

Procedure

1) Check if the endpoints are reachable (validate service) 2) Check if the container is running

If there are problems, the best is to move to another node:

1) Warn users about the problem 2) Check if a spare machine is ready to production (validate endpoint other machine) 3) Perform the DNS switch 4) Notice users the service is back

Validate service

http://cern.ch/phydb/documents/old/Validate_service_.php

DNS Switch

http://phydb.web.cern.ch/phydb/documents/old/DNS_switch.php

Using command line tools

This operations can be done logged in the machine as oracle user.

- Start service

```
dcctl start -co VO
```

- Stop service

```
dcctl stop -co VO
```

- Start HTTP server

```
dcctl start -ct ohs
```

- List Applications of a VO

```
dcctl listapplications -co VO
```

- Get status of the containers

```
dcctl getstate -d -v
```

- Start Enterprise Manager

```
nohup Xvfb :1 -pn &  
export DISPLAY=localhost:1  
emctl start
```

- Stop all services

```
sudo /etc/init.d/oracle_ias stop
```

There will be no services running if there are no opmn and java or httpd entries as result of command:

ps -aux

To stop everything, start to stop EM:

emctl stop

and then:

dcmctl stop

opmnctl stopall

If not enough, just do:

sudo kill -9 opmn

sudo kill -9 java

sudo kill -9 http

- Start the service manually
- Log in as oracle
- Check that all the processes linked to the Application server are not running
- Start the X virtual Frame buffer
 - ◆ \$ nohup Xvfb :1 -pn &
 - ◆ \$ export DISPLAY=localhost:1
- Start the Enterprise Manager
 - ◆ emctl start
- Go to http://<machine_name>:1810
 - ◆ Start the HTTP server component
 - ◆ Start the component with the name of VO
- Stop the service manually
- Go to http://<machine_name>:1810
 - ◆ Stop the HTTP server component
 - ◆ Stop the component with name of the VO
- Changing the IP address of a running 9iAS instance
- **Note:** There is a pre-requisite to do this upgrade, the iAS must be upgraded to release 9.0.2.1.0 BEFORE the actual change of IP address.
Once you are using the right version, you need to stop all the iAS related process (httpd, oc4j, em), and then

```
$ORACLE_HOME/dcm/bin/dcmctl resetHostInformation -v -d
```

then check the file

```
$ORACLE_HOME/opmn/conf/ons.conf
```

where you should see the new IP number instead of the old one.
The complete doc is in Changing the IP Address of an Oracle Host

RLS Problem Diagnosis

In order to diagnose the problem, the following logs are produced:

- Logs for the applications are put into the

```
/ORA/dbs00/oracle/log/ias/j2ee/$VO/
```

directory. Here the **\$VO** is the same as the container name used in 9iAS, i.e. **cms**, **atlas**, **lhcb**, etc. Inside those directories there are two logs per application **PER DAY** (i.e. edg-replica-location-index, edg-replica-metadata-catalog, edg-local-replica-catalog)

- ◆ **application-name_log**: the debug logs are placed here. The debug log will be not too verbose if debug logging is not enabled. See the intervention on changing the logging level for more details.
- ◆ **application-name_calls** The call log simply logs each call that was executed with the proper time and the caller host.
- ◆ The daily logs of previous days are simply appended by the date, YYYY-MM-DD. The log files with no date are the logs of the current day.

- OC4j Server logs are placed in a directory below

```
/ORA/dbs01/oracle/product/ias9.0.3.0/j2ee/home/log/default_island_1/
```

The logs are

- ◆ **default-web-access.log**: shows all accesses to the application server, along with response codes and number of bytes returned.
- ◆ **server.log**: contains information on the history of interventions on the container.

- The logs for **opmn** are placed in the directory

```
/ORA/dbs01/oracle/product/ias9.0.3.0/opmn/logs/
```

The relevant logs are in the files

- ◆ **ons.log**
- ◆ **ipm.log**

- ◆ **\$VO.default_island.1** This contains the standard output from the application server. If logging is not configured correctly, log messages may end up here!

Dataguard for RLS

http://cern.ch/phydb/documents/old/Data_Guard.html [↗](#)

Change logging level of

The logging properties can be changed during run-time without shutting down or restarting the service. The log properties are reloaded automatically when a change in configuration was detected.

Logging properties file locations

The applications have a log4j properties file residing at
`/ORA/dbs00/oracle/log/ias/j2ee/$VO/<application-shorthand>-log4j-server.properties`

where *application-shorthand* can be **rmc**, **lrc**, **rli**. The logs are being produced in the very same directory.

There are two logfiles per application,

```
<application>_log.DATE
<application>_calls.DATE
```

where *application* can be one of **edg-local-replica catalog**, **edg-replica-metadata-catalog** and **edg-replica-location-index**. The DATE is appended for previous days, the current log has no DATE extension. The **call** log simply lists the time and date of each call that has been made and the **log** has all the detailed information if DEBUG logging is enabled.

Changing the log level

The level of detail can be tuned by editing the log4j properties file and setting the log levels for the different domains. The relevant domain for the application is set using the

log4j.logger.org.edg.data

property. No restart is necessary, the log4j log files are being reloaded automatically when a change is detected. By default, the log level is set to **INFO**. Set the log level to **DEBUG** for more verbose logging in the application log (`_log`).

Reconfigure datasource using a script

This document describes how to change the database backend that a deployed application uses using an script.

Index

1. Getting the script files.
2. Using the script

1. Obtaining and preparing the script files

The scripts are in CERN's CVS system in lcg-orat1 project under the Applications/RLS/as-deployment/ directory.

1. Logon to the target machine as the oracle user
2. Copy the following two scripts to a working directory on the target machine * change-data-sources *
`Dcmctl.pm`
3. Set the scripts' execution mode to 755

2. Execute the script

The datasource configuration for a given VO can be checked manually by looking at the datasources configuration file: \$ORACLE_HOME/j2ee/test/config/data-sources.xml

The automatic script will change the datasources by modifying the datasources.xml configuration file. The database host and database SID will be replaced with the new ones for the given VO. The script then will restart the container.

The script usage is as follows:

```
usage: ./change-data-source --sid=SID --db_host=DBHOST --vo=VO [-v]
```

Options: vo name of the virtual organization (atlas, cms, ...) db_host hostname of the database server of LRC and RMC sid SID of the database of LRC and RMC v verbose mode

Example: ./change-data-source --sid=certrls4 --db_host=lxshare333d --vo=atlas

Checking the update

You can check that the update was successful by looking at the datasource now configured in the datasources.xml file

Deploy old end points of CMS

CMS needs for temporary timescale that old endpoints (before the last convention was established) are also deployed, so they can get the RLS services from hard-coded endpoints.

The fastest way is to deploy via command line AFTER normally deploy the present RLS services endpoints.

1. Get the files 2. Deploy the applications 3. Change the URL binding 4. Redeploy the applications 5. (Re)Start the container

1. Get the files

The necessary files are the .ear files for the corresponded version, which can be found in:
/afs/cern.ch/project/grid/wp2/oracle-deployment/edg-local-replica-catalog//

/afs/cern.ch/project/grid/wp2/oracle-deployment/edg-replica-metadata-catalog//

For version 2.0.2 you can just run these commands:

```
scp @lxplus☞:/afs/cern.ch/project/grid/wp2/oracle-deployment/edg-local-replica-catalog/2.0.2/*.war .
```

```
scp @lxplus☞:/afs/cern.ch/project/grid/wp2/oracle-deployment/edg-replica-metadata-catalog/2.0.2/*.war . 2.  
Deploy the applications
```

To deploy the applications run the following commands:

```
dcmctl deployApplication -file ./edg-local-replica-catalog-2.0.2.war -a edg-local-replica-catalog -co cms -rc  
/edg-replica-location -d -v
```

```
dcmctl deployApplication -file ./edg-replica-metadata-catalog-2.0.2.war -a edg-replica-metadata-catalog -co  
cms -rc /edg-replica-metadata-catalog -d -v 3. To start or restart the container now just do:
```

to start:

```
dcmctl start -co cms
```

to restart:

```
dcmctl restart -co cms
```

to start the http server:

```
dcmctl start -ct ohs 4. Validation
```

To validate and check if everything went well, go to the URLs and ping the services:

```
http://cern.ch:7777/edg-replica-location/
```

```
http://cern.ch:7777/edg-replica-metadata-catalog/
```

Retrieve backup data from TSM for RLS

This page describes the necessary steps to retrieve files required for a restore and recovery of the RLS1 database from TSM tape storage. At the moment, archived files must be first retrieved from TSM tape storage.

These steps should be executed as 'orapdm' on the PDB backup server, pdb-backup1, which currently is an alias to lxshare077d. Create temporary directories for the retrieval:

```
Create a temporary directory to stage in files from TSM to pdb-backup1 if one does not already exist: > sudo  
mkdir /data/pdb-backup1/restore/rls1 > sudo mkdir /data/pdb-backup1/restore/rls1/archivelogs
```

Copy the archive logs to the retrieval directory:

```
> cd /data/pdb-backup1/rls1/archivelogs > sudo -s > tar cvf - * | (cd /backup/restore/rls1/archivelogs/; tar xvf  
-) >exit
```

Retrieve the data:

Startup the Tivoli Storage Manager and locate the file space name that you need to retrieve, i.e.

```
/data/pdb-backup1: sudo /usr/bin/dsmc tsm> query filespace tsm> query archive "/data/pdb-backup1/rls1/*"  
-subdir=yes
```

Retrieve the data. The time taken to mount the required media may be long tsm> retrieve

```
"/data/pdb-backup1/rls1/*" /data/pdbbackup1/restore/rls1/ -subdir=yes
```

This topic: PSSGroup > CheckOracleIAS

Topic revision: r3 - 2005-12-07 - unknown



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