

Enabling access to HPC facilities for non-specialists: The Rapid portlet production tool



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Rapid Web Portlets

Access portlets using web browser on users desktop



(HTTPS)

Files read/written from file or web servers. Staged directly or via portal server.



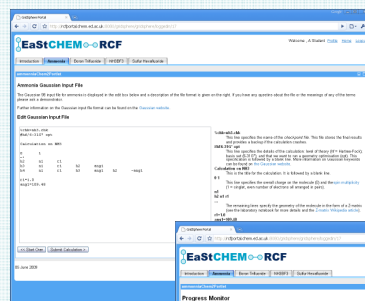
(HTTP, FTP, SFTP, GridFTP)

(Fork, PBS, SGE, Condor)

Jobs run on remote HPC facility



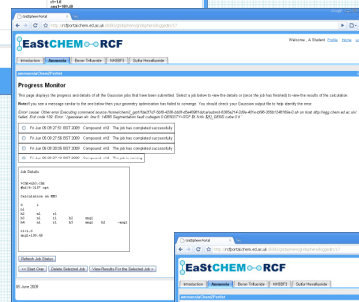
Portlets for teaching computational chemistry using HPC facilities



Web interface allows students to focus on science rather than technical details such as file transfer and job submission.



Built in Jmol applet enables scientific analysis to be performed within the portlet interface.



Portlet submits Gaussian 03 jobs to remote compute cluster using SSH



Rapid System



Simple to write and maintain

Rapid Transformation

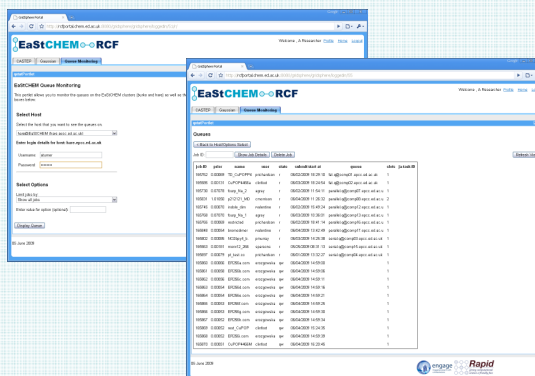
JSR 168 Compliant Portlet WAR File

Deploy in portal framework



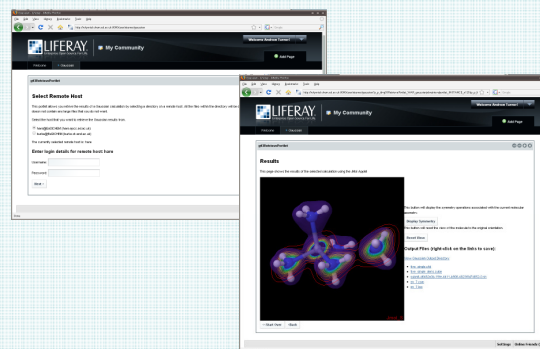
Deploy in any portal framework but targeted at Liferay and Gridsphere

Portlets for running and monitoring jobs on HPC facilities



Monitor and modify jobs in SGE, PBS and LoadLeveler.

Easily submit jobs to different HPC resource from single web interface



Benefits

- Can be developed by users rather than programmers.
- Easy to develop custom, task-based portlets.
- Short development time and ease of maintenance.
- Users can use HPC facilities without worrying about details of batch system, environment variables, etc.