Service definition for CERN devdb11
(CERN development service for Oracle 11gR2)

Version 0.9, August 12th 2011

Definition

The devdb11 service aims at providing a general purpose development platform for Oracle 11g release 2. It will not be able to fulfill high performance service nor high availability service. As its name indicates, it shall only be used for development, tests (including performance tests) should be done on another service, and full data tests shall be done on an integration service.

It will be supported during CERN working hours with a best effort basis support for outside of the working hour time.

Lifetime and service evolution

The devdb11 service starts in August 2011. It will follow closely the patchsets and patches made available by Oracle. It will have a major upgrade as soon as Oracle11gR2 newer patchsets will be made available. After the migration of most database services to 11gR2 (in 2012), the devdb10 service will be stopped.

Integration with the Oracle infrastructure

The devdb11 service will be listed in the list of database services offered by the IT department. Its SQL*Net (Oracle network protocol) definition are included in the standard sources (AFS and DFS tnsnames.ora).

Available space

Users of the service will be granted by default a 50MB quota on their default tablespace (which means that one does not need to specify the tablespace clause for the segments). We will be able to create the account with a higher quota or increase the quota for the users, the maximum quota will be 2GB. The database administrators will follow closely the growth rate, it could happen that due to an important number of requests, we will not be able to fulfill all space requests up to the requested quota.

For a short period of time (maximum two months), a separate tablespace can be made available. After the agreed period, the system will drop the tablespace with the data included.

Options / Tools

The database system will be made with the standard features: Oracle Enterprise Edition with partitioning, object, Java, Oracle Text (formerly called Intermedia Text). Other option can be made available on request.

All typical database tools will be provided on devdb11, this includes the “Session Manager”, the access to user trace files. Other tool can be made available on request (ViewDB).

Performance test on devdb11

As the service is a shared public service, we should like to stress from the beginning that absolute performance tests or comparison with other database can not be done (the impact of the other users can not be controlled).

At the same time, it is clear that, unless system parameters are changed at the database instance level -which will be announced-, relative performance comparison which do not include the time or state of the IOs can be done. For example, the comparison of the sum of disk + logical IOs can be done for several ways of writing a statement, in this example of IOs, the comparison will very likely be actually valid to another database instance or database version.

Guarantee on the data

The data stored on the devdb11 service will be protected by archive logging, physical and logical backups. At the system level, the data is protected with redundant storage,

In the case of error (table deletion, delete / update statement), users will be encouraged to use as much as possible the “flashback” technology to retrieve themselves the data without the intervention of the database administrator.

Guarantee on the service

The IT database team will make all of its possible to achieve continuous availability for the devdb11 service during the CERN working hours (8h30-12h30 and 13h30-17h30). Changes at the system and database instance levels will be performed outside of the CERN working hours.

During the extended working hours (8h – 19h), all will be made to fix any problem, the database administrator being likely onsite.

Outside of the working hours (including week-ends), the computer center operators will be able to contact the database administrators to report problems, on a best effort basis (and with lower priority than any incident on the production systems), the database administrators will try fixing the problems.

The database administrators reserve the right to apply patches with advance notification:

- 2 working days for standard patches, re-organization –intervention up to 5 hours, if possible outside of the working hours-
- 1 working day for security patches (down to one hour for urgent security patches if any) – intervention up to 2 hours, if the security level permits it, it will be performed outside of the working hours-.

It may be needed to do a major re-organization of the devdb11 service (like a move to another machine or an operating system major upgrade), it will be announced one week in advance.

Announces related to devdb11

The major announces related to devdb11 will be done on the cern-oracle@cern.ch mailing list. The small intervention announcement will be made to the mailing list of the users of devdb11.

How to request an account

We are integrating databases in the CERN account management system (https://cern.ch/account/) from where requests can be made

- for database account creation,
- for database account re-assignment to another person,
- for database account removal and
- for database account password change

Documentation and steps to be followed are available in the following knowledge base: https://cern.service-now.com/service-portal/article.do?n=KB0000829 (http://cern.ch/go/6vSt as shorter URL).

- If you are creating an account for a project which will need a number of accounts, please create login names like '<projectname>_XXXX': for example ‘project_subproject_admin' or 'project_subproject_user'.
- For personal accounts please do not use '_' (underscore) in the login name, we suggest that you use your CERN account name (NICE, AIS, email, etc.).

Connection from JAVA JDBC thin client

We recommend using the list of databases from the AFS/DFS distributed tnsnames.ora file, but in case you need to use the explicit connection description, it is the following:

(DESCRIPTION= (ADDRESS= (PROTOCOL=TCP) (HOST=oradev11.cern.ch) (PORT=10121)) (ENABLE=BROKEN) (CONNECT_DATA= (SID=DEVDB11)))