Setup of cmsuptracker007

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Contents

1 General

This tutorial is for setting up the cmsuptracker007 machine in slc6, with xdaq 11

2 Basics

```
sudo yum install nano

sudo yum install wget

sudo yum install subversion-svn2cl.noarch

sudo yum install git
```

3 uhal

```
wget https://svnweb.cern.ch/trac/cactus/export/34680/tags/ipbus_sw/uhal_2_4_0/scripts/
    release/cactus.slc6.x86_64.repo
sudo cp cactus.slc6.x86_64.repo /etc/yum.repos.d/cactus.repo
sudo yum clean all
sudo yum groupinstall uhal
export LD_LIBRARY_PATH=/opt/cactus/lib:$LD_LIBRARY_PATH
export PATH=/opt/cactus/bin:$PATH
```

4   gcc

```
svn co svn://gcc.gnu.org/svn/gcc/tags/gcc_4_8_2_release gcc
```

5   xDAQ

This section explains how to install xDAQ 11 on a SL6 machine (using yum).

1. Create repo file /etc/yum.repos.d/xdaq.repo

```
[xdaq]
name=XDAQ Software Base
baseurl=http://xdaq.web.cern.ch/xdaq/repo/11/slc6x/x86_64/base/RPMS/
enabled=1
[xdaq-sources]
name=XDAQ Software Base Sources
baseurl=http://xdaq.web.cern.ch/xdaq/repo/11/slc6x/x86_64/base/SRPMS/
enabled=1
[xdaq-updates]
name=XDAQ Software Updates
baseurl=http://xdaq.web.cern.ch/xdaq/repo/11/slc6x/x86_64/updates/RPMS/
enabled=1
[xdaq-updates-sources]
name=XDAQ Software Updates Sources
baseurl=http://xdaq.web.cern.ch/xdaq/repo/11/slc6x/x86_64/updates/SRPMS/
enabled=1
[xdaq-extras]
name=XDAQ Software Extras
baseurl=http://xdaq.web.cern.ch/xdaq/repo/11/slc6x/x86_64/extras/RPMS/
enabled=1
[xdaq-test]
name=XDAQ Software Test
baseurl=http://xdaq.web.cern.ch/xdaq/repo/11/slc6x/x86_64/test/RPMS/
enabled=0
[xdaq-test-sources]
name=XDAQ Software Test Sources
baseurl=http://xdaq.web.cern.ch/xdaq/repo/11/slc6x/x86_64/test/SRPMS/
enabled=0
```

2. Install xDAQ

```
# List of packages to install.
sudo yum groupinstall  extern_coretools --nogpgcheck
sudo yum groupinstall  coretools --nogpgcheck
sudo yum groupinstall  extern_powerpack --nogpgcheck
sudo yum groupinstall  powerpack --nogpgcheck
```

3. Setup environment : see next chapter

6   RCMS dependencies and environment

This chapter describes how to set up the environment and install all RCMS dependencies.

1. Create and source this file :

```
1  #XDAQ :
2  export XDAQ_ROOT=/opt/xdaq
3  export XDAQ_DOCUMENT_ROOT=/opt/xdaq/htdocs
4  export LD_LIBRARY_PATH=/opt/xdaq/lib:$LD_LIBRARY_PATH
5
6
7  alias xdaq=${XDAQ_ROOT}/bin/xdaq.exe
8
9
10 #JAVA
11 export JAVA_HOME=/usr/java/jdk1.8.0_45
12 export PATH=${JAVA_HOME}/bin:$PATH
13
14 #TOMCAT
15 export CATALINA_HOME=/usr/local/apache-tomcat-8.0.22
16
17 alias  StartMySql="/usr/local/mysql/bin/mysqld_safe --user=mysql &"
18 alias  StartTomcat="$CATALINA_HOME/bin/startup.sh"
19 alias  StopTomcat="$CATALINA_HOME/bin/shutdown.sh"
20
21
22 #RCMS
23 export RCMS_HOME=/opt/TriDAS/RunControl
```

2. Download and install java jdk 1.8.0

```
1  get jdk-8u45-linux-x64.rpm from http://www.oracle.com/technetwork/java/javase/
       downloads/jdk8-downloads-2133151.html
2  rpm -i jdk-8u45-linux-x64.rpm
3  mkdir /usr/lib/java-1.8.0
4  mkdir /usr/share/java-1.8.0
```

3. Download and install Tomcat

```
1  download apache-tomcat-8.0.22.tar.gz from http://archive.apache.org/dist/tomcat/
       tomcat-8/
2  tar -xzvf apache-tomcat-8.0.22.tar.gz
3  mv apache-tomcat-8.0.22 /usr/local/
```

4. Install Ant

```
1  yum install ant-nodeps (should be apache-ant-1.7.1)
```

5. Install mysql 5.0.96 community.

```
1
2  wget http://downloads.mysql.com/archives/get/file/mysql-5.0.96-linux-x86_64-
       glibc23.tar.gz
3  tar -xzvf mysql-5.0.96-linux-x86_64-glibc23.tar.gz
4  mv mysql-5.0.96-linux-x86_64-glibc23 /usr/local/mysql
5  cd /usr/local/mysql
6  groupadd mysql
7  useradd -r -g mysql mysql
8  chown -R mysql .
```

```
9  chgrp -R mysql .
10 scripts/mysql_install_db --user=mysql
11 chown -R root .
12 chown -R mysql data
13 cp support-files/my-medium.cnf /etc/my.cnf
14 #Start mysql :
15 bin/mysqld_safe --user=mysql &
16 #Set password
17 ./bin/mysqladmin -u root password 'xxxxx'
18 cp support-files/mysql.server /etc/init.d/mysql.server
```

Login to mysql with:

```
1 mysql -u root -p
```

create these four accounts:

```
1 CREATE USER 'root'@'localhost' IDENTIFIED BY 'xxxxx';
2 CREATE USER 'root'@'cmsuptracker007.cern.ch' IDENTIFIED BY 'xxxxxx';
3 CREATE USER 'xtaldaq'@'localhost' IDENTIFIED BY 'xxxxx';
4 CREATE USER 'xtaldaq'@'cmsuptracker007.cern.ch' IDENTIFIED BY 'xxxxx';
```

and grant all privileges with:

```
1 GRANT ALL PRIVILEGES ON *.* TO 'root'@'localhost' WITH GRANT OPTION;
2 GRANT ALL PRIVILEGES ON *.* TO 'root'@'cmsuptracker007.cern.ch' WITH GRANT OPTION
     ;
3 GRANT ALL PRIVILEGES ON *.* TO 'xtaldaq'@'localhost' WITH GRANT OPTION;
4 GRANT ALL PRIVILEGES ON *.* TO 'xtaldaq'@'cmsuptracker007.cern.ch' WITH GRANT
     OPTION;
```

See users and hostnames with:

```
1 select host, user, password from mysql.user;
```

remove any additional users with

```
1 DROP USER 'user'@'host';
```

If necessary, passwords can be changed with:

```
1 SET PASSWORD FOR 'user'@'host' = PASSWORD('xxxxxx');
```

7 RCMS configuration and installation

Install and configure RCMS 4.2.2

1. Download and unpack RCMS

```
1 cd /opt/
2 wget http://cmsdoc.cern.ch/cms/TRIDAS/RCMS/Downloads/data/rcms4/releases/
      RCMS_4_2_2/RCMS_4_2_2.tar.gz
3 tar -xzvf RCMS_4_2_2.tar.gz
4 rm -f RCMS_4_2_2.tar.gz
```

2. Launch installation script.

```
1 cd /opt/TriDAS/RunControl/framework/installation
2 source ~/rcms.env
3 perl installRCMS.pl
4
```

3. Here is the list of options:

```
1
2 Do you want to proceed with the installation? [y]   :
3 Enter the JAVA Home             [/usr/java/jdk1.8.0_45]   :
4 Enter the ANT Path              [/usr/bin/ant]   :
5 Enter the Tomcat Home           [/usr/local/apache-tomcat-8.0.22]   :
6 Enter the name of the host on which the Tomcat runs     [cmsuptracker007.cern.ch]
       :
7 Enter the port of the Tomcat listens for requests       [8080]   :
8 Do you want to change it?                               ["n"] :
9 Enter the RCMS Home             [/opt/TriDAS/RunControl]   :
10 Enter the RCMS user            [xtaldaq]   :
11 Enter the RCMS password        [xxxx]   :
12 Where do you want log messages to go? Enter 'file' or 'socket' [file]   :
13 Give the full path to the logging file the logger should use   [/tmp/RCMS.log]   :
14 Which type of database do you want to use for Resource Service, Oracle or MySQL?
      [mysql]   :
15 Do you want to proceed with the installation? [y]   :
16 Enter the host of the database server              [cmsuptracker007.cern.ch]   :
17 Enter the port of the database server              [3306]   :
18 Enter the root password of your database server    [xxxxx]   :
19 Enter the name of the RS database                  [resourceService3]   :
20 Enter the DB user name                             [rcms]   :
21 Enter the DB password                              [xxxxx]   :
22 Do you want to use the Run Info database?:  [no]   :
23 Do you want to use the Hardware Configuration database? [no]   :
24 Do you want to use the LogSession database? [no]   :
25 Do you want to use the ConfDB database? [no]   :
26 Do you want to install the log Collector? [no]   :
27 Do you want to install the LogDBViewer? [no]   :
```

Remember to install CBCDAQ and Ph2_ACF
Remember to mount the NAS on /cmsuptrackernas, you may need to install nfs-utils.