Commander Cluster Deploy Guide

2013/10/16

1. Runtime Environment

Software	Version	Commander	Live	Description
CentOS	6.3+	Yes	Yes	Operation System
JDK/JRE	1.7	Yes	Yes	Java Runtime Environment
Tomcat	7.x	Yes	No	Web Server
MySQL	5.5+	Yes	No	Database Software

1.1. Install CentOS

(1) Partitions

Name	Mount	Size	Description
Boot	/boot	200M	Boot data
Swap		8G	Swap partition
System	/	>20G	OS, user data, software, deploy data
Data	/data	>200G	Database files, logs etc

(2) Network settings.

For technology solution, please ensure the network interfaces are named *eth0*, *eth1*, *eth2*, *eth3*.

(a) "*/etc/udev/rules.d/70-persistent-net.rules*"

```
SUBSYSTEM=="net", ACTION=="add", DRIVERS=="?*", ATTR{address}=="00:0c:29:6c:97:ed", ATTR{type}=="1", KERNEL=="eth*", NAME="eth0"
```

(b) "*/etc/sysconfig/network-scripts/*" should exist the following 4 files:

"*ifcfg-eth0*" "*ifcfg-eth1*" "*ifcfg-eth2*" "*ifcfg-eth3*"

Each configuration file must contain the key below.

```
DEVICE=eth0
```

(3) Firewall settings.

The *eth1* is used to cluster management, please open all access for *eth1* on firewall.

(4) NTP service

The NTP service is used to synchronize date and time over the network.

1.2. Install JDK/JRE

(1) Setup environment.

Add the following settings to file "*/etc/profile*".

```
JAVA_HOME=/usr/share/jdk1.7 (change to your install path)
PATH=$JAVA_HOME/bin:$PATH
CLASSPATH=.:$JAVA_HOME/lib/dt.jar:$JAVA_HOME/lib/tools.jar
export JAVA_HOME
export PATH
export CLASSPATH
```

(2) Verify setting.

Please restart the system, then following the script below. If the java version is same as which you just installed, indicate the JDK/JRE was installed successfully.

```
[root@Commander~]# java -version
java version "1.7.0_25"
Java(TM) SE Runtime Environment (build 1.7.0_25-b15)
Java HotSpot(TM) 64-Bit Server VM (build 23.25-b01, mixed mode)
```

1.3. Install Tomcat

(1) Change port.

To change the listen port for web server, please find "*${TOMCAT_HOME}/conf/server.xml*", and find the line below. The default port is *8080*, you can change to *80* (default web port).

```
<Connector port="8080" protocol="HTTP/1.1"
                connectionTimeout="20000"
                redirectPort="8443" />
```

(2) Verify tomcat.

Please run "*${TOMCAT_HOME}/bin/startup.sh*", then input http://locallost:*8080*/ in web browser to browse, if the tomcat home page is displayed, it is OK.

NOTE: *If you changed the listen port, please change the default port 8080 to your setting.*

(3) Start tomcat.

Please run "*${TOMCAT_HOME}/bin/startup.sh*" to start tomcat.

(4) Shutdown tomcat.

Please run "*${TOMCAT_HOME}/bin/shutdown.sh*" to shutdown tomcat.

1.4. Install MySQL

NOTE: *Please ensure the database data files locate on data partition.*

2. Deploy Commander

2.1. Setup Web Application

(1) Unzip "*commander.war*" to deploy path.

(2) Create "*ROOT.xml*" on directory "*${TOMCAT_HOME}/conf/Catalina/localhost/*".

```
<?xml version="1.0" encoding="utf-8"?>
<Context crossContext="true" docBase="change to deploy path" path="" reloadable="true">
</Context>
```

2.2. Create Database

(1) Execute SQL script to create database and tables for commander.

NOTE: *Please ensure the database data files locate on data partition.*

```
mysql> source ${parent path}/commander.sql
```

(2) Update "*${DEPLOY_PATH}/WEB-INFO/classes/config/database.properties*" according to the database information.

```
jdbc.url=jdbc:mysql://localhost/commanderdb?useUnicode=yes&characterEncoding=UTF-8
jdbc.driverClass=com.mysql.jdbc.Driver
jdbc.username=root
jdbc.password=root
```

2.3. Configure Logging

Update settings in "*${DEPLOY_PATH}/WEB-INF/classes/config/log4j.properties*" for output web application logs.

NOTE: *Please ensure the output logs locate on data partition.*

```
log4j.rootLogger=ERROR, logfile

log4j.appender.logfile=org.apache.log4j.RollingFileAppender
log4j.appender.logfile.File=/data/logs/log4j.log
log4j.appender.logfile.MaxFileSize=4096KB
log4j.appender.logfile.MaxBackupIndex=5
log4j.appender.logfile.layout=org.apache.log4j.PatternLayout
log4j.appender.logfile.layout.ConversionPattern=%d %p [%c] - %m%n
```

2.4. Initialize commander

(1) Run "*${TOMCAT_HOME}/bin/startup.sh*" to start tomcat.

(2) Open *http://serverip:port/* on browse, if the system is not initialized, the system initialize page will be displayed. Please input the information below, and save it.

```
Cluster Type: LIVE
Cluster IP: 239.8.8.1
Cluster Port: 8901
Cluster Binding Address: eth1
Heart Beat Interval: 100
Heat Beat Timeout: 2000
```

2.5. Install Media Analyze Tools

To support create task on commander, the media analyze tools is required.

2.6. Start Live on OS Startup

Please add the following script to */etc/rc.local*.

```
exec /usr/local/tomcat/bin/startup.sh &
```

NOTE: If the default java is not 1.7, please also add JAVA_HOME before this script (see 1.2).

3. Deploy Live Agent

The ArcVideo is required, so please ensure the ArcVideo is setup before setup live agent. The default arcvideo install path is /usr/local/arcsoft/arcvideo/.

3.1. Setup Live Application

Unzip "*agent.zip*" to deploy path (the default path is: "*/usr/local/arcsoft/arcvideo/agent*"), the

deploy structure is like below.

Path	File	Description
bin	*startup.sh*	Script for start agent.
	shutdown.sh	Script for stop agent.
	main.sh	Script for each command.
conf	*agent.properties*	Agent configuration file.
	log4j.properties	Logging configuration file.
lib	**.jar*	Store all jar packages.
data		Store all persistent data.
logs		Store logging files.

3.2. Configure cluster settings

Update "*${AGENT_PATH}/conf/agent.properties*" to setup live settings.

NOTE: *the cluster ip and port must same as the settings in commander.*

```
cluster.ip=239.8.8.1
cluster.port=8901
cluster.bind=eth1
server.port=5000
command.port=5001
backup.bound.persistent.file=../data/boundinfo.properties
backup.heartbeat.interval=100
backup.heartbeat.timeout=1000
network.settings.file=../data/networks.properties
storage.persistence.path=../data/storages.xml
storage.mount.dir=/mnt/data/remote
```

3.3. Configure Logging

Update "*${AGENT_PATH}/conf/log4j.properties*" for output live logs.

NOTE: *Please ensure the output logs locate on data partition.*

```
log4j.rootLogger=ERROR, logfile

log4j.appender.logfile=org.apache.log4j.RollingFileAppender
log4j.appender.logfile.File=/data/logs/log4j.log
log4j.appender.logfile.MaxFileSize=4096KB
log4j.appender.logfile.MaxBackupIndex=5
log4j.appender.logfile.layout=org.apache.log4j.PatternLayout
log4j.appender.logfile.layout.ConversionPattern=%d %p [%c] - %m%n
```

3.4. Start Live

Please run "*${AGENT_PATH}/bin/startup.sh*" to start live.

3.5. Stop Live

Please run "*${AGENT_PATH}/bin/shutdown.sh*" to stop live.

3.6. Start Live on OS Startup

Please add the following script to */etc/rc.local*.

```
exec ${AGENT_PATH}/bin/startup.sh &
```

NOTE: If the default java is not 1.7, please also add JAVA_HOME before this script (see 1.2).