IT ROLES AND DESCRIPTIONS FOR TELEWORK

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California Information Technology Managers Academy (ITMA)
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PURPOSE

To identify typical California IT roles, and a high level assessment of the suitability of these roles for telework.

OVERVIEW

Not all jobs and not all employees are suitable for telecommuting. A job that involves face-to-face contact with customers, such as a medical office receptionist or a personal services provider, is generally not a good candidate for telework. Similarly, an employee who does not have the self-discipline that telework requires would not be successful in a telework role.

To determine what jobs would be most suited for telework, management conducts a task analysis. All jobs are made up of tasks that must be performed. The job's components are broken down and a percentage assigned as to the amount of the work week it consumes. Then for each task, a determination is made to see if there is a locational aspect to it. In other words, does the completion of the task depend on it being performed at a specific location? Finally, all of the percentages of the tasks that are location-dependent are added up to determine location dependence as percentage of job. From here, a determination can be made of the feasibility of the job for telecommuting. Note that even if it's determined that a large percentage of the job is location dependent, there may be a way to clump the tasks that are location independent to one or two days so that the employee holding the position can still telecommute one or two days a week.

Other factors to take into account are company resources and security requirements. If a job requires ongoing access to specialized equipment, materials and files that are situated only at the workplace, or because of your industry, there are security compliance issues, these could prove problematic if the employee wants to work from home.

IT ROLES AND SUITABILITY FOR TELEWORK

The following pages contain information on typical California State IT roles, and a general assessment of the suitability of the roles to telework. In addition, these typical roles are cross-walked to the proposed Department of Personnel Administration (DPA) new functional areas.

Color coding is used to identify suitability for telework. The three colors used indicate the following:

- Green: From 50% to 100% of this role could be performed by telework
- Yellow: From 20% to 50% of this role could be performed by telework.
- Red: Up to 20% of this role could be performed by telework.

The IT roles list is not exhaustive, and is meant as a general guideline and useful tool for IT managers in assessing the specific jobs of its employees. For more specific information on assessing your jobs for suitability for telework (both IT and non IT jobs), please refer to the Telework Resource Listing for information on training and assessing jobs for telework.

IT ROLES AND DESCRIPTIONS

IT Roles	Definition
Administrators	
Application Administrator	Role serves as the primary administrator and technical expert for an application which may be custom-developed, but is usually Commercial Off-the-shelf (COTS) (such as Remedy or Microsoft Project Server) or Modified Off-the-shelf (MOTS) (such as ChangeMan). Responsible for various administrative functions that may include: • Configuring application security within an application's security system (setting up groups within an application security system) • Configuring lookup tables and values within an application • Creating application-specific templates • Providing second or third level troubleshooting for application related problems • Serving as liaison with external vendor for COTS software products. Examples of the types of application administrators would include: • RMS Administrator • SharePoint Administrator • Remedy Administrator • ChangeMan Administrator • Programmer WorkBench Administrator • CA View Administrator • ESP Administrator
Network Administrator	Role includes all second-level network support (break/fix), minor network enhancements, and minor network implementations
Security Administrator	Responsible for and will provide for the safekeeping and integrity of information assets by maintaining daily ongoing operational systems and controls that prevent unauthorized access, modification, disclosure, and/or deletion of information from computer networks and systems. Security administrators will be responsible for reporting any anomalies to the appropriate infrastructure staff as well as the Information Security Office as possible security incidents. Examples include: • RACF Administrator
Server Administrator	Role is temporary in nature until the new services are well established, fully understood and then transitioned to administration and operations. Currently, this role takes on all aspects of engineering the new service and operating the service as appropriate until a formal transition occurs. Services include HP Open view, HP Insight Manager and HP Print Jet Administration.
System Administrator	A technician, who monitors, fixes, configures, installs and generally maintains part of the EDD infrastructure, hardware and software either desktops, laptops, printers, print appliances, data communication devices, core servers or business application servers.

Analysts	
Asset Analyst	Develop, maintain, and improve Information Technology (IT) asset management policies, procedures and reporting to collect, track and manage accurate inventory data about all of the computer hardware, software, network components and services statewide which are purchased, deployed and supported by the IT organization. Staff ensures that legal and regulatory requirements are met for tracking and management of the Departments assets. Other asset activities may include: developing project plans, risk mitigation strategies, cost benefit analysis, identifies issues, evaluates new technology, evaluates current enterprise technology and provides research, analysis and recommendations, in order to deploy asset management for the entire department.
Call Center Analyst	Design, implementation and support of call center systems
Change Management Analyst	Role includes supporting change control activities; maintains change request information; creates reports; plan, coordinate, and conduct Change Control Board (CCB) meetings.
Configuration Management Analyst	Role includes development, implementation, and maintenance of a configuration management data base (CMDB). The analyst identifies, controls, and tracks all components changed in the IT environment.
Infrastructure Analyst	Knowledge of the organizations technology infrastructure who can assist technical staff with analysis of technical documents required for the enhancement of systems, system procurement and standard system documentation
Infrastructure Client Server Analyst	Provide daily operational support to the Enterprise Client Server complex infrastructure, including monitoring client server capacity & performance to detect problems in support of business needs.
Information Systems Analyst	Performs IT analysis activities related to the management of information technology, business process analysis, or systems analysis and design. Examples of the types of analyst would include: • Application Development Analyst (analyze and design systems, document systems) • Business Process Analyst (analyze business processes for purposes of improvement, reengineering, or automation) • Business Consultant (develops business cases or feasibility studies) • Business Continuity Analyst (develops and maintains the IT Continuity of Operations Plan/Continuity of Government Plan) • Documenter (includes documenting programs and final application designs) • Policy and Standards Analyst (develops and maintains IT policies and standards) • Requirements Analyst (works with programs to define and document automation requirements) One Information Systems Analyst may perform multiple analysis roles at various times.

Move Add Change (MAC) Analyst	Oversight and coordination of all IT equipment, software and telephone moves, adds and changes (MACs).
Mainframe Analyst	Role for Mainframe applications which includes program area analysis, business and technical requirements.
Mainframe Production Scheduler Analyst	Provides mainframe production support using scheduling software. Co-ordinates scheduling requests of production monitors & regions for customers.
Mainframe Production Analyst	Involves production batch processes working with a variety of platforms and web-based applications. Monitors production processing, including; file uploads, running Special Production Processing Requests, and monitoring production database processes.
Procurement Analyst	Provide procurement consulting, document preparation, and coordination of all activities, including; procurement approvals, obtaining quotes from vendors, preparation of cost estimates, track/monitor procurements, manage licensing agreements, provide status to interested parties, and update asset management documentation as needed.
Project Analyst	Role serves various functions on a project team under the direction of the project manager, including creating, maintaining, and executing project management plans in support of achieving project objectives. Examples of the types of analyst would include: • Document and Library Manager • Issue/Risk/Change Manager • Risk Analyst • SI Vendor and Contract Manager
Project Oversight Analyst	Role which includes performing project oversight reviews, and procuring and managing IPOC and IV&V vendors.
Release Management Analyst	Role includes identifying, isolating and resolving issues in the build / release process to protect the integrity of the production environment. Releases are coordinated and communicated effectively to all impacted areas. Use current version control software to analyze, develop, review, and release operations coding for the implementation of, or modification to the production environment.
Service Desk Support Analyst	Provides 1st level support for IT problem reporting. Trouble shooting and fixing common IT problems, and triage more complex problems and directs problems to the appropriate support area for resolution. Other activities include logging, tracking, and appropriate escalation.
Telecom Voice & Cabling Analyst	Management of an organization's telephone and telecommunications systems infrastructure, which includes cabling, consulting, procurement, and maintenance of equipment and lines, vendor services management, customer chargeback, and expenditure cost containment.

Architects	
Application Architect	Help the organization deliver software that not only meets the tactical and strategic objectives of the organization, but also considers the technical, fiscal, scheduling, and staffing constraints of the project. This helps the organization identify the pros and cons of a given design decision and select a direction that optimizes the use of technology for the given business objectives and constraints. Another role of the Application architect is a Solutions Integrator who addresses how we integrate new technology into our existing infrastructure.
Chief Enterprise Architect	Serves as the principal architect responsible for planning, organizing, and directing the activities of technical staff in the development and implementation of the Enterprise Architecture for the organization. The Chief Enterprise Architect provides expert-level technical leadership in the establishment of policies, standards, best practices, templates, and tools to support the understanding, application, implementation and compliance of the Enterprise Architecture within the organization.
Enterprise Architect	Role for enterprise architecture which includes analyzing the organization's business objectives and technical strategy, developing architectural concepts and approaches, and creating models and architecture specification documents.
Information Architect	The top expert level role which includes database design, system architecture and security.
Java Architect	The top expert level role for Java applications which includes the most complex application architecture, design and development as well as framework standards and design.
Mainframe Architect	The top expert level role for Mainframe applications which includes the most complex application architecture, design and development as well as framework standards and design.
Microsoft Architect	The top expert level role for Microsoft applications which includes the most complex application architecture, design and development as well as framework standards and design.
Network Architect	Responsible for all network designs, major network enhancements, network technology migrations, major network implementations and third-level network support (break/fix
Security Architect	Responsible for providing solutions architecture for EDD security based projects or major organization projects which require new security controls and counter-measures. 1) The Security Architect will be the primary lead for the design, development, and implementation of organization's security technical architecture. The Security Architect will sponsor and promote best practices for existing systems as well as new security software products and services to ensure they effectively operate within the organization's existing infrastructure. The security architect must collaborate with application development teams, infrastructure architects and engineers, and security policy experts to define an integrated framework of application security policy and architecture, and the guidance necessary for its consistent implementation. 2) The Security Architect works closely with organizations ISO Office to insure proper operation of appropriate information security practices consistent with applicable state and federal laws and policies.
System Architect	A senior engineer responsible for the architectural design of the organization's technology environment

Database Administrators

Database Administrator DB2	The journey level role which includes DB2 database integrity, availability, performance, recoverability and security.
Database Administrator IDMS	The journey level role which includes IDMS database integrity, availability, performance, recoverability and security.
Database Administrator Informix	The journey level role which includes Informix database integrity, availability, performance, recoverability and security.
Database Administrator Oracle	The journey level role which includes Oracle database integrity, availability, performance, recoverability and security.
Database Administrator SQL	The journey level role which includes SQL database integrity, availability, performance, recoverability and security.
Associate Database Administrator	Participates in activities to plan, direct, prioritize and monitor data base activities to ensure technical tasks are carried out in a timely manner.

Designers

Java Designer	The master level role for Java applications which includes application design and the more complex application development and programming.
Microsoft Designer	The master level role for Microsoft applications which includes application design and the more complex application development and programming.
Other Designer	The master level role for 4gl applications which includes application design and the more complex application development and programming.
Mainframe Designer	The master level role for Mainframe applications which includes application design and the more complex application development and programming.

Developers

C Developer	The journey level role for C applications which includes application development and programming.
Delphi Developer	The journey level role for Delphi applications which includes application development and programming.
Java Developer	The journey level role for Java applications which includes application development and programming.
Mainframe Admin Developer	The journey level role for Mainframe applications which includes application development and programming.
Mainframe Developer	The journey level role for Mainframe applications which includes application development and programming.
Microsoft Developer	The journey level role for Microsoft applications which includes application development and programming.
Other Developer	The journey level role for 4gl applications which includes application development and programming.
SharePoint Developer	The journey level role for SharePoint applications which includes SharePoint development and programming.

Engineer

Network Engineer	Responsible for all network design, major network builds, major network enhancements, network technology migrations, major network implementations and some third-level network support (break/fix, only if second-level support cannot solve).
System Engineer	Responsible for implementing and documenting the architectural design of the organization's technology environment.

Managers

Incident Manager	Performs incident control through incident detection, recording, classification, diagnosis, resolution, recovery, closure, and ownership. Also, responsible for driving and monitoring the efficiency and effectiveness of the Incident Management process. Recommends and implements improvements. Develops and maintains the Incident Management support tools. Schedules and manages the work of incident support staff (first and second-line).
Portfolio Manager	Maintains the strategic view of business objectives and how various projects and lines of business fit within those objectives, and is responsible for the overall prioritization criteria and process. A portfolio manager is responsible for continuing oversight of the contents within a portfolio. The Portfolio Manager also provides day-to-day oversight; periodically reviews the performance of, and conformance to expectations for, initiatives within the portfolio; ensures that data is collected and analyzed about each of the initiatives in the portfolio; and enables periodic decision making about the future direction of individual initiatives. The portfolio manager is a key role in facilitating project prioritization, resource allocation, and project approval decision-making
Problem Manager	Performs problem control through problem identification and recording, classification, investigation and diagnosis, and root cause analysis. Performs error control through error identification and recording, assessment, recording, resolution, managing the known error database, monitoring resolution progress, and error closure. Also, performs proactive problem management through trend analysis, targeting support action, targeting preventative action, and feed-back of information to the relevant IT staff.
Project Manager	The designated leader of an IT project or initiative. The person assigned by the performing organization to achieve the project objectives. This role has a project team of business and IT staff, but may not be their resource manager.
Resource Manager	The first level or functional manager of staff within a line-of-business.
Senior Manager	A second level or higher level of IT management. Usually reports to an IT organizations chief, and has several lower level managers reporting to him/her.

Testers

Development Tester/Functional Tester	The programmer tester role for mainframe, client/server and/or Web applications which includes unit, functional, string/integration testing and initial performance evaluation.
Infrastructure Tester	Tester role for system infrastructure which includes telecommunication systems, commercial applications, utilities, and operating systems upgrades and patches.

Stress/Load Tester	The tester role for conducting stress/load and performance testing in a production environment.
System Tester-System/Regression Tester	Tester role for system, regression and security testing of mainframe, client /server and/or Web applications.
Test Manager (Project Level)	The test manager coordinates the organization's overall testing activities for a project and may work with the vendor test manager monitoring and reporting on the vendor testing responsibilities.
Other	
Administrative	Role involves the administrative, analytical and clerical support for the Division, Project, or Section. It includes administrative transactions related to personnel, training and travel; analytical work to develop costs of activities, resource usage and budget, and the preparation of memorandums, reports and issue papers.
Security Operator	The apprentice level for running information security based systems.
Systems Integrator	A technical specialist responsible for integrating Business Application Servers with all other aspects of the organization infrastructure including desktop, core server and network equipment.
Computer Operator	Classes in this series operate the main information technology systems console, multiple on-line teleprocessing systems, auxiliary consoles, and peripheral equipment on information technology systems, perform technical analysis, and may supervise or acts a lead person for others in the performance of information technology systems operating duties.

CROSS WALK OF NEW DPA FUNCTIONAL AREAS TO TYPICAL STATE IT ROLES

Proposed DPA IT Functional Areas	App Administrator	Network Administrator	Security Administrator	Server Administrator	System Administrator	Asset Analyst	Call Center Analyst	Change Management Analyst	Config Management Analyst	Infrastructure Analyst	Infrastructure Client Server Analyst	Information System Analyst	MAC Analyst	Mainframe Analyst	Mainframe Production Scheduler Analyst	Mainframe Production Analyst	Procurement Analyst	Project Analyst	Project Oversight Analyst	Release Management Analyst	Service Desk Support Analyst	Telecom Voice & Cabling Analyst
				Administrators								Analysts										
1. Client Server App Development											X											
2. Legacy App Development														X	X	X						
3. Web App Development																						
4. Customer Technical Support	X			X	X	X		X	X				X							X	X	
5. Database Administration																						
6. Data Administration																						
7. Server and Systems Support	X		X	X							X					X						
8. Information Sys Security Admin			X																			
9. IT Business Consultant								X	X								X	X	X			
10. IT Project Management																						
11. IT Technical Doc Writer												X										
12. Network Administration		X																				
13. Website Admin and Develop.																						
14. Telecommunications							X															X

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CROSS WALK OF NEW DPA FUNCTIONAL AREAS TO TYPICAL STATE IT ROLES

Proposed DPA IT Functional Areas	Application Architect	Chief Enterprise Architect	Enterprise Architect	Information Architect	Java Architect	Mainframe Architect	Microsoft Architect	Network Architect	Security Architect	System Architect	DB DB2	DB IDMS	DB Informix	DB Oracle	DB SQL	Associate DB Admin	Java Designer	Microsoft Designer	Other Designer	Mainframe Designer	C Developer	Delphi Developer
1. Client Server App Development	X		X		X		X										X	X			X	X
2. Legacy App Development	X		X			X													X	X		
3. Web App Development	X		X		X		X										X	X			X	X
4. Customer Technical Support																						
5. Database Administration											X	X	X	X	X	X						
6. Data Administration				X																		
7. Server and Systems Support										X												
8. Information Sys Security Admin									X													
9. IT Business Consultant		X																				
10. IT Project Management																						
11. IT Technical Doc Writer																						
12. Network Administration																						
13. Website Admin and Develop.																						
14. Telecommunications								X														

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CROSS WALK OF NEW DPA FUNCTIONAL AREAS TO TYPICAL STATE IT ROLES

Proposed DPA IT Functional Areas	Developers					Engineers		Managers			Managers			Testers					Others			
	Java Developer	Mainframe Admin Developer	Mainframe Developer	Other Developer	SharePoint Developer	Network	System	Incident Manager	Portfolio Manager	Problem Manager	Project Manager	Resource Manager	Senior Manager	Development/Functional Tester	Infrastructure Tester	Stree/Load Tester	System/Regression Tester	Test Manager (Project)	Administrative	Security Operator	Systems Integrator	Computer Operator
1. Client Server App Development	X											X	X	X		X	X	X	X		X	
2. Legacy App Development		X	X	X								X	X	X		X	X	X	X		X	
3. Web App Development	X				X							X	X	X		X	X	X	X		X	
4. Customer Technical Support								X		X		X	X						X		X	
5. Database Administration												X	X						X			
6. Data Administration												X	X						X			
7. Server and Systems Support							X					X	X		X	X			X		X	
8. Information Sys Security Admin												X	X						X	X		
9. IT Business Consultant									X			X	X						X			
10. IT Project Management											X	X	X					X	X			
11. IT Technical Doc Writer												X	X						X			
12. Network Administration						X						X	X						X			
13. Website Admin and Develop.												X	X						X			
14. Telecommunications												X	X						X			