

**Solicitation Number- QTA010MAB0016
Infrastructure As A Service (IAAS) BPA**

SECTION A – INTRODUCTION

A.1. Background

Cloud computing is a major feature of the President’s initiative to modernize Information Technology (IT). Cloud computing has the capability to reduce the cost of IT infrastructure by utilizing commercially available technology that is based on virtualization of servers, databases and applications to allow for capital cost savings. The General Services Administration (GSA) focuses on implementing projects that increase efficiencies by optimizing common services and solutions across enterprise and utilizing market innovations such as cloud computing services. For the purposes of this solicitation, GSA has adopted the definition of Cloud Computing found in National Institute of Standards and Technology (NIST) Definition of Cloud Computing, available at <http://csrc.nist.gov/groups/SNS/cloud-computing>. Cloud computing is a model for enabling available, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services). The idea is that these resources can be rapidly provisioned and released with minimal management effort or service provider interaction. Additional information can be found at <http://csrc.nist.gov/groups/SNS/cloud-computing/index.html>.

The Federal Cloud Computing initiative is a services oriented approach, whereby common infrastructure, information, and solutions can be shared/reused across the Government. The overall objective is to create a more agile Federal enterprise – where services can be reused and provisioned on demand to meet business needs.

A.2. Objective

The Quoter shall conduct all necessary work to prepare and provide Infrastructure as a Service (IaaS) offerings in accordance with Section C.4. All work and services shall be performed in accordance with the terms and conditions of the Quoter’s GSA – Multiple Award Schedule (MAS) 70 General Purpose Commercial Information Technology Equipment, Software, and Services contract hereinafter referred to as MAS 70 contract, and the resulting BPA.

The objective of this RFQ is to award multiple Blanket Purchase Agreements (BPAs) in accordance with FAR 8.4 and to offer three key service offerings through IaaS providers for ordering activities. The requirements have been divided into three distinct Lots:

- Lot 1: Cloud Storage Services (Section C.4.3.1)
- Lot 2: Virtual Machines (Section C.4.3.2)
- Lot 3: Cloud Web Hosting (Section C.4.3.3)

Quoters may propose to provide any, all, or any combination of the three (3) Lots.

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SECTION B – SERVICES AND PRICES

See Attachment A – CLIN Pricing Workbook

SECTION C – STATEMENT OF WORK

C.1. Scope

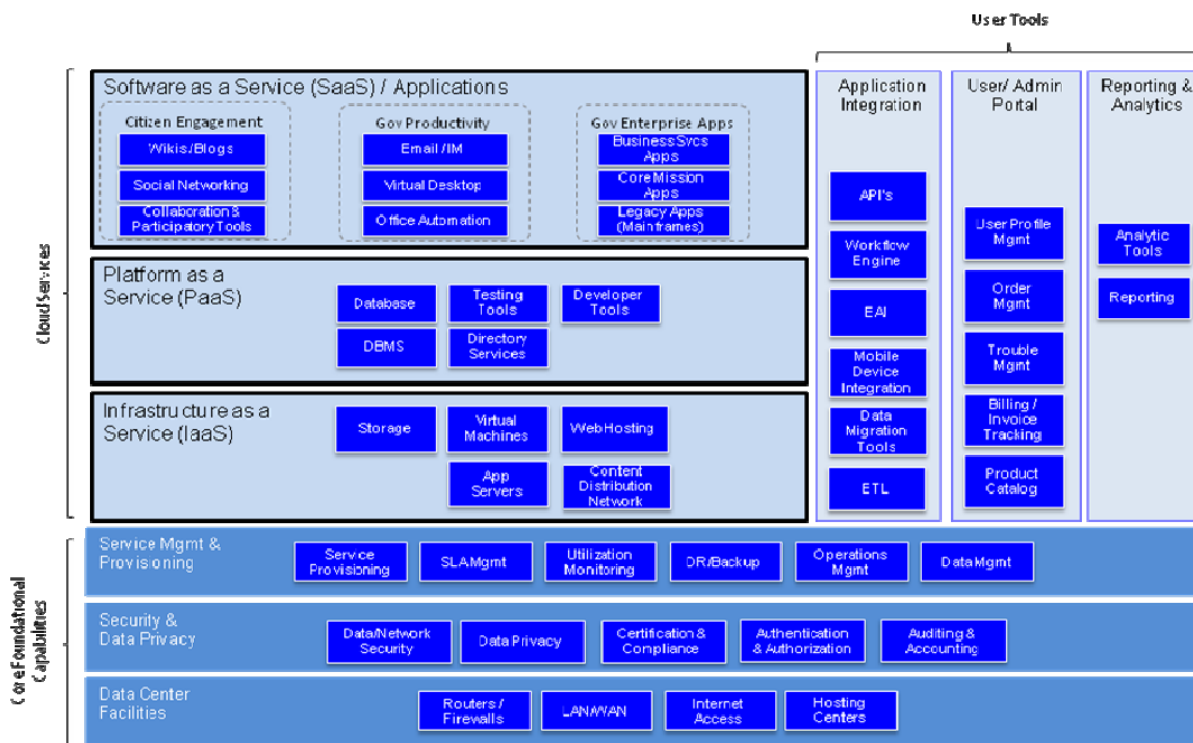
The scope of this RFQ focuses on IaaS service offerings available within a public cloud deployment model. The implementation is a Moderate Impact System as defined in National Institute of Science and Technology (NIST) Federal Information Processing Standard (FIPS) Publication 199 (Section D7. – Security Requirements).

C.2. Federal Cloud Computing Framework

The Cloud Computing Framework, illustrated below, provides a high-level overview of the key functional components for cloud computing services for the Government. The Cloud Computing Framework is neither an architecture nor an operating model. The Framework is a functional view of the key capabilities required to enable Cloud Computing. As depicted in the Figure 1 below, the framework consists of three major categories:

- Cloud Service Delivery Capabilities - Core capabilities required to deliver Cloud Services
- Cloud Services – Services delivered by the Cloud
- Cloud User Tools – Tools or capabilities that enable users to provision, manage, and use the Cloud services

Figure 1: Federal Cloud Computing Framework



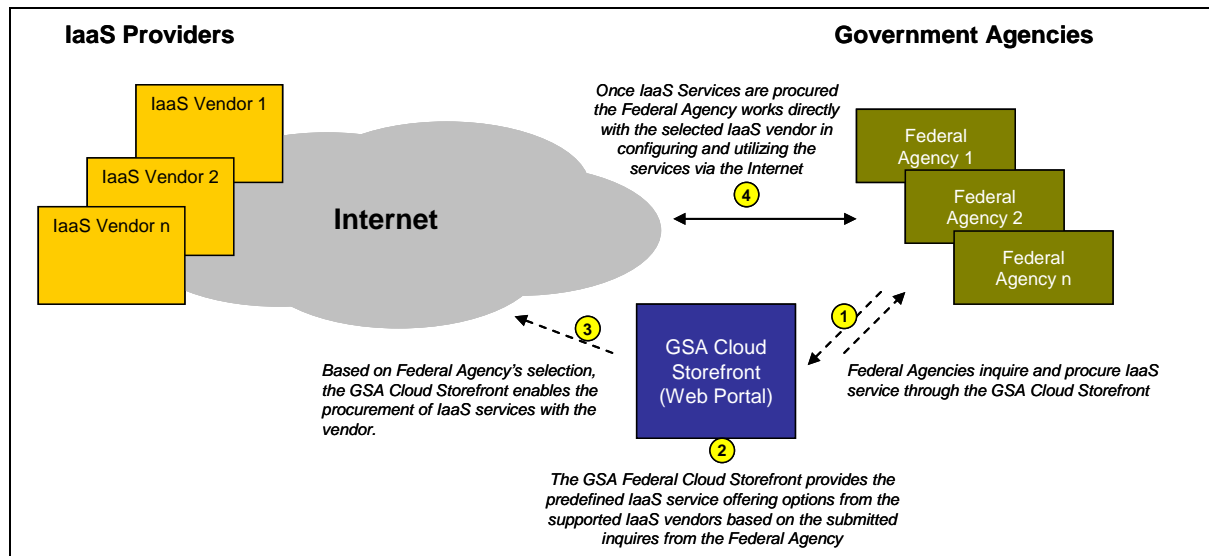
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The Horizontal functional areas represent the core “computing” capabilities that enable different levels of Cloud Computing, while the vertical functional areas illustrate the management and business capabilities needed to wrap-around the core components to enable business processes with Cloud Computing. For example, Reporting and Analytics offer the ability to perform key reporting and business intelligence analytics and therefore are not core Cloud Computing components; however, analytics offer significant business capabilities that can harness the power of the data that will reside within the Cloud Computing environment.

C.3. GSA Cloud Computing Storefront

The initial acquisition of these services will be facilitated by GSA through the GSA Cloud Computing Storefront Site – which will enable Government purchasers to buy (using a credit card or other acceptable payment option) IaaS service offerings as needed through a common Web Portal, such as apps.gov, which will be managed and maintained by GSA.

Figure 2: GSA Cloud Computing Storefront



C.4 Tasks

The requirements focus on IaaS service offerings, specifically for Storage Services, Virtual Machines (VM), and Cloud Web hosting service. Requirements have been established for each of the IaaS functional components within the Federal Cloud Framework described above as required (mandatory).

The Government shall retain ownership of any user created/loaded data and applications hosted on vendor's infrastructure, and maintains the right to request full copies of these at any time.

The requirements are divided into three categories as follows:

- General Cloud Computing Requirements – specifies general requirements for cloud services.
- IaaS Service Offering (Lot 1, 2, and 3) Requirements – specifies the requirements for service offerings along with their attributes and the purchase units.

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- IaaS Technical Requirements – specifies the technical requirements for enabling the IaaS service offerings.

C.4.1 Cloud Technical Requirements

The Quoter shall provide a Cloud Computing solution that aligns to the following “Essential Characteristics” as defined in the National Institute of Standards and Technology (NIST) Working Definition and described in Table 1 below:

Table 1: Cloud Technical Requirements

Cloud Characteristic	Definition	General Requirement
1. On-demand self-service	A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service’s provider.	The Quoter shall provide the capability for the ordering activity to unilaterally (i.e. without vendor review or approval) provision services.
2. Ubiquitous network access	Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, laptops, and PDAs).	2a. The Quoter shall support internet bandwidth of at least 1Gb/s 2b. The Quoter shall have a minimum of two data center facilities at two different geographic locations in the Continental United States (CONUS) and all services acquired under the BPA will be guaranteed to reside in CONUS.
3. Location independent resource pooling	The provider’s computing resources are pooled to serve all consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand. The customer generally has no control or knowledge over the exact location of the provided resources but may be able to specify location at a higher level of abstraction (e.g., country, state, or datacenter). Examples of resources include storage, processing, memory, network bandwidth, and virtual machines.	The Quoter shall support provisioning of practically unlimited storage, computing capacity, memory at 1000 times our minimum resource unit metrics, independently from the physical location of the facilities.
4. Rapid elasticity	Capabilities can be rapidly and elastically provisioned to quickly scale up and rapidly released to quickly	The Quoter shall support service provisioning and de-provisioning times (scale

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Cloud Characteristic	Definition	General Requirement
	scale down. To the consumer, the capabilities available for provisioning often appear to be infinite and can be purchased in any quantity at any time.	up/down), making the service available within near real-time of provisioning request.
5. Measured Service	Cloud systems automatically control and optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g., storage, processing, bandwidth, and active user accounts). Resource usage can be monitored, controlled, and reported providing transparency for both the provider and consumer of the utilized service.	The Quoter shall offer visibility into service usage via dashboard or similar electronic means.

C.4.2 IaaS Technical Requirements

This section specifies the requirements that are applicable to all three (3) Lots as mentioned in Section C.4.3. The requirements for this section are divided into the following areas: Service Management and Provisioning; User/Admin Portal; integration requirements; and data center facilities requirements.

4.2.1 C.4.2.1 Service Management and Provisioning Requirements

Service Management and Provisioning requirements address the technical requirements for supporting the provisioning and service management of the IaaS Service Offerings described in Section 4.3 of this document. Service provisioning focuses on capabilities required to assign services to users, allocate resources, and services and the monitoring and management of these resources.

Table 2: Service Management and Provisioning Requirements

<i>Service Provisioning</i>	<ol style="list-style-type: none"> 1. The Quoter shall provide the ability to provision virtual machines, storage and bandwidth dynamically (or on-demand), as requested. This shall include any traffic shaping capabilities the Quoter uses. 2. The Quoter shall enable Service Provisioning via customizable online portal/interface (tools). 3. The Quoter shall enable Service Provisioning via Application Programming Interface (API). 4. Quoter shall support secure provisioning, de-provisioning and administering [such as Secure Sockets Layer (SSL)/Transport Layer Security (TLS) or Secure Shell (SSH)]in its service offerings. 5. The Quoter shall support the terms of service requirement of
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	<p>terminating the service at any time (on-demand).</p> <p>6. The Quoter shall provide a custom webpage and associated Uniform Resource Locator (URL) that describes the following:</p> <ul style="list-style-type: none"> a. Service Level Agreements (SLAs) b. Help Desk and Technical Support c. Resources (Documentation, Articles/Tutorials, etc) <p>7. The Quoter shall make the Management Reports described in Section 6 accessible via online interface. These reports shall be available for one year after being created.</p>
<p><i>Service Level Agreement Management</i></p>	<p>8. The Quoter shall provide a robust, fault tolerant infrastructure that allows for high availability of 99.5%.</p> <p>9. The Quoter shall document and adhere to their SLAs to include:</p> <ul style="list-style-type: none"> • Service Availability (Measured as Total Uptime Hours / Total Hours within the Month) displayed as a percentage of availability up to one-tenth of a percent (e.g. 99.5%) • Within a month of a major outage occurrence resulting in greater than 1-hour of unscheduled downtime. The Quoter shall describe the outage including description of root-cause and fix. • Service provisioning and de-provisioning times (scale up and down) in near real-time <p>10. The Quoter shall provide Helpdesk and Technical support services to include system maintenance windows.</p>
<p><i>Operational Management</i></p>	<p>11. The Quoter shall manage the network, storage, server and virtualization layer, to include performance of internal technology refresh cycles applicable to this BPA.</p> <p>12. The Quoter shall provide a secure, dual factor method of remote access which allows Government designated personnel the ability to perform duties on the hosted infrastructure.</p> <p>13. The Quoter shall perform patch management appropriate to the scope of their control.</p> <p>14. The Quoter shall provide the artifacts, security policies and procedures demonstrating its compliance with the the Security Assessment and Authorization requirements as described in Section D7 – Security Requirements.</p>

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<i>DR and COOP</i>	<p>15. The Quoter shall ensure the security of the services and data hosted at their facilities by providing DR (Disaster Recovery) and COOP (Continuity of Operations) capabilities.</p> <p>16. The Quoter shall perform backup, recovery and refresh operations on a periodic basis.</p>
<i>Data Management</i>	<p>17. The Quoter shall manage data isolation in a multi-tenant environment.</p> <p>18. The Quoter shall transfer data back in-house either on demand or in case of contract or order termination for any reason.</p> <p>19. The Quoter shall manage data remanence throughout the data life cycle.</p> <p>20. The Quoter shall provide security mechanisms for handling data at rest and in transit.</p>

C.4.2.2 User/Admin Portal Requirements

Table 3 below describes User/Admin management requirements:

Table 3: User/Admin Portal Requirements

<i>Order Management</i>	<p>21. The Quoter shall enable Order Management via customizable online portal/interface (tools).</p> <p>22. The Quoter should enable Order Management via Application Programming Interface (API).</p>
<i>Billing/Invoice Tracking</i>	<p>23. The Quoter shall provide on-line billing capability that will allow customers to see the status of their bills (updated weekly).</p> <p>24. The Quoter shall provide the ability for the customer agency to track the status of their invoices.</p> <p>25. The individual task orders issued under this BPA will specify a monthly ceiling dollar limitation. When 80% of this dollar limit has been reached, the Quoter shall notify the user, by email and by posting that notification to the website, that the quoter is approaching the 80% threshold for the order. The Quoter shall not bill beyond the approved monthly dollar threshold.</p>
<i>Utilization Monitoring</i>	<p>26. The Quoter shall provide automatic monitoring of resource utilization and other events such as failure of service, degraded service, etc. via service dashboard or other electronic means.</p>
<i>Trouble Management</i>	<p>27. The Quoter shall provide Trouble Ticketing via customizable online portal/interface (tools).</p> <p>28. The Quoter should provide Trouble Ticketing via API.</p>

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<i>User Profile Management</i>	29. The Quoter shall maintain user profiles and present the user with his/her profile at the time of login.
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C.4.2.3 Integration Requirements

Table 4 describes Integration requirements for cloud services.

Table 4: Integration Requirements

<i>Application Programming Interfaces (APIs)</i>	30. The Quoter shall provide support to all API's it develops/provides.
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C.4.2.4 Data Center Facilities Requirements

Table 5 describes Data Center Facilities requirements.

Table 5: Data Center Facilities Requirements

<i>Internet Access</i>	31. The Quoter shall identify Tier 1 Internet service providers it is peered with, and where this peering occurs. A Tier 1 network is an IP network that participates in the Internet solely via Settlement Free Interconnection, also known as settlement free peering. The Quoter shall provide its Autonomous Number System
<i>Firewalls</i>	32. The Quoter shall implement a firewall policy that allows the Government to administer it remotely, or the Quoter shall administer a firewall policy in accordance with the Government's direction, allowing the Government to have read-only access to inspect the firewall configuration.
<i>LAN/WAN</i>	<p>33. The Quoter 's Local Area Network (LAN) shall not impede data transmission.</p> <p>34. The Quoter shall provide a Wide Area Network (WAN), with a minimum of two data center facilities at two different geographic locations in the Continental United States (CONUS) and all services acquired under the BPA will be guaranteed to reside in CONUS. The Quoter shall provide Internet bandwidth at the minimum of 1 GB.</p> <p>35. IP Addressing:</p> <ol style="list-style-type: none"> 1) The Quoter should provide IP address assignment, and if capable, include Dynamic Host Configuration Protocol (DHCP). 2) The Quoter shall provide IP address and IP port assignment on external network interfaces. 3) The Quoter should provide dedicated virtual private network (VPN) connectivity between customer and the vendor. 4) The Quoter shall allow mapping IP addresses to domains owned by the Government, allowing websites or other applications operating in the cloud

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	to be viewed externally as Government URLs and services. 5) The Quoter shall provide an infrastructure that is IPv6 capable.
<i>Data Center Facilities</i>	36. The Quoter shall provide data center facilities including space, power, physical infrastructure (hardware). Upon request from the Government, the hosting Quoter shall provide access to the hosting facility for inspection. 37. The Quoter shall provide data center facilities and the physical and virtual hardware that are located within the Continental United States of America (CONUS).

C.4.3 Lot Specific Technical Requirements

The IaaS Service Offering Requirements have been divided into three distinct Lots:

- Lot 1: Cloud Storage Services (Section C.4.3.1)
- Lot 2: Virtual Machines (Section C.4.3.2)
- Lot 3: Cloud Web Hosting (Section C.4.3.3)

The following sections describe the service, service options, service attributes, and service units for the three Lots.

C.4.3.1 LOT 1: CLOUD STORAGE SERVICES

C.4.3.1.1 Cloud Storage Service Requirements

Cloud Storage Services shall consist of the following REQUIRED Services, Service Options, Service Attributes and Service Units.

The service shall be available online, on-demand, and dynamically scalable up or down per request for service from the end users via Internet through a web browser. Table 7 below provides a description of the service requirements for Cloud Storage Services. This table describes the requirements for the following:

- **Service** – Provides a high-level description of the functionality of the Cloud Storage Services
- **Service Options** – The service shall support both storage of files and storage of data objects options described in Table 7. The service shall also support PUT, POST, GET, HEAD, DELETE, POST, COPY, and LIST (Table 6)
- **Command/Request** – on Containers/Buckets and Objects/Files as described in Table 6.

Table 6: Command/Request Definitions

Request/Operation	Container/Bucket	Object/File
PUT	PUT operations performed against Container/Bucket are used to create that container	PUT operations against an Object are used add object to the bucket/container and write, overwrite, an object’s metadata and content

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Request/Operation	Container/Bucket	Object/File
GET	GET operations performed against Container/Bucket lists information about objects within that container/bucket	GET operations against an Object are used to retrieve objects and the objects' data from the container/bucket
HEAD	HEAD operations against a storage Container are used to determine the number of Objects, and the total bytes of all Objects stored in the Container.	HEAD operations against an Object are used to retrieve object's metadata and other HTTP headers
DELETE	DELETE operations performed against Container/Bucket deletes the container/bucket.	DELETE operations against an Object are used to permanently delete the specified object
POST POST is an alternate form of PUT that enables browser-based uploads	The POST request operation adds an object to a container/bucket using HTML forms.	POST operations against an Object name are used to set and overwrite arbitrary key/value metadata
COPY	The COPY operation creates a new, uniquely named copy of a container/bucket that is already stored.	The COPY operation creates a uniquely name copy of an object/file that is already stored.
LIST	The LIST operation displays the information of a current Container/Bucket.	The LIST operation displays the current objects/files, including metadata.

- **Service Attributes** – All the Service Attributes described in Table 7 shall be provided for all service options as either standalone subservices within the Service or as one or more bundled Service Attributes.
- **Service Units** – Provides the requirements for the minimum purchasable units of the Service Attributes. These Service Units may be purchased at the minimum or in multiples of the minimum. The customer shall be billed for the actual service units used.

Table 7: Cloud Storage Service Requirements

Service Description	Service Options	Service Attributes (key subservices that can be applied to the Service Options)	Service Units (purchasable units of service attributes)
Cloud Storage Service – <ul style="list-style-type: none"> • Service shall provide scalable, redundant, dynamic Web-based storage • Service shall provide users with the ability to procure and use 	Storage for files – ability to store, access and modify computer files within the Cloud infrastructure via the Internet. Files shall be accessible via URL. Storage for Data	Storage Space: Online, on-demand virtual storage for files / objects supporting a single file/object sizes of up to 5GB	GB (gigabyte) of storage used/month
		Data Transfer Bandwidth:	GB (gigabyte) of Data Transfer Bandwidth (In, Out)

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Service Description	Service Options	Service Attributes (key subservices that can be applied to the Service Options)	Service Units (purchasable units of service attributes)
data and file storage capabilities remotely via the Internet • Service shall provide file and object data storage capabilities on-demand, dynamically scalable per request and via the Internet	Objects – ability to store, access and modify data objects within the Cloud infrastructure via the Internet Storage Commands / Requests- Performing commands regarding files/objects within the Storage service including: PUT, COPY, POST, LIST, GET, DELETE, HEAD	Bandwidth utilized to transfer files/objects in/out of the providers infrastructure supporting a minimum of 100GB of data transferred (in and out) via the Internet. If there are costs associated with data transfer over and above ordinary bandwidth charges, or there are special capabilities for bulk transfer, please indicate clearly in Attachment A – Pricing Workbook.	used/month

C.4.3.1.2 Storage and Bandwidth Tiers

The Quoter shall provide the following pricing tiers for storage (Table 8) and data transfer bandwidth (In, Out) (Table 9). The customer shall be billed only for actual service units used per month. Units shall be measured in Gigabytes (GB). Refer to Attachment A – CLIN Pricing Workbook.

Table 8: Storage Tiers

	Tier 1	Tier 2	Tier 3	Tier 4
	First 50,000 GB/month	50,001 to 100,000 GB /month	100,001 to 300,000 GB /month	Over 300,000 GB/ month

Table 9: Data Transfer Bandwidth Tiers

	Tier 1	Tier 2	Tier 3	Tier 4
	0 to 10,000 GB /month	10,001 to 50,000 GB /month	50,001 to 150,000 GB /month	Over 150,000 GB /month

C.4.3.2 LOT 2: VIRTUAL MACHINE

C.4.3.2.1 Virtual Machine Requirements

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The Virtual Machine Service shall consist of the following REQUIRED Services, Service Options, Service Attributes, and Service Units.

The service shall be available online, on-demand and dynamically scalable up or down per request for service from the end users via Internet through a web browser. Table 10 below provides a description of the service requirements for Virtual Machines. This table describes the requirements for the following:

- **Service** – Provides a high-level description of the functionality of the Virtual Machine Service
- **Service Options** – The service shall support the Central Processing Unit (CPU) and Operating System options described in Table 10.
- **Service Attributes** – The service shall support all the service attributes described in Table 10. The Service Attributes shall be provided as either standalone subservices within the Service or as one or more bundled Service Attributes.
- **Service Units** – The service shall provide the capability to purchase the service attributes in the units described below at a minimum. These Service Units may be purchased at the minimum or in multiples of the minimum.

Table 10: Virtual Machine Service Requirements

Service Description	Service Options	Service Attributes (key subservices that can be applied to the Service Options)	Service Units (purchasable units of service attributes)
<p>Virtual Machines-</p> <ul style="list-style-type: none"> • Service shall provide scalable, redundant, dynamic computing capabilities or virtual machines. • Service shall allow Government users to procure and provision computing services or virtual machine instances online via the Internet. • Service shall allow users to remotely load applications and data onto the computing or virtual machine instance from the Internet. • Configuration and Management of the 	<p>CPU (Central Processing Unit) - CPU options shall be provided as follows:</p> <ul style="list-style-type: none"> • A minimum equivalent CPU processor speed of 1.1GHz shall be provided. Additional options for CPU Processor Speed may be provided, however it is not required. • The CPU shall support 32-bit or 64-bit operations <p>Specify in Attachment A – CLIN Pricing Workbook</p> <p>Operating System (OS) – Service shall support at least one of the following</p>	<p>RAM (Random Access Memory):</p> <p>Physical memory (RAM) reserved for virtual machine instance or Computing supporting a minimum of 1GB of RAM.</p> <p>Disk Space</p> <p>Disk Space options allocated for all virtual machines and file data supporting a minimum of 40GB bundled storage.</p> <p>Data Transfer Bandwidth:</p> <p>Bandwidth utilized to transfer data in/out of the</p>	<ul style="list-style-type: none"> • Per hour usage <p>GB (gigabyte) of Data Transfer Bandwidth (In,</p>

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<p>Virtual Machine shall be enabled via a Web browser over the Internet</p>	<p>OS: Windows, LINUX, or Solaris. Any or all of the OSs may be provided or supported; however, only one is required.</p> <p>For each OS specify distribution (e.g. Red Hat Enterprise, SuSE, Ubuntu, Windows Server 2008) and version. Where pricing differences exist based on OS version or distribution please indicate clearly in Attachment A – CLIN Pricing Workbook</p> <p>Persistence – Persistent Bundled Storage is retained when the virtual machine instance is stopped or Non-Persistence – Non-Persistence Bundled Storage is released when the virtual instance is stopped. If quoting Non-Persistence VM, the quoter shall provide VM Block storage as defined in Table 10a.</p> <p>Please indicate clearly in which type VM you are providing in Attachment A – CLIN Pricing Workbook.</p>	<p>provider’s infrastructure supporting a minimum of 400GB of data transferred (in and out) via the Internet.</p> <p>If there are costs associated with data transfer over and above ordinary bandwidth charges, or there are special capabilities for bulk transfer, please indicate clearly in Attachment A – CLIN Pricing Workbook.</p>	<p>Out)/month</p>
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Table 10a: Virtual Machine Block Storage Service Requirements

Service Description	Service Options	Service Attributes (key subservices that can be applied to the Service Options)	Service Units (purchasable units of service attributes)
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Service Description	Service Options	Service Attributes (key subservices that can be applied to the Service Options)	Service Units (purchasable units of service attributes)
Disk/Block Storage Service – <ul style="list-style-type: none"> Service shall provide scalable, redundant, dynamic Web-based storage Service shall provide users with the ability to procure and provision block storage capabilities for cloud virtual machines remotely via the Internet. Service shall provide block storage capabilities on-demand, dynamically scalable per request for virtual machine instances. 	<ul style="list-style-type: none"> Block Storage – Once mounted, the block storage should appear to the virtual machine like any other disk 	Storage Space: Online, on-demand storage volumes of arbitrary size ranging from 1 GB to at least 1 TB	GB (gigabyte) of storage used/month
		Input/Output (I/O) Requests: Input/Output requests on block storage	Number of 1 Million I/O requests

C.4.3.2.2 Bundling of Virtual Machine Service Attributes

The Quoter shall provide bundles of Virtual Machine service attributes or equivalent as described in Table 11. The Quoter shall provide the data transfer bandwidth pricing tiers as described in Table 12. Additional usage (overage) of Disk Space within a month shall be charged by per GB of disk space usage per hour. Refer to Attachment A – CLIN Pricing Workbook.

Table 11: Virtual Machine Bundles

Service Attribute	1GB Bundle	2Gb Bundle	4 GB Bundle	8 GB Bundle	15.5 GB Bundle
RAM	1024 MB/1 GB	2048 MB/2 GB	4096MB/4GB	8192MB/8GB	15872MB/15.5 GB

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Disk Space	40 GB	80 GB	160 GB	320 GB	620 GB
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Table 12: Data Transfer Bandwidth Tiers

	Tier 1	Tier 2	Tier 3	Tier 4
	0 to 10,000 GB /month	10,001 to 50,000 GB /month	50,001 to 150,000 GB /month	Over 150,000 GB /month

C.4.3.2.3 Virtual Machine Technical Requirements

The Government retains ownership of all virtual machines, templates, clones, and scripts/applications created with individual task orders issued under this BPA as well as maintaining the right to request full copies of these virtual machines at any time.

The Government (customer) retains ownership of customer loaded software installed on virtual machines and any application or product that is developed under orders against this BPA.

The Quoter shall:

1. Provide virtualization services for the customer to be able to spawn on-demand virtual server instances.
2. Support a secure administration interface - such as SSL/TLS or SSH - for the Government designated personnel to remotely administer their virtual instance.
3. Provide the capability to dynamically allocate virtual machines based on load, with no service interruption.
4. Provide the capability to copy or clone virtual machines for archiving, troubleshooting, and testing.

The Quoter should:

5. Provide multiple processor virtual machines.
6. Manage processor isolation in a multi-tenant environment.
7. Provide capability to perform live migrations (ability to move running VM's) from one host to another.
8. Provide a hypervisor which supports security features such as role-based access controls and auditing of administrative actions.
9. Provide a hypervisor which supports hardware-assisted memory virtualization.

C.4.3.3 LOT 3: CLOUD WEB HOSTING

C.4.3.3.1 Cloud Web Hosting Service requirements

The Cloud Web Hosting Service shall consist of the following REQUIRED Services, Service Options, Service Attributes and Service Units.

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The service shall be an available online, on-demand and dynamically scalable up or down per request for service from the end users via Internet through a Web browser. Table 13 provides a description of the service requirements for Cloud Web Hosting Service. This table describes the requirements for the following:

- **Service** – Provides a high-level description of the functionality of the Cloud Web Hosting Service.
- **Service Options** – The service shall support the Central Processing Unit (CPU) and Operating Systems options described in the Table 13.
- **Service Attributes** – The service shall provide the service attributes described in the Table 13 for all of the Service Options. The Service Attributes shall be provided as either standalone subservices within the Service or as one or more bundled Service Attributes.
- **Service Units** – The service shall provide the capability to purchase the service attributes in the units described below at a minimum. These Service Units may be purchased at the minimum or in multiples of the minimum.

Table 13: Cloud Web Hosting Service Requirements

Service Description	Service Options	Service Attributes (key subservices that can be applied to the Service Options)	Service Units (purchasable units of service attributes)
<p>Cloud Web Hosting –</p> <ul style="list-style-type: none"> • Cloud Web hosting service shall provide Web application hosting services in the cloud enabling scalable, redundant, dynamic web hosting service. • Cloud Web hosting service shall allow Government users to procure and provision Web hosting service online via the Internet. • Cloud Web hosting service shall allow users to securely load applications and data onto the provider’s service remotely from the Internet. • Configuration of Cloud Web hosting service shall be 	<p>CPU (Central Processor Unit) - CPU options shall be provided as follows:</p> <ul style="list-style-type: none"> • A minimum equivalent CPU processor speed of 1.1GHz shall be provided. Additional options for CPU Processor Speed may be provided, however it is not required. • The CPU environment shall support 32-bit or 64-bit operations <p>Operating System (OS) – Service shall support Windows or LINUX OS’s. For each OS specify distribution (e.g. Red Hat Enterprise, SuSE, Ubuntu, Windows Server 2008) and version. Where pricing differences exist based on</p>	<p>Disk Space</p> <p>Disk Space allocated over and above OS, required website software and additional software shall be a minimum of 10GB of persistent storage</p> <hr/> <p>Data Transfer Bandwidth:</p> <p>Bandwidth utilized to transfer data in/out of the provider’s infrastructure shall support a minimum of 300GB of data transferred via the Internet.</p> <p>The Quoter shall support Content Delivery Network (CDN) capabilities directly or through a partner, to</p>	<p>GB of Disk Space per month</p> <hr/> <p>GB (gigabyte) of Bandwidth per month (In, Out)</p>

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Service Description	Service Options	Service Attributes (key subservices that can be applied to the Service Options)	Service Units (purchasable units of service attributes)
<p>configured via a Web browser over the Internet.</p>	<p>OS version or distribution please indicate clearly in Attachment A – CLIN Pricing Workbook.</p> <p>Required website software includes:</p> <ul style="list-style-type: none"> • Database instances (e.g. Microsoft SQL Server, MySQL, Oracle, DB2, etc.) Specify database vendor and version. <p>Where pricing differences exist based on Database vendor or versions indicate clearly in Attachment A – CLIN Pricing Workbook.</p> <ul style="list-style-type: none"> • Web Server software (e.g. Apache, IIS) • Application services capable of conveying web requests to database. • DNS (Domain Name System) • DNS Sec (Domain Name System Security Extensions) • The Quoter shall permit any additional software that is provided by the Government for operation in the cloud <p>At least one database must be included with each OS.</p> <p>The Service shall support database backup/restore</p> <p>Additional software includes but is not limited to:</p>	<p>provide balanced delivery of content nationwide.</p> <p>If there are costs associated with data transfer over and above ordinary bandwidth charges, or there are special capabilities for bulk transfer, please indicate clearly in Attachment A – Pricing Template.</p>	

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Service Description	Service Options	Service Attributes (key subservices that can be applied to the Service Options)	Service Units (purchasable units of service attributes)
	<ul style="list-style-type: none"> • Application platforms and services (JEE application servers, , PHP,PERL, Python, Ruby, PostgreSQL .Net) and licensing terms for bundled commercial software. • Additional optional services such as directory services, queuing services, authentication services, etc. <p>Where pricing differences exist based on additional software please indicate clearly in Attachment A – CLIN Pricing Workbook.</p> <p>Additional software may be included with packages, but they are not required to be included with an OS.</p>		

C.4.3.3.2 Bundling of Cloud Web Hosting Service Attributes

The Quoter shall provide the following bundles of Cloud Web Hosting Service attributes. The service shall be charged monthly. Additional usage (overage) of service attributes within a month shall be charged by the service units mentioned above.

Table 14: Cloud Web Hosting Services Bundling

Service Attribute	10GB Bundle	50GB Bundle	150 GB Bundle
Storage	10 GB	50 GB	150 GB
Data Transfer Bandwidth (In, Out)	300 GB	500GB	1500 GB

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C.5 Compliance Requirements

C.5.1 Section 508

All electronic and information technology (EIT) procured through any resultant BPA must meet the applicable accessibility standards at 36 CFR 1194, unless an agency exception to this requirement exists. The 36 CFR 1194 implements Section 508 of the Rehabilitation Act of 1973, as amended.

C.5.2 Information Technology Systems Security Requirements

The Office of Management and Budget (OMB) Circular A-130, Management of Federal Information Resources, requires Federal agencies to plan for security. The following security requirements apply to services that may be provided in individual task orders issued under this BPA.

The Government and the Contractor will work in good faith to establish an Interconnection Security Agreement (ISA) and/or a Memorandum of Understanding (MOU) as provided in the National Institute of Standards and Technology (NIST) Special Publication 800-47, Security Guide for Interconnecting Information Technology Systems, Section D.7 - Security Requirements. The Government's intent is to accept the Contractor's commercial information security practices that are functionally equivalent to those provided by NIST Special Publication 800-53, Recommended Security Controls for Federal Information Systems, for moderate impact systems.

The Federal Cloud Computing Initiative Project Management Office (FCCI PMO) manages the Cloud Computing Working Groups under the CIO Working Group. The Office of the Chief Information Officer at GSA will coordinate with the FCCI PMO and its Working Groups to provide security authorizations.

The FCCI PMO is in the process of launching Federal Risk and Authorization Management Program (FedRAMP), a unified government-wide risk management program focused on large outsourced and multi-agency systems. FedRAMP will provide security authorizations and continuous monitoring of shared systems that can be leveraged by agencies to both reduce their security compliance burden and provide them highly effective security services.

GSA OCIO will use the security framework currently being developed for FedRAMP for authorization of BPA awardees and awardees will have an opportunity to obtain a FedRAMP authorization after FedRAMP is formally launched.

- 1. Obtaining a full authorization from GSA OCIO must be accomplished before any ordering on the BPA is permitted. Therefore, quoters should be prepared to submit the necessary artifacts and the independent verification as soon after BPA award as possible.**
- 2. The cost of meeting all security requirements and maintaining authorization shall be incorporated into the quoted prices.**

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- 3. Quoters who receive an award will be given only three opportunities to submit their documentation for assessment.**
- 4. If awardee fails to receive authorization adjudication within 90 days after submission of documentation, the government reserves the right to cancel the BPA in accordance with section D.6.**

NOTE: See Section D.7 – Security Requirements for additional requirements.

C.5.3 Privacy Requirements

In accordance with the Federal Acquisitions Regulations (FAR) clause 52.239-1, the Contractor shall be responsible for the following privacy and security safeguards:

- (a) The Contractor shall not publish or disclose in any manner, without the Contracting Officer's written consent, the details of any safeguards either designed or developed by the Contractor under this BPA or otherwise provided by the Government.
- (b) To the extent required to carry out a program of inspection to safeguard against threats and hazards to the security, integrity, and confidentiality of any non-public Government data collected and stored by the Contractor, the Contractor shall afford the Government access to the Contractor's facilities, installations, technical capabilities, operations, documentation, records, and databases.
- (c) If new or unanticipated threats or hazards are discovered by either the Government or the Contractor, or if existing safeguards have ceased to function, the discoverer shall immediately bring the situation to the attention of the other party.
- (d) The contractor shall also comply with any additional GSA OCIO privacy requirements.

C.6. Management Reporting Deliverables

After award of the BPA(s), the Quoter shall be responsible for the deliverable products on firm-fixed price basis within the schedules contained in the individual task orders.

Deliverables listed below should be accessible via online interface not later than 10 days after the end of the calendar month and available for up to one year after creation. The information shall be available in comma separated values (CSV) file format. The Quoter shall provide non-cumulative monthly reports for the items described in the table below for:

- all Government customers in aggregate total
- all Government customers in aggregate total broken down by organization indicating the Agency and Bureau using the first four digits of the AB (Agency - Bureau) Code as the identifier.

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Report / Deliverable	Description	Delivered To	Frequency
Service Level Agreement (SLA)	<ul style="list-style-type: none"> • Service Availability (Measured as Total Uptime Hours / Total Hours within the Month) displayed as a percentage of availability up to one-tenth of a percent (e.g. 99.5%) • Text description of major outages (including description of root-cause and fix) resulting in greater than 1-hour of unscheduled downtime within a month 	Ordering Activity COTR	Monthly
Help Desk / Trouble Tickets	<ul style="list-style-type: none"> • Number of Help Desk/customer service requests received. • Number of Trouble Tickets Opened • Number of trouble tickets closed • Average mean time to respond to Trouble Tickets (time between trouble ticket opened and the first contact with customer) • Average mean time to resolve trouble ticket 	Ordering Activity COTR	Monthly
Attachment E – Report of Sales –	<ul style="list-style-type: none"> • Quantity and Type of IaaS service orders received • Number of service orders (and percentage of orders out of the total) which resulted in an email or contact with customer within two hours of individual task order(s) issued under this BPA being sent to vendor 	GSA Cloud Computing Initiative PMO and GSA BPA CO	Monthly
Service Utilization	<ul style="list-style-type: none"> • Monthly utilization of each IaaS Service type (Lot) as defined by the Service Units for the specific Lot offered by the vendor 	GSA BPA CO	Monthly
Invoicing/Billing	<ul style="list-style-type: none"> • Standard invoicing/billing 	Ordering Activity COTR	Monthly

The Quoter shall provide one (1) hard copy and one (1) electronic version of each deliverable submitted to the ordering activity COTR. The Government will have ten (10) business days, to review, accept or reject all deliverables. Any comments made by the Government shall be addressed and a revised deliverable submitted within five (5) business days after the receipt of the comments/rejection, unless a further time extension for incorporating the comments is approved by the ordering activity COTR.

Failure to adhere to the due dates for the deliverable may cause termination of a specific task order (when issued).

If at any time during performance of any future task orders, the ordering activity COTR determines the quality of service does not fulfill the requirement of the deliverables specified, the ordering activity COTR will inform the ordering activity Contracting Officer (CO) of the poor performance.

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The ordering activity CO will provide official written notification to the Quoter of the poor performance issue(s).

SECTION D – TERMS AND CONDITIONS

D.1. Task Orders

The Quoter will furnish all services in accordance with the specific requirements outlined in task order issued. Orders will be issued for fixed-price units of service.

D.2. Contract Clauses

This BPA will be subject to the terms and conditions of the MAS 70 contract [GS-XX-XXXX]. In the event of a conflict between the provisions of the BPA, task order, and the MAS contract, the provisions of the MAS contract will take precedence.

D.3. Additional Contract Clauses

FAR 52.217-8, OPTION TO EXTEND SERVICES (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The options provision may be exercised more than once, but the total extension of performance hereunder shall not exceed six (6) months. The Contracting Officer may exercise the option by written notice to the Quoter within 30 calendar days.

D.4. Invoices

Invoicing and payment shall be accomplished in accordance with the applicable GSA Schedule contract clauses and the individual Task Order. Invoicing may commence upon acceptance of the final version(s) of each of the deliverables.

D.5. Period of Performance

The term of the BPA(s) will be for five (5) years. Quoters may be awarded BPAs that extend beyond the current term of their GSA Schedule contract, so long as there are option periods in their GSA Schedule contract that if exercised, will cover the BPA's period of performance.

D.6. Review and Cancellation of BPAs:

- (1) In accordance with FAR 8.405-3(d), GSA shall review each BPA at least once a year to determine whether –
 - a. The Schedule contract, upon which the BPA was established, is still in effect.
 - b. The BPA still represents the best value; and
 - c. Estimated quantities/amounts have been exceeded and additional price reductions can be obtained
- (2) The ordering activity shall document the results of its review.

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- (3) Upon provision of 30 days written notice, either party may cancel this BPA, either in whole or in part. Cancellation is not termination; if the government elects to exercise this right, the contractor is not entitled to costs that might otherwise be allowed under Part 49 of the FAR.

D.7. Security Requirements

D.7.1. Overview

Below provides GSA’s minimum requirements for a Moderate Impact Cloud Computing (CC) Infrastructure as a Service (IaaS) Offering. In CC, security responsibilities are shared between the Quoter and the Consumer, in this case a Federal Government Agency. The Quoter is responsible for provisioning, securing, monitoring, and maintaining the hardware, network(s), and software that support the infrastructure and present Virtual Machines (VMs) and IT resources to the consumer. On its part, the Consumer Agency is responsible for the security of the “guest” Operating System (OS) and any additional software, up to and including the applications running on the guest OS.

In a Web Hosting scenario, the Quoter is responsible for securing, monitoring, and maintaining the infrastructure as described above, plus the Web Server software and supporting software (i.e., any data base management systems.) The Consumer Agency is responsible for securing and maintaining the web application. If individual (named) user access is required, the specific Service Level Agreement shall document who is responsible for creating, and maintaining user accounts.

The implementation of a new Federal Government IT system requires a formal approval process known as Assessment and Authorization with continuous monitoring. National Institute of Standards and Technology Special Publication 800-37, Revision 1, “Guide for applying the Risk Management Framework to Federal Information System”. (hereafter described as NIST 800-37) gives guidelines for performing the Assessment and Authorization (A&A) process.

At the Moderate Impact level, an independent third party assessment is required of the Quoter’s security controls to determine the extent to which security controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting security requirements. The GSA’s OCIO security staff will be available for consultation during the process, and will review the results before issuing a Assessment and subsequent Authorization decision. The Government reserves the right to verify the infrastructure and security test results before issuing an Authorization decision..

Ordering activities will be able to leverage the Authorization decision by the GSA process and eventually the FedRAMP process (if they choose) and any documentation prepared by the Quoter to accredit the application systems that take advantage of this contract vehicle.

The Quoter is advised to review the NIST and GSA guidance documents (see References below) to determine the level of effort that will be necessary to complete the requirements.

D.7.2. GSA Security Compliance Requirements

1. Security - The infrastructure being requested is currently rated at Moderate Impact in all three categories (confidentiality, integrity, and availability) as defined in FIPS Pub 199, “Standards for Security Categorization of Federal Information and Information Systems”. The three categories are defined as follows:

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2. Definitions:

- **CONFIDENTIALITY:** “Preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information...” [44 U.S.C, Sec 3542] A loss of confidentiality is the unauthorized disclosure of information.
- **INTEGRITY:** “Guarding against improper information modification or destruction, and includes ensuring information non-repudiation and authenticity...” [44 U.S.C., Sec 3542] A loss of integrity is the unauthorized modification or destruction of information.
- **AVAILABILITY:** “Ensuring timely and reliable access to and use of information...” [44 U.S.C., Sec 3542] A loss of availability is the disruption of access to or use of information or an information system.

3. NIST Special Publication 800-53 Revision 3¹, “Recommended Security Controls for Federal Information Systems” (hereafter described as NIST 800-53) defines requirements for compliance to meet the minimum security requirements for a system designated “Moderate Impact”. NIST SP 800-53 requirements are viewed as mandatory requirements for which some risks are acceptable, but generally most requirements pertaining to the impact level must be incorporated into the infrastructure. NIST 800-53 controls requiring organization-defined parameters (i.e., password change frequency) shall be consistent with GSA specifications. The GSA-specified control parameters and supplemental guidance defining more specifically the requirements per FIPS 199 impact level are available from the GSA Program Management Office (PMO).

4. Quoter shall implement the controls from NIST SP 800-53 as modified by the GSA OCIO for a moderate impact system (as defined in FIPS 199). The GSA OCIO process has identified additional controls and enhancements above baseline for moderate systems. The following modifications will be provided by the GSA Program Management Office (PMO).

5. The hosting Quoter shall generally and substantially and in good faith follow NIST guidelines and GSA Security guidance. Where there are no procedural guides, use generally accepted industry best practices for IT security.

D.7.2.1. Required Policies and Regulations

Quoters entering into an agreement for services to the General Services Administration (GSA) and/or its Federal customers shall be contractually subject to all GSA and Federal IT Security standards, policies, and reporting requirements. The quoter shall meet and comply with all GSA IT Security Policies and all applicable GSA and NIST standards and guidelines, other Government-wide laws and regulations for protection and security of Information Technology.

All GSA quoters must comply with the GSA policies below (these documents are all referenced within the GSA IT Security Policy).

- GSA Information Technology (IT) Security Policy, CIO P 2100.1E.
- GSA Order CIO P 2181.1 “GSA HSPD-12 Personal Identity Verification and Credentialing Handbook”, dated October 20, 2008.
- GSA Order CIO 2104.1, “GSA Information Technology (IT) General Rules of Behavior”, dated July 3, 2003.
- GSA Order CPO 1878.1, “GSA Privacy Act Program”, dated October 27, 2003.
- GSA IT Security Procedural Guide 04-26, “FISMA Implementation”.

¹ <http://csrc.nist.gov/publications/nistpubs/800-53-Rev3/sp800-53-rev3-final-errata.pdf>

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- GSA IT Security Procedural Guide 06-29, “Contingency Plan Testing.”
- GSA IT Security Procedural Guide 06-30, “Managing Enterprise Risk.”
- GSA IT Security Procedural Guide 08-39, “FY 2009 IT Security Program Management Implementation Plan.”
- GSA IT Security Procedural Guide 09-44, “Plan of Action and Milestones (POA&M).”

Quoters are also required to comply with Federal Information Processing Standards (FIPS), the “Special Publications 800 series” guidelines published by NIST, and the requirements of FISMA.

- Federal Information Security Management Act (FISMA) of 2002.
- Clinger-Cohen Act of 1996 also known as the “Information Technology Management Reform Act of 1996.”
- Privacy Act of 1974 (5 U.S.C. § 552a).
- Homeland Security Presidential Directive (HSPD-12), “Policy for a Common Identification Standard for Federal Employees and Quoters”, August 27, 2004.
- Office of Management and Budget (OMB) Circular A-130, “Management of Federal Information Resources”, and Appendix III, “Security of Federal Automated Information Systems”, as amended.
- OMB Memorandum M-04-04, “E-Authentication Guidance for Federal Agencies.”
- FIPS PUB 199, “Standards for Security Categorization of Federal Information and Information Systems.”
- FIPS PUB 200, “Minimum Security Requirements for Federal Information and Information Systems.”
- FIPS PUB 140-2, “Security Requirements for Cryptographic Modules.”
- NIST Special Publication 800-18 Rev 1, “Guide for Developing Security Plans for Federal Information Systems.”
- NIST Special Publication 800-30, “Risk Management Guide for Information Technology Security Risk Assessment Procedures for Information Technology Systems.”
- NIST Special Publication 800-34, “Contingency Planning Guide for Information Technology Systems.”
- NIST SP 800-37, Revision 1, “Guide for Applying the Risk Management Framework to Federal Information Systems: A Security Life Cycle Approach”
- NIST Special Publication 800-47, “Security Guide for Interconnecting Information Technology Systems.”
- NIST Special Publication 800-53 Revision 3, “Recommended Security Controls for Federal Information Systems.”
- NIST Special Publication 800-53A, “Guide for Assessing the Security Controls in Federal Information Systems.”

D.7.3. Assessment and Authorization (A&A) Activities

The implementation of a new Federal Government IT system requires a formal approval process known as Assessment and Authorization (A&A) process. NIST Special Publication 800-37 and GSA IT Security Procedural Guide 06-30, “Managing Enterprise Risk”, give guidelines for performing the A&A process. The Quoter system/application must have a valid assessment and authorization (approved by GSA OCIO) before going into operation and processing information. The failure to obtain and maintain a valid authorization will be grounds for cancellation of the BPA and termination of any outstanding orders. All NIST 800-53 controls must be tested/assessed continuously.

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D.7.3.1. Assessment of System

1. The Quoter shall comply with NIST Special Publication 800-37 requirements as mandated by Federal laws and policies, including making available any documentation, physical access, and logical access needed to support this requirement. The Level of Effort for the A&A is based on the System's NIST Federal Information Processing Standard (FIPS) Publication 199 categorization. The quoter shall create, maintain and update the following A&A documentation:
 - System Security Plan (SSP) completed in agreement with NIST Special Publication 800-18, Revision 1. The SSP shall include as appendices required policies and procedures across 18 control families mandated per FIPS 200, Rules of Behavior, and Interconnection Agreements (in agreement with NIST Special Publication 800-47). The SSP shall include as an appendix, a completed GSA 800-53 Control Tailoring worksheet included in Appendix A of this guide. Column E of the worksheet titled "Quoter Implemented Settings" shall document all quoter implemented settings that are different from the GSA defined setting and where the GSA defined setting allows a quoter determined setting).
 - Contingency Plan (including Disaster Recovery Plan) completed in agreement with NIST Special Publication 800-34.
 - Contingency Plan Test Report completed in agreement with GSA IT Security Procedural Guide 06-29, "Contingency Plan Testing."
 - Plan of Actions & Milestones completed in agreement with GSA IT Security Procedural Guide 09-44, "Plan of Action and Milestones (POA&M)."
 - Independent Penetration Test Report documenting the results of vulnerability analysis and exploitability of identified vulnerabilities.

In addition to the above documentation, GSA recommends (not a requirement) the quoter employ code analysis tools to examine the software for common flaws and document results in a Code Review Report. The Code Review Report should be submitted as part of the A&A package. Reference NIST 800-53 control SA-11, Enhancement 1 for additional details.

2. Information systems must be assessed whenever there is a significant change to the system's security posture in accordance with NIST Special Publication 800-37 Revision 1, "Guide for Applying the Risk Management Framework to Federal Information Systems: A Security Life Cycle Approach", and CIO IT Security 06-30, "Managing Enterprise Risk ."
3. At the Moderate impact level, the quoter will be responsible for providing an independent Security Assessment/Risk Assessment in accordance with GSA IT Security Procedural Guide 06-30, "Managing Enterprise Risk."
4. The Government reserves the right to perform Penetration Test. If the Government exercises this right, the Quoter shall allow Government employees (or designated third party auditors) to conduct Assessment and Authorization (A&A) activities to include control reviews in accordance with NIST 800-53/NIST 800-53A and GSA IT Security Procedural Guide 06-30, "Managing Enterprise Risk". Review activities include but are not limited to operating system vulnerability scanning, web application scanning, and database scanning of applicable systems that support the processing, transportation, storage, or security of GSA information. This includes the general support system infrastructure.
5. Identified gaps between required 800-53 controls and the quoter's implementation as documented in the Security Assessment/Risk Assessment report shall be tracked for mitigation in a Plan of Action and Milestones (POA&M) document completed in accordance with GSA IT Security Procedural Guide 09-44, "Plan of Action and Milestones (POA&M)." Depending on the severity of the gaps, the Government may require them to be remediated before an Authorization to Operate is issued.

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6. The Quoter is responsible for mitigating all security risks found during A&A and continuous monitoring activities. All high-risk vulnerabilities must be mitigated within 30 days and all moderate risk vulnerabilities must be mitigated within 90 days from the date vulnerabilities are formally identified. The Government will determine the risk rating of vulnerabilities.

D.7.3.2. Authorization of System

1. Upon receipt of the documentation described in the GSA IT Security Procedural Guide 06-30, "Managing Enterprise Risk" and NIST Special Publication 800-37 as documented above, the GSA OCIO Authorizing Officials (AOs) for the system (in coordination with the GSA Senior Agency Information Security Officer (SAISO), system Program Manager, Information System Security Manager (ISSM), and Information System Security Officer (ISSO)) will render an Authorization decision to:
 - Authorize system operation w/out any restrictions or limitations on it operation;
 - Authorize system operation w/ restriction or limitation on its operation, or;
 - Not authorize for operation.
2. The Quoter shall provide access to the Federal Government, or their designee acting as their agent, when requested, in order to verify compliance with the requirements for an Information Technology security program. The Government reserves the right to conduct on site inspections. The Quoter shall make appropriate personnel available for interviews and documentation during this review. If documentation is considered proprietary or sensitive, these documents may be reviewed on-site under the hosting Quoter's supervision.

D.7.4. Reporting and Continuous Monitoring

Maintenance of the security authorization to operate will be through continuous monitoring of security controls of the quoters system and its environment of operation to determine if the security controls in the information system continue to be effective over time in light of changes that occur in the system and environment. Through continuous monitoring, security controls and supporting deliverables are updated and submitted to GSA OCIO per the schedules below. The submitted deliverables (or lack thereof) provide a current understanding of the security state and risk posture of the information systems. They allow GSA OCIO authorizing officials to make credible risk-based decisions regarding the continued operations of the information systems and initiate appropriate responses as needed when changes occur.

D.7.4.1. Deliverables to be provided to the GSA OCIO, GSA COTR/ISSO/ISSM Quarterly

1. Plan of Action & Milestones (POA&M) Update
Reference: NIST 800-53 control CA-5
Quoter shall provide POA&M updates in accordance with requirements and the schedule set forth in GSA CIO IT Security Procedural Guide 09-44, "Plan of Action and Milestones."
2. Vulnerability Scanning
Reference: NIST 800-53 control RA-5
Quoter shall provide vulnerability scan reports from Web Application, Database, and Operating System Scans. Scan results shall be managed and mitigated in Plans of Action and Milestones (POA&Ms) and submitted together with the quarterly POA&M submission.

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D.7.4.2. Deliverables to be provided to the GSA OCIO, GSA COTR/ISSO/ISSM Annually

1. Updated C&A documentation including the System Security Plan and Contingency Plan
 - i. System Security Plan
Reference: NIST 800-53 control PL-2
Quoter shall review and update the System Security Plan annually to ensure the plan is current and accurately described implemented system controls and reflects changes to the quoter system and its environment of operation. The System Security Plan must be in accordance with NIST 800-18, Revision 1, Guide for Developing Security Plans.
 - ii. Contingency Plan
Reference: NIST 800-53 control CP-2
Quoter shall provide an annual update to the contingency plan completed in accordance with NIST 800-34, Contingency Planning Guide.
2. User Assessment & Authorization Review Documents
Reference: NIST 800-53 control AC-2
Quoter shall provide the results of the annual review and validation of system users' accounts to ensure the continued need for system access. The user assessment and authorization documents will illustrate the organization establishes, activates, modifies, reviews, disables, and removes information system accounts in accordance with documented account management procedures.
3. Separation of Duties Matrix
Reference: NIST 800-53 control AC-5
Quoter shall develop and furnish a separation of duties matrix reflecting proper segregation of duties for IT system maintenance, management, and development processes. The separation of duties matrix will be updated or reviewed on an annual basis.
4. Information Security Awareness and Training Records
Reference: NIST 800-53 control AT-4
Quoter shall provide the results of security awareness (AT-2) and role-based information security technical training (AT-3). AT-2 requires basic security awareness training for employees and quoter that support the operation of the quoter system. AT-3 requires information security technical training to information system security roles. Training shall be consistent with the requirements contained in C.F.R. Part 5 Subpart C (5 C.F.R 930.301) and conducted at least annually.
5. Annual FISMA Assessment
Reference: NIST 800-53 control CA-2
Quoter shall deliver the results of the annual FISMA assessment conducted per GSA CIO IT Security Procedural Guide 04-26, "FISMA Implementation". The assessment is completed using the GSA on-line assessment tool.
6. System(s) Baseline Configuration Standard Document
Reference: NIST 800-53 control CM-2
Quoter shall provide a well defined, documented, and up-to-date specification to which the information system is built.
7. System Configuration Settings
Reference: NIST 800-53 control CM-6

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Quoter shall establish and document mandatory configuration settings for information technology products employed within the information system that reflect the most restrictive mode consistent with operational requirements.

Configuration settings are the configurable security-related parameters of information technology products that compose the information system. Systems should be configured in agreement with GSA technical guidelines, NIST guidelines, Center for Internet Security guidelines (Level 1), or industry best practice guidelines in hardening their systems, as deemed appropriate by the Authorizing Official. System configuration settings will be updated or reviewed on an annual basis.

8. Configuration Management Plan
Reference: NIST 800-53 control CM-9
Quoter shall provide an annual update to the Configuration Management Plan for the information system.
9. Contingency Plan Test Report
Reference: NIST 800-53 control CP-4
Quoter shall provide a contingency plan test report completed in accordance with GSA IT Security Procedural Guide 06-29, "Contingency Plan Testing." A continuity test shall be conducted annually prior to mid-July of each year. Moderate and High impact systems must complete a functional exercise at least once every three years.
10. Incident Response Test Report
Reference: NIST 800-53 control IR-3
Quoter shall provide an incident response plan test report documenting results of incident reporting process per GSA IT Security Procedural Guide 01-02, "Incident Handling."
11. Results of Physical Security User Assessment/Authorization Review
Reference: NIST 800-53 control PE-2
Quoter shall provide the results of annual reviews and validations of physical access authorizations to facilities supporting the quoter system to ensure the continued need for physical access.
12. Results of Review of Physical Access Records
Reference: NIST 800-53 control PE-8
Quoter shall provide the results of annual reviews and validations of visitor access records to ensure the accuracy and fidelity of collected data.
13. Information System Interconnection Agreements
Reference: NIST 800-53 control CA-3
The Quoter shall provide updated Interconnection Security Agreements (ISA) and supporting Memorandum of Agreement/Understanding (MOA/U), completed in accordance with NIST 800-47, "Security Guide for Connecting Information Technology Systems", for existing and new interconnections. Per NIST 800-47, an interconnection is the direct connection of two or more IT systems for the purpose of sharing data and other information resources through a pipe, such as ISDN, T1, T3, DS3, VPN, etc. Interconnections agreements shall be submitted as appendices to the System Security Plan.
14. Rules of Behavior
Reference: NIST 800-53 control PL-4
Quoter shall define and establish Rules of Behavior for information system users. Rules of Behavior shall be submitted as an appendix to the System Security Plan.

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15. Personnel Screening and Security

Reference: NIST 800-53 control PS-3, NIST 800-53 control PS-7

Quoter shall furnish documentation reflecting favorable adjudication of background investigations for all personnel supporting the system. Quoters shall comply with GSA order 2100.1 – IT Security Policy and GSA Order CIO P 2181 – HSPD-12 Personal Identity Verification and Credentialing Handbook. GSA separates the risk levels for personnel working on Federal computer systems into three categories: Low Risk, Moderate Risk, and High Risk. In accordance with Section C.5.2, number 2, the cost of meeting all security requirements and maintaining assessment and authorization shall be incorporated into the quoted prices.

- Those contract personnel (hereafter known as “Applicant”) determined to be in a Low Risk position will require a National Agency Check with Written Inquiries (NACI) investigation.
- Those Applicants determined to be in a Moderate Risk position will require either a Limited Background Investigation (LBI) or a Minimum Background Investigation (MBI) based on the Contracting Officer’s (CO) determination.
- Those Applicants determined to be in a High Risk position will require a Background Investigation (BI).

The Contracting Officer, through the Contracting Officer’s Technical Representative or Program Manager will ensure that a completed Quoter Information Worksheet (QIW) for each Applicant is forwarded to the Federal Protective Service (FPS) in accordance with the GSA/FPS Quoter Suitability and Adjudication Program Implementation Plan dated 20 February 2007. FPS will then contact each Applicant with instructions for completing required forms and releases for the particular type of personnel investigation requested.

Applicants will not be reinvestigated if a prior favorable adjudication is on file with FPS or GSA, there has been less than a one year break in service, and the position is identified at the same or lower risk level.

Once a favorable FBI Criminal History Check (Fingerprint Check) has been returned, Applicants may receive a GSA identity credential (if required) and initial access to GSA information systems. The HSPD-12 Handbook contains procedures for obtaining identity credentials and access to GSA information systems as well as procedures to be followed in case of unfavorable adjudications.

D.7.4.3. Deliverables to be provided to the GSA OCIO, GSA COTR/ISSO/ISSM Biennially

Policies and Procedures

Quoter shall develop and maintain current the following policies and procedures:

1. Access Control Policy and Procedures (NIST 800-53 AC-1)
2. Security Awareness and Training Policy and Procedures (NIST 800-53 AT-1)
3. Audit and Accountability Policy and Procedures (NIST 800-53 AU-1)
4. Identification and Authentication Policy and Procedures (NIST 800-53 IA-1)
5. Incident Response Policy and Procedures (NIST 800-53 IR-1, reporting timeframes are documented in GSA CIO IT Security Procedural Guide 01-02, Incident Handling)
6. System Maintenance Policy and Procedures (NIST 800-53 MA-1)

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7. Media Protection Policy and Procedures (NIST 800-53 MP-1)
8. Physical and Environmental Policy and Procedures (NIST 800-53 PE-1)
9. Personnel Security Policy and Procedures (NIST 800-53 PS-1)
10. System and Information Integrity Policy and Procedures (NIST 800-53 SI-1)
11. System and Communication Protection Policy and Procedures (NIST 800-53 SC-1)
12. Key Management Policy (NIST 800-53 SC-12)

D.7.5. Additional Stipulations (as applicable)

1. The deliverables identified in section C.6 shall be labeled “CONTROLLED UNCLASSIFIED INFORMATION” (CUI) or quoter selected designation per document sensitivity. External transmission/dissemination of FOUO and CUI to or from a Government computer must be encrypted. Certified encryption modules must be used in accordance with FIPS PUB 140-2, “Security requirements for Cryptographic Modules.”
2. Federal Desktop Core Configuration
The Quoter shall certify applications are fully functional and operate correctly as intended on systems using the Federal Desktop Core Configuration (FDCC). This includes Internet Explorer 7 configured to operate on Windows. The standard installation, operation, maintenance, update, and/or patching of software shall not alter the configuration settings from the approved FDCC configuration. The information technology should also use the Windows Installer Service for installation to the default “program files” directory and should be able to silently install and uninstall. Applications designed for normal end users shall run in the standard user context without elevated system administration privileges. The Quoter shall use Security Content Automation Protocol (SCAP) validated tools with FDCC Scanner capability to certify their products operate correctly with FDCC configurations and do not alter FDCC settings.
3. As prescribed in the Federal Acquisition Regulation (FAR) clause 24.104, if the system involves the design, development, or operation of a system of records on individuals, the quoter shall implement requirements in FAR clause 52.224-1, “Privacy Act Notification” and FAR clause 52.224-2, “Privacy Act.”
4. The Quoter shall cooperate in good faith in defining non-disclosure agreements that other third parties must sign when acting as the Federal government’s agent.
5. The Government has the right to perform manual or automated audits, scans, reviews, or other inspections of the vendor’s IT environment being used to provide or facilitate services for the Government. In accordance with the Federal Acquisitions Regulations (FAR) clause 52.239-1, the Quoter shall be responsible for the following privacy and security safeguards:
 - i. The Quoter shall not publish or disclose in any manner, without the Task Ordering Officer’s written consent, the details of any safeguards either designed or developed by the Quoter under this Task Order or otherwise provided by the Government. *Exception - Disclosure to a Consumer Agency for purposes of C&A verification.*
 - ii. To the extent required to carry out a program of inspection to safeguard against threats and hazards to the security, integrity, and confidentiality of any non-public Government data collected and stored by the Quoter, the Quoter shall afford the Government logical and physical access to the Quoter’s facilities, installations, technical capabilities, operations, documentation, records, and databases within 72 hours of the request. Automated audits shall include, but are not limited to, the following methods:
 - Authenticated and unauthenticated operating system/network vulnerability scans

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- Authenticated and unauthenticated web application vulnerability scans
- Authenticated and unauthenticated database application vulnerability scans

Automated scans can be performed by Government personnel, or agents acting on behalf of the Government, using Government operated equipment, and Government specified tools. If the vendor chooses to run its own automated scans or audits, results from these scans may, at the Government's discretion, be accepted in lieu of Government performed vulnerability scans. In these cases, scanning tools and their configuration shall be approved by the Government. In addition, the results of vendor-conducted scans shall be provided, in full, to the Government.

- iii. If new or unanticipated threats or hazards are discovered by either the Government or the Quoter, or if existing safeguards have ceased to function, the discoverer shall immediately bring the situation to the attention of the other party.

D.7.6. References

The Federal Information Security Management Act of 2002

NIST SP 800-37, Revision 1 " Guide for Applying the Risk Management Framework to Federal Information Systems: A Security Life Cycle Approach"

NIST SP 800-41, Revision 1, Guidelines and best practices for DMZ/Firewall.

NIST SP 800-53, Recommended Security Controls for Federal Information Systems and Organizations, Revision 3,

NIST SP 800-53A, Guide for Assessing the Security Control for Federal Information Systems.

NIST SP 800-61, Computer Security. Incident Handling Guide,

D.8. Confidentiality and Nondisclosure

1. The preliminary and final deliverables and all associated working papers and other material deemed relevant by GSA that have been generated by the Quoter in the performance of this task order are the property of the U.S. Government and must be submitted to the PM at the conclusion of the task order.
2. All documents produced for this project are the property of the U.S. Government and cannot be reproduced, or retained by the Quoter. All appropriate project documentation will be given to GSA during and at the end of this contract. The Quoter shall not release any information without the written consent of the Contracting Officer. Any request for information relating to the Task Order presented to the Quoter must be submitted to the Contracting Officer for approval by the customer agency for a response.
3. Personnel working on any of the described tasks, at the Government's request, will be required to sign formal non-disclosure and/or conflict of interest agreements to guarantee the protection and integrity of Government information and documents.

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D.9. Organizational Conflict of Interest

1. Whenever performance of this contract requires access to another Quoter's proprietary information, the Quoter shall (i) enter into a written agreement with the other entities involved, as appropriate, in order to protect such proprietary information from unauthorized use or disclosure for as long as it remains proprietary; and (ii) refrain from using such proprietary information other than as agreed to, for example to provide assistance during technical evaluation of other Quoters' quotes under this BPA. An executed copy of all proprietary information agreements by individual personnel or on a corporate basis shall be furnished to the Contracting Officer within fifteen (15) calendar days of execution.
2. In addition, the Quoter shall obtain from each of its employees, whose anticipated responsibility in connection with the work under this BPA may be reasonably expected to involve access to such proprietary information, a written agreement, which, in substance, shall provide that such employee will not, during its employment by the Quoter, or thereafter, improperly disclose such data or information.
3. For breach of any of the above restrictions or for nondisclosure or misrepresentation of any relevant facts required to be disclosed concerning this agreement, the Government reserves the right to pursue all remedies as may be available under law.
4. If in compliance with this clause, the Quoter discovers and promptly reports an organization conflict of interest incident subsequent to contract award, the Contracting Officer may choose to undertake cancellation of the BPA.

D.10. Travel

Official travel expenses incurred for transportation and per diem (lodging, meals, and incidental expenses) shall be billed in accordance with FAR 31.205-46, Travel Costs. These expenses will be directly reimbursable by the ordering activity, subject to the limits stated above and those contained in the underlying GSA Schedule and individual task orders.

D.11. Ordering Procedures

Ordering activities shall place Task Orders in accordance with FAR 8.405-3(b), Ordering from BPAs.

D.12. Funding

There are no funds obligated or guaranteed as a result of this BPA. The Government is liable only to the amount of the funds obligated by each ordering activity's task order.

D.13. Unauthorized Commitment

Ordering activity employees (apart from contracting officers) are not authorized to change any of the terms and conditions of this BPA or the individual task orders. Changes, if any, shall be made by the Contracting Officer.

D.14. Evaluation of Quoter Performance at the Task Order Level

Interim and final evaluations of Quoter performance will be prepared in accordance with FAR Subpart 42.1500. Final performance evaluations may be prepared by Contracting Officer's Technical Representatives (COTRs), at the time of completion of work. In addition to the final

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evaluation, interim evaluations may be prepared, by COTRs, annually to coincide with the date of the requirements.

D.15. Authorized Ordering Activities

This BPA may be used by any entity within the executive branch of government, and on an optional basis, by state, local and tribal governments. The estimated value over the five (5) year term of the BPA is \$76,570,000

D.16. Contracting Officer

The GSA Contracting Officer is the only person authorized to make or approve any changes to any of the requirements of this BPA and notwithstanding any clauses contained elsewhere in this BPA, this authority remains solely with the Contracting Officer. In the event the Quoter makes any changes at the direction of any other person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in cost incurred as a result thereof. All questions concerning the BPA will be directed to the GSA Contracting Officer. The Quoter shall contact the Contracting Officer with any questions regarding performance issues.

The Contracting Officer responsible for administration of this BPA is:

Mr. Michael Anastasio
U.S. General Services Administration
10304 Eaton Place, Suite 3B-14
Fairfax, VA 22030
Email: Michael.Anastasio@GSA.gov
Phone: (703) 306-6440

The Contracting Officer for the Task Orders will be in accordance with the individual Task Orders.

D.17. Contracting Officer's Technical Representative (COTR)

The Contracting Officer's Technical Representative (COTR) for this BPA is to be determined post award

COTRs may be appointed at a Task Order level by the ordering agency Contracting Officer.

The COTR is the individual within a program management function who has overall technical responsibility for efforts. The COTR supports the COs during administration of the BPA or Task Order by:

1. Making final decisions regarding the acceptance/rejection of deliverables
2. Providing technical clarification relative to overall workload matters
3. Providing advice and guidance to the vendor in the preparation of deliverables and services
4. Providing acceptance of deliverable products to assure compliance with requirements

The COTR also provides technical direction to the vendor, i.e., shifting work emphasis between areas of work, fills in details, or otherwise serves to accomplish tasks. Technical direction shall be

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guidelines of the Statement(s) of Work. COTRs do NOT have the authority to and may NOT issue any technical direction:

1. Constitutes an assignment of work outside the general scope of work
2. Constitutes a change as defined in the "Changes" clause
3. In any way causes an increase or decrease in cost or the time required for performance
4. Changes any of the terms, conditions, or other requirements
5. Suspends or terminates any portion of efforts

All technical direction that affects the scope of tasks shall be issues in writing by the COTR or will be confirmed by the COTR. A copy of the written direction shall be furnished to the CO.

In addition to providing technical direction, the COTR will:

1. Monitor Quoter's technical progress, including surveillance and assessment of performance, and recommend to the CO and CA, any changes in requirements
2. Assist Quoters in the resolution of technical problems encountered during performance
3. Perform inspections and acceptance or recommendations for rejection of deliverables and identify deficiencies, if any. This does not replace any other quality assurance inspection requirements.

If in the opinion of the Quoter, any instruction or direction issued by a COTR is outside of their specific authority, the Quoter shall not proceed but shall notify the CO.

D.18. Government Furnished Equipment/Information (GFE/GFI)

The ordering activity may provide the quoter with some of the necessary information, equipment, and/or office space required to perform the services outlined. The Quoter shall ensure that appropriate administrative, technical, and physical safeguards are established to ensure the security and confidentiality of this information, data, and/or equipment is properly protected. The Quoter shall be responsible for properly protecting all information used, gathered, or developed as a result of work under the task order.

In addition, the Quoter shall protect all Government data, equipment, etc., by treating the information as sensitive. Sensitive but unclassified information, data, and/or equipment will only be disclosed to authorized-personnel as described in the Task Order. The Quoter shall keep the information confidential, use appropriate safeguards to maintain its security in accordance with minimum Federal standards.

Any type of marketing, up-selling, after marketing, or soliciting of any individuals is prohibited. When no longer required, this information, data, and/or equipment shall be returned to Government control, destroyed, or held until otherwise directed by the Contracting Officer. The Quoter shall destroy unneeded items by burning, shredding, or any other method that precludes the reconstruction of the material.

Anticipated work under Task Orders placed against resultant BPAs may require that Quoter personnel have access to Privacy Information. Quoter personnel shall adhere to the Privacy Act, Title 5 of the U.S. Code, Section 552a and applicable agency rules and regulations.

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E. INSTRUCTIONS TO QUOTERS

E.1. Submission of Quotes

Only quotes which trace offerings and associated pricing to its current MAS 70 contract will be considered for award (see Section E.6.5). Any modifications to MAS 70 contracts to incorporate quoted offerings must occur prior to BPA award.

The Close Date for quotes is 4:00 PM (ET), June 30, 2010. Quotes shall be submitted through GSA e-Buy at www.ebuy.gsa.gov AND three (3) hard copies shall be delivered to Michael Anastasio at 10304 Eaton Place, 4th Floor, 4B 16-17, Fairfax, VA 22030. Late quotes and quotes not submitted through GSA e-Buy will not be accepted or evaluated. The electronic time stamp on quotes submitted through e-Buy, shall determine timeliness of quote submission and take precedence over hard copies. Hard copies of quotes shall be delivered no later than three business days after the Close Date of the RFQ.

The following e-Buy document/attachment size restrictions apply: 5mb per document, unlimited number of documents.

Instructions for uploading quotes on GSA e-Buy can be found at the following link:

<https://www.ebuy.gsa.gov/images/ebuy/tutorial/ebuy sellers1.ppt>

This RFQ does not obligate the Government to pay any costs incurred in the submission of any Quote or in making necessary studies for the preparation thereof, nor does it obligate the Government to procure or contract for said services.

E.2. RFQ Questions

Submit all questions concerning this RFQ in writing within five (9) business days of the RFQ posting to the Contracting Officer at the following email address: iaaS@gsa.gov. The Government will publish questions and answers within a reasonable timeframe giving particular consideration to quote submission due date and time.

In posing questions, Quoters must cite the relevant section, paragraph, and page number. Questions should be written in a way that enables clear understanding of the Quoter's issues or concerns. Statements expressing opinions, sentiments, or conjectures are not considered valid inquiries and will not receive a response. Further, Quoters are reminded that the Contracting Officer will not address hypothetical questions aimed at receiving a potential "evaluation decision".

E.3. Exceptions/Assumptions

Quoters are required to respond to all RFQ requirements. Each quoter's terms and conditions shall be consistent with its MAS 70 contract. However, quoters must clearly identify any exception(s) and/or assumptions to the RFQ terms and conditions and must provide complete supporting rationale. Quoter exceptions/assumptions submitted with the RFQ could render a quote non-responsive, may not be evaluated, and therefore may not be considered for award.

E.4. Contractor Team Arrangement Document (no page limit)

A GSA Schedule Contractor Team Arrangement (CTA) is an arrangement between two or more GSA Schedule Quoters to work together to meet agency requirements. For more information, see <http://www.gsa.gov/contractorteamarrangements> .

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All CTAs shall be specifically identified as such. Quoters shall submit a copy of their CTA documents. This document shall address the items listed under “Elements of a Contractor Team Arrangement (CTA) Document” which is accessible through the link at:

<http://www.gsa.gov/contractorteamarrangements>.

The CTA should designate all team members, their corresponding GSA Schedule contract numbers, and describe the tasks to be performed by each team member, along with the associated proposed prices (e.g., unit prices).

The ordering activity should then be able to verify that any proposed unit prices do not exceed the prices awarded under each team member's MAS 70 contract and avoid any misunderstandings regarding each team member's responsibilities and prices.

The CTA(s) quotes shall be evaluated the same as other quotes. Each quote submitted by a CTA must include adequate technical/management information for GSA to reasonably evaluate the merits of the submission. The formation of Schedule CTAs in response to the RFQ will result in BPAs that provide a teaming solution for the Government's requirements.

E.5. Subcontracting

The Quoter, and not its subcontractor(s), shall have privity of contract with the Government. The Quoter is responsible for its subcontracting activities and can delegate responsibility for performance. Quoters are limited to the supplies and services awarded under its own and its subcontractor's, if applicable, GSA MAS 70 contract.

If a Quoter plans to utilize a subcontractor to perform services, clearly describe in the technical quote the subcontractor's experience and technical capabilities that enable the subcontractor to provide the services proposed.

E.6. Quote Content

Quoters must be current MAS 70 Contract holders. The quoter shall respond to all requirements specified in the RFQ. By submitting a quote, you are representing that your firm will perform all the requirements specified in the solicitation and therefore it is not necessary or desirable that this be repeated in your quote. Do not merely reiterate the objectives or reformulate the requirements specified in the RFQ.

Discounts from MAS 70 contract rates and prices are encouraged.

A complete quote shall consist of the following:

- 1) Executive Summary
- 2) Table of Contents
- 3) Technical Section
- 4) Price Section – Attachment A – CLIN Pricing Workbook
- 5) MAS 70 Contract Terms and Conditions
- 6) MAS 70 Product and Price List
- 7) Contract Teaming Arrangement Documentation (CTA), if applicable
- 8) Service Level Agreement – Attachment D (SAMPLE)
- 9) Acknowledgement of Cooperative Purchasing Program – Attachment B

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Quoters shall use separate files to permit rapid location of all portions of the quote, including attachments, if any. Each electronic file shall be identified by the above major areas of the quote. If files are compressed, the necessary decompression program must be included. The quotes shall be submitted in a format readable by Microsoft (MS) Word/Excel 2003 or in a PDF format, as applicable. The following E-Buy document/attachment size restrictions apply: 5mb per document, unlimited number of documents.

All quotes shall clearly demonstrate the Quoter's understanding of both general and specific requirements, as well as convey its capability of transforming its understanding of the requirement into successful performance under this BPA.

Quote Format - The quote shall be legible, single-spaced, 1" margins, and in a Times New Roman, 11-point type size font, printable to 8 ½ x 11 inch paper. The pages of the technical and price quote sections shall be separately numbered. The footer of each page submitted in quotes shall include the company name of Quoter. Diagrams must be with a minimum 8-point font size text. If a quote exceeds the page limitations, only the pages within that limit will be distributed to the evaluation team. Quoters are encouraged to directly reference other segments of their Quote where appropriate.

E.6.1 Executive Summary (2 Page Limit)

Submit a concise executive summary of the entire quote, including significant risks, and a highlight of any key or unique features, excluding price. The salient features should tie in with Section F evaluation factors/sub-factors. Any summary material presented here shall not be considered as meeting the requirements for any other part or section of the quote. Each quoter shall state that the quote is valid for 120 days from the date specified for quote submission.

Quoters shall identify the MAS 70 Contract number and SIN(s) that the quote is predicated upon. If the Quoter's GSA schedule contract will expire prior to September 30, 2010, provide a statement assuring that the Quoter has provided the cognizant MAS 70 Contracting Officer with all documents necessary to extend the MAS 70 Contract, if applicable, as well as the name, E-mail address, and telephone number of the cognizant GSA CO.

The executive summary shall identify whether the quoter is a small business, small-disadvantaged business, Section 8(a) business, woman-owned small business, HUBZone small business, veteran-owned small business, service-disabled veteran owned small business, as well as Federally recognized Native American tribes or tribal organizations. The executive summary must include your Federal Tax Identification Number (TIN) and Data Universal Numbering System (DUNS) number. Provide the name, title, telephone number, fax number, and E-mail address for the individual authorized/designated to obligate the Quoter.

In order for a quote to be considered, Quoters must meet and certify the following information:

Wholly-owned domestic entity or partial foreign ownership by a foreign country not banned from doing business with a United States Federal Agency.

Failure to meet this requirement as set forth in this section shall result in rejection of the quote as non-responsive.

E.6.2 Table of Contents

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The quote shall contain a master table of contents for the entire quote to consist of topics and page numbers only.

E.6.3 Technical Section (60 Page Limit)

The Technical Section shall address the specific requirements listed in the Statement of Work.

Lot Definitions

This RFQ solicits three (3) key services through IaaS providers for ordering activities in three (3) Lots:

- Lot 1: Cloud Storage Services
- Lot 2: Virtual Machines
- Lot 3: Cloud Web Hosting

Quoters may propose to provide any, all, or any combination of the three (3) Lots. Quoters shall propose all required elements within each Lot proposed. Quotes for more than one Lot by a single vendor will be separately evaluated by Lot and, if appropriate, qualified for award for each individual Lot. A Quote for more than one Lot does not increase the likelihood of selection. Quotes for less than all Lots will not be at a disadvantage.

If the Quoter plans to utilize teaming arrangement to perform services under [Schedule contract#/SIN#] it shall clearly describe in its technical submission the teaming partner(s) experience and performance, and technical capabilities that enables the teaming partner(s) to provide the services proposed, and the specific tasks and services to be performed under this task order.

Where appropriate, the Quoter shall indicate for each line item in Attachment A, CLIN Pricing Workbook, whether each product or service is compliant or non-compliant with the accessibility standards at 36 CFR 1194. Further, the Quote must indicate where full details of compliance can be found (e.g., vendor's website or other exact location).

Note: If the Technical Section exceeds the page limitation set forth, the excess text may NOT be evaluated. DO NOT include any price data in the technical quote.

E.6.4. Quote Content - Factors

Factor 1: Cloud Technical Requirements – Factor 1 involves an initial evaluation of all quotes against five (5) key cloud computing characteristics common to all three (3) Lots. Recommend six (6) pages for Factor 1.

1. **On-Demand Self Service** - The quoter shall demonstrate and affirm its preparedness to provision service capabilities for the service requested without review or approval delay.
2. **Ubiquitous Network Access** –
 - a. The quoter shall demonstrate and affirm its ability to provide Internet bandwidth at the minimum of 1 GB.

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<p><i>Service Provisioning</i></p>	<ol style="list-style-type: none"> 1. Describe your ability to provision virtual machines, storage and bandwidth dynamically, as requested and as required. This shall describe traffic shaping capabilities the Quoter uses. 2. Describe your method for service provisioning, de-provisioning and administration. 3. Describe your protocol for terminating the service at any time (on-demand). 4. Describe your custom webpage and associated Uniform Resource Locator (URL) that describes the following: <ol style="list-style-type: none"> a. Service Level Agreements (SLAs) b. Help Desk and Technical Support services c. Resources (Documentation, Articles/Tutorials, etc) 5. Describe your approach for providing the Management Reports required in Statement of Work Section C.6, and how they are accessible via online interface.
<p><i>Service Level Agreement Management</i></p>	<ol style="list-style-type: none"> 6. Describe your robust, fault tolerant infrastructure that allows for high availability of 99.5%. 7. Provide your Service Level Agreements (SLAs) to include: <ul style="list-style-type: none"> • Service Availability (Measured as Total Uptime Hours / Total Hours within the Month) displayed as a percentage of availability up to one-tenth of a percent (e.g., 99.5%) • Describe the outage including description of root-cause and fix when outage is greater than 1-hour of unscheduled downtime. • Service provisioning and de-provisioning times (scale up and down) in near real-time 8. Describe your Helpdesk and Technical support services, including any systems maintenance window considerations.
<p><i>Operational Management</i></p>	<ol style="list-style-type: none"> 9. Describe your method for managing the network, storage, server and virtualization layer. As a part of this, provide a description of any internal technology refresh cycle applicable to this BPA. 10. Describe your secure, dual factor method of remote access which allows Government designated personnel the ability to perform duties on the hosted infrastructure. 11. Describe your patch management process. 12. Describe your security policies and procedures demonstrating its compliance with the Assessment & Authorization (A&A) requirements as described in Section D7 – Security Requirements and provide any necessary artifacts.

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<i>DR and COOP</i>	<p>13. Describe your security of the services and data hosted at your facilities by providing DR (Disaster Recovery) and COOP (Continuity of Operations) capabilities.</p> <p>14. Describe how you provide backup services and mechanisms including the overall manual and automated backup processes, frequency of backups and refreshes, how long backup material is available, time required for retrieval and restoration of backups, backup storage types, online/offline backup options and security procedures for backup mechanisms.</p>
<i>Data Management</i>	<p>15. Describe how you manage data isolation in a multi-tenant environment.</p> <p>16. Describe how you transfer data back in-house either on demand or in case of contract or order termination for any reason.</p> <p>17. Describe how you manage data remanence throughout the data life cycle.</p> <p>18. Describe your security mechanisms for handling data at rest and in transit.</p>
<i>Order Management</i>	<p>19. Describe your Order Management via customizable online portal/interface (tools).</p> <p>20. Describe your Order Management via Application Programming Interface (API).</p>
<i>Billing/Invoice Tracking</i>	<p>21. Describe your on-line billing capability that will allow customers to see the status of their bills (updated weekly).</p> <p>22. Describe your ability to allow ordering activity to track the status of their invoices.</p> <p>23. The Quoter shall affirm that with the individual task orders issued under this BPA, the Quoter will receive a not-to-exceed monthly dollar limitation. When 80% of this dollar limit has been reached, the Quoter shall notify the ordering activity, by email and by posting that notification to the website, that the ordering activity is approaching the 80% threshold for the order. The Quoter shall not bill beyond the approved monthly dollar threshold.</p>
<i>Utilization Monitoring</i>	<p>24. Describe your automatic monitoring of resource utilization and other events such as failure of service, degraded service, etc. via service dashboard or other electronic means.</p>
<i>Trouble Management</i>	<p>25. Describe your Trouble Ticketing via customizable online portal/interface (tools).</p> <p>26. Describe your Trouble Ticketing via API.</p>
<i>User Profile Management</i>	<p>27. Describe how you maintain user profiles and present the user with his/her profile at the time of login.</p>
<i>Application Programming Interfaces (APIs)</i>	<p>28. Describe your API's support process.</p>

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<i>Internet Access</i>	29. Describe the Tier 1 Internet providers you are peered with, and where this peering occurs.
<i>Firewalls</i>	30. Describe your firewall policy that allows the Government to administer it remotely, or the how you shall administer a firewall policy in accordance with the Government’s direction, allowing the Government to have read-only access to inspect the firewall configuration.
<i>LAN/WAN</i>	31. LAN: Describe your LAN, to include the bandwidths. 32. WAN: Describe your WAN, to include the locations of your data center facilities, the bandwidths in/out of each. 33. Describe your IP Addressing to include: 1) IP address assignment, including Dynamic Host Configuration Protocol (DHCP), if applicable. 2) IP address and IP port assignment on external network interfaces. 3) Dedicated virtual private network (VPN) connectivity between customer and the vendor. 4) ability to map IP addresses to domains owned by the Government, allowing websites or other applications operating in the cloud to be viewed externally as Government URLs and services. 5) The IPv6 infrastructure.
<i>Data Center Facilities</i>	34. Describe your data center facilities including space, power, and physical infrastructure (hardware). Upon request from the Government, the hosting Quoter shall provide access to the hosting facility for inspection. 35. Describe your data center facilities and the physical and virtual hardware that are located in the Continental United States of America (CONUS).

Factor 3: Lot Specific Technical Requirements –This evaluation takes into account the Lot-specific technical criteria for consideration of award. Lots will be evaluated separately.

- **Lot 1: Cloud Storage Services**
- **Lot 2: Virtual Machines**
- **Lot 3: Cloud Web Hosting**

Recommend eight (8) pages per Lot, which extends to twenty-four (24) pages if all three (3) Lots are proposed for Factor 3.

Quoters may propose to provide any, all, or any combination of the three (3) Lots. Quotes will be evaluated by Lots against each Lot’s unique requirements to ascertain if the offer meets the Lot requirements. (Statement of Work Section C.4.3.1.1 - 4.3.1.2, 4.3.2.1 - 4.3.2.3, 4.3.3.1 - 4.3.3.2 and Section D7 – Security Requirements)

Factor 4: Past Performance - This evaluation takes into account the past performance for consideration of award.

The Quoter and/or teaming partner shall provide five (5) references, IAW FAR Subpart 52.212-1(b)(10), complete with names, titles, Government entity or company, email address, and phone numbers that can be contacted for references. These references must be from contracts or orders that provide services similar in scope and nature to the work described in Section C - Statement of Work. Provide a description of the Quoter’s specific involvement with the effort, the support provided, and the period of performance either as a prime or teaming partner.

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Upon providing the information in Items 1 through 12 of the Attachment C - Past Performance Questionnaire for each reference to be provided. The Quoter shall electronically forward the forms to the referenced customer as well as providing the partial forms in the quote to GSA. Completed Past Performance Questionnaires will be obtained from the referenced customers by email sent directly to iaaS@GSA.gov, the GSA Contracting Officer. The Government may contact all or some of the references to verify information obtained or follow-up regarding status of responses.

The quote will be evaluated based on responses received from the Past Performance Questionnaires and information from the Past Performance Information Retrieval System (PPIRS) at www.ppirs.gov. The information received from both the Quoter's description and the reference's survey feedback (if any) will also be evaluated in light of the currency, size, and scope of those past projects against the quote.

The Quoter with no relevant past performance history shall receive a rating of neutral. The Government may use past performance information obtained from other than the sources identified by the quoter. If teaming arrangements are utilized in quotes, the Government will protect the proprietary nature of this information and will only discuss past performance information with the prospective prime or teaming partner that is being reviewed.

E.6.5 Pricing Section (No page limit)

The price quotes shall be discounted off the Quoter's MAS 70 contract pricelist. The Quoter shall provide its MAS 70 contract pricelist. After award of BPA(s), task orders issued by ordering activities will be on a firm-fixed price basis.

Instructions for Attachment A, CLIN Pricing Workbook:

- a. Populate the entire workbook of, Attachment A - CLIN Pricing Workbook
- b. Do NOT alter the format of Attachment A, CLIN Pricing Workbook
- c. Do not leave any blanks. N/A is an appropriate response/fill-in.
- d. Submit completed workbook in Microsoft Excel 2003 format.
- e. Include all exceptions/assumptions (see Section E.3.)

Quoters shall map the quoted items/ units of service and prices to their MAS 70 contract pricelists. Failure to do so may eliminate the quoter from further consideration.

BPA awardees must submit electronic catalog data containing awarded BPA products and pricing using the same method employed for submitting MAS 70 contract data for posting on GSA Advantage! (i.e., GSA's Schedule Input Program (SIP) software, Electronic Data Interchange (EDI), or third party). For instructions on how to submit:

Go to <https://vsc.gsa.gov/>

Click on "Getting on Advantage!" > "Cloud Computing Documentation"

F. EVALUATION FACTORS FOR AWARD

F.1. Evaluation Criteria and Selection Process

Notice to Prospective Quoters: GSA may utilize Mitre Corporation, a Federally Funded Research and Development Center (FFRDC), eGlobalTech, Touchstone, and GCS Federal Services Division

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to assist the Government as subject-matter experts during the evaluation; they will be non-voting evaluators and/or advisors.

BPA award(s) may be made to the Contractor(s) whose quote(s) are determined to be technically acceptable and offer a fair and reasonable price.

The Government intends to award based on initial quotes without discussions, unless discussions are deemed necessary by the Contracting Officer.

EVALUATION FACTORS:

The Government has chosen four (4) technical evaluation factors and one (1) price factor. All non-price factors will be evaluated using a Pass/Fail methodology.

The following standards apply:

Pass – Meets or exceeds the requirements set forth in the solicitation.

Fail – Fails to meet the requirements set forth in the solicitation.

Factor 1 – Cloud Technical Requirements: This factor consist of five (5) key cloud characteristics:

1. On-Demand Self Service
2. Ubiquitous Network Access
3. Location Independent Resource Pooling
4. Rapid Elasticity
5. Measured Service.

Any quote that fails any one of the Factor 1 requirements will not be given further consideration for award, meaning Factors 2-5 will not be evaluated. If the quote has been determined to meet the five key cloud requirements, the Government shall proceed with evaluating the quote for Factors 2-5.

The remaining evaluation factors are:

Factor 2 – IaaS Technical Requirements (Pass/Fail)

Subfactor 1 – Technical Requirements (Pass/Fail)

Subfactor 2 – Management, Compliance, and Security Requirements (Pass/Fail)

Factor 3 – Lot Specific Technical Requirements (Pass/Fail)

Factor 4 – Past Performance (Pass/Fail)

Factor 5 – Price

Price will be evaluated in accordance with FAR 8.404 (d). As such, GSA will verify that offered items reside under the Quoter's Multiple Award Schedule (MAS) 70 contract.

Quoters must identify the schedule 70 contract number and Special Item Number (SIN) for the proposed products and/or services to assist GSA in the verification. In addition, GSA will review the price quotes to determine the magnitude of discounts offered from MAS 70 prices.

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The Government intends to evaluate pricing for a five (5) year term.

F.3. Method of Award

The Government intends to award multiple BPAs to meet its needs consistent with the requirements outlined in this RFQ. BPA awards may be made by Lot and shall be made to one or more responsible Quoter(s) whose quote is determined to be technically acceptable with fair and reasonable prices based on the evaluation factors and assessment described herein. Each quote should be submitted with the most favorable discounted pricing and technical terms the Quoter can provide to the Government.

The Contracting Officer intends to award the BPA(s) without discussions. However, the Contracting Officer reserves the right to hold discussions if necessary. If discussions are conducted, they will occur at the time and place designated by the Contracting Officer. The Government reserves the right to remove Contractors from consideration without discussions when deemed appropriate.

The Government will provide timely notification to unsuccessful Quoters in accordance with FAR 8.405-2(d).

G. Attachments

The following attachments are incorporated:

<u>Attachment</u>	<u>Description</u>	<u>Version</u>	<u>Date</u>
A	CLIN Pricing Workbook	2	6/11/2010
B	Acknowledgement of Cooperative Purchasing Program		
C	Past Performance Questionnaire		
D	SAMPLE Service Level Agreement		
E	Report of Sales Template		