



Thingworx Remote Monitoring Starter Application – Installation Guide

Author: Pai Chung

IoT Solutions Architect

Customer Success IoT



Thingworx Remote Monitoring Starter Application – Installation Guide

Files

All files needed are in a Folder called: RemoteMonitoringStarter, this is an Export to ThingworxStorage

Extensions

Not included, but the application uses the GoogleWidgetsExtension (Google Map)

Steps

1. Import Google Map extension.
2. Place RemoteMonitoringStarter folder in the ThingworxStorage exports folder.
3. From Thingworx do an Import from ThingworxStorage – Include Data, Use Default Persistence Provider, do NOT ignore Subsystems.
4. After the import has finished, go to Organizations and open Everyone.
5. In the Organization remove Users from the Everyone organization unit.
6. Go to DataTables and open PTC.RemoteMonitoring.Simulation.DT
7. Go to Services and execute SetSimulationValues
8. Go to the UserManagementSubsystem
9. In the Configuration section add PTC.RemoteMonitoring.Session.TS to the Session. Note: This step may already be done.

Note: Screen shots provided at the end.

Account Passwords

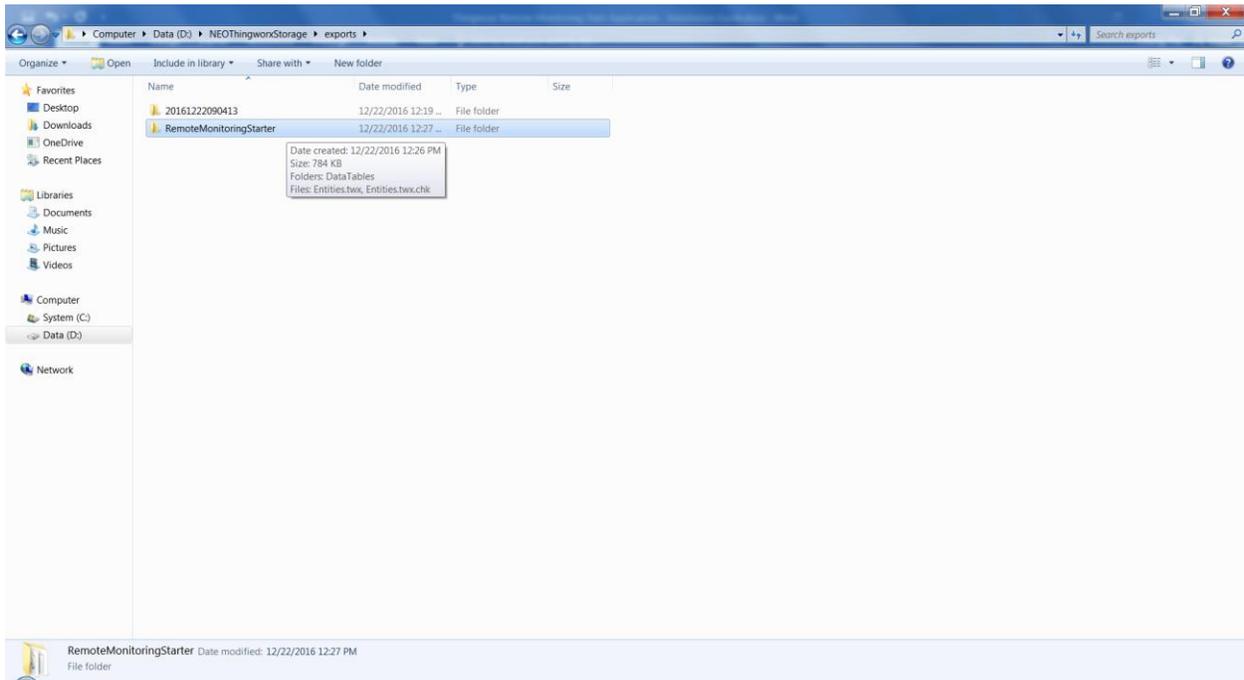
Administrator/Th1ngW0rx

FullAdmin/FullAdmin

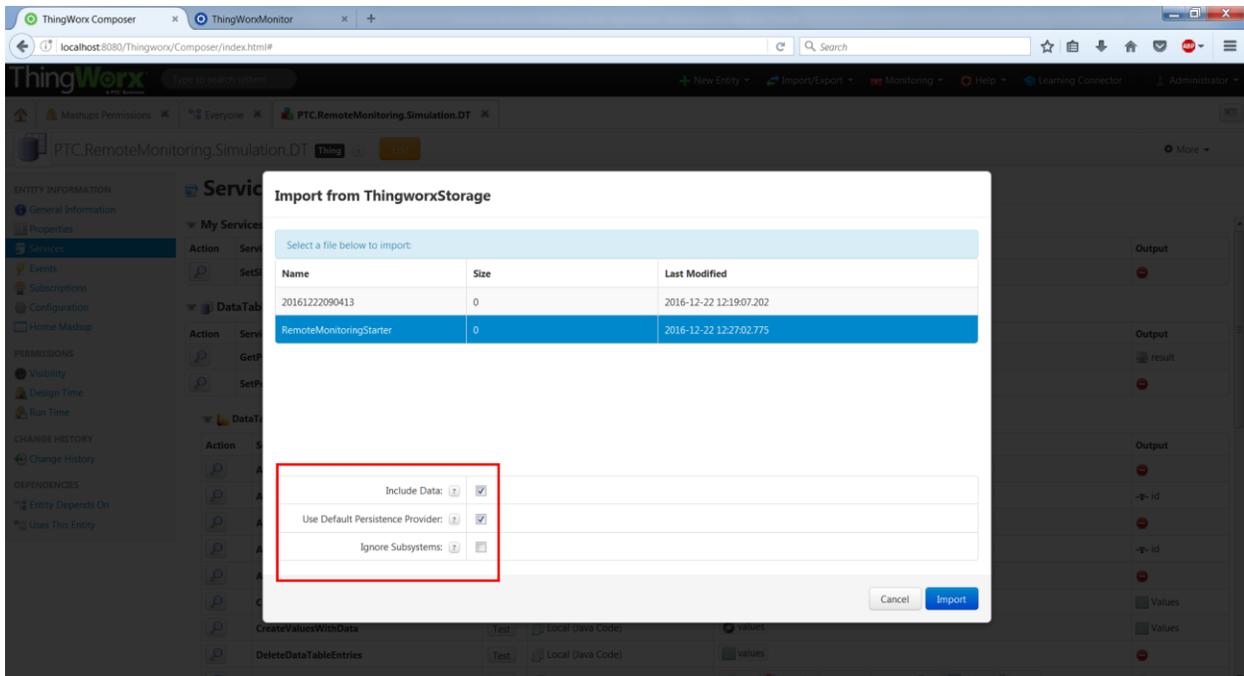
All other users have a password of: password.

Screenshots

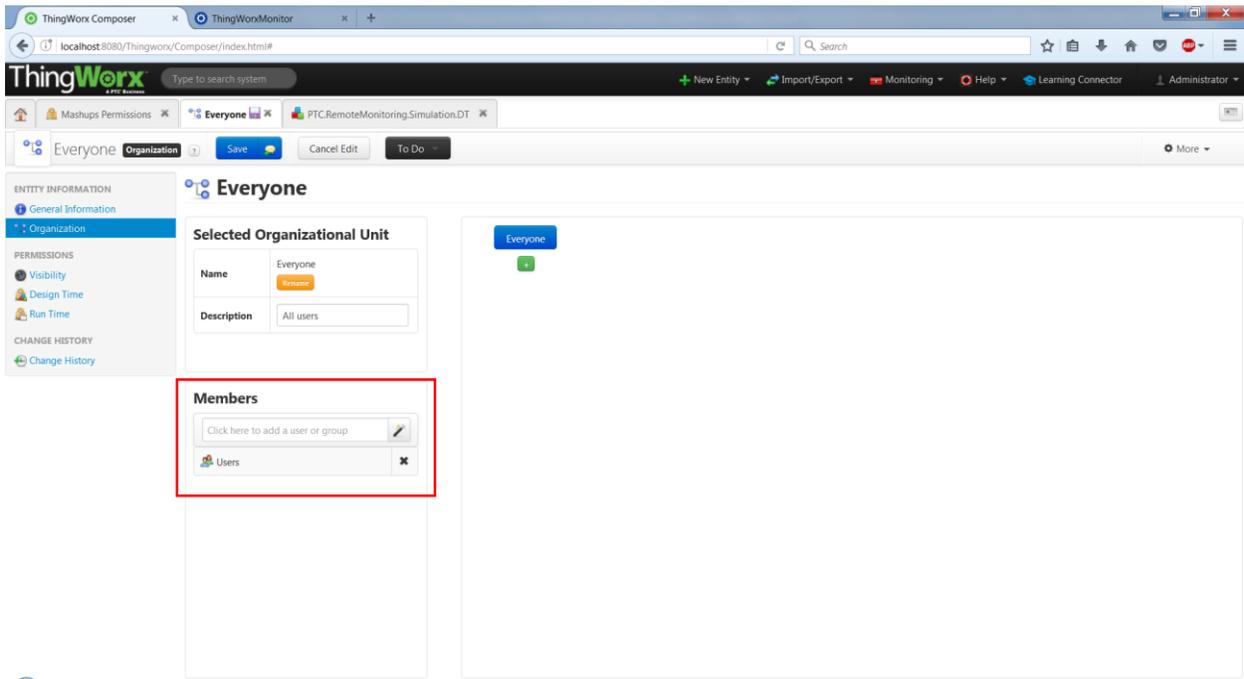
Place folder into ThingworxStorage / exports



Import from ThingworxStorage with proper options selected

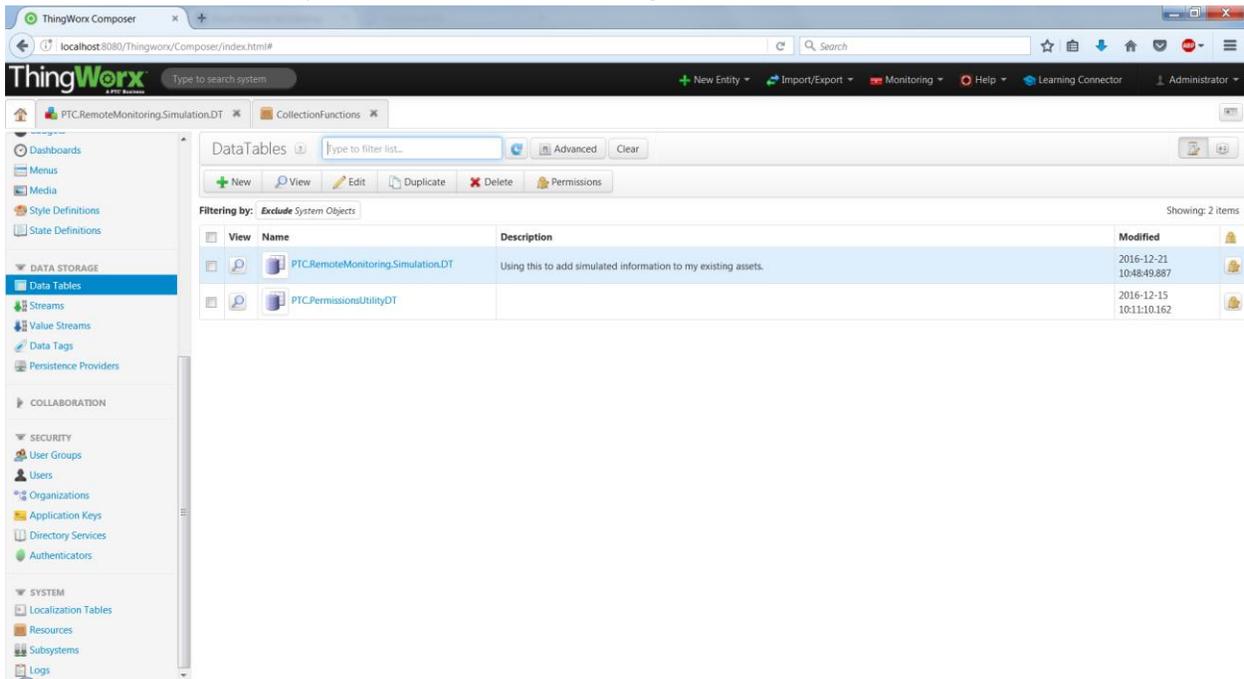


Remove Users from Everyone Organization



The screenshot shows the 'Everyone' organization configuration page in ThingWorx Composer. The 'Members' section is highlighted with a red box. It contains a search input field with the placeholder text 'Click here to add a user or group' and a list of users. The list currently contains one user, 'Users', with a delete icon (X) next to it.

Go to DataTables and open PTC.RemoteMonitoring.Simulation.DT



The screenshot shows the DataTables page in ThingWorx Composer. The table lists two items:

View	Name	Description	Modified	
	PTC.RemoteMonitoring.Simulation.DT	Using this to add simulated information to my existing assets.	2016-12-21 10:48:49.887	
	PTC.PermissionsUtilityDT		2016-12-15 10:11:10.162	

Go to Services and Run SetSimulationValues

The screenshot shows the ThingWorx Composer interface. The left sidebar contains navigation options like 'General Information', 'Properties', 'Services', 'Events', 'Subscriptions', 'Configuration', 'Home Mashup', 'PERMISSIONS', 'Visibility', 'Design Time', 'Run Time', 'CHANGE HISTORY', 'Change History', 'DEPENDENCIES', 'Entity Depends On', and 'Uses This Entity'. The main content area is titled 'Services' and includes a 'My Services' table and a 'DataTable (ThingTemplate) - Services' table.

Service Name	Test	Service Type	Inputs	Output
SetSimulationValues	Test	Local (JavaScript)		

Action	Service Name	Test	Service Type	Inputs	Output
GetPersistenceProvider	GetPersistenceProvider	Test	Local (Java Code)		result
SetPersistenceProvider	SetPersistenceProvider	Test	Local (Java Code)	name	

Action	Service Name	Test	Service Type	Inputs	Output
AddDataTableEntries	AddDataTableEntries	Test	Local (Java Code)	tags, location, source, sourceType, values	
AddDataTableEntry	AddDataTableEntry	Test	Local (Java Code)	tags, location, source, sourceType, values	id
AddOrUpdateDataTableEntries	AddOrUpdateDataTableEntries	Test	Local (Java Code)	tags, location, source, sourceType, values	
AddOrUpdateDataTableEntry	AddOrUpdateDataTableEntry	Test	Local (Java Code)	tags, location, source, sourceType, values	id
AssignDataTableEntries	AssignDataTableEntries	Test	Local (Java Code)	tags, location, source, sourceType, values	
CreateValues	CreateValues	Test	Local (Java Code)		Values
CreateValuesWithData	CreateValuesWithData	Test	Local (Java Code)	values	Values
DeleteDataTableEntries	DeleteDataTableEntries	Test	Local (Java Code)	values	
DeleteDataTableEntriesWithQuery	DeleteDataTableEntriesWithQuery	Test	Local (Java Code)	tags, location, source, sourceType, values, query	

Go to UserManagementSubsystem

The screenshot shows the ThingWorx Composer interface with the 'Subsystems' page selected. The left sidebar contains navigation options like 'Dashboards', 'Menus', 'Media', 'Style Definitions', 'State Definitions', 'DATA STORAGE', 'Data Tables', 'Streams', 'Value Streams', 'Data Tags', 'Persistence Providers', 'COLLABORATION', 'SECURITY', 'User Groups', 'Users', 'Organizations', 'Application Keys', 'Directory Services', 'Authenticators', 'SYSTEM', 'Localization Tables', 'Resources', 'Subsystems', and 'Logs'. The main content area shows a 'Subsystems' table with 14 items.

View	Name	Description	Modified
	TunnelSubsystem	Handles tunneling between Edge Things, Connected Things and Federated Servers	2016-12-21 10:32:41.426
	UserManagementSubsystem	User Management	2016-12-15 15:50:18.308
	LoggingSubsystem	Logging Subsystem - handles the various Logs (Application, Script, Communications, etc.)	2016-12-14 07:58:03.404
	FederationSubsystem	Handles Federation of Things between ThingWorx Servers	2016-12-14 07:58:03.390
	FileTransferSubsystem	Handles File Transfers between Edge Things, Connected Things, File Repositories and Federated Servers	2016-12-14 07:58:03.376
	WSExecutionProcessingSubsystem	WebSocket (WS) Execution Processing	2016-12-14 07:58:03.364
	StreamProcessingSubsystem	Handles Stream Storage and Retrieval	2016-12-14 07:58:03.353
	MessageStoreSubsystem	Message Store Subsystem processes queued messages for various remote Things including Edge Things, Connected Things and Federated servers	2016-12-14 07:58:03.340
	EventProcessingSubsystem	Handles Event Processing throughout the platform	2016-12-14 07:58:03.324
	PlatformSubsystem	Overall platform monitoring and configuration	2016-12-14 07:58:03.318
	ExportImportSubsystem	Export and Import Processing Settings	2016-12-14 07:58:03.285
	WSCommunicationsSubsystem	Core WebSocket (WS) Communications	2016-12-14 07:58:03.274

Go to Configuration and add PTC.RemoteMonitoring.Session.TS to the Session

The screenshot shows the 'Configuration for UserManagementSubsystem' page in ThingWorx Composer. The left sidebar contains navigation options: ENTITY INFORMATION (General Information, Services, Configuration), PERMISSIONS (Visibility, Design Time, Run Time), and CHANGE HISTORY (Change History). The main content area is divided into three sections:

- Session Management Settings:** A table with columns 'Name' and 'Value'.

Name	Value
Idle Session Timeout (min)	30
Allow users to call services on their own User entity regardless of permissions	<input checked="" type="checkbox"/>
- User session shape settings:** A table with columns 'ThingShape Name'. It contains two entries: 'GlobalSessionProperties' and 'PTC.RemoteMonitoring.Session.TS'. There are '+ Add' and '- Delete' buttons above the table.
- Password Hash Settings:** A table with columns 'Name' and 'Value'.

Name	Value
Hashing algorithm	PBKDF2WithHmacSHA512
Salt size in bytes	64

Start from PTC.RemoteMonitoring.Main.MU

The screenshot shows the 'Mashups' view in ThingWorx Composer. The left sidebar contains navigation options: MODELING (Things, Thing Templates, Thing Shapes, Data Shapes, Networks, Projects, Model Tags), ANALYTICS (Data Analysis Definitions), VISUALIZATION (Mashups, Masters, Gadgets, Dashboards, Menus, Media, Style Definitions, State Definitions), and DATA STORAGE (Data Tables, Streams, Value Streams). The main content area shows a list of mashups with columns for name, description, and creation date. The 'PTC.RemoteMonitoring.Main.MU' mashup is highlighted in blue.

Name	Description	Creation Date
PTC.RemoteMonitoring.AssetManagement		2016-12-21 10:48:49.767
PTC.RemoteMonitoring.BooleanGadget.MU		2016-12-21 10:48:49.762
PTC.RemoteMonitoring.Main.MU		2016-12-21 10:48:49.758
PTC.PropertyEdit.STRING	Violating naming because this is dynamically driven	2016-12-21 10:48:49.754
PTC.RemoteMonitoring.FileTransferMain.MU		2016-12-21 10:48:49.752
PTC.RemoteMonitoring.NumberGadget.MU		2016-12-21 10:48:49.734
PTC.RemoteMonitoring.DateTimeGadget.MU		2016-12-21 10:48:49.729
PTC.PropertyEdit.NUMBER	Violating naming because this is dynamically driven	2016-12-21 10:48:49.726
PTC.PropertyEdit.MASHUP	Violating naming because this is dynamically driven	2016-12-21 10:48:49.721
PTC.PropertyEdit.LOCATION	Violating naming because this is dynamically driven	2016-12-21 10:48:49.712
PTC.RemoteMonitoring.FileTransferHistory...		2016-12-21 10:48:49.710
PTC.RemoteMonitoring.TunnelHistory.MU		2016-12-21 10:48:49.464
TestTunnel.MU		2016-12-21 10:21:46.193

Log in as different users to see the effect of the permissioning

The screenshot shows the PTC Asset Remote Monitoring web application. The interface includes a navigation menu with options: Main, List, File Transfer, Tunnel History, Asset Management, and Logout. A status summary table is located in the top left, and a map of the United States is in the center. A detailed asset list table is at the bottom.

Status	Count
Critical	1
Warning	1
Normal	3

ID	Description	Status	StatusLabel
PTC.RemoteMonitoring.Asset1	Asset 1	1 Critical	
PTC.RemoteMonitoring.Asset4	Asset 4	2 Warning	
PTC.RemoteMonitoring.Asset3	Asset 3	3 Normal	
PTC.RemoteMonitoring.ExampleAsset15	Asset 15	3 Normal	
PTC.RemoteMonitoring.Asset2	Asset 2	3 Normal	