Digital Services OIT Acquisition Language Examples

***(Recommended Language Examples for Application Performance Monitoring (APM) in Service Contracts. The scope of these examples primarily applies to front end software development efforts but may be adapted to apply to other projects/product support services. This sample wording should be edited to reflect your specific project/product requirements.***

***Note - Besides the PWS language below, the acquisition team could also consider including a specific APM related technical discriminator in the Source Selection Evaluation Plan (SSEP) so that the Offeror’s expertise and processes may be evaluated and considered in the Best Value selection process. The following is an example of wording that may be used in the Technical Discriminators section of the SSEP - “In the Technical Volume, the Offerors shall propose a detailed technical approach to utilizing Application Performance Monitoring processes in their Product Development strategy.”)***

## Application Performance Monitoring and Alerting

***(In the fields of information technology and systems management, application performance monitoring (APM) is the monitoring and management of performance and availability of software applications. APM strives to detect and diagnose complex application performance problems to maintain an expected level of service.)***

As part of [product] Development and Operations, the Contractor shall utilize Application Performance Monitoring strategies for application health and performance and develop product performance metrics that that will be monitored throughout the contract.

The Contractor shall provide an Application Monitoring Plan that defines how metrics will be monitored throughout the performance of the requirements, including the automated testing tools and automated Service Level Agreement (SLA) testing scripts that shall be used. The Contractor shall provide the Application Monitoring Plan to the VA PM/COR for review and approval. Upon approval, the Contractor shall implement application monitoring IAW the approved plan and establish an Application Dashboard that provides real time performance metrics to all program stakeholders.

The Contractor APM processes shall:

1. Ensure that custom software components can be instrumented to support a VA approved performance monitoring standard (e.g. OpenTracing)
2. Produce and maintain documentation describing data flow through the application, focusing on how and when the application passes/accepts data to/from other systems or end users.
3. Ensure that all workflows and actions identified during the HCD process are distinctly mapped/measured in the monitoring environment.
4. Monitor system, network, application, database logs, and performance metrics via VA approved VAEC/Cloud Service Provider (CSP) monitoring tools and ensure that code and logic changes are accurately reflected in the monitoring tools.
5. Work with the VA to instrument all significant data paths; or instrument all significant data paths themselves using VA approved monitoring tools.
6. Utilize monitoring plugins and agents to monitor numerical metrics provided by external services, servers, or equipment to collect more in-depth metrics.
7. Work with the VA to establish performance thresholds for the application; integrate those into the monitoring tools.
8. Establish robust and reliable alerting and escalation paths for performance violations (e.g. text, PagerDuty); parties directly responsible for the application as well as the VA should be made aware of performance issues immediately when detected
9. Write and monitor synthetic monitoring scripts for VA infrastructure and applications.
10. Perform postmortems of any outages occurred, including root cause analysis and steps to prevent future outages and provide Postmortem Reports accordingly.

The Contractor shall document in the Monthly Status Report support performance metrics including but not limited to: number of issues reported, problem type identification, % resolved, time for resolution, priority, severity, etc. as agreed to with the PM/COR. The Contractor shall provide an [product] Response Time Monitoring Report, appended to the Monthly Status Report, that provides [product] response time frames at the 50th, 75th, 95th, and 99th percentiles for each [product].

**Deliverables**

1. Application Monitoring Plan/Dashboard
2. Postmortem Reports
3. Product Response Report

***(Below are some additional sample performance metrics which should be edited by the Project/Product Manager to support the specific Product requirements and implementation.)***

**Deliverable Metrics/SLAs**

The Contractor shall ensure all [product] Service Level Agreements, as defined below, are met, and that the [product] function correctly.

Service Availability: All deployed services shall be available and functional to serve user requests at no less than 99.9% availability. Services that are faulted due to an external entity shall have trouble tickets logged with the responsible party, with all outage time attributable to this team until the ticket is logged with the responsible entity. An automated test, IAW the approved Application Monitoring Plan, with an execution frequency of no more than 300 seconds, and the logged reports of execution, including timing details, of that test shall be provided in the Metrics Report. Any faulted services attributed to an external entity shall include a record of the trouble ticket that was issued to the responsible party. This record shall include the time that it was filed, and if resolved, the time of resolution. Any maintenance window outages due to upstream or downstream maintenance shall include a record of the notification that was distributed to VA Stakeholders, and the time which the record was distributed.

Service Reachability: Services on this platform shall be reachable by internal and external entities no less than 99.9% of the time. All required routing and proxying services are correctly functioning and forwarding traffic. Services that are faulted due to an external entity shall have trouble tickets logged with the responsible party, with all outage time attributable to this team until the ticket is logged with the responsible entity. Services that are unavailable due to upstream maintenance must have an outage notification to all VA stakeholders prior to the maintenance window for attribution to the upstream team. The Contractor shall have access to the Government’s published maintenance windows times and dates upon award. An automated test, IAW the approved Application Monitoring Plan, and the logged reports of execution, including timing details, of that test shall be provided in the Metrics Report.

Development Environment Availability: The [product] shall be available in the staging environment during normal VA business hours (7 am – 9 pm EST). An external entity shall be able to log into the environment, execute build and deploy jobs in the development enclave, and observe the results of those jobs with no less than 99.0% availability. An automated test, IAW the approved Application Monitoring Plan, and the logged reports of execution, including timing details, of that test shall be provided in the Platform Metrics Report.

The Contractor shall provide a [product] Monthly Status Report which shall capture data as specified in the Deliverable Metrics/SLAs.