

**The role of testbeds in the implementation of the
Future Internet Public Private Partnership (FI-PPP)**

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Infrastructure for trials in Future Internet

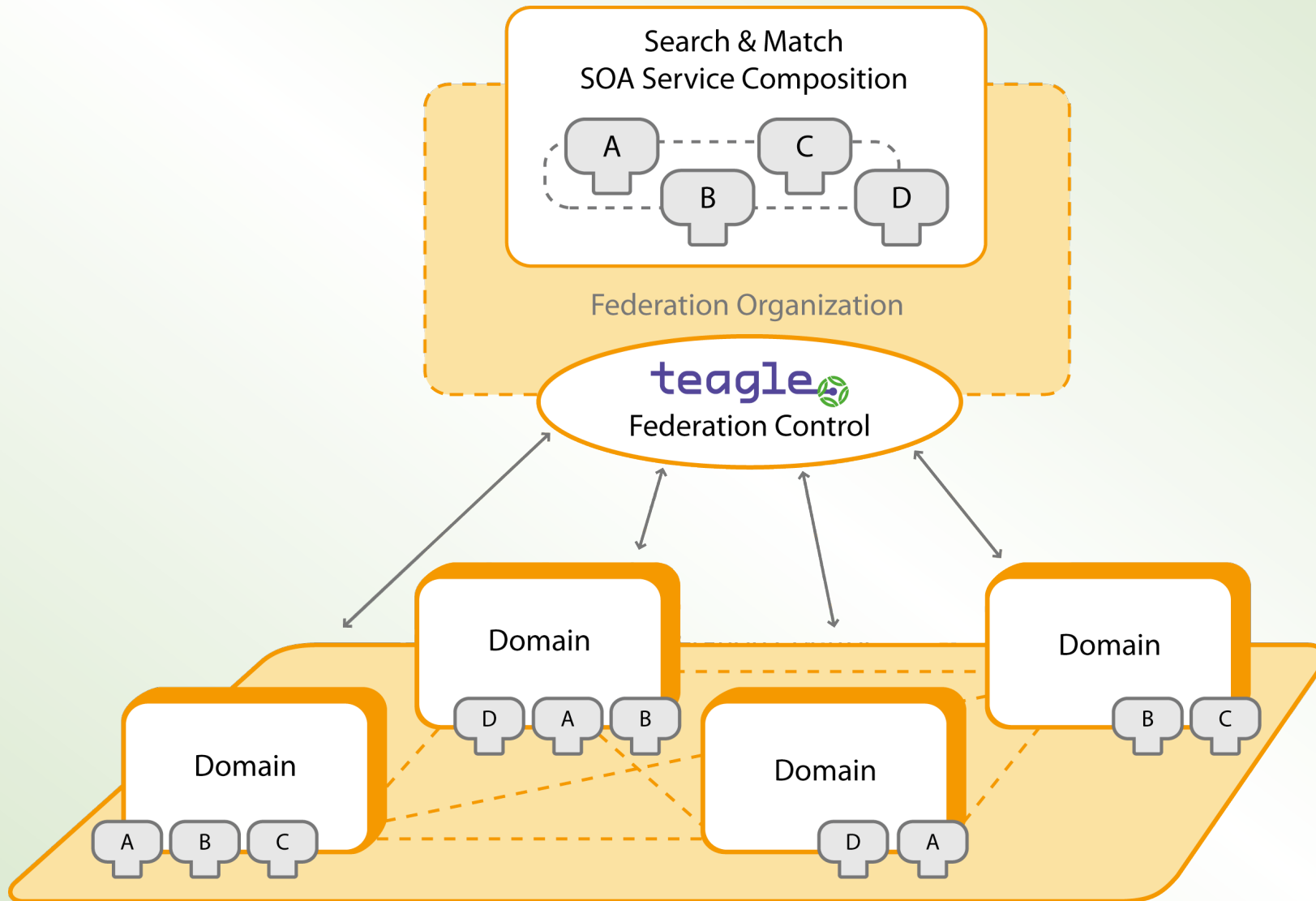
- ... versatile service infrastructure ...
- ... aggregation of resources ...
- ... composable ...
- ... Large scale trials and demonstrations ...
- ... Use existing advanced infrastructures to test future Internet functions ...

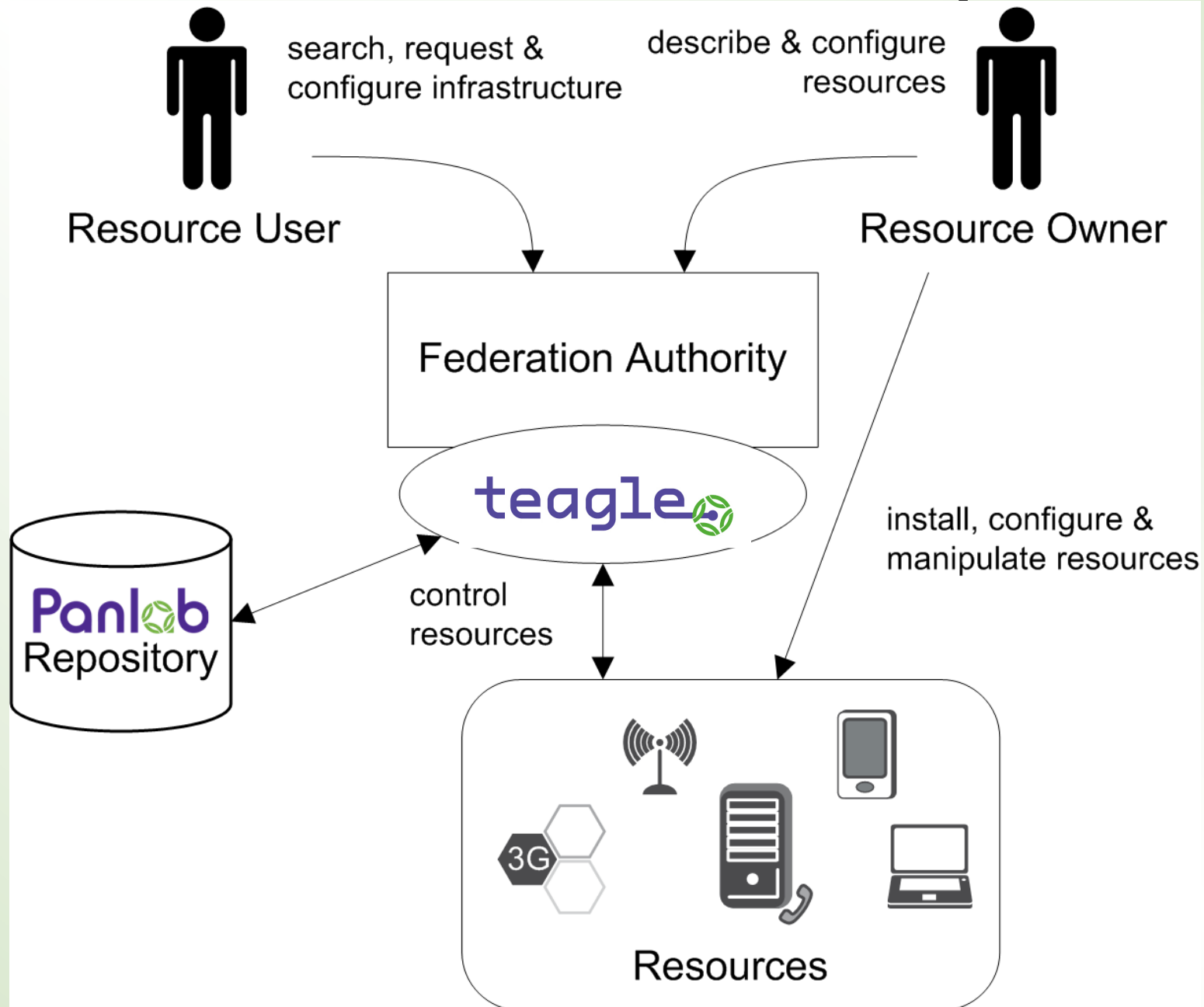
- Panlab/PII is a FIRE project

- Primary objective
 - Create a large scale testing and experimentation facility by integrating existing and emerging testbeds
 - Achieve scale and maintain independence through domain federation
 - Enable end-to-end interoperability of platforms, networks and services
- General purpose outcome
 - Generic resource integration framework
 - Agnostic to any particular technology

- Heterogeneous resources are owned and operated by different domains
- Domains engage in federation and share resources
- The federation control tool called Teagle executes management operations via a control framework
- Supports broad Future Internet research
 - Re-use resources across the boundaries of domains and communities instead of re-building infrastructure
 - Infrastructure as a Service (IaaS)
 - Platform as a Service (PaaS)

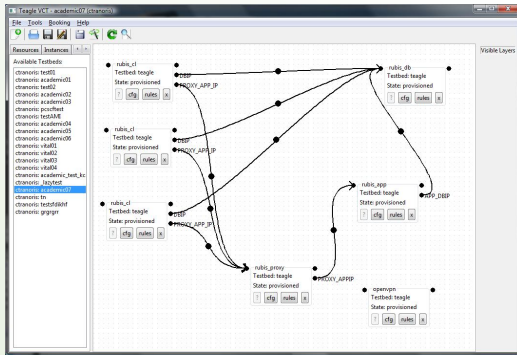
Resource Integration Framework





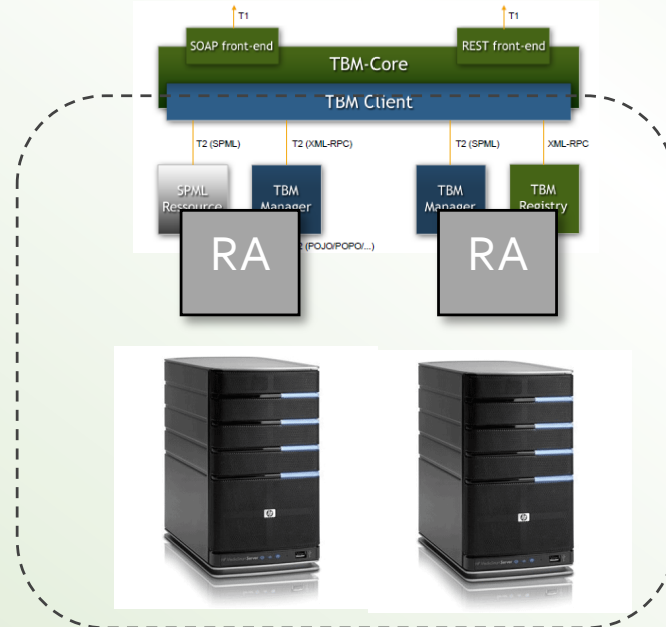
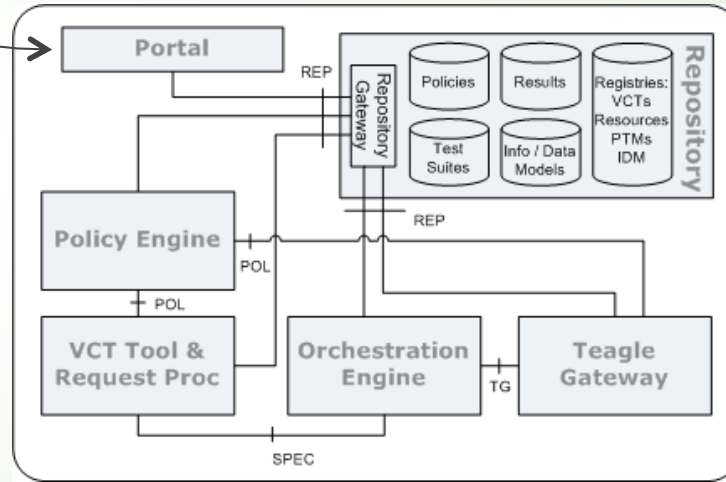


Experimenter



Partner Domain
(e.g. FIRE testbeds,
industrial and
academic testbeds)

Federation Framework



interface

Panlab Testbed Manager

interface

Resource Adaptor

interface

Resource

- Federation Portal
<http://www.fire-teagle.org/>
- Design Environment (access currently limited)
<http://www.fire-teagle.org/tutorials.jsp>
- Domain Manager to federate resources from an administrative domain
<http://trac.panlab.net/trac/wiki/CorePTM>
- Resource Adaptors (RA) to allow remote configuration. For specialized resources, RAs need to be developed
<http://trac.panlab.net/trac/wiki/RADL>
- Federation Computing Interface
<http://trac.panlab.net/trac/wiki/FCI>

- Further useful Websites
<http://www.panlab.net> – Panlab Infrastructure implementation
<http://www.ict-fire.eu> – FIRE website
<http://www.future-internet.eu> – Future Internet Portal

Thank you for your attention

<http://www.panlab.net>

<http://www.eurescom.eu>

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**15-17 December, 2010, Gent – FIRE conference,
6th FIA Conference**

17-19 May, 2011 – Budapest, 7th FIA Conference