ptc

thingworx® foundation

ThingWorx Foundation Docker Installation Guide

1.2

ThingWorx Foundation Docker Installer

September 2017

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Document Revision History

Revision Date	Version	Description of Change
September 2017	1.2	Updates to license installation steps
July 2017	1.1	Added additional steps for PostgreSQL.
June 2017	1.0	Initial version

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Overview

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Overview

This guide provides the prerequisites and instructions for installing ThingWorx Foundation via a Docker installation process. The guide also provides troubleshooting information about issues you might encounter during the installation.

Note

The Docker installation process supports three install modes:

- Graphical — Mostly for a Windows environment
- Text — Mostly for a Linux environment
- Silent — Applicable to either Windows or Linux environments

In most cases, this document describes the graphical process. For more information about the other installation modes, see Text Mode Installation or Silent Mode Installation.

The Docker installer for ThingWorx Foundation is available for the following persistence providers:

- H2
- PostgreSQL

When you launch the installer file, everything is unpacked and installed for you.

- For the H2 installer, you will be asked to provide minimal input, such as server location, license file, instance name, port number, and minimum and maximum heap size.
- For the PostgreSQL installer, you will be asked to provide input, such as server location, license file, instance name, port number, and minimum and maximum heap size. You will also be asked whether you are connecting to an RDS PostgreSQL instance, followed by the connection information to the already set up database, including PostgreSQL database hostname/IP address, PostgreSQL port, admin schema, admin username, and admin password. Finally, you will be asked to input the ThingWorx Foundation database information that you would like to create for the install, ThingWorx

Foundation database schema, ThingWorx Foundation database username, ThingWorx Foundation database password and ThingWorx Foundation tablespace location.

Note

The ThingWorx Foundation installer for PostgreSQL does not come bundled with a database. You will need to obtain and install the PostgreSQL database and configure it prior to installation. See the Software section for more information on installing PostgreSQL.

Locating Log Files and Directories

When using Docker, ThingWorx contents such as file repositories, logs, and directories reside inside the Docker container. You can connect to the running container using standard Docker commands:

```
docker -exec -i -t ${container_name} /bin/bash
```

Tomcat logs are located in:

```
/opt/tomcat/logs
```

ThingWorx directories are located in the root directory:

- `/ThingworxStorage`
- `/ThingworxBackupStorage`
- `/ThingworxPlatform`

Application logs are located in:

- `/ThingworxStorage/logs`

Security Considerations

When deploying ThingWorx Foundation, especially in a production environment, be sure to observe all best practice security measures. Before making the server or its components accessible to other users, consider the following security measures:

- Change default passwords
- Disable root login for SSH access
- Install an IP address-filtering firewall

Prerequisites

ThingWorx Foundation requires the following hardware and software. For the most current prerequisites, refer to the ThingWorx Core 8.0 System Requirements on the PTC Reference Documents site.

Note

If you have any version of the ThingWorx Trial Edition installed, remove it before installing the ThingWorx Foundation. The two cannot run on the same server.

Operating System

The ThingWorx Foundation is supported on the following operating systems:

Windows	Linux
Windows Server 2008	CentOS 7
Windows Server 2012	Ubuntu 14.04
	Amazon Linux

Software: Docker

Install the appropriate version of Docker for your operating system before installing ThingWorx. On the Install Docker Engine site, find the installation instructions for your host operating system and follow them to install Docker version 17.03.0-ce or later.

Note

If you are running an older Windows operating system (version 7 or 8) that cannot run Docker natively, download the Docker Toolbox, version 17.03.0-ce or later, instead. You can download the Docker Toolbox at https://www.docker.com/ products/docker-toolbox.

Software: PostgreSQL

For ThingWorx Foundation installer for PostgreSQL, PostgreSQL is required. You can find the download for PostgreSQL at their website: https://www.postgresql.org/. ThingWorx Foundation 8.0 supports PostgreSQL 9.4, for more information, see the ThingWorx Foundation Install Guide.

In order for ThingWorx to connect to PostgreSQL, you must allow connections from Docker to PostgreSQL. After downloading and installing PostgreSQL, you must edit the following files per your OS.

Linux: Ubuntu, RHEL, and Amazon Linux

Locate and edit the following files:

postgresql.conf: This allows database connections from the Docker container.

1. Open postgresql.conf.
2. Find `#listen_addresses = 'localhost'`.
3. Replace with: `listen_addresses = '*'`.
4. Save the file.

pg_hba.conf: This allows passwords authentication to be used instead of defaulting to user.

1. Open pg_hba.conf.
2. Locate the following section and update it to look like the section below.

   Ubuntu

   ```
   #TYPE DATABASE USER ADDRESS METHOD
   # Database administrative login by Unix domain socket
   local all postgres md5
   ```

   Ubuntu, RHEL, Amazon Linux:

   ```
   # TYPE DATABASE USER ADDRESS METHOD
   # "local" is for Unix domain socket connections only
   local all all md5
   # IPv4 connections:
   host all all 0.0.0.0/0 md5
   # IPv6 connections:
   host all all ::1/128 md5
   ```

3. Save the file.
4. After the files have been updated, restart PostgreSQL.

Windows

1. Locate and update the pg_hba.conf file:
   - Open pg_hba.conf.
   - Locate the following section: `host all 127.0.0.1/32`

- Replace with: `host all all 0.0.0.0/0`
- After the file has been updated, restart PostgreSQL.

Hardware

For sizing and hardware recommendations, refer to the ThingWorx Core 8.0 System Requirements guide.

Downloading the Installer Files

1. Log into the PTC ThingWorx eSupport page.
2. On the ThingWorx & Axeda tab, find the **Software Downloads** section, and click **PTC Software Downloads**. The **Order or Download Software Updates** page opens.
3. Enter your **Customer Name** and **Customer Number** and click **Next**. The **PTC Software Download** page opens.
4. Scroll to **ThingWorx Platform** and select it.
5. Under **Step 2: Choose Release & Download**, navigate to the download links by expanding each of the following successive options:
   - **Release <n.n>**
   - **ThingWorx H2** or **ThingWorx PostgreSQL**
   - **Most Recent Datecode**
6. Depending on whether you are downloading H2 or PostgreSQL, you will select **ThingWorx-Platform-DockerInstaller-H2-8-0-0** or **ThingWorx-Platform-DockerInstaller-Postgres-8-0-0** to download the zip file and extract its contents. The zip file includes the following installer files:

H2

File/Folder Name	Description
installer-twxfoundationH2-enterprise-windows.exe	Installer for Windows operating systems.
installer-twxfoundationH2-enterprise-linux-x64.run	Installer for Linux operating systems.
installer-twxfoundationH2-enterprise-osx.app	Installer for Mac OSX operating system.

PostgreSQL

File/Folder Name	Description
ThingWorxAnalyticsServer- 8.0.0-windows-installer.exe	Installer for Windows operating systems.
ThingWorxAnalyticsServer- 8.0.0-linux-x64-installer.run	Installer for Linux operating systems.
ThingWorxAnalyticsServer- 8.0.0-linux-x64-installer.run	Installer for Mac OSX operating system.

Note

The Mac OSX installer is for developer use only and should not be run as an enterprise environment. Specifics for installing on Mac OSX are not included in this guide.

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Installation Procedure

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To install the ThingWorx Foundation with Docker, you must have administrator privileges on the system where you are installing.

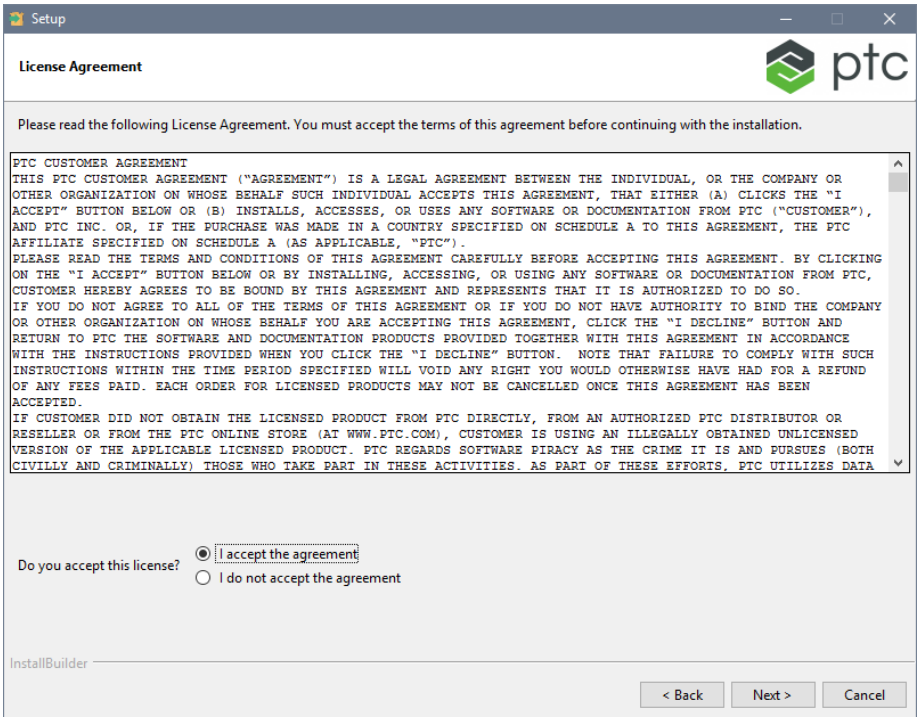
Note

This procedure represents the graphical installation mode, typically used in a Windows environment. For launch information using Text or Silent installation modes, see Text Mode Installation or Silent Mode Installation.

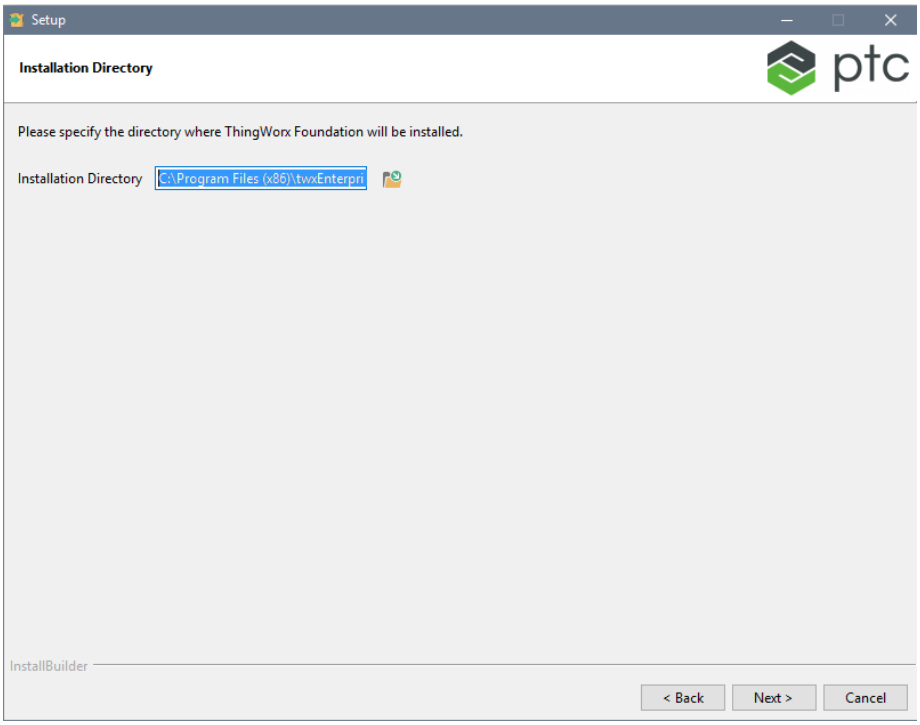
Installing ThingWorx Foundation H2

Installation requires the following steps:

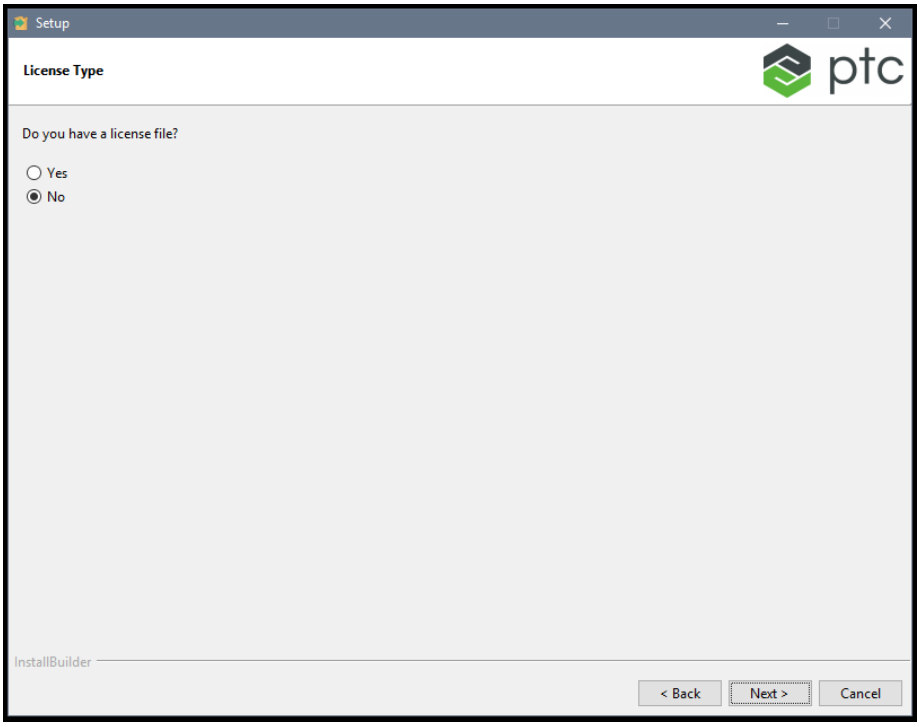
- Verify all prerequisites are met.
- Download the appropriate Docker installer files for your operating system.
- Extract the downloaded files to a location on your host system.
- Launch one of the following installer tools (depending on which file you downloaded for your operating system):
    - **installer-twxfoundationH2-enterprise-windows.exe**
    - **installer-twxfoundationH2-enterprise-linux-x64.run**
    - **installer-twxfoundationH2-enterprise-osx.app**
    - Follow the on-screen installation instructions. After each step, click **Next** to advance to the next step.
        1. Accept the license agreement:



2. Specify an installation directory. Click **Next** to accept the default or click the **Browse** icon to navigate to a different location.

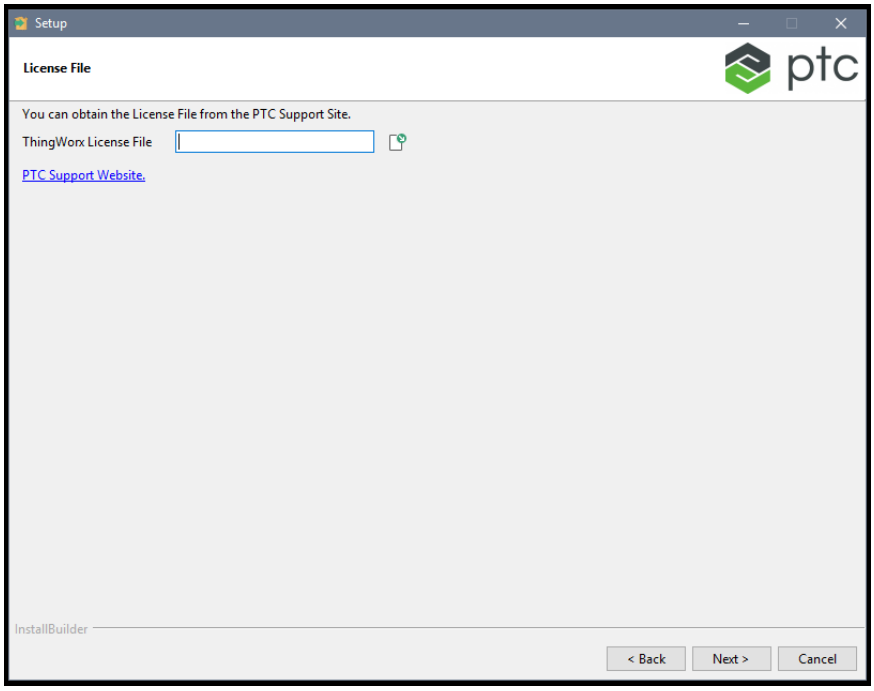


3. Select **Yes** or **No** to the question **Do you have a license file?** and click **Next**.



- If you selected **Yes**, continue on the **License File** screen by choosing the **Browse** icon to navigate to the license file.

  If you need to obtain a license file, select the **PTC Support Website** link to visit support.ptc.com.



- Or, if you selected **No**, enter the connection information for the PTC License Server.

  a. **Username**

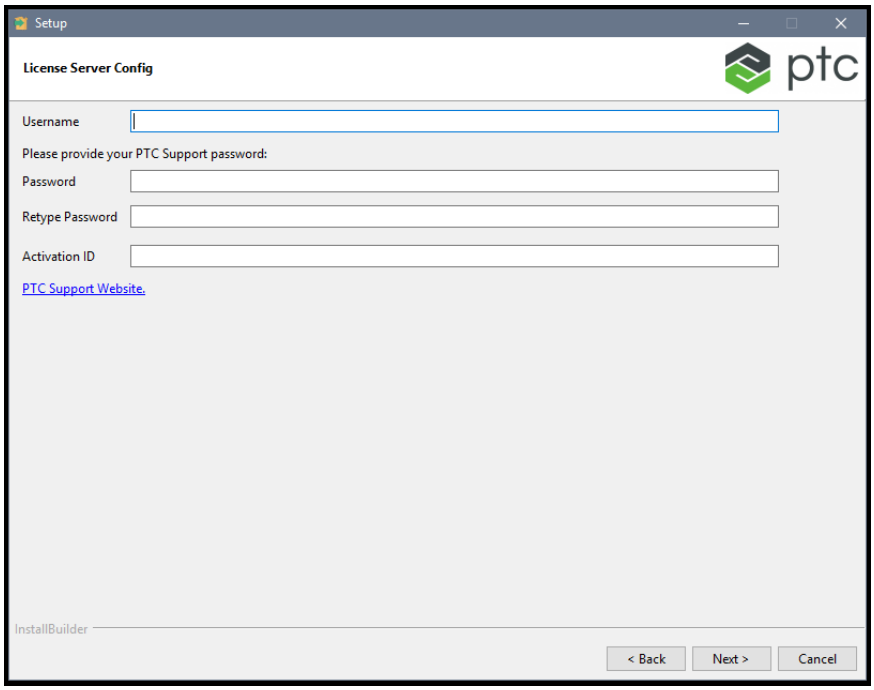
  Enter your username for the PTC License Server.

  b. **Password**

  Enter your password for the PTC License Server.

  c. **Activation ID**

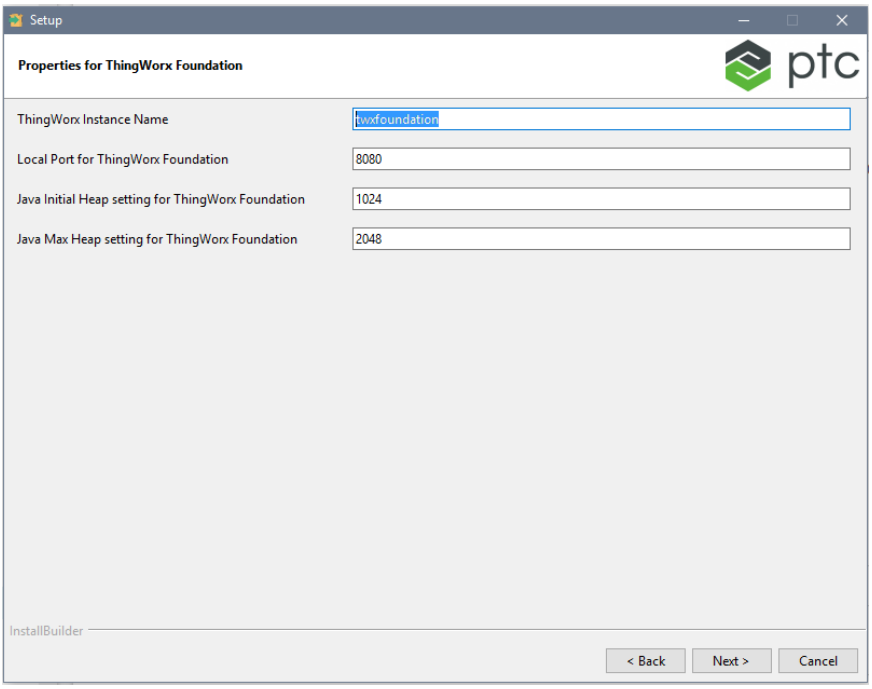
  Enter the Activation ID you received from PTC.



4. Specify the ThingWorx Foundation instance information:

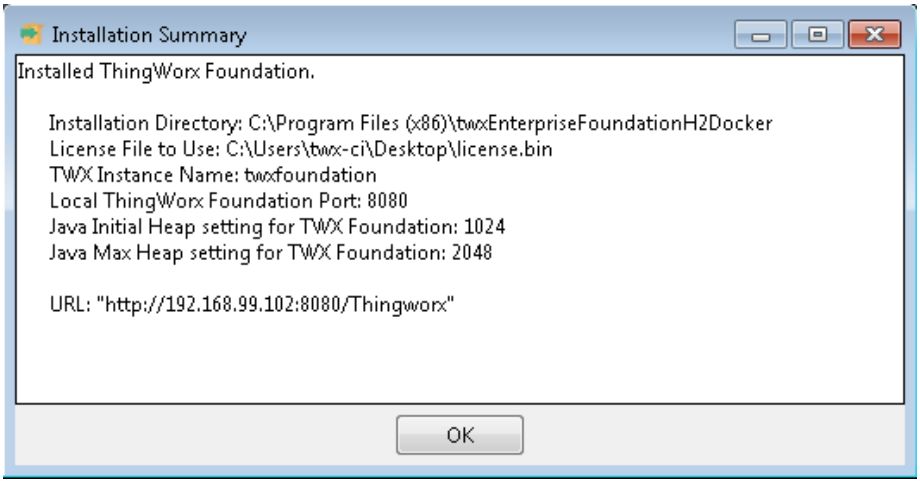
   - **ThingWorx Instance Name**: This is what you would like to call the instance, the default is twxfoundation.
   - **Local port for ThingWorx Foundation**: Depending on the operating system, Docker will attempt to forward this port back to the localhost so that you can connect directly to the instance on this port, the default is 8080.
   - **Java Initial Heap setting for ThingWorx Foundation**: This is the initial memory consumption in MB used by ThingWorx Foundation on launch, the default is 1024.

- **Java Max Heap setting for ThingWorx Foundation**: This is the maximum memory consumption in MB used by ThingWorx Foundation, the default is 2048.



You will click next through a few summary pages. When you click **Next** on the last step, the Docker install begins. Depending on your operating system, several windows may open and then close while the Docker process unpacks and installs the necessary libraries and settings. When the installation process is complete, a final page is displayed with a check box to **View Installation Summary**.

5. Click **Finish**. If the **View Installation Summary** check box was enabled, an **Installation Summary** page displays.



6. To test the ThingWorx Foundation installation:
   - Copy the URL from the summary page.
   - Open a browser.
   - Use the URL in a browser to access the platform at

     `http://<server>:<port>/Thingworx`

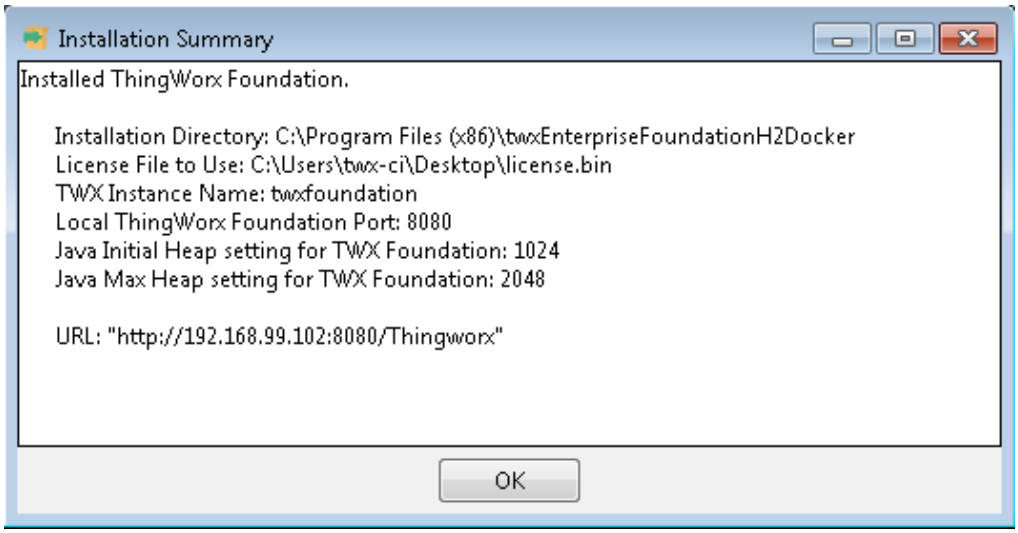
     If the installation has been successful, you will be prompted with the login page. Login with the ThingWorx Foundation default username and password.

Text Mode Installation

Text mode installation for ThingWorx is supported for a non-windows Linux environment. The text-based installation process follows the same sequence of steps as the graphic installation documented in Installation Procedure. You can open a terminal window and follow the same steps, except your interactions and responses will all be text-based. You will be prompted for the same information and can opt to view the same type of installation summary at the end of the process.

To test the ThingWorx Foundation installation:

- Copy the **URL** from the installation summary.



- Use the URL to access the platform as follows:

  `http://<server>:<port>/Thingworx`

  - If the installation has been successful, you will be prompted with the login page. Login with the ThingWorx Foundation default username and password.

Silent Mode Installation

Silent mode installation is supported for both Windows and Linux environment. In contrast to the graphical and text modes, where the installation proceeds through a series of interactive steps, the silent installation requires that all of the necessary input be included in the launch command. The installation then takes place with no further interaction required.

Silent Mode for Windows

To launch the silent installation in a Windows environment:

1. Follow Steps 1 - 3 in the Installation Procedure.
2. Open a command line window and navigate to the directory where you saved the extracted launch files.

> **Note**
>
> For a full list of commands, run `installer-twxfoundationH2-enterprise-windows.exe --help`.

3. Run the following command, substituting specific information in the angled brackets:

```
installer-twxfoundationH2-enterprise-windows.exe
<Installation Options>
```

License File Install Example

```
installer-twxfoundationH2-enterprise-windows.exe
--installdir "C:\twxEnterpriseFoundationH2Docker"
--unattendedmodeuiminimal --modeunattended
--accept_eula YES --LICENSE_BIN 1
--twxlicense “C:\license.bin"
--TWX_INSTANCE_NAME twxfoundation --TWX_PORT 8080
--INITIAL_HEAP 1024 --MAX_HEAP 2048
```

License Server Install Example

```
./installer-twxfoundationH2-enterprise-windows.exe
--installdir “C:\twxEnterpriseFoundationH2Docker"
--unattendedmodeuiminimal –mode unattended --accept_eula YES
--LICENSE_BIN 0 --LICENSE_SERVER_USERNAME "username"
--LICENSE_SERVER_PASSWORD "< password >"
--LICENSE_SERVER_ACTIVATION_ID "< activation id >
--TWX_INSTANCE_NAME twxfoundation --TWX_PORT 8080
--INITIAL_HEAP 1024 --MAX_HEAP 2048
```

When the installation is complete, the command line prompt will be returned.

- To test the ThingWorx Foundation installation:
  - Navigate to the ThingWorx Foundation install directory specified above.
  - Open the twxfoundation.json file.
  - Get the URL from the "**url**": line.
  - In a browser access the URL from above.

If the installation has been successful, you will be prompted with the login page. Login with the ThingWorx Foundation default username and password.

Silent Mode for Linux

To launch the silent installation in a Linux environment:

1. Follow Steps 1 - 3 in the Installation Procedure.
2. Open a terminal window and navigate to the directory where you saved the extracted launch files.

Note

For a full list of commands, run `./installer-twxfoundationH2-enterprise--linux-x64.run --help`.

3. Run the following command, substituting specific information in the angled brackets:

```
installer-twxfoundationH2-enterprise-linux-x64.run
<Installation Options>
```

License File Install Example

```
./installer-twxfoundationH2-enterprise-linux-x64.run
--installdir "/opt/twxEnterpriseFoundationH2Docker"
--unattendedmodeuiminimal --modeunattended
--accept_eula YES --LICENSE_BIN 1
--twxlicense "/opt/license.bin"
--TWX_INSTANCE_NAME twxfoundation --TWX_PORT 8080
--INITIAL_HEAP 1024 --MAX_HEAP 2048
```

License Server Install Example

```
./installer-twxfoundationH2-enterprise- linux-x64.run
--installdir "/opt/twxEnterpriseFoundationH2Docker"
--unattendedmodeuiminimal –mode unattended --accept_eula YES
--LICENSE_BIN 0 --LICENSE_SERVER_USERNAME "username"
--LICENSE_SERVER_PASSWORD "< password >"
--LICENSE_SERVER_ACTIVATION_ID "< activation id >"
--TWX_INSTANCE_NAME twxfoundation --TWX_PORT 8080
--INITIAL_HEAP 1024 --MAX_HEAP 2048
```

When the installation is complete, the command line prompt will be returned.

- To test the ThingWorx Foundation installation:
  - Navigate to the ThingWorx Foundation install directory specified above.
  - Open the twxfoundation.json file.
  - Get the URL from the "**url**": line.
  - In a browser access the URL from above.

  If the installation has been successful, you will be prompted with the login page. Login with the ThingWorx Foundation default username and password.

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Installing ThingWorx Foundation PostgreSQL

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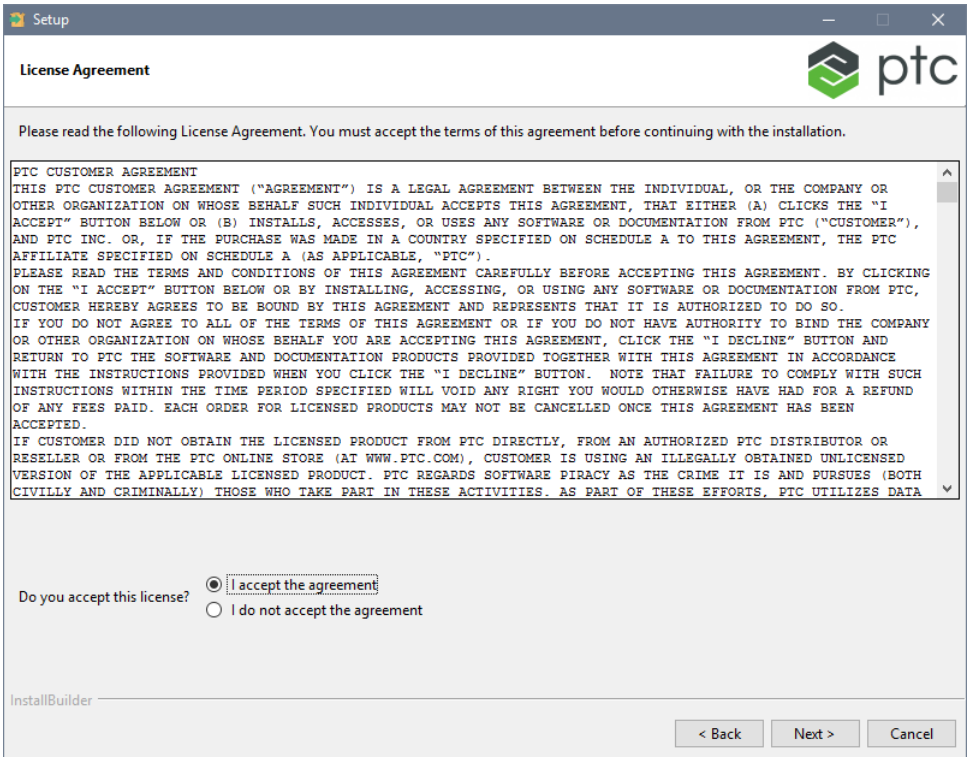
Installation requires the following steps:

Note

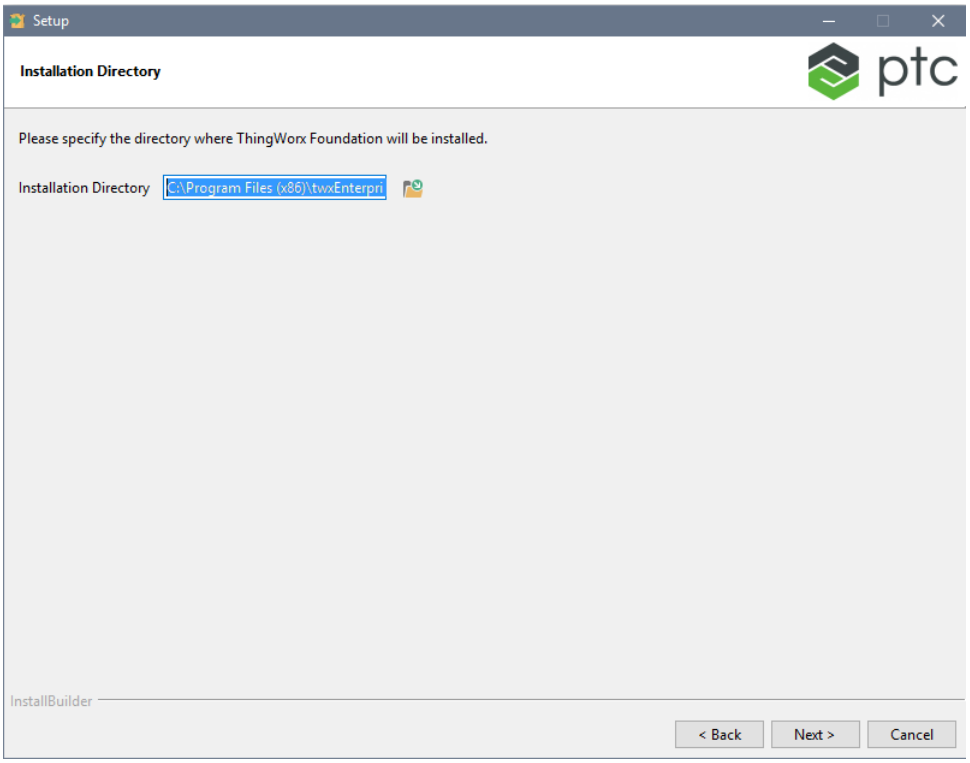
PostgreSQL is not bundled with the installer. In order to use the installer, you will either need to have an RDS PostgreSQL instance to connect to or a standalone PostgreSQL instance to connect to.

- Make sure all of the prerequisites have been met.
- Download the appropriate Docker installer files for your operating system.
- Extract the downloaded files to a location on your host system.
- Launch one of the following installer tools (depending on which file you downloaded for your operating system):
  - installer-twxfoundationPostgres-enterprise-windows.exe
  - installer-twxfoundationPostgres-enterprise-linux-x64.run
  - installer-twxfoundationPostgres-enterprise-osx.app

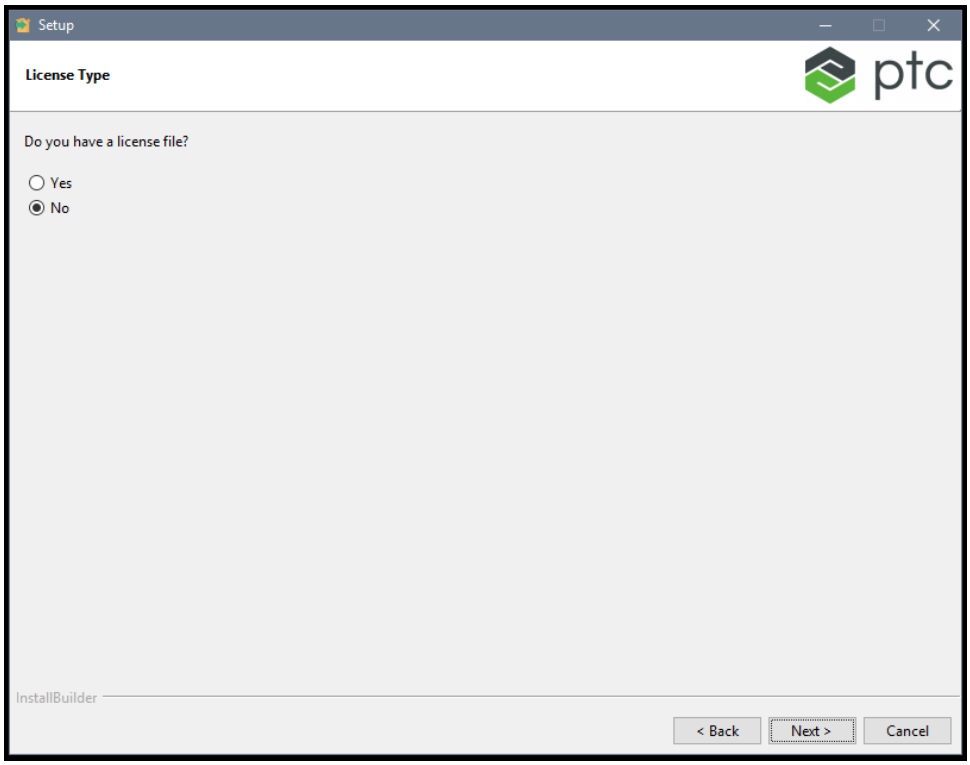
  1. Follow the on-screen installation instructions. After each step, click **Next** to advance to the next step. You'll be asked to accept the license agreement:



2. Specify an installation directory. You can click **Next** to accept the default or click the Browse icon to navigate to a different location.

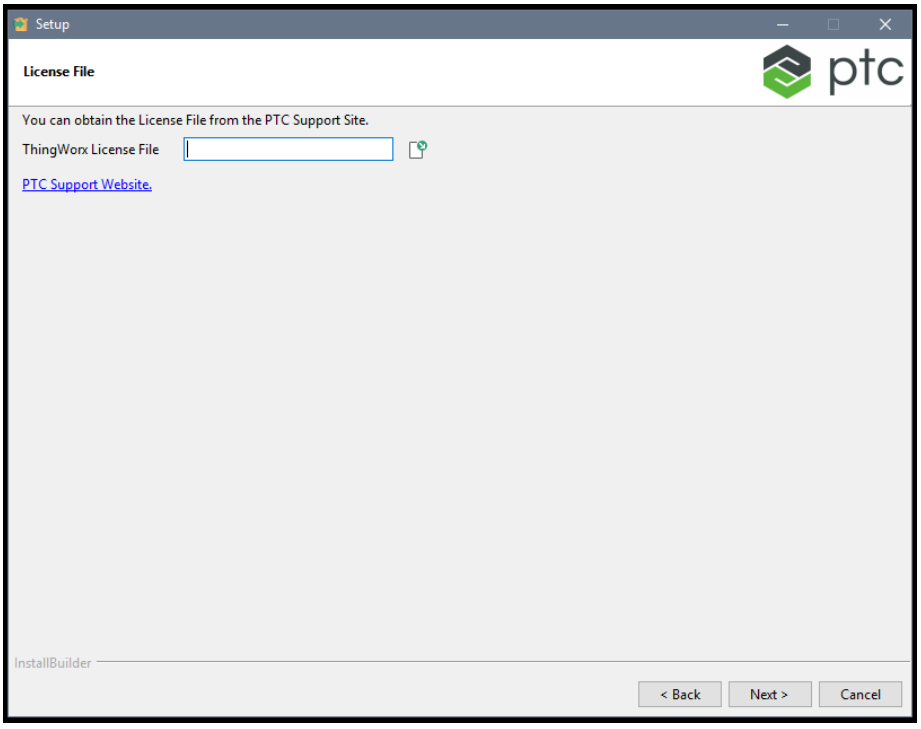


3. Select **Yes** or **No** to the question **Do you have a license file?** and click **Next**.



   - If you selected **Yes**, continue on the **License File** screen by choosing the **Browse** icon to navigate to the license file.

     If you need to obtain a license file, select the **PTC Support Website** link to visit support.ptc.com.



- Or, if you selected **No**, enter the connection information for the PTC License Server.

  a. **Username**

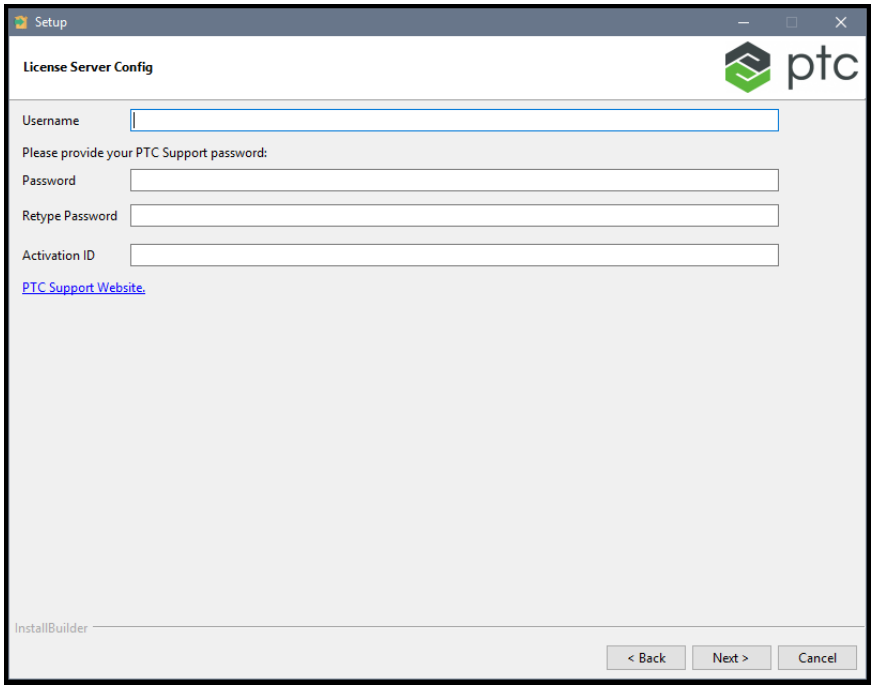
     Enter your username for the PTC License Server.

  b. **Password**

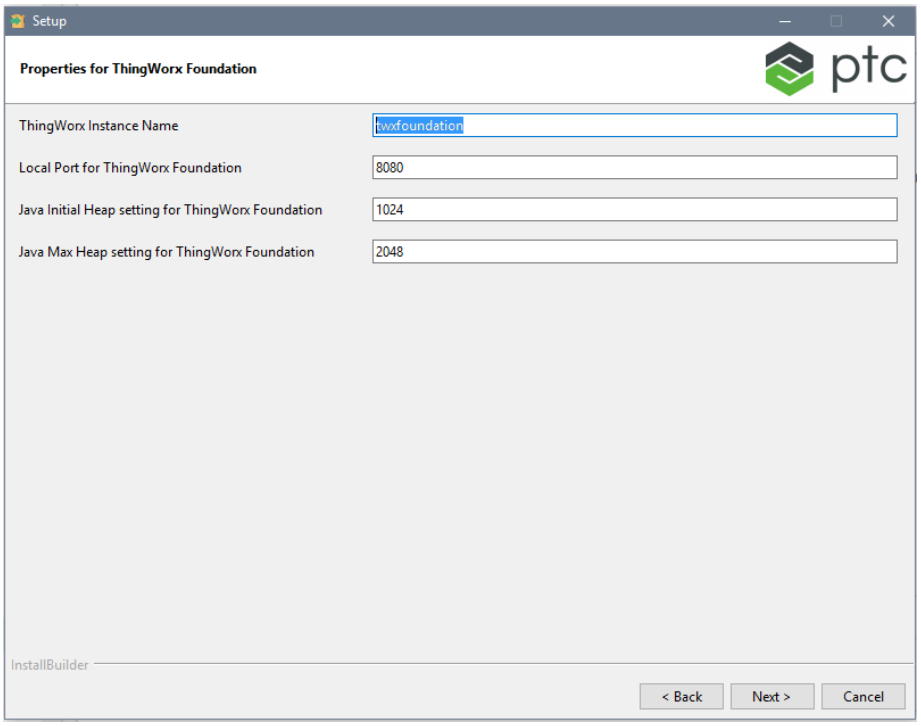
     Enter your password for the PTC License Server.

  c. **Activation ID**

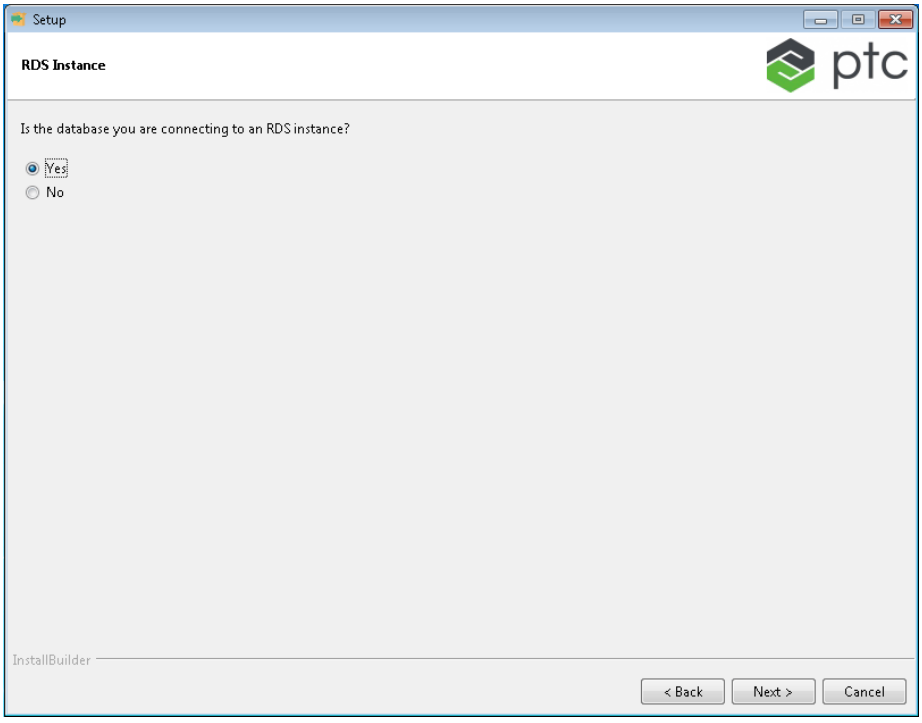
     Enter the Activation ID you received from PTC.



4. Specify the ThingWorx Foundation instance information:
    - **ThingWorx Instance Name**: This is what you would like to call the instance, the default is twxfoundation.
    - **Local port for ThingWorx Foundation**: Depending on the operating system, Docker will attempt to forward this port back to the localhost so that you can connect directly to the instance on this port, the default is 8080.
    - **Java Initial Heap setting for ThingWorx Foundation**: This is the initial memory consumption in MB used by ThingWorx Foundation on launch, the default is 1024.
    - **Java Max Heap setting for ThingWorx Foundation**: This is the maximum memory consumption in MB used by ThingWorx Foundation, the default is 2048.



- Specify whether the PostgreSQL instance you are connecting to is an RDS instance.

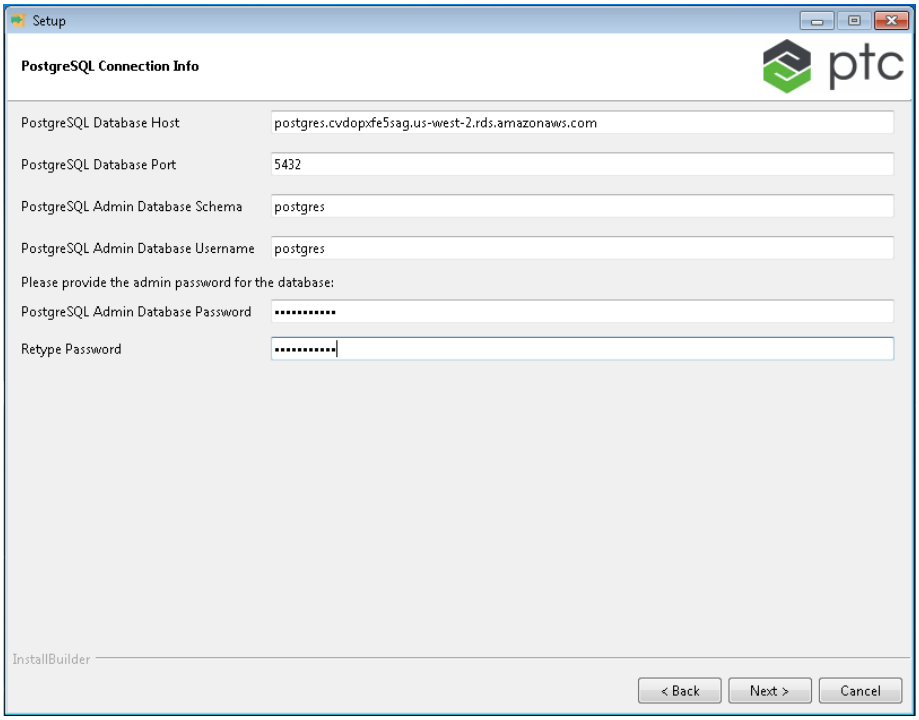


- Specify the PostgreSQL Database Connection Info:
  - **PostgreSQL Database Host**: This is the hostname or IP address for the PostgreSQL database.

    Note

    Since this is using Docker, this should not be set to localhost. Set it to the IP address of the local machine if connecting to the same machine or the IP address or DNS hostname of the remote machine.

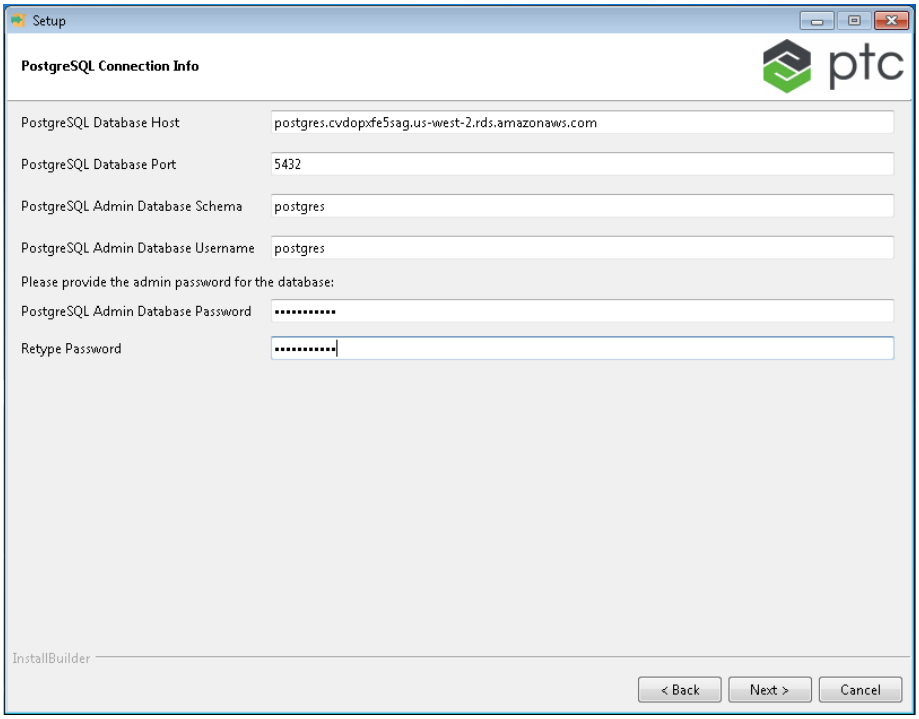
  - **PostgreSQL Database Port**: This is the port number to use when connecting to the Database host.
  - **PostgreSQL Admin Database Schema**: This is the admin schema that you created when you set up the PostgreSQL database.
  - **PostgreSQL Admin Database Username**: This is the admin username that you created when you set up the PostgreSQL database.
  - **PostgreSQL Admin Database Password**: This is the admin password that you specified for the Admin user when you set up the PostgreSQL database. (You are asked to type the password twice, if both passwords do not match an error will be thrown).

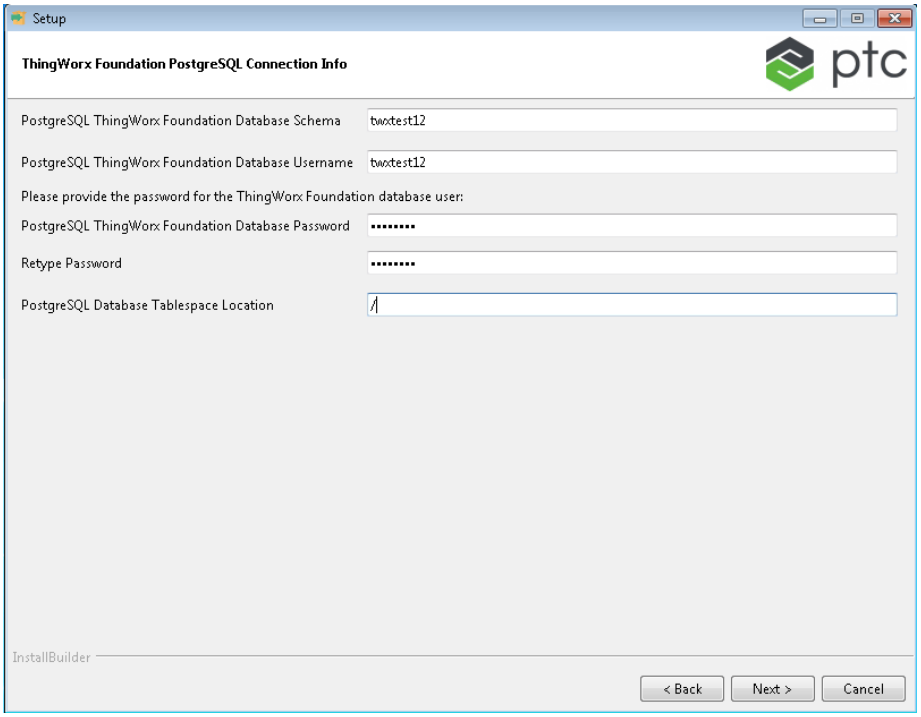


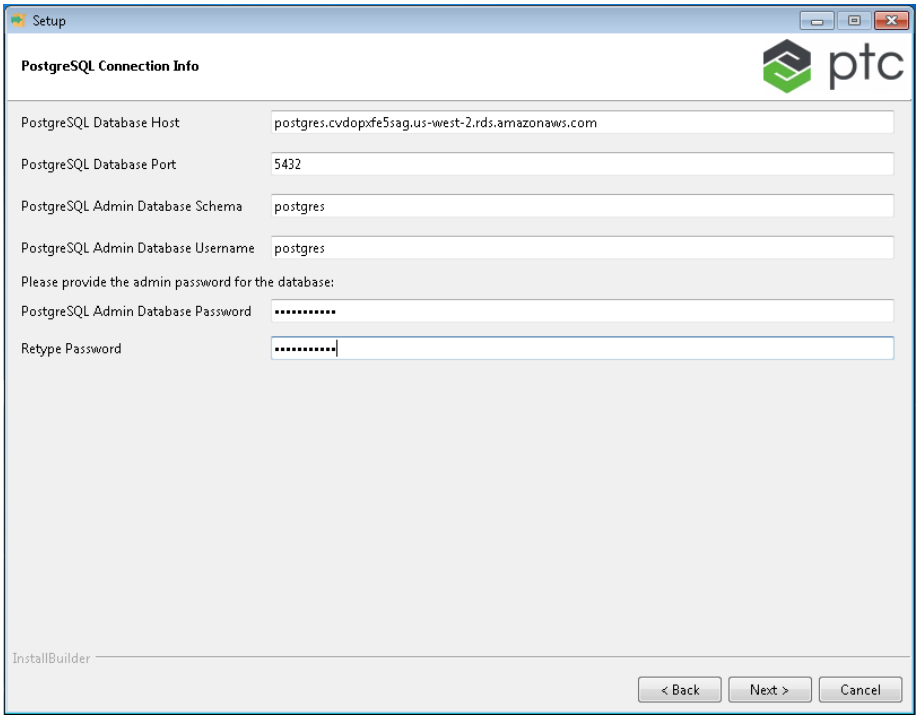
5. Specify the PostgreSQL database information from ThingWorx Foundation:
    - **PostgreSQL ThingWorx Foundation Database Schema**: This is the database schema that you would like to create for the ThingWorx Foundation instance.
    - **PostgreSQL ThingWorx Foundation Database Username**: This is the database username that you would like to create for the ThingWorx Foundation instance.
    - **PostgreSQL ThingWorx Foundation Database Password**: This is the database password that you would like to use for the ThingWorx Foundation instance (You are asked to type the password twice, if both passwords do not match an error will be thrown).

- **PostgreSQL Database Tablespace Location**: This is the exact location for the Tablespace Location for the ThingWorx Foundation Instance.

> **Note**
>
> The tablespace location must be the full path: Windows Example: C:\postgres\tablespaces\thingworx
> Linux Example: /opt/postgres/tablespaces/thingworx
> RDS does not use tablespaces, you only have to place a "/" for the installer to continue (see screenshot below).





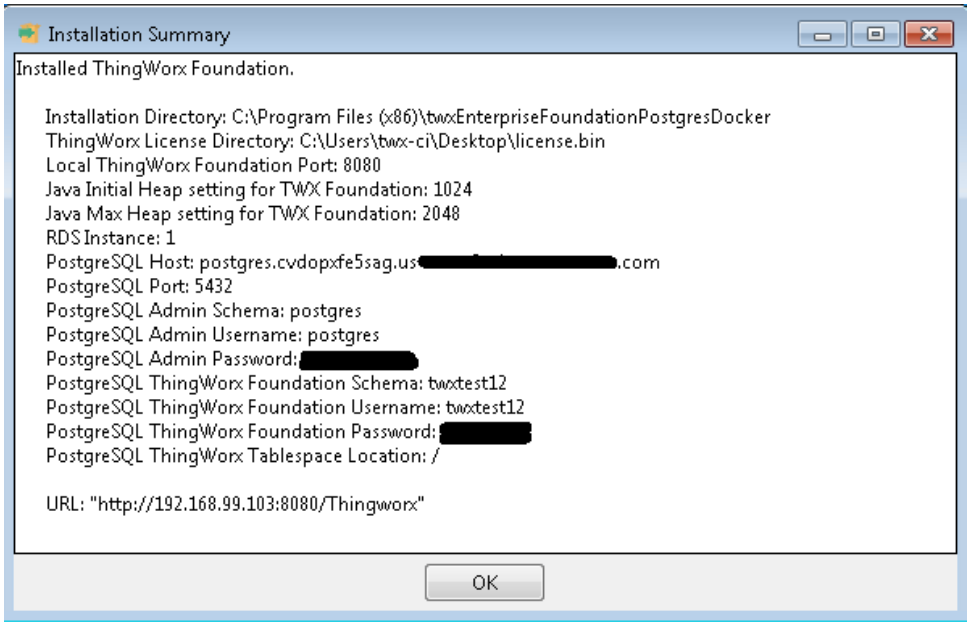


6.

a. Click through a few summary pages. When you click **Next** on the last step, the Docker install begins. Depending on your operating system, several windows may open and then close while the Docker process

unpacks and installs the necessary libraries and settings. When the installation process is complete, a final page is displayed with a check box to **View Installation Summary**.

b. Click **Finish**. If the **View Installation Summary** check box was enabled, an Installation Summary page is displayed.



7. To test the ThingWorx Foundation installation:
   - Copy the **URL** from the summary page.
   - Open a browser and go to:

     `http://<server>:<port>/Thingworx`

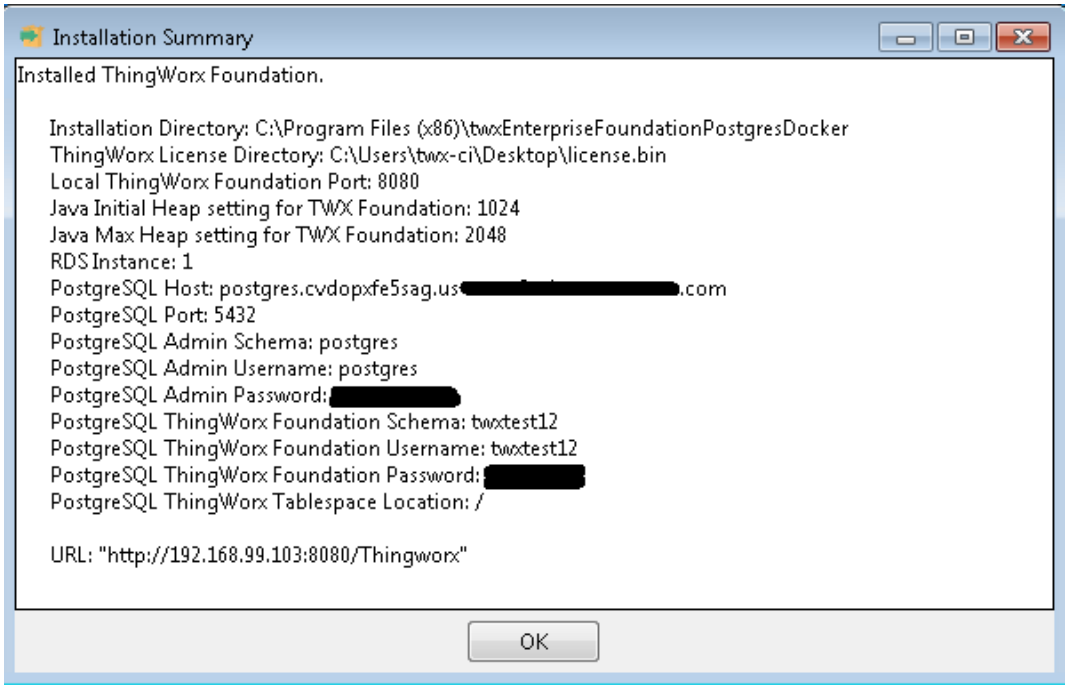
     If the installation has been successful, you will be prompted with the login page. Login with the ThingWorx Foundation default username and password.

Text Mode Installation PostgreSQL

Text mode installation of ThingWorx is supported for a non-Windows Linux environment. The text-based installation process follows the same sequence of steps as the graphic installation documented in Installation Procedure. You can open a terminal window and follow the same steps, except your interactions and responses will all be text-based. You will be prompted for the same information and can opt to view the same type of installation summary at the end of the process.

To test the ThingWorx Foundation installation:

- Copy the URL from the installation summary.



- Open a browser and use the URL to go to:

  `http://<server>:<port>/Thingworx`

  If the installation has been successful, you will be prompted with the login page. Login with the ThingWorx Foundation default username and password.

Silent Mode Installation PostgreSQL

Silent mode installation of ThingWorx is supported for both Windows and Linux environment. In contrast to the graphical and text modes, where the installation proceeds through a series of interactive steps, the silent installation requires that all of the necessary input be included in the launch command. The installation then takes place with no further interaction required.

Silent Mode for Windows

To launch the silent installation in a Windows environment:

1. Follow Steps 1 - 3 in the Installation Procedure.
2. Open a command line window and navigate to the directory where you saved the extracted launch files.

> **Note**
>
> For a full list of commands, run `installer-twxfoundationH2-enterprise-windows.exe --help`.

3. Run the following command, substituting specific information in the angled brackets.

```
installer-twxfoundationH2-enterprise-windows.exe
<Installation Options>
```

License File Install Example:

```
installer-twxfoundationH2-enterprise-windows.exe
--installdir "/opt/twxEnterpriseFoundationH2Docker"
--unattendedmodeuiminimal --modeunattended
--accept_eula YES --LICENSE_BIN 1
--twxlicense "C:\license.bin" --TWX_INSTANCE_NAME "twxfoundation"
--TWX_PORT "8080" --INITIAL_HEAP "1024" --MAX_HEAP "2048"
--POSTGRES_HOST "127.0.0.1" --POSTGRES_PORT "5432"
--POSTGRES_ADMIN_SCHEMA "postgres"
--POSTGRES_ADMIN_USERNAME "postgres"
--POSTGRES_ADMIN_PASSWORD "< password >"
--POSTGRES_TWXFOUNDATION_SCHEMA "thingworx"
--POSTGRES_ TWXFOUNDATION_USERNAME "thingworx"
--POSTGRES_TWXFOUNDATION_PASSWORD "< password >"
--TABLESPACE_LOCATION " C:\postgres\tablespace\thingworx "
--IS_RDS_INSTANCE 0
```

License Server Install Example:

```
installer-twxfoundationH2-enterprise- windows.exe
--installdir "C:\twxEnterpriseFoundationH2Docker"
--unattendedmodeuiminimal –mode unattended --accept_eula YES
--LICENSE_BIN 0 --LICENSE_SERVER_USERNAME "username"
--LICENSE_SERVER_PASSWORD "< password >"
--LICENSE_SERVER_ACTIVATION_ID "< activation id >"
--TWX_INSTANCE_NAME "twxfoundation"
--TWX_PORT "8080" --INITIAL_HEAP "1024" --MAX_HEAP "2048"
--POSTGRES_HOST "127.0.0.1" --POSTGRES_PORT "5432"
--POSTGRES_ADMIN_SCHEMA "postgres"
--POSTGRES_ADMIN_USERNAME "postgres"
```

```
--POSTGRES_ADMIN_PASSWORD "< password >"
--POSTGRES_TWXFOUNDATION_SCHEMA "thingworx"
--POSTGRES_ TWXFOUNDATION_USERNAME "thingworx"
--POSTGRES_TWXFOUNDATION_PASSWORD "< password >"
--TABLESPACE_LOCATION "C:\postgres\tablespace\thingworx"
--IS_RDS_INSTANCE 0
```

When the installation is complete, the command line prompt will be returned.

1. To test the ThingWorx Foundation installation:
   - Navigate to the ThingWorx Foundation install directory specified above.
   - Open the twxfoundation.json file.
   - Get the URL from the "**url**": line.
   - In a browser, access the URL above.

   If the installation has been successful, you will be prompted with the login page. Login with the ThingWorx Foundation default username and password.

Silent Mode for Linux

To launch the silent installation in a Linux environment:

1. Follow Steps 1 - 3 in the Installation Procedure.
2. Open a terminal window and navigate to the directory where you saved the extracted launch files.

> **Note**
>
> For a full list of commands, run `./installer-twxfoundationH2-enterprise-linux-x64.run --help`.

3. Run the following command, substituting specific information in the angled brackets:

```
installer-twxfoundationH2-enterprise-linux-x64.run
<Installation Options>
```

License File Install Example:

```
./installer-twxfoundationH2-enterprise-linux-x64.run
--installdir "/opt/twxEnterpriseFoundationH2Docker"
--unattendedmodeuiminimal --modeunattended
--accept_eula YES --LICENSE_BIN 1
--twxlicense "/opt/license.bin" --TWX_INSTANCE_NAME "twxfoundation"
--TWX_PORT "8080" --INITIAL_HEAP "1024" --MAX_HEAP "2048"
--POSTGRES_HOST "127.0.0.1" --POSTGRES_PORT "5432"
--POSTGRES_ADMIN_SCHEMA "postgres"
--POSTGRES_ADMIN_USERNAME "postgres"
```

```
--POSTGRES_ADMIN_PASSWORD "< password >"
--POSTGRES_TWXFOUNDATION_SCHEMA "thingworx"
--POSTGRES_ TWXFOUNDATION_USERNAME "thingworx"
--POSTGRES_TWXFOUNDATION_PASSWORD "< password >"
--TABLESPACE_LOCATION "/opt/postgres/tablespace/thingworx"
--IS_RDS_INSTANCE 0
```

License Server Install Example:

```
./installer-twxfoundationH2-enterprise-linux-x64.run
--installdir "/opt/twxEnterpriseFoundationH2Docker"
--unattendedmodeuiminimal –mode unattended --accept_eula YES
--LICENSE_BIN 0 --LICENSE_SERVER_USERNAME "username"
--LICENSE_SERVER_PASSWORD "< password >"
--LICENSE_SERVER_ACTIVATION_ID "< activation id >"
--TWX_INSTANCE_NAME "twxfoundation"
--TWX_PORT "8080" --INITIAL_HEAP "1024" --MAX_HEAP "2048"
--POSTGRES_HOST "127.0.0.1" --POSTGRES_PORT "5432"
--POSTGRES_ADMIN_SCHEMA "postgres"
--POSTGRES_ADMIN_USERNAME "postgres"
--POSTGRES_ADMIN_PASSWORD "< password >"
--POSTGRES_TWXFOUNDATION_SCHEMA "thingworx"
--POSTGRES_ TWXFOUNDATION_USERNAME "thingworx"
--POSTGRES_TWXFOUNDATION_PASSWORD "< password >"
--TABLESPACE_LOCATION "/opt/postgres/tablespace/thingworx"
--IS_RDS_INSTANCE 0
```

When the installation is complete, the command line prompt will be returned.

1. To test the ThingWorx Foundation installation:
   - Navigate to the ThingWorx Foundation install directory specified above.
   - Open the twxfoundation.json file.
   - Get the URL from the "**url**": line.
   - In a browser, access the URL above.

     If the installation has been successful, you will be prompted with the login page. Login with the ThingWorx Foundation default username and password.

4

Troubleshooting

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Specific Errors 44

This section describes some common problems and their resolutions.

The Installation Log

During the ThingWorx Foundation installation, the installer writes a log file to the following locations:

- Linux: /tmp/bitrock_installer.log
- Windows: C:\Users\Username\Appdata\Local\Temp\bitrock_installer.log

The log file contains details about the installation process. If you have issues during the installation, you can consult the log for any errors that might be recorded there. The log file is called: bitrock_installer.log

Handling a Failed Installation

If you are using the Docker Toolbox on a Windows computer that does not run Docker natively, and an error occurs that prevents the ThingWorx Foundation installation from completing successfully, you will need to remove whatever has already been installed before you can try again

Note

The procedures below assume that you have already consulted the install log and fixed whatever problem caused the installation to end.

.

Follow these steps to remove components:

1. If you have any version of the ThingWorx Trial Edition installed, remove it before trying to install ThingWorx Foundation. The two cannot run on the same server.
2. Open a Command Line window and remove the `DockerMachinePTC` as follows:
   - Navigate to your user directory, such as `D:\Users\lsmith`
   - Run the following list command: `docker-machine ls`
     A list of installed Docker machines is returned, along with status information.
   - If the `DockerMachinePTC` is in the list, remove it with the following command:

     ```
     docker-machine rm-f DockerMachinePTC
     ```
   - Run the list command again to ensure that `DockerMachinePTC` was removed.

3. In your Window Explorer or terminal window, navigate to the installation directory and look for `twxEnterpriseFoundationPostgresDocker` folder for PostgreSQL or `twxEnterpriseFoundationPostgresDocker` for H2. If it exists, delete it.
4. You can now try to install again.

If you are using Docker on a Windows or Linux computer running Docker natively, and an error occurs that prevents the ThingWorx Foundation installation from completing successfully, you will need to remove whatever has already been installed before you can try again.

1. Open a Command Line or Terminal window and remove any remnants of a previous install as follows:
   - `docker stop TWX_INSTANCE_NAME`
   - `docker rm -f TWX_INSTANCE_NAME`
   - `docker volume rm ThingworxFoundationPostgres ThingworxFoundationPostgresStorage ThingworxFoundationPostgresBackupStorage`
2. In your Window Explorer or terminal window, navigate to the installation directory and look for `twxEnterpriseFoundationPostgresDocker` folder for PostgreSQL or `twxEnterpriseFoundationPostgresDocker` for H2. If it exists, delete it.
3. You can now try to install again.

Specific Errors

Error	Cause
`The system cannot move the file to a different disk drive:`	This is caused by the limitations of the GoLang scripts used to move files. In order to avoid this error, move the license.bin file from the same drive you are trying to install it on.
`Problem running post-install step. Installation may not complete correctly. Error running postgres-test.exe`	This is caused by the Docker container not being able to connect to the database. Make sure that external connections are available to the database. See the Prerequisites on page 10 section of this guide
`Problem running post-install step. Installation may not complete correctly. Error running postgres-instance-test.exe`	This is caused by the ThingWorx database instance that you were trying to create already existing in the database. You must use a unique name.

5

Uninstalling

Follow the steps below to uninstall ThingWorx.

In a Windows Environment

1. In the File Explorer navigate to the install directory.
   - For PostgreSQL double click: twxfoundationpostgres_uninstall
   - For H2 double click: twxfoundationh2_uninstall
2. A Question window opens asking you to confirm that you want to uninstall ThingWorx and all its modules. Click **Yes**.
3. You might be asked to confirm a second time. Then the Uninstalling ThingWorx Foundation screen opens. When the process finishes, another window opens to let you know the uninstall is complete. Click **OK** to close the window.
   The ThingWorx Foundation is now uninstalled from your system.

In a Linux Environment

1. In the terminal window navigate to the install directory
   - For PostgreSQL run: ./twxfoundationpostgres_uninstall
   - For H2 run: ./twxfoundationh2_uninstall
2. A Question window opens asking you to confirm that you want to uninstall ThingWorx and all its modules. Click **Yes**.
3. You might be asked to confirm a second time. Then the Uninstalling ThingWorx Foundation screen opens. When the process finishes, another window opens to let you know the uninstall is complete. Click **OK** to close the window.
   The ThingWorx Foundation is now uninstalled from your system