

SURAGrid Application Description

Application Name	UABgrid BLAST
Application Area	
Keywords	
Project/Dept. Affiliation	Academic Computing, IT Department
Value of grids to this application	uses underlying grid resources to submit and run jobs
Originating institution	University of Alabama at Birmingham
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Participating sites	University of Alabama at Birmingham
General description	UABgrid BLAST is a database search application for protein and nucleotide sequences that uses globus for job staging, submission and retrieval, and ncbiBLAST for computation. It is one among many applications that use Pubcookie for initial login and myproxy for grid-based login.
Anticipated system requirements for participation	Globus, Condor, myproxy server, mpi, NCBI BLAST, mpiBLAST, Apache tomcat server, Browser, Pubcookie
Anticipated non-system requirements for participation	UABgrid Certificate, BlazerID
Grid focus (data sharing, computation, access to unique resources, collaboration)	Data sharing: All the required files for job submission like the input query file and the final result file are staged by gridftp Computation: On job submission by globus to remote machine, the BLAST executable performs the necessary computation Access to unique resources: the resource has to run either ncbiBLAST or mpiBLAST executable along with globus Collaboration: provides simplified web interface for BLAST searches on grid resources reducing barriers for non-technical users.
Network dependencies (bandwidth, latency, multicast, other)	Since staging of databases can cause considerable overhead in terms of network bandwidth, they are prestaged in the remote machine.

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