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Access to Cyberinfrastructure Resources: Federal Funding Pathways for HBCUs and TCUs

May 30, 2024



#MSCCAnnualMeeting #MSCCinDC

Our Panelists Today

Dr. Amy Apon, National Science Foundation (NSF)Dr. Jon Gant, National Telecommunications and InformationAdministration (NTIA)

Ana Hunsinger, MS-CC (Moderator)





Access to Cyberinfrastructure Resources: Federal Funding Pathways for HBCUs and TCUs

Amy Apon, Program Director

Office of Advanced Cyberinfrastructure

National Science Foundation

Advanced Cyberinfrastructure Funding Opportunities

Advanced Computing	Production and operational level advanced computing and data capabilities and services
Networking & Cybersecurity	Advanced networking and security infrastructure, research and communities of practice capabilities
Learning & Workforce Development	National research workforce for creating, utilizing, supporting advanced CI: SCIPE, CyberTraining
Software & Data Cl	Supports development and deployment of robust, reliable, sustainable data and software Cl
Strategic Investments	Special opportunities, cross-cutting and national initiatives, CI for open science and public access

Campus Cyberinfrastructure (CC*)

Must be SCIENCE DRIVEN

Must have a campus Cyberinfrastructure Plan (except Strategy awards) Seek to create partnerships – researchers, educators, IT organization

Area 1: Data Driven Networking Infrastructure

Campus up to \$700K Region up to \$1.4M

Technical solution; network management plan and diagram; leverage community Area 2: Computing and the Computing Continuum

Campus up to \$700K Region up to \$1.4M

Multiple science drivers and needs; architecture; 20% is shared, typically through PATh Area 3: Network Integration and Applied Innovation

Small up to \$500K Large up to \$1M

Networking R&D applied to the campus network with graduate student involvement Area 4: Data Storage and Digital Archives

Campus up to \$700K Region up to \$1.4M

Multiple science drivers and needs; architecture; 20% is shared, typically through OSDF Area 5: Strategy

Campus up to \$100K Region up to \$200K

A grant to help teams plan for a full proposal! No Cl plan; Funds community building activities; No hardware

See <u>NSF 24-530</u> for details. Deadline on October 15, 2024.



Program Officers: Amy Apon, <u>awapon@nsf.gov</u> and Kevin Thompson, <u>kthompso@nsf.gov</u>





Quad Chart for:

Setting Up Research Foundations Multiple Organization Regional OneOklahoma Friction Free Network (SURF-MORe-OFFN)

Challenges Project Seeks to Address:

- Extend the OneOklahoma Friction Free Network to four under-resourced campuses and one research center by providing advanced networking capabilities
- Enable fast and secure data transfers required for scientific and highperformance computing
- Offer collaborative research computing opportunities across campuses
- Expand research and education in a variety of disciplines including natural science, cybersecurity, biomedical engineering and nursing

Solutions and Deliverables:

- Provide a proven off-the-shelf hardware platform
- Realize the Science DMZ goals through the use of independent network connections, consisting of dedicated optical pathways to OneNet and the local campus backbone
- Deploy a flexible infrastructure, to be used simultaneously by multiple research entities
- Leverage federation to provide oversight and visibility into the operations of the platform

OneOklahoma Friction Free Network (OFFN) Historical Project Map



New Participating Institutions:

- Mid-America Christian University
- Northwestern Oklahoma State University
- Oklahoma State University Biomedical Imaging Center
- Rose State College
- Western Oklahoma State College



Scientific and Broader Impacts:

- Enable participating institutions to expand research and education activities on their campuses and foster collaborative opportunities for faculty and students across Oklahoma
- Expose faculty and students to leading researchers and cyberinfrastructure practitioners through STEM and Cl opportunities that impact education for undergraduate and graduate students
- Reach diverse student groups, including Hispanic, military, first-generation and adult learners
- Increase competitiveness to create a stronger and more diverse workforce both within Oklahoma and nationwide

OneNet Dashboard:

 <u>http://dashboard.offn.onenet.net/</u> maddash-webui/

Previous Related Work:

 https://onenet.net/care-moreoffn-award-expands-oklahomasresearch-network/ Tribal Colleges and Universities Program (TCUP) NSF 21-595 Program Contact: Jody Chase, <u>lchase@nsf.gov</u>

Build Capacity

- Instructional Capacity Excellence in TCUP Institutions (ICE-TI)
- *Targeted* STEM Infusion Projects (TSIP)
- Small Grants for *Research* (SGR)
- *Preparing* for TCUP Implementation (Pre-TI)
- Cyberinfrastructure Health, Assistance, and Improvements (CHAI) -window until 10/14/24

Build *on* Capacity

- TCU Enterprise Advancement (TEA) Centers
- TCUP Secondary and Elementary Teachers in STEM (TSETS)
- TCUP Partnerships can partner with a non-TCUP partner institution

NSF 24-536: Computer and Information Science and Engineering Research Expansion Program

Program Solicitation

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

May 02, 2024

February 07, 2025

February 06, 2026

CISE MSI promotes capacity building and institutional infrastructure development for CISE programs at MSIs, as well as partnerships between MSIs and non-MSIs across the nation. These activities are intended to be a driving force for strengthening and diversifying U.S. research and education pathways and providing historically marginalized communities new opportunities in STEM careers. **Proposals may be submitted only by accredited Institutions of Higher Education (IHEs) that are recognized as Minority Serving Institutions**



Relevant EPSCoR Research Infrastructure Improvement (RII) Programs

Track-2: Focused EPSCoR Collaborations (NSF 22-633)

Interjurisdictional collaborations on research theme chosen by NSF EPSCoR to align with Foundation-wide priority areas (up to \$1.5M per year for up to 4 years; next deadline Jan 2025)

Track-4: EPSCoR Research Fellows (NSF 23-535)

Fellowships for Assistant, Associate Professors, or Research faculty to have extended research visits to premier private, governmental, or academic institutions in the U.S. (up to \$300k over 2 years; next deadline April 2024)

EPSCoR Collaborations for Optimizing Research Ecosystems (NSF 23-587)

E-CORE supports jurisdictions in building capacity in one or more targeted research infrastructure cores that underlie the jurisdiction's research ecosystem (up to \$8M over 4 years, plus renewal opportunity; deadline: July 9 (2nd Tuesday in July thereafter))

EPSCoR Research Incubators for STEM Excellence (NSF 23-588)

E-RISE builds a jurisdiction-wide network of teams of researchers that incubate research in a STEM topical area aligned with priority areas for jurisdiction (up to \$7M over 4 years, plus renewal opportunity; next deadline: Aug 13 (2nd Tuesday in Aug thereafter).





Q&A

Amy Apon, awapon@nsf.govNSF/CISE/OACKevin Thompson, kthompso@nsf.govNSF/CISE/OAC

Extra Slides

Incomplete Summary of CI resources and services for the research community

Democratized access to advanced

computing



ALLOCATIONS SUPPORT OPERATIONS METRICS



Advanced Computing Resources

- Leadership-Class Computing Facility (LCCF) advancing to FDR and construction
- National Artificial Intelligence Research Resource (NAIRR) pilot: <u>nairrpilot.org</u>



Science Gateways expertise

Community and workforce development



Minority Serving Cl Consortium (MS-CC)



CyberTraining & SCIPE

CI Workforce Development

Portals: • ACCESS: <u>https://access-ci.org/</u>

- LCCF: <u>https://lccf.tacc.utexas.edu/</u>
- PaTh: https://path-cc.io/
- SGX3: <u>https://sciencegateways.org/</u>
- MSCC: <u>https://www.ms-cc.org/</u>
- RCD Nexus: <u>https://rcd-nexus.org/</u>
- <u>CaRCC: https://carcc.org/</u>
- Trusted CI: <u>https://www.trustedci.org/</u>
- Research SOC: <u>https://omnisoc.iu.edu/services/researchsoc/</u>
- CI Compass: <u>https://ci-compass.org/</u>

The National AI Research Resource (NAIRR)

Computational, data, software, model, training and user support resources for responsible discovery and innovation in Al.

- Initially supporting:
- o Safe, secure, & trustworthy AI
- Application of AI to healthcare
- Environmental & infrastructure sustainability
- o Infrastructure support to educators
- Sign up for announcements by emailing: <u>NAIRR_PILOT_ANNOUNCEMENTS-subscribe-</u> <u>request@lists</u>

- NAIRR Pilot Portal
 - o Available at: <u>nairrpilot.org</u>
 - o Scroll down to see Current Opportunities!!
 - More information at <u>nairr_pilot@nsf.gov</u>





OPPORTUNITIES FOR COLLEGES AND UNIVERSITIES TO HELP COMMUNITIES BRIDGE THE DIGITAL DIVIDE

Presentation to the Minority Serving-Cyberinfrastructure Consortium Annual Meeting

Dr. Jon Gant, Director Office of Minority Broadband Initiatives

US Department of Commerce National Telecommunications and Information Administration Office of Internet Connectivity and Growth



May 2024

Importance of High-Speed Internet Service







Availability, Adoption, and Transformation of High-Speed Internet Service



Achieving digital equity is vital to promoting personal welfare and civic engagement of the Covered Populations, focusing on issues like lack of telehealth services, online jobs, etc.

IMPACTS OF DIGITAL EQUITY:

Economic and Workforce Growth

Through increased job opportunities and business growth

Educational Expansion

By tailoring accessible learning and upskilling opportunities to individual needs and preferences



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More Individual Control of Health

From improved access to telehealth and increased health literacy



Improved Civic/Social Engagement & Delivery of Essential Services

Through increased participation in community events and access to services to improve their quality of life.



COMMITMENT TO AFFORDABLE, RELIABLE, HIGH-SPEED INTERNET

Recognizing the devastating impact of digital exclusion, President Biden made a commitment that everyone in America will have access to affordable, reliable, high-speed Internet service.





As we strive to develop sustainable campus-level IT capabilities for data-intensive education and research programs, how can minority-serving colleges and universities join in to make sure everyone has access to high-speed Internet service and other digital opportunities in America?





NTIA's Administration of the Internet for All Programs



Program



https://www.internetforall.gov/

Consolidated Appropriation Act ProgramsConnecting
MinorityTribal
BroadbandMiddle Mile

Connectivity

Program

Bipartisan Infrastructure Legislation Programs

Broadband Equity Access and Deployment Program (BEAD)

Communities

Pilot Program

Digital Equity Program (DE)





Whole of Government Approach – No One Program Can Address the Challenge of Digital Equity

Ensure that various federal agencies are working together to create a more inclusive and equitable landscape for all Americans







Colleges & Universities Bring Critical Assets, Resources, And Capabilities To Address The Digital Divide







The Digital Equity Act seeks to promote digital equity and inclusion

BEAD

\$42.45B

Broadband Equity, Access & Deployment Program

A program to get all Americans online by funding partnerships between states or territories, communities, and stakeholders to build infrastructure where we need it and increase adoption of high-speed internet.

Today's focus DIGITAL EQUITY

\$2.75B

Digital Equity Act

Three programs that provide funding to promote digital inclusion and advance equity for all. They aim to ensure that all communities can access and use affordable, reliable high-speed internet to meet their needs and improve their lives.

TRIBAL

\$2.00B

Tribal Connectivity Technical Amendments

A program to help tribal communities expand high-speed internet access and adoption on tribal lands. MIDDLE MILE

INTERNET

\$1.00B

Enabling Middle Mile Broadband Infrastructure

A program to expand middle mile infrastructure, to reduce the cost of connecting unserved and underserved areas.



There are two state formula grant programs, which are separate but connected, and a third competitive grant program



Hawaiian orgs have a separate statutory set-aside and separate program requirements under the State Planning and Capacity Programs, as detailed on the next page

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INTERNE Purpose of the State Digital Equity Capacity Grant Program

The purpose of the State Digital Equity Capacity Grant Program is to **create the conditions where individuals** and communities have the information technology capacity that is needed for full participation in the society and economy of the United States.

This Program will make funds available for States and Territories to begin implementing their accepted State and U.S. **Territory Digital Equity Plans** (and related purposes as detailed in the NOFO).

COVERED POPULATIONS²

(**)

Individuals who live in **covered households** (defined as households with income of not more than 150% of the poverty level)



Aging individuals aged 60 and older



Incarcerated individuals (as defined by the State or Territory), other than individuals who are incarcerated in a Federal correctional facility



Veterans





Individuals with disabilities



Individuals with a language barrier, including individuals who are English learners and have low levels of literacy



- Individuals who are members of a racial or ethnic minority group; and
- Individuals who primarily reside in a rural area



FOR ALL

Allocations to States to Understand, Measure, and Address Systemic Barriers to Digital Equity

Key Goals

Barriers

Availability and Affordability of Access

Online Accessibility of Public Resources

Digital Literacy

Awareness of Online Privacy and Cybersecurity

Availability and Affordability of Devices and Technical Support

- Serve Covered Populations
- Collaborate with Communities
 Impacted
- Co-create long-lasting, meaningful change
- Performance measurement and evaluation of implementation strategies

26 Internet For All







Key Dates to Remember



Application submission and grant award dates for the Capacity Grant Program are described in the NOFO₁.



Period of Performance

States and US Territories will be able to spend down grant funds during the **5-year period of performance beginning on the date when the State is awarded grant funds**.



Application Due Date

Applications are due by the following dates for ...:

- States, D.C. and Puerto Rico: 60 days after the NOFO is released, May 28, 2024
- U.S. Territories: The due date for US Territories' Capacity Grant Applications is July 31, 2024
- Native Entities: 315 days after the NOFO is released; the Native Entity <u>application window</u> opens September 25, 2024 and closes February 7, 2025

Issuing Awards

NTIA expects to begin issuing awards to Eligible States on a rolling basis **no later than August 28, 2024**.







Download NOFO

https://www.internetforall.gov/

Contact State Broadband Office

Brainstorm, Get Organized, Prepare Proposal for Sub-Award





Contact Information

Dr. Jon P. Gant Director | Office of Minority Broadband Initiatives (OMBI) Office of Internet Connectivity and Growth (OICG) National Telecommunications and Information Administration (NTIA) U.S. Department of Commerce c: 202.821-6545 | jgant@ntia.gov











We need your insights!

Please take a few moments to take this quick poll about the panel



https://bit.ly/federalpanel



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