QuickBytes

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WEBER STATE UNIVERSITY
Information Technology

What is eduroam?

Education Roaming (eduroam) provides a worldwide roaming access service (internet connectivity) for participating institutions' students, faculty, and staff and has the most secure encryption and authentication standards. When configured for eduroam, wireless devices will automatically connect when individuals visit a participating institution. Similarly, students attending distance education classes at the WSU campus from other institutions, such as Utah State University, have connected seamlessly to the WSU wireless network due to eduroam.

With school closures in 2020, many districts accelerated eduroam adoption and allowed students (IdP) to access high-speed network services in more locations around the state. WSU has been configuring devices to use eduroam as a default configuration for a few years. WSU started making eduroam, instead of WSU Secure, the primary and only network on newly configured devices. A certificate-based authentication to the network was introduced in Summer 2020 which allows users to automatically connect in locations where eduroam is available. The migration was complete when all users migrated to the certificate-based authentication in August and September 2021.

Most K–12 school districts, technical colleges, libraries, and higher education institutions participate in eduroam. Eduroam is also available on UTA FrontRunner and many State of Utah locations such as DMVs, DNR offices, State Capitol, USBE offices, and USHE offices. For a complete listing, visit the maps linked below.

US Map: https://www.incommon.org/eduroam/eduroam-u-s-locator-map/

International Map: https://eduroam.org/where/

WiFi Certificate Renewal for eduroam

The Weber State Wireless Onboarding Tool is available to faculty, staff, and active students and will set up a device to automatically connect to secure wireless internet whenever it comes in range of any WSU campus or any other institution's eduroam network.

You don't say?!

"As a faculty member, so much of my work requires connectivity. Eduroam has made it easier to do my job across a range of locations; when observing our teacher candidates in K-12 schools in Ogden and Davis districts, on the Frontrunner while traveling to education conferences in Provo, when working with colleagues at other institutions around the country, and taking my children to the local public library in Ogden.
As schools and industries have shifted to more hybrid work environments, Eduroam makes those environments more accessible to our students, staff, and faculty."

Ryan Cain
Assistant Professor,
Teacher Education

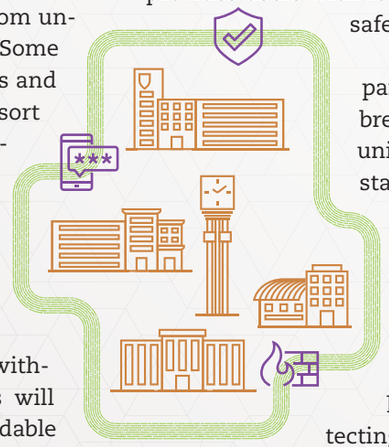
"I have been helping a US-based professional association in Washington DC expand their global footprint for more than 15 years. Consequently, they have sent me to various world regions to make connections, give presentations, develop relationships, etc. while representing WSU. Eduroam has been such a HUGE bonus. My US colleagues are often spending lots of time trying to figure out how to log in, gather passwords, figure out the campus system, etc., and all the while I'm automatically logged into Eduroam! I have a feeling they have access to it as well, but it hasn't been as well implemented at their institutions as it has been here at WSU.
The first bonus I remember was when I was in a serious traffic jam with South African hosts in 2009. I noticed my phone had automatically logged into Eduroam, so I asked if there was a university around and they replied, yes, that building just over there is a university building. It has been such a great global advancement in technology! I can't say enough great things about Eduroam. Thanks to WSU IT for being on the leading edge of this."

Brett Perozzi
former Vice President
Student Affairs

CAMPUS SECURITY PLAN

THE WHY You may have heard the terms; viruses, spyware, ransomware, etc. Cybercriminals use several types of malware (malicious software) to gain access to computers or software systems to steal data or inflict damage. When a cybercriminal compromises the data in a system, the data may not be trusted, or the system may become locked and unable to use. A secure campus provides stable, reliable, and available data and information.

THE WHAT The university provides multiple tools to protect the data from unauthorized access and modification. Some of these tools interact with the users and other tools are invisible to the user, sort of like a digital force field that rejects attempts by cybercriminals to access user and university information. Most users are aware of strong passwords and two-factor authentication through DUO. Users may not be aware that many and soon all data on hard drives within laptops and desktop computers will be encrypted (data will not be readable if a cybercriminal has stolen a laptop or desktop). The university employs many sophisticated tools to watch data coming and going from campus. Each day thousands of access requests from machines from off-campus are rejected because the tools detect malicious requests much faster than a human could catch all the requests. With all of the technology we have at the university, one careless or uneducated user can open the door to a cybercriminal and our critical data can be compromised. We all depend on one another. We must all do our part to keep the campus secure.



THE HOW The Information Security Office (ISO) developed the WSU IT Security Plan to ensure that users are not our weakest link and to address cybercriminals' advances. This plan details the threats and the countermeasures deployed. Additionally, there are three critical security measures taken to help keep the campus secure:

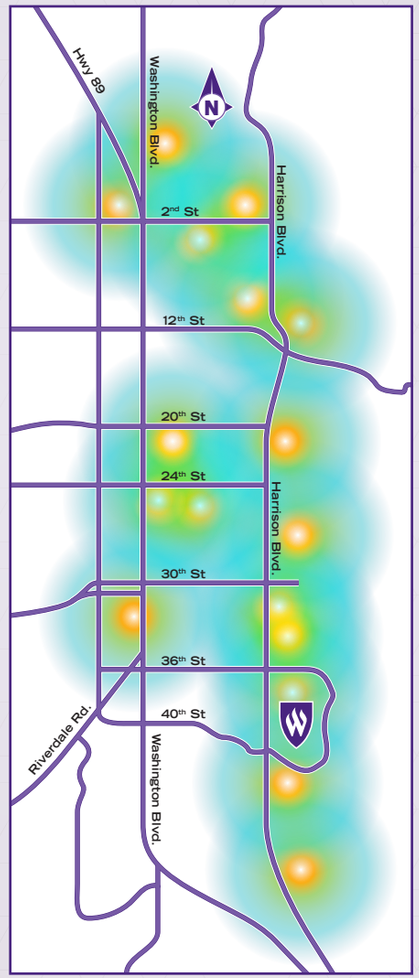
Annual Security Awareness - All faculty and staff, including adjunct faculty, are required to annually complete a multi-module review that provides users with reminders on how to be a safe computer user.

Internal Phishing Campaign - Nearly 70% of the break-ins occurring to university information starts with a user clicking on a link or sharing information inadvertently with a cybercriminal. By phishing our users, we can determine how well we are at detecting phishing attempts and reduce the likelihood of cybercriminals getting access with this method.

USHE Penetration Testing - To test our ability to detect and reject cybercriminal attempts to access our information, we participate with USHE in a regular event called pentesting or penetration testing. These pentesters use the same or similar tools that cybercriminals. Though painful to our internal security team and other user to be "owned" it's essential to learn where we have areas to work on to "harden" our perimeters.

Private LTE Project

Helping our public schools stay connected throughout the community.



The greater Ogden area with the LTE signal strength overlays.

With the shift to remote learning in early 2020, many students lacked decent broadband options at home and relied upon on-campus WiFi or campus computer labs for Internet access. To help students with access needs, the Weber State University (WSU) Stewart Library started checking out commercial T-Mobile WiFi hotspots for students.

During the summer of 2020, Utah Education and Telehealth Network (UETN) started a Private Long Term Evolution (LTE) pilot program with a few K-12 school districts in the state. The private LTE is a custom cellular network setup for an organization's private use; this differs from an LTE/5G network set up by a cell phone provider like T-Mobile, Verizon, or AT&T.

This pilot led to Ogden School District (OSD) reaching out to WSU to partner with deploying the project in their footprint. WSU has partnered with both OSD and UETN to pilot a Private LTE network within the OSD boundaries.

The Higher Education Emergency Relief Fund (HEERF) allowed WSU to accelerate the OSD's Private LTE deployment by a few years to one summer by providing rooftop equipment for fifteen (15) locations within the Ogden School district. The project funding benefits both Ogden School District and Weber State students who live within the school district boundaries.

Events on the WSU campus needing data connectivity have service in more places than ever before. This network allows WSU to supplement the T-Mobile WiFi hotspots issued by the Stewart Library and The Community Education Center with units supplied to work with WSU's Private LTE network. Additionally, this network will facilitate better data connectivity around campus in outdoor situations.