# Infor Enterprise Server Release Notes

10.6.1.1

# Contents

# About this guide

This document provides an overview of the differences between various Infor Enterprise Server versions.

**Note:** Various LN and Enterprise Server components must be licensed through Infor Solution License Manager (SLM). For details on how to find the relevant SLM product IDs, see SLM product IDs on page 92.

## Contacting Infor

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# Chapter 1: Enterprise Server 10.6.1.1

This chapter describes the differences between Enterprise Server 10.6.1.1 and Enterprise Server 10.6.1, and the new functionality in Enterprise Server 10.6.1.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.6.1.1:

| Package | KB |
|---------|-----|
| TT | 2005851 |
| TL | 1997774 |

**Note:**
- For the last minute information, see KB 1868980.
- For the dependencies between Enterprise Server components, see KB 1404654.

# New features

## Application configuration

### Export and import configurations

New sessions for export **(ttaad7203m000)** and import **(ttaad7204m000)** of configurations have been added. You can use these sessions to copy AMS data and table sharing data across environments.

### PDF properties

A new **PDF Properties (ttadv3138m100)** session is available to change and configure PDF display property settings. Use the **Convert** option to write the settings to the `PDF.properties` file.

# Application extensibility

**Session and report extensions – additional functionality calculated fields**

The session and report extension functionality has been extended with additional functionality for calculated array fields. A calculated field has an extra elements property to indicate the array depth. The calculate value hook for an array element differs from a single calculated field; the element number is an input argument.

# Functions and features

**SOAP – support CDATA**

The Library Generator (LN Studio) that generates an LN library based on a WSDL now also supports the generation of functions with CDATA data elements. A library TIV of 2230 or higher is required.

The SoapElement library has been extended with new functionality for setting CDATA elements.

**Note:** LN Studio build 10.6.0.361 is required.

**Suppress messages and questions – support 3GL processes**

The suppression of messages and questions, as set by the **Tools Parameters (ttaad0100m000)** session, is now also applicable to messages and questions of 3GL processes started through a 4GL session.

# Integration tools

**Data Publishing Management module**

A new integration module, Data Publishing Management, is introduced as part of the Integration Tools.

With the Data Publishing Management functionality, all the data from LN application tables can be published to Infor Data Lake using ION Messaging Service (IMS). In Data Lake, the data can be used for Business Intelligence and Analytics (Birst).

In the **IMS Parameters (ttdpm5130m000)** session, you can configure the connection to IMS.

In the Data Sets sessions, the tables that must be published are defined, such as data sets that are required for specific BI Reports. Sensitive data can be excluded from publishing.

The publishing sessions publish the LN data. You can use the **Publish Data (ttdpm5205m000)** session for initial load. That is, the complete content of the tables that are set up to be published. The **Publish Changes (ttdpm5125m000)** session publishes the runtime changes by users, for all the tables that are set up to be published.

**Note:** Porting set 9.2b or later is required.

# Job management

### Job groups

In a scenario where performing job A depends on the result of job B, it is hard to decide at what time job A must be scheduled, and how long job B runs. To handle dependent jobs, you can now create a job group. Use the **Job Groups (ttaad5140m000)** session to create a job group. A job group has a name, with the same characteristics as a job name, and a description. The **Status** and **User** of the job group are handled automatically.

After creating the job group, the jobs are added to the group, approximately in the order the jobs must be performed. The first job in the group (with the lowest Group Number) determines the handling of the whole job group, such as execution date and whether the job group is being repeated. If the job group is not repeating, the job group and all non-repeating jobs in the job group are deleted when the job group has run.

The dependencies of the jobs in the job group are also determined. A job in the job group can only depend on a job in the same job group with a lower job number.

You can use the specific options in the **Job Groups** (**ttaad5140m000** and**ttams5640m000**) sessions to change the status of the job group. The job group statuses have the same meaning as the status of the jobs and the same status changes are allowed.

**Note:** Job groups are only handled by the BSE service Job Scheduler Service.

# User management

### DEM authorization in role data

In Enhanced AMS, you can overrule the maximum allowed session authorization level as exported/generated through the **Aggregate DEM Authorizations for AMS (tgbrg9298m100)** session, and stored as `Current DEM Authorization`.

The overruled authorization, stored as `Actual Authorization`, can be set manually. You can now set this overruled authorization also more easily in these ways:

- Use the new **Actualize Authorizations** option that has been added to the **Authorizations (ttams4100m000/ttams4110m000)** session.
- Use the **Aggregate DEM Authorizations for AMS (tgbrg9298m100)** session. This session actualizes the authorizations if the **Automatically Start Authorization** parameter in the **AMS Parameters (ttams0100m000)** session is enabled.

# Product improvements

## Application configuration

**Companies - Preferences of LN UI landing page**

In the **Companies (ttaad1100m000)** session, you can define these settings:

- The logo to be displayed on the landing page
- The title of the landing page
- The background color of the title

In the **User Data Template (ttams1110m000)** session, you can select one of these landing page types:

- `Default`

  The current behavior. Depending on the started user interface, that is, Infor Ming.leTM or stand-alone, the landing page contains `Recently Used` or `Favorites, Bookmarks and Recently Used`.

- `Recently Used`
- `Favorites, Bookmarks and Recently Used`

## Application extensibility

- The Extension Modeler now contains an option to start the **Customer Defined Fields** session for table and session extensions.
- In the Extension Modeler, when accessing domains, Customer Defined Field domains are now included in the zoom dialog box.

## Database management

**General Table Maintenance (GTM) session – support clear fields search row**

In the **Search Row** dialog box of the **General Table Maintenance (ttaad4100/4500)** session, the **Clear Fields** option has been added.

# Integration tools

### Object configuration management - additional text

In the **Object Types (ttocm0102m000)** session, the text manager is now enabled. You can link a text to the object type of a model. In the **Models (ttocm0101m000)** session, you can export a complete model to XML. Texts that are added to an object type are not added to the exported XML.

# Miscellaneous

### Bi-directional language exceptions

The text direction of each multibyte string form field is determined by the language of the user or by the currently selected data language in case of a Multi-Language Enabled environment. In certain cases, such as phone numbers, the text must always be displayed from Left-to-Right. There are two ways to overrule the automatic text direction:

1   In the LN Studio Form Editor, the text direction of a multibyte field can be set to **`Always Left-to-Right`**.
    **Note:** LN Studio build 10.6.0.361 is required.
2   In the Form Personalization, the customer can personalize the text direction of a multibyte field to **`Always Left-to-Right`**.

### File Manager workbench – support root path

The `FileManager.selectFile()` and `FileManager.selectFolder()` functions are extended with a `root.path` argument to set the root directory of the **File Manager** workbench. A user can navigate to child directories but not to the parent of the root directory.

For more information, see the *Infor ES Programmer's Guide*.

### Change Company session – (Enhanced) AMS filter

If a user starts the **Change Company (ttdsk2007m000)** session, all companies with the same package combination as the user are displayed. However, using (Enhanced) AMS, you can restrict the companies where the user can perform any actions. That is, you can restrict the companies where the user has permission to start at least one session. The user can change to a company where the user cannot perform any tasks.

To prevent this, the convert user to runtime functionality has been changed: now, all companies where the user can perform a task (display authorization for one session in the company is sufficient) are stored. These companies are used for filtering out the companies for which a user has no session authorization.

This data is also used in BIRST to filter out the data a user can view.

A user can have session permissions on these levels: all packages, a package, a module, or a session. If a user has session permission for all companies on a level, then the user can switch to any company, except in these situations:

- AMS

  The user's **Authorization Group** is `No Authorization` for a company in the **Session Authorizations by Company (ttams3133m000)** session. The user has no other allowed authorization for a package, session, or module.

- Enhanced AMS

  The user's **Actual Authorization** is `No Authorization` for a company in the **Session Authorizations (ttams4110m000)** session for all the packages (package is empty). The user has no other allowed authorization for a package, session, or module.

The data of the allowed companies is automatically generated when a user is converted to runtime. If the user is not yet converted and the allowed companies are not yet recorded, the companies are not filtered in the **Change Company (ttdsk2007m000)** session. When a user is converted to runtime, the present allowed companies are removed and a new list is created.

**Note:** Super users do not have AMS roles and therefore have permission for all companies.

## User management

**Authorization workbench – color badges**

The workbench authorization functionality is now extended with color badges for enumerated properties. In the **Enum Domain Formatting (ttgfd4525m000)** session, you can extend enum properties with color or images. This functionality is supported for these properties:

- All authorization properties: ttaad.perf, ttaad.perm, ttams.fltr, ttams.perm
- The context (ttams.cntx) property

## LN User Interface

**Note:** LN UI 12.1.3 is required.
- On the filter row, the `<Multiple>` keyword in the column header indicates that multiple filter conditions are applied to the column. The filter conditions are displayed when resting on the column header.
- LN UI supports a light skin for the navigation menu, in addition to the default dark skin. To change the skin, open the user profile and navigate to the **Preferences** tab and the **Appearance** field group.
- This LN UI version introduces a different format of displaying the version (12.1.3) and build (32) number: 12.1.3-32.

# Chapter 2: Enterprise Server 10.6.1

This chapter describes the differences between Enterprise Server 10.6.1 and Enterprise Server 10.6.0.1, and the new functionality in Enterprise Server 10.6.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.6.1:

| Package | KB |
|---------|-----|
| TT | 1987662 |
| TL | 1987656 |
| DA | 1987645 |
| TA | 1953195 |

**Note:**
- For the last minute information, see KB 1868980.
- For the dependencies between Enterprise Server components, see KB 1404654.

# New features

## Authorization workbench

The **Authorization Workbench (ttams4300m000)** gives a different view on the AMS and DEM authorization settings. Next to this, the workbench shows the maximum effective authorization and personalization settings for each affected session.

The purpose of this workbench is to quickly scan the implemented authorizations. Therefore the workbench provides these perspectives:

- User perspective

  Shows all authorizations for a specific user. Results are displayed grouped by role.

- Role perspective

  Shows all authorizations for a specific role. All users in the specified role are displayed.

- Session perspective

  Shows all authorizations for a specific session. Results are displayed grouped by role. A list of users per role and a list of all users for the specified session are displayed.

Shortcut buttons, to quickly switch between perspectives with use of the context, are available on several levels. To get more focus on a specific authorization, you can set several filters.

To enable editing, you can zoom to the corresponding edit sessions:

- **Session Authorization (ttams4110m000)**
- **Table Authorization (ttams4111m000)**
- **Table Field Authorization (ttams4112m000)**
- **Library Authorization (ttams4113m000)**

The panel with the resulting maximum authorization is dependent on the existing Runtime Change Publishing (RCP) module. This module supplies information about maximum authorizations for sessions. Personalization settings indicators are displayed together with the maximum authorization.

# BFlow test framework

### Import/export

In the **Import BFlow Test Framework (tlrgt1245m000)** session, the import of BFlow cases, scheduling information, and test groups is now optional.

# Excel integration

### Import from Excel - session selection

When you start Import from Excel from an editable overview session with a synchronized child details session, you can now select which session, overview or details, to use to import the data from an Excel workbook.

# User management

### Enhanced AMS

A session similar to **Print Session Authorizations by User (ttams3400m000)** has been implemented for Enhanced AMS. The data must initially be generated by the **Aggregate User Authorizations** option. You can also use this option to print the authorization data.

The session is present in the **User Management > Authorization Management System > Definition of Roles** menu.

**User data defaults sets**

These fields are added to the **User Data Defaults Set (ttaad2111m000)** session:

- **Logistical company**
- **Financial company**
- **Process Browser**

# Product improvements

# Application configuration

**Create new package combination / VRCs**

Within the **Create New Package Combination / VRCs (One Step) (ttaad1222m000)** session, which is used to create a software environment in a single step, the **Set Target Attributes (ttaad1226s000)** option has been added. You can use this option to select a target VRC, a development VRC, and a TIV level, for one or more selected packages. This new session replaces the previous options to select a target and development VRC.

# BFlow test framework

**Logging**

BFlow logging was stored in one file per test step run. Logging is now reduced to one file per test case run.

# Database utilities

**Reorganize tables**

In the **Reorganize Tables (ttaad4225m000)** session, the **Repair Indices** action is no longer executed by dropping and re-creating the indices of a specified table range. Instead, the action is now performed

by `bdbreconfig`. This binary breaks up the work in parts that are executed in parallel. The **Create Missing Indices Only** option still uses the classic, create index, implementation.

# Document Management

**ODM menu option**

If a session is started floating, the **Attachments** option is available in the **References** and Context menus.

The **Attachments** option is also present in these menus if the **Show ODM in-context application** check box is cleared in the standalone mode. This check box is located on the **LN Environment Details** page in the LN UI Administration Webapp.

# Functions and features

**Automatic restart after removing call graph profile/debug options**

When you start LN UI, call graph profile and debug options may still be present from a previous session. You are prompted whether these options should be used or removed. If you choose to remove these options, LN UI automatically restarts.

**Conditional Formatting**

The **Conditional Formatting (ttadv9502m000)** session now has options to perform these actions:

- Use the format as a filter.
- Define formats at system level, super user only

**File Manager - server paging support**

The **File Manager** cannot show the directory content if it has more than 200.000 files and folders. Therefore, the number of directory entries retrieved from the server has been limited to 25.000. If a directory contains more than 25.000 entries, a message is displayed and filtering must be used to find the files in this directory.

**List detail**

- Personalize Navigation List improvements

  For a field without a label, the label description is derived from the overview session if available. Otherwise the table field description, if applicable, serves as the label description of the field.

- Navigation List toolbar

The **Navigation List** pane has been extended with a toolbar. This toolbar has a Personalization gear with the **Personalization Navigation List** menu option.

- Data Empty indication on Cards

  The **Tools Parameters (ttaad0100m000)** session has been extended with a **"Data Empty" Character** field. Use this field to specify the character to be displayed for fields with empty data on the card in a Navigation List.

### Session title personalization

The **Personalization Workbench**, which you can start through the **Personalize Form** command, now supports personalization of the session title.

### Options - Debug and Profile 4GL

This functionality has been added:

- **Add Listed Bshell Functions to Profile** - to specify the bshell functions to add to the profile
- **Keep Profile Options for other Bshells** - to specify to save the profiling settings for the current user for new started bshells

The **Profile Options Present** indicator shows whether new bshells are started with profile options.

### Options - Debug bshell

These options have been added:

- **Trace Listed Bshell Functions** - to specify the bshell functions to add to the tracing
- **Keep Debug Options for other Bshells** - to specify to save the debug settings for the current user for new started bhells
- Command buttons to start, pause, resume, and stop tracing, and to download the compressed trace file for analysis.

The **Debug Options Present** indicator shows whether new bshells are started with debug options.

# Personalization and configuration

### Reorganize application personalization menu

The **Session Personalizations (ttadv9100m000)** menu item is moved to the **Reference** menu of the **Manage Personalizations (ttadv9150m000)** session.

The functionality of the export and import personalization sessions, that is, ttadv9403m000 and ttadv9503m000, has been implemented in these sessions:

- **Export Configuration Data (ttaad7201m000)**
- **Import Configuration Data (ttaad7202m000)**

The original sessions are expired.

# LN User Interface

**Note:** LN UI 12.1.2 is required.

### GBF improvements

The GBF underwent a major technical change. It is faster and can manage bigger tree structures.

### LN Client Service settings

On the **LN Environment Details** page in the LN UI Administration Webapp, you can download the connection properties of the LN Client Service settings as a settings file or as a QR code. You may use the settings file or QR code to configure the client program, such as Mobile Field Service.

### LN Client Service support for OAuth 1.0a

In the LN UI Administration Webapp, the endpoint security of the LN Client Service can be configured for OAuth 1.0a with an access key and a secret key. This allows the LN Client Service to be exposed as an available API of the Infor OS ION API gateway.

### LN Navigator

When you use LN UI in standalone mode, the **LN Navigator** in-context application is disabled. In standalone mode, the functionality of the **LN Navigator** is provided by the ordinary navigation menu, so the **LN Navigator** is obsolete.

# Chapter 3: Enterprise Server 10.6.0.1

This chapter describes the differences between Enterprise Server 10.6.0.1 and Enterprise Server 10.6, and the new functionality in Enterprise Server 10.6.0.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.6.0.1:

| Package | KB |
|---|:---:|
| TT | 1962808 |
| TL | 1957220 |

**Note:**
- For the last minute information, see KB 1868980.
- For the dependencies between Enterprise Server components, see KB 1404654.

## BOD handling

**Improve efficiency determining company upon drill back to LN**

Subscription table tlesb300 is checked in each company looking for a match in logical ID.

If the logical ID ends with a slash ('/') followed by a number, that number is used as the company number. If this is not the case, the check on tlesb300 is performed on each company.

## Database utilities

**Progress indicator porting set binaries**

To improve the user experience and avoid time-out communication errors within LN UI, a progress indicator has been implemented. This indicator is displayed for all sessions and libraries during the processing of data by these porting set binaries:

- bdbpre

- bdbpost
- bdbreconfig
- refint

The indicator is displayed in these sessions:

- **Reorganize tables (ttaad4225m000)**
- **Create sequential dump of table (ttaad4226m000)**
- **Create table from sequential dump (ttaad4227m000)**
- **Convert/recover Tables (ttaad4228m000)**

# Enhanced AMS

**Copy from DD functionality**

In the authorization sessions that are related to Enhanced AMS, the **Actions** menu now contains an option to copy the components from DD.

You can import sessions, tables, table fields, and libraries based on a selection range and specified authorization settings.

# Excel integration

**Access control on export to and import from Excel commands**

Two check boxes, **Allow Export to Excel** and **Allow Import from Excel**, have been added to the **Tools Parameters (ttaad0100m000)** session. Use these check boxes to allow or deny Excel commands for all users. Initially the Excel commands are allowed.

Two Excel options, **Allow Export to Excel** and **Allow Import from Excel**, have been added to the **User Data Template (ttams1110m000)** session. You can set each Excel option to one of these values:

- `According to Parameters` – to follow the setting of the Tools parameters.
- `Always` – to allow access to the related Excel commands. This setting overrules the Tools parameters.
- `Never` – to deny the access to the related Excel commands. This setting overrules the Tools parameters.

Initially these two options are set to `According to Parameters`.

If a user is denied access to certain Excel commands, these Excel commands are not available in the toolbar of a session. They are also not present in the **Actions** menu of a session.

# Functions and features

**Custom format for date and time**

In the **User Data Template (ttams1110m000)**, Date and Time options are added. These options enable a user to define a custom format for date and time. This format is used by LN UI when displaying dates and times.

Note: LN UI 12.1.1 is required.

**Right-alignment for header labels**

A right-aligned header label can be defined for fields in detail sessions. This way columns of fields and the corresponding column labels are better aligned.

The `Above (Right Aligned)` label position is added to the **Position** attribute of a label. This setting is available in LN Studio in the **Session Editor** - **Form Definition** tab - **Details** pane – **Label** tab – **Details** group.

**Note:**
- LN UI 12.1.1 is required.
- LN Studio build 10.6.0.329 is required.

# Jobs

**Set all sessions to active or inactive**

In the **Job Data (ttaad5500m000)** session, commands are added to activate or deactivate all sessions that are linked to the selected job. These commands are only available if at least one session with an appropriate active or inactive status is present in the selected job.

# Personalizations and configurations

**Note:** LN UI 12.1.1 is required.

**Saving splitter position in sessions**

The last position of horizontal and vertical splitters in sessions is stored as personalization. The layout of a session can be changed by dragging the split position. When the session starts, the saved position is used for the layout of the session.

**Toolbar personalization for Gantt and tree view**

For users who are allowed to personalize applications, the **Personalize Toolbar** menu option is available for the Gantt and tree view types of sessions.

# Report designer

A new session, **Generated Reports (ttadv3548m000)**, is available. You can use this session to generate reports based on a selection of table fields of a main table and fields of related tables. In addition to the report, the session also generates a 4GL print session including a form definition and a 4GL program script. For the selection of the table fields of the main table and related tables, the **Report Designer** workbench is started automatically.

The generated reports are created in your current activity. After you have completed the generated reports, they can be checked in and committed to the Project VRC.

Afterwards, you can modify and personalize the generated reports through the **Report Designer**. You can, for example, add company logos and change report layouts.

**Note:** Porting set 9.2a.01 is required.

# User interface

**Note:** LN UI 12.1.1 is required.

**Color pickers**

Color pickers do now have an advanced RGB color selector. Users can use a color wheel and type the RGB hex code.

**Customization of landing page**

When using LN UI in stand-alone mode, an LN UI administrator can customize the landing page. The administrator can configure the LN environment to show an image, a banner text, or both on the landing page. In addition, a background color can be defined.

**Grid scroll distance**

On the **User Profile Details (uigwt0102s000)** page, users can select the amount of grid rows to scroll per mouse wheel tick.

**Handling of bshell messages**

The message window is not only used during non-interrupting message mode but also during interrupting message mode:

- You can view the history of messages by clicking the message icon in the status bar.
- If a new informational message, from for example the bshell, is received, the message icon in the status bar flashes.

**Locate recently used item in menu**

When using LN UI in stand-alone mode, you can right-click a recently used item on the landing page and select **Locate**. The side navigation menu is expanded to show the menu that started the session from which the item was started.

**Skin selection**

An LN UI administrator can configure a predefined skin per LN environment. On the **User Profile Details (uigwt0102s000)** page, users can select to apply the skin from the environment. Alternatively, they can select to apply the user's preference for one of the predefined skins.

# Chapter 4: Enterprise Server 10.6

This chapter describes the differences between Enterprise Server 10.6 and Enterprise Server 10.5.2, and the new functionality in Enterprise Server 10.6.

**Note:**
- For the last minute information, see KB 1868980.
- For the dependencies between Enterprise Server components, see KB 1404654.

## Configuration

**Case-sensitive software language codes**

In the database, the language code is interpreted in a case-sensitive way. Therefore, language code 'a' is different from language code 'A'. The Windows file system, however, interprets characters in a case-insensitive way. Therefore, the actual number of supported software languages is limited to 36.

Business requires that a single BSE supports more than 36 languages together. To distinguish between lower and upper case language codes on the Windows file system, a filename extension is introduced.

The extension is added to these filenames:

- `$BSE/lib/dtopt<lang>`
- `$BSE/lib/textinf/<id>text0<lang>`

This table shows some examples:

| Current | New |
|---|---|
| $BSE/lib/dtopt2 | $BSE/lib/dtopt2.2 |
| $BSE/lib/dtoptR | $BSE/lib/dtoptR.53 |
| $BSE/lib/dtopth | $BSE/lib/dtopth.17 |
| $BSE/lib/textinf/cutext0a | $BSE/lib/textinf/cutext0a.10 |
| $BSE/lib/textinf/bxtext0A | $BSE/lib/textinf/bxtext0A.36 |

The conversion is automatically performed after the installation of Enterprise Server 10.6.

# BOD handling

**Insight in batches that are being received or are being processed**

A new session, **Inbound Staging Batches Monitor (tlesb4500m000)**, is available. This session shows all BOD batches that are being received, are being processed, or resulted in an error. To view which batches cause problems, you can apply conditional formatting.

Some databases, such as SQL Server, 'support' dirty reading. If such a database is used, you can view the progress when a batch of BODs is being processed.

# Database utilities

The **Suppress Information Logs (bdbpost)** check box has been added in these sessions:

- **Create Table from Sequential Dump (ttaad4227m000)**
- **Convert/Recover Tables (ttaad4228m000)**

If this check box is selected, information-related entries are not logged in the `log.bdbpost6.2-<seqn>.log` file. The report output remains unchanged.

# DEM enhancements

**DEM bookmarks support**

Users can create bookmarks for sessions started through a DEM process. A DEM bookmark for a session contains both session information and DEM context. When a user starts a session through the DEM bookmark, the session is started with the DEM context of that bookmark.

**Note:** LN application 10.6 or later is required.

**DEM favorites support**

Users can create favorites of DEM menu items. A session started through a DEM favorite is started in the logistic/financial or base company. If a session cannot be started for some reason, such as insufficient permissions, a warning is displayed.

**Note:** LN application 10.6 or later is required.

**Upgrading DEM bookmarks and DEM favorites to new DEM model**

DEM bookmarks that were created with an old DEM model may not work for a new DEM model. DEM favorites only work if the menu item is still available in the new DEM model.

To upgrade to a new DEM model:

**1**  With the old DEM model: create DEM favorites for all DEM bookmarks.
**2**  With the new DEM model: start the sessions through the DEM favorites and create a new DEM bookmark.

**Note:** LN application 10.6 or later is required.

# Extensibility

### Add new reports to session

In the Extension Modeler, you can add reports, both new and existing, to a session. You can remove reports by using an `is.visible()` hook. To override reports, you can use a `get.alternative.report()` hook.

# Infor Cloud Printing Service

### Keep Connection Open check box

The connection configuration contains a new check box: **Keep Connection Open**. If this check box is selected, the connection to LN is not closed during the polling interval between two consecutive polls. You can use this option to prevent the overhead of closing and reopening connections, that is, stopping and restarting Bshells on the LN server. Only select this check box for polling intervals of less than a minute. Clear this check box for polling intervals of several minutes, to prevent idle connections.

### Improved command handling on file share items

You can configure a time-out value for the command that is performed on items that have been downloaded to the file share. If a command is still running after the time-out has expired, the process is killed to prevent "hanging processes".

The executable and its arguments are now specified in two separate text boxes. A **Browse** button has been added to allow easy selection of the executable.

A **Test** button has been added to test the configured command on a selected file.

A **Retry** button has been added to retry the command on the selected failed items. Two types of failed items exist:

- Items for which the command did not complete within the configured time-out period
- Items for which the command completed with a non-zero exit code

# LN User Interface

**Locate favorite in navigation menu**

When using LN UI 12.1 (Xi) in stand-alone mode, you can right-click a favorite item on the landing page and select **Locate in menu**. The side navigation menu is expanded to show the menu that started the session from which the favorite was created.

**Preference for display density**

In the user profile of LN UI 12.1 (Xi), you can specify the display density settings. These settings change the vertical spacing of all forms. Workbenches and graphical user interfaces, such as Gantt charts and process models, are not affected.

**Preference to use new browser window**

In the user profile of LN UI 12.1 (Xi), you can specify whether each new session must run in a separate browser window. Sessions that are called from another session are opened in the same window. Examples are detail, zoom, and print sessions.

**Support of Apache Tomcat 8.5.***

LN UI 12.1 (Xi) supports Apache Tomcat 8.5.* web server. The Enterprise Server Installer supports the installation of Apache Tomcat 8.5.* web server.

The Apache Tomcat team has announced that support for Apache Tomcat 8.0.* web server will end on June 30th, 2018.

**Support of Enterprise Server versions**

LN UI 12.1 (Xi) now supports Enterprise Server versions before 10.5, so all Enterprise Server versions from 10.3. Some customers are currently limited to using LN UI 11.3.* (UX3) because of the Enterprise Server version. These customers can now migrate to LN UI (Xi), which offers improved usability.

Earlier Enterprise Server versions may impose functional limitations.

**Support of Microsoft Exchange Server 2016**

The Exchange Synchronizer for CRM contacts and calendar events supports Microsoft Exchange Server 2016.

# Personalizations and configurations

**Disable all personalizations**

In the **Manage Personalizations (ttadv9150m000)** session, an option is added to disable personalizations, filters, and conditional formatting per user.

**Report personalization - export/import configuration data**

The **Export Configuration Data (ttaad7201m000)** and **Import Configuration Data (ttaad7202m000)** sessions are extended with report personalizations. To export report personalizations, you must select the **Report Personalizations** check box. If the **Specific Selection** check box is selected, the **Report** window is available. In this window, you can specify a range of reports and the report personalization levels for which to export the report personalizations.

**Report personalization - copy personalizations to other level**

The **Copy to other Personalization Level (ttadv9200s000)** session also supports report personalizations. To copy report personalizations, you must select the **Report Personalization Range** group. This enables the **Package** and **Report** fields where you can specify a range of reports for which to copy the report personalizations.

**Remove menu personalizations**

The **Revert to Saved** command in the **Personalize Menu (ttadv9205m000)** session has been replaced by the **Remove Personalizations** command in the **Actions** menu.

**Report personalization - copy personalizations to other companies**

You can use the **Import Configuration Data (ttaad7202m000)** session to import personalizations: you can import session, report, and menu personalizations, that were exported from a certain company, into one or more other companies.

**Report personalization - Designer**

A new session, **Report Designer (ttstppersrep)**, is available to personalize reports. In the **Report Designer** you can perform these actions:

- Modify existing report layouts, and change the properties of report fields and labels.
- Add company logos, bar codes, and images to the report.
- Add layouts to the report without customizing the report.

You can store report personalizations on user level and on company level.

**Note:** LN application 10.5.2 or later is required.

**Show personalization information for sessions**

Additional information has been added to the **Properties (ttdsksession)** session. You can start this session by pressing **Ctrl+Shift+8** in a session.

The additional information shows whether personalizations and extensions are active for the session.

**Toolbar personalization improvements**

The toolbar personalization for sessions has been enhanced with these features:

- Personalizations for toolbar buttons, menus, and menu items are fully integrated.
- You can add every menu item to the toolbar.
- Buttons and menu items can be displayed as text, icon, or both.
- Buttons and menu items can be colored.
- You can create personalized menus by adding new menus and rearranging the menu items.
- Shortcut menus are updated with the personalized visibility and description.

**Note:** LN application 10.5 or later is required.

# PMC delivery - CDF

You can use PMC to deliver Customer Defined Fields (CDF) together with the table extension. This functionality replaces these CDF-related sessions:

- **Export Customer Defined Fields (ttadv4291m000)**
- **Import Customer Defined Fields (ttadv4292m000)**

# Functions and features

For more information on the functions and features, see the *Infor ES Programmer's Guide*.

**File Manager workbench – zoom support**

To call the **File Manager** workbench for browsing and selecting on the LN server, these functions are available :

- `FileManager.selectFile()` - to select a file on the LN server. This function also supports mime-type filtering to only allow selection of a file of a certain mime-type.
- `FileManager.selectFolder()` - to select a folder on the LN server.

When running in a tenant environment, the **File Manager** workbench adheres to the file system restrictions imposed on a tenant. This in contrast to the GBF-based file browser.

**ODM Attachments column**

An additional **ODM Attachments** column is added to the grid if these prerequisites are met:

- ODM is active, that is, **Object Data Management (ODM)** is selected in the **Document Management Parameters (ttaad0180m000)** session.
- **Show ODM Attachments Column** is selected in the **Tools Parameters (ttaad0100m000)** session.

The additional **ODM Attachments** column is added to the grid to indicate attachments are present for a row. You can view and access the attachments through a contextual application.

**Note:** Filtering and conditional formatting are not supported for the **ODM Attachments** column.

Filtering and conditional formatting are not supported for the **ODM Attachments** column.

**Persistent Gantt options**

The checked state of the **Show Completions** and **Show Relations** Gantt options is saved for the user when the session is closed. The same checked state is restored the next time the session is started.

**Search box of list details sessions – support filtering on descriptions of enumerates**

When you specify a pattern in the search box of a list details session, a filter is applied on the data. This filter ensures that only the entries that contain the pattern in their string attributes are displayed. This functionality has been extended. Now, entries that contain the pattern in the description of the enumerated values are also displayed.

# Known issues

**Bdbvalidate error reporting**

Sometimes, the bdbvalidate error report can show incorrect column information containing one or more high ASCII character errors. This will be fixed in the next release.

**SLM messages**

- `Couldn't read secu file` message

  During a fresh or update installation of the PMC Addon installable unit, the SLM product generates an error in the `log.oiex1288` file. The error is related to the da package. The issue is automatically solved when the environment is licensed.

  ```
  SLM Error while reading SLM bic secu file for da 106U_0_t00
  SLM returns: Couldn't read secu file
  ```
- FQHN message

  When installing SLM on a virtual machine in demo mode, this message may be displayed in the event viewer:

```
VM restrictions set on incoming connection from system
'::ffff:10.21.47.76'. IP could not be resolved to a FQHN or the resolved
 domain is not valid for this SLM Cluster.
```

The SLM server is installed on a virtual machine with a server name that does not meet the naming convention of a Fully Qualified Host name.

**Note:** The LN environment will not work anymore after the thirty days demo license.

- `SLM Warning Source(s) not installed` message

These SLM warnings posted in the `log.oiex1288` file are informational messages only:

```
SLM Warning Source(s) not installed, no license for SLM id 7055
SLM Warning Source(s) not installed, no license for SLM id 7026
SLM Warning Source(s) not installed, no license for SLM id 7135
```

# Chapter 5: Enterprise Server 10.5.2.1

This chapter describes the differences between Enterprise Server 10.5.2.1 and Enterprise Server 10.5.2, and the new functionality in Enterprise Server 10.5.2.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.5.2.1:

| Package | KB |
| --- | --- |
| TT | 1934671 |
| TL | 1930167 |
| DA | 1930168 |

**Last minute information**

For last minute information, see 1868980.

## Configuration

**Extended Company Parameter**

By setting the `extended_company_range` system resource the company number in the system can be extended from three to four digits. This resource can be set by changing the value in the `$BSE/lib/defaults/all` file. To make changing this resource simpler, the **Extended Companies** parameter has been added to the **Tools Parameters (ttaad0100m000)** session. The resource is set by saving the changed setting.

The parameter is not available in these cases:

- Companies with a number greater than 999 are present.
- Another resource then the one in the `$BSE/lib/defaults/all` file determines the extended company.

**SSO Permissions File (sso_permissions.xml)**

The **Convert Changes to Runtime session (ttams2200m000)** now also updates the SSO permissions file, `sso_permissions.xml`. Therefore, this file does not have to be updated manually anymore. It is part of the **System Data/User Data/Text Groups** option.

Notes:

- The location of the `sso_permissions.xml` file must be defined within the **Systems (ttaad0550m000)** session.
- The file must already exist, a fresh create is not supported.
- Data is only added. If not already present, the file is updated with the processed OS/SSO user combination.

# Customer Defined Fields

**Field References**

References at table field level are now also supported within Customer Defined Fields (CDF). These reference modes can be defined:

- Mandatory
- Mandatory unless empty

A reference message can be displayed if the defined reference does not exist. A **Delete Check** option is available to prevent parent records to be deleted if child records still refer to that parent.

# Extensibility

**Function command.super()**

The `command.super()` function can be called in the `before.command()` and `after.command()` hooks of the standard command or form command extension of the session:

- If the function is called from the `before.command()` hook, it executes the `before.choice` section of that command, if present.
- If the function is called from the `after.command()` hook, it executes the `after.choice` section of that command, if present.

If `command.super()` is not called, the `before.choice` and `after.choice` are executed as usual after the hook.

For more information on this function, see the *Infor LN Extensions Development Guide* .

# File Manager Workbench

The user interface of the **File Manager (ttfmafileman)** is upgraded to the LN UI Xi style. These aspects of the **File Manager**'s **About** dialog are also updated:

- The copyright text is updated to 2017.
- A build number and build date are added.

# Functions and features

For more information on the functions and features described below, see the *Infor ES Programmer's Guide*.

### File upload dialog with file type filter

The `client.upload.file.with.filter(…)` and `client.upload.files.with.filter(…)` functions are similar to the `client.upload.file(s)` functions but have an additional string argument. You can use this argument to specify a single mime type, or a list of comma-separated mime types, to filter files in the upload dialog.

**Note:** LN UI 12.0.4 or later is required.

### Hide workflow status values

You can use the `set.initial.enum.values.for.workflow.status.field()` function to hide one or more workflow status values from a session, such as the easy filter row. Developers can use the function to remove workflow status values, that are never used in a specific ION Workflow implementation, from the session.

### LN Time Picker Field

A new field type, Time Picker, is created. This is a time field without a date part, that you can use to specify start and stop times or a duration in hours. The value returned from the field is the number of seconds since midnight.

**Note:** LN UI 12.0.2 or later is required.

### Retrieve all Software Languages

You can use the `tt.languages()` function to retrieve all software languages with the description and, optionally, the ISO code. It is returned as an XML structure.

### Rich Text Editor

You can use the `set.multiline.text.in.html.mode(…)` function to define a multiline text field in HTML mode.

**Note:** LN UI 12.0.5 or later is required.

**Support Free Float and Total Float in Gantt Charts**

The `plcm.set.slack.for.activity()` function supports two slacks per activity by allowing it to be called twice.

**Note:**
* The first call sets the bottom slack line. The second call sets the top slack line.
* LN UI 12.0.5 or later is required.

# Multidata language

**Single-data-language-MLE support by feature**

The single-data-language-MLE feature is added to the **Features (ttaad1130m000)** session.

**Note:** Porting set 9.1c or later is required.

# Personalization

**Personalization Workbench - flexible form layout**

To enable customers to tailor sessions to their requirements, the **Personalization Workbench** (Personalize Form) provides commands to perform these actions:

* Add new tabs - Add Tab
* Add new groups - Add Group
* Change the number of columns on a tab – Groups in Row
* Change the position of a group – Next to other group
* Change the appearance of a group – Label, Text Color, Text Style
**Note:** LN UI 12.0.5 or later is required.

**Personalization Workbench - show label codes**

The **Actions** menu in the **Fields** pane in the **Personalization Workbench** contains the **Show Label Codes** command. The availability of this command depends on the LN user's user data template: the command is available if the **Show Label Codes in Form Personalization** check box in the template is selected. See the online help of the **User Data Template (ttams1110m000)** session.

**Note:** LN UI 12.0.5 or later is required.

**Improve personalization rollout process**

The **Manage Personalizations (ttadv9150m000)** session now available. This session simplifies the process to define and test personalizations of a session before copying these personalizations to other users and user roles.

**Overwrite existing user personalizations**

The **Copy to Other Personalization Level (ttadv9200s000)** session is extended with the **Overwrite User Personalizations** check box. If this check box is selected, the personalizations of the users that are linked to the **Copy To** level are deleted during the copy operation.

The **Overwrite User Personalizations** check box is only available for these **Copy To** levels:

- Role - the personalizations of the users that are linked to this UI role are deleted.
- DEM Role - only if Enhanced AMS is activated and **Support Export of DEM Roles to AMS** is enabled in the **AMS Parameters (ttams0100m000)** session. In this case the personalization of the users that are linked to the DEM role is deleted.
- Company - the personalization of the users that are linked to the company are deleted.

# Runtime change publishing

**Improved logging and tracing**

The log files written by the **Generate RT BOD Data (ttrcp1200m000)** and **Start RT Monitor (ttrcp1205m000)** sessions have been renamed:

- Log entries are written to `$BSE/log/ttrcp1200m000.log` and `$BSE/log/ttrcp1205m000.log` respectively.
- Trace entries are written to `$BSE/log/ttrcp1200m000.trace` and `$BSE/log/ttrcp1205m000.trace` respectively.

Both sessions have improved logging and tracing and provide better feedback about these matters:

- The actions and steps being performed
- Information about why certain data has been skipped during processing
- The start and end times of certain actions and steps
- The number of entities being processed

You can view the log files directly from these sessions through the **Show Log File** command. You can clear the log files through the **Clear Log File** command.

When the sessions have finished processing the data, a summary of the log results is displayed. The summary shows the number of errors and warnings that have been logged.

**Improved progress reporting**

The progress indicators of the **Generate RT BOD Data (ttrcp1200m000)** and **Start RT Monitor (ttrcp1205m000)** sessions provide better feedback to the end-user. The progress indicators show information about these matters:

- The action being performed
- The code of the object being processed, such as a session code
- Any sub actions, if applicable

# Chapter 6: Enterprise Server 10.5.2

This chapter describes the differences between Enterprise Server 10.5.2 and Enterprise Server 10.5.1.1, and the new functionality in Enterprise Server 10.5.2.

This table shows the Infor Xtreme KBs for Enterprise Server 10.5.2:

| Package | KB |
|---|---|
| TT | 1910626 |
| TL | 1910624 |
| DA | 1910623 |
| TA | 1844210 |

**Last minute information**

For last minute information, see 1868980.

# Business Flow - test framework

**User name on schedules and test set log**

To determine who is responsible for starting a particular run, the user name is added to these sessions:

- **Test Sets (tlrgt1130m000)**

  The **Last Started by** user is displayed from the last test set log.

- **Schedules (tlrgt1132m000)**

  The **Last Modified by** field shows the user who is responsible for the last change made to that schedule.

- **Test Set Log (tlrgt1160m000)**

  If the test set is started by the scheduler, the **Last Started by** field shows the user who is responsible for the last change made to that schedule. If the test set is not started by the scheduler, the **Last Started by** field shows the user who is responsible for changing the status of that test set to Started.

**Segmented Fields**

The handling of segmented fields has been improved.

# Business Interface Implementations - BOD/BDE

**Consistent handling of CustomerDataLocation for BDEs**

The Customer Data Location node is only visible in the response of a BDE if it has been specified as method argument in the Business Interface Definition. Before, it was always visible in the Show Response and not in the List Response, which was inconsistent.

For BODs, the behavior has not been changed.

**Note:** LN Studio 10.5.2 or later is required.

# Excel integration

**Import from Excel**

The file upload control is now integrated in the import session.

**Note:** LN UI 12.0.4 or later is required.

# Extensibility

**Custom index description**

A custom index description, that is defined in the Extension Modeler, is displayed in **General Table Maintenance/Information (ttaad4100/ttaad4500)**.

# Gantt charts

In Gantt charts the availability of activities and resources can be displayed as a background color for time periods. These functions have been added to define the availability and unavailability for the Gantt view and schedule view:

- `plcm.set.activity.unavailability()` to set the unavailability of an activity
- `plcm.set.resource.unavailability()` to set the unavailability of a resource

These callback-functions are called if the availability or unavailability within the scope of the view has changed:

- `plcm.get.activity.unavailability()` is called if the unavailability of an activity has changed.
- `plcm.get.resource.unavailability()` is called if the unavailability of a resource has changed.

The **Show Availability** toggle option in the **Views** menu is available if at least one of these two call-back functions has been implemented in the LN application. The default value, when starting the Gantt, can be set in `plcm.init`.

For more information on these functions, see the *Infor ES Programmer's Guide*.

**Note:**  LN UI 11.3.4 / 12.0.4 (Xi Style) or later is required.

# Multi data language

**Multi data language in BOD/BDE: support for queries on multi data language fields.**

From porting set 9.1c, the **Registered Tables with Multi Language Fields (ttadv4137m000)** session contains the **All Data Languages Always Available** option. If this option is switched off, multi-language table fields are queried in only one language. This is to improve performance. Multi language fields in BODs and BDEs are still published in all languages.

These adaptions are supported by the Enterprise Server 10.5.2 LN Studio BOD/BDE code generator. It is required to regenerate the BODs and BDEs that have fields defined as multi language fields, that is, attributes that have the `<languageID>` qualifier defined.

**Note:**
- Required when using Porting set 9.1c or later.
- LN Studio 10.5.2 or later is required.

# Personalization and configuration

**Copy conditional formatting and filters across users and roles**

The **Copy Filters and Formats (ttadv9293m000)** session is created to copy conditional formatting definitions and filters to other users and roles. This session is available as action in these sessions:

- The **Conditional Formatting (ttadv9502m000)** session in the session personalization menu

- The **Filters (ttadv9593m000)** session in the session filter menu

**Default values in personalization for print sessions and processing sessions**

To force the use of default field values to users and roles, to prevent mistakes of limit ranges, default values can be added to the personalization of print sessions and processing sessions. In the **Personalization Workbench** an admin user can specify the fields for which to apply the default value.

The applied default values in a personalization take precedence over LN application defaults and user defaults. Two options are added to the personalization menu of print sessions and processing sessions:

- **Save Defaults to Personalization** to add the field values as default values to the session's personalization
- **Clear Defaults from Personalization** to remove the default values from the session's personalization

**Improvements on Enum Domain Formatting session**

The **Enum Domain Formatting (ttgfd4525m000)** session contains an extra field: **Constant**. This field contains the constant value of the enumerate. You can sort on the constant value.

# User interface

**List-detail sessions**

In a list-detail session a navigation list is displayed next to the details for easy navigation without switching between overview and details.

To define the navigation list in the **Form Editor**:

- Add a navigation list group in the overview session.
- Fill the navigation list group with important and hidden fields.

When you start a synchronized dialog from an overview with a navigation list group, a list-detail session automatically starts. This list-detail session contains two panes:

- Navigation pane

  This is a list that is defined by the navigation list group of the overview.

- Details pane

  Shows the details that are defined by the synchronized dialog.

To start a list-detail session standalone, without an overview, use this function:

```
set.list.session(session.code)
```

This function defines the overview session, which runs invisibly in the background, that is used for the navigation pane of the list-detail session.

**Note:** LN Studio 10.5.1.0278 or later is required.

# User management

**Centralized user management through IFS**

LN supports centralized user management. If user management is centralized, IFS is appointed as the System of Record (SOR) for security users.

In standard cloud installations, in which multiple customers are hosted simultaneously, this is the prescribed configuration. In other installations, this is the recommended configuration.

The security user integration between IFS and LN is role-based: in IFS, you must assign one of three specific, predefined standard roles to a security user. This makes the user an LN user, and grants the user access to the LN application through Infor Ming.leTM.

These are the standard roles that you can assign to a security user in IFS:

- Infor-SystemAdministrator - This role is used for overall administrators and makes the user a super user in LN.
- LN-Administrator - This role is used for LN administrators and makes the user a super user in LN.
- LN-User - This role makes the user a normal user in LN. To enable the user to actually use the LN application, you must assign additional LN-specific roles.

For details about centralized user management through IFS, see the *Infor LN Integration Guide for IFS* .

# Functions and features

**Prevent clearing never applicable fields after parameter changes**

The `dal.skip.never.applicable.checks` function is extended with an optional boolean argument. If the argument is true, the field value of never applicable fields is not changed by the 4GL Engine if the value is not applicable.

**4GL logging: make it possible to specify a subfolder of $BSE/log for 4GL log files only**

Normally, all logs of the 4GL Engine are logged in `${BSE}/log`. If the `BSE_LOG_4GL_SUBDIR` resource is defined, these logs are logged in the `${BSE}/log/[BSE_LOG_4GL_SUBDIR]` subfolder.

# Miscellaneous

**Create Sequential Dump from Tables (ttaad4226m000)**

In the context of OCM workflow the set of exported tables should be complete:

- An object can span multiple tables.
- An object can be shared in multiple companies.

The bdbpre binary checks for completeness and does not export tables that are part of an incomplete table set. Now this type of error is also reported by the session.

**Report input fields**

A label can be assigned to a report input field. When reports are used to print data to Excel, the report input fields are used for the column descriptions, instead of displaying the field code. Now a label can be linked to the report input field. The label description is used for the column description.

**Export/Import Graphs session**

Through the **Export/Import Graphs (ttadv9130m100)** session users can export graph configurations to, or import graphs configurations from, the default additional file, `tcgenstandardgraphs.DEA`.

To regularly export or import graph configurations, this session can be added to a job.

# LN Studio

**Form Editor**

The **Form Editor** is now fully integrated with LN Studio. The **Session Editor** in LN Studio contains an extra tab, **Form Definition**. On this tab, you can view or edit the form of the session including its groups and field elements. The left side of the **Form Definition** tab shows a tree structure in which all groups and field elements are displayed. The right side shows the properties of the selected group or field. From the **Table Fields** view, you can insert table fields from the main table or reference tables. You can navigate to linked components as usual in LN Studio.

**Note:**
- To use the **Form Definition** tab, Enterprise Server 10.5.2 is required.
- You can only use this tab to customize forms for LN 10.5 or later. To customize forms for older LN versions, you must use the Infor LN Dynamic Form Editor. See the Dynamic Form Editor documentation.

**Application search**

Application search has been extended. You can double-click on a table field in the search result to open the corresponding session and select the field in the form definition.

# LN Connector for Web Services (C4WS)

Basic Authentication in HTTP headers can be used to pass LN credentials.

Client language and locale can be passed in HTTP headers.

# Chapter 7: Enterprise Server 10.5.1.1

This chapter describes the differences between Enterprise Server 10.5.1.1 and Enterprise Server 10.5.1, and the new functionality in Enterprise Server 10.5.1.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.5.1.1:

| Package | KB |
| --- | --- |
| TT | 1891737 |
| TL | 1893473 |
| DA | 1891739 |
| TM | 1844213 |

# Business Interface Implementations - BOD/BDE

**BOD extension**

For BOD extension scripts, a new hook, `process.inbound.user.area()`, is available to process the UserArea of an inbound BOD. Within this hook, calculated fields and unmapped fields can be updated.

Within the UserArea, more data types are supported by LN Tools. The supported data types, both inbound and outbound, include these types:

- `AmountType`
- `CodeType`
- `DateType`
- `DateTimeType`
- `HierarchyReferenceType`
- `IndicatorType`
- `IntegerNumericType`
- `MasterDataReferenceType`
- `NumericType`
- `QuantityType`

- `StringType`
- `TimeType`

The Extension Modeler generates these additional macros:

- Macros to easily get and set the properties for the new data types
- Macros to navigate through a received UserArea structure for inbound BODs

**Parallel BOD processing outbox - adoption of nowait option**

The performance for BOD Processing has improved. If a BOD is locked, no retry is performed, but the next BOD is processed.

To enable this nowait option, set the `PARALLEL_OUTBOX` environment variable: specify `PARALLEL_OUT BOX=<any-value>`. You can only use this functionality if the receiving party supports out of sequence BODs.

**Note:** Porting set 9.1b.01 or later is required.

# Excel integration

**Export to Excel performance improvements**

You may call the `publish.webpart.message()`, `prcm.notify()`, and `refresh.graph()` functions in the before or after section of the `mark.occur` command. If you do so, these functions are skipped, and no incontext messages are sent, during an export to Excel. In this way, the performance of the export to Excel is improved.

# Extensibility

**Extending forms with URL fields for widgets**

In the Extension Modeler a calculated field can now have a "URL Area" control type. The **URL Area** field shows the result of the call to the URL as set in the "calculate" hook of the field. The width and height of the URL Area are defined in the Extension Modeler. The **URL Area** Field is displayed within a group box. The label of the group box is the label or description that is specified for the field in the Extension Modeler.

**Field hooks for session extensions**

You can use these field hooks for CDF fields:

- `field.get.zoom.session()`

- `field.get.zoom.return.field()`
- `field.selection.filter()`
- `field.before.zoom()`
- `field.after.zoom()`

You can use these field hooks for print or process sessions:

- `field.when.field.changes()`
- `field.check.input()`

**Adding custom indices for table extensions**

You can add additional indices to the table extension. In the Extension Modeler, you can define these indices and select table fields or customer defined fields for these custom indices. The sequence number of these custom indices starts with 99 and is numbered down for the next custom indices.

**Note:** Porting set 9.1b.01 or later is required.

**Support for array fields**

You can define Customer Defined Fields as Array Fields with multiple elements. All array elements of Customer Defined Array Fields are automatically added when you run an overview or details session. Each element of a Customer Defined Array Field is added with the description or label of the Customer Defined Field.

**Note:** Porting set 9.1b.01 or later is required.

**Support for text fields**

You can create Customer Defined Fields of type Text. All Customer Defined text fields are automatically added when you run a session.

In overview sessions, these fields are displayed in the menu.

In details sessions, these fields are displayed in the menu. They are also displayed as a multi-line edit box.

# Gantt charts

**Slack and markers**

You can use the `plcm.set.slack.for.activity()` and `plcm.add.activity.marker()` functions for these purposes:

- To set the slack for an activity.
- To set one or more markers for an activity, such as pin, star, bookmark, or clock.

See the *Infor ES Programmer's Guide*. These functions are only supported in LN UI Xi.

**Note:** LN UI Xi 12.0.3 or later is required.

# Table Sharing Modeler

**Automatically applying default table sharing during Feature Pack upgrades**

If you upgrade companies to another package combination in which new tables have been introduced, the table sharing is upgraded as follows:

• The setup in the Table Sharing Modeler is made consistent with the actual table sharing.
• New tables with a mandatory reference to shared tables are shared in the same way as the existing tables.
• The table sharing runtime is recreated.

This applies to both cloud and on-premises environments.

# User Interface

**Time / duration field**

A new field type for "Time/Duration" is introduced. If the Appearance "Duration" is selected in the form definition of LN Studio, the field is displayed as duration field with days/hours/minutes/sec.

Seconds are optional. To enable seconds, set the display format of the duration field. In the database, the field value is stored in seconds.

**Note:** LN UI Xi 12.0.3 or later is required.

**Alert icon filtering**

You can define conditional formatting conditions with row icons on an overview session.

If you do so, a filter possibility on the row icons is displayed in the header of the grid of the overview session.

If you select an icon in the alert filter control, only those records are displayed which satisfy the conditions of the selected row (alert) icon.

The row alert filter control shows all icons for which conditions have been defined for the session, regardless of the records available.

The alert icon is displayed for each row that meets the conditions of a row (alert) icon.

An alert icon is added to the filter possibility if all conditions can be translated into a valid SQL query.

If a current filter is based on a row (alert) icon filter, you cannot save the filter.

**Note:** LN UI Xi 12.0.3 or later is required.

# User management

### Remote user data protocol selection

The **Remote User Data (ttaad2501m000)** session now contains fields to specify the login protocol and port number.

Protocol options:

- **Default**

  Protocol is determined by the porting set.

- **BaanLogin**
- **Rexec**

  Not recommended, less secure; fixed port number 512

# Functions and features

### Bdbreconfig analysis report

Index changes are now reported more accurately.

**Note:** Porting set 9.1b.01 or later is required.

### Bdbreconfig performance enhancement

Bdbreconfig on SQL Server now extends VARCHAR columns without dropping indices that contain the column.

**Note:** Porting set 9.1b.01 or later is required.

### Function tt.user.data() to support IFS User Information

The tt.user.data() function returns information for the UD_SECURITY_USER property. The information that is returned depends on the IFS information that is stored, for a particular user, in the User Data (ttaad200) table:

- If available, **IFS USER ID** (`ttaad200.ifsi`) is returned.
- If `ttaad200.ifsi` is not filled, **Identity (UUID)** (`ttaad200.zd_idnt`) is returned.
- If `ttaad200.zd_idnt` is not filled, **SSO User** (`ttaad200.zb_ssou`) is returned.
- If `ttaad200.zb_ssou` is not filled, **User** (`ttaad200.user`) is returned.

**Support for custom indices in General Table Maintenance (ttaad4100/ttaad4500)**

Custom indices from extensions are supported now.

**Support for unzip in file manager**

The file manager has a new option to decompress zip files. File extensions, of extracted files, that are not allowed in a cloud configuration are replaced with other extensions.

# Chapter 8: Enterprise Server 10.5.1

This chapter describes the differences between Enterprise Server 10.5.1 and Enterprise Server 10.5, and the new functionality in Enterprise Server 10.5.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.5.1:

| Package | KB |
| --- | --- |
| TT | 1864452 |
| TL | 1860730 |

This table shows the Infor Xtreme KBs of the related components for Enterprise Server 10.5.1:

| Component | Generic KB |
| --- | --- |
| Porting set | 22923520 |
| LN UI (UX) | 1460896 |
| LN UI (Xi) | 1834377 |
| LN Studio | 1561993 |
| Infor ES Connector for Web Services | 22881149 |
| Infor Cloud Printing | 1629931 |

## Business Flow Test Framework (bflow)

### Add fields to test set

Three fields are added to test set data:

- **Company Set**
- **Test Set Type**
- **Test Set Owner**

**Test set scheduling**

A test set can now be part of a group. Within a group a test set gets a sequence number. When the group is executed the test sets are executed according to this sequence number. In the Bflow parameters an extra field is added to limit the number of concurrent test sets.

# Business Interface Implementations - BOD/BDE

**Support multi-language BODs – MLE fields**

You can mark an attribute as a translatable field by adding the 'languageID' qualifier in the Business Interface Definition. If an attribute is marked as a translatable field, the field is processed as a multi-language field on multi-language environments. This works for both outbound and inbound BODs, reading and updating all translations for the field. In the UserArea, MLE fields are not yet supported.

**Note:** LN Studio 10.5.1 or later is required.

**BDE for LN web services**

A new BDE 'WebService' has been created with the 'Show' method that shows all parameters for the Show method for a BDE.

# Default printer handling LN UI

In contrary to the Java-based Web UI, print sessions in LN UI do not show the locally installed printers on the **Device** tab. Therefore, users can also not select their default client printers. HTML5 security prevents direct access to client-side printers. With default printer handling LN UI administrators can now perform these actions:

- Register client printers within Tools through the new **Client Printers (ttaad3109m000)** session.
- Link a default client printer to each user by the **User Settings (ttaad2105m000)** session.

A new device of type Windows Server Printer must be created that serves as a placeholder for all the registered client printers within LN. This placeholder device is identified by the `$default_print er_queue` device queue.

At runtime within the select device dialog box an end user selects the Windows Server Printer placeholder device. This device, if present, is filled with the default client printer as linked to the user. If no default is defined or a change is required, end users can set the new default. End users can also select a different client printer from the registered list or even specify a printer that is not already registered.

To offer an ever more direct access to a user's default client printer, the standard **Device** tab is extended with the **Default Printer** option. If selected and a default client printer is linked to the user, the output is directly sent to this printer.

# Enhanced Authorization Management System (AMS)

With Enhanced AMS a new set of sessions is introduced, which improves these processes:

* Defining roles
* Modeling of session and database authorizations
* Assigning roles to users

You must activate Enhanced AMS in the **AMS Parameters (ttams0100m000)** session. Activating Enhanced AMS migrates all existing AMS Role Data with all authorizations to the new Enhanced AMS tables. When activated, the Authorization Management System menu shows the new Enhanced AMS sessions.

With Enhanced AMS also exporting DEM Roles to AMS is supported. If this option is enabled in the **AMS Parameters (ttams0100m000)** session, you can generate AMS Roles based on modeled DEM Authorizations. To generate the AMS roles, use the new **tgbrg9298m100** DEM session. You can then use AMS to further fine-tune authorizations and role assignments. At runtime DEM and AMS work together.

For further details about the usage and configuration, see the Administration Guide.

# Excel integration

**Import full table in type 3 sessions**

Import from Excel has a new option: **Import only in this View**. If this option is cleared, you can import records into other views.

**Option to create separate columns for date and time**

For export to Excel an option to use "Separate Date and Time Fields" is added. If this option is selected, each UTC Date/Time field is split into separate Date and Time columns in the Excel sheet.

# Extensibility

**Customer defined field domain enhancements**

For customer defined fields the domain setup has been extended. For each field you can now either use an existing domain, or specify the number of digits and the display format.

**Commands in session extension**

The session extension functionality supports extensions on commands. Standard commands have new hooks that are called before or after the command, to turn the command off or to conditionally disable the command. For existing form commands, the same hooks are available and the description can be changed. New form commands can be added to a session. These commands have the same set of hooks, and most properties, that are normally available for form commands; for example, Command Type, Command Availability, and the Shortcut Key.

**Menu extension**

The menu extension functionality supports extensions on menus. Menu extensions are used to hide standard menu items, change descriptions, and add menu items.

**Extension hooks for standard fields**

The table extension now supports hooks for standard fields. You can define these hooks in the table extension:

- Is Derived
- Is Mandatory
- Is Read-only
- Make Valid
- Is Valid
- Update

The result of these hooks is combined with the result of the standard hooks. You can only make validation stricter.

**Note:** Porting set 9.1b or later is required.

**Introduce 3GL wrappers for untrusted bshell functions**

The functions with an optional number of parameters are now also supported.

**Deliver extensions**

Extensions can be delivered to other environments with Product Maintenance and Control (PMC).

**Debug Workbench**

A new session, **Debug Workbench (ttidedebugger)**, is available to debug 4GL scripts without using LN Studio. This debug workbench is started from the **Debug and Profile 4GL (ttadv1123m000)** session.

**Note:**  LN UI 12.0.2 or later is required.

# Graph Configurations

**Supporting multiple versions**

To support multiple versions for in-session graphs, graph configurations are stored and retrieved by package combination. In other words: each package combination has a separate set of graph configurations.

**Note:** LN application 10.5.1 or later is required.

**Upgrading to a new FP**

To support upgrading to a new Feature Pack (FP), graph configurations can be exported. To perform this export, run the **Export to Additional File** form command in the **Personalize Graphs on Sessions (ttadv9130m100)** session. This command exports all graph configurations of the current package combination to the `tcgenstandardgraphs.DEA` additional file.

To import the graph configurations that are stored in the `tcgenstandardgraphs.DEA` additional file, use the standard import tool for configuration data: **Import Configuration Data (ttaad7202m000)**.

**Note:** LN application 10.5.1 or later is required.

# Object Configuration Management/Workflow improvements

**Support Filtering/Conditional Formatting on Workflow Status Field**

A user can define an easy filter, advanced filter, and a conditional formatting rule on the Workflow Status Field. In a filter or a rule you can use only one of these values:

- A standard value, that is, Draft, Draft (Revision), Pending, Recall Requested, Rejected, Approval Received, Approved, Not Started, Not Applicable
- An entry that is defined on the **Workflow Information Fields** tab in the **Object Types (ttocm0102m000)** session

**Changing table sharing when objects are checked out**

In previous versions, the table sharing setup is blocked if it involves a company that contains checked-out objects.

Now, the table sharing setup is only blocked if there are conflicting checked-out objects. That is, the setup involves tables that are shared differently between runtime and development time table sharing. The development time table sharing is based on the content of the ttaad420 table.

For new tables and new companies there are no conflicts for checked-out objects.

**Exporting and importing models**

To support easy transfer of Object Configuration Management (OCM) models from one environment to another, the **Models (ttocm0101m000)** session is extended with two new features:

- Export Model to XML
- Import Model from XML

Through these features you can export an OCM model to an XML file, and import such an XML file at another environment.

**Comparing models**

To find the differences between two models, such as a customized model and the standard model, the **Models (ttocm0101m000)** session is extended. The session now contains the Compare Models feature, that you can use to compare two OCM models. You can specify object types and root tables of the models to compare.

Finally, you can choose to only print the differences instead of the complete outcome.

**Linking multiple package combinations to an OCM deployment**

You can now have multiple 'OCM-enabled' package combinations that use the same company or set of companies. To support this, you can link package combinations to an OCM deployment. If you link a package combination to an OCM deployment, the linked package combination adopts the OCM configuration of the deployment's package combination.

You can only link a package combination to a deployment if, and only if, these conditions are met:

- The package combination's runtime data dictionary is the same as the runtime data dictionary of the deployment's package combination.
- The package combination's set of packages is the same as the set of packages of the deployment's package combination.
- The package combination has no companies attached to it.
- The package combination is not the deployment's package combination.

**Allowed actions in case of checked-out objects**

These actions are allowed now in case of checked-out objects:

- Change table sharing
- Add companies
- Add Customer Defined Fields (CDF)

# Table Sharing Modeler

**Taking multi company table references into account**

In the table references, no hard table reference is created for a table field if it has a reference company field defined.

# User Interface

**Zoom option after drop-down listbox**

If this has been defined in the Dynamic Form Editor, the zoom option is displayed for fields with these Appearance settings:

- **Drop-down List box**
- **Drop-down Combo-box**

In previous versions the zoom option was ignored for these types of fields.

**Note:** LN application 10.5 or later is required.

**Company coloring**

In the **Companies (ttaad1100m000)** session, you can specify the colors to use for different companies. These colors are also displayed in the **Change Company (ttdsk2007m000)** session.

**Note:** LN UI 12.0.2 or later is required.

**Saving column width for Gantt charts**

In LN/Xi UI the width of the columns is saved as a personalization upon closing of the Gantt session. Next time the session starts, the Gantt session shows the columns using the personalized width.

The **Reset Columns** option in the **Views** menu resets the width of the columns to the default width.

**Note:** LN UI 12.0.2 or later is required.

**Setting and clearing the check mark for a command in a Gantt/Schedule menu**

A new argument of type boolean, named `checked.command`, is added to the `plcm.add.command()` function. Use this argument to set or clear the check mark in front of a command.

**No Selection Column Grid**

In the `before.program` section, you can use the new `hide.selection.column()` function to hide the selection column on the session in LN/Xi UI. Use this feature for sessions in which the selection column is of no use, or could be confusing.

The **Change Company (ttdsk2007m000)** and **Select Workflow Deployment URLs (ttaad7141m000)** sessions already have this feature implemented.

**Note:** LN UI 11.3.1 or later is required.

# UTC40 mode

Allow the UTC time datatype to store UTC times beyond 2038. The functionality is available, but customers must enable it themselves.

This functionality is released with Enterprise Server 10.5.1, but support is delivered from 10.5 onwards.

**Note:** Porting set 9.1b or later is required.

On December 9th, Infor Xtreme KB 1824355 will be published and made available for customers. See this KB for last minute release information and information on how to implement the UTC40 mode functionality.

# Functions and features

### Function disable/enable.extension()

Two new functions have been created: `disable.table.extension()` and `enable.table.extension().`

These functions are used by developers to block or allow the execution of extension hooks. These functions are exactly the same as the `disable.ue.dll()` and `enable.ue.dll()` functions.

### Function copy.image.to.company()

You can use the new `copy.image.to.company` function to include images in archived data.

### Function is.view.field()

The `is.view.field` function now also supports sessions with a personalized view.

### Function change.satellite.label()

You can use the new `change.satellite.label` function to change the text that is displayed on the tab of a satellite session. You can use this function, for example, when the same session is used in a different context.

**Function set.dynamic.synchronized.dialog()**

You can use the new `set.dynamic.synchronized.dialog` function to enable the use of multiple synchronized dialog sessions dependent on the selected record. You can also use the function to synchronize with a session on a child table.

**Function db.record.changed()**

The `db.record.changed` function has been extended with an optional argument size. With this option, you can check the record buffer without comparing the technical data in the record buffer, such as company and locking.

**Function tt.cdf()**

The new `tt.cdf` function returns information about a Customer Defined Field. The returned information shows, for example, whether the field is active or the field is only for internal use.

**Feature - Logging & Tracing**

The naming of path and file are placed in one function.

To configure that the "`.log`" or "`.xml`" extension is added to all logging of the "tt" and "tl" packages, add the `use_log_extension:1` resource to `bse/lib/defaults/all`.

**Feature - Show information SQL parse error**

Detailed information about the syntax error of the standard query of a session is displayed.

**Note:** LN application 10.4 or later is required.

# Miscellaneous

**Selecting devices when process started from ION**

When an LN process is started from ION, this process is running in background. When a device must be selected, it uses the default device instead of starting the **Select Device** session to ask the user for the device.

**Propagating client settings**

To improve the integration with Infor Ming.le, the **Use Client Language** field has been added to the **User Data (ttaad2500m000)** session. The **Use Client Timezone** field has been added to the **User Data Template (ttams1110m000)** session. If these options are enabled, LN uses the language and timezone as defined for the user in Infor Ming.le, as opposed to those defined in LN.

**Note:** Porting set 9.1b or later and LN UI 11.3.1 or later are required.

**Performance Easy Filtering**

The performance of easy filtering has improved.

**Performance bdbreconfig**

Optimization for dictionary changes that enlarge strings domains. If possible, the action is executed in the database itself without export and import.

**Tracing to files on Windows**

To improve the tracing to files on Windows, buffering is applied. Therefore, a complete message, all that belongs to the same message, is written to the file at the same time.

**Other enhancements**

Improved log messages for error 506/512 (ENOTABLE/EDDCORRUPT). More information is stored in the log message. Therefore it is easier to find the problem or problem record. To enable this extra information, you must set the `log_error_506` resource.

When a UI-Less bshell tries to prompt something to the UI, this generates a fatal error and a 3GL stack trace. Therefore, it is easier to find the problem for this issue.

# Chapter 9: Enterprise Server 10.5

This chapter describes the differences between Enterprise Server 10.5 and Enterprise Server 10.4.2, and the new functionality in Enterprise Server 10.5.

**Note:** For details about functions and hooks mentioned in this chapter, see the *Infor ES Programmer's Guide*.

### Business process validation (BFlow)

Business Flow (BFlow) is a business process validation tool for LN. BFlow is intended to verify that end-to-end business logic functions as expected.

LN consists of sessions that implement the business logic. An LN user uses these sessions to perform different steps of a business process.

To replicate these steps in BFlow, the user input must be translated into specific actions that are collected in scripts. These scripts can be executed independently or may be combined to create more complex test scenarios, that is, a hierarchy. This way the steps of the user can be reproduced.

BFlow is intended to implement higher level, more functional, test scenarios from a user's perspective. BFlow impersonates the UI, that is, it replaces the regular UI.

For details, see the LN Studio documentation on BFlow.

### Extensibility

This feature can add functionality to a standard product, without conflicts with the standard functionality during normal operations and during upgrades of the standard product.

The Customer Defined Field (CDF) concept has been improved. This reduces the requirement for customizations. Extra fields and field hooks can be added to existing tables, forms, reports, and BODs without conflicts with the standard software. Customer requirements can be solved as extensions to the product, instead of customization of the product.

### Extensions - User exits and fields hooks

These hooks are added for user exit scripts:

- `ue.before.save.object`
- `ue.after.save.object`
- `ue.before.destroy.object`
- `ue.after.destroy.object`

**Extensions - CDFs from secondary table**

Customer Defined Fields defined on a table that is used as secondary table are now treated in the same way as CDFs on the main table. That is, they are input fields that are automatically displayed on overview and detail sessions.

**Extensions - Trusted concept in Programmer's Guide**

The 4GL functions in the *Infor ES Programmer's Guide* have been classified as either "trusted" or "untrusted". For the untrusted functions, it is documented within the "context" section of the function documentation.

For details about trusted and not trusted objects, see the "Managed Execution" section in the *Infor ES Programmer's Guide*.

**Workflow (OCM) - Release blocked objects**

In the **Checked-out Objects (ttocm9599m000)** session, pending objects may become completely blocked, if ION does not return a workflow ID. For this situation the **Approve Recall** form command is introduced. This form command moves pending Workflow objects to the `Recall Requested` status.

**Personalization workbench and new forms**

A new session, **Personalization Workbench (ttstppers)**, is available to personalize form tabs, field groups, fields, and grid columns in detail sessions and overview sessions. This workbench replaces the existing **Personalize Form** session.

**Note:** LN application 10.5 or later is required.

**Personalize graphs on session**

Graphs can be defined for a session without extensive code changes in the **Personalize Graphs on Sessions (ttadv9130m100)** session. This session also allows customers to add their own graphs, change existing graphs, and define the default graph to be displayed in the session.

Application developers can use these two functions to optimize the adoption of Graphs on Sessions:

- `is.graph.present()`

  This function checks whether a graph is available for a session. Use this function to determine whether the additional calculations for a graph must be performed.

- `refresh.graph()`

  This function forces a refresh of the graph fields on a session.

The **Export Configuration Data (ttaad7201m000)** and **Import Configuration Data (ttaad7202m000)** sessions support the export and import of graph configurations.

**Note:** LN application 10.5 or later is required.

**Translatability of personalizations**

The personalized descriptions of toolbar buttons, views, and graphs can be specified in multiple languages. The labels for these descriptions are created in the "Extensions" package (tx).

**Conditional formatting improvements**

The conditional formatting now supports multiple formats for a single field in one setup. The style options are extended with more alert icons and a round style for background coloring or badges. A preview is offered for the selected style.

**Improved column filtering**

The behavior of the standard query has been changed to support additional column filtering for:

* Duplicate references of the main table.
* Filtering on Customer Defined Fields using the expression and CDF field info.

Application developers can enable column filtering for application fields using a field query extension. These functions are available: `query.extend.fld.select()`, `query.extend.fld.from()`, and `query.extend.fld.where()`.

**Note:** LN application 10.4 or later is required.

**Download WSDL file**

In the **Business Objects (ttadv7500m000)** session, the option to download a WSDL for a BDE has been added.

**Add action buttons to messages**

Application developers can use the `add.message.button()` function to add buttons to messages and questions. The buttons can start a session or execute a function to perform corrective actions related to the error message.

The `add.message.button()` function is extended with an authorization group and a related session for proper authorization of the message button.

**New function set.initial.enum.array.for.field()**

This function is similar to `set.initial.enum.values.for.field()` but accepts an array of values.

**New function spool.restore.variables()**

This function sets the predefined spool variables to the value they had when the given report or spooler was opened.

**New function disable.personalize.view()**

Application developers can use the `disable.personalize.view()` function to disable the personalize view option for a session. Use this function for sessions where the view should not be changed or where the personalization of views does not work properly.

**Tree View - option to open or collapse a level in the tree**

Application developers can add an option to set the opening of a tree to a certain level in a GBF Tree View. For example, if the level has been set to **2** and Open Level is applied, the tree is opened two levels deep. Deeper opened nodes are collapsed.

These functions are available to facilitate this:

*   long `gbf.set.view.depth()`

    Sets the current open depth.

*   long `gbf.get.view.depth()`

    Gets the current open depth.

**Inter-company table references**

In the **Table Definitions (ttadv4520m000)** session, hard references can be defined as inter-company references from a Company Field to other tables.

The fields of the referenced table on the form are read in the company of the Company Field value. Runtime input checks and auto-completion are also performed in that company.

**Easy Unicode migration**

The Unicode character set is the international standard for multi-language support by providing a unique code for each character, regardless of the language. Single-byte and multibyte character sets, also called locales, support only a small set of languages. Unicode, on the other hand, takes away this limitation and you can have for example English, Russian, and Chinese within one LN environment.

The Unicode character set has been supported for several years now within LN, but for the 10.5 release the implemented migration process has been optimized by making it faster and easier.

For details, see the *Infor Enterprise Server Unicode Migration Guide*.

**Conversion UTC maximum date values**

The **UTC40 Conversion (ttcor0210m000)** session is available to convert the old maximum value of date fields to the new maximum date value on UTC40-enabled environments. The conversion is performed for date fields in the User Defaults (ttadv990) and Job Input Variables (ttaad503) tables.

**Table row versioning**

The runtime DD can now have an attribute `:ROW_VERSIONING:1`, so that row versioning can be enabled per table. To enable row versioning, use the **Table Row Versioning Definitions (ttadv4139m000)** session.

Use a row version column, named rcd_vers, for a table to optimize delayed locking. This is only supported from LN 10.5 and later.

For details, see these guides:

- *Infor Enterprise Server - Technical Reference Guide for Microsoft SQL Server Database Driver*
- *Infor Enterprise Server - Technical Reference Guide for Oracle Database Driver*
- *Infor Enterprise Server - Technical Reference Guide for DB2 Database Driver*
- *Infor Enterprise Server - Technical Reference Guide for EnterpriseDB Driver*

**ODM Attachments column**

An additional **ODM Attachments** column is added to the grid if these prerequisites are met:

- ODM is active, that is, **Object Data Management (ODM)** is selected in the **Document Management Parameters (ttaad0180m000)** session.
- **Show ODM Attachments Column** is selected in the **Tools Parameters (ttaad0100m000)** session.

The additional **ODM Attachments** column is added to the grid to indicate attachments are present for a row. You can view and access the attachments through a contextual application.

**Note:** Filtering and conditional formatting are not supported for the **ODM Attachments** column.

Filtering and conditional formatting are not supported for the **ODM Attachments** column.

# Chapter 10: Enterprise Server 10.4.2

This chapter describes the differences between Enterprise Server 10.4.2 and Enterprise Server 10.4.1.1, and the new functionality in Enterprise Server 10.4.2.

This table shows the Infor Xtreme KBs for Enterprise Server 10.4.2:

| Package | KB |
| --- | --- |
| TT | 1670720 |
| | 1672819 |
| TL | 1670725 |
| DA | 1672395 |
| NT | 1672390 |
| TA | 1672370 |

**Cloud Printing Service**

The Infor Cloud Printing Service is a Windows service that periodically makes contact to Cloud-based Infor software and retrieves print requests that are waiting to be printed on a local printer. You can now register one or more shared folders in the configuration of the Cloud Printing Service. New LN functions are available to store files as queued items that are published to one of the file shares when the service is running.

For details about the usage and configuration of the Cloud Printing Service, see the *Infor Cloud Printing Service Administration Guide*.

**Connector for Web Services**

You can now use the thread queuing mechanism of JCA. Use the **Add/Modify ERP Server** administration page to configure the **Max threads** property for an LN server. This property indicates the maximum number of requests that can be queued, waiting for a physical connection to become available. The default value, 0, means that no queuing is used. A negative value, -1, indicates that there is no limit to the number of requests that can be queued.

This property is typically used in combination with **Max references** set to 0. This prevents multiple requests from being processed concurrently in the same bshell.

**Document Output Management**

In Document Output Management (DOM) you can now send addendum reports as attachments together with the main report in one distribution. For example, you can print the Project Contract Acknowledgment report together with the Installments as possible addendum. For more information, see the *Infor LN Document Output Management User Guide*.

**Supporting more than 20 customer defined fields per table**

Customers can now create more than 20 customer defined fields per table.

If there are more than 12 customer defined fields to be displayed on the **Configurable Fields** tab of a details session, these fields are spread over three columns.

**Advanced filtering – support OR in condition**

In the **Filters (ttadv9593m000)** session you can now use the OR operator in conditions. The brackets are set automatically by the session. The "Or" search operator has priority in a filter, so you can specify which fields from an enumeration apply.

The OR operator is only allowed if this has been configured in the **Tools Parameters (ttaad0100m000)** session. Enabling the OR operator may adversely affect the performance. If a filter with an OR operator is applied, it may take more time before the data is displayed on the screen.

**Default string filter operator**

For Easy Filtering, the default operator for string fields is `Starts With`. This default is configurable now and can be changed to `Contains`.

You can change the default operator in these ways:

- System-wide, in the **Tools Parameters (ttaad0100m000)** session
- Through session personalization

**Inbound out-of-sync Sync BOD messages must be skipped**

The order in which ION-mediated BOD messages are received by an application is not necessarily the same as the order in which the sending application published the BODs.

Therefore, for the same BOD document, the latest Variation ID is stored. If a BOD with a lower or equal Variation ID arrives, that BOD is not processed.

Also, a cleanup mechanism has been built, to prevent a large number of rows in the Processed Variation IDs table.

**Support copy to clipboard from LN UI**

From LN UI version 11.2.4 the copy to clipboard functionality is enabled for grids, like it was in Web UI. Because of browser limitations, you can copy 1000 rows at most. To copy more rows, you can use the Export to Excel functionality instead.

**Support for fields of type Color Picker**

The color picker is now supported by Tools, and implemented for enum domain formatting and conditional formatting.

For development, a new version of the Dynamic Form Editor (DFE) is required. The minimal required version is 10.4.0.16.

**Required changes for Enterprise DB**

A new function, rdi.is.application.column, is added in the standard library. Also, changes were made in handling of record buffers to support row versioning required by Enterprise DB.

**Multiple views for same index**

Multiple views for the same index allow the user to create a customized view on an existing index. The standard indices delivered with the session have a fixed number of view fields.

This option makes it possible to create a new view on an existing index with another number of view fields.

**CDF list constants**

The constant name defined for a customer defined field related list, as registered in the **List Constants (ttadv4593m000)** session, is now visible and editable.

**Other format for HTML5 workbench deployments**

The **Workbench Parameters (ttaad7131m000)** session now contains a check box to select which separator is used for the workbench deployment. By default, the underscore ("_") is selected. If you clear the check box, a hyphen ("-") is used. If you change the separator, you must redeploy all workbenches to actualize the changes.

**Support for Windows 10**

These client programs can now run on Windows 10:

* Dynamic Form Editor (DFE)
* Office Integration
* DEM modeler for LN 10.3 and earlier versions

**Active Users**

The **Active Users (ttaad2560m000)** session is now available. You can use this session to monitor logged in users on one or more nodes or hosts. The session shows the contents of the Active Users (ttaad260) table and refreshes every five seconds. This table is updated regularly based on information stored, by the porting set, in the $BSE/proc directory. For each active user, the session shows this information:

* Login time

- User id
- Bhell PID
- User Name
- SSO User
- User Type (Super user or Normal user)
- Status

**Printing bar codes in PDF documents**

In LN UI most of the printing, including preview, is done using a PDF format. You can now also print bar codes in a PDF document. To work with bar codes, these components are required:

- Porting set 9.0c.01 or later
- LN UI 11.2.4 or later

**Note:** The field for creating the bar code in customizations must be at least 32 bytes longer than the data that is printed. This length is required to store the extra data that is required for the coding of the bar code.

# Chapter 11: Enterprise Server 10.4.1.1

This chapter describes the differences between Enterprise Server 10.4.1.1 and Enterprise Server 10.4.1, and the new functionality in Enterprise Server 10.4.1.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.4.1.1:

| Package | KB |
| --- | --- |
| TT | 1649636 |
| TL | 1649654 |
| DA | 1649673 |
| NT | 1649741 |

**Document Output Management can add extra attachment before sending the e-mail**

Before sending an e-mail through Document Output Management, users can add extra attachments to the e-mail. Users can select different types of files, such as pictures or documents, from their local system and add them to the e-mail.

**Logging into Infor Document Management using certificate instead of username and password**

In the previous version of Enterprise Server users could connect to Infor Document Management (IDM) using a username and a password. From this version, users can also connect using a client certificate that is generated by Infor ION Grid.

**Support of Access Control Lists (ACL) of Infor Document Management (IDM) added to Document Output Management (DOM)**

In Document Hub, Access Control Lists (ACL) are imported from IDM. If applicable, an additional attribute called `AccessControlList` is added to the attribute list of the document type. You can use this attribute to set the ACL during document upload.

**Include reference counters (bdbpre/bdbpost)**

Bdbpre and bdbpost now have a -F option to preserve the values of the reference count columns. If you export a complete data set with the -F option, you can import that set with the -F option. In that case all reference counters are preserved. You do not have to run a separate time-consuming 'repair reference counters' process.

This new functionality is also available through the new **Include reference counters** option in these sessions:

- **Create sequential dump from table (ttaad4226m000)**
- **Create table from sequential dump (ttaad4227m000)**
- **Convert/recover tables (ttaad4228m000)**

Porting set 9.0 b or later is required.

### Alignment of graphs on form

If a field of type `Graph` has been defined in the form definition, groups that are positioned next to each other can be nested two levels deep. In these groups, you can define sub groups. You can position these sub groups next to each other or below each other. By using these alignment features, you can ensure that both, the graph and other parts of the form, are displayed in a neat way.

DFE 10.4.0.15 or later is required.

### Menu entries as text

In the **Personalize Toolbar (ttadv9220m100)** session, you can add form commands as text to the toolbar. In previous versions, you first had to attach an icon to the form command to make the command visible on the toolbar. This is not required anymore. If no icon is attached to the form command, the command is displayed as text in the toolbar.

### Indicator check box type

In a session's **Print** menu, the default print session is now indicated by a round indicator. In previous versions, the default print session was indicated by a check mark.

### Show company description for logistic or financial company number

In some sessions, the logistic or financial company number is displayed at the bottom of the session window. If you hover the mouse pointer over the financial or logistic company number, the corresponding company description is displayed. In previous versions, only the company number was displayed for logistic and financial companies.

### Conditional coloring

With conditional formatting you can define coloring for all fields in a session. Previously, coloring was only possible for table fields. Now, you can define coloring for form fields that are not linked to a table, customer defined fields, and referenced fields.

### Dynamic table pointer to prevent compilation errors

In LN Studio, the generated code for BOD and BDE now uses dynamic table pointers instead of static pointers. This prevents compilation errors for versions in which the table does not exist.

**Change the visibility and position of satellite tabs**

Satellite sessions in MMT sessions can be defined as initially hidden. If a satellite session is initially hidden, it is not displayed as a satellite tab when a user starts the MMT session. In the new **Personalize Satellite Tabs** session, users can now hide or unhide satellite tabs and change the position of satellite tabs. Users can start this session from the **Personalize** menu in MMT sessions.

**Filter menu**

Previously, you could access the **Filter** menu of a session only through the Filter icon. Now you can also open the **Filter** menu through the **Views** menu.

# Chapter 12: Enterprise Server 10.4.1

This chapter describes the differences between Enterprise Server 10.4.1 and Enterprise Server 10.4.0.1, and the new functionality in Enterprise Server 10.4.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.4.1:

| Package | KB |
|---------|----|
| TT | 1625771 |
| TL | 1625816 |
| TA | 1625840 |
| TM | 1625846 |

**File Manager workbench**

You can use the **File Manager (ttfmafileman)** workbench to browse and manage files and folders on the file system in the BSE where LN is installed. Among other things, you can upload and download files from and to the client environment.

Basic access to the **File Manager** can be arranged using regular authorization management through the Tools AMS module.

If you are a super user, you can access all files and folders in the BSE. In the future, the access will be more restricted for certain cloud editions of LN. If you are a normal user, and you are authorized for the **File Manager (ttfmafileman)** workbench, you can only access a limited number of directories; for details on the directories that are excluded, see the session help.

**Coloring of enum domains**

In the **Enum Domain Formatting (ttgfd4525m000)** session, you can configure colors for an enumeration domain. For each constant of the enumeration, you can define a color. In every session where the specific enumeration is shown, the constant for which a color has been defined is displayed in the defined color.

You can use the **Export Configuration Data (ttaad7201m000)** session to export colors that are configured for enumeration domains. You can use the **Import Configuration Data (ttaad7202m000)** session to import these colors.

In the **Maintain Parameters (ttaad0100m000)** session, you can switch the enumeration formatting on or off. If the setting is off, the enumeration formatting (Color and Icon) is not applied.

You can no longer switch off the enumeration formatting of a field through personalization. In previous versions, you could personalize the icon enumeration formatting, so that the constant would be displayed by the description again.

An icon that is configured for a constant of an enumeration domain is now also displayed in a details session. In previous versions, the configured icons were only used if the enumeration field was used in the grid.

### Graphs on forms

For development a new version of the DFE is required. The minimal required version is 10.4.0.12. In the DFE, you can set a field of the String data type to be displayed as a URL-Area. In the session, the URL-Area renders the URL that is set in the field.

### ODM paperclip removed

The paperclip option has been removed from the toolbar. The paperclip option is replaced by the **Attached Files** web part.

### Initial hidden form commands

An **Initial Hidden** option has been added to the **Form Command properties** dialog box in LN Studio. If the **Initial Hidden** option is selected, the form command is initially not displayed in the session. At runtime, you can make the form command visible through the **Personalize Session Menus** or **Personalize Toolbar** option. The initially hidden commands are displayed as a menu option in the **Hidden** panel of the **Personalize Session Menus** dialog box, just like the other hidden menu options.

### Keyboard shortcut help page under session help

In LN UI, the **Help** menu in a session contains a command to view the **Keyboard Shortcut Help** page.

Like in previous versions, you can also view this help page by pressing **?**.

### Role-specific start menu

Roles have been expanded with a specific start menu. When you switch between roles, another start menu is loaded.

### Customer defined fields can be used in Infor Reporting

Customer defined fields can be sent to Infor Reporting and be selectable as input fields on the report, without requiring a custom 4GL report.

### Company specific logo

Company logos used in Infor Reporting were stored as additional file in the ta package. Now a company logo (picture) can be stored per company in the **Companies (ttaad1100m000)** session.

If the company logo is not stored in the user's company, the company logo from company 0 will be used.

If the company logo is not stored in company 0, the company logo from the ta package will be used.

**Document Output Management can show total number of pages on PDF documents**

In Document Output Management (DOM), there is a new predefined `show.total.number.of.pages` variable. You can use this variable to show the total number of pages on PDF documents.

**Document Output Management supports PDF/A for all destination types**

In the previous version you could convert documents to PDF/A before uploading them to an archive, for example Infor Document Management. In this version, this has been extended, and in the **Report Rules (ttrpi2520m000)** session you can define PDF/A conversion to all destination types.

**Document Output Management – font scaling**

The FPS variable from the Document Output Management device is not used anymore. You can now use the `font.scaling` variable. See the *Infor LN Document Output Management User Guide*.

**Compress/Uncompress option added in Reorganize Tables (ttaad4225m000)**

You can now use the **Reorganize Tables (ttaad4225m000)** session to compress or uncompress data or indices in the underlying databases. You can switch the **Compress** option on or off in the **Storage Parameter Optimization (ttdba0132m000)** session. After the option is switched on, and a Convert to Runtime is performed in the **ttdba0132m000** session, only new tables are created with the chosen compress option. You can use the **Compress/Uncompress Data and Indices** option to alter existing tables. Take care: this takes a substantial amount of time, during which the system must be offline. Therefore you must plan this action carefully. As the first option **Data and Indices** creates the tables and indices anew, the compress status of the tables and indices is also changed. However the processing takes longer.

# Chapter 13: Enterprise Server 10.4.0.1

This chapter describes the differences between Enterprise Server 10.4.0.1 and Enterprise Server 10.4, and the new functionality in Enterprise Server 10.4.0.1.

This table shows the Infor Xtreme KBs for Enterprise Server 10.4.0.1:

| Package | KB |
|---------|------|
| TT | 1604255 |
| TL | 1604264 |

**Document Output Management (DOM) uses Document Hub**

Document Hub is a new component that handles the communication between applications and Document Management Systems (DMS). When distributing a document to an archive, Document Output Management (DOM) uploads documents to a DMS defined in the Document Hub.

The first time DOM is started after installation, DOM tries to migrate all Infor Document Management (IDM) settings to Document Hub. In case of any problems you can restart this migration process by running the **Migrate Archive Specifications to Document (ttrpi2216m000)** session.

In the DMS implementation within the Document Hub the *dom.document.company* variable is not known. Therefore the distribution process switches to the company of the document first before the actual distribution is started.

For details about Document Hub, see the *Infor LN Document Output Management User Guide*.

**Toolbar personalization - link icon to non-standard command**

If you unhide a non-standard command, ensure the command has an icon attached. If the command has no icon, you must link one.

See the online help of the **Personalize Toolbar** session.

**Text editor icon in session toolbar**

In previous releases, you could start the **Text Editor** through a menu option. Now you can start the **Text Editor** through an icon in the session toolbar.

For details, see the *Infor LN UI Infor Ming.le-LN Plug-in User Guide*.

**Current page number/total number of pages in PDF reports**

In reports in PDF format, the total number of pages can be displayed along with the current page number in the header of each page. The page numbers are displayed in this format: [Current page number]/[Total number of pages]. For example, 1/10, 2/10, 3/10.

For details, see the online help of the **Device Data (ttaad3100s000)** session.

**Workflow - Support multi select for ION Workflow commands**

Previously, ION Workflow commands are supported if only one record is selected. Now, you can start all workflow commands if multiple records are selected. If you try to run a workflow command that is not allowed for one of the selected records, an error message is displayed. The command is only executed for the records for which the command is allowed.

**Support enum conversion on UserArea of standard BOD**

You can customize standard BODs through a customization library. The "addTableField" and "addCdfField" functions are enhanced. If an enum is used in public or protected attributes, these functions now convert the enum "constant name" to the required long value.

This functionality is supported for BODs that are generated with LN Studio or Business Studio, build 0246 or later.

**Enable "Edit" on browse overview sessions**

From a zoom session you could only view the details. Now you can, if you are authorized, also edit the details.

**Menu filter**

New fields are added in the **Menu Fields (ttadv3561m000)** session. Per menu field, you can now specify a library and a function within this library.

If both, the library and the function, exist and the function returns false when called without parameters, the menu field is not displayed in LN UI. In this way you can filter sessions that depend on parameter settings.

For details, see the online help of the **Menu Fields (ttadv3561m000)** session.

**Note:** This functionality is also available in the Menu Editor in LN Studio.

**Initially hidden sessions and sub menus**

In the **Menu Fields (ttadv3561m000)** session a check box is added to initially hide the menu field. If this check box is selected, the menu field is not displayed in LN UI.

For details, see the online help of the **Menu Fields (ttadv3561m000)** session.

In LN UI users can make the menu item visible through the **Personalize Menu** command. Administrators can centrally maintain these personalizations through the **Overview Menu Personalizations**

**(ttadv9505m000)** session. In this session, you can also hide menu fields and change the order of menu fields.

**Note:** This functionality is also available in the Menu Editor in LN Studio.

### Role-based personalizations

Previously you could define and apply personalizations at three levels: user, DEM roles, and company level. Now you can create personalizations at a new level: the Role level. These roles, not to be confused with DEM roles, are designed to function in a non-DEM context.

You can create roles and assign them to users. Role-based personalization is enabled for a user if a default role is specified for this user. A role-enabled user has one current role and can have multiple roles assigned. A user can change his current role to any other role that is assigned to the user.

To support this functionality, these new sessions are available:

- **Roles (ttaad1150m000)**
- **User Roles (ttaad2104m100)**
- **Change Current Role (ttdsk2009m000)**

### Import/export personalization

New sessions are available to export and import configuration data. The export and import can be based on a file or an additional file. In this release, the configuration data includes session personalizations, menu personalizations, and conditional formatting.

For details, see the online help of the **Export Configurations (ttaad7201m000)** and **Import Configurations (ttaad7202m000)** sessions.

# Chapter 14: Enterprise Server 10.4 and previous versions

This chapter contains release notes for Enterprise Server 10.4 and previous versions.

## Enterprise Server release notes

### Deployment

**Platform support**

For details on platform support, see the  *Infor Enterprise Server Platform Support Matrix* which is available through Infor Xtreme KB 1183466.

**Data compression**

Infor LN supports table and index compression on SQL Server, Oracle, and DB2 databases.

**Note:** A database edition that supports compression is required. Depending on the database vendor, this may be a licensed feature.

This table shows the table compression support per database:

| Database | Table compression support |
|---|---|
| SQL Server | LN supports page compression on tables and indexes in SQL Server. An edition that supports compression is required. |
| Oracle | LN supports advanced OLTP table compression and basic index compression on Oracle databases.<br><br>**Caution:**  Newly inserted data is compressed in the table, but is not compressed in the index. Therefore, you must manually recompress indexes on a regular basis. As of Oracle version 12.1.0.2 and porting set 9.0a.01, advanced index compression is supported. |

| Database | Table compression support |
|----------|---------------------------|
| DB2 | LN supports table and index compression on DB2 databases. An edition which contains the Storage Optimization feature pack is required. Ensure you enabled the licenses for the Storage Optimization Package before you start the LN installation. |

For more information about data compression, see *Infor LN Data Compression.*

**Parallel table reconfiguration**

By parallel execution of tasks, you can improve the performance of the reconfiguration of tables during an update. Every configuration operation on a single table is seen as a task. Parallel execution is intended to speed up the reconfiguration of many tables. The minimum number of parallel processes is 1 (sequential behavior), the default is 4, the maximum is 128. You can control the number of parallel processes through the bdbreconfig_parallel resource. For more information, see *Infor Enterprise Server - Technical Manual.*

**MLE shadow table index organization (Oracle only)**

To improve performance, the MLE shadow tables are now organized on index1. For more information, see *Infor LN - Performance, Tracing and Tuning Guide for Oracle Server.*

**Default database driver properties**

To reflect current database behavior, the default database driver properties have been updated.

For the new settings, see the Technical Reference Guide of the appropriate driver.

**Multi-domain support**

You can now specify the Single Sign On User in LN in the User Principal Format (UPN). For example, `user1@domain1.com`. The SSO user will now be unique over domains.

# Integrations

**InContext Modeler**

You can use a programmable hook in the modeler to determine the relevant drillback session.

**Infor LN UI**

For details about the HTML5 based LN UI in comparison to Infor ES Web UI, see *Infor LN UI Difference Study.*

## Tools

The LN Tools now support Source Code Management (SCM) for 'Additional Files'.

## Product Maintenance and Control (PMC)

PMC supports the ability to download solutions via http.

## Document Output Management

This feature provides electronic distribution of documents and reports to recipients. Recipients can be any known party in the LN environment such as business partners, employees, or system users.

You can specify preferences by document type, by distribution channel, and by recipient. For example, to distribute invoices you can distribute one copy through e-mail to one business partner and a paper copy to another business partner.

For details about the setup and usage, see the *Infor LN Document Output Management User Guide*.

## Infor Staging wizard

The staging wizard may show this message:

```
The wizard requires that you restart your computer.
```

If you click **Next**, your computer is immediately restarted. If you do not want to restart your computer, click **Cancel**.

## Installation Wizard

An LN database can be configured to store data and indices in the same tablespace.

The Infor Support Assistant (ISA) tool is bundled.

## Connector for Web Services

The connector supports the ability to block anonymous requests.

# LN Studio

LN Studio contains these enhancements / changes:

- Source Code Management (SCM) for Additional Files.
- Remote debugging.
- Generate an IEX patch for an activity.

# Known issues

## Startup menu after installation

After the installation on Unix, the installation user might have the **Tools** menu as startup menu, instead of the Infor LN startup menu (**tccom00000000**). To change this, use the**User Data (ttaad2500m000)** session.

## Messages during ISA installation

These are Infor Support Assistant (ISA) informational installation messages:

```
27: INF: The system is not currently installed (the environment variables
 are not set).
63: INFO: Preparing the script file "./temp/package/scripts/notify-serv
er.sh"...
180: INF: Replacing the file "/opt/ISA/HOME/ServiceFailureCheck-net40.exe"
 with the file "./package/scripts/ServiceFailureCheck-net40.exe"...
309: INF: Setting the file "/opt/ISA/HOME/notify-server.sh" to be exe
cutable...
378: /opt/ISA/DATA/config/AgentRegistrationConfiguration.xml (No such file
 or directory)
589: java.lang.Exception: HttpInvocation failed with error Code:401, and
 Error Description:<error>authorization required</error>
597: SEVERE: java.lang.Exception: HttpInvocation failed with error
Code:401, and Error Description:<error>authorization required</error>
```

These messages are just informational and do not indicate any failure in the ISA installation process.

**SLM Messages**

**FQHN message**
When installing SLM on a virtual machine in demo mode, you can get this message in the event viewer.

```
VM restrictions set on incoming connection from system '::ffff:10.21.47.76'.
IP could not be resolved to a FQHN or the resolved domain is not valid for
this SLM Cluster.
```
The SLM Server is installed on a virtual machine with a server name that does not meet the naming convention of a Fully Qualified Hostname.

**Note:** The LN environment will not work anymore after the thirty days demo license.

**SLM Warning Source(s) not installed**

These SLM warnings posted in the `log.oiex1288` file are informational messages only:

```
SLM Warning Source(s) not installed, no license for SLM id 7055
SLM Warning Source(s) not installed, no license for SLM id 7026
SLM Warning Source(s) not installed, no license for SLM id 7135
```

**Could not read secu file**

You can ignore this message in `log.oiex1288`:

```
SLM Error while reading SLM bic secu file for da 104_0_ta
```

# Bdbvalidate error report

In some cases, the bdbvalidate error report can show incorrect column information containing one or more high ASCII character errors. This will be fixed in the next release.

# Infor Enterprise Server Technical Notes

# Operating system and database

For operating system and database-specific notes, see *Infor Enterprise Server - Technical Notes for generic Porting Set*, solution 22923520 available through http://www.infor.com/inforxtreme.

# Infor LN licensing

Use these IDs:

- Infor365 Maintenance Contract: 10365

Register as a Concurrent User with a quantity of 1.The end-date you specify is the end-date of your maintenance contract for Infor LN.

Infor LN:

- Infor LN: 10056.
- Infor LN (2): 7114.
- Infor LN (3): 7115.
- Infor LN (4): 7116.

Infor LN Service:

- Infor LN Service: 10896.
- Infor LN Service (2): 7117.
- Infor Business Data Entity Modeler: 7033.
- Infor Business Data Entity Implementation Generator: 7034.
- Infor Business Data Entity Repository: 7035.

# Infor Enterprise Server licensing

## Runtime licensing

Infor Enterprise Server 8.4 introduced maintenance licensing. To run Enterprise Server 10.4, add the following product ID to your SLM license manager:

- Infor365 Maintenance Contract: 10365

    Register as a Concurrent User with a quantity of 1.

    The end-date you must fill in is the end-date of your maintenance contract for Infor LN.

The following lists contain the Infor Enterprise Server parts with their own product IDs that require licenses to run:

- Enterprise Server: 10996.

    Additional license:

    - Connector for JDBC: 7046.

        This license is required for the use of homepages.

    - Infor LN Connector for Web Services: 7056, server license
    - Invoking BDEs: 7056, server license

## Studio licensing (development)

Check solution 22876519 to get a clear description of the required licensing for the Infor LN Studio parts.

You can find the solution through http://www.infor.com/inforxtreme.

# Infor LN 10.4 New Installation Technical Notes

## Installing Infor LN 10.4

This section describes points of attention about a new installation of Infor LN 10.4.

For the complete installation procedure, see *Infor LN - Installation Guide*.

## Enterprise Server solutions

The Enterprise Server ISO image contains several solutions on top of the Enterprise Server feature pack. These solutions are mandatory and installed automatically, and should not be removed.

## For SLM

There are two ways to install Infor Solution License Manager:

- Select this installable unit and 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 on the Infor 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 an SLM server on another system,
  - Only install an SLM client on the Infor LN system as there already is an SLM server present.
  - Install an SLM cluster.

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

# SLM uninstall leaves some files on the system

A full uninstall of the Infor Solution License Manager will leave some files on the system, which must be removed manually. These files will not harm the system, but could cause problems on any following attempt to install the Infor Solution License Manager. All files and directories that remain in the installation directory, which was chosen during install (default `C:\Program Files\SLM\`), can be removed.

# Upgrade Notes

# Updating to Infor LN 10.4

This section describes points of attention about an upgrade to Infor LN 10.4.

For the complete update procedure, see *Infor LN - Specific Installation Guide - Updates.*

The Enterprise Server ISO image contains several solutions on top of the Enterprise Server feature pack. These solutions are mandatory and installed automatically, and should not be removed.

# Post-install step: Customized form fields must have a unique identification assigned

**Note:** This step is required if your previous version is FP5 or earlier.

To personalize forms, each field on a form must have a unique identification assigned. FP6 comes with all the converted standard forms. Based on the converted standard forms, customized forms must be converted also. For more information, see UUID Conversion Personalization on page 89.

# Multilanguage data enabling – upgrade from ES 8.4

## Replacement of ISO 639-2 standard with 8.4.1 release

The data languages with ES 8.4 were based on the ISO 639-2 standard, which does not support all languages. For example, there is no differentiation between these languages:

- Simplified and Tradition Chinese
- Brazilian European and Brazilian Portuguese
- English Great Britain and English US

Therefore, with the release of Enterprise Server 8.4.1, Infor used another standard as a base for data language definition. Customers who have implemented multilanguage data enabling (mle) based on Enterprise Server 8.4 will take into account a table reconfiguration of multilanguage enabled tables.

## NT package part of Enterprise Server AddOn

The nt package was originally part of the Infor LN packages; because its content is more technology oriented, the delivery with Enterprise Server 8.4 is moved to the Enterprise Server AddOn Installable Unit. The version is now nt_7.6_xx.

The package nt_b61_a has become obsolete.

# Connector for JDBC and ODBC

## Supported platforms

For details on platform support, see the *Infor Enterprise Server Platform Support Matrix* which is available through Infor Xtreme KB [1183466](#).

# UUID Conversion Personalization

This section describes the migration of the session personalization conversion to be executed directly after the installation of LN 10.4. This action is required only if your previous version is FP5 or earlier.

The procedure is applicable for LN UI. This section is for system administrators.

## Introduction

In FP5 and lower versions, field personalizations could not be fully exchanged between Worktop and Web UI. This issue is caused by a different storage format of the personalizations between Worktop and Web UI. From FP6 the field personalizations are stored equally.

In FP5 and lower versions, the identification of a personalized field during the personalization process is based on the field name and the sequence number linked to this field. When the definition of the form is changed, the sequence of a field might be changed. When processing the personalization, the

field can no longer be found and the personalization is lost. To solve these issues and make a field personalization identifiable, FP6 links a Universally Unique Identifier (UUID) to each form field.

From FP6, in combination with at least the 10.4.0.1 version of the Dynamic Form Editor (DFE), field personalizations will be stored with a UUID.

A conversion is required for the following:

- Dynamic form fields (ttadv308.zb_uuid)
- Field personalizations (ttadv900.zb_uuid)

The FP6 release has been delivered with all the converted forms. Based on the converted standard forms, customized forms must be converted too. In the **Compare Package VRC's (ttadv6450m000)** session, an **Ignore UUID of form field** option has been added to exclude form changes caused by the UUID conversion.

The next section describes the procedure for the customized forms to be executed. The procedure is applicable only for VRCs with customized components (sessions/forms).

## Procedure

Note the following:

- You only have to perform this procedure if you convert from LN FP5 or a lower version to LN 10.4.
- Checked-out sessions are not processed, so ensure that no checked-out sessions are present on the environment to convert.
- After the conversion process, users must update the DFE to at least version 10.4.0.1. The latest version of DFE can be retrieved via solution 22881485 on http://www.infor.com/inforxtreme.

**Step 1: Generate UUID for dynamic form fields**

1  Start the **Generate Form Field UUID (ttcon9201m000)** session. This session generates the UUID (ttadv308.zb_uuid) for each dynamic form field of an integrated session which is not expired.
2  Select the package and package VRC for which the UUID form field generation must be executed. An additional (from – to) selection on module and session code is possible.
3  Click **Convert** to start the process.

   The following actions are performed during this process:

   - If SCM is active, the session is checked out.
   - For each processed form field, a UUID (ttadv308.zb_uuid) is added in the following way:
     a  Session is not based on standard session (full customization): A new UUID is generated.
     b  Session is based on standard session (partly customization): Standard fields: Form field UUID is copied from the highest standard VRC; Custom fields: A new UUID is generated.

   Important: In case of multiple custom package VRCs, which are derived from the selected package VRC, all custom VRCs are processed.

   - If SCM is active, the session will be checked in. The text "UUID for form fields generated" will be added as revision text.
   - Converted form will be dumped/compiled.

Additional options:

- Simulation mode.
- During the process, an error log file will be created. Log file (path) can be selected (default: `$BSE/log.con9201`).

**Step 2: Convert Personalizations**

**1** Start the **Convert Personalizations (ttcon9200m000)** session. This new session updates the UUID (ttadv900.zb_uuid) for each dynamic form field present as field personalization. This session can be executed multiple times; personalizations that are already updated will be skipped.

**2** Select the package combination for which the UUID form field generation must be executed. An additional (from – to) selection on package, module, and session code is possible.

**3** Click **Convert** to start the process.

The UUID (ttadv900.zb_uuid) is filled for all personalized form fields.

Important: The conversion program cannot update all the field personalizations. For example, fields which are present multiple times on a form, or personalized fields which are removed from the form, will not be converted. Non-converted personalizations will still be valid. The personalize process for these fields will be the same as before.

Additional options:

- Simulation mode.
- During the process, an error log file will be created. Log file (path) can be selected (default: `$BSE/log.conadv900`).

# Appendix A: SLM product IDs

For the SLM product IDs for LN and Enterprise Server components, see the user documentation of those components.

Alternatively, to view the actual list of SLM product IDs:

**1**   Log on to Infor Xtreme.

**2**   Select **Resources > Request a Software Key > License Key Forms > Infor BAAN /SLM**.
The **Software validation** page is displayed.

**3**   At the bottom of the page, select `Infor License Manager (SLM)` and click **Information**.
The **Infor License Manager (SLM)** page is displayed.

**4**   At the bottom of the page, select `Infor ERP LN` and click **Information**.
The SLM product IDs for LN and Enterprise Server components are displayed.