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Abstract

High performance computing has been developed over the years providing researchers with the most powerful computational machines available at a given time. The National Science Foundation, which directs research and development of these resources, has outlined goals for developing sustainable and extensible HPC systems and services, [1][2]. These goals include the developments of systems that support individuals as well as groups to more easily use computation [1]. Both the user interfaces and the detail of building custom software prove to be a hurdle for researchers who don't have access to computational human resources. Making these things easier to use for non-computer experts would increase the usage of existing resources and software. Making completed programs accessible via the web saves resources by encouraging researchers to reuse existing code. In this paper, we developed a science gateway --- MOWIC, the Modern Web-based Interface for Clusters, which attempts to meet many demands for research on parallel systems. It requires only that the user has a web browser. It can easily used with most hardware and software. MOWIC tool attempts to prototype an interface that can tie together all computational programs and visualization tools in research clusters.

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Index Terms

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Keywords

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