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Testing FTS Upgrade from 2.1 to 2.2.3

The starting point was the first FTS release for gLite 3.1, which I assumed being FTS 2.1

Steps performed on a clean vNode SL4 machine, vtb-generic-57.cern.ch:

```
# wget http://grid-deployment.web.cern.ch/grid-deployment/glite/repos/3.1/jpackage.repo -P /etc/yum.repos.d/

# yum -y install jpackage-utils
=====
Package                Arch      Version      Repository      Size
=====
Updating:
jpackage-utils         noarch    5.0.0-2.jpp5  jpackage5-generic  72 k

# wget http://glite.web.cern.ch/glite/packages/R3.1/deployment/glite-FTS_oracle/3.1.1-0/glite-FTS_oracle-3.1.1-0.rpm.list.txt
_The Jpackage 1.7 files have been removed_

# yum -y --enablerepo=CERN-only install oracle-instantclient-basic oracle-instantclient-sqlplus
=====
Package                Arch      Version      Repository      Size
=====
Installing:
oracle-instantclient-basic  i386      10.2.0.3-3.slc4  CERN-only      33 M
oracle-instantclient-sqlplus  i386      10.2.0.3-3.slc4  CERN-only      726 k

# yum -y --enablerepo=CERN-only install java-1.5.0-sun java-1.5.0-sun-devel
=====
Package                Arch      Version      Repository      Size
=====
Installing:
java-1.5.0-sun          i586      1.5.0.15-1.slc4  CERN-only      31 M
java-1.5.0-sun-devel    i586      1.5.0.15-1.slc4  CERN-only      5.1 M

# ls
CGSI_gSOAP_2.7-1.2.1-2.slc4.i386.rpm          glite-service-discovery-file-c-2.1.2-2.slc4.i386.rpm
ant-1.7.1-7.jpp5.noarch.rpm                 glite-version-3.1.0-1.slc4.i386.rpm
bdii-3.9.1-5.noarch.rpm                     glite-yaim-core-4.0.4-2.noarch.rpm
bea-stax-1.2.0-0.rc1.3.jpp5.noarch.rpm       glite-yaim-fts-4.0.12-1.noarch.rpm
bea-stax-api-1.2.0-0.rc1.3.jpp5.noarch.rpm   glue-schema-1.3.0-3.noarch.rpm
edg-mkgridmap-3.0.0-1.noarch.rpm             gridsite-shared-1.1.18.1-1.i386.rpm
fetch-curl-2.6.3-1.noarch.rpm               icu4j-3.8.1-5.jpp5.noarch.rpm
glite-FTS_oracle-3.1.1-0.rpm.list.txt        isorelax-0.1-0.20041111.6.jpp5.noarch.rpm
glite-data-delegation-api-c-2.0.0-4.slc4.i386.rpm  jakarta-commons-dbc-p-tomcat5-1.2.2-2.jpp5.noarch.rpm
glite-data-delegation-cli-2.0.0-4.slc4.i386.rpm  jakarta-commons-digester-1.8-1.jpp5.noarch.rpm
glite-data-transfer-api-c-3.4.0-1.slc4.i386.rpm  jakarta-commons-logging-1.1-8.jpp5.noarch.rpm
glite-data-transfer-cli-3.4.3-2.slc4.i386.rpm   jakarta-commons-pool-tomcat5-1.3-11.jpp5.noarch.rpm
glite-data-transfer-fts-3.4.2-3.noarch.rpm      jdom-1.0-5.jpp5.noarch.rpm
glite-data-util-c-1.2.3-1.slc4.i386.rpm         lcg-vomscerts-5.0.0-1.noarch.rpm
glite-info-generic-2.0.2-3.noarch.rpm          msv-1.2-0.20050722.6.jpp5.noarch.rpm
glite-info-templates-1.0.0-8.noarch.rpm        msv-xsdlib-1.2-0.20050722.6.jpp5.noarch.rpm
glite-security-delegation-interface-2.0.0-1.noarch.rpm  newlist.txt
glite-security-trustmanager-1.8.16-1.noarch.rpm  relaxngDatatype-1.0-3.jpp5.noarch.rpm
glite-security-util-java-1.4.0-1.noarch.rpm     saxon-6.5.5-1.jpp5.noarch.rpm
glite-security-voms-api-c-1.8.3-4.slc4.i386.rpm  user_certificates
glite-service-discovery-api-c-2.2.2-2.slc4.i386.rpm  vdt_globus_essentials-VDT1.6.1x86_rhas_4-1.0-1.noarch.rpm
glite-service-discovery-bdii-c-2.2.2-2.slc4.i386.rpm  xpp2-2.1.10-6.jpp5.noarch.rpm
glite-service-discovery-cli-2.2.1-2.slc4.i386.rpm  xpp3-1.1.3.8-1.jpp5.noarch.rpm
```

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```
# yum --enablerepo=dag localinstall *.rpm
Installed: CGSI_gSOAP_2.7.i386 0:1.2.1-2.slc4 ant.noarch 0:1.7.1-7.jpp5 bdii.noarch 0:3.9.1-5 bea
Dependency Installed: bcel.noarch 0:5.1-16.jpp5 bouncycastle.noarch 0:1.43-1.jpp5 classpathx-mail
Complete!

# mkdir /etc/yaim/

# cd /etc/yaim/

# wget https://pucciani.web.cern.ch/pucciani/yaimfiles/yaimfiles.tar.gz

# tar -xvzf yaimfiles.tar.gz
groups.conf
site-info.def
users.conf
vo.d/
vo.d/org.glite.voms-test
wn-list.conf

# sed -i 's/bash/sh/' /etc/rc.d/init.d/tomcat5
```

site-info.def modified to include:

```
#####
# FTS configuration variables #
#####
FTS_HOST="vtb-generic-57.cern.ch"
FTS_HOST_ALIAS=${FTS_HOST}
FTS_SERVER_URL="https://${FTS_HOST}:8443/glite-data-transfer-fts"
FTA_GLOBAL_DB_CONNECTSTRING="(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP) (HOST=int11r2-v.cern.ch) (PORT=10
FTS_DBURL="jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP) (HOST=int11r2-v.cern.ch) (PORT=10
FTS_DB_TYPE=ORACLE
FTS_DB_USER=lcg_voms_test_5
FTS_DB_PASSWORD=*****

TOMCAT_USER=tomcat
ORACLE_LOCATION="/usr/lib/oracle/10.2.0.3"
JAVA_LOCATION="/usr/lib/jvm/jre-1.5.0"
```

The database was cleaned using

/opt/glite/etc/glite-data-transfer-fts/schema/oracle/oracle-drop.sql and he first Yaim run gave:

```
# /opt/glite/yaim/bin/yaim -c -s ./site-info.def -n FTS2
[...]
INFO: FTS database type Oracle selected
INFO: Setting FTS_DB_SQLPLUS_CONNECTSTRING to the value
INFO: set for FTA agents from FTA_GLOBAL_DB_CONNECTSTRING
INFO: Service administrator mapfile /opt/glite/etc/glite-data-transfer-manager-mapfile already
INFO: Copying Oracle JDBC jar file to tomcat common lib directory...
INFO: Testing DB account and FTS schema...
ABORT: Database schema does not appear to be loaded. Assuming yaim is currently configured wit
ABORT: sqlplus "LCG_FTS_SA3TESTS3/*****@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP) (HOST=int
ABORT: If this command only completes partially then there is a problem with your schema, plea

sqlplus "LCG_FTS_SA3TESTS3/*****@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP) (HOST=int11r2-v.cern.ch) (
```

Second run of Yaim gave:

```
INFO: Testing DB account and FTS schema...
INFO: ...schema OK.
INFO: Testing delegation schema...
```

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```
ABORT: Delegation schema does not appear to be loaded. Assuming yaim is currently configured w
ABORT: sqlplus "lcg_voms_test_5/*****@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP) (HOST=int11r2-
ABORT:
```

The delegation schema was created by running

```
/opt/glite/etc/glite-security-delegation-interface/schema/oracle/oracle-schema.sql
```

The third run of Yaim gave:

```
INFO: Testing DB account and FTS schema...
INFO: ...schema OK.
INFO: Testing delegation schema...
INFO: ...schema OK.
INFO: Making context file /etc/tomcat5/Catalina/localhost/glite-data-transfer-fts.xml...
INFO: Replacing JAVA_HOME in the file /etc/tomcat5/tomcat5.conf...
INFO: Replacing LD_LIBRARY_PATH and CATALINA_OPTS (if they exist) in the file /etc/tomcat5/tom
INFO: Installing log rotation for FTS (N.B. it's not a standard logrotate script)...
INFO: Creating basic /opt/glite/etc/services.xml file...
INFO: Doing chkconfig for tomcat5...
INFO: Restarting Tomcat:
Stopping tomcat5: [FAILED]

Starting tomcat5: [ OK ]

INFO: Configuration Complete.
```

At this point the version of the schema was 3.2.0

```
# sqlplus "lcg_voms_test_5/*****@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP) (HOST=int11r2-v.cern.
SQL*Plus: Release 10.2.0.3.0 - Production on Wed Feb 24 16:47:52 2010
```

```
Copyright (c) 1982, 2006, Oracle. All Rights Reserved.
```

```
Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.4.0 - 64bit Production
With the Partitioning, Real Application Clusters, OLAP, Data Mining
and Real Application Testing options
```

```
3.2.0
Disconnected from Oracle Database 10g Enterprise Edition Release 10.2.0.4.0 - 64bit Production
With the Partitioning, Real Application Clusters, OLAP, Data Mining
and Real Application Testing options
```

From this point the upgrade to the latest version was done by:

```
# wget http://grid-deployment.web.cern.ch/grid-deployment/glite/repos/3.1/glite-FTS_oracle.repo -
# yum upgrade
[...]
Installed: ca_policy_igtf-classic.noarch 0:1.34-1 glite-data-transfer-cli.i386 0:3.7.2-1.slc4 ker
Dependency Installed: ca_AAACertificateServices.noarch 0:1.34-1 ca_CESNET-CA-3.noarch 0:1.34-1 ca
Updated: CGSI_gSOAP_2.7.i386 0:1.3.3-1.slc4 bdii.noarch 0:4.0.1-4 ca_AEGIS.noarch 0:1.34-1 ca_AIS
Replaced: ca_CNRS.noarch 0:1.32-1 ca_CNRS-Grid-FR.noarch 0:1.32-1 ca_CNRS-Projets.noarch 0:1.32-1
Complete!
```

Re-running Yaim:

```
# /opt/glite/yaim/bin/yaim -c -s ./site-info.def -n FTS2
[...]
INFO: FTS database type Oracle selected
INFO: Setting FTS_DB_SQLPLUS_CONNECTSTRING to the value
INFO: set for FTA agents from FTA_GLOBAL_DB_CONNECTSTRING
```

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```
INFO: Service administrator mapfile /opt/glite/etc/glite-data-transfer-manager-mapfile already
INFO: Copying Oracle JDBC jar file to tomcat common lib directory...
INFO: Testing DB account and FTS schema...
INFO: The expected schema version is 3.4.1
ABORT: Database schema is using the old 3.2.0 version.
ABORT: Please upgrade to 3.4.1 using the following command(s)
ABORT: (assuming yaim is configured to use the schema owner account):
ABORT: /usr/lib/oracle/10.2.0.3/client/bin/sqlplus "LCG_FTS_SA3TESTS3/*****@(DESCRIPTION=
ABORT: /usr/lib/oracle/10.2.0.3/client/bin/sqlplus "LCG_FTS_SA3TESTS3/*****@(DESCRIPTION=
ABORT: /usr/lib/oracle/10.2.0.3/client/bin/sqlplus "LCG_FTS_SA3TESTS3/*****@(DESCRIPTION=
ABORT: NOTE: This operation is irreversible!
ERROR: One of the functions returned with error without specifying it's nature !
```

The schema was updated by running the commands

```
# /usr/lib/oracle/10.2.0.3/client/bin/sqlplus "LCG_FTS_SA3TESTS3/*****@(DESCRIPTION=(ADDRESS=
[...]
Updating schema version...
SUCCESS: Patch applied. New version is 3.3.0

PL/SQL procedure successfully completed.
```

```
/usr/lib/oracle/10.2.0.3/client/bin/sqlplus "LCG_FTS_SA3TESTS3/*****@(DESCRIPTION=(ADDRESS=
[...]
INFO: Column [t_fts_plugin_schema.schemaversion] added
Updating schema version...
SUCCESS: Patch applied. New version is 3.4.0

PL/SQL procedure successfully completed.
```

```
/usr/lib/oracle/10.2.0.3/client/bin/sqlplus "LCG_FTS_SA3TESTS3/*****@(DESCRIPTION=(ADDRESS=
[...]
Applying Patch...
Upgrading T_SCHEMA_VERS...
Upgrading schema 3.4.0 to 3.4.1 ...
Updating schema version...
SUCCESS: Patch applied. New version is 3.4.1

PL/SQL procedure successfully completed.
```

```
Running Yaim again:
[...]
INFO: Testing DB account and FTS schema...
INFO: The expected schema version is 3.4.1
INFO: ...schema OK.
INFO: Testing delegation schema...
INFO: ...schema OK.
INFO: Testing the history package...
ABORT: FTS history package does not appear to be loaded. Assuming yaim is currently configured
ABORT: /usr/lib/oracle/10.2.0.3/client/bin/sqlplus "lcg_voms_test_5/*****@(DESCRIPTION=(AD
ABORT: /usr/lib/oracle/10.2.0.3/client/bin/sqlplus "lcg_voms_test_5/*****@(DESCRIPTION=(AD
ERROR: One of the functions returned with error without specifying it's nature !
```

```
/opt/glite/etc/glite-data-transfer-fts/schema/oracle/fts_history_pack.sql and /opt/glite/etc/glite
```

```
Running Yaim again:
[...]
INFO: Testing DB account and FTS schema...
INFO: The expected schema version is 3.4.1
INFO: ...schema OK.
INFO: Testing delegation schema...
INFO: ...schema OK.
INFO: Testing the history package...
```

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```
INFO: ...schema OK.
INFO: Testing the purge package...
ABORT: FTS purge package does not appear to be loaded. Assuming yaim is currently configured w
ABORT: /usr/lib/oracle/10.2.0.3/client/bin/sqlplus "lcg_voms_test_5/*****@(DESCRIPTION=(ADD
ABORT: /usr/lib/oracle/10.2.0.3/client/bin/sqlplus "lcg_voms_test_5/*****@(DESCRIPTION=(ADD
ERROR: One of the functions returned with error without specifying it's nature !
```

/opt/glite/etc/glite-data-transfer-fts/schema/oracle/fts_purge_pack.sql and /opt/glite/etc/glite-

Final run of Yaim:

```
[...]
INFO: Testing DB account and FTS schema...
INFO: The expected schema version is 3.4.1
INFO: ...schema OK.
INFO: Testing delegation schema...
INFO: ...schema OK.
INFO: Testing the history package...
INFO: ...schema OK.
INFO: Testing the purge package...
INFO: ...schema OK.
INFO: Making context file /etc/tomcat5/Catalina/localhost/glite-data-transfer-fts.xml...
INFO: Replacing JAVA_HOME in the file /etc/tomcat5/tomcat5.conf...
INFO: Replacing CATALINA_OPTS (if it exists) in the file /etc/tomcat5/tomcat5.conf...
INFO: Adding LD_LIBRARY_PATH for the native JDBC driver in the file /etc/tomcat5/tomcat5.conf.
INFO: Installing log rotation for FTS (N.B. it's not a standard logrotate script)...
INFO: /opt/glite/etc/services.xml already exists. Will not update!
INFO: Please ensure you have added a delegation service block (see /tmp/glite-fts-add-delegati
INFO: Doing chkconfig for tomcat5...
INFO: Restarting Tomcat:
Stopping tomcat5: [ OK ]

Starting tomcat5: [ OK ]

DEBUG: Skipping function: config_bdii_only_setenv because it is not defined
INFO: Executing function: config_bdii_only
Stopping BDII [ OK ]
Starting BDII [ OK ]
INFO: Configuration Complete. [ OK ]
INFO: YAIM terminated succesfully.
```

At this point, installing FTS from production gives the same error reported in [ticket=55828](#).

```
# wget http://grid-deployment.web.cern.ch/grid-deployment/glite/repos/3.1/glite-FTA_oracle.repo -
# yum install glite-FTA_oracle
# /opt/glite/yaim/bin/yaim -c -s ./site-info.def -n FTA2
[...]
INFO: Executing function: config_FTA2_agents
DEBUG: Setting up the environment
DEBUG: Setting environment variable GLITE_LOCATION, to value "/opt/glite".
DEBUG: Unset environment variable GLITE_LOCATION.
DEBUG: Setting default configuration files for known agents' types
DEBUG: Checking the DB type
INFO: FTA database type Oracle selected
INFO: Site definiton file contains definitions for FTA agent server ONE on host vtb-generic-57
INFO: Running basic sanity check on site definition file...
DEBUG: FTA_MACHINES = ONE
DEBUG: san_mach = ONE; sanmachsub=FTA_AGENTS_ONE
DEBUG: san_agent = DTEAM; atsub=FTA_DTEAM
DEBUG: Agent "DTEAM" has the following variables: FTA_DTEAM
DEBUG: san_agent_type = FTA_TTYPEDEFAULT_VOAGENT
DEBUG: used_agents_types=FTA_TTYPEDEFAULT_VOAGENT
DEBUG: san_agent = VOMSTEST; atsub=FTA_VOMSTEST
DEBUG: Agent "VOMSTEST" has the following variables: FTA_VOMSTEST FTA_VOMSTEST_AGENT_NAME
DEBUG: san_agent_type = FTA_TTYPEDEFAULT_VOAGENT
DEBUG: used_agents_types=FTA_TTYPEDEFAULT_VOAGENT
```

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```
DEBUG: san_agent = CERN-CERN; atsub=FTA_CERN_CERN
DEBUG: Agent "CERN-CERN" has the following variables: FTA_CERN_CERN
DEBUG: san_agent_type = FTA_TYPEDEFAULT_SRMCOPIY
DEBUG: used_agents_types=FTA_TYPEDEFAULT_VOAGENT FTA_TYPEDEFAULT_SRMCOPIY
DEBUG: san_agent = CERN-DESY; atsub=FTA_CERN_DESY
DEBUG: Agent "CERN-DESY" has the following variables: FTA_CERN_DESY
DEBUG: san_agent_type = FTA_TYPEDEFAULT_URLCOPIY
DEBUG: used_agents_types=FTA_TYPEDEFAULT_VOAGENT FTA_TYPEDEFAULT_SRMCOPIY FTA_TYPEDEFAULT_URLCOPIY
DEBUG: Type "FTA_TYPEDEFAULT_VOAGENT" has vars: FTA_TYPEDEFAULT_VOAGENT_ACTIONS_RETRYMODULE FTA_TYPEDEFAULT_VOAGENT_ACTIONS_RETRYPARAMS
DEBUG: Type "FTA_TYPEDEFAULT_SRMCOPIY" has vars: FTA_TYPEDEFAULT_SRMCOPIY_ACTIONS_SURLNORMALIZATION
DEBUG: Type "FTA_TYPEDEFAULT_URLCOPIY" has vars:
INFO: ... file looks OK.
INFO: Copying hostcert to /etc/grid-security/glite-data-transfer-agents-cert.pem for :root...
INFO: Copying hostkey to /etc/grid-security/glite-data-transfer-agents-key.pem for :root...
INFO: This hostname is: vtb-generic-57.cern.ch
INFO: This machine is going to be configured as server: ONE
INFO: The following agents will be configured on this server:
INFO: DTEAM of type VOAGENT
INFO: VOMSTEST of type VOAGENT
INFO: CERN-CERN of type SRMCOPIY
INFO: CERN-DESY of type URLCOPIY
INFO: Making temporary config directory as /tmp/tmp.Nwymw14631
INFO: Writing input file for the global defaults to temporary file: /tmp/tmp.Nwymw14631/global_defaults.conf
INFO: Configuring agent DTEAM of type VOAGENT...
INFO: Agent DTEAM uses template file: /opt/glite/share/config/glite-data-transfer-agents/glite_data_config_generator
INFO: This is the default template file for this agent type.
INFO: New agent type VOAGENT used. Creating the default generator config files for it.
INFO: Writing generator input file for agent type VOAGENT to temporary file: /tmp/tmp.Nwymw14631/agent_defaults.conf
INFO: Agent type VOAGENT overrides some defaults with the following variables:
    FTA_TYPEDEFAULT_VOAGENT_ACTIONS_RETRYMODULE FTA_TYPEDEFAULT_VOAGENT_ACTIONS_RETRYPARAMS
INFO: Generating instance configuration...
INFO: No instance variables changed for this agent. Defaults will be used.
ERROR: Config generator failed with errors. See message above.
ERROR: Error during the execution of function: config_FTA2_agents
^[[80G^[[1;31mFAILED^[[0;39m^M ERROR: Error during the configuration.Exiting.
ERROR: One of the functions returned with error without specifying it's nature !
```

Adding some more logging messages and re-running the yaim function:

```
# /opt/glite/yaim/bin/yaim -r -s ./site-info.def -f config_FTA2_agents
[...]
```

```
ERROR: The following command returned 127
ERROR: /opt/glite/bin/glite_data_config_generator -f /opt/glite/share/config/glite-data-transfer-agents/glite_data_config_generator
ERROR: Error during the execution of function: config_FTA2_agents
```

```
[root@vtb-generic-57 yaim]# /opt/glite/bin/glite_data_config_generator
/opt/glite/bin/glite_data_config_generator: error while loading shared libraries: liblog4cpp.so.4
```

The problem was a not updated version of log4cpp:

```
[root@vtb-generic-57 yaim]# rpm -ql log4cpp-0.3.4b-2.slc4 | grep liblog4cpp.so
/opt/log4cpp/lib/liblog4cpp.so
/opt/log4cpp/lib/liblog4cpp.so.3
/opt/log4cpp/lib/liblog4cpp.so.3.1.3
```

After installing a newer version of log4cpp enabling the dag repository config_FTA2_agents run ok.

```
# yum --enablerepo=dag install log4cpp
[...]
```

```
=====
Package                Arch      Version      Repository      Size
=====
```

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Updating:
log4cpp i386 1.0-1.el4.rf dag 2.4 M

```
[root@vtb-generic-57 yaim]# /opt/glite/bin/glite_data_config_generator
```

```
<glite-data-config-generator> Version 2.5.0
```

```
Usage:  
[...]
```

```
# /opt/glite/yaim/bin/yaim -r -s ./site-info.def -f config_FTA2_agents  
[...]
```

```
INFO: Scanning existing configuration...
```

```
INFO: There are 0 existing agents.
```

```
INFO:
```

```
    New agents that are being defined on this server:
```

```
INFO: DTEAM
```

```
INFO: VOMSTEST
```

```
INFO: CERN-CERN
```

```
INFO: CERN-DESY
```

```
INFO:
```

```
    Copied configuration successfully to directory:
```

```
    /opt/glite/etc/glite-data-transfer-agents.d/
```

```
INFO: Wrote daemon sysconfig script to /etc/sysconfig/glite-data-transfer-agents...
```

```
INFO: Linked SysV script from /opt/glite/etc/init.d/glite-data-transfer-agents to /etc/init.d/
```

```
INFO: Ckconfig'd transfer-agents on ...
```

```
INFO: Writing logrotate script to /etc/logrotate.d/glite-data-transfer-agents ...
```

```
DEBUG: Closing VO paramters.
```

```
INFO: YAIM terminated succesfully.
```

-- GianniPucciani - 24-Feb-2010

This topic: [Main > FtsUpgrade](#)

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