Gatlet – a Grid Portal Framework

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Needs a portal to give grid newbies an easy access to services and resources available in D-Grid

Scientists from different fields need portals for easy grid access
Developers

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GAT (Grid Application Toolkit)

- Open source
- GAT aims to provide a simple, clear interface to many different infrastructures (Globus Toolkit, gLite, Unicore, dCache)
- Different Implementations (C, C++, Java, Python)
- Easy to use API with focus on applications, and scientists, rather than Grid experts
Gatlet

- Gatlet = GAT + Portlet
- Grid Portal Framework and Service Provider
- Supports access to multiple middlewares and protocols (GT4, gLite 3.1, GridFTP, SRM)
- Provides vendor independent data persistence for storing jobs and resources in the portal
- Easy to use Service-API for developing scientific portlets
- Includes portlets for instant grid access
• Authentication via X.509 or User/Pwd
• Single Sign On
• GSI-Security via MyProxy
• Grid Proxy Manager (Firefox Plugin)
• HTTPS
Gatlet - Core Portlets

- Job Handling
  - Submit
  - Monitoring
  - Job Details
- File Browser (SRM, GridFTP)
- Resource Management
- MyProxy
- SSHTerm
Gatlet – Service API

• FileService
  • createFile, createFileInputStream, createFileOutputStream

• JobService
  • saveJob, getAllActiveJobs, getJobById, getJobByJobId, refreshJob, stopJob, submitJob

• MonitoringAndDiscoverService
  • getQueues

• ResourceService
  • getGlobusResources, getMyProxyResources, saveResource,…
Gatlet - Import

- **UserManagerPortlet**
  Imports Users and Vos from gridadmin file

- **DGridImporter**
  Imports Users, Vos and Resources from GRRS database
Gatlet - Architektur
Gatlet – Technical Overview

- Java 6
- Tomcat 5.5 (Webserver)
- Ant 1.7 (BuildManagement)
- Gridsphere 3.1
- Modified Version of GAT
- Spring 2.5.6
- EclipseLink (JPA)
- SLF4j (Logging)
- JGlobus 1.7 (MyProxy)
• Integration of Globus 5
• Integration of Unicore 6
• Migration from GridSphere to LifeRay
• Import interface to GOC-DB
• Workflow support
• Development of portlets for scientific applications
• Dissemination
Gatlet – Links

- Gatlet
- JavaGAT
- GridSphere
- bwGRiD
- D-Grid
- KIT
- Ulm University
Thank you!