# **Control System Studio Training**

# More about "Products"

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# **Product: Composition of Plugins**

**Product** Plugins **Features** org.eclipse.core.runtime **Eclipse** My Product \*.product splash.bmp plugin customization.ini org.cs-studio.data Core org.cs-studio.display.probe **Applications** org.cs-studio.alarm.\* Optional



#### **Feature-Based Products**

- org.cstudio.basic.epics.product/CSS.product
  - Based on "Features"
- org.csstudio.sns.feature.applications
  - org.csstudio.diag.probe
  - org.csstudio.diag.epics.pvtree
  - **–** ...
  - and features ...opibuilder, ...databrowser

#### **Features:**

- 1. "Group" plugins to better organize them
- 2. Features can be installed & updated from update sites
  - Individual plugins can't



#### **Smaller Products without Features**

- org.csstudio.archive.engine/ArchiveEngine.product
- org.csstudio.archive.config.rdb/ArchiveConfigTool.product
- org.csstudio.alarm.beast.server/AlarmServer.product
- org.csstudio.alarm.beast.configtool/AlarmConfigTool.produc

It's OK to not use features

Easier to start that way.

But: Less organized, no install & update possible.



### **Dependencies**

- org.csstudio.diag.probe
  - MANIFEST.MF, plugin.xml
  - Dependency on ..utility.pv
- org.csstudio.utility.pv\*

Products that include probe must also include utility.pv.

Otherwise obvious error about missing dependency at startup, or no product at all.

Similar: Databrowser depends on org.csstudio.archive.reader, org.csstudio.logbook

<sup>\*</sup> Apology for the bad example.
We're just now replacing \*.utility.pv.\* with \*.pvmanager.\*...



#### **Extension Points**

- org.csstudio.utility.pv
  - Extension point pvfactory
  - "How to get live data"
- org.csstudio.utility.pv.simu
  - Implements that ext. point for "loc", "sim", ...
- org.csstudio.utility.pv.epics
  - Implements that ext. point for "ca"
  - Depends on ..libs.epics

You may include utility.pv.epics, or pv.simu, or both. Not enforced by Eclipse.
No error message on startup.
But probe may not display any data.

#### Similar:

org.csstudio.logbook.\* - Need 0 or 1 org.csstudio.archive.reader.\* - Need 0 or more



# To build a custom product:

- You pick what you want
  - Probe, Data Browser, BOY, ...
- Add dependencies, Eclipse helps
  - Logbook, pv, archive, ...
- Determine what you may also need
  - pv.epics, logbook.mysite, archive.reader.\*
- Test within Eclipse IDE (Run Configurations...)
  - Then update your \*product, \*feature

Read http://cs-studio.sourceforge.net/docbook/

