Infor LN Business Studio Installation and Configuration Guide

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About this document

Objectives

This guide describes the installation and configuration of Business Studio, which is the Eclipse-based development environment to model and implement business interfaces. The guide also outlines the basic use of the software.

Document summary

The guide contains the following chapters:

- **Chapter *Introduction (p. 7)***
  Introduces the Business Studio and gives a concise overview of the product.
- **Chapter *Requirements (p. 9)***
  Describes the software prerequisites your system must fulfill to install and use Business Studio. The chapter also lists the supported platforms.
- **Chapter *Installation (p. 11)***
  Explains how to install Business Studio. The installation consists of extracting an archive file. You can either install the Studio feature and the required Eclipse environment together in one go, or install them seperately.
- **Chapter *Configuration (p. 13)***
  Shows that you must perform some post-installation steps to configure the connection between the Studio Eclipse environment and an LN backend. This backend is used to retrieve business interface metadata, to test business interface implementations, and to generate runtime code.
- **Chapter *Troubleshooting (p. 17)***
  Deals with solving known problems.

Related Documents

- *User's Guide for Business Studio* (online Help).
- *Infor LN BODs and BDEs Development Guide (U9215 US)*.

Comments?

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In your e-mail, refer to the document number and title. More specific information will enable us to process feedback efficiently.

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Chapter 1
Introduction

1

This chapter introduces the Business Studio and gives a concise overview of the product.

Introducing Infor LN Business Studio

Development platform for Infor business interfaces

Infor LN Business Studio can be used as a development platform for Infor business interfaces, which are the interfaces that allow you to communicate business data between LN and other enterprise applications. Therefore, you can use Business Studio to build integrations for LN applications.

Business Studio is implemented as a group of features in the Eclipse framework, and offers you an Infor Business Studio Perspective that unites all views, commands, property sheets, and editors used for business interface development. Business Studio provides a tool to test the business interfaces you have developed.

One or more business interfaces are represented, in Business Studio, as an interface project. These projects can include various components of a business interface, such as a definition and implementation of a business interface, but also related entities such as tables, applications, datatypes, and modules.

You can use Business Studio for the following main tasks:

- To define a new business interface.
- To view and edit an existing business interface.
- To implement a business interface for LN by generating the runtime code.
- To test a business interface implementation.
- To export or import a business interface.

Overview of Infor LN Business Studio

This section provides an overview of the functionality and architecture of Infor LN Business Studio.

Functions and Features

Business Studio allows you to do the following:

- **Define a new business interface**
  You can design an abstract Business Object that has attributes to embody business data and methods or events to access this data.

  This type of abstract Business Object design is called a Business Interface Definition (BID) or, in Business Studio, an interface definition.

  The interface definition describes the attributes of the Business Object, the object's aggregated subcomponents called child objects, the relationships with other Business Objects, called association relationship, and the interface definition's events or methods and method arguments, and the events the business interface can send or receive.
- **View and edit existing business interfaces**
  You can import a business interface from an Infor enterprise application server and view or modify the interface in Business Studio.
- **To implement a business interface**
  You can map the properties and methods of an abstract, logical Business Object to application-specific data stores and modules, such as LN DLLs, ERP sessions, or database tables.
- **Generate runtime code for a business interface**
  After you have defined a business interface implementation, you can generate the corresponding runtime source code of the business interface for the involved LN application server by using the Infor LN Business Studio Implementation Generator.
- **To test a business interface**
  With the Business Interface Test Tool, you can test developed or modified business interface implementations. You can define and execute tests against a live LN application server. You can also compose and run complete test scenarios.

Note

Business Studio supports only LN Business Interfaces, which are business object representations on Infor LN application servers that comply to the Infor Open SOA. LN distinguishes two types of Business Interfaces: BDE Business Interfaces and BOD Business Interfaces.

Chapter 2
Requirements

2

This chapter describes the software prerequisites your system must have to install and use the Business Studio.

Requirements

This section provides the requirements to install and use the Business Studio.

Business Studio is a development environment for Infor LN Business Interfaces, which runs on Windows platforms and is implemented in the Eclipse framework. Business Studio consists of these Eclipse features:

- Infor LN Business Studio Test Tool
- Infor LN Business Studio
- Infor LN Business Studio Implementation Generator
- LN Business Studio Generator.

If you install Business Studio in combination with the required Eclipse environment and the used third-party Eclipse features, check whether Java Runtime Environment (JRE) 1.6 or later is installed on your Windows system. It is not necessary to install other additional software.

If you install Business Studio in an existing Eclipse environment, ensure that this environment conforms to Studio's software requirements. Check whether the used Eclipse features are installed and whether they have the appropriate version.

Windows platform support

You can only use the Business Studio development environment on Windows operating systems. The following Windows versions are supported:

- Windows XP
- Windows 2003
- Windows Vista
- Windows 7

Software requirements

To use Business Studio, the minimum requirements include the following third-party software:

- **JRE 1.6**
  Java Runtime Environment version 1.6 (Java 6).
- **Eclipse 3.5**
  Eclipse version 3.5.
- **GEF 3.5**
  Graphical Editing Framework version 3.5 (an Eclipse feature).
- **EMF 2.5**
  Eclipse Modeling Framework Project version 2.5 (an Eclipse feature).

Back-end support

You can use an LN back-end that is connected to Business Studio to store the generated code, to import business interface meta data from a runtime repository, and to test business interface implementations.

Licenses

To use Business Studio, you need these licenses:

- A license for the Adapter for LN. Take care of the following:
  - If you already have an Adapter for LN license for product ID 7013, you do not need a new license.
  - If you do not have a license yet, obtain a license for product ID 7056.
- One of these licenses:
  - An Infor LN Development license, product ID 10146. This is a replacement of product ID 7105.

  This is only required if you want to modify and generate Business Object implementations.

To obtain a license, add the corresponding product ID in the Infor Solution License Manager (SLM) and request a license for it.

Chapter 3
Installation

3

This chapter describes how to install the software of Business Studio. To install the software, extract the Studio archive file at an appropriate location.

Installation

This section describes how to install Business Studio.

There are two ways to install Business Studio:

- As a completely new Eclipse framework installation, including the Eclipse framework and all used Eclipse features.
- As an Eclipse feature that you add to an existing Eclipse environment. Ensure that this environment meets the software requirements of Business Studio, and contains the correct versions of the used Eclipse Features.

Complete installation including Eclipse

These steps describe how to install Business Studio together with all the required Eclipse software.

Step 1: Check Business Studio requirements

Ensure you have installed Java Runtime Environment (JRE) 1.6 or later on your Windows system.

Step 2: Download or copy the zip files with the Business Studio software.

These zip files are available:

- `InforBusinessStudio_10.3.0.nnn_Including_Eclipse` (32-bits)
  You can download this file from solution 1009745 on the www.infor.com/inforxtreme site.
- `InforBusinessStudio_10.3.0.nnn-x86_64_Including_Eclipse.zip` (64-bits)
  You can copy this file from the installation medium.

nnn represents a build number, such as "0023".

Important!: The selection of the zip file depends on the JRE version. If you use a 32-bits JRE on a 64-bits machine, you must select the 32-bits zip file.

Step 3: Extract Business Studio archive file

Extract the Business Studio archive file to an appropriate location. The recommended location is directory `C:\Infor\ERP\BusinessStudio`.

The Eclipse software, including all Business Studio features, will be installed in an `eclipse` subdirectory of the location where you extracted the ZIP file, such as `C:\Infor\ERP\BusinessStudio\eclipse`. The Business Studio software will be added to the `eclipse\features` and `eclipse\plugins` folders.

Installation on existing Eclipse platform

To install the Business Studio Eclipse features on an existing Eclipse platform, complete these steps:

Step 1: Check Business Studio requirements

Ensure you have installed Java Runtime Environment (JRE) 1.6 or later and Eclipse version 3.5 or later on your Windows system.

Check whether your Eclipse platform fulfills these requirements:

- GEF 3.5 or later.
- EMF 2.5 or later.

For detailed information about these requirements, refer to the *Requirements (p. 9)* section.

Step 2: Copy Business Studio software

From the Business Studio installation medium, copy the `InforBusinessStudio_10.3.0.nnn.zip` file to your computer.

nnn represents a build number, such as "0023".

Step 3: Extract Business Studio archive file

Extract the Business Studio archive file to the parent folder of your `eclipse` folder. For example, if your `eclipse` folder is `C:\Infor\ERP\BusinessStudio\eclipse`, you must extract the archive file to `C:\Infor\ERP\BusinessStudio`.

Note

Infor makes software updates for Business Studio available as separate releases. No update site will be used.

Chapter 4
Configuration

4

This chapter describes how to configure Business Studio to establish a connection with an LN application server. You use this backend to retrieve metadata from business interfaces or application components and to test the implementations of business interfaces in an application.

Configuration

This section describes the configuration of Infor LN Business Studio.

Besides using standard Eclipse options, you can configure Business Studio by setting the following preferences:

- **Colors**
  With the **Colors** preferences of Business Studio, you can set the colors of the graphical modelers and textual editors that you use for Business Interface modeling.
- **Infor LN Business Studio BDE Implementation**
  With the **BDE Implementation** preferences of the Business Studio Generators, you can set the VRC of the LN server for which you generate the Business Interface Implementation.
- **Infor LN JCA Connectivity**
  With the **Infor LN JCA Connectivity** preferences, you can configure the connection between Business Studio and the LN back-end.

  Each Business Studio installation distinguishes two types of back-ends: an LN system used to store or retrieve business interface metadata (the Runtime Repository system), and an LN system used for testing the modeled business interfaces (the Test Server system). Usually, you will use the same LN application server for exchanging metadata and testing business interfaces. For the Runtime Repository server, use company 0. For testing, you generally use a company with another number.

  On the **Log Configuration** page of **Infor LN JCA Connectivity**, you can configure the log settings for the connectivity runtime processes. You can specify the path and the name of the log file, and you can select a log level.

To navigate to the preference pages of Business Studio, open the **Windows** menu and click **Preferences**. In the Preferences window, expand the **Infor Business Studio** folder and click one of the preference options.

Note

To generate proxies for old BDEs (version 6.1 only!)

The Business Interfaces you develop with Business Studio do not use proxies. However, to remain backwards compatible, Business Studio still contains functionality to generate BDE Proxies for the business interface definitions (BIDs) that you created with Integration Studio 6.1.

You can configure the involved Proxy Generators using the **.NET Proxy** and **Java Proxy** preferences of the Business Studio Generators. For detailed information, refer to the online Help of Business Studio.

To define connectivity preferences

Before you can exchange business metadata with the application server, the application server must be available in Infor LN Business Studio. This means that the application server must be running, and that you must have configured a connection point that connects to the server. You can configure the connection in the **Infor LN JCA Connectivity** page.

To configure the connection to the application server, complete the following steps:

1. On the Eclipse **Windows** menu, click **Preferences**. The **Preferences** window is displayed.
2. In the left-hand navigation pane of the **Preferences** window, click **Infor LN JCA Connectivity**. The **Infor LN JCA Connectivity** page is displayed.
3. Select the RuntimeRepositoryConnection connection point and click **Edit**. The **Configure Connection point** wizard starts.
4. Specify the properties for the connection point and close the wizard. Note It is recommended to select the *BaanLogin* Activation Type.

For details, refer to the wizard's online Help and to the online Help of the Infor Connectivity plug-in.

Note

To use the Business Interface Test Tool, you must define a TestServerConnection connection point. For details, refer to the online Help of the Test Tool.

Preferences of Infor LN Business Studio Implementation Generator

This section describes the preferences of the LN Business Studio Implementation Generator. With this generator, you can generate the runtime code for an implementation on an LN application server.

Before you can generate Business Interface runtime code, you must specify the version, in other words, the VRC in which the Business Interface runtime will be created. You must set the version on the Preferences page of the Business Studio Implementation Generator. To access this page, in the **Preferences** dialog box, click **Infor Business Studio** > **Generators** > **Infor LN Implementation**. To open the **Preferences** dialog box, on the **Window** menu, click **Preferences**.

The **Major Version**, **Minor Version** and optional **Subordinate Version** refer to what is called the Base VRC in LN. To view the available base VRCs, run the Base VRCs (ttpmc0110m000) session in LN. If no base VRC exists that corresponds to the VRC in which you must generate the Business Interface runtime, you must create a base VRC in LN.

To determine the actual package VRC that is used, the Business Studio Implementation Generator uses the following criteria:

- Takes the package from the value specified for the **Implementation Identifier** property of the Business Interface Implementation.
- Takes the VRC from the Export VRC, as defined in the Base VRCs (ttpmc0110m000) session.

Important!

To develop in the resulting package VRC, you must have sufficient authorizations. In Infor development, the VRC that you must use is a VRC that is open for development or maintenance. In a customer environment, the VRC is a customization VRC, such as B61C_a_cust.

The following table lists the preferences of the Business Studio Implementation Generator:

Preference property	Description
Major Version	Version number of the Base VRC.
Minor Version	Release code of the Base VRC.
Subordinate Version	Customer code of the Base VRC.

Business Interface Test Tool preferences

Use this page to set the configuration for testing Business Interface Implementations.

Fields	Description
Allow a manual change of the request xml for a Test	If this check box is selected, you can manually edit the XML documents, which are used as a request for a Business Interface, such as a SyncBOD or a Request BDE message. If this check box is cleared, you cannot edit the XML request documents Business Studio generated from the specified test parameters. Note: It is not recommended to manually edit a generated request. because this can result in an incorrect request and might cause problems when you execute the test. Therefore, this check box is cleared by default.

Chapter 5
Troubleshooting

5

This chapter provides help when something does not work as expected. The chapter deals with solving known problems.

Troubleshooting

If the heap space of the Java Virtual Machine is too small, you will encounter out of memory problems. To solve this, add the following JVM parameter settings to your Eclipse shortcut:

```
"C:\Program Files\eclipse\eclipse.exe" "-vmargs -Xms100m -Xmx1024m"
```

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