**IoT Workshop**

July 27, 2015

* Scott Geinsberg, PTC
* Raja Tamilarsara, Product Technologies, IoT
* Luis Ferrer, Digital business consulting
* Joseph Naragura, Austin, Advanced Analytics
* Bassam Amran, Manufacturing, Executive Account Management, Business Development, was a CIO for high tech company
* Anju Tiwari, London, BFSI vertical, Enterprise Architect
* Ajay
* Oscar Acuna, Mexico City, Digital Business consulting,
* Kiran Gadey

Scope of work

* Everything in the cloud

PTC, started about 30 yrs ago. They were in the CAD business. Acquired ThingWorx, Exceeda and Coldley to get into IoT end to end.

Exceeda is taking all the data that is coming from connected devices and does aggregation. Exceeda has remote access, send/receive content. Expecting customers to send the data. We will not connect to sensors but will talk to simulators.

Actual examples of Smart Connected Products

* John Deere FarmSight: Collect & send machine information wirelessly to a computer
* GE Smart Engines (for Boeing Jets): Collecting data from the engines. Data used to predict inefficiencies, engine maintenance, fule consumption, crew allocation and scheduling when these smart aircrafts can communicate with operators
* Philip’s Intellicap

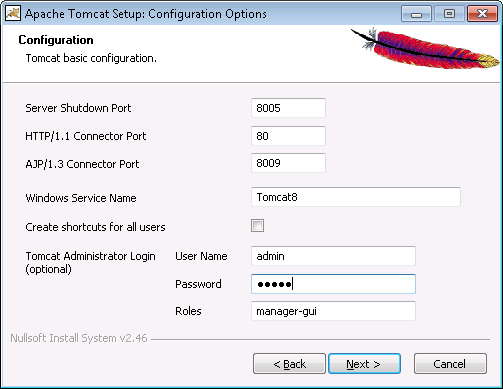
Digital Guide: Precisionlms.ptc.com

VM 047

User Id/Pwd: PTCTrainingUser/stand1

Installing ThingWorx

1. Install JDK 8
2. Install Tomcat 8

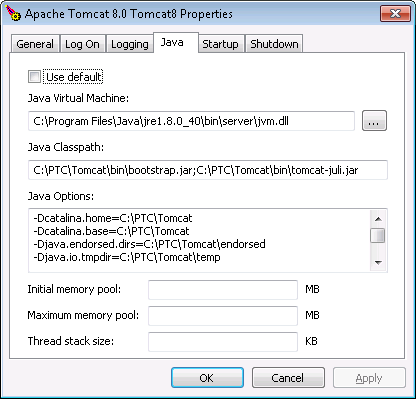


Admin/admin

Destination folder: C:\PTC\Tomcat

Task 4 Step 8

Note: Clearing the Max Memory pool allows ThingWorx to take up all memory. Hence when you install it on your own machine make sure you have Max Memory pool setup appropriately



Add User

* In ThingWorx, when you create a user they are by default created as “Everyone” role. The Everyone role has one step less than Administrator priviledges/access
* User added
  + RitwikTW/password

Import/Export

* Import are done in 2 steps
  + Entities: XML file
  + Data: JSON file
* Always import in the above order, i.e. Entities 🡪 Data
* Imports for Extensions are done as zip files.

<http://marketplace.thingworx.com/>

<https://community.thingworx.com>

Concepts of ThingWorx

* Things
  + Can have only one Thing Template associated with it
  + But can have multiple Thing Shapes associated with it
* Things Template
  + Template from which Things can inherit
  + A Thing can inherit from a single Thing Template
* Thing Shape
  + From ThingWorx perspective is at the highest level of hierarchy
  + Interfaces in OOP terminology

REST API to view ThingWorx

<http://vmr3147.cloudapp.net:8080/Thingworx/ThingShapes>