

ENTERPRISE INFORMATION SERVICES DIVISION DUTY STATEMENT

Section	Infrastructure Services
Unit	Servers, Storage and Virtualization
Position Number	065-647-1367-001
Classification	Systems Software Specialist III (Technical)
Revised Date	June 11, 2012

Supervision: The System Software Specialist III Technical (SSS III Tech) will function under the general direction of the Chief of Infrastructure Services and Enterprise Architecture Section Manager, and the direct supervision of the Systems Administration Section Manager. The incumbent will develop and implement standards and architectural designs relevant to the California Department of Corrections and Rehabilitation (CDCR) data in the Virtual Machine (VM) environment. The incumbent will have the responsibility of developing and implementing practices and standards that pertain to VMWare vCenter, vSphere, vMotion and all other aspects of managing CDCR's virtual resources. This position will be responsible for coordinating all Tier III support efforts with the Windows Server Administration unit to resolve the most complex technical problems and issues that occur within the Department's Enterprise VM infrastructure. The incumbent assists the CDCR CIO, the Enterprise Architecture Section Manager and other Department executive level management to formulate strategic Information Technology (IT) direction and specific IT goals to meet CDCR's strategic business objectives. The incumbent will independently perform strategic organizational technical decision-making and provide technical direction to other analysts relative to VM design, test, deployment, support and disaster recovery.

Knowledge: This is an expert level position and the incumbent must be familiar with electronic computer systems, data communications software programming, installation, maintenance and troubleshooting. The incumbent must have worked in 500 + server environment with strong skills in AD, DNS, WINS, DMZ, and all aspects of supporting VMware hosts. The incumbent has knowledge of all electronic data processing equipment and its capabilities and interfaces between hardware and software; and has extensive experience in the configuration, installation, maintenance, troubleshooting and implementation of data communications systems. The incumbent demonstrates true proficiency with respect to data processing concepts, practice, methods, and principles along with an in-depth understanding of, and currency with respect to evolving industry trends and standards. The incumbent will demonstrate specialization in enterprise system administration/operation as well as expert knowledge and ability to apply concepts relative to system, Windows server and server components in designing, implementing and evaluating long term, complex information technology systems.

Knowledge base at an expert level must include the following:

- 1) Plan, install, and maintain a VMware vCenter server and infrastructure to support centralized configuration and management of a VMware vSphere environment.
- 2) Install and configure VMware ESXi hosts and HA to form a cluster that supports High Availability of the running VMs.
- 3) Plan for, complete, and troubleshoot live migrations of VMs using VMware vMotion.
- 4) Plan for, complete, and troubleshoot live migrations of the VM storage using VMware Storage vMotion.

- 5) Plan for, complete, and troubleshoot cold migrations of VMs using VMware Converter or other 3rd party tools to move powered off VMs from one vSphere environment to another.
- 6) Configure and use VM Templates and Host Profiles to help automate the deployment and configuration of new VMs.
- 7) Plan for, configure, and use VMware Update Manager to support the patching and upgrading of ESXi hosts.
- 8) Complete the tasks to create Storage Array LUNs and make them accessible to VMware ESXi hosts and servers.
- 9) Create new VMware Datastores on Storage Array LUNs for use by VMs.
- 10) Create, configure, and use vSphere Distributed Switches (vDS) to provide VMs with network connectivity.

Guidelines: The incumbent is responsible for establishing and documenting procedures, system policies, operations and reference materials for the services provided. The incumbent must use his/her judgment to determine the scope and depth of guidelines for services under their responsibility.

Complexity: The breadth of the position incumbent includes developing and ensuring availability of infrastructure services for an enterprise network environment for departmental business applications and systems infrastructure management. The impact of these services affects all business areas utilizing the CDCR computing resources for their business processes. The incumbent is also responsible for documenting and ensuring planned business applications will effectively function within the VM architecture design and defining architecture requirements and configuration management. When considering service enhancements or additions, the incumbent is responsible to identify impacts, determine appropriate methodology and procedures, and recommend alternatives for the CDCR enterprise. The incumbent ensures the integration of multiple services occurs without service impact to customers. The incumbent demonstrates skills and qualities required for effective VMware vCenter production, staging, testing and architectural design. The incumbent also demonstrates team leadership and plays a key role in the success of the department's IT and the business as a whole. The incumbent possesses leadership ability needed to mentor organizational staff and relate to CDCR program management and staff.

Scope and Effect: The services and decisions the incumbent is responsible to provide affect a large number of CDCR mission critical and non-mission critical areas. The scope of the work involves planning, developing and implementing technological solutions that are essential to the mission of the overall organization and/or affect a large number of CDCR business areas on a long-term basis. Primary responsibilities also include architectural design and standardization necessary to ensure the organization's business success. The incumbent is responsible and authorized to make significant technical decisions relative to the implementation, management and support of VMware, vCenter, vSphere, ESXi hosts, HA clusters and all other aspects of CDCR's virtual machine environment..

Personal Contact: The incumbent represents CDCR to external entities, advises CDCR IT and program management, administrative or executive staff on the planning, development, implementation and coordination of IT issues. This includes the operations, maintenance, installation and construction of information systems on a regular basis. The incumbent advises technical staff and system users to provide and make recommendations regarding systems and problems requiring resolutions. There is regular contact with IT staff, management, and external entities to coordinate problem resolution and ensure conformity of methods and

practices. The incumbent contacts users to discuss business and system requirements, contractors to provide contract oversight and contacts vendors to discuss existing or new technology. The incumbent communicates effectively, both orally and in writing, with subordinates, peers, clients and customers at all levels. The incumbent demonstrates a high level of communications and interpersonal skills.

Purpose of Contacts: The incumbent is familiar with customer business program areas, practices, and IT service requirements. The incumbent possesses the ability to provide quantitative information, and consider and value differing viewpoints, goals, or objectives. The incumbent possess the ability to motivate, persuade and lead individuals or groups.

The actual duties of the incumbent include, but are not limited to the following:

40% - Infrastructure services and system/service enhancements

- Develop impact assessments of proposed executive and legislative changes;
- Makes application, production and operation presentations to management;
- Develop, analyze and correct technical aspects of Request for Proposals (RFP), Feasibility Study Reports (FSR), Post-Implementation Evaluation & Reviews (PIER) as needed;
- Propose and/or modify service level agreements;
- Determine and document impact of upgrades and systems to existing VM infrastructure and services;
- Administer all aspects of VMWare server virtualization platforms;
- HP Blade Chassis configuration and administration;
- Design, configure and support DR systems for Virtual environment.
- Evaluate and recommend approval/rejection of new special purpose vendor supplied applications and technology;
- Support multiple server OS's in an Enterprise environment
- Analyze, test, install utility software upgrades and patches;
- Perform the installation of operating system upgrades and/or patches;
- Coordinate and ensure effective operations of complex multiple hardware/software configurations in a highly virtualized environment;
- Perform configuration management for system hardware and operating system;
- Monitor and optimize the performance of systems for business application projects.
- Define infrastructure configuration, analyze and report capacity planning needs;
- Set configuration standards and conventions;
- Act as technical advisor and liaison to application development, database, operations and security staff in the development of new services or projects;
- Act as a consultant or technical advisor in meetings; and
- Act as a technical advisor/consultant to other customers, IT staff, vendors and contractors.

30% - Existing systems/services maintenance

- Add entries and resolve issues on DNS and DDNS, DMZ and MX records;
- Coordinate with technical staff and user project managers to review development and maintenance components of project plans;
- Coordinate with technical staff and user project managers the testing of various infrastructure alternatives to ensure the selection of effective solutions;

- Manage implementation of systems site installations, relocations, removals and changes;
- Perform complex project coordination, reporting tasks and implementation plans;
- Develop complex project plans and schedules;;
- Define and document systems infrastructure and infrastructure processes;
- Obtain and confirm personnel commitments to project tasks.
- Maintain version control of operating system and special purpose vendor supplied utility software and licenses;
- Evaluate and analyze systems' performance;
- Provide support and updates to field personnel for Virtualized environment;
- Perform quick analyses as required;

25% - Enterprise Technical Architecture – Infrastructure

- Support the maturity and adoption of EA across the organization.
- Ensure that the quality, security, stability and agility of the EA meet evolving business needs by coordinating with other architects and analysts.
- Develop, lead, facilitate, and oversee the creation and maintenance of enterprise architecture artifacts and program.
- Serve as contact for the formulation of reference architectures.
- Develop current state models, future state models, migration strategies, portfolios, and standards.
- Serve as contact for CDCR architects to ensure consistent communication and partnership.
- Develop conceptual and logical subject area models and implementation-level details that affect the continuum of disciplines involved in the architecture, design, implementation and management of enterprise application and technology.
- Assist with defining EA processes and procedures.
- Review project design artifacts, including but not limited to requirements and architecture models for EA conformance.
- Review IT procurements for EA conformance.
- Coordinate and review the enterprise architecture artifacts into cohesive architecture.
- Provide direction to other CDCR architects and analysts.
- Assist and participate in EA discussions.
- Lead meetings and other activities as required.
- Promote EA benefits, process, outcomes, results, and compliance with policies, practices and processes.
- Represent the EA program on committees and organizations.
- Provide expertise in the areas of EA.
- Train and mentor staff on best practices in the EA areas.
- Create and maintain a working environment that encourages mutual cooperation.
- Assess the readiness of emerging standards and technologies for adoption.
- Keep abreast of changes in architecture policies and strategies at the federal and State levels.
- Prepare and deliver presentations to various audiences including other architects, business, IT management, and executive management.

5% - Service disruptions

- Act as a coordinator during systems troubleshooting;

- Assist with server troubleshooting;
- Provide third level Help Desk support for all VM related disruptions;
- Provide systems expertise and assistance for production incidents on a 24-hour availability basis;
- Act as liaison with vendors to report/troubleshoot special purpose vendor supplied application software problems;
- Identify and resolve problems with system and configuration software;
- Prepare/review disruption reports and correction plans; and
- Systems research/problem solving.

Employee

Date

Employee

Date