

PAS RFP Exhibit E-14: PAS Support Services

Below are the PAS support services that the PAS will need. KPERS and the selected Offeror will negotiate which services will be provided by KPERS and which will be provided by the Offeror.

Service Category #	Roles and Responsibilities Matrix	KPERS Support Team	Offeror Support Team
	R= Responsible/executes A= Approves C = Consults/provides input I = Informed W: Works alongside		
1	ENTERPRISE SYSTEMS MANAGEMENT		
1.1	Align IT strategy with business strategy		
1.2	Define IT mission, vision		
1.3	Assign priorities to major requests for information systems		
1.4	Produce long range systems plan		
1.5	Determine hardware platform/strategy		
1.6	Perform annual technology audit		
1.7	Assess requests for major configuration changes to new application systems		
1.8	Assess new application release impact on the Architecture		
1.9	Define annual discretionary / non-discretionary spending plans as it relates to application		
2	SERVICE MANAGEMENT		
2.1	Application Service Management		
2.1.1	Receive business requests, monitor, and report progress to business		
2.1.2	Prioritize and approve major project or service requests		
2.1.3	Approve requests requiring new application configuration changes		
2.1.4	Maintain prioritization of project or major service requests		
2.1.5	Provide application service level reporting		
2.1.6	Schedule and lead power user meetings		
2.1.7	Attend power user meetings		
2.1.8	Develop and document service levels for application and database		
2.1.9	Develop and document service levels for components - Operating System, Disk, Network, etc.		
2.2	Application Quality Management		
2.2.1	Assess and document stakeholder expectations		
2.2.2	Perform quality management reviews and communicate to stakeholders		
2.2.3	Monitor progress against quality plan action items		
2.3	Help Desk Support Services		
2.3.1	User Support (Level 1)		
2.3.1.1	Answer user "how-to" questions		
2.3.1.2	Deliver end-user refresher training		
2.3.1.3	Incidents logged with the help desk or directly into the incident management tool		
2.3.1.4	Vendor discovered incidents reported to help desk		
2.3.1.5	Capture and log enhancement requests		
2.3.2	Help Desk (Level 1/2/3)		
2.3.2.1	Perform Level 1 initial triage to trouble shoot, manage, track, and report problems users experience with application and in-scope application functions		
2.3.2.2	Perform Level 2 support to manage, track, and report problems users experience with application and in-scope application functions		
2.3.2.3	Perform Level 3 support to manage, track, and report problems users experience with application and in-scope application functions		
2.3.3	Provide Problem Escalation, Review and Reporting		
2.3.3.1	Maintain Level 1 and 2 problem escalation procedures		
2.3.3.2	Maintain Level 3 application support escalation procedures		
2.3.3.3	Maintain Level 3 infrastructure support escalation procedures		

Service Category #	Roles and Responsibilities Matrix - KPERS Hosted	KPERS Support Team	Offeror Support Team
2.4	Change Control		
2.4.1	Overall governance/accountability for system change management activities		
2.4.2	Define information needed to request an application change		
2.4.3	Document and maintain migration execution procedures		
2.4.4	Application Environment Coordination and Planning		
2.4.4.1	Plan and implement release strategy		
2.4.4.2	Define project and/or release schedules		
2.4.4.3	Serve as communication point for application environment events		
2.4.4.4	Represent application events at Change Advisory Board		
2.4.4.5	Comply with all application change control and notification processes		
2.4.4.6	Migrate releases non-production		
2.4.4.7	Migrate releases production		
2.4.4.8	Coordinate activities with business contingency plan		
2.4.5	Control System Changes and Activities		
2.4.5.1	Provide overall accountability for system change control		
2.4.5.2	Perform application and in-scope application/database break/fix unit testing		
2.4.5.3	Perform hardware or operating system break/fix unit testing		
2.4.5.4	Perform application and in-scope application/database break/fix regression testing in staging prior to migration to production changes		
2.4.5.5	Accept application and in-scope application Staging test results and approve to migrate to Production		
2.4.5.6	Support power users with user acceptance test of application changes prior to migration to Production		
2.4.5.7	Conduct user acceptance test of application changes prior to migration to Production		
2.4.6	Change Advisory Board		
2.4.6.1	Provide application and in-scope application and database input for changes required		
2.4.6.2	Provide infrastructure input for changes required		
2.4.6.3	Coordinate and provide business approval for changes that are ready to migrate to production		
2.4.6.4	Manage Change Advisory Board process and approvals		
2.4.6.5	Provide integration between application and all other application environments		
2.4.6.6	Clean up environments for application and in-scope applications		
2.4.6.7	Clean up application and in-scope applications and database (i.e. temporary programs, stale corrections, repairs and migrations, decommission components)		
2.4.6.8	Create and facilitate requests for migration		
2.4.7	Perform Change		
2.4.7.1	Execute Operating System level commands and service programs to support application migrations and application functions		
2.4.7.2	Execute data imports non-production		
2.4.7.3	Execute data imports production		
2.4.7.4	Execute data exports non-production		
2.4.7.5	Execute data exports production		
2.4.7.6	Execute transaction processes (i.e. table copies, etc.) non-production		
2.4.7.7	Execute transaction processes (i.e. table copies, etc.) production		
2.4.7.8	Perform code and data migrations non-production		
2.4.7.9	Perform code and data migrations production		
2.4.7.10	Provide notification of migration warnings and errors		
2.4.7.11	Address code and data migration problems		
2.4.7.12	Document code and data migration activities		
2.4.7.13	Perform Operating System maintenance activities non-production		

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2.4.7.14	Perform Operating System maintenance activities production		
2.4.7.15	Perform application and in-scope application database maintenance activities non-production		
2.4.7.16	Perform application and in-scope application database maintenance activities production		
2.4.8	Coordinate and Document Change Schedule - Release Management		
2.4.8.1	Coordinate and document release schedule for application and in-scope application code migration and application service functions		
2.4.8.2	Coordinate and document change schedule for Operating System maintenance		
2.4.8.3	Coordinate and document change schedule for application and in-scope application databases maintenance		
2.4.8.4	Coordinate and document batch job schedule changes		
2.4.9	Implement Standard Procedures and Methods for Change		
2.4.9.1	Implement standard procedures for code migrations and application service functions		
2.4.9.2	Implement standard procedures for Operating System maintenance		
2.4.9.3	Implement standard procedures for application and in-scope application database maintenance		
2.4.9.4	Implement standard procedures for batch job maintenance		
2.4.9.5	Implement procedures for batch job schedule changes		
2.4.10	Report Status of Scheduled Changes		
2.4.10.1	Report status of scheduled migration requests non-production		
2.4.10.2	Report status of scheduled migration requests production		
2.4.10.3	Report status of scheduled operating level commands and service programs used to support application functions		
2.4.10.4	Report status of operating system maintenance		
2.4.10.5	Report status of database maintenance non-production		
2.4.10.6	Report status of database maintenance production		
2.4.10.7	Report status of batch job schedule changes		
2.4.11	Assess Impact of Change		
2.4.11.1	Assess impact of migration requests (production changes) and application service functions, prior to and after implementation		
2.4.11.2	Assess impact of operating system changes prior to and after implementation		
2.4.11.3	Assess impact of application database changes prior to and after implementation		
2.4.11.4	Assess impact of batch job schedule changes		
2.4.12	Customer Services		
2.4.12.1	Manage User Satisfaction		
2.4.12.2	Resolve customer issues		
2.4.12.3	Report on SLA compliance – Infrastructure		
2.4.12.4	Report on SLA compliance – Applications		
2.4.13	Continuous Improvement		
2.4.13.1	Infrastructure		
2.4.13.2	Applications		
2.4.13.3	KPERS Service Desk - Level 1		
2.4.13.4	KPERS Service Desk - Level 2 and above		
2.4.14	Service Provider Integration		
2.4.14.1	Coordinate change requests across service providers		
2.4.14.2	Arbitrage incidents which fall across resolving domains		
3	LOB APPLICATION MANAGEMENT		
3.1	Application Software Installation		
3.1.1	Install application and in-scope application component(s)		

Service Category #	Roles and Responsibilities Matrix - KPERS Hosted	KPERS Support Team	Vendor Support Team
3.1.2	Load pre-configured environment, templates, and scripts in support of the project		
3.1.3	Create initial project specific environments		
3.1.4	Determine database / file system impacts		
3.1.5	Setup application and appropriate database users		
3.1.6	Obtain application license keys		
3.1.7	Install appropriate database software		
3.1.8	Load standard database delivered with application		
3.1.9	Setup work process and operations mode definitions		
3.1.10	Apply application level security controls (initial passwords, security control parameters, etc.)		
3.2	Level Two and Three Application Problem Management		
3.2.1	Track and Report Incidents and Problems		
3.2.1.1	Troubleshoot, manage, track, and report operations problems with disk sub-system, operating system, network, etc.		
3.2.1.2	Troubleshoot, manage, track, and report operations problem that are a result of database and application		
3.2.1.3	Troubleshoot, manage, track, and report application and in-scope application technical problems		
3.2.1.4	Troubleshoot, manage, track, and report application database problems		
3.2.1.5	Troubleshoot, manage, and track application desktop installation issues required for provider support team		
3.2.1.6	Provide user assistance / Level 2 support functions		
3.2.2	Manage Level 3 Incidents and Problems		
3.2.2.1	Initiate problem resolution - prioritize, assign resources		
3.2.2.2	Analyze application problem		
3.2.2.3	Escalate problems as necessary according to procedures from SLA		
3.2.2.4	Coordinate 3rd level application problem management for application and in-scope applications		
3.2.3	Break/Fix Support		
3.2.3.1	Design, build, and test application fixes		
3.2.3.2	Design, build, and test infrastructure fixes		
3.2.3.3	Approve fixes		
3.2.3.4	Unit test fixes		
3.2.3.5	System test fixes		
3.2.3.6	Integration test fixes		
3.2.3.7	User acceptance test fixes		
3.2.3.8	Analyze problem trends		
3.2.3.9	Overall accountability for Level 2 application problem management		
3.2.3.10	Provide application desktop configuration to desktop support for application and in-scope applications		
3.3	Production Change Requests		
3.3.1	Capture and verify change request (ex. new report, configuration change)		
3.3.2	Maintain backlog of change requests		
3.3.3	Create Conceptual and Functional Design		
3.3.4	Create Technical Design		
3.3.5	Estimate effort and perform application impact assessment		
3.3.6	Review and approve change request		
3.3.7	Create and review application configuration change / modification plans		
3.3.8	Conduct walk-through review of configuration change / modification		
3.3.9	Program, compile, and document configuration changes / modifications		
3.3.10	Testing		
3.3.10.1	Perform unit testing on all changes		

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3.3.10.2	Perform system testing		
3.3.10.3	Perform integration testing		
3.3.10.4	Perform regression testing		
3.3.10.5	Perform performance testing		
3.3.10.6	Perform user acceptance testing for all changes		
3.3.11	Plan and manage end-user training and adoption of modifications		
3.3.12	Deliver end-user training		
3.3.13	Update user documentation and training materials		
3.3.14	Maintain functional application documentation		
3.3.15	Maintain technical architecture documentation		
3.3.16	Evaluate impact on applications Disaster Recovery plan and environment		
3.3.17	Evaluate impact on system capacity and performance		
4	INFRASTRUCTURE SUPPORT		
4.1	OS System Startup/Shutdown		
4.1.1	Develop procedures for OS startup / shutdown		
4.1.2	Define schedule for planned OS startup / shutdown		
4.1.3	Notify all parties for planned/unplanned OS startup / shutdown (planned)		
4.1.4	Notify all parties for planned/unplanned OS startup / shutdown (unplanned)		
4.1.5	Execute OS startup / shutdown		
4.1.6	Restart hardware / OS following fault correction		
4.2	OS Backup / Recovery		
4.2.1	Provide data backup and retention periods		
4.2.2	Test central / remote backup / restore procedures periodically		
4.2.3	Prepare system for OS backup processes		
4.2.4	Perform complete / incremental OS backup		
4.2.5	Monitor OS backup processes		
4.2.6	Verify OS backup media integrity		
4.2.7	Notify OS backup has failed		
4.2.8	Label OS backup media		
4.2.9	Store copies of the OS backups in a vault / off-site		
4.2.10	Maintain backup architecture (tape library, drives, etc.)		
4.2.11	Synchronize OS backups and restores - tape rotation		
4.2.12	Prepare system for OS restoration processes		
4.2.13	Restore single / multiple OS objects from the backup media		
4.2.14	Restore complete / incremental OS backup		
4.2.15	Monitor OS restoration processes		
4.2.16	Validate OS integrity and consistency of restored information		
4.2.17	Notify OS restoration has been completed		
4.3	Application Startup and Shutdown		
4.3.1	Define Application startup / shutdown schedule		
4.3.2	Define database startup / shutdown schedule		
4.3.3	Perform starting and stopping of application and components		
4.3.4	Perform starting and stopping of databases		
4.3.5	Perform Stopping and Restarting of the Production Batch Schedule		
4.3.5.1	Perform stopping and restarting of application components of the production batch schedule		
4.3.5.2	Perform stopping and restarting of non-application tool components of the production batch schedule		
4.3.6	Restart Application After Failure		

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4.3.6.1	Restart disk subsystem, operating system, network components		
4.3.6.2	Restart application		
4.3.6.3	Restart database		
4.4	Media Management		
4.4.1	Provide support in using storage and storage tools		
4.4.2	Maintain and report on inventory of storage media equipment, volumes allocated, and naming assignments		
4.4.3	Mount, dismount, initialize, and manage storage media as required		
4.4.4	Monitor and control storage performance and resolve exceptions and alerts		
4.4.5	Determine file and volume placement to optimize performance		
4.4.6	Provide reporting on storage usage and performance		
4.4.7	Initiate requests for storage resource increases and decreases		
4.4.8	Provide resource usage requirements		
4.5	Database Backup/Restore Management		
4.5.1	Prepare system for backup processes		
4.5.2	Test central / remote application backup/restore procedures periodically		
4.5.3	Perform complete and incremental backups		
4.5.4	Monitor backup processes		
4.5.5	Verify backup media integrity		
4.5.6	Notify backup has failed		
4.5.7	Label backup media		
4.5.8	Store copies of the backups in a vault / off-site		
4.5.9	Maintain backup library		
4.5.10	Synchronize application backups and restores - tape rotation		
4.5.11	Prepare application and database for restoration processes		
4.5.12	Restore single / multiple objects from the application backup media		
4.5.13	Restore complete / incremental application backup as required		
4.5.14	Monitor restoration process		
4.5.15	Roll forward from the archive logs after a restore (i.e. point in time recovery)		
4.5.16	Validate Integrity and Consistency of Restored Information		
4.5.16.1	Validate integrity and consistency of restored information at database layer		
4.5.16.2	Validate integrity and consistency of restored information at the application layer		
4.5.16.3	Validate integrity and consistency of restored information at operating system layer		
4.5.16.4	Perform business level validation of integrity and consistency of restored information		
4.5.17	Define requirements for backup times and schedules		
4.5.18	Create and maintain backup scripts		
4.6	Database Management		
4.6.1	Administer Database		
4.6.1.1	Plan and implement application database		
4.6.1.2	Plan database extensions		
4.6.1.3	Perform database extensions		
4.6.1.4	Manage table space usage		
4.6.1.5	Manage next extent sizes		
4.6.1.6	Perform database profile modifications - tuning		
4.6.1.7	Perform database reorganizations		
4.6.1.8	Backup database archive logs to tape		
4.6.1.9	Resolve database problems		
4.6.1.10	Perform database imports and exports		

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4.6.1.11	Perform database upgrades and patches		
4.6.1.12	Create indexes		
4.6.1.13	Assist development team in optimizing SQL statements (indexes, selects, etc.)		
4.6.1.14	Assess application database capacity / utilization		
4.6.1.15	Respond to alerts, investigate, and resolve issues		
4.6.1.16	Schedule database specific related jobs		
4.6.1.17	Perform database copies and application database refreshes		
4.6.1.18	Analysis of database functions using application tools		
4.6.1.19	Database administration using application tools		
4.6.2	Manage Change Advisory Board Process and Approvals		
4.6.2.1	Recommend changes to database management systems (including the application of new releases, upgrades, and patches as well as recommendations to change to different systems)		
4.6.2.2	Review and approve changes to database management systems		
4.6.2.3	Install, test, and maintain changes to the database management systems in accordance with the infrastructure systems change management procedure		
4.6.3	Manage Database Changes		
4.6.3.1	Install, operate, and manage database instances and disks		
4.6.3.2	Create and manage the database startup and shutdown procedures		
4.6.3.3	Manage the production database environment		
4.6.3.4	Manage the non-production database environment		
4.6.3.5	Administer database and disk security		
4.6.3.6	Plan, implement, and manage database and disk space reorganizations		
4.6.4	Capacity and Usage		
4.6.4.1	Prepare, produce, and provide reports on database and disk usage		
4.6.4.2	Forecast database and disk space resources based on KPERS' business requirements forecast		
4.6.4.3	Monitor resource consumption		
4.6.4.4	Analyze and report resource trends		
4.6.4.5	Prepare, produce, and provide resource-planning reports on a regular basis or as required in the reports schedule		
4.6.4.6	Make recommendations regarding resource consumption and trends		
4.6.4.7	Analyze workload capacity		
4.6.4.8	Ensure appropriate capacity to meet resource requirements		
4.6.4.9	Prepare, produce, and provide usage and resource capacity reports to KPERS		
4.6.5	Maintain Documentation		
4.6.5.1	Create, maintain, and provide documentation and reports on current configurations		
4.6.5.2	Document all changes to database configurations and installations		
4.6.5.3	Approve tuning and load balancing adjustments		
4.6.5.4	Review and analyze system logs and take corrective action		
4.6.5.5	Plan, manage, and coordinate database upgrades and patches		
4.7	OS Administration		
4.7.1	Install / configure operating system per application requirements		
4.7.2	Detect / troubleshoot operating system problems / events		
4.7.3	Work with hardware vendor to resolve operating system problems		
4.7.4	Apply patches to the operating system		
4.7.5	Perform operating system upgrades		
4.7.6	Create file systems and / or logical volumes per storage policy / procedures		
4.7.7	Administer operating system scheduler		
4.7.8	Administer Network File System (NFS) requirements		
4.7.9	Administer output management devices (print / fax devices)		

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4.8	Application Environment Operations		
4.8.1	Develop and maintain multi-environment strategy / approach		
4.8.2	Perform application-specific technical operations (e.g. application system copies, moves, deletes)		
4.8.3	Perform export/imports between application environments		
4.8.4	Provide service level management with feedback on system availability and operations		
4.8.5	Investigate and resolve application technical problems		
4.8.6	Maintain application technical settings		
4.8.7	Investigate and resolve functional errors (application, database tables / fields, etc.)		
4.8.8	Maintain environment configuration documentation		
4.8.9	Administer environment copy schedule		
4.9	Application Technical Patches and Packaged Code Updates		
4.9.1	Determine overall technical patch and packaged code update approach and work plan		
4.9.2	Implementation of application-specific technical patches and packaged code updates		
4.9.3	Execute technical and functional operations to resolve application conflicts		
4.9.4	Test support package and kernel updates - application testing		
4.9.5	Test application technical patches and packaged code updates - business testing		
4.9.6	Manage, plan, and coordinate package upgrade implementations		
4.10	Problem Management		
4.10.1	Analyze incident trends to determine problems		
4.10.2	Provide support for problem resolution		
4.10.3	Receive request from Level 2 help desk and Level 3		
4.10.4	Assess request criticality, effort required, and approvals required		
4.10.5	Log and categorize problem		
4.10.6	Coordinate request scheduling		
4.10.7	Initiate problem resolution - prioritize, assign resources		
4.10.8	Track problem resolution process		
4.10.9	Escalate problems as necessary		
4.10.10	Determine problem resolution or work-around solution		
4.10.11	Test problem resolution		
4.10.12	Communicate resolution status - closure notification		
4.10.13	Generate and disseminate reports from tracking database		
4.10.14	Correspond with appropriate vendors for problem resolution		
4.11	Output Management		
4.11.1	Define Printer / Fax / Output Management Requirements		
4.11.1.1	Provide business requirements for printer / fax / output management		
4.11.1.2	Define application requirements for printer / fax / output management		
4.11.1.3	Define technical requirements for printer / fax / output management		
4.11.1.4	Document and maintain print distribution schedules and requirements		
4.11.1.5	Distribute reports and documentation, as scheduled		
4.11.1.6	Define and create print forms, as requested		
4.11.1.7	Review and approve print forms		
4.11.2	Configure and Test Printer / Fax / Output		
4.11.2.1	Perform quality assurance of all printed output		
4.11.2.2	Configure, monitor, test, and manage operating system printer / fax / output management queues and spool files		
4.11.2.3	Configure and test printer / fax / output management in application, based on existing standards		
4.11.2.4	Maintain printer / fax / output management application parameters		

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4.11.2.5	Manage printer / fax / output management processes and output queues at the application layer		
4.11.2.6	Investigate and resolve application related printer / fax / output management problems		
4.11.2.7	Investigate and resolve infrastructure related printer / fax / output management problems		
4.11.2.8	Provide output management device maintenance and service		
4.11.2.9	Provide technical team with output device IP address / technical configuration		
4.11.2.10	Cancel output jobs at O/S level		
4.11.3	Configure Printer / Fax / Output Management Profile Parameters in the Application		
4.11.3.1	Support and maintain printer / fax / output application		
4.11.3.2	Support and maintain printer / fax / output integration components on the application		
4.11.3.3	Support and maintain printer / fax / output integration components on the server		
4.11.3.4	Support and maintain printer / fax / output integration server		
4.12	Virus Protection		
4.12.1	Provide Virus protection software		
4.12.2	Monitor and control KPERS computing environment against Viruses		
4.12.3	Use reasonable efforts to confirm that software upgrades are Virus-free		
4.12.4	Execute Virus disinfectant procedures, when necessary		
4.12.5	Update Virus protection software and data files		
4.12.6	Notify KPERS of updates to Virus protection software and data files in accordance with the		
4.12.7	Provide reports on Virus protection activities on a regular basis.		
5	OPERATIONS		
5.1	Define business requirements governing batch schedule		
5.2	Job scheduling plan analysis and design (with changes / deletion management)		
5.3	Document and maintain job schedule		
5.4	Schedule batch jobs		
5.5	Execute batch jobs in accordance with the job schedule		
5.6	Define job dependencies		
5.7	Distribute production job schedule		
5.8	Define parameters and variants for production jobs		
5.9	Job Scheduling Creation and Execution		
5.9.1	Job scheduling in application		
5.9.2	Job definition in production control tool		
5.9.3	Job definition in application if control tool is native to application		
5.9.4	Identify and facilitate resolution of scheduling conflicts		
5.10	Job Monitoring Configuration and Execution		
5.10.1	Job monitoring configuration and execution in application		
5.10.2	Job monitoring configuration and execution in production control tool		
5.10.3	Monitoring of failed jobs that are submitted ad-hoc by business users		
5.11	Notification of Failed Jobs		
5.11.1	Assess impact of failed jobs		
5.11.2	Notification of failed jobs that are monitored with native application tools		
5.11.3	Notification of failed jobs that are monitored with production control tool		
5.11.4	Notification of failed jobs that are submitted ad-hoc by business users		
5.11.5	Verify results for completion and accuracy		
5.11.6	Recover / resolve from failed jobs		
5.11.7	Define restart rules and perform restarts		
5.11.8	Provide process for job schedule change requests		

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5.11.9	Review and modify changes in job schedule		
5.11.10	Resolve scheduling conflicts		
5.11.11	Terminate / cancel jobs per requests or pre-defined procedures		
5.11.12	Perform job rejection analysis with error notification to the users		
5.12	Provide Schedule Status and Escalate Problems		
5.12.1	Provide schedule status and escalate problems for jobs monitored with native application tools		
5.12.2	Provide schedule status and escalate problems for jobs monitored with production control tools		
5.12.3	Terminate / cancel jobs per requests or pre-defined procedures		
6	APPLICATION ADMINISTRATION		
6.1	System Performance Tuning and Management		
6.1.1	Application Performance and Tuning		
6.1.1.1	Determination and definition of performance and tuning requirements that are related to application performance		
6.1.1.2	Application performance and tuning as related to application layer code, database configuration and layout, objects, and configuration		
6.1.1.3	Determination and definition of performance and tuning requirements that are related to operating system configuration and layout, disk sub-system configuration and layout, or network configuration and throughput and communicate to infrastructure		
6.1.1.4	Implementation of performance and tuning requirements as related to operating system configuration and layout, disk sub-system configuration and layout, and network configuration and throughput		
6.1.2	Database Layer Performance and Tuning		
6.1.2.1	Determination and definition of performance and tuning requirements that are related to database configuration		
6.1.2.2	Database performance and tuning as related to database configuration and layout, table reorganizations, index reorganizations, trigger, and code tuning		
6.1.2.3	Determination and definition of performance and tuning requirements that are related to operating system configuration and layout, disk sub-system configuration and layout, or network configuration and throughput and communicate to infrastructure		
6.1.2.4	Database performance and tuning as related to operating system configuration and layout, disk sub-system configuration and layout, and network configuration and throughput		
6.1.3	Network and Operating System Performance and Tuning		
6.1.3.1	Create and distribute reports on system and network utilization, capacity, and performance		
6.1.3.2	Identify/recommend potential OS tuning adjustments		
6.1.3.3	Alter tunable OS parameters		
6.1.3.4	Monitor performance adjustments for their effectiveness		
6.1.3.5	Disk subsystem performance and tuning		
6.1.3.6	Network WAN and LAN performance and tuning		
6.1.4	Application and Instance Performance and Tuning		
6.1.4.1	Identify end-user performance problems		
6.1.4.2	Provide application performance analysis		
6.1.4.3	Determine optimal performance settings for application parameters		
6.1.4.4	Configure application tunable parameters		
6.1.4.5	Monitor systems performance adjustments for their effectiveness		
6.1.4.6	Monitor application performance adjustments for their effectiveness		
6.1.4.7	Support application team in resolution of application performance problems		
6.1.4.8	Perform environment modifications as required		
6.1.4.9	Perform database modifications as required		
6.1.4.10	Adjust memory management services as needed (e.g. core dumps, etc.)		
6.2	System Monitoring		
6.2.1	Application Monitoring		

Service Category #	Roles and Responsibilities Matrix - KPERS Hosted	KPERS Support Team	Vendor Support Team
6.2.1.1	Define application monitoring requirements - availability, performance, critical issues, or faults such as database locks, massive abends, update suspension, massive application locks, extremely poor performance, database errors, etc.		
6.2.1.2	Configure and execute application monitoring requirements in application and / or native application monitoring tool		
6.2.1.3	Configure and execute application monitoring requirements in non-application tool		
6.2.2	Database Monitoring		
6.2.2.1	Define database monitoring requirements - availability, performance, critical issues or faults such as database locks, massive abends, extremely poor performance, database errors, etc.		
6.2.2.2	Configure and execute database monitoring requirements in database and / or native database monitoring tool		
6.2.2.3	Configure and execute database monitoring requirements in non-application tool		
6.2.3	Operating System Monitoring		
6.2.3.1	Define operating system monitoring requirements - availability, performance, critical issues or faults, extremely poor performance, etc.		
6.2.3.2	Configure and execute operating system monitoring requirements		
6.2.4	Disk Sub-System Monitoring		
6.2.4.1	Define disk sub-system monitoring requirements - availability, performance, critical issues or faults, extremely poor performance, etc.		
6.2.4.2	Configure and execute disk sub-system monitoring requirements		
6.2.5	Network Monitoring		
6.2.5.1	Define network monitoring requirements - availability, performance, critical issues or faults, extremely poor performance, etc.		
6.2.5.2	Configure and execute network monitoring requirements		
6.2.6	Event Monitoring and Closure		
6.2.6.1	Event detection and notification		
6.2.6.2	Execute monitoring and event detection per requirements		
6.2.6.3	Log events		
6.2.6.4	Respond to events according to event notification and escalation procedures		
6.2.6.5	Communicate event status through to closure		
6.3	Application Connectivity to Remote Support Environments		
6.3.1	Define and communicate connectivity requirements to remote support environments		
6.3.2	Initial network connectivity and setup		
6.3.3	Configuration of connection in application		
6.3.4	Application remote connection enabling / disabling		
6.3.5	Application problem submission, querying, and download of non-PII data		
6.4	Capacity Planning		
6.4.1	Determine Trends and Forecast Capacity		
6.4.1.1	Servers, peripherals, and disk-subsystems		
6.4.1.2	LAN and WAN Infrastructure		
6.4.1.3	Database		
6.4.1.4	Application		
6.4.1.5	Network and Communication		
6.4.2	Manage Capacity Plan Based on Requirements (Users, New Apps, etc.)		
6.4.2.1	Gather business requirements for additional users, new applications, etc.		
6.4.2.2	Provide application requirements and recommendations for application changes		
6.4.2.3	Utilize application capacity requirements to define database modifications and issue appropriate change requests		
6.4.2.4	Utilize application capacity requirements to define OS modifications and issue appropriate change requests		

Service Category #	Roles and Responsibilities Matrix - KPERS Hosted	KPERS Support Team	Vendor Support Team
6.4.2.5	Utilize application capacity requirements to define disk sub-system modifications and issue appropriate change requests		
6.4.2.6	Utilize application capacity requirements to define network modifications and issue appropriate change requests		
6.4.2.7	Analyze and report resource trends		
6.4.2.8	Make recommendations regarding resource consumption and trends		
6.4.2.9	Monitor database use and capacity		
6.4.2.10	Prepare, produce, and provide reports on database and disk usage		
6.4.2.11	Forecast database and disk space resources based on KPERS' business requirements forecast		
7	SECURITY ADMINISTRATION		
7.1	System Data Security		
7.1.1	Administer security system in compliance with standards		
7.1.1.1	Administer database security practices and procedures		
7.1.1.2	Administer operating system security		
7.1.1.3	Provide application-specific security access to vendor for standard application management activities		
7.1.1.4	Create new OS users as necessary		
7.1.1.5	Administer firewalls		
7.1.1.6	Provide OS support for annual audit		
7.1.1.7	Provide database and application support of annual audit		
7.2	Application Security Management		
7.2.1	Define corporate security policies specific to each application		
7.2.2	Implement corporate security policy in application		
7.2.3	Setup initial passwords for user administrator and application specific delivered users		
7.2.4	Maintain/Reset passwords		
7.2.4.1	Maintain/reset passwords for production		
7.2.4.2	Maintain/reset passwords for development and test		
7.2.5	Request changes to end-user security		
7.2.6	Request changes to developer security		
7.2.7	Request changes to system process security (e.g., batch processes and interfaces)		
7.2.8	Create new application users		
7.2.9	Identify and define specific security roles for new / modified users		
7.2.10	Coordinate business approval for new / modified users		
7.2.11	Create / Modify / Delete users based on fully approved request		
7.2.11.1	Create / modify / delete production users based on fully approved request		
7.2.11.2	Create / modify / delete non-production users based on fully approved request		
7.2.12	Reset Users		
7.2.12.1	Reset users for production only if users are locked due to incorrect logins		
7.2.12.2	Reset users for production if users are locked by system manager		
7.2.12.3	Reset users for development and test		
7.2.13	Maintain user roles or profiles		
7.2.13.1	Maintain user role templates		
7.2.13.2	Provide requirements for new / updated / deleted user roles or profiles		
7.2.13.3	Create / modify / delete user roles or profiles based on fully approved request		
7.2.14	Migrate security modifications through to Production based on change management procedures		
7.2.16	Test and communicate status to user		
7.2.16.1	Test user security to verify accurate implementation and communicate to user		
7.2.16.2	Test security changes to verify business usage functionality		

Service Category #	Roles and Responsibilities Matrix - KPERS Hosted	KPERS Support Team	Vendor Support Team
7.2.17	Support client audit requirements for security roles, basis parameter settings, procedures, etc.		
7.3	Application remote support user account administration		
7.3.1	Define access privileges		
7.3.2	Assign user accounts		
7.3.3	Define procedure to provide access keys		
8	DEVELOPMENT AND TEST SYSTEM REFRESHES		
8.1	Develop configurations for test and quality control environments		
8.2	Review and approve test and quality control configuration		
8.3	Procure, implement, operate, and manage test and quality control environments		
8.4	Accountable for planning, scheduling and managing execution of system refreshes		
8.5	Plan and schedule development and test system refreshes		
8.6	Database copy		
8.6.1	System level activities - e.g. tape restore, copy of data files		
8.6.2	Database level activities - e.g. startup database, rename control file		
8.7	System ID rename		
8.8	Application layer changes		
9	DOCUMENTATION MANAGEMENT		
9.1	Creation and Modification of Existing Documentation		
9.1.1	Overall accountability for management of documentation		
9.1.2	Update existing documentation as required to enhance or improve quality of documentation		
9.1.2.1	Application and in-scope application functionality - update existing documentation as required to enhance or improve quality of documentation		
9.1.2.2	Application and in-scope database functionality - update existing documentation as required to enhance or improve quality of documentation		
9.1.2.3	Infrastructure (operating system, disk, network, etc.) - update existing documentation as required to enhance or improve quality of documentation		
9.1.3	Document problem resolution in Help Desk tool		
9.1.4	Create/update documentation for initial implementation and subsequent enhancements		
9.1.5	Create/update user documentation for initial implementation and subsequent enhancements		
9.1.6	Create/update technical documentation for initial implementation and subsequent enhancements		
9.1.7	Creation of documentation to address existing gaps in documentation of current application configuration and functionality		
10	DISASTER RECOVERY		
10.1	Administer Disaster Recovery		
10.1.1	Determine disaster recovery requirements based on SLAs		
10.1.2	Determine key infrastructure components required to provide service		
10.1.3	Determine disaster recovery strategy required to meet SLAs		
10.1.4	Develop disaster recovery plan for the System		
10.1.5	Maintain procedure manuals in accordance with disaster recovery plan		
10.1.6	Approve disaster recovery plan for the System		
10.2	Test Disaster Recovery		
10.2.1	Review disaster recovery plans with management		
10.2.2	Develop and maintain overall disaster recovery plan		
10.2.3	Coordinate and schedule disaster recovery testing		
10.2.4	Perform disaster recovery testing		
10.2.5	Resolve causes of failures occurring during disaster recovery testing and re-test until successfully completed		
10.2.6	Report test results		

Service Category #	Roles and Responsibilities Matrix - KPERS Hosted	KPERS Support Team	Vendor Support Team
10.3	Execute Disaster Recovery		
10.3.1	Implement disaster recovery plan in accordance with the disaster recovery plan in the event of a disaster		
10.3.2	Prioritize recovery of data when disaster occurs		
10.3.3	Approve data recovery prioritization		
10.3.4	Restore to normal operations in the event of a disaster		
10.3.5	Coordinate with KPERS on declaration of a disaster		