OneNet Impact Report

Serving Oklahoma for 30 Years

OneNet
30 Years
1996 · 2026
Oklahoma's Research & Education Network

OneNet By the Numbers

Utilizes
3,100+ miles
of high-speed
fiber backbone

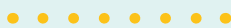**700+ million**
gigabytes of data
transported annually

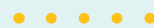**1,100+ gigabits**
per second to
the rest of the world

1,270 connections
spanning the state

1971 Statewide Talk-Back Television System is established and operated by the Oklahoma State Regents for Higher Education

1990s Legislators form concept for an integrated state network maximizing state-owned and commercial infrastructures

Oklahoma's Research and Education Network

In 2026, OneNet proudly celebrates 30 years as Oklahoma's trusted research and education network. Over the past three decades, our mission has remained clear: to drive progress in research, education, health care, and government services through high-speed connectivity.

From K-12 schools to career technology centers to colleges and universities, OneNet has stood as a committed partner in education across Oklahoma. Through our ongoing efforts to expand research connectivity across our state, OneNet has earned recognition as a key player in the national research and education network community.

Beyond education, OneNet delivers high-speed connectivity to libraries, research institutions, health care providers, and government entities at all levels—local, state, federal, and tribal.

OneNet connects Oklahomans to global research initiatives, digital learning tools, and virtual health care. Through our subscribers, OneNet creates meaningful connections for Oklahomans within communities and across the globe.

As we honor 30 years of service, the OneNet team remains committed to our mission of providing the connectivity required for our subscribers to accomplish their own missions in serving our fellow Oklahomans.

OKLAHOMA STATE REGENTS FOR HIGHER EDUCATION

Improving our future by degrees

OneNet is a division of the Oklahoma State Regents for Higher Education.

1992 Capitol bond issue provides $14 million to implement a comprehensive, statewide network

1995 Oklahoma State Regents for Higher Education approve OneNet business plan
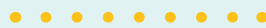
OneNet's Evolution

In the early 1990s, Oklahoma's state legislature envisioned an integrated state network that would leverage both public and private infrastructures. This vision led to a public-private partnership model and ultimately led to the creation of OneNet.

In 1992, voters approved $14 million from a $350 million statewide capital bond issue to fund the development of this network. A comprehensive business plan established OneNet as a division of the Oklahoma State Regents for Higher Education and by 1996, the network was fully operational.
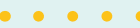
OneNet's original design was a hub-and-spoke infrastructure, with hubs in Oklahoma City and Tulsa and spokes extending to all corners of the state. At the time, the network supported a bandwidth of 45Mbps. Fast-forward three decades, and OneNet now delivers core bandwidths ranging from 100Gbps to 400Gbps, powering the high-speed connectivity essential for Oklahoma's most critical organizations.

Today, OSRHE continues to provide administration and leadership, and OneNet's infrastructure remains integrated with OneNet's higher education institutions, with network equipment housed on campuses across the state.

1996 Initial statewide deployment and implementation of OneNet

1997 Latimer County General Hospital sends first digital X-ray and CT scans through OneNet

"For 30 years, OneNet has been a catalyst in advancing research, education, health care and government services for vital institutions across Oklahoma. OneNet's commitment to meeting the high-speed connectivity requirements of our colleges and universities has empowered our state's institutions to excel in scientific discovery and learning. We are proud to celebrate this milestone and look forward to the continued impact OneNet will make in shaping the future of our state."
— **Chancellor Sean Burrage,** Oklahoma State Regents for Higher Education

1998 Joins the Great Plains Network

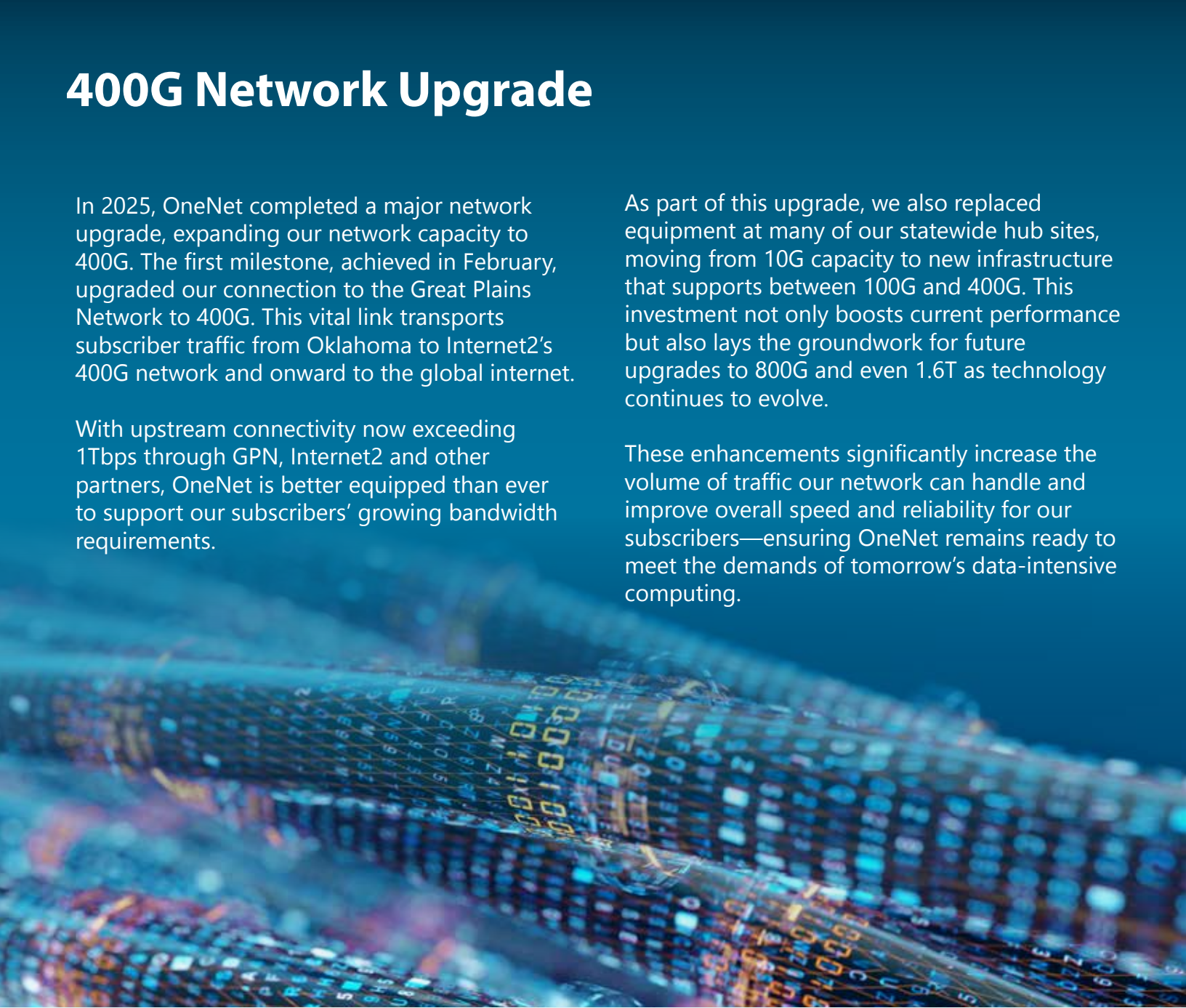**1998** Transmits 1,000 video conferences every week

400G Network Upgrade

In 2025, OneNet completed a major network upgrade, expanding our network capacity to 400G. The first milestone, achieved in February, upgraded our connection to the Great Plains Network to 400G. This vital link transports subscriber traffic from Oklahoma to Internet2's 400G network and onward to the global internet.

With upstream connectivity now exceeding 1Tbps through GPN, Internet2 and other partners, OneNet is better equipped than ever to support our subscribers' growing bandwidth requirements.

As part of this upgrade, we also replaced equipment at many of our statewide hub sites, moving from 10G capacity to new infrastructure that supports between 100G and 400G. This investment not only boosts current performance but also lays the groundwork for future upgrades to 800G and even 1.6T as technology continues to evolve.

These enhancements significantly increase the volume of traffic our network can handle and improve overall speed and reliability for our subscribers—ensuring OneNet remains ready to meet the demands of tomorrow's data-intensive computing.

1999 Begins providing Internet2 connectivity for Oklahoma's research institutions
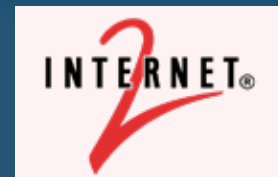
1999 Joins The Quilt

Research and Education Partnerships

OneNet's strategic partnerships facilitate connectivity and delivery of the best technologies for Oklahoma. Each one is vital to advancing our mission.

Internet2
OneNet is Oklahoma's connector to Internet2's 400Gbps nationwide network. Internet2 provides uninhibited network performance for the research and education community. Members are engaged in developing technologies fundamental to tomorrow's internet.

The Quilt
The Quilt brings together 43 regional optical networks across the United States to advance common goals. Through OneNet's membership in The Quilt, we identify and implement best practices of similar state networks.

Great Plains Network
The Great Plains Network is a consortium of universities and networks in the Midwestern states. Its members partner to facilitate the use of advanced cyberinfrastructure across their networks.

MUS-IX
The Midsouth U.S. Internet Exchange (MUS-IX) is a regional collaboration of four research and education networks—OneNet in Oklahoma, ARE-ON in Arkansas, LEARN in Texas, and LONI in Louisiana. MUS-IX works to reduce costs, enhance services, and coordinate mutual activities.

OneOCII
The OneOklahoma Cyberinfrastructure Initiative (OneOCII) is a statewide strategy for academic research computing in Oklahoma. OneOCII has achieved research technology improvements for higher education institutions across the state.

2002 Deploys a $1.7 million network bandwidth upgrade

2002 Internet2 becomes available to all higher education institutions, as well as CareerTech, K-12 schools and libraries
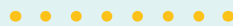
Advancing Oklahoma Research, Powering Scientific Discovery

OneNet has proven to be an indispensable partner in advancing research in Oklahoma. With high-speed connectivity and a robust infrastructure, OneNet facilitates seamless communications and big data sharing among researchers. As researchers drive demand to move data, OneNet has strategically positioned the state to participate in world-class, global research, including:

- Oklahoma Center for High Energy Physics — Collaborates with 42 countries on the ATLAS experiment
- University of Oklahoma's Center for Analysis and Prediction of Storms — Produces high-resolution regional climate simulations and storm-scale ensemble prediction
- Oklahoma State University's High Performance Computing Center — Requires moving high-volume data for brain imaging research
- University of Oklahoma's Advanced Radar Research Center — Generates abundant radar data for storm research and applications

OneNet serves as Oklahoma's gateway to Internet2's nationwide 400Gbps research and education network. Recent infrastructure upgrades by both Internet2 and OneNet have more than quadrupled OneNet's connectivity across the state and the nation, significantly enhancing our ability to support the data transfer needs of researchers at Oklahoma's higher education institutions.

2004 Joins the National LambdaRail, a network with capacities 873,000 times faster than residential internet

2006 Invests $8.1 million in routing, switching and optical network upgrade

"The ATLAS experiment generates PetaBytes of data every year, and as a Tier2 Computing Center, OU receives hundreds of TB a month delivered to process on Schooner. We regularly see transfers of up to 25Gbps from other ATLAS sites worldwide, and OneNet enables us to do that."
—**Horst Severini**, Ph.D., University of Oklahoma Associate Director of Remote and Heterogeneous Computing and Research Computing Facilitator

"I'm passionate about Oklahoma being a leader in high-performance computing. Championing OneNet to potential users is one of the paths to extending our own service to the community. OneNet spends the time to understand the challenges, how they are changing and proactively participates in pursuit of the solutions."
—**Stephen Wheat**, Ph.D., Oral Roberts University Senior Professor of Computer Science and Director of ORU Research Computing and Analytics Facility

"The opportunity to utilize the high-performance computing capabilities of larger institutions of higher education through a high-speed internet connection enriches and augments the USAO undergraduate student experience."
—**Dany Doughan**, University of Science and Arts of Oklahoma Professor of Chemistry and Computer Science

"OneNet is the partner you need when you're in the field of high-performance computing. From the beginning of our work at Langston University's Computing Center for Research and Education, OneNet has continuously supported us."
—**Franklin Fotou Fondjo**, Ph.D., Langston University Chair and Faculty, Department of Technology

2008 Forms OneOklahoma Cyberinfrastructure Initative—OneOCII—with OU and OSU to increase research computing

2009 Receives a USDA Rural Utilities Services distance learning and telemedicine grant to expand videoconferencing capabilities

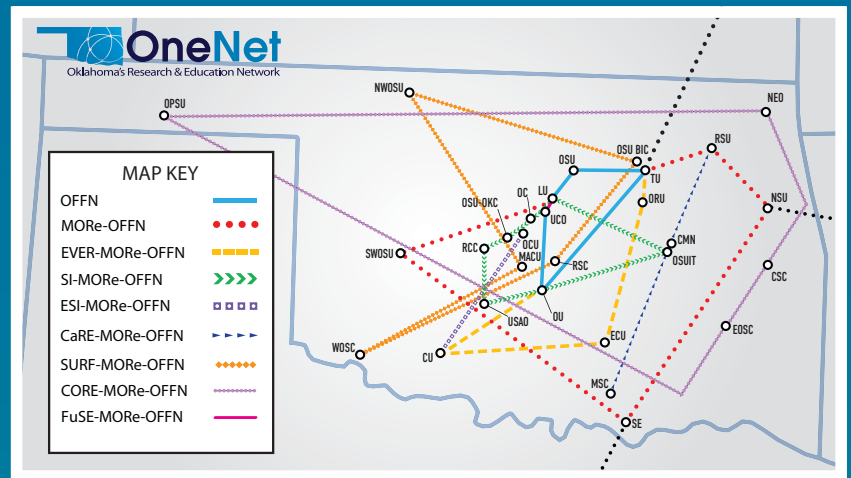# Oklahoma's Dedicated Research Network

Since 2009, OneNet's high-speed network has played a key role in helping Oklahoma secure nearly $59 million in grants aimed at expanding cyberinfrastructure for the state's higher education institutions.

The National Science Foundation has awarded OneNet and the State Regents six Campus Cyberinfrastructure grants to enhance the state's dedicated research network—a specialized segment of OneNet's infrastructure fine-tuned for handling research data.

Known as the OneOklahoma Friction Free Network, this advanced 10G and 100G research network offers universities and colleges a high-speed, dedicated pathway to internet and national research networks, delivering performance far beyond that

of traditional internet routes. This optimized network enables researchers to transfer large datasets with greater speed and efficiency.

Upon completion of the six grant-funded projects, the OFFN network will link 31 campus locations to cutting-edge cyberinfrastructure and powerful supercomputing resources across the state.

2011 Implements a $7.8 million network upgrade with MPLS capabilities

2012 First in the nation to connect to Internet2's 100Gbps upstream optical network

"OneNet has proven to be a tremendous partner and supporter in fulfilling and surpassing the University of Oklahoma's needs in teaching, learning, research, and service. Their steadfast dedication to innovation and excellence has been instrumental in advancing OU's academic endeavors. The high-speed connectivity and robust infrastructure provided by OneNet enable OU researchers to collaborate effortlessly with national peers, significantly boosting our research productivity and funding opportunities. OneNet's influence permeates every aspect of our university, by delivering essential internet services, ensuring connectivity resilience for our weather research facilities, interconnecting our data centers, and offering unparalleled internet speeds that enhance student life and athletic broadcasts. OU's growth, success, and leadership in higher education and research greatly attributed to the exceptional service provided by OneNet."

— **Nishanth Rodrigues,** University of Oklahoma Chief Information Officer

"OneNet has consistently demonstrated its value as a key partner in meeting the evolving technological demands of Oklahoma State University. Their dependable, high-speed internet services have been vital in supporting critical research initiatives and strengthening connectivity across the entire OSU/A&M System. What truly sets OneNet apart is their deep insight into the higher education landscape. Their proactive approach, exceptional responsiveness, and steadfast commitment to our mission make them a trusted and highly valued collaborator."

— **Charles McCann**, Oklahoma State University Interim Chief Information Officer

2013 The Oklahoma Community Anchor Network becomes operational, creating a 1,005 mile optical fiber ring around the state

2015 Deploys a 100Gbps ring to support big data movement for Oklahoma's research universities

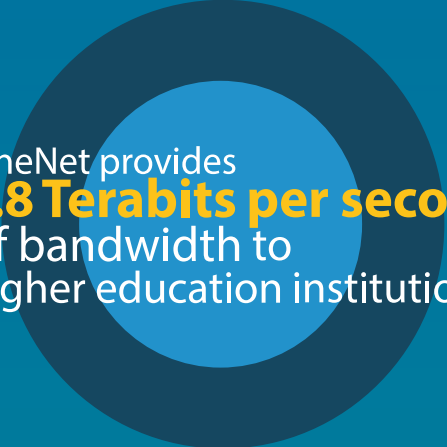# Oklahoma's Partner in Education

Since 1996, OneNet has operated as a partner with Oklahoma's higher education system. OneNet's infrastructure is integrated into this system, with network equipment housed at 40 college and university campuses. Through this collaboration, OneNet provides reliable connectivity to higher education institutions and, in return, receives space in campus data centers and support for our equipment. This partnership generates substantial savings each year and empowers Oklahoma's students to connect, collaborate and compete on a global stage.

OneNet's partnership with education extends beyond colleges and universities. The network currently serves approximately half of Oklahoma's public K-12 school districts, as well as career technology centers and public libraries. As a provider for the E-Rate federal funding program since its inception, OneNet works to expand high-speed broadband access to rural communities and improve the affordability of essential services. Through this work, OneNet helps ensure that students across the state are equipped for success in today's digital learning environments—preparing them for the careers and classrooms of tomorrow.
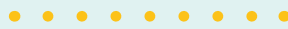
Connecting OETA Viewers to Educational Television

OneNet's commitment to education also extends to educational broadcasting, supporting the 650,00 weekly viewers of the Oklahoma Educational Television Authority (OETA), America's most-watched public broadcasting service network. By connecting OETA's transmission towers to a fiber network, OneNet enhances the reliability of OETA's broadcast, ensuring educational programming reaches communities across the state.
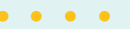
OneNet provides
1.8 Terabits per second
of bandwidth to
higher education institutions

2017 Leverages network for Oklahoma State University's Project ECHO, connecting rural physicians across Oklahoma

2017 Begins hosting K20 Center educational video games for students across Oklahoma

Going Gig for Education

As bandwidth demands continue to grow, many of the K-12 schools connected to OneNet are making the shift to gigabit connectivity—1G or higher. OneNet currently delivers circuits ranging from 1G to 30G to 178 K-12 schools across Oklahoma. Putnam City Schools leads the way with the largest K-12 circuit at 30G. OneNet is prepared to support up to 100G, and up to 400G in some areas, for K-12s as bandwidth requirements continue to grow.

In response to evolving cybersecurity needs, more schools are also leveraging OneNet's managed firewall services. The services offer an efficient first line of defense against malicious internet traffic. OneNet provides managed firewall protection for 35 K-12 schools statewide. Subscribers benefit from around-the-clock access to OneNet's expert security team, ensuring critical support without straining school resources.

"**Technology is a key component of providing our students the best products that will help spur innovation and help enable that transformative experience. The technology that we put in the hands of our students allows them to create high-quality projects, engage in interactive learning activities, and have the flexibility they need on demand.**"
— **Cory Boggs**, Putnam City Schools Chief Information Technology Officer

2019 Completes state-of-the-art data center upgrade

2020 Receives first of six National Science Foundation grants to expand the OneOklahoma Friction Free Network
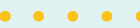
Over the last 12 years

OneNet reinvested more than

$140 million statewide

through **public-private** partnerships

2020 Provides content filtering for 50,000 hotspots at no-cost to K-12 schools during the pandemic

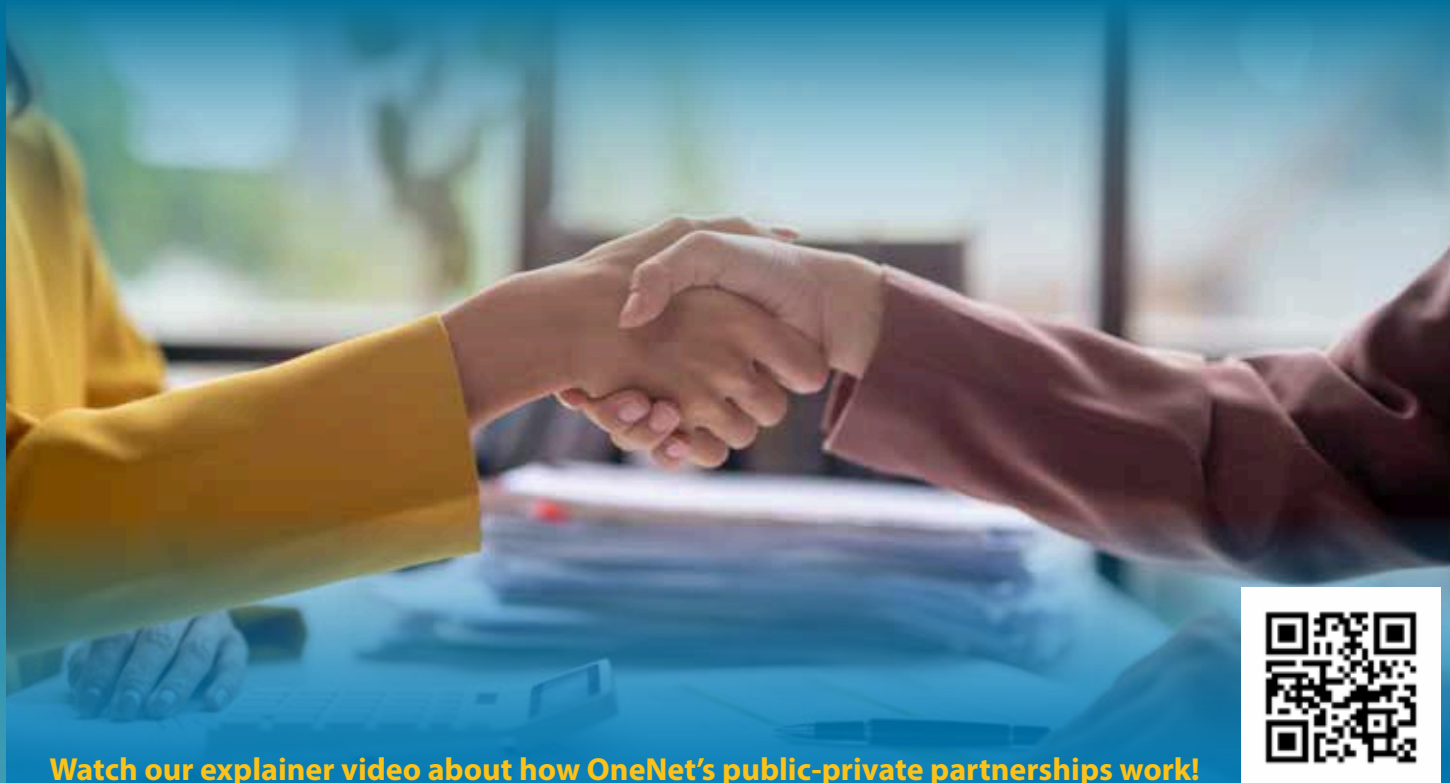**2020** Quickly expands Zoom service offerings to support virtual learning during the pandemic

Public-Private Partnerships

OneNet was founded on a model of public-private partnerships, leveraging resources from both sectors to establish a robust, statewide infrastructure.

Today, these partnerships remain vital to delivering last-mile connectivity to our subscribers.

We work with approximately 30 telecommunications and cable providers across the state.

These providers help connect 85% of OneNet's non-higher education subscribers by delivering service from our network to subscribers' facilities.

Watch our explainer video about how OneNet's public-private partnerships work!

2020 Forms Midsouth U.S. Internet Exchange (MUS-IX) to increase regional connectivity

2021 Partners with Oklahoma higher education institutions to create virtual reality learning modules
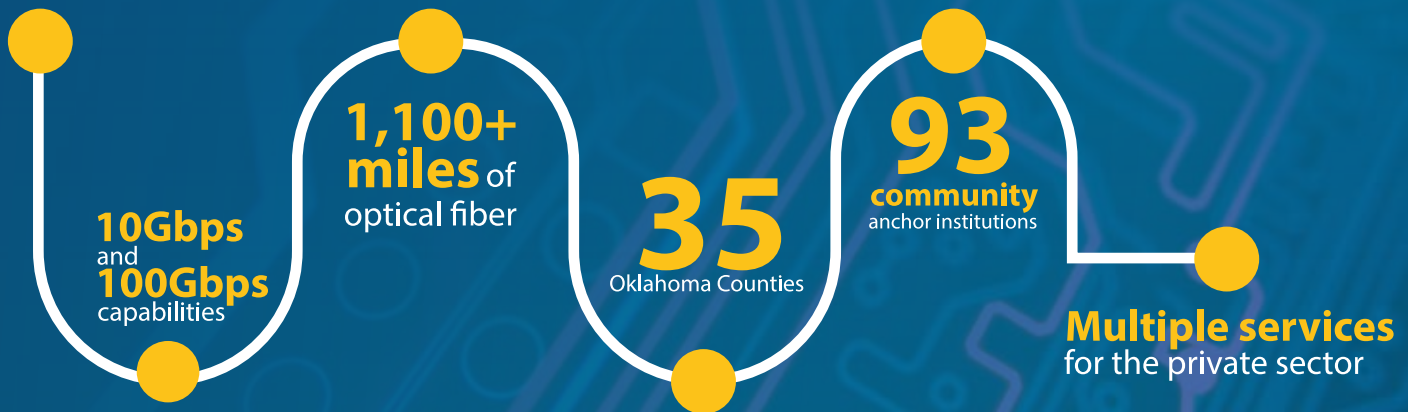
Oklahoma Community Anchor Network

OCAN
OKLAHOMA COMMUNITY ANCHOR NETWORK

Completed in 2013, the Oklahoma Community Anchor Network brings high-speed broadband connectivity to underserved communities in 35 Oklahoma counties. By managing and operating this network, OneNet delivers enhanced connectivity for education, health care, and public safety institutions in previously undeserved communities.

By providing services to local telecommunications and cable providers, OCAN also extends services to the private sector—empowering small businesses and driving economic growth in these communities.

OCAN Fast Facts

10Gbps and **100Gbps** capabilities

1,100+ miles of optical fiber

35 Oklahoma Counties

93 community anchor institutions

Multiple services for the private sector

2023 Rolls out rebrand and new tagline—Oklahoma's research and education network

2023 Celebrates 10th anniversary of the Oklahoma Community Anchor Network

Connecting Oklahomans to Health Care

Over the past decade, the number of private hospitals and clinics served by OneNet has doubled—a growth driven in part by the Federal Universal Service Administration's Rural Health Care Program, which helps fund internet access for qualified rural health care facilities.

OneNet has been a provider for the RHC program since 2014. Our participation in the program currently delivers broadband connectivity to more than 180 eligible healthcare sites across the state, including hospitals, private clinics, and public health and mental health department locations.

OneNet's high-speed internet service connects health care providers with one another, enables virtual training, and supports telemedicine visits. For rural communities, this connectivity is vital—helping expand access to care for Oklahomans statewide.

2024 Receives sixth annual SOC2 Type II audit of data center services

2025 Over the last 12 years, reinvests more than $140 million statewide through public-private partnerships with last-mile providers

OneNet Services

Internet Access

DDoS Mitigation

MPLS Virtualization

Virtual Infrastructure

Colocation

Managed Firewall

Managed Router

Quality of Service

Web and Email Hosting

Content Filtering

DNS Services

Content Delivery Networks

Managed Contracts

2025 Deploys 400G research core upgrade

State-of-the-Art Data Center

OneNet has invested in state-of-the-art systems and robust connectivity for our Oklahoma City data center. Our data center offers a range of services, including equipment colocation, disaster recovery solutions, and virtual infrastructure. In 2025, OneNet completed our sixth SOC2 Type II audit of our data center services, ensuring we are enforcing security controls and doing our part to protect subscriber information.

In 2018, OneNet began hosting the Colleague ERP system in our data center to support the administrative requirements of Oklahoma's higher education institutions. Today, we provide this service for nine regional universities and community colleges. OneNet's engineering team delivers essential support to ensure the ERP systems remain current, reliable, and fully operational.

"This service has allowed us to focus on what we do best—providing a quality education—while OneNet handles the technical complexities of system maintenance."
—Dr. Bo Hannaford, President of Northwestern Oklahoma State University

2026 OneNet's 30th Anniversary!

OneNet Network

Legend:
- —— Oklahoma Community Anchor Network (OCAN)
- —— State Network

OneNet Points of Presence

Higher Education Campuses	Career Technology Centers	Hospitals	Public Safety Agencies	Other

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