CEMON installation and configuration procedure on CE 0.4.1

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Draft

Introduction

This document is intended for administrators responsible for supporting ITB Compute Element (CE) version 0.4.1 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 install and configure the newest CEMonitor service from vdt_1.3.11 on top of existing ce 0.4.1 installation. This service is capable of collecting the CE resource information by using Generic Information Provider (GIP).

A properly installed and configured 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.

Initial assumptions

We assume that CE-0.4.1 software has been installed on the node and the following products are installed and properly configured:

- Job Management software (condor, pbs or lsf)
- GIP

We also assume that apache and tomcat are not installed on the CE node.

Installation method

The installation method is based on Pacman. You will need to install the latest pacman version somewhere on your machine (make sure that the version is equal or greater 3.18.5).

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

In order to avoid any overlapping between previously installed software and CEMon you have to create a new directory that is different from your intial intallation of ce-0.4.1.

a. Create a directory where you want to install vdt-1.3.11 cemon cache
   cd /usr/local
   mkdir cemon
   cd to the cemon directory ($VDT_LOCATION)
b. Install CEMon from vdt:1.3.11

pacman –get http://vdt.cs.wisc.edu/vdt_1311_cache:CEMon
Do you want to add [http://vdt.cs.wisc.edu/vdt_1311_cache] to [trusted.caches]? (y or n): y
Do you agree to the licenses? [y/n] y
…
Where would you like to install CA files? n
…
Would you like to setup daily rotation of VDT log files? y
…
Would you like to enable the CEMon server to run automatically? y
…
If you would like, we can configure the Globus GRIS (MDS) to start automatically at boot time? s

c. Apache and tomcat have been configured and should be started at this time.
d. In order to properly configure CEMon consumer (IG) subscription execute the following command:

   $VDT_LOCATION/vdt/setup/configure_cemon --consumer https://osg-ress-1.fnal.gov:8443/igservices/CEInfoCollector --dialect OLD_CLASSAD --topic OSG_CE

e. 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# 8
  sslCAfiles="/usr/local/cemon/globus/TRUSTED_CA/*.0"

  change this value to correct path to trusted certificate directory
- 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">

f. Modify gip wrapper script. Open file *$VDT_LOCATION/glite/etc/glite-ce-ce-plugin/glite-ce-info* and change it to the following:

```
#!/bin/sh
export LANG=c
$OSG_LOCATION/lcg/bin/lcg-info-generic $OSG_LOCATION/lcg/etc/osg-info-generic.conf
```

Where $OSG_LOCATION is a root directory of your CE.0.4.1 installation

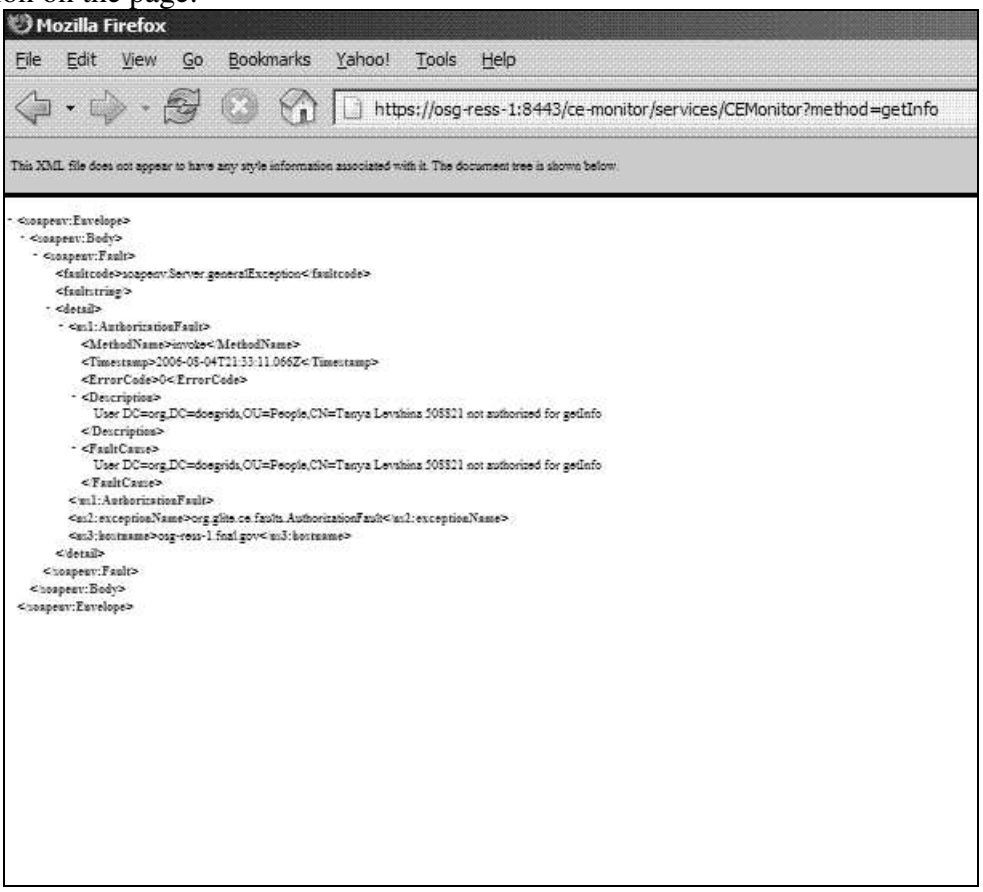
Verification

At this time apache, tomcat and CEMon should be up and running. You can check cemon log file that is located $VDT_LOCATION/tomcat/v5/logs/glite-ce-monitor.log.

You can also 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:

You can verify that CEMonitor started reporting to IG by checking $VDT_LOCATION/tomcat/v5/log/glite-ce-monitor.log. You should see:

….org.glite.security.trustmanager.CRLFileTrustManager - Client CN=osg-ress-1.fnal.gov, OU=Services, DC=doegrids, DC=org accepted

each time CEMonitor pushes information to Information Gatherer.

You can also run

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

to check what information your CE is advertising.