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# Storage Element (SE) name change

In case the FQDN of a SE changes, some entries need to be modified in the LFC databases.

## Oracle LFC

In this section you describe how to the update with an Oracle LFC.

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### Case 1 : a few entries need to be updated (<100, 000 rows)

#### Presentation of the script

This is taken care of automatically by the PL/SQL script `update_sfn_path.sql`.

It is not yet included in any LFC RPM, but can be found in the gLite CVS repository [☞](#) :

- under LCG-DM/script/change-se-name

This script is composed of two functions:

- **update\_host\_name** (`host_to_replace varchar2, host_name_replacing varchar2`) which allows replacing the `Cns_file_replica.host` column = `host_to_replace` with `host_name_replacing`;
  - **update\_sfn** (`sfn_prefix_to_replace varchar2, sfn_prefix_replacing varchar2, host_cond varchar2` default NULL) which allows replacing the `Cns_file_replica.sfn` column starts with `sfn_prefix_to_replace` with `sfn_prefix_replacing`. An extra condition must be given is the host entry.
- 

#### Installation of the script (to do only the first time)

As it is a PL/SQL script, it needs to be compiled on the DB. To do so, launch a `sqlplus` command line and connect to the DB. Then type, `@<path_to_plsql_script>/update_sfn_path.sql`.

#### Example of usage

##### Updating the host name

To change the host `lxb5409.cern.ch` to `lxn1177.cern.ch`, you need to do as follows:

```
sqlplus> set serveroutput on;
sqlplus> variable rescode varchar2(1000);
sqlplus> exec :rescode:=update_host_name('lxb5409.cern.ch','lxn1177.cern.ch');
sqlplus>print rescode;
```

The script should return `rescode=SUCCESSFUL_UPDATE` if the update has been done correctly.

##### Updating the sfn entries

There are two possible scenarii:

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- I want to replace all the sfns which **start with**  
srm://sc.cr.cnaf.infn.it/castor/cnaf.infn.it/grid/lcg/atlas/datafile with  
srm://storm-fe.cr.cnaf.infn.it/atlas/datafiles/. You need to use the script as follows:

```
sqlplus> set serveroutput on;
sqlplus> variable rescode varchar2(1000);
sqlplus> exec :rescode:=update_sfn('srm://sc.cr.cnaf.infn.it/castor/cnaf.infn.it/grid/lcg/
sqlplus>print rescode;
```

The script should return rescode=SUCCESSFUL\_UPDATE if the update has been done correctly.

- I want to replace all the sfns which **start with**  
srm://sc.cr.cnaf.infn.it/castor/cnaf.infn.it/grid/lcg/atlas/datafile with  
srm://storm-fe.cr.cnaf.infn.it/atlas/datafiles/ **AND** which are located on host='DCTAPE\_00'

You need to use the script as follows:

```
sqlplus> set serveroutput on;
sqlplus> variable rescode varchar2(1000);
sqlplus> exec :rescode:=update_sfn('srm://sc.cr.cnaf.infn.it/castor/cnaf.infn.it/grid/lcg/atlas/d
sqlplus>print rescode;
```

The script should return rescode=SUCCESSFUL\_UPDATE if the update has been done correctly.

**Note:** in the two previous scenari, if you have already registered your new sfn, the script deletes the entry with the old sfn.

## Case 2 : many rows need to be updated

In that case, you should schedule a **downtime for your LFC. The LFC daemon should be stopped.** To update the host name in the sfn field (we take the same example as in the previous section), do as follows (order is important).

```
>alter table Cns_file_replica drop constraint pk_repl_sfn;
>lock table cns_file_replica in exclusive mode nowait;
>delete from Cns_file_replica where sfn like 'srm://sc.cr.cnaf.infn.it/castor/cnaf.infn.it/grid/l
>commit;
>lock table cns_file_replica in exclusive mode nowait;
>update cns_file_replica set sfn=replace(sfn,'srm://sc.cr.cnaf.infn.it/castor/cnaf.infn.it/grid/l
>commit;
>alter table cns_file_replica add constraint pk_repl_sfn primary key(sfn);
```

**Note** it may happen that the constraint does not exist, then you should do drop index repl\_sfn and then recreate the constraint as primary key and not as an index. Then you can restart your LFC.

## MySQL LFC

If you have a MySQL LFC, you can do as follows:

```
mysql> use cns_db
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

Database changed

```
mysql> update Cns_file_replica set sfn = replace(sfn,'sfn://se01.cern.ch/old/path/', 'srm://new-se
Query OK, 38 rows affected (0.01 sec)
Rows matched: 2107 Changed: 38 Warnings: 0
```

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```
mysql> update Cns_file_replica set host = replace(host, 'se01.cern.ch', 'new-se01.cern.ch');
Query OK, 38 rows affected (0.01 sec)
Rows matched: 2107  Changed: 38  Warnings: 0
```

If you have millions of entries then you need to limit the number of rows to update via limit and retype the command until you see **0 rows affected**

```
mysql> use cns_db
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

Database changed

```
mysql> update Cns_file_replica set sfn = replace(sfn, 'sfn://se01.cern.ch/old/path/', 'srm://new-se01.cern.ch/old/path/');
Query OK, 1000 rows affected (0.01 sec)
Rows matched: 32000  Changed: 1000  Warnings: 0
```

```
mysql> update Cns_file_replica set sfn = replace(sfn, 'sfn://se01.cern.ch/old/path/', 'srm://new-se01.cern.ch/old/path/');
Query OK, 1000 rows affected (0.01 sec)
Rows matched: 32000  Changed: 1000  Warnings: 0
```

```
mysql> update Cns_file_replica set sfn = replace(sfn, 'sfn://se01.cern.ch/old/path/', 'srm://new-se01.cern.ch/old/path/');
Query OK, 0 rows affected (0.01 sec)
Rows matched: 32000  Changed: 1000  Warnings: 0
```

**WARNING:** if the new files have already been registered in the LFC, you will get a unique violated constraint, to circumvent it, you need to delete the old entries first and then run the update command.

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## Checks that you can perform afterwards

- You can rerun the script and check that no entries have been left out. you should of course get that there are no entries to update
- You can connect directly to the database and check that the HOST field of the main table returns the correct entry (same remark for the sfn column).

```
select count(*) from Cns_file_replica where HOST='oldSE.cern.ch';
```

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## Troubleshooting

In case the script complains about NLS\_XXXX parameters, just unset all the NLS\_XXXX environment variables before running the script :

```
unset NLS_LANG
unset ORA_NLS33
unset NLS_DATE_FORMAT
```

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## Help !

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In case of problems, contact [helpdesk@ggusNOSPAMPLEASE.org](mailto:helpdesk@ggusNOSPAMPLEASE.org) (remove the NOSPAM !): your ROC will help you and contact the appropriate experts if needed.

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-- SophieLemaitre - 06 Jul 2006

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