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TECHNICAL NOTICE

INSTALLING CS TO SHARE AN ORACLE DATABASE ENGINE WITH IS

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For updates to any Content Services (CS) documentation, choose the Documentation link on the FileNET Worldwide Support web site <http://www.css.filenet.com/>, and navigate to the current CS release for your platform. If you do not have a customer support services (CSS) Web Account, click the New User button and follow the online instructions.

Overview

Many sites will install user interfaces (such as IDM Desktop) on client PCs so that users can access both Image Services (IS) and Content Services (CS) library systems. Some sites may want a CS library system to use the database engine already being used by an existing IS library system. This technical notice describes what to do *before* you set up the initial components of a CS library system on the same server and database engine used by an existing IS system.

The procedure described in this technical notice requires you to:

- Back up your existing stored data (for IS and other applications using any associated *site-controlled* Oracle engine).

WARNING The multistep procedure in this document is high-risk. Failure to perform prior backups may result in loss of data or system integrity.

- Use the Oracle backup utility to export the IS database.
- Rebuild the master database with the network configurations, character set, and sort order specified by the CS software requirements.

CAUTION If other applications besides IS are using a particular *site-controlled* Oracle engine, be sure they can accommodate the settings indicated in the following topic, [“Requirements and Restrictions”](#) (e.g., for sort order).

- Retrieve that exported data and import it into the rebuilt database.

Requirements and Restrictions

There are several major issues to consider when IS and CS share the same Oracle database engine:

- For CS and IS to share an Oracle database on the same Windows platform currently requires a **Windows 2000 operating system**. See the [“Supported Configurations under Oracle”](#) topic for details.

- CS library systems run in a *case-insensitive* database environment (i.e., **Dictionary order, case-insensitive, accent-insensitive sort order**). These library systems consider uppercase and lowercase characters in property values (known as *indexes* to IS users) to be identical. On the other hand, IS, by default, installs into a database configured to be *case-sensitive* for indexes.

Therefore, you must analyze your current working environment and decide whether you can adapt your currently stored data (for IS or any other applications that are sharing the Oracle Server engine) to a *case-insensitive* model. If not, you will have to install CS on a dedicated Oracle database engine and retain your existing database engine(s) for the existing IS systems.

- In English and Latin-1 language environments, new CS library systems run best on the WE8ISO8859P1 character set. If you have Image Services already installed, you will likely have to reinstall the Oracle database to reset it to this character set.
- In IS (using `fn_edit`) you must, at a minimum, accommodate CS requirements for the following settings (CS typically uses the Oracle Server defaults, as indicated here):
 - **User Connections (20)**
 - **Open Objects (500)**
 - **Recovery Interval (5)**
- You can set up IS to run with a *FileNET-controlled* or *site-controlled* SQL Server engine. We recommend, however, that you set up **IS in site-controlled mode** so you have independent control over the database instances for IS and CS. If you run in FileNET-controlled mode, whenever you shut down or restart Image Services, the same action will occur to the CS library systems; this may be disruptive to your users, their client applications, and general CS processes.

Supported Configurations under Oracle

You can install Content Services 5.2.0 and Image Services 3.6.0 to share an Oracle database engine, using the following operating system and database software:

Operating Systems:

- Microsoft Windows 2000 Server with Service Pack 2
- Microsoft Windows 2000 Advanced Server with Service Pack 2
- HP-UX 11.00 with latest General Release Patches
- Sun Solaris 8 (32-bit or 64-bit) with latest Recommended Patch Cluster
- IBM AIX 4.3.2 with latest patches

Database:

- Oracle8i Release 3 (8.1.7) Enterprise Edition with Oracle server patch 8.1.7.2.1 for Windows NT/2000
- Oracle8i Release 3 (8.1.7) for HP 9000 Series HP-UX
- Oracle8i Release 3 (8.1.7) for Sun SPARC Solaris

The following considerations and abbreviations apply to the tested and/or supported configurations (see below) of Content Services (CS) and Image Services (IS):

- CS and IS may be installed on the same machine or on different machines.
- If CS and IS are installed on different machines, each must be running the same operating system.
- "local" means that the database engine is installed on a machine where at least one of CS or IS is installed.
- "remote" means that the database engine is installed on a machine where neither CS nor IS is installed
- "Win2K" means Microsoft Windows 2000 Server or Microsoft Windows 2000 Advanced Server with Service Pack 2
- "HP-UX" means HP-UX 11.00 with General Release Patches
- "Solaris" means Sun Solaris 8 with latest Recommended Patch Cluster
- "AIX" means AIX 4.3.2 with latest patches

- "Oracle" means Oracle8i Release 3 (8.1.7) Enterprise Edition with patch 8.1.7.2.1

Supported and Tested Configurations

- CS and IS on Win2K with remote Solaris Oracle database
- CS and IS on HP-UX with local Oracle database

Supported (But Not Tested) Configurations

- CS and IS on Win2K with local Oracle database
- CS and IS on Win2K with remote Win2K Oracle database
- CS and IS on Win2K with remote HP-UX Oracle database
- CS and IS on Win2K with remote AIX Oracle database
- CS and IS on HP-UX with remote HP-UX Oracle database
- CS and IS on Solaris with local Oracle database
- CS and IS on Solaris with remote Solaris Oracle database

Procedure

➔ To install CS to share a database engine with an existing IS system:

1. Back up the IS database, as well as any databases used by other applications that are sharing the *site-controlled* Oracle engine.

WARNING The multistep procedure that follows is high-risk. Failure to perform database backups may result in loss of data or system integrity.

2. Write down the record count for each IS database table, and also note a few of the actual records so that you can check them at the end of the following procedure prior to installing CS. To access the IS database tables, do the following:
 - a. Connect to the database as the INTERNAL user:

```
svrmgrl  
connect internal
```

- b. Create the views and tables required by the Export utility:

```
@%ORACLE_HOME%\rdbms\admin\catexp.sql
```

- c. Determine the number of documents in the database:

```
select count(*) from f_sw.doctaba;
```

Record the number of documents so you can determine later that none are lost.

- d. Disconnect from the database and exit from Server Manager:

```
disconnect  
exit
```

3. Analyze *all* indexes (property values) in every table in the entire IS database (not just the index database) and modify them if necessary to ensure unique names in a case-insensitive environment. This will also affect any other applications that might be sharing the Oracle database engine.

Here are some simple queries you can run on each IS table to return a list of associated values. For the key index of each table, use the column name.

```
Select f_docclassname from f_sw.document_class  
order by f_docclassname
```

```
Select f_indexname from f_sw.user_index order by  
f_indexname
```

CAUTION This step is critical. If you do not resolve duplicate indexes (for example, you cannot allow the same value to be repeated, one in uppercase and one in lowercase), the following may occur:

- associated IS tables may be dropped altogether
- your database will not be imported as expected
- your database will not be recoverable in the rebuilt database

- associated applications, such as COLD, may be adversely affected, and you may not be immediately aware of it

Therefore, be sure to check for errors, as documented later in the procedure, before you proceed with the CS installation.

4. Export the database using the Oracle Export utility, as follows:
 - a. Log on to the database as the database administrator and run the Export utility to export the database:

```
exp f_maint\f_maint file=ora_exp.out full=y  
log=or_exp.log
```

ora_exp.out is the name of the file to which the contents of the database are to be exported.

ora_exp.log is the name of the export error log.

full=y specifies that the entire database is to be exported.

Note If the `exp` command doesn't fit on one line, type a space followed by a backslash (\) as the last character on each line (except the last) before pressing Enter.

- b. The Export utility may run for quite a while. When it is finished, check the **ora_exp.log** file for errors.
5. In the Services control panel, stop the services for Image Services and then the services for Oracle.
6. Reinstall Oracle Server, specifying the WE8ISO8859P1 database character set.
7. Re-create the FileNET IS database (*fnsys*, for example).
8. Initialize the IS database by running *fn_util initrdb* using the command line in DOS.
9. Import the database using the **imp_fn** utility on the Oracle server, as follows:
 - a. Edit the **imp_fn** script on the Oracle server so that each import command points to the full path and file name of the export file **ora_exp.out** on the Oracle server.

- b. As the Oracle user, change directory to the location of the **imp_fn** script and import the Oracle data by typing `imp_fn` at the command prompt. The import may run for quite a while, depending on the size of the database.
- c. After the import finishes, verify that the number of records imported is the same as the number of records exported in step 6. To do this, as the Oracle user, enter the following commands at the command prompt:

```
svrmgrl
connect internal
select count (*) from f_sw.doctaba;
exit
```

10. (IS *FileNET-controlled* systems only) Set the memory and user connections for Oracle Server to accommodate the CS library system you intend to install, as follows.
 - a. From the Start menu on your IS server, choose Run.
 - b. In the Open field, browse to find the IS System Configuration Editor (**fn_edit**) and click OK.
 - c. Click OK in the Open Configuration Database dialog box.
 - d. Select the Relational Databases tab in the FileNET Image Services System Configuration Editor dialog box.
 - e. Select the Oracle tab.

NOTE For details on what CS requires concerning the following three substeps, refer to “Preparing a Windows Oracle Database” in the “Prerequisites to Installing Content Services” topic of the Content Services *Installation Guide*.

- f. Locate the Memory parameter for the particular database server and modify to the desired value.
- g. Locate the User Connections parameter for the particular database server and modify to the desired value (minimum of 20 for CS).
- h. Locate the Recovery Interval parameter for the particular database server and modify to the desired value (minimum of 5 for CS).
- i. From the File menu choose Exit.

- j. Click Yes when prompted to save your changes.
- 11. Restart the IS library system.
- 12. Check that the record counts and information you wrote down in [step 2 on page 5](#) still match the IS database tables.
- 13. You may now create the database for, and install, a CS library system on the Oracle engine. See the CS server documentation for details.