

DYNES FAQ

1. My university provided a letter of support when the DYNES proposal was submitted. Will we be on the list to receive equipment?

Thank you for your support of the proposal. The NSF has requested that there be a review process to choose the participants in DYNES. A process for applying is being created. Applications for both end-site and regional participants are now available at <http://www.internet2.edu/dynes>. Applications are due on Dec 15th, 2010.

2. Is there already a list of the ~40 Universities?

We are grateful to the institutions that submitted letters of support for the original proposal in August of 2009. The NSF has asked that each interested institution submit a proposal to be reviewed by a panel and those participating in the project will be chosen on the basis of scientific merit and demonstrated need. The selection criteria is now available for comment at <http://www.internet2.edu/dynes>.

3. Will a pdf of the slides from the community calls be shared?

The slides from the community calls may be found here:
<http://www.internet2.edu/ion/docs/20100805%20MRI%20DYNES.pdf>

4. Where are the DYNES applications expected to come from? PIs, local Offices of Research, local IT units?

End-site proposals are to be submitted by the researchers seeking to participate in DYNES. Regional network proposals are to be submitted by the appropriate technical lead at the regional network. Each end-site proposer will be required to submit an internal letter of support from the appropriate campus networking organization and an external letter of support from the Internet2 connector supporting the campus. Each regional network proposer will be required to submit letters of support from the end-site organizations they expect to connect. Further details are found in the draft version of the application that is now available for comment at <http://www.internet2.edu/dynes> .

5. If a campus is not selected for inclusion, is the option open for a campus to self-fund?

Internet2 offers ION to all connectors and campuses. Anyone wanting to participate in ION can and is encouraged to do so and if you choose to build an IDC that could be included as a component of DYNES. It is important that the

instrument be broadly deployed. On-going support for the self-funded DYNES node is likely to be the responsibility of the entity building it.

6. Is there some place that outlines the expected commitment (SLA's, staffing availability) beyond the initial set-up?

A draft version of the minimum criteria for participation is now available for comment at <http://www.internet2.edu/dynes> .

7. Can an institution connect to DYNES via NLR or ESnet?

DYNES is not a network or even a single project. There will be many projects that utilize the infrastructure created by the DYNES proposal. These will all use ION for their connectivity. It is certainly possible to create connectivity to an end site on Internet2 from ESnet. At this point such a connection from an NLR site would not be possible.

8. Are there recurring and non-recurring costs of setting up an ION connection for connector?

There are no additional fees or charges that Internet2 will impose for an ION connection. Internet2 cannot of course speak to any charges or fees that a campus or connector might charge to offer this service.

9. Is there a list of other experiments beyond the LHC and if there is a list is it prioritized?

In general, the goal is to support NSF-supported science with data intensive networking needs. The intent in the original proposal was to pick sites based on LHC participation and if a GENI researcher (for example) was at same school, the GENI researcher would be able to use the instrument as well. The review panel will have the flexibility to choose sites based on other experiments in support of the general NSF mission.

10. How will the sites be chosen under the revised model given the new requirements by the NSF?

A six-plus-member review panel will be assembled to review the proposals based on scientific merit, actual need and broad impact. See the site selection criteria document and the site requirements documents for more information, now available in draft form at <http://www.internet2.edu/dynes> .

11. Will prose description of project also be made available?

A prose description of the is now available in draft form at <http://wwwinternet2.edu/dynes> .

12. Now that you know the funding levels, do you believe that you can fund approximately 40 institutions?

Although the funding amount was decreased from \$2M to \$1.74M, we believe that we will be able to fund approximately 40 end-site institutions. As individual calls with the institutions commence, we will have a better idea and will update the community as we know more.

13. Is DYNES the same as ION?

DYNES is not a separate network service. DYNES is a distributed virtual instrument that uses IDC-based dynamic circuit services under the hood. ION is the Internet2 backbone network service that the DYNES project will use for connectivity between DYNES-supported regional networks. Participating in DYNES implies that the regional network will have and use an ION connection.

14. Is it necessary to run the DRAGON software in addition to the OSCARS software?

Using OSCARS alone or the combination of OSCARS/DRAGON will depend on the type of equipment and how it will be operated to provide dynamic services. The primary technical choice is between providing dynamic network services based on a Layer 2 mode or Layer 3 mode operations. A general overview is as follows:

Use OSCARS alone if:

- The network is built with multiple Juniper or Cisco routers, and the network elements are running in Layer 3 mode. This implies that MPLS provisioned LSPs are being utilized to provide L2VPN for vlan "circuit" provisioning, or
- The network is built with a single Juniper or Cisco router, doing local cross connects between ports

Use OSCARS/DRAGON combination if:

- The network includes one or more ethernet switches (various vendors supported) to do regular vlan based provisioning. In this case, the provisioning is based on regular Ethernet vlan switch functions. That is, the network elements are not using built in MPLS to signal LSPs.

The standards DYNES equipment will be based on OSCARS/DRAGON IDC software configuration. This will support the standard DYNES provided single Ethernet Switch, and also allow for the future addition of other Ethernet switches to the dynamic infrastructure as desired. For those sites that want to construct dynamic network services based on their current infrastructure (as opposed to using the DYNES provided equipment), other configurations may make more sense.

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In general, there are multiple options in terms of network element types/vendors and software configurations for the provision of dynamic services. Each site will likely have a specific set of considerations. It is expected that specific discussions with interested sites will be held prior to the application submission date, during the review process, and after site selection.

15. Before DYNES was announced, ION service existed – are there ways for connectors and universities to participate in ION.

There certainly are ways for sites and connectors to began using the ION network. More information regarding ION may be found at:

<http://www.internet2.edu/ion/>

16. Is there information available on how a pair of DYNES participants can use the circuit between them to create an end-to-end connection for moving data?

There is a document at <http://www.internet2.edu/dynes> called [DYNES: End-to-End Data Flow Architecture \(pdf\)](#). This document suggests ways in which sites can build actual end-to-end connectivity once a circuit is set up.