

SIEMENS

# TC Platform培训 – 高级应用技术 (1) —AWC Client

龙永义, 2017年5月

# Contents



- **Description**
- **AWC Client Overview**
- **Setup AWC Client**
- **Practice AWC Mobility**
- **Propose AWC Client Solution**
- **Activities**
- **Summary**

# Description

## Purpose

This lesson describes Teamcenter Active Workspace Client (AWC)'s components & architecture, capabilities and features, how to setup AWC environment, how to demonstrate its mobility feature.

## Objectives

After you complete this lesson, you should be able to:

- Describe what's AWC, what capabilities and features it does have.
- How to setup AWC environment.
- How to demonstrate AWC mobility feature.

## AWC Client Overview

### □ What is Teamcenter AWC

Teamcenter AWC, or Teamcenter Active Workspace Client, is one of clients for Teamcenter PLM platform. It is a Web-based client with HTML5 enabled.

It will be the main client for Teamcenter PLM product in future.

Currently, the latest release is AWC 3.x

## AWC Client Overview (2)

### □ Features Overview

- 面向全球的、零安装的客户端体系架构，可嵌入于多种应用与设备中，支持云架构。

### 移动客户端





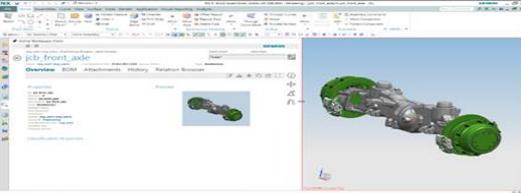



### 面向全球的、零安装的客户端体系架构



- 轻客户端
- 性能和带宽
- 无须插件和支持

### 嵌入于多种应用中




- 一致的用户体验
- 无缝集成于各类应用

## AWC Client Overview (3)

### □ Features Overview

- 支持多种设备，包括各种移动设备(如智能手机，IPad, tablet等)，支持不同浏览器。

#### 浏览器支持

- Chrome
- Internet Explorer 9 (and above)
- Firefox
- Safari



#### 设备支持



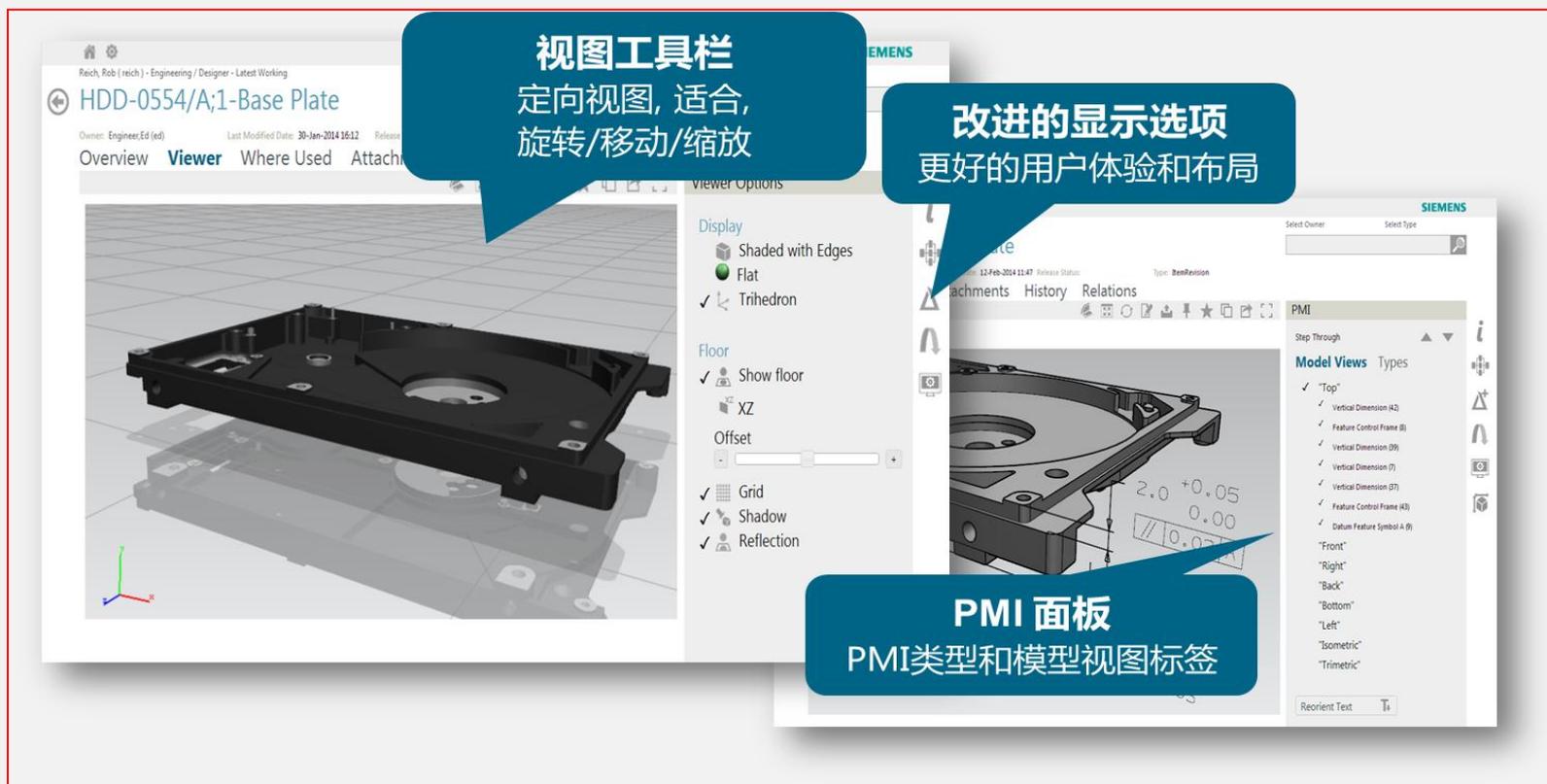
#### 操作系统支持

- Windows 7
- Windows 8 (Intel)
- Windows 8 RT (ARM)
- Windows 8 phone
- iPad (iOS)
- iPhone (iOS)
- MacOS
- Android Tablet (inc. Kindle Fire)
- Android Phone
- Chromebook
- Linux
- Blackberry

## AWC Client Overview (4)

### □ Features Overview

#### ➤ 3D显示, 3D设计(planned)



## AWC Client Overview (5)

### □ Features Overview

#### ➤ 3D显示, 以及3D设计(planned)



## AWC Client Overview (6)

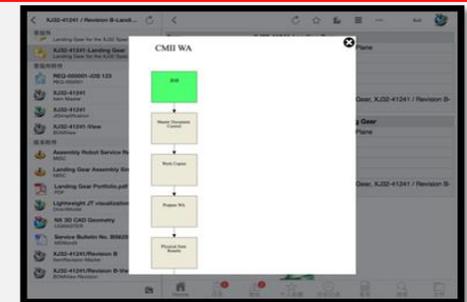
### □ Features Overview

➤ 移动决策 – 决策无处不在。

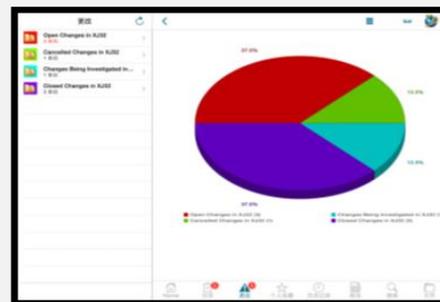
- 在Teamcenter中搜索并调用对象
- 查看对象元数据
- 检查附加的文档
- 创建附件
- 执行 workflow 任务
- 将对象提交到 workflow
- 联机或脱机工作
- 创建疑问报告和问题报告
- 查看更改数据
- 查看生成报告



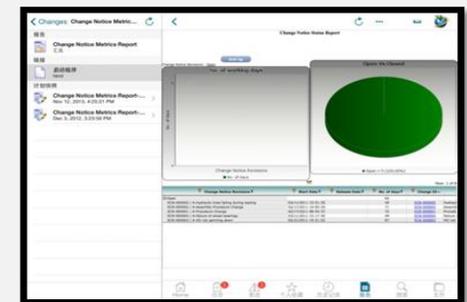
查看模型数据



提交工作任务



查看更改数据



查看生成报告

## AWC Client Overview (7)

### □ Features Overview

#### ➤ 明显改进的性能体验

**Active Workspace**



1. Search for life preserver
2. Activate where used
3. Open ship

**User experience...**

- 3 steps, ~83% fewer steps than used in RAC
- 9 seconds, ~88% less time spent than in RAC with cacheless

**Rich Client**



1. Search for life preserver by item name (2 steps)
2. Perform impact analysis for where used (3 steps)
3. Send top to structure manager (2 steps)
4. Use cacheless to find the life preserver (9 steps)
5. Use display to show in the structure (2 steps)

**User experience...**

- 18 steps,
- 78 seconds

## AWC Client Overview (8)

### □ Capability Overview

- The functionalities and capabilities will be gradually migrated into AWC. AWC 1.0 capabilities:

#### New Home Page

##### Search

- One text box search
- Filter results
  - Via the Bar Chart
  - Via the "Filters" fly-out
- Open Results
- Searches can be saved (open / add / remove)
- Tracks recent searches
- Pre-filter data to current user or specific business object type

##### Summary Views

- Used pervasively for:
  - Search results
  - Inbox
  - Home Folders
  - Opened objects
- Multiple smart "tabs"
  - Tabs of related data only display when relevant: (e.g., BOM, Viewer, Where Used, Workflow, Requirements,...)
- Related objects in lists:
  - e.g. BOM, where used, documents, actions to add / relate

#### Data Interrogation

- Any opened object can be submitted into a workflow process
- Any opened object can become "full screen"

#### Inbox

- Filter via pie chart
- View and manage tasks
- Task execution
  - Perform Signoff
  - Select Signoff team
  - Do Tasks
- Workflow viewer
- Open and view related objects

#### Themed User Interface

- Ships with 4 themes (White, Grey, Blue, Light Gray)
- Customers can add more

#### Change – Change home folders

- Attach references
- View workflow status
  - Graphical Workflow Viewer
  - Or if not in a one submit to workflow
  - Open and view related objects

#### Launch

- Open basic documents and models in appropriate application
- Open TcVis on simple configured structure

#### Smart Palette (Shelf) for manipulating objects

- Favorites
  - Maintain list of Favorite objects (open / add / remove)
- Clipboard
- Recent
- Smart Paste – only displays things on the Shelf that are appropriate for the action
  - i.e., only presents Datasets to paste into a Dataset table, etc.

#### Viewer

- Preproduction 3D of JT files
  - Zero install
  - Limited to specific browsers
  - Limited in supported formats (e.g., JT9 format)

## AWC Client Overview (9)

### □ Capability Overview

#### ➤ AWC 2.0 capabilities:

##### **New Home Page**

- Configurable Home Page

##### **Search**

- Breadcrumb
- Filter results
  - Via the breadcrumb trail
  - Date Range drill-down
  - Revision rules honoring
- Search results
  - Relevance Ranking (AND, Modification date, attribute vs. FTS, specific attribute priority)
  - Accurate results based on access rules
- Aggregate Search
  - Preproduction support for searching from additional repositories
- Full Text Search
  - Searching on file contents as well as Business Objects
  - Searching for files (not just Business Objects)
- Shape Search
- Classification Search

##### **New**

- New Item
- New Folder
- New File (with Upload File)
- Change in context or not

##### **Revise**

##### **Themed User Interface**

- Ships with 2 themes (Light, Dark)
- Customers can add more
- Consistent styling

##### **Requirements Viewing**

- Specification and requirement previewing
- Where used in specifications
- Traceability tracking

##### **Framework**

- Context Setting – Project, Group/Role, Revision Rule
- Stacked Commands
- Narrow Display
- Property Editing

##### **Visual Relation Navigation**

- Systems, Design, and General views

##### **EWI (Electronic Work Instructions)**

##### **Launch**

- Open Rich Client on selected Object

##### **Viewer**

- Preproduction viewing 3D of JT files
  - Zero install
  - Support for all browsers
  - Support for all JT versions
- PMI Viewing
- Display control including materials and floor options

##### **Linux Server Support**

##### **Supported Teamcenter Versions**

- Teamcenter 9.1.2.3
- Teamcenter 10.1

# AWC Client Overview (10)

## □ Capability Overview

### ➤ AWC 2.1 capabilities:

#### Home

- Notifications on Inbox tile
- Report Problem tile
- Resize tiles
- Group/Role Tile layout
- Pinning objects and searches to homepage

#### Inbox and Workflow Efficiency

- Streamlined Inbox
- Differentiate **read** and unread (new) tasks
- Find/filter tasks in Inbox
- Claim tasks from teams assignments
- Reassign Tasks from Inbox

#### Search

- Performance and syntax improvements
- Indexing and searching localized data
- Embed Active Workspace search in rich client

#### Simplified Change Process

- Simplified Change Creation
  - Report problem directly from Home page
- 1-click submit to workflow
- Automation to assign workflow template & participant(s)
- Simplified signoffs tab to view workflow history

#### Authoring and Editing

- Edit and Save Office documents using Office Integration
- Open parts in NX to edit the models
- Edit multiple objects at a time in tables

#### Requirements Authoring

- Rich text author/edit requirements including fonts, pictures, tables, videos, etc.
- Uses predefined templates/forms for content and layout
- Create tracelinks

#### Markup Management

- Markup in neutral format
- Organize markups
- Manage markup access
- Markup discussion threads
- Disposition and resolution tracking by comment

#### Hosting Active Workspace in Other Clients

- Teamcenter – Rich client, Office, and Visualization
- Shared session/login
- Open in host
- Show in Active Workspace
- Common selection bus and command interoperability

#### Deployability, Extensibility, Performance and Quality

- Improved search performance and robustness
- Improved and automated server-side install
- Improved deployability
- Health monitoring of visualization rendering and indexing

#### Visual Relation Navigation

- New nested layout control

#### Visualization

- Scaled for the enterprise
- Viewer administration for components and processes
- Settings for many visualization features saved across work sessions
- Improved PMI and display control interaction
- Viewer navigation commands more readily accessible

#### Windows, Linux, Solaris, and AIX Server Support

#### Supported Teamcenter Versions

- Teamcenter 9.1.2.7+
- Teamcenter 10.1.1.1+

# AWC Client Overview (11)

## □ Capability Overview

### ➤ AWC 2.2 capabilities

#### Structures

- Navigate configured structures
- Find in structures
- Edit structure – Add and remove elements
- Structure driven visualization
- Working context
  - Background session data saved automatically
  - Saved working contexts for capturing state and sharing
- Instant Top Level Where Used
- Configuration, including:
  - Revision Rules
  - Revision Effectivity
  - Variant Rules

#### Architecture Modeling and Navigation

- Context specific RFLP navigation
- Configured diagram display
- Diagrammatic display of structures/relations/connectivity
- Easy-to-author diagramming
- Find in context and in diagram
- Add from outside context where needed
- Simple evaluation of cross-system interactions
- Edit in context using information panel

#### Supported Teamcenter Versions

- Asynchronous releases (enabled the +)
- Teamcenter 9.1.2.10+ and 10.1.2.1+

#### Extensibility

- External CSS styling
- Custom HTML panel (iFrame)

#### Markup Collaboration

- Image capture and markup for 3D models
- New markup tools including freehand tool

#### Official L10N Support

- All 13 languages PL supports
- Search against localized language
- VisServer for localized PMI display

#### Documents

- Open/save and upload edited file
- Create Office documents using Templates and IRDC
- Document view and markup component

#### Improved Change and Workflow Processing

- Perform task from target
- Email notification with links to Active Workspace
- Out of Office reassignments
- Derive changes
- Sort in Inbox and Change
- Manage your surrogates

#### Search

- Table sorting
- Search criteria syntax for grouping e.g. (x AND y) OR z
- Relevance sorting – boosting for full versus partial match and multiple criteria versus single match

#### Deployability

- Search indexing infrastructure updates
- JMX tooling for monitoring VisServers health and load
- Install – Feature selection and documentation updates

#### Framework

- Save As in addition to Revise (*Requires Tc10*)
- Open button default action

#### Active (Social) Collaboration

- View and update your picture on your user profile
- Comment and ask/answer questions

#### PMI

- View PMI on elements of a structure

#### Impact Analysis

- Where referenced listing and relations component

#### Reporting

- Integrated access to report builder reports (prerelease)

# AWC Client Overview (12)

## □ Capability Overview

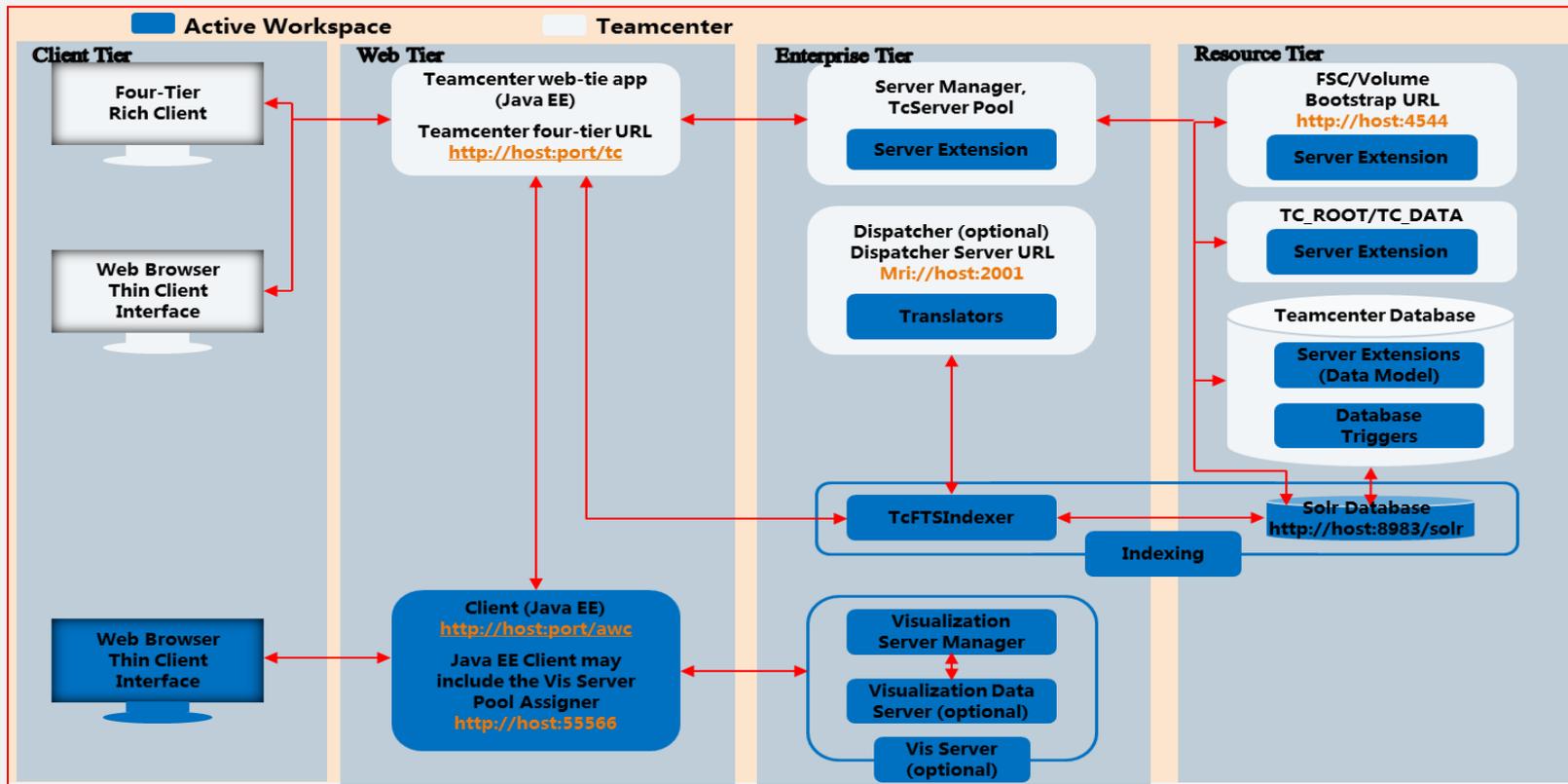
### ➤ AWC 3.x capabilities:

Capabilities	Platform
<p><b>SDPD</b></p> <ul style="list-style-type: none"> <li>Reliability               <ul style="list-style-type: none"> <li>FMEA (Ford Commitment)</li> </ul> </li> <li>Requirements Management               <ul style="list-style-type: none"> <li>Traceability improvement</li> <li>Office-live update</li> <li>Requirement review/markup</li> <li>Table Generation</li> </ul> </li> <li>Systems Architecture Modelling               <ul style="list-style-type: none"> <li>Support standard notations (EASTADL, etc.)</li> <li>Diagram definitions</li> <li>Diagram review/markup</li> <li>Interface management</li> </ul> </li> </ul> <p><b>4GD/BOM</b></p> <ul style="list-style-type: none"> <li>General object exposure <sup>11</sup></li> <li>Content Navigation <sup>11</sup></li> <li>Subsetting <sup>11</sup></li> <li>Partition Organization <sup>11</sup></li> <li>Basic Visualization for 4GD BOM <sup>11</sup></li> </ul> <p><b>Structures</b></p> <ul style="list-style-type: none"> <li>Multiple selection support of Content</li> <li>Save more session state in Working Contexts</li> <li>Subsetting</li> </ul> <p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>In-context reports</li> <li>Report Layouts</li> </ul>	<p><b>Schedule Execution</b></p> <ul style="list-style-type: none"> <li>From Inbox, update schedule task execution data and deliverables <sup>11</sup></li> <li>View schedules and related task information <sup>11</sup></li> </ul> <p><b>Change and Workflow</b></p> <ul style="list-style-type: none"> <li>Working in a change context</li> <li>Change support for 4GD</li> <li>Change history for impact analysis</li> <li>Change lineage / genealogy, sequencing,</li> <li>Copy selective change content during derive</li> <li>Workflow viewer enhancements</li> <li>Show multiple workflows</li> <li>Perform task enhancements and automation</li> <li>Smart workflow template choices</li> <li>Promote tasks</li> </ul> <p><b>Document Management</b></p> <ul style="list-style-type: none"> <li>Attach files during create using IRDC</li> <li>User defined printstamp / watermark</li> </ul> <p><b>Simulation Process Management</b></p> <ul style="list-style-type: none"> <li>Capture and manage simulation data with traceability</li> <li>Track external simulation data</li> <li>Execute local simulation applications</li> </ul> <p><b>As Maintained Structures</b></p> <ul style="list-style-type: none"> <li>“Extra to Design” Parts</li> <li>Create Lot</li> <li>Move Part to new Location</li> </ul>
	<p><b>Search</b></p> <ul style="list-style-type: none"> <li>Saved search notifications</li> <li>Range &amp; search within long filters</li> <li>Grouping of filters</li> <li>Multi-site search</li> <li>Full Text display</li> <li>Sharing Active Workspace searches</li> <li>Navigate library hierarchy</li> </ul> <p><b>Framework</b></p> <ul style="list-style-type: none"> <li>Full screen task panel overlay</li> <li>Project navigation and assignments</li> <li>Deploy in Web Container, without Application Server</li> <li>IIS/.NET support for App launcher and TcSS</li> <li>Command contribution</li> <li><b>Skills / Task based User Interface (may not make it)</b></li> <li>Notification center</li> <li>Table Property Support <sup>11</sup></li> <li>Change ownership of objects</li> <li>Bulk edit of properties in a table</li> <li>Rich text property values</li> <li>Display time and date based on client's time-zone</li> <li>Column configuration for disparate types, e.g. Search</li> <li>Multiple select – Compare and Print</li> <li>Subscription across related objects</li> <li>Export search results to Microsoft Excel</li> </ul>

# AWC Client Overview (3)

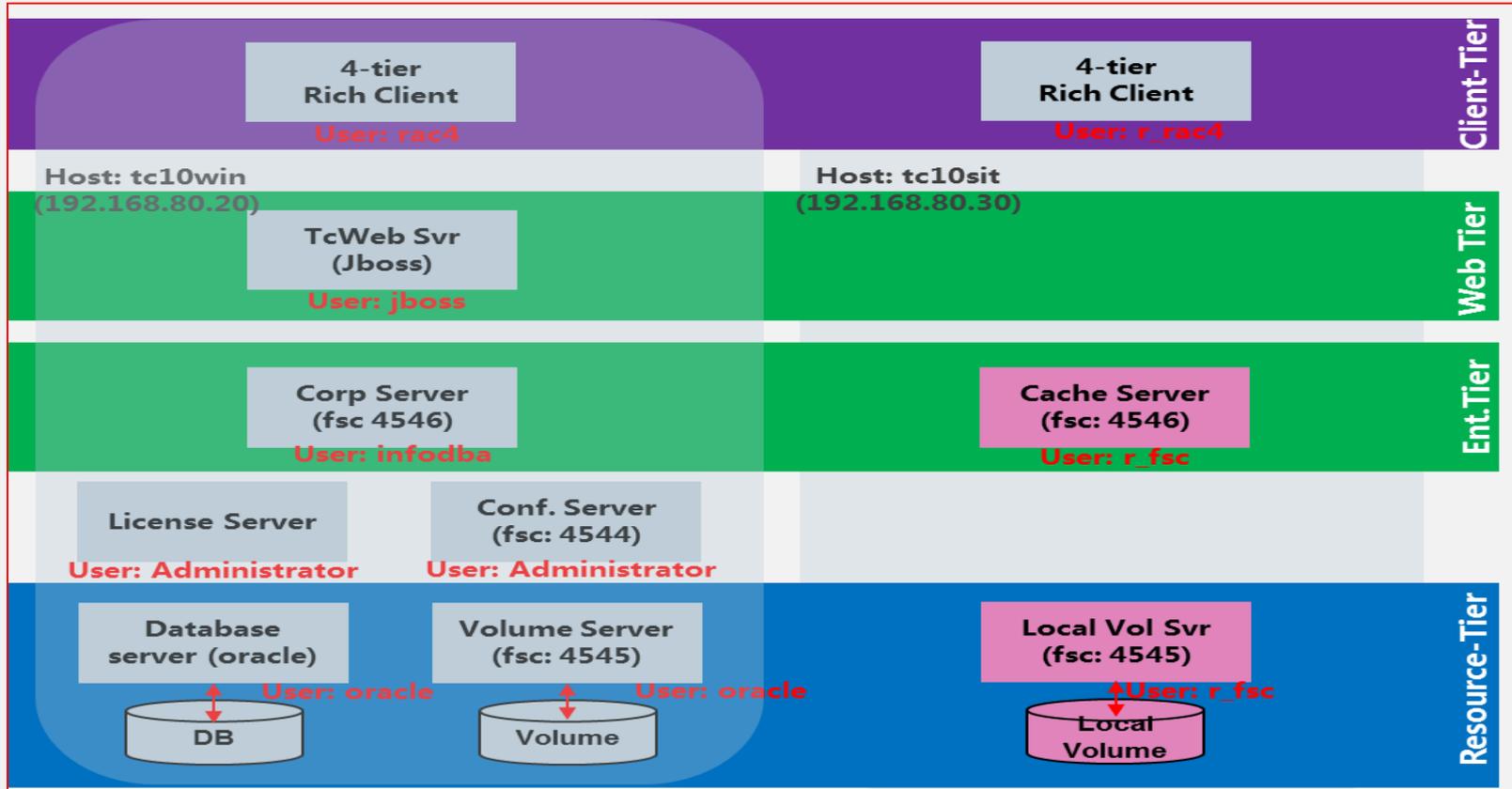
□ Components & Architecture Overview

➤ AWC Client also includes the features installed in Teamcenter Ent tier and Resource tier.



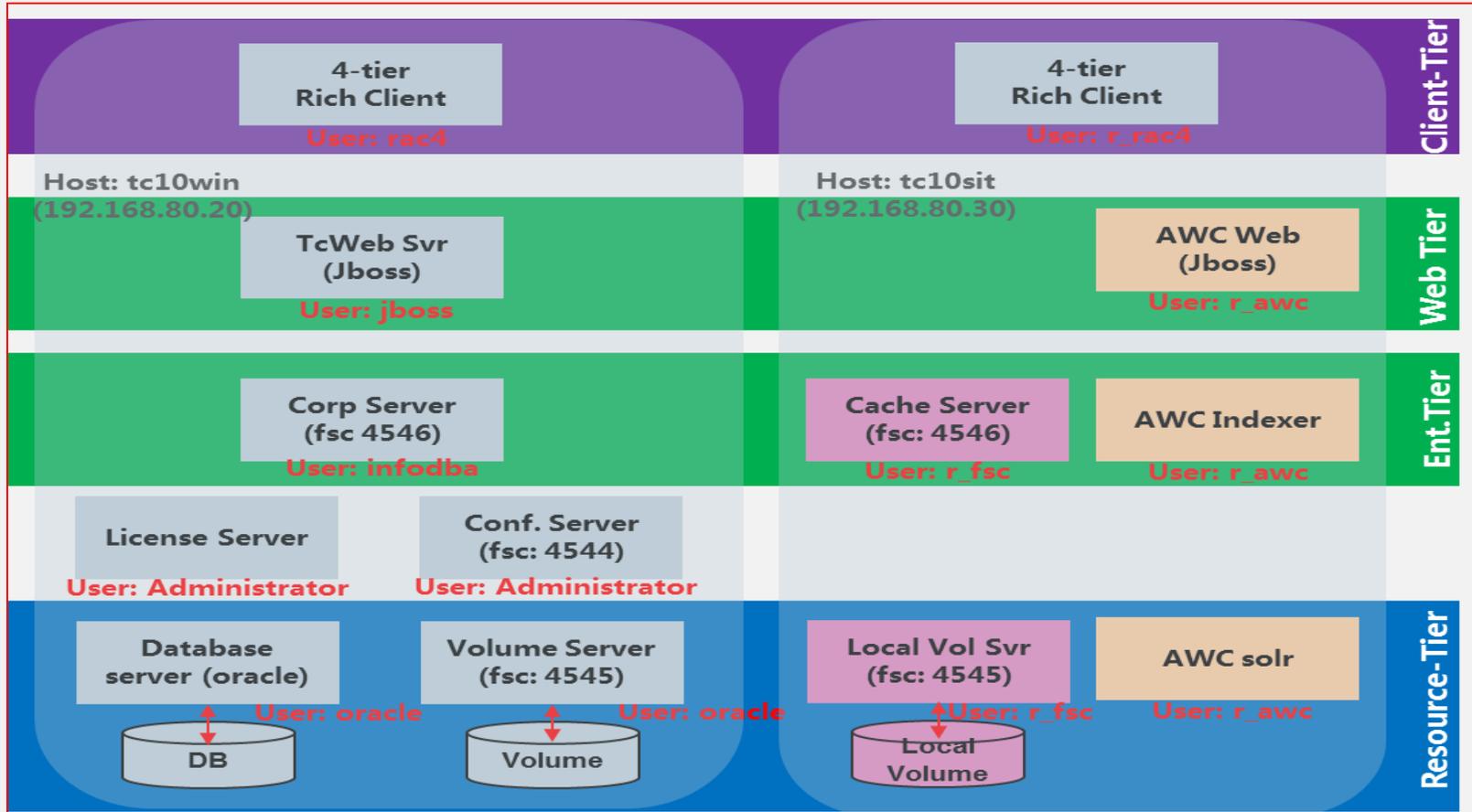
# Setup AWC Client

□ Source System



# Setup AWC Client (2)

□ Target System



## Setup AWC Client (3)

### □ Setup Process

#### Build AWC Client Environment

- Install AWC Server Extension
- Install Indexing Engine (solr)
- Install AWC Indexer
- Deploy AWC Client

#### Customize AWC Client Home Page

- Customize Home Page for a Group
- Customize Home page for a single user



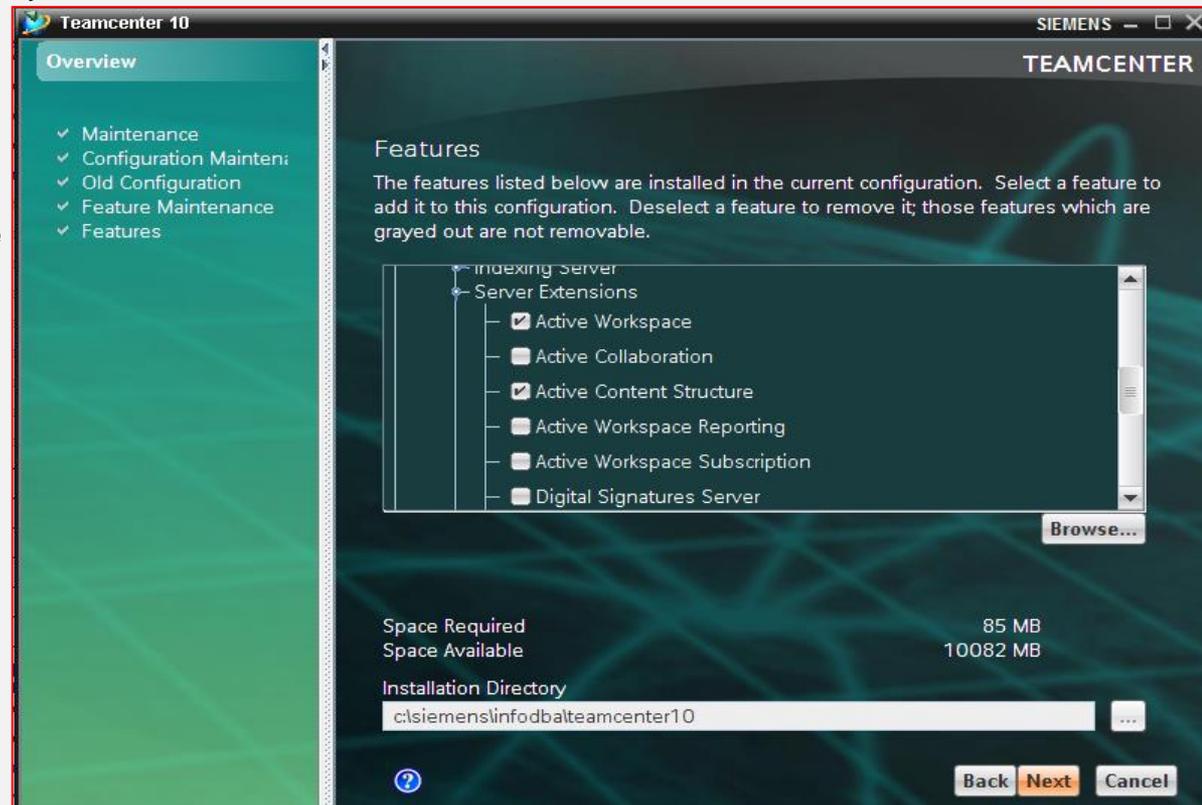
## Setup AWC Client (4)

### □ Build AWC Client Environment

➤ Install AWC server extension in the Teamcenter corporate server. In training system, it's Teamcenter 10 Corporate Server installed on tc10win by os user infodba.

#### ➤ Server Extensions

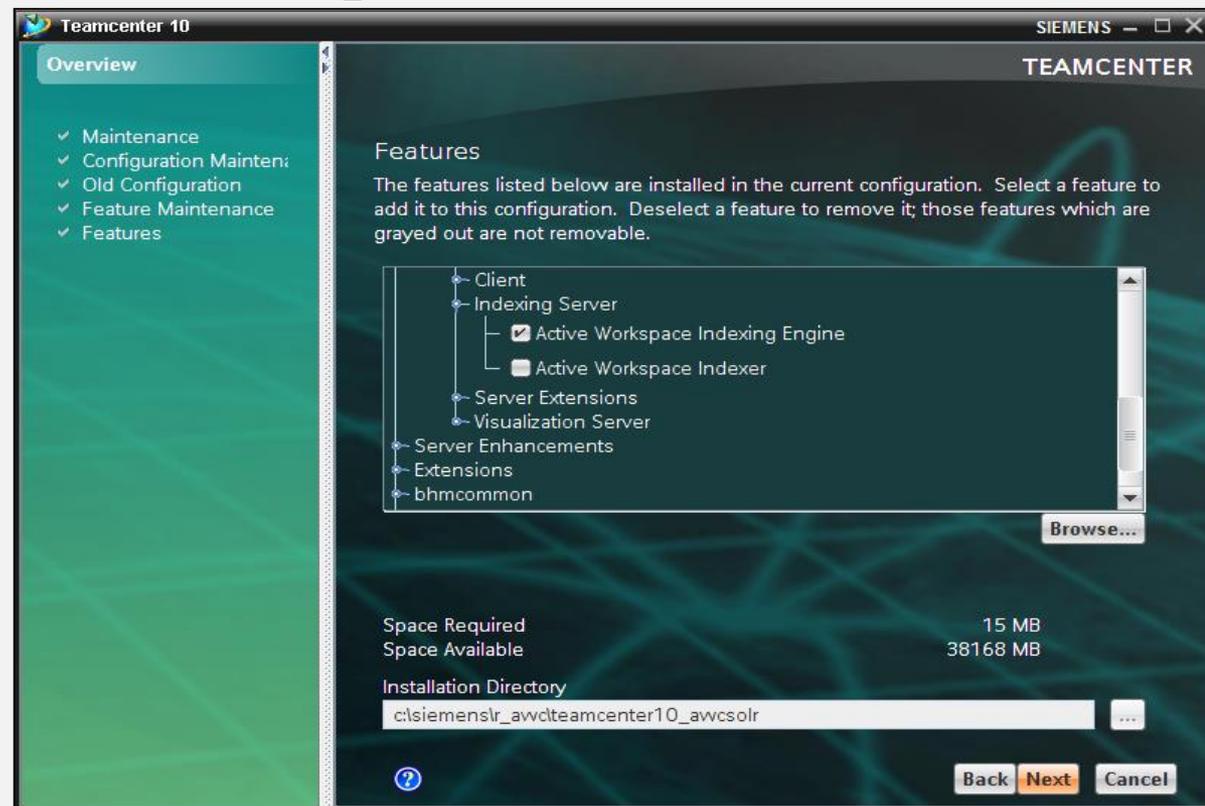
- Active Workspace
- Active Content Structure
- Active Workspace Visualization



## Setup AWC Client (5)

### □ Build AWC Client Environment

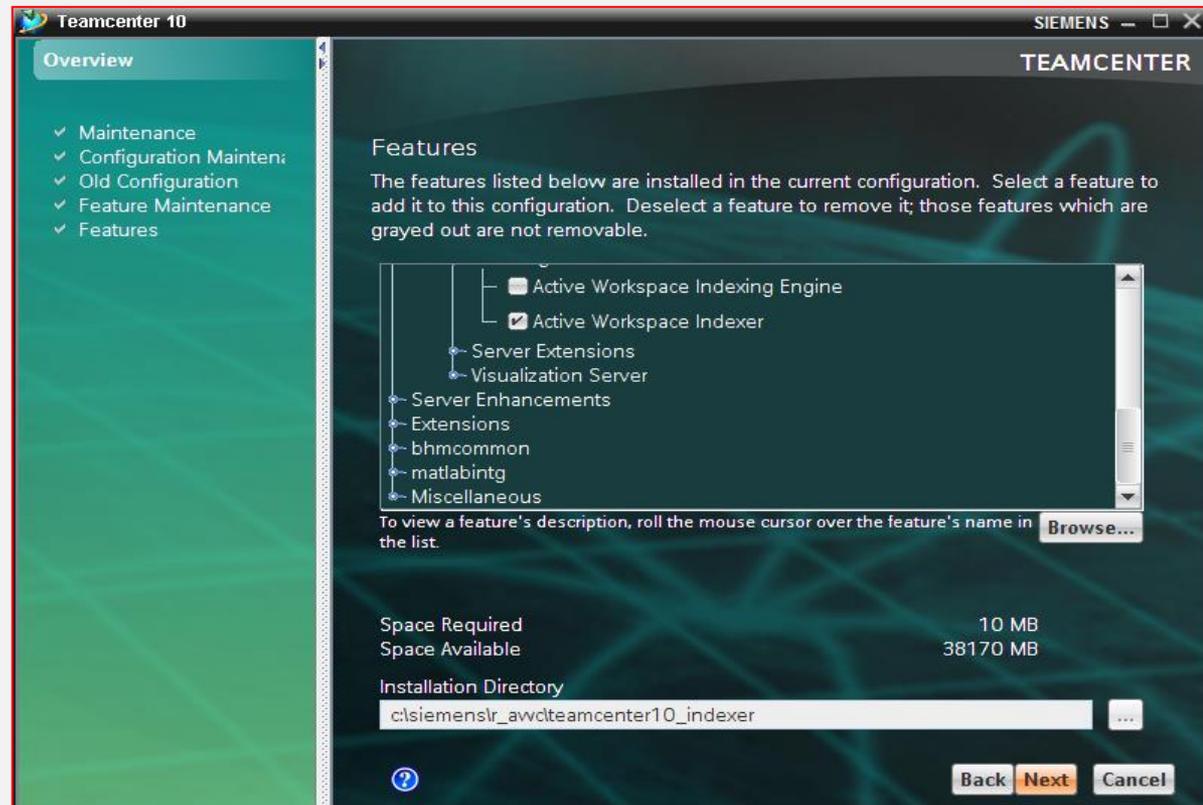
- Install AWC Indexing Engine (solr). In training system, it is a brand new Teamcenter installation instance installed by os user r\_awc on tc10sit. It's called Teamcenter 10\_awcsolr.
- Indexing Server
  - Active Workspace Indexing Engine



## Setup AWC Client (6)

### □ Build AWC Client Environment

- Install AWC Indexer. In training system, it is a brand new Teamcenter installation instance installed by os user r\_awc on tc10sit. It's called Teamcenter 10\_indexer.
- Indexing Server
  - Active Workspace Indexer



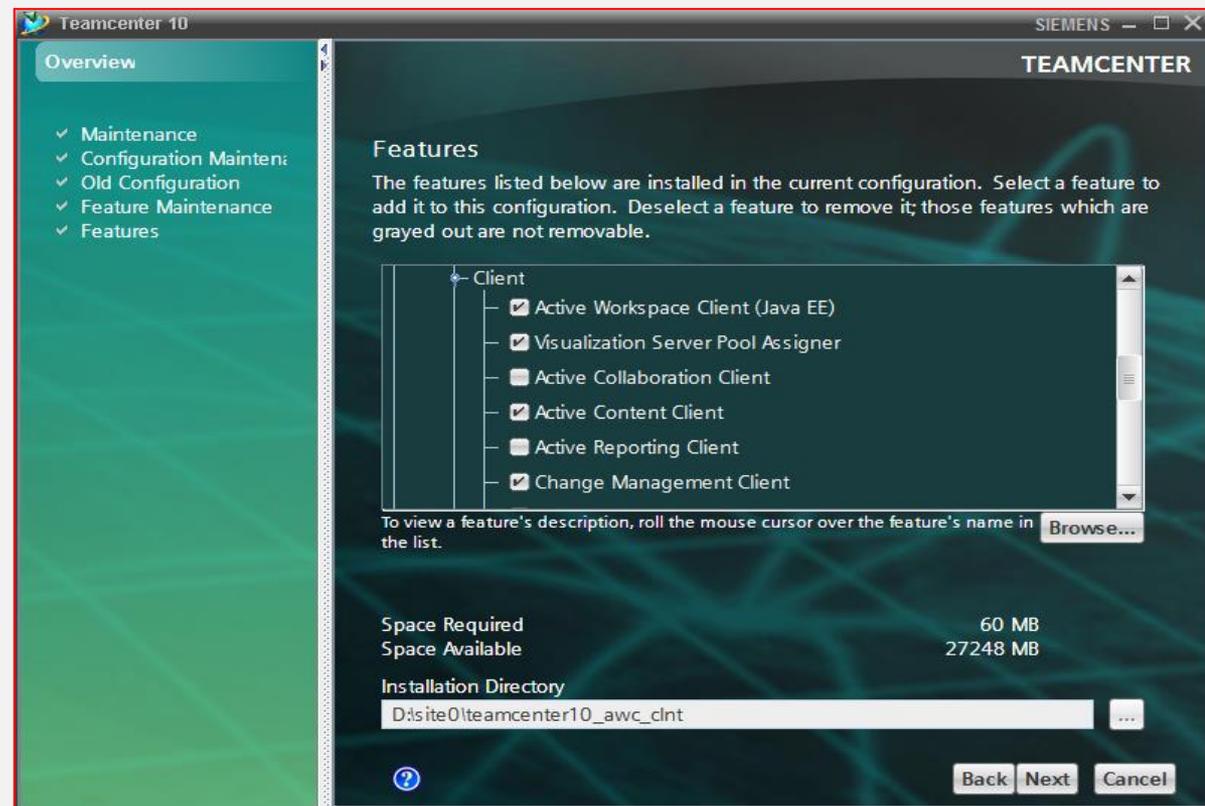
## Setup AWC Client (7)

### □ Build AWC Client Environment

➤ Build AWC client war file on additional machine with TEM, then deploy the war file in JBOSS on tc10sit.

#### ➤ AWC Client

- AWC Workspace Client (Java EE)
- Visualization Server Pool Assigner
- Active Content Client
- Change Management Client



## Setup AWC Client (8)

### □ Customize AWC Client Home Page

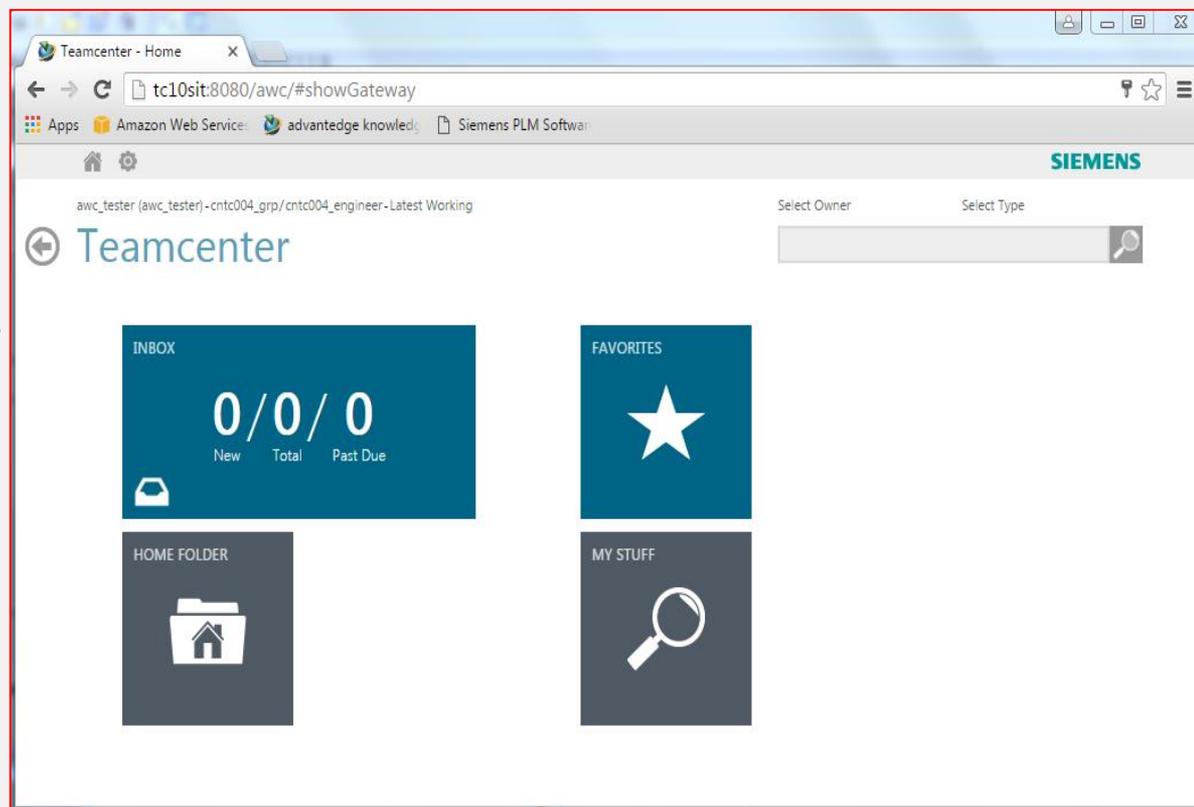
- Customize AWC Client Home Page for a group. In the group, each user is of the same home page. The home page only contains Inbox tile.
- Teamcenter group
  - AWCGrp



## Setup AWC Client (8)

### □ Customize AWC Client Home Page

- Simply customize the home page for a specific user, such as the user `awc_tester`, who is not been added into the group
- Teamctner user
  - `awc_tester`
- The home page may Contain more tiles, due to The protected the attribute.



## Practice AWC Mobility

- Create a wireless environment
  - Share the wireless network with the laptop, by connecting the cell phone to the laptop.
  - Setup a reserve proxy server on the laptop to allow the cell phone to access tc10win and tc10sit.

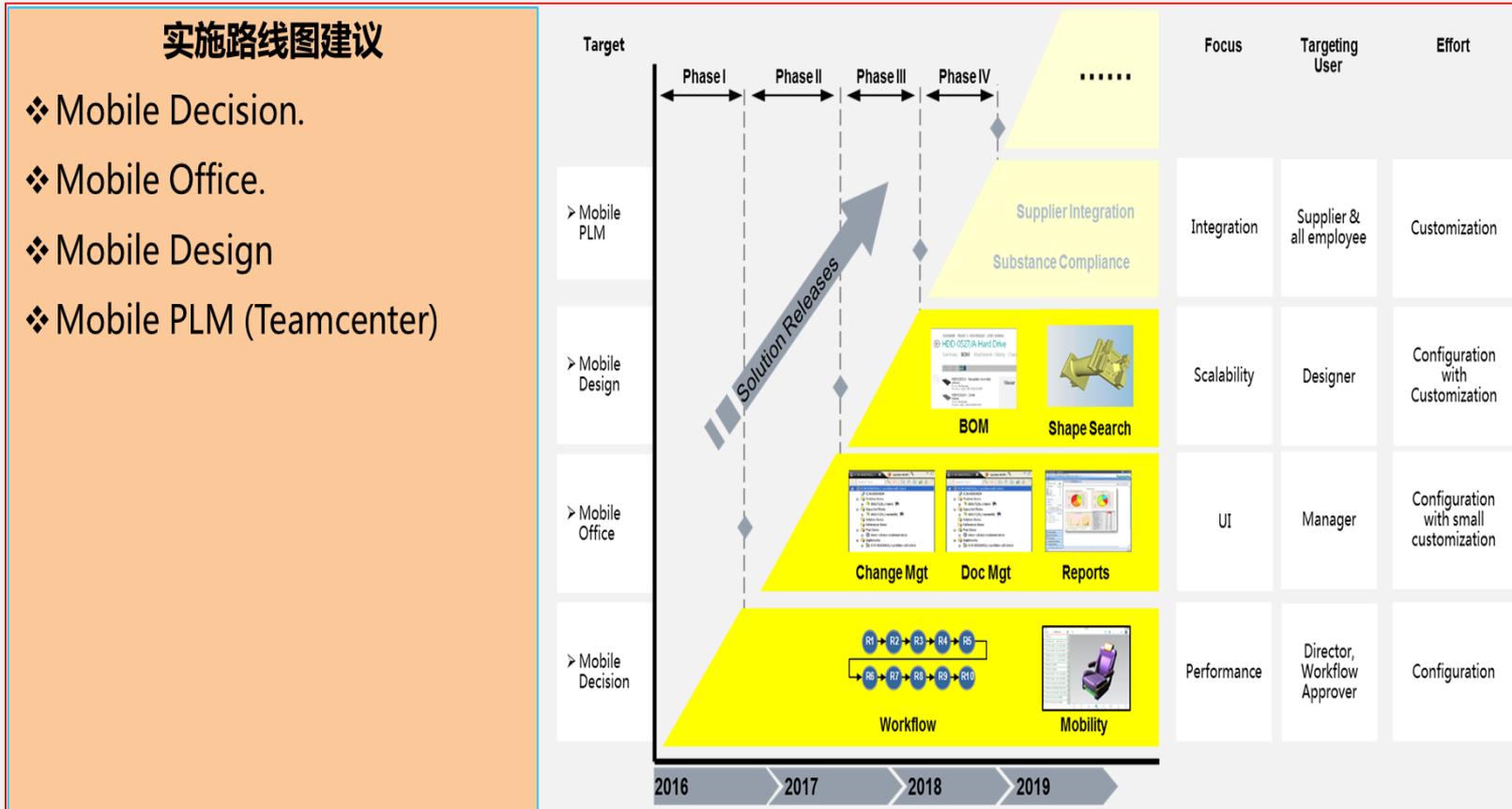
## Practice AWC Mobility (2)

### □ Practice AWC Mobility

- A Test engineer **e01** login to Teamcenter AWC Client (<http://172.20.1.1/awc>) on his laptop, report a PR to the design engineer **e04** for a product design issue.
- The design engineer **e04** logins to Teamcenter AWC Client (<http://172.20.1.1/awc>) on his laptop, reviews the issues and makes a change on the design, then sign off the change for approval.
- The project leader **p04** login to Teamcenter AWC Client (<http://172.20.1.1/awc>) with his cell phone. He reviews and approves the change made to the design.
- (4). The directory **d04** login to Teamcenter AWC Client (<http://172.20.1.1/awc>) with his cell phone. He reviews the change made to the design and makes a final approval.

# Propose AWC Client Solution

□ AWC solution proposal



## Activities

- In this section of the activities, do the following activities with different os account on both tc10win and tc10sit:
  - Install AWC Solr Engine
  - Install AWC Indexer
  - Customize AWC Client Home Page
  - Practice AWC Client Mobility Feature

## Summary

- ❑ The following topics were taught and practiced in this session.
  - AWC capability, feature, and its component & architecture
  - Set AWC Client environment.
  - Customize AWC Client home page.

# Thank you!

Learn and grow with our customers every day!