TIBCO iProcess® Workspace (Browser)

Installation

Version 11.10.0 | May 2025

Contents

Introduction

This section contains important information which you should read before you install or upgrade the TIBCO iProcess Workspace (Browser). processname

Installation Overview

This installation guide provides instructions on how to install, upgrade, or remove the following elements of the iProcess Workspace (Browser):

- **iProcess Client** - This client application provides a graphical user interface that allows you to perform functions such as starting cases of procedures, viewing lists of work items, processing (keeping, releasing, etc.) work items, etc. After installing iProcess Client on any of the supported operating systems, it can then be accessed and run from a Windows system using a browser (for a list of the supported browsers, see System Requirements).
- **iProcess Action Processor** - This is the engine that interprets action requests from the iProcess Client. It receives requests from the browser (in which the iProcess Client is running), then interacts with the TIBCO iProcess Objects Server to either return the requested data to the client, or perform the requested operation (open a form, release a work item, close a case, etc.).

  The following two types of Action Processor are available:

  — Java

  — .NET

  This installation program allows you to install either the Java or the .NET Action Processor. If you have a need to install both, you must run the installation program twice.
- **Components** - These are building blocks, accessed via the TIBCO General Interface Builder, that can be used to construct iProcess applications. For more information, see the *TIBCO iProcess Workspace (Browser) Components Concepts* guide. (Note that the components can only be installed on Windows systems.)

- **Samples** - Includes sample code for setting up things like ASP forms, single authentication, etc. The sample code available is described in the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide.

Hosting the iProcess Client and Action Processor

There are no dependencies between where the iProcess Client is hosted and where the Action Processor is hosted.

For instance, you may host the iProcess Client in IIS (Microsoft Internet Information Services) and a Java Action Processor in Apache Tomcat. Or you may host both the iProcess Client and a .NET Action Processor in IIS. There are many combinations you may choose depending on your situation.

> **Note:** The assumption is that most installations will host the iProcess Client in a Web server. However, the iProcess Client does not have to be hosted in a Web server. You can run the installation program to install the iProcess Client anywhere on your system, then run the iProcess Client locally from there if desired.
>
> However, that cross-domain scripting can be an issue with some browsers. For more information, see Accessing the Client.

Even though the installer allows you to install the iProcess Client and an Action Processor at the same time, you should view them as separate actions, as they are not dependent on one another (except that, to run, the iProcess Client must be able to point to a running Action Processor).

This installation guide provides examples of installing and hosting the following:

- iProcess Client in Apache Tomcat
- iProcess Client in IIS
- Java Action Processor in Apache Tomcat
- .NET Action Processor in IIS (note that this is the only dependency for the Action Processors — if you install the .NET Action Processor, it must be hosted on IIS)

If you are using a different Web server, you can use the installer to install the iProcess Client and Action Processor files to the proper locations, then deploy according to your Web server.

Packing/Unpacking WAR Files

The installation program packs and unpacks WAR files as follows:

- **iProcess Client WAR File** - The installation program unpacks the iProcess Client's WAR file during the installation process. If you are using an Application Server that requires WAR files, you will need to manually repack them into a WAR file after the installation is completed.
- **Action Processor WAR File** - The installation program gives you the option to have the installation program unpack the Action Processor WAR file, or to leave it packed. This is specified during the installation process.

  If you choose not to unpack the Action Processor WAR file, no configuration of the Action Processor will take place.

Upgrading from Previous Versions

If you already have a previous version of the iProcess Client or Action Processor installed, you can upgrade to a newer version by following the installation instructions starting on Installing in GUI Mode.

The following subsections describe issues concerning upgrading the iProcess Workspace (Browser).

Configuration Files

The following describes how configuration files are affected during an upgrade of the iProcess Workspace (Browser).

Action Processor Configuration File — apConfig.xml

Upgrading the iProcess Workspace (Browser) Action Processor software causes the Action Processor configuration file (*APInstallDir*\`apConfig.xml`, where *APInstallDir* is the directory in which the Action Processor is installed) to be overwritten. Therefore, if you have made changes to this file, make a copy prior to performing the installation / upgrade procedure.

After the installation is complete, you can make any desired modifications to the new configuration file.

Java Action Processor Log4j Configuration File - log4j.properties

Upgrading the iProcess Workspace (Browser) Action Processor software causes the Action Processor configuration file (*APInstallDir*\log4j.properties, where *APInstallDir* is the directory in which the Action Processor is installed) to be overwritten. Therefore, if you have made changes to this file, make a copy prior to performing the installation / upgrade procedure.

After the installation is complete, you can make any desired modifications to the new configuration file.

iProcess Client Configuration Files — config.xml & userAccessProfiles.xml

Starting 11.8.0, during iProcess Workspace (Browser) client application upgrade, the installer renames the existing iProcess Client configuration file from config.xml file to config_prev<version>.xml. This is so that any customizations you have made in your original configuration file are retained.

The installer also renames your existing user access profile configuration file from userAccessProfiles.xml to userAccessProfiles_prev<version>.xml. This is so that any customizations you have made in your user access profiles are retained.

The client's configuration and user access profile files are located in the following directory:

```
ClientInstallDir\JSXAPPS\ipc\
```

where *ClientInstallDir* is the directory in which the iProcess Client is installed.

After the upgrade, it is your responsibility to perform the following tasks, depending on the version you are upgrading from:

If Upgrading to Version 11.8 or above

- Transfer any custom configurations from your old configuration file (which is now named config_prev<version>.xml, say, config_prev11.8.0.xml) to the new config.xml file.
- Transfer any custom user access profile settings from your old user access profile file (which is now named userAccessProfiles_prev<version>.xml, say., userAccessProfiles_prev11.8.0.xml) to the new userAccessProfiles.xml file.

If Upgrading from Versions 10.6, 10.7, or 11.x

- Transfer any custom configurations from your old configuration file (which is now named `config_old.xml`) to the new `config.xml` file.
- Transfer any custom user access profile settings from your old user access profile file (which is now named `userAccessProfiles_old.xml`) to the new `userAccessProfiles.xml` file.

If Upgrading from a Pre-10.6 Version

- Transfer any custom configurations from your old configuration file (which is now named `config_old.xml`) to the new `config.xml` file.
- Transfer any user access profiles from the old `config.xml` file (which is now named `config_old.xml`) to the new `userAccessProfile.xml` file.

  (The user access profile definitions were removed from the `config.xml` file in version 10.6.0 and placed in the new `userAccessProfiles.xml` file. The way in which user access profiles are defined also changed in the 10.6.0 release. For more information, see the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide.)

For information about all of the client configuration settings, see the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide.

Also, see the "Migration" section in the *TIBCO iProcess Workspace (Browser) Release Notes.*

Multiple Shortcuts

If you are upgrading from a pre-version 10.6 iProcess Workspace (Browser) to version 10.6 or newer on a Windows system, you may end up with shortcuts to both the older and newer version. After installing the newer version, delete the old shortcut.

Previously Localized Client Application

If you are upgrading from version 10.6.0, and have manually localized your client application using the procedure provided in the "Localization" topic of the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide, you need to perform the following steps prior to installing the new version of TIBCO iProcess Workspace (Browser).

If you fail to perform these steps before upgrading, your existing custom locale resource file in the *ClientInstallDir*\JSXAPPS\ipc\locale directory is overwritten by the installation program.

Procedure

1. Create a file named ipcLocale.properties.
2. Add a single line to the ipcLocale.properties file.

   If your custom locale resource file name contains only the language code (i.e., locale_ll.xml, where ll is the two-letter language code), enter the following line:

   locale=ll

   where ll is the language code. For example:

   locale=es

   If your custom locale resource file name contains a language code and a country code (i.e., locale_ll_CC.xml, where ll is the two-letter language code and CC is the two-letter country code), enter the following line:

   locale=ll_CC

   where ll is the language code and CC is the country code. For example:

   locale=es_MX
3. Create a JAR file containing the ipcLocale.properties file, and name the JAR file as follows:

   lang_ll.jar

   or

   lang_ll_CC.jar

   For example: lang_es.jar or lang_es_MX.jar.
4. Place the JAR file in the *ClientInstallDir*\JSXAPPS\ipc\locale\footprints directory, where *ClientInstallDir* is the directory in which you installed your previous version of the iProcess Workspace (Browser) client application.

You can now continue with the installation of the iProcess Workspace (Browser). The installation program detects that you have a localized resource file (because of the JAR file in the ...\footprints directory), and incorporate it into the new installation.

System Requirements

For system requirement information, see the readme file that is included with the iProcess Workspace (Browser).

Microsoft Visual C++ Redistributable Package

If you are installing the Action Processor on a Windows system, you must also ensure that that machine has the Microsoft Visual C++ 2015, 2017, or 2019 Redistributable Package installed. (This package is needed by the underlying iProcess Server Objects that make calls to the Action Processor.)

The Microsoft Visual C++ Redistributable Package is not installed by default (although it is included when Microsoft Visual Studio is installed). You can determine if you have it installed on your machine by looking for "Microsoft Visual C++ Redistributable" in Add/Remove Programs.

If you do not have the redistributable package installed, download and install it using the following link:

https://support.microsoft.com/en-in/help/2977003/the-latest-supported-visual-c-downloads

Installation Modes

The TIBCO iProcess Workspace (Browser) can be installed using the following installation modes:

- **GUI Mode** - The GUI (graphical user interface) mode causes the installer to present dialogs that allow you to make choices about product selection, product location, and so on.

  For information about installing in GUI mode, see Installing in GUI Mode.

- **Console Mode** - Console mode allows you to run the installer from the command prompt or terminal window. This is useful if your machine does not have a Windows environment.

  For information about installing in Console mode, see Installing in Console Mode.

- **Silent Mode** - Silent mode installs the software without prompting you for information — all the information the installer needs is passed to the installer in the form of a response file that was saved during an earlier installation.

  For information about installing in Silent mode, see Installing in Silent Mode.

For all installation modes, however, you must ensure the prerequisites described in Installation Prerequisites have been met.

Installation Environment

An installation environment isolates product installations. A product installed into one installation environment cannot access components in other installation environments. An installation environment is the top level installation directory for TIBCO products. It consists of the following properties:

- **Directory**: identifies the name of the directory where the product is installed. This directory is referred to as ***TIBCO_HOME***.
- **Name**: identifies the installation environment. On Microsoft Windows, the name is a component of the path to the product shortcut in the Windows **Start > All Programs** menu.

Installation Prerequisites

This section describes prerequisites to installing the iProcess Client and/or Action Processor.

Use the section that is appropriate for the software you are installing and the web server in which you are hosting that software. If you are installing both an iProcess Client and an Action Processor, you must satisfy the requirements specified in two of the following sections.

- Prerequisites if using IIS to host a .NET Action Processor — see Prerequisites if Using IIS to Host a .NET Action Processor
- Prerequisites if using IIS to host the iProcess Client — Prerequisite if Using IIS to Host the iProcess Client
- Prerequisites if using Tomcat to host a Java Action Processor — Prerequisites if Using Tomcat to Host a Java Action Processor
- Prerequisites if using Tomcat to host the iProcess Client — Prerequisites if Using Tomcat to Host the iProcess Client

Prerequisites if Using IIS to Host a .NET Action Processor

The following prerequisite is required if you are using Internet Information Services (IIS) to host a .NET Action Processor:

- Ensure that IIS is installed. For instructions to install, see Microsoft IIS documentation.

Prerequisite if Using IIS to Host the iProcess Client

The following prerequisite is required if you are using IIS to host the iProcess Client:

- Ensure that IIS is installed. For instructions to install, see Microsoft IIS documentation.

Prerequisites if Using Tomcat to Host a Java Action Processor

The following are prerequisites if you are using Tomcat to host a Java Action Processor:

- Ensure that the Java Runtime Environment (JRE) is installed.
- Ensure that Tomcat is installed.
- Ensure that the `TOMCAT_HOME` environment variable is set to `TOMCAT 10.x home` if you use TOMCAT 10.x.
- Ensure that the system environment variable, `PATH` for Windows and `LD_LIBRARY_PATH` for Linux is set.

These are described in the following sections.

Ensure that the JRE is Installed

Enter the following from the command line to determine if the Java Runtime Environment (JRE) is installed, and to determine its version:

```
java -version
```

If you need to install JRE, you can download it from the following website:

https://java.com/en/download/

Ensure that Tomcat is Installed

Note: An embedded version of Tomcat is installed with the iProcess Engine; this version can be used to host the Action Processor. However, you may want to install a separate version of Tomcat that would host the Java Action Processor.

To install Tomcat, perform the following steps:

1. Log into the system with an account that has administrator privileges.
2. Download the appropriate binary file from the following website:

   http://tomcat.apache.org/index.html
3. Install the software on your machine following the steps in the Tomcat installer.

Note: Testing of the TIBCO iProcess Workspace (Browser) was performed using Tomcat 8.5 and later.

Ensure to set TOMCAT_HOME for TOMCAT 10.x

If you are using TOMCAT 10.x to host TIBCO iProcess Workspace (Browser), then set the `TOMCAT_HOME` environment variable to perform the migration from `javax` to `jakarta` name spaces by running the following command:

```
TOMCAT_HOME - C:\apache-tomcat-<TOMCAT 10.x version>

For example, TOMCAT_HOME - C:\apache-tomcat-10.1.26
```

Note: The default TOMCAT installation folder is C:\apache-tomcat-<TOMCAT version>.

Note:
If the `TOMCAT_HOME` property is not set during the installation, then the following error is displayed in the installation log:
`"Property "env.TOMCAT_HOME" has not been set".`

The installation log, for example, `antTask_log_T10migration_2024-11-13.180122.log` is located at:

- In Windows: `C:\Users\Administrator\.TIBCO`
- In Linux: `\home\pro\.TIBCO`

Ensure to set PATH/LD_LIBRARY_PATH

Before you start Tomcat,

In Windows,

```
Set the system environment variable PATH to include %TOMCAT_HOME%\lib
```

In Linux,

Set the environment variable `LD_LIBRARY_PATH` by running the following command:

```
export LD_LIBRARY_PATH=$TOMCAT_HOME/lib:$LD_LIBRARY_PATH
```

Prerequisites if Using Tomcat to Host the iProcess Client

The following are prerequisites if you are using Tomcat to host the iProcess Client portion of the iProcess Workspace (Browser):

- Ensure that the Java Runtime Environment (JRE) is installed.
- Ensure that Tomcat is installed.
- Ensure that the `TOMCAT_HOME` environment variable is set if you use TOMCAT 10.x.
- Ensure that the system environment variable, `PATH` for Windows and `LD_LIBRARY_PATH` for Linux is set.

These are described in the following sections.

Ensure that the JRE is Installed

Enter the following from the command line to determine if the Java Runtime Environment (JRE) is installed, and to determine its version:

```
java -version
```

If you need to install JRE, it can be downloaded from the following website:

https://java.com/en/download

Ensure that Tomcat is Installed

Note: An embedded version of Tomcat is installed with the iProcess Engine; this version can be used to host the iProcess Client. However, you may want to install a separate version of Tomcat that would host the iProcess Client.

If Tomcat needs to be installed, perform the following steps:

1. Log into the system with an account that has administrator privileges.
2. Download the appropriate binary file from the following website:

   http://tomcat.apache.org/index.html
3. Install the software on your machine following the steps in the Tomcat installer.

Note: Testing of the TIBCO iProcess Workspace (Browser) was performed using Tomcat 8.5 and later.

Ensure to set TOMCAT_HOME for TOMCAT 10.x

If you are using TOMCAT 10.x to host TIBCO iProcess Workspace (Browser), then set the `TOMCAT_HOME` environment variable to perform the migration from `javax` to `jakarta` name spaces by running the following command:

```
TOMCAT_HOME - C:\apache-tomcat-<TOMCAT 10.x version>

For example, TOMCAT_HOME - C:\apache-tomcat-10.1.26
```

Note: The default TOMCAT installation folder is C:\apache-tomcat-<TOMCAT version>.

Note:
If the TOMCAT_HOME property is not set during the installation, then the following error is displayed in the installation log:
"Property "env.TOMCAT_HOME" has not been set".

The installation log, for example, antTask_log_T10migration_2024-11-13.180122.log is located at:

- In Windows: C:\Users\Administrator\.TIBCO
- In Linux: \home\pro\.TIBCO

Ensure to set PATH/LD_LIBRARY_PATH

Before you start Tomcat,

In Windows,

```
Set the system environment variable PATH to include %TOMCAT_HOME%\lib
```

In Linux,

Set the environment variable LD_LIBRARY_PATH by running the following command:

```
export LD_LIBRARY_PATH=$TOMCAT_HOME/lib:$LD_LIBRARY_PATH
```

Installation

This section describes how to install or upgrade the TIBCO iProcess Workspace (Browser) software using the graphical user interface (GUI).

Installing in GUI Mode

The following steps describe installing or upgrading an iProcess Client, Action Processor, and Components using the graphical user interface (GUI).

Note: If you are upgrading from an earlier version of the TIBCO iProcess Workspace (Browser), read Upgrading from Previous Versions before proceeding.

Also, if your previously installed application had been localized, be sure to read Previously Localized Client Application.

1. Open the physical media or download the package from the TIBCO Software Downloads site. To download the installation package, a user name and password are required. If you do not have a user name and password, contact TIBCO Technical Support.
2. Extract the contents of the package to a temporary directory.
3. Stop your Web server.
4. Start the TIBCO Universal Installer:
   - On Microsoft Windows, double-click TIBCOUniversalInstaller.exe or TIBCOUniversalInstaller-x86-64.exe.
   - On UNIX, run TIBCOUniversalInstaller-***platform-acronym***.bin.
5. In the **Welcome** dialog, click **Next**.
6. Read through the license text, select the **I accept the terms of the license agreement** check box, and then click **Next**.

Or if you do not agree to the terms of the license agreement, click **Cancel** to exit the installation process.

7. In the **TIBCO Installation Home** dialog, click **Use an existing TIBCO_HOME**, and then choose the appropriate ***TIBCO_HOME*** from the list. Click **Next**.

   For more information, see Installation Environment.

8. In the Installation Profile Selection dialog, select an installation profile to specify the installation components to be installed. The default is Typical (installs all components). Or select the **Customize Installation** check box to select the installation components and then Click **Next**. Given below is a list of components you can choose to install:

   — **iProcess Client** - The client application that allows users to process/administer cases/work items. For more information, see Installation Overview.

   — **Components** - These are building blocks, accessed via TIBCO General Interface Builder, that are used to construct iProcess applications. For more information, see the *TIBCO iProcess Workspace (Browser) Components Concepts* guide.

   — **iProcess Action Processor** - The engine that interprets actions from the client application and sends them to the server. For more information, see Installation Overview.

   — **Samples** - Includes sample code for setting up things like ASP forms, single authentication, etc. The sample code available is described in the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide.

   > **Note:** The **Component Selection** dialog does not indicate if you already have any of the listed items installed. Therefore, if you install an iProcess Client, Components, or Action Processor in the same location as one already installed, the existing one will be overwritten.

9. Depending on which boxes you have checked, a series of dialogs is displayed, on which you must enter configuration information for each of the items you are installing. Also note that if you are upgrading, some of the fields in the dialogs are pre-filled with values from the previous installation.

   Use the following subsections for information about how to complete each of the dialogs:

   — if you are installing an iProcess Client application, see iProcess Client Dialogs

— if you are installing an iProcess Action Processor, see iProcess Action Processor Dialogs

— if you are installing the iProcess Workspace components, see Components Dialogs

The **Samples** selection does not result in dialogs.

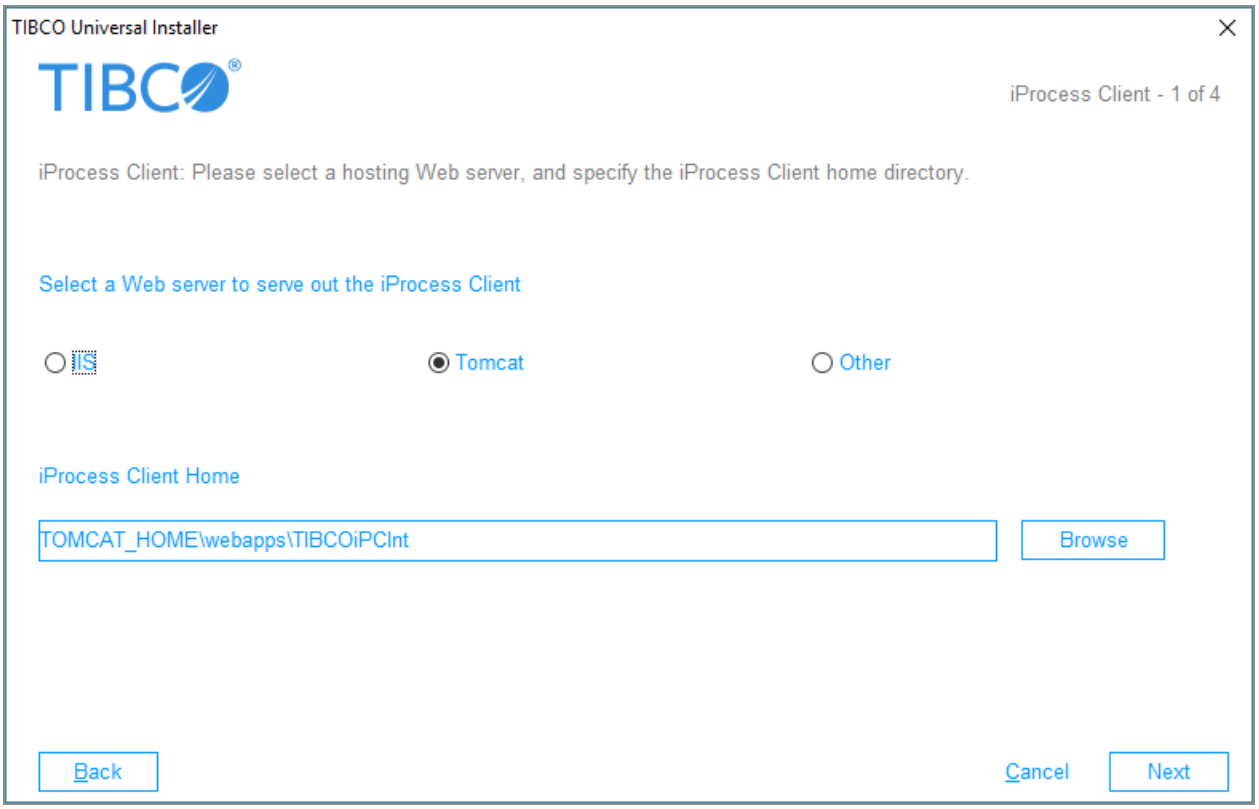
10. Review the information in the **Pre-Install Summary** dialog, and then click **Install** to start the installation process.

iProcess Client Dialogs

Selecting the **iProcess Client** checkbox on the **Component Selection** dialog causes a series of four **iProcess Client** dialogs to be displayed. These dialogs are described in the following subsections.

iProcess Client Dialog (1 of 4)

The first **iProcess Client** dialog is used to specify the Web server that hosts the client application, as well as the home directory of the client application.



The following describes the radio buttons and fields on this dialog:

- **Web Server**: Specify which Web server is used to host the iProcess Client: **IIS**, **Tomcat**, or **Other**.
- **iProcess Client Home**: Specify the directory in which the iProcess Client software is to be installed. You can use the **Browse** button to locate the directory.

  If **IIS** is selected for the Web server, then the home directory defaults to `C:\Inetpub\wwwroot\TIBCOiPClnt`. If you have created a virtual directory into which the iProcess Workspace (Browser) is installed, modify this path accordingly.

  If **Tomcat** is selected for the Web server, then the home directory defaults to:

  - In Windows: *TOMCAT_HOME*`\webapps\TIBCOiPClnt`
  - In Unix: or *TOMCAT_HOME*`/webapps/TIBCOiPClnt`

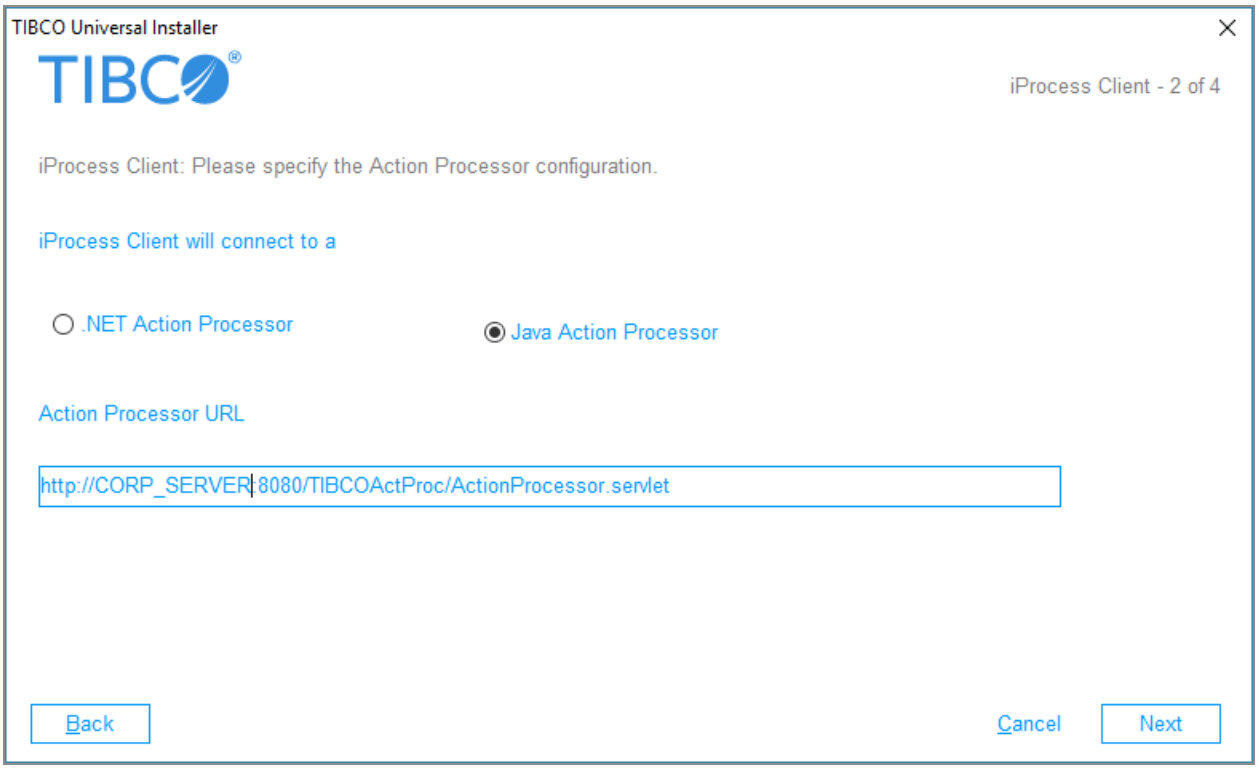
    You must replace *TOMCAT_HOME* with the directory in which Tomcat is installed (for example, `D:\Tomcat`). The remainder of the default path can also be changed, if desired.

> **Note:** If the *TOMCAT_HOME* variable is defined on the system, the installer automatically inserts the variable's value instead of displaying TOMCAT_HOME.

If **Other** is selected for the Web server, then the home directory field is blank. Enter the path to the directory into which the iProcess Client should be installed.

iProcess Client Dialog (2 of 4)

The second **iProcess Client** dialog is used to specify the type of Action Processor to which the iProcess Client connects, as well as the URL to the Action Processor.



Information entered in this dialog is written to the `config.xml` file for the iProcess Client. This information can be modified later by manually editing the `config.xml` file. For more information, see the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide.

The following describes the radio buttons and fields on this dialog:

- **iProcess Client will Connect to a**: Select the Java or .NET Action Processor. This is the Action Processor to which the iProcess Client you are currently installing will connect.

- **Action Processor URL**: This is the URL to either the Java Action Processor or the .NET Action Processor. This must be in the form:

  ```
  http://Host:Port/APDir/ActionProcessor.ext
  ```

  where:

  — *Host* is the name of the machine hosting the Action Processor.

  — *Port* is the port number used by the Web server to communicate with web applications.

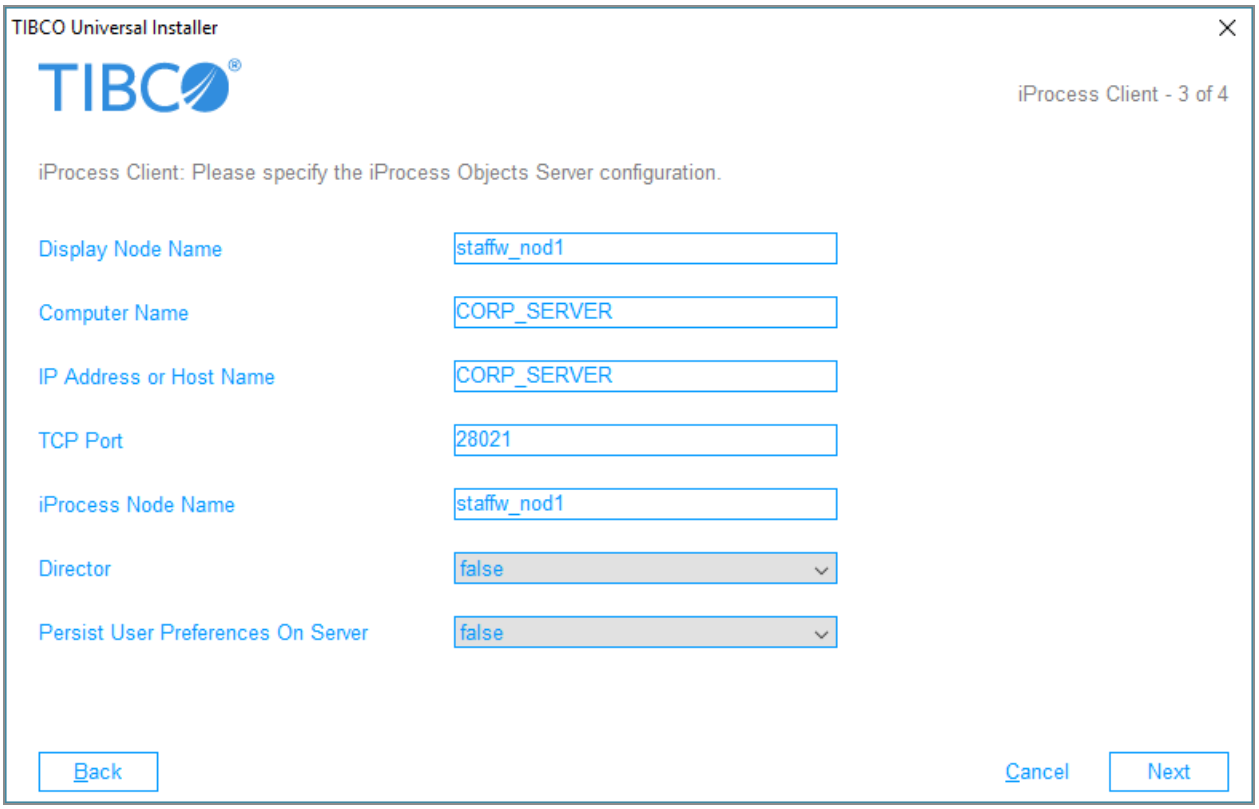
  — *APDir* is the directory (or virtual directory alias) on *Host* in which the Action Processor is installed.

  — *ext* is the file name extension (this is “servlet” if it is a Java servlet, that is, the Java Action Processor. Or “aspx” if it is a .NET ASP web application, that is, the .NET Action Processor).

Note: If you are hosting both the iProcess Client and the Action Processor on the same machine, and they are both being hosted by Tomcat, you can specify *Host* as “localhost”.

iProcess Client Dialog (3 of 4)

The third **iProcess Client** dialog specifies information about the TIBCO iProcess® Objects Server that the user can log into after starting the iProcess Client.



Information entered in this dialog is written to the `config.xml` file for the iProcess Client. This information can be modified later by manually editing the `config.xml` file. For more information, see the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide.

The following describes the fields on this dialog:

- **Display Node Name**: The name that you would like displayed in the iProcess Client **Server** field dropdown list on the **Login** screen. This is the name that the user would select when choosing a server to log into.
- **Computer Name**: The name of the machine on which the TIBCO iProcess Objects Server is installed.
- **IP Address or Host Name**: The IP address of the machine on which the TIBCO iProcess Objects Server is installed. You can enter the name of the host machine in this field, as long as that name resolves to the IP address of the machine where the iProcess Objects Server is running. Note, however, that this name must be able to be resolved by the machine on which the Action Processor is running.
- **TCP Port**: The TCP port number used by the TIBCO iProcess Objects Server. The TCP port used by the server is specified by using the iProcess Objects Server Configuration Utility in Windows systems (*SWDIR*`\bin\SWEntObjSvCfg.exe`), or by

editing the iProcess Objects Server configuration file in UNIX systems (`$SWDIR/seo/data/swentobjsv.cfg`). For more information, see the *TIBCO iProcess Objects Server Administrator's Guide.*)

Note: The iProcess Objects Server must be configured to use a static TCP port, so that that port number can be specified here—it cannot be configured to use a dynamic port.

If you are using an iProcess Objects Director, see the *TIBCO iProcess Objects Director Administrator's Guide* for information about configuring the TCP port on the Director.

If this is a new installation, this field is blank by default, and the installer denies you to advance without entering a port number. You must determine the TCP port used by the iProcess Objects Server to which the iProcess Client is going to connect.

- **iProcess Node Name**: The name of the TIBCO iProcess Engine / iProcess Objects Server to which the user can log in. This is the "nodename" that is assigned to the iProcess Engine when it is installed.
- **Director**: Specifies whether the previous entries actually describe a TIBCO iProcess Objects Director, which is used to connect the client to a server). Select "true" if the specifications are for a Director, or "false" if a TIBCO iProcess Objects Director is not being used.
- **Persist User Preferences On Server** - This specifies whether user data[1] is persisted locally or on the server, as well as obtained locally or from the server on login. Server-side persistence allows users to move to different machines and/or browser types, and pick up user preferences specified from another machine and/or browser type.

  If set to "false":

  — All user data is stored on the client.

  — User data is not cached and is persisted client-side immediately.

  If set to "true":

  — All user data is stored on the server.

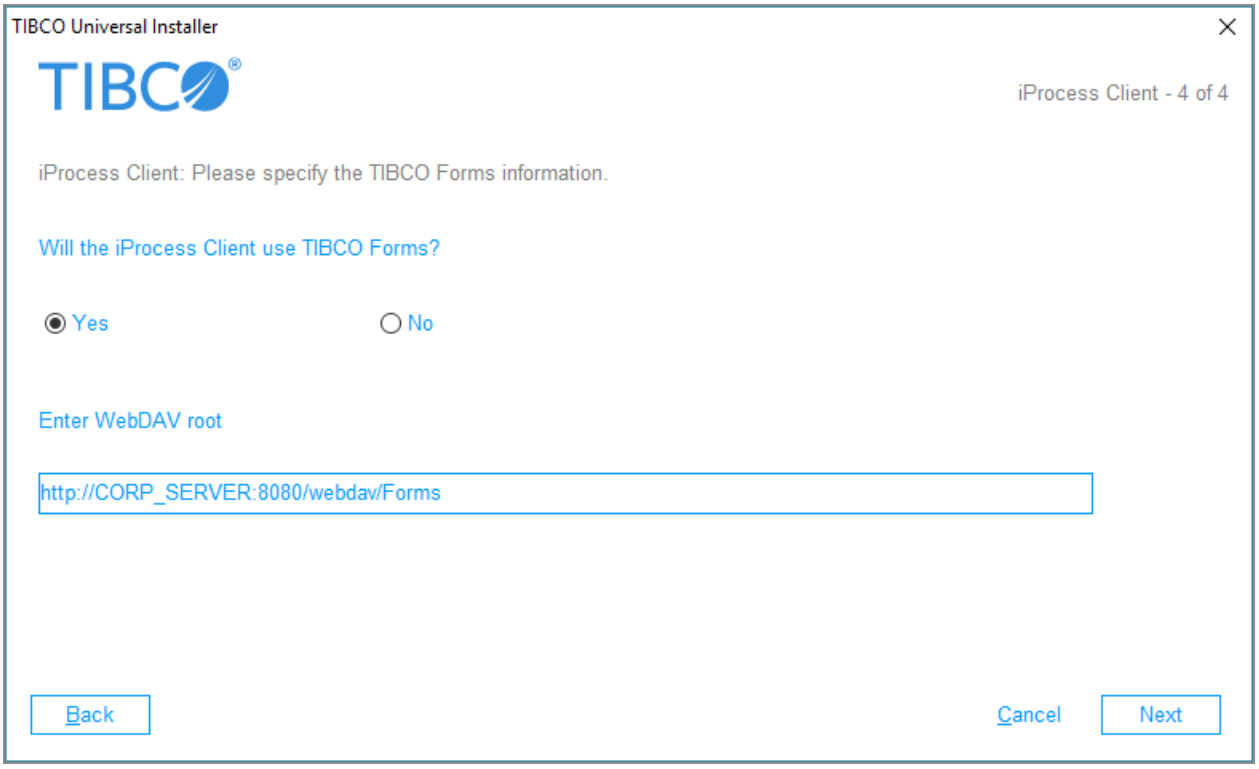
[1]User data consists of the following: Adding, removing, or changing views (note that changes to views are persisted immediately, whereas all other user data are persisted on logout or application closure); list filters; list sorts; column changes (either using the Column Selector, or done manually); auto-repeat toggle on the work item list; case history show seconds/microseconds setting.

- User data is cached and is not saved to the server until the user logs out or closes the browser window.
- Options values (that is, all settings on the **Options** dialog in the application) are stored on both the client and the server. This is required because the language setting is stored in the Options data and this is needed to set up the locale before login.

Note: The first time server-side data is accessed for a given user, the user is given the option of initializing the server-side data with any data that has previously been persisted client side (if any client-side data exists). The user's response to this question is persisted on the server and will not be asked again.

iProcess Client Dialog (4 of 4)

The fourth **iProcess Client** dialog is used to tell the installer if your client application is using TIBCO Forms. TIBCO Forms are forms that are created and deployed using TIBCO Business Studio. For more information, see the *TIBCO Business Studio Forms User Guide*.



The following describes the radio buttons and field on this dialog:

- **Will the iProcess Client use TIBCO Forms?** - Select the **Yes** radio button if your client application is using TIBCO forms, or **No** if it is using some other type of forms.
- **Enter WebDAV root** - Enter the base URL of the location at which the TIBCO forms are stored. The installation program writes this URL to the **webDAVRoot** configuration parameter in the client application's `config.xml` file. This allows the client application to find the TIBCO Forms on the server.

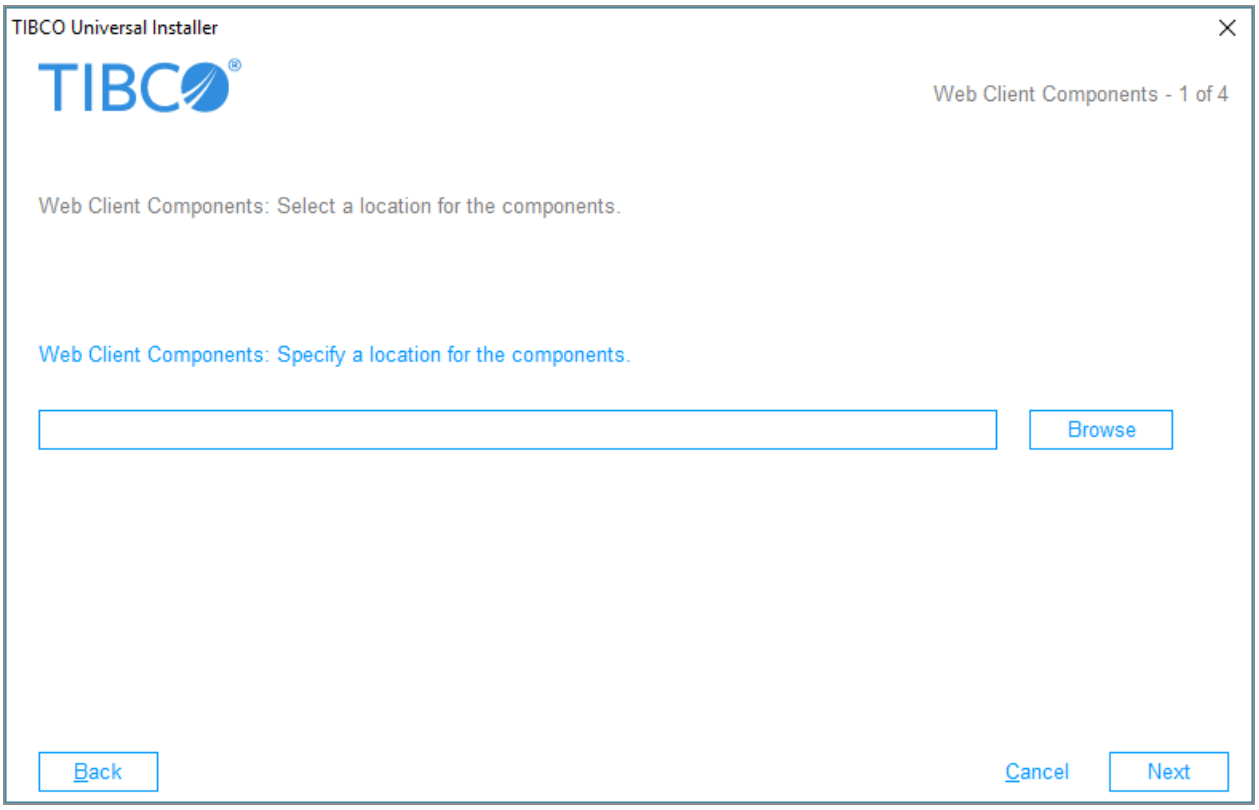
If you do not know if the client application uses TIBCO Forms, respond **No**. The **webDAVRoot** configuration parameter can be manually updated later. For more information, see the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide.

Components Dialogs

Selecting the **Components** checkbox on the **Component Selection** dialog causes as series of four **Web Client Components** dialogs to be displayed. These dialogs are described in the following subsections.

Web Client Components Dialog (1 of 4)

The first **Web Client Components** dialog is used to specify the location in which the iProcess Workspace (Browser) components (also known as WCC components) are to be installed.



The following describes the fields on this dialog:

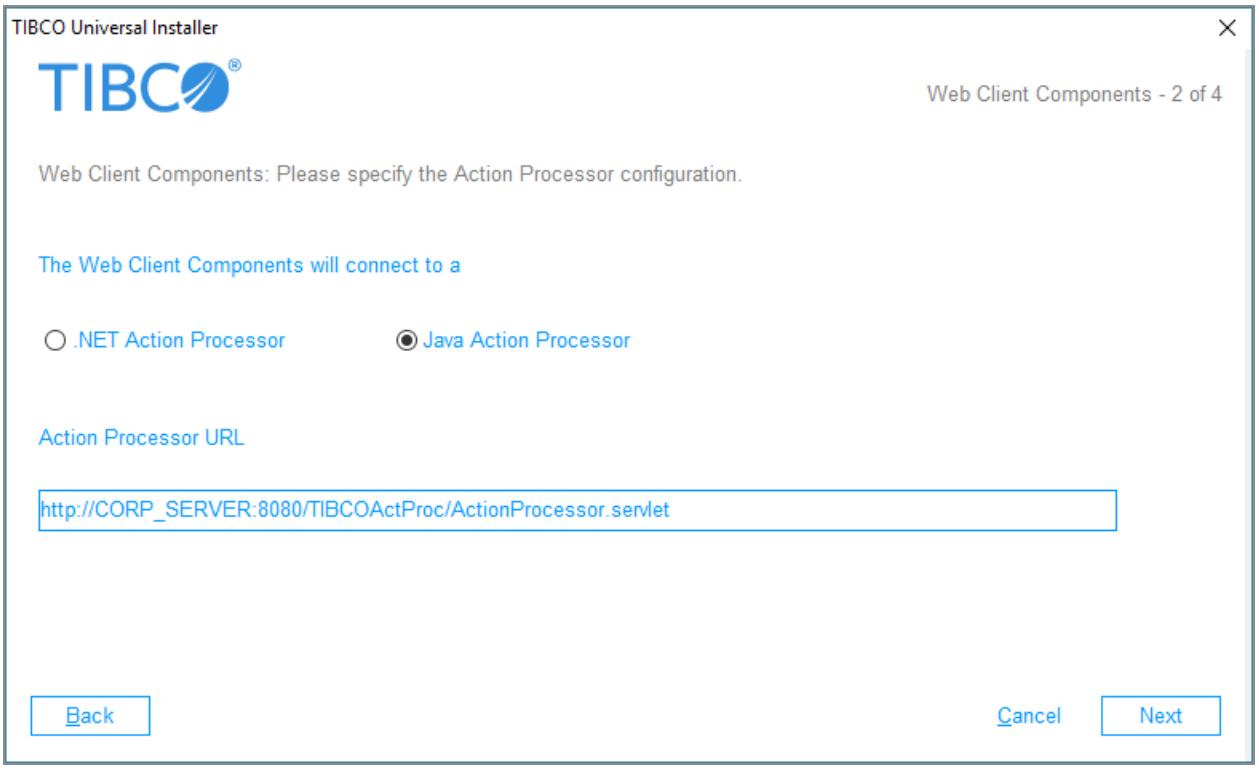
- **Web Client Components Directory**: Specify the directory into which the installation program should install the iProcess Workspace (Browser) components.

  This should be the directory in which TIBCO General Interface was installed (that is, the directory that contains `GI_Builder.html`). After installing the components, they can be accessed via General Interface Builder. For information about accessing the components, see the *TIBCO iProcess Workspace (Browser) Components Concepts* guide.

Note: The WCC components must be installed into a directory where GI Builder can write to the file system. For example, it is typically not recommended to install the WCC components under the inetpub directory of Microsoft IIS because IIS has special permissions on that directory that can prevent the GI Builder from writing to the file system. It is recommended to install the WCC components into some separate and normal user directory.

Web Client Components Dialog (2 of 4)

The second **Web Client Components** dialog is used to specify the type of Action Processor to which custom applications created with WCC components will connect. It also allows you to specify the URL to the Action Processor.



Information entered in this dialog is written to the `config.xml` file created for a custom application created with WCC components. For more information, see the *Custom Applications* section in the *TIBCO iProcess Workspace (Browser) Components Concepts* guide.

The following describes the radio buttons and fields on this dialog:

- **The Web Client Components will connect to a**: Select the Java or .NET Action Processor. This is the Action Processor to which the custom application created with the iProcess Workspace (Browser) components will connect.
- **Action Processor URL**: This is the URL to either the Java Action Processor or the .NET Action Processor. This must be in the form:

  ```
  http://Host:Port/APDir/ActionProcessor.ext
  ```

  where:

— *Host* is the name of the machine hosting the Action Processor. Note that if you are hosting both the custom application and the Action Processor on the same machine, and they are both being hosted by Tomcat, you can specify *Host* as “localhost”.

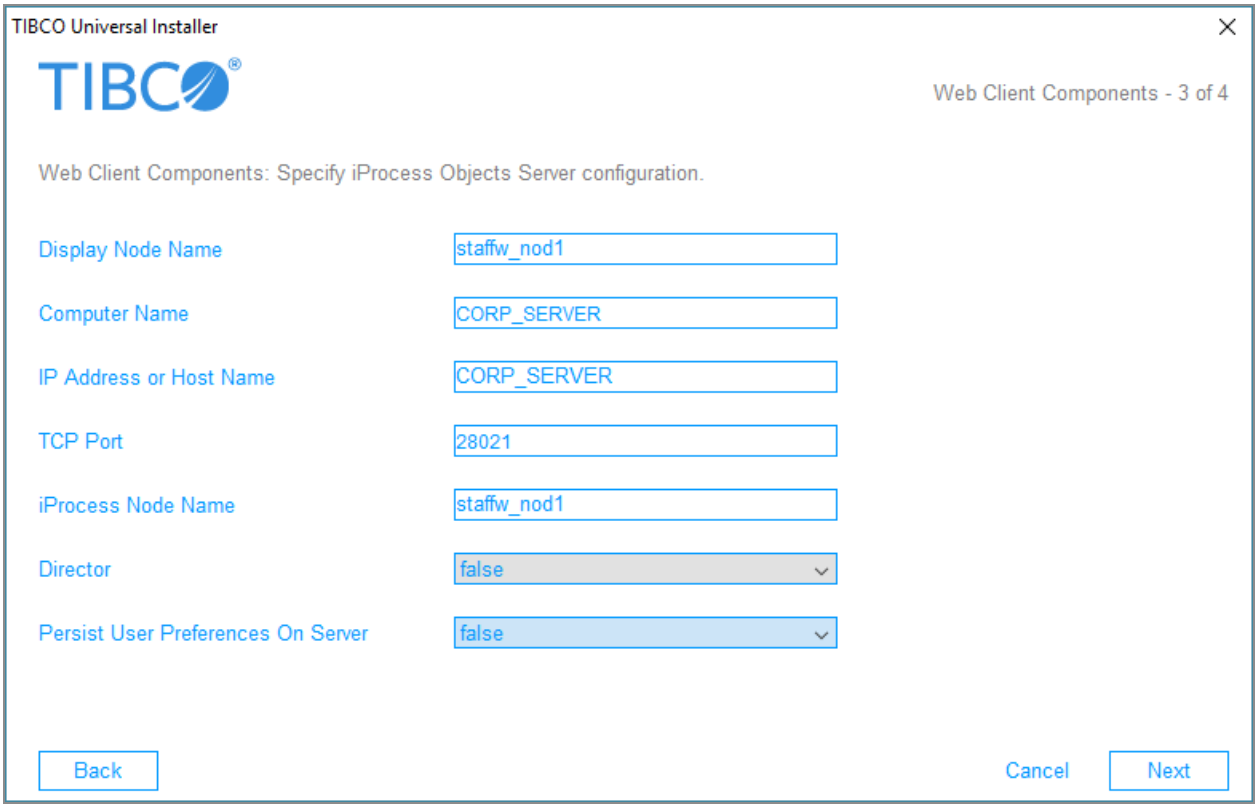
— *Port* is the port number used by the Web server to communicate with web applications.

— *APDir* is the directory (or virtual directory alias) on the *Host* in which the Action Processor is installed.

— *ext* is the file name extension (this is “servlet” if it’s a Java servlet, i.e., the Java Action Processor; or “aspx” if it’s a .NET ASP web application, i.e., the .NET Action Processor).

Web Client Components Dialog (3 of 4)

The third **Web Client Components** dialog specifies information about the TIBCO iProcess Objects Server that the user can log into after starting a custom application that was created with iProcess Workspace (Browser) components.



Information entered in this dialog is written to the `config.xml` file created for a custom application created with iProcess Workspace (Browser) components. For more information, see the "Custom Applications" section in the *TIBCO iProcess Workspace (Browser) Components Concepts* guide.

If you have already installed the iProcess Client, or you are upgrading the iProcess Workspace (Browser) components, the fields on this dialog are pre-filled with the values that were entered on the iProcess Client dialog, or from the previous components installation.

The following describes the fields on this dialog:

- **Display Node Name**: The name that you would like displayed in the custom application **Server** field drop-down list on the **Login** screen. This is the name the user would select when choosing a server to log into.
- **Computer Name**: The name of the machine on which the TIBCO iProcess Objects Server is installed.
- **IP Address or Host Name**: The IP address of the machine on which the TIBCO iProcess Objects Server is installed. You can enter the name of the host machine in this field, as long as that name resolves to the IP address of the machine where the iProcess Objects Server is running. Note, however, that this name must be able to be resolved by the machine on which the Action Processor is running.
- **TCP Port**: The TCP port number used by the TIBCO iProcess Objects Server. (The TCP port used by the server is specified using the iProcess Objects Server Configuration Utility in Windows systems (*SWDIR*`\bin\SWEntObjSvCfg.exe`), or by editing the iProcess Objects Server configuration file in UNIX systems (`$SWDIR/seo/data/swentobjsv.cfg`). For more information, see the *TIBCO iProcess Objects Server Administrator's Guide.*)

> **Note:** The iProcess Objects Server must be configured to use a static TCP port, so that that port number can be specified here — it cannot be configured to use a dynamic port.

If you are using an iProcess Objects Director, see the *TIBCO iProcess Objects Director Administrator's Guide* for information about configuring the TCP port on the Director.

If this is a new installation, this field is blank by default, and the installer will not allow you to advance without entering a port number. You must determine the TCP port used by the iProcess Objects Server to which the custom application created with the components is going to connect.

- **iProcess Node Name**: The name of the TIBCO iProcess Engine / iProcess Objects Server to which the user can log in. This is the “nodename” that is assigned to the iProcess Engine when it is installed.
- **Director**: Specifies whether or not the previous entries actually describe a TIBCO iProcess Objects Director, which is used to connect the client to a server). Select “true” if the specifications are for a Director, or “false” if a TIBCO iProcess Objects Director is not being used.
- **Persist User Preferences On Server** - This specifies whether user data[1] is persisted locally or on the server, as well as obtained locally or from the server upon login. Server-side persistence allows users to move to different machines and/or browser types, and pick up user preferences specified from another machine and/or browser type.

  If set to “false”:

  — All user data is stored on the client.

  — User data is not cached and is persisted client-side immediately.

  If set to “true”:

  — All user data is stored on the server.

  — User data is cached and is not saved to the server until the user logs out or closes the browser window.

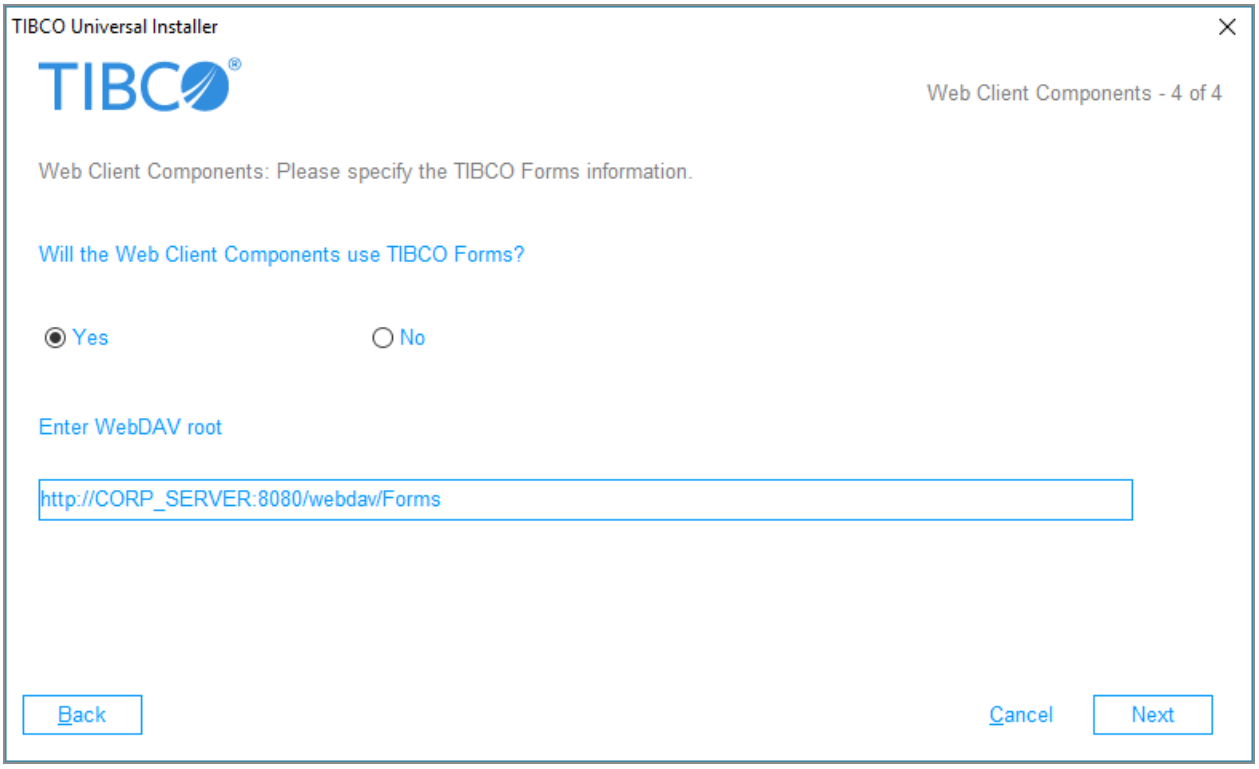
  — Options values (that is, all settings on the **Options** dialog in the application) are stored on both the client and the server. This is required because the language setting is stored in the Options data and this is needed to set up the locale before login.

  > **Note:** The first time server-side data is accessed for a given user, the user is given the option of initializing the server-side data with any data that has previously been persisted client side (if any client-side data exists). The user’s response to this question is persisted on the server and will not be asked again.

[1]User data consists of the following: Adding, removing, or changing views (note that changes to views are persisted immediately, whereas all other user data are persisted upon logout or application closure); list filters; list sorts; column changes (either using the Column Selector, or done manually); auto-repeat toggle on the work item list; case history show seconds/microseconds setting.

Web Client Components Dialog (4 of 4)

The fourth **Web Client Components** dialog is used to tell the installer if your custom application is using TIBCO Forms. TIBCO Forms are forms that are created and deployed with TIBCO Business Studio. For more information, see the *TIBCO Business Studio Forms User Guide*.



The following describes the radio buttons and fields on this dialog:

- **Will the Web Client Components use TIBCO Forms?** - Select the **Yes** radio button if your custom application is using TIBCO forms, or **No** if it is using some other type of forms.
- **Enter WebDAV root** - Enter the base URL of the location at which the TIBCO forms are stored. The installation program writes this URL to the **webDAVRoot** configuration parameter in the custom application's `config.xml` file. This allows the custom application to find the TIBCO Forms on the server.

If you don't know if the custom application will use TIBCO Forms, respond **No**; the **webDAVRoot** configuration parameter can be manually updated at a later time. For more information, see the *TIBCO iProcess Workspace (Browser) Configuration and Customization* guide.

iProcess Action Processor Dialogs

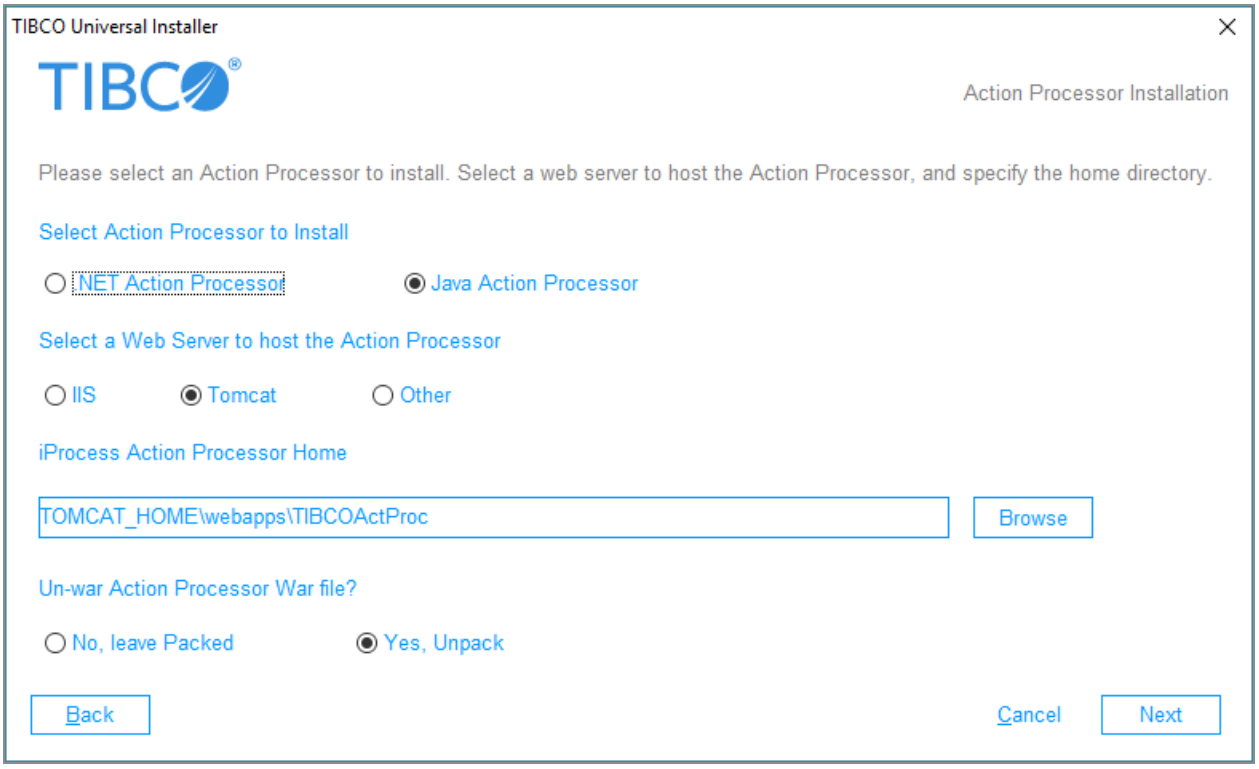
Selecting the **iProcess Action Processor** checkbox on the **Component Selection** dialog causes the following Action Processor-related dialogs to be displayed:

- **Action Processor Installation** dialog
- **iProcess Server Objects (Java)** dialog (Note that this dialog is displayed only if you have selected to install the Java Action Processor)

These dialogs are described in the following subsections.

Action Processor Installation Dialog

This dialog is used to specify which Action Processor to install, the Web server that hosts it, as well as the location to install the Action Processor.



The following describes the radio buttons and fields on this dialog:

- **Action Processor to Install**: Specify which Action Processor you want to install—.NET or Java—by clicking the appropriate radio button.
- **Web Server**: Specify which Web server is used to host the Action Processor: **IIS**, **Tomcat**, or **Other**.

> **Note:** If the .NET Action Processor is selected, this is automatically set to IIS, which is the only Web server you can use to host the .NET Action Processor.

- **Action Processor Home Directory**: Specify the directory in which the Action Processor software gets installed. You can use the **Browse** button to locate the directory.

  If **IIS** is selected for the Web server, then the home directory defaults to `C:\Inetpub\wwwroot\TIBCOActProc`.

  If **Tomcat** is selected for the Web server, then the home directory defaults to:

  - In Windows: *TOMCAT_HOME*`\webapps\TIBCOActProc`
  - In Unix: or *TOMCAT_HOME*`/webapps/TIBCOActProc`

    You must replace *TOMCAT_HOME* with the directory in which Tomcat is installed (for example, `D:\Tomcat`). The remainder of the default path can also be changed, if desired.

    > **Note:** If the *TOMCAT_HOME* variable is defined on the system, the installer automatically inserts the variable's value instead of displaying TOMCAT_HOME.

  If **Other** is selected for the Web server, the home directory field is blank. Enter the path to the directory into which the Action Processor should be installed.

- **Un-war Action Processor War file?**: These radio buttons are displayed only if you select the **Java Action Processor**.

  These radio buttons allow you to specify whether the Action Processor WAR file should be left packed or not. For more information, see Hosting the iProcess Client and Action Processor. Select the appropriate radio button.

> **Note:** If you choose not to unpack the Action Processor WAR file, no configuration of the Action Processor takes place.

iProcess Server Objects (Java) Dialog

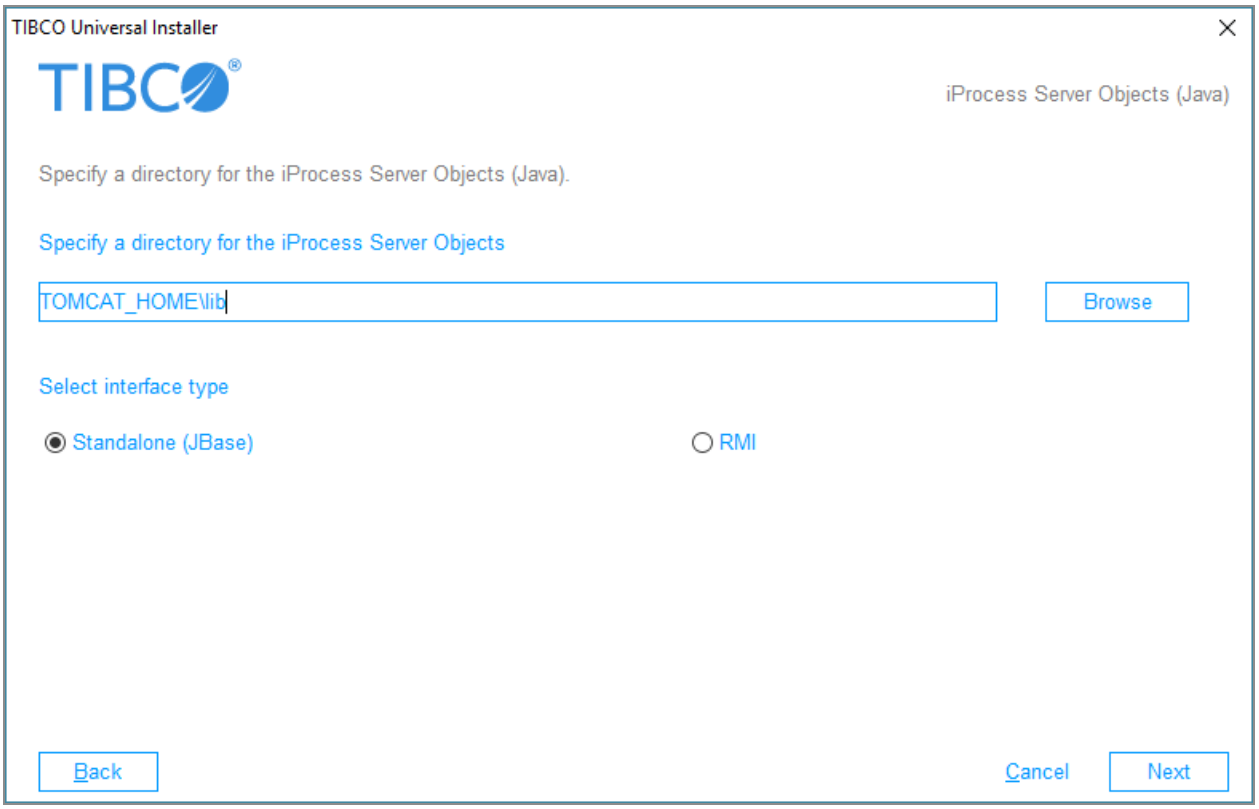
This dialog is used to specify where to install the iProcess Server Objects (Java). It also allows you to specify which interface to install, Standalone or RMI.

Note: The iProcess Server Objects are required to run the iProcess Workspace (Browser). There are two types of the iProcess Server Objects: Java and .NET. The type you need depends on the type of Action Processor you are installing, as follows:

- If you are installing the Java Action Processor, you need the iProcess Server Objects (Java).
- If you are installing the .NET Action Processor, you need the iProcess Server Objects (.NET).

The appropriate type of iProcess Server Objects is automatically installed for you with the iProcess Workspace (Browser) software.

This dialog is displayed only if you are installing the iProcess Server Objects (Java) (which are automatically installed if you are installing a Java Action Processor). It is not displayed if you are installing the iProcess Server Objects (.NET) (which are automatically installed if you are installing a .NET Action Processor), as there are no configuration requirements for the iProcess Server Objects (.NET).



- **Directory for the iProcess Server Objects**: Specify the directory into which the iProcess Server Objects (Java) are to be installed.

If your Java Action Processor is hosted on Tomcat, the iProcess Server Objects (Java) must be installed in the *Tomcat_Home***lib** directory (*Tomcat_Home*/**lib**, respectively, on UNIX).

If your Java Action Processor is hosted by any other Web server, see the Web server's documentation for information about where to install shared libraries so that they are accessible by the Action Processor Java servlet.

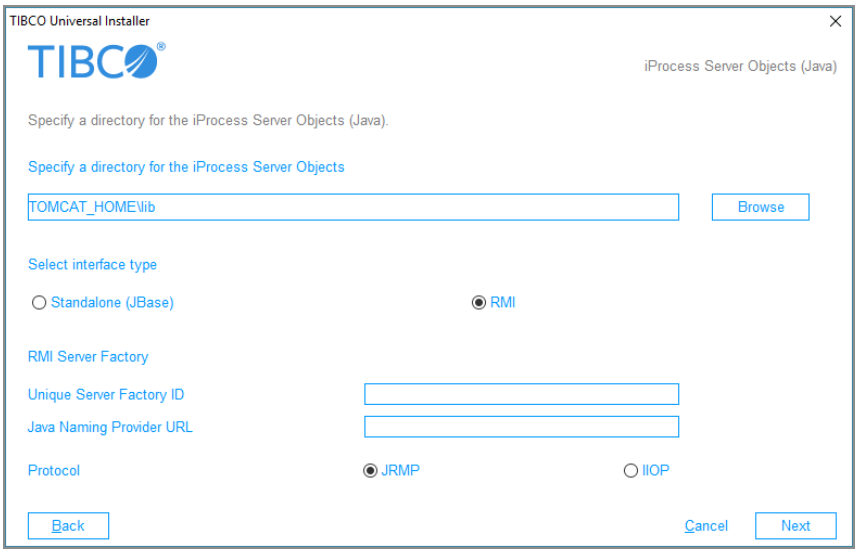
The installation program checks to see if there were iProcess Server Objects (Java) already installed in the specified directory. If it finds an existing installation, it prompts if it can overwrite the files in that installation.

Note:

- If you had a previous version of the TIBCO iProcess® Server Objects (Java) installed in a different directory, you should uninstall them before installing the new version.
- The iProcess Workspace (Browser) may not work properly if the TIBCO iProcess Server Objects (Java) library file (for example, **ssoJNI.dll** in Windows; **libssoJNI.sl** or **libssoJNI.so** in UNIX) is located anywhere else on your system.

- **Interface Type**: Specify which iProcess Server Objects (Java) interface type should be installed. The choice here depends on how the iProcess Server Objects (Java) are implemented, as follows:
  - **Standalone (JBase) -** This is the local solution—it exposes TIBCO iProcess Server Objects functionality as simple Java objects. This interface does not use remote objects. It is typically used when incorporating a broker application that is automatically processing work items arriving in a particular work queue.
  - **RMI (Remote Method Invocation) -** This is the remote solution—it uses Java's Remote Method Invocation (RMI) technology. This allows the client to be on a machine remote from the TIBCO iProcess Server Objects.

    If **RMI** is selected, the following fields and radio buttons are displayed:



These allow you to specify configuration information when using RMI. The information you specify in the **RMI Server Factory** section is automatically written to the Action Processor's configuration file, **apConfig.xml**, as described below.

— **Unique Server Factory ID**: This is a unique name that identifies the server factory. If you are running the iProcess Server Objects (Java) through RMI, a server factory must be set up to access the remote objects across the network. The name that is given to the server factory when it is set up, is entered in this field.

The name entered in this field is written to the **<UniqueId />** and **<Name />** elements in the **apConfig.xml** file. (Note that this will not occur if you chose not to unpack the Action Processor WAR file—see Hosting the iProcess Client and Action Processor.)

— Java Naming Provider URL - Specifies the location of the Registry when the Registry is being used as the initial context. This value must contain a URL in the form "*protocol*://*host*:*port*". Some examples are:

RMIRegistry running on your local machine on port 1099:

```
rmi://localhost:1099
```

COS registry running on an external machine port 900, J2EE Reference Implementation naming server on external machine:

```
iiop://10.20.30.103:900
```

This is written to the **apConfig.xml** file as the value of the `java.naming.factory.initial` entry.[1]

— **Protocol**: This specifies the protocol used to marshall objects across the RMI boundary. This protocol is specified when the server factory is started—the same protocol must be specified here. The options are:

- JRMP - Java Remote Method Protocol

- IIOP - CORBA standard Internet Inter-Orb Protocol

If **JRMP** is selected, the **<IsJRMP />** element in the **apConfig.xml** file is set to true. If **IIOP** is selected, the **<IsJRMP />** element is set to false.

For more information about the RMI interface, see the *TIBCO iProcess Server Objects (Java) Programmer's Guide*.

Installing in Console Mode

Console mode allows you to install the TIBCO iProcess Workspace (Browser) from a non-Windows environment. This mode presents a series of prompts that request the same information that you would enter on the dialogs presented in the GUI installation mode.

Note: If you are upgrading from an earlier version of the TIBCO iProcess Workspace (Browser), read Upgrading from Previous Versions before proceeding.

Also, if your previously installed application had been localized, be sure to read Previously Localized Client Application.

The basic command to run a console installation is:

<*Installer*> `-console`

where <*Installer*> is the name of the installer **.exe** file (on Windows) or **.bin** file (on UNIX).

To perform a console mode installation, perform the following steps:

[1]A post-installation configuration procedure is required when using RMI because the installer adds two `java.naming.factory.initial` entries to the **apConfig.xml** file by default. See Modify the apConfig.xml File if Using RMI.

1. Open the physical media or download the package from the TIBCO Software Downloads site. To download the installation package, a user name and password are required. If you do not have a user name and password, contact TIBCO Technical Support..
2. Extract the contents of the package to a temporary directory.
3. Log in as the iProcess Engine administrator (IPEADMIN).
   - in UNIX, this defaults to **pro** (also referred to as the “Background” user in UNIX).
   - in Windows, this is specified when the iProcess Engine is installed (it defaults to the user installing the iProcess Engine).

   For more information, see the *TIBCO iProcess Engine Installation Guide*.
4. On the command line, navigate to the temporary directory to which you extract the installation package.
5. Enter the appropriate command to start the installation. For example:
   - Microsoft Windows: TIBCOUniversalInstaller.cmd -console
   - UNIX: ./TIBCOUniversalInstaller-***platform*-*acronym***.bin -console
6. Respond to each of the prompts as required.

   Generally, the prompts in console mode expect you to enter a number to indicate your selection, then press **Enter** to submit that entry. Then you must enter a **0** (zero) and press **Enter** to finish that prompt and proceed to the next prompt.

   If a value is shown in square brackets at the end of the prompt (for example, [0]), it signifies a default. Pressing **Enter** submits that value.

   For additional information about possible responses to the prompts, see Installing in GUI Mode.
7. When the installation is completed, press Enter to exit the installer.

Installing in Silent Mode

In silent mode, you can run the installer without user input by pointing the installer to an existing response file, which contains installation parameters.

Note: If you are upgrading from an earlier version of the TIBCO iProcess Workspace (Browser), read Upgrading from Previous Versions before proceeding.

Also, if your previously installed application had been localized, be sure to read Previously Localized Client Application.

A default response file is included with the product. You can edit the response file with information about your environment before launching the silent installation. The name of the default response file is:

TIBCOUniversalInstaller_ip-wksp-brwsr_***version***.silent

The best practice is to make a copy of the default response file, and then edit that file and use it for the installation. If you invoke the TIBCO Universal Installer with only the -silent argument, the installer reads the input from the default response file. If you make a copy of the default response file, and rename it, you must provide the name of the response file when invoking the installer. This is done by passing the following arguments on the command line:

-silent -V responseFile="***filename***.silent"

where ***filename*** is the name you gave the response file. To install this product in silent mode:

To install this product in silent mode:

1. Open the physical media or download the package from the TIBCO Software Downloads site. To download the installation package, a user name and password are required. If you do not have a user name and password, contact TIBCO Technical Support..
2. Extract the contents of the package to a temporary directory.
3. Navigate to the temporary directory to which you extract the installation package.
4. Make a copy of the default response file, and then rename this copied file.
5. Open the copied file by using a text editor. Update the installation location, ***ENV_NAME***, and features to be installed.
6. Enter the following command to start the installation. For example, if you have copied the response file and saved it as MyResponseFile.silent:
   - Microsoft Windows:
     TIBCOUniversalInstaller.cmd -silent -V responseFile="MyResponseFile.silent"

— UNIX:
./TIBCOUniversalInstaller-platform-acronym.bin -silent -V
responseFile="MyResponseFile.silent".

Note: If you copy the response file to a directory other than the temporary directory containing the installer, you must provide the absolute path of the response file.

Post-Installation Configuration

This section describes post-installation requirements.

Post-Installation Configuration

The post-installation configuration tasks are divided into the following sections.

- Configuration if using IIS to host the iProcess Client and using TIBCO Forms— see Configuration if Using IIS to Host the iProcess Client and Using TIBCO Forms
- Configuration if using IIS to host a .NET Action Processor—see Configuration if Using IIS to Host a .NET Action Processor
- Configuration if using Tomcat to host a Java Action Processor—Configuration if Using Tomcat to Host a Java Action Processor

Use the appropriate section depending on which software has been installed and which web server is used to host them.

If you are installing on a Web server other than IIS or Tomcat, there may be configuration functions required by that Web server. see that server's documentation.

Note: The iProcess Workspace (Browser) installation program unpacks the iProcess Client's WAR file during the installation process. If you are using an Application Server that requires WAR files, you will need to manually repack them into a WAR file after the installation is completed. For more information, see Packing/Unpacking WAR Files.

Note: If you are hosting the .NET Action Processor in IIS 8.5 or 10, and you want the Action Processor to run in a **.NET Framework 4.0** Application Pool, you must open the web.config file for the Action Processor's web site, and uncomment the following line:

```
<!--httpRuntime requestValidationMode="2.0" /-->
```

This is required because .NET Framework 4.0 disables switching off validation of HTML input (that is, it causes the Validate=false setting in ActionProcessor.aspx to be disregarded).

Configuration if Using IIS to Host the iProcess Client and Using TIBCO Forms

If you are hosting the iProcess Client in IIS, and you are using TIBCO Forms in your application, you must ensure the following MIME types are added to the virtual directories for your iProcess Client and TIBCO Forms (WebDAV directory):

- .json
- .form

To add MIME Types to IIS:

1. Access **Administrative Tools** / **Internet Information Services (IIS) Manager**.
2. In the **Internet Information Services (IIS) Manager** window, either:
   - click on a virtual directory, either for the iProcess Client or TIBCO Forms (WebDAV directory), in the left pane. If you choose to add the required MIME types for individual virtual directories, you will need to perform this procedure twice; once for the iProcess Client virtual directory, and again for the TIBCO Forms virtual directory (WebDAV directory), or
   - click on the machine name or the website in the left pane; MIME types at the machine or website level are inherited by the virtual directories below them.
3. Scroll down the list in the **MIME Types** dialog and verify whether or not **.json** has been added. If it has, proceed to Scroll down the list in the MIME Types dialog and verify whether or not .form has been added. If it has, no further action is required—exit the MIME Types dialog and IIS..
4. If **.json** is not in the list, click **Add**.

5. In the **Add MIME Type** dialog, enter:

   File name extension: **.json**
   MIME type: **application/json**

6. Click **OK** to save the new MIME type.
7. Scroll down the list in the **MIME Types** dialog and verify whether or not **.form** has been added. If it has, no further action is required—exit the **MIME Types** dialog and IIS.
8. If **.form** is not in the list, click **Add**.
9. In the **Add MIME Type** dialog, enter:

   File name extension: **.form**
   MIME type: **text/xml**

10. Click **OK** to save the new MIME type.
11. Exit Internet Information Services (IIS) Manager.

IIS does not need to be restarted to recognize new MIME types.

Configuration if Using IIS to Host a .NET Action Processor

The following are configuration functions you must perform if you are using IIS to host a .NET Action Processor.

Before you begin

You need to set the dependent DLL's path to the system path. For example:
`C:\inetpub\wwwroot\TIBCOActProc\Bin`

> **Note:** If you are running the .NET Action Processor in a .NET Framework 4.0 application pool, also see *.NET Action Processor Compatibility with .NET 4.0* in the "Compatibility" section of the *TIBCO iProcess Workspace (Browser) Release Notes.*

Note that these tasks are required only after an initial installation. If you have upgraded, these configuration changes should have already been made.

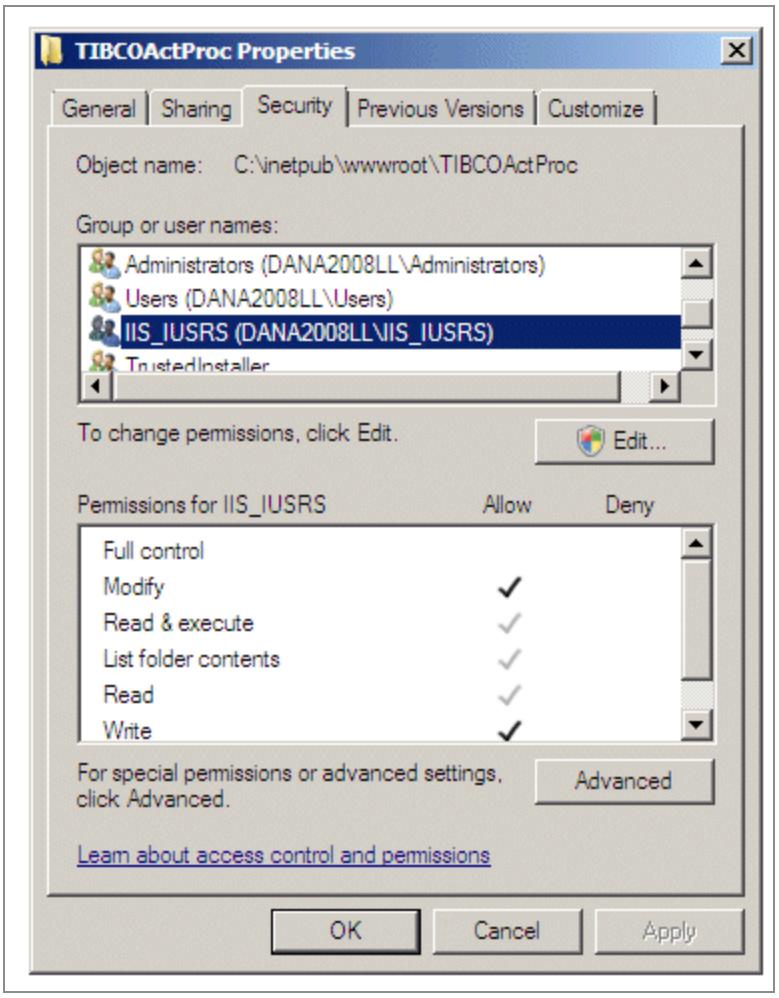
- Give the IIS_IUSRS group modify permission to the Action Processor installation directory—see Give the IIS_IUSRS Group Modify Permission to the Action Processor Installation Directory.
- Specify the Application Pool Identity and give that User Full Control to the Action Processor installation directory—see Specify the Application Pool Identity and Give that User Full Control to the Action Processor.
- Convert the Action Processor's virtual directory to an application—see Convert the Action Processor's Virtual Directory to an Application.
- Change the location of the Action Processor log file—see Start the Website to Start the Action Processor.
- Start the website to start the Action Processor—see Start the Website to Start the Action Processor.

Give the IIS_IUSRS Group Modify Permission to the Action Processor Installation Directory

Note that this task is required only after an initial installation. If you have upgraded, this configuration change should have already been made.

The IIS_IUSRS group must be given modify permissions to the Action Processor installation directory. To do this:

1. Right-click the directory that was created by the installer for the Action Processor files (**TIBCOActProc** in this example) and select **Properties**.
2. On the **Security** tab, check to see if the IIS_IUSRS group account has modify permissions. If necessary, add the "**IIS_IUSRS**" group account and give it modify permissions:



Specify the Application Pool Identity and Give that User Full Control to the Action Processor

Note that this task needs to be performed only if this is the initial installation (if this is an upgrade, the permissions from the previous installation should still be correct).

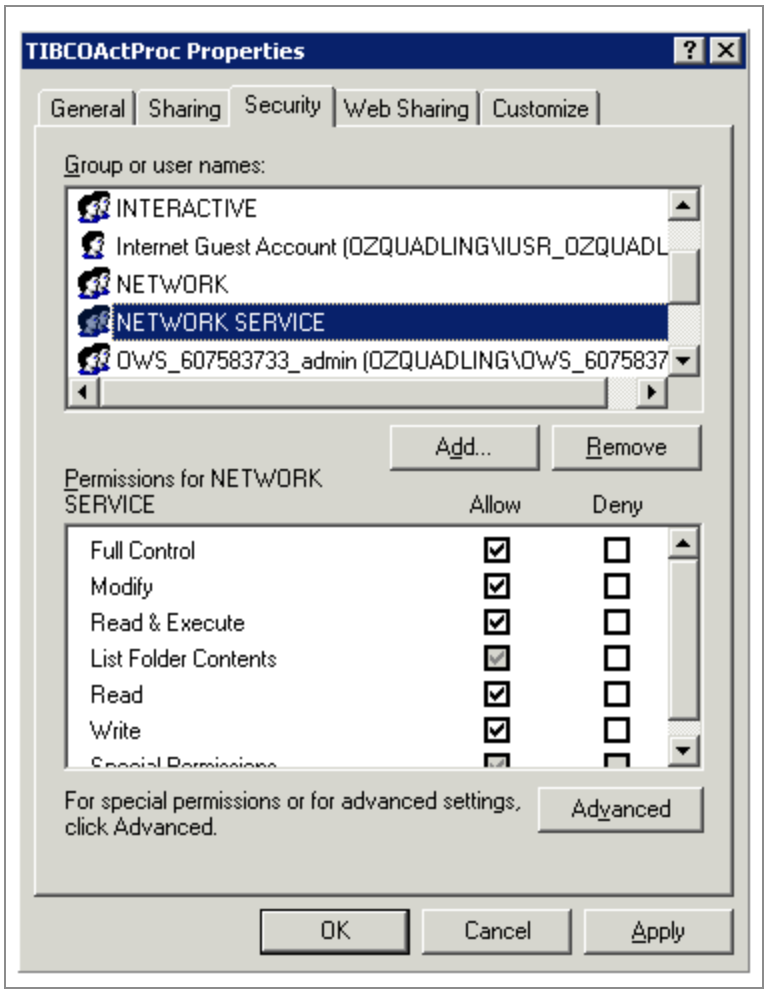
This procedure uses the NETWORK SERVICE user as the application identity, as it is a built-in and available user, although you can use another user if desired.

The user that is specified as the application identity must be given full control permissions to the Action Processor installation directory so that it can write to the Action Processor log file. To do this:

1. In Internet Information Services (IIS) Manager, select **Application Pools** in the left

pane.

2. Choose the application pool to use from the center pane.
3. In the right pane, click **Advanced Settings**.
4. On the **Advanced Settings** dialog, select the browse button in the field to the right of the **Identity** field.
5. On the **Application Pool Identity** dialog, choose **NetworkService** (or a different user account if you are using one other than Network Service) from the **Built-in Account** list, then click **OK**.
6. On the **Advanced Settings** dialog, click **OK**.
7. In the left pane of IIS Manager, right-click the Action Processor folder (**TIBCOActProc** in this example) and select **Edit Permissions**.
8. On the **Security** tab, check to see if the NETWORK SERVICE account has full control permissions. If necessary, add the "**NETWORK SERVICE"** user account and give it full control permissions:

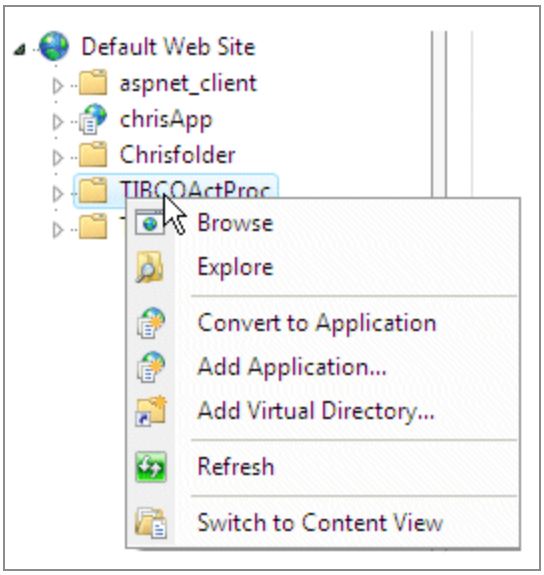


Convert the Action Processor's Virtual Directory to an Application

Note that this task is required only after an initial installation. If you have upgraded, this is already done.

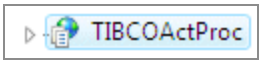
You must convert the virtual directory being used by the Action Processor to an application. To do this:

1. From IIS Manager, right-click the virtual directory being used for the Action Processor and select **Convert to Application** from the dropdown menu:



2. From the **Add Application** dialog, leave all default values and click **OK**.

   The icon for the virtual directory changes to indicate it is now an application. For example:



Start the Website to Start the Action Processor

Starting the website on which your .NET Action Processor is hosted starts the Action Processor.

To start the website, in IIS Manager, right-click the website hosting your Action Processor, then select **Start**.

If for some reason, the website had not been previously stopped, stop it now, then restart it.

Configuration if Using Tomcat to Host a Java Action Processor

The following are configuration functions you must perform if you are using Tomcat to host a Java Action Processor:

Before you start Tomcat,

In Windows,

```
Set the system environment variable PATH to include %TOMCAT_HOME%\lib
```

In Linux,

Set the environment variable `LD_LIBRARY_PATH` by running the following command:

```
export LD_LIBRARY_PATH=$TOMCAT_HOME/lib:$LD_LIBRARY_PATH
```

- Modify the **apConfig.xml** file if using RMI.
- Update the Java library path.
- Add a security filter to enable a secure HTTP header.
- Start Tomcat to start the Action Processor.

These are described in the following sections.

Modify the apConfig.xml File if Using RMI

This is required only if you are using RMI.

When RMI is selected during installation, the installer includes two `java.naming.factory.initial` entries in the **apConfig.xml** file by default, as follows:

```
<JNDIEnv>
  <Name>java.naming.factory.initial</Name>
  <Value>com.sun.jndi.rmi.registry.RegistryContextFactory</Value>
</JNDIEnv>
<JNDIEnv>
  <Name>java.naming.factory.initial</Name>
  <Value>com.sun.jndi.cosnaming.CNCtxFactory</Value>
</JNDIEnv>
```

You need to remove one of these entries.

— The first entry (com.sun.jndi.rmi.registry.RegistryContextFactory) is the correct entry if you are using JRMP.

— The second entry (com.sun.jndi.cosnaming.CNCtxFactory) is the correct entry if you are using IIOP.

Remove the entry that does not apply to the protocol you are using.

The default location of the **apConfig.xml** file is:

```
TomcatInstallDir\webapps\TIBCOAcrProc\
```

Update the Java Library Path

Update the Java library path so that it points to the TIBCO iProcess® Server Objects (Java) JAR file.

The following subsections describe how to do this, depending on whether you are installing on Windows or UNIX.

Note: You need to perform the steps in this section *only* if you are using a version of Tomcat other than the one that is embedded in, and installed with, the iProcess Engine. If you are using the embedded Tomcat, the Java library path is updated when you run **smserv.bat** (Windows) or **smstart** (UNIX) to start the embedded Tomcat. If you are using a version of Tomcat other than the embedded one, you must explicitly update the Java library path as described in this section.

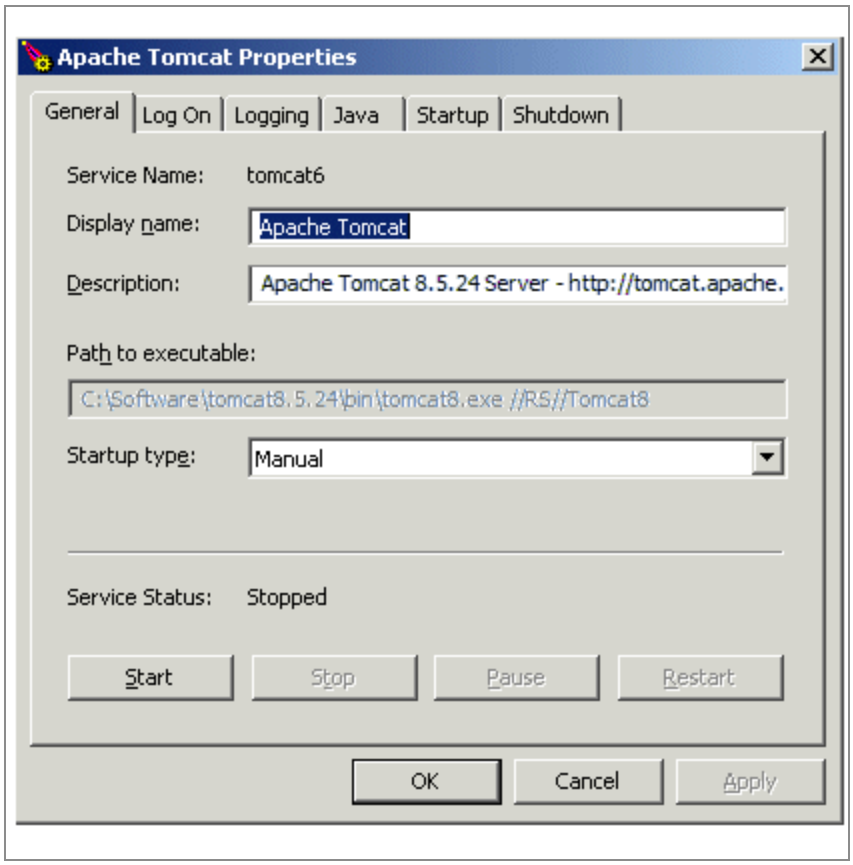
Windows Systems

To update the Java library path in Windows:

1. Start the Tomcat monitoring/configuration program by running one of the following:

   ```
   TomcatDir\bin\tomcat8w.exe   [Tomcat 8.x] or
   TomcatDir\bin\tomcat9w.exe   [Tomcat 9.x]
   ```

   The following dialog is displayed:

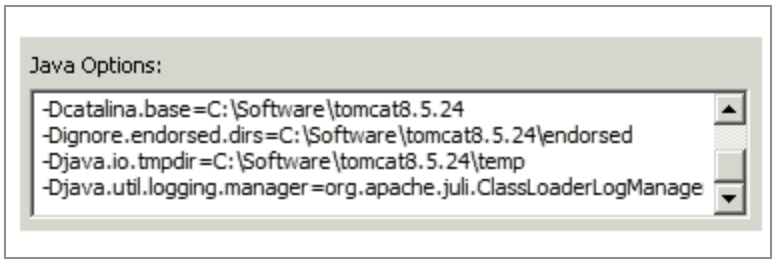


2. Click the **Java** tab.
3. In the **Java Options** section, ensure that the following line is included in the entries. If it is not already included, add it after the existing entries.

```
-Djava.library.path=TomcatDir\lib   [Tomcat 8.x and 9.x]
```

   where *TomcatDir* is the directory in which Tomcat is installed.

   The **Java Options** section should now appear similar to the following:



4. Click **OK** to save the changes and close the Tomcat monitoring program.

UNIX Systems

To check the Java library path on UNIX systems:

1. Open the following file with an editor:

   ```
   TomcatDir/bin/catalina.sh
   ```

2. Locate “RUNJAVA” in the **catalina.sh** file and ensure that the following line is included:

   `-Djava.library.path=`*TomcatDir*`/lib \` [Tomcat 8.x and 9.x]

   where *TomcatDir* in the directory in which Tomcat is installed.

   For example:

   ```
   "$_RUNJAVA" $JAVA_OPTS $CATALINA_OPTS \
       -Djava.library.path=/tomcat/lib \
       -Djava.endorsed.dirs="$JAVA_ENDORSED_DIRS" -classpath
   "$CLASSPATH" \
       -Dcatalina.base="$CATALINA_BASE" \
       -Dcatalina.home="$CATALINA_HOME" \
       -Djava.io.tmpdir="$CATALINA_TMPDIR" \
   ```

3. Save and close the **catalina.sh** file.

Add security filter to enable secure HTTP header

It is now possible to manually add security filter to enable secure HTTP header and reduce security threats in iProcess Workspace (Browser).

To add security filter and enable secure HTTP header, add the below lines in TomcatDir\conf\web.xml after the following tag

```
<!-- ========== Built In Filter Definitions ================= -->
<filter>
    <filter-name>httpHeaderSecurity</filter-name> <filter-
class>org.apache.catalina.filters.HttpHeaderSecurityFilter</filter-
class>
        <async-supported>true</async-supported>
                                <init-param>
        <param-name>antiClickJackingOption</param-name>
```

```
 <param-value>SAMEORIGIN</param-value>
 </init-param>
        <init-param>
 <param-name>xssProtectionEnabled</param-name>
 <param-value>true</param-value>
 </init-param>
         </filter>
<filter-mapping>
 <filter-name>httpHeaderSecurity</filter-name>
 <url-pattern>/*</url-pattern>
</filter-mapping>"
```

Note: The above steps are same for every operating system that is used.

Start Tomcat to Start the Action Processor

Starting Tomcat causes the Action Processor to start.

The following sections describe how to start Tomcat, depending whether you have installed on Windows or UNIX.

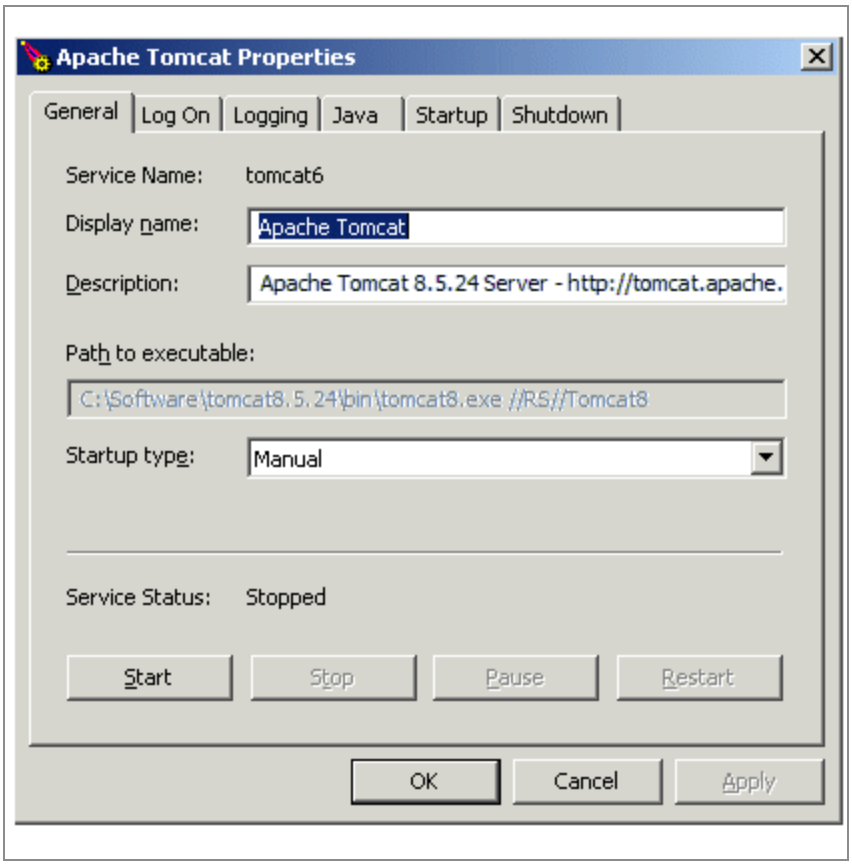
Windows Systems

To start Tomcat on Windows systems:

1. Start the Tomcat monitoring/configuration program by executing one of the following:

   ```
   TomcatDir\bin\tomcat8w.exe   [Tomcat 8.x] or
   TomcatDir\bin\tomcat9w.exe   [Tomcat 9.x]
   ```

   The following dialog is displayed:



2. Click on the **Start** button.

   This starts Tomcat and the Action Processor.

3. Click **OK** to close the Tomcat monitoring program.

Note: Tomcat can also be stopped by executing the Tomcat monitoring program as described above, then clicking the **Stop** button. This also stops the Action Processor.

UNIX Systems

To start Tomcat on UNIX systems, run the Tomcat startup script:

```
TomcatDir/bin/startup.sh
```

This starts the Java Action Processor.

Accessing the Client

This section describes how to access the client application after installing the TIBCO iProcess Workspace (Browser).

Accessing the iProcess Client

After all installation and configuration tasks are completed, and the Web Application Server hosting the iProcess Client and Action Processor has been started, the iProcess Client can be launched by pointing a browser at the iProcess Client launch fragment:

```
http://Host:Port/ClientDir/iProcessClient.html
```

where:

- *Host* is the machine name on which the iProcess Client is being hosted.
- *Port* is the port number used by the Web server to communicate with web applications.
- *ClientDir* is the directory (or virtual directory alias) in which you installed the iProcess Client files (which defaults to **TIBCOiPClnt**).

For example:

```
http://Roxie:8090/TIBCOiPClnt/iProcessClient.html
```

Cross-Domain Scripting

Cross-domain scripting is a security vulnerability of web applications. If you trigger cross-domain scripting, and your browser doesn't allow it, the web application will not run (in the case of an iProcess Workspace (Browser) application, it will state that it is unable to establish a connection to the Action Processor).

Some browsers are more strict about enforcing cross-domain scripting than others; and newer versions of browsers tend to be more strict than older versions. Some browsers also provide methods to allow cross-domain scripting—see your browser's documentation for more information.

Cross-domain scripting affects accessing iProcess Workspace (Browser) applications in the following ways:

- **URL used to launch the application** - To prevent cross-domain scripting, it is best practice to ensure that the domain portion of the URL that is entered into the address line of the browser exactly matches the domain portion of the Action Processor URL specified in the application's `config.xml` file.

  The domain consists of the "`http://`*Host*`:`*Port*" part of the URL.

  The domain used to launch the application cannot differ in any way from the Action Processor's specified domain, otherwise cross-domain scripting may be triggered (depending on your browser). That is, you cannot use "http" in one and "https" in the other; you cannot use a host name in one and an IP address in the other; one host name cannot be unqualified and the other qualified; you cannot use "localhost" in one and "127.0.0.1" in the other.

  To determine if cross-domain scripting is being used, the browser simply compares the URL domains as strings.

- **Running the application from the local file system** - Because of the security risk of cross-domain scripting, some browsers will not allow you to run a web application (including the iProcess Client or a WCC application) from the local file system.

Note: You would typically only run the iProcess Client or a WCC application from the file system in a testing and development environment. In a production environment, it is expected that the application is deployed to a Web server and run from there.

Uninstallation

This section describes how to remove the individual components of the iProcess Workspace (Browser) using the uninstall program. You can remove one or all of the components, depending on your requirements.

Uninstalling in GUI Mode

By using the TIBCO Universal Installer, you can uninstall all products in a particular TIBCO_HOME, or you can uninstall specific products that have been installed in a TIBCO_HOME. To uninstall this product in GUI mode:

1. Navigate to the ***TIBCO_HOME***/tools/universal_installer directory
2. Start the TIBCO Universal Installer:
   - On Microsoft Windows, double-click TIBCOUniversalInstaller.exe or TIBCOUniversalInstaller-x86-64.exe.
   - On UNIX, run TIBCOUniversalInstaller-platform-acronym.bin.
3. Select **Uninstall Products from a TIBCO Home Location**.
4. In the **TIBCO Home Location** field, select the ***TIBCO_HOME*** in which the product is installed, and then click **Next**.
5. In the Welcome dialog, click **Next**.
6. In the **Uninstallation Type** dialog, select one of the following options, and then click **Next**.
   - Custom Uninstall Removes the products that you select in step 7.
   - Typical Uninstall Removes all the products in the TIBCO_HOME you selected. If you select this option, proceed to step 8.
7. Select the products to be uninstalled, and then click **Next**.
8. Review the products to be uninstalled, and then click **Uninstall**.
9. In the **Post Uninstall Summary** dialog, click **Finish** to exit the uninstall wizard.

10. If you have uninstalled all the software in ***TIBCO_HOME***, delete the folders in the installation environment and user home.

Uninstalling in Console Mode

In console mode, you can uninstall the product from the command line.

To uninstall this product in console mode:

1. Open a command line and navigate to the ***TIBCO_HOME***/tools/universal_installer directory.
2. Enter the appropriate command to start the uninstallation. For example:
   - Microsoft Windows: TIBCOUniversalInstaller.exe -console or TIBCOUniversalInstaller-x86-64.exe -console
   - UNIX: ./TIBCOUniversalInstaller-platform-acronym.bin -console
3. Respond to the messages on the command line.
   See Uninstalling in GUI Mode for information about the messages.
4. When the uninstallation is completed, press Enter to exit the installer.

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the Product Documentation website, mainly in HTML and PDF formats.

The Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

Documentation for TIBCO iProcess® Workspace (Browser) is available on the TIBCO iProcess® Workspace (Browser) Product Documentation page.

How to Contact Support for TIBCO Products

You can contact the Support team in the following ways:

- To access the Support Knowledge Base and getting personalized content about products you are interested in, visit our product Support website.
- To create a Support case, you must have a valid maintenance or support contract with a Cloud Software Group entity. You also need a username and password to log in to the product Support website. If you do not have a username, you can request one by clicking **Register** on the website.

How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature

requests from within the TIBCO Ideas Portal. For a free registration, go to TIBCO Community.

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