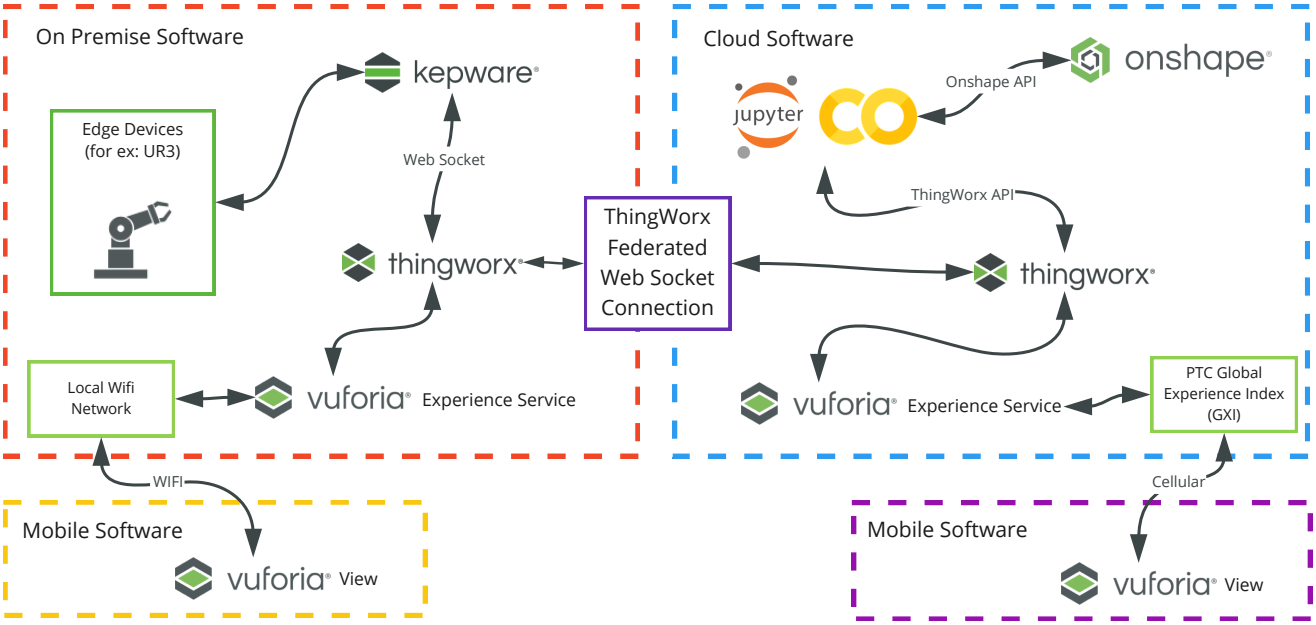
Overall Architecture & Example Integrations



ThingWorx Federation Details (specific to PTC Education Collaboration partners)

On Premise ThingWorx

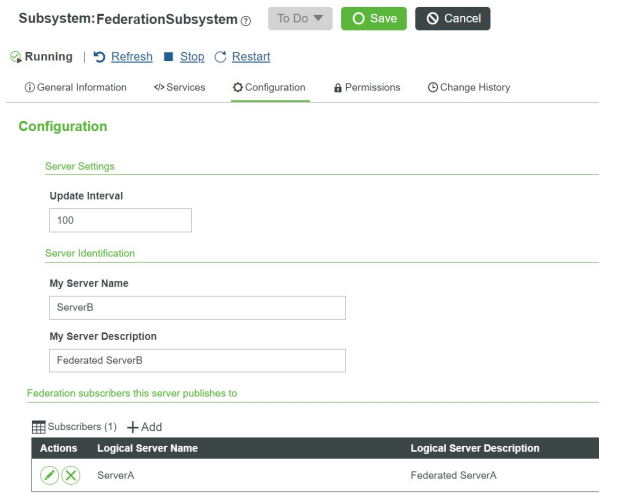
1. Federation Subsystem
    a. Configuration:
        i. Defines name of local TWX server: "Server B"
        ii. Controls update interval
        iii. Publishes to cloud "Server A"
            1. Subscriber settings:
                a. Includes name, URI, AppKey, User for Subscriber (Server A)
2. Stream
    a. Type: Stream
        i. Streams data to cloud instance from any "Published" things

Cloud Hosted ThingWorx

1. Federation Subsystem
    a. Configuration
        i. Defines name of cloud TWX server: "Server A"
2. Stream
    a. Type: Remote Stream
        i. Receives data from On-prem instance
3. Remote Things
    a. General Information:
        i. Any things with Base Thing Template "RemoteThing" are able to select an "Identifier" any published thing from the On-prem server
    b. Properties, Services: Are able to bind to the properties or services on the "Identified" On-prem thing.

Federated Settings, Things on On-Prem/Local “Server B”

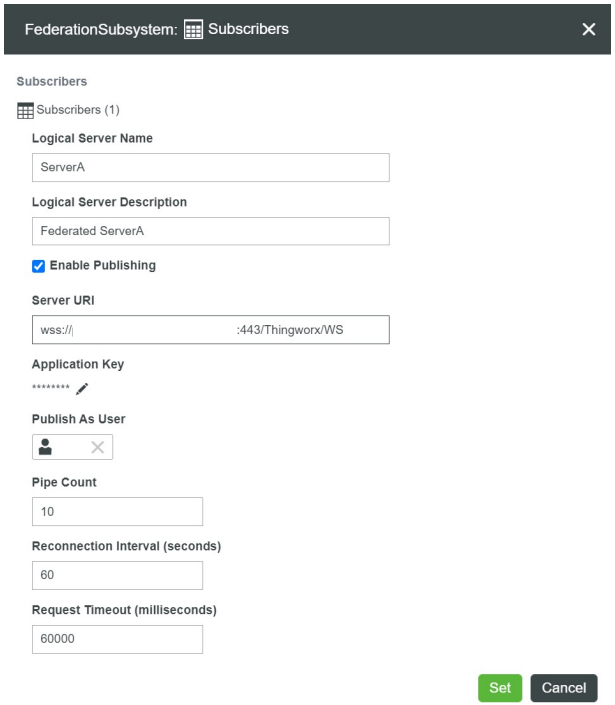
“FederationSubsystem” is found in Browse > Subsystems

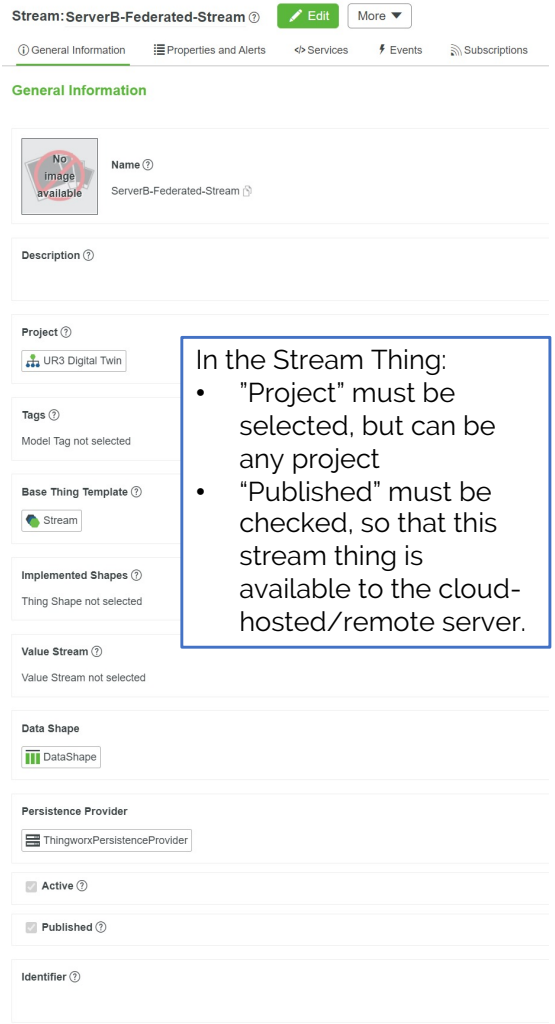


Clicking “+Add” opens the Subscriber settings:

Include:

- The URI of the Cloud-hosted server
- A valid AppKey and a specific user

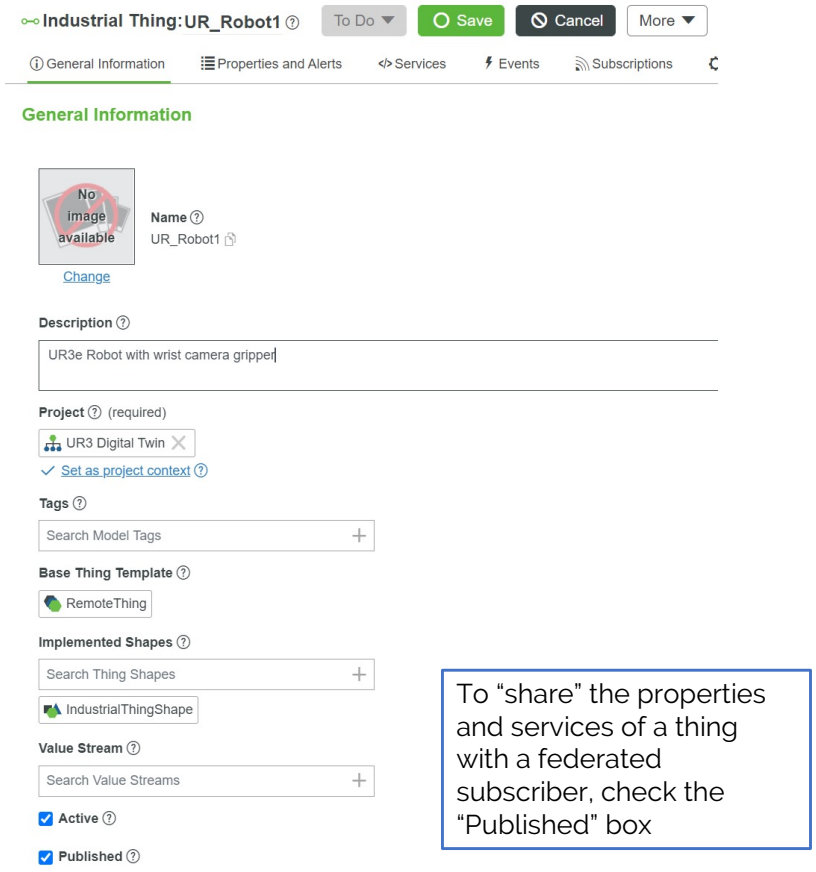




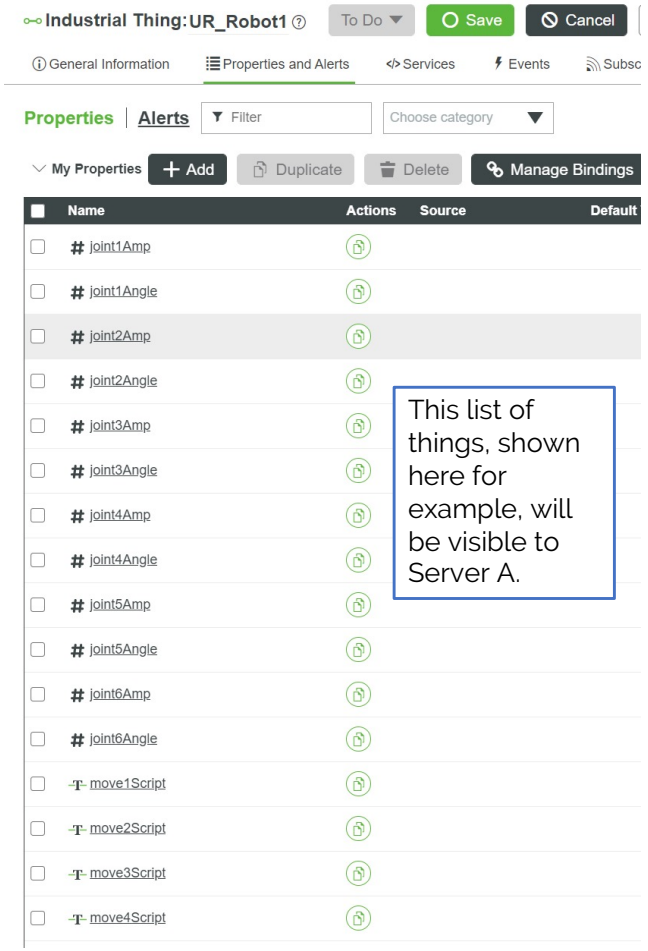
In the Stream Thing:

- ”Project” must be selected, but can be any project
- “Published” must be checked, so that this stream thing is available to the cloud-hosted/remote server.

Federated Settings, Things on On-Prem/Local “Server B”



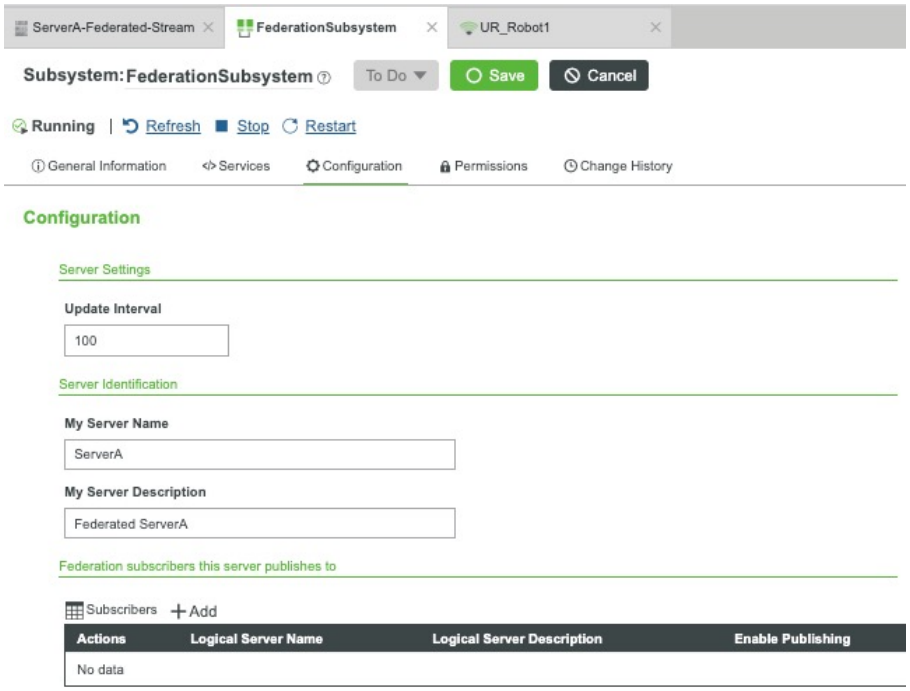
To “share” the properties and services of a thing with a federated subscriber, check the “Published” box

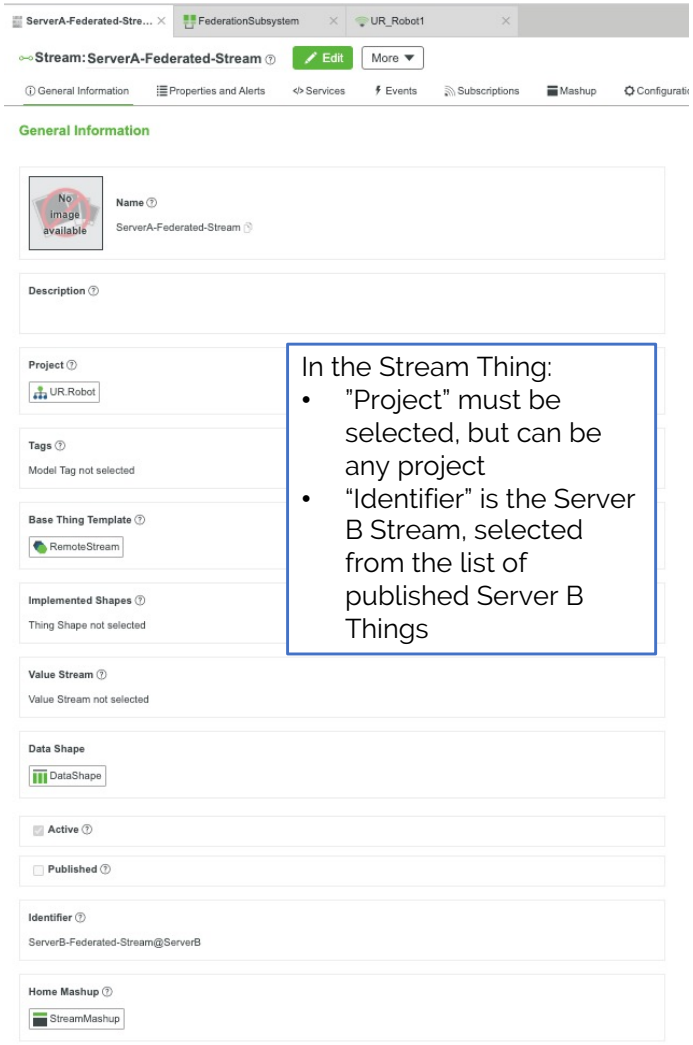


This list of things, shown here for example, will be visible to Server A.

Federated Settings, Things on Cloud-Hosted/Remote (Subscribed) “Server A”

“FederationSubsystem” is found in Browse > Subsystems



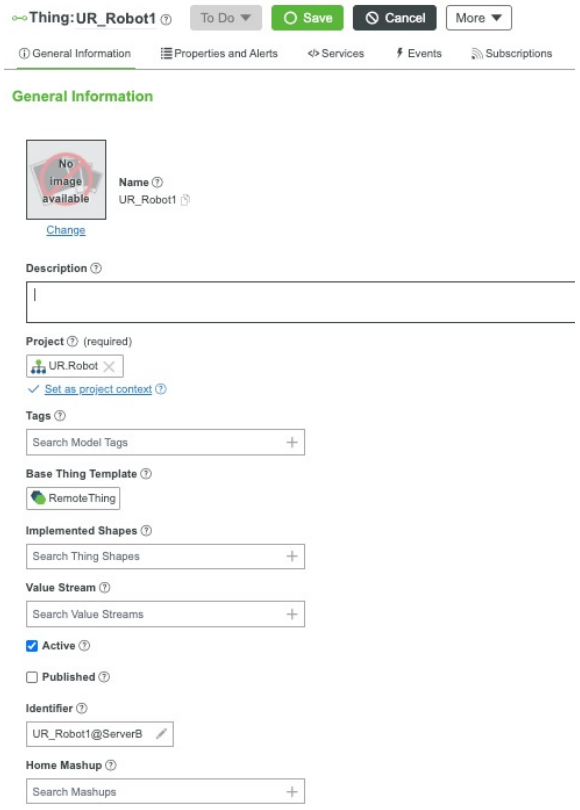
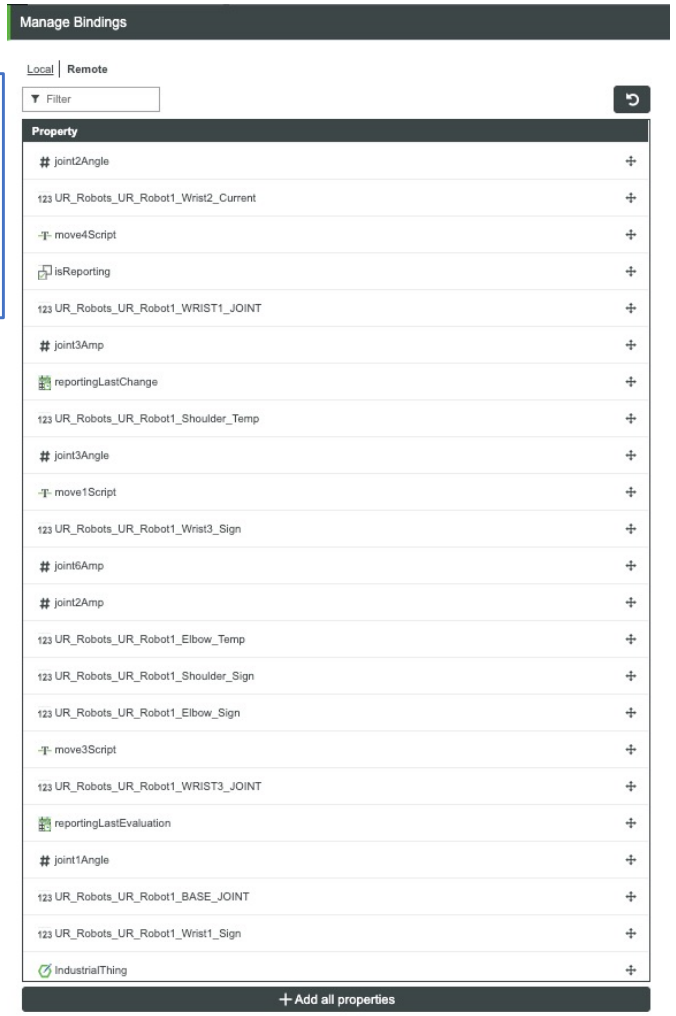


In the Stream Thing:

- ”Project” must be selected, but can be any project
- “Identifier” is the Server B Stream, selected from the list of published Server B Things

Federated Settings, Things on Cloud-Hosted/Remote (Subscribed) “Server A”

A remote Thing can have any name, or the same name as the local thing. The “Identifier” should be the published local thing that has the properties/services desired in this thing.



On the properties of the subscribed remote thing, the properties of the published local thing area available: