

July 2013

Overview

Merit's Network Openness Policy encourages cooperation in interconnecting Internet networks and Merit will provide interconnection with its network where technically feasible at reasonable rates and terms for the purpose of exchanging traffic.

Merit will engage selectively in settlement-free peering with a willing interconnected network when peering is beneficial to Merit's purposes.

This Peering Policy provides guidelines for Merit's settlement-free peering. Meeting or exceeding all of the peering requirements does not guarantee Merit will enter into a peering relationship with an Applicant. Merit reserves the right to grant or refuse peering to an Applicant. It is within Merit's sole discretion to modify, replace or discontinue this policy, or any peering relationship granted under the Policy, at any time. Merit can provision network peering connections at speeds from 1 Gbps Ethernet to 10 Gbps Ethernet, and is capable of IPv4 and IPv6 peering. Peering with the Merit network does not convey access privileges to, nor automatically provide for traffic exchange with, any of the other research and education networks or private networks with which Merit connects; traffic is exchanged with those networks only in ways that comport with the policies of those other networks.

Section 1: Peering Requirements

1. Routes must be contained in a single Autonomous System Number (ASN) per network to be shared.
2. An Internet Network must be a single Autonomous System Number.
3. Routing protocol must be BGP-4.
4. The average amount of bandwidth exchanged monthly in each direction aggregated across all interconnection links between the Peer and Merit's network shall generally equal or exceed 250 Mbps.
5. Merit will peer only at the following locations:
 - a. CoreSite Exchange, 427 South La Salle St., Chicago IL 60605
 - b. Equinix, 350 E. Cermak Rd, Chicago IL
 - c. Level 3, 600 W. Chicago Ave, Chicago IL 60611
 - d. Northwestern Data Center (Starlight), 710 North Lake Shore Dr., Chicago IL 60611
 - e. 123Net, 24700 Northwestern Hwy, Southfield MI 48075
 - f. Merit Iron Mountain Hut, 3222 East Frank Pipp Drive, Iron Mountain, MI
6. Peer must abide by the following routing policy:
 - a. Peer must use the same peering AS at each interconnection point and must announce a consistent set of routes at each point, unless otherwise mutually agreed.
 - b. No transit or third party routes are to be announced; all routes exchanged must be peer's and peer's

customers' routes.

- c. Peer must filter route announcements from its customers by prefix.
- d. Neither party shall abuse the peering relationship by engaging in activities such as but not limited to: pointing a default route at the other or otherwise forwarding traffic for destinations not explicitly advertised, resetting next-hop, selling or giving next-hop to others.

Section 2: Operational Peering Requirements

1. The Peer must operate a fully functional 24x7 Network Operations Center.
2. The Peer must be, in Merit's sole judgment, operationally staffed to be an effective peering partner.
3. The Peer must be responsive to unsolicited email and network abuse complaints, as well as routing, security and interconnection issues, providing knowledgeable staff within a two-hour period after notice.
4. The Peer must establish and maintain traffic exchange links of a sufficient robustness, aggregate capacity, and geographic dispersion, in Merit's sole judgment, to facilitate mutually acceptable performance across the interconnect links.
5. Each Internet Network must set next hop to be itself, the advertising router of the network. Each Internet Network will propagate such routes to its transit customers with its own router as next hop.
6. Each Internet Network shall implement "shortest exit routing" and advertise routes consistent with that policy, unless both Internet Networks mutually agree otherwise based on special circumstances.
7. Each Internet Network will restrict its advertisements to non-transit routes originating within the range for which peering is established and will not propagate the received route announcements outside such range.
8. Each Internet Network must operate a fully redundant network, capable of handling a simultaneous single-node outage in each network without significantly affecting the performance of the traffic being exchanged. The Peer must use a dynamic routing protocol for their internal gateway connectivity routing.

Section 3: General Policy Guidelines

1. Settlement free peering means that IP traffic will flow between the two peering organizations' networks without a transfer of funds between the two organizations.
2. Merit generally will peer with other education and research networks of regional and national scope.
3. Peer must agree to enter into a Mutual Non-Disclosure Agreement and an Interconnection Agreement.
4. All Requirements of the Peering Policy must continue to be met to continue a peering interconnection with Merit's network. Status under this policy will be evaluated periodically. In the case of a change in ownership or control of an Internet network with which Merit Network has an interconnection agreement, the relationship will be evaluated within 30 days of such change.

5. Merit Network will continue to monitor the development of the Internet and traffic conditions and make appropriate changes in this policy as the Internet continues to evolve. Merit Network reserves the right to modify this Policy at any time.
6. All requests for settlement-free or regional interconnection peering must be submitted to peering@merit.edu. An Internet Network may submit a request for interconnection once per calendar quarter.