CEMON installation and configuration procedure

Tanya Levshina, Rohit Mathur, Steve Timm

Draft

Introduction

This document is intended for administrators responsible for installing and configuring ITB Compute Element (CE) version 0.5.0 onto OSG Integration Resources. We assume that an administrator is already familiar with the installation and configuration procedure described in OSG Installation Guide. Our goal is to describe some additional steps that need to be performed in order to configure CEMonitor service . This service is capable of collecting the CE resource information by using Generic Information Provider (GIP).

In current ITB CE installation CEMonitor service pushes collected information in classad format to central Information Gatherer (IG) running on designated host (osg-ress-1.fnal.gov). IG advertises these classads to Condor Match Maker service.

Installation method

The installation method is based on Pacman. You will need to install the latest pacman version somewhere on your machine.

wget http://physics.bu.edu/pacman/sample_cache/tarballs/pacman-latest.tar.gz

unzip and untar the file
cd to the untared directory

. setup.sh

Pre-install steps

Make sure that you have host and http service certificates on the server you are planning to install cemon:

a. The host certificate should be installed in /etc/grid-security with ownership and permissions as:
   -rw-r--r-- root root hostcert.pem
   -r-------- root root hostkey.pem
b. . http certificate: Used by apache and tomcat. The http certificate for your system should be installed in /etc/grid-security/http with ownership and permission as:

-rw-r--r-- daemon daemon httpcert.pem
-r-------- daemon daemon httpkey.pem

Installation

1. CEMon is installed automatically as you installed ce-0.5.0:
   a. Create a directory where you want to install vdt package if it doesn't exists
      cd /usr/local
      mkdir vdt
   b. cd to the vdt directory ($VDT_LOCATION)
   c. Install ce-0.5.0 from ITB
      pacman -get ITB:ce-0.5.0

      *Steve note—at the moment ITB:ce is the same as ITB:ce-0.5.0 and it generally points to the current CE version of the ITB whatever that is. More instructions on the ITB CE install and preparation for it can be found in http://osg.ivdgl.org/twiki/bin/view/Integration/OSGCEInstallGuide.

2. Make sure that there is a batch system already installed on your node. If the OSGCEInstall guide was followed correctly, it will already be installed by this time, as will the globus jobmanager adapters. GIP works with condor, PBS, LSF, SGE. Be sure you have done the two steps below. If you haven't,
   a. Install condor from vdt1.3.11: In $VDT_LOCATION install condor:
      pacman -get http://vdt.cs.wisc.edu/vdt_1311_cache:Condor
      (answer "yes" to all the questions). See the OSGCEInstallGuide for hints on condor and other installation tricks.
   b, pacman -get ITB:Globus-Condor-Setup (or Globus-PBS-Setup, etc).
   (if this has not already been done.)
3. The next step is performed with each installation of ce package. Run configure-osg script. Under ITB 0.5.0 and greater this will also automatically configure the GIP.
   . $VDT_LOCATION/setup.sh
   monitoring/configure_osg.sh

Modification of CEMon configuration file and GIP wrapper

The next step is to manually modify the CEMon configuration in order to do minor fixes and minimize the load on the system (this changes will be included in the next vdt release). Open *$VDT_LOCATION/glite/etc/glite-ce-monitor/cemonitor-config.xml* with your favorite editor, do the following changes:

- Line# 73 – Line# 80
  <sensor id="sensor-ce"
  ….
  </sensor >

  You will need to disable invocation of this sensor by commenting the whole xml fragment out:
  <!-- sensor id="sensor-ce"
  ….

</sensor -->

- Line # 86
  <property name="executionDelay" value="600000" />
  Increase the interval between executions of gip script from 1 minute to 10 minute:
  <property name="executionDelay" value="6000000" />
- Line# 126
  <policy rate="60000">
  Increase the frequency of consumer notification from 1 minute to 10 minute:
  <policy rate="600000">

Modify gip wrapper script. Open file *$VDT_LOCATION/glite/etc/glite-ce-ce-plugin/glite-ce-info* and add the following line:

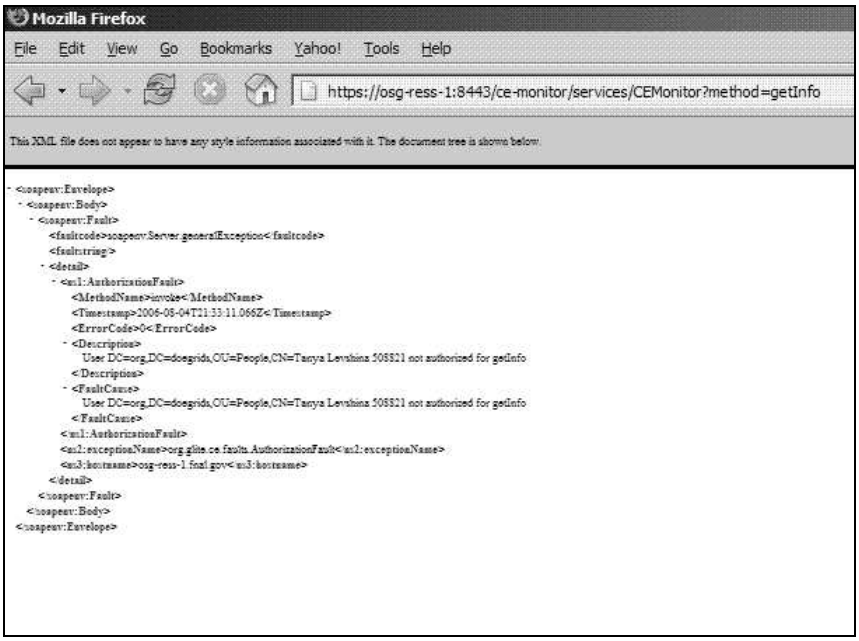
```
#!/bin/sh
export LANG=c     #add this line

$VDT_LOCATION/lcg/bin/lcg-info-generic $VDT_LOCATION/lcg/etc/osg-info-generic.conf
```

Installation Verification

- Apache and tomcat have been configured and should be started at this time.
- CEMon should be started as well. Check cemon log file that is located $VDT_LOCATION/tomcat/v5/logs/glite-ce-monitor.log. You can verify that cemon is started by accessing it via your browser (your certificate should be imported into your browser). Use the following url:
  https://<host>:8443/ce-monitor/services/CEMonitor?method=GetInfo

- If your DN is not in the /etc/grid-security/grid-mapfile you will see the following information on the page:



If you add your DN to a /etc/security/grid-mapfile, you could get back meaningful information about topics and dialects that CEMonitor supports, e.g:

Verify that CEMonitor started reporting to IG (in $VDT_LOCATION/tomcat/v5/log/glite-ce-monitor.log) you will see:
….org.glite.security.trustmanager.CRLFileTrustManager - Client CN=osg-ress-1.fnal.gov, OU=Services, DC=doegrids, DC=org accepted

each time CEMonitor pushed information to Information Gatherer.

You can also run

condor_status –pool osg-ress-1.fnal.gov –l