

## Technical Specifications for Health Care Network Access

The goal of Michigan's Rural Health Care Pilot Program (RHCPP) project is to construct and operate a highly reliable, always available, high-speed network linking health care providers (HCPs) throughout rural Michigan. The network, especially the backbone that interconnects multiple sites, is designed to be redundant and resistant to failures. Each connection will provide three different types of network communication: intra-network traffic (participating HCP to participating HCP), access to the commercial Internet, and access to the research-based Internet2 network. The network is designed to be adaptive and scalable to meet the always changing health care landscape. All sites on the network will have access to the full set of Internet Protocol (IP) services/ports, including advanced services. The network will also be IPv6 (IP version 6) capable. All hardware will be brand name (made by industry-leading manufacturers), and all equipment, transmission methods, and systems will be based on industry standards.

All sites will have easy access to around-the-clock (24x7x365) network support. At a site's option, the vendor can fully support the network and related hardware. The vendor will be required to maintain a fast response and repair time. Each site will also receive monthly usage and incident reports.

In order to cover the wide range of health care sites, we have categorized them into four tiers. Each tier has different technical specifications and connection capabilities. The tiers are described below. Tier titles, such as "Large Regional Referral Hospitals," are purely informational and may not accurately describe all sites included in a tier.

### Tier 1 – Large Regional Referral Hospitals

- Connection capable of 1 Gbps
- Capable of at least 400 concurrent virtual private network (VPN) sessions with sustained, bidirectional VPN throughput of at least 500 Mbps
  - Configuration of sixty (60) VPNs is included in the installation
- 99.999% uptime
- 256 IP addresses or routing of existing HCP-owned IP addresses

### Tier 2 – Other Hospitals

- Connection capable of 45 Mbps
- Capable of at least 200 concurrent VPN sessions with sustained, bidirectional VPN throughput of at least 35 Mbps
  - Configuration of thirty (30) VPNs is included in the installation
- 99.999% uptime
- 128 IP addresses or routing of existing HCP-owned IP addresses

### Tier 3 – Large Clinics (5 or more clinicians) and county/regional health departments

- Connection capable of 10 Mbps
- Capable of at least 100 concurrent VPN sessions with sustained, bidirectional VPN throughput of at least 8 Mbps
  - Configuration of fifteen (15) VPNs is included in the installation

- 99.99% uptime
- 64 IP addresses or routing of existing HCP-owned IP addresses

Tier 4 – Clinics (less than 5 clinicians)

- Connection capable of 1 Mbps
- Capable of at least 50 concurrent VPN sessions with sustained, bidirectional VPN throughput of at least eight (8) Mbps
  - Configuration of ten (10) VPNs is included in the installation
- 99.99% uptime
- 16 IP addresses or routing of existing HCP-owned IP addresses