Hands on Session: DAG Job Submission

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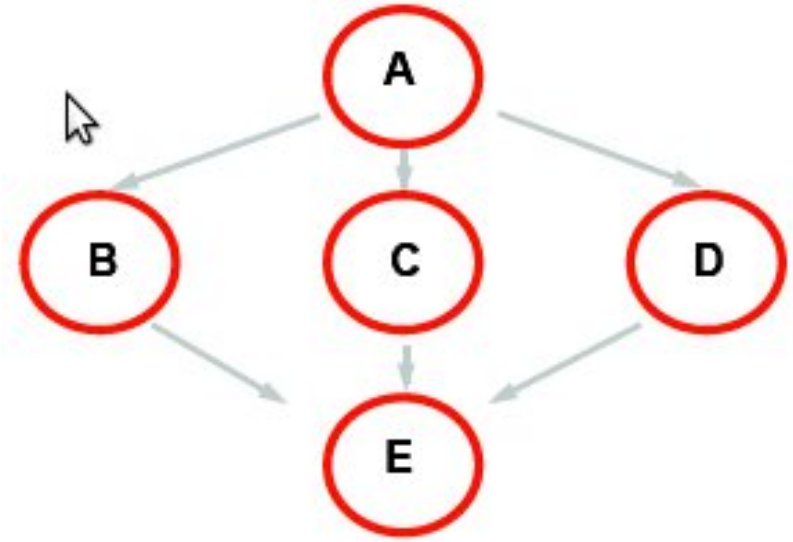
e-infrastructure

Overview

- DAG job workflow
- JDL of a DAG job
- Inheritance of sandboxes
- Hands On example

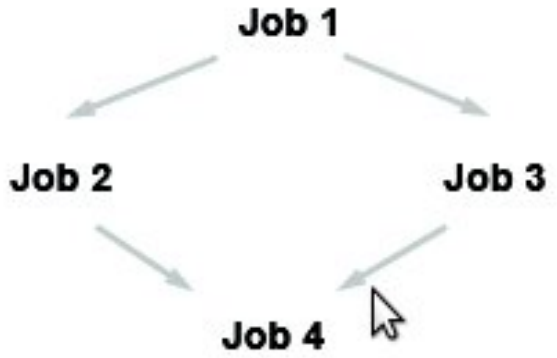
DAG Jobs

- Direct Acyclic Graph (DAG) is a set of jobs where the input, output, or execution of one or more jobs depends on one or more other jobs
- Sharing and inheritance of sandboxes
  - Include OutputSandbox in the next InputSandbox
- Dependencies defined between pairs of jobs



JDL of a DAG job

```
[ Type = "DAG";
    InputSandbox = {            #Transfer from UI only once
        "sharedFile1", . . ., "sharedFileN" };
  nodes = [
        Job1 = [                #JDL of first job
        description = [
        JobType = "Normal";
                  . . .;];
                ];
. . . . . .
              ];
Dependencies = {                #Graph structure
{job1,{job2,job3}}, {job2,job4}, {job3,job4} };
]
```



DAG: Inheritance of sandboxes

```
[ Type = “DAG";
…
    job4 = [
        description = [
            JobType = "Normal";
            InputSandbox = {
root.nodes.job1.description.OutputSandbox[0],
root.nodes.job2.description.OutputSandbox,
                        ...};
                    ...;];
    ];
    . . .
]
```

Hands On example

- Navigate to the following address:

http://wiki.ipb.ac.rs/index.php/Grid_examples

- Choose DAG job example and follow the instructions for submitting a DAG job

Links

- gLite user guide
  - https://edms.cern.ch/file/722398//gLite-3-UserGuide.pdf
- Quick user guide for submitting jobs
  - http://wiki.egee-see.org/index.php/Quick_User_Guide_for_Submitting_Jobs
- Description of DAG jobs
  - http://wiki.egee-see.org/index.php/Description_of_DAG_jobs