# LINK OREGON

**Link Oregon Application for eduroam Support Organization On-Ramp Program**

*April 22, 2022*

1. **Formally state that Link Oregon is interested in joining the eduroam Support Organization OnRamp Program and becoming, eventually, a full-fledged eduroam Support Organization:**

> Link Oregon requests to join the eduroam Support Organization (SO) On-Ramp Program as the Oregon statewide participant and, upon successful completion of the program, become a full-fledged eduroam Support Organization in 2023.
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> Link Oregon recognizes that there are often challenges in initializing a statewide eduroam program. In coordination with our Board of Directors, Link Oregon has determined that leveraging the new eduroam Support Organization On-Ramp Program provides the greatest opportunity for successfully becoming a full-fledged eduroam Support Organization in the future. This step will allow Link Oregon to put the necessary foundational elements and procedures in place and engage with five pilot organizations to provide service as a preliminary Support Organization. We then will be wellpositioned to extend our reach and build a successful statewide eduroam program for all Oregon K12, libraries, museums, and other eligible organizations that wish to participate.

2. **Provide background on Link Oregon**

> The Oregon Fiber Partnership, operating as Link Oregon, is a federally tax-exempt 501(c)(3) Oregon non-profit organization, that provides high-speed, fiber-optic broadband connectivity and shared network services to K-12 and higher education, libraries, Tribes, public health care organizations, remote state offices and other public and non-profit organizations and facilities across Oregon.
>
> Link Oregon is a consortium of the State of Oregon, through its Office of Enterprise Information Services (EIS), and the state's four largest research universities: Oregon Health & Science University (OHSU), Oregon State University (OSU), Portland State University (PSU), and the University of Oregon (UO).
>
> Link Oregon works with an ecosystem of community and commercial collaborators to build and maintain our systems and services. We have engaged with local and national telecommunications companies to operate approximately 2,500 route-miles of dark fiber-optic cable across the state.
>
> This high-capacity network will eventually serve more than 600 locations across the state, making it easier for these entities to collaborate, share information, and deliver services to Oregon residents and visitors.
>
> Link Oregon's four founding member universities currently offer eduroam services on their campuses, and Link Oregon staff uses eduroam at its Portland office on the PSU campus and its

Eugene office on the UO campus. With Link Oregon support, PSU, OHSU, and Portland Community College (PCC) recent collaborated on an eduroam deployment to utilize a single wireless network deployment at the new, shared Vanport Building in downtown Portland.

Most recently, Link Oregon coordinated with OSU on an early eduroam pilot program at the LinnBenton-Lincoln Education Service District (LBL ESD), which has implemented eduroam at the Corvallis and Albany School Districts within its service footprint thus far. OSU is in full support of Link Oregon's rollout of a statewide eduroam program and intended for the LBL ESD pilot to serve as Link Oregon's initiation into the SO role.

3. **Indicate that Link Oregon is the recognized research and education network (REN) and middlemile provider for Oregon and how the acquisition of NERO from the University of Oregon has allowed Link Oregon to benefit from and strengthen relationships with K-12 school districts across the state.**

As mentioned, Link Oregon was founded by five entities, each of which had undertaken efforts separately to establish a robust, fiber-based network to meet its respective connectivity and datasharing needs for education, research, and public services connectivity. Each encountered roadblocks in developing and operationalizing these efforts individually and the idea of a unified, partnershipdriven, non-profit organization to provide these services was born.

Link Oregon began operation in 2019 and proceeded to develop a statewide middle-mile backbone to serve the public and non-profit sectors. Later that year, we formally absorbed the University of Oregon's prior research and education network, NERO (the Network for Education and Research in Oregon), which supported roughly 30% of Oregon's K-12 school districts, as well as libraries, technical and regional universities, and other educational entities. Fortunately, this integration also included NERO's two long-time network engineers, Stephen Fromm and Rick Hicks, who are now part of our core engineering team. In addition to retaining these members, we continue adding new members across the state in tandem with [expanding our network footprint](#).

As the Link Oregon network has expanded, the team rolled out enhanced services and comprehensive network support through Indiana University's [Global NOC](#) team. Link Oregon is about to embark on a membership campaign to further expand the number of K-12 schools and ESDs, libraries, museums, and other public and non-profit entities it serves across the state.

Two members of the Oregon K-12 sector serve on our Board of Directors – the CIO of the Oregon Department of Education (Peter Tamayo) and the CIO of the Northwest Regional ESD/Cascade Technology Alliance (CTA – Stuart Long).  CTA is a technology consortium that supports both the Northwest Regional and Multnomah ESDs, which together support nearly 60 school districts in northwest Oregon.

Link Oregon is also collaborating with a consortium of Oregon Economic Development Districts on a new crowdsourced broadband mapping initiative for Oregon, Faster Internet Oregon. This will provide an opportunity to forge even stronger relationships with community stakeholders including ESDs and individual school districts.

The following ESDs have indicated their interest in identifying pilot schools in their districts that would like to participate in the Link Oregon On-Ramp program: High Desert ESD, InterMountain ESD, Northwest Regional ESD, Willamette ESD, Lane ESD, and Clackamas ESD.

**4. Indicate in what ways Link Oregon is willing to prepare the technical and administrative elements necessary to take on the role of SO for Oregon.**

Link Oregon's participation in the On-Ramp program will give us the necessary time to gain a better understanding of the requirements and activities expected of a full-fledged Support Organization—particularly in the challenges we may face in providing support and services across as diverse a state as Oregon. We intend to continue to learn from our colleagues in Utah, Nebraska, and Arizona who are already on this path, gather input from the ESDs and school districts we serve along the way, and tap the many resources available through Internet2 / InCommon on procedures and protocols to follow to be effective in this role.

As we ramp up, we expect to be able to:

- Identify and enroll five pilot school districts and assist them with the technology and service requirements as well as the obligations associated with being eduroam IdPs/SPs

- Gain a better understanding of and comfort navigating the new Internet2 cloud-forward architecture

- Learn the necessary protocols and strategies surrounding the RADIUS server environment to effectively support our pilot eduroam subscribers

- Add staff and establish procedures to support the new subscribers

- Become familiar with what is needed to offer first line support should a pilot subscriber need assistance in establishing or maintaining their eduroam services

- Determine how to escalate a support issue to Internet2/InCommon resources should Link Oregon be unable to resolve the subscriber's issues

**5. Funding**

**Provide assurance that Link Oregon would have the funding available to become a full SO at the end of the On-Ramp period.**

Link Oregon fully intends to identify and engage the appropriate funding sources and secure commitments that will allow it to become a full-fledged eduroam SO once it has completed the OnRamp Program. We are currently in discussion with our four founding university partners and other entities, including the Oregon Department of Education and the ESDs, on strategies to fund the statewide eduroam program long-term.

Given the current unprecedented funding atmosphere, Link Oregon is also exploring potential federal/state sources that could support the rollout of eduroam statewide as well as the ongoing costs.

Link Oregon will look to current Support Organizations models, with particular interest in the funding models for state support established by Network Nebraska/Connected Nebraska and the Utah Education and Telehealth Network (UETN), which are built on similar partnerships of state and university entities.

**6. Readiness**

**Provide an assessment of current readiness for taking on the role of SO.**

We are using an abbreviated version of the Readiness Table that appears in the Planning Tool for 2022 Cohort [eduroam Support Organization Wiki](#) to assess our current level of readiness.

| Readiness Category | Level of Readiness (Low, Medium, High) |
|---|---|
| **Organizational Requirements** | |
| **Serve K12s, libraries, museums** | High |
| **Can ensure its constituents and their users abide by terms of agreement** | Medium |
| **Using eduroam internally** | Medium-High |
| **Additional factors which make your organization a good fit for the program:** Link Oregon is already the identified REN and middle-mile provider to the non-profit & public sectors in Oregon. Founded/supported by 4 top research universities that are already active with eduroam and dedicated to connecting other schools (esp. K-12s), libraries, and museums. Link Oregon's network already connects 30% of the K-12 schools in Oregon. | High |
| **Planning Requirements** | |
| **Roll-out team and roles identified and have cycles:** Initial planning efforts are underway, and we have technical support staff internally that will oversee; long term, will need to hire a half or full-time employee to manage this program. | Low |
| **Early adopters identified and are willing to take part in the plan:** Since we already work with school districts and Education Service Districts in Oregon, we have strong, trusting relationships established in that sector, as well as with Oregon Dept of Education. The following ESDs / SDs have expressed interest in participating in the on-ramp: High Desert ESD, InterMountain ESD, Willamette ESD, Lane ESD and Clackamas County School District | High |
| **One or more eduroam pilots/implementations completed (bonus points for K12, museums, libraries already subscribing)** | |
| · Linn Benton Lincoln (LBL) ESD: Corvallis and Albany School Districts. Pilot eduroam program for which Link Oregon coordinated with Oregon State University | Medium |
| **Constituent Infrastructure Requirements** We will provide this information as it becomes available. | |

We invite your questions and feedback and look forward to the next steps in joining the eduroam OnRamp Support Organization Program.

On behalf of Link Oregon:

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# Notes from the review team

Tuesday, May 3

## Questions for Link Oregon

- More details on how LO's internal partners will interoperate. Chart or table? Some visualization? Who's responsible for what portions of the project?
- Some opportunities to have service centers, other internal partnerships help stand each other up, develop processes
- Identify/stage schools to engage outside of currently served K12s.
- WRT 5 pilot schools, would like to see a run sheet on what's needed to stand up those schools. Debrief after initial deployment, apply standar project management principles
- Work out sources of funding, contingency plans if initial plans fall short
- More detail on how to get from concept to executed pilot
- Develop analysis of readiness for most/all schools in the state
- Develop roadmap/workplan to move from current pilot support to production support
- Would be helpful to better understand GlobalNOC's role in supporting Link Oregon's community. Any plans to rely on them for this project?

## Top Priorities for On-Ramp

- Survey and analysis of pilot school readiness, gap analysis of pilot schools and other constituents
- Plan/roadmap to transition from interim support staff to "production" support staff
- Strategy to engage with ESDs to participate in support

## Internal considerations

- I2 to consider limit of pilot IdP/SPs for on-rampers who've already had some engagement, turned up schools