution, you can click Skip to skip this server. Alternatively, you can click Retry to execute the step again on the server</li> </ul>
	of steps with exceptions	<ul> <li>If the step includes a script, the Script Content and Execution Parameters pages will appear, where you can view the script content and the script execution parameters.</li> </ul>
		<ul> <li>If the step includes a command, the Commands and Execution Parameters pages will appear, where you can view the command content and the command execution parameters.</li> </ul>
	Retry the failed step	At the failed step, click <b>Retry</b> to execute the step again.
	Skip the failed step	At the failed step, click <b>Skip</b> to skip this step and execute the subsequent steps.
	Roll back to the complete status of the previous step	At the failed step, click <b>Rollback</b> to roll back to the complete status of the previous step.
	Reset the failed step to the Pending state	At the failed step, click <b>Reset</b> to reset the step to the <b>Pending</b> state. When the failed step is reset to the Not Started state, the execution status becomes <b>Paused</b> . You can click <b>Continue</b> at the top to execute the step again.
Failure		

Execution status	Feature	Operation
	View the execution details of failed steps	• On the <b>Servers</b> page of a step, click <b>View Details</b> in the Actions column of a certain server. The execution details of the step on the server, including the execution output and error message, appear in the Execution Details section.
		After you have viewed the details of the server with exceptions during the execution, you can click <b>Skip</b> to skip this server. Alternatively, you can click <b>Retry</b> to execute the step again on the server.
		<ul> <li>If the step includes a script, the Script Content and Execution Parameters pages will appear, where you can view the script content and the script execution parameters.</li> </ul>
		<ul> <li>If the step includes a command, the Commands and Execution Parameters pages will appear, where you can view the command content and the command execution parameters.</li> </ul>
	Cancel the execution	Click <b>Cancel</b> at the top to cancel the execution.

# 5.3. Health management

Apsara Big Data Manager (ABM) provides a wide range of built-in scheduling items and monitoring items for each service. These items check service faults and send alerts when necessary, enabling you to detect and fix service faults in time.

#### Prerequisites

- Your ABM account is granted the required permissions to perform O&M operations on the corresponding service.
- The alert sources and checkers of the monitoring items are obtained.

#### Background

Different services have different scheduling and monitoring items, but their configuration and operations are the same. This topic uses MaxCompute as an example.

Scheduling: You can run checkers on all hosts of a specified Apsara Infrastructure Management Framework role as scheduled to generate raw alert data. The raw alert data includes the checker, host, alert severity, and alert information. ABM stores the raw alert data in its database.

Monitoring: You can mount checkers to service pages in ABM. When mounting a checker to a service page, you can set a filter policy to display only required alerts.

Both the scheduling items and monitoring items are built-in and cannot be added. However, you can modify some parameters of the items, such as whether to enable an item, running parameters, and description. In addition, you can configure mount points of the monitoring items or delete monitoring items.

#### View details and mount points of scheduling items

The mount points of scheduling items are built-in and cannot be added, modified, or deleted. The mount points of the scheduling items correspond to the list of all hosts corresponding to the Apsara Infrastructure Management Framework role that runs the scheduling script.

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner, and then click MaxCompute.
- Click Management in the upper-right corner of the MaxCompute page, and then click Health Management in the left-side navigation pane of the Management page. The Scheduling page appears.

The **Scheduling** page displays all scheduling items of the current service.

4. On the Scheduling page, click View in the Actions column of a scheduling item to view the details.

The details of a scheduling item include the name, alias, description, alert cause, and alert solution.

5. Click + to expand a scheduling item, and then view the mount points of the scheduling item.

#### Modify a scheduling item

You can set the scheduling interval and running parameters of a scheduling item, and set whether to enable the scheduling item.

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner, and then click MaxCompute.
- Click Management in the upper-right corner of the MaxCompute page, and then click Health Management in the left-side navigation pane of the Management page. The Scheduling page appears.
- 4. On the **Scheduling** page, click **Edit** in the Actions column of a scheduling item. In the dialog box that appears, set relevant parameters.

Type: The value System Default indicates that parameters such as Execution Interval and Parameters use the default settings. The value Custom indicates that the parameters can be customized.

**Note** Set the **Execution Interval** parameter based on the **crontab** command.

5. Click **OK**. The system prompts that the configuration has been modified.

#### View faulty hosts

You can view all the faulty hosts in the current cluster.

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner, and then click **MaxCompute**.
- Click Management in the upper-right corner of the MaxCompute page, and then click Health Management in the left-side navigation pane of the Management page. The Scheduling page appears.
- 4. Click Faulty Servers in the upper-right corner to view the faulty hosts in the cluster.

The faulty host list displays all faulty hosts in the current cluster and the Apsara Infrastructure Management Framework role of each host.

#### Modify a monitoring item

You can modify the name and description of a monitoring item and determine whether to enable it. The alert sources and checkers of monitoring items are built-in. Do not modify them.

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner, and then click MaxCompute.
- 3. Click **Management** in the upper-right corner of the MaxCompute page, and then click **Health Management** in the left-side navigation pane of the **Management** page.
- 4. On the Health Management page, click the Monitoring tab. The Monitoring page appears.

The Monitoring page displays all monitoring items of the current service.

- 5. On the **Monitoring** page, click **Modify** in the Actions column of a monitoring item to modify its configuration.
- 6. Click OK. The system prompts that the configuration has been modified.

#### Add a mount point for a monitoring item

After a mount point is added for a monitoring item, the monitoring item mounts the raw alert data to the O&M page of each service in the ABM console.

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner, and then click MaxCompute.
- 3. Click **Management** in the upper-right corner of the MaxCompute page, and then click **Health Management** in the left-side navigation pane of the **Management** page.
- 4. On the Health Management page, click the Monitoring tab. The Monitoring page appears.
- 5. On the **Monitoring** page, click + to expand a monitoring item, and then view the mount points of the monitoring item.
- 6. Click **Add Mount Point** under the mount point list. In the dialog box that appears, set relevant parameters.

Parameter	Description
Mount Point	The mount point to which the required inspection result of this monitoring item is to be mounted. For example, the value <b>odps/host</b> indicates that the result is mounted to the host O&M page of MaxCompute.
Filter Policy	<ul> <li>Valid values:</li> <li>None: Display all alerts generated by the monitoring item.</li> <li>Custom: Display the alerts generated by the monitoring item in accordance with the filter configured for the service tree node.</li> <li>Node Name: Display the alerts whose node name is the same as the name of the current node.</li> </ul>

The following table describes some key parameters.

Parameter	Description

Enabled	Specifies whether the mount point takes effect.
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7. Click OK. The system prompts that the configuration has been modified.

#### Delete a mount point for a monitoring item

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner, and then click MaxCompute.
- 3. Click **Management** in the upper-right corner of the MaxCompute page, and then click **Health Management** in the left-side navigation pane of the **Management** page.
- 4. On the Health Management page, click the Monitoring tab. The Monitoring page appears.
- 5. On the **Monitoring** page, click + to expand a monitoring item, and then view the mount points of the monitoring item.
- 6. Click **Delete** in the Mount Point column of the mount point to be deleted. In the dialog box that appears, click **OK**. The system prompts that the deletion is successful.

#### Delete a monitoring item

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner, and then click **MaxCompute**.
- 3. Click **Management** in the upper-right corner of the MaxCompute page, and then click **Health Management** in the left-side navigation pane of the **Management** page.
- 4. On the Health Management page, click the Monitoring tab. The Monitoring page appears.
- 5. Click **Delete** in the Actions column of the monitoring item to be deleted. In the dialog box that appears, click **OK**. The system prompts that the deletion is successful.

# 5.4. Operation auditing

This feature allows you to view the O&M operations of the current service of Apsara Big Data Manager (ABM). The details of each operation are provided for retrieval and fault locating.

#### Prerequisites

Your ABM account is granted the required permissions to perform O&M operations on the corresponding service.

#### Background

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You can view operation logs by service. For example, to view the operation logs of MaxCompute, you must go to the MaxCompute page first. The following describes how to view the operation logs of MaxCompute.

**?** Note This page displays only the O&M operations of a service. Note that the O&M operations of job services are not included.

#### Procedure

- 1. Log on to the ABM console.
- 2. Click in the upper-left corner, and then click **MaxCompute**.
- 3. Click **Management** in the upper-right corner of the MaxCompute page, and then click **Operation Audit** in the left-side navigation pane of the **Management** page.

The **Operation Audit** page displays the O&M operations of the current service. In this example, the information about MaxCompute O&M operations is displayed, including the operation name, operation ID, status, submission time, start time, end time, operator, and implementation method.

4. Click **Details** for an operation to view the O&M operation details.

You can also view the causes of failed steps in detail.

- 5. If an O&M operation fails, view the cause of the failure.
- 6. When the task is in the Failure, Not Started, Pending, or Exception state, perform the operations listed in the following table based on your situation.

State	Executable operation
Not Started	<ul> <li>Click Start to start the task.</li> <li>Click Parameter Configuration to view the parameter configuration of the task.</li> <li>Click Cancel to cancel the task.</li> </ul>
Pending	<ul> <li>Follow the instructions and click OK to go to the next step.</li> <li>Click Rollback to roll back to the complete status of the previous step.</li> <li>Click Parameter Configuration to view the parameter configuration of the task.</li> <li>Click Cancel to cancel the task.</li> </ul>
Exception	<ul> <li>Click Retry to run the step again.</li> <li>Click Skip to skip this step and execute the subsequent steps.</li> <li>Click Rollback to roll back to the complete status of the previous step.</li> <li>Click Parameter Configuration to view the parameter configuration of the task.</li> <li>Click Cancel to cancel the task.</li> </ul>

State	Executable operation
Failure	<ul> <li>Click Retry to run the step again.</li> <li>Click Skip to skip this step and execute the subsequent steps.</li> <li>Click Rollback to roll back to the complete status of the previous step.</li> <li>Click Parameter Configuration to view the parameter configuration of the task.</li> <li>Click Cancel to cancel the task.</li> </ul>

7. To download the O&M operation execution logs, click **Download Execution Details** at the top to save the logs to your local device.

# 6.Go to other consoles

Apsara Big Data Manager (ABM) provides links to the Apsara Uni-manager Operations Console (ASO), Apsara Infrastructure Management Framework console, and Apsara Stack Security Center console to facilitate the operations and maintenance (O&M) of big data services.

#### Prerequisites

An ABM account that works properly and its password are obtained.

#### Procedure

- 1. Log on to the ABM console.
- 2. On the homepage of ABM, click the in the upper-left corner. In the Site Navigation section, click ASO, TIANJI, or YUNDUN to go to the console that you want to access.

#### Result

After you click **ASO** or **TIANJI**, you can log on to the Apsara Uni-manager Operations Console or the Apsara Infrastructure Management Framework console without the need to enter your username and password.

After you click **YUNDUN**, you must enter the username and password to log on to the Apsara Stack Security Center console.