

DYNES: Criteria for Site Selection

1 Introduction

This NSF-funded project (grant number 0958998) will develop and deploy the **Dynamic Network System (DYNES)**, a nationwide cyber-instrument built on the Internet2 ION network spanning about 40 US universities and 14 Internet2 connectors. A collaborative team including **Internet2**, **Caltech**, **University of Michigan**, and **Vanderbilt University** will work with regional networks and campuses to support large, long-distance scientific data flows in the LHC, other leading programs in data intensive science (such as LIGO, Virtual Observatory, and other large scale sky surveys), and the broader scientific community.

For the latest announcements concerning DYNES, subscribe to the dynes@internet2.edu mailing list.

- <http://lists.internet2.edu/sympa/subscribe/dynes>.

To ask questions of the DYNES project team, email dynes-questions@internet2.edu.

- <http://lists.internet2.edu/sympa/subscribe/dynes-questions>

The purpose of this document is to provide an overview of the site selection criteria. In this context, site refers to either a Regional Network or End-Site facility. An End-Site facility could be a campus or a lab facility within a campus. Additional documents are provided for Regional Networks and End-Sites who may be interested in participating in the DYNES project. These documents are as follows:

- DYNES: Overview
- DYNES: Regional Network and End-Site Participation Requirements
- DYNES: Frequently Asked Questions (FAQ)
- DYNES: Application Package

This document and all of the above are on the DYNES web site:

- <http://www.internet2.edu/dynes>

2 DYNES Site Selection Criteria Overview

The DYNES Regional Network and End-Site Participation Requirements document details the requirements for Regional Networks and End-Site involvement in DYNES. This document will focus on the Regional Network and End-Site requirements as they relate to the site selection process. The information contained here is intended to provide additional guidance for completion of the DYNES Application Package.

Sites will be selected with the goal of serving the largest range of NSF-funded user bases, including the greatest number of campuses and regional networks. The overall goal of DYNES will be to maximize NSF investment in this valuable distributed instrument, and to increase participation in this instrument by as many research projects as possible. The selection process will include an expert scientific review panel. The process will clearly define criteria to allow assessment of the applications to ensure that the sites selected will accommodate scientific projects that include proven track records of feasibility, that articulate the need for large-scale data transfers, and that demonstrate interest in the use of the distributed instrument .

3 Site Selection Criteria

The panel will evaluate proposals based on the **scientific merit** of the projects listed, the **actual need** of the End-Site, and the **broad impact** within and beyond the applicants' scientific discipline or campus. These evaluations will be based on the one-page responses to the criteria submitted by applicants.

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In evaluating the **Scientific merit** of the proposal the panel will consider involvement of the applicant in data analysis or operations; network transfer tool development; an established track record of reliable, and large-scale data transfers. In addition, for end-sites, the panel will consider the applicant's demonstrated willingness to allow access by researchers funded by NSF and other agencies within an individual campus. For regional networks, the panel will consider the applicant's demonstrated willingness to allow access by researchers funded by NSF and other agencies beyond individual campuses or within the largest scope of campuses connected by a given regional network. This criteria will primarily be focused on the End-Site participants.

Actual need will be assessed by considering the needs of actively funded physicists and other scientists involved, and the sufficiency of their existing facilities and capabilities. Situations that could represent instrumentation duplication will be avoided, e.g. two applications from a single campus would be discouraged. Assessment also will include consideration of existing resources available to these researchers. Institutions with a significant fraction of under-represented groups will also receive particular consideration. Consideration of need also will take into account demonstrated commitment and expressed need as shown by statements of support included in the original application from a significant number of campuses and regional networks. Consideration will also recognize the existing base of regional networks connected to ION, and their corresponding campuses in order to maximize investment. Actual need will also be judged somewhat differently for a Regional and an End-Site. Considerations for a regional might for instance be based on the number of participating End-Sites in the region.

Judgments of **broad impact** will be based on the effect on under-represented groups, the likelihood of benefit to multiple groups, the existence of outreach activities, and the ability to serve multiple users at multiple campuses or multiple campus within a single region.

Specific criteria that the panel will review include:

- 1) Does proposal meet the minimum DYNES requirements?
- 2) Does the proposal fall within the allocated budget envelope?
- 3) Does proposal build on existing network infrastructure?
- 4) Does the proposal meet the needs of the LHC community?
- 5) Does the proposal support other data-intensive scientific research?
- 6) Does the proposal plan for success and scale to include scientists from all disciplines?
- 7) Does the operational plan for the DYNES instrument make sense?
- 8) Does the proposal make sense in the context of the associated regional network proposal (for end-site proposals) or the associated end-site proposals (for regional proposals)?
- 9) Does the proposal show creativity and advance the state of the art of R&E networking?
- 10) Does the proposal look beyond the scope of the DYNES project and plan for success?
- 11) Is the proposal accompanied by letters of support from the campus and regional (where applicable)?