Grid Programming Environment (GPE)

Grid Summer School, July 28, 2004 Ralf Ratering

Intel - Parallel and Distributed Solutions Division (PDSD)



Grid Programming Environment (GPE)

Bringing applications to the Grid...

Grid SDK

GridBeans

Client Framework

GPE

High-level Grid API

Resource, job and workflow descriptions

Job management, file transfers, brokering, steering, etc.

Grid Programming Language

Open Grid Service Architecture OGSA

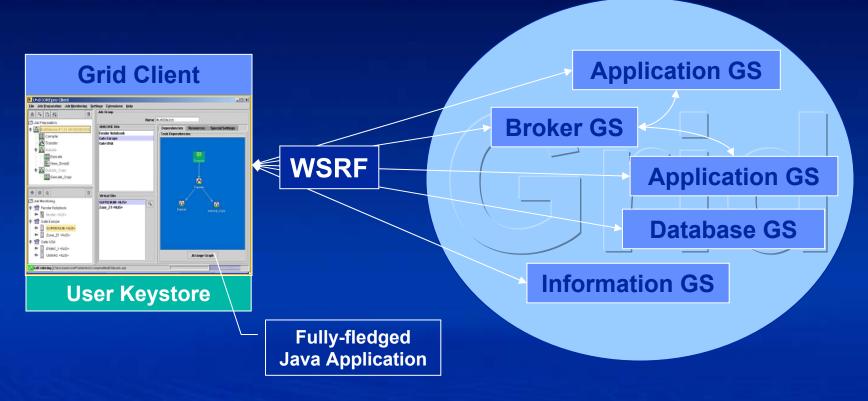
WS Resource Framework WSRF

Web Services

OGSA enabled Server Components

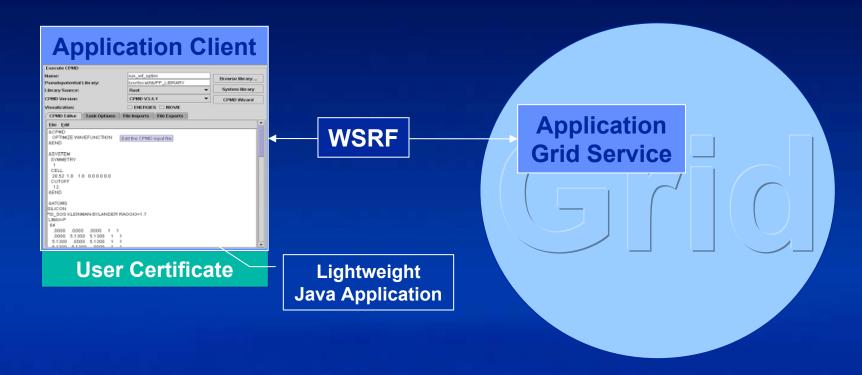


Use Case: Expert User



- Run multiple applications in complex workflows
- Get all information from the Grid
 - Functionality as in old UNICORE Client

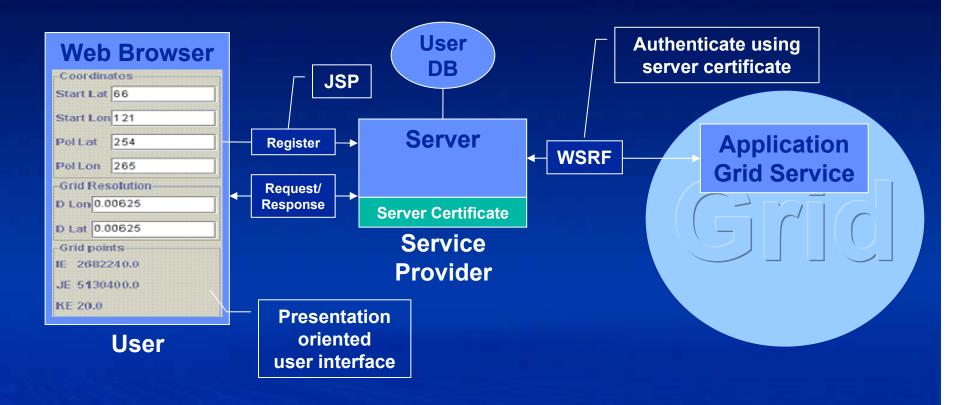
Use Case: Application User



- Only one application
- Get only application specific information
- Run lightweight client on mobile devices



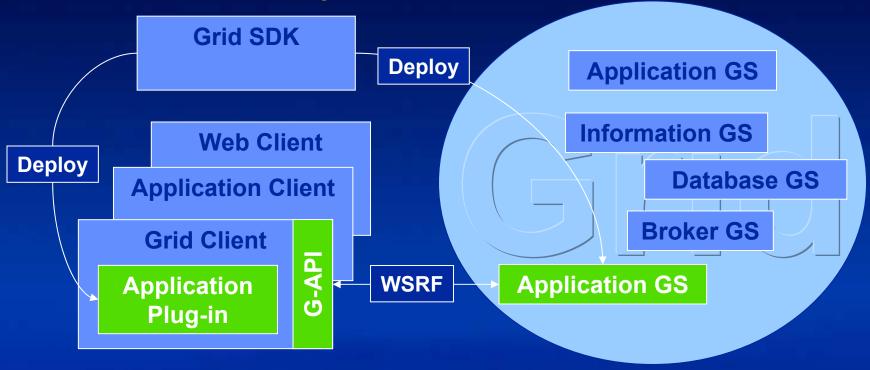
Use Case: Unaware User



- What is a "Grid"?
- Service provider offers a service on the web



The Grid Developer

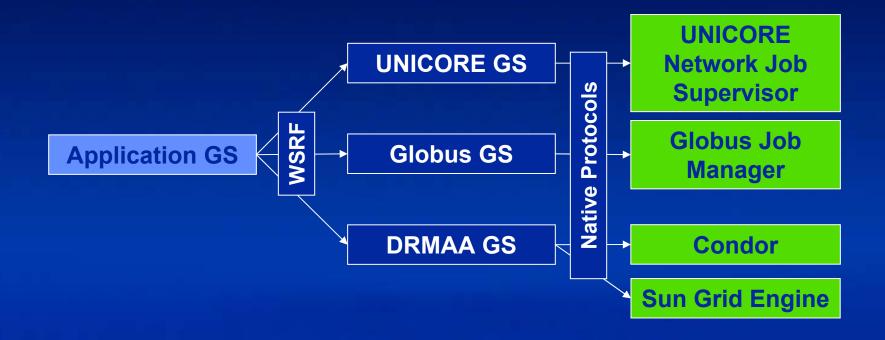


- GridBean = Grid Service + Client Plug-in
- Wrap existing applications
- Write new Grid applications



• Plug-in for Eclipse?

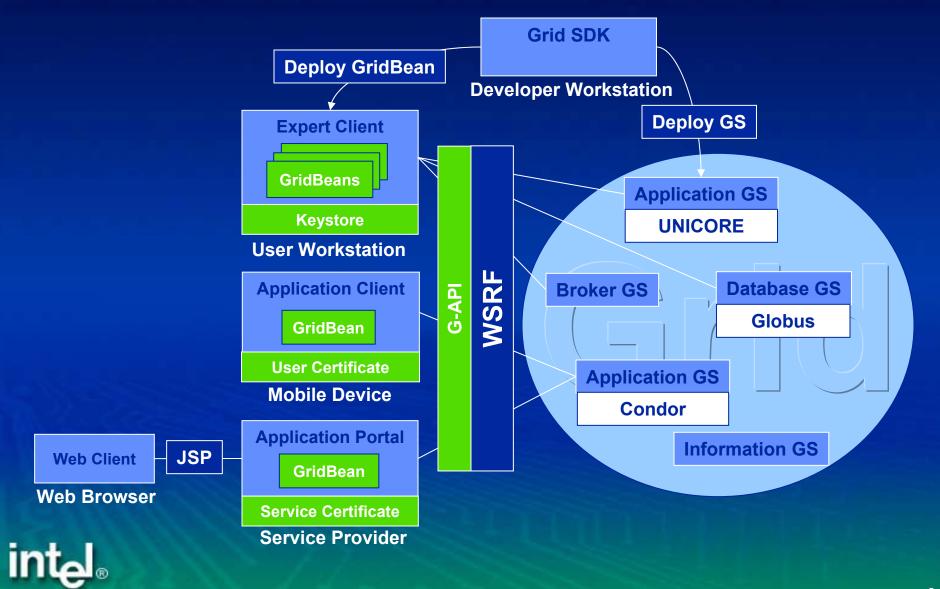
Grid Service Backends



 GPE will provide Grid services to wrap different server types



GPE: The Big Picture...



GPE: Summary

 Proof of Concept implementation based on Globus Java CoG

 Integration with UNICORE services in UniGridS project

 GPE will enable developers to implement applications for the Grid

