

Pan-European Laboratory Infrastructure Implementation

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About Panlab/PII

- 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

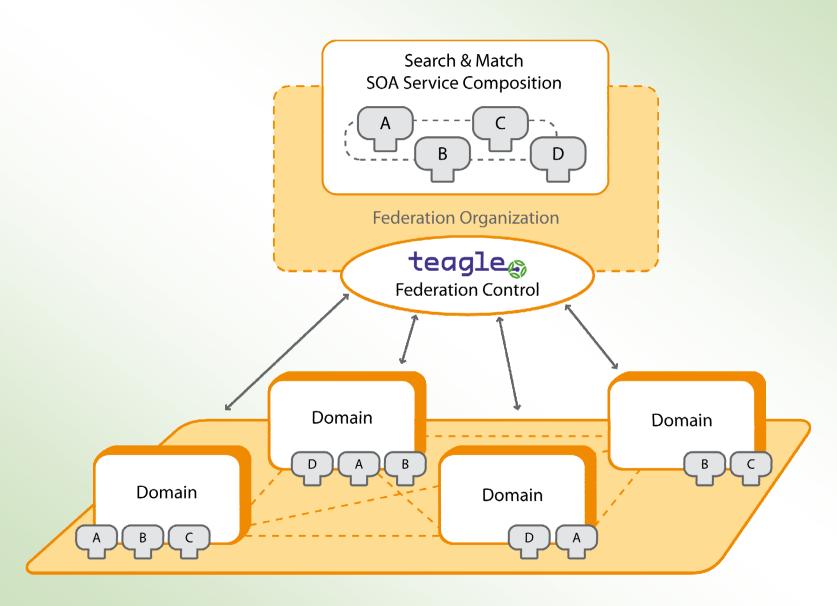


Resource Federation

- 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 (laaS)
 - Platform as a Service (PaaS)

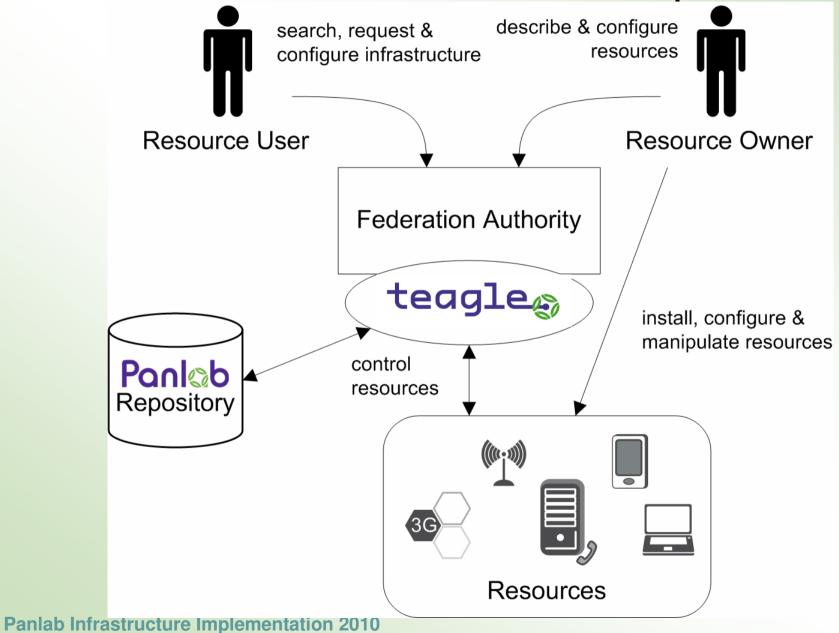


Resource Integration Framework



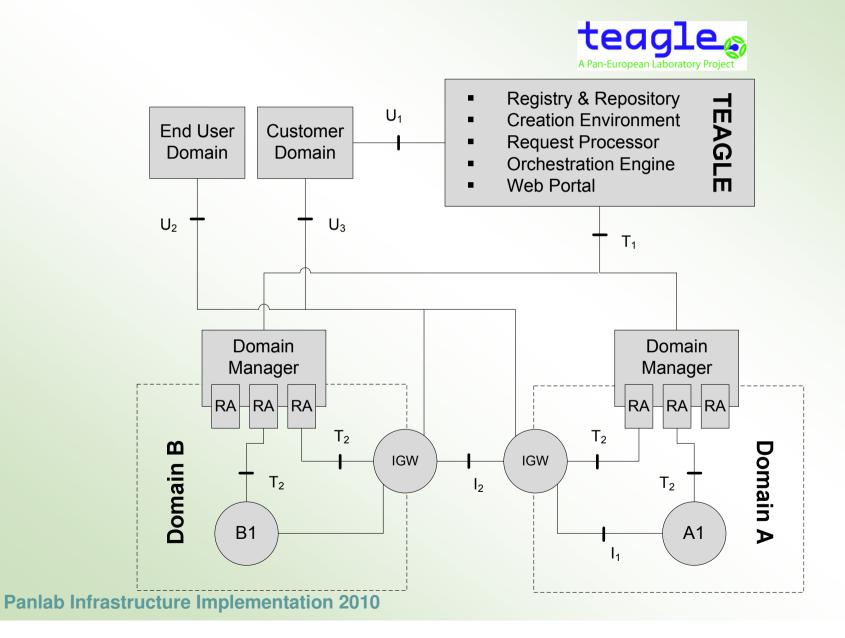


Concept and roles





Federation Architecture

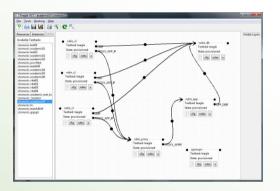


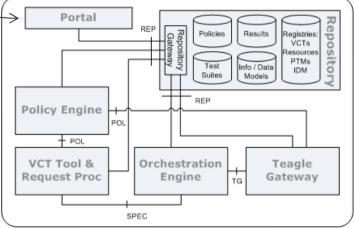




Federation Framework

Experimenter



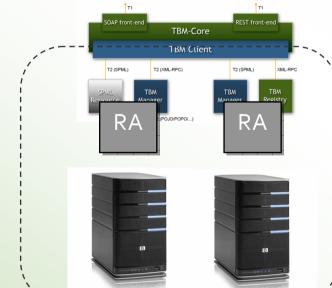




interface

Partner Domain

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



Panlab Testbed Manager

interface

Resource Adaptor



Resource



What Exists?

- Federation Portal and Design Environment (currently access to selected users only) http://www.fire-teagle.org/
- Detailed Technical Information in Trac/wiki http://trac.panlab.net/trac/wiki
- Software components available <u>http://svn.panlab.net/PII/repos/Software/</u>
- 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



Thank you for your attention

http://www.panlab.net