# Revamp of High Energy Physics Laboratory's Computer Systems

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Milestone 6 Goals

GEM Computers

Compute Cluster

Muon Tomography Station

Existing MTS

Development MTS

Documentation

Future Work



### Milestone 6 Progress

Milestone 6 Goals

GEM Computer:

Compute Cluster

Tomography Station Existing MTS Development MT

Documentatio

Future Work

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**

Milestone (

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Documentation

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#### Compute Cluster

Milestone 6

GEM Computers

Compute Cluster

Muon
Tomography
Station
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Future Work

- NAS-0 hard drive issues have been slowing its integration into the cluster.
  - Confusing drive labels makes replacing several drives challenging.
- SE software installation and configuration is being used for training.
  - The sysadmins need to get used to working without me.
  - They will gain valuable, first-hand knowledge about how the cluster is put together.

## **Existing MTS**

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GEM Computers

Comput Cluster

Muon Tomography Station

Existing MTS

Development MT

Documentation

Future Work

- The MTS is being operated in a degraded state.
  - Not all sides of the detector are operational.
  - Data can still be collected.
- User-friendliness script is being written.
  - Packaging provided operation instructions into an easy-to-use script.
  - Ease workload of MTS researchers.

### Development MTS

Milestone 6

GEM Computer

Compute Cluster

Muon Tomography Station Existing MTS

Development MTS

Documentation

Future Work

- 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, manually changing dependencies to our new version of root.

#### Documentation

Milestone 6

GEM Computer:

Compute Cluster

Muon Tomography Station Existing MTS

Documentation

Future Work

- Manuals have been created for:
  - the rebuild of the computing cluster.
  - the construction of the development MTS machine.
- These manuals are incomplete, but they are living documents to be lengthened as the two projects develop.

#### Future Work

Future Work

- Computing Cluster
  - Fully integrate remaining cluster component.
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## Questions

Milestone (

GEM Computers

Cluster

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