Background

- 4Qimaging provides image-based analysis for clinicians.
- This analysis enables better patient care.
- Current application used by 4Qimaging is designed for single computer use.
- The system workflow needs to be upgraded to support use by many remote computers.
- Key aspects of the system must include reliability, auditability, and regulatory compliance to FDA standards.

Features

- Scalable architecture ensures a high throughput of Jobs.
- Redundant components permit continued operation after a single failure.
- Image processing operations are specified on a per-job basis.

Technologies

- PostgreSQL
- Qt
- SLURM

Process

- Requirements
- Architecture
- Design
- Testing
- Feedback
- Implementation
- Final Submission

Future Work

- Implement a distributed Data Store to increase scalability and provide better fault-tolerance.
- Optimize assignment of Tasks to Worker Nodes.
- Add user account types to the system with different permission levels.
- Create a GUI client for the administration of the system.