

SURAGrid
Application Evaluation Criteria
(As of 3/12/07)

- 1) The scientific inquiry or problem the application is being used to solve:
 - a) Can be solved more effectively through access to grid-based resources

- 2) The application team:
 - a) Has sufficient skill in utilizing computer and network technology to ensure application has potential to benefit from grid technology.
 - b) Has access to skills for modifying application code to take advantage of grid potential.
 - c) Has staff to devote to working through and documenting deployment.

- 3) The project the application is being used:
 - a) Is generating open source code in a specific science field (especially, where no such code is currently available).
 - b) Is multi-disciplinary and it is particularly desirable for it to include computer science and domain scientists.
 - c) Requires collaboration between multi-institutional, national and/or international groups

- 4) The application:
 - a) Has regional significance – for example, it involves multiple participating institutions, requires collaboration with major e-science initiatives, and benefits specific user communities, and/or SURA program directions and priorities.
 - b) Will be run with some regularity.
 - c) Will make use of multiple resources/sites.
 - d) Will use the SG infrastructure as much as possible (e.g., SG portal, SG accounts).
 - e) Needs access to increased computational capacity.
 - f) Needs access to and management of distributed data.
 - g) Needs access to visualization services.
 - h) Needs access to physically-separated or unique/specialized resources.
 - i) Source code is stable, adaptable and accessible for grid-enabling modifications.
 - j) Lends itself to the application of parallel processing techniques
 - k) Includes a process or job that directly communicates with another process or job, thus allowing one or more tasks to be distributed across the grid.
 - l) Uses well-known algorithms.
 - m) Can handle and display data from different sources.
 - n) Have few dependencies on specific operating systems, libraries or software packages (which could limit the grid nodes the application can run on or how many concurrent instances of it could be active.)
 - o) Has few specific performance or response time requirements within or between particular steps where service latencies would prohibit useful results.
 - p) Has minimal workflow dependencies and uses independent calculations
 - q) Doesn't require not-yet-available features such as on-demand scheduling, co-scheduling or advanced reservations.

