



Infor LN Installation Guide

Copyright © 2016 Infor

Important Notices

The material contained in this publication (including any supplementary information) constitutes and contains confidential and proprietary information of Infor.

By gaining access to the attached, you acknowledge and agree that the material (including any modification, translation or adaptation of the material) and all copyright, trade secrets and all other right, title and interest therein, are the sole property of Infor and that you shall not gain right, title or interest in the material (including any modification, translation or adaptation of the material) by virtue of your review thereof other than the non-exclusive right to use the material solely in connection with and the furtherance of your license and use of software made available to your company from Infor pursuant to a separate agreement, the terms of which separate agreement shall govern your use of this material and all supplemental related materials ("Purpose").

In addition, by accessing the enclosed material, you acknowledge and agree that you are required to maintain such material in strict confidence and that your use of such material is limited to the Purpose described above. Although Infor has taken due care to ensure that the material included in this publication is accurate and complete, Infor cannot warrant that the information contained in this publication is complete, does not contain typographical or other errors, or will meet your specific requirements. As such, Infor does not assume and hereby disclaims all liability, consequential or otherwise, for any loss or damage to any person or entity which is caused by or relates to errors or omissions in this publication (including any supplementary information), whether such errors or omissions result from negligence, accident or any other cause.

Without limitation, U.S. export control laws and other applicable export and import laws govern your use of this material and you will neither export or re-export, directly or indirectly, this material nor any related materials or supplemental information in violation of such laws, or use such materials for any purpose prohibited by such laws.

Trademark Acknowledgements

The word and design marks set forth herein are trademarks and/or registered trademarks of Infor and/or related affiliates and subsidiaries. All rights reserved. All other company, product, trade or service names referenced may be registered trademarks or trademarks of their respective owners.

Publication information

Infor LN Release: 10.4

Publication Date: February 29, 2016

Document code: U9498IUS

Contents

About this guide.....	5
Contacting Infor.....	5
Chapter 1: Introduction.....	7
Overview installation process.....	7
General installation notes.....	10
Chapter 2: Pre-installation tasks.....	11
System settings.....	11
Database settings.....	11
Microsoft SQL Server.....	12
Oracle.....	14
DB2 universal database.....	16
Chapter 3: Installation procedure.....	19
Installation notes.....	19
Staging the software.....	21
Installing the software.....	21
Chapter 4: Post-installation tasks.....	27
Database and application tuning.....	27
Installing user interface software.....	28
Setting up online help.....	28
Updates.....	28
License Infor LN.....	28
License for DEM Content Pack.....	29
Configure Shared Memory.....	29
Changing passwords.....	30
Specifying default currencies.....	30
LN installation with ASM.....	30
DEM Content Pack.....	30
Parameter settings for DEM Content Pack.....	31
Setting up exchange schemes.....	32
Infor ES Reporting.....	32
Chapter 5: Installing a language in LN.....	33
The base language installation process.....	33

Updating the language.....	34
English as fall back language.....	34
Appendix A: Installing on Windows Server Cluster.....	35
Installation on first cluster node.....	35
Installation on next cluster nodes.....	36
Finish the cluster installation.....	37
Setting up a failover job daemon.....	37
Maintenance and Administration on cluster aware BSE.....	37
Appendix B: Application Server installation.....	39
Appendix C: Installation log files.....	41
Appendix D: Installing Infor ES Reporting Service.....	47
Upgrading the Infor ES Reporting Service.....	47
Modifying the port number.....	48
Troubleshooting Infor ES Reporting Service.....	48

About this guide

This installation guide describes the procedure to install the entire Infor LN software suite as a single installation. The Infor Installation Wizard guides the Infor LN software installation process.

Intended Audience

The document is intended for Infor consultants, partners and customers who are responsible for installing Infor LN.

Related documents:

You can find the documents in the product documentation section of the Infor Xtreme Support portal, as described in "Contacting Infor".

- *Infor Enterprise Server 10.4 Release Notes (P3675 US)*
- *Infor LN - Specific Installation Guide - Updates (U9497)*
- *Infor Enterprise Server Installation Guide (U9484)*
- *Infor Solution License Manager - Installation and Configuration Guide (U9200)*
- *Infor Enterprise Server - Administration Guide (U8854)*
- *Infor Application Service Manager - Administration Guide (U7784)*
- *Deploying Infor LN in a Virtualized environment (B0073)*
- *Infor LN - Performance, Tracing and Tuning Guide (U9357)*
- *Infor LN - User Guide for Setting Up a Company (U9503)*
- *Infor LN - DEM Content Pack User Guide (U9774)*
- *Infor LN - Standard Master and Demo Data User Guide (U9803)*
- *Infor LN UI Administration Guide (U9790)*
- *Infor LN UI Infor Ming.le-LN Plug-in User Guide (U9791)*

From this point onwards Infor LN is referred to as LN.

Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal.

About this guide

If we update this document after the product release, we will post the new version on this website. We recommend that you check this website periodically for updated documentation.

If you have comments about Infor documentation, contact documentation@infor.com.

Overview installation process

This section supplies an overview of the LN installation procedure.

The terms and abbreviations used in this guide are:

- Installation Wizard = Infor Installation Wizard
- SLM = Infor Solution License Manager
- LN = Infor LN
- ASM = Infor Application Service Manager

Pre-installation tasks

Before you can start with the actual installation of the LN software, you must have performed some pre-installation tasks. One of the pre-installation tasks is that a database instance is installed and running. For information about preparing a database for LN, see "Pre-installation tasks" on page 11.

Staging Installable Units

LN consists of different components, the so-called Installable Units (IU). These Installable Units must be placed in a directory on the system from where the installation is started. This directory is called staging area. For installation on a Windows server, the Installable Units must be staged on the LN server itself. For installation on a UNIX/Linux server, the Installable Units must be placed on a Windows client system.

To stage the Installable Units from the installation media in the staging area, the Infor Staging Wizard must be used. The user can select which Installable Units must be staged in the Staging Area.

Each IU that must be installed in one installation run is staged in the same Staging Area. No dependency check is made for the IUs loaded into the Staging Area.

The user who performs the installation is responsible for loading the correct IUs and versions in the Staging Area.

The available Installable Units defined for Enterprise Server are shown in this table:

Installable Unit	Description
Infor Staging Wizard	The wizard used to build a staging area. A staging area is a storage place for various Installable Units before the actual installation is performed.
Infor Installation Wizard	The wizard used to install the staged Installable Units
Solution License Manager	The Solution License Manager (SLM) is the license manager for the majority of the Infor LN and Infor Baan products. SLM installation is mandatory.
Infor Enterprise Server	The LN tools software. With these tools, you can manage the LN application software.
Infor ES Porting Set	The Enterprise Server Porting set contains sets of binaries that are operating system dependent. The porting set is a layer between the Operating System and the LN software.
Infor ES PMC Solutions	Feature Pack for the Enterprise Server containing the latest available version of the Enterprise Server software.
Infor ES AddOn PMC Solutions	Feature Pack for Enterprise Server AddOn, which contains the packages da (Data Director), nt (New Technology), tm (OpenWorld Middleware enabling), and ta (Technology Adjustable).
Infor Application Service Manager	Administrative tool to start and stop LN or other (partner) application services.
Infor Support Assistant	The Infor Support Assistant keeps you up to date with information about your Infor environment. Note: The Infor Support Assistant must be installed together with an Infor ES Porting Set.

The available Installable Units defined for LN:

Installable Unit	Description
Infor LN	LN application
Infor LN PMC Solutions	LN Product Maintenance and Control updates
Infor LN Standard Master Data	Master data containing: Company 050: Basic generic master data, which you can use to copy data such as Countries or Languages to use in your production companies.
Infor LN Demo Data	Demo company 090 and 091 contain master data to train, test and demonstrate LN functionality.
Infor LN DEM Content Pack	Functionality in LN (such as Enterprise Planning, Inventory Management, and Purchase) is modeled in a DEM Model called the DEM Content Pack. This can be used to model a customer specific Project Model in LN. This model contains scenarios and business processes with options, roles and rules. This is based on the relevant distribution

and production typologies and verticals supported in the LN functionality. In a project model you select the scenarios relevant for your business, and set the options that you want to implement. Based on the rules DEM select and transforms business processes that suit your need and simplifies the use of the LN functionality.

A separate license must be purchased to use the DEM Content Pack model.

Actual installation

After one or more IUs are placed in the Staging Area, they can be installed simultaneously to the target system, or selectively installed. The Installation Wizard handles the actual installation of the IUs.

To install the complete LN software for the first time, these installable units are mandatory to install:

- Infor Staging Wizard.
- Infor Installation Wizard.
- Infor ES Porting Set
- Infor Support Assistant
- Infor Enterprise Server
- Infor LN
- Infor Solution License Manager

There are two ways to install Infor Solution License Manager:

- You can select this installable unit so the installation wizard will install SLM together with the other selected installable units in one run. The SLM installable unit will install all SLM components (client and server part) on the LN server system. The default values for SLM will be configured. This means a master SLM Server will be started at port number 6005.
- You must use the standalone SLM installer in other situations. Possible situations that require the standalone SLM installer are:
 - Set your own values,
 - Install a SLM server on another system,
 - Only install a SLM client on the LN system as there already is a SLM server present.
 - Install a SLM cluster.

Before you can proceed with the LN installation, you must have installed SLM or selected the installable unit of SLM. The installation wizard runs a check on SLM components and will stop the installation if SLM information is not found.

Post-installation tasks

After you complete the installation, you must perform several additional tasks to set up your LN product. For more information, see "Post-installation tasks" on page 27.

General installation notes

This section describes in general what you must take into account before you start the LN installation.

Last minute information

For the latest information about LN, take note of these Infor Xtreme solutions.

Solution	Description
22867311	This solution provides an overview of the LN applications solutions. It is recommended to choose the latest version of the software for new installations. For possible installation problems and last minute solutions you must install extra information gathered after completion of the documentation.
22881401	Latest information about system sizing, performance considerations and operating system and database tuning aspects

Release and Technical notes

Read the *Infor Enterprise Server 10.4 Release Notes (P3675 US)* and the Technical Notes for Porting Set together with other documents that apply to your configuration. Check the Platform support matrix that is available in solution **1183466**

These notes do not replace the installation tasks or online help. They provide additional information that can be useful during the installation, or help you overcome functional issues after the installation.

Demo data

If you plan to install the demo companies, do not install additional solutions next to the solutions delivered with the installation media of the feature pack. The new solutions can introduce meta data changes for which the demo companies are not compliant.

First, finish the installation, including the installation of the demo companies. Then install the additional solutions. The reconfiguration process automatically brings the demo companies on the correct meta data level.

During the installation you can be asked to specify new company numbers. Do not create company numbers with a number of 100 or lower. The range of zero through 100 is reserved by Infor for delivering demo and base data. During updates of demo and base data problems arise if a duplicate, company number is created for operational use.

Before the Infor LN installation, you must perform some pre-installation tasks. For an efficiently performing database and Infor LN system, you must procure the right system and hardware that suits your business needs. Consider hardware sizing by Infor. Incorrect values can negatively impact performance.

For system tuning recommendations, see *Infor LN - Performance, Tracing and Tuning Guide (U9357)*.

We recommend some guidelines for a correct setup of the system and database before the actual installation of Infor LN. Follow the guidelines in your applicable database section.

General note: Ensure to apply the latest available service packs and fixes to your Operating System and Database before starting the installation of Infor LN.

Java must be installed on the LN Server.

System settings

This section provides guidelines for a correct system configuration before the installation of LN.

Before you install LN on Windows, you must create an installation user account for example `infor`, with administrator rights. On UNIX/Linux create a group, for example `bsp`. This group includes all the users, who are granted access to the LN application. Also create an installation user, for example `bsp`, with enough rights to create the `BSE` directory where the LN environment will reside. The installation user name on Windows or UNIX must not exceed eight characters.

On UNIX, for the installation user, activate the korn shell to avoid installation problems.

Database settings

This section provides general guidelines for a correct database configuration for LN. The database instance must be created manually. The database can be created through the Installation Wizard.

The installation wizard does not create directories for database files. Ensure these directories already exist.

Disk space

For performance reasons we recommend to allocate the full size of the database tablespaces according the sizing recommendation during the creation of the tablespace. For example, if the sizing requires 500 GB disk space for the database for the coming two years, allocate that size during the database creation. In order to decrease the disk space, the compress database table on functionality can be considered.

Character set

Before you start the installation you must have decided what Character Set you are using for LN.

We recommend that you use Unicode. When using Unicode, integrations with other applications are possible and extra languages can be added to your environment. Changing from Single Byte to Unicode after the installation is a very time consuming conversion. Compared with Single byte, a Unicode character set has impact on performance and requires more disk space. For more specific sizing information and the impact on your hardware, contact Infor.

Users

We recommend that you create all database users and group names in lowercase to prevent case problems.

Database client for 3-tier

When using a 3-tier environment, a database client installation is required on the application server. Use the database specific installation manuals for installation instructions.

Microsoft SQL Server

To install the Microsoft SQL Server (MSQL) software, use the SQL Server Installation Manuals. This section provides guidelines for a correct setup of SQL Server for Infor LN. For SQL Server database tuning advice, see *Infor LN - Performance, Tracing and Tuning Guide for SQL Server (B0079)*

Collation settings

During the installation process of SQL Server the Server configuration dialog box is displayed. On this dialog box you can select a collation, code page and sort order.

Collations provide sorting rules, case, and accent sensitivity properties for your data. Collations that are used with character data types such as `char` and `varchar` dictate the code page and corresponding characters that can be represented for that data type.

The collation of the LN database is set by the Installation Wizard during the database creation process.

Before selecting the collation and sorting rules during the SQL Server installation, you must decide which applications you want to run using this SQL Server instance. Investigate if these applications have pre-requisites about the instance collation.

Select the correct collation and sorting rules during the SQL Server installation. Changing the collation after you installed the SQL Server means rebuilding your database and reloading the data.

The LN database on the SQL server requires a "Windows collation designator and sort order". The used collation depends on the choice of Unicode, Single Byte or Multibyte for your LN database. When installing a new SQL server instance you can select this on the Collation selection dialog.

Windows Region system locale settings

During the installation process of LN the selected installation locale for Multibyte and Single byte must correspond to the SQL Server Database Collation. Furthermore, the SQL Server database collation must match the character set of the Windows system locale of the LN server. If the character sets of the SQL Server database collation and the Windows system locale do not match, unexpected character translations can occur, resulting in data corruption.

Note: You can change the system locale for non-Unicode programs in the control panel, in the Region section.

After the initial LN installation is finished, these settings cannot be changed and result in data corruption of any existing data.

Unicode

In case of a Unicode installation select **Latin1_General_100_CS_AS_KS_WS** and these sort order characteristics:

- Case - sensitive
- Accent - sensitive
- Kana - sensitive
- Width - sensitive

Single Byte

In case of a Single Byte installation select binary sort order. Do not select the Binary-code point. Binary collations sort data based on the sequence of coded values that are defined by the locale and data type. They are case sensitive.

Multibyte

To store native multibyte (not Unicode) characters in a SQL Server database, the SQL Server collation, the Windows system and the locale of the LN environment must be compatible with each other. For example, when the used Multibyte language is SHIFTJIS, the system locale must be Japanese (Japan). To change the system locale, click Start > Control Panel > Region and Language > Administrative tab > Change system locale.

This table shows the LN locale, the OS locale and the SQL Server collation which are compatible.

LN locale	Windows system locale	SQL Server collation
SHIFTJIS_WIN32	Japanese (Japan)	Japanese_BIN
GB_WIN32	Chinese (SIMPLIFIED, PRC)	Chinese_PRC_BIN
BIG5_WIN32	Chinese (Traditional, Taiwan)	Chinese_Taiwan_Stroke_BIN
KOREAN_WIN32	Korean (Korea)	Korean_Wansung_BIN

Data storage

This table shows a rough starting value for the size of the SQL Server table spaces. Consider the requirements based on your system sizing for optimal performance.

Tablespace	Initial size
Log	2 GB
Data + Index	Refer to sizing, minimal 20 GB

When using auto growth, use large chunks of 2 GB or more to minimize fragmentation.

Remote database (3-tier)

To install the database on another server, you must Install SQL Server client on the application server. For more information, refer to the SQL Server Books Online.

Oracle

To install the Oracle software, see the Oracle Installation Manuals. This section provides guidelines for a correct setup of Oracle for LN. For more Oracle database tuning advice, see *Infor LN - Performance, Tracing and Tuning Guide for Oracle (B0078 US)*.

Parameters

This table shows a rough starting value of Oracle parameters which must be changed while creating the instance. Consider the requirements based on your system sizing for optimal performance.

Parameter	Recommended value
sga_target (2-tier)	25% of internal memory
sga_target (3-tier)	40% of internal memory
Connection mode	Dedicated server
processes	150 + number of users
sessions	Number of users * 1.1
db_block_size	Oracle 12 / Unicode: at least 16KB

Unicode mode: Oracle 12 has new Unicode Collation Algorithm compliant collations. The definition of some LN tables requires a `db_block_size` of at least 16KB. This is currently the largest available block size on Oracle/Windows installations. On Oracle/UNIX 32KB is preferred. Ensure to set this parameter before creating the Oracle database. You cannot change this parameter afterwards.

Character set

For a Single Byte and Multibyte installation choose an appropriate character set (`NLS_CHARACTERSET`) that matches your main language. Do not use AL32UTF8 for Single Byte or Multibyte character sets.

This table shows the main Single Byte and Multibyte languages with their recommended character set:

Language	Oracle instance character set
Japanese	ja16sjis
Simplified Chinese	zhs16gbk
Traditional Chinese	zht32euc
Korean	Ko16KSC5601 / KO16MSWIN949
West European	WE8ISO8859P1 / WEMSWIN1252
East European	EE8ISO8859P2 Cyrillic / CL8ISO8859P5

In case of a Unicode installation the value of the character set (`NLS_CHARACTERSET`) is not relevant for LN. Select AL16UTF16 as value of the national character set (`NLS_NCHAR_CHARACTERSET`). The value of the national character set is not relevant for LN running in Single Byte.

Data storage

This table shows a rough starting value for the size of the Oracle tablespaces. Consider the requirements based on your system sizing for optimal performance.

Tablespace	Initial size
System	5 GB
Undo	10 GB
Temp	10 GB
Redo	6 files of 1 GB each
Data + Index	See sizing, minimal 20 GB

Remote database (3-tier)

To install the database on another server:

- 1 Install Oracle Net Services on the application server.
- 2 Configure a listener using net Configuration Assistant (netca).

For more information, see the *Oracle Net Services Administrator's Guide*.

DB2 universal database

There are some guidelines to set up DB2 for LN. For installing the DB2 software and creating a DB2 instance, see the IBM documentation or online help. For DB2 database tuning advice, see *Infor LN - Performance, Tracing and Tuning Guide for DB2 (B0077 US)*.

System accounts

DB2 uses Operating System authentication. In case of a 3-Tier setup you can use one of these authentication options:

- Server authentication: the OS users and groups must be created on the database server.
- Client authentication: the OS users and groups must be created on the (Master) Application server.

In case of 2-Tier, use server authentication.

These OS users and groups must be added or modified:

- Create a UNIX group for all LN users; for example `infor`. The group name must correspond with the DB2 database that is created during the installation of LN. Any user who must have access to the database must be a member of this group. All users that require database administration access must belong to the group `db2iadm` that was created during the installation of DB2.
- Add the installation user, for example `bsp`, to the LN application group `infor` and to the database administration group `db2iadm`.
- Create a user `infor` whose name corresponds to the DB2 database group that is created during the installation of LN. You must add this user to the UNIX group, for example `infor` and to the database administration group `db2iadm`.
- Modify the user account root/administrator and make the account a member of the group `infor`. In addition, the user root must be a member of the DB2 related groups created during installation.

Character set

The table shows the character set settings for a single byte and Unicode DB2 installation. When using Unicode the used collation depends on the DB2 version. When creating the database through the LN Installation Wizard, these settings are used.

Installation	Code set	Territory	Collation (database version dependent)
Single Byte	ISO8859-1	en_US	IDENTITY
Unicode	UTF-8	en_US	CLDR181_NX (DB2 version V10.1 or later) UCA500R1_NX (DB2 version V9.7 or later) UCA400_NO (DB2 version 9.5)

DB2 Code page

DB2 can convert characters if the client, the Infor LN DB2 driver, and the RDBMS work with different code pages. The client code page is derived from system settings, for example `local`.

If conversion errors occur, the `DB2CODEPAGE` variable must be set to the same code page as used in the database. Specify the `DB2CODEPAGE` in the `$BSE/lib/tabledef6.2` file.

Data storage

The table shows a rough starting value for the size of the DB2 tablespaces. Consider the requirements based on your system sizing for optimal performance.

Tablespace	Type	Initial size
Catalog	SMS	Minimal 10 GB free disk space
Temporary	SMS	Minimal 10 GB free disk space
Data + Index	DMS	See sizing, minimal 20 GB

Parameters

Use automatic tuning as much as possible. Consider the requirements based on your system sizing for optimal performance.

This table shows a rough starting value of some DB2 parameters:

Parameter	Recommended value
bufferpool (data)	AUTOMATIC(200000)
bufferpool (temp)	AUTOMATIC(10000)
bufferpool (ibmdefaultbp)	AUTOMATIC(25000)
dbheap	AUTOMATIC(50000)
logprimary	6
logsecondary	10
logfilsiz	128000

Enable connection pooling, run this command at a db2 command prompt:

```
db2 => update cli cfg for section Common using MultiConnect 3
```

If the MultiConnect setting is not set to 3, errors occur.

DB2 shared libraries on UNIX/Linux

Ensure that you create a symbolic link for the correct version of DB2 libraries under `/usr/lib`. To create this symbolic link, use the `db2ln` utility.

The `db2ln` utility creates a symbolic link to `/usr/lib/$LIBNAME`. Symbolic links to previous versions of DB2 are removed. You can find `db2ln` in: `<DB2INSTALLDIR>/cfg`

Run the command as root: `<DB2INSTALLDIR>/cfg/db2ln`

Links from previous versions of DB2 to the `/usr/lib` directory are automatically replaced with a link to the newer DB2 version if you run the `db2ln` command. Check IBM DB2 documentation if you want to re-establish a symbolic link to a previous version of DB2. You can only establish symbolic links for one DB2 version on a specific system.

In case of multiple DB2 installations on the same system, the shared library environment variable must be set in `<BSE>/lib/bse_vars`. This environment variable enables you to use the correct libraries with the DB2 version you want to use for the LN installation.

During the installation of the LN software, a dialog box is displayed where you can change the `bse_vars` file. The name of the variable varies by platform:

- On AIX: `LIBPATH=<DB2INSTALLDIR>/lib`
- Other UNIX/Linux platforms: `LD_LIBRARY_PATH=<DB2INSTALLDIR>/lib`

Remote database (3-tier)

To install the database on another server:

1 Set these DB2 environment variables on both the database- and application server:

- `db2set DB2COMM=TCPIP`
- `db2set DB2INSTANCE=instance_name`

2 Search for two consecutive unused TCP/IP port numbers higher than 1024 on both the application and database server in `/etc/services`. Use these port numbers for DB2 client/server communication. Add these lines:

- `name1 port_number1/tcp`
- `name2 port_number2/tcp`

The name of the first port number is referred to as the service name.

3 On the database server, ensure the database manager configuration parameter `SVCENAME` contains the correct service name:

```
db2 => update dbm cfg using SVCENAME name1
```

4 Catalog the database on the (Master) Application Server. Start a db2 command prompt and specify these commands:

- `db2 => catalog tcpip node NODENAME remote hostname|ip_address server service_name|port_number`
- `db2 => catalog database DATABASE as DATABASE at node NODENAME`
- `db2 => update dbm cfg using authentication CLIENT`
- `db2 => terminate`

The installation procedure will guide you creating a Staging Area with the Staging Wizard from which you can start the actual LN software installation.

Installation notes

This section describes some important installation notes.

Master Application Server and Application Server

Two different setup types are available:

- Master Application Server (MAS)
- Application Server (AS)

A MAS is a complete LN server that contains the application files and database. Having the database on the MAS is not mandatory. You can install the database on another server. These LN components are installed on the MAS:

- LN runtime data dictionary
- Virtual machine (bshell)
- Database driver
- Audit server
- LN printer manager

An AS is a stripped version of a MAS, and runs on Windows and UNIX. The AS contains a virtual machine (bshell), communicating with the MAS. The LN AS decreases the pressure on the traditional LN server, on which all application processing is performed. By setting up an AS next to the MAS, you can reduce part of the processing load from the MAS and balance the load across several servers in your LN network. This concept is mainly used in remote data management (3-tier) situations; database and application reside on different machines.

Note: Infor does not support a MAS running on a Windows operating system in combination with an AS on a UNIX operating system.

Before installing the AS, first install the MAS. For specific information about the AS, see "Application Server installation" on page 39.

Client / Server Scenario

LN is implemented in a client/server (C/S) mode. Therefore, the main parts of the LN architecture, including the presentation layer, application layer, and database layer, can run on separate machines. You can configure numerous C/S scenarios. However, most LN scenarios are based on two scenarios of the Gartner Group:

- Remote presentation scenario (2-Tier)
- Remote data management (3-Tier)

In the 2-Tier scenario, the presentation layer runs on the client machine, usually a PC, and the server part contains the application and database layer. Because two machines are involved, this type of environment is called a 2-Tier environment. In the 3-Tier scenario, the application and the database layer run on separate machines. The display driver is started on a separate machine. For more detailed sizing information, contact Infor.

When using a 3-tier setup, you must install the RDBMS specific client interface. This client interface provides access to the remote database. The client interface is required on the MAS. For instructions, see the RDBMS documentation or online help.

For starting the 3-Tier installation see the installation procedure of 2-Tier. Follow the same procedure until step 15. The relevant dialog boxes for the 3-Tier installation are:

- The Database Server Location dialog box. Select the correct checkbox to install on another server.
- The Database Connection Information dialog box. Specify the host name of the machine where the database server will reside. This information is required to connect to the correct database.
- Continue the rest of the 2-Tier installation procedure.

Synchronize system clocks

When installing LN on a non-Windows system, two systems are involved, The Installation Wizard is started on a Windows system, and at some time during the installation process, this setup will start processes on the system where the environment must be installed. Because of this technique, log files are created on both systems. If the time on both systems differ, it will be difficult to compare these log files regarding the timestamps. We recommend that you synchronize the clocks on both systems before starting the installation. For more specific information, see section "Server" in "Installation Log files" on page 41".

Single Byte, Multibyte and Unicode

In case of a Single byte U.S. English installation, you can select the locale ISO_BIN1 (default). To select another Character set, click the drop down arrow in the Locale dialog box during the installation.

In case of a Multibyte language pack installation such as Japanese, Simplified Chinese, Traditional Chinese or Korean, select the appropriate locale.

Language	Locale
Japanese	SHIFTJIS or KANJIEUC

Language	Locale
Simplified Chinese	GB2312
Traditional Chinese	BIG5
Korean	WANSUNG

If you want to integrate LN with other applications we recommend that you have the LN environment Unicode enabled.

Staging the software

With the Staging Wizard you create a Staging Area. A Staging Area is used as part of the Infor LN installation process to install components from. The components stored in the Staging Area are the Installable units (IU). The Installation Wizard can install the Installable Units in one run.

Note: We recommend that you create a new staging area when running a fresh installation or an update.

The way in which the Staging Wizard behaves depends on the location where you start the Staging Wizard:

- You start the Staging Wizard from the Infor Enterprise Server 10.4 (1-2) medium to create a staging area, the Wizard asks you to specify a destination directory to which to copy the Installable Units.
- You start the Staging Wizard from the Staging Area to stage the installable units from another media, the Wizard asks for the source directory of the Installable Units.

To start the Staging Wizard from the Infor Enterprise Server 10.4 (1-2) medium, navigate to <Install medium>\Start folder. Double-click the `StartFirst.exe` binary. A page displays with information about installing several software components on the media. Read the screen carefully and click the appropriate [here](#) link to start the Staging wizard.

Click the Start Staging Wizard link at the center of the page.

The Staging Wizard is started and guides you through the staging process.

Note: The Infor Enterprise Server 10.4 (2-2) medium contains among others the web based user interface and extended connectivity software for LN. The installation of this medium is described in "Installing user interface software" on page 28.

Installing the software

This section describes an example installation on a Windows machine with a Microsoft SQL Server database. For this installation, the Application Service Manager (client and server part) is also selected to be installed in one run.

The LN installation on UNIX is almost identical to the installation on Windows. However, on Windows, you run a local installation on the server. On UNIX you must start the UNIX installation from a Windows client system and run a remote installation. If the example installation differs on certain steps from a UNIX Installation, you will find comments about this.

For specific information about installing on a Windows Server cluster, see "Installing on Windows Server Cluster" on page 35.

To install the Installable Units, the Installation Wizard must be started. Online help is available during the complete installation process.

After the LN installation, check the log files. The files are located in:

- <stagingarea>\Logging Files
- \$BSE/log
- On Windows also in event viewer

Never remove the directory <BSE>/lib/install after an installation. This directory contains important installation-specific information and information important for runtime.

Close all running applications and to start the installation, complete these steps

- 1 Logon to the system. The user must have administrator rights.
- 2 To start the installation, run the `startfirst.exe` file directly from the Start directory in the staging area.
A dialog box is displayed with several options.
- 3 Click the link to start the Installation Wizard
The Welcome dialog box of the Installation Wizard is displayed.
- 4 Click **Next**. The Environment dialog box is displayed.
- 5 Specify a new Environment name, or select an existing environment from the list. Click **Next**.
The list in the Select Installable Units dialog box details which units you can select for installation; to select a unit, click the unit.
- 6 Click **Next**. The Select Porting Set dialog will appear.
- 7 Select the Porting Set applicable for your Operating System, and click **Next**.
The Host Name dialog box is displayed. The Host Name is the system name of the (Master) Application Server where you install your LN software. The dialog boxes differ for Remote and Local installations. When installing on Windows, the fields are already filled.
- 8 Check or specify the Hostname and click **Next**.
The Destination Directory dialog box is displayed.
- 9 Specify the path of the directory in which the LN software must be installed.
We recommend to have `bse` as the last subdirectory in the destination directory. If the target directory does not exist, you are asked to create the target directory.
- 10 Click **Next**. The Setup Type dialog box is displayed.
Select one of the three different setup types:
 - The Master Application Server (MAS)
 - Application Server (AS)

- DB-Connection

Note that for a first install, a Master Application Server (MAS) is mandatory. Before you can install an AS connection to set up an Enterprise Cluster, you must have an MAS installed.

For more specific information about the Application Server, see "Application Server installation" on page 39

- 11** Click **Next** to select the database in the Database dialog box which, you prepared to store the repository of the LN software.

From this stage onwards, the dialog boxes of the Installation Wizard can differ for each RDBMS choice. The remainder of this example installation provides a description of an installation on the Microsoft SQL Server database. If you have prepared another RDBMS, for support, use Help (F1).

The Installation Wizard does not automatically create directories for database data files or check if they do or do not exist; you must have already created these directories.

- 12** Click **Next** to select the locale and character set in the Locale dialog box. For more information click **Help** or check the database specific information in "Pre-installation tasks" on page 11.

- 13** Click **Next**. The Database Server Location dialog box is displayed.

- 14** Select a database server location.

Your choice depends on whether you want to install your database repository on your LN server (Master Application Server) or on another server.

- 15** Click **Next**. The Database Connection Information dialog box is displayed.

- 16** Specify the host name of the machine where the database server will reside; this information is required to connect to the correct database.

- 17** Click **Next**. The Database Users and Group dialog box is displayed.

- 18** Specify the users and a group for, in this case, the SQL Server database:

- The SQL Server System Administrator is **sa**. To avoid problems, it is recommended that you assign a password to **sa**.
- A default name for the Infor Database Group is **<ENV> db** (<ENV> is the environment name). In the **Password** field, type a password you want to associate with the group.
- The current user field is filled. Enter the database password for the current user. Ensure the user is present in the database and that the password is correct.

- 19** Click **Next** to continue with the Database Configuration Parameters dialog box.

The Truncate Log on Checkpoint option ensures that production database recover ability is maintained. You must only select this option if regular backups are not performed and if space for log files must be regularly freed up, such as demo and test systems.

The AutoGrow option controls whether database storage files (data, log) created by the administration utility will automatically grow as required when their existing space is exhausted.

The Compress Database Tables option controls whether advanced compression of the database tables and indexes is enabled. See the online help for table and index compression requirements.

Specify the correct database collation in the SQL Server Database collation field. For more information see the "Pre-installation tasks" on page 11.

- 20** Click **Next** to continue with the Database Device Locations and Sizes dialog box.

- 21** Specify the locations and sizes for the data and log files. For specific information, click **Help**.

- 22** Click **Next** to continue with the Program Folder dialog box.
- 23** Specify in which folder and under what name this LN installation must be saved.
A default name is `Infor`. Type or select an existing program folder name or create a new folder.
- 24** Click **Next** to continue with the Logic Service dialog box.
If you want to use a separate account to start the Infor ES Logic Service, you must supply the account information here. Ensure that you supply the correct password.
- 25** Click **Next**. The Parallel Processes dialog box is displayed.
- 26** Select the number of processes your hardware can simultaneously support.
Multiple bshells speed up the installation. Do not use more number of processes than available CPUs.
- 27** Click **Next** to continue with the BW Configuration Parameters rexec / login dialog box. (UNIX only).
- 28** Click **Next** to continue with the Select Base VRCs for PMC solutions.
- 29** Select the Base VRCs for which the PMC solutions must be installed. Select one or more Base VRCs and click **Next**. For more specific online information, click **Help**.
- 30** If you have selected the "Infor LN DEM Content Pack" for installation, specify the Infor demo company number (090) to use for the DEM Content Pack and click **Next**.
We recommend that you install the DEM Content Pack in demo company 090. When you do not want to install the content pack in company 090, select one of your own company numbers. Do not install the content pack in other Infor demo and master data companies.
Ensure to perform additional post-installation tasks. See "DEM Content Pack" on page 30
The Configuration Files dialog box is displayed. Note that changing these configuration files can have serious consequences.
- 31** Select the configuration files you want to change and click **Next**.
If you select the `bse_vars` file, the `bse_vars` file dialog box is displayed (UNIX only).
This dialog box can be filled with specific settings for the LN environment. For example, in case more versions of DB2 are installed on the same system, you must set a shared library path environment variable. This environment variable allows you to use the correct libraries with the DB2 version you want to use for the LN installation.
- 32** Click **Next**. If you also selected the `storage_param` file, the Configuration File: `storage_param` dialog box is displayed.
The dialog allows you to specify the `storage_param` with specific settings for the database. To display the default entries of the `storage_param` file, click **Defaults**. Select an entry you want to edit. For specific information about the `storage_param` file entries, consult the Technical Reference Manual applicable for your database.
- 33** Click **Next**. If the Installable Unit Solution License Manager (SLM) is also selected, the Location dialog box about SLM is displayed.
- 34** Click **Next**. The Host Name dialog box is displayed.
- 35** Specify the host name of the computer on which the SLM will reside. During the installation on Windows, the hostname is already filled. For more information, click **Help**.
- 36** Click **Next**, the Platform Type dialog box is displayed.
- 37** Click **Next**, the Destination Directory dialog box is displayed.

38 Specify the Destination Directory for the SLM software, for example `C:\Program Files\SLM`

39 Click **Next**.

The Installation Components dialog box is displayed.

40 Select **All components** checkbox.

41 Click **Next**.

If you also selected the Installable Unit for Application Service Manager (ASM) during this installation, a Location dialog box about ASM is displayed.

42 Select Local as installation on windows, the location for the ASM software is Local.

43 Click **Next** to continue with the Host Name dialog box.

The Host name and Login name of your local machine are specified.

44 Click **Next** to select the Platform Type.

45 Click **Next** to continue with the Destination Directory dialog box.

46 Specify the destination directory for the ASM software and click **Next**.

47 The Installation Components dialog box is displayed.

Select one of the Installation Components. In this case, the Server and the Snap-in option is selected, which means you will install all available components.

On Windows you can select the Server or the snap-in option. With the snap-in, you can configure the Server.

On UNIX, only the Server option is available, because snap-ins cannot be installed on UNIX.

48 Click **Next** to continue.

The Jobs dialog box is displayed.

49 Specify the mechanism and click **Next**.

50 The Ready to Install dialog box is displayed.

Check the information in this dialog box. To make adjustments, click **Back**. Otherwise, to start the installation, click **Install**.

After the LN installation, you must perform post installation tasks. Not all tasks are mandatory. Some optional tasks are left to the discretion of the customer.

Database and application tuning

Database and application tuning and optimization is a continuous process. To help you tuning Infor LN, see *Infor LN - Performance, Tracing and Tuning Guide (U9357)*. The table shows the documents for database tuning and technical reference information.

You can retrieve the database specific Performance, Tracing and Tuning Guides from solution 22881401.

Database	Documents
Microsoft SQL Server	<i>Infor LN - Performance, Tracing and Tuning Guide for SQL Server (B0079)</i> <i>Infor Enterprise Server - Technical Reference Guide for Microsoft SQL Server Database Driver (U8173)</i>
Oracle	<i>Infor LN - Performance, Tracing and Tuning Guide for Oracle Server (B0078)</i> <i>Infor Enterprise Server - Technical Reference Guide for Oracle Database Driver (U7076)</i>
IBM DB2	<i>Infor LN - Performance, Tracing and Tuning Guide for DB2 Server (B0077)</i> <i>Infor Enterprise Server - Technical Reference Guide for DB2 Database Driver (U7829)</i>

Installing user interface software

To access LN, you must install an user interface.

The dedicated user Interface for LN is Infor Ming.le with embedded LN UI.

The LN UI framework provides a completely Web-based user interface in which you can work with the LN application. For specific information about the installation of LN UI, see the installation instructions on the Infor Enterprise Server 10.4 (2-2) installation medium.

Translations are available for the user interface software. To change the user interface language, see *Infor LN UI Infor Ming.le-LN Plug-in User Guide (U9791)*.

Setting up online help

To install the LN Help files, see *Infor LN UI Administration Guide (U9790)*.

See solution **22944448** if the online help is available in the language of your choice.

Updates

After you have installed LN, it is recommended to check solution **22867311**. With this solution you can link to the last minute notes for your LN version.

To upgrade an installation with a Feature Pack, Language Pack, or Porting set, see *Infor LN - Specific Installation Guide - Updates (U9497)*.

License LN

The Solution License Manager (SLM) is the integrated and the central license manager for all Infor products and bundled partner products. SLM is a central application that checks whether users are licensed to start one of these products, and provides a common licensing solution for all Infor products, which ensures a consistent and reliable license-validating mechanism.

You must license your LN environment. The initial installation will state automatically a 30 day demo license.

Based on the pricing of an Infor product, you can assign a restricted set of license types to an application. Therefore, you must know the license type for your application before you can configure SLM.

The documentation of the Infor product you are installing will inform you which SLM product-id' s you must register against which license type to get the product activated.

Another way is to check the Infor Xtreme Support portal:

- 1 Open your Internet browser and navigate to:
<http://www.infor.com/inforxtreme>
- 2 Click **Request a Software Key** in the Support Sources section in the right bottom corner. The Software Keys page appears.
- 3 Select **Infor License Management (SLM)**. The Request Form for Licensing using the Infor License Manager page displays.
- 4 Click **More information...**
The Infor License Manager (SLM) page is displayed, containing general information about SLM.
- 5 Select, at the bottom of the page, one of the Infor product groups for which you want to know the product IDs, such as Infor LN or Talent Management.
- 6 Click **Information**. A table displays that lists the product IDs and licensetypes for each product of the selected product group that is licensed through SLM.

For more information on how to validate your environment, see *Infor Solution License Manager - Installation and Configuration Guide (U9200)*.

License for DEM Content Pack

Log an incident on <http://www.infor.com/inforxtreme> using your support account. Specify this information:

- Incident text "Requesting license key for DEM Content Pack".
- Version code: **I10_040S1**.
- Customer code of the company (user) as provided by Infor after you validated your Infor LN application. You can retrieve this customer code through the SLM management Console or by running the Support Information Tool (ttsit0100m000) session.

Note: If the version code and customer code are not provided in the incident correctly, the model cannot be validated.

After the installation and receiving the DEM Content Pack license code, use the Revalidate Licensed Version (tgbrg1247m000) session to license the model.

Configure Shared Memory

To enhance the performance of your LN system, we recommend loading program objects and report objects into the shared memory. For more information about the Shared Memory configuration, see *Infor LN - Performance, Tracing and Tuning Guide (U9357)* and *Infor Enterprise Server - Administration Guide (U8854)*.

Changing passwords

To change the passwords for General Table Maintenance and Role and Developer Authorization:

- 1 On the Menu, select **Tools > Database Management > General Table Sessions > Change Password for General Table Maintenance (ttadv0144m000)**.
- 2 The current password is blank. Insert the new password.
- 3 On the Menu, select **Tools > User Management > Developers Data > Change Password for Role and Developer Authorization (ttadv0143m000)**.
- 4 The current password is blank. Insert the new password.

Specifying default currencies

To specify the default currencies:

- 1 On the Menu navigate to **Tools > Application Configuration > Companies and Package Combinations > Companies (ttaad1100m000) session**.
- 2 Specify the default currency for all companies.
The default currency for company 090 is EUR. The default currency for 091 is GBP.
- 3 On the Specific menu, click **Convert to Runtime**.
- 4 Save and close the session.

LN installation with ASM

If you have installed LN on a Windows machine with the Application Service Manager (ASM), to start the Job Daemon you must supply a password. For more detailed information, see *Infor Application Service Manager - Administration Guide (U7784)*

DEM Content Pack

When you installed the Enterprise Business Model in company 090, proceed with the Parameter settings for DEM Content Pack.

When the Enterprise Business Model is installed in another company then 090, you must create the tables for the companies the Enterprise Business is created for (session ttaad4230m000).

Parameter settings for DEM Content Pack

To set parameters and other master data for the DEM Content Pack:

- 1 Ensure that a user demo is created.
- 2 Create a new version if you want to keep the original content. Derive the new version from the standard version in which you want to make changes.
 - a Start the Versions (tgbrg1500m000) session.
 - b Select the appropriate version and click **Copy**.
 - c Change the code. Change the **S** (standard) to **C** (Customized), for example **I10_040S1** to **I10_040C1**.
 - d Specify information in the **Description** field.
 - e Specify the original version in the **Derived-From Version** field.
 - f Change the **Status** field to **Developing**.
- 3 Start the Version Authorization by User (tgbrg1150m000) session.
The Check Password (tgbrg1165m000) session is displayed.
- 4 Supply the password **DEM** (uppercases) and click **OK**.
- 5 Authorize user 'demo' for the appropriate version.
- 6 Start the Current Modeling Version of Users (tgbrg1510m000) session. When no version is set for a specific user, the version of the Generic user is taken into account
- 7 Double-click the record(s) for the listed user(s) to supply the field **Current Version** with version **I10_040S1**.
- 8 To store the Enterprise Modeler Data, start the Central Company to store Enterprise Modeler Data session (tgbrg0100s000). The Check Password dialog box is displayed.
- 9 Supply the password **DEM**.
The password must be specified in uppercase; the field is uppercase/lowercase sensitive. Click **OK**.
- 10 Check the Central Company to Store Enterprise Modeler Data field. This field must contain the company number you currently work in.
- 11 Select the Central Company to Store Enterprise Structure Models. This field must contain the company number you are working in. For company 091, the Central Company to Store Enterprise Structure Models must be filled with company 090.
For more specific information, see *Infor LN - User Guide for Setting Up a Company (U9503)*.
- 12 To save this data, click **Save** or **OK**.
- 13 Start the DEM Parameters (tgbrg0135s000) session.
A password dialog box is displayed. Supply the password **DEM** and click **OK**. The DEM Parameters session is displayed. The settings for Running ERP Component must equal component **LN** and component release **6.1**.

Note:

For a company that contains the DEM Content Pack you must accept the values already filled; do not change these values other than the Running ERP Component. For specific information, see *Infor LN - DEM Content Pack User Guide (U9774)*.

14 To continue, click **OK**.

15 Start the Applications by Component (tgbrg5155m000) session.

16 Specify this information:

- **Component: LN.**
- **Component Release: 6.1.**
- Start the command **Import Applications from Running ERP Component**.
- Select these check boxes:
 - **Overwrite existing values**
 - **Remove the applications that no longer exist**
 - **Print**
- Print the report to excel and save the .xls file.

Note: This file must be analyzed to find out if new sessions (customization or sessions on your system due to installing solutions) must be added to the pre-configured business processes.

17 Start the Employees (tgbrg8135m000) session.

18 Select employee 'demo' and ensure the **User** field is set to user 'demo'.

19 Ensure that the **Process Browser** checkbox is selected for the user 'demo' in the User Data (ttaad2500m000) session.

20 Check the Runtime Version Project model and Optimization Phase (tgbrg0105m000) session. A record must be present for DEM Content Pack based on the company used.

The post-installation tasks are completed. If another DEM company number must be installed, repeat the process.

Setting up exchange schemes

Some exchange schemes for specific integrations are created by Infor. During the LN installation, the Exchange Schemes are imported into the base data company (050). Before you can use these schemes, you must run some sessions within LN software. See the online help topic "*Exchange Scheme Delivery for LN*".

Infor ES Reporting

When you want to use the Windows Server Printer concept, you can install the Infor ES Reporting Service on one or more of your client machines. For more specific information about Windows Server Printer see *Device Management* in *Infor Enterprise Server - Administration Guide (U8854)*

For installation see "Installing Infor ES Reporting Service" on page 47.

LN is delivered with the English language. When you want to add a new language, you must first install the base language translations for this language. The base language translations are available as installable units on the LN Language Packs for 6.1a media, which can be downloaded from the Infor Xtreme Updates support portal. This so called initial master media contains the base language translations for both Applications and Tools.

Once the base language translations are installed, updates on a language can be installed using the standard PMC solution procedure. These PMC solutions are available for each feature pack. See solution **22867311** and link to the appropriate LN feature pack and translation solution.

The base language installation process

Note:

- The environment must contain the correct package combination and package VRCs, using the official naming conventions.
- The environment must contain the target language code.

To install a language pack:

- 1 From the staging area start the Staging Wizard and stage the language Installable Units.
- 2 After staging the installable units start the Installation Wizard.
The Welcome page of the Installation Wizard is displayed.
- 3 Click **Next**.
The Environment dialog box is displayed.
- 4 Specify the environment you want to update with your language. Click **Next**.
- 5 Select the installable units for your language to install. Click **Next**.
- 6 In case of an installation on UNIX, click **Remote**. In case of a Windows installation, click **Local**. Click **Next**. This example installation is a UNIX installation; therefore, **Remote** is selected.
The **Host Name** and **Login Name** are probably already filled with the user who performed the initial installation.
- 7 Specify the password. Click **Next**

- 8 The Destination Directory dialog box shows the `BSE` directory. To continue with the Configuration Files dialog, click **Next**.
- 9 Select the configuration files you want to change. To continue, click **Next**.

If you select the `bse_vars` file, the `bse_vars` file dialog box is displayed. This dialog box can be filled with specific settings for the LN environment; for example, in case more versions of DB2 are installed on the same system, you must set a shared library path environment variable. This environment variable lets you use the correct libraries with the DB2 version you want to use for the LN installation. The environment variable must, if not already, be placed in the `bse_vars` file.
- 10 Click **Next**. If you also selected the `storage_param` file, the Configuration File: `storage_param` dialog box is displayed.

The dialog lets you fill the `storage_param` with specific settings for the database. To display the default entries of the `storage_param` file, click **Defaults**. Select an entry you want to edit. For specific information about the `storage_param` file entries, see the technical reference manual applicable to your database.
- 11 To check the summary information, click **Next**. If you agree, click **Install**. Otherwise, to make the necessary adjustments, click **Back**.
- 12 To start the installation, click **Install**. Several information dialog boxes inform you of the installation process. To stop the installation during this process, click **Stop**.
- 13 To complete the update process, click **Finish**.
- 14 In case of a Multibyte installation:
 - a Open the Software Languages (ttaa1510m000) session. Double-click the MB language record to be installed.

Sub session ttaa1110s000 opens. Ensure the entry of the **Character set** field corresponds with the installed language pack, such as GB2312.

Updating the language

Once the base language translations are installed, the updates for the language on feature pack level can be installed using a PMC solution. For example, when customers migrate from 10.3 to 10.4 and already have installed English and Dutch, it is sufficient to install the translation PMC solution for 10.4 (first in English than in Dutch).

English as fall back language

If the LN product is installed in a language other than English, and certain LN packages, messages, labels, or help text are not available in that language code, the English version will be shown.

Installing on Windows Server Cluster



This section provides some guidelines for installing LN on a Microsoft Windows Server Cluster.

Preparation

Before you start an installation on a Microsoft Windows cluster, you must prepare a cluster. Clusters are used for increasing the availability of a server. The server can be used for the Master Application Server (MAS) or Application Server (AS). The Installation Wizard takes care for some specific steps.

To start with a cluster aware installation (active/passive) of LN, it is required to start with a normal cluster installation on the first cluster node. This node must own the cluster disk where LN needs to be installed.

For the specific installation procedure of the database that you want to install on a Windows Server cluster, check your database vendor documentation

Installation

Share the setup files between all nodes, as this will help you fill in the required data in the Installation Wizard and use the same environment name and destination directory on all nodes of the cluster. When the installation files are in a shared disk or folder, the Installation Wizard automatically gathers the data filled during installation on the first node of the cluster.

The differences between a normal installation and the installation on a cluster will be discussed in "Installation on first cluster node" on page 35

Installation on first cluster node

Start the LN installation as described in "Installation procedure" on page 19.

When the environment dialog is displayed, complete these steps:

- 1 Specify an environment name, for example: **Incluster**.
Use this environment name for all nodes, which are part of the same cluster.
- 2 When the Host name dialog box is displayed, it shows that the installer has detected that the current host is part of a Windows cluster.

- 3 When the Destination Directory dialog box is displayed, specify the name of the BSE directory.
 - This directory must be on a cluster disk separate from the Quorum disk and separate from the database disk. Notice that the installer mentions the available cluster disks.
 - The Normal Windows cluster installation need only to be chosen for the first node when you run the Installation Wizard. For additional nodes, you need to select minimal Windows cluster porting set only installation.
- 4 Click **Next**. When a message is displayed complete step 5.
- 5 Click **No** to return to the Destination Directory dialog box. Use the Windows tools to move the used disk drive resource to the current cluster node. It is required the disk is owned by the current cluster node.
- 6 Click **Yes**, the Setup Type dialog box is displayed.
- 7 Continue with the installation as described in "Installation procedure" on page 19.

The installation Wizard creates an LN Environment resource for the used BSE in an isolated cluster application group. Every BSE has its own cluster application group in the cluster. The name of the resource group in the cluster is fixed, and cannot be changed. All BSE related cluster resources must stay together (for example, disk resource, client access point). The Installation Wizard takes care of moving the involved disk resource to the BSE cluster application group and associated LN Environment cluster resource. The Installation Wizard does not create a client access point (a.k.a. as cluster network name). The cluster administrator has to create a client access point where Infor client applications can connect to the cluster aware BSE installation. IPv4 and IPv6 addresses are supported by LN.

It is required that the node, on which a full BSE installation is performed owns the cluster disk of the BSE directory. In case the cluster disk is not owned, only so-called 'minimal cluster' installations are possible. After the installation on the first node has finished, you must run the installation wizard on the other nodes of the cluster. Use the so-called 'minimal cluster' installation. The minimal cluster installation will prepare the required steps to make the BSE cluster also aware on the other cluster nodes.

Installation on next cluster nodes

Always start a new installation on an active node. This is the node owned by LN disk. Run a complete installation and not a minimal cluster installation. The installation only differs on installing the BSE on the cluster disk. During the setup, Windows registers the installation as a cluster resource.

Do not change the ownership of the LN disk during the installation on all nodes.

Repeat the setup for all passive nodes. Passive nodes are the nodes that do not own the LN disk.

To run a minimal cluster installation on a second or next node:

- 1 Select at least the porting set installable unit.
- 2 Do not select installable units that are part of the clustered BSE environment, such as the 'Enterprise Server' and/or Applications. These must already been installed during the installation on the first node of the cluster.

You must install the SLM installable unit on a minimal cluster, since the Infor ES Porting set requires it.

Optionally you can install other installable units that are not part of the BSE environment (for example ASM).

- 3 Note:** neither the Infor management snap-in nor the Windows service manager can be used to manage services that are cluster aware. The Windows Failover Cluster Manager must be used to manage cluster resources, including cluster-aware services. For example: stopping a cluster-aware service by other applications results in errors on the cluster.

Finish the cluster installation

After the installation of LN on all the nodes, some additional manual actions are needed.

Complete all other configuring tasks of the cluster resources with the Failover Cluster Manager. See the Windows documentation for more information. It is recommended to place all BSE related resources in one group. Manually create the IP address and Network name resources in the same cluster group. The network name can then be used for all clients to connect to the BSE. If a Network name resource was created, then the LN Environment resource must be made dependent on this resource

Setting up a failover job daemon

Install the job daemon manually (with the Infor Manager snap-in) on every node where it is required to start the job daemon after a failover of a node. If the job daemon is not installed as a service, no job daemon is started after failover to that node. If a job daemon was installed as a service - the Infor management snap-in installs it as a manual service - the service is started upon cluster node failover.

Maintenance and Administration on cluster aware BSE

The Infor Manager snap-in can only handle administration tasks if the cluster disk where the BSE is installed is owned by the current node. Stopping or starting services from snap-in is not possible. The Windows cluster administrator has precedence in managing all BSE services (Infor ES Logic Service Shared Memory and Job daemon). The Windows cluster administrator will restart a service as soon as it is stopped. Use the Windows Cluster Administrator to manage cluster resources.

If the LN environment needs to be updated, the cluster disk used for that LN environment must be owned to the cluster node running the Installation Wizard. Updating an LN environment on a cluster will result in down-time of that environment. Updating the porting set will also require a reboot.

Application Server installation



How to install an LN Application Server (AS).

Requirements

Before you can install the AS, this software and hardware is required:

- The Solution License Manager (SLM) client software must be installed and configured on the application server to make a connection with the SLM server. For more information about the installation and configuration of SLM, see *Infor Solution License Manager - Installation and Configuration Guide (U9200)*.
- The Master Application Server (MAS), with an active RDBMS attached, must be installed and running. Follow these rules:
 - Perform administrator tasks on the MAS.
 - Perform the data load actions such as installation of demo tables on the MAS.
 - Create the users on the MAS.
 - The administrator requires access, through a remote user file, to all the startup systems used in the user data templates.
 - If you run a **Convert to Runtime** in the Tables by Database session, do not select the **(Other) Workstations** check box. You can only regenerate the table definition (tabledef) on an AS if the database driver also runs on the AS.
 - For performance reasons, we recommend that you run the database driver on the Application Server, connecting directly through the native database client libraries to the database server. This requires the database client software installed on the Application Server.

Note: We recommend that the porting set version on the AS is equal to the porting set version on the MAS.

Installation procedure

To install and configure the LN application server, start the LN Installation Wizard. You can use the online help in the Installation Wizard.

Select the **Application Server** check box on the Setup Type dialog box. On the Master Application Server Host Name dialog box, specify this information:

- **Host Name:** Specify the host name or IP address of the MAS.

- **Login Name and Password:** Specify the login name and password of the user profile on the MAS that is used to log on from the AS.
- **Directory on the MAS.** Specify the path to the BSE environment.

AS post-installation tasks

After the installation you must:

- Check if the Application Server is registered in the Systems (ttaad0550m000) session.
- In the User Data Templates (ttams1110m000) session, define startup systems for users who login on the MAS.
- Define an Audit host:
 - Start the Audit Hosts (ttaud3130m000) session. You can only run the audit host on the MAS.
 - Insert the Master Application Server.
 - On the **Specific** menu, select **Create Runtime Audit Definitions**, to start the Create Runtime Audio Definitions (ttaud3200s000) session.
 - Select the **Audit Hosts** check box and click **Create**.
- Restart LN.

Installation log files



To allow users to trace problems during an installation, log files are created. In these log files, the installable unit logs installation progress and issues. The Installation Wizard can detect errors through these log files. Do not change or delete these files.

Client

Depending on the type of IU, the user has two options:

- Use the Staging Wizard that creates a Staging Area, and run the installation of the IU from Staging Area.
- Skip the Staging Wizard and Staging Area and directly run the installation for one IU by its standalone `setup.exe` file.

Note that most of the IUs must be installed using the Staging Wizard.

Using a Staging Area, log files can be found in:

- `<Staging Area>\Logging files\<environment>`
Where `<Staging Area>` refers to the directory where the Staging Area is located.
- `%TEMP%\Baan Setup\<environment>`
Where `%TEMP%` refers to the directory name of the windows variable `TEMP`.

In the log directories, you can also find the file `BaanERPClient.info`. The `BaanERPClient.info` file contains the settings that the installation user has chosen. As soon as the user defines an environment and a destination for the installation, the Installation Wizard will check the system for an existing installation.

If the file `$BSE/lib/install/BaanERPServer.info` is found, the settings are copied from the server to the client to the file `BaanERPClient.info`. After the copy from the server, all configuration settings are stored in files `BaanERPServer.info` and `BaanERPClient.info`. The `BaanERPServer.info` file overrules `BaanERPClient.info` file. The same applies for the `BaanERPServer.log`, the `BaanERPClient.log` files, and the `ExistingIUs.info` files

BaanERPClient.log

The `BaanERPClient.log` file is usually the first file to check if an error occurs. The file contains information about what the Installation Wizard detects, and shows the more general error descriptions.

For example:

BaanERPClient.log

```
4/26/2006[13:30:34(UTC-02:00)]:I:bsp: INFO - Detected Platformtype: Windows_NT
```

```
4/26/2006[13:39:22(UTC-02:00)]:E:bsp: ERROR - ttbsi.000700: Error opening file C:\Staging Area\InstallableUnits\ InstallableUnit_ERP_Installer\Setup_debug\..\..\..\InstallableUnits\OW ERP 6_1\applfiles\ bw_import!
```

This timestamp is related to the time on the Client machine. If the time on the Client differs from the time on the Server machines, you must take that time difference into account when you compare time stamps. Before you start the Installation Wizard, it is better to synchronize the time setting for both machines. See section "Server" on page 43.

BaanERPClient.info

The `BaanERPClient.info` file contains the information about which configuration is used and the current status of the installation. This table, shows the most important settings:

Parameter	Description
Environment=erpenterprise	Environment for installation
Location=0	Local Windows machine
ProductName=BaanERP	Product name
TmpDir=C:\Staging Area\Logging Files\erpenterprise	Directory for this info file and log file
SupportDir=C:\DOCUME~1\pleersni\LOCALS~1\Temp\{3C5A8C2F-AD79-4884-B78B-0488FBE8E1BC}\	Temporary installation directory of User
Hostname=CNL09834	Hostname where to install
User=bsp	Installation User
SuperUser=	Super user (only UNIX)
BsePath=c:\Infor\erpenterprise\bse	\$BSE (path where the software will be installed)
PlatformType=Windows	Platform type
BseRel=6.2	use value 6.1 for Infor Baan IV; use value 6.2 for Infor Baan 5.0, Baan 5.2, or LN
PreReger=0	use value 0 for Infor Baan 5.2 or LN; use value 1 for Infor Baan IV, or Infor Baan 5.0
DbType=msql7	Database type: SQL server
BaanMAS=1	0 for AS; 1 for MAS installation

Parameter	Description
InstallStatus=4000	0 for new; 4000 for finished; 0<InstallStatus<4000 for a failed installation
IUStatus=	IU key where the installation was crashed
PortingSetInstalled=1	1: a porting set was installed before
ApplSetInstalled=1	1: tools were installed before
BCLMLLogin....	Settings for an SLM installation
ASMLLogin.....	Settings for an ASM installation
GenParams.szSelectedKeys=,ERP_Tools,ERP_Applications	List with selected IUs to install
szVRCs[0][0].szBaseVRC=7.6_a_tt	List with base VRCs to install solutions for
szVRCs[0][0].szUpdateVRCs= 7.6_a	List with update VRCs to install solutions for

Server

All log files and info files on the server can be found in the directory tree where LN is installed. The name of the top level of this directory tree is referred to as `$BSE`. For installations on a Windows machine, all directory forward (/) slashes must be read as backward (\) slashes.

The Installation Wizard supports fresh installations and updates for LN

The file `ExistingIUs.info` contains information about what Installable Units are installed earlier, and all subdirectories of `$BSE\lib\install`.

Do not remove the directory `$BSE\lib\install` or one of the other files. In case files are missing, next updates will fail.

BaanERPServer datetime logfile

The `BaanERPServer<datetime>.log` can be found in the directory: `$BSE/lib/install`

The `BaanERPServer<datetime>.log` file contains all logging as described in ""Client"" on page 41. In contrary with `BaanERPClient.log`, the `BaanERPServer<datetime>.log` is split into log files indicating the dates and times when the setup was started. After every update or restart, a new `BaanERPServer.log` file is added; this file is displayed when the Installation Wizard has finished. The `BaanERPClient.log` file on the client is a merge of all these files. All info found on the Client machine can also be found on the server. This directory serves as a backup if the files on the Client machine are deleted or the installation is restarted from another Client machine. For the info files, the files in this directory are leading.

ExistingIUs.info

The `ExistingIUs.info` file contains information about what Installable units have been installed earlier. The file is located in the directory: `$BSE\lib\install`

An example of the `ExistingIUs.info` file:

- `ExistingIus.info`
- `ERP_RuntimeTools_WINDOWS`
- `OW_ERP_Adapter`
- `ERP_Applications`
- `ERP_Tools`

This file is also written to the client in the directory: `<Staging Area>\Logging files\
<environment>`

The `ExistingIUs.info` file on the server is always leading.

Installing porting sets

During the installation of a porting set, the folder `$BSE/lib/install/vm` is created/updated. This virtual machine (VM) folder contains a part of the virtual machine, necessary for the installation of the porting set. During the installation of the porting set, logging is done in the subdirectory `log`.

Installing demo sets

During installation of demo sets, DEM models, demo companies, and so on, calls are made to 3GL functions. These functions usually log their information in the directory: `$BSE/log`

Depending on the date and time that these log files are created/updated, you can find out where an error has occurred. If the installation fails during the import, the main log file created by the import is named `log.ottix1287`.

RExec/FTP or SSH/SFTP

During the installation, remote commands or ftp calls are often run. If an error occurs during such a command, the Windows Event Viewer (application) shows the reason for this error.

TMP files

During an installation, temporary files are created. If the installation fails, these temporary files are not always removed. These files can contain more information about the failure. You can remove the files from one of these directories:

- `$BSE/lib/install/vm/tmp`
- `$BSE/tmp`

Failed installations

If an installation fails, you must check the log files and try to solve the issue, then restart the installation. The dialog boxes to select the Installable Units are displayed with the previously selected installable units, except for the ones already successfully installed. You can add or remove Installable Units.

When clicking **Next** in the Destination Directory dialog box, the installation program discovers that a failure happened during the previous installation. This is indicated by the `InstallStatus` in the `BaanERPClient.info` file. The Restart Installation dialog box is displayed.

Explanation of the options:

- **Restart Current:** Removes old installation settings and restarts the installation of the currently selected installable units.

Note that during a Restart Current, the files in `BaanERPServer.info` are reset.

- `InstallStatus`
- `IUstatus`
- `SelectedKeys`
- `PaccChecksum`
- `PaccSel`

For example, if `InstallStatus` is set to 4000, the `$BSE/tmp` directory is emptied; 4000 means finished.

- **Restart Previous:** Removes old installation settings and restarts the installation of the previously selected installable units.
- **Retry:** Continues with the installation at the point where it stopped; this is faster, but less secure than the other options. This option always continues with the previous selection.
- **Abort:** Cancel the installation.

Installing Infor ES Reporting Service



The installer of the Infor ES Reporting Service can be found in the "Clients" directory of the LN media. The installer consists of the single executable: `setup.exe`.

Complete these steps:

- 1 Double-click the `setup.exe` file. On the Welcome dialog box, click **Next**. The Setup Type dialog box is displayed.
- 2 Select one of these setup types and click **Next**.
 - The Complete setup type: to use the default port number 7688, select this type. If you click **Next**, you will continue directly with the "Ready to Install the Program" dialog box.
 - The Custom setup type starts the Custom Setup dialog box. In the Port number field, specify the desired port number. Remember the specified port number: you will need it for the configuration of any software which must use this Reporting Service. Check if this port number is not blocked by a firewall which can be active on your computer.
- 3 Click **Next**. The "Ready to Install the Program" dialog box is displayed.
- 4 To start the installation, click **Install**.
- 5 When the installation has successfully finished, click **Finish**.

Upgrading the Infor ES Reporting Service

Before you can upgrade the Infor ES Reporting Service from version 2.0.0.13 or lower, first uninstall the existing version of the Infor ES Reporting Service. Use Remove in the Add or Remove Programs applet in your Control Panel, and then install the new version as described earlier.

When upgrading from version 2.0.14 (or later) to a newer version, run the setup of the newer version. Follow the on-screen instructions.

Modifying the port number

If you want to modify the port number used by the Infor ES Reporting Service, use the Add or Remove Programs applet in your Control Panel.

Complete these steps:

- 1 Click **Change**. The Welcome screen of the Install Wizard displays.
- 2 To start the Program Maintenance, click **Next**.
- 3 Select **Modify** and click **Next**. The Custom Setup will display the current port number used by the Reporting Service.
- 4 Modify the port number. Remember the specified port number: you will need it for the configuration of any software which must use this Reporting Service. Check if this port number is not blocked by a firewall which can be active on your computer.
- 5 Click **Next**. The Ready to modify the Program dialog box will appear.
- 6 To start the installation, click **Install**.
- 7 When the installation has successfully finished, click **Finish**.

Troubleshooting Infor ES Reporting Service

Troubleshooting when using a "Windows Server Printer device".

Use the online help of the Device Data (ttaad3100s000) session and related help pages to set up a "Windows Server Printer" device.

Follow these rules:

- By default, the Infor ES Reporting Service runs under the Local System account. This account does not have a well-defined default printer. You can specify a printer in the **Device Queue** field of the Device Data session. Specify the name of a printer which is already installed on the machine on which the Infor ES Reporting Service is running. The Local System account does not have the correct permissions to use a network printer. Therefore, deploy the Infor ES Reporting Service on the server to which the printer is connected.
- Sometimes, it is preferable to run the Infor ES Reporting Service under a different account other than the Local System account. Use the standard Microsoft tools for Services to change the account. Go to **Control Panel > Administrative Tools > Services**.
Ensure to switch the account back to Local User; before running the procedure "Modifying the port number" on page 48". Otherwise, that procedure will fail.
- When printing to a "Windows Server Printer" device, the Infor ES Reporting Service is used to start the `BwPrint.exe` file. To check whether BwPrint is actually started and whether it terminates use the Task Manager. Check the Infor ES Reporting Service or BwPrint log information with the Event Viewer.