Job Description
Network Engineer

Department: ISP Operations   **Last Updated:** 01/06/2021
Reports To: Manager, ISP Network Operations
Classifications:

[X] Non-Bargaining Unit	[X] Exempt	[ ] Supervisory	[ ] Senior Staff
[ ] Bargaining Unit	[ ] Non-Exempt	[ ] Non-Supervisory Management	[ ] Executive Team

Supervises: n/a

Job descriptions are subject to modification to reasonably accommodate individuals with disabilities, depending on risk to health and safety of the employee and/or others. The basic requirement of every position is to perform all tasks as assigned. Duties and scope of position may change based on needs of the Company. This document does not create an employment contract, implied or otherwise.

GLE staff members are required to work in a safe manner in accordance with regulatory standards and requirements and with the procedures listed in the Cooperative's Safety Handbook.

Efficient and cooperative work is required of staff, which includes regular, dependable, punctual attendance except when required by law, and timely and accurate performance of duties.

Position Summary:
Administer, design and maintain networks, software, systems and equipment necessary to deliver quality broadband service.

Experience/Education:
- High school diploma or equivalence certificate in addition to proficiency in a broad range of computing technologies, enterprise systems management, enterprise network management and application of technology solutions, typically attained through a Bachelor's degree in computer systems and network systems or computer information systems and three or more years of experience, or equivalent experience/education.
- Fundamental knowledge of the Open Systems Interconnection (OSI) model.
- Competent with Local and Wide Area Networking equipment, Virtual Operating Systems, Firewalls, Passive Optical Networks, and other related technologies.
- Competent with DNS, DHCP, IPAM, TCP, UDP, IPv4, IPv6, BGP, OSPF, Netflow, Syslog, SNMP, Radius, and other related protocols.
- Competent with the architecture and maintenance of complex service provider enterprise networks and data centers.
- Competent in business security, continuity and disaster recovery best practices.
- Competent in risk management as related to position.
- Competent with position-specific software and applications.
- Competent with position specific equipment.
- Competent with Microsoft Office: Outlook, Excel, Word.
- Competent with general office equipment.
- Valid Michigan driver's license with satisfactory driving record within Company standards.

Essential Duties/Responsibilities:

- Recommend, install, configure, and maintain equipment essential for delivery of high quality broadband voice and data services over a passive optical network up to the outside plant (point of demarcation from ISP facilities) utilizing a variety of optical and electrical interfaces. This includes the installation, construction, operation and break-fix remediation, with root cause analysis of equipment associated with Headend (HE), Central Offices (CO) and Customer Premise Equipment (CPE.)
- Investigate and resolve customer network quality, reliability, and interference issues.
- Provide support to other engineers, service representatives and other employees regarding customer network issues.
- Work with field design and home installation technicians to ensure timely, efficient, and proper installation and configuration of equipment and connection of customers to the network.
- Perform Head End (HE) and Central Office (CO) facility inspections; Ensure cabling, equipment installation, power and cooling is compliant with Company standards.
- Recommend, install, configure, and maintain performance and alerting tools to assess availability and performance of network and systems to maximize reliability.
- Utilize automation tools to configure networks and systems as efficiently as possible.
- Install, and maintain backup and availability solutions for all Company technology related to broadband service.
- Maintain security of communication networks and systems including virtual operating systems and applications.
- Maintain required logs, records and other documentation compliant with Company, regulatory and legal requirements.
- Monitor service provider industry developments, enhancements, and regulations to ensure that Company processes and products are current within the industry.

Significant Duties/Responsibilities:
- Assist fiber service coordination team and TIER1 technical support group with technical questions and support, directing them on how to respond to customer questions.
- Assist in the support, upgrades, and maintenance of systems equipment.
- Function as a project team member as assigned.
- Actively and consistently support efforts to simplify and enhance the customer experience.
- Direct customers on effective troubleshooting steps as necessary.

Working Conditions:
- Participate as assigned in an on-call rotation.
- Office environment with occasional field work
- Available for consultation at various times of the day and night

Required Skills:
- Ability to effectively read, write and speak the English language to communicate in a clear, straight forward, and professional manner.
- Critical Thinking: using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Active Listening: giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Active Learning: understanding the implications of new information for both current and future problem-solving and decision-making.

- Complex Problem Solving: identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Coordination: adjusting actions in relation to others' actions.
- Instructing: teaching others how to do something.
- Service Orientation: actively looking for ways to help people.
- Monitoring: monitoring/assessing performance of oneself, other individuals, or organizations to make improvements or take corrective action.
- Judgment and Decision Making: considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Systems Analysis: determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Time Management: managing one's own time.
- Installation: installing equipment, machines, wiring, or programs to meet specifications.
- Troubleshooting: determining causes of operating errors and deciding what to do about it.
- Social Perceptiveness: being aware of others' reactions and understanding why they react as they do.
- Operation Monitoring: watching gauges, dials, or other indicators to make sure a machine is working properly.
- Quality Control Analysis: conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Systems Evaluation: identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- Operation and Control: controlling operations of equipment or systems.
- Equipment Maintenance: performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Equipment Selection: determining the kind of tools and equipment needed to do a job.
- Repairing: repairing machines or systems using the needed tools.
- Project Management: organizing and directing production of a limited scope plan or undertaking.
- Mathematics: using mathematics to solve problems.
- Technology Design: generating or adapting equipment and technology to serve user needs.
- Management of Material Resources: obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.
- Operations Analysis: analyzing needs and product requirements to create a design.

Attributes:
- Integrity: Exhibits a high degree of integrity and honesty.
- Demonstrates diplomacy, tact, discretion, and the ability to exercise confidentiality and objectivity in complex and sensitive situations.
- Oral Comprehension: able to listen to and understand information and ideas presented through spoken words and sentences.
- Speech Recognition: able to identify and understand the speech of another person.
- Written Comprehension: able to read and understand information and ideas presented in writing.
- Spatial Orientation: able to know one's location in relation to the environment or to know where other objects are in relation to oneself.
- Near Vision: able to see details at close range (within a few feet of the observer).
- Depth Perception: able to judge which of several objects is closer or farther away from oneself,

or to judge the distance between oneself and an object.

- Time Sharing: able to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).
- Selective Attention: able to concentrate on a task over a period of time without being distracted.
- Problem Sensitivity: able to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Deductive Reasoning: able to apply general rules to specific problems to produce answers that make sense.
- Inductive Reasoning: able to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
- Finger Dexterity: able to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
- Manual Dexterity: able to quickly move hand, hand together with arm, or two hands to grasp, manipulate, or assemble objects.
- Multi-Limb Coordination: able to coordinate two or more limbs (i.e. arms, legs, one of each) while sitting, standing or lying down. Does not involve performing the activities while whole body is in motion.
- Extent Flexibility: able to bend, stretch, twist, or reach with one's body, arms, and/or legs.
- Wrist-Finger Speed: able to make fast, simple, repeated movements of the fingers, hands, and wrists.
- Gross Body Equilibrium: able to keep or regain one's body balance or stay upright when in an unstable position.
- Number Facility: able to add, subtract, multiply, or divide quickly and correctly.
- Information Ordering: able to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- Category Flexibility: able to generate or use different sets of rules for combining or grouping things in different ways.
- Control Precision: able to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
- Visualization: able to imagine how something will look after it is moved around or when its parts are moved or rearranged.
- Fluency of Ideas: able to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
- Speed of Closure: able to quickly make sense of, combine, and organize information into meaningful patterns.
- Flexibility of Closure: able to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
- Originality: able to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

Additional Preferences:
- Public Speaking: conveying information to an audience effectively through delivery of speeches or presentations.
- Learning Strategies: selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- Persuasion: persuading others to change their minds or behavior.

- Negotiation: bringing others together and trying to reconcile differences.
- Competent with Microsoft Office: Project, Visio.

Problem Solving and Freedom to Act
Problems are moderately complex. Methods and procedures are loosely defined and require judgment to apply them to the work. Work is varied. Tasks may be unrelated.

Working Relationships/Contacts:
Requires contacts for the purpose of developing or communicating plans, coordinating activities or advising others. Gaining acceptance and influencing others may be necessary.

Internal: Peers, management
External: Members, peers, contractors, consultants, community businesses, vendors