

Flypeer: a JXTA implementation of DE transactions

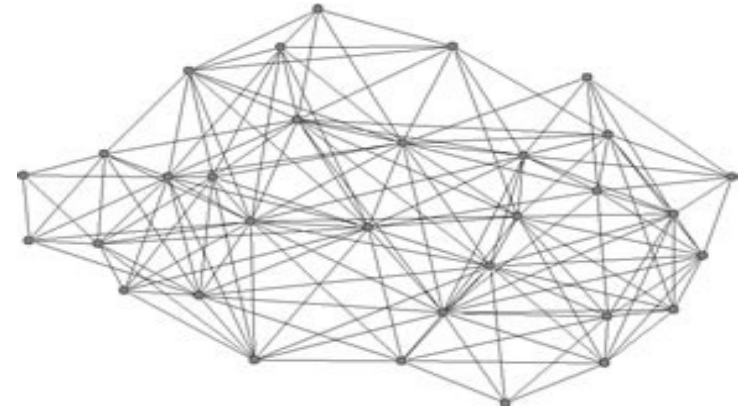


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Guiding principles

- No single point of failure
- No single point of control
- No vendor lock-in!

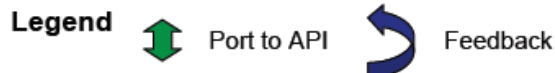
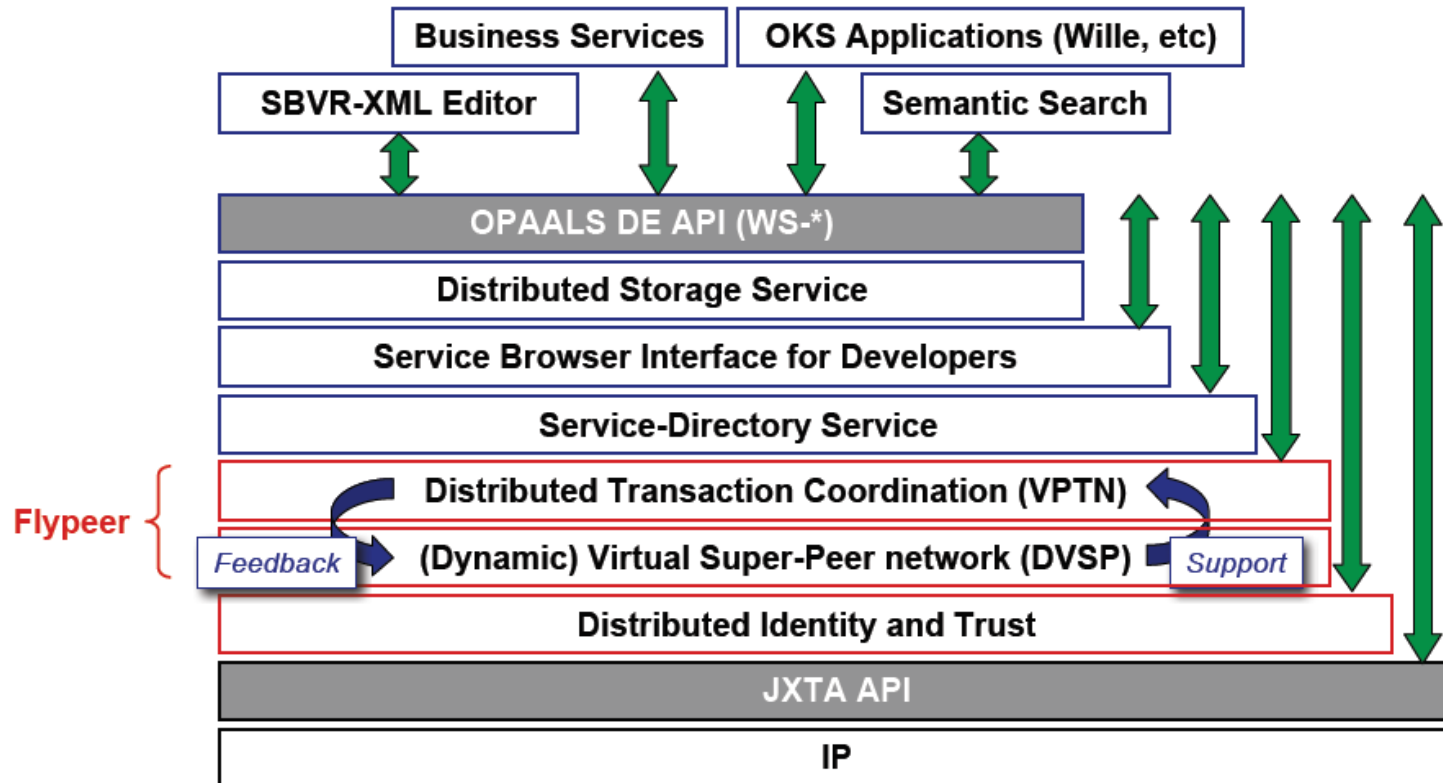
- Dynamic Virtual Super Peers (DVSPs)
 - Defined in research by the University of Surrey



Opaals Digital Ecosystem Stack

OPAALS Prototype* DE Functional Architecture

Agreed version to be implemented in minimum working form by Jan 2010



* 'Prototype' means that this is the architecture being implemented in the short term, in order to complete a working platform for the Aragon Region and achieve a minimum level of adoption by real SW SMEs. The full OPAALS DE architecture is documented in D3.3, D3.6, and D3.10, but may not be realised before the end of the project.

Flypeer

- Initially thought as an implementation of the Dynamic Virtual Super Peers (DVSP) model, by Surrey
- DVSPs define a way to evolve the setup of a p2p network based on the peer themselves
 - The transaction support is the base work for that



Flypeer

- Platform for developing / deploying services
- Target users: SMEs
- Runs on a P2P network
- Leverages JXTA with transaction support
 - Firewall traversal with re-inventing the wheel



Flypeer

- Single-operation services
 - Multiple operation might be supported in the future
- Services consumed through:
 - Internally, flypeer specific code
 - SOAP gateway, using any SOAP-compliant client



Flypeer network setup

- Currently: Simple P2P setup
 - Nodes + Rendezvous Nodes (Super Nodes)
- Future: DVSP “topology”
 - “Evolutive” network setup
 - Nodes will be granted and revoked 'super node' status



Transaction Support

Services composed in two ways:

- Static XML files
 - Being used by Naica to develop an SBVR editor
- Programmatically
 - Done with Java code
 - Easier, used internally for testing and other things



Transaction Support

- Types of service composition
 - Sequential
 - Parallel
 - Alternative
- Any kind of 'fancy' combination of compositions can be made

Community

- Implementation work started august 2008
- IPTI is the main developer
- SUAS contributed some code
- Other Opaals partners are testing and reporting bugs
- Presented to a small group of SMEs in the second week of march 2010
 - Presentation took place at ITA – Instituto Tecnológico de Aragon – (Zaragoza, Spain)
- They demonstrated interest in testing Flypeer

Concluding

- Research, publications etc
- Ground-work for cloud computing
 - Cloud in a p2p environment would be
- Democratization of infra-structure access, again: no vendor lock-in



Thank you!

Questions?

