



Enabling Grids for E-science

GLite condor batch system

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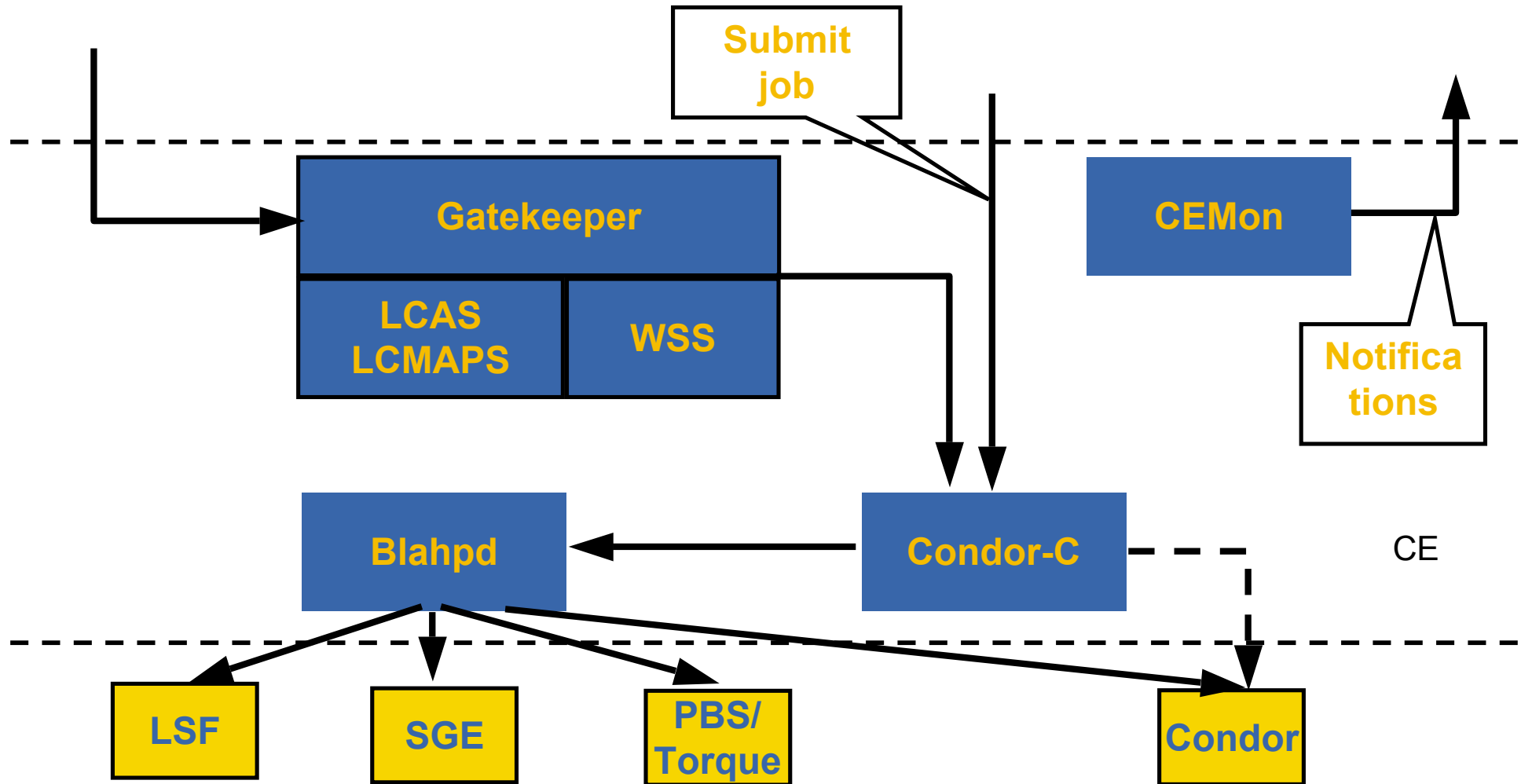
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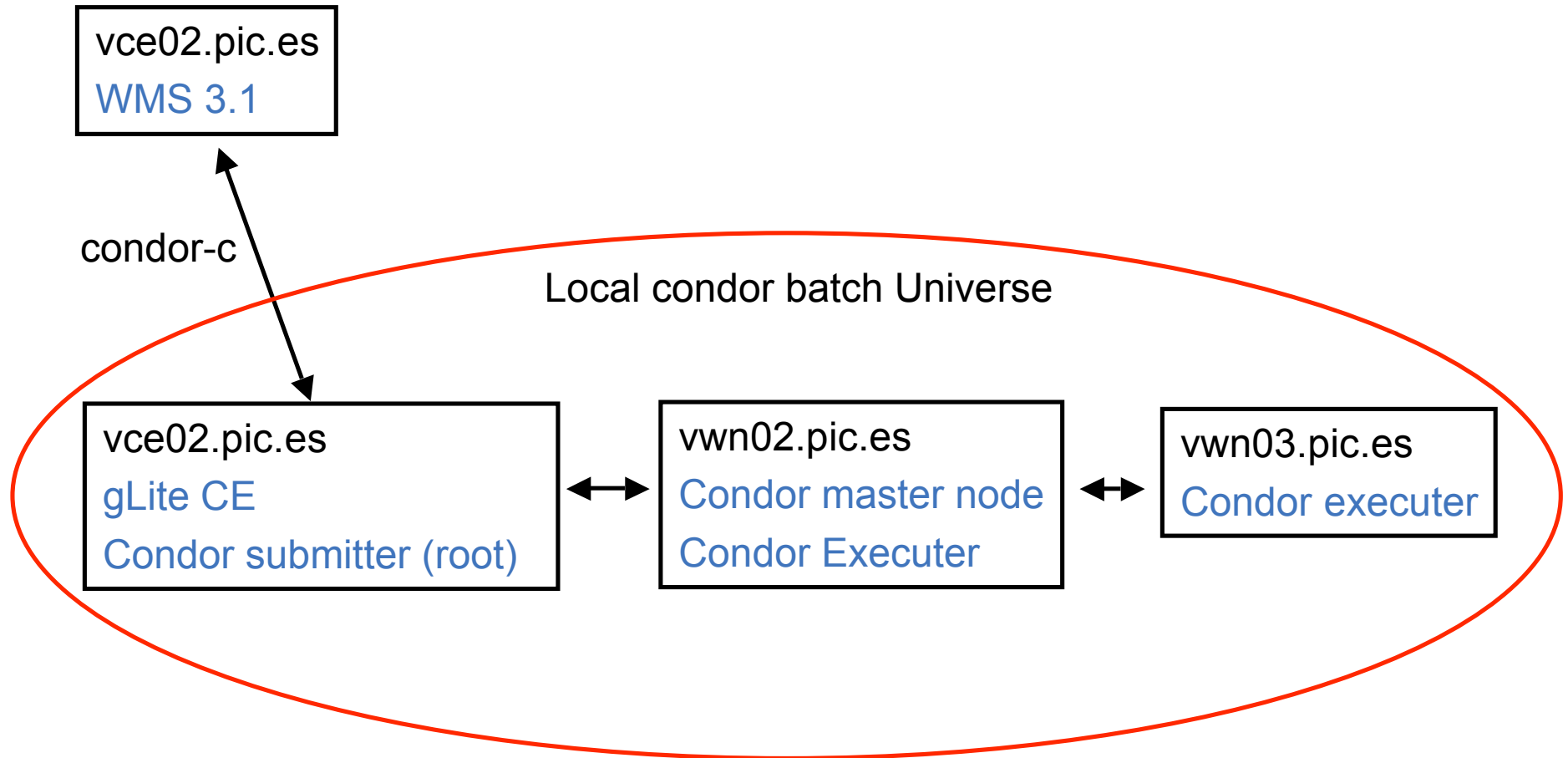


- Job Submission



- **WMS 3.0 does not support condor LSRM**
 - Sends job to “condor” universe instead of “blah” universe
- **Using WMS 3.1 at CERN ixb2032.cern.ch**
 - Sometimes unavailable
 - No direct access to the WMS condor queue
 - No direct debugging possible
- **Local PIC WMS 3.1 installation**
 - Difficult to install due to missing dependencies
 - We found bug #25610

- PIC condor installation**



- **gLiteCE configuration problems**

- site-info.def:

```
# Jobmanager specific settings
JOB_MANAGER=condor
CE_BATCH_SYS=condor
```

- Comment line 189 to 192 of /opt/glite/etc/config/scripts/glite-ce-config.py

```
#if params['cemon.lrms'] == 'condor' and params['cemon.cetype'] != 'condor':
#    glib.printErrorMessage("The Condor batch system is supported only with a
Condor CE type")
#    glib.printErrorMessage("Please check the configuration file")
#    return 1
```

- /opt/glite/yaim/functions/config_gip_scheduler_plugin

```
requires INSTALL_ROOT CE_BATCH_SYS TORQUE_SERVER
```

- /opt/glite/etc/config/scripts/glite-ce-config.py:

```
os.chmod("%s/bin/condor_submit.sh" % os.environ['GLITE_LOCATION'],0755)
os.chmod("%s/bin/condor_status.sh" % os.environ['GLITE_LOCATION'],0755)
os.chmod("%s/bin/condor_cancel.sh" % os.environ['GLITE_LOCATION'],0755)
```

- opt/glite/etc/blah.config

```
supported_lrms=pbs,lsf,condor
```

```

####
#Path where CONDOR executables are located
condor_binpath=/opt/condor-local/bin
#Path where the CONDOR conf file is located ($condor_confpath/condor_config)
condor_confpath=/opt/condor-local/etc
#If it is set to no blah scripts for CONDOR will not try to read
#locally from the logs if BLParser is not presentcondor_fallback=no
#Set to yes to use Blah Log Parser for CONDORcondor_BLParse=
#Host where Blah Log Parser for CONDOR is runningcondor_BLPserver=127.0.0.1
#Port where Blah Log Parser for CONDOR is runningcondor_BLPport=33334
#Number of Blah Log Parser to try for CONDOR (if it is null lsf_BLPserver and lsf_BLPport are used
condor_num_BLParse=
#condor_BLPserver1=condor_BLPport1=
#condor_BLPserver2=condor_BLPport2=
    
```

– /opt/glite/etc/blparser.conf

```

##CONDOR part
##Set to yes to start the CONDOR parser
GLITE_CE_USE_BLPARSERCONDOR=yes
#Set to yes to run the CONDOR parser in daemon mode
GLITE_CE_BLPARSERCONDOR_DAEMON=yes
#Set to 1 for normal debug or 2 for more debug
GLITE_CE_BLPARSERCONDOR_DEBUGLEVEL=
#Log file where the debug information are written
GLITE_CE_BLPARSERCONDOR_DEBUGLOGFILE=
#CONDOR spooldir
GLITE_CE_BLPARSERCONDOR_SPOOLDIR=
#Use this to start multiple CONDOR parser on different ports
#if it is not set defaults to 1
GLITE_CE_BLPARSERCONDOR_NUM=
#CONDOR parser listening port
GLITE_CE_BLPARSERCONDOR_PORT1=33334
GLITE_CE_BLPARSERCONDOR_PORT2=
#CONDOR parser listening cream port
GLITE_CE_BLPARSERCONDOR_CREAMPORT1=
GLITE_CE_BLPARSERCONDOR_CREAMPORT2=
    
```

- **Lcg-infosystem**

- /opt/lcg/libexec/lcg-info-dynamic-condor

- 3 typo bugs

- /opt/lcg/var/gip/plugin/ce-condor.sh

- Add condor master node:

```
/opt/lcg/libexec/lcg-info-dynamic-condor /opt/condor-c/bin /opt/lcg/var/gip/ldif/lcg-info-static-ce.ldif vwn02.pic.es
```

- Creation of /opt/lcg/libexec/lrmsinfo-condor

- /opt/lcg/etc/lcg-info-dynamic-scheduler-lcgcondor.conf

- Add condor master node:

```
[LRMS]lrms_backend_cmd:
```

```
/opt/lcg/libexec/lrmsinfo-condor -p /opt/condor-c/bin/ -h vwn02.pic.es
```

- /opt/lcg/libexec/lcg-info-wrapper

```
#!/bin/sh
```

```
export LANG=C
```

```
export CONDOR_CONFIG=/opt/condor-local
```

```
/etc/condor_config/opt/lcg/bin/lcg-info-generic /opt/lcg/etc/lcg-info-generic.conf
```

- **/opt/condor-local**

- Tarball:

http://eticssoft.web.cern.ch/eticssoft/repository/externals/condor/6.7.19/slc4_ia32_gcc346/condor-6.7.19.tar.gz

- Installation:

```
# mkdir /opt/condor-local
# mv slc4_ia32_gcc346/condor-6.7.19.tar.gz /opt/condor-local
# cd /opt/condor-local# tar -xzvf slc4_ia32_gcc346/condor-6.7.19.tar.gz
```

- We configure the installation as submitter (set CONDOR-MANAGER to your LRMS Manager host)

```
# export CONDOR_CONFIG=/opt/condor-local/etc/condor_config
# /opt/condor/sbin/condor_configure --install-dir=/opt/condor-local
# /opt/condor/sbin/condor_configure --central-manager=CONDOR-MANAGER --type=submit
--install-dir=/opt/condor-local --local-dir=/opt/condor-local/home
```

- /etc/init.d/condor:

```
# cp /opt/condor-local/etc/examples/condor.boot /etc/init.d
# chkconfig --add condor.boot
```

- /opt/condor-local/etc/condor_config:

```
MASTER=/opt/condor-local/sbin/condor_master
## What machine is your central manager?
CONDOR_HOST           = YOUR_LRMS_MANAGER
RELEASE_DIR           = /opt/condor-local
LOCAL_DIR              = $(RELEASE_DIR)/home
LOCAL_CONFIG_FILE     = $(LOCAL_DIR)/condor_config.local
CONDOR_ADMIN          = root@YOUR_CE_HOST
MAIL                  = /bin/mail
UID_DOMAIN             = YOUR_DOMAIN
FILESYSTEM_DOMAIN     = YOUR_DOMAIN
COLLECTOR_NAME        = My Pool
CONDOR_IDS             = 0.0
```


- **Environment variables**
 - The environment of the local Unix user on the gLite CE sees a lot of environment variables, which have to be masked to use the blah scripts (caused by condor-c ?)
- **Blah script adaptation**
 - Scripts from JRA1 are full of bugs
 - Existing scripts are not compatible with having a second condor on the CE
 - For not having the local condor on the CE there is a authentication problem for job submission

- **Next Steps**
 - Infosystem (first version done)
 - Blah scripts (within the next two week)
 - condor_submit, condor_cancel, condor_status
 - Accounting (Apel Parser) (one or two months)
 - Release integration
 - YAIM integration
 - Test writing (following GRNET plan)

- **Is blah job submission the right way?**
- **Should the gLite CE run as condor submitter?**
- **Should the LRMS use the same version of condor as the WMS/CE?**
- **Condor user policy, mapping etc. (one condor user on the WN)?**

- We depend a lot on the WMS 3.1 - best to provide one locally
- Not easy to find gLite documentation - we loose time understanding in detail how job submission works (read scripts/ source code)
- Developers sometimes react “strange” if you submit a bug
- Problems with condor-c <-> local condor separation
- We have two interested possible clients at the UAB when gLite CE will be stable