Application Performance Management 2.0

Getting Started

 Issue
 01

 Date
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Enabling APM 2.0

- 1. Register a Huawei Cloud account and complete real-name authentication.
- 2. Enable APM 2.0
 - a. Log in to the Huawei Cloud APM console.
 - b. Click on the left and choose **Application** > **Application Performance Management**.
 - c. Click **Try APM 2.0** in the upper right corner. The APM 2.0 page is displayed.

Figure 1-1 Experiencing APM 2.0

Ē	Overview Try APM 2.8				
APM	We would much appreciate it if you could complete or gustimmer on AM. Your feedback will help us provide a beter user experience. X				
Dashboard	So to Member Center to win code coles for gifts!				
(Eo Alarm Center · · · · · · · · · · · · · · · · · · ·	Application Performance Management (APM) monitors and manages the performance of cloud applications in real time. APM provides performance analysis of distributed applications, releting GAM personnel puickly locate and resolve tauts and performance bottlenecks Learn more Service agreement APM Expert Celler Consultation Ty Sty Proclamp Image: Service agreement APM Expert Celler Consultation				
G Inventory	The state of the s				
@ Tracing 🗸	Application Application Application Application Application Associated as the set of the set o				

- d. Click Experience APM for free.
- 3. Obtain the access key that is automatically created.

APM 2.0 uses AK/SK for signature verification. Only authorized accounts can report data.

- a. Log in to the APM 2.0 console.
- b. In the navigation pane, choose System Management > Access Keys.
- c. On the **Access Keys** page, view the access key that has been automatically created.

2 Monitoring Java Applications

2.1 Connecting Agents

Prerequisite

The network between your host and APM is normal.

You can run the **Telnet** command to check the network. For example, to check the network connectivity in the **CN-Hong Kong** region, log in to the host where the application is deployed and run the **telnet 100.125.6.106:41333** command. For details about the access addresses of other regions, see **Access Addresses**.

Procedure

- **Step 1** Log in to the management console.
- Step 2 Click on the left and choose Application > Application Performance Management.
- **Step 3** In the navigation pane, choose **Application Monitoring** > **Applications**.
- **Step 4** On the displayed page, click **Access Application**.

Figure 2-1 Connecting an application

APM	Applications ③			SP User Guide Access Application
Alarm Center 👻	CN North-Beijing4 O CN East-Shanghal1		AP-Singapore	
Application Monitoring				Free Edition
Applications	Application default (Default)		Enter a keyword.	Q C Free Edition
Metrics	Component Environment @	Agent Status	Operation	
Tracing Agent Management	apm2-mysql defaut	1 0 0 Enabled Offline Disabled	Topology Configure Delote	
Configuration Management	apm2-test default	0 1 0 Enabled Offline Disabled	Topology Configure Delete	
System Management 🔹 👻	app_new2 detault	2 0 0 Enabled Offline Disabled	Topotogy Configure Delete	
	4 app_rew1 default	2 0 0 Enabled Offline Disabled	Topology Configure Delete	
	10 💌 Total Records: 4 < 1 >			

Step 5 For Code Source, select Enhanced probe.

Step 6 Select a region and application.

Figure 2-2 Basic information

Basic Information			
* Region	Application		
AP-Singapore -	default	•	

Step 7 For Backend language, select Java.

Figure 2-3 Access mode

Select an access mode.			
 Backend language 			
ی Java			
* Code Source			
Enhanced probe Provides richer and more st			

Step 8 Select an access mode based on the application type, and access data by following the instructions.

Figure 2-4 Data access

Da	ta access	
e	Install JavaAgent	
	curl -k https://apm2-javaagent-ap-southeast-3 obs.ap-southeast-3 myhuaweicloud com/apm_agent_install z sh -o apm_agent_install sh && bash apm_agent_install sh -ak (APM_AK) -sk (APM_SK) -masteraddress https:// -obsaddress https://apm2-javaagent-ap-southeast-3 obs.ap-southeast-3 myhuaweicloud com - version latest; history -cw; history -r	٦
	Note: The user who runs the installation command must be the same as the user who starts the application.	
0	Restart Application	
	After the Agent is installed (about 1 minute), copy Java parameters to the startup command of your application and then restart it: Example is as follows: Startup command without Agent parameters:	
	java -jar test-2.0.0-SNAPSHOT.jar	٦
	Startup command with Agent parameters:	
	java -javaagent/root/my-dir/apm-javaagent/apm-javaagent.jar=appName=my-service.env=dev.envTag=beta.business=mydemo.subBusiness=app -jar test-2.0.0- SNAPSHOT.jar	٥
0	Parameter Command	
	-javaagent (pwd)/apm-javaagent/apm-javaagent jar=appName=(appName), env=(env], envTag=(envTag), business=(business), subBusiness=(subBusiness), instanceName= (instanceName)	٦
	Note: You can move the cursor to a variable to view the parameter description	

Table 2-1 Parameter description

Param eter	Description	Man dato ry
pwd	Path where the apm-javaagent.jar package is located.	Yes
appNa me	Component name, which must start with a character. A component can contain multiple environments. The names of components under an application must be unique. If there are duplicate names, use instanceName to distinguish them.	Yes

Param eter	Description	Man dato ry
env	Name of an environment where an application is deployed. A program can be deployed in different environments (such as the test or live network environment). Each environment is deployed in one region and has a unique region attribute. If this parameter is blank, the default environment will be used.	No
envTa Environment tag for filtering environments. Different environments may have the same tag. This parameter can be left blank.		No
busine ss	Name of an application that already exists (a global concept). If this parameter is left blank, the automatically created application will be used.	No
subBu siness	Name of a sub-application (a global concept), which is similar to a folder. If it is left blank, resources will be mounted to the root application. There can be up to three layers of sub- applications. For example, for a/b/c , a , b , and c respectively represents a layer.	No
instan ceNa me	Name of an instance, which is left blank by default. If an application has multiple instances deployed on a host, use this parameter to distinguish them. Generally, Java instances deployed on a host belong to different applications. An application rarely has identical instances.	No

----End

Dynamically Configuring master.address and AK/SK

APM supports dynamic configuration of the master.address and AK/SK.

You can set the APM_MASTER_ADDRESS, APM_ACCESS_KEY (apm-ak), and APM_SECRET_KEY (apm-sk) environment variables. For details about how to obtain the AK/SK, see Manually Installing Agents for Java Applications. For details about how to obtain the master.address, see Access Address (master.address).

NOTE

- If you set the AK/SK and master.address in both the JavaAgent configuration file and environment variables, your environment variable settings will take precedence.
- Agents later than 2.3.19 support dynamic configuration of master.address and AK/SK.

2.2 Manually Installing Agents for Java Applications

Prerequisites

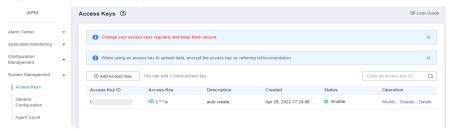
• The network between your host and APM is normal.

You can run the **Telnet** command to check the network.

For example, to check the network connectivity in the **CN-Hong Kong** region, log in to the host where the application is deployed and run the **telnet 100.125.6.106:41333** command. For details about the access addresses of other regions, see **Access Addresses**.

• The AK/SK required for accessing JavaAgents have been obtained. To obtain them, log in to the APM console and choose **System Management** > **Access Keys** in the navigation pane.

Figure 2-5 Obtaining an AK/SK



Procedure

Step 1 Download **apm-javaagent-x.x.x.zip** to any directory of your host. For the download address, see **JavaAgent Download Addresses**.

Example command:

curl -O https://xxx/apm-javaagent-x.x.x.tar

Step 2 Run the **tar** command to decompress the JavaAgent package.

Example command:

tar -xvf apm-javaagent-x.x.x.tar

Step 3 Modify the **apm.config** file in the JavaAgent package. Configure **master.address** by referring to **Access Address (master.address)**, and add the AK/SK to the configuration file, as shown in the following figure.

Figure 2-6 Adding the AK/SK

*apm.config -		-	×
master.address=https://	1333		^
access.key=ag7ł 83 secret.key=vRv			
log.level=debug event.thread.count=3 apm.proxy=http://iiiii31 #access.address= app.name=helloworld #instance.name= #env=((env)) #env.tag=			
#decrypt.className=com	:lemo.DecryptDemo		
#decrypt.methodName=decrypt			

Step 4 Modify the startup script of the Java process.

Add the path of the **apm-javaagent.jar** package and the component name of the Java process to the end of the Java command in the service startup script.

Example of adding **-javaagent** parameters:

java -javaagent:/xxx/apm-javaagent/apmjavaagent.jar=appName={appName}

If your enterprise has a large number of services, you can add more complex configurations. For example:

java -javaagent:/xxx/apm-javaagent/apmjavaagent.jar=appName=myApp,env=myEnv,envTag=myTag,business=myBusin ess,subBusiness=mySub

NOTE

- The preceding parameters are built-in CMDB information of APM. For details, see CMDB Management.
- Due to historical reasons, the metadata of APM startup parameters conflicts with some CMDB concepts. The following shows the details.

Generally, the startup parameter is set to **-javaagent:D:\javaagent-package\apm-javaagent\apm-**

javaagent.jar=appName=xxx,env=yyy,business=zzz,subBusiness=sss,envTag=xxx. appName indicates a component, business indicates an application, subBusiness indicates a sub-application, and envTag indicates an environment tag.

If **business** is not set on the web page, the system reports an error when the JavaAgent is started. If other parameters (**subBusiness**, **appName**, **env**, and **envTag**) are not set, the system automatically creates them when the JavaAgent is started.

Component names are unique under an application.

Step 5 Redeploy the application.

----End

2.3 Installing Agents for the Java Applications Deployed in CCE Containers

Prerequisites

• The network between your host and APM is normal.

You can run the **Telnet** command to check the network.

For example, to check the network connectivity in the **CN-Hong Kong** region, log in to the host where the application is deployed and run the **telnet 100.125.6.106:41333** command. For details about the access addresses of other regions, see **Access Addresses**.

- For details, see **Regions and Endpoints**.
- The AK/SK required for accessing JavaAgents have been obtained. To obtain them, log in to the APM console and choose System Management > Access Keys in the navigation pane.

Figure 2-7 Obtaining an AK/SK

APM		Acc	ess Keys ⑦						🕼 User Guide
Alarm Center Application Monitoring	•		Change your access i	keys regularly and keep them	secure.				×
Configuration Management	•		When using an acces	s key to upload data, encrypt	the access key by referring to	Documentation.			×
System Management	*		Add Access Key	You can add 1 more access k	ey.			Enter an access key I	0. Q
Access Keys			Access Key ID	Access Key	Description	Created	Status	Operation	
General Configuration			t i	⊙ L****a	auto create	Apr 29, 2022 17:24:09	Enable	Modify Disat	le Delete
Agent Count									

Usage Instruction

APM only supports Java applications deployed on CCE. **Table 2-2** describes the parameters.

Table 2-2 Parameters	for	configuring	performance	management

Name	Description
Probe	Select a target probe. Options: Disable , APM 1.0 , and APM 2.0 .
Probe Version	Version of the probe.
Probe Upgrade	Policy for the probe upgrade. The default value is Auto upgrade upon restart .
Policy	• Automatic upgrade upon restart: The system downloads the probe image each time the pod is restarted.
	• Manual upgrade : If a local image is available, it will be used. If no local image is available, the system downloads the probe image.
APM Environmen t	Enter an APM environment name. This parameter is optional.
АРМ Арр	Select an existing APM application.
Sub-app	Enter an APM sub-application. This parameter is optional.
Access Key	The system automatically obtains the APM key. For details, see Prerequisites .

- Step 1 Log in to the CCE console. In the navigation pane, choose Workloads > Deployments or StatefulSets, and click Create Deployment or Create StatefulSet.
- **Step 2** In the **APM Settings** area on the **Configure Advanced Settings** page, select **Java probe**. The APM service will be enabled and a probe will be installed on the node.

Currently, both APM 1.0 and APM 2.0 probes are supported. You are advised to select the APM 2.0 probe.

Probes provide traces, topologies, SQL analysis, and stack tracing for Java workloads. A small number of resources will be consumed when you run probes.

- Step 3 Set probe-related parameters.
 - **Monitoring Group**: Enter a monitoring group name, for example, **testapp**. Select a group from the drop-down list if there are any.
 - **Probe Version**: Select a probe version.
 - Probe Upgrade Policy: By default, Automatic upgrade upon restart is selected.
 - **Automatic upgrade upon restart**: The system downloads the probe image each time the pod is restarted.
 - **Manual upgrade**: If a local image is available, it will be used. If no local image is available, the system downloads the probe image.
- **Step 4** After the application is started, wait for about 3 minutes. Then, the application data is displayed on the APM console. You can log in to the APM console and optimize the application performance through topology and tracing.

----End

For how to install Agents for Java applications deployed on the new CCE console, see **CCE User Guide**.

2.4 Installing Agents on Applications Deployed Using CodeArts Deploy

Prerequisite

The network between your host and APM is normal.

You can run the **Telnet** command to check the network. For example, to check the network connectivity in the **CN-Hong Kong** region, log in to the host where the application is deployed and run the **telnet 100.125.6.106:41333** command. For details about the access addresses of other regions, see **Access Addresses**.

Procedure

Step 1 Log in to the management console.

- Step 2 Click on the left and choose Application > Application Performance Management.
- **Step 3** In the navigation pane, choose **Application Monitoring** > **Applications**.
- **Step 4** On the displayed page, click **Access Application**.

APM	Applications ③			Diser Guide Access Application
Alarm Center 🔹 🔹	CN North-Beijing4 OCN East-Shanghai1 OCN South-	Guangzhou OCN Southwest-Gulyang1 OAP-Singapore		
Applications	Application:default (Default)		Enter a keyword. Q. C.	Free Edition
Metrics	Component Environment @	Agent Status	Operation	Entriping Contri
Tracing Agent Management	apm2-mysol default	1 0 0 Enabled Offline Disabled	Topology Configure Delete	
Configuration Nanagement	apm2-beat default	0 1 0 Enabled Offine Disabled	Topology Configure Delete	
System Management •	app_new2 default	2 0 0 Enabled Offline Disabled	Topology Configure Debite	
	app_new1 default	2 0 0 Enabled Offline Disabled	Topology Configure Delote	
	10 💌 Total Records: 4 < 🚺 >			

Figure 2-8 Connecting an application

Step 5 For Code Source, select Enhanced probe.

Step 6 Select a region and application.

Figure 2-9 Basic information

	Basic Information				
•	Region		Application		
	AP-Singapore ·	·	default	•	

Step 7 For Backend language, select Java.

Figure 2-10 Access mode

Step 8 Select an access mode based on the application type, and access data by following the instructions.

Figure 2-11 Data access

Da	ata access	
e	Install JavaAgent	
	curl -k https://apm2-javaagent-ap-southeast-3 obs ap-southeast-3 myhuaweicloud com/apm_agent_install 2 sh -o apm_agent_install sh && bash apm_agent_install sh -ak (APM_AK) -sk (APM_SK) -masteraddress https:// -obsaddress https://apm2-javaagent-ap-southeast-3 obs ap-southeast-3 myhuaweicloud com - version latest; history -cw; history -c	٦
	Note: The user who runs the installation command must be the same as the user who starts the application.	
ø	Restart Application	
	After the Agent is installed (about 1 minute), copy Java parameters to the startup command of your application and then restart it. Example is as follows: Startup command without Agent parameters:	
	java -jar test-2.0.0-SNAPSHOT jar	٦
	Startup command with Agent parameters:	
	java -javaagent/root/my-dir/apm-javaagent/apm-javaagent.jar=appName=my-service,env=dev.envTag=beta,business=mydemo.subBusiness=app -jar test-2.0.0- SNAPSHOT.jar	đ
0	Parameter Command	
	-javaagent/pwd/apm-javaagent/apm-javaagent/ar=appName=(appName),env=(env],envTag=(envTag),business=(business),subBusiness=(subBusiness),instanceName= (instanceName)	٦
	Note: You can move the cursor to a variable to view the parameter description.	

Param eter	Description	Man dato ry
pwd	Path where the apm-javaagent.jar package is located.	Yes
appNa me	Component name, which must start with a character. A component can contain multiple environments. The names of components under an application must be unique. If there are duplicate names, use instanceName to distinguish them.	Yes
env	Name of an environment where an application is deployed. A program can be deployed in different environments (such as the test or live network environment). Each environment is deployed in one region and has a unique region attribute. If this parameter is blank, the default environment will be used.	No
envTa g	Environment tag for filtering environments. Different environments may have the same tag. This parameter can be left blank.	No
busine Name of an application that already exists (a global concerss this parameter is left blank, the automatically created application will be used.		No
subBu siness	Name of a sub-application (a global concept), which is similar to a folder. If it is left blank, resources will be mounted to the root application. There can be up to three layers of sub- applications. For example, for a/b/c , a , b , and c respectively represents a layer.	No
instan ceNa me	Name of an instance, which is left blank by default. If an application has multiple instances deployed on a host, use this parameter to distinguish them. Generally, Java instances deployed on a host belong to different applications. An application rarely has identical instances.	No

- **Step 9** Access the CodeArts Deploy deployment task, edit the deployment action, add the step of running the **shell** command, and then add the **copied command**.
- **Step 10** Modify the deployment procedure, copy the startup parameter, and add the parameter to the Java command of the service startup script.
- **Step 11** Redeploy the application.

----End

2.5 Installing Agents on Docker Applications

Prerequisite

The network between your host and APM is normal.

You can run the **Telnet** command to check the network. For example, to check the network connectivity in the **CN-Hong Kong** region, log in to the host where the application is deployed and run the **telnet 100.125.6.106:41333** command. For details about the access addresses of other regions, see **Access Addresses**.

Procedure

- **Step 1** Log in to the management console.
- Step 2 Click on the left and choose Application > Application Performance Management.
- **Step 3** In the navigation pane, choose **Application Monitoring** > **Applications**.
- **Step 4** On the displayed page, click **Access Application**.

Figure 2-12 Connecting an application

APM	Applications ③			D User Guide Access Application
Alarm Center 👻	OCN North-Beijing4 OCN East-Shanghai1 O	CN South-Guangzhou OCN Southwest-Gulyang1 OAP-Singapore		
Application Monitoring	Application default (Default)		Enter a keyword. Q	Free Edition
Applications	Component Environment @	Agent Status	Operation	Enterprise Edition
Tracing	apm2-mytol	1 0 0	Toppicer Carfigure Delete	
Agent Management	delault	Enabled Offline Disabled	Topology Compute Dente	
Configuration v	apm2-test default	0 1 0 Enabled Offine Disabled	Topology Configure Delete	
System Management 🔹 🔻	app_new2 detault	2 0 0 Enabled Offline Disabled	Topotogy Configure Dehite	
	4 app_new1 default	2 0 0 Enabled Offline Disabled	Topology Configure Delete	
	10 • Total Records: 4 < 1 >			

- Step 5 For Code Source, select Enhanced probe.
- **Step 6** Select a region and application.

Figure 2-13 Basic information

Basic Information	
* Region	Application
AP-Singapore -	default 👻

Step 7 For Backend language, select Java.

Figure 2-14 Access mode

Select an access mode.	
* Backend language	
Java	
* Code Source	
Enhanced probe Provides richer and more st	Nuawei

Step 8 Select an access mode based on the application type and access data by following the instructions.

Figure 2-15 Data access

D	ata access	
e	install JavaAgent	
	curl -k https://apm2-javaagent-ap-southeast-3.obs.ap-southeast-3.myhuaweicloud.com/apm_agent_install 2.sh -o apm_agent_install 5h && bash apm_agent_install 5h -ak (APM_AKG -sk (APM_SKG -masteraddress https:// -obsaddress https://apm2-javaagent-ap-southeast-3.obs.ap-southeast-3.myhuaweicloud.com - version latest; history -cv; history -c	٦
	Note: The user who runs the installation command must be the same as the user who starts the application.	
0	Restart Application	
	After the Agent is installed (about 1 minute), copy Java parameters to the startup command of your application and then restart it: Example is as follows: Startup command without Agent parameters:	
	java -jar test-2.0.0-SNAPSHOT jar	٥
	Startup command with Agent parameters:	
	java -javaagent./root/my-dir/apm-javaagent/apm-javaagent.jar=appName=my-service,env=dev.envTag=beta.business=mydemo.subBusiness=app -jar test-2.0.0- SNAPSHOT.jar	٦
0	Parameter Command	
	-javaagent:[pwd]/apm-javaagent/apm-javaagent.jar=appName=(appName),env=(env],envTag=(envTag),business=(business),subBusiness=(subBusiness),instanceName= (instanceName)	٥
	Note: You can move the cursor to a variable to view the parameter description.	

Table 2-4 Parameters

Param eter	Description	Man dato ry
pwd	Path where the apm-javaagent.jar package is located.	Yes
appNa me	Component name, which must start with a character. A component can contain multiple environments. The names of components under an application must be unique. If there are duplicate names, use instanceName to distinguish them.	Yes

Param eter	Description	
env	Name of an environment where an application is deployed. A program can be deployed in different environments (such as the test or live network environment). Each environment is deployed in one region and has a unique region attribute. If this parameter is blank, the default environment will be used.	
envTa g	Environment tag for filtering environments. Different environments may have the same tag. This parameter can be left blank.	
busine ss	Name of an application that already exists (a global concept). If this parameter is left blank, the automatically created application will be used.	
subBu siness		
instan ceNa me	Name of an instance, which is left blank by default. If an application has multiple instances deployed on a host, use this parameter to distinguish them. Generally, Java instances deployed on a host belong to different applications. An application rarely has identical instances.	No

Step 9 Add the copied command to the Dockerfile file and add the JAVA_TOOL_OPTIONS environment variable.

RUN curl -k https://javaagent.obs.xx-xxx-x.ulanqab.huawei.com/apm_agent_install2.sh -o apm_agent_install.sh && bash apm_agent_install.sh -ak {AK}-sk {SK} -masteraddress https://xxx.xx.xx.xx.xxx--obsaddress https://javaagent.obs.xx-xxx-x.ulanqab.huawei.com -version latest

ENV JAVA_TOOL_OPTIONS=-javaagent:\${PROJECT_DIR}/apm-javaagent/apm-javaagent.jar=appName=\$ {APP_NAME}

Step 10 Rebuild an image. The following is an example of the Dockerfile file.

FROM openjdk RUN mkdir /opt/cloud ENV PROJECT_DIR=/opt/cloud ENV APP_NAME=hello WORKDIR \$PROJECT_DIR ADD \${APP_NAME}.jar \${APP_NAME}.jar RUN curl -k https://javaagent.obs.xx-xxx-x.ulanqab.huawei.com/apm_agent_install2.sh -o apm_agent_install.sh && bash apm_agent_install.sh -ak {AK}-sk {SK} -masteraddress https://xxx.xx.xx.xxxxx -obsaddress https://javaagent.obs.xx-xxx-x.ulanqab.huawei.com -version latest ENV JAVA_TOOL_OPTIONS=-javaagent:\${PROJECT_DIR}/apm-javaagent/apm-javaagent.jar=appName=\$ {APP_NAME} CMD ["bash","-c","java -jar \${APP_NAME}.jar"]

Step 11 Redeploy the application.

----End

3 Getting Started with Common Practices

After learning about how to use APM to monitor applications, implement common practices as required.

This section describes common practices of APM, helping you better use it.

Table	3-1	Common	practices
-------	-----	--------	-----------

Practice	Description	
Locating the Causes of Request Errors	 Routine inspection of application metrics such as latency, throughput, and number of errors Quick locating of error calls 	

4 Change History

Table 4-1 Change history

Released On	Description	
2023-07-20	This issue is the first official release.	

A JavaAgent Download Addresses

Region	Latest Version	Earlier Ver	sion			
CN-Hong Kong	2.4.5 sha256:3 7b15562 6f46f3a8 b19772e 3fd6597 ece92bb 255fdffa 21e3e9e 1467cc0 09392	2.4.4 sha256:f6 0b55d646 fe592c42 7143f1c8 d8e8f277 a647a3dd 73dcdca4 3d7d3765 5ec573	2.4.3 sha256:7 3de7b49 e148b10 2b74a60 75c3d8b2 5e76f43d 6144ec5a afe6ac19 0ab3c1ef 0b	-	-	-
AP- Singapor e	2.4.5 sha256:3 7b15562 6f46f3a8 b19772e 3fd6597 ece92bb 255fdffa 21e3e9e 1467cc0 09392	2.4.4 sha256:f6 0b55d646 fe592c42 7143f1c8 d8e8f277 a647a3dd 73dcdca4 3d7d3765 5ec573	2.4.3 sha256:7 3de7b49 e148b10 2b74a60 75c3d8b2 5e76f43d 6144ec5a afe6ac19 0ab3c1ef 0b	2.4.1 sha256:c 31cd55ea d0b2172 eb694fe4 02242b0 9caeb67d 7059aaf4 0602586 33d9ade 9f8	2.3.19 sha256:8 755abcd5 41797ebf 900f8f17 67d6267 8b3cd57a 6d8e045 dcfb2f8c 24885bfc e	2.3.17 sha256:8 893e89cd 3174879 2327048 28027fd6 3647152 5d6e577 2ff77e33 13f79a4b 6b5

Region	Latest Version	Earlier Ver	sion	-	-	
LA-Sao Paulo1	2.4.3 sha256:7 3de7b49 e148b10 2b74a60 75c3d8b 25e76f4 3d6144e c5aafe6a c190ab3 c1ef0b	-	-	-	-	-

B Access Address (master.address)

Region	Access Address (master.address)
LA-Sao Paulo1	https://100.125.11.27:41333
CN-Hong Kong	https://100.125.6.106:41333
AP-Singapore	https://100.125.4.25:41333