

# IMPACT REPORT

CONNECTING OKLAHOMA TO THE GLOBE

***OneNet***<sup>®</sup>  
Advancing Technology Across Oklahoma





## ONENET BY THE NUMBERS

**2,061 miles**  
of high-speed fiber  
backbone

**500+ million**  
gigabytes of data  
transported annually

**800+ gigabits**  
per second to the rest  
of the world

**1,500+ connections**  
spanning all corners  
of the state



## Traversing the Globe

When OneNet began serving Oklahomans in 1996, few organizations such as schools, libraries and health clinics were connected to the internet. In rural areas, entire communities were not connected. For 25 years, OneNet has worked to deliver internet access to all four corners of the state. Today, Oklahomans are connected not only across the state but also around the globe. High-speed internet access has brought the world to Oklahoma. Our state's citizens can travel the globe through a connection at school, a public library or other community organization. Whether it's digital educational resources, telemedicine visits or world-class research initiatives, OneNet's mission to advance technology across Oklahoma is making it possible for Oklahomans to connect in ways once unimaginable.

## Advancing Technology in an Evolving World

As technology changes at a rapid pace, OneNet's network and organization must evolve to meet the growing needs of communities for high-speed connectivity. OneNet makes continual enhancements – both technical and operational – to better serve our customers.

### Enterprise Enhancements

OneNet is regularly evaluating and refreshing our applications to improve customer communications and service delivery. We strive to keep our website user-friendly and accessible for customers. We continually update our billing system to improve the billing process and provide new options for customers. OneNet also utilizes a customer relationship management (CRM) application to enhance our circuit provisioning process, provide better access to information for our staff and accelerate ongoing communications with our customers.

### Data Center Upgrades

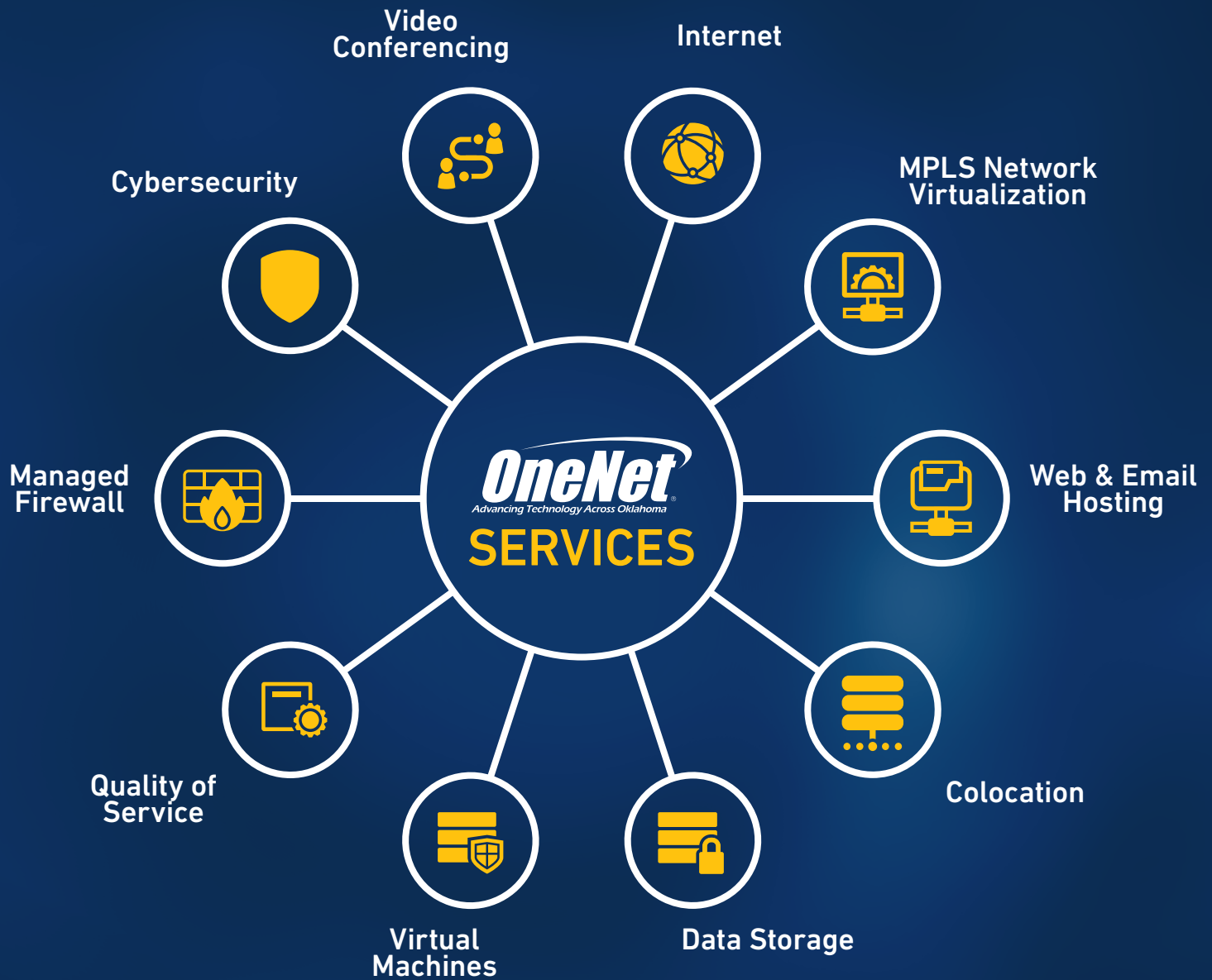
Maintaining high standards in our data center is a priority. A fully redundant, chilled water system ensures the data center always maintains the cooling needed to protect OneNet and customer equipment. Two hot aisle containment systems expand available rack space for customers needing colocation services and provides efficient cooling for the equipment housed in the system.

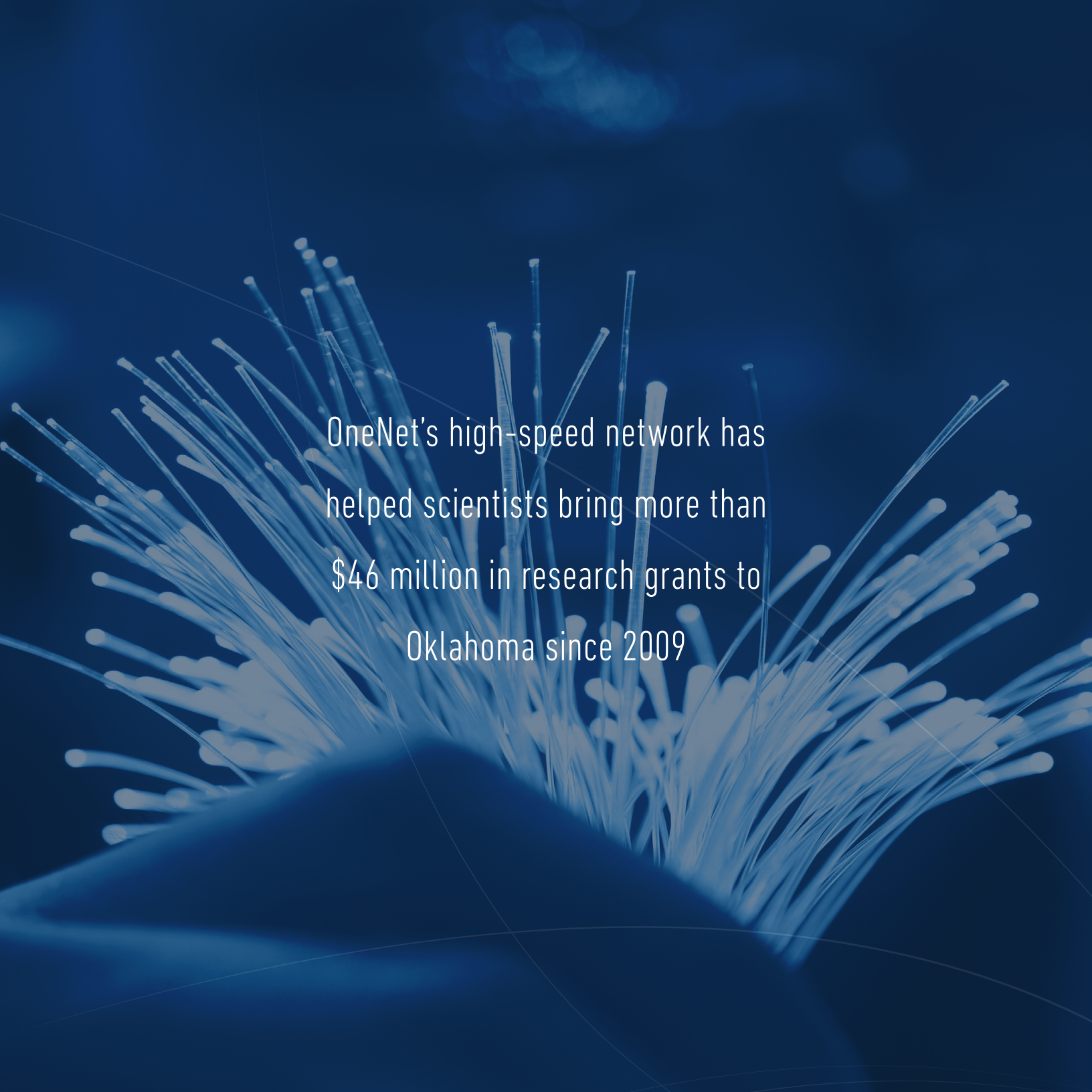
### Security Initiatives

Cybersecurity is a growing concern for OneNet customers and a top priority for OneNet's leadership. To help our customers manage cybersecurity issues, OneNet's engineering team has developed tactics for DDoS mitigation and other types of cyberattacks. We have expanded our managed firewall service options to better meet our customers' needs. Through customer outreach, we are educating our users on security techniques and how to prevent and manage attacks.









OneNet's high-speed network has  
helped scientists bring more than  
\$46 million in research grants to  
Oklahoma since 2009



## Advancing Oklahoma Research, Powering Big Data Movement Around the Globe

OneNet has a long history of advancing research in Oklahoma. OneNet's high-speed network has helped scientists bring more than \$46 million in research grants to Oklahoma since 2009.

Today, OneNet's 100Gbps research ring, regional partnerships and connection to Internet2 are expanding possibilities for Oklahoma researchers by increasing the capacity for big data movement.

As researchers drive demand for big data movement, OneNet has strategically positioned the state to participate in world-class, global research, including:

- Oklahoma Center for High Energy Physics – Collaborates with 34 countries on the ATLAS project
- University of Oklahoma's Center for Analysis and Prediction of Storms – Conducts storm-scale ensemble forecast with NOAA
- Oklahoma State University's High Performance Computing Center – Requires moving high-volume data across the country for bioinformatics research
- University of Oklahoma's Advanced Radar Research Center – Generates more than 20Tb of data per day for storm prediction research



OneNet provides exclusive access to Internet2's nationwide 100Gbps research and education network.

## **Oklahoma's Partner in Education**

Since 1996, OneNet has operated interdependently with higher education. OneNet's network is built upon the higher education system across the state, with OneNet's network gear housed at 40 higher education campuses. OneNet provides connectivity for the higher education institutions and in return, receives space in the institutions' data centers and support for our equipment. This partnership generates millions in savings each year and enables Oklahoma's students to become globally engaged citizens through reliable connectivity. OneNet internet connectivity saves higher education approximately \$10 million annually.

OneNet's partnership with education goes beyond universities and colleges. OneNet serves more than half of the K-12 school districts across the state, reaching more than half of Oklahoma's students and teachers. OneNet also serves career technology centers and public libraries. As a

provider for the E-Rate federal funding program since its inception, OneNet's goal has been to expand high-speed broadband services to Oklahoma's rural communities and drive down costs for these services. OneNet remains committed to ensuring that all of Oklahoma's students can participate in today's digital learning initiatives, so they are prepared for work and educational opportunities in our digital world.

## **Connecting OETA Viewers to Educational Television**

OneNet's commitment to education extends to educational television and the 650,000 viewers who tune in to the Oklahoma Educational Television Authority (OETA) weekly. OneNet connects OETA's towers to a fiber network, improving both reliability and quality of service for OETA's viewers. The fiber connections also create significant annual cost savings for the agency.



A photograph of two young women in a classroom setting, both smiling and looking at tablets they are holding. They are seated at a desk. In the background, another student is visible, slightly out of focus. The entire image is overlaid with a blue tint and a subtle geometric pattern of thin white lines.

Enabling Oklahoma's  
students to become globally  
engaged citizens through  
reliable connectivity



**853** Government Agency Sites



**57** College & University Campuses



**303** K-12 School Districts



**74** Libraries



**55** Career Technology Center Campuses



**54** Hospitals & Clinics



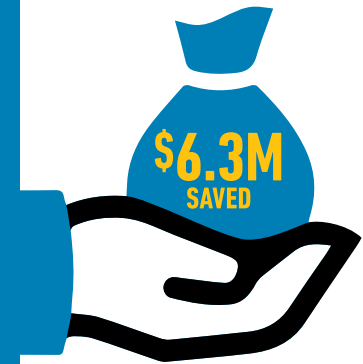
**13** Tribal Agency Sites



**46** Research, Nonprofit, Other Agencies

## Taxpayer Savings

Over the last few years, OneNet has successfully optimized the networks of several state agencies and created significant cost savings for taxpayers.

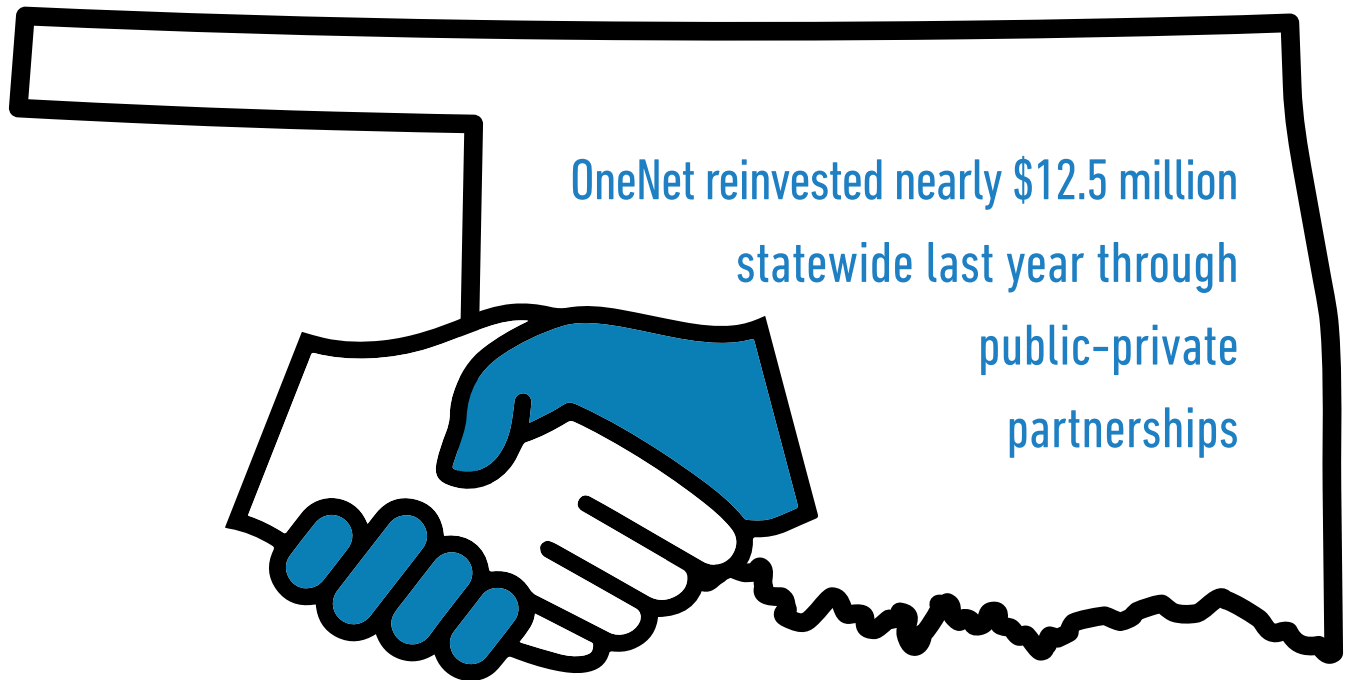



OneNet provides approximately 820 connections for state agencies. Network optimization for these agencies has created a projected total annual savings of \$6.3 million for the state.



## Public-Private Partnerships

Since its inception, OneNet has partnered with local telecommunications and cable providers to deliver broadband services to customers across the state. This partnership assists those we serve in finding affordable broadband options, while returning most of the customer fees to local communities. OneNet is a middle-mile internet service provider. This means we operate a network that connects communities across the state. We depend on local telecommunications and cable companies to provide the connection from our network to the customer's site, which is called the last-mile connection. OneNet greatly values the local companies who partner with us to provide last-mile services. Last year, OneNet paid last-mile providers nearly \$12.5 million to connect customers to our network. These customer fees are returned to local providers to support local broadband services.





Ensuring Oklahomans have access  
to the resources needed to succeed  
in their communities and beyond



## Connecting Rural Oklahoma



Completed in 2013, the Oklahoma Community Anchor Network (OCAN) connects rural communities in 35 Oklahoma counties to high-speed broadband services. Through management and operation of this 10Gbps network, OneNet provides new options for connectivity for education, health care and public safety institutions in previously underserved communities, so all Oklahomans have access to the resources needed to succeed in their communities and beyond. In addition, through OneNet's partnerships with local telecommunications providers, OCAN services extend to the private sector, creating opportunities for small businesses and advancing economic growth.

**2,072 MILES OF HIGH-SPEED FIBER**

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**93 COMMUNITY ANCHOR INSTITUTIONS**

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**35 OKLAHOMA COUNTIES**

## Expanded Regional Connections

OneNet is building on regional partnerships to boost connectivity in the state of Oklahoma and throughout the southcentral region. OneNet's geographic location as a crossroads uniquely positions the network to expand high-speed services across the region.

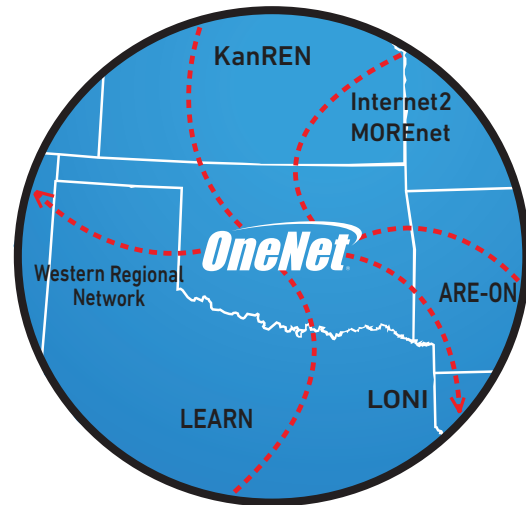
## Research and Education Networks

Multiple research and education networks are participating in the Midsouth U.S. Internet Exchange or MUS-IX, with the goals of increasing connectivity, lowering costs and bringing more content to member states. The consortium includes OneNet in Oklahoma, ARE-ON in Arkansas, LEARN in Texas and LONI in Louisiana. Consortium members are provisioning fiber and wave services across state lines to deploy more direct connections among these networks. OneNet's connection to Internet2 facilitates our connections with MUS-IX participants.

## Regional Networks

OneNet's current partnership with the Great Plains Network and our access to the Western Regional Network through Internet2 both provide regional connectivity for the southcentral states and connections to the West Coast. OneNet's connection to Internet2's high-speed, nationwide network extends this connectivity across the country.

## Regional Connectivity



OneNet's regional partnerships power high-speed bandwidth, connecting the southcentral region across the country and around the globe.

## Internet Exchange Oklahoma City

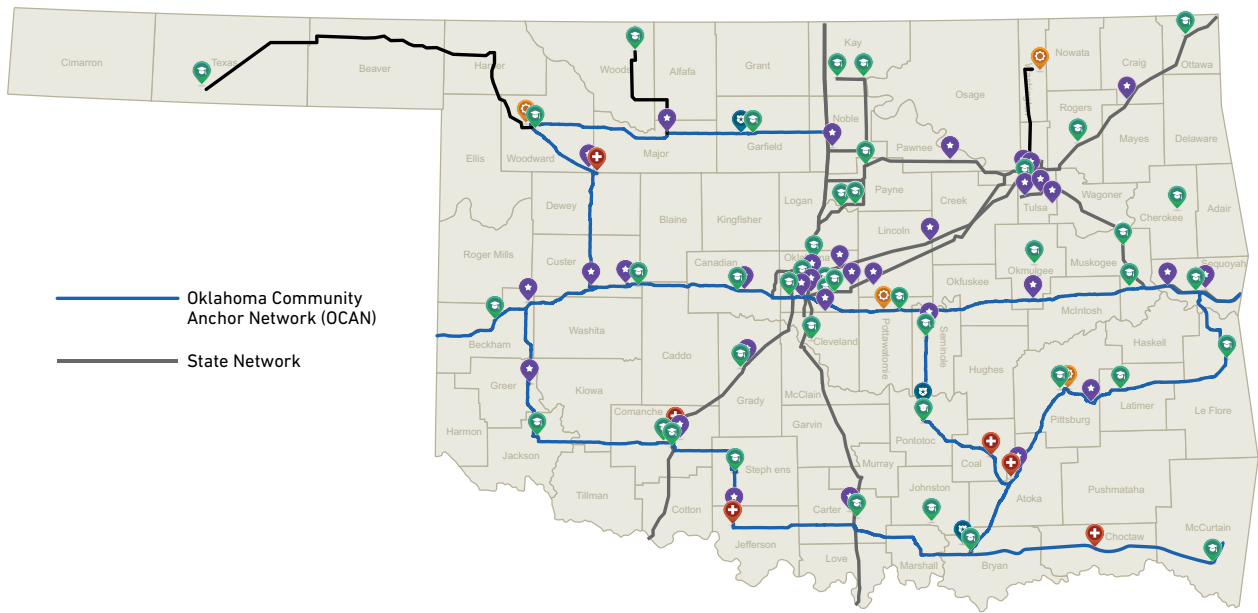
OneNet, along with Oklahoma data centers and telecommunications providers, have created a new partnership, the Internet Exchange Oklahoma City or iX-OKC. OneNet is facilitating fiber connections into Oklahoma City area data centers, where participants connect with OneNet's and each other's networks. iX-OKC partners can reduce costs through shared services and peering with other participants.



Connecting communities, states  
and regions to high-speed  
services that expand access and  
transform education, research,  
health care and public service



# OneNet Network



## OneNet Points of Presence



Higher Education  
Campuses



Career Technology  
Centers



Hospitals



Public Safety Agencies



Other



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