

# NSF Campus Cyberinfrastructure PI and Cybersecurity Innovation for Cyberinfrastructure PI Workshop

September 23 – 25, 2019 | Minneapolis, MN

**NSF Program:** CC\* Award Number: 1925687

**Program Area:** Cyber Team – R&E CI-based Regional Facilitation

PI: Brian Nichols

co-Pls: James Griffioen, Doyle Friskney

Project Title: CC\* Team: KyRC - A Kentucky Research Computing Team



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## **Quad Chart for:**

### CC\* Team: KyRC - A Kentucky Research Computing Team

Brian Nichols, James Griffioen, Doyle Friskney
University of Kentucky

#### **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.

#### √Internet2 Internet2 Lousville Cincinnati 101 Cold Harbor Drive Frankfort, KY 40601 To Atlanta KyRON Node Louisville Parking Structure #2 848 S. 8th St. 301 Hillton Ave Lexington KY 40506 Louisville, KY Northern Kentucky University Western Kentucky University 1 Big Red Way Bowling Green, KY 42101 100 Nunn Dr. Highland Heights, KY 41099 University 110 Ginger Hall Morehead KY, 40351 Murray State University 175 Chestnut St. Murray, KY 42071 **KPEN** Eastern Kentucky University 521 Lancaster Ave. Richmond KY, 40475 Kentucky State University 400 E Main St. Frankfort, KY 40601

#### **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