LECTRA ENTERPRISE SOLUTIONS

Installation Guide

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

1. GENERAL OVERVIEW

1.1 Scope of this document

This document describes the Lectra Enterprise Server Installer usage. It explains all the screens displayed during the installation process. All fields are explained: definition, expected values and validation rules.

This document does not describe how the Installer performs the installation, but focuses on the required interaction from the user to complete the installation.

1.2 Target versions

This document is only applicable for Lectra Enterprise Solutions Server versions based on Lectra Fashion Platform from release V4R4. This installer is applicable to the PLM Solutions including Lectra Fashion PLM.

Older versions must be installed with corresponding documentation.

1.3 Related documentation

ID	TITLE	REFERENCE
1	Installation Oracle	Oracle_Quick-Installation-Guide_en.pdf

1.4 Terms definition

The following terms will be used in this document:

JVM = Java Virtual Machine, is an application that interprets compiled Java binary code (called byte code) for a computer's processor (or "hardware platform") so that it can perform a Java program's instructions.

Fashion Integration Platform (FIP) = set of technical components of the Lectra Fashion Platform

1.5 Customer Environments

The Customer’s Environments shall remain under the sole direction, control and responsibility of the Customer.

The Customer acknowledges and agrees that resident applications in Equipment or Software may be affected, or impaired by the implementation of upgrades, updates or other changes to the Customer’s Environments (e.g. firmware, operating systems, utility or other software programs).

Lectra disclaims any and all liability for losses or damage which may arise out, or in connection with, the implementation by the Customer of upgrades, updates or other changes to its Environments.

2. BEFORE YOU BEGIN

This section describes all the components which will be installed using the Enterprise Server Installer and the infrastructure recommendations associated with them. Before installing, you need to review the Enterprise Server architecture adapted to your installation according to your hardware requirements.

2.1 Third party components

2.1.1 Oracle JDK

Oracle JVM required for all J2EE applications.

2.1.2 Wildfly Server

This server is required for PLM Java EE application.

2.1.3 HornetQ

HornetQ is an open source project to build a multi-protocol, embeddable, very high performance, clustered, asynchronous messaging system.

2.1.4 Apache HTTP Server

The most popular web server, this component offers to us flexibility to configure our application. Add a dedicated server in front of application server is a common best practice.

2.2 Lectra components

2.2.1 Lectra Operator Server

This is the component responsible for the generation of thumbnails and extraction of metadata from the image.

2.2.2 Lectra File Manager Directory Watcher1

The **File Manager Directory Watcher** is a tool which allows users to establish a link between a local directory and a directory of the Enterprise Server. It is a Windows service which examines the local folder, without taking into account the hierarchy between files, in order to load all the newly-created files into the remote folder on the server.

2.2.3 Fashion Integration Platform (FIP)

The FIP Platform provides the next-generation global enterprise architecture for managing Lectra Fashion PLM Platform.

1 Optional component depending on the offer

- n-tier,
- standards-based,
- service-oriented architecture,
- leveraging Web services, J2EE, XML and analytics technologies, providing visibility, control, collaboration, and decision support of product management across all the enterprise solutions.

2.2.4 Product Development2

Product Development Module is the second component of PLM solution. That is the main web application of PLM solution.

2.2.5 Lectra Database Bundle

These are scripts installed on the server to install and manage the application database.

2.2.6 Lectra Fashion PLM System Administration

Allows the consultation and updating of the PLM system configuration.

2.2.7 Lectra ModaREST

Lectra ModaREST allows querying Modaservice with REST.

2.2.8 Lectra patches; content processor

Allows the extraction of unprocessed MTG and MDL files from database and calls Lectra operator server to process them.

2.3 Targeted infrastructure

2.3.1 Small configuration (one server)

In this infrastructure, all components will be installed on the same server.

This infrastructure may be used when there are less than twenty users.

2.3.2 Typical configuration (three servers)

In this infrastructure there are three servers, this infrastructure is recommended for between 20 to 60 users.

Three servers are:

- Database server;
- Reporting and file processing server (asynchronous server);

2 Optional component depending on the offer

- Application Server (synchronous server).

2.3.3 Custom configuration

No infrastructure is defined for this type of installation. The R&D PLM Support team shall be contacted first to get a customized infrastructure defined.

2.4 How to read the documentation

In the screens description, fields are listed in a table. Each entry indicates the field name, the description and the validation rule.

Field Name	Description	Validation rule

3. SOFTWARE INSTALLATION

This section describes the prerequisites and the installation processes presented by the Lectra Fashion PLM Installer: executables, screens and fields.

3.1 Prerequisites

3.1.1 Administrator rights

You must have Windows administrator rights to perform the installation.

3.1.2 Dedicated user for PLM

3.1.2.1 Local account

It is possible to use a local account. This Windows account must be created on the server. This User must be a member of Administrators group.

The user must have the same login and password on all the servers.

Installation must be launched with this user.

Local account cannot be use if the content repository is located on network resource.

3.1.2.2 Domain account

It is possible to use a domain account. This user must be a member of Administrators group.

Installation must be launched with this user.

3.1.3 Windows Services

The Installer creates and starts some windows services. To avoid any problem at the creation of these services, make sure “Services” tool is not running during installation.

3.1.4 License Server installation

The License Server can be installed from the CD “LectraFLEXlm Server” before launching the Lectra Enterprise Installer.

If not, the Lectra Enterprise Server allows running the installation of the License Server. See chapter 3.6.3 in that document.

3.1.5 Database installation

3.1.5.1 Oracle

Please refer to the document ref. [1] for the installation procedure.

Default mode

The following rules must be respected for a Small or Typical installation if you do not want to use the advanced mode (described in the next section):

- The Listener port: 1521
- An Instance named LDPLM000 must be created
- The oracle “system” account password must set to “LDPLM000”

The Lectra Enterprise installer is designed to work with database schemas named PLM_01 and PLM_01_JMS. These schemas are created during installation.

Local database instance LDPLM000 must not content these schemas**.**

Advanced mode

The installer offers the capability to use other database settings than the default ones; it is very useful for security reasons and offers more flexibility to match the database administrator recommendations.

The advanced mode can be activated in the installation process thru a checkbox whose label is “Advanced mode”.

Note: The schemas set in the installer screens are created during installation.

The database instance must not content these schemas**.**

Using a remote database server

Why use a remote database?

- You do not have enough rights to directly connect to the database server;
- You want to use a database hosted on a operating system not supported by the installer;
- You want to use a Small installation type which is easier but using a database instance located on a dedicated server.

The installer is able to do the installation on a remote database server using the Oracle client layer. So, there is a prerequisite if you want to do that, the Oracle client must be installed on the server where you launched the installer.

Please refer to the document ref. [1] for the installation procedure.

There is a limitation in this installer that forces to use the ORACLE_SID as the alias in the tnsnames.ora.

The following configuration could be used. That is an extract of the tnsnames.ora file located (default location) in C:\app\<username>\product\11.2.0\client_1\network\admin\

For more details, please refer to the dedicated documentation.

```
<ORALE_SID> =
 (DESCRIPTION =
  (ADDRESS = (PROTOCOL = TCP)(HOST = <SERVER_NAME>)(PORT = <LISTENER_PORT>))
  (CONNECT_DATA =
   (SERVER = DEDICATED)
   (SERVICE_NAME = <ORACLE_SID>)
  )
 )
ORACLR_CONNECTION_DATA =
 (DESCRIPTION =
  (ADDRESS_LIST =
   (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1521))
  )
  (CONNECT_DATA =
   (SID = CLRExtProc)
   (PRESENTATION = RO)
  )
 )
Where ORACLE_SID = the ORACLE_SID of the remote database
SERVER_NAME = the database server hostname
And LISTENER_PORT= the listener port (default value 1521)
```

If the message “It seems that your Oracle Client configuration does not work”, you must check your tnsnames.ora.

To validate the configuration, you can use the command tnsping.

tnsping <ORACLE_SID>

Where ORACLE_SID is the database instance name.

the result must display OK (xx msec)

3.2 Launching the Lectra Enterprise Installer

The Enterprise Installer is a Windows executable.

The installer name is**: installer-LectraEnterprise-<VERSION>.exe**

This executable is a self-extracting executable that launches the Installer after deploying the Sun Java Runtime on the server. No prerequisites are required to be able to launch the Installer on the server.

3.2.1 Optional – configuration file load during installation

It is possible to load configuration files during installation process.

To use this feature, it is necessary to:

- Create a folder named “config” in the same folder than the installer executable;
- Create a folder named “bundles” in the folder “config”;
- Copy into the "bundles" folder the configuration bundles you want to load.

3.2.2 Running installer

The installer is a self-extracting executable that launches the Installer after deploying the Sun Java Runtime on the server. No prerequisites are required to be able to launch the Installer on the server.

Double-click on executable to launch the Installer. If a popup appears, click on “Open” or “Run” to initiate the installation.

A progression bar indicating the status of the extraction is displayed, when the extraction is completed, a new MS-DOS window is launched. This window must not be closed during the installation procedure.

Data extraction may take a few minutes.

3.3 Small installation

The following table lists all the screens displayed in the small installation process.

Clicking on the screen name allows going to the screen description in this documentation.

The “[option value]” indicates the option to select on the screen.

License Panel
Offer Selection
Target Path
Installation Type [Small]
Required Information
Database settings [in advanced mode]
Content Folder
Customization deployment 3
Installation Summary
Installation Screen
Installation Finished
Result Small

3 This screen is displayed only if a customization installer or a config folder is detected ib the same folder as the installer executable.

3.4 Typical Installation

The typical infrastructure consists of three servers.

The Installer cannot perform a remote installation on all three servers at the same time in this targeted infrastructure, so the Installer must be launched three times: once on each server.

To perform this installation, you must launch the Installer onto each server individually.

Note that the order of the installation process must be respected:

The “[option value]” indicates the option to select on the screen.

	❶ Database Server	❷ Reporting Server Asynchronous server dedicated to reports and file processing	❸ Application Server Synchronous server
Common screens		License Panel Target Path Installation Type [Typical]	
	Server Choice [Database Server]	Server Choice [Reporting Server]	Server Choice [Application Server]
	Install License Server	Server Information Reporting Server	Server Information Application Server
	Database settings [if advanced mode]	Database settings [if advanced mode]	Database settings [if advanced mode]
	Installation Summary	Content Folder	Content Folder
	Installation Screen	Installation Summary	Customization deployment
	InstallationFinished	Installation Screen	Installation Summary
	Installation Result	InstallationFinished	Installation Screen
		Installation Result	InstallationFinished
			Installation Result

3.5 Custom Installation

The following matrix describes component location in typical configuration.

The (X) means selection is optional.

The * means that the component does not exist in all the offers.

Component / Server	Application Server	Reporting Server	Database Server
License Server			(X)
Oracle JDK	X	X	X
JBoss/Wildfly	X	X	
Database Bundle			X
PLM System Administration	X		
Operator Server		X	
Lectra ModaREST		X	
Lectra File Directory Watcher *		X	
PLM Package	X	X	
Apache Http Server	X		
HornetQ		X	
PLM Asynchronous server configuration		X	
Install customization	(X)		
PLM synchronous server	X		
PLM initialization package	X		
Load configuration and initialization files	(X)		

The following table lists all the screens displayed in the custom installation process.

All the screens marked with an * are optional, depending on the pack selection.

The “[option value]” indicates the option to select on the screen.

Clicking on the screen name allows going to the screen description in the documentation.

License Panel

Offer Selection

Target Path

Installation Type [Custom]

Packs Selection

Database settings

Wildfly settings *****

Lectra Operator Settings *****

Asynchronous Server settings *****

Synchronous Server Settings *****

Apache settings *****

Customization deployment *****

Installation Summary

Installation Screen

Installation Finished

Result Custom

3.6 Installer Common Screens

3.6.1 License Panel

You must accept this license agreement to continue with the installation.

The bottom of the “TERMS OF USE” lists all third parties components licenses.

3.6.2 Offer Selection

This screen allows you to select the application to be deployed.

The following solution is available:

- Lectra Fashion PLM

Select the desired application, and then click on “Next”.

3.6.3 Target Path

This screen allows you to select the target installation directory for the application.

Only the Lectra components will be deployed in this directory, other 3rd party prerequisites are installed in the standard Program files directory.

3.6.4 Installation Type

This screen allows selecting the installation type you want to do. There are three choices:

- Small: all component will be installed on the server;
- Typical: infrastructure with three servers (Database Server, Reporting Server, Application Server);
- Custom: the most flexible but also with more inputs. Allows defining which component(s) will be installed on this server.

3.6.5 Required Information

FIELD NAME	DESCRIPTION	VALIDATION RULE
Messaging server (SMTP host)	Name of the Messaging Host Server e.g. “mail.lectra.com”	No check
PLM System 's Root user password	The password of the platform root user. Default value: lectra	Mandatory field with length > 5
License server	Name of the License Server Note: If the “@” character preceding server name is omitted, the installer automatically adds it. e.g. “plmlicenseserver” becomes "@plmlicenseserver" If PLM licensing is not configured on the license server's default port (27000), it should be set to avoid a time-consuming port scan at each request. e.g. "27003@plmlicenseserver"	Check that the license PLM_USER is available
Install license server	If this field is checked a license server will be installed on the server	If selected : Check that the lic and opt files are available in the folder config/licenses “Config” is a folder located in the same folder than the installer
Windows "System" user login	Windows System Administrator account (local or domain) Dedicated user for the platform	Mandatory field
Windows "System" user password	Windows System Administrator user password	Mandatory field
DNS name of application server	DNS name of the application server. This name must be accessible for all recipients of	Mandatory field

FIELD NAME	DESCRIPTION	VALIDATION RULE
	notifications. The mails sent by the application contain link based on this name. This field could be set with the server hostname.	

Advanced mode	**Activating this mode allows using a database instance that does not match Lectra prerequisites.** **Activating this mode allows using a remote database.** **A dedicated screen will be displayed in the next step if this option is checked.**

3.6.6 Database settings

This screen is available in several contexts:

- Small installation advanced mode,
- Typical installation, advanced mode
- Custom installation, every time but with more information if the “Database Bundle” pack is selected.

Depending on the context, some fields can be hidden.

Changing the database server hostname allows using a remote database. In fact, it is possible to specify a remote hostname.

If you want to do that, the Oracle client must be installed and configured on the server.

Please refer to the dedicated section in this document for more details.

FIELD NAME	DESCRIPTION	VALIDATION RULE
Database server	Database server hostname. Default value is localhost.	JDBC connection test + oracle client connection test
Admin password	Password of system Oracle user.	Connection test with system user
Instance name	Name of Database instance to use	Connection test with system user
Listener port	Oracle listener port	Valid number format Connection test with system user
PLM schema	PLM dedicated schema to create	Mandatory field
PLM schema password	PLM schema password	Mandatory field

3.6.7 Content Folder

This screen allows defining the Content Repository folder. A default value is proposed by the Installer. It is recommended to choose another location on the server. In fact, default value is a sub folder of installation path and could be deleted during uninstall if the option “force directory deletion” is selected in uninstaller.

It is necessary to create a backup before uninstalling the application and removing this folder.

3.6.8 Customization deployment

This screen is optional. It is displayed if a “config” folder or a customized Installer is detected in the Installer base directory. This screen contains one or two checkboxes:

- If a “config” folder exists in the same folder as the Installer, the “”load data and configuration” checkbox is displayed.

- If a pdm-custom-installer.jar (customization installer) file is detected in the same folder as the installer, the “update application wit customization” checkbox is displayed.

FIELD NAME	DESCRIPTION	VALIDATION RULE
Load data and configuration …	Checked or unchecked	If checked, all the zip files contained in the config/bundles will be loaded
Update application with customization	Checked or unchecked	If checked, the customization installer will be launched

3.6.9 Server choice

This screen allows you to select the server for the installation.

There are three choices:

- Database Server,
- Reporting Server,
- Application Server.

Remote installation is not possible; you must select the Server on which you have launched the Installer

3.6.10 Install License server

This screen allows you to choose to install the license server or not. This is required only if you do not have yet the LectraFLEXlmServer component already installed. In such a case, it has to be installed on the database server.

Note: if you want to install a license server, you can pre-configure the license server file (.lic) and eventually the option file (.opt). They must be placed in config\licenses folder before launching the Installer.

FIELD NAME	DESCRIPTION	VALIDATION RULE
Install license server	Install license server	
Advanced mode	Activating this mode allows using a database instance that does not match Lectra prerequisites. Activating this mode allows using a remote database. A dedicated screen will be displayed in the next step if this option is checked.	

3.6.11 Installation summary

This screen displays a summary of data input during setup. That screen is the last one before the installation on the server really starts.

The "next" button launches the installation process. This screen allows checking parameters before start the installation.

3.6.12 Servers information (Reporting Server)

This screen displays required information necessary to install the Reporting server.

A Windows "System" User account will be used to manage rights on PLMContentRepository. In fact this folder is located on the Reporting Server and is shared with the Application server.

FIELD NAME	DESCRIPTION	VALIDATION RULE
License server	Name of the License Server Note: The “@” character must not be added at the beginning, the installer does this for you. e.g. “plmlicenseserver”	Check that the license PLM_USER is available
Database server	Name of the Database server	An SQL request is issued to validate the connection with the Database server.
System user login	Windows "System" User Account. This account must be a member of the Administrators group. This user must exist on both the Reporting Server and the Application Server	None
System user password	Windows "System" User Password.	None

Advanced mode	**Activating this mode allows using a database instance that does not match Lectra prerequisites.** **A dedicated screen will be displayed in the next step if this option is checked.**	**None**

3.6.13 Servers information (Application server)

This screen displays information required to install the Application server.

Note: Windows "System" user account defined in this screen will be used to launch the JBoss/Wildfly server application as service.

The Reporting server and the Application server must share the content (PLMContentRepository) located on the reporting server. Using a "system" account allows to access the content repository shared on the reporting server from the application server.

You must input the same user as during the reporting server installation.

FIELD NAME	DESCRIPTION	VALIDATION RULE
License server	Name of the License Server Note: The "@" character must not be added at the beginning, the installer does this for you. e.g. "plmlicenseserver"	Check that the license PLM_USER is available
Database server	Name of the Database server	An SQL request is issued to validate the connection with the Database server.
Reporting Server	Reporting server name	Check that the PLMContentRepository shared folder is available on this server
Messaging server (SMTP host)	Name of the Messaging Host Server e.g. "mail.lectra.com"	No check
PLM System root user's password	Windows User account. This account must be member of "Administrators" group of the server. This user must exist on both Reporting Server and Application Server	Mandatory field with length > 5
System user login	Windows "System" User Account. This account must be a member of the Administrators group. This user must exist on both the Reporting Server and the Application Server	None

FIELD NAME	DESCRIPTION	VALIDATION RULE
System user password	Windows "System" User Password.	None
DNS name of application server	DNS name of the application server. This name must be accessible for all recipients of notifications. The mails sent by the application contain link based on this name. This field could be set with the server hostname.	Mandatory field
Advanced mode	Activating this mode allows using a database instance that does not match Lectra prerequisites. A dedicated screen will be displayed in the next step if this option is checked.	

3.6.14 Installation screen

The Installation screen displays two progression bars:

- The first one indicating the installation progress of the current pack being installed;
- The second one indicating the overall installation progression.

The progression bar at the bottom of the panel displays the current panel number in the installation wizard.

3.6.15 Installation Finished

When the installation process is complete, an “Installation Finished” screen should be displayed.

Click on the “Done” button: end of installation, exit the installer.

3.7 Installer Custom screens

3.7.1 Packs selection

Select packs you want to install on the server. The Installer manages dependencies between packs; some packs cannot be installed without selecting another one.

PACK NAME	DEPENDS	DESCRIPTION
License Server pack	NA	Installs the FlexLM License server. Opt and lic files are required. An error is displayed if these files are not found.
Oracle JDK package	NA	Installs the Oracle JDK
JBoss package	Oracle JDK	Installs JBoss/Wildfly

PACK NAME	DEPENDS	DESCRIPTION
Lectra DatabaseBundle	NA	Installs the Database Bundle
PLM System Administration	Apache Http Server package	Installs the Lectra Fashion PLM System Administration web console
Operator Server	NA	Installs the Operator Server
Lectra File Directory Watcher	NA	Installs the Lectra File Directory Watcher
PLM /PDM package	JBoss/Wildfly	Installs the PLM
Apache Http Server	NA	Installs and configures the Apache Server
PLM asynchronous server configuration	PLM package	Manages firewall for required ports Shares plm content repository
Install customization	PLM package	Installs the customization contained in a dedicated installer
PLM synchronous server	PLM package	Updates the configuration to delegate asynchronous process to Reporting server. All JMS request are processed by asynchronous server.
PLM initialization package	PLM package	Boostrap, Init, Update root user password
Load configuration and initialization files	PLM package	Load bundles contained in config/bundles folder
Lectra Fashion PLM Event Bus	NA	Install HornetQ
Lectra ModaREST	Na	Install Lectra ModaREST

3.7.2 Wildfly settings

This screen is available if JBoss/Wildfly pack is selected.

This screen allows setting Wildfly port configuration. It is not possible to specify all ports, three configurations are pre defined. This screen only displays main ports required for PLM configuration.

When you select a configuration, associated ports are displayed. This configuration must be change if you have port conflicts on the server.

FIELD NAME	DESCRIPTION	VALIDATION RULE
Server ports configuration	Default configuration / Ports 01 / Ports 02	There is no check
Windows 'System' user	Login of PLM "system" dedicated Windows user. This user must be a	Mandatory field

FIELD NAME	DESCRIPTION	VALIDATION RULE
login	member or Administrators group	
Windows 'System' user password	Password of PLM "system" dedicated Windows user. This user must be a member of Administrators group	Mandatory field

3.7.3 Lectra Operators settings

This screen is available if the "Lectra Operators Server" pack is selected.

This screen allows defining configuration of Lectra Operators Server. It is possible to define listening port and system user account used to launch services.

FIELD NAME	DESCRIPTION	VALIDATION RULE
Operator Server port	Available port	There is no check
Windows 'System' user login	Login of PLM "system" dedicated Windows user. This user must be a member or Administrators group	Mandatory field
Windows 'System' user password	Password of PLM "system" dedicated Windows user. This user must be a member of Administrators group	Mandatory field
Lectra Enterprise Server Name Url:Port	The URL used by the Designer to communicate with the platform. This information is used to update the access-config.xml file.	Mandatory field

3.7.4 PLM settings

These screens are available if the "PLM" pack is selected.

3.7.4.1 PLM settings (1/3)

FIELD NAME	DESCRIPTION	VALIDATION RULE
PLM server host name	Front end host name Default value set to hostname	Mandatory field
PLM server host port	Available http port. Default value set depending on Wildfly settings if JBoss/Wildfly pack is also selected. On asynchronous server:: If the default Wildfly config is used on Application Server, the value to set is 8080. Possible value 8080, 8180, 8280.	Number format and Mandatory field
JNDI provider url	JNDI provider url of Wildfly application server. Default is set with Wildfly settings if JBoss/Wildfly pack is also selected. If the default Wildfly config is used on Application Server, the value to set is remote://localhost:4447. The port could be 4547, 4647 depending on Wildfly ports configuration	Mandatory field
Operator Server	Operator server host name and port. Set with Operator Server settings if Operator Server pack is also selected.	Mandatory field
PLM system root user's password	New password of Lectra Fashion PLM Server user root	Mandatory field with length > 5
License Server	Existing license server name. Default value set to hostname if license pack is also selected	Mandatory field + checkout of PLM_USER license is validated
SMTP Server	SMTP host name	There is no check
Admin console login	Login to access plm-console	Mandatory field
Admin console password	Password to access plm-console	Mandatory field

DNS name of application server	**DNS name of application server. This name must be accessible for all recipients of notifications. Mail sent by application contain link based on this name.**	**Mandatory field**

3.7.4.2 PLM settings (2/3)

Note: if database bundle pack is selected, all values are set with the database settings values.

FIELD NAME	DESCRIPTION	VALIDATION RULE
Database Server	Database server host name	Mandatory field
Database name	Oracle instance name	Mandatory field
Listener port	Static listener port defined in instance configuration	Number format and Mandatory field
PLM schema name	PLM schema to use	Mandatory field
PLM schema password	PLM schema password	Mandatory field

3.7.4.3 PLM settings (3/3)

FIELD NAME	DESCRIPTION	VALIDATION RULE
PLM Content folder	Folder where user has read/write access	There is no check

3.7.5 Asynchronous server settings

This screen allows defining the required information to launch Lectra JBoss/Wildfly service with the dedicated user.

FIELD NAME	DESCRIPTION	VALIDATION RULE
Windows 'System' user login	PLM dedicated Windows user account. This user must have read / write rights on PLMcontentRepository shared folder on asynchronous server	Mandatory field
Windows 'System' user password	PLM dedicated Windows user password	Mandatory field

3.7.6 Synchronous settings

This screen allows defining the required information to setup JBoss/Wildfly to delegate asynchronous process to another instance.

FIELD NAME	DESCRIPTION	VALIDATION RULE
Windows 'System' user login	PLM dedicated Windows user account. This user must have read / write rights on PLMcontentRepository shared folder on asynchronous server	Mandatory field
Windows 'System' user password	PLM dedicated Windows user password	Mandatory field
Reporting Server host name	Host name where Reporting Server is deployed	Mandatory field
Naming Service port	Asynchronous naming service port Default value 4447. Possible values: 4447, 4547, 4647 depending on the Wildfly ports set on the reporting server.	Number format and mandatory field

3.7.7 Apache settings

This screen allows defining parameters required for the Apache Server deployment.

FIELD NAME	DESCRIPTION	VALIDATION RULE
PLM host	Host name where PLM is deployed. If there are several PLM servers, set the hostname of the synchronous server.	Mandatory field
Wildfly AJP Port	AJP port defined in PLM Wildfly configuration. Possible values are 8009, 8109 or 8209 depending on choice made during installation	Number format and Mandatory field

3.8 Post-installation operations

3.8.1 Cluster for Event Bus (e.g. : WebSocket)

A HornetQ server is installed on each of the asynchronous servers. By default, clustering between servers is not enabled, so events published on bus will not be received by other servers.

To enable clusteing, you have to modify HornetQ configuration on all asynchronous servers, and restart the corresponding services (Lectra Fashion PLM Event Bus).

The configuration files are in :

- /hornetq-2.4.0.Final/config/stand-alone/clustered

3.8.1.1 hornetq-configuration.xml

- Add a <connector> block for each of the asynchronous servers in the cluster :

```
<connectors>
    <connector name="netty">
      <factory-class>org.hornetq.core.remoting.impl.netty.NettyConnectorFactory</factory-class>
      <param key="host"  value="${hornetq.remoting.netty.host:localhost}"/>
      <param key="port"  value="${hornetq.remoting.netty.port:6445}"/>
    </connector>

        <!--mod Cluster : add connector for each cluster node, !change server name -->
          <connector name="netty2">
      <factory-class>org.hornetq.core.remoting.impl.netty.NettyConnectorFactory</factory-class>
      <param key="host"  value=" ASYNC_SERVER2"/>
      <param key="port"  value=" 6445"/>
    </connector>

        <connector name="netty3">
      <factory-class>org.hornetq.core.remoting.impl.netty.NettyConnectorFactory</factory-class>
      <param key="host"  value=" ASYNC_SERVER3"/>
      <param key="port"  value=" 6445"/>
    </connector>
```

- Uncomment <cluster-connections> block and add a <connector-ref> block for each of the asynchronous servers in the cluster :

```
  <!--mod Cluster : add connector-ref for each cluster node-->
  <cluster-connections>
    <cluster-connection name="my-cluster">
      <address>jms</address>
      <connector-ref>netty</connector-ref>
            <static-connectors>
                    <connector-ref>netty2</connector-ref>
                   <connector-ref>netty3</connector-ref>
          </static-connectors>
    </cluster-connection>
  </cluster-connections>
```

3.8.1.1 hornetq-jms.xml

- Add a <connector-ref> for each of the asynchronous servers in the cluster :

```
<connection-factory name="NettyConnectionFactory">
  <xa>false</xa>
  <connectors>
    <connector-ref connector-name="netty"/>
        <!-- cluster mod: add connector-ref for each cluster node -->
          <connector-ref connector-name="netty2"/>
          <connector-ref connector-name="netty3"/>
  </connectors>
  <entries>
    <entry name="/ConnectionFactory"/>
  </entries>
</connection-factory>
```

4. INSTALLATION RESULT

4.1.1 Small installation

4.1.1.1 Components location

The table below lists all the folders created in the destination folder during the installation process.

FOLDER NAME	DESCRIPTION
apache-http	Apache http server
HornetQ	HornetQ messaging system
config	Contains bundles and associated logs loaded during installation process.
DatabaseBundle	Lectra module containing database scripts for the admin user.
externalized-customization	Contains customization files : configuration (xml file) and implementation (jar file)
File Manager Directory Watcher	File Directory Watcher
Wildfly-<version>	Application Server dedicated to Lectra Fashion PLM Server application.
jdk-<version>	Oracle JDK required for Java applications
lectra	Contains installers and configuration files embedded in the Lectra Enterprise Installer
logs	Installer & Wildfly server logs
PDM or PLM	Product Development module / PLM J2EE application, parameters and configuration folder
scripts	Contains scripts used during the Installation
Uninstaller	Contains uninstaller for the application deployed and JRE required to launch the uninstaller.
LectraFLEXlmServer (optional)	Home directory of the Lectra FlexLm Server deployed by the installer
patchs\ContentProcessor	contains .bat files which can be used to launch MDL or MTG content processing

The table below lists the components deployed on other folders than the destination one.

FOLDER NAME	DESCRIPTION
C:\Program Files (x86)\Common Files\Lectra	Lectra Applications dedicated for image processing : Designer, Operator Server and required dependencies
C:\Program Files (x86)\ \Lectra	Lectra Applications dedicated for image processing : Designer, Operator Server, Lectra ModaRest and required dependencies

There is another folder: PLMContentRepository. This folder contains data. It is necessary to create a backup before uninstalling the application and removing this folder. This folder is created in destination selected during the installation.

It is recommended to choose another location (not the default one) on the server. In fact, default value is a sub folder of installation path and could be deleted during uninstall if force directory deletion is selected in uninstaller.

4.1.1.2 Services definition

SERVICE NAME	DESCRIPTION	STARTING MODE	STARTING ACCOUNT
Apache2.4	Apache Server	Automatic	SYSTEM
Lectra File Manager Directory Watcher	Lectra File Manager Application	Manual	SYSTEM
Lectra File Operators (Downloader service)	Lectra File Operator Services.	Automatic	PLM dedicated user
Lectra File Operators (Processor service)	Lectra File Operator Services.	Automatic	PLM dedicated user
Lectra Fashion PLM System Administration	Lectra Fashion PLM System Administration	Automatic	PLM dedicated user
Lectra Soap Server	Lectra File Operator Services	Automatic	PLM dedicated user
Lectra Server JBoss Service	JBoss/Wildfly application server service	Automatic	PLM dedicated user
LectraPLMEventBus	HornetQ service	Automatic	PLM dedicated user
ModaRest	ModaRest service	Automatic	PLM dedicated user
Lectra PLM FlexIm (optional)	License service. This service is created if license server is installed on this server.	Automatic	SYSTEM

4.1.2 Typical installation

4.1.2.1 Database Server

Components location

The table below lists all the folders created in the destination folder during the installation process.

FOLDER NAME	DESCRIPTION
DatabaseBundle	Lectra module containing database scripts for the admin user.
jdk-<version>	Oracle JDK required for Java applications
lectra	Contains installers and configuration files embedded in the Lectra Enterprise Installer
logs	Installer & Wildfly server logs
scripts	Contains scripts used during the Installation
Uninstaller	Contains uninstaller for the application deployed and JRE required to launch the uninstaller.
LectraFLEXlmServer (optional)	Home directory of the Lectra FlexLm Server deployed by the installer

Services definition

SERVICE NAME	DESCRIPTION	STARTING MODE	STARTING ACCOUNT
Lectra PLM FlexIm (optional)	License service. This service is created if license server is installed on this server.	Automatic	SYSTEM

4.1.2.2 Reporting Server

Components location

The table below lists all the folders created in the destination folder during the installation process.

FOLDER NAME	DESCRIPTION
File Manager Directory	File Directory Watcher

FOLDER NAME	DESCRIPTION
Watcher	
Wildfly-<version>	Application Server dedicated to Lectra Fashion PLM Server application.
Hornetq	Hornetq messaging system
jdk-<version>	Oracle JDK required for Java applications
lectra	Contains installers and configuration files embedded in the Enterprise Installer
logs	Installer & Wildfly server logs
PDM or PLM	Product Development module/ PLM J2EE application, parameters and configuration folder
scripts	Contains scripts used during the Installation
Uninstaller	Contains uninstaller for the application deployed and JRE required to launch the uninstaller.

The table below lists the components deployed on other folders than the destination one.

FOLDER NAME	DESCRIPTION
C:\Program Files (x86)\Common Files\Lectra	Lectra Applications dedicated for image processing : Designer, Operator Server and required dependencies
C:\Program Files (x86)\ \Lectra	Lectra Applications dedicated for image processing : Designer, Operator Server and required dependencies

There is another folder: PLMContentRepository. This folder contains data. It is necessary to create a backup before uninstalling the application and removing this folder. This folder is created in destination selected during the installation.

It is recommended to choose another location (not the default one) on the server. In fact, default value is a sub folder of installation path and could be deleted during uninstall if force directory deletion is selected in uninstaller.

Services definition

SERVICE NAME	DESCRIPTION	STARTING MODE	STARTING ACCOUNT
Lectra File Manager Directory Watcher	Lectra File Manager Application	Manual	SYSTEM
LectraPLMEventBus	HornetQ service	Automatic	PLM dedicated user

SERVICE NAME	DESCRIPTION	STARTING MODE	STARTING ACCOUNT
Lectra File Operators (Downloader service)	Lectra File Operator Services	Automatic	PLM dedicated user
Lectra File Operators (Processor service)	Lectra File Operator Services	Automatic	PLM dedicated user
ModaRest	ModaRest service	Automatic	PLM dedicated user
Lectra Soap Server	Lectra File Operator Services	Automatic	PLM dedicated user
Lectra Server JBoss Service	JBoss/Wildfly application server service	Automatic	PLM dedicated user

4.1.2.3 Application Server

Components location

The table below lists all the folders created in the destination folder during the installation process.

FOLDER NAME	DESCRIPTION
apache-http	Apache http server
config	Contains bundles and associated logs loaded during installation process.
externalized-customization	Contains customization files : configuration (xml file) and implementation (jar file)
Wildfly-<version>	Application Server dedicated to Lectra Fashion PLM Server application.
jdk-<version>	Oracle JDK required for Java applications
lectra	Contains installers and configuration files embedded in the Lectra Enterprise Installer
logs	Installer & Wildfly server logs
PDM or PLM	Product Development module/ PLM J2EE application, parameters and configuration folder
scripts	Contains scripts used during the Installation
Uninstaller	Contains uninstaller for the application deployed and JRE required to launch the uninstaller.

FOLDER NAME	DESCRIPTION
patchs\ContentProcessor	Contains .bat files which can be used to launch MDL or MTG content processing

Services definition

SERVICE NAME	DESCRIPTION	STARTING MODE	STARTING ACCOUNT
Apache2.4	Apache Server	Automatic	SYSTEM
Lectra Fashion PLM System Administration	Lectra Fashion PLM System Administration	Automatic	PLM dedicated user
Lectra Server JBoss Service	JBoss/Wildfly application server service	Automatic	PLM dedicated user

4.1.3 Custom installation

With this mode, the result is depending on the choices made on the “packs selection” panel.

To check the result, you can consult the Small installation result section.

You will obtain the same result filtered with your packs selection.

5. INSTALLATION VALIDATION

5.1.1 Validate Product development module installation

Open a web browser and browse to the, URL http://<servername>:8080/pdm, where <servername> is the name of the Application Server. You should obtain a PDM login.

5.1.2 Validate Operator Server

Validation must be done on server (for small configuration) or on reporting server for typical installation.

To confirm that the installation was successful, launch a web browser and browse to the URL http://localhost:8080/enterpriseserver-web. Connect with the username “root” and the password set during the installation process (the default value is “lectra”).

Click on File Manager Board link on the right of the screen.

The “Operator Server Status” is displayed. Validate that the Operator Server status is “started” and that the two links are valid (i.e. no error 404 when you click on links)

5.1.3 Validate config file load

A folder “config” is created in destination folder; it contains the logs about configuration files load. Each bundle loaded during installation process is copied in this folder with the associated log file. Those files are located in a subfolder whose name is the loading time.

6. LOGS

6.1 Installer logs

The logs corresponding to the installation process are stored in the folder %DEST_FOLDER%\logs.

If you encounter an error during installation process, please send all the content of this folder to the support team.

Izpack-inputs.xml is very useful because it contains all the data set by the user.

6.2 Product Development logs

The server logs are stored in the folder %DEST_FOLDER%\logs\

There is another log file named server.log located in the folder %PDM_HOME%\Wildfly-<VERSION>\standalone\log\server.log.

This file contains only startup information but could be very useful when the JBoss/Wildfly Windows Service does not correctly start.

7. REPAIR APPLICATION

The "repair" mode is available launching again the same installer as the version already deployed on the server.

This mode allows modifying parameters on already installed Enterprise Solutions on server: license servers, server ports… without fully install again all the application. It is not necessary to deploy again customization (if it exists) after repair installed application.

When the installer is launched, a check tests the existence of the Enterprise Solution on the server. If the same version is detected, the "repair" mode is proposed to the end-user.

The “repair” mode overwrites some configuration files. If manual modifications have been done on installation, these modifications have to be done again after repair. A history folder will be created to store some configuration files and information about installation before repair operation.

7.1 Program maintenance

A screen indicating than an existing version has been detected and only the repair mode is available.

7.2 Parameters available in repair mode

"Repair" mode only allows overriding some parameters set during previous installation. Repair mode does not allow creating new schema.

The "DatabaseBundle" input page in "Custom" installation is disabled. All others parameters available during installation (depending on type of installation) are available in repair mode.

Screens displayed in repair mode are the same than during installation you want to repair. It is impossible to change value not displayed during previous installation. Same fields are displayed.

7.3 Installation history

It indicates the existing and the location of the history folder. The “history” folder is used to backup information: parameters, logs, from the previous installation.

8. UPGRADE APPLICATION

The upgrade mode is available launching again an installer more recent than the previous version already deployed on the server.

When installer is launched, a check tests existence of application on the server. If previous version is detected and if this version is upgradable, upgrade mode is proposed to user.

The “upgrade” mode overwrites some configuration files. If manual modifications have been done on installation, these modifications have to be done again after repair. A history folder will be created to store some configuration files and information about installation before upgrade operation.

It is necessary to install again customization after application upgrade.

8.1 Program maintenance

A screen indicating than an existing version has been detected and only the upgrade mode is available.

8.2 Parameters available in upgrade mode

Screens displayed in upgrade mode are the same than during installation you want to upgrade. It is impossible to change value not displayed during previous installation. Same fields are displayed.

Note: all fields already existing in previous version are initialized with values set during previous installation.

8.3 Installation history

It indicates the existing and the location of the history folder. The “history” folder is used to backup information: parameters, logs, from the previous installation.

8.4 Content processing

Run **MDLProcessor.bat** (located in **patchs\ContentProcessor**).

This batch file:

1. Retrieve all MDL file IDs from the installed database
2. For each MDL file ID, call operator server to process them, and display server response

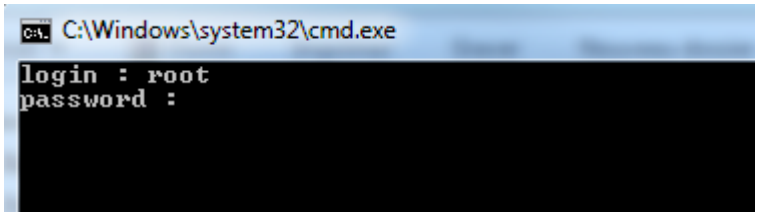
Run **MTGProcessor.bat**.

This batch file:

1. Retrieve unprocessed MTG file IDs (i.e. either MTG files with no OBJ file associated or MTG files with null-sized OBJ file associated) from the installed database
2. For each MTG file ID, call operator server to create the OBJ file, and display server response

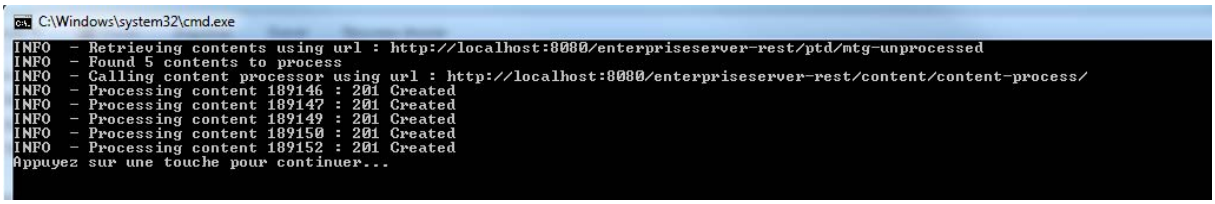
Instructions:

1. Launch bat file
2. Enter credentials (note that only root user is allowed to execute this patch) :



3. Wait for patch execution completion

Each execution appends information to the contentReprocessor.log file. This information is also displayed in the command prompt window while the patch is executing:



9. UNINSTALL APPLICATION

9.1 Before uninstalling application

The uninstallation of the application removes all components from the server. All components and uninstaller behavior are described in next section.

Uninstallation removes database schemas and it could also delete PLMContentRepository depending on target folder you selected during installation. So, it is necessary to backup your database and your PLMContentRepository before uninstall application if you want to preserve your data.

To prevent loose of data, the uninstaller exports PLM database before removing database schemas. The export is done in the home directory of the user who launches the uninstaller.

9.2 Launch uninstaller

The Uninstaller is available throw "Add or Remove Program" component of Windows operating system. You could uninstall the Enterprise Server Solutions, as you uninstall other applications on your computer.

Select the product and click on “Uninstall”.

An IzPack window appears, click "Uninstall" to launch uninstallation of application.

If you check "Force the deletion of xxxx" and if your PLMContentRepository is in the same folder, you will lose your data.

There are several operations launched before the beginning of the files deletion. The progression bar stays inactive during this step. That does not mean that the uninstaller does not start.

When "Finished" message is displayed, click on "Quit" to exit Uninstall program.

The uninstaller removed all component installed during installation process, except the Designer module.

10. DIAGNOSTIC

The aim of this section is to describe the messages displayed by the installer. There are error and warning messages. The aim is to identify and fix the issues.

MESSAGE	CAUSE	HOW TO FIX
Impossible to contact database server, please check database settings and network settings.	The information set are not valid or There is a firewall issue	Check the information : instance, port, hostname or Validate that the database listener port is authorized on the firewalls or In typical installation, ensure that the Database server is already installed.
It seems that your Oracle Client configuration does not work.	a) The tnsnames.ora is not well set up b) The alias in the tnsnames.ora has not the same name as the instance c) There is a firewall issue	a) Fix the tnsnames.ora b) Check the firewall c) Validate that the database listener port is authorized on the firewalls
It is impossible to configure one server as synchronous and asynchronous.	You select both the “PLM asynchronous pack” and the “PLM synchronous pack”.	Uncheck the two checkboxes. In fact, the default behaviour for a server is to be Application & Reporting Server. Note: synchronous and asynchronous must be used when there are several servers.
Application server cannot be installed on the same server as reporting server.	You try to install the application server (typical installation) on the same server as the Reporting. That is not allowed by the installer	Install application server on another server or change the type of installation. Note: changing the installation type requires uninstalling the current Reporting server.
Impossible to write file in PLMContentRepository (shared directory on reporting server). Check reporting server installation.	The installer cannot write in the PLMContentRepository located in the reporting server because : - the folder is not correctly shared on the reporting	Manually share the PLMContentRepository on the reporting server. or Launch the installer with the user dedicated to the server installation = the same

MESSAGE	CAUSE	HOW TO FIX
	server - The user used to launch the installer is not the same as the one set during reporting server installation.	as the one set during reporting server installation
The required license cannot be checked out. Try again or check your settings.	The required license is not available on the license server	Check the licenses available on the license server and add the correct one : PLM_USER
The license server is unreachable. Try again or check your settings.	The installer cannot contact the license server.	Check the license server set is valid or Check the network state
Microsoft .NET Framework 3.5 SP1 is required and not installed.	The .NET framework required version is not installed	Add the feature .NET framework. On windows 2008 server : Server Manager -> Features -> Add Feature Select .NET framework 3.5 SP1 (child of.NET framework 3.5 SP1features) Install On windows 2012 server : Open a command window as an administrator Run the following command `DISM /Online /Enable-Feature /FeatureName:NetFx3 /All`
Required port xx is already used on this server.	Another application uses a required port	Change the port configuration if you are in custom mode or

MESSAGE	CAUSE	HOW TO FIX
		Stop the application using the port To identify the application, use the following command `netstat –nao` The PID of the application using the port can be identified and then stop thru the task manager.
Required port 80 is already used on this server.	The port 80 is currently used	Using the netstat command shows that the port is used by SYSTEM process. This is due to the IISS web server available on 2008 Server. Stop the service “World Wide Web Publisher” and change his starting mode to Manual.
Your installation of Oracle is not compliant with this type.	Default mode is used and there is a missing prerequisite. With default mode, it is mandatory to have : Instance name LDPLM000 System password LDPLM000 Listener Port 1521	Change the instance parameters to match prerequisites or use the advanced mode.
sqlplus is not recognized as an internal or external command.	The sqlplus is not found in the path.	Oracle client (advanced mode) or Oracle server (default mode) is not correctly installed. or The path is not up to date, force the refresh of environments variables restarting the server or making a fake modification on an existing environment variable, then restart the installer from a new explorer window.
Impossible to install server. opt and lic files not found in %INSTALLER_BASEDIR%/config/licenses directory	You make the choice to install the license server with the installer but you do not copy opt and lic files in	Copy the missing file in the right place: the config/licenses folder in the same folder as the installer executable.

MESSAGE	CAUSE	HOW TO FIX
	the config/licenses folder	Note: that must be valid files with the right licenses. If the files are invalid, the installation will fail.
Not enough free disk space.	There is no enough disk space on the selected drive.	Clean your drive. Note: the installer is temporary uncompress in the temp folder => when the installer is started, you have less space than before starting.
The database server must be upgraded first.	Your are upgrading the reporting or application server without having upgrade the database server	Upgrade the database server first