

Setup Server Autostart

In Factory Studio, users are able to run the projects on multiple ways, they are:

- Local or Remote manual command
- On user login
- Projects as a Service
- Remote OPC Activation

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Setup the Server to Start the Runtime

You can run the project in any of the following ways:

- Start manually. From the FactoryStudio main window and project list, right-click the project and select **Run Project**.
- Start manually. When configuring the project, go to **Run > Startup** and click **Run Startup**.
- Start the project automatically, which is the best option for production environments.

The best way to define an automated startup of the product, it is to use the configuration interface available on the Project Management tools, at the Server tab.

The screenshot shows the 'Server' configuration tab in Factory Studio. At the top, there are two tabs: 'Projects' and 'Server'. The 'Server' tab is active. Below the tabs, there is a header 'Setup a project to automatic startup on server localhost'. Under 'Current settings:', it says 'Select the runtime auto startup mode:'. There are four radio button options: 'None: projects are started only with a command, local or remote.', 'Login: run project when an user login and stop on user logout', 'Service: run project as a service when computer starts, independently of user logins' (which is selected), and 'OPC Activation: runtime is activated by remote OPC client connections'. Below these options is a 'Project:' label followed by a text box containing 'CAFactoryStudio\Projects\Samples\Demo.tproj' and a small button with three dots. At the bottom, there are two buttons: 'Apply Settings' and '<< Back'.

We recommend that you start manually during project development or installation, where an operator is needed during the startup process. When your project is setup for production, automated startup is more suitable.

You should use the login option, the startup shortcut, when testing the project, or in scenarios where the application will always run in the same Windows user profile.

Use the Windows Service on production servers when you need different Windows users to login to the computer, while keeping the server side runtime components running at all times.

We also support OPC client activation, in order to be in full OPC compliance, but we don't recommend its use, because, as a good practice principle, it is not desirable to allow the status of remote client connections to control whether a server side application is running.

The following sections will describe what those automated settings are doing in case, for some reason, you need to setup those startup settings without using the configuration tools.

Using a Shortcut on Windows Startup

You can configure a Windows server to automatically start a project using a startup shortcut. The startup shortcut starts the application when a user logs in to Windows, and the application stops running when the user logs off of Windows.

This procedure is automatically executed by the system when the startup mode is selected, as described above. This section will explain how to manually setup those shortcuts.

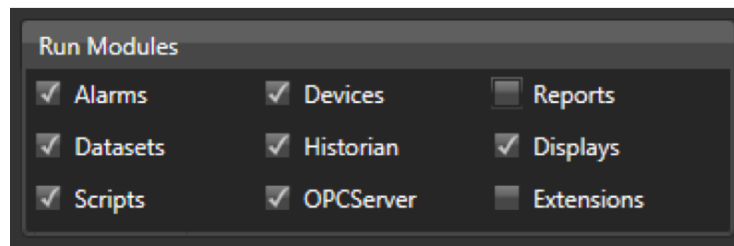
The Project runtime startup is executed by the program **TStartup.exe**.

When using this example, make sure to change the installation path and version of FactoryStudio to the installation on your computer.

The project is started from a command line window. The following command line parameters are available:

```
/project: Project Path and Name between double quotes
/username: (optional), username that will be used to start the server , if you do not specify, the user
guest will be used.
/redundancy: indicates that the server redundancy is being used (requires ip1 and ip2)
/ip1: IP Address of the Primary FactoryStudio Server
/port1: TCP port of the Primary FactoryStudio Server
/ip2: IP Address of the Secondary FactoryStudio Server
/port2: TCP port of the Secondary FactoryStudio Server
/viewonly: indicates that the project is in view only mode
/wa: indicates that the project uses Windows Authentication
```

The modules that will be started are configured in the project, at **Run > Startup**.



Examples

```
"C:\Program Files\Studio\fs-8.1\TStartup.exe"
/project:"C:\Studio Projects\Project1.tproj"
"C:\Program Files\Studio\fs-8.1\TStartup.exe"
/project:"C:\Studio Projects\Project1.tproj" /port1:3101
Server Redundancy:
"C:\Program Files\Studio\fs-8.1\TStartup.exe" /project:"C:\Studio Projects\Project1.tproj" /username:Administrator /redundancy /ip1:
192.168.1.1 /port1:3101 /ip2:192.168.1.2 /port2:3101
```

Creating the shortcut

Go to Start > All Programs, right-click the Startup folder, and select Open.

- In the Startup folder, right-click and select **New > Shortcut**.
- In the Create Shortcut window, paste into the field that displays.
- If you are not using redundancy, delete the redundancy part of the text.

In the examples below, be sure to change the installation path and version of FactoryStudio to the installation on your computer.

- Type or paste the full command line, for example: "C:\Program Files\Studio\fs-8.1\TStartup.exe" /project:"C:\Studio Projects\Project1.tproj"
- Click **Next**.
- Enter a name for the shortcut.
- Click **Finish**.

When you restart the computer next, the project will start automatically.

Using a Windows Service to Startup

You can configure a Windows server to automatically start a project when the computer starts using a Windows Service. The Windows Service starts the application as soon as the computer is powered on and the Windows Operating System starts, even if no user has logged in to Windows.

This procedure is automatically executed by the system when selected for startup mode, as described above. This section will explain how to set it up manually.

These methods do not start the client (user interface with the displays). To automate the client startup, see "Automatically Starting Windows Clients", below.

Use the Windows Service only on production servers that you are not using as engineering stations, and only if you need the ability to differentiate Windows users logging in while the project is running.

The first several steps of the procedure below are required to let you set up the Windows Service.

To run your application as a Windows Service:

- Go to **Info > Project > Redundancy**.
- Enter or select the information, as needed.

Field	Description
Primary Server IP and Target Port	Enter the IP address and port of the primary server.
Secondary Server IP and Target Port	Enter the IP address and port of the secondary server, if any.
On Primary Startup	Select the option you want.
Historian Replication	Select how to handle historian replication.
Connection Timeout	Connection timeout time, in seconds, to switch to secondary server.
Server Command Line	Read-only field populated based on the fields above. Click Copy to Clipboard to copy the command for use.
Rich Client command	The commands to start a Rich Client with the project selected parameters
Smart Client url	The URL to access the Smart Client with the project's parameters
Web Client url	The URL to access the Web Client with the project's parameters
View-Only	If checked, apply View-Only parameter to Rich and Smart Client's url
Windows Authentication	If checked, apply Windows Authentication logon parameter to Rich and Smart Client's url

- Next to the Server Command Line field, click **Copy to Clipboard**. This copies the read-only field that was populated based on the fields above it.
- Open a text file, paste, and continue the next steps in the file.
- If you are not using redundancy, delete the redundancy part of the text.
- At the beginning of the command line, enter or paste the full path to the FactoryStudio installation folder and put quotes around it. It should look something like this: "C:\Program Files (x86)\Tatsoft\FactoryStudio\fs-8.1\TStartup.exe"
- Before the "tproj" text, enter or paste the full path to the project. It should look something like this: /project:C:\FactoryStudio Projects\<project_name>.tproj

The whole command line should look something like this:

```
"C:\ProgramFiles(x86)\Tatsoft\FactoryStudio\fs-8.1\ tStartup.exe" /project:C:\Factory Studio Projects\  
<project_name>.tproj /username:<username>
```

- Leave the text file open for later use.
- From the command line prompt, go to the <.NET Framework Install Path> and execute the following command:

```
installutil <InstallPath>\<fs-version>\TStartupAsService.exe  
Example: C:\Windows\Microsoft.NET\Framework\v2.0.50727>installutil C:\Program files\Tatsoft\FactoryStudio\fs-  
8.1\ TStartupAsService.exe
```

- Copy and paste the command you created in the text file.
- In the Windows Registry, set up the parameters on:

```
"HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\ TStartup\ImagePath"
```

```
Example: "C:\\tatsoft\\fs-8.1\\TStartupAsService.exe" "/project:C:\\FactoryStudio Projects\\Project1.tproj"
```

- In the Windows Services (Administrative Tools), set "TStartup Service" to Automatic, so the selected project will start when the computer starts.
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