

**PERFORMANCE WORK STATEMENT (PWS)**

**DEPARTMENT OF VETERANS AFFAIRS**

VistA Application Analytics

**Date:** July 30, 2024

VA-FY-24-00054128

**Task Order PWS Version Number:** 1.2

Contents

[1.0 BACKGROUND 3](#_Toc172548479)

[2.0 APPLICABLE DOCUMENTS 3](#_Toc172548480)

[3.0 SCOPE OF WORK 3](#_Toc172548481)

[3.1 APPLICABILITY 4](#_Toc172548482)

[3.2 ORDER TYPE 4](#_Toc172548483)

[4.0 PERFORMANCE DETAILS 4](#_Toc172548484)

[4.1 PERFORMANCE PERIOD 4](#_Toc172548485)

[4.2 PLACE OF PERFORMANCE 4](#_Toc172548486)

[4.3 TRAVEL OR SPECIAL REQUIREMENTS 4](#_Toc172548487)

[4.4 CONTRACT MANAGEMENT 4](#_Toc172548488)

[4.5 GOVERNMENT FURNISHED PROPERTY 4](#_Toc172548489)

[4.6 SECURITY AND PRIVACY 5](#_Toc172548490)

[4.6.1 POSITION/TASK RISK DESIGNATION LEVEL(S) 5](#_Toc172548491)

[5.0 SPECIFIC TASKS AND DELIVERABLES 5](#_Toc172548492)

[5.1 PROJECT MANAGEMENT 5](#_Toc172548493)

[5.1.1 CONTRACTOR PROJECT MANAGEMENT PLAN 5](#_Toc172548494)

[5.1.2 REPORTING REQUIREMENTS 6](#_Toc172548495)

[5.1.3 TECHNICAL KICKOFF MEETING 6](#_Toc172548496)

[5.2 VISTA CLIENT TRAFFIC CAPTURE AND ANALYSIS (Base Period) 7](#_Toc172548497)

[5.2.1 CAPTURE OF VISTA CLIENT TRAFFIC 7](#_Toc172548498)

[5.2.2 ANALYSIS OF VISTA CLIENT TRAFFIC 7](#_Toc172548499)

[5.2.3 Analysis of Use of Key VISTA Clients 8](#_Toc172548500)

[5.2.4 VISTA Client Use Improvement Report 9](#_Toc172548501)

[5.3 VISTA CLIENT traffic CAPTURE AND Analysis [OPTION PERIOD 1] 9](#_Toc172548502)

[5.3.1 MIGRATED VISTA client TRAFFIC ANALYSIS 9](#_Toc172548503)

[5.3.2 VISTA Community Care client traffic ANALYSIS 9](#_Toc172548504)

[6.0 GENERAL REQUIREMENTS 10](#_Toc172548505)

[6.1 PERFORMANCE METRICS 10](#_Toc172548506)

[6.2 SECTION 508 – INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) STANDARDS 11](#_Toc172548507)

[6.2.1 COMPATIBILITY WITH ASSISTIVE TECHNOLOGY 12](#_Toc172548508)

[6.2.2 ACCEPTANCE AND ACCEPTANCE TESTING 12](#_Toc172548509)

[6.3 SHIPMENT OF HARDWARE OR EQUIPMENT 12](#_Toc172548510)

[6.4 ENTERPRISE AND IT FRAMEWORK 12](#_Toc172548511)

[6.4.1 FEDERAL IDENTITY, CREDENTIAL, AND ACCESS MANAGEMENT (FICAM) 12](#_Toc172548512)

[6.5 INFORMATION TECHNOLOGY USING ENERGY-EFFICIENT PRODUCTS 12](#_Toc172548513)

[6.5.1 EPEAT 12](#_Toc172548514)

[6.5.2 ENERGY STAR 13](#_Toc172548515)

[6.5.3 FEMP 13](#_Toc172548516)

[ADDENDUM B – VA INFORMATION AND INFORMATION SYSTEM SECURITY/PRIVACY LANGUAGE 14](#_Toc172548517)

# BACKGROUND

To aid maintenance and manageability of VistA, VA has migrated all VistA systems to the VA Enterprise Cloud (VAEC), a federally certified U.S. GovCloud managed by Amazon Web Services (AWS). By leveraging the built-in traffic logging capabilities of the VAEC-based VistA systems, VHA has the first-ever opportunity to analyze the actual clinical care workflows employed in VA medical centers. Such analysis would drive improved standards of practice by health care providers. These improvements would be prompted by the actual practice of care and not speculation about how care is being provided.

VA care is currently provided through VistA’s point of care clients (‘VistA Applications”) which communicate with the VistA servers. Taken as a whole, these communications between VistA clients and VistA servers capture the patterns of clinical care activity performed today in VA. The Vista Application Analytics task order calls for health care data experts to analyze the traffic between VistA clients and three representative VistA servers. The analysis will be provided in a series of precise reports, detailing different aspect of VA care.

Analysis will include the types and volumes of structured and unstructured information read and written by clearly identified classes of health care professional as well as the range of time spent on different tasks. On completion, VHA will possess a set of concrete, actionable recommendations, and demonstrations for improving the care provided to Veterans as well as a guide for how to perform such analysis in the future.

# APPLICABLE DOCUMENTS

The Contractor shall comply with the following documents, in addition to the documents in Paragraph 2.0 in the T4NG Basic Performance Work Statement (PWS), in the performance of this effort:

1. 44 U.S.C. § 3541-3549, “Federal Information Security Management Act (FISMA) of 2002”
2. VA Handbook 6500.6, “Contract Security,” March 12, 2010
3. One-VA Technical Reference Model (TRM) (reference at <https://www.va.gov/trm/TRMHomePage.aspx>)

# SCOPE OF WORK

The Contractor shall analyze the traffic exchanged between VistA clients and a representative sample of VAEC-based VistA systems. These exchanges use VA’s proprietary Remote Procedure Call (RPC) protocol. The Contractor shall use the built-in facilities of VAEC to capture this traffic non-invasively (without any need to change or reconfigure the VistA system itself or its clients). From this captured data, the Contractor shall provide detailed analysis of representative traffic, identifying point-of-care applications, user behaviors, patterns of clinical use, and areas of concern. The Contractor shall reduce the production of this analysis to a repeatable process.

## **APPLICABILITY**

This Task Order (TO) effort PWS is within the scope of paragraphs 4.1.5 and 4.2.11 of the T4NG Basic PWS.

## ORDER TYPE

The effort shall be proposed on a Firm Fixed Price (FFP) basis.

# PERFORMANCE DETAILS

## PERFORMANCE PERIOD

The PoP shall be12 months from date of award with one 12-month option period.  The overall Period of Performance shall not exceed 24 months.

## PLACE OF PERFORMANCE

Efforts under this TO shall be performed at Contractor facilities. The Contractor shall identify the Contractor’s place of performance in their Task Execution Plan submission.

## TRAVEL OR SPECIAL REQUIREMENTS

The Government anticipates travel to perform the tasks associated with the effort, as well as to attend program-related meetings or conferences throughout the PoP.  Include all estimated travel costs in your firm-fixed price line items. These costs will not be directly reimbursed by the Government.

The total estimated number of trips in support of the program related meetings for this effort is two trips with two contractors per trip.  Anticipated locations include the following, estimated at 2-3 days in duration:

1. Washington, D.C

## CONTRACT MANAGEMENT

All requirements of Sections 7.0 and 8.0 of the T4NG Basic PWS apply to this effort. This TO shall be addressed in the Contractor’s Progress, Status and Management Report as set forth in the T4NG Basic contract.

## GOVERNMENT FURNISHED PROPERTY

Not Applicable.

# SPECIFIC TASKS AND DELIVERABLES

## PROJECT MANAGEMENT

### CONTRACTOR PROJECT MANAGEMENT PLAN

The Contractor shall deliver a Contractor Project Management Plan (CPMP) that lays out the Contractor’s approach, timeline and tools to be used in execution of this TO effort.  The CPMP should take the form of both a narrative and graphic format that displays the schedule, milestones, risks and resource support.  The CPMP shall also include how the Contractor shall coordinate and execute planned, routine, and ad hoc data collection reporting requests as identified within the PWS. The initial baseline CPMP shall be concurred upon and updated in accordance with Section B of the TO. The Contractor shall update and maintain the VA Program Manager (PM) approved CPMP throughout the PoP.

**Deliverable:**

1. Contractor Project Management Plan

### REPORTING REQUIREMENTS

The Contractor shall provide a monthly progress report to the Contracting Officer (CO) and Contracting Officer’s Representative (COR) via electronic mail. This report shall include: (1) a summary of all project milestones and their anticipated completion dates, (2) invoicing data, (3) an assessment of current month and future month activities, and (4) a discussion of any issues related to contract performance or administration.

The Monthly Progress Reports shall cover all work completed during the reporting period and work planned for the subsequent reporting period.  The report shall also identify any problems that arose and a description of how the problems were resolved.  If problems have not been completely resolved, the Contractor shall provide an explanation including their plan and timeframe for resolving the issue. The Contractor shall monitor performance against the CPMP and report any deviations. It is expected that the Contractor will keep in communication with VA accordingly so that issues that arise are transparent to both parties to prevent escalation of outstanding issues.

**Deliverable:**

1. Monthly Progress Report

### TECHNICAL KICKOFF MEETING

A technical kickoff meeting shall be held within 10 days after TO award. The Contractor shall coordinate the date, time, and location (can be virtual) with the Contracting Officer (CO), as the Post-Award Conference Chairperson, the VA PM, as the Co-Chairperson, the Contract Specialist (CS), and the COR.

The Contractor shall provide a draft agenda to the CO and VA PM at least five (5) calendar days prior to the meeting. Upon Government approval of a final agenda, the Contractor shall distribute to all meeting attendees. During the kickoff-meeting, the Contractor shall present, for review and approval by the Government, the details of the intended approach, work plan, and project schedule for each effort via a Microsoft PowerPoint presentation. At the conclusion of the meeting, the Contractor shall update the presentation with a final slide entitled “Summary Report” which shall include notes on any major issues, agreements, or disagreements discussed during the kickoff meeting and the following statement “As the Post-Award Conference Chairperson, I have reviewed the entirety of this presentation and assert that it is an accurate representation and summary of the discussions held during the Technical Kickoff Meeting for the VistA Application Analytics effort.” The Contractor shall compile the PowerPoint into a Microsoft Word document and submit the final Microsoft Word document to the CO for review and signature within three (3) calendar days after the meeting.

The Contractor shall also work with the CS, the Government’s designated note taker, to prepare and distribute the meeting minutes of the kickoff meeting to the CO, COR and all attendees within three (3) calendar days after the meeting. The Contractor shall obtain concurrence from the CS on the content of the meeting minutes prior to distribution of the document.

## VISTA CLIENT TRAFFIC CAPTURE AND ANALYSIS (Base Period)

### **CAPTURE OF VISTA CLIENT TRAFFIC**

The Contractor shall coordinate the use of built-in VAEC facilities to non-invasively log the VistA client traffic (RPC traffic) of VAEC-hosted VistAs for a representative period. As a non-invasive method, it will not require any change, reconfiguration, interfaces, development, patches, or plugins in the VistA system itself or any client communicating with that VistA.

The Contractor shall coordinate the logging of all client traffic of three VAEC-based production VA VistAs (“Analyzed VistAs”). At least one of the VistAs should support a large integrated medical facility.

The Contractor shall:

1. In collaboration with the Government, identity three VistAs and obtain permission from their managers to capture their RPC traffic.
2. Coordinate the configuration of the RPC Traffic capture to log all RPC traffic for these three VistAs.
3. Monitor and ensure traffic logging of each of the three identified VistAs for at least one month and the storage of all captured data in VAEC for analysis.
4. Develop and provide a VistA Traffic Logging Standard Operating Procedure to document the processes and procedures used to log required traffic from any VistA, including permissions required from VistA owners and VAEC maintainers

**Deliverables:**

1. VistA Traffic Logging Standard Operating Procedure

### ANALYSIS OF VISTA CLIENT TRAFFIC

Using the client traffic captured (deliverable 5.2.1A) , the Contractor shall provide Traffic Analysis Reports comprising the complete client traffic for each of the three analyzed VistAs. In addition, the Contractor shall provide a Cross VistA Analysis Report distinguishing cross-VistA from VistA-specific traffic patterns. All four reports (i.e. 3 Traffic Analysis Reports and 1 Cross VistA Analysis Report) shall be composed in GitHub compatible markdown with embedded graphics where appropriate. The Contractor shall store all four reports as markdown in the VA Enterprise GitHub.

Traffic Analysis Report for each VistA shall characterize:

1. User volume
2. Client types and volume of use
3. Connection volumes, frequency, and duration
4. Types of user authentication/security and relative use
5. Machine from end Users
6. RPC usage frequency and execution times
7. RPC groupings – representing transactions
8. RPCs specific to a VistA from cross-VistA RPCs

**Deliverables**:

1. Traffic Analysis Reports for three production VistAs
2. Cross VistA Traffic Analysis Report

### Analysis of Use of Key VISTA Clients

Based on the traffic and client types isolated during the VistA traffic analysis, the Contractor shall produce a detailed Client Traffic Analysis of the operation of three of the most used VistA point-of-care applications ("Clients"). CPRS shall be one of the three; the remaining two shall be chosen after project start based on client usage. All three reports shall be composed in GitHub compatible markdown with embedded graphics where appropriate. The Contractor shall store the three reports in a git in the VA Enterprise GitHub. All client analyses must be validated and verifiable in a demonstrable way, matching RPC flows to specific client screens and typical tasks. The Contractor shall document the verification and validation of the analysis and provide a Client Traffic Analysis Validation and Verification Report.

The per Client Traffic Analysis shall include:

1. User volumes and types. User types shall capture clinical care specialties and roles.
2. Connection volume and duration, tying frequency of client use to user types
3. Types of user authentication/security and relative use
4. Patient volumes
5. Enumeration of all RPCs used by a client and their relative use
6. Distinction of clinical from non-clinical RPCs
7. Distinction of RPCs that change (write) from those that read the clinical record
8. Distinction of slow running, high overhead and variable overhead RPCs
9. Clinical care task sets, represented as groups of RPCs used in tandem
10. Match task sets with the use of one or more specific client screens
11. Task sets employed by different user types
12. Isolate performance issues with patterns of use that slow care
13. Verification and validation that the analysis accurately captures care provision

**Deliverables**:

1. Three (3) VistA Client Use Analysis Reports
2. Client Analysis Validation and Verification Report

### VISTA Client Use Improvement Report

Based solely on the Client Use Analysis Reports, the Contractor shall provide recommendations to upgrade the use of the top three RPC-using Point-of-Care VistA Clients to deliver better clinical care. These recommendations shall be documented in Client Use Improvement Reports for each Client in Microsoft Word and a supporting PowerPoint presentation.

**Deliverables**:

1. Client Use Improvement Reports

## VISTA CLIENT traffic CAPTURE AND Analysis [OPTION PERIOD 1]

This option will take the approach to non-invasive traffic analysis used in the base period, and extend its application to other types of VistA traffic and scenarios.

### MIGRATED VISTA client TRAFFIC ANALYSIS

Post Cerner migration, the VistA of a migrated site (“Migrated VistA”) is still in production, running a subset of its previous functionality.

Client traffic for one month from a Migrated VistA shall be captured, using the same mechanism employed in the base period (5.2.1).

Migrated VistA Traffic Analysis Report shall include:

* + - Identify which clients are still in use and how they are used
    - Identify the type and volume of users still operating in this VistA
    - Identify the subset of RPCs still being used – compare to the range of RPCs used in full VistAs analyzed in year one.

**Deliverables**:

A. Migrated VistA Traffic Analysis Report

### VISTA Community Care client traffic ANALYSIS

An increasing amount of veteran care is provided outside VA in the private sector (“Community Care”).

Client traffic for one month reflecting Community Care from a production VistA shall be isolated and captured using the same mechanism employed in the base period (5.2.1).

The Vista Community Care Traffic Report shall include:

* + - Types, volumes, and sources of parseable text
    - Types, volumes, and sources of references to images/screenshots
    - Where and how this information is displayed in pre-existing and specialized VistA clients
    - Recommendations how to better integrate this external information with clinical and other data within VA

**Deliverable**:

* + - * 1. VistA Community Care Traffic Analysis Report