



EXHIBIT 2
HOSTING SERVICES

***WASHINGTON STATE DEPARTMENT OF
ENTERPRISE SERVICES***

AND

[PRIME VENDOR]

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HOSTING SERVICES

This Hosting Services Exhibit describes the Hosting Services to be performed by Prime Vendor for DES under the TA and other terms and conditions relating to such Hosting Services.

1. DESCRIPTION AND SCOPE OF SERVICES

This **Section 1** describes the Hosting Services to be performed by Prime Vendor and related responsibilities of DES under this Schedule.

A. Scope Relative to Meeting the DES Business and Technical Requirements. The software-based items included in the scope of the Hosting Services as of the Effective Date is: (1) the TLA Solution; (2) to the extent the TLA Solution does not meet the DES Business and Technical Requirements, all such Solution Modules and/or other software that is required to meet the DES Business and Technical Requirements; (3) any software (including all Solution Modules) added to the scope of Hosting Services as described in **Section 1(D)**; (4) all other software required for Prime Vendor to perform the Hosting Services (*i.e.*, to support, operate, test, monitor and maintain the TLA Solution in its data center); and (5) all Extensions, Interfaces and reports that are part of or made in connection with the TLA Solution Project whether: (i) prepared by Prime Vendor; or (ii) prepared by DES or its Third Party consultants provided DES or its Third Parties adheres to the design and other standards and protocols developed by the parties to certify such customer-prepared item. Any Extensions, Interfaces and/or reports made after Project Completion of the TLA Solution Project shall be subject to **Section 1(C)**.

B. Normal and Routine Services Included. Acknowledging that there are many activities and tasks typically undertaken in a data center to operate, administer and maintain software-based solutions, and further acknowledging that each and every activity and task may not be set forth in this Exhibit, in addition to the tasks specifically listed in this Section, Prime Vendor shall perform, as part of the Hosting Services, the following-described services, functions, responsibilities and tasks shall be deemed to be implied by and included within the scope of the Hosting Services to the same extent and in the same manner as if specifically described in this Hosting Services Exhibit, unless specifically identified in this Hosting Services Exhibit as being excluded from the Hosting Services or identified as a DES Responsibility: (a) those that are similar to the services, functions, responsibilities and/or tasks performed by DES prior to the Effective Date, provided that such services, functions, responsibilities and/or tasks: (i) relate to information technology services or functions; and (ii) are a natural extension of, or relate to, a major service category generally identified or described in this Hosting Services Exhibit; and/or (b) are required for the proper performance of the Hosting Services and are an inherent part of, or a necessary sub-part included within, the Hosting Services.

C. Scope Relative to DES Changes Post Project Completion of the TLA Solution Project. The parties acknowledge that changes will be made to business requirements of DES (DES Business and Technical Requirements and otherwise) after Project Completion of the TLA Solution Project, including additional Solution Modules, Extensions, Interfaces and/or Reports (whether developed by Prime Vendor, DES or

DES' Third Parties). The parties further recognize that such changes may or may not involve costs to Prime Vendor to accommodate such changes. To the extent a change involves a cost that is reflected as an ARC in **Attachment D**, DES shall pay the rates described therein. To the extent a change involves a cost not reflected as an ARC in **Attachment D** and Prime Vendor incurs a cost to implement the change, DES shall pay the amounts agreed to by the parties pursuant to a Change Order. To the extent there are no actual incremental costs to Prime Vendor to accommodate a change, or such costs are *de minimis*, there shall not be any increase to the Monthly Hosting Fees or other fee to be paid by DES for such change.

D. Solution Components. If there is any software (including Solution components) outside the scope of Hosting Services as described in **Section 1(A)** for which DES wants Prime Vendor to provide Hosting Services, DES shall license (or shall have licensed) such software (including Solution components) from Prime Vendor or from a Third Party, as applicable, and such expansion of Hosting Services shall be subject to the Change Order procedures.

E. DES Responsibilities. The ability of Prime Vendor to deliver Hosting Services at the performance levels specified in this Schedule and within the Monthly Hosting Fees may be dependent on DES fulfilling the applicable DES Responsibilities described in this **Section 1**. A failure of DES to discharge a DES Responsibility shall not result or be construed as a breach of the TA or this Exhibit by DES. If Prime Vendor believes that DES is not fulfilling one or more DES Responsibilities and that such failure has or may impact Prime Vendor's ability to deliver the Hosting Services in accordance with the terms and conditions of this Schedule and within the Monthly Hosting Fees, or impedes Prime Vendor's ability to achieve higher levels of performance, Prime Vendor shall provide timely written notice of such failure to DES.

DES is responsible for maintaining, during the Hosting Term, licenses for the Solution and for any software licensed by DES for which Prime Vendor provides Hosting Services (beyond any software required for Prime Vendor to perform the Hosting Services), as well as Support and Maintenance Services.

F. Information Technology Infrastructure Library. In addition to Prime Vendor's representations and warranties under **Section 9.2** of the TA, Prime Vendor shall perform the Hosting Services in accordance with the IT Service Management Best Practice guidance standards promulgated by ITIL, as such standards are updated from time-to-time.

G. Changes to the Prime Vendor Environment. Notwithstanding any of the terms contained in this **Section 1**, Prime Vendor shall provide prior written notice at least ten (10) days prior to any Prime Vendor change to the Prime Vendor Environment that will have an impact on DES' operation of the software included in the scope of Hosting Services as described in **Section 1(A)**; provided, however, that any such change shall not cause Prime Vendor to fail to deliver the Hosting Services in accordance with the terms and conditions of this Hosting Exhibit.

H. Hosting Services to Include All Maintenance of the Solution. The following activities shall be included in the Hosting Services for the Monthly Hosting Fees: The loading, configuring, compiling, and migrating and movement from test and other Instances to the production environment of Functionality Releases, Maintenance Code

Releases, and any other corrections, fixes or modifications to software included in the scope of Hosting Services as described in **Section 1(A)** made or provided by Prime Vendor (and, if necessary, restoration of the environment from a back-up made of such environment prior to the application of any such Functionality Release, Maintenance Code Release, and any other correction, fix or modification to software included in the scope of Hosting Services as described in **Section 1(A)** made or provided by Prime Vendor) (collectively, "**Included Maintenance**"). If Prime Vendor omits the loading, configuring, compiling and migrating, of Extensions, Interfaces and/or reports within the Prime Vendor Environment from a future Statement of Work or Change Order pertaining to software-based solution hosted by Prime Vendor, such loading, configuring, compiling and migrating shall be deemed included in the Hosting Services at no additional cost.

I. Security Certifications. Prime Vendor represents and warrants that it is certified under ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission) ISO/IEC 27001:2005, Code of Practice for Information Security Management ("**ISO Security Standards**"), and shall maintain such certification on an on-going basis. Prime Vendor shall provide DES with a copy of such certification upon request. Prime Vendor shall provide DES with full and complete copies of any ISO Security Standards and other security audits, reports and reviews, whether conducted internally by Prime Vendor or through a Third Party, within thirty (30) days of receipt of such audits, reports and reviews. If there are deficiencies cited and/or recommendations made, Prime Vendor Information Security Officer, Prime Vendor Executive Sponsor and other appropriate personnel from Prime Vendor shall meet to review the deficiencies and recommendations and develop a plan of action to address such items. The implementation of any measures to address deficiencies and/or recommendations shall not be chargeable to DES.

J. Scope of Excluded Activities and Tasks From Hosting Services. The following activities and tasks represent the only activities and tasks excluded from the scope of Hosting Services for the Monthly Hosting Fees referenced in **Attachment D** and, subject to **Section 1(C)** and as described below, any such activities or tasks may be subject to a Change Order:

1. Data conversion or custom coding;
2. New design work;
3. Software coding; or
4. Services for any Non-Prime Vendor Provided Solution applications.

References to any "production" environment in this Schedule means those Instances within the Prime Vendor Environment in which DES Authorized Users process live business data as part of DES' business transactions.

1.1 Hosting Facility Management

Prime Vendor shall:

- A. Provide the physical primary data center in the United States for the Hosting Services.

- B. Provide a physical secondary data center in the United States at least 250 miles away from the physical primary data center for use in recovery operations and/or during disaster recovery services in accordance with **Section 1.5.4**.
- C. Manage all aspects of the data centers.
- D. Maintain physical security of the data centers, interconnecting networks and any location where State Data is present.
- E. Maintain an inventory of assets.
- F. Ensure the data center can satisfy the terms and conditions of the Hosting Services.

1.2 Hardware and Operating System Management

Prime Vendor shall, with respect to the Prime Vendor Environment:

- A. Manage host, workstation and network device operating system security in accordance with **Section 1.11** to this Hosting Services Exhibit.
- B. Perform maintenance for operating systems.
- C. Provide DES with advance written notice and general information about changes to be made to the Prime Vendor Environment during routine maintenance.
- D. Monitor performance.
- E. Isolate performance Issues.
- F. Implement and test fixes to performance Issues regarding the hardware and operating system.
- G. Plan, implement and manage capacity based on the scope and use of the Hosting Services and the Performance Standards.
- H. Identify need for, and analyze impact of, infrastructure patches.
- I. Apply security and other patches for operating systems and all Third Party software to all devices. Patch management includes security patches, version updates, and service packs provided by Third Party vendors for all devices and software used to support the Solution and/or the Prime Vendor Environment, including hosts, servers, workstations, network devices, operating systems, database systems, interface technology, and all software used by the Solution or personnel who support the Solution. Patch management shall include regular monthly patch vulnerability scanning to verify that no security patches are missing from any component of the Solution or Prime Vendor Environment. Primary Vendor shall proactively monitor all Third Party vendors who provide components of the Solution and the Prime Vendor Environment for patch alerts and update notices.

The patch management schedule used by Prime Vendor shall be as follows:

[DRAFTING NOTE: PRIME VENDOR TO PROVIDE PATCH MANAGEMENT SCHEDULE TO BE INCORPORATED BELOW. IN GENERAL, WORKSTATION PATCHES SHOULD BE AP-

PLIED WITHIN 24 HOURS OF PATCH RELEASE FROM ANY THIRD PARTY VENDOR. PATCHES FOR HOST DEVICES AND NETWORK DEVICES SHOULD BE APPLIED AFTER REASONABLE TESTING TO INSURE A PATCH DOES NOT ADVERSELY IMPACT SOLUTION AVAILABILITY BUT IN NO CASE SHOULD THEY TAKE LONGER THAN 30 DAYS TO APPLY.]

Device/Equipment	Type of Action	Frequency

- J. Test patches and the interaction of such patches to the components to which they are applied.
- K. Provide DES with monthly evidence that patch management in accordance with the patch management schedule set forth above was accomplished, including providing vulnerability assessments of any devices that were not patched.
- L. Review hardware maintenance plans.
- M. Schedule and execute hardware maintenance.
- N. Execute preventative maintenance plans.
- O. Test components that have received maintenance.
- P. Monitor maintenance plan for its effectiveness.
- Q. Perform standard reboots and any other regular maintenance of the hardware as recommended by the applicable hardware manufacturers.
- R. As new hardware is added to the configuration, design and perform tests to ensure the hardware performs in accordance with the equipment manufacturer specifications.
- S. Implement and operate an End Point Protection Platform to ensure that all components of the Prime Vendor Environment secure State Data. The End Point Protection Platform must operate full spectrum capability for defending servers and workstations running the operating systems used by the Solutions, be centrally controlled and integrated into an overall layered defensive strategy for protecting State Data and all Prime Vendor Environment components, and have network perimeter capability to detect common viruses, malware, and malicious traffic at the network perimeter to prevent malicious content from entering the Prime Vendor Environment.

1.3 Network Management

1.3.1 Prime Vendor Obligations

As part of the management of equipment and connectivity for the different parts of the network (LAN and WAN) from the Hosting Services data center to the Point of Demarcation, Prime Vendor shall:

- A. Maintain and monitor all network LANs within the data center.
- B. Configure changes to all network LANs within the data center.
- C. Perform internal IP address management, router table management, NAT administration, switch administration and firewall administration at the data centers.
- D. Enable the software included in the scope of Hosting Services as described in **Section 1(A)** to be accessible on the public Internet by Authorized Users in a manner that maintains data security pursuant to **Section 1.11** and the requirements set forth in the TA.
- E. Plan, implement and manage capacity based on the scope of Hosting Services, in coordination with DES.
- F. Provide connection to the Internet through redundant routers with multiple high-bandwidth circuits on physically diverse paths and points of entry into each data center, with circuits provisioned for each data center over separate Internet Service Providers to ensure high availability.
- G. At DES' election, Prime Vendor shall provide performance data identifying network performance from the Point of Demarcation to DES' site.
- H. Provide and manage up to the Points of Demarcation two (2) secure VPN connections to the DES State Governmental Network (SGN) and Intergovernmental Network (IGN) points of presence, as depicted in the technical architecture schematic set forth in **Attachment G**.

The summary of Prime Vendor's monitoring activities is set forth in **Attachment H**.

1.3.2 DES Responsibilities

DES will:

- A. Provide external DNS management for DES address space.
- B. Provide internal DNS management within the DES network.
- C. Manage DES' internal network.
- D. Unless purchased by DES from Prime Vendor pursuant to **Section 3.8 of Attachment D**, procure connectivity from the connectivity provider.
- E. Unless purchased by DES from Prime Vendor pursuant to **Section 3.8 of Attachment D**, manage the connectivity provider, including management of network segments from the Point of Demarcation to DES.

- F. Specify any required network connectivity (port, addresses, etc.) for any software originating from DES' network.

1.4 Storage Management

Prime Vendor shall:

- A. Monitor and maintain file systems.
- B. Provide offsite media storage.
- C. Monitor and maintain storage for database Instances.
- D. Plan capacity based on the scope and use of Hosting Services and the Performance Standards.
- E. Utilize industry standard technology for hot swappable, high availability storage devices and media.
- F. Maintain physical and logical security of all storage including file systems, decommissioned storage devices and media, all in accordance with **Section 1.11**.

1.5 Backup/Restore and Disaster Recovery

1.5.1 Back-Up Operations

Prime Vendor shall perform the following back-up operations:

Production Backups

Backup Type	Description	Frequency
Baseline	Pre-Production (go-live) Image	For each Solution Module, one (1) baseline backup prior to any Stabilization Period for Production Use for that Solution Module
Daily Incremental Files	Any element (including all files, application data and objects) in the Prime Vendor Environment that changes during the period	Daily
Database Hot Backups	Complete Prime Vendor database backup including all State Data in database	Weekly
Database Archives	Prime Vendor archive files containing any change to the database which allows point in time recovery	Daily
Applications	All application executables and configuration files and Source Code for software operating the Solution	Weekly
Operating System/Infrastructure	Stored images of operating systems, including configuration files, BIOS, firmware, router configurations, SANS configuration settings, virtualization settings	As changes are made
Pay Cycle Backup	Complete Prime Vendor database backup including all State Data in database	Per pay cycle
Full Backup Copy (Refreshed Baseline)	Full backup of all data, software and other files referenced in this chart	Annually and upon request of DES whenever there is Functionality Release, Maintenance

Backup Type	Description	Frequency
		Code Release or other major change
Continuous Prime Vendor Database Log Files	Prime Vendor relational database management system archive logging is activated for the production Prime Vendor Environment and replicated to the secondary data center at 15 minute intervals each of which shall be on a 24 x 7 basis, except during Scheduled Downtime	Ongoing

Non-Production (excluding Demo) Backups

Backup Type	Description	Frequency
Daily Incremental Files	Data or object changes during the period residing in the file system	Daily
Database Hot Backups	Complete Prime Vendor database backup including all State Data in database	Weekly
Database Archives	Prime Vendor archive files containing any change to the database which allows point in time recovery	Daily
Applications	All application executables and configuration files operating the Solution	Weekly
Operating System/Infrastructure	Stored images of full operating systems, including configuration files, BIOS, firmware, router configurations, SANs configuration settings, virtualization settings	As changes are made
Full Backup Copy (Refreshed Baseline)	Full backup of all data, software and other files referenced in this chart	Annually and upon request of DES whenever there is Functionality Release, Maintenance Code Release or other major change

For each backup, Prime Vendor shall make two (2) identical copies, and the maintenance and retention obligations set forth herein shall apply to both copies of the backups. All backed up data shall be encrypted, and upon request, Prime Vendor shall provide DES with the names of the individuals who are authorized to recover and decrypt backup files.

As part of its backup procedures, Prime Vendor shall perform automated verification of each backup to confirm that complete data, software and other files have been successfully backed up. The results of the automated verification shall be placed in backup logs which shall be made available and accessible to DES online 24 x 7 x 365. In addition, Prime Vendor each quarter shall perform manual checks to verify that the backup procedures are working properly and the then-current set (at the time of manual verification) of backups have all the required data, software and other files properly backed up. Within three (3) business days of Prime Vendor's manual verification, Prime Vendor shall provide DES with a written report verifying the successful completion of the data backups, or, if there are Issues with respect to the backups or backup procedures, Prime Vendor shall identify the Issues and submit with the written notice a corrective action plan to be implemented no later than five (5) business days. At the end of the five (5) day period, Prime Vendor shall report to DES whether it has corrected the Issue. A failure of Prime Vendor to report the correction or to correct an Issue within the five (5) day period shall constitute a failure of the Disaster Recovery Performance Standard. DES shall have the

right to require Prime Vendor to conduct additional automated or manual verifications until any Issues have been corrected.

1.5.2 Back-Ups and Retention

During the Hosting Term and for the seven (7) year period thereafter, Prime Vendor shall transfer to, maintain and retain the backup copies at a physically secure designated offsite location in the United States at least 250 miles from the primary data center. Prime Vendor shall disclose the location of the offsite storage location to DES. Prime Vendor shall ensure that there is limited access to the backup media whether at Prime Vendor's primary data center facility, secondary data center facility or off-site storage facility. If Prime Vendor uses a Third Party to transport and/or store backup media, Prime Vendor shall have a written agreement with such Third Party incorporating appropriate handling of media safeguards, consistent with industry practices, and limiting the number of Third Party personnel having access to such media. Prime Vendor shall be responsible for any and all damages relating to the use, misuse and/or loss of media, whether caused by Prime Vendor or a Third Party handler or off-site storage provider.

The retention periods for the backups are as follows:

Description	Retention Period
Baseline and Refreshed Baselines	The later of 7 years or the duration of the Hosting Term
Daily	6 days
Weekly	4 weeks
Monthly	12 months
Pay Cycle Backups	16 months

During the Hosting Term and for a period of seven (7) years thereafter, Prime Vendor shall retain and maintain the versions of software, tools and utilities required to retrieve and restore the backups. If Prime Vendor fails to maintain the software, tools and utilities to retrieve and restore the backups, Prime Vendor shall be responsible for converting such data, at its expense, to an industry standard format selected by DES.

After the Hosting Term, Prime Vendor shall provide such backups to DES subject to the parties executing a Change Order for the reasonable (and substantiated) costs to retain such copies and provided DES pays Prime Vendor, at the Service Rates and any out-of-pocket materials expenses.

DES may request back-up copies of DES' data and other files from Prime Vendor in an industry-standard format designated by DES, and if Prime Vendor does not support the designated format, in a format mutually agreed to by the parties. The fee for additional back-ups is listed as an ARC in **Attachment D**.

1.5.3 Incident Data Restoration

For Incidents not involving a Disaster, Prime Vendor shall perform data restoration services to recover lost or corrupted data from production data as soon as possible from DES' request, but in no event greater than two (2) hours. For the Disaster recovery time objective and recovery point objective, see **Section 5.4 of Exhibit C**.

1.5.4 Disaster Recovery and Business Continuity Plan

The preliminary Disaster Recovery and Business Continuity Plan is set forth in **Attachment F**. Within ninety (90) days from the Effective Date, Prime Vendor will provide DES with a detailed, updated plan for DES' review. The Disaster Recovery and Business Continuity Plan is a Deliverable and its delivery is a Critical Milestone event subject to the terms of the TA. After delivery of the updated plan, the parties shall meet to finalize the plan, and once agreed to by DES shall supersede the preliminary plan and become the new **Attachment F**. If Prime Vendor fails to deliver the updated plan within the 90 day period, or fails to finalize the plan with DES within 180 days from the Effective Date, DES shall have the right to suspend payment of all amounts due or to be due and owing under the TA until the plan is finalized and agreed to by DES. Once the Disaster Recovery and Business Continuity Plan is finalized, the plan shall be updated by Prime Vendor on an annual basis as part of the Procedures Manual update process described in **Section 2.9**. Subsequently approved Disaster Recovery and Business Continuity Plans shall replace the then-existing plan and become the new **Attachment F**.

1.5.5 Disaster Recovery and Business Continuity Services

A "**Disaster**" is an unplanned event that causes a complete loss of access to and use of the software included in the scope of Hosting Services as described in **Section 1(A)**, where such loss of access and use is likely to continue for a period greater than twelve (12) hours. DES and Prime Vendor agree, within two (2) hours after an event that may qualify as a Disaster, to determine the nature and cause of the event and whether the event should be declared a Disaster for purposes of commencing disaster recovery Services.

Upon the reasonable determination by DES that an Incident qualifies as a Disaster, Prime Vendor shall follow the procedures set forth in the Disaster Recovery and Business Continuity Plan set forth in **Attachment F** to restore the production Prime Vendor Environment, at the primary data center or a secondary data center, in accordance with the timeframes set forth in **Section 5.4 of Attachment C**. The back-up production Prime Vendor Environment at the secondary data center may have reduced capacity, but will not fall below a level at which the Solution is able to function as intended and will have the same application setup, as compared to the production environment at the primary data center.

1.5.6 Disaster Recovery Rehearsals

Prior to Production Use, Prime Vendor shall set up a test of the active/passive failover capability of the Solution between the primary and secondary data center to confirm that the production ready Prime Vendor Environment can be restored in accordance with the Disaster Recovery and Business Continuity Plan. The rehearsal will test all parts of the Business Continuity Plan, except as otherwise specified by DES. Rehearsals shall not be complete until operations can be successfully tested from the secondary data center. Prior to commencing the first rehearsal, Prime Vendor shall provide DES with information on Prime Vendor's infrastructure and readiness to fulfill its Disaster Recovery obligations, including the circuits provisioned by Prime Vendor between the primary and secondary data centers, *etc.*

On a monthly basis, DES shall have the right to have various, incremental components of the Disaster Recovery and Business Continuity Plan tested, with the objective being to ensure that various components of the secondary data center are functioning. The parties may develop, as part of the Disaster Recovery and Business Continuity Plan a monthly readiness checklist that can be used by Prime Vendor to report, through operational and monitoring tools, the relative state of readiness of the components being tested.

Once per year after Production Use and at any time upon the request of DES, Prime Vendor shall conduct a disaster recovery rehearsal to confirm that the production Prime Vendor Environment can be restored in accordance with the Disaster Recovery and Business Continuity Plan set forth in **Attachment F**. DES will have the right to observe and/or directly participate in such rehearsals.

If a disaster recovery rehearsal reveals that there are deficiencies, Prime Vendor shall develop a corrective plan of action as soon as possible, not to exceed fifteen (15) days, and implement such plan within forty five (45) days, all at no additional cost to DES. Upon completion of the corrections, DES shall have the right to require a partial or full rehearsal to confirm that the corrections have been implemented successfully.

Prime Vendor shall perform the disaster recovery rehearsals described in this Section as part of the Monthly Hosting Fees set forth in **Attachment D**.

1.6 Desktop Management

1.6.1 DES Responsibilities – Desktop Management

DES will:

- A. Manage and administer all DES-issued end-user equipment; and
- B. Provide support for DES-issued end-user equipment.

1.7 Data Administration

1.7.1 Prime Vendor Obligations

Prime Vendor shall:

- A. Administer data files and database Instances including configuration, sizing, ongoing storage management, stopping, starting, connectivity setup and configuration, problem diagnosis, tuning, patching and backups.
- B. Manage and maintain all database software included in the scope of Hosting Services as described in **Section 1(A)**.
- C. Administer the database environments identified in **Attachment B**.
- D. Pursuant to a Service Request from DES, provide change (read + change only) access to non-production data and databases on an as-needed/restricted basis for developer access, and promptly (but no later than two (2) hours from the request) provide read only access to the production database for DES developer Authorized Users.
- E. Provide routine start-ups and shutdowns for the Prime Vendor managed database environments.
- F. Provide database security management in accordance with then-current industry standards and best practices and DES Policies, including ensuring that data at rest is encrypted.
- G. Maintain custom database User IDs.
- H. Monitor database performance.
- I. Isolate database performance Issues, if necessary, to the physical database level.
- J. Install and test fixes to database performance Issues as reported by DES.
- K. Plan database capacity based on the Hosting Services as described in **Section 1**.
- L. Provide copies of application data configuration files. DES may review the configuration files for troubleshooting purposes only, and will not have access to change these files.
- M. In addition to the database actions that Prime Vendor may be required to implement in support of the Hosting Services as described in **Section 1**, DES may require additional database actions (including actions to write to the database for the purpose of correcting erroneous data or otherwise), as it reasonably determines are needed, as part of the Hosting Services. Such DES requested database actions are defined as DES requests for Prime Vendor to execute specific database commands on DES' behalf.
- N. To facilitate system efficiency, Prime Vendor shall manage the movement and location of all data and database files, including managing the relocation of data files, online redo log files, and database control files. Prime Vendor shall provide written notice to DES at least ten (10) days in advance of all file relocations. DES is responsible for all data within DES application-specific schema.

- O. Prime Vendor shall reload an image copy of DES' production data files for all environment Instances in the Prime Vendor Environment and make appropriate configuration changes to facilitate use of such files (a "**Refresh**"): (1) up to the date on which all Solution Modules have achieved Solution Component Certification, up to four (4) times per month or as necessary; and (2) from and after Solution Component Certification, once per pay cycle (as of the Effective Date, two (2) per month), plus two (2) additional Refreshes annually at a time specified by DES. Upon DES' request and at no additional cost to DES, Prime Vendor shall encrypt all personal data in connection with the migration to test.

Additional Terms Relating to Refreshes

Other than Prime Vendor-initiated Refreshes, Prime Vendor shall provide additional database Refreshes at the ARC rate. DES-requested Refreshes will require one (1) business day advance written notice. If the requested Refresh would coincide with a scheduled maintenance period, the parties will schedule the Refresh as soon as practicable after such maintenance period. Refreshes from an existing environment (and not an archive) to a new environment shall not take more than forty eight (48) hours to complete.

Prime Vendor may elect to perform database Refreshes to facilitate Prime Vendor's compliance with Performance Standards set forth in **Attachment C**. Prime Vendor shall notify DES regarding the performance of any such Refresh.

For the purpose of performing a Refresh from an existing environment to a new environment, Prime Vendor shall use one of DES' existing available environments described in **Attachment B** as the new environment or a new environment that DES purchases as an ARC.

All Refreshes will be performed during scheduled time periods to be mutually agreed to between DES and Prime Vendor.

Access to New Data and Database Schemas and Infrastructure Changes

Prior to implementing any Enhancements that involve new data and/or database schemas or other infrastructure changes affecting State Data, Prime Vendor shall provide DES with as much advance notice of the changes as possible, and not less than sixty (60) days before any such change is made. At no additional cost to DES, Prime Vendor shall create a complete set of non-production Prime Vendor Environments, replicating DES' then-current non-production environments, so that DES can test the data and database schemas or other infrastructure changes. Prime Vendor shall continue to maintain both sets of non-production Prime Vendor Environments until the Enhancements are stabilized and there are no Level 1 or Level 2 Incidents relating to the Enhancements and DES places the Enhancements into Production.

1.7.2 DES Responsibilities

DES will assist with the testing of database performance Issues as reasonably requested by Prime Vendor provided DES has the technical skill level to provide such assistance.

1.8 Solutions Management

1.8.1 Prime Vendor Obligations

Prime Vendor shall manage the application architecture, such as the application servers, web servers, database servers, and batch servers, as follows:

- A. Configure and maintain server environments.
- B. Provide reboots of server components according to an agreed to maintenance schedule.
- C. Isolate application performance Issues.
- D. Monitor application software server components.
- E. Execute production and non-production jobs as required for processing the Solution's internal processes, Extensions, reports and Interfaces.
- F. Schedule all batch processes, job runs, interfaces, or other processes to be run in the Prime Vendor Environment according to the job schedule provided by DES.
- G. Assess failed jobs and proper resolution including potential rerun or skip run.
- H. Monitor and notify DES designated resources of the success or failure of pre-defined batch jobs, and assist DES in the assessment of failed jobs.
- I. Test patches in accordance with the patch maintenance schedule set forth in **Section 1.2(I)**.

Prime Vendor shall make a real-time log of the foregoing actions (including when an action is scheduled to occur and when an action was successfully completed) available to DES online, and shall provide DES with a monthly summary recapping the foregoing actions taken in the previous month.

1.8.2 DES Responsibilities

DES will:

- A. Assist in isolating performance Issues as requested by Prime Vendor.
- B. Manage and deploy any needed DES client software, such as browsers, remote access software and mobile software.
- C. Configure and manage the physical hardware and software associated with DES' printers.
- D. Maintain production and non-production job schedules.
- E. Assess impact of failed jobs.
- F. If needed, provide its authorized personnel with 2-Tier access to the development Instance of the Prime Vendor Environment dur-

ing the pre-production phase of the Hosting Services, for the purpose of implementation support and/or configuration of the application.

- G. Provide, maintain and update as needed, a schedule identifying the frequency, time and any other scheduling requirements for DES' receipt of interfaces, reports or other output from and relating to the Solution.

1.9 Release Management

1.9.1 Prime Vendor Obligations

Prime Vendor shall, with respect to each of the Prime Vendor Environments, as applicable:

- A. Build, apply, and migrate Functionality Releases and Maintenance Code Releases as such Functionality Releases and Maintenance Code Releases are made available.
- B. Identify Extensions, Interfaces and reports that could be overwritten, made inoperable or unable to function in its intended manner as a result of the Enhancements, and retrofit such Extensions, Interfaces and reports so that they maintain their compatibility with the Enhancements, and such identification and retrofitting shall be completed by Prime Vendor no later than the general release date of the Enhancement.
- C. Migrate software objects to the production Prime Vendor Environment on a weekly scheduled basis, if needed.
- D. Coordinate and apply Regulatory Modifications.
- E. Proactively review Enhancements and provide recommendations on upgrading to Enhancements.
- F. Coordinate with DES to determine which Functionality Releases and Maintenance Code Releases should be applied and provide overall management of the update process in accordance with an agreed to schedule.
- G. Verify the installation of patches per the install instructions.
- H. Migrate objects between the Prime Vendor Environments.
- I. Replicate the data in the test environment by Refreshing the test environment from the production environment, as requested by DES.
- J. Track all patches applied to the Solution.
- K. Install security patches in accordance with **Section 1.11**.
- L. Identify any Maintenance Code Releases that Prime Vendor determines is advisable to perform the Hosting Services in accordance with the Performance Standards, and prioritize the installation of such Maintenance Code Releases so that Performance Standards can be met.
- M. Install all Enhancements.

Release Management Schedule

Prime Vendor's release management schedule is as follows:

[NOTE: PRIME VENDOR TO PROVIDE FOR REVIEW]

Type of Action	Frequency	Notes

Replication of Non-Production Prime Vendor Environments to Support Enhancement Testing

Prior to implementing any Enhancements, Prime Vendor shall provide DES with as much advance written notice of the release of the Enhancement as possible, and not less than sixty (60) days before any such Enhancement is made generally available to Prime Vendor's customers. At no additional cost to DES, Prime Vendor shall create a complete set of non-production Prime Vendor Environments, replicating DES' then-current non-production environments, so that DES can test the Enhancements. The non-production environments shall be on discreet networks with a firewall layer that will not allow data to egress the environment, except upon code promotion. Prime Vendor shall continue to maintain both sets of non-production Prime Vendor Environments until the Enhancements are stabilized and there are no Level 1 or Level 2 Incidents relating to the Enhancements and DES places the Enhancements into Production.

1.9.2 DES Responsibilities

DES will:

- A. Work with Prime Vendor to identify and analyze the impact of Functionality Releases and Maintenance Code Releases.
- B. Initiate requests to migrate software objects.
- C. Provide approval to install Functionality Releases and Maintenance Code Releases.
- D. Plan and execute testing of Functionality Releases and Maintenance Code Releases, including performing configuration testing.
- E. Develop and coordinate implementation/upgrade strategy for Functionality Releases.
- F. Perform integration testing prior to application of patches to the production Prime Vendor Environment.
- G. Perform acceptance testing of all patches.
- H. Provide post-installation functional testing of all patches.

1.10 Monitoring

1.10.1 Prime Vendor Obligations

Prime Vendor shall monitor the performance, security and availability of the Prime Vendor Environment by use of the tools and utilities sufficient to accurately

and reliably report on the Performance Standards. Prime Vendor represents and warrants that the tools and utilities it uses to report on the Performance Standards are sufficient to meet the Performance Standards.

As part of its monitoring activities under this **Section 1.10**, Prime Vendor shall:

- A. Perform operational and security monitoring of hardware, infrastructure, OS, LAN, database, and software included in the scope of Hosting Services as described in **Section 1(A)**. With respect to security monitoring, Prime Vendor shall: provide a logging and monitoring strategy that outlines how the Prime Vendor will meet requirements outlined in the Security Policies and Procedures.
- B. Collect information about the capacity, performance, configuration and operational state of the Prime Vendor Environment, and compile such information in a Prime Vendor controlled repository.
- C. Perform initial event notification and escalation.
- D. Respond to events according to event notification and escalation procedures.
- E. Monitor capacity of application servers, web servers, database servers, batch servers and storage devices.
- F. Monitor availability of critical components, such as the Prime Vendor Internet architecture.
- G. Install a Prime Vendor tool set that enables monitoring and management capabilities for the Prime Vendor Environment.
- H. Facilitate appropriate configuration of events.
- I. Perform vulnerability scanning using a DES-approved scanning tool at least monthly to identify vulnerabilities and track progress in remediation of identified vulnerabilities on all host, workstation, and network devices that support the Solution. Provide DES with a monthly electronic summary of this activity, and, upon request, details for any given device.

Prime Vendor shall make a real-time log of the foregoing actions (including when an action is scheduled to occur and when an action was successfully completed) available to DES and provide a monthly report of the foregoing actions taken in the previous month.

1.10.2 Tools and Utilities.

Without limiting Prime Vendor's obligations under **Section 1.10.1** above, the following are tools and utilities are intended to be used by Prime Vendor to monitor the Hosting Services:

[PRIME VENDOR TO SUPPLY]

- _____
- _____

Prime Vendor shall provide DES with credentials to access to the above tools and utilities.

Prime Vendor shall integrate its monitoring tools and utilities with DES' then-current monitoring tools and utilities. DES' monitoring tools and utilities as of the Effective Date are set forth below:

[DISCUSS – PARTIES TO DISCUSS DURING IPS WHICH TOOLS/UTILITIES WILL BE INTEGRATED. EXAMPLE: INTEGRATING PRIME VENDOR'S TROUBLE TICKET SYSTEM WITH DES' TROUBLE TICKET SYSTEM]

1.11 Security

The terms and conditions set forth in this Section are in addition to, and not in lieu of, Prime Vendor's obligations to comply with the Security Policies and Procedures and other security and confidentiality obligations as set forth in the TA. State Data is classified as "Category 3 data" under Security Policies and Procedures, and as such, Prime Vendor shall implement and deploy the security and confidentiality obligations identified in such Security Policies and Procedures. Prime Vendor shall limit administrative access to hosts and workstations that host or access State Data to the least number of personnel required to meet Prime Vendor's obligations under this Hosting Services Exhibit. Prime Vendor shall employ management, operational and technical controls within the security framework of ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission) ISO/IEC 27001:2005, Code of Practice for Information Security Management, and Prime Vendor acknowledges that it will be audited to this standard.

The security related controls employed by Prime Vendor are described in this **Section 1.11** and may be further described in the Procedures Manual.

1.11.1 Prime Vendor Obligations

Prime Vendor shall:

- A. Perform security-related changes to the Prime Vendor Environment.
- B. Create and change Prime Vendor administrative User IDs, de-provision Prime Vendor administrative users and reset administrative passwords. Prime Vendor shall maintain and secure audit logs of all actions of users who have administrative privileges with respect to the Prime Vendor Environment, and shall make such logs available to DES in electronic form upon request. Audit log data shall be retained by Prime Vendor for a period of two (2) years from date of data capture.
- C. Provide the following physical security of the primary and secondary data centers and to the DES-designated locations in which the Prime Vendor Environment is housed:
 1. Restrict Access – Data Centers – Prime Vendor shall limit access to the primary and secondary data centers to personnel requiring access to perform their assigned duties and to authorized visitors. Visitors are to be checked in and escorted by data center personnel.

2. Restrict Access – Prime Vendor Environment – Prime Vendor shall limit access to the area in which the Prime Vendor Environment is housed only for such periods as specified personnel are actively engaged in DES-related duties. Blanket or unlimited duration for Prime Vendor personnel is prohibited.
 3. Secure Media Storage – Prime Vendor shall secure access to portable back-up media at all times while stored on premise, while in transit to off-premise storage facilities, and while in off-premise storage facilities.
 4. Review Access – Prime Vendor shall periodically (no less than once a year) review its practices regarding restrictions to physical access to the primary and secondary data centers.
- D. Provide the following logical security of the primary data center:
1. Solution and Database Access – Access by Prime Vendor Personnel to the software included in the scope of Hosting Services as described in **Section 1(A)**, database programs, utilities of any form, State Data and all other components of the Prime Vendor Environment and communications will be limited to those personnel providing Hosting Services and Support and Maintenance Services as well as tasks incidental to Hosting Services and Support and Maintenance Services. Access to operating systems, network applications and/or State Data by Prime Vendor and its subcontractors and/or data center facility(ies) (collectively, for purposes of this Section, "**Prime Vendor Personnel**") shall only be through Prime Vendor-assigned individual User IDs, and individual User IDs issued to Prime Vendor Personnel shall not be shared. Access shall be provided only for such periods as specified Prime Vendor personnel are actively engaged in DES-related duties. Blanket or unlimited duration access for Prime Vendor personnel is prohibited. Prime Vendor shall maintain records that will permit Prime Vendor to identify, at any given day and time, any Prime Vendor Personnel who used a User ID to access and/or change any operating system, network application and/or State Data, and if there is any unauthorized access and/or change by any Prime Vendor Personnel by use of a User ID to operating systems, network applications and/or State Data. Prime Vendor shall be responsible and liable for the actions and/or omissions of any individual assigned a User ID or otherwise given access by Prime Vendor.
 2. Co-Mingled Data – Prime Vendor shall either: (a) locate State Data on data storage devices separate and apart from Prime Vendor's other customers; or (b) if State Data resides on data storage devices that contain other Prime Vendor customer data, then Prime Vendor shall create logical partitions and implement such access and security controls to prohibit State Data from being accessible by any Third Party or Prime Vendor personnel not otherwise authorized to access State Data.
 3. Operating System Access – Access by Prime Vendor Personnel to the operating system of the Prime Vendor Environment will be limited to those personnel providing Hosting Services

and Support and Maintenance Services as well as tasks incidental to Hosting Services and Support and Maintenance Services.

4. Security Patches – Security patches shall be applied in accordance with the schedule set forth in **Section 1.2(I)**.
 5. Antivirus protection will be maintained at up to date levels at all times on all servers used in the data center to deliver Hosting Services, and such antivirus protection shall not impede or hinder DES' ability to access the Prime Vendor Environment.
 6. Review Access – Prime Vendor shall periodically (no less than once a year) review its practices regarding restrictions to logical access to the Prime Vendor Environment.
- E. Provide the following network security applicable to the Prime Vendor Environment:
1. Control Network Edge (Firewalls) and Remote Access – Prime Vendor shall maintain industry standard firewall configurations with current firmware and rule sets and other security and technologies to control access to the network within the primary and secondary data centers that support the Prime Vendor Environment (including the software included in the scope of Hosting Services as described in **Section 1(A)** and State Data within the Prime Vendor Environment) from external sources.
 2. Intrusion Detection / Prevention – Prime Vendor shall maintain industry standard security technology to proactively monitor for unauthorized intrusion attempts to access to the network within the primary and secondary data centers that support the Prime Vendor Environment (including the software included in the scope of Hosting Services as described in **Section 1(A)** and State Data within the Prime Vendor Environment) from internal and external sources.
 3. Monitor for Vulnerabilities and Remediate – Prime Vendor shall maintain industry standard security technologies to continually monitor for software and configuration vulnerabilities on the network within the primary and secondary data centers that support the Prime Vendor Environment (including the software included in the scope of Hosting Services as described in **Section 1(A)** and State Data within the Prime Vendor Environment).
 4. Patch Management – See **Section 1.2(I)**.
 5. Control Web Application Vulnerabilities. Prime Vendor shall use industry standard web application firewall and pattern recognition software to block access to the Solution from exploits that seek to take advantage of known web application vulnerabilities.
- F. Security Breaches and Compromises – Prime Vendor shall:
1. Notification and Isolate – Immediately notify DES of and create a Service Request and assign a Level 1 Incident relating to any of the following: a security breach, a failure of any security control, an attack on Prime Vendor's systems (regardless of whether any State Data or the Prime Vendor Environment was accessed or potentially compromised) or a suspected breach

of the Prime Vendor Environment (production or non-production environments), or any part thereof, and whether in the primary or secondary data center. Prime Vendor shall respond and resolve such Service Requests in accordance with **Section 5.5 of Attachment D**, provided that Prime Vendor shall commence isolating and containing the spread of any Incident within thirty (30) minutes once detected or reported, and shall use its continuous and dedicated efforts on a 24 x 7 basis to remediate such Incident. The Prime Vendor Information Security Officer shall be the primary liaison between Prime Vendor and DES during any such security breach.

2. Investigative Reporting; Root Cause Determination and Reporting – Prime Vendor shall undertake an investigation and perform a root cause analysis of any security Incident that involves a security or suspected security breach of and/or failure of a security control relating to the Prime Vendor Environment. The results of the analysis will be documented and any remaining high risk open Issues will be addressed and/or corrected, if applicable, by Prime Vendor within five (5) days from the completion of such investigation and root cause analysis. The Prime Vendor Information Security Officer shall be the primary liaison between Prime Vendor and DES during any such investigation and root cause analysis.
 3. Prime Vendor shall cooperate fully with DES at any time DES needs to investigate a potential misuse or threat to the Solution or the operation of its systems that interact with the Solution. At the request of DES, the Prime Vendor Information Security Officer shall be available to be the primary liaison between Prime Vendor and DES during any such investigation
- G. e-Discovery – Prime Vendor shall respond on a timely basis and at DES' expense at the Service Rates to requests by the DES Office of General Counsel or its designee to comply with DES records hold and electronic records discovery requirements.
- H. Media Disposal – All media (portable or stationary/hard drives on desktop computers) containing DES applications and State Data will be wiped/erased according to Media Sanitization Procedures standards defined by the National Institute of Standards and Technology (NIST), currently found at http://csrc.nist.gov/publications/nistpubs/800-88/NISTSP800-88_rev1.pdf.
- I. On an annual basis upon DES' written notice to Prime Vendor, Prime Vendor shall retain an independent Third Party to perform security penetration testing ("**Ethical Hacking**") against the Solution. The Third Party and DES shall discuss the scope of the Ethical Hacking tests using industry best practices as the Third Party and DES agree, including references to practices, methodologies and techniques set forth in the NIST Special Publications 800 Series, OWASP (Open Web Application Security Standard), and OSSTMM (Open Source Security Testing Methodology Manual). Ethical Hacking testing will be conducted during periods other than test period exclusions time periods agreed to between the Third Party and DES and communicated to Prime Vendor, which exclusion time pe-

riods will generally relate to high-volume production period. If Prime Vendor has a concern over the exclusion time period, Prime Vendor and DES will meet to address Prime Vendor's concerns. Testing shall take place during times other than the agreed to exclusion windows and without Prime Vendor's knowledge of the specific date and time of the test. Upon the completion of the Ethical Hacking testing, Prime Vendor shall provide the written results of the test to DES along with any remediation plan to address any gaps in security.

- J. Device Connection – Prime Vendor shall ensure that any device (including mobile devices) that connect to the Solution comply with DES Policies, including all security-related DES Policies.
- H. Internal Security Policies – Prime Vendor shall provide DES with copies of its internal security policies governing data center operations, including physical security, operating system security and network security. If Prime Vendor uses any subcontractor to provide Hosting Services, Prime Vendor shall provide DES with copies of the internal security policies of such subcontractor governing data center operations, including physical security, operating system security and network security.

1.11.2 DES Responsibilities

DES will:

- A. Be responsible for maintaining access control lists for Authorized Users requiring access to the Prime Vendor Environment.
- B. Add, modify and delete State end-user accounts as needed.
- C. Perform periodic audits of the software included in the scope of Hosting Services as described in **Section 1(A)** for unusual DES access.
- D. Maintain application security configurations needed, roles, permission lists and Authorized User profiles.
- E. DES will communicate to its Authorized Users that their computers accessing the Prime Vendor Environment should run an up to date level of anti-virus software at all times and have the latest security patches and service packs applied.

1.12 Performance Management

1.12.1 Prime Vendor Obligations

Prime Vendor shall:

- A. Monitor Solution Availability and Application Response Time performance in accordance with **Section 1.10**.
- B. Identify or determine Issues affecting Solution performance.
- C. Facilitate the analysis of application related Issues with Prime Vendor operational support services (OSS).

- D. Assist in troubleshooting application performance Issues with OSS.
- E. Identify and isolate Issues to a specific Extension, Interface and/or reports.
- F. Perform stress testing of the Prime Vendor Environment annually and whenever there is a new Release or Version of the Solution.
- G. Resolve any performance Issues that cause performance to fall below agreed upon Performance Standards in accordance with and as defined in **Attachment C**.

Prime Vendor shall provide a monthly report detailing the foregoing activities for the previous month.

1.12.2 DES Responsibilities

DES will:

- A. Submit Service Requests in connection with application performance Issues upon discovery of such Issues.
- B. Assist Prime Vendor in troubleshooting Issues arising from Extensions.

1.13 Prime Vendor Hosting Support Center

Prime Vendor's Hosting Support Center will provide support and assistance for incoming Service Request receipt and routing during the Primary Hours of Operation and will track progress to resolution as described below. Prime Vendor shall coordinate Issue handling, resolution and escalation for any call within Prime Vendor's areas of responsibility. DES may contact the Hosting Support Center via telephone and/or via the Prime Vendor Portal.

1.13.1 Prime Vendor Obligations – Hosting Support Center

As part of the Hosting Support Center services, Prime Vendor shall:

- A. Address Issues arising from the Hosting Services, including the computing server environment, database, remote access software, components of the software included in the scope of Hosting Services as described in **Section 1(A)** (e.g., web server, app server, process scheduler), Prime Vendor LAN, hardware and operating system.
- B. Train the applicable DES personnel on the protocol for communicating Issues and provide training materials for use by DES personnel.
- C. Conduct status meetings on a monthly basis, or as needed, documenting discussions and agreements with DES, provided that with respect to Solution Modules placed into Production, the meetings shall be held weekly.
- D. Resolve submitted Service Requests according to priority.

- E. Coordinate Support and Maintenance Services Issues with DES and DES' Third Parties, when needed.
- F. For all software other than Solution components and for any hardware outside Point of Demarcation, Prime Vendor shall log the call and refer DES to the appropriate vendor or supplier for resolution.

1.13.2 Prime Vendor Obligations – Service Request Process

The Service Request process provides for diagnosis and resolution of problems reported in connection with the Solution. As part of this process, for each Service Request, Prime Vendor shall:

- A. Receive the Service Request from DES' Help Desk submitted either through the Prime Vendor Portal or by telephone via the Prime Vendor Hosting Support Center.
- B. Generate Service Requests via events detected by Prime Vendor's monitoring tools.
- C. Validate the Service Request that is generated by DES' Help Desk for identity and authorization.
- D. Acknowledge receipt of the Service Request received from DES' Help Desk.
- E. Perform initial problem determination so that the Service Request can be assigned to the correct Prime Vendor resource.
- F. Record an initial Incident Level as defined in **Section 5.5 of Attachment C**.
- G. Gather required information to facilitate determination of the cause of the Issue that is the subject of the Service Request.
- H. Track the Service Request for analysis and reporting.
- I. Provide DES a Service Request reference number.
- J. Perform problem diagnosis of the cause of the Issue.
- K. Determine potential resolution options.
- L. Determine the applicable resolution in conjunction with DES' support team.
- M. Escalate and resolve Service Requests in accordance with **Section 5.5 of Attachment C**.
- N. Proactively communicate with DES regarding all Issues and other Defects, including providing updates every at least every two (2) hours regarding the status of any Level 1 Defects and other Level 1 Incidents.

1.13.3 DES Responsibilities

DES will:

- A. Submit DES Service Requests via DES Super Users.
- B. Submit each Service Request after the occurrence of the underlying Incident of which DES becomes aware.
- C. Submit support calls to the Prime Vendor Hosting Support Center or submit tickets via the Prime Vendor Portal.

- D. Participate with and assist Prime Vendor in resolving the Service Request.
- E. For Service Requests for Level 1 and 2 Incidents, provide an operational contact that will be available to Prime Vendor by telephone or pager on a 24 x 7 basis while Prime Vendor works towards closure of such Service Requests.
- F. Assist Prime Vendor in connection with fault isolation of Issues.
- G. Address Issues and questions related to DES' business processes and the functionality of the software included in the scope of Hosting Services as described in **Section 1(A)** (such as how-to, feature/function questions).
- H. Address Issues related to Extensions (once Prime Vendor is no longer providing Services under the applicable Statement of Work).
- I. Assign an appropriate number of individuals to provide first level support to the Authorized Users.
- J. Manage DES' internal communications.

1.14 Communications Management

The parties agree to establish a formal management framework that would enhance communication between the parties, identify weaknesses and strengths in the performance of Prime Vendor's obligations herein and DES Responsibilities, and coordinate ongoing operations and requirements with respect to the Hosting Services ("**Communications Management**"). The framework described herein is in support of ITIL procedures and industry best practices.

1.14.1 Prime Vendor and DES Joint Communications Management Responsibilities:

Communications Management Committee

The parties will jointly:

- A. Appoint senior management representatives to participate in the Communications Management Committee.
- B. Hold formal Communications Management Committee meetings on a quarterly basis.
- C. Develop executive relationships between the parties.
- D. Develop and update strategies for ongoing Hosting Services.
- E. Approve strategies for introducing new and updated technology into the Hosting Services.
- F. Work to resolve escalated service related Issues.
- G. Review operational performance of the Hosting Services.

1.14.2. Service Delivery Management

Prime Vendor shall:

- A. Assign a service delivery management team to deliver Hosting Services described in this **Section 1.14**.
- B. Facilitate completion of each phase of the Hosting Services.
- C. Advise DES regarding Functionality Releases and Maintenance Code Releases applied to the Solution within the Prime Vendor Environment and as to training for DES personnel.
- D. Conduct status meetings on a monthly basis, or as needed, and record discussions taking place during such meetings, provided that with respect to Solution Modules placed into Production, the meetings shall be held weekly.
- E. Coordinate Prime Vendor visits to DES locations.
- F. Coordinate DES visits to Prime Vendor locations.
- G. Notify DES when a change to the Prime Vendor Environment, technology, best practices or other factors occurs that requires an update to plans and documents that underlie the Hosting Services, such as the Disaster Recovery and Business Continuity Plan, System Architecture Diagram, Escalation Procedures, runbook(s) and the Procedures Manual.
- H. Create and update (as appropriate as a result of changes in the Prime Vendor Environment, technology, best practices or other factors) plans and documents that underlie the Hosting Services, such as the Disaster Recovery and Business Continuity Plan, System Architecture Diagram, Escalation Procedures, runbook(s) and the Procedures Manual.
- I. Facilitate a kickoff and planning meeting with DES to review the applicable Project Agreement and/or Contract Supplement and this Hosting Services Exhibit. The kickoff meeting shall include the following topics:
 - 1. Review of Hosting Services to be provided.
 - 2. Define of the respective roles and responsibilities of each party.
 - 3. Establish Hosting Services related implementation and production timelines.

1.14.3 DES Responsibilities – Service Scheduling

DES will:

- A. Notify Prime Vendor when DES is ready to begin use of the Prime Vendor Environment to process production data for DES business transactions.
- B. Notify Prime Vendor when there is a change to DES' services schedule, including its application rollout schedule.
- C. Notify Prime Vendor when DES would like to visit Prime Vendor's data center or when DES would like Prime Vendor to visit DES.
- D. Notify Prime Vendor when DES identifies a change to the Prime Vendor Environment, technology, best practices or other factors that requires an update to plans and documents that underlie the Host-

ing Services, such as the Disaster Recovery and Business Continuity Plan, System Architecture Diagram, Escalation Procedures, run-book(s) and the Procedures Manual.

1.14.4 DES Responsibilities – Cutover Assessments

DES will assist in the preparation of, and provide updates to, cutover assessments to confirm the production readiness of the Prime Vendor Environment, and correct discrepancies identified by Prime Vendor.

2.0 ADDITIONAL TERMS

2.1 Use of Services

- A. **Access and Security** – DES is responsible for issuing User IDs for DES-designated Authorized Users, and for administering and maintaining such User IDs. The parties agree to work together during the implementation of a project on a collaborative and cooperative basis with respect to implementing DES' security procedures and practices, including the commitment of Prime Vendor Hosting personnel to work with Prime Vendor Consulting personnel in the design and configuration of DES' security procedures or practices.

Prime Vendor shall not permit non-read infrastructure level access, or information on how to obtain such access, that in Prime Vendor's sole judgment would potentially jeopardize the security or integrity of the Prime Vendor Environment. Prime Vendor shall permit DES with read-only access to the infrastructure level. The type of access that Prime Vendor shall grant on a read-only basis shall include, at DES' written election:

- Read only access to the database as described in **Section 1.7.1(D)**
- Read only access to report output
- Read only access to report logs
- Read/write access to the data files directory
- Other access as agreed to by the parties

Prime Vendor shall implement and transfer all data to DES, and any access shall be permitted only via an encrypted network connection.

- B. **Responsibility for the Quality of Inputted State Data** – Except as may otherwise be expressly set forth in TA or the TLA Statement of Work, DES acknowledges it is responsible for the quality and content of State Data and information supplied to Prime Vendor.

2.2 Term of Hosting Services

Subject to DES' earlier termination rights as set forth in the TA, the initial term of Hosting Services will commence on the Effective Date and will end four (4) years after the last component of the TLA Solution is placed into Production, provided that if Production is delayed by DES, as documented with a Change Order adjusting the Production date of the last component of the TLA Solution, then the term shall be fixed at the date Production for the last component of the TLA Solution would have taken place but for DES' delays and not due to any Prime Vendor delays (the "**Initial Hosting Term**"). DES shall have ten (10) successive one (1) year renewal options to commence immediately after expiration of the Initial Hosting Term (each, an "**Annual Hosting Renewal Option**"), which options are exercisable by DES upon written notice to Prime Vendor no less than ninety (90) days prior to the expiration of the Initial Hosting Term or then current Annual Hosting Renewal Option period, as applicable, provided that DES: (A) has not received

written notice from Prime Vendor that DES is in breach of the TA; and (B) on or before the end of the then-current applicable term DES issues a purchase order as set forth in **Section 1.10** of the TA for such Annual Hosting Renewal Option in accordance with **Section 2.4** below.

If the Annual Hosting Renewal Option does not involve any change to the then-current Configuration or to the scope of the Hosting Services, then the Monthly Hosting Fees for the Annual Hosting Renewal Option period as set forth in the Change Order will be calculated in accordance **Section 2.0** of **Attachment D**. If the Annual Hosting Renewal Option involves change to the then-current Configuration or to the scope of the Hosting Services, the Change Order for the Annual Hosting Renewal Option period shall contain applicable adjustments to the scope, Configuration and pricing (based on the ARCs, and if the ARCs are not applicable, from Prime Vendor's then current list rates, subject to any discounts mutually agreed to by the parties) of the Hosting Services for that Annual Hosting Renewal Option period.

The Initial Hosting Term and any exercised Annual Hosting Renewal Option period(s) are collectively referred to as the "**Hosting Term**."

2.3 Hosting Services Termination Fee

DES shall be obligated to pay Prime Vendor a termination fee ("**Termination Fees**") for the termination of Hosting Services, it being acknowledged that DES has the right to terminate this Schedule for its convenience without being required to terminate the TLA Solution Project Agreement in its entirety. The Hosting Services Termination Fee is determined beginning the month in which DES no longer pays the Monthly Hosting Fees.

Month(s)	Termination Fees Due and Payable to Prime Vendor

Prime Vendor represents and warrants to DES, and based on such representations and warranties DES acknowledges, that the Termination Fee represents the amount of uncapitalized costs of equipment and other components of the Prime Vendor Environment that Prime Vendor cannot recoup as a consequence of such early termination.

2.4 Purchase Orders

Any exercise of DES' termination rights shall be contingent on the issuance of a purchase order to cover any applicable Termination Fees that may be due and owing.

2.5 Event of Default and Termination for Chronic Performance Standards Failures

A Prime Vendor Event of Default shall be deemed to occur and this Hosting Services Exhibit may be terminated by DES if:

- A. Prime Vendor fails for two (2) consecutive months or for any four (4) months during any twelve (12) month period to meet any of the following performance levels for a particular month:
 - (i) Production Application Availability: Achievement of less than ninety-nine and one half percent (99.5%) Production Application Availability;
 - (ii) Application Response Time: Achievement of less than eighty five percent (85%) of all Transactions executed within a twenty percent (20%) deviation of the Performance Standard; and/or
 - (iii) Service Request Response and Resolution Time for all Service Requests for Level 1 Incidents: Achievement of less than ninety five percent (95%) of Service Requests within the Performance Standard;
- B. Security Management: Any failure by Prime Vendor to conform to the security terms and conditions set forth in **Section 1.11**;
- C. Disaster Recovery: Recovery time is greater than twelve (12) hours; and/or
- D. DES is entitled to one hundred percent (100%) of the At Risk Amount in Performance Credits during any two (2) months during any twelve (12) month period (**subsections (A) through (D)** are individually referred to as a "**Chronic Performance Standards Failure**" and collectively referred to as "**Chronic Performance Standards Failure(s)**").

DES shall provide written notice of termination, and the date for termination, to Prime Vendor within ninety (90) days following the end of the month in which DES is eligible to exercise its right to terminate under this Section, provided, that a subsequent cure of the performance shall not diminish DES' right to terminate.

2.6 Hosting Systems Decommission

During the Hosting Term at any time and upon the expiration of the Hosting Term or the earlier termination of the Hosting Services, at no additional cost or fee to DES, Prime Vendor shall provide DES with: (A) two (2) complete copies of each of the Prime Vendor Environments, including all databases, in an industry standard format selected by DES, provided that if Prime Vendor does not use such format, then on an industry standard format mutually agreed to by the parties; and (B) the following Knowledge transfer:

- Release levels and patch levels for each Solution Module and the Prime Vendor database and operating system
- Documentation of technology stack
- The then-current Procedures Manual
- Information regarding the following topics:
 - ✓ Installation
 - ✓ Logins for environment-specific accounts

- ✓ Operations procedures
- Keys used to encrypt and decrypt State Data to disk, database or media

If DES elects to have Prime Vendor maintain the Prime Vendor Environment after Prime Vendor complies with its transition Services obligations under **Section 10.5** of the TA, provided DES agrees to pay Prime Vendor for the Monthly Hosting Fees for such month or months, as applicable, Prime Vendor shall maintain as fully operational (in accordance with the terms of this Schedule) the then-current Prime Vendor Environment on a month-to-month basis.

2.7 Transition of Hosting Facilities

If Prime Vendor wants to alter the hosting facilities or hosting subcontractors, if any, Prime Vendor shall provide written notice to DES at least one hundred twenty (120) days prior to the Prime Vendor-requested termination date, and such written notice shall be accompanied by a detailed written transition plan ("**Hosting Transition Plan**") sufficient to demonstrate a transition at Hosting Service performance levels in accordance with this Schedule to Prime Vendor or another hosting provider or facility. The parties shall meet to discuss any concerns that DES may have with respect to the Hosting Transition Plan. Upon DES' written consent that the Hosting Transition Plan and successor is acceptable, Prime Vendor shall be permitted to transition the Hosting Services to another facility or provider, but only in accordance with the agreed to Hosting Transition Plan. Any change to the Hosting Transition Plan shall be subject to DES' written consent, which consent shall be provided in DES' sole discretion, prior to implementing any such change.

2.8 Controls Over Financial Reporting and Operations

2.8.1 Audits. The terms and conditions set forth in this **Section 2.8.1** (and Prime Vendor's obligations under this **Section 2.8.1**) shall apply to Prime Vendor and to each Prime Vendor subcontractor providing any component of the Hosting Services (and, where appropriate, each reference to Prime Vendor in this **Section 2.8.1** shall be read to mean and include any such subcontractors). Prime Vendor shall cause each subcontractor providing any component of the Hosting Services to comply with the terms set forth in, and Prime Vendors obligations under, this **Section 2.8.1**. Without limiting the generality of the foregoing, Prime Vendor's data center provider (if an entity other than Prime Vendor) shall constitute a subcontractor for purposes of the TA.

2.8.1.1 General.

In connection with providing the Hosting Services, Prime Vendor shall comply with SOC 1 financial and operational control objectives and SOC 2 criteria for complying with the trust services principles (collectively, the "**Control Objectives**"). Prime Vendor shall provide to DES for its review no later than sixty (60) days prior to the commencement of Prime Vendor audits undertaken in this **Section 2.8.1** an electronic or written copy of the scope of audit (including the services and classes of transactions, procedures, accounting records, control environment and customer reporting) and Control Objectives used or to be used in the audits described below in this **Section 2.8.1**. Control Objectives shall include

the audit of policies, practices and procedures involving the delivery of the Solution via mobile devices and platforms. If DES determines as a result of any such review that Prime Vendor must comply with additional and/or different control objectives or expand the scope of its audit, DES shall so notify Prime Vendor in writing and such control objectives and/or expanded scope of audit thereafter shall constitute the scope of audit and/or Control Objectives for purposes of this TA. If Prime Vendor wants to change the control environment, reduce the scope of audit or any of the Control Objectives subsequent to the delivery of the last SOC 1 Type 2 Report or SOC 2 Type 2 Report, Prime Vendor shall so notify DES in writing at least sixty (60) days prior to the proposed change, including identifying the planned effective date of such change, and such proposed changed control environment, scope of audit and/or Control Objective(s) shall be subject to the DES review process described above in this Section. Prime Vendor shall cooperate with DES and its auditors (including DES' internal, independent Third Party, and/or State, auditors) in connection with the terms, obligations and rights set forth in this **Section 2.8**.

2.8.1.2 SOC 1 Type 2 Reports and SOC 2 Type 2 Reports.

- A. By Prime Vendor.** In accordance with the requirements set forth in this Section, Prime Vendor shall cause a nationally-recognized certified public accounting firm to conduct audits with respect to the Control Objectives at least once annually and to promptly prepare, no later than [March 31] of each year, SOC 1 Type 2 Reports and SOC 2 Type 2 Reports following each such audit. No later than [April 15] of each year, Prime Vendor shall deliver to DES a full and complete electronic copy of each such SOC 1 Type 2 Report and SOC 2 Type 2 Report, each of which must cover the calendar year. Within forty-five (45) days following DES' written request for a letter updating the most recently issued SOC 1 Type 2 Report or SOC 2 Type 2 Report, an authorized senior executive officer of Prime Vendor shall deliver to DES a letter that contains a written description of any material changes to the control environment that would adversely affect the prior delivered SOC 1 Type 2 Report or SOC 2 Type 2 Report to cover the time period not covered under the scope of such most recently issued audit report from the date of such report until the date requested in DES' written request, or if there have not been any such changes, a letter stating that there have not been any changes since the date of the most recently issued report.
- B. By DES.** At DES' sole cost and expense, DES shall have the right (either through its own audit staff, an independent Third Party auditor or an Agency of the State) to conduct reviews and audits of the type covered by SOC 1 Type 2 Reports and SOC 2 Type 2 Reports or other reviews and audits to ensure compliance with the Control Objectives and Prime Vendor's other obligations under the TA. Such reviews or audits will be conducted during regular business hours, will be subject to Prime Vendor's reasonable security policies (which will not apply to the extent they prevent or interfere with DES' right to conduct a review or audit as described in this

Section) and will not unreasonably interfere with Prime Vendor's business activities. Further, within the scope of each such review or audit, such reviewers and/or auditors shall have the right to examine and audit the Records and question and interview any personnel with knowledge about the Control Objectives and other financial, operational, security, physical or other aspects of the Hosting Services. If the report identifies Deficiencies requiring remediation, DES shall deliver to Prime Vendor a full and complete copy of the report.

- C. **Auditor Independence.** As of the Effective Date, Prime Vendor uses _____ as its SOC 1 Type 2 Report, and _____ to conduct audits resulting in SOC 2 Type 2 Report **[and Prime Vendor's subcontractor uses _____ to conduct audits resulting in SOC 1 Type 2 Reports and _____ to conduct audits resulting in SOC 2 Type 2 Reports]**. In order to assure auditor independence, Prime Vendor shall provide DES at least ninety (90) days prior written notice if Prime Vendor intends to use an auditing firm other than _____ or _____ to conduct such audits, and shall discuss with DES, and address any concerns that DES may have regarding such change of auditors.

2.8.2 Maintenance of Records.

Prime Vendor shall develop and maintain appropriate books and records documenting the Control Objectives, and such records shall include the auditor's work papers (collectively, "**Records**"). Prime Vendor shall make copies of the Records available to DES and its auditors in electronic and paper format at no additional charge to DES, and DES and its auditors shall be permitted to retain a copy of such Records.

2.8.3 Results of Inquiries and Remedial Plan.

If any SOC 1 Type 2 Report, SOC 2 Type 2 Report or other audit report (whether conducted under **Section 2.8.1.2(A)** or **Section 2.8.1.2(B)**) reveals any deficiencies and/or exceptions with respect to the Control Objectives or otherwise (the "**Deficiencies**"), Prime Vendor shall prepare and deliver to DES a detailed plan for remedying all such Deficiencies (each such plan, a "**Remedial Plan**"). Prime Vendor shall deliver such Remedial Plan to DES within a reasonable period of time following identification of any Deficiencies based on the nature and complexity of the Deficiencies to be remedied, not to exceed thirty (30) days following DES' written request for same. Prime Vendor shall bear all costs and expenses associated with correcting all Deficiencies.

2.8.4 Subcontractors.

Without limiting the other terms and requirements set forth in **Section 15.4** of the TA (including the requirement to identify DES as a direct and intended third-party beneficiary in any subcontractor agreement), any agreement between Prime Vendor and a subcontractor that will be providing any component of the Hosting Services must include substantially the same terms as those set forth in this **Sec-**

tion 2.8 (modified as appropriate since the agreement will be one between Prime Vendor and the applicable subcontractor). Prime Vendor shall provide a copy of the unexecuted final version of any proposed agreement to be entered into between Prime Vendor and a subcontractor that will be providing any component of the Hosting Services so that DES may independently verify that Prime Vendor's obligations in relation to the Hosting Services are appropriately addressed in such agreement. DES shall have the right to withhold its consent to any such proposed subcontractor until DES is satisfied that such obligations have been appropriately addressed in the proposed subcontract agreement.

2.8.5 Costs.

Except as otherwise expressly provided otherwise in this **Section 2.8** to the contrary, each party shall bear its own costs and expenses incurred in connection with performing its obligations and/or exercising its rights under this **Section 2.8**, including costs and expenses charged by its own independent auditors.

2.9 Procedures Manual

2.9.1 Development and Ongoing Maintenance of Procedures Manual.

Prime Vendor shall develop and regularly update a detailed, DES-specific procedures manual that minimally includes the contents described in **Section 2.9.2** below (the "**Procedures Manual**"). Prime Vendor shall deliver the first draft of the Procedures Manual to DES for its review, comments and approval within six (6) months following the Effective Date, and thereafter promptly shall consider incorporating into the Procedures Manual DES' comments and suggestions. If Prime Vendor fails to deliver the final draft Procedures Manual to DES on or before the first Production date of the Solution, DES shall have the right to suspend any and all payments then due or to become due and owing to Prime Vendor until Prime Vendor complies with the terms of this Section. The Procedures Manual is a Deliverable subject to the terms of the TA. From and after approval of the Procedures Manual by DES, Prime Vendor shall make available online or deliver to DES on a quarterly basis and for its review and comments, an updated Procedures Manual, which shall reflect appropriate additions, changes and/or updates. The Procedures Manual shall be made available online in a downloadable, editable format or delivered to DES in an editable electronic format (such as Microsoft Word).

2.9.2 Contents.

The Procedures Manual shall include and/or describe the following items and such other items as are appropriate or necessary to have a full and complete understanding of the Prime Vendor Environment:

- A. Copies of the then-current Technical Architecture (which Prime Vendor shall update, if changes have occurred, each time the Procedures Manual is updated), and the then-current Disaster Recovery and Business Continuity Plan (which Prime Vendor shall update,

if changes have occurred, each time the Procedures Manual is updated).

- B. Back-up, data recovery, data aging and data archiving procedures.
- C. Listing of, and procedures for using, tools used to monitor and maintain DES' environments.
- D. Listing of, and procedures for executing, batch programs and other scripts developed to run processes on the system.
- E. Listing of all third-party software required to run the system, including manufacturer and release and version levels.
- F. System configuration layout.
- G. Description and copies of all policies and access permissions configured into the application(s).
- H. Description and copies of all security-related policies and procedures.
- I. List of custom and other integration code, including templates.
- J. Run books and related instructions.
- K. Installation and configuration guides for the as-built environment.

2.10 Prime Vendor Environment Documentation and Transition to In-House Solution

Upon request, Prime Vendor shall provide DES with full and complete Documentation on the Prime Vendor Environment sufficient to enable DES to replicated the operating environment used by Prime Vendor to DES, including, the complete technical architecture, operating procedure manuals, runbook(s), and release and version levels of all operating system software, middleware and other software used as part of the hardware configuration.

3.0 HOSTING DEFINITIONS AND TERMS

The following definitions and terms apply to this Schedule and will supersede any conflicting terms in the TA.

"Additional Resource Charges" or **"ARCs"** means charges, in addition to the Monthly Hosting Fees, for items identified in **Attachment D**, and purchased by DES through a purchase order or, as applicable, authorized pursuant to a Change Order.

"Annual Hosting Renewal Option" has the meaning set forth in **Section 2.2**.

"Application Pillar" means a single set of related Solution Modules (e.g., the entire TLA Solution is one (1) Application Pillar), and the Solution modules within an Application Pillar together support a common functionality, requiring all the user data and online application objects to reside in a single database Instance and utilize a single environment Instance.

"Application Response Time" is described in **Section 5.3** of **Attachment C** to this Hosting Services Exhibit.

"At Risk Amount" has the meaning set forth in **Section 2.3** of **Attachment C**.

"Chronic Performance Standards Failures" is defined in **Section 2.5**.

"Communications Management" is defined in **Section 1.14**.

"Configuration" means a combination of hardware (as described for informational purposes on **Attachment E**), operating system(s), communications networks within the Points of Demarcation, as such items are physically and/or logically distributed and/or implemented in one or more Instances and used by Prime Vendor to perform the Hosting Services.

"Control Objectives" is defined in **Section 2.8.1.1**.

"DCD" means a data collection device, including any Device.

"Deficiencies" is defined in **Section 2.8.3**.

"Device" means a desktop, laptop, smart phone or other electronic device.

"Disaster" is defined in **Section 1.5.5**.

"Disaster Recovery Restoration" is described in **Section 5.4** of **Attachment C**.

"End Point Protection Platform" means a solution that converges endpoint device security functionality into a single product that delivers antivirus, anti-spyware, personal firewall, application control and other styles of host intrusion prevention (for example, behavioral blocking) capabilities into a single and cohesive solution, including integrated vulnerability, patch and configuration management capabilities for proactive protection,

data protection features, such as disk and file encryption, data loss prevention, and device control, and device endpoints, including the management and tracking of mobile devices, such as tablets and smartphones.

"Enhancements" has the meaning set forth in the TA, and includes, for purposes of this Exhibit, all Functionality Releases and Maintenance Code Releases.

"Functionality Releases" means software code releases provided by Prime Vendor, such as tool upgrades to the Solution or service packs, and any release containing new functionality, that are designed to change the functionality or intended results of processing data where such change represents a departure from the originally designed functionality. Functionality Releases may include Maintenance Code Releases.

"Gain Sharing/Improvement Opportunity" is defined in **Section 4.0 of Attachment D**.

"Hosting Exhibit" is defined in the opening paragraph of this Schedule.

"Hosting Stabilization Period" is defined in **Section 4.1 of Attachment C**.

"Hosting Term" is defined in **Section 2.2**.

"Hosting Transition Plan" is defined in **Section 2.7**.

"Included Maintenance" is defined in **Section 1(H)**.

"Initial Hosting Term" has the meaning set forth in **Section 2.2**.

"Instance" means a copy of a Software program running in a computer environment or the computer environment itself, as applicable.

"Maintenance Code Release" means any software code release provided by Prime Vendor designed to address the manner of processing data or operating the Solution (e.g., any software patch, fix, tools update, tax update, bug fix, maintenance packs, etc.). Maintenance Code Releases do not include any Functionality Releases.

"Monthly Hosting Fees" means Prime Vendor's regularly recurring fees payable in connection with its performance of Hosting Services for a single calendar month, as set forth in **Attachment D** and as adjusted in accordance with the terms and conditions of this Schedule. The Monthly Hosting Fees do not include Additional Resource Charges or one-time fees or costs agreed to by the parties via the Change Order procedures.

"Monthly Performance Report" has the meaning set forth in **Section 1.2 of Attachment C**.

"Non-Prime Vendor Provided Solution" means any software not provided by Prime Vendor.

"Non-Production Infrastructure Availability" means the non-production Instances in the Prime Vendor Environment and is referenced in **Section 5.2 of Attachment C**.

"Page Load Data Point(s)" is defined in **Section 5.3.1.2.2 of Attachment C of Exhibit 2.**

"Performance Credit" means a credit deducted from the Monthly Hosting Fees in connection with Performance Standard Failures, as described in **Section 2.0 of Attachment C.**

"Performance Standards" means the level of performance, as stated in **Section 5.0 of Attachment C**, at which Prime Vendor is required to perform a particular function, service or subset of the Hosting Services.

"Performance Standard(s) Failure(s)" means the failure of Prime Vendor to perform a function, service or subset of the Hosting Service at a level equal to or greater than the applicable Performance Standard during a month of the Hosting Term. As of the Effective Date, Performance Standards that are subject to Performance Standard Failures includes the following: Production Application Availability; Non-Production Infrastructure Availability; Application Response Time; Disaster Recovery; Service Request Response and Resolution Time; and Security Management.

"Point(s) of Demarcation" means and includes the router(s) and/or device(s) where the public Internet access lines and/or T1 leased line(s) used to access DES' systems terminate.

"Primary Hours of Operation" or **"PHO"** means the hours in which the Prime Vendor Hosting Support Center is staffed. These hours are from Sunday at 1900 US Pacific Time through to the following Saturday at 1700 Pacific Time, excluding Holidays.

"Prime Vendor Environment" means the environments identified in **Attachment B** or otherwise needed, necessary or required to operate the Solution in accordance with and to meet the Performance Standards and the other terms and conditions of this Exhibit.

"Prime Vendor Personnel" is defined in **Section 1.11.1(D)(1)** for purposes of the Hosting Exhibit.

"Prime Vendor Portal" means the Internet-based portal provided by Prime Vendor as part of the Hosting Services as described in **Section 1.1 of Attachment C.**

"Procedures Manual" has the meaning set forth in **Section 2.9.1.**

"Production Application Availability" is described in **Section 5.1 of Attachment C.**

"Production Baselining Period" has the meaning set forth in **Section 3.3 of Attachment C.**

"Records" is defined in **Section 2.8.2.**

"Reduced Resource Charges" or **"RRCs"** means the reduced charge for eliminating an ARC and shall be equal in value to the ARC rate.

"Refresh" is defined in **Section 1.7.1(O).**

"Remedial Plan" is defined in **Section 2.8.3**.

"Scheduled Downtime" means the period of time that one (1) or more components of a Solution, whether in the production or non-production Prime Vendor Environment, is unavailable due to scheduled system maintenance. Scheduled Downtime may affect Prime Vendor customers individually or as a group. Scheduled Downtime may include proactive software maintenance, DES-specific infrastructure upgrades, or relocation or reconfiguration of the production Prime Vendor Environment. Prime Vendor will work with DES to define Scheduled Downtime windows for maintenance each month for one (1) year in advance. For any Scheduled Maintenance outside the planned schedule, seven (7) days prior written notice to, and agreement with, DES will be required. The production Prime Vendor Environment will have a maximum of two (2) hours of Scheduled Downtime per month per Application Pillar with a total of four (4) hours of Scheduled Downtime per month for all Application Pillars. Each non-production Prime Vendor Environment will have a maximum of four (4) hours of Scheduled Downtime per month. The parties can increase such Scheduled Downtime due to circumstances presented by DES and/or Prime Vendor; subject to the Change Order procedures.

Prime Vendor and DES may agree on a weekend (Saturday or Sunday) system maintenance period. In the absence of an agreement, the maintenance period will be from 0800 to 1000 Sunday, Pacific Time. If a portion or all of the maintenance period is not required, the Prime Vendor Environment will be available to DES. If emergency maintenance is required, Prime Vendor shall provide reasonable advance notification of the maintenance, and such downtime shall be added to the permitted Scheduled Downtime timeframe.

"Security Management" is described in **Section 5.6** of **Attachment C**.

"Service Level Objective" or **"SLO"** is defined in **Section 5.3.1** of **Attachment C** of **Exhibit 2**.

"Service Request" means any operational request with respect to the functioning of the Prime Vendor Environment or any component thereof that is submitted to the Prime Vendor Hosting Support Center by telephone, via Internet, or by Prime Vendor through a Prime Vendor monitoring tool or otherwise to the Hosting Support Center.

"Service Request Response and Resolution Time" is described in **Section 5.5** of **Attachment C**.

"SOC 1 Type 2 Report" means a report, issued pursuant to the American Institute of Certified Public Accountants' Statement on Standards for Attestation Engagements (SSAE) No. 16, Reporting on Controls at a Service Organization (as the same may be modified from time-to-time, including any replacement or successor standard), on the operational effectiveness of a service organization's controls over a stated period of time (which must be at least six (6) months in duration).

"SOC 2 Type 2 Report" means a report, issued pursuant to the Public Company Accounting Oversight Board's AT Section 101, Attest Engagements (as the same may be modified from time-to-time, including any replacement or successor standard), on a service organization's controls over the security, availability and processing integrity of the service organization's system, the confidentiality of the information that the service or-

ganization's system processes or maintains for user entities, and the privacy of personal information that the service organization collects, uses, retains, discloses and disposes of for user entities.

"Super Users" means those individuals provided by DES who assist DES' Authorized Users and act as the liaison to such Authorized Users, DES' help desk and Prime Vendor.

"Technical Architecture" is defined in **Attachment E**.

"Termination Fees" is set forth in **Section 2.3**.

"TLA Solution" means: (a) the software and/or service that is required to meet the DES Business and Technical Requirements; and (b) the tools and utilities to be provided by Prime Vendor in accordance with **Section 3.5** of the TA).

"TLA Statement of Work" means the TLA Statement of Work attached as **Schedule 6.1** to the TLA Solution Project Agreement) of the TA, as the same may be amended by the parties from time-to-time.

"Unscheduled Downtime" means the total time, other than Scheduled Downtime, during which DES is unable to access a Solution Module.

ATTACHMENT A
SOLUTION LISTING
(Informational Purposes Only)

See **Section 1.9.1** of the TLA Statement of Work.

ATTACHMENT B

PRIME VENDOR ENVIRONMENT

This **Attachment B** describes the Prime Vendor Environment that will be provided by Prime Vendor as part of the Hosting Services as of the Effective Date. Any references made herein to the technical design schematic, number of software Instances, databases, computer resources and the like are provided on an information basis only and shall not operate to limit or diminish Prime Vendor's obligations to provide the Hosting Services in accordance with the Performance Standards and other terms and conditions set forth in this Exhibit.

1.0 Prime Vendor Environment

Prime Vendor will deliver the Hosting Services through hosted environments consisting of the components described in this **Attachment B**, the components described in **Attachment E** and **Attachment G** to the Hosting Services Exhibit, and the solutions included in the scope of Hosting Services as described in **Section 1(A)** of the Hosting Services Exhibit.

2.0 Summary of Environment Instances

The Prime Vendor Environment will consist of the environment Instances listed below. The production environment will be physically and logically separate from the non-production environment Instances, and the Prime Vendor Environment will be physically and logically separate from any other customer of Prime Vendor. To the extent additional environment Instances are required or needed to meet the DES Business and Technical Requirements, such additional environment Instances will be provided by Prime Vendor at no additional cost to DES. Without limiting the foregoing, any environment Instances implemented prior to Project Completion of the TLA Solution Project shall be provided at no additional cost to DES.

[DISCUSS – PARTIES TO DISCUSS THE SPECIFIC # AND TYPES OF ENVIRONMENTS REQUIRED FOR DES. THESE ENVIRONMENTS MUST BE ROBUST, SCALABLE AND BASED ON BEST PRACTICES – NOT NECESSARILY THE MINIMUM AMOUNT PRIME VENDOR BELIEVES WILL WORK – SET FORTH IN THE LEGEND BELOW ARE THE TYPES OF ENVIRONMENTS DES HAS IDENTIFIED THAT IT WILL LIKELY NEED]

Application Pillar	Category	Environment
	Production (1)	PROD
	Production Maintenance	
	Non-Production	

Application Pillar	Category	Environment
	Production (1)	PROD
	Production Maintenance	
	Non-Production	

Legend:

Configuration	Production Stage
Conversion	System Integration Test
Development	Sandbox
Demo	Stage
Production Development	Training
Production	Test

3.0 Technical Design

The schematic included in **Attachment G** represents the technical design and architecture proposed by Prime Vendor. Notwithstanding that the information referenced herein is informational, Prime Vendor shall not, without the prior written consent of DES, alter or revise any components of the technical design represented in **Attachment G** that relate to the connectivity to DES' network.

4.0 ITIL and Best Practices.

Prime Vendor shall implement and practice ITIL standards and other best practices for implementing changes to the Prime Vendor Environment. Any changes to the End Point Protection Platform, security or disaster recovery components of the Prime Vendor Environment shall require the prior written approval of DES.

ATTACHMENT C

SERVICE LEVEL AGREEMENT

1.0 Performance Standard Reporting

1.1 Prime Vendor Portal and General Reporting

Prime Vendor shall provide DES with access to a DES-specific Prime Vendor Portal for Hosting Services. The Prime Vendor Portal will allow DES to enter Service Requests related to Hosting Services and view all Scheduled Downtime, Unscheduled Downtime, Monthly Performance Reports and Service Requests. In addition to the Prime Vendor Portal, Prime Vendor shall provide regular and periodic reports and updates to DES as such notifications are required in this Exhibit, and at any time upon request by DES.

1.2 Performance Standard Measurement and Reporting

On a monthly basis during the Hosting Term, Prime Vendor shall assess its performance with respect to each component of the Hosting Services for which a Performance Standard has been established in accordance with **Section 5.0 of Attachment C**. Within five (5) business days after the end of each month, Prime Vendor shall provide to DES a performance report that will, with respect to the immediately preceding month: (a) identify and describe any Performance Standard Failure that occurred; (b) notify DES of any Performance Credit to which DES is entitled; and (c) show how such Performance Credit was calculated (collectively, a "**Monthly Performance Report**"). The failure to report the Performance Standards during any two (2) hour period in any given month where DES users report performance degradation in the production and/or non-production systems, regardless of cause, shall be deemed a Performance Standard Failure for all Performance Standards, resulting in the maximum amount of Performance Credits allowable under this Schedule.

2.0 Performance Credits

2.1 Overview of Performance Credit Process for Performance Standard Failures

- A. Single Performance Standard Failures.** If a Performance Standard Failure occurs in any calendar month during the Hosting Term, then Prime Vendor shall provide a Performance Credit to DES equal to the amount of Monthly Hosting Fees times the percentage referenced in the applicable Performance Standard, subject to the further limitations herein. By way of example, if Prime Vendor fails to meet the Application Response Time Performance Standard, and the applicable percentage referenced for failing to meet the Application Response Time is 25%, then the Performance Credit for the month would be equal to the Monthly

Hosting Fees x 25%. The parties agree that Performance Credits represent a lower net Hosting Services fee for Prime Vendor not providing the Hosting Services as set forth herein, and is not to be construed as a penalty or an exclusive remedy.

- B. **Multiple Performance Standard Failures.** If more than one Performance Standard Failure occurs in a single month, the sum of the corresponding Performance Credits will be credited to DES, subject to the limitations set forth in **Section 2.3** of this **Attachment C**.

2.2 Invoicing Related to Performance Standard Failures

Prime Vendor shall apply the total amount of all Performance Credits for which DES is eligible due to Performance Standard Failures that occurred in an applicable month to the invoice generated by Prime Vendor in the following month. If DES is eligible to receive a Performance Credit in the final month of the Hosting Term, Prime Vendor shall pay to DES the amount of such Performance Credit within thirty (30) days after the final day of such month.

2.3 Performance Credit At Risk Amount Cap

The aggregate maximum amount of Performance Credits that DES may receive for all failures by Prime Vendor to meet Performance Standards in any single calendar month shall not exceed one hundred fifty percent (150%) of the Monthly Hosting Fees for Hosting Services for such calendar month (prior to deduction of any Performance Credits), and the maximum amount of Performance Credits that DES may receive during any calendar year shall not exceed one hundred percent (100%) of the amount of Monthly Hosting Fees during such calendar year (prior to deduction of any Performance Credits) (as applicable, the "**At Risk Amount**").

2.4 Commencement of Performance Standards Obligations

DES' right to receive, and Prime Vendor's obligation to pay, any Performance Credits shall commence upon the Production Use of the Solution (or any component of the Solution)

2.5 Excused Performance Standards Failures

Prime Vendor will be excused from meeting the Performance Standards for the Hosting Services that are actually and adversely affected by any of the conditions or events described below, but only for the duration of the time period that any such conditions or events are in effect. Excused Performance Standards Failures are:

- A. those caused by DES' failures to meet the DES Responsibilities set forth in **Sections 2.1(A)**, provided that Prime Vendor provides timely written notice of such failure upon Prime Vendor's knowledge that such failure directly will affect Prime Vendor's inability to meet the applicable Performance Standard under this Exhibit.
- B. with respect to a Performance Standard Failure of Application Response Time under **Section 5.3.1** of **Attachment C**, those caused by any deteri-

- oration or impact that is attributable to batch processes or reports executed by DES that are abnormal, not identified in the production batch schedule, or executed outside the production batch schedule.
- C. those caused by network changes or failures beyond the Point(s) of Demarcation or DES equipment infrastructure changes or failures for which Prime Vendor is not responsible.
 - D. those caused by failures or fluctuations in electrical or telecommunications equipment or lines or other equipment beyond the Point(s) of Demarcation, including any network issue that results in a latency of 150 milliseconds or greater.
 - E. those caused by a Force Majeure Event (other than as set forth in **Section 5.4 of Attachment C**), provided that no single point of failure of a communications line between the Prime Vendor Environment and the Points of Demarcation or at the Point of Demarcation itself (*i.e.*, the failure of a single router) shall constitute a Force Majeure Event.
 - F. those caused by a declared Disaster (other than as set forth in **Section 5.4 of Attachment C**).
 - G. those caused by the use of the Prime Vendor Environment by more than the number of licensed users of the Solution.
 - H. those relating to DES' submission of a Service Request (via either the Prime Vendor Portal or by telephone through the Prime Vendor Hosting Support Center) outside the Primary Hours of Operation, but only until the Primary Hours of Operation re-commence.

2.6 Root-Cause Analysis.

Prime Vendor shall commence performing a root-cause analysis to identify the cause of a Performance Standard Failure within one (1) business day of the occurrence of such failure involving a Service Request for a Level 1 Incident, and within three (3) business days of the occurrence of all other Performance Standard Failures. If the cause of such failure is within Prime Vendor's control, Prime Vendor shall take such corrective action to cure the Performance Standard Failure. If the cause of such failure is not within Prime Vendor's control, Prime Vendor shall meet with DES to discuss a corrective plan of action mutually acceptable to the parties. Notwithstanding any root cause analysis or efforts undertaken by Prime Vendor herein, additional Performance Standard Failures of the same or similar type shall continue to generate Performance Credits under the terms herein.

3.0 Additions and Deletions of Performance Standards

3.1 Additional Performance Standards

DES shall have the right to add one (1) or more Performance Standards by written notice to Prime Vendor not more than twice a year throughout the Hosting Term. Prime Vendor reserves the right to adjust the Monthly Hosting Fees based on inclusion of such additional Performance Standards provided Prime Vendor can provide adequate substantiation that additional resources will be required to meet the additional Performance Standards. The new Performance Standards will be established in one of the following ways:

- A. Where Prime Vendor has measured and reported to DES, in accordance with **Section 1.2 of Attachment C**, verifiable performance measurements for a particular component of the Hosting Services for a period of at least three (3) months immediately preceding DES' request for a new Performance Standard, DES can elect to establish a new Performance Standard at the data point equal to the average monthly performance achieved during that three (3) month period, or such other level of performance as may be as mutually agreed to by the parties; or
- B. Where Prime Vendor has not measured and reported to DES, in accordance with **Section 1.2 of Attachment C**, verifiable performance measurements for a particular component of the Hosting Services for a period of least three (3) months immediately preceding DES' request for a new Performance Standard, the parties will follow the procedures defined in **Section 3.3 of Attachment C** for production baselining to establish a new Performance Standard.

DES will be responsible for any actual, substantiated incremental costs incurred by Prime Vendor to measure proposed new Performance Standards that are not then measured by Prime Vendor. The Commencement Date on which the new Performance Standard shall become eligible for Performance Credits shall be jointly determined by the parties.

3.2 Deletion of Performance Standards.

DES may request the deletion of any Performance Standard upon written notice to Prime Vendor, which notice shall be delivered at least thirty (30) days prior to the date on which such deletions to the Performance Standard is to be effective. The parties will mutually agree, pursuant to the Change Order procedures, upon the deletion of such Performance Standard. If DES previously requested the addition of a Performance Standard in which Prime Vendor required an increase in Monthly Hosting Fees, the Monthly Hosting Fees will be reduced to reflect such removed Performance Standard (excluding amounts of any un-capitalized costs of equipment and other components of the Prime Vendor Environment that are not able to be recouped by Prime Vendor as a consequence of the removal of such Performance Standard).

3.3 Baseline Period for Proposed New Performance Standards

For any new Performance Standard proposed by DES to which **Section 3.1(b) of Attachment C** applies (*i.e.*, three (3) months of performance data does not exist for the proposed new Performance Standard), Prime Vendor shall measure and report (as described in **Section 1.2 of Attachment C**) the actual performance of the Hosting Services in production against the new proposed Performance Standard for a period of six (6) consecutive months for the purpose of establishing such Performance Standard (the "**Production Baselining Period**"). Any Production Baselining Period shall commence only after the Production Use of the applicable Solution Module.

The new Performance Standard established at the end of such Production Baselining Period will be equal to the average of the documented monthly performance measured during the Production Baseline Period. DES is not entitled to receive, and Prime Vendor is not obligated to pay, Performance Credits for the applicable new Performance Stand-

ard until the conclusion of the Production Baseline Period and the Commencement Date for such Performance Standard as set forth in **Section 2.5 of Attachment C**.

4.0 Performance Standards and Performance Credits During Stabilization Periods

4.1 Stabilization Periods

The stabilization periods resulting from the changes described below made to the Prime Vendor Environment (each, a “**Hosting Stabilization Period**”) shall be as follows:

- A. Ten (10) days for each new Application Pillar migrated into the Prime Vendor Environment; and
- B. With respect to a previously migrated Application Pillar, five (5) days for each introduction of a Solution Module into such previously migrated Application Pillar.

4.2 Performance Standards During Stabilization Periods

During each Stabilization Period, the following Performance Standards shall apply:

- A. The Production Application Availability Performance Standard for the applicable production Application Pillar will be at least ninety eight and one half percent (98.50%);
- B. At least eighty five percent (85%) of all Transactions for the applicable production Application Pillar will be executed within a twenty percent (20%) deviation of the Application Response Time Performance Standard; and
- C. At least ninety five percent (95%) of all Severity Service Requests will meet the Service Request Resolution Time Performance Standard.

4.3 Performance Credits During Stabilization Period

If performance falls below the Performance Standards described in **Section 4.2** for a Stabilization Period the amount of Performance Credit shall equal the Performance Credit otherwise due multiplied by fifty percent (50%).

5.0 Performance Standards

This Section describes the Performance Standards applicable to the Hosting Services. Prime Vendor represents and warrants to DES that the hosted System shall meet or exceed the Performance Standards set forth in this **Section 5**.

Unless otherwise indicated, all of the Performance Standards shall be measured and reported as an average on a monthly basis as set forth in **Section 1.2 of Attachment C**. Prime Vendor represents and warrants that it has undertaken such due diligence as necessary to confirm that the Configurations are sufficient and based on the DES Busi-

ness and Technical Requirements to operate the Solutions and other items included in the scope of Hosting Services as described in **Section 1(A)** in accordance with the Performance Standards, given the transaction volumes specified in **Attachment E**, and the anticipated growth in transactions volumes stated therein through the Initial Term. If the Configurations based on the DES Business and Technical Requirements are not sufficient to meet any of the Performance Standards, Prime Vendor shall, in addition to granting Performance Credits to DES, promptly correct such Configurations and incorporate such additional hardware, software and services into the Configurations at no additional cost to DES to bring the Hosting Services within the Performance Standards. In addition, if Prime Vendor fails to achieve any single Performance Standard in: (a) any two (2) or more consecutive measurement intervals; or (b) any three (3) or more measurement intervals (non-consecutive or consecutive) during any twelve (12) consecutive measurement intervals, then, upon DES' request, Prime Vendor's Chief Technology Officer shall meet with DES to discuss Prime Vendor's proposed solution to the problem. Further, upon DES' request, within one (1) week after each subsequent failure of Prime Vendor to comply with a Performance Standard, Prime Vendor's Chief Technology Officer and Chief Executive Officer shall meet with DES to discuss Prime Vendor's proposed solution to the problem.

5.1 Performance Standard – Production Application Availability and Data Collection Device Availability

A. Production Application Availability. Prime Vendor shall measure Production Application Availability of the production Instances for each of the Application Pillars every five (5) minutes by accessing the Instance to determine whether it is functioning.

Production Application Availability will be calculated by aggregating all the Application Pillars with the following formula:

Total minutes in a calendar month x # of Application Pillars,

minus

The aggregate amount of Unscheduled Downtime and Scheduled Downtime for all Application Pillars in such month,

divided by

Total minutes in such calendar month x # of Application Pillars, minus aggregated Scheduled Downtime for all Application Pillars.

The Production Application Availability Performance Standard is 99.9% for the Application Pillars on an aggregate basis. The Performance Credit applicable to Production Application Availability calculated with the above formula shall be determined in accordance with the following Table:

Production	
Production Application Availability for the Application Pillars on an Aggregate Basis	Performance Credit - % of Monthly Hosting Fees
$\geq 99.9\%$ - 100%	No Credit
$< 99.9\%$ and $\geq 99.7\%$	25%
$< 99.7\%$ and $\geq 99.6\%$	50%
$< 99.6\%$ and $\geq 99.5\%$	75%
$< 99.5\%$	100%

B. DCD (Data Collection Device) Availability. Prime Vendor shall measure DCD Availability for each DCD every ____ () minutes by accessing all DES DCDs.

DCD Availability will be calculated by aggregating all DCDs with the following formula:

Total minutes in a calendar month x # of DCDs,

minus

The aggregate amount of Unscheduled Downtime and Scheduled Downtime for all DCDs in such month,

divided by

Total minutes in such calendar month x # of DCDs, minus aggregated Scheduled Downtime for all DCDs.

The DCD Availability Performance Standard is ____% for all DCDs on an aggregate basis. The Performance Credit applicable to DCD Availability calculated with the above formula shall be determined in accordance with the following **Table: [TO BE NEGOTIATED]**

Data Collection Devices	
DCD Availability for all DCDs on an Aggregate Basis	Performance Credit - % of Monthly Hosting Fees
$\geq __\%$ - 100%	No Credit
$< __\%$ and $\geq __\%$	10%
$< __\%$ and $\geq __\%$	25%
$< __\%$ and $\geq __\%$	50%
$< __\%$	75%

5.2 Performance Standard – Non-Production Infrastructure Availability

Prime Vendor shall measure Non-Production Infrastructure Availability for each non-production Instance in the Prime Vendor Environment, and will be measured on a non-production Instance-by-non-production Instance basis. If the monitored infrastructure does not respond to the monitoring tool or utility, the non-production Instance in the Prime Vendor Environment will be deemed "unavailable."

Non-Production Infrastructure Availability will be calculated on a non-production Instance-by-non-production Instance basis in accordance with the following formula:

Total minutes in a calendar month

minus

Unscheduled Downtime and Scheduled Downtime measured for the applicable non-production Instance in such month

divided by

Total minutes in such calendar month minus Scheduled Downtime.

The Performance Credit applicable to the Non-Production Infrastructure Availability calculated with the above formula shall be determined in accordance with the following Table:

Non-Production	
Non-Production Infrastructure Availability for Each Non-Production Instance failing to meet the Performance Standard	Performance Credit - % of Monthly Hosting Fees
$\geq 99.8\%$	No Credit
$< 99.8\%$ but $\geq 99.5\%$	5%
$< 99.5\%$ but $\geq 99.0\%$	25%
$< 99.0\%$	50%

5.3 Performance Standard – Application Response Time

5.3.1 Application Response Times.

Prime Vendor will measure response times using two separate measurement methodologies – the first being measurements based on selected transactions, as described in **Section 5.3.1.1 (Method A)**, and the second using page loads, as described in **Section 5.3.1.2 (Method B)**. On or before the Production Use date for an Application Pillar or Solution Module if less than the full Application Pillar is being placed into Production, DES shall select one of the methods as the method to be used to calculate compliance with the Application Response Time

Performance Standard, and the method not selected will be deemed a "**Service Level Objective**" or "**SLO**", and Prime Vendor shall continue to measure and report on the response times using the method for the SLO, however, no Performance Credits shall accrue related to failures to meet an SLO. Upon thirty (30) days written notice to Prime Vendor, DES shall have the right to alternate the method of measuring and calculating the Application Response Time Performance Standard, *i.e.*, from Method A to Method B or vice-versa, and upon such change, the Method that was previously a SLO shall become the Performance Standard against which such applicable Performance Credits shall apply. DES shall be permitted to alternate methods once in any given twelve (12)-month period.

5.3.1.1 Method A – Selected Transactions

Performance Standards and Performance Credits

Type of Transaction	Response Time	Performance Credit - % of Monthly Hosting Fees
Standard Transactions*	98% of the time, the average response time will be two (2) seconds or less and for the remaining 2% of the time, the average response time will be five (5) seconds or less.	<u>% Deviation from Either Metric**:</u> > 0% and < 2% - 10% ≥ 2% and < 15% - 20% ≥ 15% and < 25% - 30% ≥ 25% and < 35% - 50% ≥ 35% and < 45% - 75% ≥ 45% - 100%
Time Intensive Transactions*	98% of the time, the average response time will be five (5) seconds or less, and for the remaining 2% of the time, the average response time will be eight (8) seconds or less.	<u>% Deviation from Either Metric**:</u> > 0% and < 2% - 10% ≥ 2% and < 15% - 20% ≥ 15% and < 25% - 30% ≥ 25% and < 35% - 50% ≥ 35% and < 45% - 75% ≥ 45% - 100%

* In accordance with **Section 5.6** of the TLA Statement of Work, the parties will determine what transactions constitute Standard and Time Intensive Transactions. From and after Project Completion of the TLA Solution Project, the parties shall continue to use the terms contained in **Section 5.6** of the TLA Statement of Work with respect to any new or additional Solution Modules added to the Hosting Services.

** % Deviation will be determined by the formula: $x-y/y$, where "x" represents the actual average response time and "y" represents the performance standard response time. Example for the Standard Transactions, assume the actual average response time for 98% of the Standard Transactions is 2.4 seconds. Then the % Deviation would be 20% $(2.4-2.0)/2.0$, resulting in a Performance Credit of 30%.

5.3.1.1.1 Measurement – Method A

Prime Vendor shall measure the performance of each Transaction 24 x 7. Response and throughput times for each Transaction will be measured internally between the firewall and the Point of Demarcation in five (5)-minute intervals.

5.3.1.1.2 Calculation – Method A

Application Response Time will be calculated in accordance with the following formula:

Total number of all executed Transactions that meet the applicable Application Response Time Performance Standard within any one (1) hour period of time selected by DES, other than during Scheduled Downtime,

divided by

Total number of all executed Transactions in such one (1) hour period of time.

5.3.1.2 Method B – Page Load Transactions

The Application Response Time each month shall be the value of the ninety eighth percentile (98%) of all Page Load Data Points. The Performance Credit applicable to the Application Response Time Performance Standard shall be determined in accordance with the following Table:

Application Response Time Performance Standard and Performance Credit Calculation

Based on 98th Percentile*	Application Response Time Ranges (in seconds)		Performance Credit
	Greater Than	Less Than/ Equal To	Performance Credit – % of Monthly Hosting Fees
1	N/A	5.20	No Credit
2	5.20	5.30	10%
3	5.30	6.00	20%
4	6.00	6.50	30%
5	6.50	7.00	50%
6	7.00	7.50	75%
	7.50	N/A	100%

*The 98th Percentile means the data point representing the 98th part of the statistical distribution of Page Load Time data (not the average of such data points). For example, if there are 100 Page Load Time data points, and there are 95 data points at 5.1 seconds and the remaining 5% of data points are at 6.00

seconds, then the 98th percentile of Page Load Time data points will be 6.00 seconds.

5.3.1.2.1 Measurement – Method B

Page Load Data Points will be collected and reported for all DES user transactions 24x7, other than during Scheduled Downtime. Prime Vendor shall report to DES on all the Page Load Data Points measured for such month. If Prime Vendor's measurement tool or utility is unavailable for any reason, other than for an excused performance under **Section 2.5 of Exhibit C** for the time period(s) referenced therein, or experiences a problem with measuring or reporting Page Load Data Points in accordance with the Application Response Time Performance Standard, then such failure shall be deemed a Performance Standard Failure for the Application Response Time Performance Standard. Prime Vendor shall provision and maintain, at its cost and expense, any measurement tools and utilities required to capture the Page Load Data Points.

5.3.1.2.2 Calculation – Method B

The term "**Page Load Data Point(s)**" shall mean the collection and averaging of the time in which users depress the ENTER, SUBMIT or similar action key on the keyboard (or mouse or voice activation) to the time it takes to refresh the user's Device screen with updated or new data plus the time it takes for the acknowledgement to reach the measurement tool or utility from the users' Device. The time interval will be calculated in seconds (to the tenth position, however, averaging data will be calculated to the hundredth position), for each five (5)-minute interval within each such month (excluding those five (5)-minute intervals within such month during which there is no end user use of the Prime Vendor Environment of the load time for each production page of all components of the Solution.

5.4 Performance Standard – Disaster Recovery Restoration

A Performance Standard Failure of the Disaster Recovery Performance Standard occurs any time when there is a failure by Prime Vendor to conform to the requirements set forth in the Disaster Recovery Plan during a declared Disaster or during any rehearsal of the Disaster Recovery Plan and, as a consequence:

- A. the recovery time achieved is greater than eight (8) hours from the declaration of a Disaster, the failure of which to achieve shall result in a Performance Credit of five percent (5%) of the Monthly Hosting Fees for each one (1) hour increment (or part thereof) beyond eight (8) hours; or
- B. the recovery point achieved is greater than fifteen (15) minutes, the failure of which to achieve shall result in a Performance Credit of five percent (5%) of the Monthly Hosting Fees for each fifteen (15) minute increment (or part thereof) beyond fifteen (15) minutes; or
- C. Prime Vendor fails to correct the Issues within the time frame set forth in **Section 1.5.1** which shall result in a Performance Credit of five percent

(5%) of the Monthly Hosting Fees for each calendar day in which the Issues are not corrected and certified as corrected by Prime Vendor.

In connection with the recovery time and recovery point achieved by Prime Vendor, in order to meet the Disaster Recovery Performance Standard and for purposes of determining whether a Performance Credit is due to DES, DES must have one hundred percent (100%) of the functionality, but at seventy five percent (75%) of standard production capacity.

5.5 Performance Standard – Service Request Response and Resolution Time

5.5.1 Incident Level Definitions

Each Service Request will be assigned one of the Incident Levels listed in the chart below. Each of the Service Requests will be measured from the time of submission of the Service Request via the Prime Vendor Portal, by telephone via the Prime Vendor Hosting Support Center, or when Prime Vendor detects the problem and logs the problem as a trouble or similar ticket in the Prime Vendor Portal or otherwise to the Hosting Support Center. For Level 1 Incidents, Prime Vendor shall provide DES with updates at least every two (2) hours regarding the status of such Incidents until the Incident is closed or downgraded.

Level of Service Request	Monthly Average Time to Respond to Service Requests	Monthly Average Time to Close or Downgrade Service Requests
Service Request involving a Level 1 Incident.	15 Minutes	4 Hours
Service Request involving a Level 2 Incident.	30 Minutes	8 Hours
General Requests not involving a Level 1 Incident or Level 2 Incident	8 Hours	As agreed to by the parties, not to exceed one (1) week

5.5.1.1 Service Request Response and Resolution Time Performance Calculation

Service Requests for Level 1 Incidents, Level 2 Incidents and Level 3 Incidents will be used to calculate Prime Vendor's monthly performance against Service Request Response and Resolution Time set forth in the Table in **Section 5.5.1** above. Prime Vendor shall measure the time it takes, during the applicable month and during the Primary Hours of Operation only (hours that fall outside the PHO are not counted as part of such measurement): (a) to respond to each such Service Request; (b) to close each such Service Request; and (c) to implement automated or manual workarounds that result in a downgrade of the Incident Level of the Service Request as described in **Section 5.5.2.2** below. This measurement shall include Service Requests for Extensions included in the scope of Hosting Services as described in **Section 1(A)** above. The measurement excludes Service Requests: (d) relating to problems other

than Service Requests for Level 1 Incidents, Level 2 Incidents or Level 3 Incidents; (e) relating to Non-Prime Vendor Provided Solution Incidents; or (f) resulting from the failure of infrastructure that DES provides.

The Service Request Response and Resolution Time Performance Standard will be calculated in accordance with the following formula:

Total number of all Service Requests for all Incident Levels which meet both the times to respond and the close or downgrade such Service Requests (*i.e.*, the same Service Request must meet both the applicable time to respond and the applicable time to close or downgrade) as set forth in the Table in **Section 5.5.1** above in a calendar month,

divided by

Total number of all Service Requests for all Incident Levels in such calendar month.

DES shall receive a Performance Credit for the Performance Standard Failure of Service Request Response and Resolution Time. Prime Vendor shall issue a Performance Credit of two percent (2%) of the Monthly Hosting Services Fees for each one percent (1%) that the Service Request Response and Resolution Time for all Service Requests of all Incident Levels is below ninety eight percent (98%) in the applicable month.

5.5.2 Determining Service Request Incident Level

5.5.2.1 Initial Incident Level

DES will designate in accordance with the Incident designations set forth in **Section 5.5.1** above and Prime Vendor shall record the initial Incident Level of a Service Request at the time the Service Request is made. The Incident Level of a Service Request may be adjusted by mutual agreement of the parties as set forth in **Sections 5.5.2.2** and **5.5.2.3** below.

5.5.2.2 Downgrades of Incident Levels

If, during the Service Request process, the Issue no longer warrants the Incident Level currently assigned based on its current impact on DES' business operations within the Prime Vendor Environment, then the parties may mutually agree to downgrade the Incident Level to the Incident Level that most appropriately reflects its current impact. To the extent DES involvement is required to address a remedy of a failure of the Performance Standards, any delays on the part of DES in working with Prime Vendor during the Service Request process will not be counted in the elapsed time for remedying and conforming to the applicable Performance Standard.

5.5.2.3 Upgrade of Incident Levels

If, during the Service Request process, the Issue warrants the assignment of a higher Incident Level than that currently assigned based on the current impact on DES' business operations within the Prime Vendor Environment, then the Incident Level shall be upgraded to the Incident Level that most appropriately reflects its current impact.

5.5.2.4 Adherence to Incident Level Definitions

Prime Vendor and DES shall work in good faith to develop a process to assure that the assignment and adjustment of any Incident Level designation is accurate based on the current impact on DES' business operations within the Prime Vendor Environment.

5.5.3 Service Request Escalations

5.5.3.1 DES Escalation

At any time, DES may escalate the handling of an unresolved Service Request from the initial analyst to which the Service Request was routed to a Prime Vendor duty manager. The duty manager will document the open business or technical Issues and will work with DES to define an action plan to address the Issue. If the action plan fails to resolve the Service Request, DES may escalate the Service Request to a Prime Vendor senior manager for resolution. If the Service Request remains unresolved, DES may successively escalate the Issue to: (a) the director of the applicable product group within Prime Vendor Support and Maintenance Services; (b) the Prime Vendor Service Delivery Manager for Hosting Services; (c) the Service Delivery Director for Hosting Services; and (d) the Communications Committee as described in **Section 2.14.1(A)**, until such Issue is resolved.

5.5.4 Hours of Operations for Prime Vendor's Hosting Support Center

Except where otherwise stated or required as part of Prime Vendor's obligations, Prime Vendor's Hosting Support Center will be staffed during the Primary Hours of Operation. During such time, Prime Vendor shall respond to inquiries from DES about any outstanding Service Request.

5.6 Performance Standard – Security Management

If Prime Vendor fails to provide Hosting Services in accordance with **Section 1.11** and/or fails to comply with the Security Policies and Procedures: (a) DES shall receive a Performance Credit of 100% of the Monthly Hosting Services Fees; (b) an Event of Default shall be deemed to have occurred under the TA; and (c) DES shall be entitled to any other rights and remedies provided for in the TA.

ATTACHMENT D

FEES AND CHARGES

This **Attachment D** sets forth the Monthly Hosting Fees and Additional Resource Charges to be paid by DES in connection with the Hosting Services.

1.0 Monthly Hosting Fees During the Initial Hosting Term

Prime Vendor will invoice DES for the Hosting Services on a monthly basis, with each invoice being issued during the first week of each month for the Monthly Hosting Fees to be incurred during that month. The Monthly Hosting Fees for the Initial Hosting Term are as follows:

	Pre-Production Period*	Production Period
Monthly Hosting Fees		

*The Pre-Production Period commences on the Effective Date, and terminates upon the last component of the TLA Solution to be placed into Production. The cumulative Hosting Services Fees shall not exceed [\$_____ - **[INSERT THE TOTAL AMOUNT OF HOSTING FEES BASED ON THE DATE THE LAST COMPONENT OF THE SOLUTION WILL BE PLACED INTO PRODUCTION AS SET FORTH IN THE INITIAL PROJECT SCHEDULE]**]. The Production Period commences upon the expiration of the Pre-Production Period, and continues for a period of four (4) years thereafter.

The Monthly Hosting Fees set forth above are current as of the Effective Date, and are subject to adjustment during the Hosting Term pursuant to the Change Order procedures and by inclusion of Additional Resource Charges that recur continuously on a monthly basis and become part of the Monthly Hosting Fees.

2.0 Monthly Hosting Fees and Additional Resource Charges During the Annual Hosting Renewal Options

A. Monthly Hosting Fees. If DES exercises an Annual Hosting Renewal Option in accordance with **Section 2.2**, the Monthly Hosting Fee for such Annual Hosting Renewal Option will be calculated as follows:

1.02 X (the Monthly Hosting Fee applicable in the last month of the expiring annual period (*i.e.*, the last month of the Initial Hosting Term or then-expiring Annual Hosting Renewal Option period, as applicable))

In addition, if the then-current Configuration or the then-current scope of the Hosting Services will be expanded in connection with DES' exercise of the Annual Hosting Renewal Option, appropriate adjustments to the Monthly Hosting Fee will be implemented through the Change Order procedures.

B. Additional Resource Charges. If DES exercises an Annual Hosting Renewal Option in accordance with **Section 2.2**, unless other pricing is then agreed to by

the parties (and documented through the Change Order procedures or an amendment to this Schedule), the Additional Resource Charges for such Annual Hosting Renewal Option period will be calculated as follows:

1.02 X (the ARCs applicable in the last month of the expiring annual period (*i.e.*, the last month of the Initial Hosting Term or then-expiring Annual Hosting Renewal Option period, as applicable))

3.0 Additional Resource Charges and Reduced Resource Charges

In addition to the Monthly Hosting Fees, DES is entitled to order pursuant to a purchase order (or, if there are terms that must be discussed by the parties in connection with an ARC (see, *e.g.*, **Section 3.6** below), a Change Order) setting forth the relevant details of the applicable product or service being ordered, and Prime Vendor will deliver and invoice DES for, the products and services that are subject to Additional Resource Charges as described below in this Section. Notwithstanding anything that may be contained herein to the contrary, Additional Resource Charges shall not apply to the extent Prime Vendor is required to provide the applicable product or service under **Section 1** or in order to meet the DES Business and Technical Requirements, the Performance Standards, **Section 1(A)** and the first paragraph of **Section 5.0**.

ARCs that do not recur continuously on a monthly basis and become part of the Monthly Hosting Fees will be separately invoiced by Prime Vendor. The Additional Resource Charges include related labor costs, except as otherwise specifically noted.

DES can eliminate an ARC by providing Prime Vendor with ten (10) days prior written notice that it is issuing a RRC against such ARC, and upon such effective date of such elimination, Prime Vendor shall reduce the Monthly Hosting Fees if such ARC was added to the baseline charges or otherwise not invoice DES for such ARC if separately invoiced.

3.1 Additional Storage Charges

DES is entitled to order, and Prime Vendor shall provide, additional database, non-database and raw storage at the applicable monthly ARC rates set forth in the Tables below. Database storage means the amount of usable primary storage needed for each database Instance, and non-database storage means the amount of usable primary storage needed for purposes other than databases, such as reports, interface files and conversion files. The monthly ARC prices set forth in the first Table below are for useable primary storage and include, at no additional charge, storage for RAID, secondary, temporary tables, hot and cold online backups, media backups and warm-site disaster recovery (production only). Charges for both types of storage include operational support for backups as defined in this Schedule.

Description	Monthly ARC for Useable Primary Storage
Database Storage	
Non-Database Storage	

Description	Monthly ARC
1 TB of unmanaged storage	

3.2 Additional Non-Production Environments

DES is entitled to order, and Prime Vendor shall provide, additional non-production environments at the monthly ARC rate set forth in the Table below.

Description	Monthly ARC
Additional Non-Production Environment	\$ ____ per environment

3.3 Additional Refreshes

DES is entitled to order, and Prime Vendor shall provide, additional Refreshes beyond the amount set forth in **Section 1.7.1(O)** at the one-time ARC rate for each such Refresh that is set forth in the Table below.

Description	ARC
Additional Refreshes	\$ ____ per Refresh

3.4 Additional Servers

DES is entitled to order, and Prime Vendor shall provide, additional servers (including additional servers that may be required to operate a Non-Prime Vendor Provided Solution that DES wants to add to the scope of the Hosting Services) at a monthly ARC rate calculated as provided in the Table below. Such Table sets forth a monthly ARC for representative additional servers; however, DES acknowledges that the monthly ARC for a particular server may differ from the ARC set forth below depending on the type, size, tier, and components of the particular server that is required.

Description	Monthly ARC
Windows Server	
Terminal Server	
Entry Level	
Mid-Range	
High End	

3.5 Additional Solution Modules

DES is entitled to add additional Solution Modules to the Prime Vendor Environment at the monthly ARC associated with each such module set forth in the Table below. Such monthly ARC includes the hardware required by Prime Vendor to perform Hosting Services for each such additional Solution Module; however, such monthly ARC does not include, and DES must separately order and pay for, the following as applicable: (a) additional disk storage; (b) software licenses for the additional Solution Module; (c) Support and Maintenance Services for the

additional Solution Module; and (d) services associated with setup and implementation of the additional Solution Module.

Solution Module	Monthly ARC

3.6 Increase in Number of Authorized Users

If, for purposes of **Section 2.5(G)** of **Attachment C**, DES wants to increase the number of Authorized Users that may use the Prime Vendor Environment, DES is entitled to do so by purchasing, in increments of 1,000 additional Authorized Users at the monthly ARC rate set forth in the Table below.

# of Authorized Users	Monthly ARC
Up to 10,000	Included within the Monthly Hosting Fees as of the Effective Date
Each additional increment of 1,000 Authorized Users	\$ _____

3.7 End-to-End OLTP Measurements

DES may order, and Prime Vendor shall provide, response time measurement services for additional transactions not covered by Prime Vendor's obligations under **Section 5.3.1.2 (Method B)** outside the Point of Demarcation and to the end-user desktop. Such services include production and development hardware and operating system, initial setup, ongoing maintenance, and monthly assistance to collect and report the data. The one-time and monthly ARC for such services are set forth in the Table below.

One-Time Initial Setup	Monthly ARC
\$ _____	\$ _____

In addition, and pursuant to the Change Order procedures, DES may request that Prime Vendor install in the Prime Vendor Environment and/or provide services with respect to a DES-provided response time measurement tool or utility.

3.8 Additional VPN Connections

The ARC rates for Prime Vendor to establish and manage additional VPN connections is as follows:

Description	ARC
Establish a VPN connection, includes testing and remediation of any problems with the connection	\$ _____ per setup
Managing the VPN connection	\$ _____ per month

4.0 Improvements and Gain Sharing Opportunities

Each party may identify potential savings, enhanced quality in delivering the Hosting Services and/or enhanced Performance Standards opportunities (each, a "***Gain Sharing/Improvement Opportunity***"). If either party identifies a Gain Sharing/Improvement Opportunity, the parties shall discuss such Gain Sharing/Improvement Opportunity, including the likelihood that such Gain Sharing/Improvement Opportunity will result in savings to DES and/or improved quality as to the Hosting Services and/or enhanced Performance Standards and, if approved by DES, Prime Vendor shall further research the Gain Sharing/Improvement Opportunity and present a written proposal to DES within a mutually agreed time frame. Prime Vendor's proposal shall include, as applicable, the estimated current costs, the recommended changes, the anticipated savings and/or improvements in the Performance Standards and/or Hosting Services that will be achieved by DES and a proposed Change Request (including a project schedule) or Contract Supplement setting forth each party's responsibilities if the Gain Sharing/Improvement Opportunity is to be realized. In the case of improved quality of Hosting Services or enhanced Performance Standards, a mutually agreed value shall be ascribed to such improved Hosting Services or enhanced Performance Standards and used as the basis for any gain sharing as hereinafter described. If DES agrees with Prime Vendor's proposal, the parties shall execute the Change Order or Contract Supplement, and the parties thereafter shall proceed to implement the Gain Sharing/Improvement Opportunity based on the terms and conditions specified therein. The parties shall specify in the Change Order or Contract Supplement the gain sharing formula (if any) that will be applicable in order to compensate Prime Vendor with respect to the Gain Sharing/Improvement Opportunity; however, the parties anticipate that such gain sharing formula shall provide, at a minimum, that Prime Vendor will be reimbursed by DES for Prime Vendor's actual cost of implementing such Gain Sharing/Improvement Opportunity and thereafter Prime Vendor will be entitled to fifty percent (50%) of the savings or value in improved Hosting Services or enhanced Performance Standards for a period of two (2) years and DES will be entitled to the remaining fifty percent (50%) of the savings for value in improved Hosting Services or enhanced Performance Standards for a period of two (2) years, after which DES will be entitled to all further savings or enhanced value.

ATTACHMENT E

TECHNICAL ARCHITECTURE

Using the preliminary technical architecture set forth in **Attachment G**, Prime Vendor shall further define and update, consistent with the terms and conditions of this Hosting Service Exhibit, with the assistance of DES, as needed, a detailed, DES-specific technical architecture that is in the form, format and in such detail, and minimally including the following contents, as necessary to fulfill its purposes (the "**Technical Architecture**"):

- Overview
 - Objectives and Approach
 - System Requirements
 - Key Technical Assumptions
 - Sizing Inputs
- Hardware Recommendation Summary
- Web Server Sizing
- Integration Approach and Tools
- Report Repository
- Reverse Proxy Servers
- Application Server Sizing
- Windows Batch (Report) Server Sizing
- Load Testing Servers
- Database Server Sizing
- Storage Sizing
- Load Balancers
- Failover Process
- Switches and Network
- Instance Plan

Prime Vendor shall deliver the updated Technical Architecture to DES within sixty (60) days after the Effective Date, and a further updated version prior to **[Phase 1 Production]**. If Prime Vendor fails to deliver the updated version of the Technical Architecture to DES on or before **[Phase 1 Production]**, DES shall have the right to suspend any and all Hosting Services payments then due or to become due and owing to Prime Vendor until Prime Vendor complies with the terms of this Section. From and after **[Phase 1 Production]**, Prime Vendor shall continuously update the Technical Architecture to reflect the then current technical architecture, provided that any changes to the Technical Architecture that relates to the connectivity to DES' network shall be subject to the prior written consent of DES.

ATTACHMENT F

DISASTER RECOVERY AND BUSINESS CONTINUITY PLAN

[TO BE DEVELOPED AND PROPOSED BY PRIME VENDOR DURING IPS]

**(SEE ATTACHED PRELIMINARY DISASTER RECOVERY AND BUSINESS CONTINUITY PLAN
– TO BE REPLACED IN ACCORDANCE WITH THE TERMS OF THIS EXHIBIT)**

ATTACHMENT G
TECHNICAL DESIGN

[TO BE DEVELOPED DURING IPS]

ATTACHMENT H

SUMMARY OF PRIME VENDOR'S MONITORING ACTIVITIES

Layer	Monitoring	Tools	Environments
Infrastructure			
Technology Stack			
Transactional			
Service Desk			