CGSP (ChinaGrid Support Platform) Developing Toolkit

CGSP Work Group
Why Need Developing Toolkit

- Why not globus toolkit?
  - Low-level components
  - service oriented
- In CGSP, we give out
  - Parallel program developing toolkit
  - Portal building toolkit for CGSP
Grid Parallel Programming Interface

- Object Oriented
- MPI-like Interfaces
- Coarse Grain Parallel Program Oriented
- Light-weight Client-Server Model
Program Running Workflow

1. Submit to Grid Task
2. Instantiate Grid Task Instance
3. Invoke Grid Service A
4. Invoke Grid Service B
5. Invoke Grid Service C
Grid Task Example

Class MyTask extends GridTask
{
  public void main_task()
  {
    int id=getTaskid();
    if (id==1)
    {
      waitAll("over");
      .......... //expression is a sum of other tasks' result
      int jobid= executeService(IndexService.find("elim"),expression);
      .......... 
    }else
    {
      int jobid=executeService(IndexService.find("elim"),getData());
      sendSignal(1,"over",getStringResult(jobid));
    }
  }
}
Portal building toolkit

- Job Definition Tool
- System Administration tools
- Service packaging tool