

TRILOG GROUP, INC.

ProjExec® for IBM Connections®

Installation Guide

ProjExec® for IBM Connections®

Installation Guide

© 2004-2014 Trilog Group Inc.
54 Cummings Park • Suite 308
Woburn, MA 01810
Phone 781.937.9963 • Fax 781.935.2299

Table of Contents

1	GETTING STARTED.....	4
1.1	SYSTEM REQUIREMENTS.....	4
1.1.1	Hardware Requirements.....	5
1.1.2	Software Requirements.....	5
1.2	BEFORE YOU BEGIN.....	7
2	RUNNING THE PROJEXEC INSTALLER.....	13
2.1	LAUNCHING THE PROJEXEC INSTALLER.....	13
2.1.1	Windows.....	13
2.1.2	Linux.....	13
2.1.3	iSeries.....	14
2.2	SELECT THE DEFAULT LANGUAGE.....	15
2.3	ACCEPT TERMS OF LICENSE AGREEMENT.....	16
2.4	CHOOSE THE INSTALLATION TYPE.....	16
2.5	CLUSTER MODE CONFIGURATION (OPTIONAL).....	17
2.6	JVM 1.6 ACCESS CONFIGURATION.....	18
2.7	SPECIFY AND CONFIGURE DATABASE.....	18
2.8	SPECIFY LDAP DIRECTORY CONNECTION.....	22
2.9	SPECIFY MAIL SERVER.....	23
2.10	ENTER LICENSE KEY.....	24
2.11	IBM CONNECTIONS SERVER SETTINGS.....	24
2.12	CHOOSE WAR FILE LOCATION.....	25
2.13	DEPLOY SELECTED DATABASE.....	25
2.14	ADD PROJEXEC ADMINISTRATOR.....	26
2.15	INSTALLATION SUMMARY.....	27
3	INSTALLING THE PROJEXEC APPLICATION ON IBM CONNECTIONS (WEBSHERE DEPLOYMENT).....	28
3.1	ACCESS THE INTEGRATED SOLUTIONS CONSOLE.....	28
3.2	UPLOADING THE PROJEXEC WAR FILE.....	29
3.3	CONFIGURING PROJEXEC ON WEBSHERE.....	31
3.4	ADDING ACCESS TO THE PROJEXEC APPLICATION BY CUSTOMIZING THE IBM CONNECTIONS USER INTERFACE.....	36
3.5	CONFIGURE CLASS LOADER.....	39
3.6	ALLOW PROJEXEC TO INVOKE THE CONNECTIONS REST API OVER SSL.....	40
3.7	40	
3.8	TESTING THE INSTALLATION.....	40
3.9	ADD/ENABLE PROJEXEC WIDGETS AND GADGETS.....	42
3.10	ADDING PROJEXEC TO THE CONNECTIONS MOBILE APP (OPTIONAL).....	48
3.11	ADVANCED CONFIGURATIONS.....	50
4	APPENDIX: DB2 CONFIGURATION INSTRUCTIONS.....	52
4.1	DB2 RUNNING ON WINDOWS OR LINUX.....	52
4.1.1	Step 1. Set up Database Parameters.....	52
4.1.2	Step 2. Create Table Spaces with Larger Page Size.....	53
4.1.3	Step 3. Select the DB2 JDBC Drivers from the ProjExec Installer.....	53
4.2	DB2 RUNNING ON ISERIES.....	55

4.2.1	Step 1. Create a Schema	55
4.2.2	Step 2. Select the DB2 JDBC Drivers from the ProjExec Installer.....	55
4.3	CONFIGURING A JNDI DATA SOURCE FOR PROJEXEC DATABASE:	56
4.3.1	Step 1: Add JNDI Data Source in WebSphere Application Server	57
4.3.2	Step 2: Configure ProjExec to use the WebSphere JNDI Resource.....	61
5	APPENDIX: SQL SERVER CONFIGURATION INSTRUCTIONS	63
6	APPENDIX: ORACLE CONFIGURATION INSTRUCTIONS	63
7	APPENDIX: ISERIES CONFIGURATION INSTRUCTIONS	64
7.1	STEP 1. MAP INSTALLATION DIRECTORY	64
7.2	STEP 2. SETTING UP NAWT FOR A GRAPHICAL INTERFACE	64
8	APPENDIX: UPGRADING PROJEXEC	65
8.1	PERFORMING A PROJEXEC UPGRADE.....	66
8.2	APPLYING FIX PACKS AND HOT FIXES.....	68
8.3	APPLYING PROJEXEC CONFIGURATION CHANGES	69
9	APPENDIX: CLUSTER RELATED CONFIGURATIONS	71
9.1	SETTING UP PROJEXEC IN ITS OWN CLUSTER	71
9.2	SETTING UP PROJEXEC TO RUN WITHIN THE EXISTING IBM CONNECTIONS APPLICATIONS CLUSTER	75
9.3	ADDITIONAL NECESSARY CONFIGURATIONS FOR CLUSTERED ENVIRONMENTS	76

1 Getting Started

Important information you should know before you begin to install ProjExec for IBM Connections

Trilog's ProjExec solution combines advanced project management capabilities with the powerful social collaboration capabilities of IBM Connections. While this Guide explains how to install this ProjExec edition on the IBM Connections platform, it is assumed that the reader has some familiarity with installation and administration of the IBM Connections environment and other supported database servers, LDAP directories and the like.

This guide describes the installation process for ProjExec, and is applicable to both ProjExec Express, and ProjExec Enterprise Edition. Note that ProjExec Enterprise Edition contains more modules and features than the Express edition.

1.1 System Requirements

ProjExec for IBM Connections requires that **IBM® Connections®** is installed prior to beginning the ProjExec installation.

Supported versions: from **V4.5 CR4+ to V5.0 CR1+**

1.1.1 Hardware Requirements

ProjExec server hardware requirements are dictated by IBM Connections hardware requirements. ProjExec requires a minimum of an **additional 2GB of RAM** to be allocated on IBM WebSphere (and therefore the OS). More RAM may be required depending on the number of ProjExec users and utilization.

Note

Requirements are periodically updated by IBM. Please refer to IBM's latest documentation for the IBM Connections product before you begin.

1.1.2 Software Requirements

➤ Server Side

❑ IBM Requirements

The ProjExec IBM Connections Edition software requirements are dictated by the IBM requirements for IBM Connections. Refer to IBM's latest requirements.

ProjExec only supports IBM Connections environments running on **64-bit WebSphere on 64-bit OS**.

❑ Database

The minimum supported database versions to store ProjExec data:

- IBM DB2 Universal Database Version 9.7 (recommended V10.1).
- Microsoft SQL Server 2005 or 2008
- Oracle 10g and 11g

If you plan to use DB2, we recommend to use the latest DB2 version supported by IBM Connections (currently DB2 v10.1).

NOTE: IBM Connections includes an entitlement to DB2 software, licensed for use only by IBM Connections and integrated applications. **You should not deploy the ProjExec database into any of the Connections product databases** . Refer to the Appendix for specific details on how to configure DB2 for ProjExec.

➤ **Client Side**

Client machines must have a Web browser with the Java plug-in:

Supported browsers:

- Microsoft Internet Explorer 8+
- Mozilla Firefox 10+ on Windows
- Safari 5+
- Chrome 23+

Supported email client integration:

- Lotus Notes 8.5+
- Outlook 2007, 2010 and 2013

Supported mobile access (through micro-browser):

- iPhone/iPad
- Android
- Blackberry
- Windows phone

Java Virtual Machine (Plug-in on the browser): 1.6+ (Java 7 update 67 is supported).

1.2 Before you Begin

Several points need to be checked before you begin:

<input checked="" type="checkbox"/>	Check List
<input type="checkbox"/>	<p>Information to collect before starting the installation</p> <ul style="list-style-type: none"> ▪ Database connection settings (server name, port, instance name, user and password of the database administrator, JDBC drivers needed to connect to the database) ▪ LDAP Directory connection settings (server name, port, LDAP suffix, user and password to bind with LDAP server) ▪ SMTP server settings (hostname and an email address to set as the ProjExec return address) ▪ Name and password of the user who will be set as ProjExec Administrator Usually, the ProjExec administrator is a technical user. He must be a registered user in the directory and he must have an email address.
<input type="checkbox"/>	<p>IMPORTANT NOTE: It is a ProjExec requirement to have a valid email address already defined in your Directory for each user that will be using ProjExec. If you have users without email addresses, please make sure to correct this before installing ProjExec..</p>
<input type="checkbox"/>	<p>JVM Maximum Heap Size</p> <p>The Java Virtual Machine should be configured to allow the heap to grow as much as possible.</p> <p>You should configure the Maximum Heap Size from the Websphere Administration Console (servers->application servers->Cluster_SERVER_name-> Process Definition -> Java Virtual Machine).</p> <p>The minimum value to run ProjExec with Connections is 4096 MB. The default value is usually 2506 MB. If you don't increase this value, you may experience performance issues.</p>
<input type="checkbox"/>	<p>Installation on iSeries</p> <p>You must read:</p> <ul style="list-style-type: none"> ▪ the chapter “Preparing to run the installation” ▪ and the corresponding appendix, <p>before starting ProjExec installation.</p>

<input type="checkbox"/>	<p>Database Creation - IMPORTANT</p> <p>You MUST create the ProjExec database prior to installing ProjExec. Note that the database does not need to be created on the IBM Connections server: it can be on a different server. If you use DB2 (comes in standard with IBM Connections), please make sure to create the database with a 32K page size instead of the default 4K and choose UTF-8 as the code set. Please refer to the corresponding appendix for database creation instructions.</p>
<input type="checkbox"/>	<p>HTTP Server Compression</p> <p>HTTP Server must be enabled for compression, as recommended by IBM documentation:</p> <p>http://www-10.lotus.com/ldd/lcwiki.nsf/dx/Determining_which_files_to_compress_ic301</p> <p>IMPORTANT:</p> <p>If you have installed IBM http server and enabled compression, you should make sure that the following method is added under <IBM http server>\conf\httpd.conf:</p> <pre>AddOutputFilterByType DEFLATE text/html text/plain text/xml text/css text/javascript application/x-javascript application/javascript</pre> <p>Otherwise, projects exported from ProjExec might be zipped incorrectly.</p>

<div data-bbox="443 947 467 974" data-label="Image"> </div>	<div data-bbox="570 243 1252 275" data-label="Section-Header"> <h3>Enable Caching for JS and CSS files on HTTP server</h3> </div> <div data-bbox="570 310 1369 378" data-label="Text"> <p>In the httpd.conf configuration file for the HTTP server (found under HTTPServer_installation folder/conf/httpd.conf)</p> </div> <div data-bbox="667 420 1333 520" data-label="Text"> <p>a- Uncomment or add the following: LoadModule expires_module modules/mod_expires.so LoadModule headers_module modules/mod_headers.so</p> </div> <div data-bbox="667 562 1369 844" data-label="Text"> <p>b- Add the following to all the virtualhost/listener sections (in httpd.conf there might be more than one Listen and VirtualHost directive. The caching configuration needs to be added to all of them. Example of "listen": the line looks like "Listen *:80" or "Listen 192.168.1.1:80"...etc. Example of VirtualHost: the line looks like "<VirtualHost *:443> ... </VirtualHost>". You need to add the configuration inside the VirtualHost opening/closing tag ..etc):</p> </div> <div data-bbox="570 917 1414 1604" data-label="Text"> <pre><LocationMatch "/projexec/(.*)/(.*)/(ico jpg jpeg png gif js css)\$ "> Header unset ETag #FileETag None Header unset Last-Modified Header set Cache-Control "max-age=432000, public" Header set Cache-Control "public, no-transform" ExpiresActive On ExpiresByType text/javascript A432000 ExpiresByType text/x-javascript A432000 ExpiresByType application/javascript A432000 ExpiresByType application/x-javascript A432000 ExpiresByType text/css A432000 ExpiresByType image/gif A432000 ExpiresByType image/jpeg A432000 ExpiresByType image/png A432000 ExpiresByType image/ico A432000 </LocationMatch></pre> </div> <div data-bbox="667 1644 1369 1705" data-label="Text"> <p>c- Save and close the configuration file and restart the HTTP server</p> </div>
---	--

<input type="checkbox"/>	<p>Single Sign-On and LTPA Token</p> <p>Make sure that Single Sign-On (SSO) is enabled.</p> <ul style="list-style-type: none"> ▪ It is highly recommended to increase the LTPA token timeout (time period for which the token will be valid). The LTPA token can timeout unexpectedly causing Connections users to lose what they are currently working on : the LTPA token expires when the timeout is reached, even if the Connections user is still working on the application. The recommended value is 720 minutes instead of 30 minutes (default). ▪ After installation, refer to the Administration Guide to indicate your SSO configuration in a ProjExec server configuration file. This step is mandatory if your SSO domain is different than the fully qualified domain name.
<input type="checkbox"/>	<p>If HTTPS is enabled</p> <p>If your server is configured to use HTTPS protocol, you have to import the Certificate into the Websphere Trust Stores. To do that, follow these instructions:</p> <p>From the Websphere console, from security-> SSL certificate and key management->Key stores and certificates, repeat the following steps for both the NodeDefaultTrustStore and CellDefaultTrustStore:</p> <ol style="list-style-type: none"> 1- click on the keystore 2- click on Signer certificates 3- click on Retrieve from port 4- enter the Host and the port where to retrieve the SSL certificate from and give an alias to this certificate. 5- click on ok then save 6- (repeat for the other TrustStore). 7- restart the cluster(s)

<input type="checkbox"/>	<p>If you want to force HTTPS on IBM HTTP Server</p> <p>If you want all traffic to be forced to https instead of http, configure your IHS (IBM HTTP Server) by following the steps below:</p> <p>1- open your httpd.conf file for editing</p> <p>2- locate and uncomment the following line: "LoadModule rewrite_module modules/mod_rewrite.so"</p> <p>3- add to your virtual host definitions the following:</p> <p>RewriteEngine on</p> <p>RewriteCond %{SERVER_PORT} =80</p> <p>RewriteRule ^(.*) https://%{SERVER_NAME}%{REQUEST_URI} [R,L]</p>

<input type="checkbox"/>	<p>Additional pre-requisites for clustered environments</p> <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note</p> <p>Please refer to "Chapter 9: APPENDIX:CLUSTER RELATED CONFIGURATIONS" for details about different cluster setup scenarios and necessary configuration steps related to ProjExec in a clustered environment.</p> </div> <p>For ProjExec running in clustered environments, in the Web server plug-in (plugin-cfg.xml under Dmgr/config/cells) the following two parameters should be configured as follows (please refer to "plugin-cfg.xml file" section of websphere Application Server distributed environment documentation for more details:</p> <p>1- ServerIOTimeout:</p> <p>If you have very large projects import/export and save operations, the value for this parameter needs to be increased to prevent the server from timing out, the minimum recommended value is ServerIOTimeout=900</p> <p>2- IgnoreAffinityRequests: this parameter should be set to: IgnoreAffinityRequests="false", for all requests of the same JSESSIONID to be sent to the same Application Server.</p>
<input type="checkbox"/>	<p>IBM Connections server and database must be started</p> <p>Start the IBM Connections server and the appropriate database server before you begin the ProjExec installation.</p>
<input type="checkbox"/>	<p>About Upgrading ProjExec</p> <p>Refer to "Chapter 8: Appendix: Upgrading ProjExec" for detailed steps about upgrading ProjExec.</p> <p>If you are about to upgrade ProjExec, please inform all users that they must not use the application during the upgrade process, and they must close all browser windows opened on ProjExec. We strongly recommend to stop the ProjExec application and make a backup of the ProjExec database before upgrading.</p>

2 Running the ProjExec Installer

This chapter will guide you through the installation steps for ProjExec. Refer to the prerequisite requirements listed in Chapter 1 before you proceed.

This installation guide applies to both the Express Edition and the Enterprise Edition. Features are enabled based upon your license key.

The installation process for ProjExec for Connections consists of four parts:

- 1) Completing the **prerequisite** configurations outlined in Chapter 1.
- 2) Running the ProjExec Install process that will both create the database structure on the database server, and will **create a WAR file** to be deployed.
- 3) Running the IBM Connections application install process to **place the ProjExec WAR** file on the Connections Server.
- 4) Enabling access to the ProjExec application by **customizing the Connections Apps menu** in the top navigation bar.

2.1 Launching the ProjExec Installer

2.1.1 Windows

Download and launch the ProjExec installer by double clicking on the file `install.bat`

2.1.2 Linux

Complete these steps to install ProjExec on a Linux server.

If the IBM Connections server is running without X libraries loaded, the JVM property **java.awt.headless** must be set to true, to avoid problems displaying some images in ProjExec.

To change this setting, log in to the Websphere administrative console and add the following value in the generic JVM parameters:

```
-Djava.awt.headless=true
```

Log on to the server using the same User Name as the one used when IBM Connections server was installed.

From the terminal window, change to the `bin` directory under the ProjExec installer directory.

Set the `JAVA_HOME` environment variable to the home of a JRE/JDK version greater than or equal to 1.6. For example (the exact syntax depends on your environment):

```
export JAVA_HOME=/opt/IBM/WebSphere/AppServer/java
```

Finally, to run the installer, go to the `bin` directory of the ProjExec installer and enter the command

```
./install.sh
```

2.1.3 iSeries

The requirements for the iSeries installation of ProjExec are fully described in the corresponding Appendix. Please make sure that you read this section and that you complete the described steps before proceeding with the installation.

Proceed with the following steps to install ProjExec Connections Edition on an iSeries server.

On the machine used to access the iSeries, create a mapping to the iSeries directory (see Appendix) and copy the ProjExec installer to the mapped directory.

Launch the iSeries Navigator that gives you access to the iSeries machine and then launch the emulator. Now if you do not have NAWT configured then set it up to enable a graphical interface to the iSeries (see Appendix). Run the TightVNC Viewer program; it is preferred to run the Fast Compression viewer for best performance.

Launch the Q shell from the emulator (see Appendix). From the terminal window, change to the `bin` directory under the ProjExec installer directory.

Set the `JAVA_HOME` environment variable to the home of an IBM JRE/JDK version greater than or equal to 1.6 as in the following example:

```
export
JAVA_HOME=/QIBM/WebAS5/WebSphere/AppServer/java
```

To start the installation, go to the bin directory of the ProjExec installer and enter the command

```
installAS400.sh
```

In order to continue the installation you have to go to the TightVNC viewer where you can proceed as described in the rest of this guide.

2.2 Select the Default Language

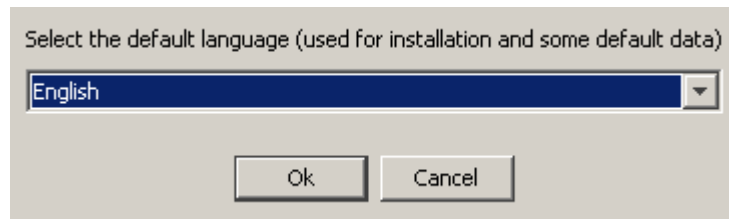
The same installer can be used to install ProjExec in English, French, German, Chinese, etc.

When you first launch the installer, you will be prompted to select the default language of installation:

A default site (that will contain all your projects) is created automatically during ProjExec installation. This default site will use the **language selected during installation**. Email notifications, Events posted on the Project Wall, Predefined Reports, Alerts, Security Profiles, Roles and Invitation Configuration will follow the **default site language**.

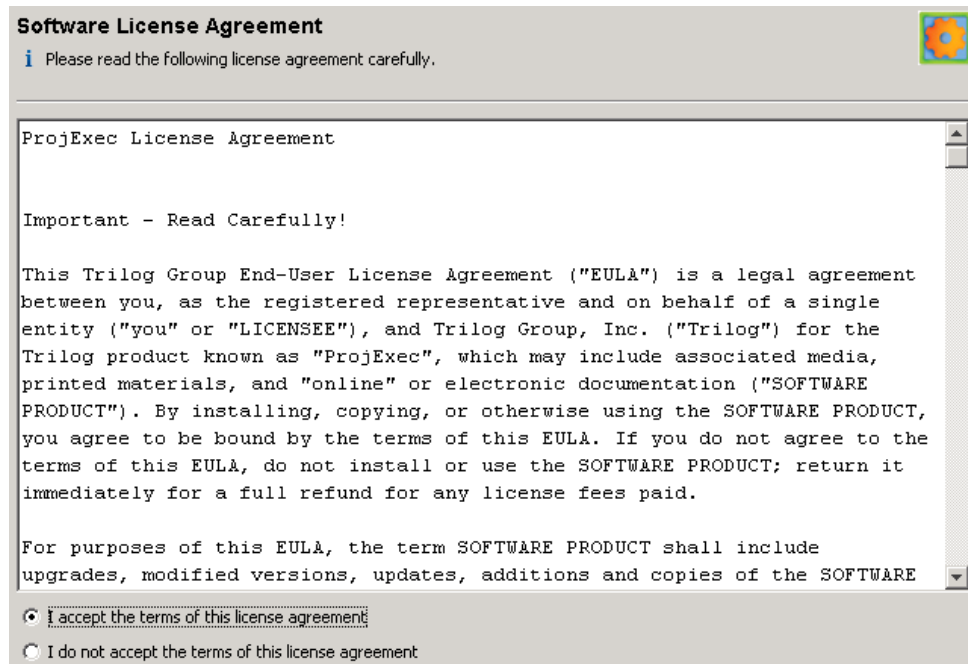
Also the pages of the installer are displayed in the selected language.

Whatever language you selected during the installation, all ProjExec pages will be displayed according to the end-user **browser's preferred language**. If the browser's preferred language is not supported, English will be used.



2.3 Accept Terms of License Agreement

Read the terms and conditions of the ProjExec IBM Connections Edition license agreement. You must agree to the terms of the license agreement to proceed. Select **I accept the terms of this license agreement** and click **Next**.

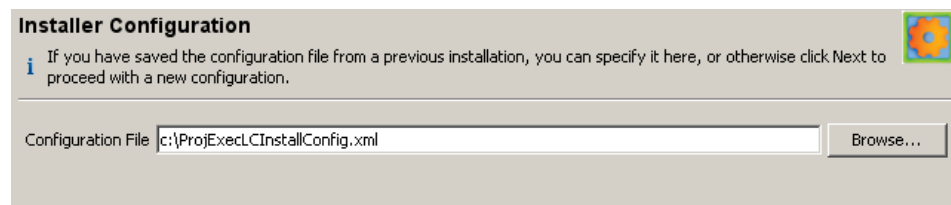


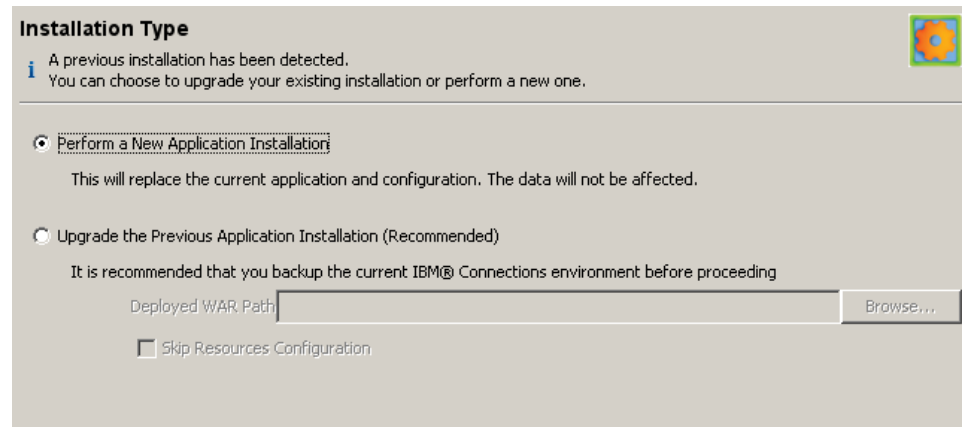
2.4 Choose the Installation Type

At this step, you may choose to perform a new application installation or upgrade the previously installed application,.


Previous Configuration Path:

If you have previously performed an installation and have saved the configuration parameters, enter that path now, otherwise leave blank.





Installation Type

 A previous installation has been detected.
You can choose to upgrade your existing installation or perform a new one.

☒ **Perform a New Application Installation**

This will replace the current application and configuration. The data will not be affected.

☐ **Upgrade the Previous Application Installation (Recommended)**

It is recommended that you backup the current IBM® Connections environment before proceeding

Deployed WAR Path:

☐ Skip Resources Configuration

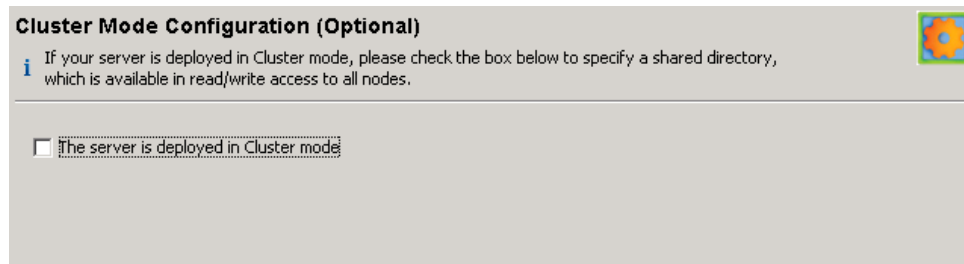
Note that performing a new installation or upgrading an existing one does not affect existing data; however, it will update the user interface and application logic.

2.5 Cluster Mode Configuration (Optional)


Note

If you're deploying in a clustered environment with more than one node, it is necessary to refer to "APPENDIX:CLUSTER RELATED CONFIGURATIONS" for details about different cluster setup scenarios and necessary configuration steps related to ProjExec in a clustered environment.

This step is only necessary if your server is deployed in cluster mode. If you run on a single server don't check the box "the server is deployed in cluster mode" and just go to the next step.



Cluster Mode Configuration (Optional)

 If your server is deployed in Cluster mode, please check the box below to specify a shared directory, which is available in read/write access to all nodes.

☐ **The server is deployed in Cluster mode**

IMPORTANT REMARK:

To install ProjExec on a server deployed in cluster mode, you have to:

1. Install and deploy ProjExec **on the main node** of your cluster with ProjExec installer.

2. Deploy ProjExec on all other nodes.

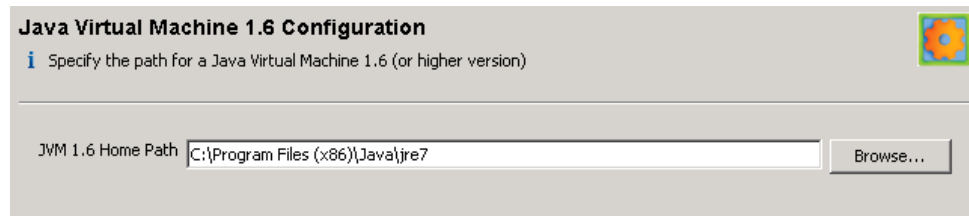
When installing ProjExec on the main node, you have to:

- Check the box as shown on the screen above
- Provide the path to a shared directory that will be accessible with read/write access from all nodes. This directory will be used to share data between the nodes of your cluster.

2.6 JVM 1.6 Access Configuration

Certain features of ProjExec require a Java Virtual Machine 1.6 (or greater) to function correctly. For example, you need JVM 1.6 if you want to import a project schedule in MPP format.

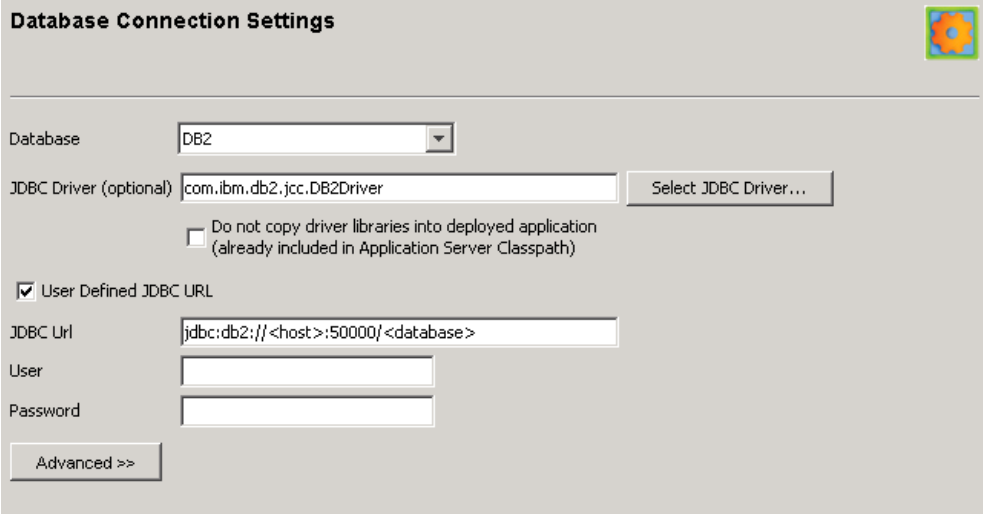
You can specify a path of a JVM1.6 install.



This JVM will be used only for features that require 1.6 and higher such as importing and exporting Microsoft Project file formats.

2.7 Specify and Configure Database

The subsequent series of steps will configure connections to external resources. Each connection is validated when you click **Next**. Beginning with the database connection, you should see a screen like the one below that displays the current default values for the Derby database configuration. You may choose another DBMS from the list available and specify the new parameters as described below.



Database Connection Settings

Database: DB2

JDBC Driver (optional): com.ibm.db2.jcc.DB2Driver Select JDBC Driver...

☐ Do not copy driver libraries into deployed application
(already included in Application Server Classpath)

☒ User Defined JDBC URL

JDBC Url: jdbc:db2://<host>:50000/<database>

User:

Password:

Advanced >>

Database: Database system, which is one of the following:

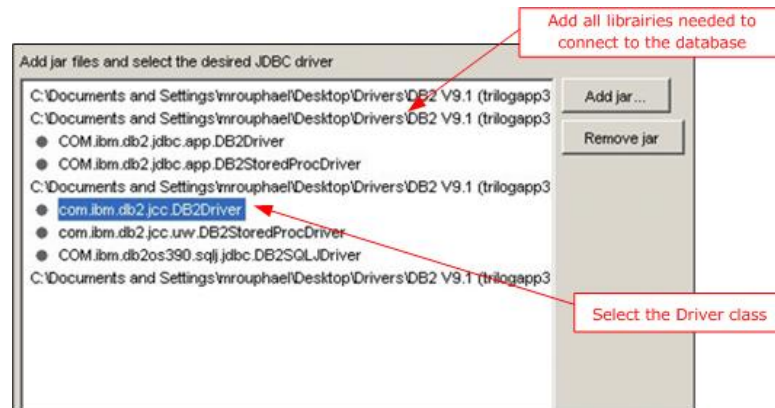
- Derby
- DB2
- Microsoft SQL Server
- Oracle

Note: You must create the ProjExec database in your database system prior to this step. Please refer to Appendix 4-6 for database creation.

Note: In order to use a JNDI Resource configured at WebSphere Application Server level, please complete the installation steps of this chapter, then refer to "Configuring a JNDI Data Source for ProjExec database" in the appendix BEFORE proceeding with ProjExec WAR deployment described in chapter 3.

JDBC driver:

It specifies the vendor JDBC driver class name. You will need to add the jar file containing the JDBC driver class name, along with any other dependency jar files, by clicking on the button labeled **Select JDBC Driver...** After that, select the JDBC driver included in the selected jar file and click on the button labeled **OK** to confirm the selection.



You should check the box "Do not copy driver libraries into deployed application (already included in Application Server Classpath)", if the driver libraries are already included in the JVM classpath of the Application Server. If you check this box, the libraries will not be copied in the deployed ProjExec application.

The following three parameters are displayed with any database system other than Derby

User defined URL: If you know the URL of the JDBC to connect to a database server, check this option and enter the full URL. The server IP address and database name will no longer be needed, because they will be part of the JDBC URL.

Server IP/DNS: Network address of the database server or JDBC server.

Database name: Name of the database. Depending on the database repository, you might need to include the full path of the database name.

JDBC URL The URL of the JDBC to connect to the database server.

User: The user name used to connect to the database server.

Password: Database manager password.

Note that if Derby is the database selected, the URL parameter "create=true" will create an instance of the database automatically if one does not exist when the installation program attempts to establish the database connection.

You must specify a driver Java class and you can add libraries that will be copied to the correct place in the WAR file: You need to specify the JDBC Driver and you may need to add the libraries to access the database.

These libraries are generally **a jar or a zip file**, and one of them contains a java class that is the **driver** to connect to the database through JDBC.

Use the “Select JDBC Drivers” button to:

- Add the libraries
- Select the driver class.

For example, if you are using SQL Server, you can download the JDBC driver from the Microsoft web site:

<http://www.microsoft.com/downloads/en/details.aspx?familyid=99B21B65-E98F-4A61-B811-19912601FDC9&displaylang=en>

After uploading the JDBC driver library, then choose from the list the driver class: "com.microsoft.sqlserver.jdbc.SQLServerDriver"

Note that **DB2** must be configured appropriately before it can be used with ProjExec. Additionally, the proper JDBC driver must be chosen for optimal performance. For more detailed guidelines for DB2 configuration, **refer to the Appendix**.

Note

You **must not** use any of the IBM Connections DB2 databases which is created by default during the Connections installation. You should create a new database dedicated to ProjExec and preferably not in the same DB2 instance as Connections . Refer to the corresponding Appendix for more details to create a new DB2 database

Note

If you are using DB2 V9.7, you must specify `deferPrepares=false` in the JDBC URL.

Example:

`jdbc:db2://myserver:50000/PROJEXEC:deferPrepares=false;`

Furthermore, regardless of which database software is used, the database to which ProjExec will be connected should be configured to support the **UTF-8 codeset**.

Click **Next** to validate the database connection and continue with the installation.

2.8 Specify LDAP Directory Connection

Please indicate settings to connect to your directory.

LDAP Server: Select the directory resource from the list as follows.

- Websphere Directory
- Domino
- IBM Tivoli Directory Server
- Standard LDAP
- XML Directory
- Active Directory

Port: The port number that the LDAP server is listening for. The default is 10031 in case of Websphere Directory and 389 in the other case.

Directory Manager: A super user distinguished name. This user should have read and edit privileges on the LDAP server.

Password: Directory manager password.

Suffixes DN: Enter values for the distinguished name suffix of the directory server. **Add several suffixes if needed. The suffix is important to search for users in LDAP, so please make sure that you have it right.** Values are case-sensitive.

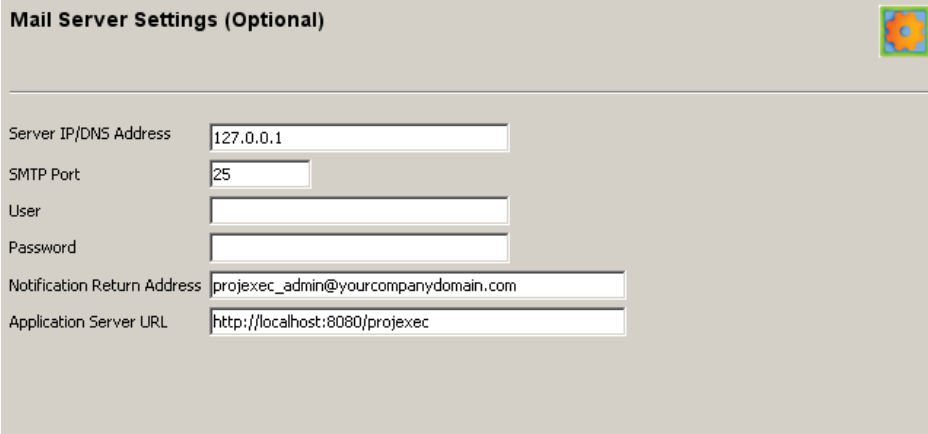
Secure LDAP: Check this option if you are using a Secure LDAP. If you are running SLDAP with a self-signed certificate,

then the SSL certificate and certificate root must be included in the JVM cacert key store prior to running the installer, otherwise the installer will not be able to trust the certificate.

Click **Next** to validate the directory connection and continue with the installation.

2.9 Specify Mail Server

You must specify a mail server so that ProjExec Connections Edition users will receive email notification when new documents or issues are posted for any projects in which users are participating. A screen like the one below is displayed.



Mail Server Settings (Optional)

Server IP/DNS Address	127.0.0.1
SMTP Port	25
User	
Password	
Notification Return Address	projexec_admin@yourcompanydomain.com
Application Server URL	http://localhost:8080/projexec

Specify the path to the corresponding mail server. You must also specify a **Port** and the **User** and **Password** for the mail server.

Notification Return Address: This value sets the return address of emails sent by ProjExec workflow engine. The specified email address must be valid. We recommend to indicate a technical user.

Application Server URL: This value sets the URL link to your Connections Server. This address will be appended to all emails notifications.

This value can be used as the reverse proxy URL in case you have a cluster mode configuration.

To modify this value after installation, you can edit it in the file `projexec.fbserver` located in the root of the deployed WAR file (under the `projexec.war` directory).

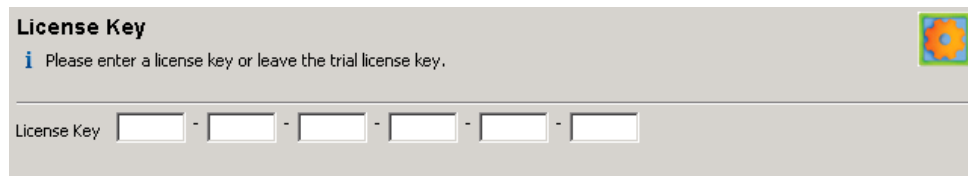
If you do not choose a valid mail server, you may proceed with the installation, but notifications from ProjExec will not be sent. If you do choose a correctly configured mail server, the **Notification Return Address** value is mandatory. **Please ensure that the SMTP mail server that you choose is configured to authorize relay from the IP addresses used by all the IBM Connections nodes.**

Click **Next** to continue with the installation.

2.10 Enter License Key

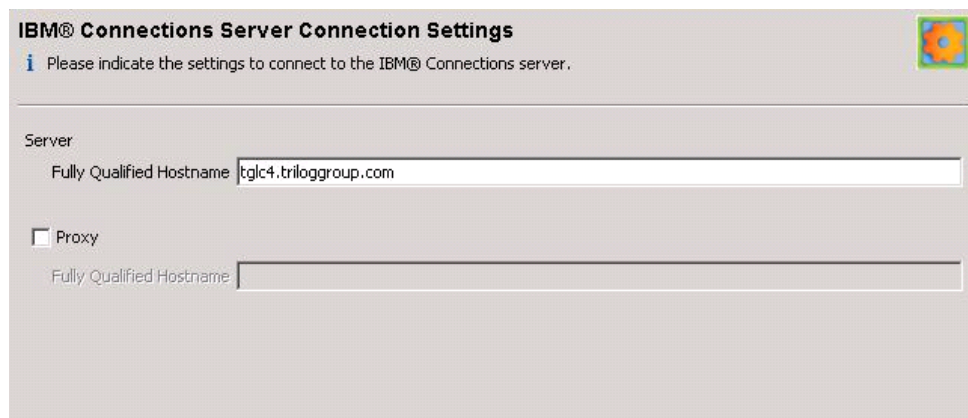
If you have purchased a license, please enter its key in the provided fields.

If you leave the license key empty, ProjExec will be installed with a trial license. In this case you will be able to use the application for a period of 30 days starting from the installation date, with the maximum of 20 users.



2.11 IBM Connections Server Settings

The next step is to configure the IBM Connections Server settings.



The fully qualified hostname of the IBM connections server should be specified and if a proxy is configured, the proxy checkbox should be selected and the fully qualified hostname of the proxy should be filled as well.

Since some requests coming from a client machine arrive through a proxy and

other requests come from the server machine behind the proxy, the URL can be different depending on the requests' origin.

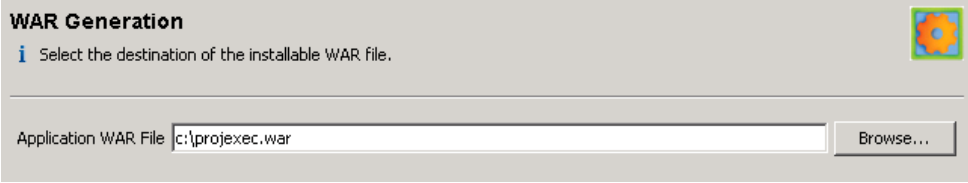
Note that the connection settings may be identical for both Server and Proxy if the proxy is accessible to the Server, so Server to Server communications will also be proxied in this case.

The connection settings are stored in the file **projexec_config.properties**. You can customize these settings after installation if necessary. Please refer to Appendix 8 section 8.3 for details on updating ProjExec after changing this file. This file is located in the WEB-INF subdirectory of the generated projexec.war file.

Click **Next** to continue.

2.12 Choose WAR file location

The output of the ProjExec Installer process is a WebSphere deployable war file called projexec.war by default. Please enter the location where you would like this file to be created.



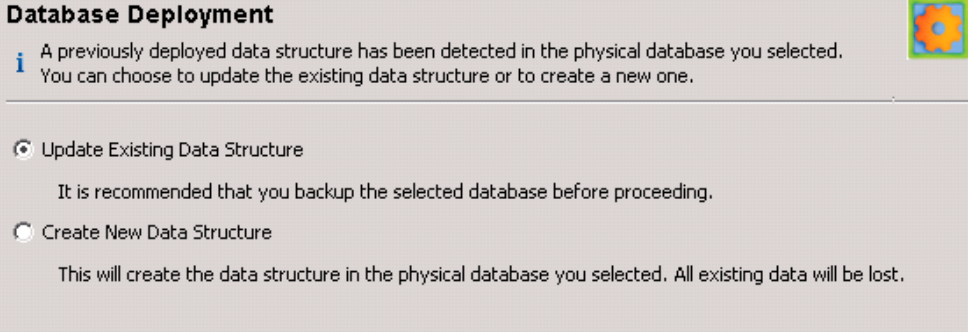
WAR Generation

Select the destination of the installable WAR file.

Application WAR File

2.13 Deploy Selected Database

This step creates or updates the data structure of the physical database and imports initial data values.



Database Deployment

A previously deployed data structure has been detected in the physical database you selected. You can choose to update the existing data structure or to create a new one.

☒ Update Existing Data Structure
It is recommended that you backup the selected database before proceeding.

☐ Create New Data Structure
This will create the data structure in the physical database you selected. All existing data will be lost.

If you have previously installed ProjExec and wish to retain your existing data, select the radio button labeled ***Update Existing Data Structure***. Otherwise,

select the radio button labeled **Create New Data Structure**. If you choose this option, all the data that exists in the database will be deleted.

Click **Next** to deploy the database.

2.14 Add ProjExec Administrator

This step will select or create the user(s) who will be the Administrator for ProjExec. **ProjExec Administrators** are allowed to access all features and data and to define ProjExec global settings. You may choose a user from your directory or create new users.

We recommend to select a technical user as ProjExec administrator.

Note

All ProjExec users must have valid email addresses.

To choose an existing user, check the radio button **“Select an existing user”** and click **Search**. Note that the search is case sensitive and users are displayed with their first name and last name. For example, to search for “Philip Collins”, enter “P” and press “Enter”. **If the Search does not retrieve users that you know exist in the LDAP directory, the suffix (or suffixes) specified earlier in the LDAP configuration may have been specified incorrectly.**

ProjExec® Administrator

Please select administrative user for ProjExec®

☐ Keep current Administrator

No User

☒ Select an existing User

Common Name

User ID

☐ Create a new User

First Name

Last Name

User ID

Email

Password

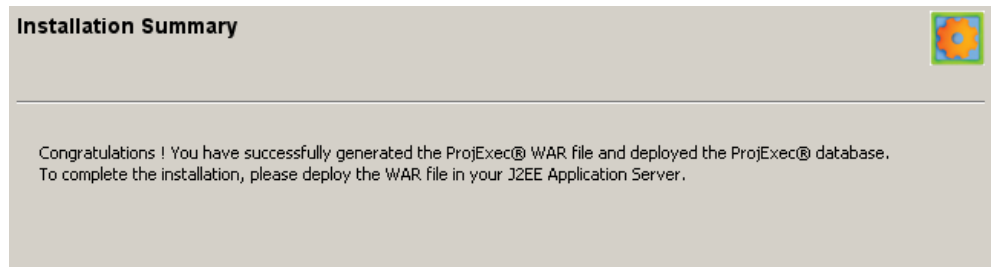
Confirm Password

To create a new user, check the radio button labeled **“Create a new user”** and enter the **First Name, Last Name, User ID , Email** and **Password** for the new user in the panel as shown below. Password confirmation is also required. The new user will be created in the LDAP directory.

Click **Next** to continue.

2.15 Installation Summary

The summary confirms that the installer has completed properly.



Click **Finish** to complete the installer process. However, at this point **the installation is not complete.**

Now you must install the ProjExec application onto the IBM Connections platform.

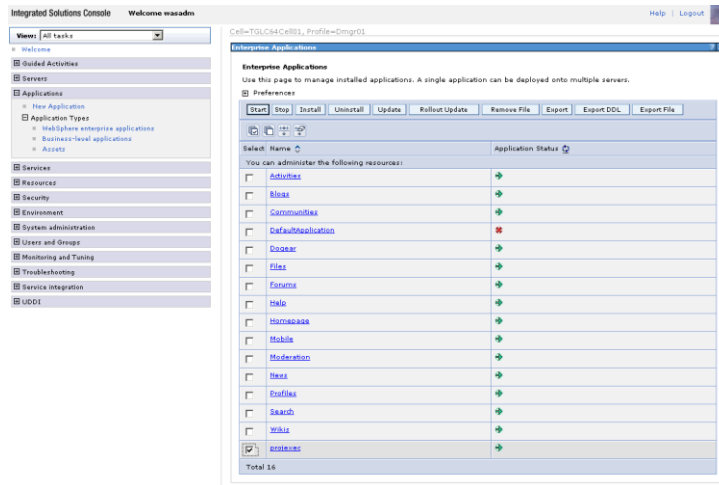
3 Installing the ProjExec Application on IBM Connections (WebSphere Deployment)

This chapter provides the instructions necessary to deploy the ProjExec WAR file on the Connections Server, and then to enable access to the ProjExec application by customizing the Connections Apps menu in the top navigation bar.

3.1 Access the Integrated Solutions Console

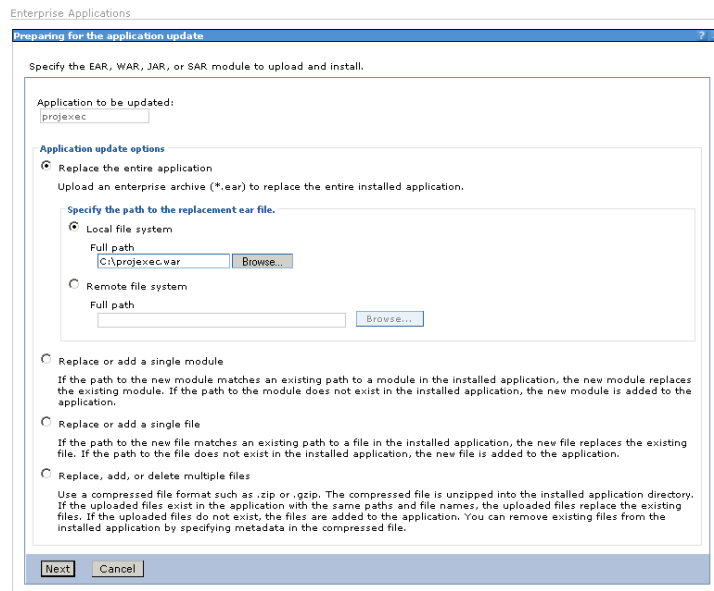
First, go to the integrated solutions console on IBM Connections. This is usually found at: <https://connectionserverhostname:9043/admin>, or it may be accessible from the menu Start->All Programs->IBM Websphere-> Application Server network Deployment-> Profiles->Dmgr01-> Administrative Console.

Open the Applications pane, and click “New Application” (if you are upgrading ProjExec, check the box next to ProjExec and click the “Update” button).



3.2 Uploading the ProjExec War File

First, specify the Path to the replacement .ear file (the .war file you created in chapter 2):



Click **Next**.

Next, Select “Detailed” (needed later)

Enterprise Applications

Preparing for the application update

How do you want to install the application?

☐ Fast Path - Prompt only when additional information is required.

☒ Detailed - Show all installation options and parameters.

Specify bindings to use

merge new and existing bindings ▼

☒ Choose to generate default bindings and mappings

Previous Next Cancel

Click **Next**.

The application security warnings pane will be displayed.

Enterprise Applications

Application Security Warnings

Specify the resulting security warnings from an analysis of this application.

The contents of the was.policy file -

```
// Template policy file for enterprise application. // Extra permissions can be added if required by the enterprise application. // NOTE: Syntax errors in the
policy file will cause the enterprise application to fail to start. // Extreme care should be taken when editing these policy files. It is advised to use the policy
provided by the JSC for editing the policy files // (WAS_HOME)/java/bin/policytool // grant codebase "file:${application}" {}; grant codebase
"file:${app}" {}; grant codebase "file:${connectorComponent}" {}; grant codebase "file:${webComponent}" {}; grant codebase "file:${servletComponent}" {};
```

Continue Cancel

Click **Continue**.

3.3 Configuring ProjExec on Websphere

You now must complete the application configuration wizard on Websphere.

Step 1. ensure that you select the options as shown in the image below:

Install New Application

Specify options for installing enterprise applications and modules.

→ Step 1: Select installation options

Step 2: Map modules to servers

Step 3: Provide JSP reloading options for Web modules

Step 4: Map shared libraries

Step 5: Map shared library relationships

Step 6: Initialize parameters for servlets

Step 7: Map virtual hosts for Web modules

Step 8: Map context roots for Web modules

Step 9: Map security roles to users or groups

Step 10: Summary

Select installation options

Specify the various options that are available to prepare and install your application.

☐ Precompile JavaServer Pages files

Directory to install application
\${APP_INSTALL_ROOT}/T

☒ Distribute application

☐ Use Binary Configuration

☐ Deploy enterprise beans

☒ Create MBeans for resources

☐ Override class reloading settings for Web and EJB modules

Reload interval in seconds
[]

☐ Deploy Web services

Validate input off/warn/fail
[warn]

☐ Process embedded configuration

File Permission

Allow all files to be read but not written to
Allow executables to execute
Allow HTML and image files to be read by everyone

.*:dlm=755#.*:co=755#.*:a=755#.*:s=755

Application Build ID
Unknown

☐ Allow dispatching includes to remote resources

☐ Allow servicing includes from remote resources

Asynchronous Request Dispatch Type
[Disabled]

☐ Allow EJB reference targets to resolve automatically

Next Cancel

Click **Next**.

Step 2. Module Mapping **THIS IS A VERY IMPORTANT CONFIGURATION STEP THAT IS OFTEN MISSED.** Check the box to select ProjExec, then in the multiple selection listbox above, select to map the module to the Cluster AND the WebServer Node. Click Apply.

Cell=TGLC64Cell01, Profile=Dmgr01

Install New Application

Specify options for installing enterprise applications and modules.

→ Step 2: Map modules to servers

Step 1: Select installation options

Step 3: Provide JSP reloading options for Web modules

Step 4: Map shared libraries

Step 5: Map shared library relationships

Step 6: Initialize parameters for servlets

Step 7: Map virtual hosts for Web modules

Step 8: Map context roots for Web modules

Step 9: Map security roles to users or groups

Step 10: Summary

Map modules to servers

Specify targets such as application servers or clusters of application servers where you want to install the modules that are contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Also, specify the Web servers as targets that serve as routers for requests to this application. The plug-in configuration file (plugin-dp.xml) for each Web server is generated, based on the applications that are routed through.

Clusters and servers:
WebSphere:cell=TGLC64Cell01,dst=tp64Clust
WebSphere:cell=TGLC64Cell01,node=webserver2,node=webserver1
WebSphere:cell=TGLC64Cell01,node=webserver1,node=webserver1

Apply

Select	Module	URI	Server
<input type="checkbox"/>	ProjExec	projexec.var.WEB-INF/web.xml	WebSphere:cell=TGLC64Cell01,node=webserver2,node=webserver1,WebSphere:cell=TGLC64Cell01,dst=tp64Clust

Previous Next Cancel

Click **Next**.

Step 3. JSP Reloading options (No action required)

The screenshot shows the 'Install New Application' wizard at Step 3. The left sidebar lists steps 1 through 10, with Step 3 highlighted. The main panel is titled 'Provide JSP reloading options for Web modules'. It contains a table for specifying JSP reloading attributes per module.

Web module	URI	JSP enable class reloading	JSP reload interval in seconds
ProjExec	projexec.war,WEB-INF/web.xml	<input checked="" type="checkbox"/>	10

Buttons at the bottom: Previous, Next, Cancel.

Click **Next**.

Step 4. Shared library mapping (No action required)

The screenshot shows the 'Install New Application' wizard at Step 4. The left sidebar lists steps 1 through 10, with Step 4 highlighted. The main panel is titled 'Map shared libraries'. It contains a table for specifying shared libraries that the application or individual modules reference.

Select	Application	URI	Shared Libraries
<input type="checkbox"/>	projexec	META-INF/application.xml	

Select	Module	URI	Shared Libraries
<input type="checkbox"/>	ProjExec	projexec.war,WEB-INF/web.xml	

Buttons at the bottom: Previous, Next, Cancel.

Click **Next**.

Step 5. Shared library relationships (No action required)

Step 1. Select installation options

Step 2. Map modules to servers

Step 3. Provide JSP reloading options for Web modules

Step 4. Map shared libraries

→ Step 5. Map shared library relationships

Step 6. Initialize parameters for servlets

Step 7. Map virtual hosts for Web modules

Step 8. Map context roots for Web modules

Step 9. Map security roles to users or groups

Step 10. Summary

Specify options for installing enterprise applications and modules.

Map shared library relationships

Specify asset or composition unit IDs as shared libraries that the application or individual modules reference. If a composition unit ID is specified, it must be part of the business level application that this enterprise application belongs to. If an asset ID is specified, a composition unit is created from the asset. When editing an application, only composition unit IDs can be specified as shared libraries.

Reference shared libraries

Select	Application	URI	Asset or composition unit IDs	Match target
<input type="checkbox"/>	projexec	META-INF/application.xml		<input checked="" type="checkbox"/>
Select	Module	URI	Asset or composition unit IDs	Match target
<input type="checkbox"/>	ProjExec	projexec.war,WEB-INF/web.xml		<input checked="" type="checkbox"/>

Previous

Next

Cancel

Click **Next**.

Step 6. Set servlet parameters.

Step 1. Select installation options

Step 2. Map modules to servers

Step 3. Provide JSP reloading options for web modules

Step 4. Map shared libraries

Step 5. Map shared library relationships

→ Step 6. Initialize parameters for servlets

Step 7. Map virtual hosts for Web modules

Step 8. Map context roots for Web modules

Step 9. Map security roles to users or groups

Step 10. Summary

Specify options for installing enterprise applications and modules.

Initialize parameters for servlets

Servlet's initial parameter defined in the deployment descriptor can be edited.

Web module	URI	Servlet	Name	Description	Value
ProjExec	projexec.war,WEB-INF/web.xml	SOAPMonitorService	SOAPMonitorPort		5005
ProjExec	projexec.war,WEB-INF/web.xml	xpservlet	flowbuilderrender		[total]
ProjExec	projexec.war,WEB-INF/web.xml	xpservlet	autoreload		true

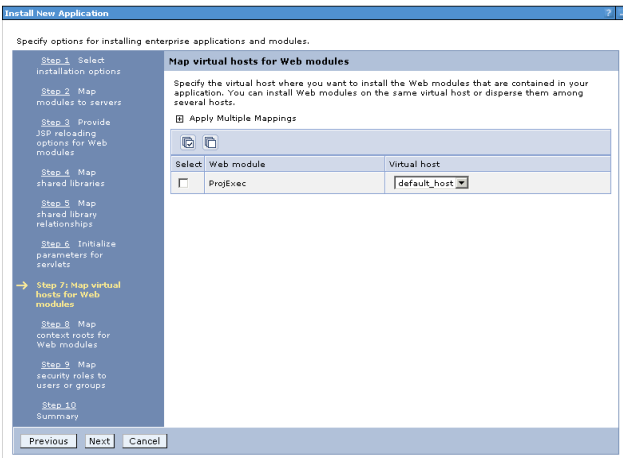
Previous

Next

Cancel

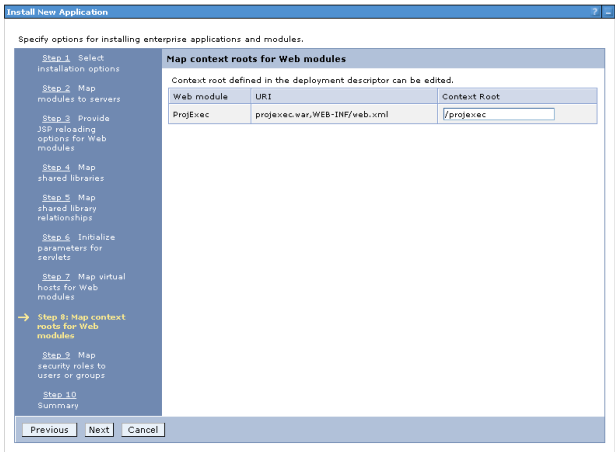
Click **Next**.

Step 7. Map virtual hosts as required.



Click **Next**.

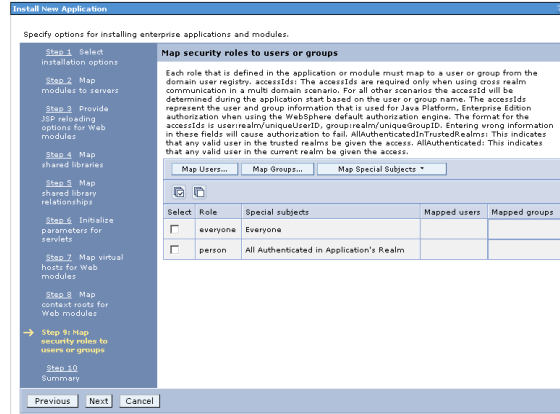
Step 8. Set the context root for ProjExec to /projexec



Click **Next**.

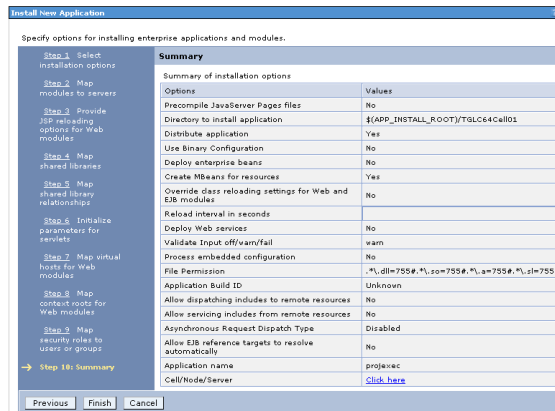
Step 9. Mapping security roles.

Ensure that ‘everyone’ and ‘person’ roles are mapped respectively to ‘Everyone’ and ‘All Authenticated in Application’s Realm’.



Click **Next**.

Step 10. The installation summary page is displayed.



Click **Finish**. Then click save.

After the application installation has completed successfully, Synchronize Websphere nodes (From System Administration->Nodes, select the node(s) to synchronize and click on Full Resynchronize)

3.4 Adding access to the ProjExec application by customizing the IBM Connections user interface

The purpose of this step is to enable Connections users to access the ProjExec application. The following is an example of the suggested customization to add access to ProjExec through the Apps menu in the top navigation bar.

To include a Projects menu link to ProjExec in the Connections apps menu, do the following (you should translate the labels to your own language or take translation into account)

- a) Copy the file:

```
...\WebSphere\AppServer\profiles\<node>\installedApps\<cell>\Homepage.ear\homepage.war\nav\templates\menu\apps.jsp
```

to the folder

```
...\Connections\data\shared\customization\common\nav\templates\menu.
```

where ... \Connections\data\shared\customization is the default customization path for Connections. In a clustered environment, you should check the WebSphere Environment variable called CONNECTIONS_CUSTOMIZATION_PATH as it may be pointing to a different drive (generally the shared drive of the cluster).

- b) Edit the file **apps.jsp** and include the following block of code just above the string **Activities**:

Projects

```
--%><tr><%--

--%><th scope="row" class="lotusNowrap"><%--

--%><%--

--%><a href="/projexec/projexec/pe_main.xsp"><%--

--%><strong>Projects</strong><%--

--%></a><%--

--%></th><%--
--%><td class="lotusNowrap"><%--

--%><a
href="/projexec/projexec/pe_main.xsp?pepage=myprojects"><%--

--%>My Projects<%--

--%></a><%--

--%></td><%--

--%><td class="lotusNowrap lotusLastCell"><%--

--%><a
href="/projexec/projexec/pe_main.xsp?pepage=myportfolios"><%--

--%>My Portfolios<%--
--%></a><%--

--%></td><%--

--%></tr><%--
```

- c) If you want to restrict the users of ProjExec to a certain group of users from your LDAP directory, please copy and paste the sections in blue into your apps.jsp file based on the example apps.jsp below. Please also note that the group name should contain "projexec" as configured in the current provided code sample, but you can customize the group name or test membership against several groups by customizing the commented line `if(g.contains("projexec"))`:

The <lc-ui:serviceLink /> tag can be used to generate links to any service defined in LotusConnections-config.xml.

```
--%>
<%!
    public static boolean hasProjExecRole() {
        try {
            java.util.Set creds =
com.ibm.websphere.security.auth.WSSubject.getCallerSubje
ct().getPublicCredentials(com.ibm.websphere.security.cred
d.WSCredential.class);
            for(Object _c: creds) {
                com.ibm.websphere.security.cred.WSCredential
c = (com.ibm.websphere.security.cred.WSCredential)_c;
                java.util.List groups = c.getGroupIds();
                for(int i=0; i<groups.size(); i++) {
                    String g = groups.get(i).toString();
                    if(g.contains("projexec")) { //You can
customize the group name or test membership against
several groups.
                        return true;
                    }
                }
            }
        } catch(Exception ex) {
            ex.printStackTrace();
        }
        return false;
    }
}
%>
```

```
<div role="document"><table class="lotusLayout
lotusNavMenuLarge" cellpadding="0" cellspacing="0"><%--
```

Projects

```
--%><c:if test="<%=hasProjExecRole() %>"><%--
--%><tr><%--
--%><th scope="row" class="lotusNowrap"><%--
--%><%--
--%><a
href="/projexec/projexec/pe_main.xsp"><%--
--%><strong>Projects</strong><%--
--%></a><%--
--%></th><%--

--%><td class="lotusNowrap"><%--
--%><a
href="/projexec/projexec/pe_main.xsp?pepage=myprojects">
<%--
--%>My Projects<%--
--%></a><%--
```

```

--%></td><%--
--%><td class="lotusNowrap lotusLastCell"><%--
--%><a
href="/projexec/projexec/pe_main.xsp?pepage=myportfolios
"><%--
--%>My Portfolios<%--
--%></a><%--
--%></td><%--
--%></tr><%--
--%></c:if><%--
Activities

```

- d) Restart the cluster server

Troubleshooting: If the Projects link doesn't appear in the menu, then make sure to empty your browser cache and retry. If the ProjExec icon still doesn't appear, then the most likely cause would be that the apps.jsp file wasn't placed in the correct folder. Please double check that the file has been placed in the correct path with the right folder structure as specified above in step a) If the Projects link appears without the icon, this may mean that the ProjExec application is not started or the deployment

3.5 Configure Class Loader

After WAR deployment, you have to configure the classloader option for both the deployed application and the module.

From the Websphere Administration Console's menu, go to

Applications->Application types-> Websphere Enterprise Applications

- click on projexec application
- click on "classloading and update detection" then select the option "Classes loaded with local class loader first (parent last)"
- Then go back to the projexec application and click on "manage modules" then click on projexec application in the list and select "Parent last" under "class loader order".

3.6 Allow ProjExec to invoke the Connections REST API over SSL

If your server is accessed through HTTPS, you need to configure the following to allow ProjExec to access the Connections REST API using HTTPS.

To avoid "java.lang.ClassNotFoundException: Cannot find the specified class com.ibm.websphere.ssl.protocol.SSLSocketFactory:

- Edit

C:\IBM\WebSphere\AppServer\java\jre\lib\security\java.security file

- Change the ssl provider properties as follows (use com.ibm.jsse2 classes instead of com.ibm.websphere.ssl):

Default JSSE socket factories

ssl.SocketFactory.provider=com.ibm.jsse2.SSLSocketFactoryImpl

ssl.ServerSocketFactory.provider=com.ibm.jsse2.SSLServerSocketFactoryImpl

WebSphere socket factories (in cryptosf.jar)

#ssl.SocketFactory.provider=com.ibm.websphere.ssl.protocol.SSLSocketFactory

#ssl.ServerSocketFactory.provider=com.ibm.websphere.ssl.protocol.SSLServerSocketFactory

- Save file

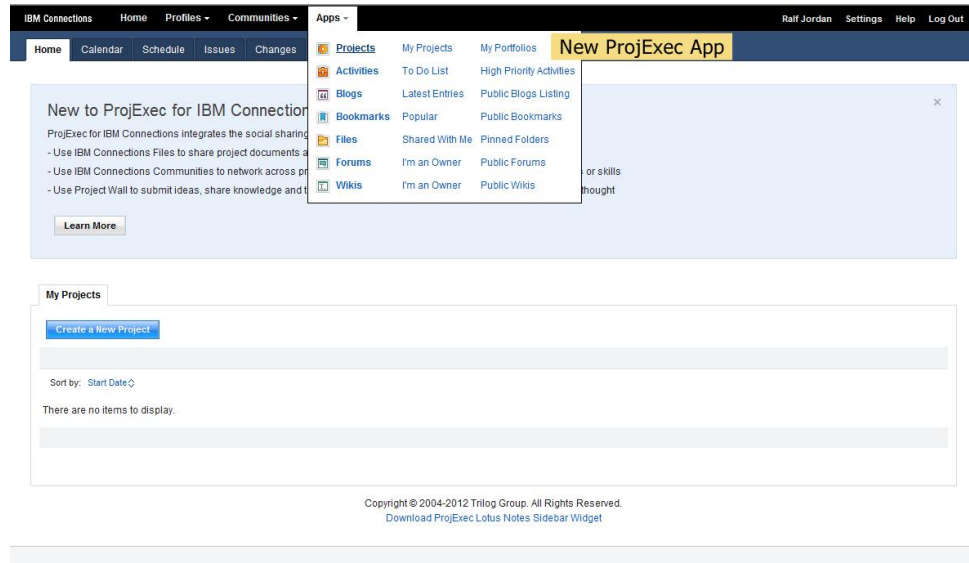
- Restart server

3.7

3.8 Testing the Installation

The purpose of this final step is to insure that the installation process has successfully installed ProjExec. Log in to IBM Connections workspace using the **ProjExec Administrator** user name and password.

You should see “Projects | My Projects | My Portfolios” listed under the apps menu. Click on the My Projects link then click on the Create Project button to create your first project.



ProjExec Administrators should have access to the Site Settings and Global Settings tabs (last two tabs on the right, hidden for other users) and there is no need to create a first project to access these tabs. Please refer to the ProjExec Administrator Guide for more information.

3.9 Add/Enable ProjExec Widgets and Gadgets

1- Register ProjExec Gadgets in Activity Stream Service

- Locate the file registerProjExecGadgets.py under
...\\WebSphere\\AppServer\\profiles\\<node>\\installedApps\\<cell>\\projexec_war.ear\\projexec_war\\opensocialGadgets\\python
- edit the registerProjExecGadgets.py file and replace all occurrences of YOURSERVERNAME with the fully qualified hostname of your server (for example: lc45.triloggroup.com)

- Copy the resulting file on a drive root to make the path to the file shorter.

- On the server open a DOS window command (or equivalent on other OS).
- Go to Connections Dmgr bin directory:

```
cd D:\\IBM\\WebSphere\\AppServer\\profiles\\Dmgr01\\bin
```

- run the following command replacing YOURWASADMIN and YOURWASPASS by your WebSphere Console Admin/pass :

```
wsadmin -lang jython -user YOURWASADMIN -password YOURWASPASS -port 8879
```

- run the command: **execfile("newsAdmin.py")**

- then run the registerProjExecGadgets.py script replacing "PATH" by the correct path to the registerProjExecGadgets.py that you copied, by running the command:

```
execfile("PATH\\registerProjExecGadgets.py")
```

2-Add ProjExec NLS Resources Bundle to Connections

- Locate the file peWidgetResources.zip under
`...\\WebSphere\\AppServer\\profiles\\<node>\\installedApps\\<cell>\\projexec_war.ear\\projexec_war\\opensocialGadgets\\iWidgets\\`
- Extract peWidgetResources.zip in
`%CONNECTIONS_CUSTOMIZATION_PATH%\\strings` directory
(ex: `c:\\IBM\\Connections\\data\\shared\\customization\\strings`)
- On the server open a DOS window command (or equivalent on other OS)
- Go to the WebSphere Dmgr\\bin directory
`cd c:\\IBM\\WebSphere\\AppServer\\profiles\\Dmgr01\\bin`
- Enter following command with right user/pwd
`wsadmin -lang jython -user WASADMIN -password WASPASSWORD -port 8879`
- Enter the following command with the right output directory path and the right server cell name
`execfile("connectionsConfig.py")`
`LCConfigService.checkOutConfig("c:/temp", "CellName")`
- Edit the LotusConnections-config.xml file that was checked out to the `c:/temp` directory
- Add in the `<resources>` tag the following sub tag:
`<widgetBundle name="com.projexec.resources" prefix="projexec"/>`
- In wsadmin command launch the following command with the right path and the cell name
`LCConfigService.checkInConfig("c:/temp", "CellName")`

3-Enable adding ProjExec Widgets to Community

This step allows users to add the ProjExec widgets to their community using the Customize menu

- On the server open a DOS window command (or equivalent on other OS)
- Go to the WebSphere Dmgr\\bin directory
`cd c:\\IBM\\WebSphere\\AppServer\\profiles\\Dmgr01\\bin`
- Enter the following command with right user/pwd
`wsadmin -lang jython -user WASADMIN -password WASPASSWORD -port 8879`

- Enter the following command with the right output directory path and the right server cell name

```
execfile("communitiesAdmin.py")
CommunitiesConfigService.checkOutWidgetsConfig("c:/temp",
"CellName")
```

- Edit the widgets-config.xml file that was checked out into the c:/temp directory

- Open the peCommunityWidgetDef.xml file located under
...\\WebSphere\\AppServer\\profiles\\<node>\\installedApps\\<cell>\\projexec_war.ear\\projexec.war\\opensocialGadgets\\iWidgets\\

- Copy all 3 <widgetDef> sections from the peCommunityWidgetDef.xml file.

In the widgets-config.xml search for: type="community"

Paste the 3 <widgetDef> sections under <definitions> as highlighted below

```
</widgets>
</resource>
<resource type="community"
aclServiceImpl="com.ibm.lconn.comm.acl.ACLSvcImpl"
resourceValuesProvider="com.ibm.tango.internal.service.CommunitiesResourceValuesProvider"
xpathMandatedWidgetForMainPage="/tns:config/tns:resource
[@type='community']/tns:widgets/tns:layout/tns:page[@pageId =
'communityOverview']">
  <widgets xmlns:tns="http://www.ibm.com/widgets-config">
    <definitions>
      <!-- Insert ProjExec Widgets here -->
      <widgetDef defId="Members" primaryWidget="false"
modes="view fullpage" showInPalette="false" uniqueInstance="true"
url="{webresourcesSvcRef}/web/lconn.comm/communityMembers/communityMembers.xml?etag={version}"
helpLink="{helpSvcRef}/topic/com.ibm.lotus.connections.communities.help
"
```

- On the wsadmin command line, enter the following command with the right path and cell name

```
CommunitiesConfigService.checkInWidgetsConfig("c:/temp", "CellName")
```

- Restart the Connections cluster

- Clear browser cache

4- Enable ProjExec Gadgets for Embedded Experience

- Login to Connections as **Administrator** and go to **Home/Administration** page
- For each gadget click on **Add another widget** button at the bottom right of the page
- For Project Wall enter the following values

Widget Type: Open Social Gadget

Security: Trusted / Use SSO

UI Integration points: Check Show for Activity stream events

Server Access via Proxy: All Servers

Widget Title: Project Wall

URL Address:

http://YOURSERVERNAME/projexec/opensocialGadgets/peWallEEGadget.xml

Secure URL Address:

https://YOURSERVERNAME/projexec/opensocialGadgets/peWallEEGadget.xml

Icon URL: http://YOURSERVERNAME/projexec/projexec.png

Icon Secure URL: https://YOURSERVERNAME/projexec/projexec.png

Check the following prerequisites: communities, personTag, opensocial

- For Project Health enter the following values

Widget Type: Open Social Gadget

Security: Trusted / Use SSO

UI Integration points: Check Show for Activity stream events

Server Access via Proxy: All Servers

Widget Title: Project Progress Update

URL Address:

http://YOURSERVERNAME/projexec/opensocialGadgets/pePrjHealthEEGadget.xml

Secure URL Address:

https://YOURSERVERNAME/projexec/opensocialGadgets/pePrjHealthEEGadget.xml

Icon URL: http://YOURSERVERNAME/projexec/projexec.png

Icon Secure URL: https://YOURSERVERNAME/projexec/projexec.png

Check the following prerequisites: communities, personTag, opensocial

- For Project Summary enter the following values

Widget Type: Open Social Gadget

Security: Trusted / Use SSO

UI Integration points: Check Show for Activity stream events

Server Access via Proxy: All Servers

Widget Title: Project Creation

URL Address:

http://YOURSERVERNAME/projexec/opensocialGadgets/pePrjEEGadget.xml

Secure URL Address:

https://YOURSERVERNAME/projexec/opensocialGadgets/pePrjEEGadget.xml

Icon URL: http://YOURSERVERNAME/projexec/projexec.png

Icon Secure URL: https://YOURSERVERNAME/projexec/projexec.png

Check the following prerequisites: communities, personTag, opensocial

- Select the registered gadget and click on Enable button

- Do it for each gadget and finally click on Refresh Cache button

5-Enable adding ProjExec Widgets to Home Page

- Login to Connections as Home administrator
- Go to Home tab and then Administration page

- For each widget (Project Dashboard, Project Wall, Project List) click on **Add another widget** button at the bottom right of the page

- For Project Dashboard, fill the widget form with following values (with correct server hostname):
 - Widget Title:** Project Dashboard
 - URL Address:**
http://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/peIWidget.xml
 - Secure URL Address:**
https://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/peIWidget.xml
 - Icon URL:**
http://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/projexecBW.png
 - Icon Secure URL:**
https://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/projexecBW.png
 - Select **Display on the Widgets page** (In connections 4.5 select "**Display on My Page**")
 - Select **Display on the Updates page**
 - And click Save

- For Project Wall, fill the widget form with following values:
 - Widget Title:** Project Wall
 - URL Address:**
http://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/peWallWidget.xml
 - Secure URL Address:**
https://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/peWallWidget.xml
 - Icon URL:**
http://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/projexecBW.png
 - Icon Secure URL:**
https://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/projexecBW.png
 - Select **Display on the Widgets page** (In Connections 4.5 select "**Display on My Page**")
 - Select **Display on the Updates page**
 - And click Save

- For Project List, fill the widget form with following values:
 - Widget Title:** Project List

URL Address:

<http://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/peProjectsIWidget.xml>

Secure URL Address:

<https://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/peProjectsIWidget.xml>

Icon URL:

<http://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/projexecBW.png>

Icon Secure URL:

<https://YOURSERVERNAME/projexec/opensocialGadgets/iWidgets/projexecBW.png>

Select **Display on the Widgets page** (In Connections 4.5 select "**Display on My Page**")

Select **Display on the Updates page**

And click Save

- Select the widgets in the list and click on **Enabled** then **Refresh Cache**

Any user can go to connections Home/My Page and add the widget by clicking on customize link (in top right corner)

Summary:

A Community owner can now add a ProjExec Widget to a Community page by clicking on the Customize link in the Community Actions menu (available when on the Community Overview page).

Note:

- When added to a Community, a ProjExec widget will only display to the user his project data for projects that he's a member of AND that are part of the community.

- When added to the Home Page, a ProjExec widget will display to the user all his project data for projects that he's a member of across all communities.

3.10 Adding ProjExec to the Connections Mobile App (Optional)

The ProjExec Mobile app is accessible as a standalone by entering YOURSERVERNAME/projexec on your mobile device browser. However, it is a time saver to open the ProjExec Mobile app directly from the Connections mobile app by adding Projects to the Connections mobile app menu.

To add "Projects" to the Connections mobile application menu please follow the steps below:

1. Open command prompt and browser to the the deployment manager\bin folder (example: "d:\IBM\Websphere\Appserver\Profiles\Dmgr01\bin" then connect to wsadmin on the SOAP port using jython by running the following command:

```
wsadmin YourServerFQHN -lang jython -username YOURUSER -password YOURPASS -port 8879
```

```
example: (wsadmin ic4.yourdomain.com -lang jython -username WASADMIN -password WASPASSWORD -port 8879
```

2. Connect to the mobile administration by running the command:

```
execfile("mobileAdmin.py")
```

3. Checkout the mobile-config.xml configuration file to a temporary folder by running the command where "dir" is the temporary directory and "cell" is the name of your deployment cell name:

```
MobileConfigService.checkOutConfig("dir","cell")
```

```
(example: MobileConfigService.checkOutconfig("c:\ICTemp","IC4Cell01")
```

make changes to file as described below then check-in using the command

```
MobileConfigService.checkInConfig()
```

```
exit wsadmin
```

```
sync all nodes
```

```
restart cluster
```

```
-----changes to do in mobile-config.xml-----
```

1. Open the file: mobile-config.xml for editing,

find the section "<!-- EXTENSIBILITY SECTION -->",

then find at the end of this section the tags:

```
<applications> </applications>
```

then add inside this tag the following (replacing YOURSERVERNAME with the FQHN to your connections server (example: connections.triloggroup.com):

```
<Application name="ProjExec" enabled="true">
```

```
  <ApplicationIcon>
```

```
    <Android>
```

```
      <Hdpi>/images/projexec_gray_48.jpg</Hdpi>
```

```
      <Mdpi>/images/projexec_gray_24.jpg</Mdpi>
```

```
      <Ldpi>/images/projexec_gray_16.jpg</Ldpi>
```

```
    </Android>
```

```
  <IOS>
```

```
    <Reg>/images/projexec_gray_48.jpg</Reg>
```

```
    <Retina>/images/projexec_gray_48.jpg</Retina>
```

```
  </IOS>
```

```
  <BB>
```

```
    <HighDensity>/images/projexec_gray_48.jpg</HighDensity>
```

```
    <MedDensity>/images/projexec_gray_24.jpg</MedDensity>
```

```
    <LowDensity>/images/projexec_gray_16.jpg</LowDensity>
```

```
  </BB>
```

```
<DefaultLocation>/images/projexec_gray_48.jpg</DefaultLocation>
```

```
</ApplicationIcon>
```

```
<ApplicationLabel>Projects</ApplicationLabel>
```

```
<ApplicationURL>http://YOURSERVERNAME/projexec/mobile</ApplicationURL>
```

```
</Application>
```

2. Find the mobile folder under connections shared customization folder (usually under "C:\IBM\Connections\data\shared\customization\mobile") and create a new folder inside it and name it "images". Then copy ProjExec mobile application icons (3 icons to copy: projexec_gray_16.jpg, projexec_gray_24.jpg and projexec_gray_48.jpg) from the projexec deployed war under \tgweb20\media\, (usually under: C:\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\CELLNAME\projexec_war.ear\projexec.war\tgweb20\media) to the new images folder you just created.

3. Restart the Connections cluster.

3.11 Advanced configurations

It is highly recommended that you restart IBM Server, especially in the case of updating a previous installation of ProjExec. Now, it is time to look at the ProjExec Administration Guide for advanced configurations. Note that integration with external connectors depends on your platform and your license. For example, you may define:

- Integration with Sametime server
- Integration with Notes Calendar
- ProjExec access from mobile devices
- Wall notification option

- Etc.

If something does not work as expected, please refer to the chapter “Troubleshooting” in the ProjExec Administration Guide or contact Trilog Group support at support@triloggroup.com

4 Appendix: DB2

Configuration Instructions

A DB2 database must be configured appropriately for use with ProjExec.

Note

The minimum DB2 version to use is V 9.7 and the recommended version is V10.1

This appendix provides the instructions necessary to configure a DB2 database to be used with ProjExec. Furthermore the appendix will be broken into two subsections where one discusses how to configure a DB2 database that is running on Windows or Linux while the other discusses how to configure a DB2 database that is running on iSeries.

4.1 DB2 Running on Windows or Linux

4.1.1 Step 1. Set up Database Parameters

Some database parameters should be modified to satisfy the most demanding requirements when using DB2 with ProjExec. These parameters can be edited in the Configuration panel of the database. From this panel, the following parameters must be modified:

1. Maximum Storage for Lock List: In the **Performance** section, the value of **Maximum storage for lock list (LOCKLIST)** should be set to automatic (default). If not available, set the value to 1024 or more.
2. Application Control Heap Size: In the same section, select the parameter **Application control heap size (APP_CTL_HEAP_SZ)** should be set to automatic (default). If not available, set the value to 6400 or more.
3. Log File Size: Under the **Logs** section, select the parameter **Log file size (LOGFILSIZ)** should be set to automatic (default). If not available, set this value to 10000 or more.

4.1.2 Step 2. Create Table Spaces with Larger Page Size

While creating the database with the database creation wizard from the DB2 Control Center, do the following configuration:

1. Set the CodeSet to UTF-8
2. Increase the “Default bufferpool and table space page size” from 4k to 32k.

If you choose to create the database by using DB2 command line, take care of setting the correct CODESET and PAGESIZE as in the following sample:

```
CREATE DATABASE PROJEXEC AUTOMATIC STORAGE YES ON 'C:\'  
USING CODESET UTF-8 TERRITORY US PAGESIZE 32 K
```

Important Note

it's a common mistake to add a semi-column at the end of the statement when executing it from the DB2 command line, please be sure NOT to add a semi-column at the end of the above statement when running it from the DB2 command line

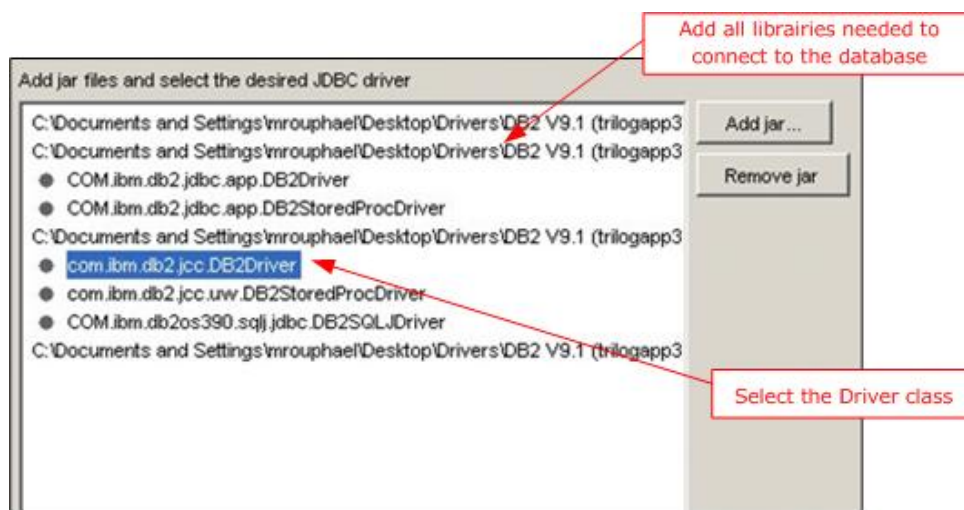
4.1.3 Step 3. Select the DB2 JDBC Drivers from the ProjExec Installer

Once the DB2 database has been configured as described, the right DB2 JDBC driver should be selected in the *Database Connection Settings* panel when installing ProjExec. Otherwise, the installer will fail to connect to the database.

You have to add all jar files that are needed to connect to DB2. Click on the button “Select JDBC Driver” to select and indicate the driver class.

Note

The needed jar files should be taken from the DB2 Server



You will need to add the jar file containing the JDBC driver class name, along with any other dependency jar files. Normally, these DB2-specific jar files are installed with DB2 and are located in <SQLLIB_HOME>/java folder. You may need to copy these files to the machine running the installer. **In DB2 9.7 or DB2 10.1, the driver jar file names are db2jcc.jar and db2jcc_license_cu.jar.**

After that, click on the `com.ibm.db2.jcc.DB2Driver` line JDBC driver included in the selected jar file and click on the button labeled **OK** to confirm the selection. Please note that the driver name might differ from a version to another.

For optimal performance with DB2, the *universal* driver should be used. This driver is named `com.ibm.db2.jcc.DB2Driver` and is located in the `db2jcc.jar` file. In this case, all the `db2jcc*.jar` files should be added to the selected list without the need for other jar files. **In DB2 9.7 or DB2 10.1, the driver jar file names are db2jcc.jar and db2jcc_license_cu.jar.** In earlier DB2 releases, you may need to add `db2jcc.jar`, `db2jcc_javax.jar`, `db2jcc_license_cisuz.jar` and `db2jcc_license_cu.jar`.

The JDBC URL of the *universal* driver is:

```
jdbc:db2://<hostname>:50000/<databasename>;deferPrepares=false; for
DB2 9.7 or DB2 10.1
```

Note

If certain jar files are missing, please contact your database administrator to procure these files as this could be due to database upgrade from a previous version.

4.2 DB2 Running on iSeries

4.2.1 Step 1. Create a Schema

In a DB2 running on iSeries, each database is a physical hard disk and each database can contain multiple schemas. In order to install ProjExec you need to create a schema that will contain the data.

To create a schema, open the iSeries Navigator and expand the tree through “Databases”. Next, expand the tree under the database that you wish to create the ProjExec schema in. Now choose the “Schemas” and right click to select “New>Schema”. Choose a name for schema and click “OK”.

Take note of both the name of the schema and the database since both will be needed when setting the connection to the DB2.

Note that, in the Database Connection Settings panel, you have to specify the database name in the JDBC URL field and the schema name in the Schema field under the Advanced section. For example, the JDBC URL should be of the format `jdbc:as400://<host>/<database>`.

4.2.2 Step 2. Select the DB2 JDBC Drivers from the ProjExec Installer

Once the schema has been created and you have run the installer, you will need to select the DB2 JDBC drivers.

You will need to add the jar file containing the JDBC driver class name. The needed JDBC driver class is `com.ibm.as400.access.AS400JDBCDriver`. This driver class is found inside the `jt400.jar`. This jar file should be already on iSeries machine. Please note that if you need an updated version of this jar then go to jt400.sourceforge.net

Note that the above mentioned JDBC driver expects the JDBC URL specified in the Database Connection Settings panel to be of the format `jdbc:as400://<host>/<database>`.

4.3 Configuring a JNDI Data Source for ProjExec database:

By default, ProjExec uses a built-in, no configuration connections pool for the database connections. Although this solution makes the installation and configuration steps easier, better production performance can be achieved by leveraging the WebSphere data sources, at the expense of extra configuration steps.

Configuring ProjExec to use WebSphere managed JNDI connection involves two main steps, first to prepare the JNDI connection from WebSphere, and second to configure the ProjExec generated WAR file with necessary connection parameters to use the configured JNDI resource.

4.3.1 Step 1: Add JNDI Data Source in WebSphere Application Server

1. Login to WebSphere Administration Console (WebSphere Integrated Solutions Console).
2. Expand Resource->JDBC-> then click JDBC Providers.
3. Select the Scope to be the cell used by IBM connections application server/cluster for Example: Cell=IBMConn45Cell01.
4. Click new to create a new JDBC provider to be used later when creating the data source.
5. Select "DB2" from database type.
6. Select/Enter the values as shown in the screen below then click next:

database class path information

Step 3: Summary

classes that are required to access the database. The wizard fills in the name and the description fields, but you can type different values.

Scope
cells:TGLC45Cell01

* Database type
DB2

* Provider type
DB2 Universal JDBC Driver Provider

* Implementation type
Connection pool data source

* Name
ProjExecJDBC

Description
One-phase commit DB2 JCC provider that supports JDBC 3.0. Data sources that use this provider support only 1-phase commit processing, unless you use driver type 2 with the application server for z/OS. If you use the application server for z/OS, driver type 2 uses RRS and supports 2-phase commit processing.

Next Cancel

7. Enter the following two lines in the "Class path" field as shown in screenshot below then click the "Apply" button next to the class path field, then click next:

`${PROFILES_JDBC_DRIVER_HOME}/db2jcc4.jar`

`${PROFILES_JDBC_DRIVER_HOME}/db2jcc_license_cu.jar`

Class path:

`${PROFILES_JDBC_DRIVER_HOME}/db2jcc4.jar`
`${PROFILES_JDBC_DRIVER_HOME}/db2jcc_license_cu.jar`

Apply

Directory location for "db2jcc4.jar, db2jcc_license_cu.jar" which is saved as WebSphere variable `${PROFILES_JDBC_DRIVER_HOME}`

`e:/IBM/SQLLIB/java`

Native library path

Directory location which is saved as WebSphere variable `${DB2UNIVERSAL_JDBC_DRIVER_NATIVEPATH}`

Previous Next Cancel

Please note that the "Directory location for "db2jcc4.jar.." will be automatically filled and no need to enter a path as shown in the screenshot above ("e:/IBM/SQLLIB/java").

8. Click finish then click save.
9. Expand Resources->JDBC-> then click Data Sources.
10. Select the Scope to be the cell used by IBM connections application server/cluster for Example: Cell=IBMConn45Cell01.
11. Click on "New..." to create a new data source.

12. In both "Data source name" and "JNDI name" enter the value: **ProjExec** then click next, as shown in the screenshot below:

The screenshot shows the 'Create a data source' wizard. The title bar is 'Create a data source'. The main window has a sidebar on the left with a list of steps: Step 1: Enter basic data source information (highlighted with a yellow arrow), Step 2: Select JDBC provider, Step 3: Enter database specific properties for the data source, Step 4: Setup security aliases, and Step 5: Summary. The main content area is titled 'Enter basic data source information'. It contains a text box for 'Scope' with the value 'cells:TGLC45FrCell01'. Below this are two fields: '* Data source name' and '* JNDI name', both with the value 'ProjExec'. At the bottom are 'Next' and 'Cancel' buttons.

13. On step 2, select the ProjExecJDBC provider that you created in the previous step from "Select an existing JDBC provider".

The screenshot shows the 'Create a data source' wizard at Step 2: Select JDBC provider. The sidebar on the left shows the same list of steps, with Step 2 now highlighted with a yellow arrow. The main content area is titled 'Select JDBC provider'. It contains a text box for 'Scope' with the value 'cells:TGLC45FrCell01'. Below this are two radio buttons: 'Create new JDBC provider' (unselected) and 'Select an existing JDBC provider' (selected). Below the radio buttons is a dropdown menu with the value 'ProjExecJDBC'. At the bottom are 'Previous', 'Next', and 'Cancel' buttons.

14. On step 3, select 4 for Driver Type, enter the name of the database your created for ProjExec (for example ProjExec or PEDB), enter your fully

qualified database server hostname and the database port then click next.

The screenshot shows a wizard window titled "Create a data source". On the left, a vertical pane lists five steps: Step 1: Enter basic data source information, Step 2: Select JDBC provider, Step 3: Enter database specific properties for the data source (highlighted with a yellow arrow), Step 4: Setup security aliases, and Step 5: Summary. The main area is titled "Enter database specific properties for the data source" and contains instructions: "Set these database-specific properties, which are required by the database vendor JDBC driver to support the connections that are managed through the datasource." Below this is a table with two columns: "Name" and "Value". The table contains four rows: "Driver type" with a dropdown menu showing "4", "Database name" with a text field containing "PROJEXEC", "Server name" with a text field containing "yourserver.yourdomain.com", and "Port number" with a text field containing "50000". Below the table is a checkbox labeled "Use this data source in container managed persistence (CMP)" which is checked. At the bottom of the wizard are three buttons: "Previous", "Next", and "Cancel".

Name	Value
* Driver type	4
* Database name	PROJEXEC
* Server name	yourserver.yourdomain.com
* Port number	50000

☒ Use this data source in container managed persistence (CMP)

Previous Next Cancel

15. On the "setup security aliases" step, do not do any selection and click next (You will create a JAAS J2C authentication data in the coming steps and select it after the data source creation wizard has completed).
16. Click finish, then click save.
17. Go back to Data Sources (Resources->JDBC->Data Sources) then click on the name of the data source that you just created.
18. On the right side under "Related Items", click on "JAAS - J2C authentication data".
19. Click "New..." then fill the Alias field with a name you chose (for example: ProjExec), and the UserId and Password with the database user/password that has full access to the ProjExec database you created or the Database server administrator, then fill the description with a descriptive name for reference like the screenshot below then click apply

and save:

Data sources

[Data sources](#) > [ProjExec](#) > [JAAS - J2C authentication data](#) > New...

Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.

General Properties

* Alias
ProjExec

* User ID
db2admin

* Password
.....

Description
ProjExec_db2admin

Apply OK Reset Cancel

20. Go back one step to the data source you created (example: Data Sources->ProjExec).
21. Under "Security Settings", under "Component-managed authentication alias", select the J2C authentication data you just created (the name will be based on your cellmanager name) for example: (TGLCFrCellManager01/ProjExec). See screenshot below for reference.

Security settings

Select the authentication values for this resource.

Component-managed authentication alias
TGLC45FrCellManager01/Projexec

Mapping-configuration alias
(none)

Container-managed authentication alias
(none)

22. Click apply then click save and restart your WebSphere server/cluster.

4.3.2 Step 2: Configure ProjExec to use the WebSphere JNDI Resource

Locate and open the ProjExec WAR file generated by the ProjExec installer with your preferred zip file editor. Navigate to WEB-INF folder and extract the resources.xml file.

Find the database reference in the file and either remove it from the file, or remove the default="true" attribute in the main <resource> element:

```
<Resource type="DocAPIServer" name="PEDb"
default="true" configurable="true"
displayableName="false" acceptInvalid="false">
<Driver>DB2:com.ibm.db2.jcc.DB2Driver</Driver>
<Server>jdbc:db2://yourserver.yourdomain.com:50000/P
ROJEXEC:retrieveMessagesFromServerOnGetMessage=true;
deferPrepares=false;</Server>
<IdleTimeout>1800000</IdleTimeout>
<LibPaths>
<Path>D:\IBM\SQLLIB\java\db2jcc.jar</Path>
Path>D:\IBM\SQLLIB\java\db2jcc_license_cu.jar</Path>
</LibPaths>
</Resource>
```

Then add a new entry to the file, specifying the name of the JNDI resource you created under "name=" and "Server". Copy and paste the following definition:

```
<Resource type="DocAPIServer" name="ProjExec"
default="true" configurable="true"
displayableName="false" acceptInvalid="false">
  <Driver>DB2:JNDI</Driver>
  <Server>ProjExec</Server>
<IdleTimeout>1800000</IdleTimeout>
</Resource>
```

Save the modified file, and replace the one resources.xml file. Now, proceed to deploying the WAR file as described in Chapter 3.

5 Appendix: SQL Server

Configuration Instructions

1. Prepare the database:

From the SQL Server Management Studio, expand the server name, right click on databases and create a New Database. specify the Database Name and leave the other options with the default values.

2. Download the JDBC driver and copy it to the machine where you run ProjExec Installer

Download the Microsoft JDBC Driver 4.0 for SQL Server from Microsoft's web site for your OS:

<http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=11774#system-requirements>

3. During ProjExec installation process, select the driver you downloaded (ex: sqljdbc4.jar) and complete the fields as requested.

Example of a JDBC URL for SQL server 2005-2008:

`jdbc:sqlserver://SQL.YOURHOSTNAME.COM:1433;DatabaseName=ProjExecDB;selectmethod=cursor`

6 Appendix: Oracle

Configuration Instructions

- From the Database Configuration Assistant create a new database and name it for example ProjExecDB
- Specify the Memory to 2GB Recommended (1GB minimum) for (SGA and PGA) and use automatic memory management
- For Tablespaces set each tablespace to autogrow and keep the default suggested tablespaces (System, SysAUX, UndoTBS , User and Temp will be created by the general database template)
- Create a user PROJEXEC, this will be the schema used and owner of the tables
- Grant the user PROJEXEC the DBA role and connect Role. This user should only be used by ProjExec application and not by any user.
- Set the Database Character Set to Unicode (AL32UTF8) and the National Character Set to UTF-8 Unicode 3.0
- If you need to import projects into ProjExec later on after the installation, the temporary tablespace should be increased to 400MB or more

7 Appendix: iSeries

Configuration instructions

This appendix provides the instructions needed to configure an iSeries machine to install ProjExec.

iSeries 6.0+ is supported.

7.1 Step 1. Map Installation Directory

In order to be able to copy the installer to the iSeries machine, the simplest way is to map your installation directory on the iSeries machine to a drive on a windows machine running the iSeries Navigator.

From within the iSeries Navigator, expand the tree node labeled with the iSeries machine name and then navigate to File Systems > Integrated File System > Root. The view in the right pane displays all the directories under “/”.

Right click on the directory to be mapped and select Sharing > New Share menu option. Now change the Access from “Read Only” to “Read/Write”. Once this is done, you would be able to create a mapping to the directory from the windows machine.

On your windows machine, go to the command line prompt and execute the following command: *net use <Drive Name>:\<Path>\<directory> /user:<name> <password>*

7.2 Step 2. Setting Up NAWT for a Graphical Interface

In order to run the installer, you will need to have some form of graphical interface. By default there is no GUI for an iSeries machine; however, every iSeries machine has the ability of setting up a GUI for java applications using native AWT (NAWT).

To set up the NAWT you need to open the Display Emulator. To do so go to the iSeries Navigator and right click on the machine name to select the Display Emulator menu option. A new window is opened where you have to enter your username (“ROOT”) and password. Note that the password is case sensitive.

To launch the NAWT, execute the following commands in the iSeries Navigator on Windows command prompt. This will launch a VNC server for graphical java application on the iSeries on port 1:

```
ADDENVVAR ENVVAR(DISPLAY) VALUE('i55003:1')

ADDENVVAR ENVVAR(XAUTHORITY) VALUE('/home/root/.Xauthority')

CALL QP2SHELL
PARM('/QOpenSys/QIBM/ProdData/DeveloperTools/vnc/vncserver_java
' ':1')
```

Now in order to run the installer launch the following commands in iSeries Navigator inside the Q shell (the Q shell is run from the iSeries Navigator by calling the command “qsh”)

```
Export JAVA_HOME=/QIBM/ProdData/Java400/
```

Where java home is the java virtual machine used by Websphere Portal

```
Export DISPLAY=:1
```

To redirect the graphical part to the VNC server

Go in the bin directory of the installer (/home/root/ProjExec3.5PEbxxx/bin)

Launch the installOS400.sh shell with the full path

```
/bin/sh /home/root/ProjExce3.5PEbxxx/bin/installOS400.sh
```

Open a VNC client to connect to the iSeries and use the installer as described in this documentation.

8 Appendix: Upgrading ProjExec

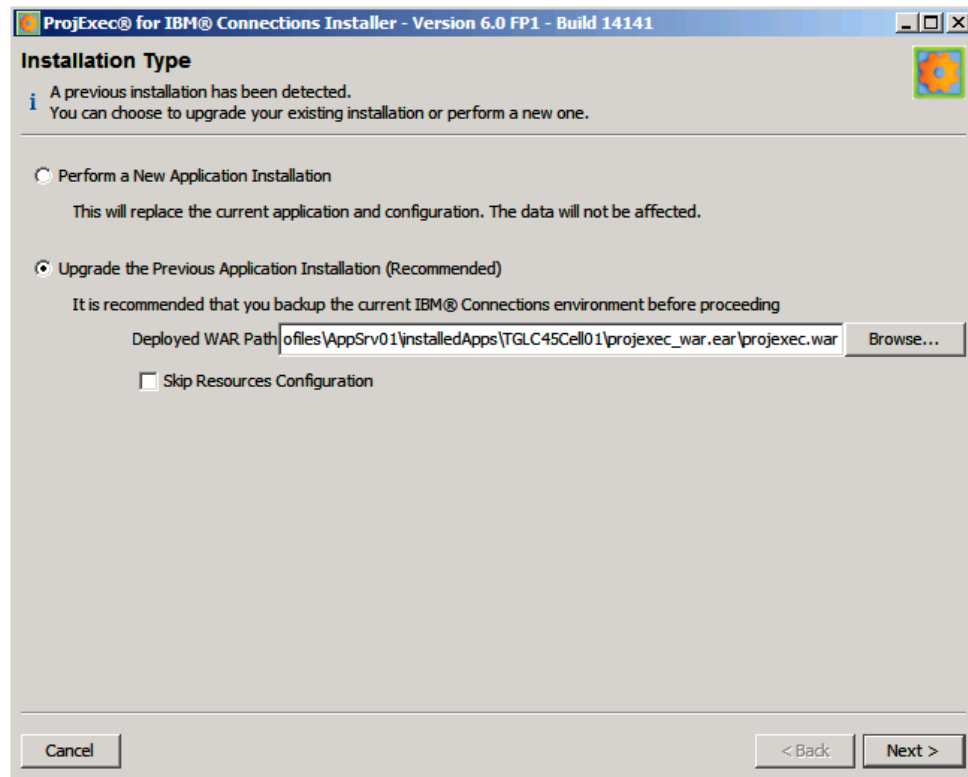
This appendix provides instructions on how to Upgrade ProjExec to a new version as well as how to apply fix packs and hot fixes.

IMPORTANT NOTE: Please make sure that you have a complete backup of all your environment before you proceed with any type of install, in order to have a valid restore point of your system in case of any problem or human error. This applies to IBM connections and ProjExec related database/application files.

8.1 Performing a ProjExec Upgrade

When a new version of ProjExec is released with database structure changes and newly added features, a new installer is provided. This installer needs to be run just as you would do a new ProjExec installation BUT making sure to select "Upgrade" for both the Database and the Application steps in the installer, instead of "new" install/deployment. **(PLEASE BE ADVISED THAT YOU MUST SPECIFY UPGRADE FOR BOTH THE APPLICATION AND DATABASE STEP FROM WITHIN THE INSTALLER, IN ORDER NOT TO OVERWRITE YOUR CURRENT INSTALLATION AND LOSE YOUR DATA).** Please refer to steps "2. Running the ProjExec installer" and to the screenshots below that show the installer steps where "Upgrade" needs to be selected:

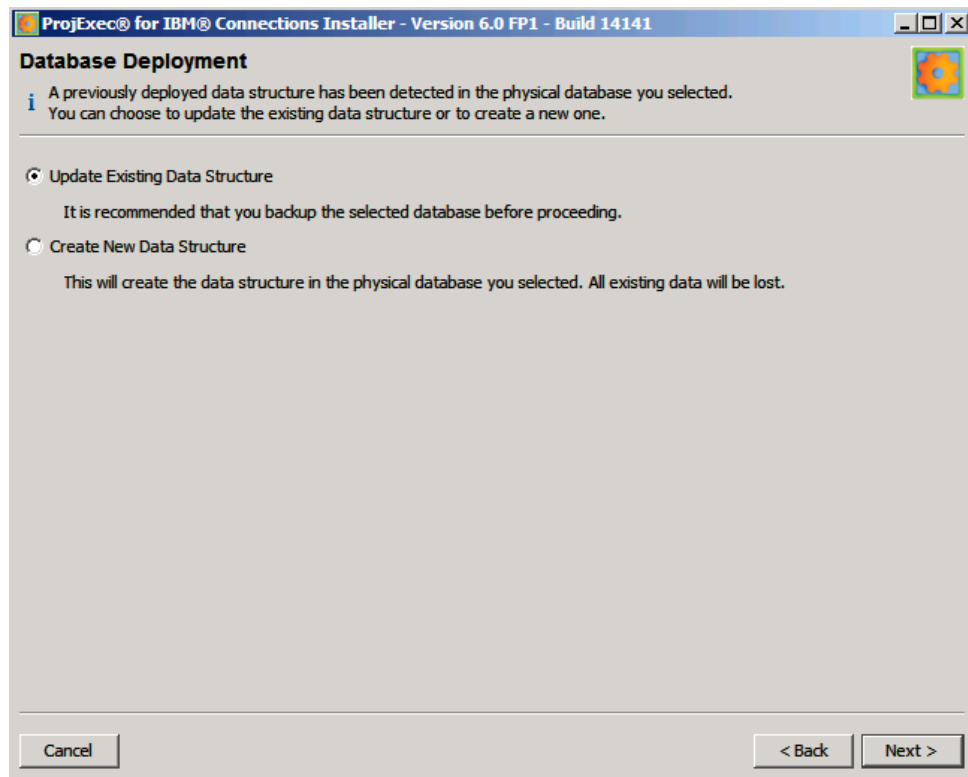
1. In section "2.4 Choose the Installation type" , "Upgrade the Previous Application Installation (Recommended)" must be selected in order to perform an application upgrade, and the path to your currently deployed ProjExec application war needs to be specified from the "Deployed WAR Path" as shown in the screenshot below:



The projexec war path is usually located under your websphere deployed path, example:

"X:\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\CELLNAME\projexec_war.ear\projexec.war"

2. when you reach the step "Database Deployment", please make sure to select "Update Existing Data Structure" as shown in the screenshot below:



Those are the two steps necessary to have "Upgrade" and "Update" selected in order to perform an upgrade of ProjExec.

8.2 Applying Fix Packs and Hot Fixes

When a Fix pack or a Hot Fix is available, they are provided in a zip file format. This zip file needs to be applied from within the Websphere console in order to update the related ProjExec files with the changes. Please follow the steps below in order to apply the provided zip fix:

Note: When ProjExec application war file was deployed for the first time, the administrator deploying it has the option to change the default application name. If ProjExec war file name was changed upon first deployment, (and was named different from the default projexec.war), then you have to manually edit the provided Zip Fix file and rename the root directory inside it (projexec.war root directory) to match the war file name you have, else the new files will not replace their corresponding old files. In order to know if it was changed, you can check under this path:

"X:\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\CELLNAME\projexec_war.ear\" to see if you have a folder named "projexec.war" or a different folder.

1. From the WAS administrative console menu, go to Applications→Application Types→WebSphere enterprise applications. Find and select the ProjExec application (projexec_war), then click "Update".
2. From the Application update options scroll down to the end of the page and select "Replace, add, or delete multiple files" as shown in the screenshot below

☒ **Replace, add, or delete multiple files**

Use a compressed file format such as .zip or .gzip. The compressed file is unzipped into the installed application directory. If the uploaded files exist in the application with the same paths and file names, the uploaded files replace the existing files. If the uploaded files do not exist, the files are added to the application. You can remove existing files from the installed application by specifying metadata in the compressed file.

Specify the path to the file.

☒ **Local file system**

Full path

☐ **Remote file system**

Full path

3. Under "Specify the path to the file", browse and select the fix file to apply (.zip) then follow the wizards' steps to complete the update and save the changes.
4. Wait about 5 minutes and then stop / start your ProjExec App. It is important to wait for the redeployment to complete.
5. Notify your end users to clear their browser's cache.

8.3 Applying ProjExec configuration changes

In ProjExec there are many configuration parameters that can be changed from within **projexec_config.properties** file as described in ProjExec administration guide, as well as ProjExec installation related configuration that can be changed from within **resources.xml** file. Whenever any configuration parameter or property is changed in any of those files the following procedure should be followed in order to Update ProjExec with those changes:

- 1) make a copy of the file (resources.xml or projexec_config.properties) where the parameters need to be changed and change the configuration inside the file copy
- 2) create a new zip file and name it something to refer to the change and the date the change was made for example: LDAPUserPasswordChange20Oct2014.zip
- 3) inside the zip file create a folder named by default **projexec.war** , but please refer to the note below to know if you need to name the folder otherwise.

Note: When ProjExec application war file was deployed for the first time, the administrator deploying it has the option to change the default application name, If ProjExec war file name was changed upon first deployment, (and was named different from the default projexec.war), then you need to create the above folder inside the zip file according to the name that was specified. In order to know if it was changed, you can check under this path:

"X:\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\CELLNAME\projexec_war.ear\" to see if you have a folder named "projexec.war" or a different folder.

- 4) inside the folder you just created, create a folder named WEB-INF
- 5) move the copy of the configuration file that you changed in step 1 inside the WEB-INF folder, then save and close the zip file.
- 6) From the WAS administrative console menu, go to Applications→Application Types→WebSphere enterprise applications. Find and select the zip file you created, then click "Update".
- 7) From the Application update options scroll down to the end of the page and select "Replace, add, or delete multiple files" as shown in the screenshot below
- 8) Under "Specify the path to the file", browse and select the fix file to apply (.zip) then follow the wizards' steps to complete the update and save the changes.

Replace, add, or delete multiple files

Use a compressed file format such as .zip or .gzip. The compressed file is unzipped into the installed application directory. If the uploaded files exist in the application with the same paths and file names, the uploaded files replace the existing files. If the uploaded files do not exist, the files are added to the application. You can remove existing files from the installed application by specifying metadata in the compressed file.

Specify the path to the file.

☒ Local file system

Full path

☐ Remote file system

Full path

- 9) Wait about 5 minutes and then stop / start your ProjExec App. It is important to wait for the redeployment to complete.
- 10) Notify your end users to clear their browser's cache.

9 Appendix: Cluster Related Configurations

There are two different ways to setup ProjExec within a clustered environment: One is adding the ProjExec application to the IBM Connections applications cluster that was already created during IBM Connections installation and the other way is creating a separate cluster only for ProjExec:

9.1 Setting up ProjExec in its own Cluster

- i- From Websphere console, expand Servers->Clusters then click on "Websphere application server clusters"
- ii- Click New to create a new cluster then enter the cluster name as "PEClust" or "PECluster" then click Next



iii-

- iv- Enter a "Member name" for the first member of the cluster and chose the node where this application server will run on from the "select node" drop down then click Next

v-

- vi- you will see that the first member was added:

Use the Edit function to modify the properties of a cluster member in this list. Use the Delete function to remove a cluster member from this list. You are not allowed to edit or remove the first cluster member.

<div>Edit Delete</div>				
<div>   </div>				
Select	Member name	Nodes	Version	Weight
<input checked="" type="checkbox"/>	PEClusterServer1	TGLC45FrNode01	ND 8.0.0.5	2
Total 1				

vii-

viii- Enter the name of the second member of the cluster and chose the node where this application server will run on from the "select node" drop down then click on "Add member":

Create additional cluster members

Enter information about this new cluster member, and click Add Member to add this cluster member to the member list. A server configuration template is created from the first member, and stored as part of the cluster data. Additional cluster members are copied from this template.

* Member name

Select node

* Weight
 (0..100)



☒ Generate unique HTTP ports

Add Member

ix-

x- now you should see the second member added as well:

Use the Edit function to modify the properties of a cluster member in this list. Use the Delete function to remove a cluster member from this list. You are not allowed to edit or remove the first cluster member.

<div>Edit Delete</div>				
<div>   </div>				
Select	Member name	Nodes	Version	Weight
<input checked="" type="checkbox"/>	PEClusterServer1	TGLC45FrNode01	ND 8.0.0.5	2
<input type="checkbox"/>	PEClusterServer2	TGLC45FrNode01	ND 8.0.0.5	2
Total 2				

xi-

xii- Click Next then click finish to create the Cluster and its members

- xiii- Once the Cluster has been created with its members, next is to link ProjExec application to this cluster
- xiv- From Websphere console, expand Applications->Application types, then Click on "Websphere enterprise applications"



- xv- then click on the name of the application server that's part of the cluster where ProjExec application is deployed
- xvi- then scroll in the list and find projexec application usually named "projexec_war" and click on it (you might need to go to the next page to find the application at the end of the list)
- xvii- under "modules" click on "manage modules"

Modules

- [Manage Modules](#)

- xviii- Click on the checkbox for the ProjExec module Then select both the ProjExec Cluster you have created and your webserver name then click Apply to link ProjExec to both, then click OK then click save.

Enterprise Applications

[Enterprise Applications](#) > [projexec_war](#) > Manage Modules

Manage Modules

Specify targets such as application servers or clusters of application servers where you want the application to be installed. Modules can be installed on the same application server or on different application servers. Also, specify the Web servers as targets that serve as routers for requests to the application. A plug-in configuration file (plugin-cfg.xml) for each Web server is generated, based on the targets specified.

Clusters and servers:

WebSphere:cell=TGLC45FrCell01,cluster=TGLC45FrClust
 WebSphere:cell=TGLC45FrCell01,cluster=ProjExecClust
 WebSphere:cell=TGLC45FrCell01,node=WebServerNode2,server=webserver2
 WebSphere:cell=TGLC45FrCell01,node=WebServerNode,server=webserver1

Remove Update Remove File Export File

Select	Module	URI	Module Type	Server
<input checked="" type="checkbox"/>	ProjExec	projexec_war,WEB-INF/web.xml	Web Module	WebSphere:cell=TGLC45FrCell01,cluster=ProjExecClust WebSphere:cell=TGLC45FrCell01,node=WebServerNode2,server=webserver2 WebSphere:cell=TGLC45FrCell01,node=WebServerNode,server=webserver1

OK Cancel

- xix- make sure all nodes agents are started then Synchronize all nodes from
System Administration->Nodes
- xx- Restart everything (DM/Cluster/Node agents/Nodes on all servers)

9.2 Setting up ProjExec to run within the existing IBM connections applications Cluster

To link ProjExec to an existing IBM connections cluster, follow the same steps but select the cluster name that you want to link to and the webserver name in the manage module of ProjExec application for example:

- i- From Websphere console, expand Applications->Application types, then Click on "WebSphere enterprise applications"

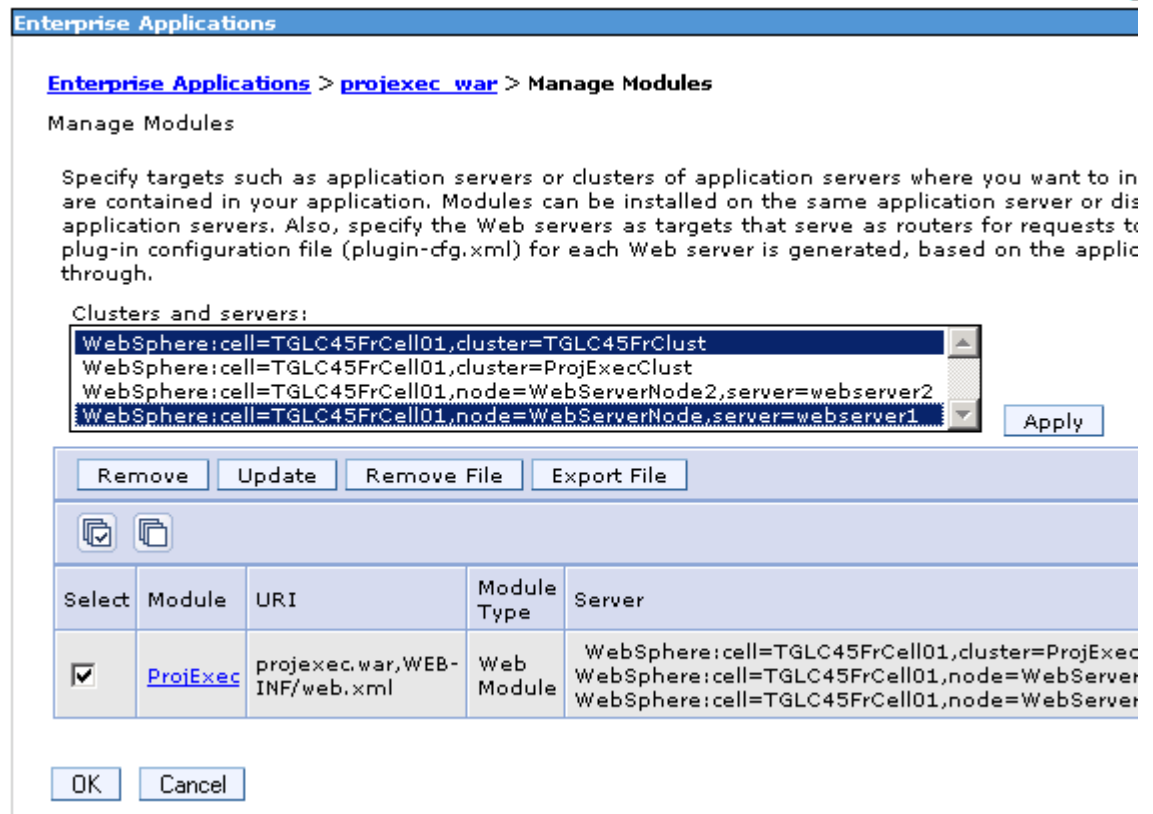


- ii- then click on the name of the application server that's part of the cluster where ProjExec application is deployed
- iii- then scroll in the list and find projexec application usually named "projexec_war" and click on it (you might need to go to the next page to find the application at the end of the list)
- iv- under "modules" click on "manage modules"

Modules

- [Manage Modules](#)

- v- Click on the checkbox for the ProjExec module Then select both the Cluster of IBM connections applications and your webserver name then click Apply to link ProjExec to both, then click OK then click save.



- vi- make sure all nodes agents are started then Synchronize all nodes from System Administration->Nodes
- vii- Restart everything (DM/Cluster/Node agents/Nodes on all servers)

9.3 Additional necessary configurations for clustered environments

For clustered environments, regardless if ProjExec application was setup in its own or separate cluster, it is required to configure session management and session affinity as follows:

1- Configuring Session Management:

the below steps needs to be done from two places ("Manage module" under "modules" section of the ProjExec application and from the "session management" under "Web Module properties")

- a-
 - i- Open Websphere Console
 - ii- expand Applications->Application types, then Click on "Websphere enterprise applications"



- iii- then click on the name of the application server that's part of the cluster where ProjExec application is deployed
- iv- then scroll in the list and find projexec application usually named "projexec_war" and click on it (you might need to go to the next page to find the application at the end of the list)
- v- under "modules" click on "manage modules"

Modules

- [Manage Modules](#)

- vi- Then click on the module named "ProjExec"

<div> <div>Remove</div> <div>Update</div> <div>Remove File</div> <div>Export File</div> </div>				
<div> <div> <div> <div></div> <div></div> </div> </div> </div>				
Select	Module	URI	Module Type	Server
<input type="checkbox"/>	ProjExec	projexec_war,WEB-INF/web.xml	Web Module	WebSphere:cell=TG WebSphere:cell=TGL WebSphere:cell=TGL

- vii- Next click on "Session Management" under "additional properties"

Additional Properties

- [View Module Class Loader](#)
- [Custom properties](#)
- [Target specific application status](#)
- [View Deployment Descriptor](#)
- [View Portlet Deployment Descriptor](#)
- [Session Management](#)
- [Web Module Proxy Configuration](#)

viii- Then check the checkbox "Override session management"

Configuration

General Properties

☒ Override session management

Session tracking mechanism:

☐ Enable SSL ID tracking

☒ [Enable cookies](#)

Maximum wait time
0 seconds

☒ Allow access on timeout

Apply OK Reset Cancel

ix- then scroll down and Click on Apply

Enterprise Applications

Messages

- ⚠ The session management cha Web container.
- ⚠ Changes have been made to
 - [Save](#) directly to the master cor
 - [Review](#) changes before saving
 An option to synchronize the conf can be enabled in [Preferences](#).
- ⚠ The server may need to be re

Enterprise Applications > projexec_war > Manage

Use this page to configure session manager prope (HTTP) session support. These settings apply to b

Configuration

General Properties

☒ Override session management

x- then click on Save

Enterprise Applications

Messages

- ⚠ The session management cha Web container.
- ⚠ Changes have been made to
 - [Save](#) directly to the master cor
 - [Review](#) changes before saving
 An option to synchronize the conf can be enabled in [Preferences](#).
- ⚠ The server may need to be re

Enterprise Applications > projexec_war > Manage

Use this page to configure session manager prope (HTTP) session support. These settings apply to b

Configuration

General Properties

☒ Override session management

xi- Then click again on the module "ProjExec"

<div>Remove Update Remove File Export File</div>				
<div> <div></div> <div></div> </div>				
Select	Module	URI	Module Type	Server
<input type="checkbox"/>	ProjExec	projexec.war,WEB-INF/web.xml	Web Module	WebSphere:cell=TG WebSphere:cell=TGL WebSphere:cell=TGL

xii- and click on Session Management" under "additional properties"

Additional Properties

- [View Module Class Loader](#)
- [Custom properties](#)
- [Target specific application status](#)
- [View Deployment Descriptor](#)
- [View Portlet Deployment Descriptor](#)
- [Session Management](#)
- [Web Module Proxy Configuration](#)

xiii- Then click on the hyperlink button "Enable cookies"

Configuration

General Properties

☒ Override session management

Session tracking mechanism:

☐ Enable SSL ID tracking

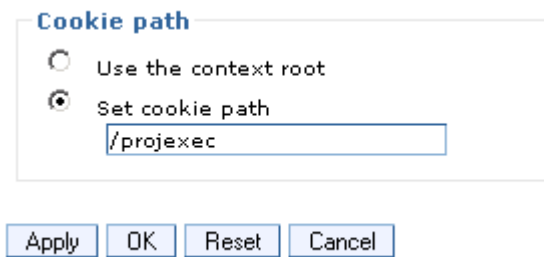
☒ [Enable cookies](#)

xiv- and uncheck "Set session cookies to HTTPOnly.."

- ☐ Set session cookies to HTTPOnly to help prevent cross-site scripting attacks

xv-

xvi- then scroll down and set the "Cookie path" to "/projexec" then click Apply and then click save



Cookie path

☐ Use the context root
☒ Set cookie path

b-

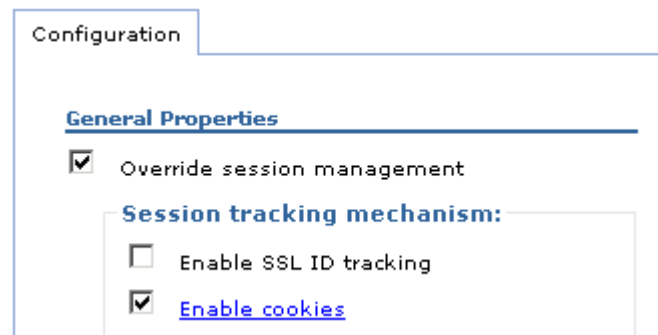
- i- Open Websphere Console
- ii- expand Applications->Application types, then Click on "Websphere enterprise applications"



- iii- then click on the name of the application server that's part of the cluster where ProjExec application is deployed
- iv- then scroll in the list and find projexec application usually named "projexec_war" and click on it (you might need to go to the next page to find the application at the end of the list)
- v- under "Web Module Properties" click on "Session Management"



- vi- Then check the checkbox "Override session management"



Configuration

General Properties

☒ Override session management

Session tracking mechanism:

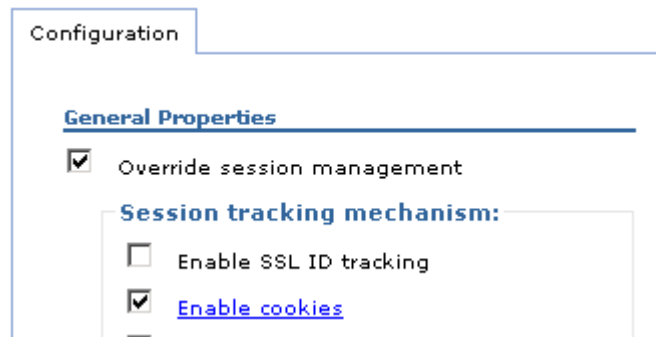
☐ Enable SSL ID tracking
☒ [Enable cookies](#)

- vii- then scroll down and Click on Apply Then click on Save

viii- Then click again on "Session Management"



ix- Then click on the hyperlink button "Enable cookies"

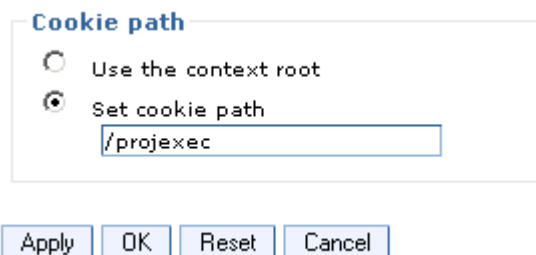


x- and uncheck "Set session cookies to HTTPOnly.."

☐ Set session cookies to HTTPOnly to help prevent cross-site scripting attacks

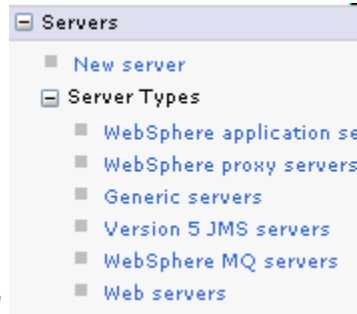
xi-

xii- then scroll down and set the "Cookie path" to "/projexec" then click Apply and then click save



2- Configuring Session affinity:

- i- Open Websphere console and expand servers->Server types then click on



"Web Servers"

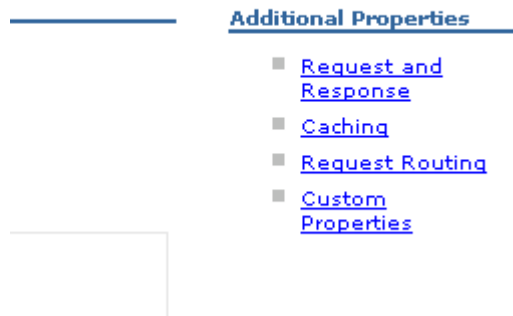
- ii- In the list of web servers, click on the name of your web server (usually webserver1")
 iii- Then under "additional properties", click on "Plug-in Properties"

Additional Properties

- [Log file](#)
- [Configuration File](#)
- [Plug-in properties](#)
- [Remote Web server](#)
- [Custom properties](#)

iv-

- v- then under "additional properties" on the right side of the screen, click on "Custom properties"



vi-

- vii- Click "New" button to add a new custom property and add in the property name field "IgnoreAffinityRequests" (please note the case is sensitive) and in the value field "false" as shown in the screenshot below:

[Web servers](#) > [webserver1](#) > [Plug-in properties](#) > [Custom properties](#) > New...

Use this page to specify an arbitrary name and value pair. The value that is specified for the pair is a string that can set internal system configuration properties.

Configuration

General Properties

* Name

IgnoreAffinityRequests

* Value

false

Description

Apply

OK

Reset

Cancel

Viii-

ix- Then click "Apply" then save, the added property would look like the follow screenshot:

[Web servers](#) > [webserver1](#) > [Plug-in properties](#) > Custom properties

Use this page to specify an arbitrary name and value pair. The value that is specified value pair is a string that can set internal system configuration properties.

Preferences

New... Delete

Select	Name	Value	Description
You can administer the following resources:			
<input type="checkbox"/>	IgnoreAffinityRequests	true	
Total 1			

 X_-

xi- click on "Web servers" in the navigation links to go back to your web servers list

Web servers

Web servers > **webserver1** >

Xii-

xiii- Generate then propagate then plugin by selecting the checkbox next to your web server name and click on "Generate Plug-in"

Web servers

Use this page to view a list of the installed w

Preferences

Generate Plug-in

Propagate Plug-in

SelectNameWeb server TypeN

You can administer the following resources:

<input checked="" type="checkbox"/>	webserver1	IBM HTTP Server	W
-------------------------------------	----------------------------	-----------------	---

xiv-

xv- then select the checkbox again next to your web server name and click on "Propagate Plug-in"

xvi- Then restart your webserver