



Duty Statement

Classification: **Associate Telecommunication Engineer**

Position Number: **275-809-3640-002**

HCM#: **2164 JC-276782**

Branch/Section: **Information Technology Services Branch / Data Center**

Location: **Sacramento, CA**

Effective Date: **October 4, 2021**

Working Title: **Network Architect**

Collective Bargaining Identifier (CBID): **R09**

Supervision Exercised: Yes No

The Information Technology Services Branch (ITSB) provides the technology services that support the CalPERS lines of business. The organization includes a data center, programming maintenance and development staff, business development including business relations, business process improvement and project and portfolio management. ITSB is committed to provide the technical leadership, increased business alignment, talent, transparency, and accountability in support of all the CalPERS strategic business objectives.

Under direction of the Information Technology Manager II, Data Center Chief, the Associate Telecommunications Engineer function as a Data and Telecommunication Architect and a subject matter expert for the Datacenter. The Associate Telecommunications Engineer will be responsible for participating in the development of strategic plans, goals and objectives including, but not limited to: development of the technology roadmap; enterprise-wide collaboration to enable the design, engineering, and implementation of Software Defined Networking (SDN), Software Defined Wide Area Network (SD-WAN), and Network Function Virtualization (NFV) services; the most complex and critical network infrastructure automation improvements. The Associate Telecommunications Engineer serves as an expert for current public and private cloud and enterprise network architectures, including their functional organization and configuration, as well as operational principles and procedures.

The Associate Telecommunications Engineer works effectively with contractors, vendors, professional engineers, customers, California Public Employees Retirement System (CalPERS) staff, and other stakeholders, as a technical engineering consultant. The Associate Telecommunications Engineer provide expert advice on the matter related to Contact Center, Investment Office, Datacenter and DevOps. The Associate Telecommunications Engineer conducts and/or reviews engineering studies and surveys; provides technology expertise at the senior engineer level; and consults on the specifications and maintenance of network automation, design and implementation services. The Associate Telecommunications Engineer works primarily in the system engineering domain.

Essential Functions

30% The Associate Telecommunications Engineer act as the lead data center, WAN and cloud network automation engineer to design and manage the implementation of the most critical network solution to modernize the CalPERS network infrastructure. Lead and participate in the design, installation, maintenance and operations of the most complex data center, WAN, and cloud automation technologies, including but not limited to Software Defined Networking (SDN); Software Defined Wide Area Network (SD-WAN); Network Function Virtualization (NFV); and private, public and hybrid cloud network orchestration and automation. Applies expert knowledge of IT industry standards and best practices related to the design of data and telecommunication systems; communications systems to address communications problems. Develop, recommend, implement and document network and hybrid cloud specifications and maintenance standards. Implement and support system and network automation using scripting languages such as Python, Ansible, Shell, YAML, Json and POSTMAN. Participate in the development and implementation of disaster recovery designs, operational plans, and

processes for network and cloud computing. Make recommendations to senior management regarding technology decisions, infrastructure improvements, vendor partnerships, and other critical aspects of the management and operations of the department's data center, WAN and hybrid cloud network service offerings. Perform expertise in implementing the network solution with routing protocols, including BGP, MP-BGP, OSPF, EIGRP and IS-IS. Makes recommendation in telecommunication engineering related to fiber, copper and radio connectivity for wide area network (WAN); local area network (LAN); and voice technology offerings. Develop voice solutions and integrate with an existing telecommunication system; maintain the quality of traffic for contact center, traders and business users.

- 30% The Associate Telecommunications Engineer performs as the CalPERS network automation and orchestration architect. Plan, develop and maintain an architectural roadmap that defines business needs, design principles, technology strategy and methodology, and project timelines to ensure cost effective and optimal use of resources and technology: Research, analyze and recommend new automation and orchestration tools and strategies; changes to existing tools and strategies; virtualization; cloud and network orchestration; and network security automation systems to achieve greater economy and efficiency and eliminate obsolete platforms. Collaborate with internal and external stakeholders and customers of CalPERS to identify and document current and anticipated business needs. Develop a solution to automate the network security, network operation and network provisioning. Periodically review of current business process, develop and propose system workflows and integrate with the business processes. Collaborate with other teams to design and implement tools that help automate end-to-end processes that involve the network infrastructure. Write and maintain software to solve complex network management and monitoring tasks, including deploying and auditing configuration, health monitoring, metric collection, capacity planning, visualization and alerting of network devices. Communicate extremely complex data center, WAN and cloud network automation concepts and solutions to internal and external customers, peers, and executives in a manner that enables understanding of the business value of technology solutions.
- 20% The Associate Telecommunications Engineer builds effective relationships with technical and management staff of Datacenter teams, development teams, vendors, partners, contractors, solution providers and 3rd party customers. Establish, coordinate and maintain partnership between departments, vendors, customers and 3rd parties to provide well-engineered, cost effective cloud and automation services and problem resolutions for the most complex cloud networking and telecommunication products and services. Meet with senior management, customers, leading industry vendors, utilities, and others to provide engineering consulting on the most complex network services issues. Coordinate with Information Security Office to ensure CalPERS network infrastructure comply with documented standards and policies. Act as the engineer, advisor, consultant, liaison, escalation contact, and facilitator between multiple entities to obtain prompt resolution of a variety of the most complex data center, WAN and cloud network problems and related issues.
- 15% The Associate Telecommunications Engineer maintain and improve knowledge of emerging technologies for communication network, develop staff skill sets and maintain the stability of CalPERS network and telecommunication systems. Identify gaps in skills and involve staff in design, development, implementation, installation, procurement and troubleshooting of complex LAN, WAN and voice problems. Provides technical advice and guidance to end users on telecommunication technologies and regulations for voice, video and data systems. Provide guidance and counseling to network staff to support their technical and professional development; to facilitate knowledge transfer and cross training; and to ensure the organization is prepared for succession planning. Research emerging technologies and assist in developing a training plan for the network staff in order to meet the client's expectations. Perform as a leads professional engineering and IT staff to ensure Incident and Problem Management are completed in accordance with established CalPERS policies, practices, and procedures. Provides expert level support to quickly address complex outages and systems anomalies. Provides the highest level of technical leadership in connection with the maintenance and operations of data and telecommunication systems.

Marginal Functions

- 5% Coordinate and participate in special project and other related duties as assigned. Attend staff and other meeting, on premise and offsite as required. Prepares correspondence, reports, and issue papers related to data and communications software, hardware, and systems.

Desirable Qualifications

- Experienced in modern datacenters, policy driven applications and networks.
- Experience with Cisco ISE and Software Defined Access (SDA).
- Experience with Cisco ACI, Nexus 9K, Cisco ASR, Cisco Firepower, F5 and Palo Alto Networks.
- Advanced knowledge of IP routing using BGP, OSPF, EIGRP and Static
- Expert in Azure, AWS and colocation datacenters.
- Experience with Cisco Voice platforms, Call Manager, Unity, VOIP gateway, SIP, PRI's, Dialing plans, and Cisco Unified Boundary Element (CUBE)
- Knowledge of coding languages such as Python, Ansible, Shell, YAML, Json and POSTMAN
- Expert in troubleshooting complex performance issues between applications, sites and cloud infrastructure
- Ability to follow detailed directions, multi-task, analytical thinking and to perform completed staff work
- Ability to provide quality customer service and work cooperatively with CalPERS staff and contractors
- Excellent written and verbal communication skills.

Working Conditions

- The Associate Telecommunications Engineer is required to carry a smartphone and respond to incidents after business hours, on weekends, and State Holidays.

Conduct, Attendance and Performance Expectations

- Ability to maintain consistent attendance
- Ability to demonstrate punctuality, initiative, and dependability
- Ability to model and support CalPERS Core Values (Integrity, Accountability, Respect, Openness, Quality and Balance)
- Ability to model CalPERS Competencies and demonstrate proficiency in; Collaboration, Leading People, Leading Change, Driving Results, Business Acumen, Communication, and Leading Self.

I have read and understood the duties and essential functions of the position and can perform these duties with or without reasonable accommodation.

Employee Name:

Employee Signature: _____ **Date:**

I certify that the above accurately represent the duties of the position.

Supervisor Signature: _____ **Date:**