# Revamp of High Energy Physics Laboratory's Computer Systems

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Milestone 6

GEM Computers

Compute Cluster

Muon Tomography Station

Existing MTS

Documentation

Future Goals



### Milestone 6 Progress

Milestone 6 Goals

GEM Computer:

Compute Cluster

Tomography Station Existing MTS Development MT

Documentation

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Juestions

Task	Progress	Notes
Polish Cluster Documentation	100%	
Polish MTS Documentation	100%	
Create MTS Automation Script	70%	
Integrate Remainder of Cluster Components	50%	NAS-0 must be included
Assist Researchers	100%	helping out with general problems as they arise
Create GEM computer Backups	50%	issues with hardware requirements

#### **GEM Computers**

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Development IVI I S

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Future Goal

- Assist the researchers with their computer issues.
  - Discovered that many of the lab's computers have an unfortunate RAID configuration.
- Optimize the researchers' workflows.
  - Wrote some brief scripts to enhance data processing.

#### Compute Cluster

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Questions

- The nodes and SE have been integrated into the cluster!
  - except for one uncooperative node...

- NAS-0 still needs to be integrated.
  - The OS drive group is not showing up in the Anaconda installer.

### **Existing MTS**

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Junctions

- The FEC with the faulty firmware is still broken.
  - We obtained the firmware version that was supposed to work with the FEC.
  - While the firmware installation was successful, the FEC still failed to function.
- Another, separate FEC has decided to boycott ethernet.
- The MTS researchers have been instructed to try to get the remaining, functional parts of the detector operational rather than continue trying to repair the entire thing.

#### Development MTS

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Question

- Attempted to build AMORE from source
- Makefile 'Makefile.arch' was not found during build configuration, but we did
  find the file in another directory, and made AMORE reliant on that Makefile
  instead.
- Build got further, but a few header files weren't found. The configuration seems to not know the proper location to find some files.
- Continued attempting to get the previous build of AMORE working, by manually changing dependencies to our new version of root.

#### Documentation

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- Documentation is key to the long-term success of the project.
- We have been taking extensive notes and recording everything we have been doing.
- These logs will be compiled into proper manuals.
  - step-by-step instructions
  - troubleshooting

#### Future Goals

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## Questions

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