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Title: Development of a Capacity ON Demand User Interaction Toolkit (CONDUIT) Web Dashboard

Abstract:

CONDUIT is a data transfer orchestration system for high performance computing that eases the burden on users when transferring data between networked storage systems. Previously, CONDUIT utilized an external job scheduler which caused instability issues and lacked TLS support. In addition, users could only interface with CONDUIT through the CLI or through SLURM job directives (DWS). To resolve the external job scheduler's issues, we developed and integrated a custom internal job scheduler. To provide an alternative to the CLI and DWS we developed a web dashboard. We utilized web socket communication in the CONDUIT HTTP server to support relaying user job progression to the web dashboard. We achieved this by building a web interface written in TypeScript, using React for our frontend web framework, and writing a backend communication API in Go. This web dashboard extends the CLI and DWS by providing another way for users to interact with CONDUIT.