

## ACADEMIC ALLIANCE

The OmniPoP is a collaborative effort between 12 of the member universities of the Big Ten Academic Alliance. Together, these institutions have pooled their efforts to create a high performance shared infrastructure based in the Chicago area. This infrastructure was designed to complement and augment the shared fiber infrastructure that the Big Ten Academic Alliance members had previously purchased.

The OmniPoP operates a high capacity switching infrastructure that supports 10 gigabit and 100 gigabit connections to its member institutions and equivalent high capacity links to national research and education networks such as Internet2, ESnet, and Starlight. This allows OmniPoP connections to be leveraged to provide services to large data flows in support of multi-institutional cooperative research efforts. Efforts supported today include interconnections between the Large Hadron Collider (LHC) Tier 2 efforts at the member institutions and the Midwest Openflow Crossroads Initiative (MOXI) project which links several midwest regional networks to the GENI backbone.

The Omnipop infrastructure consists of a redundant pair of 100 gigabit capable switches. These switches operate from geographically diverse co-location facilities within the Chicago metropolitan areas. These facilities also serve as Points of Presence (PoPs) for other major networks such as Internet2, ESnet (Department of Energy's Energy Sciences Network), and Starlight (the international peering exchange), enabling seamless cross connections to the major national and international research and education networks that support much of the academic research community. An additional benefit to these facilities is that they offer the opportunity for Big Ten Academic Alliance members to co-locate additional network related equipment in support of their own projects independent of the OmniPoP core infrastructure.

The switches support 10 gigabit and 100 gigabit connections for member and affiliate institutions. To date, seven 100 gigabit connections:

- University of Michigan
- University of Chicago
- University of Wisconsin (2)
- Indiana University/Purdue University (shared)
- University of Iowa
- University of Illinois – Urbana Champaign/ScienceDMZ/NCSA

and eighteen 10 gigabit connections:

- Wiscnet (Affiliate member) (2)
- University of Illinois – ICCN (2)

University of Chicago



guidance of the Provosts, many Big Ten Academic Alliance stakeholder groups convene and carry out collaborative programs on a regular basis and typically fall into one of three categories:

**Executive Leadership:** These groups include senior leaders at Big Ten Academic Alliance member universities who govern and/or make investments in Big Ten Academic Alliance activities, e.g., Chief Information Officers, Vice Chancellors for Research, and Deans.

**Program Management/Task Forces:** These groups are typically convened by an executive leadership group to accomplish a particular analysis or to manage a Big Ten Academic Alliance project or program.

**Peer Groups:** These groups are typically self-organizing peers from member universities who get together (virtually and/or face-to-face) to share ideas and best practices.

Management of the OmniPoP is overseen by the OmniPoP Executive Board comprised of the Chief Information Officers (CIOs) of the Big Ten Academic Alliance member institutions. Routine technical operations are coordinated by a Technical Advisory Committee, which is comprised of two representatives from each member institution.