



thingworx[®] utilities

Installation Guide

8.2

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1

Overview

This guide provides instructions to install and upgrade ThingWorx Utilities. After you install ThingWorx Utilities, the following utilities are available for use:

- Alert Management
- Asset Management
- Audit Management
- Software Content Management
- Workflow Builder
- Workflow Management
- Remote Access and Control

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Prerequisites

Before installing ThingWorx Utilities, ensure that the following necessary prerequisites are installed:

- ThingWorx 8.2.0

Note

ThingWorx Utilities is only compatible with the matching version of ThingWorx. It is not compatible with earlier or later releases.

- It is highly recommended to install the following ThingWorx extensions from ThingWorx Marketplace:
 - [Mail Extension](#) — Required.
 - [Google Maps Widget](#) — If you do not install this extension, then the **Location** option under the **Current** menu of the selected asset is not available.
 - [Web Sockets Tunnel Widget and Library](#) — If you do not install this extension, then the **Remote Connection** option under the **Remote Access** menu of the selected asset is not available.

Note

You will be able to upgrade these extensions after installing ThingWorx Utilities.

-
- The following ThingWorx extensions that were bundled with ThingWorx Utilities have been deprecated and removed:

- LabelTooltip_ExtensionPackage
- LinkTooltip_ExtensionPackage
- ButtonTooltip_ExtensionPackage
- NavigationTooltip_ExtensionPackage

If you are using any of the widgets available in these extensions, you can continue to download them from the PTC Support page, under **Release 8.0 ▶ ThingWorx Utilities Deprecated Tooltip Widgets**.

- Tomcat 8
- Java 8

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Downloading the Software Package

Complete the following steps to download the software package:

1. Log in to the [PTC ThingWorx & Axeda 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. Click the first subheading, **Order or Download Software Updates**. Enter your **Customer Name** and **Customer Number**, and click **Next**.

The **PTC Software Download** page opens.

4. Under **Step 1: Select the Product Family**, 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.n>**
 - **ThingWorx Utilities**
 - **Most Recent Datecode**
6. Depending on how you want to install ThingWorx Utilities, click **HTTPS** or **Download Manager** to download either of the following software packages:
 - **ThingWorx-Utilities-<n.n.n>**
 - **ThingWorx-Utilities-Installer-<n.n.n>**

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Installing ThingWorx Utilities

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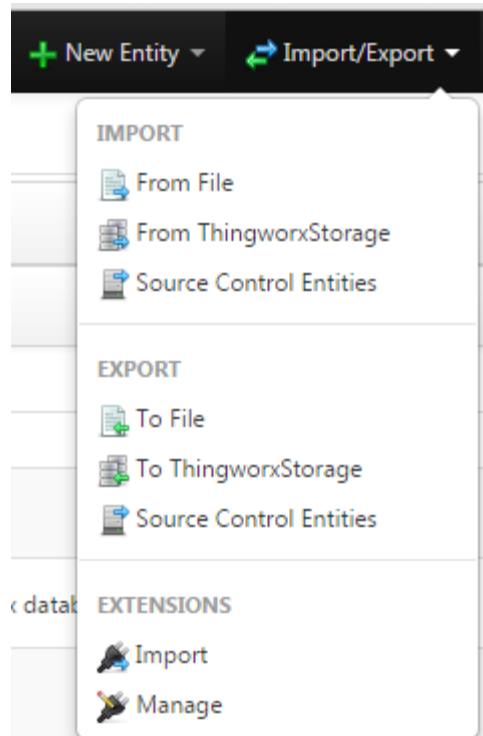
You can install ThingWorx Utilities by using one of the following options:

- [Importing the Extension](#)
- [Running the Installer](#)

Importing the ThingWorx Utilities Extension

After you have downloaded the **ThingWorx-Utilities-<n.n.n>** extension zip package, complete the following steps to import the extension into ThingWorx:

1. Log in to ThingWorx Composer as administrator.
2. Choose **Import/Export** ► **Import**.




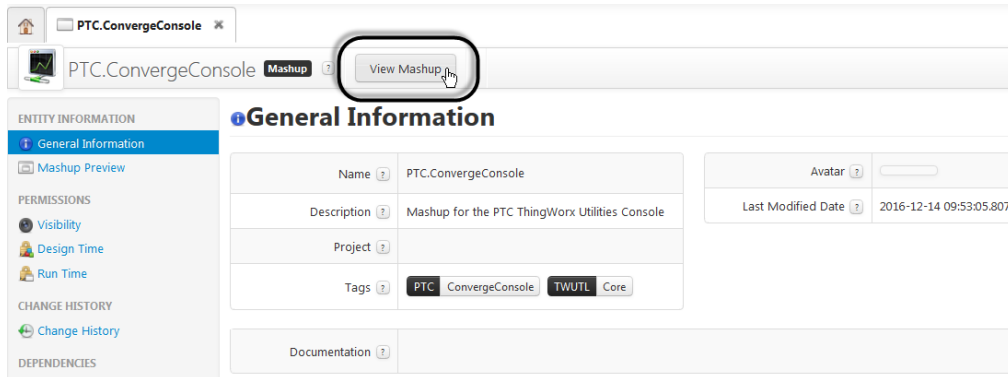
The **Import Extensions** window appears.

3. Click **Choose File** and navigate to the extension zip file, and click **Import**.
4. Once the import process is complete, click **Close**.
5. When prompted to refresh your browser, click **Yes**.

Verification

To verify that the extension has been successfully imported, complete the following steps:

1. In ThingWorx Composer, search for the **PTC.ConvergeConsole** mashup.
2. Click  next to the mashup, and click **View Mashup**.



3. On the ThingWorx Utilities Console, click **Asset Management** and verify that it loads.

Continue with [Importing the ThingWorx Utilities Demo Data Extension](#).

Running the Installer

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

The **ThingWorx-Utilities-Installer- $\langle n.n.n \rangle$** software package contains the following installer files:

File Name	Operating System
installer-twxutilities-devzone-windows.exe	Windows
installer-twxutilities-devzone-linux-x64.run	Linux
installer-twxutilities-devzone-osx.app	Mac OSX

Note

The Mac OSX installer is for developer use only and should not be installed in an enterprise environment. This guide does not include information on installing ThingWorx Utilities on Mac OSX.

You can install ThingWorx Utilities through one of the following modes:

- [Graphical Mode Installation](#)
- [Text Mode Installation](#)
- [Silent Mode Installation](#)

 **Note**


You can install ThingWorx Utilities by running the installer only for a fresh installation of ThingWorx Utilities.

Graphical Mode Installation

 **Note**

This procedure represents the graphical mode of installation, typically used in a Windows environment.

Complete the following steps to install ThingWorx Utilities:

1. Depending on the operating system on which you want to install ThingWorx Utilities, launch either of the installers:
 - `installer-twxutilities-devzone-windows.exe`
 - `installer-twxutilities-devzone-linux-x64.run`
2. In the **Setup – ThingWorx Utilities** window, click **Next**.
3. In the **License Agreement** window, read the license agreement carefully, select **I accept the agreement**, and click **Next**.
4. In the **Installation Directory** window, click **Next** to install ThingWorx Utilities to the default location, or click  to navigate to the location where you want to install ThingWorx Utilities, and click **Next**.
5. In the **ThingWorx Utilities Variables** window, enter the following values, and then click **Next**:
 - In the **Host Address for ThingWorx Foundation** field, specify the IP address or the FQDN of the ThingWorx Foundation instance.
By default, this is set to `127.0.0.1`.
 - In the **Host Port for ThingWorx Foundation** field, specify the port on which the ThingWorx Foundation instance is running.
By default, this is set to `8080`.

-
- In the **Admin Username for ThingWorx Foundation** field, specify the name of the administrator user that you want to use to install ThingWorx Utilities.
By default, this is set to `Administrator`.
 - In the **Admin Password for ThingWorx Foundation** field, enter the password for the administrator user.
By default, this is set to the default ThingWorx password.
 - In the **Retype Password** field, enter the same password that you entered in the **Admin Password for ThingWorx Foundation** field.
6. In the **Configuration Summary** window, review the configuration settings, and click **Next**.
If you want to make any changes to the configuration options, click **Back** to go to the previous screen.
 7. In the **Ready to Install** window, click **Next** to install ThingWorx Utilities.
 8. Once the installation is complete, click **Finish** to view the installation summary.

Text Mode Installation

Text mode installation for ThingWorx Utilities is supported for a Linux environment.

In Linux terminal, follow the same sequence of steps as the graphic mode installation to install ThingWorx Utilities. All inputs and responses are text-based.



Silent Mode Installation

Silent mode installation is supported for both Windows and Linux environment. In the silent mode installation, provide all the necessary inputs in the command. Once the installation starts, it does not require any inputs. Complete the following steps to install ThingWorx Utilities by using the silent mode:

1. In a command-line window, browse to the location where you saved the installers.
2. Run the following command to install ThingWorx Utilities:

```
installer-twxutilities-devzone-<os installer>  
<Installer Options>
```

The following table provides example commands that you can run based on your operating system:


Operating System	Command
Windows	<pre data-bbox="553 472 1356 840"> .\installer-twxutilities-devzone-windows.exe --installdir "C:\Program Files (x86)\twxUtilitiesDocker- <n.n.n>" --unattendedmodeui minimal --mode unattended --accept_eula YES --TWXHOST_HOST <HOST_NAME> --TWXHOST_PORT <PORT_NUMBER> --TWXHOST_USERNAME "<ADMINISTRATOR_USER_NAME>" --TWXHOST_PASSWORD "<PASSWORD>" </pre> <p data-bbox="553 871 1274 955">  Note Ensure that you run this command in one single line. </p>
Linux	<pre data-bbox="553 982 1209 1312"> .\installer-twxutilities-devzone-linux-x64.run --installdir "/opt/twxUtilitiesDocker-<n.n.n>" --unattendedmodeui minimal --mode unattended --accept_eula YES --TWX_HOST <HOST_NAME> --TWX_PORT <PORT_NUMBER> --TWXHOST_USERNAME "<ADMINISTRATOR_USER_NAME>" --TWXHOST_PASSWORD "<password>" </pre> <p data-bbox="553 1344 1274 1428">  Note Ensure that you run this command in one single line. </p>

 **Note**

For a full list of commands, run the `installer-twxutilities-devzone-<os installer> --help` command.

Verification

To verify that the extension has been successfully imported, complete the following steps:

1. In ThingWorx Composer, search for the **PTC.ConvergeConsole** mashup.
2. Click  next to the mashup, and click **View Mashup**.



3. On the ThingWorx Utilities Console, click **Asset Management** and verify that it loads.

Continue with [Importing the ThingWorx Utilities Demo Data Extension](#).

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Importing the ThingWorx Utilities Demo Data Extension

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Note

Because the demo data requires specific thing shapes and thing templates, all ThingWorx Utilities extensions, including Workflow Management and Software Content Management, must be loaded prior to importing the demo data.

Before working with the demo data or completing the configuration, you must import the `utl-demo-data-extension.zip` extension package and the `utl-demo-data-imports.xml` imports XML file into ThingWorx Composer. The download ZIP file (`ThingWorx-Utilities-Demo-Data-version`) contains the extension ZIP file and the imports XML file.

Name	Type	Compressed size
 README.txt	TXT File	1 KB
 utl-demo-data-extension.zip	Compressed (zipped) Fol...	16 KB
 utl-demo-data-imports.xml	XML Document	342 KB
 utl-demo-data-simulator-zip.zip	Compressed (zipped) Fol...	26,025 KB

Importing the Extension ZIP File

The `utl-demo-data-extension.zip` file contains the minimum supporting objects for running the MRI demo data. Complete the following steps to import this extension ZIP:

1. Extract the contents of the `utl-demo-data-extension.zip` file to your system.
2. From ThingWorx Composer, navigate to the **Import/Export** menu.
3. Under **Extensions**, select **Import**.
4. Click **Choose File**, and navigate to the `utl-demo-data-extension.zip` file, and select it.
5. Click **Import**.

Importing the Imports XML File

The `utl-demo-data-imports.xml` file contains entities that you will want access to when working with the MRI demo data. Complete the following steps to import the `utl-demo-data-imports.xml` file:

1. From ThingWorx Composer, navigate to **Import/Export** ► **Import** ► **From File**.
2. On the **Single File** tab, click **Choose File**, and navigate to the `utl-demo-data-imports.xml` file, and select it.
3. Click **Import**.

Extracting the Core Data Simulator

1. Extract the contents of the `utl-demo-data-simulator-zip.zip` file to your system.
2. In the extracted `utl-demo-data-simulator-zip` directory on your system, create 8 new directories, one for each MRI machine. Name these directories SN0001, SN0002, and so on, through SN0008.

Note

You must follow this naming convention, as the simulator relies on these identifiers.

3. In each of those 8 new directories, create 4 more directories:
 - `in`
 - `out`
 - `staging`
 - `updates`

These directories are used for file transfer and are used for File Transfer and Software Content Management capabilities.

Configuring Email Server Details

After you have installed ThingWorx Utilities, you must specify the email server that will be used for ThingWorx Software Content Management notifications:

1. From ThingWorx Composer, navigate to the **TW.RSM.SFW.Thing.MailServer** thing.
2. Under **Entity Information**, click **Configuration** and then click **Edit**.
3. Enter the appropriate information for **Mail Server Connection Parameters**.

Configuration for MailThing ?

Mail Server Connection Parameters	
Name	Value
SMTP Server	<input type="text" value="smtp.domain.com"/>
SMTP Server Port	<input type="text" value="465"/>
POP3 Server	<input type="text" value="pop3.domain.com"/>
POP3 Server Port	<input type="text" value="995"/>
Use TLS	<input type="checkbox"/>
Use SSL	<input checked="" type="checkbox"/>
Mail Account User	<input type="text" value="account@domain.com"/>
Mail Account Password	<input type="button" value="Change Password"/>
Connection Timeout	<input type="text" value="30000"/>
Operation Timeout	<input type="text" value="30000"/>
Socks Host	<input type="text"/>
Socks Port	<input type="text" value="1080"/>
Attachment File Repository	<input type="text" value="SystemRepository"/> <input type="button" value="x"/>

4. Click **Save**.
5. Restart the **TW.RSM.SFW.Thing.MailServer** thing to begin using the new settings:
 - a. Click **Services**.
 - b. Under **Generic Services**, find the **RestartThing** row and click **Test**.

-
- c. On the **RestartThing - Test Service** window, click **Execute Service**.

 **Note**

These entities are not considered part of the extension, but are created after the ThingWorx Utilities has been installed. If these entities are deleted for any reason, ThingWorx Utilities will recreate them, but they must be reconfigured.

MRI Demonstration Data Post-Import Configuration

After you have imported the MRI demo data extension, complete the following steps:

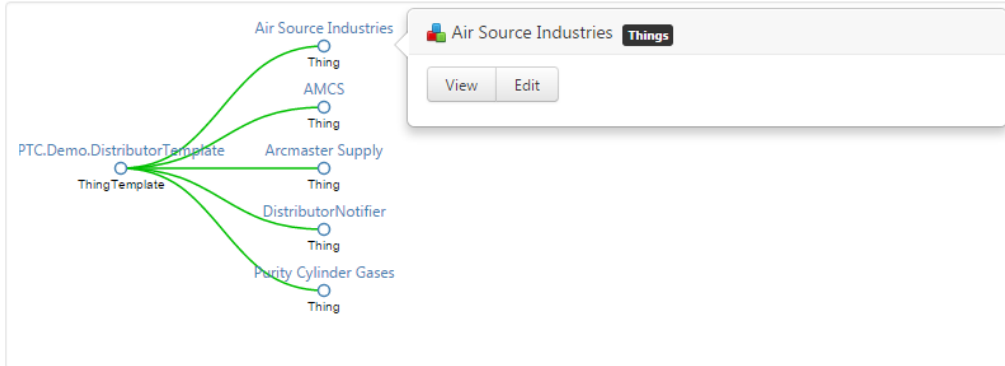
Configure DistributorNotifier Email Addresses

1. From ThingWorx Composer, navigate to the **PTC.Demo.DistributorTemplate** thing template.
2. In the left panel, under **Dependencies**, click **Uses This Entity**. A list of distributors that you will update appears.
 - Air Source Industries
 - AMCS
 - Arcmaster Supply
 - Purity Cylinder Gases

For each of these entities, complete Steps 3 and 4.

3. Click the entity, and then click **Edit**.

Uses This Entity ?





4. Under **Entity Information**, click **Properties**. Click **Set** next to the email property. Enter the appropriate email address and click **Set** to save your update.


Configure Email Server

1. From ThingWorx Composer, navigate to the **PTC.BPE.BusinessProcessNotifier** thing.
2. Under **Entity Information**, click **Configuration**, and then click **Edit**.

3. Enter the appropriate information for **Mail Server Connection Parameters**.

 **Configuration for MailThing** 

Mail Server Connection Parameters

Name	Value
SMTP Server	<input type="text" value="smtp.domain.com"/>
SMTP Server Port	<input type="text" value="465"/>
POP3 Server	<input type="text" value="pop3.domain.com"/>
POP3 Server Port	<input type="text" value="995"/>
Use TLS	<input type="checkbox"/>
Use SSL	<input checked="" type="checkbox"/>
Mail Account User	<input type="text" value="account@domain.com"/>
Mail Account Password	<input type="button" value="Change Password"/>
Connection Timeout	<input type="text" value="30000"/>
Operation Timeout	<input type="text" value="30000"/>
Socks Host	<input type="text"/>
Socks Port	<input type="text" value="1080"/>
Attachment File Repository	<input type="button" value="SystemRepository"/> 

4. Click **Save**.
5. Restart the **TW.RSM.SFW.Thing.MailServer** thing to begin using the new settings:
 - a. Click **Services**.
 - b. Under **Generic Services**, find the **RestartThing** row and click **Test**.
 - c. On the **RestartThing - Test Service** window, click **Execute Service**.


 **Note**

These entities are not considered part of the extension, but are created after the ThingWorx Utilities has been installed. If these entities are deleted for any reason, ThingWorx Utilities will recreate them, but they must be reconfigured.

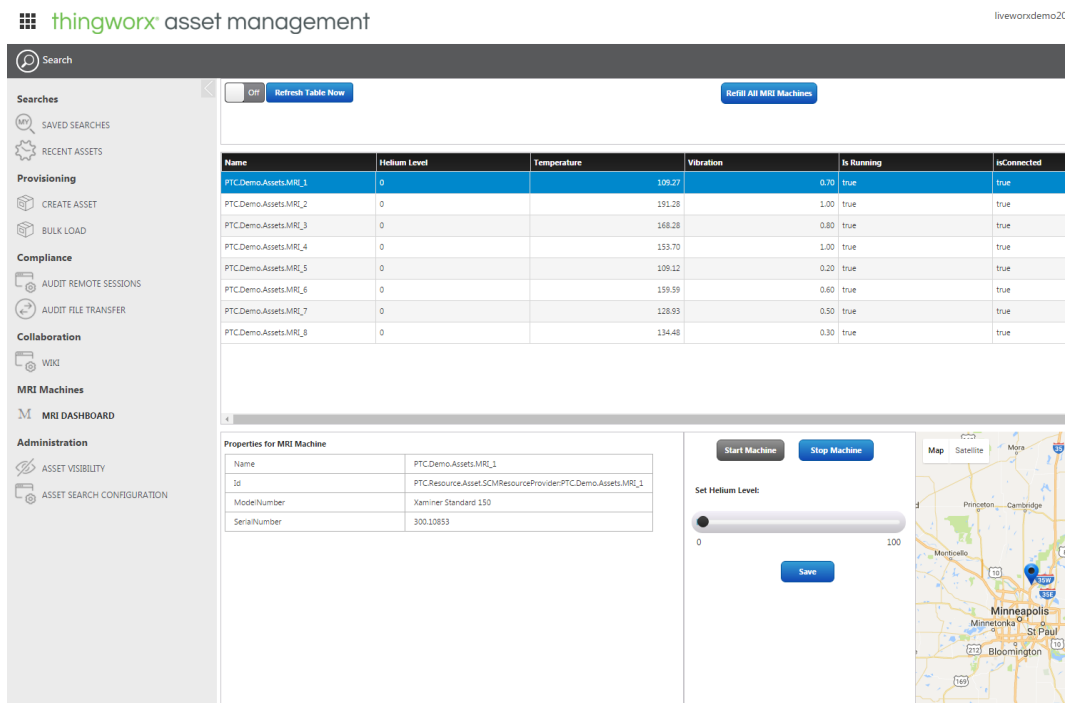
Start the Core Data Simulator

1. Open the extracted Core_DataSimulator-zip directory on your system.
2. Start the simulator by running the appropriate script for your system:
 - Windows—startMRIClient.bat
 - Linux—startMRIClient.sh

Add the MRI Demo Simulator Tile to the Console

1. From the ThingWorx Utilities Console, click the **Add/Remove Tiles** tile.
2. In the tiles table, find **MRI Demo Simulator**.
3. Select the checkboxes in the **In Console** and **In App Switcher** columns.
4. Click .
5. The **MRI Demo Simulator** now appears on the Console.

Once you have imported and configured the MRI demonstration data, a **MRI Machines** section will also appear in ThingWorx Asset Management.



The screenshot displays the ThingWorx Asset Management interface. The top navigation bar includes the ThingWorx logo, the text "asset management", and the user identifier "liveworxdemo2C". A search bar is located on the left side of the header. Below the header, there is a sidebar with navigation options: Searches, Saved Searches, Recent Assets, Provisioning (Create Asset, Bulk Load), Compliance (Audit Remote Sessions, Audit File Transfer), Collaboration (Wiki), MRI Machines (MRI Dashboard), and Administration (Asset Visibility, Asset Search Configuration). The main content area features a table of MRI machines with columns for Name, Helium Level, Temperature, Vibration, Is Running, and Is Connected. Below the table, there is a "Properties for MRI Machine" section for "PTC.Demo.Assets.MRI_1", showing details like Id, ModelNumber, and SerialNumber. To the right of the properties is a "Set Helium Level" control with a slider and a "Save" button. A map of Minneapolis is visible in the bottom right corner.

Name	Helium Level	Temperature	Vibration	Is Running	Is Connected
PTC.Demo.Assets.MRI_1	0	109.27	0.70	true	true
PTC.Demo.Assets.MRI_2	0	191.28	1.00	true	true
PTC.Demo.Assets.MRI_3	0	168.28	0.80	true	true
PTC.Demo.Assets.MRI_4	0	153.70	1.00	true	true
PTC.Demo.Assets.MRI_5	0	109.12	0.20	true	true
PTC.Demo.Assets.MRI_6	0	159.59	0.60	true	true
PTC.Demo.Assets.MRI_7	0	128.93	0.50	true	true
PTC.Demo.Assets.MRI_8	0	134.48	0.30	true	true

Properties for MRI Machine	
Name	PTC.Demo.Assets.MRI_1
Id	PTC.Resource.Asset.SCMResourceProvider:PTC.Demo.Assets.MRI_1
ModelNumber	Xaminer Standard 150
SerialNumber	300.10853

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Updating to a New Version of ThingWorx Utilities

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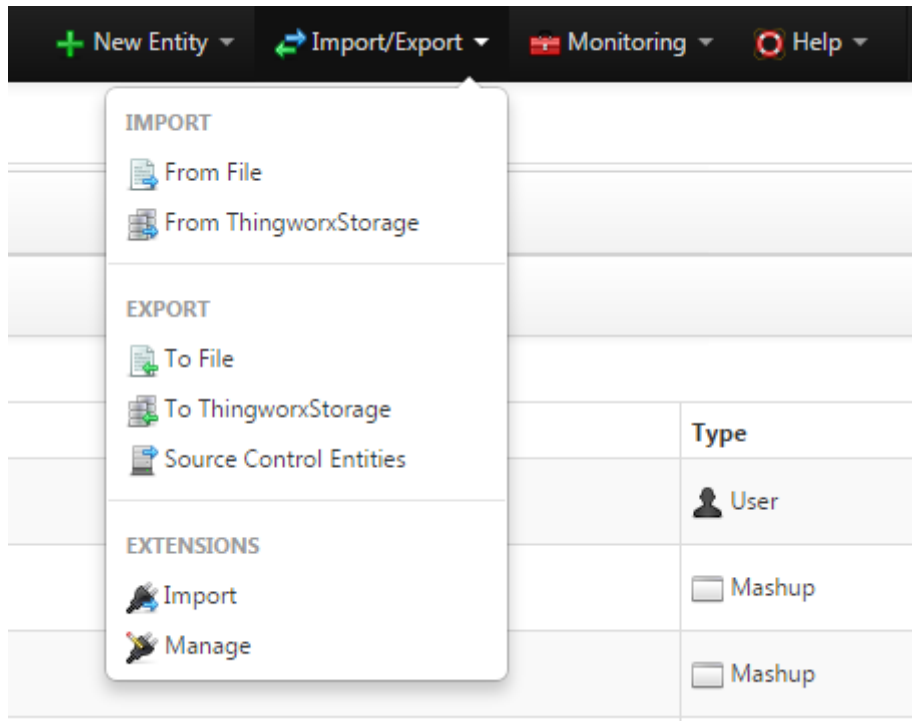
To update to a new version of ThingWorx Utilities, complete the following steps:

 **Note**

When upgrading from version 8.0.0 to 8.1.0, you can directly import ThingWorx Utilities after an in-place upgrade of ThingWorx foundation 8.1.0 and it is no longer necessary to follow the Export/Import extension upgrade process.

After performing the import, you must restart Tomcat. You may also need to run the AdjustUtilitiesVisibility service in the TW.UTL.UtilSetupHelper resource to ensure the visibility and permissions are properly set.

1. Export data:
 - a. Export everything that has been developed in your current version of ThingWorx from ThingWorx Utilities using the **Import/Export** drop-down and selecting **To ThingWorxStorage** under **Export**.



- b. Select the **Include Data** checkbox.

Export to ThingworxStorage

Exporting All by default exports all of your entities asynchronously to the ThingworxStorage/exports directory on your server. Check the box to export all your data as well.

Include Data:

- c. Click **Export**.
 - d. Once the export completes successfully, a directory is created in /ThingworxStorage/exports. Create a ZIP file of the exports directory.
2. Ensure that the ThingWorx 8.1.0 platform is installed.
 3. Install the ThingWorx Utilities 8.1.0 extension and any other optional ThingWorx Utilities extensions that you previously had installed. For more information, see [Installing ThingWorx Utilities](#).
 4. Import data:
 - a. Navigate to the ZIP file that you created in step 1, and extract the contents of the file to the newly installed ThingWorx Utilities 8.1.0 /ThingworxStorage/exports directory.
 - b. From ThingWorx Composer, import the extracted files from the ThingWorx Utilities 8.1.0 /ThingworxStorage/exports directory using the **Import/Export** menu and selecting **From ThingWorxStorage** under **Import**.
 - c. After the import has completed successfully, restart the application server. This enables ThingWorx Workflow Builder to create dynamic subscriptions correctly.
 5. Depending on the version you are updating from, follow the appropriate instructions in [Post-Update Steps](#).

Post-Update Steps

After updating to a new version of ThingWorx Utilities, you may need to perform post-update tasks depending on the version of ThingWorx Utilities you are updating from:

Updating from 8.1.0

No post-update steps are required when updating from ThingWorx Utilities 8.1.0.

Updating from ThingWorx Utilities 8.0.0

No post-update steps are required when updating from ThingWorx Utilities 8.0.0.

 **Note**

There will be no migration for Package Version updates. If an existing package contains non-numerical characters for any version, it can only be used in the dependency check for its package name. All package version dependencies will not be allowed for legacy packages containing non-numerical characters.

Updating from ThingWorx Utilities 7.4.0

No post-update steps are required when updating from ThingWorx Utilities 7.4.0.

Updating from ThingWorx Utilities 7.3.0

No post-update steps are required when updating from ThingWorx Utilities 7.3.0.

Updating from ThingWorx Utilities 7.2.1

No post-update steps are required when updating from ThingWorx Utilities 7.2.1.

Updating from ThingWorx Utilities 7.1.0

If you are updating from ThingWorx Utilities 7.1.0, you must complete the following tasks.

If You Have Multiple Organizations

If you have more than one organization, you must manually add the following tags after updating your ThingWorx Utilities version:

- ThingWorx Workflow Builder
 - TW.UTL.WB.Master.CommonHeader, TWUTL:Workflow
 - TW.UTL.WM.Master.CommonHeader, TWUTL:Workflow
- ThingWorx
 - TW.UTL.Alert.Master.CommonHeader, TWUTL:Core
 - PTC.Asset.CommonHeader, TWUTL:Core
 - TW.UTL.AssetDetail.Master.CommonHeader, TWUTL:Core
 - TW.UTL.AssetSearch.Master.CommonHeader, TWUTL:Core
 - TW.UTL.CommonHeader, TWUTL:Core
 - TW.UTL.PRM.Master.CommonHeader, TWUTL:Core
 - PTC.Asset.FlattenedOwnablesResourceProvider, TWUTL:Core
 - PTC.Asset.FlattenedOwnablesDataShape, TWUTL:Core
 - PTC.Resource.Asset.ThingworxAssetResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.Asset.ThingworxAssetDataShape, TWUTL:ResourceProvider
 - PTC.Resource.CRM.OperatorContactRelationshipResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.CRM.OperatorContactRelationshipDataShape, TWUTL:ResourceProvider
 - PTC.Resource.CRM.OperatorRelationshipResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.CRM.OperatorRelationshipDataShape, TWUTL:ResourceProvider
 - PTC.Resource.CRM.OwnerContactRelationshipResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.CRM.OwnerContactRelationshipDataShape, TWUTL:ResourceProvider
 - PTC.Resource.CRM.OwnerRelationshipResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.CRM.OwnerRelationshipDataShape, TWUTL:ResourceProvider
 - PTC.Resource.CRM.ThingworxCustomerResourceProvider, TWUTL:ResourceProvider

-
- PTC.Resource.CRM.ThingworxCustomerDataShape, TWUTL:ResourceProvider
 - Salesforce
 - PTC.Resource.CRM.SalesforceAccountResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.CRM.SalesforceAccountDataShape, TWUTL:ResourceProvider
 - PTC.Resource.CRM.SalesforceContactResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.CRM.SalesforceContactDataShape, TWUTL:ResourceProvider
 - ThingWorx Software Content Management
 - TW.UTL.SFW.Master.CommonHeader, TWUTL:RemoteServices
 - PTC.Resource.Asset.RSMUpdatableResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.Asset.SCMResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.Asset.SCMDDataShape, TWUTL:ResourceProvider
 - TW.RSM.SFW.SoftwareManager.SoftwareAuditHistory, TWUTL:RemoteServices
 - TW.RSM.SFW.SoftwareManager.Configuration, TWUTL:RemoteServices
 - TW.RSM.SFW.SoftwareManager.AccessPrivileges, TWUTL:RemoteServices
 - TW.RSM.SFW.SoftwareManager.DeliveryTarget, TWUTL:RemoteServices
 - TW.RSM.SFW.SoftwareManager.Campaign, TWUTL:RemoteServices
 - TW.RSM.SFW.SoftwareManager.Definition, TWUTL:RemoteServices
 - TW.RSM.SFW.FlattenedOwnablesResourceProvider, TWUTL:RemoteServices
 - PTC.Resource.Asset.RSMAssetResourceProvider, TWUTL:ResourceProvider
 - PTC.Resource.Asset.RSMAssetDataShape, TWUTL:ResourceProvider
 - Styles
 - PTC.ConvergeConsole.Master, TWUTL:Core

Updating from ThingWorx Utilities 7.0.1

For most installations, no post-update steps are required when updating from ThingWorx Utilities 7.0.1.

If you have more than one organization, you must manually add tags as described in the following topic: [Updating from ThingWorx Utilities 7.1.0](#).

Updating from ThingWorx Utilities 6.6.0

If you are updating from ThingWorx Utilities 6.6.0, you must complete the following tasks.

Customizations to ThingWorx Utilities Entities

Custom edits to ThingWorx Utilities entities are not supported and must be re-applied after upgrading to ThingWorx Utilities 7.0.1. This includes changes to the master mashups to update logos in the utility banners.

Workflow Definitions

The workflow definitions created prior to ThingWorx Utilities 6.6.0 will continue to be supported. However, if there is a need to edit the events configured for a receive task in a pre-7.0.1 workflow definition, the event must be removed and replaced with a newly created event.

Updating Pre-ThingWorx Utilities 7.0.1 Assets with Appropriate Thing Shapes

Run the **UpdatePre40Assets** utility service, available in the **PTC.Asset.AssetCoreUtils** thing, to update pre-7.0.1 assets with the appropriate thing shapes associated with the new resource providers using the following steps:

1. In ThingWorx Composer, navigate to the **PTC.Asset.AssetCoreUtils** thing.
2. Click **Services**, and find the **UpdatePre40Assets** service. Click **Test**.

The service finds all things which implement the `TW.RSM.ManagedAsset` thing shape, but do not implement the `TW.RSM.SFW.ThingShape.Updateable` thing shape. If they are not currently assigned to any thing-based resource provider, the service adds the resource thing shape, `PTC.Resource.Asset.RSMAssetResourceThingShape` to those things.

It then finds all things which implement the `TW.RSM.SFW.ThingShape.Updateable` thing shape, and if they are not currently assigned to any thing-based resource provider, adds the `PTC.Resource.Asset.RSMUpdatableResourceThingShape` resource thing shape to those things.

DisplayName Property for ThingWorx Product Relationship Manager

A display name was added for ThingWorx Utilities customer things. A migration script is available to create the new `DisplayName` property for each `PTC.Resource.CRM.ThingworxCustomer` thing and populate it based on its corresponding thing name. Complete the following steps to run the **MigrateCustomerNames** service on the **PTC.Resource.CRM.CustomerManagementUtils** thing:

1. In ThingWorx Composer, navigate to the **PTC.Resource.CRM.CustomerManagementUtils** thing.
2. Click **Services**, and find the **MigrateCustomerNames** service. Click **Test**.

ThingWorx Utilities Help Center

If the Help Center tile is pointing to a previous version of the ThingWorx Utilities Help Center, you must update the tile to point to the ThingWorx Utilities 7.4.0 Help Center using the following steps:

1. Click the **Add/Remove Tiles** tile.
2. Select **ThingWorx Utilities Help Center** in the table.
3. In the **Mashup or URL** field, enter the following: `http://support.ptc.com/help/thingworx_hc/thingworx_utilities_7_hc/[language]/`, where *[language]* is the two-character code for your preferred language:
 - Simplified Chinese—`zh_CN`
 - Traditional Chinese—`zh_TW`
 - English—`en`
 - French—`fr`
 - German—`de`
 - Italian—`it`
 - Japanese—`ja`
 - Korean—`ko`
 - Russian—`ru`
 - Spanish—`es`
4. Click **Save Tile**.

If You Have Multiple Organizations

If you have more than one organization, you must manually add tags as described in the following topic: [Updating from ThingWorx Utilities 7.1.0](#).

Avoiding Upgrade Impacts

When developing on top of ThingWorx Utilities, steps can be taken to avoid issues when upgrading to a newer release in the future. Depending on the updates that are provided in future releases, you may need to ensure that custom code and objects are compatible with the updates made to ThingWorx Utilities. To avoid upgrade issues, we recommend the following:

Resource Providers

- When extending the ThingWorx Utilities ontology to support new domains, avoid modeling specific resource types, such as Customer and Contact. Instead, model the capabilities that are provided by these resources, like Addressable and Contactable.
- Java-based thing templates should not be modified in the ThingWorx Composer. To prevent a Java-based thing template from being modified in the ThingWorx Composer, ensure that the thing template is set to be non-editable when it is imported as part of an extension.

Capabilities

- To avoid naming conflicts, the field name of a capability data shape should contain the prefix of a capability. For example, the Contactable capability has field names such as `ContactablePhoneNumber` and `ContactableEmail` instead of `PhoneNumber` or `Email`.
- To prevent upgrade impacts due to future changes to any ontology extension you create, the ThingWorx entities that make up the capabilities that are part of your ontology extension (for example, the thing shapes and data shapes) should be set to be non-editable when imported through an extension.

7

Visibility Support for ThingWorx Utilities

Visibility support for multiple organizations is available for non-asset entities (mashups, helper things, and so on). The **TW.UTL.UtilSetupHelper** resource contains the **AdjustUtilitiesVisibility** service to help align visibility and permission for ThingWorx Utilities.

 **Note**


To set visibility you must be an administrator or have the correct permissions.

Complete the following steps to set visibility:

1. In ThingWorx Composer, navigate to **System ▶ Resources**.
2. Click **TW.UTL.UtilSetupHelper**, and then click **Services**.
3. Click **Test** next to the **AdjustUtilitiesVisibility** service.

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4. Enter the organization for which you want to execute the service, or you can also use a colon to enter the unit as well. In the example below, running the service sets visibility for the core entities that are available to ThingWorx Utilities and some platform entities (subsystems, resources, and so on) for the AcmeOrganization and the AcmeUnit.

AdjustUtilitiesVisibility - Test Service

 Please be careful. Only execute services and queries where you understand the impacts.

Inputs:

orgOrOrgUnit

AcmeOrganization:AcmeUnit

5. Click **Execute Service**.