



Infor LN HTML5 Workbench Administration Guide

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About this guide

This document is the administration guide for Infor LN Workbench Applications based on HTML5 technology (Workbench).

The guide describes:

- System requirements.
- How to install and administer the web server hosting one or more Workbenches.
- How to deploy a Workbench.
- Workbench log files

Note: This guide is not applicable to Silverlight based Workbenches. For more information about the installation of Silverlight based Workbenches, see *Infor LN Workbench Installation Guide* (U9732 US).

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A Workbench provides an advanced user interface to Infor Enterprise Server. Workbenches are seamlessly integrated with Infor LN UI and the Infor Ming.le™ environment. Depending on design, a Workbench can be started as an ordinary Infor LN session or can be incorporated on a Infor Ming.le Role-Based Home Page.

Software prerequisites

For a description of the software requirements, see the *Infor LN UI Administration Guide (U9790)* .

Workbench operation

In Enterprise Server, the Workbench is supported by a 3GL session and one or more DLL and/or BDE components. These are installed and deployed with the standard PMC tools.

The Workbench user interface, shown in the end user's browser, is supported by a web application. The web application communicates with the relevant BDE and DLL components in Enterprise Server.

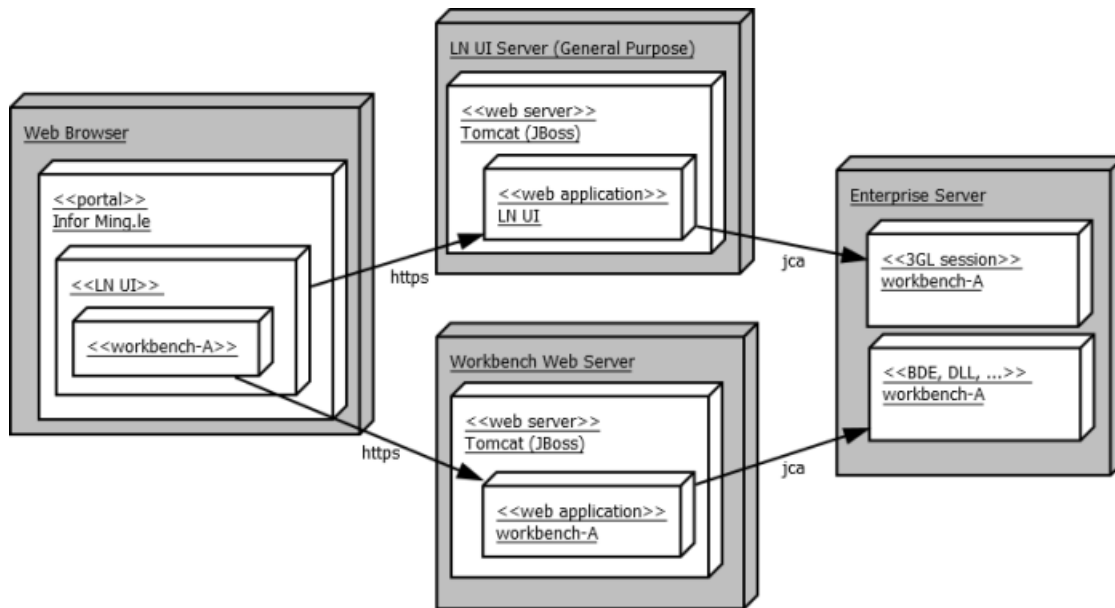
There are various subsystems relevant to the operation of a Workbench. The subsystems are:

- Enterprise Server: Infor Enterprise Server.
- LN UI Server (General Purpose): a Java based web server running the LN UI web application.
- Workbench Web Server: a Java based web server running the web application part for one or more Workbenches.
- Web Browser: the end user's browser.



Caution: We recommend that you deploy the LN UI Server (General Purpose) and the Workbench Web Server in the same DNS domain. If this is **not** possible, the privacy settings in the client browsers must not block third-party cookies. In IE, third-party cookies are blocked by default.

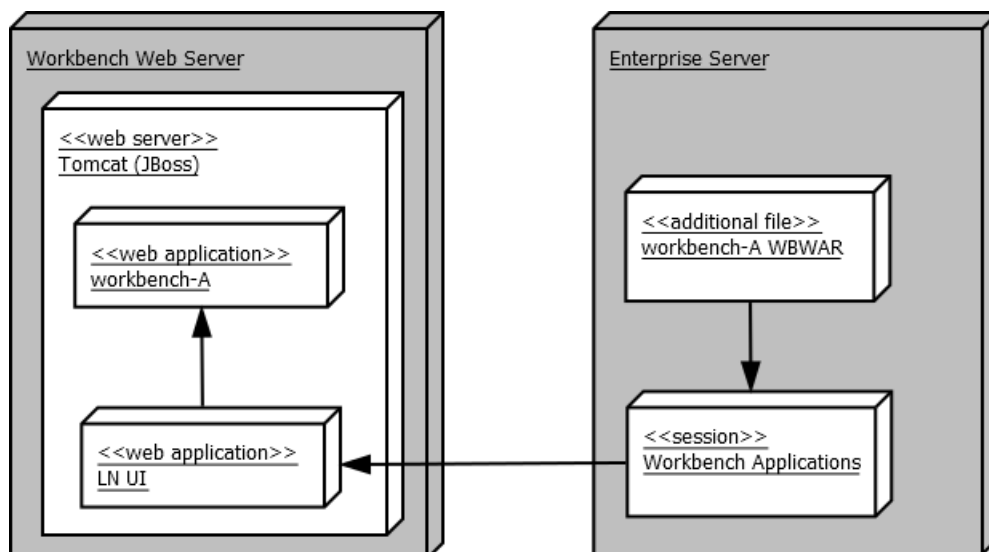
This diagram shows an overview of the various subsystems relevant to the operation of a Workbench:



Workbench deployment

To activate the Workbench as a web application, an administrator must deploy it from an Additional File. The Additional File must be present on the Enterprise Server, for example through distribution using the standard PMC tools. The administrator starts the deployment using the Workbench Applications session; this step requires that LN UI is operational on the Workbench Web Server.

This diagram shows the operational LN UI on the Workbench Web Server:



This document describes:

- The configuration of the LN UI instance present at the Workbench Web Server. The configuration steps of the Workbench Web Server's LN UI are described in "Configuration of Workbench Web Server" on page 11.
- The deployment of Workbenches using this LN UI instance. The actual deployment of the Additional File for a particular Workbench is described in "Workbench Installation" on page 21.

This section is applicable to Workbench Web Servers employing the Tomcat or JBoss web server. When the WebSphere application server is used, see "Configuration of Workbench Web Server (WebSphere)" on page 17

You must prepare the LN UI instance at the Workbench Web Server to support the deployment of Workbenches. The Enterprise Server required for those deployment tasks must be configured.

These tasks are involved:

- Configuring the (Tomcat or JBoss) web server of the Workbench Web Server.
- Configuring the LN UI web application of the Workbench Web Server.
- On the Enterprise Server, add the Deployment URL and specify the Workbench Web Server Base URL.

When the described steps are successfully completed, the Workbench Web Server and the Enterprise Server are ready to deploy a Workbench web application from its Additional File.

Prerequisites

Meet these requirements:

- The (Tomcat or JBoss) web server and LN UI are installed and operational on the Workbench Web Server.
- You can start the Workbench Deployment URLs (ttaad7140m000) session and the Workbench Parameters (HTML-based) (ttaad7131m000) session.

Determine the value of configuration items

Some configuration items such as usernames and passwords are used in one or more steps. Use this table to determine and record the value for later usage:

Configuration Item	Description	Chosen Value
Workbench Web Server Base URL	This is the base URL of the web server running at the Workbench Web Server, for example <code>https://myserver.yourdomain.com:8312</code> .	
Workbench Deployer password	This is the password used by the Enterprise Server to gain access to the LN UI during Workbench deployment	
Application Server username	The web server's account, on for example Tomcat or JBoss, with manager privileges, requires deploying a web application. This account is used by the LN UI during Workbench deployment Example: wbdeployer	
Application Server password	This is the password for the <Application Server Username> mentioned earlier. Example: deploy123	
Tomcat Home	This item is relevant when the Workbench Web Server is using Tomcat. This is the installation directory of the Tomcat web server on the UI Server for Workbenches, for example: <code>C:\Infor\ese\apache-tomcat-7.0.30</code>	

Configuring Application Server username and password (Tomcat)

These configuration steps are applicable when the Workbench Web Server employs a Tomcat web server. The goal is to create a Tomcat user account with management privileges supporting the Workbench deployment. The steps require administrative privileges to read and modify Tomcat configuration files.

Prerequisites

The described procedure assumes this (default) Tomcat web server configuration:

- UserDatabaseRealm backed by file `$CATALINA_BASE/conf/tomcat-users.xml` with passwords stored in cleartext.
- Authentication type of realm Tomcat Manager Application is set to BASIC.
- Tomcat manager application supports the Text Manager interface for role manager-script.

Creating / verifying Tomcat user account

Configure the Tomcat web server with the <Application Server username> and <Application Server password>.

Complete these steps:

- 1 Use a text editor to open the file <Tomcat Home>/conf/tomcat-users.xml
 - a Add between <tomcat-users> and </tomcat-users>:

```
<user username="<Application Server username>"
      password="<Application Server password>"
      roles="manager-script"/>
```

Using the specified sample values, the file must be similar to:

```
<tomcat-users>
  <user username="tomcat" password="admin123" role="standard" />
  <user username="wbdeployer"
        password="deploy123"
        roles="manager-script"/>
</tomcat-users>
```

- b Click **Save** to save the file and exit the editor.
- 2 Verify the configuration:
 - a Restart the Tomcat web server.
 - b Use a browser to navigate to URL <Workbench Web Server Base URL>/manager/text/list
 - c When prompted to provide username and password for the Tomcat Manager Application, specify <Application Server username> and <Application Server password>

```
OK - Listed applications for virtual host localhost
/:running:0:ROOT
/manager:running:1:manager
/webui:running:1:G:/gwtui/war
/docs:running:0:docs
/wsdl-enabled-fromwsdl:running:0:wsdl-enabled-fromwsdl
/examples:running:0:examples
/host-manager:running:0:host-manager
```

Configuring Application Server username and password (JBoss)

These configuration steps are applicable when the Workbench Web Server employs a JBoss web server. The goal is to create a JBoss management user account supporting the Workbench deployment. The steps require administrative privileges to read and modify JBoss configuration files.

Prerequisites

The described procedure assumes this (default) JBoss web server configuration:

- Native management interface associated to the "ManagementRealm" security realm (see `standalone.xml`, XML element `server/management/management-interfaces/native-interface`).

Creating JBoss management user account

Use the JBoss command line utility `add-user` to add a new Management User (realm `ManagementRealm`). When prompted for the username, specify `<Application Server username>`; when prompted for the password, specify `<Application Server password>`

Note: The default JBoss installation allows all local users access to the management interfaces without username and password authentication. We recommend that you disable the silent authentication using the instructions from this Web site:

https://access.redhat.com/documentation/en-US/JBoss_Enterprise_Application_Platform/6/html/Administration_and_Configuration_Guide/Remove_Silent_Authentication_from_the_Default_Security_Realm.html

Configuring Workbench Web Server's LN UI Instance

You must configure the Workbench Web Server's LN UI with the specified username and password for Workbench deployment. This allows LN UI to deploy the Workbench web application using the web server's management interface.

To configure the Workbench Web Server's LN UI:

- 1 Start the Workbench Web Server's LN UI administrative web application.
Use the browser with URL `<Workbench Web Server Base URL>/webui/servlet/admin`
- 2 Select **Infor LN > Workbench Deployer**.
- 3 Specify the Workbench Deployer password in these fields:
 - **Workbench Deployer password**
 - **Confirm Workbench Deployer password**

- 4 Ensure that field Application Server URL is specified with `http://localhost`.
- 5 Ensure that the **Port number** field contains the correct value; when the Tomcat web server is used, it must be equal to the configured HTTP port number.
When the JBoss web server is used, it must be equal to the configured port for the native management interface (default 9999).
- 6 Specify the Application Server username in the corresponding **Application Server username** field.
- 7 Specify the Application Server password in these fields:
 - **Application Server password**
 - **Confirm Application Server password**
- 8 Save the changes.
- 9 Click **Test** to verify the changes.
The **Log** field must display output similar to:

```
The following applications are installed on your Application Server:
manager
webui
```

Troubleshooting

When testing the Workbench Web Server's LN UI configuration, these messages can display:

- Failed to ping the server, check Application Server URL and Port number.
Solution: check the fields Application Server URL and Port number.
- Failed to login, check Application Server username and password.
Solution: check the fields Application Server username and Application Server password. Ensure that the values are consistent with the specified values.

Configuring Workbench Deployment URL

Configure the Enterprise Server with the network location and credentials required during Workbench deployment.

To configure the workbench deployment URL:

- 1 Start the general purpose LN UI.
- 2 Start the Workbench Deployment URLs (ttaad7140m000) session.
- 3 Create a new Deployment URL, specify this information:
 - **Deployment:** an appropriate description.
 - **Deployment URL:** **<Workbench Web Server Base URL>/webui/servlet/deploy**, for example:

```
https://nlbavhtml5wb.infor.com:8445/webui/servlet/deploy
```

- **User:** deployer.
- **Password:** <Workbench Deployer password>.

4 Save changes.

5 Verify the changes. Select the new entry > **Actions** > **Test URL**.

Troubleshooting

When testing the Deployment URL, this message can display:

```
URL http://... not correct (Not Found)
```

Solution: check and correct the **Deployment URL** field.

Configuring Workbench Web Server Base URL

Configure the Enterprise Server with the network location of the Workbench Web Server at which Workbenches are started.

Complete these steps:

- 1 Start the general purpose LN UI.
- 2 Start the Workbench Parameters (HTML-based) (ttaad7131m000) session.
- 3 Specify this information:
 - **Workbench Web Server ID:** **WBWAR**
 - **Workbench Web Server Base URL:** <Workbench Web Server Base URL>, for example:

```
https://nlbavhtml5wb.infor.com:8445
```
- 4 Click **OK** to save the changes.

Configuration of Workbench Web Server (WebSphere)

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This section is applicable when the Workbench Web Server employs the WebSphere Application Server.

Prepare the LN UI instance at the Workbench Web Server to support the deployment of Workbenches.

These tasks are involved:

- Retrieving WebSphere configuration details.
- Configuring the LN UI web application of the Workbench Web Server.
- On the Enterprise Server, add the Deployment URL and specify the Workbench Web Server Base URL

When the described steps are successfully completed, the Workbench Web Server and the Enterprise Server are ready to deploy a Workbench web application from its Additional File.

Prerequisites

Meet these requirements:

- The WebSphere application server is operational and its Administrator GUI can be accessed, for example from URL `https://myserver.mydomain:9060/ibm/console`
- The WebSphere application server is configured to use HTTPS using a CA signed or self-signed certificate.
- You can start the Workbench Deployment URLs (ttaad7140m000) session and the Workbench Parameters (HTML-based) (ttaad7131m000) session.

Determine the value of configuration items

Some configuration items such as usernames and passwords are used in one or more steps. Use this table to determine and record the value for later usage:

Configuration Item	Description	Chosen Value
Workbench Web Server Base URL	This is the base URL of the web server running at the Workbench Web Server, for example <code>https://myserver.yourdomain:9080</code> .	
Workbench Deployer password	This is the password used by the Enterprise Server to gain access to the LN UI during Workbench deployment	
Application Server username	The web server's account, this is an account that has administrator rights on the web server. This account is used by the LN UI during Workbench deployment.	
Application Server password	This is the password for the <Application Server Username> mentioned earlier.	

Retrieving WebSphere configuration details

The retrieved data is used in subsequent configuration steps.

To retrieve WebSphere specific settings:

- 1 Use the browser to start the WebSphere Administration GUI.
- 2 Start the Certificate Export Wizard using the padlock shown in the browser's address bar.
- 3 Export the certificate in the Base-64 encoded X.509 file format (.cer file) and make a note of the file location for later usage.
- 4 In WebSphere Administrator GUI, select **Servers > Server Types > WebSphere application servers**.
- 5 Make a note of the name of the server as <Server name>.
- 6 Select the <Server name> and select **Communication > Ports > SOAP_CONNECTOR_ADDRESS**
- 7 Make a note of the values in the <Host> and <Port> fields.
- 8 Select **Servers > Server Types > WebSphere application servers**.
- 9 Select <Server name> and click **Runtime**
- 10 Make a note of the <Cell name> and <Node name>.

Configuring Workbench Web Server's LN UI Instance

The Workbench Web Server's LN UI must be configured with the settings from the previous section, see "Retrieving WebSphere configuration details" on page 18

This allows LN UI to deploy the Workbench web application using the WebSphere's internal management interface.

These settings are required:

Item	Example
Server name	Server1
Host	myhost.mydomain.com
Port	8880
Cell name	myhostNode01Cell
Node name	myhostNode01

To configure the Workbench Web Server's LN UI:

- 1 Start the Workbench Web Server's LN UI administrative web application.
Use the browser with URL `<Workbench Web Server Base URL>/webui/servlet/admin`
- 2 Select **Infor LN > SSL Truststore**.
- 3 Click **Import certificate** and import the exported SSL Certificate (.cer file).
- 4 Select **Infor LN > Workbench Deployer**.
- 5 Specify the Workbench Deployer password in these fields:
 - **Workbench Deployer password**
 - **Confirm Workbench Deployer password**
- 6 Ensure that field Application Server URL is specified with `https://<Host>`. For example `https://myhost.domain.com`.
- 7 Ensure that the **Port number** field is equal to `<Port>`.
- 8 Specify the `<Application Server username>` in the corresponding **Application Server username** field.
This is an account that has sufficient rights, otherwise use the administrator login.
- 9 Specify for the user you login with the Application Server password in these fields:
 - **Application Server password**
 - **Confirm Application Server password**
- 10 Save the changes.
- 11 Click **Test** to verify the changes.
The **Log** field must display output similar to:

The following applications are installed on your Application Server:
DefaultApplication

```
webui  
ivtApp
```

12 Select the **Server specifics** tab.

13 Specify this information:

- **Server name:** <Server name>
- **Cell name:** <Cell name>
- **Node name:** <Node name>

Troubleshooting

When testing the Workbench Web Server's LN UI configuration, these messages can display:

`Failed to ping the server, check Application Server URL and Port number.`

Solution: check the **Application Server URL** and **Port number** fields.

`Failed to login, check Application Server username and password.`

Solution: check the **Application Server username** and **Application Server password** fields . Ensure that the values are consistent with the specified values.

`SSL Trust not, or incorrectly defined`

Solution 1: An SSL Certificate is not imported in the session SSL Truststore.

Solution 2: An incorrect SSL certificate is uploaded, not belonging to the web server on which WebSphere is running.

Configuring the Enterprise Server for Workbench Deployment

Complete the required configuration using the steps described in these sections:

- "Configuring Workbench Deployment URL" on page 15
- "Configuring Workbench Web Server Base URL" on page 16

Workbench installation

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These steps are described:

- Installing a Workbench by deploying it on the Workbench Web Server.
- Deploying an (existing) Additional File to the Workbench Web Server.
- Creating / updating an Additional File of a Workbench.

Prerequisites

Meet these prerequisites:

- The configuration of Workbench Web Server is successfully completed. See "Configuration of Workbench Web Server" on page 11.
- You can start these sessions:
 - Import Workbench Application (ttadv2570m200)
 - Workbench Applications (ttadv2570m100)

Deploying an Additional File

Perform this step when the Workbench is deployed for the first time or when the Workbench Additional File was updated by a PMC solution.

To deploy the Additional File of a Workbench:

- 1 Start the general purpose LN UI.
- 2 Optional: Start the Additional Files (ttadv2570m000) session to check the presence or history of the Workbench Additional File to deploy.
- 3 Start the Workbench Applications (ttadv2570m100) session.
- 4 Select **Actions > Select URLs**
Use the **Selected** column to select the Workbench Web Server.
- 5 Save and exit.
- 6 Select the row with the Additional File (extension .wbwar) of the desired Workbench.

7 Select Actions > Deploy

Wait for the Workbench deployment to complete.

8 Close the Workbench Applications session.

Troubleshooting

These messages can display when running the Workbench Applications session.

- `Deployment is performed by other user.`
Solution: wait until another user has completed the deployment and closes the Workbench Applications session.
- `Deployment FAILED; see logfile ... for detailed information.`
Solution: select **Actions > Logfiles > View Log (HTML)**

Creating (updating) an Additional File

Creating or updating an additional file is required when you are developing your own workbench.

To create or update the Additional File of a Workbench:

- 1** Download the Workbench web archive (extension .war) to the local computer.
- 2** Start the general purpose LN UI.
- 3** Start the Import Workbench Application (ttadv2570m200) session.
- 4** Specify the **Package**, **VRC** and **Session** fields pertaining to the Workbench Additional File.
- 5** Select **Import From > Client**.
- 6** When updating instead of creating an Additional File select **Options > Overwrite existing entry**.
- 7** Select **Import** and browse to the Workbench web archive file on the local computer.
- 8** Click **OK** to start the file upload.
- 9** Optional: use the Additional Files (ttadv2570m000) session to verify the history of the Additional File.

Troubleshooting

These message can display during the import of the web archive.

`Workbench application ... has already been imported for VRC ...`

Solution: ensure to update instead of creating the Additional File (step 6).

Overview

When a Workbench is deployed successfully on the Workbench Web Server and is operational, diagnostic messages are logged in a log file. These messages, with increasing degrees of verbosity, can have this severity:

- ERROR
- INFO
- DEBUG

The log file is maintained for each Workbench separately and it contains the diagnostic messages for all user sessions of a Workbench.

The name of the Workbench log file contains the session code and version, release and customer of the corresponding 3GL session. For example; `tdpur8360m000_B60_a_sy82.txt`.

When the Tomcat web server is used, the file can be found in this folder:

```
${catalina.base}/logs
```

When the JBoss web server is used, the file can be found in this folder:

```
${jboss.server.log.dir}
```

To find the value of `${catalina.base}` or `${jboss.server.log.dir}` start the LN UI Administration Webapp, navigate to **Infor LN UI Administration > Diagnostics > System Properties**.

Workbench log file configuration

The severity of the emitted log messages and the location of the Workbench log file are configured in the `log4j.xml` file. The configuration file is maintained for each Workbench separately and it is created during the first deployment of the Workbench.

You can find the file on the file system of the Workbench Web Server in this folder:

```
C:\Infor\ese\lnui\config\workbenches\<workbench-name>.
```

Replace `<workbench-name>` with the actual workbench name derived from the session code and version, release and customer of the corresponding 3GL session, for example: `tdpur8360m000_B60_a_sy82`

Changing the log level

Use these steps to change the level of log message for a specific Workbench from ERROR to INFO or DEBUG.

To change the log level:

- 1 Log on to the Workbench Web Server.
- 2 Locate the Workbench specific configuration `log4j.xml` file(see 'Workbench log file configuration') see "Workbench log file configuration" on page 23
- 3 Open `log4j.xml` in a text editor.
- 4 Replace ERROR with INFO or DEBUG (as desired) in these lines:
 - `<param name="Threshold" value="ERROR" />`
 - `<priority value="ERROR" />`
- 5 Save the file and exit the editor.

The Workbench log level change takes effect immediately, restarting the Workbench Web Server or the Workbench is not required.