Quad Chart for:
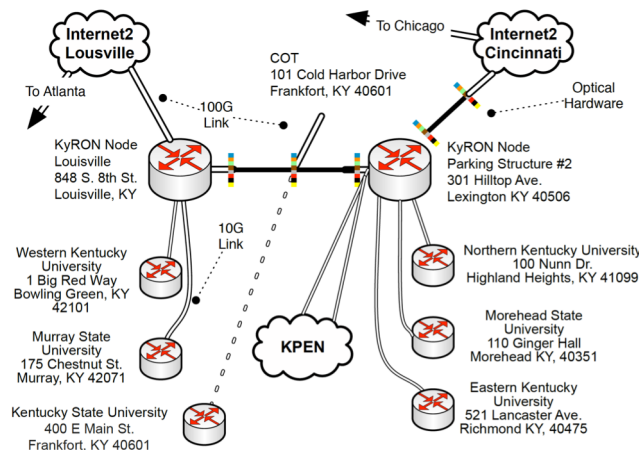
CC* Team: KyRC - A Kentucky Research Computing Team

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Challenge:

- Researchers increasingly use big data to drive research discoveries.
- Big data introduces compute, storage, and data transport challenges.
- Selecting the appropriate or best Cyber Infrastructure (CI) solution requires significant expertise.
- Big data CI expertise has become a key challenge for campus IT groups.

Broader Impacts:

- Enable institutions with limited computational resources to participate in research and new discoveries that require big data.
- Enable research in areas heretofore not part of the computational community.
- Address the shortage of qualified CI support staff at regional universities

Solution/Approach:

- Goal: Support research at regional institutions through the use of advanced cyberinfrastructure (CI)
- Key Institutions: EKU, KCTCS, KSU, Morehead State, Murray State NKU, UofL, WKU, and UK
- Form a regional CI support team – the *Kentucky Research Computing Team*
- Hire three new CI Engineers and a Community Facilitator
- Build on existing CI expertise

Research/Education Drivers:

- Biological Sciences – Murray State
- Chemistry – UofL
- Software Security – NKU
- Big Data/Data Visualization – UofL
- Statistics/Computer Vision – NKU
- Cancer Research – UofL
- Pathology Informatics – UK
- Biomedical Imaging – UofL
- Epidemiology – EKU
- Neuroscience – UofL
- High wage/high demand Educational Programs – KCTCS

Planned Activities

- Faculty Engagement Activities
  - Regional Training Events
  - On-site Training Events
  - National Training Events
  - Institutional Staff/Workforce Training Events
  - One-on-One Faculty Engagement Meetings
  - Networking and Information Sharing Events
  - Local Research Liaison Recruitment/Training Events
- Support Services
  - Institutional Infrastructure Analysis and Monitoring
  - Shared Documentation