

**POSITION DUTY STATEMENT**

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Information Technology Specialist III	OFFICE/BRANCH/SECTION Information Technology/Security Services Division	
WORKING TITLE Senior Cybersecurity Architect	POSITION NUMBER 900-170-1415-613	REVISION DATE 01/08/2025

As a valued member of the Caltrans leadership team, you make it possible for the Department to provide a safe and reliable transportation network that serves all people and respects the environment.

**GENERAL STATEMENT:**

Under administrative direction of the Chief Information Security Office (CISO), Career Executive Appointment (CEA) of the Caltrans Security Services Division, the Information Technology Specialist III (ITS III) serves as a prime technical security architect within the Security Services Division. This includes but is not limited to the network security operations, technology and cloud architecture security design and services.

The ITS III will work to provide direction, recommendations, create, and develop enterprise security standards to properly secure the enterprise network and cloud services architectures, to effectively respond and adapt to the increasing organizations business and technical requirements and needs.

**Major Functions**

The incumbent provides leadership and expertise for the security architecture for the enterprise network and cloud technology, including developing and overseeing the technical design and support for the California Integrated Travel Project (Cal-ITP) system and other Caltrans security systems, including the proper operation and configuration of firewalls, Intrusion Prevention Systems (IPS's), URL filtering systems, remote access, and highly technical security operational monitoring and logging equipment. The IT Spec III conducts research and provides input on strategic design decisions, serving as lead security architect for the design, implementation, and deployment of the network, applications, system resources, network access control solutions (NAC), operational technology (OT), and Internet of Things (IoT). The ITS III, will work closely with the California Integrated Mobility Program (CIM), Traffic Operations, Transportation Management Centers (TMCs) to increase the security controls and security posture. Oversees the operational and maintenance duties related to all security infrastructure resources.

The incumbent works both independently and/or collaboratively as the senior technical architect as part of a team on security issues and helping guide other Information Technology (IT) professionals to properly and effectively secure systems, network and application design and integration.

The incumbent provides expert guidance to improve the Department's security posture, investigate security events, assist in the remediation of identified risks, vulnerabilities to ensure the confidentiality, integrity and availability of the organizations sensitive data and associated data security standards as defined by the Payment Card Industry Data Security Standards (PCI DSS) and other relevant data privacy and disclosure compliance requirements.

Domain: Information Security Engineering

**CORE COMPETENCIES:**

As an Information Technology Specialist III, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- **Learning on the Fly:** Learns quickly, is open to change, experiments, and is flexible. (Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency - Innovation, Integrity)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Innovation)
- **Ethics and Integrity:** Demonstrated concern to be perceived as responsible, reliable, and trustworthy. Respects the confidentiality of information or concern shared by others. Honest and forthright. Conforms to accepted standards of conduct. (Cultivate Excellence - Integrity)

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**POSITION DUTY STATEMENT**

PM-0924 (REV 01/2022)

- **Problem-solving and Decision-making** : Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Innovation)
- **Teamwork/Partnership**: Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Innovation)
- **Customer Focus**: Considers, prioritizes, and takes action on the needs of both internal and external customers. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Innovation)
- **Communication**: Expresses oneself clearly in all forms of communication. Gives feedback and is receptive to feedback received. Knows that listening is essential. Keeps others in the Division and other functional units informed as appropriate. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Innovation)
- **Analytical Skills**: Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Innovation, Pride)
- **Thoroughness**: Ensures that work and information is complete and accurate. Ensures that assignment goals, objectives, and completion dates are met. Documents and reports on work progress. (Cultivate Excellence - Engagement, Integrity)

**TYPICAL DUTIES:**

Percentage	Job Description
Essential (E)/Marginal (M) <sup>1</sup>	
45% E	Lead Security Architect

The IT Spec III serves as a lead security architect and subject matter security expert for the enterprise, including the Data and Digital Services Programs:

- Serves as a senior expert security architect for enterprise network (OT and IoT) and cloud infrastructure, network access control, design and development frameworks, providing robust, scalable, and secure solutions that meet or exceed published and mandated security requirements and meeting customer goals and expectations.
- Collaborates with internal and external business partners to design, review, and provide recommendations for the secure design of security enhanced technology implementation.
- Provides expert security advice to the implementation of hosted technology services (software as a service, platform as a service, infrastructure as a service etc.)
- Establishes and reviews security standards for implementation for both locally and vendor hosted infrastructure technology services (software as a service, platform as a service, infrastructure as a service etc.)
- Advises senior and executive management, for the purpose of formulating IT security strategy, policy, and governance directives for departmental security services offerings.
- Provides senior expert security guidance for the development of strategic roadmaps, system security specifications, standards, and reference architectures in support of departmental architecture designs for network, system, applications, and cloud infrastructure related to system security controls.
- Collaborate with vendor partners for the maturation activities for the security platforms and controls of departmental architecture designs for network, system, applications, and cloud infrastructure related to system security controls.
- Collaborate with vendor partners for the maturation activities for the security platforms and controls.

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PM-0924 (REV 01/2022)

25%	E	<p><b>Lead Security Advisor</b> The IT Spec III advises the Caltrans partner divisions on topics related to security centric solutions, applying process improvement models and methodologies, best practices, guidelines to update and align organization business outcomes:</p> <ul style="list-style-type: none"> <li>• Provides expert consulting services to business stakeholders and technology architects and program engineers on core business processes and business priorities, provides security control recommendations in the planning, development, implementation, and coordination of technology solutions (enterprise network, internal systems, and vendor based cloud infrastructure).</li> <li>• Collaborates with internal and external technology teams within the Caltrans organization to secure the organization data and assets.</li> <li>• Provides expert security advisory services for all enterprise information systems and system application computing environments.</li> <li>• Provides security analytical and technical review to ensure the enterprise, the organizational policies, practices and standards meet control agency compliance.</li> <li>• Ensures information systems security solutions are aligned with department, State, and Federal information technology and security standards and requirements.</li> <li>• Serves as the senior technology expert on third-party cybersecurity assessments and both internal and external audits.</li> </ul>
15%	E	<p><b>Organization Governance and Compliance</b></p> <ul style="list-style-type: none"> <li>• Reviews and provides standards for security tools (hardware, software, application) to ensure they meet industry cybersecurity best practices.</li> <li>• Participates in enterprise architecture discussions to review proposed new and enhanced technology (applications, systems, solutions) security controls and organizational alignment.</li> <li>• Conducts extensive research and develop proof of concept opportunities for a zero-trust network model, in collaboration with the internal IT organizations.</li> <li>• Performs research, stays abreast of new technology trends and tools; audit processes, systems, reports, and recommend best course of action.</li> <li>• Documents and reviews security tool documentation to ensure accuracy.</li> </ul>
10%	E	<p><b>Program Development</b></p> <ul style="list-style-type: none"> <li>• Mentors junior team members in risk and vulnerability analysis, problem statement development and remediation activities, including recommendations for the most complex enterprise cyber risks.</li> <li>• Develops presentations for Executive Leadership and Senior management as related to security control objectives, security improvement, risk tolerance, and cyber risk evaluation.</li> <li>• Effectively represents the Caltrans Security Services in meetings and engagements with other agencies and vendors. Other related business and technical duties as assigned.</li> </ul>
5%	M	<p><b>Communication</b> Develops and maintains effective communication and working relationships with Caltrans CIO, IT Division Chiefs, department executive management, state agencies, vendors and business stakeholders. Represents the section and Caltrans IT at various meetings and conferences. The incumbent will perform other duties in the specified domain(s) as needed.</p>

<sup>1</sup>ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned.

MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others.

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PM-0924 (REV 01/2022)

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### SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

In this role, the incumbent does not directly supervise/manage staff but will lead and/or mentor data engineers and/or data analysts working on mobility data standards quality and compliance.

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### KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of interoperability of multiple architectural platforms and systems Including but not limited to:

Expert level security knowledge related to zero trust architectures, full stack firewall resources, endpoint detection technologies, intrusion detection and prevention resources, DataLake structures for log collection and reporting, Microsoft windows-based operating system platforms (Windows Server, Windows Desktop, Virtual Desktop, Database, Web technologies) and M365 Cloud Applications, Unix based operating system platforms (SYS-V, Linux), embedded operating systems (TROS) familiarity and Virtual infrastructure, Microsoft Azure, Google, Amazon Web Services cloud offerings and supplemental security technologies.

Knowledge of emerging technologies and their applications to business processes; business or systems process analysis, design, testing, and implementation techniques; techniques for assessing skills and education needs to support training, planning and development; business continuity and technology recovery principles and processes; principles and practices related to the design and implementation of information technology systems; information technology systems and data auditing; the department's security and risk management policies, requirements, and acceptable level of risk; application and implementation of information systems to meet organizational requirements; project management lifecycle including the State of California project management standards, methodologies, tools, and processes; software quality assurance and quality control principles, methods, tools, and techniques; research and information technology best practice methods and processes to identify current and emerging trends in technology and risk management processes; and state and federal privacy laws, policies, and standards. Development and application of technology in the current and future business environment; emerging technologies and their applications to business processes; policy development; and applications and implementation of information systems to meet organizational requirements.

Ability to recognize and apply technology trends and industry best practices; assess training needs related to the application of technology; interpret audit findings and results; implement information assurance principles and organizational requirements to protect confidentiality, integrity, availability, authenticity, and non-repudiation of information and data; apply principles and methods for planning or managing the implementation, update, or integration of information systems components; apply the principles, methods, techniques, and tools for developing scheduling, coordinating, and managing projects and resources, including integration, scope, time, cost, quality, human resources, communications, and risk and procurement management; monitor and evaluate the effectiveness of the applied change management activities; keep informed on technology trends and industry best practices and recommend appropriate solutions; foster a team environment through leadership and conflict management; effectively negotiate with project stakeholders, suppliers, or sponsors to achieve project objectives; and analyze the effectiveness of the backup and recovery of data, programs, and services. Research and identify best practice methods and processes to identify current and emerging trends in technology and recommend appropriate courses of action.

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### RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent must exercise good judgment, analyze problems, and take appropriate action. Poor decisions or recommendations could result in significant losses of departmental efficiencies through unnecessary delays, loss of data, equipment damage, loss of employee productivity, and user dissatisfaction.

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### PUBLIC AND INTERNAL CONTACTS

The incumbent will have frequent contacts with managers and staff in Caltrans, IT managers throughout the state, private consultants, and vendor representatives concerning the needs and development of IT systems. The incumbent may initiate contacts with other departments, governmental agencies, or private companies concerning IT technology related to the performance of this position.

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### PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The employee may be required to sit for prolonged periods of time using a keyboard, monitor, mouse, and telephone while in the office or teleworking. Employee must value cultural diversity and other individual differences in the workforce; adjust rapidly to new situations warranting attention and resolution; be open to change and new information; adapt behavior and work methods in response to new information, changing conditions, or unexpected obstacles; consider and respond appropriately to the needs, feelings, and capabilities of others; be tactful and treat others with respect. In addition, the employee must have the ability to

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multi-task, adapt quickly to changing priorities, and perform completed staff work or tasks and projects with short notice.

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### WORK ENVIRONMENT

This position may be eligible for telework. The amount of telework is at the discretion of the Department and based on Caltrans's evolving telework policy. Caltrans supports telework, recognizing that in-person attendance may be required based on operational needs. Employees are expected to be able to report to their worksites with minimum notification if an urgent need arises. The selected candidate will be required to commute to the headquartered location as needed to meet operational needs. Business travel may be required, and reimbursement considers an employee's designated headquartered location, primary residence, and may be subject to CalHR regulations or applicable bargaining unit contract provisions. All commute expenses to the headquartered location will be the responsibility of the selected candidate.

If not working remotely, the employee will work in a climate-controlled office under artificial lighting using a personal computer. The employee may be required to travel. When available, a State vehicle will be provided. Possession of a valid driver's license is required when operating a State owned or leased vehicle. If the employee utilizes their own personal vehicle, they may be reimbursed for travel expenses.

The incumbent may work after regular business hours and/or weekends to perform activities to support business operations. The incumbent must carry a cell phone and respond to calls after hours to support these business operations. The incumbent will make occasional, scheduled trips to local Caltrans HQ, transportation agencies and other Caltrans project sites.

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I have read, understand and can perform the duties listed above. (If you believe you may require reasonable accommodation, please discuss this with your hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

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EMPLOYEE (Print)

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EMPLOYEE (Signature)

DATE

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I have discussed the duties with, and provided a copy of this duty statement to the employee named above.

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SUPERVISOR (Print)

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SUPERVISOR (Signature)

DATE