

POSITION DUTY STATEMENT

PM-0924 (REV 04/2021)

CLASSIFICATION TITLE Information Technology Specialist III	OFFICE/BRANCH/SECTION HQ/Information Technology/Security Services Division	
WORKING TITLE Senior Cybersecurity Architect	POSITION NUMBER 900-170-1415-924	EFFECTIVE DATE 09/15/2021

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 (IT Spec III) serves as the 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 IT Spec 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 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 Information Technology Specialist III (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, and system resources. 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 data and assets.

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. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)

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- **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. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **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. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Relationship Building:** The ability to develop and maintain internal and external trust and professional relationships, which includes listening and understanding to build rapport. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Interpersonal Effectiveness :** Effectively and appropriately interacts and communicates with others to build positive, constructive, professional relationships. Tailors communication style based on the audience. Provides and is receptive to feedback. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Planning and Results Oriented:** Organizes and executes work to meet organizational goals and objectives while meeting quality standards, following organizational processes, and demonstrating continuous commitment. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, 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. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)

TYPICAL DUTIES:

Percentage	Job Description
Essential (E)/Marginal (M) ¹	

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45%	E	Lead Security Architect
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The IT Spec III serves as the lead security architect and subject matter security expert for the enterprise, including the Traffic Operations, Transportation Management Centers:

- Serves as the senior expert security architect for enterprise network and cloud infrastructure, 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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25% E Lead Security Advisor

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:

- 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)
- Collaborates with internal and external technology teams within the Caltrans organization to secure the organization data and assets
- Provides expert security advisory services for all enterprise information systems and system application computing environments
- Provides security analytical and technical review to ensure the enterprise the organizational policies, practices and standards meet control agency compliance
- Ensures information systems security solutions are aligned with department, State, and Federal information technology and security standards and requirements
- Serves as the senior technology expert on third-party cybersecurity assessments and both internal and external audits

15% E Organization Governance and Compliance

- Reviews and provides standards for security tools (hardware, software, application) to ensure they meet industry cybersecurity best practices
- Participates in enterprise architecture discussions to review proposed new and enhanced technology (applications, systems, solutions) security controls and organizational alignment
- Conducts extensive research and develop proof of concept opportunities for a zero-trust network model, in collaboration with the internal IT organizations
- Performs research, stays abreast of new technology trends and tools; audit processes, systems, reports, and recommend best course of action
- Documents and reviews security tool documentation to ensure accuracy

10% E Program Development

- Mentors junior team members in risk and vulnerability analysis, problem statement development and remediation activities, including recommendations for the most complex enterprise cyber risks
- Develops presentations for Executive Leadership and Senior management as related to security control objectives, security improvement, risk tolerance, and cyber risk evaluation
- Effectively represents the Caltrans Security Services in meetings and engagements with other agencies and vendors. Other related business and technical duties as assigned.

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5%	M	<p>Other duties</p> <p>Develops and maintains effective communication and working relationships with Caltrans CIO, IT Division Chiefs, department executive management, state agencies, vendors and business stakeholders.</p> <p>Represents the section and Caltrans IT at various meetings and conferences.</p>
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¹ESSENTIAL 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.

SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

This is not a supervisory role; it will require providing guidance and mentoring to the security operations team and the adversary emulation security teams.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

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

1. 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
2. Microsoft windows-based operating system platforms (Windows Server, Windows Desktop, Virtual Desktop, Database, Web technologies) and M365 Cloud Applications
3. Unix based operating system platforms (SYS-V, Linux)
4. Embedded operating systems (TROS) familiarity
5. Virtual infrastructure, Microsoft Azure, Google, Amazon Web Services cloud offerings and supplemental security technologies.

- Knowledge of the development and application of technology in the business environment.
- Ability to produce technical enterprise level architectural design outputs.
- Ability to provide architecture consulting services to Agencies/Departments.
- Strong leadership skills to facilitate the development, implementation, and maintenance of enterprise technology systems and design.
- Experience in delivering presentations to senior-level executives and technical audiences.
- Excellent written skills for preparing reports and briefings.
- Ability to bridge the strategic intent and practical application across multiple information technology functional domains.
- Ability to work collaboratively with varied multi-disciplined work groups.
- Skills related to leading large and innovate efforts, creating technological solutions and architectures impacting critical areas of the business.
- Formal business and IT architecture training/education.
- Ability to be organized, meet important deadlines.
- Ability to maintain a professional decorum and treat others with respect.

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.

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.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The employee may be required to sit for prolonged periods of time using a keyboard, monitor, mouse, and telephone. 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 multi-task, adapt quickly to changing priorities, and perform completed staff work or tasks and projects with short notice.

Equipment installation may be required must be able to lift up to 50lbs with or without assistance.

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For alternate format information, contact the Forms Management Unit at (916) 445-1233, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

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WORK ENVIRONMENT

The incumbent is required to work outside normal business hours, extended hours, weekends, and holidays and may be required to travel to Caltrans locations within California. If the incumbent has a Class C driver's license and utilizes their own vehicle, they may be reimbursed for travel expenses. When available, a State vehicle will be provided.

Due to COVID emergency order the incumbent will be teleworking. Note: this may change to a hybrid approach telework/onsite situation.

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.)

EMPLOYEE (Print)

EMPLOYEE (Signature)

DATE

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

SUPERVISOR (Print)

Karl Kopper

SUPERVISOR (Signature)

DATE