

ATTACHMENT 1: SERVICE LEVEL AGREEMENTS (SLAS)

1.0 ENTERPRISE MOBILITY MANAGEMENT (EMM) SOFTWARE AS A SERVICE (SAAS) SOLUTION AND ASSOCIATED COMPONENTS

The Contractor shall ensure that its services shall conform to the following SLA parameters in accordance with Performance Work Statement:

1. Engineering Response SLA

- a. The Contractor shall acknowledge and provide an initial engineering response to all Engineering Requests submitted within two hours.
- b. The Contractor shall calculate “Delayed Engineering Response Time” for each calendar month and include the results in the Monthly Progress, Status and Management Report. “Delayed Engineering Response Time” means each instance that the Contractor exceeds the two hour initial acknowledgement response.
- c. The Contractor shall have the Managed Routing Service (MRS) deliver IP packets to the Demarcation Point in all equipment space utilized for the EMM SaaS environment and all sub-components if they are running in different cloud environments with different demarcation points 99.9% of the time.
- d. The Contractor shall calculate “MRS Unavailability” for each calendar month and include the results in the Monthly Progress, Status and Management Report. “MRS Unavailability” consists of the number of minutes that the MRS was not available.
- e. Calculation of MRS unavailability shall not include any time the MRS Service is unavailable due to scheduled maintenance. The Contractor shall notify the VA Program Manager (PM) by email and phone within 48 hours of regularly scheduled maintenance, not to exceed a four hour period between midnight and 4 a.m. Eastern Time (ET) once per calendar month.
- f. Engineering Requests will be submitted and logged through the service desk, and time to respond begins when the change management ticket is submitted to the Contractor and when all ticket information is complete.

2. 24x7x365 Network Monitoring Responses SLA

- a. The Contractor shall notify the VA PM by email and phone of a faulty Network Element within 30 minutes or less.
- b. The Contractor shall calculate “Network Monitoring Delayed Response Time” for each calendar month and include the results in the Monthly Progress, Status and Management Report. “Network Monitoring Delayed Response Time” means each instance that the Contractor exceeds the 30 minutes Response Time for a specific affected Network Element.

3. 99.9% Service Availability Guarantee

- a. *The Contractor shall provide Service Availability at an acceptable threshold of 99.9%. Service Availability shall be defined as the availability of all Services and applications in all associated cloud environments hosting components of the full EMM SaaS solution or sub-components, whether it is during abnormal system operation or software upgrade regardless of hardware, platform or configuration change, or normal operations.* Upon identification of a failure / outage / incident, the Contractor shall inform the VA PM via email and phone within 15 minutes.
- b. The Contractor shall calculate the Solution Element's Unavailability "SE Unavailability" for the EMM private cloud environments for each calendar month and include the results in the Monthly Progress, Status and Management Report. "SE Unavailability" consists of the number of hours that the Solution Element was not available to VA in excess of the applicable Service Level percentage ("Outage").
- c. Calculation of SE Unavailability shall not include any time the Solution Element is unavailable due to scheduled maintenance. The Contractor shall notify the VA PM within 48 hours of regularly scheduled maintenance, not to exceed a four hour period between midnight and 4 a.m. ET once per calendar month.

4. Internet Link Availability:

- a. The Internet Link is critical to the Operational support of the EMM applications. An Outage is defined as any duration of time exceeding 0.1% of minutes in a given month or 43 minutes and 12 seconds, whichever is less, where the virtual machines (VMs) in the Virtual Private Cloud Environment lose connectivity to the internet resulting from a failure or degraded performance of the Contractor managed devices which provide this connectivity, excluding downtime for approved scheduled maintenance.

5. Site to Site Virtual Private Network (VPN)/Private Cloud Encrypted Link Availability:

- a. *SLA Definition: The Contractor shall monitor availability of the Site to Site VPN, or any future solution which VA and the Contractor deem an appropriate means of connecting the private cloud environment to the VA networks, to ensure the Contractor-managed end of the connection is available 99.9% of the time.* The Site to Site VPN is a critical component to the EMM solutions which allows VA users to access the applications to communicate with the various VA data sources. VPN concentrators shall have automatic fail-over to secondary concentrators in the event that the primary fails. Downtime is defined as any time the Applications are unavailable to the users or to the VA Systems with which the EMM systems communicate related to cloud hosting capabilities. Downtime may be as a result of the Contractor-managed physical devices being down or the devices *performance is degraded to the point the application's users or the system to system communications cannot function within acceptable tolerances, excluding downtime for approved scheduled maintenance.*

- b. How Measured: The Percentage of availability shall be calculated as the total number of hours in the reporting period, less hours of approved scheduled downtime, minus the hours of downtime as a result of down or degraded devices, divided by the total number of hours in the reporting period, less hours of approved scheduled down time, multiplied by 100. The reporting periods are each calendar month.
- c. X = total number of hours in the reporting period, less hours of approved scheduled down time
- d. Y = hours of downtime as a result of down or degraded devices
- e. Availability = $((X-Y)*100)/X$
- f. The Contractor shall monitor packet loss outside the encrypted tunnel and provide up/down availability. The demarcation of responsibility is at the Contractor's internet routers.

6. System and Network Performance and Monitoring:

- a. SLA Definition: *The Contractor shall monitor the underlying physical infrastructure which defines the Virtual Private Cloud Environment, the internal Ethernet networks which allow the system to system and System to SAN communications between the individual VMs and the individual VMs and the SAN within the Virtual Private Cloud Environment to ensure the network throughput and performance meet and maintain acceptable levels of performance as agreed to with the VA PM, and alert the appropriate VA Authorities as described below.* Acceptable levels of performance shall be validated and baseline established within 30 days of Task Order award and agreed to by both the VA PM and the Contractor. The VA PM and the Contractor will determine an appropriate mechanism for routine testing and reporting to ensure the agreed to performance levels are sustained on an ongoing basis. The testing mechanism will be documented and reviewed by both the VA PM and the Contractor as needed.
- b. How Measured: Once the VA PM and the Contractor have agreed to the acceptable performance levels and the mechanism in which they will be reported, the Contactor shall execute the validation tests and report the findings monthly.

Event Escalation: If in the execution of the monthly test the Contractor finds the performance levels have fallen below the agreed to acceptable levels; the Contactor shall conduct root cause analysis in accordance with the root cause analysis (RCA) process and report template in Appendix A to the SLA.

7. Monitor Load and Utilization on EMM Routers / Switches / Core Infrastructure

The Contractor shall monitor, measure, and ensure the equipment referenced in the Contractor-provided equipment list, as updated to support ongoing changes or modifications, do not exceed the following utilization and load:

Type: CPU Load
 SLA: Not to exceed 50% over 5 min
 Calculation: Cisco Stats or equivalent

Type: Memory Utilization
 SLA: Not to exceed 70%
 Calculation: Cisco Stats or equivalent

8. Security Incident Response:

SLA Definition: The Contractor shall monitor the security posture of the EMM SaaS solution and all sub-components, providing reporting to the VA PM regarding suspicious or anomalous activity and suspected and confirmed security breaches of both the private cloud boundary and the Contractor infrastructure by unauthorized agents. The Contractor shall notify VA via email or phone within the time frames listed in the table, "Contractor-Required Computer Security Reporting Timeframes" table listed below for the referenced National Institute of Standards and Technology (NIST) categories of incidents.

These categories below are derived from the Computer Security Incident Handling Guide, found in the NIST, Special Publication 800-61, revision 2, August 2012. The Contractor shall support reporting timeframes as specified in the referenced table.

Contractor-Required Computer Security Reporting Timeframes

Category	Name	Reporting Timeframe	Description
CAT 1	Unauthorized Access	Within 15 minutes of discovery/detection.	A person gains logical or physical access without permission to a federal agency network, system, application, data, or other technical resource.
CAT 2	Denial of Service (DoS)	Within one hour of discovery/detection if the successful attack is still ongoing and the Contractor is unable to successfully mitigate activity.	An attack that prevents or impairs the authorized use of networks, systems or applications by exhausting resources. This activity includes being the victim or participating in the DoS.
CAT 3	Malicious Code	Within 30 minutes of discovery/detection.	A virus, worm, Trojan horse, or other code-based malicious entity that successfully infects a host. Agencies are NOT required to report malicious logic that has been successfully quarantined by antivirus software.
CAT 4	Inappropriate Usage	Within 24 hours of discovery/detection	A person violates acceptable use of any network or computer use policies.

CAT 5	Scans/Probes / Attempted Access	Weekly	This category includes any activity that seeks to access or identify a federal agency computer, open ports, protocols, service, or any combination for later exploit. This activity does not directly result in a compromise or denial of service.
CAT 6	Investigation	Monthly	Unconfirmed incidents that are potentially malicious or anomalous activity deemed by the reporting entity to warrant further review.

2.0 CLOUD COMPUTING ENVIRONMENT SERVICE LEVEL AGREEMENT (SLA) TERMS AND DEFINITIONS

The following terms apply to the availability of the Cloud application and Infrastructure.

1. Support Response Time and Severity Levels. The Contractor shall provide technical support 24 hours a day, seven days a week, and 365 days a year to assist VA with issues pertaining to the EMM SaaS solution and all components set forth in this TO. Response time begins when monitoring alerts are discovered, validated and severity level is declared or when the Contractor receives a support request from the Government. The VA PM will declare severity level; if they are immediately unavailable, the Contractor may declare severity level. The Contractor shall respond to validated monitoring alerts and VA's support requests according to the following Severity Levels:

- a. Severity Level A – Critical impact. The Contractor shall respond to all Severity A problems within 15 minutes. VAs' support requests for Severity Level A problems must be received by phone.
- b. Severity Level B – Major impact. A business impacting function or service is not available. The Contractor shall respond to all Severity Level B problems within 30 minutes. VAs' support requests for Severity Level B problems must be received by phone.
- c. Severity Level C – Minor impact. VA's environment is not seriously affected. The Contractor shall respond to all Severity Level C problems within 24 hours.
- d. Severity Level D – No impact. Response times may vary for Severity Level D support depending on the project work associated with the request.

2. Network, Data Center, and Infrastructure Availability. The Contractor Network Infrastructure shall extend from the Infrastructure computing resources to the data center located router that provides the outside interface of each of the Contractor's wide area network connections to its backbone providers. The Contractor Data

Center Infrastructure includes HVAC, managed power systems, backup generators, and battery backup systems. Infrastructure includes the servers, the storage, and the network related to the EMM Applications. The Contractor Network Infrastructure, the Data Center Infrastructure, and Infrastructure (referred to herein as the “the Contractor Infrastructure”), subject to the exceptions in sections 5(a) and 5(b), shall be available for a percentage of each calendar month equal to the Availability Calculation specifically set forth in section 4 of this SLA.

3. EMM Application Availability Commitment

- a. The EMM Applications shall, subject to the exceptions listed in sections 5(a) and 5(b), be available for a percentage of each calendar month equal to the Service Level Commitment as specifically set forth in this Service Level Agreement (referred to herein as the “Availability Commitment”) at 99.9% of the time.
- b. For purposes of this calculation, the total solution shall be deemed to be unavailable if it, based upon availability of keyword monitoring of the Contractor benchmark transaction, does not respond to a request issued by the Contractor’s monitoring software (referred to herein as “Unavailable”). Further, the Solution will not be deemed Unavailable for any downtime or outages excluded from such calculation by reason of the exceptions set forth in Section 5 of this SLA. The Contractor’s records and data shall be the sole basis for all SLA calculations and determinations, provided that VA may audit the Contractor’s records and data for the sole purpose of determining the accuracy of SLA calculations and determinations.

4. Availability Calculation. The availability of the Contractor provided EMM SaaS solution for a given month shall be calculated according to the following formula (referred to herein as the “Availability”):

Where: **Total hours in the month= THM***
 Total hours in month unavailable = THU
And: **% Availability = ((THM-THU) x 100)/THM****

**THM is based on 30 days in a month, or 720 hours. THU includes the subtraction of planned/scheduled downtime and downtime associated with causes outlined in the Exceptions below. For the calculation of THU, the unavailability of multiple elements during a given hour is counted as a single hour. The availability calculation applies when any single component of the total EMM SaaS solution or sub parts that are integrated in are unavailable as this is a single managed service being delivered to the VA.*

5. Exceptions

- a. The EMM SaaS solution shall not be considered to be Unavailable for any outage that results from any maintenance performed by the Contractor (i) of which VA is notified at least 48 hours in advance; (ii) during VA’s

implementation period; (iii) during the Contractor's then-current standard maintenance windows (collectively referred to herein as "Scheduled Maintenance"); or (iv) as a result of VA's request outside of the normally scheduled maintenance.

- b. The EMM Applications or Contractor's Cloud Infrastructure shall not be considered Unavailable for any outage due to (i) VA's information content or application programming, acts or omissions of VA's or its agents, application deployment package inaccuracies, failures of equipment or facilities provided by VA.
- c. SLA commitments shall not apply when outages or service issues related to inaccuracy or errors in VA or other VA Contractor supplied materials (application packages, service requests, trouble ticket information, and VA supplied data) exist.
- d. Elements *in blue italic font* in this document are elements which the Contractor has notified VA that its configuration (as provided by the current cloud service provider) is not suited to provide this level of performance, and thus no monetary penalties will be assessed for the elements in blue italic font against the Prime service provider; however, any monetary credits that may be offered from the cloud service provider shall be credited back to the Government directly.
- e. The configuration being provided under this Agreement is based on data and assumptions made by VA. As a result, the Contractor shall not be responsible, under this SLA or otherwise, for any outages or performance issues caused by inaccuracies in these assumptions.
- f. Degraded as used in this document is defined as a 20 percent reduction in infrastructure performance from baseline. The baseline shall be established within 30 days of SLA execution.

6. Configuration Changes; Customer Supported Software.

- a. The configuration of the Services set forth in the Performance Work Statement has been designed by the parties to provide the performance level contemplated by the Availability Commitment in this SLA. If the Contractor notifies VA that it has determined that VA's configuration (as provided by the current cloud services provider) is not suited to provide this level of performance, the SLAs shall be suspended until VA and the Contractor agree upon and implement a new or modified configuration designed to provide this level of performance, subject to fine tuning the SLAs.
- b. The EMM Applications and the Contractor Infrastructure shall adhere to the following Availability Commitments:

99.9% - EMM SaaS Solution and Sub-Components Accessibility

7. Effective Date. This SLA remains in effect throughout the Task Order period of performance. Any and all revisions are also effective based on agreement of the parties throughout the period of performance.

8. Service Credits

If the Contractor does not meet the Availability Commitments SLA, VA may apply for a service credit ("Service Credit"). The Service Credit is the sole and exclusive monetary remedy available to VA for the Contractor not meeting the Availability Commitments of the SLA.

The service credit calculation is: **Total Hours Unavailable* X Hourly Rate****

*Refer to section 4. Availability Calculation.

**Hourly rate will be determined at Task Order award and is based on the total solution cost hourly.

To be eligible for a Service Credit, VA must:

- a. Request that the Contractor opens a trouble ticket documenting the Service Credit and request the Service Credit within 30 days after the trouble ticket is resolved. Each Service Credit request must reference the associated trouble ticket number(s) and include any corroborating data or information.
- b. Meet with the Contractor within at least 30 days to discuss the SLA and variance.
- c. Service Credit requests will be evaluated in relation to the respective accumulated statistics (e.g., Availability) for the month during which the non-conforming event is alleged to have occurred. Service Credit requests that encompass multiple months will be prorated in accordance with the relevant statistical accumulations for each month.

The Contractor shall have 30 business days from the end of the month in which the request is submitted to respond to VA accepting or contesting the Service Credit request. Service Credit requests approved by the Contractor will be credited to VA's account in the form of a credit to VA's bill/invoice during the next monthly billing cycle beginning not less than 10 business days after approval.

APPENDIX A – ROOT CAUSE ANALYSIS PROCESS AND REPORTING TEMPLATE

KEY PROCESS STEPS

For incidents that trigger an SLA metric:

1. Contractor assigns an RCA Lead and generates and distributes the RCA form.
2. RCA Lead gathers input from the EMM SaaS Team that worked on the issue, as well as from other stakeholders (VA, Cloud Service Provider, etc.).
3. RCA Lead conducts an Event and Causal Factor Analysis and completes the RCA Report.
4. RCA Lead e-mails the completed RCA Report to the Contractor Program / Project Management Team within one business day.
5. Contractor Program / Project management team respond with concurrence or comments within one business day.
6. If the Contractor does not reach consensus on the root cause or an absence of concurrence within five business days of the unplanned outage or issue, the incident escalates to the Contracting Officer for mediation.

ROOT CAUSE ANALYSIS REPORT

OUTAGE / INCIDENT TICKET #		CONTRACTOR REPRESENTATIVE	CHOOSE AN ITEM.
RCA RESOLUTION STATUS	CHOOSE AN ITEM.	RCA LEAD ASSIGNED	
DESCRIPTION SUMMARY			
Enter Summary			
BUSINESS IMPACT			
Service Impact:			
Technical Impact			
Comment:			
ROOT CAUSE ANALYSIS			
Completed By:			
Date	Time	Description	
CORRECTIVE ACTION			
1.			
2.			
3.			
CONTRACTOR PROGRAM MANAGER MUST COMPLETE THIS SECTION			
RCA SATISFACTORY?	CHOOSE AN ITEM.	PGM MEMBER VALIDATION :	DATE
		OF VALIDATION: ____/____/____	
ACTION ITEMS ASSIGNMENT			
Action Item #	Description	Assigned to	Date Due
1.			
			Choose an item.
LESSONS LEARNED		RECOMMENDATIONS IMPLEMENTATION DATE:	
		____/____/____	
1.			