Global Grid Forum

Leading the pervasive adoption of grid computing
for research and industry

Enterprise Grids Requirements Research Group

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Session Name, EGR-RG
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Session Agenda

- Summary of GGF16 and what we've done so far.
- Attempts at summary finding white papers on the web
  - Satoshi Itoh
  - Toshiyuki Nakata
- Introduction of a Grid experiment
  - Takemoto-san from NTT
- Future Plans

Summary of GGF16

Discussion how to get the Use-Cases.

- Tried to see if existing usecases or white papers might work.
- Copyright turned out to be a issue at the beginning.

- Copyright Issues:

Decided to find out on our own.

- Whose home page to look for?
  - Enterprises in the following. Due to time constraints, only Platinum and Gold Organization Members

Platinum Organization Members

- National Institute of Advanced Industrial Science and Technology, Japan (AIST)
- Hewlett-Packard
- IBM
- Intel
- Microsoft Research
- Silicon Graphics, Inc.
- Sun Microsystems

http://www.gridforum.org/Members/ggf_members_members.php

Gold Organization Members

- Computer Associates
- DataSynapse
- EMC
- Fujitsu
- Grid Consortium Japan
- Hitachi Data Systems
- KISTI
- US National Archives and Records Administration (NARA)
- National Computational Science Alliance (NCSA)
- Nortel Networks
- Oracle
- Platform Computing
- Shell Exploration
- Sybase

Criteria for the white papers

- Did not include news releases.
- English white papers / Usecases only.
- Included journal papers.
- Algorithm.
  - Go to the top web page.
  - If a white page section exists => goto that page.
  - If not. > Search the company's webpages for the key word Grid.
- Apologies in advance: There probably are lots of papers that I've not been able to locate. Please tell me.

Problems.

- Copyrights: How can one make a summary without fringing on each company's copyright?
  - For the time being, just include the URL and let the people find out. Probably some more info. Eg. No. of pages can be added..
- Some companies ask you to register before you can get to the URLs.
  - I registered, but obviously, I cannot include URLs of those white papers.
    - Discussing with one of the company's egr-rg member.
- Most of the papers are either introductory material, or just describe the results and not the technologies which created the results.

Abstract Candidates

- Source: http:
- Date: March 200X
- Adopter: AAA Corporation (Healthcare)
- System: YY System, ZZZ servers
- Users: Employee
- Application: data analysis
- Benefit: drastically lowered the total cost of ownership and dramatically increased productivity
- *Model：eg HPC*
- *Updated information：（Name of the Contact Person)*
- *No. of Applications, No. of sites: Size of the Grid*
- *Webpod (Semantics?)*
- *Simple Questionnair.*
- *What are the semantic annotations*

More Ideas

- Create Top 500.=>Metrics to find out trends
- Company X Good Usecase for showcases. Success Story Usecases (Best Practices).
- A)How do we get the real inf.?
- How to give an incentive to the vendors?
  - GGF Contest? Publicity,
  - Derive segments etc.
- How to get the initial list.
- Any way to auto
- Checklist
- Got volunteers

And then….

- Copyright Issues:
  - Decided to ask the main players in the Grid for permission to quote the white papers / provide summaries.
  - Got permission from IBM, Sun, HP, Platform Computing (Thank you very much) and intend to ask more organizations.
- Time to see if the summary is adequate
  - Sun's Usecases (Satoshi)
  - HP's Usecases(Toshi)

- Implementor HP
- Adaptor:
  - GRNET (Greece's pan-European Research Infrastructure)
- Industry
  - Research
- Products
  - 384 dual node HP servers - 28 HP ProLiant DL360s which will run the network and 356 HP ProLiant DL140s for data processing
- Abstract
  - to create a grid-enabled electronic infrastructure in the country.
  - Initially designed to assist Greece's own academic and research communities, this will also enable Greece to become part of the pan-European infrastructures proposed by various EU initiatives.
- Benefits
  - • The Grid infrastructure will enable on one hand the Greek scientific and research establishments to benefit from sharing resources and to concentrate on their specialities without the worry of buying their own IT equipment.
  - • On the other hand it will establish new e-Government facilities, creating a common medical database for the whole country and improvements in processing tax returns.
- Scope

- Implementor HP
- Adaptor: Sharc Net
- Industry:Academic Research Netork
- Products:1900 Nodes
- Abstract:A cluster of Clusters
- Application:research
- Benefits:Meet the growing demand for HPC
- Scope

- Implementor HP
- Adaptor: Dream Works
- Industry:Animation
- Products:
  - 100 High-end Workstation+3000 Render farms
- Abstract: Animation Creation System
- Application:Animation Rendering
- Benefits: More High Throughput
- Scope

- Implementor HP
- Adaptor: BMW WilliamsF1 Team
- Industry: Car design team
- Products: HP cluster platform 4000 Supercomputer system
- Abstract:
  - HP technology enabled the team to perform design simulation of 1.3 terabytes of aerodynamic data.
- Application: CFD
- Benefits:
  - Together with our partner HP, we have scaled up our computational resource by a factor of three. We augmented our in-house capability with the use of HP's Bristol Labs utility computing facility, which allows us to run computations using external resource at peak load times, such as during the new car design phase."
- Scope

- Implementor HP
- Adaptor: Southern Partnership for Advanced Computational Infrastructures
- Industry: Academic Research
- Products:
  - The SPACI architecture provides for Lecce a cluster of 68 HP integrity Rx2600 servers with an Itanium 2 1.4 GHz biprocessor;
  - mass memory of 36 GB and 264 GB of RAM; SAN storage of 720 GB, 1 Quadrics Elan4 switch.
- Abstract
- Application
- Benefits
- Scope

- Implementor HP
- Adaptor:CERN Large Hadron Collider
- Industry:Academic Research
- Products:
- Abstract:
  - HP will link computing resources at its HP Labs locations in Palo Alto and Bristol (U.K.) as well as HP Brazil and HP Puerto Rico to CERN's LHC Computing Grid (LCG) to help manage and analyze the massive quantities of data expected to be produced by the facility.
- Application
- Benefits
- Scope

- Implementor HP
- Adaptor: BAE SYSTEMS, Others on Grid for Advanced Aerospace and Defense Design
- Industry: aerospace and defense design
- Products
- Abstract
  - Grid experts in HP Services and HP Labs are working with researchers in BAE SYSTEMS' Advanced Technology Centre (ATC), the Welsh e-Science Centre at Cardiff University and the University of Wales, Swansea, to grid-enable the applications that the ATC uses to create and test its most sophisticated designs, including future concepts such as the More Electric Aircraft and the All Electric Ship.
- Application
- Benefits
  - This project will significantly help to develop grid technologies for industrial applications. The idea of an 'extended enterprise,' or 'virtual organization' in which organizations with specialized skills come together to solve complex computational problems is a key element of the grid computing vision,
- Scope

Future Plans

- We need people to explain their usecases in more detail.
  - A Workshop?
  - How can we provide motivation to provide usecases?