



Network Design Engineer

Company Overview

At Archtop Fiber, our mission is to be the true fiber of your community! We believe in the power of local connectivity and dedication to bridging the digital divide in rural and suburban cities across the Hudson Valley and beyond. We have seen how larger cities often receive priority for broadband infrastructure upgrades, leaving smaller communities underserved. That's why we prioritize serving "Main Street" communities by investing up to \$350 million in private funding to build over 2,500 miles of fiber-optic infrastructure.

Job Summary

The **Network Design Engineer** is part of Archtop Fiber's Engineering & Technology group and will support our IP access and Core network engineering needs. This position will work closely with the Director Network Engineering and others to support our advanced communications service provider and 100% fiber optic network. The Network Design Engineer will be an integral team member working to design and develop Archtop's IP/SR-MPLS backbone, XGS-PON access layer, internet peering, and transport infrastructure expansions and upgrades related to our multi-state fiber optic network.

Job Responsibilities

- Create & implement SP Network designs and required documentation, including Methods of Procedures (MOPs), diagrams, drawings, and various instruction details.
- Develop designs that align with Archtop's architectures for PON last-mile, AE last-mile, IP/SR-MPLS backbone, and transport technologies.
- Provide turnup and test information for new network builds and augmentations.
- Support process development, documentation and support as needed to other teams for implementation, troubleshooting, and repair of network connections and customer deployments.
- Support the selection of vendors, equipment and materials.
- Maintain strong relationships with Archtop's vendors.
- Foster a resilient network design approach that ensures redundancy and rapid failover.
- Develop customer service configurations that can be deployed via network automation and low-touch provisioning. Work collectively with Network Operations to ensure that configurations align with and meet the needs of provision platforms.
- Implement security requirements that align with Archtop's carrier-class network requirements, including protection against flooding, denial of service, etc.
- Ensure proper traffic management and optimization - traffic shaping, classification, policing, queuing, scheduling, etc.
- Assist Network Operations team objectives such as network management/element management, performance measurement, fault management, access security, and others.
- Support technical product development and deployment, including Proof of Concept testing procedures. Perform and monitor testing in conjunction with Network Operations team members and others.



- Assimilate, analyze, and correlate large amounts of forensic data from various network devices, operating systems, applications, security devices, logs, and alerts by leveraging analytical and problem-solving skills.
- Be a continuous Subject Matter Expert for technical design and be an escalation point for Network Operations and Field Operations teams.
- Act as an ambassador and promoter of Archtop Fiber and Archtop's products. Ensure a positive Company image by working closely with trusted partners, external customers, community leaders, regulatory groups, and others.

Job Requirements

- “Can do” attitude and a desire to help others. Must foster a team environment approach and participate at all levels.
- 7+ years of progressive Professional Level network engineering experience in a large ISP/SP Service Provider environment.
- Four-year Engineering degree from an accredited college or university is preferred. Equivalent professional experience also considered.
- Professional Level of networking knowledge, (CCNP, JNCIS-SP, JNCIP, JNCIS-) certifications preferred.
- Working knowledge of all aspects of OSI layers 1-4.
- Understanding of BGP, MPLS, OSPF, ISIS; Segment Routing at a network design level is a plus.
- Understanding of network security, Professional Level of Firewall and VPN experience (Juniper SRX, Fortinet) in design and management is a plus.
- Understanding of FTTx design and PON access technology such as XGS-PON or Active Ethernet.
- Knowledge of QOS - Layer 2 COS and Layer 3 QOS.
- Knowledge of network tools and protocols including SNMP, Syslog, DNS, AAA, DHCP, L2 VPN and L3 VPN technologies, VRFs, LAG technologies, CGNAT, VOIP, network timing, and others.
- Working knowledge of network operating systems, such as IOS-XR or JUNOS.
- Understanding of optical transport solutions, including coherent optics, passive muxes, amplification, RON/ROADM, and DWDM.
- Firewall and VPN experience preferred.
- Data Center / Rack / Cabinet including space, power, heat dissipation calculation / design.
- A strong focus on quality and network sustainability (99.999% up time).
- The ability to work independently under minimal supervision – must be driven and be able to define work tasks based upon project goal and corporate objectives. Fast paced environment.
- Must have strong communications skills – verbal and written.
- Demonstrated ability to thrive in a team environment. This includes the willingness and desire to share information, work collaboratively, and help others – both inside and outside of the Engineering & Technology group.

Benefits

- Competitive salary: \$90,000 - \$125,000 per year
- Comprehensive health, dental, and vision insurance
- 401(k) with company match
- Paid time off and holidays
- Career development opportunities in a growing company



Archtop Fiber is proud to be an Equal Opportunity Employer. We celebrate diversity and are committed to creating a welcoming and inclusive environment for all.