

DYNES End-site Application

Name: University of Iowa, Department of Physics And Astronomy, High Energy Physics Group

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Point of Contact for this Application: Yasar Onel, yasar-onel@uiowa.edu, 319 335 18 53

Type of DYNES Site (Regional Network or End-Site): End-Site

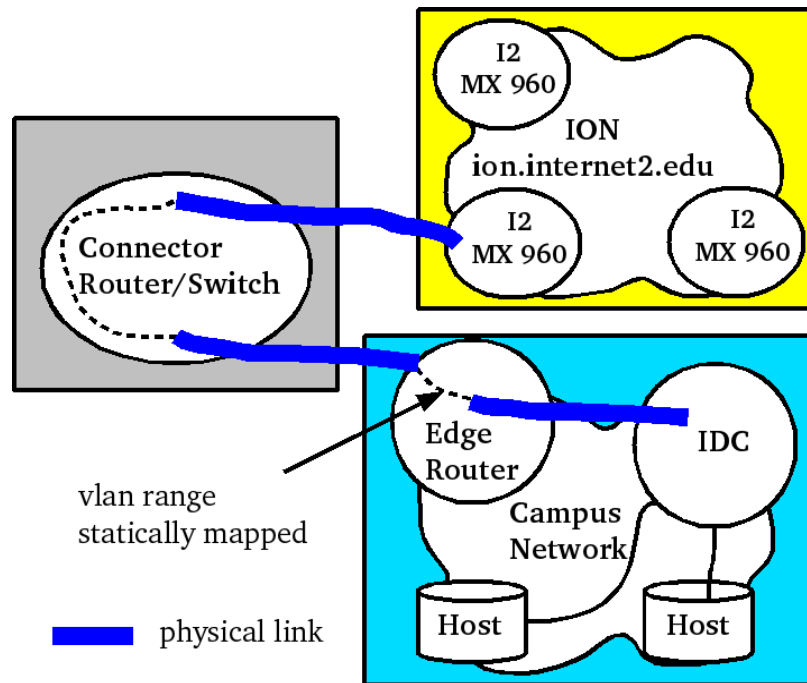
•Participation Overview

Participation in the DYNES network is primarily intended to help reduce the future heavy data traffic in the University of Iowa (UI) Tier3 center for the CMS experiment at the LHC. The UI CMS Tier3 center is serving over 15 physicists on campus and is currently under a major hardware upgrade process. Physicists will be actively using the Tier3 center for data analysis and storage of analysis results together with small-medium size data/Monte Carlo simulation files. The University of Iowa High Energy Physics (UI-HEP) group previsions that the data flow enhancement to be provided by participation in the DYNES project will enable a faster reach to CMS resources, which will be accompanied by prompt production of analysis outcomes.

Furthermore, UI-HEP offers a campus-wide computing environment for life and social sciences, medical sciences and arts through Open Science Grid. Therefore, the projected benefit of the on-campus researchers could be underestimated by the judgment of the current situation. The University of Iowa Information Technology Services (UI-ITS) Research Services group will provide support for technical implementation. The University of Iowa has been a member institute of BOREAS Regional Optical Network since 2007 and will be ready for any further collaborative effort towards high quality networking that would enable important scientific production. The long term goal is to be an integral part of the DYNES project with strong collaboration primarily with the other member CMS communities and to utilize this overall infrastructure and data flow integrity to actively produce scientific knowledge.

•End-Site Deployment Plan

The UI DYNES point-of-contact will be Yasar Onel. The UI-ITS will provide the hosting capabilities required by DYNES project. Yasar Onel has setup a Deployment Operation Team (DOT) of which the members are physics- and computer science-based. This group of five graduate and undergraduate students will be responsible for the receiving and deployment of the DYNES hardware components. This team is currently responsible for the receiving and deployment of the upgrade hardware of the Tier3 center. The proposed deployment plan for the DYNES equipment is presented below. The plan is subject to modifications upon receiving of more feasible and efficient suggestions.



The operations will be in collaboration with UI-ITS Research Services group. Team members from computer science will specifically be responsible for the configuration of the DYNES equipment. This operation will again be in collaboration with UI-ITS and the team was informed of the possibility of remote assistance. The physics part of DOT will be responsible for a full testing of the initial functionality.

For the local maintenance of the infrastructure, a combined team from physics/computer science students and a future UI-ITS representative will be formed. This team will be responsible for continuous monitoring of the operations, required maintenance and upgrades of the infrastructure and physical access in case of hardware failure. The UI-ITS will provide optimal support as stated in the attached letter.