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**Position:** Network Design Engineer – Entry Level**Type:** Full Time**Location:** Kingston, NY**Date Added:** May 8, 2023

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## Position 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 of 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 support the design and development of 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. Strong focus on documentation, testing, and deployment of designs and procedures.

## Responsibilities

- Assist in the building, management, and maintenance of Archtop's Network Engineering lab to support all users, and stakeholders.
- Focus on lab validation and documented test results of new devices, designs, and procedures.
- Maintain and assist in the creation of implementation designs and required documentation, including Methods of Procedures (MOPs), diagrams, drawings, and various instruction details.
- Deploy designs that align with Archtop's architectures for PON last-mile, IP/SR-MPLS backbone, and transport technologies.
- Provide turnup and test information for new network builds and augmentations.
- Maintain detailed documentation of network elements and device deployments.
- Support process development, documentation, and support as needed to other teams for implementation, troubleshooting, and repair of network connections and customer deployments.
- Participate in support of equipment/materials vendor selection and maintain strong relationships with Archtop's vendors.
- Implementing a resilient network design approach that ensures redundancy and rapid failover.
- Deploy customer service configurations 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.
- Create and maintain Best Practice documentation to capture our design, and deployment methodologies, network device configuration templates, and customer service configuration.
- Support technical product development and deployment, including Proof of Concept testing procedures with no predetermined bias. Carry out Alpha and Beta testing by working 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.
- Other related tasks as assigned.

## **Qualifications**

- "Can do" attitude and a desire to help others. Must foster a team environment approach and participate at all levels.
- Associate degree in network administration, information technology, or equivalent experience. Equivalent professional experience also considered.
- Associate level certification (CRS-A, CCNA, JNCIA) preferred.
- Working knowledge of all aspects of OSI layers 1-4.
- Knowledge of eBGP, iBGP, OSPF, MPLS, RPKI; Segment Routing is a plus.
- Familiar with FTTx design and PON access technology GPON, XGSPON, OLT, and ONU.
- Awareness of End to End QOS, Layer 2 QOS, and Layer 3 QOS.
- Knowledge of network tools and protocols including SNMP, TACACS+, radius, syslog, DHCP, VLANs, Spanning Tree, EVPN, VPLS, IPsec, Pseudowire, VRFs, MC-LAG, EV-LAG, DNS, NAT, CGN, TCP/IP, FQDN, SIP, MGCP, RTP, NTP, PTP, and others.
- Knowledge of network operating systems, such as SAOS, IOS-XR, or JUNOS.
- Familiarity of optical transport solutions, including coherent optics, passive muxes, amplification, RON, ROADM, and DWDM. Must stay current on fast changing optical transport technologies and methodologies.

- Firewall and VPN experience is a plus.
- Must have 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.
- Applicants must be a US citizen.

## **Compensation and Benefits**

Competitive salary and benefits package

## **How to Apply**

Interested applicants must submit a resume and cover letter (detailing how they meet our requirements and how this position aligns with their career goals) via email to [career@archtopfiber.com](mailto:career@archtopfiber.com).