NYSED – DATA DASHBOARD SOLUTIONS RFP

ATTACHMENT 6.3 - HOSTING SERVICES

1. **Definitions**. The following definitions shall apply to this Appendix. All capitalized terms not otherwise defined herein shall have the meanings ascribed to such terms in the EDP License and Services Agreement (the "Agreement"):

a) "**Confidential Information**" means as defined in the Agreement.

b) "**Defect**" An error, flaw, mistake, failure, fault or "undocumented feature" in the EDP that causes a deviation, which in NYC's reasonable opinion is detrimental, from its intended behavior or performance as specified in its written specification.

c) **"Disaster"**.means any unplanned interruption of Hosting Services reasonably and in good faith projected by the Contractor to last over 24 hours.

d) "**Documentation**" means as defined in the Agreement.

e) **"Emergency Unavailability"** means those times when material components of the Hosting Services are not available resulting from third party communication failure, a third party software interoperability issue that is not caused by or could not have been reasonably mitigated by Contractor utilizing commercially reasonable efforts, or a hardware failure that is the result of an error or defect on the part of the hardware manufacturer and that requires repair by a person with specialized knowledge before the equipment can be put back into operation.

f) "**Hosting Site**" means as defined in the Agreement.

g) "**Hosting Services**" means the services to be provided by Contractor pursuant to this Schedule and the Agreement.

h) "**EDP**" means as defined in the Agreement

i) **"Annual Licensing Fee"** means as defined in the Agreement.

j) "**Monthly Licensing Fee"** means the Annual Licensing Fee divided by twelve (12).

j) "**Users**" means as defined in the Agreement.

2. **Hosting Site.** Hosting Services shall consist of the following:

The proposed production system must be securely hosted and accessed in a data center that minimally meets Uptime Institute Tier 3 standards (www.uptimeinstitute.com), with the State preferring a data center that meets Tier 4 standards. The data center may be at the contractor's site(s) or can be subcontracted. The contractor must use generally accepted industry standards to implement and operate the systems environment and must meet the requirements and performance standards for the indicated tier. This must include the use of auditable procedures for system operations, change control, capacity planning, performance management, problem management, backup (including off-site storage), and fail-safe and disaster recovery. The systems environment

must be scalable to accommodate future systems expansion and must reside in the continental United States of America. If the systems environment is shared, the contractor must follow auditable procedures which ensure the security and confidentiality of NYSED programs and data. No local (i.e. outside of the hosting site) replication of data will be allowed.

3. **Hosting Services.** Hosting Services shall consist of the following:

a) Provision and housing of EDP computer hardware (i.e. vendor owns hardware NOT NYSED) within a designated physical facility including provisioned computer rack space, conditioned electrical power and multiple access paths to the Internet;

b) Provision of secure access via the Internet, using a Web browser and web services, to the EDP by Users;

c) Installation, configuration, system administration, and maintenance services for the facilities, equipment, and software required to operate and ensure access to the EDP in a manner consistent with the SLA defined later in the Schedule. Contractor or its approved subcontractor also shall perform standard database administration functions to maintain efficient and secure operation of the hosted databases.

d) Provision and support of a minimum of two system instances – production and a testable non-production instance.

Contractor may use limited third parties to provide physical infrastructure for its data centers, Internet connectivity, energy utilities, security services, fire prevention services, environmental services such as HVAC, and third parties for maintenance and support on hardware, all of which may be part of Hosting Services. Where Contractor is intending to make a change to the Hosting Services that will have a direct and material impact on NYSED, or, where the change would allow a third party direct access to NYSED's Confidential Information or NYSED Data, Contractor will acquire the prior written consent from NYSED, which will not be unreasonably withheld or delayed. Contractor may be required to demonstrate the third party is duly authorized, licensed and or capable of performing the task or service requested.. In either case, Contractor shall remain solely responsible for providing the Hosting Services described herein, according to the Service Levels described in this Schedule.

4. **Service Levels.** Contractor or its approved subcontractor shall provide the Hosting Services to enable the NYSED to use the EDP as described in the applicable documents. The Service Levels that Contractor or its approved subcontractor shall meet are set forth below, together with liquidated damages for the failure to meet them. A failure caused by a hosting entity chosen by Contractor, including an approved subcontractor, shall be treated as a failure caused by Contractor.

a) The following terms shall be used in defining and measuring compliance with Service Levels:

(i) "Availability" means the total time in a calendar month when the EDP is accessible via an Internet connection and performing its intended functions as specified in the Agreement, including the Statement of Work. The hosted environment shall be unavailable during certain scheduled downtime periods for the purpose of conducting maintenance and upgrades to the EDP. The hosted environment shall be deemed available, even if it is not accessible by the NYSED, if the inaccessibility is due to the NYSED's network infrastructure,

its connection to the Internet, when a User's computer or network infrastructure impairs or prevents access, or an Internet failure outside the control of Contractor or its approved subcontractor.

(ii) "Uptime" means the percentage of total time in a calendar month that the hosted environment is either available or in scheduled downtime. Uptime is calculated as the sum of available time plus Scheduled Downtime divided by total time, expressed as a percentage.

(iii) "Unscheduled Downtime" is unplanned downtime due to system or environmental (e.g. power). Unscheduled Downtime is 100% minus Uptime, both expressed as percentages.

(iv) "Scheduled Downtime" is defined as time planned and agreed upon in advance for reasons including scheduled maintenance, system updates and patches, and system upgrades with notification.

(v) "Response Time" means the amount of time elapsed between the point at which an http/https request reaches the Hosting Site and the beginning of the transmission of a response back to the originating station. Contractor or its approved subcontractor shall continually monitor the performance of the hosted environment and will use commercially reasonable efforts to anticipate how the hosted environment appears to the User community, including Internet latency, and shall take all reasonable and prudent steps to maintain the agreed upon Response Times. Response Time is a metric exclusive to the Contractor's Hosting Site. .

b) Contractor guarantees that the EDP shall have an Uptime of 99.9 percent each calendar month. If Contractor fails to meet this guarantee, Contractor shall provide a credit to the NYSED at the applicable credit percentage set forth in Table below limited to a maximum of a 60% credit across all penalties Credits are calculated each month by multiplying the hosting portion of the Licensing Fee for the applicable School Year by the credit percentage that corresponds to the calculated system availability.

SYSTEM UPTIME	**CREDIT PERCENTAGE**	**APPROXIMATE MONTHLY UNSCHEDULED DOWNTIME (MINUTES)**
≥ 99.9 %	0%	<45 minutes
	8%	45 – 120 minutes
	12%	121 – 240 minutes
	15%	≥ 241 minutes

c) In addition, if an unacceptably high number of short service outages or interruptions occur that are equal to or less than 45 minutes in duration~~,~~ and greater than 12 minutes in duration (for purposes herein a "short outage") during a School Year, the Contractor shall provide a credit to the NYSED as set forth below limited to a maximum of a 60% credit across all penalties in Schedule 2. After there has been ten (10) short outages in

a School Year, for each short outage thereafter, credits are calculated by multiplying the number of additional short outages in the School Year by the credit percentage in the Table below.

Number of Outages <45 Minutes In Duration In A School Year	**Credit Percentage**
0 – 10	0%
≥10	3% of the Monthly Licensing Fee (for the applicable School Year) for each outage

5. **Response time** Contractor guarantees that the EDP Response Time shall be within five seconds. Response Percentage is calculated as the number of requests serviced within the stipulated Response Time divided by the total number of requests. If Contractor fails to meet this guarantee, Contractor shall provide a credit to the NYSED at the applicable credit percentage set forth in Table below. Credits are calculated by taking the hosting portion of the Licensing Fee for the EDP for the applicable School Year and multiplying by the credit percentage that corresponds to the calculated system availability. If the system is not responding due to the lack of availability, only the credits related to system availability apply.

RESPONSE PERCENTAGE	**CREDIT PERCENTAGE**
≥ 99.00 %	0%
95.00 – 99.00 %	10%
< 95.00 %	20%

6. **Outage Management.**

a) From the release of the Demo version of the product and thereafter, Contractor shall provide on NYSED's reasonable request (i.e. once a month), a Service Level Report (in a form to be agreed upon between Contractor and NYSED), that measures of the following:

(i) Response Times statistics (e.g., average, mean, high, low, etc.) as measured from the server when responding to an http/https request for various EDP transactions.

(ii) Scheduled maintenance, including the date and time performed, a detailed explanation of the maintenance performed, and the duration of each occurrence of maintenance.

(iii) All measures of sustained system utilization, including measures of Downtime, scheduled maintenance, system availability, network capacity and bandwidth utilization.

(iv) In addition, Contractor shall calculate the Service Downtime (both Scheduled and Unscheduled) each calendar month and shall include the date, time and duration of each occurrence of Downtime and provide same in the Service Level Report.

b) From the release of the Demo version of the product and thereafter, Contractor shall provide a detailed report of each Downtime occurrence within twenty four hours of the Problem Resolution depending on the severity level as described in Attachment 6.4 Maintenance and Support Services. Such report shall include a detailed description of the elements related to the outage and in the detail known at that time by Contractor, that include root cause, duration, future risk and the methods employed to correct the problems. Where the Contractor does not have all the details at the time of issuing a report pursuant to this subsection, Contractor will work with NYSED to provide updates on those elements which are incomplete, and will use commercially reasonable efforts to provide safe in a manner commensurate with the nature of the Downtime. For clarity if Downtime occurs that has a significant impact on the NYSED, Contractor will be required to invest significant time and energy to provide the NYSED reasonable satisfaction that Contractor understands the cause, effect and has developed strategies to mitigate a repetition of the Downtime in future.

7. **Security.**

a) Contractor shall comply with applicable NYSED security policies to the hosted technical environments which support the EDP as specified in the RFP. Any changes to the NYSED security policies will be provided to Contractor in advance, and those changes may have a detrimental effect on any performance obligations of Contractor. If it is anticipated by either Party that a security policy may have a detrimental effect on a performance obligation, or a detrimental effect is reasonably realized after the fact, the Parties agree to resolve the issue in good faith.

b) Access to the hosted environment shall be limited to certain employees of Contractor and its subcontractors who have the job responsibilities required for such access. In all cases, specific User ID and passwords shall be required and shall be managed such that each User ID and password combination can be traced to an individual by NYSED, in the case of Users, or by Contractor security staff in the case of technical and support staff of Contractor or its subcontractors. NYSED shall be responsible for provisioning and maintaining User account information. The Contractor shall be responsible for provisioning and maintaining contractor system administration account information.

c) Subject to reasonable notice and protocol procedures by Contractor, physical access, both announced and unannounced, to the hosted environment shall be provided to designated NYSED resources.

d) Starting with the initial login page, all data transmitted between a User's browser and the application environment shall be encrypted using Secure Sockets Layer (SSL/https) 128-bit or higher encryption.

e) The communication of Confidential Information of the NYSED in either direction between Users and the Hosting Site shall be through a secure environment.

f) Contractor or its approved subcontractor shall provide a multi-tiered security architecture of physical, network, Web, system, application and data security to protect the EDP from intrusion and unauthorized access.

g) Any suspected or confirmed security breach that effects NYSED data shall be reported to the NYSED within 30 minutes of such activity. The Contractor shall coordinate response to such security breaches with the NYSED, unless a different protocol is mutually agreed to.

8. **Backup and Recovery**. Contractor shall execute nightly backup processes for NYSED Data.

a) Contractor shall perform a backup of all transaction logs every two hours.

b) Transaction logs shall be retained for two weeks.

c) Incremental system backups of all data, applications, configurations and operating systems shall be created on a daily basis. Full backups will be conducted on a weekly basis.

d) Copies of backups are transported weekly to a secure facility, physically separate from the facility being backed up.

9. **Disaster Recovery**.

a) **Disaster Definition**: A Disaster is an unplanned event that causes a complete loss of access to and use of NYSED's Production Environment(s) at the Vendor's primary data center for a period greater than 24 hours, as declared by the Vendor. An outage that impacts a specific sub-set of NYSED's users, but does not cause an impact to all NYSED users, is not considered a disaster. Some examples of what might cause a disaster are the following:

- Natural disasters, such as fire, flood, earthquake or other natural disaster;
- Complete power outage;
- Complete network outage; and
- Terrorist act affecting Vendor's data center

b) Option for restoration of the production environment within a data center with equal or greater facilities on equipment with equal or greater capacity should include:

Disaster Recovery Service Option	Recovery Time Objective	Recovery Point Objective
1 Day Option	72 Hours	72 Hours

c) Vendor's hot-standby site shall be at least fifty (50) miles away from Vendor's primary site from which the Hosting Services are then provided.

d) Restoration shall include all operating software and NYSED data.

e) The transition of Hosting Services back to Vendor facilities once those facilities are reconstructed and re-validated.

f) Vendor shall provide to NYSED a full and complete copy of its disaster recovery plan(s). Upon the occurrence, and periodically for the duration, of any disaster, Vendor shall provide regular reports and notices to NYSED regarding the status of Vendor's response to, and recovery from, the disaster. Vendor shall provide disaster recovery Services as described herein at all times irrespective of whether a Force Majeure Event has occurred, unless the Force Majeure Event prevents the performance of the disaster recovery Services. Vendor shall provide disaster recovery Services if NYSED notifies Vendor that a disaster has occurred or if the Vendor themselves identifies that a disaster has occurred.

g) Vendor shall test and update the disaster recovery plan (including plans for data backups, storage management and contingency operations), reserving capacity at alternate site facilities and annually testing network connectivity between such alternate site and the applicable end-user sites. NYSED shall have the right to participate fully in any disaster recovery testing conducted by Vendor including being physically present at the facilities of Vendor and/or any Third Parties involved in such testing.

h) If Vendor fails to comply with the disaster recovery time frames set forth in above, without limiting any other rights and remedies that may then be available to NYSED, NYSED shall be entitled to credits equal to five thousand dollars ($5,000) per hour in excess of the respective Recovery Time Objective.

10. **NYSED Responsibilities**.

a) The NYSED shall (i) notify Contractor of suspected Defects in the EDP; (ii) reproduce, to the extent reasonably possible, any suspected Defects; (iii) provide, on Contractor's request, additional data in machine-readable or interpreted form as reasonably deemed necessary or desirable by Contractor to reproduce the environment in which the Defect occurred; (iv) install, on Contractor's request, equipment defect correction and maintenance releases provided by Contractor; and (v) allow the use of online diagnostics provided by Contractor on the EDP if requested by Contractor during problem diagnosis.