

GENI Development and Prototyping Requirement	NLR/CWave Feature	Researcher Benefit
Requirements and architecture prototyping, esp. instrumentation	<ul style="list-style-type: none"> • Access to production traffic data on PacketNet • Access to NLR’s data via NLRView • Colocation space at NLR POPs where available to watch real traffic at Layers 2 and 3. • Ability to compare data sets through archive NLRView data sets 	<ul style="list-style-type: none"> • Ability to test instrumentation on real production traffic • Ability to install test software at NLRView sites
End-to-end slicing prototyping over a range of technologies, esp. working demonstrations and trial integrations	<ul style="list-style-type: none"> • Access to two unique layer 2 networks— up to 10 Gbps on FrameNet (VPNs) and up to 10Gbps CWave (MPLS and custom) • Colocation space at NLR POPs where available • Regional Optical Network members for local interconnections to NLR infrastructure • Access to NLR Sherpa service for provisioning VPNs • Dedicated block of GENI-specific IDs • Dynamically assigned IDs • Ability to install prototype software on CWave switches • Additional dedicated circuits at Layer 1 or Layer 2 at discounted rates or Layer 2 special needs • Ability to provision VPN circuits using Sherpa service making it easy to nail up and pull down prototype configurations 	<ul style="list-style-type: none"> • Ability to test in multiple protocol streams— VPN and MPLS • Ability to reconfigure “breakable” switches in CWave with prototype software • Ability to place prototype hardware in NLR POP sites to be used with either CWave or FrameNet • Ability to provide end-to-end connectivity and coordination for researcher projects through NLR and its member RONS • Ability to tap RONS, Cisco and NLR expertise for configuration and prototype network configurations • Ability to add dedicated connectivity at discounted rates for projects that have Layer 1
Operational concepts and costs prototyping, esp. administrative and operational control	<ul style="list-style-type: none"> • Access to NLRView • Colocation space at NLR POPs where available • Access to up to 10 Gbps on PacketNet for Layer 3 • Ability to interconnect projects via the Layer 3 infrastructure on an end-to-end basis 	<ul style="list-style-type: none"> • Access to real production network data through NLRView • Ability to put measurement equipment at NLR PoP sites for direct control testing