



Ibis as Glue

Hands-on

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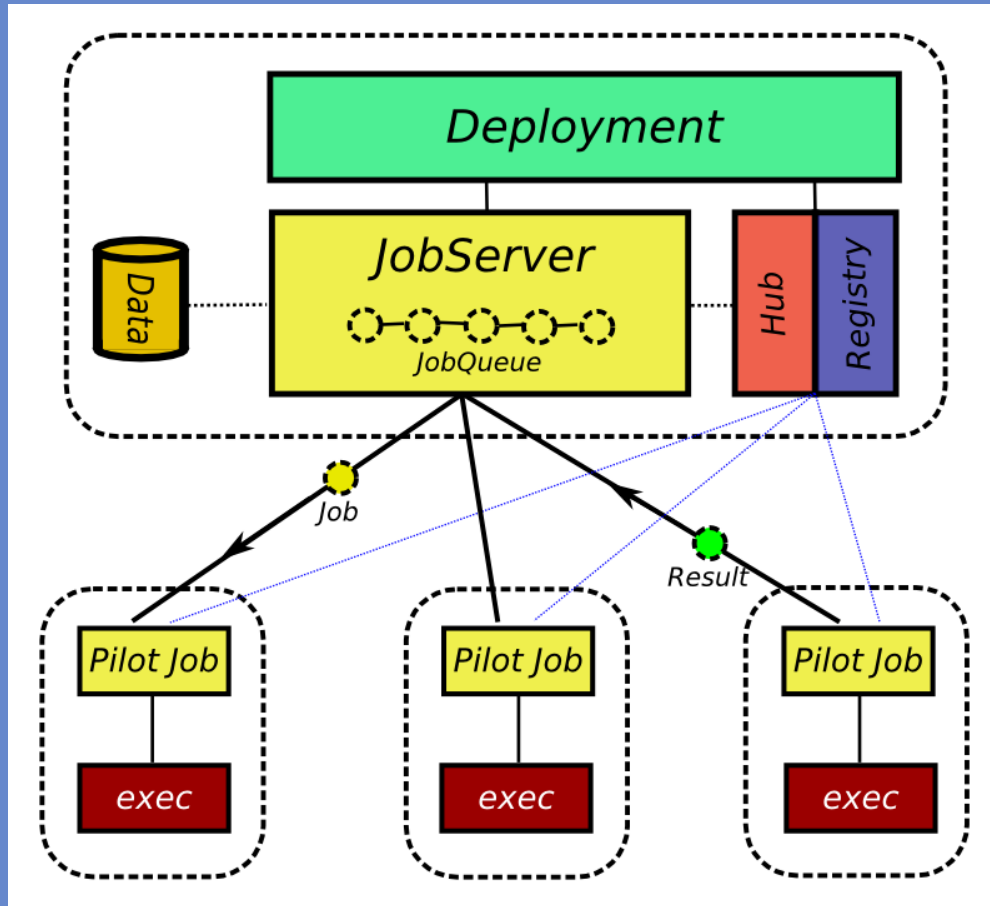


Ibis as Glue

- Use the IPL to communicate between parts of a computation
- In this Hands-on we will use the Pilot Job framework to illustrate this, and use IbisDeploy to start it

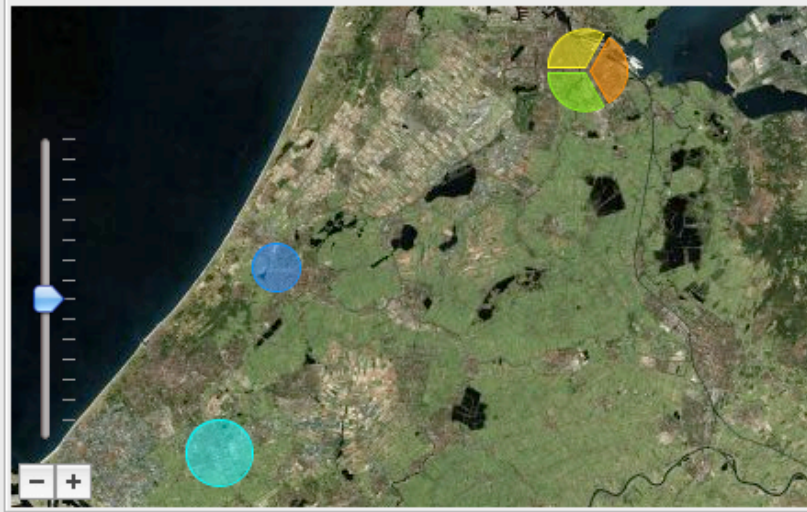


Pilot Job Framework Design





Experiment Editor



Pool Name:

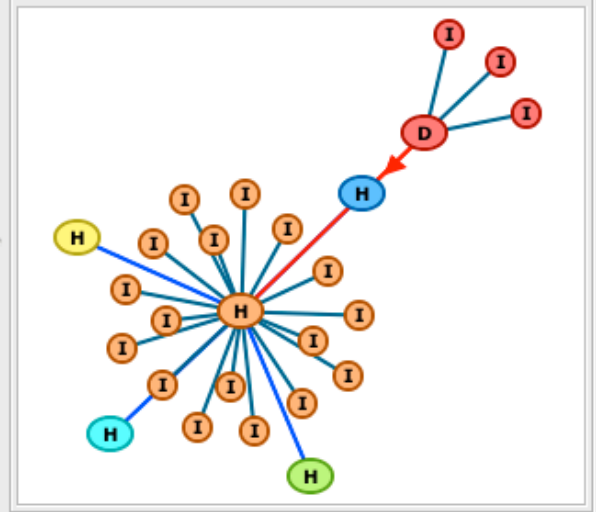
Select Application

x

Select Cluster

x

Experiment Monitor



	pool	name	job status	hub status	cluster	middleware	application	process count	resource count	output
<input type="checkbox"/>	demo	Client	DEPLOYED	DEPLOYED	local	local	Client	1	1	<input type="button" value="output"/>
<input type="checkbox"/>	demo	Delft-Server	INITIALIZING	DEPLOYED	Delft	ssh	Server	16	16	<input type="button" value="output"/>
<input type="checkbox"/>	demo	Leiden-Server	INITIALIZING	DEPLOYED	Leiden	ssh	Server	16	16	<input type="button" value="output"/>
<input type="checkbox"/>	demo	Local-Server	DEPLOYED	DEPLOYED	local	local	Server	1	1	<input type="button" value="output"/>
<input type="checkbox"/>	demo	Multimedia...	INITIALIZING	DEPLOYED	MultimediaN	ssh	Server	16	16	<input type="button" value="output"/>
<input type="checkbox"/>	demo	UvA-Server	INITIALIZING	DEPLOYED	UvA	ssh	Server	16	16	<input type="button" value="output"/>
<input type="checkbox"/>	demo	VU-Server	DEPLOYED	DEPLOYED	VU	ssh	Server	16	16	<input type="button" value="output"/>

Property files

- Grid file: description of all resources (clusters)
 - Hostname of frontend, JavaGAT adaptor used, Geolocation, etc
- Application file: description of applications
 - Main class, jars needed, arguments, etc
- Experiment file: description of experiment
 - “run application A on 32 nodes of cluster B”
 - Alternative: specify in GUI
- Workspace: directory containing all 3 files



Application File

```
# Application "JobServer"
JobServer.main.class = glue.multicore.JobServer
JobServer.libs = lib, deploy/lib-server
JobServer.arguments = --script blur.sh --input images
                    --output output-images
JobServer.input.files = images, scripts/blur.sh
JobServer.output.files = output-image

# Application "Pilot"
Pilot.main.class = glue.multicore.PilotJob
Pilot.libs = lib, deploy/lib-server
```

Grid File

```
# Details of cluster "DAS4-VU"  
#DAS4-VU.support.adaptor =  
DAS4-VU.support.uri = ssh://fs0.das4.cs.vu.nl  
#DAS4-VU.job.adaptor =  
DAS4-VU.job.uri = ssh://fs0.das4.cs.vu.nl  
DAS4-VU.file.adaptors = SftpTrilead, SshTrilead, Local  
DAS4-VU.java.path = /usr/lib/jvm/java-openjdk/bin/java  
DAS4-VU.job.wrapper.script = das4.script  
#DAS4-VU.user.name =  
#DAS4-VU.user.key =  
#DAS4-VU.support.system.properties =  
DAS4-VU.latitude = 52.3328  
DAS4-VU.longitude = 4.8669  
DAS4-VU.color = #FFBF80
```

Experiment File

```
# Details of job "job-00"  
job-00.application.name = JobServer  
job-00.process.count = 1  
job-00.cluster.name = local  
job-00.resource.count = 1  
#job-00.runtime =  
job-00.pool.name = pilotjob  
#job-00.pool.size =  
  
# Details of job "job-01"  
job-01.application.name = Pilot  
job-01.process.count = 1  
job-01.cluster.name = local  
job-01.resource.count = 1  
#job-01.runtime =  
job-01.pool.name = pilotjob  
#job-01.pool.size =
```



Running the Example

- Download ibis-glue.zip from tutorial site
- Compile with ant
- Run
 - scripts/ibis-deploy-gui for GUI
 - scripts/ibis-deploy-cli for command line interface
- Use “-m” option for performance visualization in GUI

