INFORMATION SYSTEMS (IS)
TECHNICAL SERVICES

I. DEFINITIONS

A. Identifying the Correct Job title

This section defines duties performed by positions appropriately included in this job family.

No specific definitions are provided for the IS Comprehensive Services job titles because these positions spend no more than 50% of their time on duties in any other single professional IS Data Services, IS Network Services, IS Systems Development Services, IS Technical Services job title, and more than 50% of their time on a combination of duties from two or more of these IS job titles.

The Technical Services Job Family covers those positions responsible for confidentiality, integrity and availability of systems through the planning, analysis, development, implementation, maintenance, and enhancements and support of systems, programs, policies, procedures and tools. Positions in this family are also responsible for the planning and co-ordination of the installation, testing, operation, troubleshooting and maintenance and use of large-scale hardware and software systems. Also, jobs cover the planning, installation, configuration, testing, implementation and management of the systems environment. Position types include, systems engineers, systems programmers, security officers, customer service providers, technical writers, training and help desk professionals, as well as other technical experts. Staff occupying positions in this family have the experience to serve the technology needs of the enterprise, agency business areas as well as extra and inter-agency requirements.

Positions which spend the majority of their time (50% or more) on one or more of the following duties are appropriately included in the IS Technical Services job titles:

1. Assist in design (higher levels do the design) of processor and storage systems.
2. Install, configure, tune and troubleshoot server and desktop operating systems and other enterprise system software (virus, Email, etc).
3. Research, test and recommend new systems software and hardware.
4. Maintain server directories and access structures.
5. Develop server backup and recovery policies and procedures, implement and verify implementation.
6. Administer disk space and other system resources.
7. Develop policies and procedures to ensure information systems reliability and accessibility, and to prevent and defend against unauthorized access.
8. Participate in the development, analysis, and refinement of systems requirements.
9. Conduct security risk and vulnerability assessment of planned and installed information systems.
10. Develop information systems contingency plans and disaster recovery procedures.
11. Develop and implement programs to ensure that users are aware of, understand, and adhere to security and other enterprise IT standards, policies and procedures.
12. Participate in network and systems design to ensure implementation of appropriate information security policies, and assist in the gathering, analysis, and preservation of evidence used in the prosecution of computer crimes.
13. Determine overall Internet technical architecture and design.

14. Monitor web server functionality, security, and integrity.
15. Review, test and integrate Internet activities.
16. Collect and analyze Internet statistics.
17. Evaluate new Internet applications.
18. Provide technical advice to Internet content providers.
19. Troubleshoot and resolve technical problems.
20. Research, evaluate and provide feedback on problematic issues, trends and patterns.
21. Develop and maintain problem tracking and resolution systems and information.
22. Install, configure, tune, troubleshoot and maintain hardware and software.
23. Manage and control IT assets, including financial management, contract management, and system change management.
24. Provide technical training to customers.
25. Establish metrics to measure and evaluate systems performance and usage.
26. Plan and schedule the installation of new or modified hardware/software.
27. Manage accounts, passwords, and access to servers and other equipment.
28. Monitor the performance, capacity, load balances, availability, serviceability, and recoverability of installed systems and make any required adjustments.
29. Provide agency end user support for hardware and/or software.
30. Develop technical documentation for technical staff and end users.
31. Manage complex IT projects.
32. Support end user tools on the enterprise level. Provide expertise to all levels of users and lead departmental user groups. Plan for and assist end users with version upgrades and software implementations.
33. Research, test, recommend and support tools and facilities used to help other IS professionals.

Positions appropriately classified in the IS Technical Services job titles may perform some of the following duties, but would not spend the majority of their time on one or more of these duties:

1. Understand information technology principles and techniques as they relate to the evaluation of business programs and operations.
2. Develop and maintain business applications.
3. Design networks or changing PC configurations so several PCs can network in a small office.
4. Develop, create, or populate data (base) structures.
5. Authorize access to computer resources.
6. Function as end user project coordinator (business needs).
7. Perform end user system administration (add/deletes).
8. Participate in building or review of IT facilities as a business representative.
9. Use IT policy, standards, guidelines, or procedures in the day to day operations.
10. Perform low-level IT troubleshooting or problem detection.
11. Use IT hardware or software to perform business functions or activities related to one's primary job functions.
12. Use "off-the-shelf" applications and/or non-professional development tools to manage data and/or develop applications used in one's own job or local business area.

B. Levels

IS PROFESSIONAL

This job title is used as an entry progressing to a development level for professional IS positions. Work is performed under close progressing to limited supervision. Although this is the entry-developmental level for this series, knowledge of fundamental IS concepts, principles and practices must have been acquired before appointment into this job title; the focus is on learning the procedures, practices, techniques and technology for the assigned specialized area; and assignments are narrow in scope. As

the employee progresses, s/he continues to develop knowledge of the specialized area and the associated IS concepts, principles, practices, and techniques.

IS SENIOR

Positions at this level work under general supervision. The technical work performed by a position at this level may be reviewed by the position's assigned supervisor for agreement with the established technical direction, policies and standards. This is the full performance level, and it is the level that an employee in this series can reasonably expect to attain. An employee at this level has acquired a broad knowledge of general IS concepts, principles, practices and techniques **and** broad knowledge of the job family and job title to which the position is assigned. Positions at this level may lead positions at the Professional and Senior level in the completion of projects and work assignments. Positions at this level may support the activities of IS Specialists, Consultants, and/or Administrators and may work under the day-to-day direction of IS Specialists, Consultants, and/or Administrators.

C. Job title Definitions

IS TECHNICAL SERVICES PROFESSIONAL

This job title is used as an entry progressing to a development level for professional IS Technical Services positions. Work is performed under close progressing to limited supervision. Positions spend the majority of their time performing any combination of the following duties:

- Perform diagnostics and trouble shooting to fix application software problems.
- Assist in implementing software including assessment of customer needs, developing work processes and writing procedures.
- Develop and coordinate information system training on specific supported hardware and software
- Develop, write and edit technical manuals and procedures.
- Coordinate writing of technical procedures and standards by IS staff.
- Answer questions and resolve problems related to hardware, desk top software, applications and systems software, and connectivity.
- Log requests for help and refer calls.
- Determine the impact of reported problems on hardware, software and production services.
- Install and maintain vendor-provided systems (includes operating systems) software to support desktop configurations.
- Perform diagnostics and trouble shooting for supported systems software.
- Provide technical hardware, applications and systems software support primarily for personal/microcomputers, but also for workstations, and distributed applications.
- Resolve printer connectivity issues.
- Conduct assessments of customer needs.
- Identify possible applications for microcomputers, and potentially, other computer systems.
- Provide problem resolution and training to microcomputer and other customers.
- Provide for or direct customers in the installation and maintenance of microcomputers and other systems.
- Assess current and future IS customer training needs.
- Deliver specialized IS training covering a variety of subjects within IS, e.g., applications and systems software, data communications, databases, and hardware.
- Apply knowledge of adult learning techniques and adult learning styles to adult learning situations.
- Support the storage complex to meet established schedules.
- Support storage complex to meet established schedules.

- Perform storage system problem determination.
- Assist with implementation of data storage subsystems.
- Assist and train customers in data storage functions.
- Perform data recovery.
- Assist Database administrator in database recovery.

IS TECHNICAL SERVICES SENIOR

Positions in this job title perform professional IS work related to the support and coordination of the hardware and systems and applications software. For a majority of time positions in this job title perform work related to the installation, maintenance and problem resolution of computer platforms, systems (including operating systems) software and applications software. Senior level positions spend the majority of their time performing any combination of the following duties:

- Assist applications staff in the use of development software tools.
- Train applications staff in the use of development software tools and methodologies or other aspects of the applications development architecture as it relates to the overall technology environment.
- Implement standards and procedures for the provision of IS customer technical services activities.
- Coordinate the provision of a variety of customer technical services to ensure an agencywide standardized approach.
- Develop and implement standards and procedures for problem/change resolution.
- Manage all aspects of changes including procedures, software, hardware, applications to ensure smooth transition and minimal impact on agency/campus production.
- Install and maintain vendor-provided systems (includes operating systems) software to support agency-wide complex automated systems.
- Install and maintain utilities and software packages to support production in a variety of environments.
- Assess and recommend hardware/software configurations, procedures, and technical standards to be used by applications development and operations staff.
- Work with Data Services staff on changes and standards for production databases and coordinate changes to production procedures, software, and hardware.
- Complete cost and feasibility studies for proposed microcomputer and other acquisitions.
- Develop specialized IS training covering a variety of subjects within IS, e.g., applications and systems software, data communications, databases, and hardware.
- Coordinate the delivery of training with other IS staff.
- Evaluate vendor provided training and recommend as required.
- Assist with the technical analysis supporting data management, file conversions, file organization methods, system implementation, and data recovery procedures for optimum system performance.
- Monitor levels of service and support "service level agreements" to ensure that deadlines are met.
- Participate in system design meetings to develop objectives and requirements of new systems or maintenance to existing systems.
- Analyze and implement mainframe system procedures to ensure the most efficient processing method is utilized.
- Recommend automation techniques to eliminate manual procedures.
- Analyze contention conflicts and determine priorities to resolve contention problems.
- Assist IS Technical Services Specialists and/or Consultants with their responsibilities.

This job title includes, but is not limited to, the following representative positions or job types. Positions do not need to exactly match one of these representative positions in order to be appropriately classified at this level.

Representative Positions

IS Applications Support Senior - Positions in this job title primarily provide technical support on any platform to operations and application development management and staff on applications and/or systems software. These positions assist applications staff in the use of development software tools and/or perform training for applications staff in the use of development software tools and methodologies or other aspects of the application development architecture as it relates to the overall technology environment. These positions may perform diagnostics and troubleshooting to fix applications software problems; may assist in implementing software including assessment of customer needs, developing work processes, and writing procedures; or may work on complex and automated systems.

IS Customer Services Senior - Positions implement standards and procedures for the provision of IS customer technical services activities and coordinate the provision of a variety of customer technical services to ensure an agencywide standardized approach. Positions may develop and coordinate information system training on specific supported hardware and software.

IS Documentation Senior - Positions develop, write and edit technical manuals and procedures; ensure that documentation is scheduled and developed for IS staff and IS customers to meet service needs and that documentation is revised as services and tools change; and coordinate writing of technical procedures by IS staff. Technical writings by positions may document any IS services area.

IS Help Desk Senior - Positions must provide direction, answers and resolutions to a full range of IS questions and problems. Questions and problems will be from IS customers and must include topics such as hardware, desk top software, applications and systems software, and connectivity. Positions must spend the majority of time providing technical resolution to problems and questions, but positions may also log requests for help and refer calls.

IS Problem/Change Analyst - Positions, for the majority of time, analyze and resolve reported problems for an agency/campus production unit. Analysis and resolution will include impact on agency/campus hardware, software and production services. Positions develop and implement standards and procedures for problem/change resolution and manage all aspects of changes including procedures, software, hardware, applications to ensure smooth transition and minimal impact on agency/campus production.

II. QUALIFICATIONS

The qualifications required for these positions will be determined at the time of recruitment.