

An overview of Current Trends in Grid Computing

Date : August 05-06, 2004

Venue : Dept. of Inf. Tech, MIT Campus, Anna University, Chennai

Workshop Co-ordinator : Dr.VCV.Rao, C-DAC, Pune University Campus

Thursday August 05, 2004

Time (Hrs)	Title / Activity	Speaker
0900~0930	Inauguration : Inauguration of Grid Computing workshop (Dr. K. Jayaraman, Registrar, Anna University; Dr. P. Kanagasabapathy, Dean, M.I.T. Campus; Prof. S. Thamarai Selvi, Professor and Head, Dept. of Inf. Tech., MIT Campus; Dr. VCV.Rao, Group Coordinator, Centre for Development of Advanced Computing (C-DAC, Pune)	C-DAC
0930~1030	Introduction to Grid Computing What is grid? What is Globus ? Why should I care about this Grid Stuff? What is involved in the Globus project ? Who is using the Globus Toolkit ? Is'nt it a lot of work to use Globus in my application ? Types of Grid Computing : Computational, Data, Science, Access, and knowledge Prof. S. Thamarai Selvi, Dept.of Inf Tech., MIT	MIT
1030~1130	Classification of Grid applications : Issues and Challenges, Classification of Grid applications Distributed, Collaborative, Data-Intensive, On-demand; Category of applications - Loosely Coupled; Pipelined; Tightly Synchronized; Widely Distributed; Compute and Data Intensive Applications	
1130~1145	Tea break	
1145~1230	An Overview Globus Toolkit 2.4 and Ideal Grid Architecture What is in the Globus Tool kit 2.4? An overview of Globus Toolkit 2.4 Project, GRAM (Globus Resource Allocation Manager); GSS (Global Security Services); How does Globus project compare to Condor and Legion? Description of Five layered Grid Architecture - Fabric, Connectivity, Resource, Collective and Application; An overview of Grid Services	C-DAC
1230~1300	An Overview of Grid Programming and some Indications : Grid Programming and Some Indications: Grid Programming-Indications; Challenges; How to design Grid aware applications? (New Programming models, tools and languages; Developers -Grid, tools, & Applications); Grid Programming models (Communication models: Shared data and Shared nothing); Grid Global Compiling System	C-DAC
1300~1400	Lunch Break	
1400~1530	Grid Programming-An overview of tools and Environments Part I : Grid enabled Message Passing libraries - (MPICH-G2, PACX-MPI, MetaMPICH); Role of Grid Middleware; Grid based Middleware Tools; (Network-enabled server - GRID RPC; Component based technology- CORBA, Enterprise Java Beans (EJB); XML-based technologies; Scripting languages); Grid Programming-Indications; How to design Grid aware applications? (New Programming models, tools and languages; Developers -Grid, tools, & Applications); Grid Programming models; Grid Global Compiling System	C-DAC
1530~1600	Building Grid Services using Globus 2.4 Toolkit Operational Issues and Examples	C-DAC
1600~1615	Tea break	
1615~1700	Globus 3.2 Tool Kit An Overview and Demonstration of Globus 3.2 Toolkit by Dept. of Information Technology Staff	MIT

Friday August 06, 2004

Time (Hrs)	Title / Activity	Speaker

0900~1030	Current Trends in Globus Toolkit : Web Services and Grids, Grid Open Grid Services Architecture (OGSA) Protocols; Available Web Service Components; XML Based Technologies, Script Languages ; HTTP, DNS, SOAP (Simple Object Access Protocols), Web Service Description Language (WSDL) (Dr S. Thamarai Selvi, MIT Campus, Anna University)	MIT
1030~1130	Grid Programming- An overview of tools and environments Part II : Grid Middleware (Frame work -Core Features of Problem Solving Environments; Framework- Cactus Tool; Interoperability between various data parallel runtime libraries; Meta-Chaos Framework -Efficient distribution of data structures by user or Compiler; Global Grid Compilation System (GrADS) project; & Grid Portals) (C-DAC, Pune)	C-DAC
1130~1145	Tea break	
1145~1300	Current Trends -An Overview of Grid Resource Brokers : Introduction, functionality; Job Scheduling and Resource Management Techniques in Dynamic Grid Environment, Resource Selection, Job Scheduling, Resource Allocation and Management, Quality of Services, Available resource brokers-Nimrod/G, Condor-G (C-DAC, Pune)	C-DAC
1300~1400	Lunch Break	
1400~1500	An overview of Globus 3.2 Toolkit : An overview of Globus 3.2 toolkit; Web Services XML, SOAP; Introductory concepts of service-oriented grid architecture; OGSA and OGSI; GT3 architecture; Grid Service	C-DAC
1530~1630	Current Trends in Grid Benchmarks : Current Trends- Grid Benchmarks and Performance: Grid low level benchmarks; Grid Probe Benchmarks; Grid Synthetic Benchmarks, Compute intensive Grid Benchmarks and Data Intensive Grid Benchmarks	C-DAC
1630~1645	Tea break	
1645~1730	Grid Computing : Open Discussions and Future directions / Valedictory Function (Shri M.R. RajaGopalan, Prog. Coordinator, Head C-DAC, Chennai, Dr. S. Thamarai Selvi; Professor and Head, Dept. of Inf Tech, MIT Campus, Dr. VCV.Rao, Group Coordinator, C-DAC, Pune)	