[Department]
[Agency]

**Statement of Objectives For**

**Infrastructure-As-A-Service
Blanket Purchase Agreement (BPA)** **# QT****A010MAB0016

May 2013**

**SAMPLE**

**Draft Version 0.4**

# Introduction and Instructions

This sample Scope of Objectives and Statement of Work describes the requirements and tasks for a cloud-based Web hosting solution, including additional Content Management Systems, as well as associated professional IT services.

All sections should be reviewed for relevance to the cloud-based objectives of the ordering activity and modified accordingly.

All IaaS BPA CLINs and relevant MAS Schedule 70 labor categories are included in the appendices in anticipation of scopes which materially differ from this sample.

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# Purpose: Public Cloud Initiative for [Department/Agency]

# Scope

The primary goal of this acquisition is to establish the consolidated and integrated public service delivery capability for Development/Test and Production that will streamline the migration, implementation and support of current and future [Department/Agency] Public facing websites and applications to the Public Cloud. In addition, this includes all work associated with web hosting and application services to support [Department/Agency] public websites. The Blanket Purchase Agreement (BPA), numbered QTA010MAB0016, issued by the General Services Administration (GSA) for Infrastructure As A Service (IaaS), is hereby incorporated by reference.

# Period and Place of Performance

The base Period of Performance will be twelve (12) months from date of award with two (2) one (1) year options. Services will be provided at the vendor location.

# Background

[Department/Agency] plans to move all [Department/Agency] public facing websites to the public cloud. All public websites hosted in the Cloud is the [Department/Agency] target operating model. Therefore [Department/Agency] seeks a Public Cloud solution to encompass the full application development and deployment lifecycle for all [Department/Agency] public facing websites. At present the current production capacity for [Department/Agency] 15 component websites is fragmented across multiple platforms and providers. Correspondingly, the development environment is equally fragmented. Subsequently, the opportunity to leverage synergies, including data sharing, downloading, access and cross platform integration, is minimal.

The proposed environment will allow for enterprise development, testing, staging and production. The proposed environments will consist of integrated environments designated as Development/Testing and Production that support development, integration, acceptance testing, training, staging, troubleshooting and all pre-production, as well as production, activities. This Public Cloud environment will contain all required security, service delivery and hosting capabilities necessary to effectively support the development, testing, quality assurance, and production needs. All services delivered will be required to meet vendor-offered Service Level Agreement (SLA) as well as the performance criteria described later in section .

##  Day One Operating Conditions

[Department/Agency] plans to implement a solution with the following performance characteristics and requirements on Day 1.

Table 1: Day One Operating Conditions

|  |  |
| --- | --- |
| CONDITION | VALUE |
| Total number of daily visits |  |
| Number of visits per busy hour |  |
| Average web page size (in KB) |  |
| Number of web pages |  |
| Maximum allowable latency (ms) |  |
| Average throughput per user (kbps) |  |
| Peak throughput per user (kbps) |  |

# Objectives

The Contractor shall provide a turn-key cloud-based platform with various service level guaranties as indicated herein and maintain appropriate certification as indicated herein:

## Solution-specific Objectives

The following text is an example, please replace. The Contractor shall provide a prescribed open source Content Management System (CMS) platform for the on-demand deployment of websites. This CMS platform shall consist of the entire application stack required to support the CMS.

###  The CMS platform shall provide the following capabilities:

1. Integration capabilities to social media applications including, but not limited to, Facebook, Twitter, Youtube, etc.
2. Integration capabilities to email, third party messaging including, but not limited to, GovDelivery

###  This CMS platform will be consistently used to support the following:

1. A Development & Test environment that is logically isolated from the QA/Staging, Production, and Training environments.
2. A QA/Staging (pre-production) environment that is logically isolated from the end user and other environments, but representative of the Production environment.
3. A Production environment that is logically isolated from the Development/Test, QA/Staging environments, and Training environments.
4. A Training environment that is logically isolated from the Development/Test, QA/Staging, and Production environments.
5. A path for application development (Change Mechanism) that supports enhancements and/or customization requests to the System. This change mechanism capability shall support the transition between the aforementioned environments.

###  Open Source Application Support

### The Contractor shall provide open source application support for the Content Management

## Generic Objectives

The Infrastructure-as-a-Service solution can be composed of any of the lots as long as it achieves the objectives specified

###  Management support

### The Contractor shall provide management support for all software servers (database, web servers, application enablers), operating systems, hypervisors, hardware and network infrastructure that are included in the Contractor’s boundary and will specifically describe the Consumer/Provider responsibilities for maintenance.

### Web Hosting infrastructure

###  The Contractor shall provide web hosting infrastructure and application integrations support.

###  Operations management

### The Contractor shall provide Operations Management and operations of the environment to be inclusive of all the above components and their respective integration.

###  Content delivery Network

### The Contractor shall provide support for a content delivery network and/or support for third part providers.

###  Customer support

### The Contractor shall provide customer support for internal client bases, including, but not limited to, system owners and managers, as required.

# Tasks

Provide a cloud based hosting solution based on current and evolving industry standards and best practices over the course of the contract duration. The cloud based hosting solution will provide the best value to Government while at the same time allowing [Department/Agency] the flexibility to meet current and future requirements. The cloud based hosting solution shall meet all requirements set forth in this section.

The cloud based hosting Contractor’s proposal shall describe their methods of compliance with these requirements and will propose service level agreements (SLAs), associated terms and conditions, and enforcement methodology. At a minimum the SLA shall cover the following points:

* Uptime for the solution as measured as the total external availability for the solution during the billing period of one month; not to be less than that proposed within the IaaS BPA, and including definition for measurement of uptime.
* Provisioning Time Objectives for provisioning of new infrastructure through both the web user interface and Application Programming Interface.
* Recovery Time Objective (RTO) and Recovery Point Object (RPO) in the event of loss of operation for the hardware; not to be less than that proposed within the IaaS BPA.
* Points and methods of contact for communicating service outages, technical issues, and security issues with tiered response times.
* Methodology for ensuring that the Service Level Agreement is met.

##  Solution-specific tasks

The following define the specific requirements:

###  Turn-key solution

 The Contractor Shall:

1. Provide an effective solution that utilizes industry standards and best practices that meets or exceeds the performance criteria detailed in the Service Level Agreements (SLAs)
2. Provide an implementation plan for sites utilizing the turn-key solution.
3. Manage and operate the solution in accordance with the SLAs,
4. The Contractor shall jointly develop an implementation plan with the Government for the first implementations and for the remaining implementations.
5. For the initial implementations, the Contractor shall provide hosting services to meet the mandatory requirements defined in the BPA, which include, but are not limited to, security.

###  Solution robustness

The Contractor Shall:

1. Provide end-to-end SLA monitoring capability and reporting for website rendering, content query, rich media content delivery, and file download services that enable root-cause analysis and the resolution of performance issues.

###  Administrative capabilities

The Contractor Shall:

1. Provide a Virtual Desktop Environment within the Dev/Test environment with the necessary development tools to provide [Department/Agency] development staff with a consolidated and cohesive infrastructure for the development lifecycle of public facing applications.
2. Provide lifecycle management tools such as Rational for Configuration Management.
3. Provide tools for analyzing usage specific trends as it relates to the public users of the system.
4. Provide a Change Control Process to secure the functionality of the environment without hindering the ability of [Department/Agency] Content Developers/Managers to efficiently add new functionality, integration and or content delivery mechanisms.
5. Provide a test environment for [Department/Agency] Applications and Development staff to test code for all environments that may receive iterative patches and/or refreshes.

###  Data archival

The Contractor Shall:

1. Provide tiered storage solution to move data through multiple tiers as the data ages.
2. Provide archive data retention mechanism as well as data disposal.
3. Manage the logs and data consistent with best practice approaches.

##  Generic tasks

###  Infrastructure scalability, capacity and evolution

The Contractor Shall:

1. Provide solutions that meet or exceed the day-1 minimum capacity that serve the needs of the [Department/Agency] application development community as well as provide web server delivery capacity to Internet consumers of [Department/Agency] content. These requirements are described in §4.1.
2. Describe the configuration proposed to fulfill day-1 requirements with the explicit understanding that during the duration of the contract these nominal profile requirements will change. The vendor shall continue to develop and refine infrastructure in accordance with emerging requirements and evolving technology specifications as required.

###  Customer support

The Contractor Shall:

1. Provide Service and Support the [Department/Agency] solution 24 x 7 x number of days in base period to include Tier 1, 2, 3 help desk support / service center functions defined as:
* Tier 1 (Incident response catch/dispatch)
* Tier 2 (SME engagement)
* Tier 3 (SME and/or Vendor engagement as required)
1. Provide trouble ticketing via customizable online portal/interface with integrated email capabilities.
2. Provide a mechanism to [Department/Agency] for the bulk retrieval of all data, scripts, software, virtual machine images, and so forth such as mirroring or copying to [Department/Agency] supplied industry standard media. The Contractor’s proposal shall describe the formats data will be provided; preference will be given to open standards such as OVF.

###  Usage reporting

The Contractor Shall:

1. Provide a mechanism to track system usage based on Information System codes so that usage by designated account holders can see and track costs corresponding with their usage.
2. Provide on-line reporting capability that will allow designated account holders to see the status of their usage (updated at least weekly).

###  Administration capabilities

The Contractor Shall:

1. Provide a trusted secure communication channel to support the Government’s PIV Card authentication (dual factor method) of remote access in accordance with OMB M-11-11.
2. Provide network storage, server and virtualization layer management to include performance of internal technology and refresh cycles applicable to the environment.
3. Provide and document patch management appropriate to all components within the provider’s boundary and to adhere to [Department/Agency] standards.
4. Provide automated monitoring of performance, resource utilization and other events such as failure of service, degraded service, availability of the network, storage, database systems, operating Systems, applications, including API access within the provider’s boundary and Security Content Automation Protocol (SCAP) automation capabilities via a service dashboard or by other electronic methods.
5. Provide maintenance of user profiles presented to the user at time of login.

###  Comprehensive backup

The Contractor Shall:

1. Provide restoration of an individual file or folder on request as outlined in the SLA.
2. Describe and implement a backup procedure and process that supports the following objectives:
	* Recovery Point Objective (RPO) – Contractor shall be able to recover files for any specific day within a rolling six month period.
	* Recovery Time Objective (RTO) – Contractor shall recovery files within 24 hours of request.
	* Data Backup Location – Data backups shall be maintained or replicated at a site geographically disparate from the production site such that the loss of one data center does not prohibit recovery of data within the prescribed RTO.
	* Specific Snapshot Objective – At the Component Agency request, the Contractor shall create a full snapshots for the platform, content and related data, to be retrieved at the Component Agency’s request within 24 hours up to a period to be determined by the Component Agency.

###  Technology refresh

The Contractor Shall:

1. Comply with technology refresh requirements as required by [Department/Agency] to ensure security requirements and service level agreements (SLA) are met.
2. Comply with the [Department/Agency] requirements that software within the Provider’s Boundary will never be more than two versions behind.

###  Operational FISMA compliance

The Contractor Shall:

1. Sustain operations with no more than three non-compliant FISMA findings per fiscal year.
2. Provide a solution that delivers periodic migration support.
3. Support Physical-to-Virtual (P2V), Virtual-to-Virtual (V2V), and Virtual-to-Physical migration methods for systems including private Local Area Network (LAN) integration with provider network via secure channel(s), such as site-to-site virtual private network (VPN) tunnel(s).
4. Support database array-based data replication.
5. Provide a timeframe target period of no more than five days for validated migration of each physical application server and associated database server, including test and development servers to the cloud environment.
6. Provide migration planning and support, such as configuring external connections to the hosted infrastructure and the ability to upload database backups and virtual machine (VM) images to the hosting environment.
7. Coordinate all impacts to system availability impacts during the migration and subsequent cutover to the service provider infrastructure and secure approval from the Contracting Officer Technical Representative (COTR) before execution.
8. Provide a solution in which data calls (requests for information) do not exceed two incidents of non-compliance per fiscal year.
9. Comply with directed mandates to protect and defend information systems from recurring security threats or in response to real-time vulnerabilities and have no more than one non-compliant incident per fiscal year.
10. Provide and apply tactical patching in defense of real-time vulnerabilities within 24 hours or less and have no more than one non-compliant incident per fiscal year.

###  Migration support services

The Contractor shall:

1. Demonstrate an architecture based upon the Day 1 Operating Requirements.
2. Configure, manage, deploy, scale, the system on selected infrastructures.
3. Provide an expert technical operations and management team which can advise the Government on optimal operational practices, recommend deployment architectures for cloud infrastructures, design and implement automated scaling processes, day-to-day and emergency procedures, deploy and monitor applications, performance reporting and metrics, and ensure the overall reliability and responsive operation of the applications through both proactive planning and rapid situational response.
4. Provide tools and processes for monitoring the availability of assigned applications, responding to system and application outages with troubleshooting activities designed to identify and mitigate operational issues.

# Requirements cross-references

The requirements in this Scope of Objectives can be cross-referenced with the requirements in the IaaS Blanket Purchase Agreement Solicitation#

Table 2: SOO to IaaS BPA Cross-reference

| SOO REQUIREMENT REFERENCE | BPA REQUIREMENT CROSS-REFERENCE |
| --- | --- |
| §6.1.1 | *Additional* |
| §6.1.2 | §C.4.2.1, Table 2, Item 9 |
| §6.1.3 | *Additional* |
| §6.1.4 | §C.4.2.1, Table 2, Item 19§C.4.2.2, Table3, Item 26 |
| §6.2.2a | §C.4.2.1, Table 2, Item 6, 10 |
| §6.2.2b  | §C.4.2.2, Table 3, Items 27, 28§C.4.2.3; Table 4, Item 30 |
| §6.2.2c | §C.4.3.2.3 |
| §6.2.3 | §C.4.1, Table 1, Item 5§C.4.2.2, Table 3, Items 23, 24, 25, 26§E.6.4, Factor 2, Subfactor 2, Table Item 21 |
| §6.2.4a | §C.4.2.1, Table 2, Item 12;§D.7.2.1 |
| §6.2.4b | §C.4.2.1, Table 2, Item 11 |
| §6.2.4c | §C.4.2.1, Table 2, Item 13 |
| §6.2.4d | §C.4.2.2, Table 3, Item 26 |
| §6.2.4e | §C.4.2.2, Table 3, Item 29 |
| §6.2.5a | §C.4.2.1 , Table 2, Item 16§C.4.3.3.1, Table 13 |
| §6.2.5b | §C.4.2.1 , Table 2, Item 15, 16, 18§C.4.3.3.1, Table 13 |
| §6.2.6a | §C.4.2.1, Table 2, Item 11 |
| §6.2.6b | §C.4.2.1, Table 2, Item  |
| §6.2.7a | §C.4.2.1, Table 2, Items 11, 12, 13, 14 |
| §6.2.7b | *Additional* |
| §6.2.7c | §C4.2.4, Table 5, Item 35, Point 3 |
| §6.2.7d | *Additional* |
| §6.2.7e | *Additional* |
| §6.2.7f | *Additional* |
| §6.2.7g | *Additional* |
| §6.2.7h | *Additional* |
| §6.2.7i | *Additional* |
| §6.2.7j | *Additional* |

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# IaaS BPA CLINs and MAS Schedule 70 labor categories

Table 3: CLINs and Labor Categories

| CLIN | DESCRIPTION | MONTHLY UNIT PRICE | QUANTITY | CEILING |
| --- | --- | --- | --- | --- |
| 0001 | Cloud Storage |  |  |  |
| 0002 | Data Transfer Bandwidth In – Web addressable cloud |  |  |  |
| 0003 | Data Transfer Bandwidth Out – Web addressable cloud |  |  |  |
| 0004 | Virtual Machine Bundle Windows OS – Persistent Storage |  |  |  |
| 0005 | Virtual Machine Bundle Linux OS – Persistent Storage |  |  |  |
| 0006 | Virtual Machine Bundle Solaris OS – Persistent Storage |  |  |  |
| 0007 | Supplemental Disk Space for Virtual Machine Lots – Persistent Storage |  |  |  |
| 0008 | Virtual Machine Bundle Windows OS – non-persistent storage |  |  |  |
| 0009 | Virtual Machine Bundle Linux OS – non-persistent storage |  |  |  |
| 0010 | Virtual Machine Bundle Solaris OS – non-persistent storage |  |  |  |
| 0011 | Persistent Block Cloud Storage for Virtual Machine Lots |  |  |  |
| 0012 | Virtual Machine Data Transfer In Bandwidth |  |  |  |
| 0013 | Virtual Machine Data Transfer Out Bandwidth |  |  |  |
| 0014 | Web Hosting Bundle Windows OS or equivalent |  |  |  |
| 0015 | Web Hosting Bundle Linux/Unix OS or equivalent |  |  |  |
| 0016 | Web Hosting Supplemental Disk Space |  |  |  |
| 0017 | Web Hosting Supplemental Data Transfer In |  |  |  |
| 0018 | Web Hosting Supplemental Data Transfer Out |  |  |  |
| CLIN | LABOR CATEGORY | LH RATE | TOTAL LH | CEILING |
| 0019 | Integration Services Project Manager |  |  |  |
| 0020 | Integration Services Subject Matter Expert I |  |  |  |
| 0021 | Integration Services Subject Matter Expert II |  |  |  |
| 0022 | Integration Services Subject Matter Expert III |  |  |  |
| 0023 | Integration Services Quality Assurance Analyst |  |  |  |
| 0024 | Integration Services System Architect |  |  |  |
| 0025 | Integration Services System Programmer |  |  |  |
| 0026 | Integration Services Hardware/Software Specialist |  |  |  |
| 0027 | Integration Services Security Specialist |  |  |  |