

**Cameron Harr**  
**Supported Projects: DTN, CSS File System**

**Quarterly Report for July 1, 2017 – September 30, 2017**

**Quarterly Synopsis:**

In Q3 of this year, Mr. Harr planned and executed the delivery and integration of expansion hardware to the CSS03 file system. In addition to that major task, Mr. Harr also performed routine maintenance and updating on the systems he controls and he assisted with testing, debugging, and tuning transfers over the ESNNet through the DTN nodes.

**Quarterly Accomplishments:**

- Worked with Computation Facilities to reinforce the raised floor underneath and around the current CSS03 file system hardware, required to accommodate future racks filled with disks.
- Integrated new expansion hardware into CSS03 file system, raising usable space from 1.6PB to 5.3 PB.
- Enhanced security on CSS I/O nodes by integrating them with LC's RSA OTP authentication scheme, instead of static passwords.
- Provided parallelized sync scripts to Jeff P. for high-speed data syncing from older file systems to CSS03.
- Tested transfer performance through aimsdtn nodes and worked with Eli Dart and Jeff P. to diagnose and tune performance issues. End result was one tuning parameter that should help aimsdtn performance and a focus on some European sites to tune their performance.
- Performed maintenance and update of CSS03 storage system components to latest firmware and software versions.
- Assisted ESGF system administrator with various issues regarding various PCMDI/AIMS/ESGF servers.

**Next Quarter's Roadmap:**

- Further enhance security and administration automation of CSS03 I/O nodes.
- Continue to provide system administration services as needed.