ENTERPRISE SOLUTIONS

Oracle Standard Edition One installation and configuration

Installation Guide

Date of last update:	December 2016
Edition :	5.4
Reference	521657

PREFACE

Lectra PLM Fashion: Copyright ©2006-2015, Lectra and third parties. All rights reserved. This software is owned by Lectra and Lectra's applicable suppliers, and is protected by intellectual property and copyright laws. All rights, title and interest in and to this software, including without limitation all copyrights, patents, trademarks and trade secrets remain at all times exclusively with Lectra, or its applicable suppliers. Clarity: Copyright©1998-2005 Niku Corporation and third parties. This software is owned by Niku and its suppliers and is protected by United States copyright laws and international treaty provisions.

Trademarks

Niku and the Niku logo are registered trademarks, and Clarity, the Clarity logo, Clarity Studio, Global 2000 Proven, Precision Security, PowerMods, Best Practice Accelerators, PMO Accelerator, CPIC Accelerator, Service Connect, Schedule Connect, and XOG are trademarks of Niku Corporation in the United States and certain other countries. All other trademarks, trade names, and/or product names are used solely for the purpose of identification and are the property of their respective owners.

Lectra® and Lectra Systèmes® are registered trademarks of Lectra. Internet Explorer is a registered trademark of Microsoft Corporation.

Windows NT®, Windows® 2000, and Windows® XP are registered trademarks of Microsoft Corporation. Microsoft® is a registered trademark of Microsoft Corporation. Any integrated Actuate product remains the property of Actuate.

License

The software is for limited use only. The software is subject to a limited, non-exclusive and non-transferable license of use, for the licensee's own internal business purposes only. The conditions and restrictions of such license are described in Lectra's end-user license of use.

Guarantees

Lectra reserves the right to modify information relating to its products etc., without prior notification, with the aim of improving their reliability and operation.

Publication does not imply that this information is free of all intellectual copyright and does not grant any license over these rights. Furthermore, Lectra shall not be held liable for any consequences arising from the use of this information, for whatever purpose.

The performance measurements and other data referred to in this documentation are approximate and have no contractual value.

Contacts

Europe Call Center: mailto: callcenter-europe@lectra.com

North America Call Center: mailto: Callcenter.Americas@lectra.com

Asia Pacific Call Center: mailto: callcenter.asia.pacific@lectra.com

Italy Call Center: mailto: callcenter.italia@lectra.com

Spain Call Center: mailto: callcenter.sp@lectra.com

Contents

Trademarks 2
License 2
Guarantees 2
Contacts 2
1. General Overview 5
1.1 Scope of This document 5
1.2 Abbreviations 5
2. ORACLE SERVER: PRE-INSTALLATION STEPS 6
2.1 Check Database bundle/Oracle/Windows Compatibility Matrix 6
2.1.1 PLM V2R3 targets 6
2.1.2 PLM V3 targets 6
2.1.3 PLM V4-V5 targets 7
2.2 Get the Database bundle according to your PLM and Oracle target 8
2.2.1 From your target PLM DVD (Lectra customers), ... 8
2.2.2 From another source 8
2.3 Operating system preparation tasks 8
2.3.1 Find scripts and readme to help to prepare operating system 8
2.3.1.1 Common: check operating system privileges 8
2.3.2 Steps 9
2.4 Get Oracle software DVD 10
2.4.1 Customer: from the delivered DVD or from Oracle 10
2.5 Database bundle preparation tasks 10
2.5.1 Typical changes 10
2.5.1.1 Install and create the database on E: instead of C: 10
2.5.1.2 Change Z: drive to another drive W: because Z: not free 10
2.5.1.3 You want another instance name than the default LDPLM000 10
2.6 Map the Oracle software 11
2.6.1 Mapping changes since v4r2 11
2.6.2 Network mapping path examples 11
2.6.2.1 Example: PLM V2xx installation 11GR1 on Windows server 2003 11
2.6.2.2 Example: PLM V3xx installation 11GR202 on Windows server 2008R2 11
2.6.2.3 Example: PLM V4xx installation 11GR204 on Windows server 2008R2/2012R2 11
2.6.3 Local folder mapping syntax example 11
3. ORACLE SERVER: START THE INSTALLATION 12
3.1 ORACLE SERVER: during silent installation 12
3.1.1.1 Custom sort configuration step not mandatory (PLM > v3r3sp3) 12

4. ORACLE SERVER: POST-INSTALLATION STEPS 13
4.1 Antivirus and Firewall 13
4.2 Check if all is running well 13
4.3 Advanced: Adjust instance configuration to your context 13
4.4 Database console (not mandatory) 13
4.4.1.1 [11GR2 performance tab usage can require to install Adobe Flash Plugin] 13
5. APPENDIX 01: SILENT INSTALL: HOW TO CHANGE INSTANCE NAME 14
5.1 Default instance naming rules (recommended) 14
5.2 PLM <= v3r3sp3 14
5.3 PLM > v3r3sp3 14
5.3.1 Automatic/Forced instance naming mode 14
5.3.2 You want to follow default standard naming rule (recommended) 14
5.3.3 You have another naming rules standards 14
6. APPENDIX 02: 11202 SERVER SPECIFIC INSTALLATION STEPS TO AVOID ORA-12638 (OBSOLETE since 11.2.0.4) 15
6.1.1 Conditions to reproduce (All conditions need to be true) 15
6.1.2 Recommended steps if none of the 3 conditions can be changed 15
6.1.3 Next step: Follow the normal POST-INSTALLATION STEPS 15
6.1.4 For more details 15
7. APPENDIX 03: Where to find additional information 16
7.1 Troubleshooting, How to and Performance guide 16
8. APPENDIX 04: HOW TO UNINSTALL 17
8.1.1 ORACLE SERVER SIDE: Uninstall of all Oracle 11GR2 components 17
8.1.1.1 In standalone home context (only one Oracle version installed once) 17
8.1.1.2 In multi-home context, ... 17
8.1.2 ORACLE CLIENT SIDE: Uninstall 17

Modifications made to the document since its last publication are highlighted in blue.

1. GENERAL OVERVIEW

1.1 Scope of This document

How to do a non-interactive fresh install of Oracle database standard Edition One without having to read a long roadmap

This document is available for Lectra Fashion PLM versions between v2r3 and v4r4.

1.2 Abbreviations

PLM	=	Product Life Management Module
WLP	=	Workflow Management and Line Planning Module
<ORA_ VERSION>	=	11GR1/11GR2/11GR202/11GR204
		(Ex: 11GR204: Oracle 11204 Release 2 Standard Edition One)
<PLM_VERSION>	=	PLM Minor compatible version (used for patches)
<Supported_OS>	=	Supported Operating system
		Example: windows 2008R2
<OS_TYPE>	=	Example: 64 bits
<DATABASE_BUNDLE_PATH>	=	path\<Database bundle root folder>
<Database bundle root folder>	=	PLM < v3: ORA<ORA_VERSION>_SE_WIN
	=	PLM >= v3: ORA_SE_WIN

2. ORACLE SERVER: PRE-INSTALLATION STEPS

2.1 Check Database bundle/Oracle/Windows Compatibility Matrix

2.1.1 PLM V2R3 targets

Target Database bundle	Operating system	Oracle version	Status And remarks
Database bundle for Oracle 11G Standard Edition	**Windows 2003 server SP2 32bits**	**Oracle 11106 Standard Edition One 32bits**	**(Certified and recommended configuration on Windows)** 32 bits: certified target 64 bits: compatible (1) (2)

2.1.2 PLM V3 targets

Target Database bundle	Operating system	Oracle version	Status And remarks
Database bundle for Oracle 11GR2 Standard Edition One	**Windows 2008R2 SP1 64bits**	**Oracle 11202 Standard Edition One 64bits**	**(Certified and recommended configuration on Windows)**

(1) Need to use Oracle for 64bits platforms

(2) All version certified on Windows 2008R2 server can run on Windows 7 64 bits but not certified for production target,

All certified on Windows 2008R2 server 64 bits can run on Windows 7 64 bits but not certified on production environments that need server operating system

Lectra certify production environment only on server type operating system

Oracle 11GR2 is the unique release certified on Windows 7 and Windows 2008R2 by Oracle

Oracle 11GR2 64bits don't run under Windows 32 bits targets

2.1.3 PLM V4-V5 targets

Target Database bundle	Installation Type	Operating system	Oracle version	Status And remarks
Database bundle for Oracle 11GR2 Standard Edition One	**Fresh Installation**	**Windows server 2008R2 /2012 SP1 /2012R2 (64bit)**	**Oracle 11204 Standard Edition One 64bits**	**Certified and recommended configurations**
	Upgrade from v3r3sp3	**Windows server 2008R2 SP1 64bits**	**Oracle 11202 /11204 Standard Edition One 64bits**	**Certified configuration**

(1) About Oracle certification,

- Oracle is certified on Windows 2012 or Windows 8.0 from Oracle 11204 inclusive
- Oracle is certified on Windows 2012R2 or Windows 8.1 only from Oracle 11204 (RAC excluded)
- Oracle 11.2.0.2 is not certified on Windows servers greater than 2008R2
- Oracle 11GR2 (11.2.0.X) 64bit doesn't run under Windows 32bit targets
- Oracle 11GR2 is not certified on Windows 2016 or Windows 10
- The first version to be certified on Windows 2016 or Windows 10 is Oracle 12.1.0.2

(2) About PLM certification,

- All PLM versions certified on Windows 2008R2 servers can run on Windows 7 64bit but are not certified for production targets,
- All PLM versions certified on Windows 2012R2 servers can run on Windows 8 64bit but are not certified for PLM production targets
- PLM is not certified on Oracle RAC
- PLM is not still certified on Oracle 12c

2.2 Get the Database bundle according to your PLM and Oracle target

Since PLM V2R1 PLM database bundle

- Is synchronized with PLM version, Database bundle can create schema and associate objects like tables...
- is deployed and used by PLM easy installer

2.2.1 From your target PLM DVD (Lectra customers),

To install Oracle in silent mode using database bundle you need to extract the PLM database bundle from the Lectra PLM DVD or ISO folder tree

2.2.2 From another source

```
e.g. \\<server_name>\Distrib_BDD\ORACLE\LECTRA_INSTALL_BUNDLE\<APP_ALIAS>\<APP_VERSION> to
a path without blanks
```

2.3 Operating system preparation tasks

2.3.1 Find scripts and readme to help to prepare operating system

Since PLM v2r3, database bundle provide scripts to help for pre-installation tasks under <DATABASE_BUNDLE_PATH>\<APP_ALIAS>\silent_install\

(&1): STD_ prepare_operating_system.cmd

This will start a menu with a list of choice that matches all steps to be done, starting Windows wizards and suggesting good configuration values when needed.

(&2): STD_prepare_operating_system_help.txt

More details on how to configure (Can be called using choice 11: help)

2.3.1.1 Common: check operating system privileges

Your need to run scripts as a full administrator to install Oracle (Oracle need to create services …).

- In recent PLM version, this can be checked by running the script (check the log):

Under <DATABASE_BUNDLE_PATH>\<Database bundle root folder>\silent_install
DB_INST_check_permission.cmd

- In old version this can be checked by running a script with the following code:

```
@echo off
net session >nul 2>&1
if %errorLevel% == 0 (
    echo Success:  "as administrator" mode confirmed.
) else (
  echo warning: Script NOT run "as administrator" mode
)
Echo.
Pause
```

2.3.2 Steps

- On WINDOWS 2008R2/2012R2/ 7/8/8.1 disable UAC during the installation **and reboot** (**&1)**
- Set ORACLE_HOSTNAME Windows system environment to ORAHOST (**&1) (&2)**
- When DHCP, choose a loopback configuration (**&1) (&2)**: using 127.0.0.1 as a computer loopback (recommended default loopback) or a Microsoft loopback network adapter (not recommended because side effect on other network access)
- Configure network connection according to previous choice (**&1) (&2):**
  - Recommended configuration is ipv4 instead of ipv6 and if not possible see workaround described on PLM installation trouble shooting guide
- Open explorer to configure HOST FILE (Need to add ORAHOST) (**&1) (&2)**
  - When no DHCP (Fix IP), example of typical Windows\system32\drivers\etc\hosts file configuration :
    => <fix IP> <computer long name> <computer short name> ORAHOST
  - When DHCP, example of typical Windows\system32\drivers\etc\hosts file configuration:
    => 127.0.0.1 <computer long name> <computer short name> ORAHOST
- CHECK Virtual memory **(&2)**
- DISABLE ALL UNUSED NETWORK INTERFACES (Wifi, etc.) (**&1)**

2.4 Get Oracle software DVD

2.4.1 Customer: from the delivered DVD or from Oracle

Recommended: Use or download the Oracle DVD provided by Lectra

Or download from Oracle:

http://www.oracle.com/technology/software/products/database/index.html

Oracle version	DVD folder
Oracle 11106 Standard Edition One 32bits	DVD_313027_Oracle11GR1_WINXP_2K3_32bit
Oracle 11202 Standard Edition One 64bits	DVD_313842_Oracle11202_win_2K3_2K8_XP_VIST_7_64bits
Oracle 11204 Standard Edition One 64bits	DVD_314502_Oracle11204_win_2K3_2K8_2K12_XP_VIST_7_8_64bits

2.5 Database bundle preparation tasks

Copy or unzip the Lectra bundle installation tools locally on a path without blanks

Recommended target root directory: <DRIVE>:\DATABASE_BUNDLE\<PLM_VERSION>

2.5.1 Typical changes

IF you want to change some parameters (installation target, etc.) then modify the <DATABASE_BUNDLE_PATH>\PLM\silent_install**DB_INST_PARAM.cmd** file

2.5.1.1 Install and create the database on E: instead of C:

REM DB level: Which drive letter for ORACLE binary installation target?

set DB_ORACLE_HOME_DRIVE_LETTER=**E:**

REM DB level: Which drive letter for database files target installation?

set DB_ORACLE_DATABASE_DRIVE_LETTER= **E:**

REM DB level: Which drive letter for ORACLE flashback area (flash backup)?

set DB_FLASH_LOC_DRIVE_LETTER= **E:**

2.5.1.2 Change Z: drive to another drive W: because Z: not free

REM DB level: Where are Oracle database installation product?

set DB_DISK_DRIVE=**W:**

2.5.1.3 You want another instance name than the default LDPLM000

It is recommended to distinguish environment type

Refer to APPENDIX 01

2.6 Map the Oracle software

2.6.1 Mapping changes since v4r2

Since PLM v4r2, for Windows targets greater than Windows 2008R2/7(even if using an administrator account), network (or local) mapping needs to be done using the “as administrator” mode to be able to successfully install Oracle binaries.

Network mapping can be done using a new script **DB_INST_map_drive.cmd** in administrator mode. If not done, it will be called during the silent install process.

2.6.2 Network mapping path examples

Map the Oracle software on **Z:** to the Oracle database setup.exe directory:

2.6.2.1 Example: PLM V2xx installation 11GR1 on Windows server 2003

\\<my_server>\DVD_313027_Oracle11GR1_WINXP_2K3_32bit\database_11106_win_XP_VISTA_W2K3_SERVER_32bits

2.6.2.2 Example: PLM V3xx installation 11GR202 on Windows server 2008R2

\\<my_server>\DVD_313842_Oracle11202_win_2K3_2K8_XP_VIST_7_64bits\database_112020_win_2K3_2K8_XP_VIST_7_64bits_SERVER

2.6.2.3 Example: PLM V4xx installation 11GR204 on Windows server 2008R2/2012R2

\\<my_server>\
DVD_314502_Oracle11204_win_2K3_2K8_2K12_XP_VIST_7_8_64bits\database_11204_win_2K3_2K8_2K12_XP_VIST_7_8_64bits_SERVER

2.6.3 Local folder mapping syntax example

To run from a script in administrator mode:

subst Z: <oracle software directory setup directory>

3. ORACLE SERVER: START THE INSTALLATION

Caution: If using WINDOWS 2008R2 / Win7 X64 (11202 context) *and* non- English operating system *and* administrator in the domain, then it is recommended to create a local administrator and install Oracle from this account to avoid authentication problems on domain accounts (Oracle 11202 bug fixed on 11204). If still not possible to change one of the 3 conditions, more complex and manual workaround needs to be applied as explained in "APPENDIX 02: 11GR2 INSTALLATION SPECIFIC STEPS TO AVOID ORA-12638. "

For standard cases, START THE INSTALLATION:

⇨ Double click on:

<DATABASE_BUNDLE_PATH>\PLM\silent_install**DB_INST_00_START.cmd**

⇨ wait for completion

3.1 ORACLE SERVER: during silent installation

3.1.1.1 Custom sort configuration step not mandatory (PLM > v3r3sp3)

According to the version, the following screen can be displayed:

```
*********************************************************************************************
*                                    MANAGE NLS CONFIGURATION                                 *
* ***************************************************************************************** *
* objective1: Generate scripts to manage NLS custom sort                                    *
* objective2: Hide complexity to move a plan from an instance to another                    *
* Requirement: Database open                                                                 *
*********************************************************************************************

1. Install PL/SQL package to manage custom sort
   . {normally already installed during PLM create or upgrade}

2. Check LECTRA_GENERIC_M custom sort status

3. Deploy custom sort .nlb files under ORACLE_HOME\nls\data folder

4. Test LECTRA_GENERIC_M custom sort effect on data

5. run sqlplus {system user}

6. Windows Dos prompt

7. Readme {Help}

8. Exit

Choose (1/8) [1]?
```

For customers using Oracle custom sorts; apply choice 1, 3 and 2

For others (most of the customer) nothing to do.

4. ORACLE SERVER: POST-INSTALLATION STEPS

4.1 Antivirus and Firewall

- Re-start antivirus if previously stopped
- If Windows firewall is on, add exceptions (<drive>:\oracle\product\ 11.1.0\db_1\BIN):
  - oracle.exe - Oracle Database executable
  - tnslsnr.exe - Oracle TNS Listener
  - emagent.exe - Oracle Database Control

4.2 Check if all is running well

- Test a sqlplus connection:
  - Sqlplus PLM_01/PLM_01@LDPLM000
- Run the database console:
  - Start menu> Oratool<ORA_VERSION>_SE_WIN> Database Control- LDPLM000
  - Connect with username system, password LDPLM000
  - For any problems refer to the PLM Database troubleshooting guide

4.3 Advanced: Adjust instance configuration to your context

Default instance configuration are minimal, this to save resource on small environments like Laptop

It is the Customer DBA responsibility to adjust instance settings, like memory, according to the customer context (environment type, architecture type, application usage, user access, data amount, database server resource limit, …)

Refer to “Database Performance Guide” for settings.

To help, Lectra provide a script to change instance basic parameters values under <DATABASE_BUNDLE_PATH>\PLM\admin\manage_schema:

- **STD_configure_instance.cmd**

Additional information can be found on the PLM Database performance guide

4.4 Database console (not mandatory)

4.4.1.1 [11GR2 performance tab usage can require to install Adobe Flash Plugin]

5. APPENDIX 01: SILENT INSTALL: HOW TO CHANGE INSTANCE NAME

5.1 Default instance naming rules (recommended)

To help Lectra support by having for all customers the same naming rules we recommend using following rules when possible:

{DB_COMPANY_LETTER}{DB_ORACLE_ENV_TYPE_LETTER}{APP_ALIAS}000

- With DB_ORACLE_ENV_TYPE_LETTER=**D** {DEV}, **P** {PROD}, **U** {UAT}, **T** {TRAINING}

Example: LDPLM000 (L= for Lectra D=for Development PLM=application alias)

5.2 PLM <= v3r3sp3

Open <DATABASE_BUNDLE_PATH>\PLM\silent_install\DB_INST_PARAM.cmd file

Set ORACLE_SID=<Your Instance name>

Instead of the default value: set DB_ORACLE_SID=LD%APP_ALIAS%000

5.3 PLM > v3r3sp3

5.3.1 Automatic/Forced instance naming mode

Open <DATABASE_BUNDLE_PATH>\PLM\silent_install\DB_INST_PARAM.cmd file

Since PLM v3r3sp1 there is 2 modes:

- AUTOMATIC mode (the default which follow recommended naming rules)
- FORCED mode (enabled only if DB_ORACLE_SID_NAMING_FORCE is not empty)

5.3.2 You want to follow default standard naming rule (recommended)

⇨ Define your Company letter and environment type (DEV/…/PROD)

Example: for Lectra Production environment

set DB_COMPANY_LETTER=L

set DB_ORACLE_ENV_TYPE_LETTER=P

Caution: let the variable DB_ORACLE_SID_NAMING_FORCE empty

5.3.3 You have another naming rules standards

set DB_ORACLE_SID_NAMING_FORCE=<Your customized instance name>

6. APPENDIX 02: 11202 SERVER SPECIFIC INSTALLATION STEPS TO AVOID ORA-12638 (OBSOLETE SINCE 11.2.0.4)

6.1.1 Conditions to reproduce (All conditions need to be true)

- Win7 X64 or 2008R2 X64
- Non English platform
- When using administrator in the domain

6.1.2 Recommended steps if none of the 3 conditions can be changed

You will need to run the silent install step by step instead of running <DATABASE_BUNDLE_PATH>\ DB_INST_00_START.cmd:

- Start manually the following subscripts
  - **DB_INST_01_BIN.cmd** (Oracle binaries installation)
  - **DB_INST_02_network.cmd** (Oracle network listener installation)
  - **DB_INST_03_BASE.cmd** (Database creation)
- **IF <you don't need to use database console>** just let :
  - SQLNET.AUTHENTICATION_SERVICES= (NONE) in ORACLE_HOME \network\admin\sqlnet.ora if not already set
- **ELSE**
  - **Change Oracle services logon from the default (local system) to your network admin logon** (example: oracleServiceLDPLM000 ,OracleOraDb11g_homeTNSlistener)
- **ENDIF**
  - **DB_INST_03a_APP_creTBS.cmd** (PLM tablespace creation)
  - **DB_INST_03b_create_schema.cmd** (PLM and WLP schema creation)
  - **[DB_INST_06_flash_recovery_area.cmd]** (adjust flash area)
- **IF you need to use database console**:
  - **DB_INST_08_em.cmd** (Database console configuration)

6.1.3 Next step: Follow the normal POST-INSTALLATION STEPS

6.1.4 For more details

Refer to "LECTRA FASHION PLM Database troubleshooting guide, "11.1 PB01 (Oracle 11GR2): ORA-12638 Authentication problems on domain accounts" .Fixed since 11204.

7. APPENDIX 03: WHERE TO FIND ADDITIONAL INFORMATION

7.1 Troubleshooting, How to and Performance guide

Subject	Content	Remark
LECTRA FASHION PLM Database Non-interactive Installation and Configuration Quick Guide	**Oracle_Windows_Quick-Installation_guide_en.docx** • Compatibility matrix • where to find DVD steps to do a silent install	This document
LECTRA FASHION PLM Database Non-interactive Installation and Configuration How To	**Oracle_Windows_HowTo_en.docx** • Database Bundle presentation • interactive installation (server and client) • manage PLM schema (install and upgrade lifecycle , create, drop, export, repair …) • manage database console • manage Oracle instance, backup and restore • database bundle script summary	Other document
LECTRA FASHION PLM Database troubleshooting guide Target: ORACLE on Windows	**Oracle_Windows_Troubleshooting_en.docx** • Manage logs (find, clean,..) • Oracle binaries installation problems • Oracle database bundle problems, connection problems • Oracle instance and operating system problems • Oracle database console and tools (datapump,..) problems	Other document
LECTRA FASHION PLM Database performance guide Target: ORACLE on Windows	**Oracle_Windows_Performance_en.docx** • Pre and post installation performance tasks • Solve performance part1: collect general functional customer context • Solve performance part2: collect relevant functional information • Solve performance part3: find relevant technical information • Solve performance part4: Centralize all information to analyze • Solve performance part5: Methode to analyze	Other document

8. APPENDIX 04: HOW TO UNINSTALL

8.1.1 ORACLE SERVER SIDE: Uninstall of all Oracle 11GR2 components

8.1.1.1 In standalone home context (only one Oracle version installed once)

Run Oratool_SE_WIN\<APP_ALIAS>\silent_install\Remove\ REMOVE_11GR2_BIN.cmd

This will call ORACLE_HOME\deinstall\deinstall.bat

On standard installation answers are default answers except 2 questions that need an explicit answer:

- database storage question: choose "FS" (means "File System")
- and the last question to continue: y (in English language context)

8.1.1.2 In multi-home context,

It is recommended to use the "desinstall utility" provided by Oracle (see

Lectra DVD: database_112030_win_desinstall_utility_64bits)

Copy on the local database server directory and run:

deinstall.bat –home "<ORACLE_HOME_PATH>"

Example:

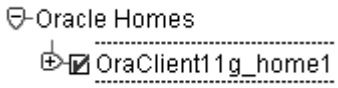
D:\database_112030_win_desinstall_utility_64bits\deinstall>deinstall.bat -home

"D:\app\oracle\product\11.2.0\dbhome_1"

8.1.2 ORACLE CLIENT SIDE: Uninstall

From the Window start menu:

- All programs > Oracle - OraClient11g_home1 > Oracle Installation Products > Universal Installer> De-install Products
- Check Oracle client



- push the remove button