

5 BUILD Standards

This section describes naming standards for objects that will be encountered or defined in the “Build” phase of application development. These objects are primarily database objects therefore the naming of these objects was developed with the cooperation of the DCII Engineering System Support Database Administrators (DBAs). They must approve any deviations from these standards.

5.1 Tablespaces

5.1.1 Naming Convention

5.1.1.1 Tablespace Names

BLD-01 Name tablespaces using the following convention:

<schema_prefix>_<DATA or INDX>_<nn>.

Refer to Appendix B for schema prefix names.

The “nn” is used when multiple tablespaces are needed for each type of tablespace. The “nn” represents a two-digit number starting with 01.

BLD-02 Oracle RDBMS standard tablespace names are defined according to the Optimal Flexible Architecture Standard (OFA-9). This means that you will have at least the following tablespaces:

- SYSTEM data dictionary segments only
- TEMP temporary segments only
- RBS rollback segments only
- TOOLS general-purpose tools only
- USERS default tablespace for users with resource privilege

These are named during a standard Oracle installation and should not be changed.

5.1.1.2 Tablespace for a Single Table

BLD-03 In a very large database (VLDB), such as a data warehouse, it may be necessary to assign certain tables to their own tablespace. This is a decision that must be made by the DBA.

5.1.1.3 Tablespaces for a Single Index

BLD-04 It may be necessary to create a tablespace for a very large index. This is a decision made by the DBA. This is the only case where the data and index names will not exactly match.

5.1.2 Definition

5.1.2.1 Tablespace

BLD-05 Define at least one data tablespace and one index tablespace for each application system.

BLD-06 Define the name of the database where this tablespace is to reside.

BLD-07 The data and associated indexes should be in corresponding tablespaces. That is, if TAB1 is in tablespace DCD_DATA_05, then the indexes for TAB1 will be in tablespace DCD_INDX_05.

BLD-08 In the server model, the applications must declare the tablespace to use for Tables and Indexes. No other storage parameters beside tablespace name should be defined, including percent free and percent used.

5.2 Datafiles

5.2.1 Naming Convention

BLD-09 Tablespace can contain anywhere from 1 to many data files. The names for the data files will reflect the tablespace name, an incremented number, and the database file extension (.dbf or .ora). Name datafile names using the convention:

<tablespace name>_<nn>.dbf

Where <nn> is an integer, starting from 01.

Example:

Tablespace name = DCD_DATA_01

Number of data files = 3

Data file names:

dcd_data_01_01.dbf

dcd_data_01_02.dbf

dcd_data_01_03.dbf

5.3 Rollback Segments

5.3.1 Naming Convention

BLD-10 Name rollback segments using the convention:

RBS<nn>_<optional size>

Where:

<nn> is a sequentially increasing integer, starting at 01

<optional size> optionally designates SM (small), ME (medium), LA (large), or VL (very large)

Examples:

RBS01	Standard rollback segment
RBS02	Standard rollback segment
RBS01_LA	Large rollback segment

5.4 Cluster

5.4.1 Naming Convention

5.4.1.1 Cluster

BLD-11 Name clusters using the convention:

<application_prefix>_<table alias>_<table alias>

where the table aliases are for the tables involved in the cluster.

Application prefixes are listed in Appendix B.

5.4.1.2 Cluster Index

BLD-12 Name a cluster index using the convention:

<cluster_name>_INDX

5.4.2 Definition

5.4.2.1 Create Cluster statements

BLD-13 Do not specify PCTFREE and PCTUSED in all the CREATE CLUSTER statements.

BLD-14 Include the TABLESPACE clause in the CREATE CLUSTER statement of each cluster.

BLD-15 Do not deviate from the default value for Init Trans, unless you predict that the cluster will form a “hot spot”, requiring many users to update a cluster page simultaneously. Document any deviation from the default value in the Description belonging to the cluster definition using the keyword INIT TRANS.

BLD-16 Do not deviate from the default value for Max Transactions.

BLD-17 Define the name of the database where this cluster is to reside.

BLD-18 Assign a tablespace to each cluster, based on the amount of changes made to a cluster. Put relatively static clusters together in a tablespace with relatively static tables, and relatively dynamic clusters together in a tablespace with relatively dynamic tables.

5.4.2.2 Cluster Columns

BLD-19 If concatenated columns to be included in the cluster index are already indexed by, for example, a primary key index, make sure that the cluster index will get priority over other (unique) indexes by changing the column sequence of the other indexes. Document any design decisions in the Description using the keyword COLUMN SEQUENCE.

5.4.2.3 Cluster Index

- BLD-20 Make the value of Init Trans for the cluster index identical to the value specified for the cluster. Document any deviation in the Description belonging to the cluster definition using the keyword CLUSTER INDEX INIT TRANS.
- BLD-21 Make the value of Max Trans for the cluster index identical to the value specified for the cluster. Document any deviation in the Description belonging to the cluster definition using the keyword CLUSTER INDEX MAX TRANS.
- BLD-22 Avoid row chaining by leaving enough room for updates to rows. If necessary, consider the pattern of update, which may require examination of the function matrices. Document any design decisions in the Description belonging to the index definition using the keyword FREE SPACE.
- BLD-23 Each object consuming space in the database must have a storage definition assigned to it.
- BLD-24 Each object consuming space in the database must have a tablespace assigned to it.

5.5 Snapshots

BLD-25 There are two kinds of snapshots that can be defined in Designer: simple and complex. Name simple snapshots (ones accessing only one table) using the convention:

SS_<table name>

Where 'SS' represents 'snapshot' and the table name is the name of the table or view the snapshot is based on.

Example:

SS_ORG is a snapshot of the ORG table

BLD-26 Snapshots defined in Oracle Replication Manager are named using the convention:

<schema>.<table name>

BLD-27 The maximum length for a snapshot name will be 26, except for Oracle Replication Manager where snapshots are limited to 19. Snapshot names must be singular just like tables.

BLD-28 Name Complex snapshots using the convention:

SS_<table name>_<criteria>

The criteria qualifier should give the end users a clear idea of the purpose and contents of the snapshot. Use the criteria qualifier if:

- Using the table name alone is not unique
- The snapshot is based on a join of 2 or more tables
- The snapshot contains a where clause
- The snapshot is unusually complex
- The snapshot is a summary

Examples:

SS_DC_ORG_ACTIVE provides information on only active ORGs.

SS_DC_ORG_DC_PERS is a snapshot joining the DC_ORG table and the DC_PERS table.

5.6 Users

5.6.1 Naming Convention

BLD-29 Name interface or application oracle usernames using the convention:

<application prefix>_<descriptor>

Example:

CEFT_ADMIN

Application prefixes are listed in Appendix B.

5.6.2 Definition

BLD-30 Create only internal or system administration Users to be used by programs. Do not create definitions for end users.

5.7 Roles

5.7.1 Naming Convention

BLD-31 Name Application specific roles using the convention:

<application prefix>_<access level>

The access levels must be determined by the Functional Project Officer and Technical Project Officer.

Examples of access levels might be ADMIN, USER, and REPORT. So examples of role names might be:

- FICS_ADMIN
- FICS_ANALYSIS
- SGL_SUPERVISOR

5.7.2 Definition

BLD-32 Every application must have at least one role defined for the application system.

BLD-33 No role will have any sub-roles. All roles are directly granted to a user.

5.8 Profile

5.8.1 Naming Convention

BLD-34 Profile names should describe the interaction of the ORACLE user with the database. The DBA and the Technical Project Officer should determine profile definitions together.

Some recommended profile names are:

USER Profile for end users. May be broken into multiple profiles if application warrants different resource limits for different types of users.

SUPPORT Profile for developers supporting the application.

DBA Profile for DBAs.

If the profile is application specific, then it should be prefixed with the application prefix.

Example:

SGL_USER

5.9 Synonyms

5.9.1 Naming Convention

BLD-35 Name Synonyms using the convention:

<object name>

Synonyms, whether public or private, should always match the underlying object that the synonym is referencing.

5.10 Control File

5.10.1 Naming Convention

BLD-36 The convention for a control file name is:

Control file = CTL<n><SID>.ora

Where <n> is an integer, starting from 1 and <SID> is the database instance name.

Examples:

CTL1SINADEV1.ORA

CTL2SINADEV1.ORA

5.11 Database Links

5.11.1 Naming Convention

BLD-37 A database link should be the same as the name of the remote database to which it points. Name database links using the convention:

<remote database>

Where:

<remote database> is the name of the remote database

Example:

DCDPROD1

DPPSREPL1

5.12 Schema

5.12.1 Naming Convention

BLD-38 Name schema account names using the convention:

<application prefix>_<“OWN”, “PROC” or “STG”>

Application Schema account names will contain the application prefix and a “_OWN”, “_PROC” or “_STG” prefix.

Application prefixes are listed in Appendix B.

5.12.2 Definition

BLD-39 At least one schema must be defined in the application system.