

NLR Support for GENI

NLR's support for the GENI project includes donations of bandwidth, accessibility, and co-location facilities. Questions about these services and facilities including "How do I get started?" should be sent to the **NLR ESS** (Experiments Support Services) at ess@nlr.net.

* **Free, non-dedicated bandwidth up to 10Gbps on three backbones**

- Layer 3 PacketNet
- Layer 2 FrameNet
- Layer 2 CWave - Cisco controlled Layer 2 network

NLR allows backbone access to any GENI researcher independent of membership affiliation.

* **Regional Access**

Regional access is through existing regional infrastructure where possible. There may be some regional costs and/or restrictions.

* **Equipment Co-location**

One year free, with the option to request an extension (subject to review).

The co-lo standard offering includes:

- Rack space, DC power, cooling (dependent upon resources available at the requested site)
- Up to three 1GE connections (research project to provide SFPs)
- Equipment installation during regular business hours. (Lead time to schedule and do the install is approximately four weeks. There may be costs associated with install.)
- Cross connects within the NLR cage (Cross connects to other networks may be outside NLR cages and will incur costs to be covered by the research project.)

To request equipment co-location:

Planning for equipment co-location can be initiated by sending a request to the **NLR ESS** (Experiments Support Services) at ess@nlr.net. The request should include a list of resources such as:

- NLR PoP location
- Type of connectivity - FrameNet, PacketNet, CWave. For more information about these services and available locations, contact NLR's ESS (ess@nlr.net)
- Bandwidth requirements
- Equipment power (DC), space, and cooling requirements

- Description of network connections and network interface media type e.g. fiber LR, SR, SM, MM, copper. Connection to NLR's Cisco 6509 switches requires an appropriate SFP module.
- OOB/console/async management access if needed.

If your project needs resources beyond the "standard offering"...

For projects that need resources beyond the scope of the donation, the project team may submit a request for support to the **NLR NNRC** (NLR Networking Research Council) via the **NLR ESS** (Experiments Support Services) at ess@nlr.net.

The request should include a one-to-two paragraph project description, a list of required resources with costs (if known) as outlined above, and an expected duration when beyond the standard one year.

The NNRC will review the proposal, ask additional questions as needed, and decide on the level of additional support that can be offered to the project.

GENI equipment co-lo installation process

The installation process, whether as offered to GENI or through NNRC approval, will proceed as follows:

- Confirm that the research team wants to proceed
- Create an INSTALL ticket
- NLR Layer2/3 NOC personnel will plan and manage the installation
- Confirm shipping address for the equipment and when the research team plans to ship the equipment. Likely shipping destinations are the IU/GRNOC or directly to the NLR PoP.
- Schedule the installation. The preferred installation is sometime during regular business hours, given approximately four weeks for advance planning.
- Installation, testing, and debugging if necessary

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Send questions or comments to: ess@nlr.net