Training: Build using the ETICS Service
Welcome, Logistics and Overview

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www.eu-etics.org

Information Society
and Media

- **Welcome to this ETICS training event**

- **The ETICS Service and Tools are still under beta testing. We expect to release v1.0 in December**

- **This is an opportunity to give feedback that can influence the first release. ETICS is for you!!**

- **Please share your thoughts with us and others:**

  - etics-discuss@cern.ch

- **Goal of today's training day: Teach the foundations of the ETICS Service for building Grid and distributed software, such as DILIGENT**

- **Time: 14:30 – 18:30**

- **Programme:**
  - http://indico.cern.ch/conferenceDisplay.py?confId=6849
  - Includes slides and exercises

- **Please take a Student Id Number and use it by appending this number to the modules and configuration you will be creating today (more details in the exercises material)**

- **We have tested the tutorials with:**
  - Browser: Firefox (Internet Explorer doesn't work)
  - Command-line client: SLC3 and SLC4. If you are running another OS and experience difficulties:
    - account: eticsbld_1...eticsbld_31
    - Password: buildWithETHICS
    - hostname: lxb1303.cern.ch

- **Required dependencies for the client and tutorials:**
  - rpmbuild
  - openssl-devel
  - python-devel

- **Bugs (if ever found ;-) should be reported:**
  - email to: etics-bugs@cern.ch or better
  - enter in savannah: http://savannah/projects/etics (please login if possible, so that we can get back to you)

- **Please fill an evaluation form before leaving. This is important for us to improve and do a better job**

- **Vision: A dependable, reliable, stable grid infrastructure requires high-quality, thoroughly tested, interoperable software middleware and applications**

- **Mission: Provide a generic service that other projects can use to efficiently and easily build and test their grid and distributed software. Set up the foundations for a certification process to help increasing the quality and interoperability of such software**

Build system, software configuration, service infrastructure, dissemination, EGEE, gLite, project coord.

Software configuration, service infrastructure, dissemination

The Condor batch system, distributed testing tools, service infrastructure, NMI

Web portals and tools, quality process, dissemination, DILIGENT

Test methods and metrics, unit testing tools, EBIT

Web Application

Web Service

Via browser

Report DB

Project DB

Build/Test Artefacts

NMI Scheduler

Clients

WNs

NMI Client Wrapper

ETICS Infrastructure

Databases and repositories
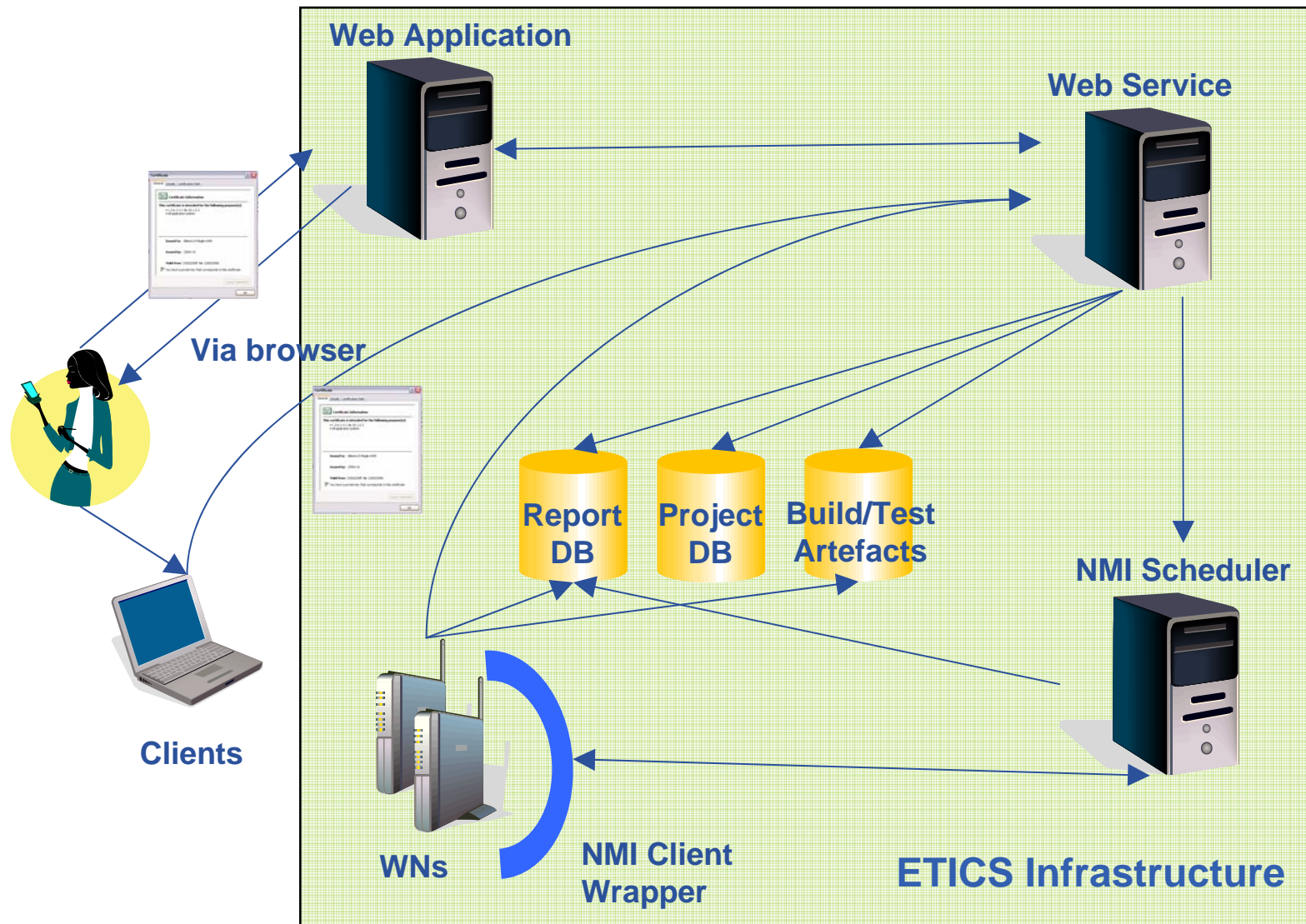
Project DB → **Contains all project and configuration information, currently implemented as a MySQL DB**

**Report DB** → **Contains the output of builds and test runs. Implemented as a MySQL database**

Build/Test Artifacts → **Contains the artifacts produced by build and test runs (packages, text, files, complete distributions, etc). Implemented as a file system**

- **Developers**: can run local and remote builds/tests and create/edit configurations

- **Integrators**: register artefacts

- **Testers**: register test reports

- **Release Managers**: can publish artefacts, create release notes and other documentation

- **Project Managers**: can create and manage projects, assign permissions, set policies, etc

- **Project**: container for components and subsystems

- **Subsystem**: container for components

- **Component**: a module configuration can also be made of sub-module's configurations

- **Module**: generic way to refer to *project, subsystem* and *component*

- **Configuration**: concrete module instance (a.k.a. CVS tag)
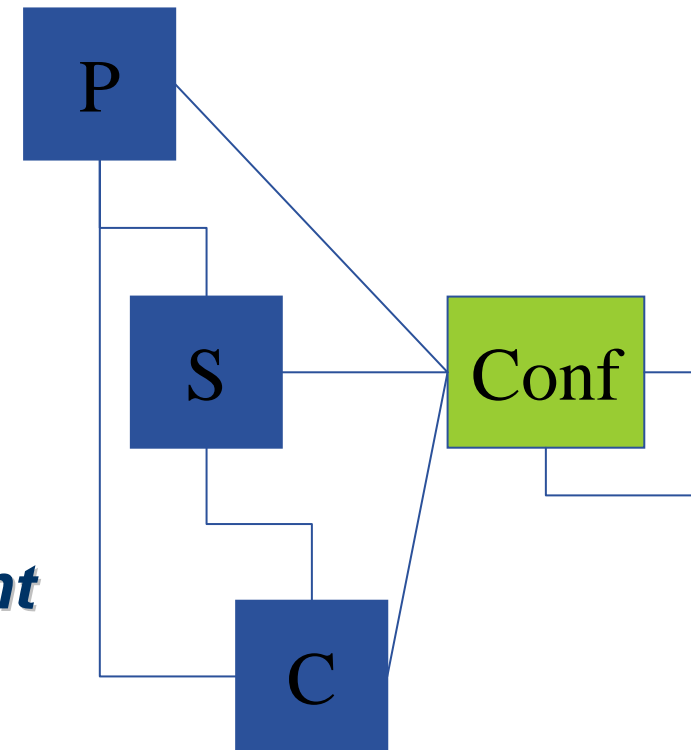
- **Platform: represents a specific combination of *architecture*, *operating system* and *C/C++ compiler***
  - E.g. *slc3_ia32_gcc323*
- **Allows users to specify platform specific metadata**
  - Commands
    - Version control system commands (e.g. CVS)
    - Build commands
    - Test commands
  - Properties
  - Environment variables
  - Dependencies
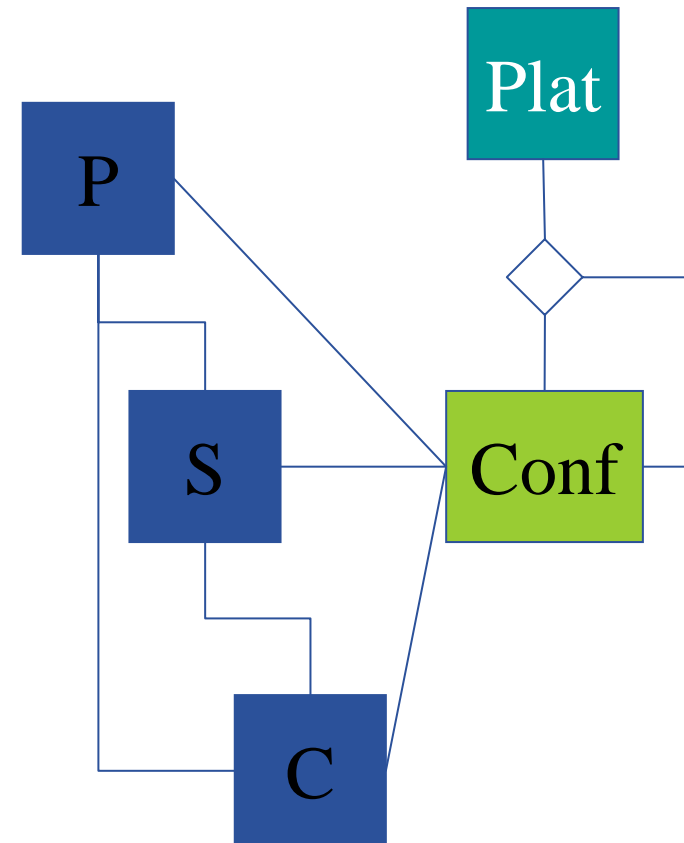
- **Properties and environment variables in the ETICS data model are an important point of extensibility**

- **Used in commands**
  - E.g.: cvs -d ${**vcsroot**} co -r ${**tag**} ${**moduleName**}

- **Properties and environment variables are inherited from parents and propagated back from children and dependencies**

Modules Structure

Configurations Structure

$$P \quad\text{----}\quad P_c$$

$$S \quad\text{----}\quad S_c$$

$$C^1 \quad\text{----}\quad C^1_c$$

$$C^2 \quad\text{----}\quad C^2_c$$

dependency

P_c — **myprop=p_value**
parentprop=p_value

S_c — **myprop=s_value**
parentprop=s_value

C^1_c — **myprop=c1_value**

C^2_c — **myprop=c2_value**

Result:
${myprop}=c2_value
${parentprop}=s_value

P_c — myprop=p_value
parentprop=p_value

S_c — myprop=s_value
parentprop=s_value
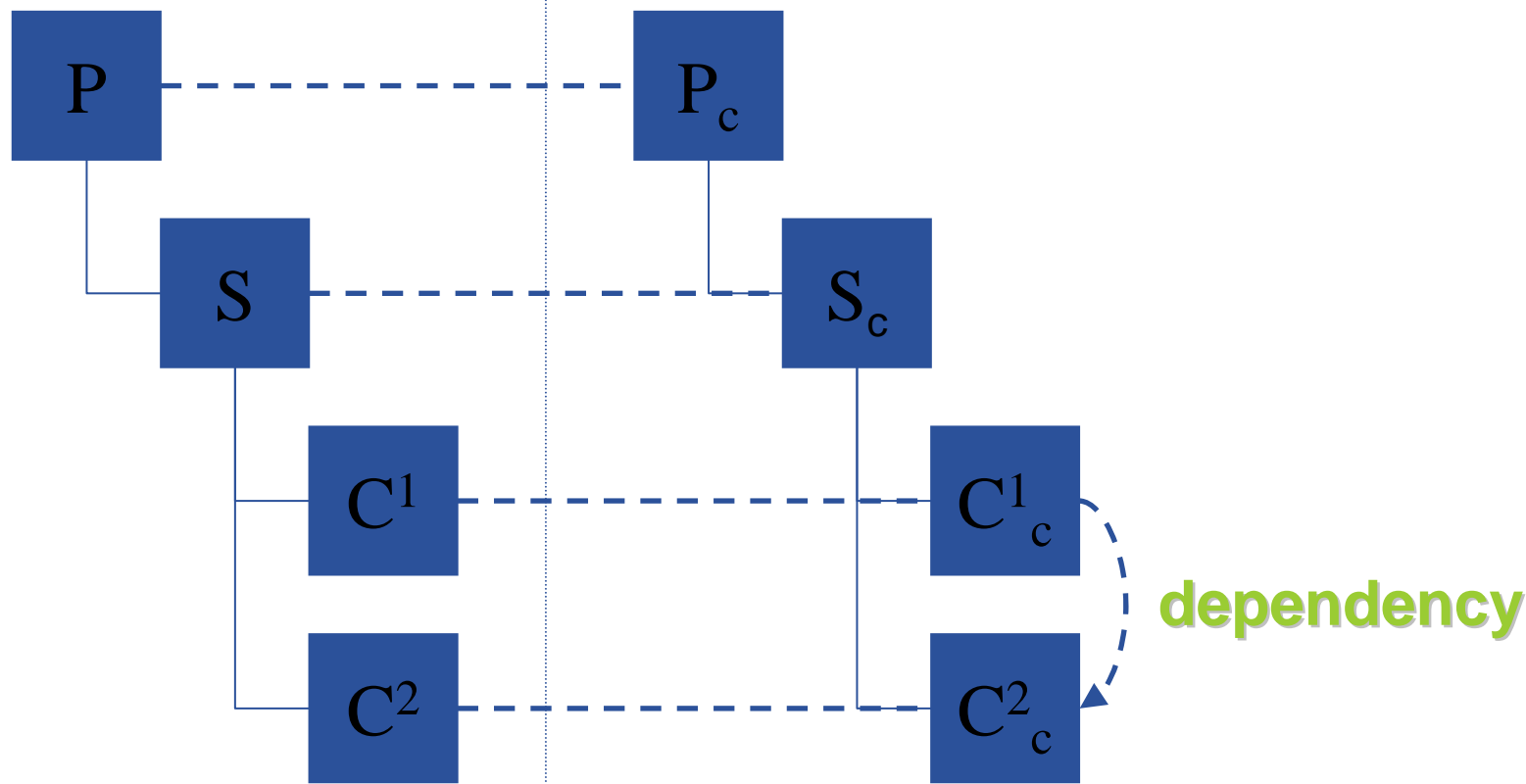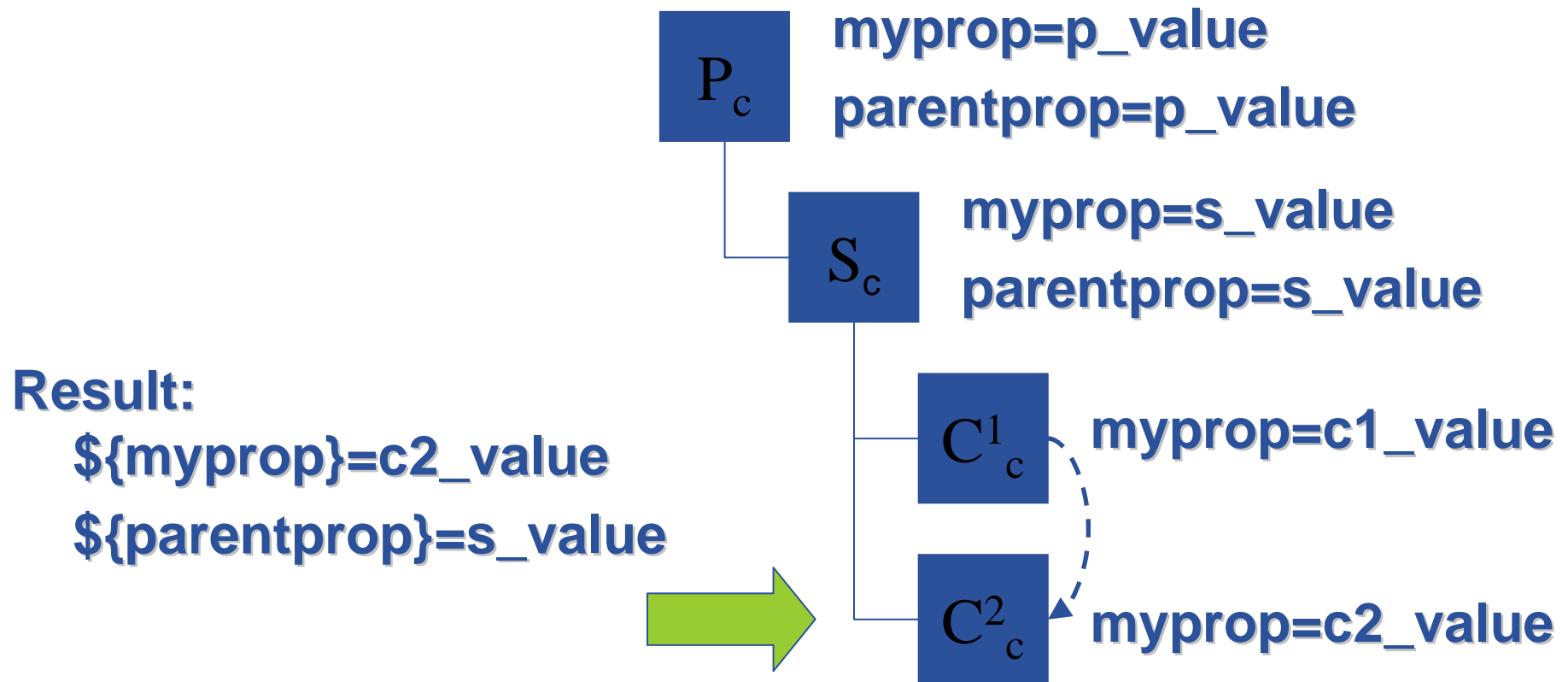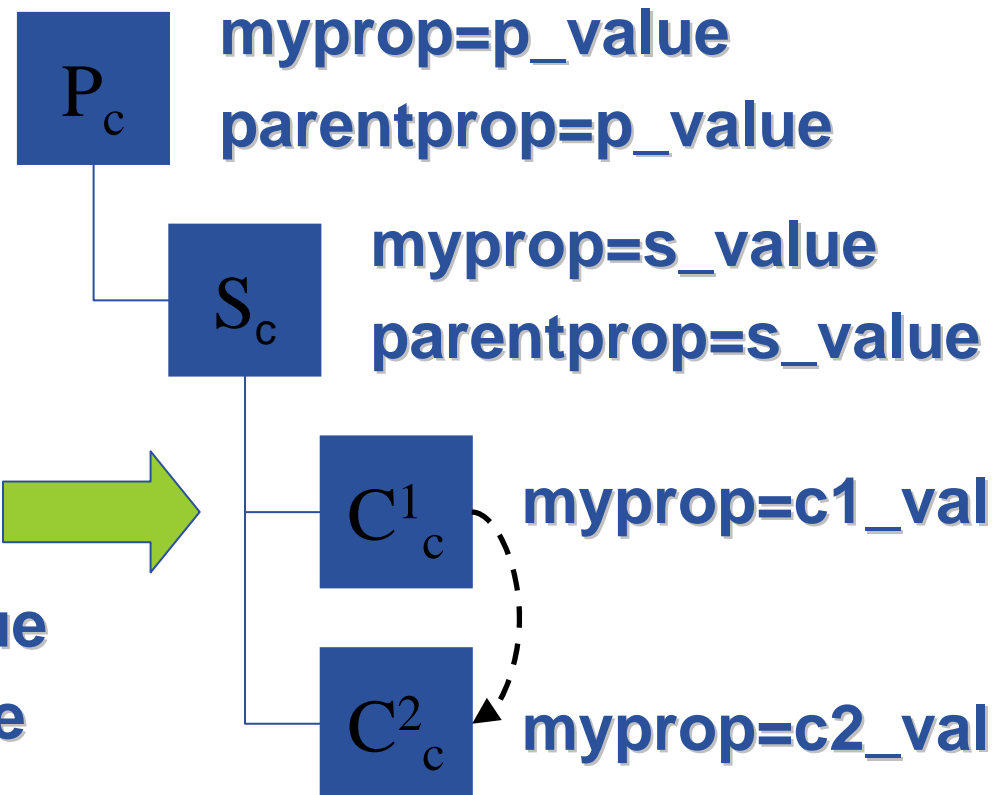
- **Result:**
  ${myprop}=c1_value
  ${c2.myprop}=c2_value
  ${parentprop}=s_value

C^1_c — myprop=c1_value

C^2_c — myprop=c2_value

P_c **myprop=p_value**
parentprop=p_value

S_c **myprop=s_value**
parentprop=s_value

C^1_c **myprop=c1_value**

C^2_c **myprop=c2_value**

- **Result:**
  ${myprop}=s_value
  ${c1.myprop}=c1_value
  ${c2.myprop}=c2_value
  ${parentprop}=s_value

P_c **myprop=p_value**
parentprop=p_value

S_c **myprop=s_value**
parentprop=s_value

C^1_c **myprop=c1_value**
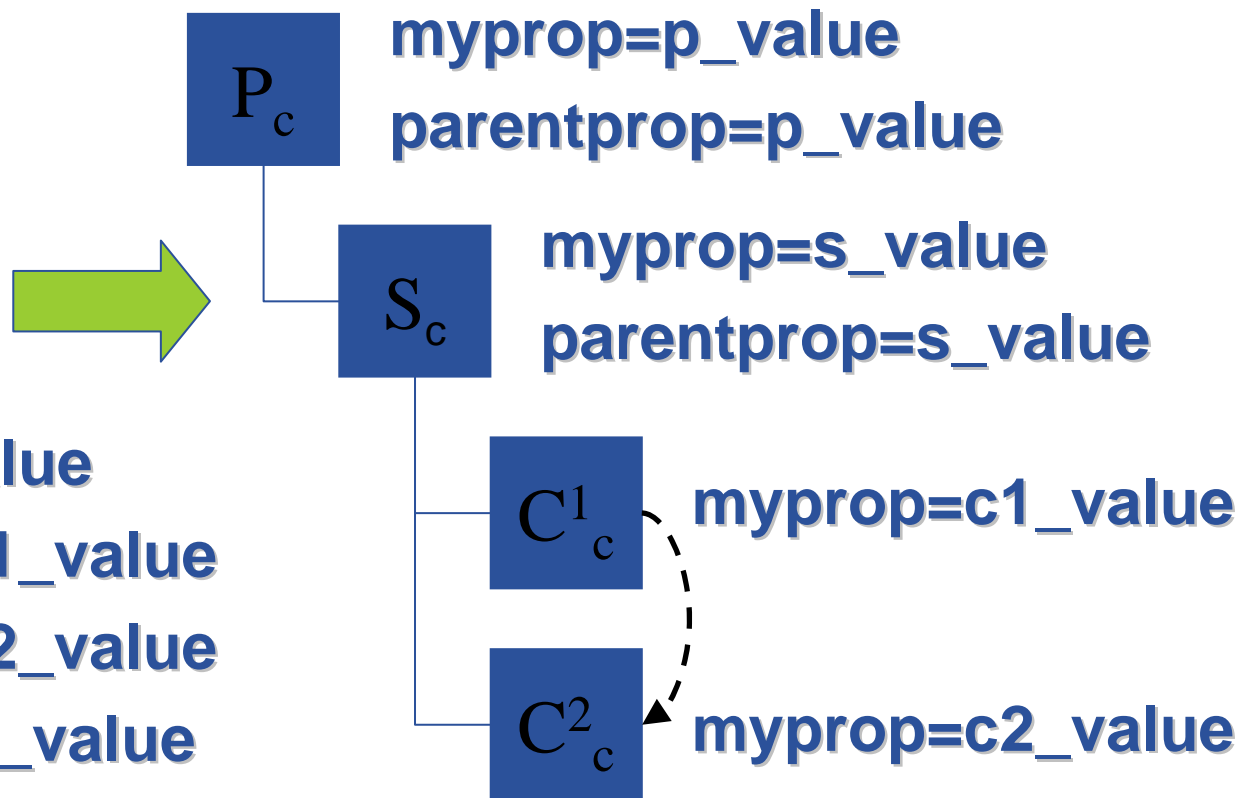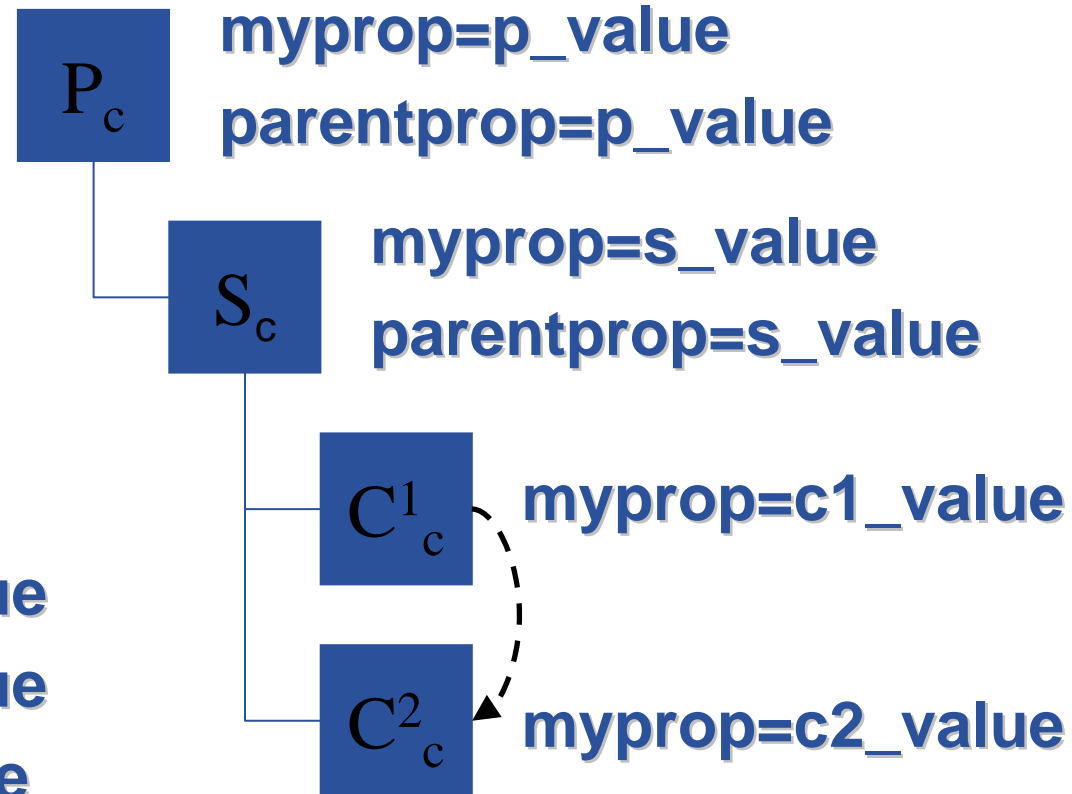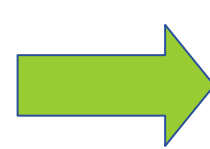
C^2_c **myprop=c2_value**

- **Result:**
  ${myprop}=p_value
  ${s.myprop}=s_value
  ${c1.myprop}=c1_value
  ${c2.myprop}=c2_value
  ${parentprop}=p_value

- **ETICS portal: http://eu-etics.org**

Where to find more on ETICS?

- **ETICS wiki:**
  https://uimon.cern.ch/twiki/bin/view/ETICS/WebHome

- **ETICS client getting started**
  https://uimon.cern.ch/twiki/bin/view/ETICS/ClientHowTo

- **ETICS tutorials**
  https://uimon.cern.ch/twiki/bin/view/ETICS/EticsTutorials

Under development

- **ETICS provides a** multi-platform environment **for building and testing middleware and applications**

- **ETICS focus is on** automation **of: builds, tests, reporting, etc. The goal is to simplify life when managing complex software management tasks**

- **We want it to be as** simple as possible to use. **For this we need your feedback**:

etics-discuss@cern.ch

etics-bugs@cern.ch

Thanks you for taking the time

to learn about ETICS

enjoy the day and

give us feedback

http://www.eu-etics.org