



Agile e6.0.2

Installation Manual for Oracle 10g for Agile e6.0.2 on Windows

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Chapter 1 Introduction

This guide describes how to install Oracle 10g and adapt the Oracle database for the use with Agile e6, running under Windows 2000/XP/2003.

Where to Go for More Information

For additional information, consult the Oracle online installation and administration documentation, which is available on the Oracle DVD, or Agile e6 DVD in the folder Oracle_Win\db\doc. The Oracle Documentation Library, which contains information about Oracle databases, is available on a separate Oracle documentation CD, or on the Agile e6 DVD in the folder Oracle_Win\doc.

For information on installing Oracle 10g and Agile e6 at the same time refer to the document *Installing the Agile e6 on Windows Server* (PLM602_WindowsServer.pdf).

Note:The Agile e6 installation guides are available in the doc directory on the product
DVD. To view Adobe® Portable Document Format (PDF) files, use Adobe
Acrobat Reader® software, which is available at no charge at www.adobe.com.

Chapter 2 Installing Oracle 10g

This chapter provides instructions for installing the Oracle 10gR2 Server for use with Agile e6.

Starting the Oracle Server Installation

1. Insert the Oracle media and start ...\database\setup.exe. Select Advanced Installation.

If you are using the Agile e6 DVD, start setup.exe in the folder Oracle_Win\database.

2. Click Next to continue.

Choose the Custom installation and click Next.

oracle Universal Inst	aller: Select Installation Ty	pe		_ 🗆 🗙
Select Instal	ation Type			
Oracle Databas	e 10g 10.2.0.1.0			
What type of instal	lation do you want?			
C Enterprise Editio	n (631MB)			
Oracle Database 10g B scalability, performanc applications.	interprise Edition, the first datab e, high availability and security f	ase designed for th eatures required to	he grid, is a self-ma o run the most dem	anaging database that has the anding, mission critical
C Standard Edition	(630MB)			
Oracle Database 10g S looking for a lower-cos	Standard Edition is ideal for work st offering.	groups, departmer	nts and small-to-me	dium sized businesses
C Personal Edition	(631MB)			
Supports single user d Oracle Standard Edition	evelopment and deployment that n 10g.	require full compa	atibility with Oracle	Enterprise Edition 10g and
© Custom				
Enables you to choose	individual components to install			
				Product Languages)

The window for defining the ORACLE_HOME name and path is opened.

3. Enter the full path of your Oracle home directory and click Next.



The next window lets you select the components to be installed.

4. Select the components you want to install and click Next.

	New Install
☑ Oracle Database 10g 10.2.0.1.0	New Install
Oracle Enterprise Manager Console DB 10.2.0.1.0	New Install
⊕ ☐ Enterprise Edition Options 10.2.0.1.0	Not Installed
⊕ 🗹 Oracle Net Services 10.2.0.1.0	New Install
☑ Oracle Call Interface (OCI) 10.2.0.1.0	New Install
□ Oracle Programmer 10.2.0.1.0	Not Installed
□ Oracle XML Development Kit 10.2.0.1.0	Not Installed
⊕ ☐ Oracle Windows Interfaces 10.2.0.1.0	Not Installed
. □ iSQL*Plus 10.2.0.1.0	Not Installed

The Installer verifies that your environment meets all of the minimum requirements for 10gR2 installing and configuring. The overall result of the check must be 'Passed'. If some checks have failed, cancel the installation and verify once again if your system satisfies hardware and software requirements. Then start the installation again.

Product-Specific Prerequisite Che	ecks	
he Installer verifies that your environment meets all of th onfiguring the products that you have chosen to install. Y re flagged with warnings and tems that require manual hecks, click the item and review the details in the box at i	e minimum requirements f ′ou must manually verify an checks. For details about p the bottom of the window.	or installing and d confirm the items th performing these
Check	Type	Status
Checking for proper system clean-up	Automatic	Succeeded
Checking for Oracle Home incompatibilities	Automatic	Succeeded
		D
		Retry Stop
O requirements to be verified.		
		-
Actual Result: NEW_HOME Dheck complete. The overall result of this check is: Pass	:ea	

5. In the Create Database window, select Install database Software only as you will create the database later. Click Next.



6. Review the options you have chosen in the **Summary** window.

If necessary, click **Back** to make changes.

Gracle Universal Installer: Summary	
Summary Oracle Database 10g 10.2.0.1.0	
-Source: D:\database\stage\products.xml	
-Oracle Home: C:toraclet10.2 (ORA102)	
Installation Type: Custom	
-Product Languages	
English	
Space Requirements	
C:\ Required 658MB (includes 44MB temporary) : Available 5.62GB	
-New Installations (97 products)	
Agent Required Support Files 10.2.0.1.0	
Assistant Common Files 10.2.0.1.0	
-Bali Share 1.1.18.0.0	
Buildtools Common Files 10.2.0.1.0	
Obereater Det Misretian Litility 10.3.0.1.0	
Help Installed Products Back Next Install Can	el
ORACLE	

If the options are correct, click Install to start the installation.
 Oracle 10g will be installed. This may take some time.



8. Click **Exit** to leave the Oracle Installer.

Installing Patches

The Oracle 10.2.0.2 patch has to be applied on the 10.2.0.1 ORACLE_HOME, the installation you did in the previous steps.

You have to run the setup.exe from the Oracle Patch after you have installed the Oracle Server Software from the original Oracle CDs or DVDs.

If you are using the Agile e6 DVD, start setup.exe in the folder Oracle_Patch_Win.

If you are using the Agile Oracle Patch DVD, start setup.exe in the folder patch\WINNT.

Make sure all Oracle 10g services are stopped before you start the setup.

1. Select **Installed Products** on Welcome screen to review already installed Oracle software components.

oracle Univer	sal Installer: Welcome
Welcom	e
The Oracle Oracle prod	Universal Installer guides you through the installation and configuration of your ucts.
Click "Install	ed Products" to see all installed products.
	Deinstall Products
	About Qracle Universal Installer
Help	Installed Products Back Next Install Cancel

2. If the list is correct, click Next.



3. Review if the Oracle Home name and path are the same as in your previous Oracle 10g installation and click **Next**.



- 4. Review the list of available components and click **Install** to start the Installation. This may take a while.
- 5. After successful installation, click Exit to leave the Oracle Universal Installer.

If possible, create the database **after** you have installed the patches. If the database was created before the patches were installed the data dictionary has to be recreated.

Note: Refer also to the patch readme file for additional information.

Follow these steps only if you have installed the patch after the database (10.2.0.1) creation!

- **1.** Backup the database !!! (OS Backup is recommended).
- 2. Startup the Oracle listener with lsnrctl start.
- **3.** Startup OracleServicePLM60 service from Services (in folder Control Panel->Administrative Tools->Services).
- 4. Log in as sysdba using SQL*Plus sqlplus /nolog.
- 5. Connect sys/oracle@plm60 as sysdba.
- 6. Startup database in migrate mode startup upgrade.
- **7.** Enable spool **spool patch.log**.
- **8.** Run script catupgrd.sql.

@{ORACLE_HOME}\rdbms\admin\catupgrd.sql.

- **9.** Disable spooling **spool off.**
- **10.** Review the log file patch.log for errors.
- 11. Shutdown database by shutdown immediate and start it for normal operation by startup.
- **12.** Run the script **utlrp.sql** to recompile invalid PL/SQL packages.

@{ORACLE_HOME}\rdbms\admin\utlrp.sql

Note: Substitute {ORACLE_HOME} with the path of your Oracle home directory.

Installing the Database

The database will be created by using the Database Configuration Assistant (DBCA) templates, which are provided in the folder **doc\OracleAddOn\win\templates** on the Agile e6 DVD. DBCA templates include database options, initialization parameters, and storage information for datafiles, tablespaces, control files and redo logs.

Six different templates are predefined to meet different requirements according to purpose, size and number of the Agile e6 database installations.

Template Name	Description
plm_laptop	small sized database especially designed for laptop installations
plm_test	database designed for test installations number of concurrent users < 40 no archiving
plm_prod_small	database designed for productive use number of concurrent users < 40 archiving
plm_prod_medium	database designed for productive use number of concurrent users: 40 - 80 archiving
plm_prod_large	database designed for productive use number of concurrent users: 80 – 120 archiving
plm_prod_huge	database designed for productive use number of concurrent users: 120 - 150 archiving

Additional information on significant database parameters and settings of each template can be found in the **Appendix**. Decide which template corresponds approximately to your needs. It is also possible to adapt any of the values during the database creation process.

- 1. Copy the DBCA template file (e.g. plm_test.dbt) to {ORACLE_HOME}\assistants\dbca\templates.
- Start the Oracle Database Configuration Assistant from the Windows start menu. Start > Oracle – OraHome10 > Configuration and Migration Tool > Database Configuration Assistant.

An introduction window is opened.

- **3.** Click **Next** to start the database configuration.
- 4. Select Create a database and click Next.

	Select the operation that you want to perform: Create a Database Configure Database Options Delete a Database Manage Templates	ţş
Cancel Help		Sack West >)

A list of different templates is provided. You should also see the template that you have chosen and copied in step 1.

Select	Template	Includes Datafiles
0	Custom Database	No
0	Data Warehouse	Yes
0	General Purpose	Yes
0	Transaction Processing	Yes
0	plm laptop	No
0	plm prod huge	No
	plm prod large	No
0	plm prod medium	No
0	plm prod small	No
0	plm test	
Approximation of the second se	pim prod small pim test	No
		Show Details

- 5. Select the template you want to use and click Next.
- 6. Enter the global database name and SID (default: plm60) and click Next.

The next window provides the possibility to centrally manage Oracle databases using Oracle Enterprise Manager Database Control.

7. Select this option and click Next.

	✓ Configure the Database with	Enterprise Manager	
	C Use Grid Control for Databa	se Management	
	Select the Management Serv	ice No Agents Found 👘	
New York Control of Co	Use Database Control for D	atabase Management	l⊋
	Enable Email Notifications	3	
Vicenzy Administrative Vicenzy Control of Co	Outgoing Mall (GMTP) Serv	er.	
Annual State	Email Address:		
Manager Street S	🗆 Enable Daily Backup		
North Statement	Backup Start Time:	02 00 0 AM C PM	
	OB Username:		
	Password:		

8. Enter passwords for SYS, SYSTEM, SYSMAN and DBSNMP. It is highly recommended to use different passwords for these accounts. Click **Next**.

The next window allows registering your database with a directory service.

- 9. Select No, do not register the database and click Next.
- 10. Select File System for database storage and click Next.

Automatic Storage Management (ASM) Automatic Storage Management simplifies database storage administration and optim database layout for IVO performance. To use this option you must either specify a set or create an ASM disk group or specify an existing ASM disk group. Raw Devices Raw partitions or volumes can provide the required shared storage for Real Applicatio Clusters (RAC) databases if you do not use Automatic Storage Longement and a Cit. System is not available. You need to have created one raw device for each datafile, co and log file you are planning to create in the database. Beecity Raw Devices Mapping File Browse		File System Use the File System for Database storage.
Raw Devices Raw partitions or volumes can provide the required shared storage for Real Applicatio Clusters (RAC) databases if you do not use Automatic Storage Anagement and a Clu System is not available. You need to have created one raw device for each datafile, co and log file you are planning to create in the database. Browse Browse	Types and the second	Automatic Storage Management (ASM) Automatic Storage Management simplifies database storage administration and optimizes database layout for I/O performance. To use this option you must either specify a set of disks to create an ASM disk group or specify an existing ASM disk group.
Browse	Managalanen Babergalanen Hauriggalanen Huuriggalanen Warrighalenen Huurig	C Raw Devices Raw partitions or volumes can provide the required shared storage for Real Application Clusters (RAC) databases if you do not use Automatic Storage, anagement and a Cluster File System is not available. You need to have created one raw device for each datafile, control file, and log file you are planning to create in the database.
	And	Browse

11. In the next window, choose Use Database File Locations from Template and click Next.

	Specify locations for the Database files to be created:	
	Use Database File Locations from Template	
	C Use Common Location for All Database Files	
	Database Files Location:	Browse)
	C Use Oracle-Managed Files	
March Statester March Statester March Statester	Database Area:	Browse
Magazinggalamian Magazinggalamian Magazinggalamian Magazinggalamian	Multiplex Redo Logs and Control Files)	
And	If you want to specify different locations for any database files, pick either of the options and use the Storage page to specify each location.	above Variables)
Cancel Help	🔞 Back 🛄 🕅 🛞	Einish

- **12.** Deselect the option **Specify Flash Recovery Area** in the next window. Depending on your backup strategy and used template, archiving could be enabled.
 - **Note:** For productive installations it is highly recommended to archive the database. The archive log mode and the destination of the archive directory can be specified by clicking on the **Edit Archive Mode Parameters** button.

13. Click Next.

	Choose the recovery options for t	he database:	
	Specify Flash Recovery Area		
	This is used as the default for for automatic backup using E files and recovery files be loc performance.	all backup and recovery operat nterprise Manager. Oracle recom ated on physically different disks	ions, and is also required mends that the database for data protection and
	Flash Recovery Area:	(ORACLE_BASE)/flash_recov	ery_ Browse)
Yayaran Marina Marana Marina Marana Marina Marana Marina	Flash Recovery Area Size:	2048	M Bytes v
Hamphanian Barbaran Hamphanian Hamphan Hamphanian Hamphan Hamphanian Hamphani	Enable Archiving	Edit Archive Mode Parame	ters)
			(File Location Variables)
Cancel Help		S Back	Next >>) Einish)

The next window provides database features as well as the possibility to run custom scripts after database creation. It is not recommended to change the settings provided by the template.

14. Click Next.

The next window provides diverse database parameters. You can navigate to the setting of memory, character sets, database sizing, and connection mode.

15. Check if the connection mode is set to **Dedicated Server Mode** in the folder **Connection Mode**.

	Memory Sizing	Character Sets	Connection Mode
	C Typical - Allocate memory as a p Percentage: 70 Show	percentage of the total phy Memory Distribution	iysical memory (1023 MB)
	Shared Memory Management:	C Automatic @ Manua	
	Shared Pool:	104857600	Bytes V
	Buffer Cache:	150	M Bytes 👻
	Java Pool:	25165824	Bytes V
	Large Pool:	8388608	Bytes V
	PGA Size:	52428800	Bytes ▼
	Total Memory for Oracle: Total memory includes parameters, if any.	372 M Bytes 40MB of Oracle Process	" s Size and the defaults for the empty
	All Initialization Parameters)		
Cancel Help		(Back Next >) Einish

The values are recommended by Agile for the selected kind of database installation.

16. Click Next.

17. Click File Location Variables on the next window.

Review and adapt the file location for your system. Enter variables mentioned in the table below, as well as the values for them.

See the table for detailed information on predefined file destination variables.

Variable	Description
ORADATA1	Data files for tablespaces EDB, EDB_LOB, EDB_TMPIDX
ORADATA2	Data files for tablespaces EDB_IDX, EDB_TMP
ORADATA3	Data files for temporary tablespace TEMP
ORADATA4	Data files for undo tablespace
ORADATA5	Data files for tablespaces SYSTEM, TOOLS, USERS
ORAARCH	archive log files
REDO1	redo log files
REDO2	redo log files

do logs, and any other files (r example, a control file may (ORACLE_BASE)/oradata/([used by database. y be specified as DB_NAME¥control01.ctl
Variable	Value
ORACLE_BASE	C:toracle
ORACLE_HOME	C:\oracle\ora10g
DB_NAME	plm
DB_UNIQUE_NAME	pim
SID	plm
ORADATA1	
ORADATA2	
ORADATA3	
ORADATA4	
ORADATA5	
ORAARCH	
RED01	
RED02	

The storage parameters for control files, tablespaces, data files, rollback segments, and redo log files can be reviewed and modified. Double-click an object in the left window section if you want to edit and modify the settings in the right window section. The required new tablespaces can be created.

Create Tablespace				×
General Storage				
Name: EDB				
Datafiles				a
File Name	File Directory	Size		
🛃 🛃 EDB01.dbf	E:\oracle\oradata\fff\	100	MB	
			<u>`</u>	
				1
- Status				
🖲 Online 🗌 Read Only				
O Offline Normal	~			
- Type				
Permanent				
CTemporary				
Set as Default Temporary	Tablesnare			
	Tableopade			
	2reate Cancel	Show	SQL Help	

Note: The predefined values are recommended by Agile according to the chosen kind of database installation.

- **18.** When you have finished click Next.
- **19.** Select Create Database to start the database creation immediately.

Name:	pin	
- Generate	Database Creation Scripts	I
Destination Directory:	E toracletadmintplmtscripts	Browse

It is recommended to choose also the option **Generate Database Creation Scripts** and to define a destination directory (default: {ORACLE_BASE}\admin\plm60\scripts). Those scripts are useful for future reference or use.

20. Click Finish.

A summary of the database parameter is displayed.

Click **Save as HTML file** for future reference and click **OK**. The database creation process is started.

21. Click Exit to finish the process.

Configuring the Oracle Listener

- 1. Copy the listener configuration files from Agile e6 DVD to the doc\OracleAddOn\win directory to your installation.
- □ cp listener.ora {ORACLE_HOME}\network\admin
- □ cp tnsnames.ora {ORACLE_HOME}\network\admin
- □ cp tnsnav.ora {ORACLE_HOME}\network\admin
- □ cp sqlnet.ora {ORACLE_HOME}\network\admin
- **2.** Adapt the configuration files (especially **tnsnames.ora** and **listener.ora** to reflect the correct hostname, database id and other information).
- 3. Start listener and test the database connection.

Isnrctl start tnsping plm60 sqlplus system@plm60

Note: As the listener service doesn't exist yet, the following error message will be displayed by executing lsnrctl start:

Failed to open service <OracleORA102TNSListener>, error 1060.

You can ignore it – it just shows that the requested service doesn't exist and this service will be created now.

Troubleshooting

When installing Oracle Server manually on Windows 2000 German Edition, errors might occur. Follow the instructions for a work around:

During the installation, the following error appears:

Warnung	×
OCR konnte nicht initialisier	t werden.
Klicken Sie auf "Hilfe", um weit Klicken Sie auf "OK", um fortzi	ere Informationen aufzurufen. Ifahren.
Hilfe	ок

1. Click OK and ignore the message.

The installations continue and later another error message appears:



- **2.** Click "Ignorieren" and finish the installation.
- 3. When the installation is finished, open a Windows command prompt and execute

localconfig Idel

This will remove the Oracle CSS service from your machine.

Chapter 3 Modifying the Oracle Database

Creating a Database User and Role

You will need to create the Agile e6 database user and role and provide the necessary privileges and quotas. You can do this using the commands in the following section or using the Oracle Enterprise Manager Database Control as described in the section below.

Using SQL to Create a Role

Check if the plm role exists - open sqlplus session, connect as SYSTEM and execute

Select role from dba_roles where role='AGILE_E_ROLE'. If string 'AGILE_E_ROLE' is returned, the role exists. Then skip the role creation and continue with the user creation. Otherwise the role doesn't exist and has to be created by

Create role AGILE_E_ROLE;

```
GRANT CONNECT TO AGILE_E_ROLE;
GRANT CREATE TABLE TO AGILE_E_ROLE;
GRANT CREATE VIEW TO AGILE_E_ROLE;
GRANT CREATE SYNONYM TO AGILE_E_ROLE;
GRANT CREATE DATABASE LINK TO AGILE_E_ROLE;
GRANT CREATE CLUSTER TO AGILE_E_ROLE;
GRANT CREATE SEQUENCE TO AGILE_E_ROLE;
GRANT ALTER SESSION TO AGILE_E_ROLE;
GRANT CREATE PROCEDURE TO AGILE_E_ROLE;
GRANT CREATE TRIGGER TO AGILE_E_ROLE;
GRANT ALL ON DIRECTORY ORA_DMP TO AGILE_E_ROLE;
```

Using SQL to create a user

 Create a database user (named, e.g. plm): CREATE USER PLM IDENTIFIED BY <PASSWORD> DEFAULT TABLESPACE "EDB" TEMPORARY TABLESPACE "TEMP" PROFILE DEFAULT QUOTA UNLIMITED ON "EDB" QUOTA UNLIMITED ON "EDB_IDX" QUOTA UNLIMITED ON "EDB_TMP" QUOTA UNLIMITED ON "EDB_TMPIDX" QUOTA UNLIMITED ON "EDB_LOB" ACCOUNT UNLOCK; GRANT "AGILE_E_ROLE" TO PLM;

ALTER USER PLM DEFAULT ROLE AGILE_E_ROLE;

A default script (cre_plm_usr.sql) with these commands can be found on the Agile e6 DVD in the **doc\OracleAddOn\sql** directory.

Using Enterprise Manager Database Control to create User

1. Start the Enterprise Manager Database Control. By default it can be invoked on localhost:1158/em, but it can be configured manually to use another port. Click on Login.

ACLE Enterprise M abase Control	anager 10 <i>g</i>	Help
ogin		
gin to Database	rpima	
ginte batance	in the second	
• User Name	sys	
* Password	******	
Connect As	SYSDBA	
	Login	
and @ 1996 2004 Crawler A	labele second	
ngni @ 1995, 2004, 01808. A	rights reserved.	

- 2. Click on Administration and in the security section on Users.
- 3. Click Create.

Database Control	Selus Praferences Hels Lonout Database
And and a second se	1
<u>Database: pimg > Users</u> > Create User	Logged in As SYS
New York Coser	Show SQL Cancel OK
General Roles System Privileges Object Privileges Quotas Consumer Groups Proxy Users	
* Name PLM	
Profile DEFAULT	
Authentication Password	
* Enter Password	
* Confirm Password	
Expire Password now	
Default Tablespace EDB 🚀	
Temporary Tablespace TEMP 🚽	
Status C Locked @ Unlocked	
General Roles System Privileges Object Privileges Quotas Consumer Groups Proxy Users	
	Show SQL) Cancel OK
Database Satup Preferences Help Copyright @ 1996, 2004, Cracle. All rights reserved.	Logout
About Dracle Enterprise Manuager 10g Database Control	

- **4.** Click on the **General** tab and insert a user name and password and assign default and temporary tablespace.
- **5.** Click the **Roles** tab, then **Modify** button, select role AGILE_E_ROLE from the list with available roles and by clicking the **Move** button move it to the Selected Roles. Click **OK**.

ORACLE Enterprise Manager 10g Database Control	Setue Destructions Helic Logand Database
Database: plm60 > Users > Create User Modify Roles	Logged in As SYS
Available Roles Au Administration Role Au Administration Role Des Four Analog Role Des Four Analog Role Des Four Analog Role Des Four Analog Role Des Four Ber Role Not Roles Addition Role Ber Role Ber Role Ber Role Addition Role Ber Role Addition	Cancel (BC)
Capying t & 1986, 2005, Oackin: All rights meanwell About Discle Effective Measure: Too Delivieue Caribid	Database Setue Perferences Hele Lossed

(Role AGILE_E_ROLE should exists or be created in a previous section)

6. Click the **Quota** tab and assign unlimited quota on EDB, EDB_IDX, EDB_LOB, EDB_TMP and EDB_TMPIDX.

Create User			
General Roles System Privileges Object Privileges	Quotas Consumer Groups Prexy U	Jsers	(Show SQL) (Cancel) (OF
Tablespace	Quota		Value Unit
EDB	Unlimited 💌	þ	MBytes 💌
EDB_IDX	Unlimited 💌	p	MBytes 💌
EDB_LOB	Unlimited 💌	p	MBytes 💌
EDB_TMP	Unlimited 💌	p	MBytes 💌
EDB_TMP_IDX	Unlimited 💌	þ	MBytes 💌
SYSAUX	None	þ	MBytes 💌
SYSTEM (Default)	None 💌	D	MBytes 💌
TEMP	None 💌	o	MBytes 💌
UNDOTES1	None	p	MBytes 💌
USERS	None	ō	MBytes 💌
General Roles System Privileges Object Privileges	Quotas Consumer Groups Proxy U	Isara	

7. Click OK to finish the database user creation.

Importing the Database Dump

Import the Agile e6 dump using the following commands, and then check the logfile for errors.

commit=y	rollback segments cannot get too small
analyze=n	no statistics will be created
buffer=132000	necessary for lobs, better performance
full=y	imports full dump even if the dump was exported by different user

imp plm/plm@plm60 file=plm60.dmp log=plm60.log buffer=132000 commit=y statistics=none full=y

Create directories for Oracle Data Pump Utility

- 1. Create directory which will be used for Oracle Data Pump Export/Import Utility with two subdirectories system and user (for instance d:\ora_dmp\system; d:\ora_dmp\user).
- **2.** Open a sqlplus session and connect as system.

sqlplus system/<system password>

3. Run the script ddl_pump_dir.sql. This script can be found on the Agile e6 DVD in the doc\OracleAddOn\sql directory.

SQL>@<full path to the file ddl_pump_dir.sql>

4. Enter the path to the main directory created in 1. (for instance d:\ora_dmp).

The script will create two directory objects – one for system users and one for normal users and will give rights on the second directory to user PLM.

Compile all invalid objects in schema PLM

After importing the Agile e6 dump some objects might be invalid. This could be verified by the following way:

1. Open a sqlplus session and connect as system.

```
sqlplus system/<system password>SQL>select * from dba_objects where status <> 'VALID' and owner='PLM';
```

If the returned message is 'no rows selected', then you have no invalid objects. Otherwise you have to run the script compile_all.sql, which can be found on the Agile e6 DVD in the **doc\OracleAddOn\sql** directory.

SQL>@<full path to the file compile_all.sql> <parameter>

Note: Parameter = SQL user; e.g. PLM. The parameter has to be entered in upper case only.

2. Verify once again that there are no invalid objects by

SQL>select * from dba_objects where status <> 'VALID' and owner='PLM';

Create Statistics

In Oracle 10g the default value for the OPTIMIZER_MODE initialization parameter is ALL_ROWS, which means that a cost-based approach will be used for all SQL statements. Agile highly recommends creating statistics in order to avoid performance loss. This should be done after the dump import and has to be repeated periodically.

1. Calculate statistics of all tables and indexes in db schema PLM:

SQL> EXECUTE DBMS_STATS.GATHER_SCHEMA_STATS('PLM',CASCADE =>true);

2. Calculate statistics of all tables and indexes in db schema PLM with 5% of the rows:

SQL> EXECUTE DBMS_STATS.GATHER_SCHEMA_STATS('PLM', estimate_percent => 5, CASCADE =>true);

3. Drop all statistics of PLM schema objects. Optimizer is now running in rule mode.

SQL> EXECUTE DBMS_STATS.DELETE_SCHEMA_STATS('PLM');

For all schema objects, statistics have to be available to support the cost based optimizer. If tables and indexes are modified or created, statistics must be established.

1. Calculate statistics on all tables without statistics and their indexes in db schema PLM with 5% of the rows:

SQL> EXECUTE DBMS_STATS.GATHER_SCHEMA_STATS(ownname => 'PLM',options => 'GATHER EMPTY', estimate_percent => 5, CASCADE =>true);

2. Calculate statistics on tables t_master_dat and their indexes in db schema PLM_ENTW with 10% of the rows:

SQL> exec sys.dbms_stats.gather_table_stats(ownname=> 'PLM_ENTW', tabname=> 'T_MASTER_DAT', partname=> NULL , estimate_percent=> 10 ,cascade=> true);

Statistic information can be viewed, e.g. in user_tables and user_indexes. These views provide information about e.g. average width of the row and number of rows.

Set access rights for axalantrt

The Agile e6 runtime user needs read permission on the Oracle software.

You can either use the Explorer:

- 1. Select the Oracle software folder and
- 2. Select properties.
- **3.** Give local user axalantrt read access.

Or you can use the following command:

cd e:\oracle cacls ora10 /c /t /e /g axalantrt:R

Deinstall Oracle for Windows

If you have an improper Oracle installation, a second installation will fail. You have to uninstall Oracle and then try from beginning. The automatic Oracle installation performed by Agile e6 or axalant setup is only possible if Oracle is not installed on the system.

Uninstall Oracle:

- If you want to uninstall Windows Service entries for databases use oradim oradim -delete -SID plm60
- **2.** Shutdown all Oracle Services.
- **3.** Start Oracle Installer.
- **4.** Select all packs except the Oracle Installer itself.
- 5. Press Remove.
- 6. Drop Oracle folders

(Oracle Home: e:\oracle\ora10.2, Oracle Installer: C:\Program Files\Oracle)

- 7. Drop the registry leave HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE.
- **8.** If Windows services still exist, drop the special registry sections in HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Oracle*.
- **9.** Reboot the computer.

Oracle installation on Windows failed

If the software is installed (E:\oracle\ora10.2*) and registry entries are created (HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE), the creation of the database may fail due to the following reasons:

- □ Insufficient memory (Oracle parameters to high, small RAM size)
- □ Incorrect internal password
- □ No administrative rights on the machine
- □ Wrong path definition
- □ Not enough disk space for datafiles

Check the following:

- Database create logs: {ORACLE_BASE}\admin\plm60\create\cre*.log
- □ Instance Parameter file: {ORACLE_BASE}\admin\plm60\pfile\init*.ora
- □ Instance SPFILE: {ORACLE_HOME}\dbs\spfileplm60.ora
- Database log file: {ORACLE_BASE}\admin\plm60\bdump\alert_plm60.log
- □ Network configuration: {ORACLE_HOME}\network\admin*.ora

Chapter 4 Appendix A

The most significant parameters of the predefined Database Configuration Assistant templates are referenced in the following.

Template "plm_laptop"

Parameter/Setting	Value
db_block_size	4 k
db_cache_size (buffer)	48 MB
db_file_multiblock_read_count	8
shared_pool_size	80 MB
open_cursors	600
processes	40
pga_aggregate_target	50 MB
Tablespaces	locally managed
EDB	25 MB
EDB_IDX	25 MB
EDB_LOB	5 MB
EDB_TMP	1 MB
EDB_TMP_IDX	1 MB
Redolog file size	5 MB
archiveLogMode	FALSE

Template "plm_test"

Parameter/Setting	Value
db_block_size	8 k
db_cache_size (buffer)	150 MB
db_file_multiblock_read_count	8

shared_pool_size	100 MB
open_cursors	600
processes	80
pga_aggregate_target	50 MB
Tablespaces	locally managed
EDB	100 MB
EDB_IDX	100 MB
EDB_LOB	5 MB
EDB_TMP	5 MB
EDB_TMP_IDX	5 MB
Redolog file size	10 MB
archiveLogMode	FALSE

Template "plm_prod_small" 40 users max

Parameter/Setting	Value
db_block_size	8 k
db_cache_size (buffer)	200 MB
db_file_multiblock_read_count	8
shared_pool_size	100 MB
open_cursors	600
processes	100
pga_aggregate_target	50 MB
Tablespaces	locally managed
EDB	300 MB
EDB_IDX	300 MB
EDB_LOB	5 MB
EDB_TMP	5 MB
EDB_TMP_IDX	5 MB

Redolog file size	10 MB
archiveLogMode	TRUE

Template "plm_prod_medium" 80 users max

Parameter/Setting	Value
db_block_size	8 k
db_cache_size (buffer)	500 MB
db_file_multiblock_read_count	8
shared_pool_size	120 MB
open_cursors	600
processes	180
pga_aggregate_target	110 MB
Tablespaces	locally managed
EDB	1,5 GB
EDB_IDX	1,5 GB
EDB_LOB	5 MB
EDB_TMP	5 MB
EDB_TMP_IDX	5 MB
Redolog file size	10 MB
archiveLogMode	TRUE

Template "plm_prod_large" 120 user max

Parameter/Setting	Value
db_block_size	8 k
db_cache_size (buffer)	1 GB
db_file_multiblock_read_count	8
shared_pool_size	160 MB
open_cursors	600
processes	260

pga_aggregate_target	160 MB
Tablespaces	locally managed
EDB	2 data files, each 1,5 GB
EDB_IDX	2 data files, each 1,5 GB
EDB_LOB	5 MB
EDB_TMP	10 MB
EDB_TMP_IDX	10 MB
Redolog file size	10 MB
archiveLogMode	TRUE

Template "plm_prod_huge" 150 users max

Parameter/Setting	Value
db_block_size	8 k
db_cache_size (buffer)	1 GB
db_file_multiblock_read_count	8
shared_pool_size	200 MB
open_cursors	600
processes	320
pga_aggregate_target	200
Tablespaces	locally managed
EDB	2 data files, each 1,5 GB
EDB_IDX	2 data files, each 1,5 GB
EDB_LOB	5 MB
EDB_TMP	10 MB
EDB_TMP_IDX	10 MB
Redolog file size	10 MB
archiveLogMode	TRUE