



Infor Enterprise Server ODBC and JDBC Connectors Installation Guide

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About this guide

This document describes the installation and configuration of these connectors:

- The Connector for ODBC for Infor LN.
- The Connector for JDBC for Infor LN.

Intended audience

This document is intended for LN database administrators and system administrators.

Organization

This table shows the chapters of the guide:

Section	Description
Chapter 1 Overview	Provides an overview of the components and configuration.
Chapter 2 Prerequisites	Specifies the required software and system prerequisites.
Chapter 3 Configure Licensing for ODBC and JDBC Product IDs	Describes how to register the Connector for ODBC or JDBC and related software with the license manager server.
Chapter 4 To Install the Porting Set	Contains a procedure about how to install the LN porting set and the extra steps to establish the connection with LN back-ends.
Chapter 5 Flexible Connections	Describes how to create a Remote Database connection
Chapter 6 Test the Configuration	Shows how to test and log the ODBC and JDBC connection

Related documents

You can find the documents in the product documentation section of the Infor Xtreme Support portal, as described in "Contacting Infor" on page 6.

Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at <http://www.infor.com/inforxtreme>.

If we update this product or document after the product release, we will post the new version on this Web site. We recommend that you check this Web site periodically for updates.

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

Introduction

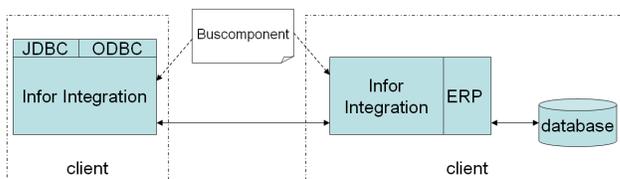
1

This section supplies a short introduction to the connectors.

How to use

The diagrams in this section explain which scenarios you can use with ODBC/JDBC.

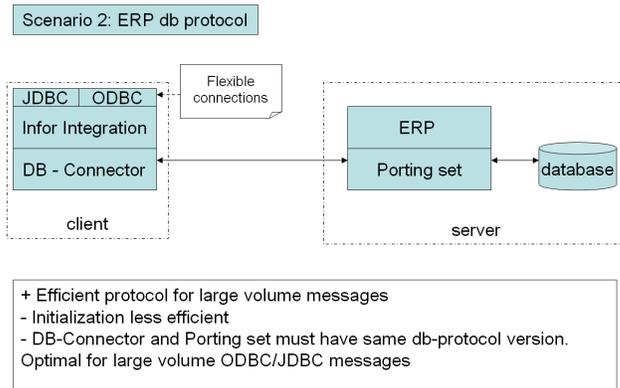
Scenario 1: OpenWorld protocol



+ Fast initialization
- Message overhead
Optimal for small messages and short lifetime connections

Note:

- For BaanIVc Infor Integration needs to be installed on the server side, for ERP LN Infor Integration is part of Enterprise Server AddOn.



Note that with scenario 2, the DB-connector is supported for:

- Infor Baan IVc on Windows.
- Infor Baan 5.0 on Windows and UNIX.
- LN on Windows and UNIX.

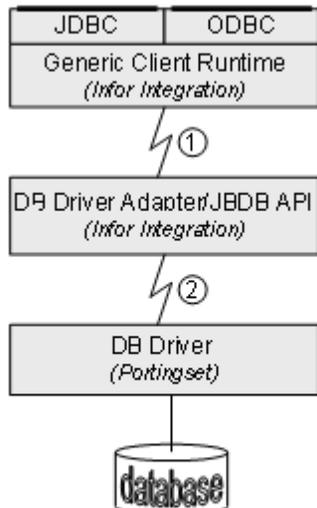
For more specific information about which databases are supported, see the *Enterprise Server Technical Notes*.

Architecture

The ODBC/JDBC functionality consists of these multiple components:

- The API with generic client logic.
- The DB Driver adapter.
- The DB Driver.

These components can optionally run on different hosts to provide flexibility/performance; see this diagram:



The Connection (1) and (2) can be configured separately:

Connection 1

The connection between component 1 and 2 can be defined in two ways:

- Through a configured Infor Integration BusComponent. This allows components 1 and 2 to be installed on different servers.
- Through a virtual BusComponent called “localprocess”. This is only possible when components 1 and 2 are on the same system.

Connection 2

The connection between component 2 and 3 can be defined in these ways:

- Using the DB Driver Adapter (part of Infor Integration). In this case, components 2 and 3 must reside on the same server.
- Using the JBDB API (the DB Connection installation of the porting set), which gives the following two possibilities for the DB-connector:
 - One fixed connection: only one user can connect to one BSE environment on one host. Parallel processing is not possible.
 - Flexible connection: with some extra parameter settings, multiple users can connect to multiple BSE environments on multiple hosts; these connections can run in parallel.

Configurations

The Connector for ODBC/JDBC can be deployed in several ways. In this section, some typical configurations are listed. In these configurations, it is presumed that an existing LN installation is at the server. In all cases, SLM licensing is required for 7046 per LN host.

Client API at same host as LN

For example; when LN reporting service is installed on the same host as the LN application.

Components to install (needed for the ODBC Client Logic)

Infor Integration 6.2

Infor Integration configuration

Not needed: the virtual bus component "localprocess" is used.

DB-connector configuration

Environment variables needed for the process running the ODBC/JDBC client:

- JBDBHOME
- CLASSPATH
- PATH (Windows only)
- PATH/LD_LIBRARY_PATH/SHLIB_PATH/LIBPATH (Unix only)

In case of flexible connections:

- The remote BSE options (see "Flexible Connections" on page 23).

Client API and LN on different hosts – performance optimized

For example; when Cognos Enterprise Reporting is installed on a Windows system and communicating with LN on a UNIX host.

Components to install (Client)

- Infor Integration 6.2 (needed for the ODBC Client Logic).
- DB-Connection (Part of porting set install). Required to have the JBDB API available on the client system. For installation instructions, see "Installing ODBC and JDBC connectors" on page 17.

Infor Integration Configuration

Not needed: The virtual bus component "localprocess" is used.

DB-connector configuration (client)

These environment variables are required for the process that runs the ODBC/JDBC client:

- JBDBHOME
- CLASSPATH
- PATH (Windows only)
- PATH/LD_LIBRARY_PATH/SHLIB_PATH/LIBPATH (Unix only)

In case of flexible connections, the remote BSE options are required. See "Flexible Connections" on page 23.

Client API and LN on different host – configuration optimized

For example, a lightweight ODBC or JDBC client distributed to many clients.

Components to install (Client)

Infor Integration 6.2, needed for the generic client logic for ODBC and JDBC and also for configuring Infor Integration using the Central Configuration Console.

Infor Integration Configuration (Client)

A bus component configured to Connect/Activate the Adapter for Baan DB Driver.

Infor Integration Configuration (server)

The owconfig.properties file must be filled with correct links to the LDAP file or LDAP server, and have the same settings as the Client.

DB Driver Adapter Configuration (server)

Environment variables required to run the DB Driver Adapter:

- JBDBHOME
- CLASSPATH
- PATH (Windows only)
- PATH/LD_LIBRARY_PATH/SHLIB_PATH/LIBPATH (UNIX only)

The connector for JDBC is only supported for supported Operating Systems and Database combinations containing SQL Server, Oracle, and DB2. Combinations containing other databases are not supported because of limitations of the databases. With the release of Porting Set 8.4a, the Connector for JDBC and ODBC no longer requires an SLM license at the client side.

You can consider the connectors for ODBC and JDBC as the ODBC and JDBC drivers for Infor Baan IVc and Infor LN servers. The connectors are only available as an internal part of Infor reporting solutions. Outside the context of an Infor reporting solution, Infor does not support the use of the connectors for ODBC and JDBC.

The connectors are used by these reporting solutions:

- Cognos Enterprise Analytics for LN
- Cognos Enterprise Reporting for LN
- BIRT / Role Based Homepages for LN on FP3

You must have this software installed:

For Infor Baan IVc:

- Porting set 6.1c.15 or later, and the corresponding Installation Wizard as described in the porting set solutions.
- Infor Integration 6.2.11

For LN:

- Infor Enterprise Server 8 – porting set 8.7a.01 or later, and the related Installation Wizard as described in the porting set solutions.
- Infor Integration 6.2.11

You can download the porting sets from <http://www.infor.com/inforxtreme>

Solution 22923521 for Infor Baan IVc and solution 22923520 for LN. On this site, from the Knowledge Center menu, select Infor Baan Solutions. To log on, you must have an account for Infor Global Support Online.

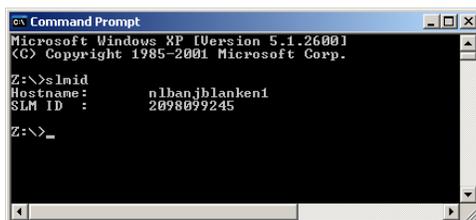
The technical notes of the porting set identify the platforms supported, validate your claim. The Installation Wizard is available through the solution 22889669.

Configuring Licensing

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To receive a license for the ODBC or JDBC driver, complete these steps:

- 1 In the SLM configuration, register product-id 7046 “Enterprise Server DB Library”, as a Server license.
- 2 For each LN system you want to connect to, you need a license.
- 3 To request an activation key, use the standard procedure. Upload the license.xml file to the validation section of <http://www.infor.com/inforxtreme>, and apply the activation key you received.
- 4 When this procedure has been completed, the licenses are available.
- 5 You must register the involved systems to these product-ids.
- 6 For the “Enterprise Server DB Library” license, you must register the slm-ids of the hosts where LN is installed.
- 7 To retrieve the slm-id of a host, run the ‘slmid’ command on that system; see the following figure:



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

Z:\>slmid
Hostname:      nlbanjblanken1
SLM ID :      2698099245

Z:\>_
```

The slmid command is available in the [SLM Installdir]/bin folder.

This chapter consists of these topics:

- Installation preparation
- Installation
- Post-installation steps

During installation, the DB-Connector and ODBC/JDBC java layer are installed.

The DB-Connector is the LN specific communication layer. The ODBC or JDBC layer is the java layer that provides an ODBC or JDBC-compliant interface.

Installation preparation

The procedure described is valid for Windows, UNIX, and Linux platforms. Sometimes there are deviations in the procedure; these are explained in the procedure.

Remark for Windows: Because of the JBDBHOME variable set in the Windows environment, you cannot connect to LN and Infor Baan IVc from the same Windows system. A DB connection for LN would overwrite the installation for Infor Baan IVc and vice versa.

Preparation consists of unpacking the porting set and Installation Wizard installation components in the appropriate directories.

To prepare the installation for Infor Baan IVc:

- 1 Create a temporary directory for the installation.
- 2 Unpack the zip-file which contains the porting set and the Installation Wizard.
- 3 The Installation Wizard will refer to the subfolder with the unpacked porting set as the Installable Unit Directory.

To prepare the installation for LN:

- 1 Create a temporary directory for the installation.
- 2 Unpack the Installation Wizard (zip-file) in a folder, such as c:\temp\iw.
- 3 Unpack the porting set (zip-file) in a subfolder, such as c:\temp\ps. The Installation Wizard will refer to this subfolder with the unpacked porting set as the Installable Unit Directory.

- 4 Install the Visual Studio 2005 runtime libraries, such as c:\temp\iw\vcredist_x86.exe.

Installation part 1

To install the porting set:

- 1 Start the Infor Installation Wizard, double click the file c:\temp\iw\setup\setup.exe.
- 2 The Welcome dialog box appears; click **Next**.
- 3 In the **Environment** dialog box specify a name for the DB Connection environment. For example: odbc or jdbc.
Note: When Infor BECS is installed on your system, do not give the DB connection environment the same environment name as already defined in Infor BECS.
- 4 Click **Next**.
If you do not start from a Staging Area, you will continue with the **Installable Unit Directory** dialog box.
- 5 Specify the directory where the installable unit for the Porting Set can be found. For example: c:\temp\ps.
- 6 Click **Next** to continue with the **Host Name** dialog box.
For a Windows installation, this dialog box is automatically filled; for a non-Windows environment, specify this information:
 - **Host Name:** System where you want to install the jdbc connector.
 - **Login Name:** Valid account for that system.
 - **Password:** Related password.
 - **Super User Password:** You can leave this empty.
- 7 Click **Next**, the **Destination Directory** dialog box displays.
- 8 Specify a destination directory, such as odbcclient or jdbcclient.
The porting set will be installed in the Destination Directory, for example on Windows in:
C:\infor\ERPLN\bse\odbcclient
- 9 Click **Next**.
The installation directory will be set as the BSE environment variable later. For example:
 - BSE=C:\infor\ERPLN\bse\odbcclient (Windows)
 - BSE=/opt/infor/ERPLN/bse/jdbc_client (UNIX)
- 10 Select setup type DB-Connection in the **Setup Type** dialog box.
- 11 Click Next, the Master Application Server dialog box displays.
- 12 Specify this information about the Master Application Server:
 - **Host Name:** Hostname of the LN backend system.

- **Login Name:** The login account for the LN backend system.
- **Password:** The login password on the LN backend system related to the Login name
- **Directory:** The BSE directory name of the LN installation (installation directory of the LN backend system).
- **LN user:** The LN user name.

13 Click **Next**, the **Ready to Install** dialog box displays.

14 Check the 'Ready to Install' parameters, and click **Install**.

15 After the installation has been completed, click **Finish**.

Remark for Windows: If something goes wrong during installation, or if you want to upgrade the db connection to a higher porting set function, we recommend that you first uninstall the current environment. Use the **Add Remove Programs** functionality of Windows.

The following section explains extra steps to establish a good connection with the LN backend.

Installation part 2

Integration with ODBC

For ODBC, you must run the installation of Infor Integration to include a runtime component to create an ODBC connection with the database of an LN backend.

To install the client software of Infor Integration 6.2, run the installer of Infor Integration.

During the installation, note the following:

- Select a **Complete** setup.
- If you already have a Configuration Directory available for Infor Integration, specify the Configuration Directory. Later, you can use this directory to configure the logging of the ODBC integration.
If you do not have a directory available, you can leave the Configuration Directory field empty.

Note: If you do not configure a Configuration Directory, error messages will occur, and you cannot adjust the logging settings for the Infor Integration part of the ODBC client configuration.

Integration with JDBC

- To activate the JDBC driver, the JDBC client must call:

```
Class.forName("com.infor.erp.jdbc.JDBCdriver")
```

- The JDBC client receives a Connection instance by calling:

```
DriverManager.getConnection("jdbc:infor://localprocess")
```

- To specify additional connection properties, call:

```
DriverManager.getConnection(String url, Properties props)
```

- To predefine the LN company from which this JDBC connection retrieves data, in the additional connect properties, define:

```
COMPNR=[ERP LN company number]
```

Post-installation steps

LN server

Ensure the LN installation file `$BSE/lib/defaults/db_resource.jbdb` has the following contents:

```
rds_full:100
```

UNIX/Linux

Before you use the JDBC client, ensure the following environment variables are set:

- `JBDBHOME=[DB Connection installation directory]`
- `CLASSPATH=$CLASSPATH:$BSE/java/jbdb.jar:$BSE/java/ow.jar:$BSE/java/ow3p.jar:$BSE/java`

Ensure the library path is pointing to the jdbc libraries:

- For AIX: `LIBPATH=${BSE}/shlib`
- For Solaris, HP-UX - Itanium, Suse, RedHat: `LD_LIBRARY_PATH=${BSE}/shlib`
- For HP-UX / PARISC: `SHLIB_PATH=${BSE}/shlib`

The LN User, defined with the variable `USER`, must be the same user that was used during the installation of the jdbc client. For this user, the file `$BSE/lib/user/r[user]` must exist.

The JBDBHOME variable will have the installation directory of the client set as its value, such as /opt/infor/ERPLN/bse/jdbc_client.

Windows

During installation, the following user and system variables are automatically set:

- JBDBHOME=[DB Connection installation directory]
- The following values are automatically appended to the system variables:
- CLASSPATH=...;%BSE%\java\jdbc.jar;%BSE%\java\ow.jar;%BSE%\java\ow3p.jar
- PATH=...;%BSE%\shlib

The JBDBHOME variable will have the installation directory of the client set as its value, such as C:\program files\infor\odbc_client.

If you use an Infor Integration Configuration Directory, check whether the classpath contains the folder with the owconfig.properties file. This file specifies the URL address of the Configuration Directory used to store the logging settings.

A flexible connection is configured using the “DB-connector properties”. Each connection at the JDBC/ODBC level can create its own BSE connection (2), which implies that one JDBC/ODBC API can offer connections using different users towards different BSE environments on different hosts. For an overview, see the “Introduction” chapter.

The usage of the flexible connection is optional, and is independent of the Infor Integration connection and activation (1).

In case the “DB-connector properties” are not defined, the default “fixed connection” is used, which allows only one user to connect to one BSE on one server.

Requirements

The minimal Porting set versions for using the DB-Connector properties are the following:

- LN: 8.7a02.
- ERP Baan 5.0: 8.7a02.
- ERP Baan IVc: 6.1c.16.

DB Connector Properties

- The properties needed to connect to the ‘remote’ BSE are similar to the properties needed to set up a BW connection.
- BSE_HOSTNAME
Name or IP address of the host where the complete BSE (LN System Environment) is located. This property is mandatory.
- BSE
The ‘remote’ BSE to connect to. This property is mandatory.
- BSE_OSUSER

Username to log on to the host. For the protocols 'rexec' and 'baanlogin', this property is mandatory unless the property BSE_MAPUSER is set.

- BSE_OSPASSWORD

Password to log on to the host. For the protocols 'rexec' and 'baanlogin', this property is mandatory unless the property BSE_MAPUSER is set.

- BSE_PROTOCOL (optional)

Different techniques to activate/connect to the BSE:

- baanlogin
- rexec
- sspi (Windows: Security Support Provider Interface).

Default protocol is rexec.

- BSE_PORT (optional)

Port number for the protocol to use. Only applies to protocols baanlogin and sspi (default port is 7150).

- BSE_MAPUSER (optional)

Maps the JDBC/ODBC User (used for OW activation) to the BSE user. If this option is set, the BSE_OSUSER and BSE_OSPASSWORD are not required.

The "DB-connector properties" must be set in this way:

- For ODBC connections, the properties can be added to the "Additional Connect Properties" field (separated with a semicolon) of the "Connector for ODBC Datasource Setup".
- For JDBC connections, the properties can be added to the java.util.Properties object used in the "DriverManager.getConnection(String url, Properties props)" method.

Testing the configuration

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To test your configuration, select one of the following sections:

Testing the configuration for ODBC

Create and configure an ODBC connection. A 64-bit machine by default starts **Windows\system32\odbcad32.exe** and only 64 bits drivers are shown. To see the Infor Integration 32-bit driver, start **Windows\SysWOW64\odbcad32.exe**.

See the “Infor Integration ODBC Help” documentation, available in Infor Integration, on how to setup a DSN.

To check the configuration and to perform an SQL query through the ODBC driver, use the Connector for ODBC Test Tool. For usage instructions, open a command window and type this command:

```
odbcetest
```

Testing the configuration for JDBC

To check the configuration and to perform an SQL query through the JDBC driver, use the “com.infor.jdbc.TestQuery” utility. Open a command window and type this command:

```
java com.ssa.jdbc.TestQuery [bus component] [query text]
```

Use Bus Component “localprocess”. The command can be as follows:

```
java com.ssa.jdbc.TestQuery localprocess "select * from dbtst120"
```

Note: With this test utility, you cannot test the “flexible connection”, because no “DB-connector properties” can be defined.

Logging information

If issues occur, check this log information:

- Windows Event Viewer on the ODBC Client system:
 - ODBC porting set issues.
 - JDBC porting set issues.
- Infor Integration logging, default in C:\Documents and Settings\[username]\owlog.
The specification of an alternate log file and logging level requires definition of a Configuration Directory for Infor Integration.
- Logging of the LN server.
- SLM Server logging for specific information on failed licensing:
 - For Windows: Event Viewer.
 - For UNIX: [installdir]/log