GUAM WATERWORKS AUTHORITY

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Issue for Decision

Resolution No. 07-FY2025
Relative to the Amendment and Approval of Position Classification Specification for the Network Analyst and Network Systems Administrator Positions.

What is the project's objective and is it necessary and urgent?
The amendment of the classified positions of Network Analyst and Network Systems Administrator is necessary and urgent to modernize the job specifications, broaden the pool of potential candidates, update the educational and experience requirements, and align the roles with current industry standards and technological advancements.

The current deficiencies in the Network Analyst and Network Systems Administrator job standards stem from outdated minimum qualification requirements and job specifications that result in a narrow pool of potential candidates. These requirements are not aligned with current industry standards and technological advancements.

The original educational and experience requirements for the Network Analyst position, established in 2010, are too narrow, focusing solely on computer science degrees and a higher-than-necessary amount of experience. This excludes many qualified professionals with degrees in other relevant fields like cybersecurity or computer engineering, as well as those with valuable but less extensive experience. Similarly, the Network Systems Administrator position, created in 2008, originally did not require a degree, focusing purely on extensive supervisory and administrative experience. However, the growing complexity of the role in today's technology landscape now necessitates a formal educational foundation in network systems and administration. The original five-year supervisory experience requirement also sets an unnecessarily high bar, excluding capable candidates who possess the needed technical skills but less supervisory experience. These deficiencies in both roles need to be addressed to ensure GWA remains competitive and able to attract a broader and more qualified pool of candidates. The proposed amendments address these issues by modernizing educational and experience requirements and aligning the roles with current industry standards.

The changes proposed include expanding the acceptable degree types to include fields such as computer information systems, cybersecurity, and related disciplines, allowing for a more diverse range of candidates with relevant technical expertise. Additionally, the experience requirements have been adjusted to reflect current market conditions, ensuring the positions are accessible to qualified professionals with the necessary skill sets, while still maintaining high standards of competency.
These amendments are designed to ensure GWA's technology infrastructure is supported by professionals with updated knowledge in areas like network automation, cloud computing, and cybersecurity. This will help GWA continue to effectively manage its operational technology across more than 250 assets, including water and wastewater treatment plants, deep wells, and booster stations.

Approval of this request will enhance GWA's ability to attract a more diverse and qualified pool of candidates, enabling the utility to continue providing robust and reliable services to the community.

Where is the location?
The Network Analyst and the Network Systems Administrator position are organizationally based within the Information Technology Division of GWA

How much will it cost?
The proposed changes will not affect GWA's budget, as they align with the existing compensation plan and pay scales. The implementation salary range to fill the positions are as follows:

Network Analyst

- **Minimum - $70,738 per annum / $34.01 per hour**
- **Maximum - $73,610 per annum / $35.39 per hour**

Network Systems Administrator

- **Minimum - $82,727 per annum / $39.77 per hour**
- **Maximum - $86,086 per annum / $41.39 per hour**

When will it be completed?
Public Law 28-159, Section 7.0.3(c) requires GWA to post a petition on their respective website for ten (10) days (Saturdays, Sundays, and government of Guam holidays excepted). Once adopted by the CCU, the amendment of the Network Analyst and Network Systems Administrator positions will not be filled until one hundred eighty (180) have elapsed from the date of filing the petition of the resolution with the Legislative Secretary and the Department of Administration.

What is the funding source?
Revenue generated by current service rates and fees for all water and wastewater customer classes.

The RFP/BID responses (if applicable):
Not Applicable

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 07-FY2025

RELATIVE TO THE AMENDMENT AND APPROVAL OF POSITION CLASSIFICATION SPECIFICATION FOR THE NETWORK ANALYST AND THE NETWORK SYSTEMS ADMINISTRATOR POSITIONS

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS 4 GCA, §6303(e) authorizes the amendment of position in Autonomous Agencies and Public Corporations; and

WHEREAS the GWA is responsible for developing, maintaining, and supporting its Enterprise and Operational Technology Infrastructure, which includes a network of over 250 assets such as water and wastewater treatment plants, booster and sewer pump stations, deep wells, and springs; and

WHEREAS it is essential that GWA maintains seamless network operations and efficiently responds to the growing demands for advanced network support, cybersecurity, and data management; and

WHEREAS the classified positions of Network Analyst and Network Systems Administrator were established in 2010 and 2008, respectively, with outdated qualification requirements and job specifications that no longer reflect current industry standards or technological advancements; and

1   **WHEREAS** the existing job standards result in a narrow pool of potential candidates by

2   restricting acceptable educational qualifications and requiring excessive years of experience,

3   limiting GWA's ability to attract qualified professionals; and

5   **WHEREAS** the proposed amendments to the Network Analyst and Network Systems

6   Administrator positions include broadening acceptable degree types, updating the required years

7   of experience, and modernizing the duties and responsibilities to align with emerging fields such

8   as cloud computing, network automation, and cybersecurity; and

10   **WHEREAS** these amendments are critical to ensuring that GWA attracts and retains

11   highly skilled professionals capable of managing its complex technology infrastructure, while also

12   enhancing the organization's ability to remain competitive in the public utility sector; and

14   **WHEREAS** the proposed amendments will not require any changes to GWA's current

15   compensation plan, as they align with the Strategic Pay Plan Methodology and market data,

16   ensuring compliance with Public Law 28-159 and other applicable regulations.

18   **NOW BE IT THEREFORE RESOLVED**; the Consolidated Commission on Utilities

19   does hereby approve the following:

        1.   The recitals set forth above hereby constitute the findings of the CCU.

        2.   The CCU finds that GWA has met the requirements of the 4 GCA, §6303(e) and P.L. 28-159 Section 3(c).

        3.   The CCU hereby authorizes the approval of the amendment of the job classification specifications of the Network Analyst and Network Systems Administrator positions. The existing job classification specifications will be superseded by the approved amendments (see Exhibits A and B).

        4.   The implementation of any reallocations resulting from this resolution shall follow the applicable policies outlined in the GWA Personnel Rules & Regulations regarding classification and compensation adjustments.

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5. The CCU hereby further authorizes the GWA management to implement the salary ranges of the respective positions as follows:

Benchmark Position	JE Points	25th Market Percentile (2022 Market Data – 5 Sub-Steps) – GWA									
		Structural Adjustment- MIN					Structural Adjustment- MIN				
		Base Salary	Hourly	Grade	Step	Sub-Step	Base Salary	Hourly	Grade	Step	Sub-Step
Network Analyst	791	$70,738	$34.01	K	2	A	$73,610	$35.39	K	3	A
Network Systems Administrator	898	$82,727	$39.77	L	4	A	$86,086	$41.39	L	5	A

RESOLVED, that the Chairman certified, and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 22nd day of October 2024.

Certified by: Attested by:

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JOSEPH T. DUENAS   **PEDRO ROY MARTINEZ**

Chairperson   Secretary

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SECRETARY'S CERTIFICATE

I, Pedro Roy Martinez, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSENT: _____

ABSTAIN: _____

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GUAM WATERWORKS AUTHORITY

NETWORK ANALYST

NATURE OF WORK IN THE CLASS:

Under general direction, employees in this class perform advanced analysis, design, configuration, installation, maintenance, and support of network systems and components. Responsibilities include monitoring network performance, diagnosing issues, and optimizing the organization's LAN, WAN, and wireless networks. Network Analysts work closely with Network Administrators and Information Security teams to ensure reliable and secure network operations across physical, virtual, and cloud environments, while also contributing to network improvements and scalability.

ILLUSTRATIVE EXAMPLES OF WORK:
(These are examples of work and do not indicate all job-related duties required of this position.)

Network Monitoring & Performance:
- Monitor and analyze network performance across the organization's LANs, WANs, and wireless deployments, assessing system capacity to identify performance impacts and recommend enhancements for evolving network demands.
- Ensure efficient, secure, and stable operation of network systems and infrastructure, identifying and remedying performance bottlenecks.
- Plan, implement, and document improvements or modifications to network components to meet compliance and performance requirements.

Network Installation, Configuration, & Maintenance:
- Perform technical activities in support of network equipment installation, configuration, and operation, including routers, switches, hubs, firewalls, wireless access points, and cabling.
- Install, configure, and maintain system hardware and software, including operating systems, network printers, workstations, application servers, and data communication lines.
- Assist in developing and implementing policies for network asset management, inventory maintenance, and system documentation.

Troubleshooting & Problem Resolution:
- Diagnose and resolve network-related issues, including server connectivity, user access problems, security vulnerabilities, and software or hardware malfunctions.
- Respond to system functionality complaints from users, providing helpdesk support and addressing network performance issues both onsite and remotely.
- Maintain and troubleshoot user accounts and access for Windows networks, email servers, SQL databases, Oracle systems, and related applications.

Network Security & Disaster Recovery:
- Assist in developing and implementing security procedures to protect the network, including anti-virus updates, backup protocols, and disaster recovery plans.
- Conduct research and assessment of new technologies, hardware, and software for improved network security and performance.
- Participate in creating and maintaining Intranet content, user manuals, and technical documentation to support network operations and security.

System Administration & User Support:

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NETWORK ANALYST

- Install, configure, and maintain Windows servers, including routine updates, backup verification, and security protocols for TCP/IP networks.
- Provide technical support for workstations, ensuring proper installation of applications, software updates, and network connectivity.
- Coordinate with vendors for technical support and troubleshooting of network issues at remote workstation sites.

Network Policy Development & Training:
- Assist with developing policies, procedures, and training for appropriate network resource utilization, disaster recovery, and secure network practices.
- Participate in developing and implementing network resource administration policies and establish service-level agreements for network uptime and reliability.

Research & Development:
- Conduct research on emerging network technologies, tools, and protocols to support procurement and network development efforts.
- Evaluate and recommend network enhancements and system upgrades based on industry standards and organizational needs.

Documentation & Reporting:
- Document all network activities, configurations, changes, and performance analyses to maintain accurate records.
- Generate and maintain technical manuals, installation processes, and standard operating procedures for network operations and troubleshooting. Performs related duties as required.

KKNOWLEDGE, ABILITIES, AND SKILLS

Knowledge of:
- Fundamentals, principles, and operational practices of computer networking, including LAN/WAN concepts, network cabling, and equipment.
- Practices and techniques for installing, configuring, operating, maintaining, and troubleshooting network systems, hardware, and software.
- Networking protocols and operations, including TCP/IP, DNS, WINS, and Microsoft Exchange Server.
- Modern technologies and platforms, including physical, virtual, and cloud-based servers and cybersecurity practices.
- Business software applications, such as word processing, spreadsheets, anti-virus programs, and backup solutions.

Ability to:
- Perform technical tasks related to network installation, maintenance, and troubleshooting for secure and efficient network operations.
- Analyze, diagnose, and resolve complex network issues with equipment and peripherals, maintaining reliable and high-performance systems.
- Implement network administration activities, including user account management, server operations, and system backups.
- Assist in project implementation, workflow management, and adherence to schedules and timelines for network activities.

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GUAM WATERWORKS AUTHORITY

NETWORK ANALYST

- Communicate effectively both verbally and in writing, explaining technical information clearly and concisely to various stakeholders.
- Think critically, evaluate alternatives, and make recommendations to improve network operations and support organizational goals.

Skill in:
- Network analysis, design, and implementation practices across LAN, WAN, and telecommunications systems.
- Utilizing network tools and protocols for performance monitoring, troubleshooting, and secure configuration.

MINIMUM EXPERIENCE AND TRAINING

A) Bachelor's degree in computer science, computer information systems, computer engineering, cybersecurity/information security or related degree and two (2) years of progressive experience in technology infrastructure, telecommunication network management, or network design; *or*

B) Any equivalent combination of experience and training, which provides the minimum experience knowledge, skills, and abilities.

NECESSARY SPECIAL QUALIFICATION

Must possess a valid driver's license.

LICENSURE OR CERTIFICATE

Possession of or the ability to obtain a Cisco Certified Network Associate (CCNA), Network+, and Security+ certification within 3 years of hire may be required.

ESTABLISHED: **OCTOBER 2010**

AMENDED: **OCTOBER 2024**

JE POINTS: **791**

FLSA STATUS: **Non-Exempt**

This classification specification revises and supersedes the classification specification established in October 2010.

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JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities

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NETWORK ANALYST

Exhibit B

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NETWORK SYSTEMS ADMINISTRATOR

NATURE OF WORK IN THE CLASS:

The Network Administrator is responsible for the management and maintenance of complex network systems, including design, configuration, installation, and support. The Network Administrator ensures efficient, secure, and reliable operation of LAN, WAN, and wireless networks, collaborating closely with Network Analysts and Information Security staff. This role includes implementing and monitoring network policies, troubleshooting issues, and optimizing network performance across all environments, including physical, virtual, and cloud servers. The Network Administrator also takes a lead role in developing network architecture and ensuring compliance with security standards.

ILLUSTRATIVE EXAMPLES OF WORK:
(These are examples of work and do not indicate all job-related duties required of this position.)

Network Installation, Configuration, and Maintenance
- Oversee the installation, configuration, operation, maintenance, and repair of Local Area Network (LAN) and Wide Area Network (WAN) wired and wireless systems, along with related hardware and software.
- Implements, configures, and maintains physical, virtual, and cloud servers/networks, ensuring optimal performance, security, and availability. Monitors and analyzes network performance and traffic.
- Supervises the evaluation, installation, configuration, and maintenance of network hardware and software, including operating systems, application software, system upgrades, network printers, and data communication lines. Ensures documentation of processes and configurations.

Troubleshooting and Diagnostics
- Oversee and perform network issue resolution, including addressing equipment-related problems with servers, access points, routers, switches, cabling, firewalls, and other components; configures and adjust network devices as needed and replaces faulty hardware.
- Assesses user-reported issues with system functionality; diagnoses and resolves advanced computer hardware, software, and network problems, ensuring timely resolution through the helpdesk or appropriate channels.
- Diagnoses addresses network connectivity problems, ensuring consistent printing functionality across the organization by configuring printers and resolving user issues.

Server and Workstation Management
- Oversee the installation, maintenance, and configuration of Windows servers; supervises the application of operating system and server updates, and troubleshoots issues related to network security, TCP/IP, backups, and viruses.
- Manages installation, configuration, and troubleshooting of software on workstations; addresses network issues across the WAN and coordinates with vendors to resolve problems at remote sites. Provides helpdesk support and remote assistance to end users.
- Oversee the performance of file backups on all servers, ensuring error-free operations and adherence to backup schedules and storage routines.

Policy Development and Research

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NETWORK SYSTEMS ADMINISTRATOR

- Creates and implements policies, procedures, and training for efficient network resource administration, disaster recovery, and appropriate utilization of network assets.
- Evaluates emerging network technologies, software, and hardware solutions; maintains an updated and secure Intranet site with user and technical manuals. Assists in security policy creation and performs regular updates for antivirus software.

Administrative and Supervisory Responsibilities

- Analyzes and resolves defined information system issues, developing feasible solutions aligned with industry standards and technological advancements.
- and supervises access for user accounts across Windows network, email systems, SQL, Oracle databases, and helpdesk applications; manages print queues and access controls.
- Conducts performance evaluations, provides mentorship, and recommends training and development to enhance the technical skills of lower-level staff, fostering a knowledgeable and capable network team.

Performs related duties as required.

KNOWLEDGE, ABILITIES, AND SKILLS

Knowledge of:

- Knowledge of network security principles and best practices, including firewalls, VPNs, intrusion detection/prevention systems (IDS/IPS), and encryption protocols for secure data transmission.
- Knowledge of wireless networking standards and technologies, including 802.11 protocols, wireless access point configuration, and security practices for deploying and troubleshooting Wi-Fi networks.
- Knowledge of network monitoring and performance tools, such as Wireshark, SolarWinds, and PRTG, for traffic analysis, troubleshooting, and ensuring optimal network performance.
- Knowledge of virtualization and cloud networking concepts, including the management of virtual LANs (VLANs), VMware, Hyper-V environments, and cloud platforms like AWS, Azure, or Google Cloud.
- Knowledge of routing and switching technologies, including routing protocols such as OSPF, BGP, and RIP, and the ability to configure and troubleshoot various types of routers and switches.
- Knowledge of compliance standards and policies relevant to network security and data privacy, such as HIPAA, PCI-DSS, GDPR, and NIST, and their implications for network architecture and operations.
- Knowledge of disaster recovery and business continuity planning for networks, including strategies for network backup, redundancy, failover, and maintaining availability during emergencies.
- Knowledge of scripting and automation for network tasks, utilizing tools like Python, PowerShell, or Bash, and configuration management solutions such as Ansible, Puppet, or Chef to streamline network processes.
- Knowledge of VoIP and unified communications platforms, including the setup, configuration, and troubleshooting of VoIP systems and familiarity with tools like Microsoft Teams, Cisco WebEx, and Zoom for efficient communication.

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GUAM WATERWORKS AUTHORITY

NETWORK SYSTEMS ADMINISTRATOR

Ability to:
- Supervise and support a range of technical activities related to the installation, configuration, operation, maintenance, troubleshooting, diagnosis, and repair of network systems, including both hardware and software components, ensuring secure and efficient network operations.
- Troubleshoot, diagnose, and resolve complex network issues, including connectivity problems, hardware malfunctions, and security incidents, while overseeing and mentoring technical teams to follow best practices.
- Oversee installation and configuration of server and workstation software, including network operating systems, virtual environments, and cloud-based platforms, ensuring all systems are optimized for network connectivity and performance.
- Design, implement, and manage network projects and workflows, such as network upgrades, migrations, and expansions, effectively coordinating resources to meet schedules, budgets, and performance requirements.
- Administer and maintain comprehensive network activities, including configuring network devices (e.g., routers, switches, firewalls), managing domains and accounts, ensuring system backups are performed, overseeing email services, and ensuring stable internet connectivity across the organization.
- Proactively monitor network performance, identify bottlenecks, security vulnerabilities, and areas for improvement, and recommend solutions to enhance efficiency, reliability, and security of network operations.
- Evaluate and apply network policies and compliance standards, ensuring adherence to regulations (e.g., HIPAA, PCI-DSS) and implementing security policies for access control, data protection, and user activity monitoring.
- Develop and implement disaster recovery and network continuity plans, ensuring that backup and failover systems are functional and that procedures are in place to restore operations quickly in the event of a network disruption or disaster.
- Utilize automation and scripting for network management, developing scripts or using automation tools to perform routine network tasks, configurations, or deployments, reducing manual effort and enhancing consistency.
- Think critically and analyze complex technical scenarios, evaluate alternatives, assess potential risks and impacts, and make informed recommendations that align with organizational goals and technological trends.
- Communicate effectively with diverse stakeholders, including technical teams, end-users, vendors, and senior management, providing clear and concise information both verbally and in writing to ensure understanding of network issues, plans, and strategies.
- Lead and mentor technical teams, providing administrative supervision, conducting performance evaluations, offering constructive feedback, and recommending training and professional development opportunities to foster growth in lower-level employees.
- Adapt quickly to new technologies and methodologies, continuously updating technical skills and network knowledge to remain current with evolving network architectures, cybersecurity threats, and industry best practices.

Skill in:
- LAN/WAN/Telecommunications analysis, design, and implementation, with expertise in configuring, optimizing, and managing network connections to ensure seamless and secure data flow across the organization.

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NETWORK SYSTEMS ADMINISTRATOR

- Network troubleshooting and diagnostics tools, such as SolarWinds, and command-line utilities (e.g., ping, traceroute, netstat) for effective resolution of network issues and performance optimization.
- Advanced network security practices, including firewall configuration, VPN setup, intrusion detection/prevention, access control policies, and network encryption to ensure protection against internal and external threats.
- Routing and switching technologies, including protocols such as OSPF, BGP, and RIP, and experience with devices like Cisco routers, switches, and load balancers for efficient and secure network traffic management.
- Wireless network deployment and management, including Wi-Fi design, implementation, and security, as well as configuring wireless LAN controllers and access points for reliable wireless connectivity.
- Network automation and scripting, using languages like Python, PowerShell, or Bash, as well as tools like SolarWinds Network Configuration Manager for automating network configurations, deployments, and monitoring tasks.
- Virtualization and cloud networking, with experience in configuring and managing virtual networks (VLANs), VMware, Hyper-V environments, and cloud networking on platforms like Oracle, AWS or Azure.
- Disaster recovery and business continuity planning, implementing and testing backup solutions, redundancy measures, and failover systems to ensure network availability and data integrity during emergencies.

MINIMUM EXPERIENCE AND TRAINING

A) Bachelor's degree in computer science, computer information systems, computer engineering, cybersecurity/information security or related degree and four (4) years of progressive experience in technology infrastructure, telecommunication network management, or network design and 1 year of administrative supervisory duties; *or*

B) Any equivalent combination of experience and training which provides the minimum experience knowledge, skills, and abilities.

NECESSARY SPECIAL QUALIFICATION

Possession of a valid driver's license.

LICENSURE OR CERTIFICATE

Possession of or the ability to obtain a Cisco Certified Network Associate (CCNA), Network+, and Security+ certification within 1 years of hire may be required.

ESTABLISHED: **MARCH 2008**

AMENDED: **OCTOBER 2024**

JE POINTS: **898**

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GUAM WATERWORKS AUTHORITY

NETWORK SYSTEMS ADMINISTRATOR

FLSA STATUS: Non-Exempt

This classification specification revises and supersedes the classification specification established in October 2008.

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JOSEPH T. DUENAS, Chairman
Consolidated Commission on Utilities