

JUSTIFICATION
FOR AN EXCEPTION TO FAIR OPPORTUNITY

1. Contracting Activity: Department of Veterans Affairs (VA)
Office of Acquisition Operations
Technology Acquisition Center
23 Christopher Way
Eatontown, New Jersey 07724
2. Description of Action: This proposed action is for a firm-fixed-price delivery order issued under the National Aeronautics and Space Administration (NASA) Solutions for Enterprise-Wide Procurement (SEWP) V Government Wide Acquisition Contract (GWAC) for Citrix software, hardware, and associated technical support.
3. Description of the Supplies or Services: VA Office of Information and Technology (OI&T), Infrastructure Operations (IO) has a requirement for Citrix software, hardware, and associated technical support. Citrix software is installed throughout the existing VA virtual server infrastructure and provides virtual application and virtual desktop access to endpoint devices inside and outside the VA network. VA's current use of Citrix provides virtual secure accessibility to servers hosting Computerized Patient Records System (CPRS), Veterans Benefit Management System (VBMS), and Burial Operations Support System (BOSS) databases as well as over 400 other VA applications published to users off of existing Citrix farms. This allows VA to centrally deploy and manage software applications while providing secure, on-demand access to critical business resources accessed 24 hours a day, 7 days a week by internal and external employees, contractors, as well as key external partners such as Veterans Service Organizations (VSOs).

VA's specific requirements under this proposed action are for Citrix software, hardware, and associated technical support as described below:

- a. Renewal of 108,836 quantity of Citrix XenDesktop Platinum Edition software licenses including software assurance and associated maintenance support. Under the proposed action, VA seeks to renew 108,836 existing Citrix XenDesktop Platinum Edition named licenses and subsequently, convert them down to 54,418 concurrent licenses on a one-for-two conversion ratio, which is now being offered through Citrix at a cost savings to its customers, including VA. The conversion to concurrent licenses allows VA flexibility of use the Citrix feature set, without the limitations of the previous "named" licensing structure. The named license structure previously procured required each user to have its own dedicated license. This eliminates the level of complexity of using this software on a named user basis, which hindered VA's ability to effectively offer the use of Citrix software beyond about 20% of our user base. By converting to concurrent user licenses, VA can increase the Citrix offering to a larger percentage of our user base due to the nature of the fact that a large portion of our staff is employed serving Veterans 24 hours a day allowing multiple users to share a single license. A study was conducted in

October 2016 by VA's technical experts that determined that concurrent usage of the licenses should never exceed 54,418 users. This determination was based on historical data of VA's usage of maximum concurrent users on the existing Citrix implementations. The Citrix XenDesktop Platinum Edition software adds extensive optimization, security, monitoring and end user support benefits to users' virtual applications & desktops. The associated maintenance support includes downloads, upgrades, troubleshooting, and 24 hours per day, 7 days per week, 365 days per year technical support for the currently installed Citrix software.

- b. Additional quantity of 36 Citrix NetScaler Load Balancer software licenses, associated hardware, and associated maintenance support. These items will be used to upgrade the current deployed remote user access system, and software maintenance subscriptions and preferred extended hours maintenance services for currently installed Citrix software and hardware throughout the VA enterprise. Adding additional load balancers improves the high availability and disaster recovery capabilities of the existing Citrix environments. The associated load balancer maintenance support includes downloads, upgrades, troubleshooting features, and 24 hours per day, 7 days per week, 365 days per year technical support for the Citrix load balancer software and hardware.
- c. Associated technical support which includes Technical Relationship Manager (TRM) services; consulting, training and load balancing services to support new and currently installed Citrix products throughout VA. The required full-time dedicated software TRMs and part time hardware TRM assist VA staff in ensuring high availability of the Citrix environment while utilizing the least number of servers. This avoids unnecessary cost in underutilized hardware and software and ensures business operations are not negatively impacted by any unscheduled downtime that occurs. The TRMs also provide customized education of deployed Citrix products, have access to key internal Citrix resources that only Citrix or an authorized reseller of Citrix products and services can provide, and assign correct priorities to any technical case VA opens to mitigate system issues. Because VA implements only a subset of Citrix's hardware and software capabilities, customized training classes are required to teach employees and contract staff maintaining Citrix environments in order to better maintain and improve their operation for end users. It would be inefficient to train VA staff in Citrix features that VA will not be utilizing which allows VA to decrease the number of training hours necessary per staff member each year. Only Citrix Education can provide customized Citrix course content including the ability to skip standard course content that public training centers are required to teach which allows VA to reduce the time commitment of standard Citrix courses from 40 to 30 hours of training per attendee. The Citrix consulting services are required and provide for architecture, design, and implementation support for the 30 Citrix environments located throughout the continental United States at VA data centers and regional consolidation points. The consulting and training services are procured via Citrix Consulting Vouchers which are redeemed as the training classes and consulting engagements are scheduled.

The base period of performance shall be March 29, 2017 through March 28, 2018. Additionally, there will be two subsequent 12-month option periods for the continuation of Citrix brand name license, software and hardware technical support, TRM services, consulting, training and load balancing services. In addition, there are optional tasks for quantities of TRM, consulting, and training support and additional software and hardware quantities that may be exercised at any time during contract performance as the need arises and funding becomes available. Further, VA requires optional tasks during the contract period of performance to meet future demands for Citrix NetScaler Load Balancer software, hardware and technical support for anticipated system upgrades, datacenter migrations, and to support additional applications and desktops that are anticipated to be added over the period of performance.

4. Statutory Authority: The statutory authority permitting an exception to fair opportunity is Section 41 U.S.C. 4106(c)(2) as implemented by the Federal Acquisition Regulation (FAR) Subpart 16.505(b)(2)(i)(B), entitled "Only one awardee is capable of providing the supplies or services required at the level of quality required because the supplies or services ordered are unique or highly specialized."

5. Rationale Supporting Use of Authority Cited Above: Based on market research, as described in section 8 of this document, it has been determined that limited competition is available among authorized resellers for the required Citrix software, hardware, and associated technical support. Only Citrix brand name items and services meet all of VA's requirements, specifically compatibility and interoperability with VA's existing virtual infrastructure integrated with critical business systems including CPRS, VBMS, and BOSS. Due to Citrix' patents, copyrights, proprietary database structures, proprietary communication protocols, and proprietary software application programming interfaces, no other source is able to provide the software and support required for maintaining these high availability information systems.

The Citrix software licenses provide the underlying core functionality necessary for application and desktop virtualization currently being utilized in support of VA's datacenter consolidation efforts. Use of any other brand software or hardware would result in serious interoperability and compatibility issues with the current infrastructure. VA's current remote access infrastructure is configured to only support Citrix software through Citrix NetScaler devices deployed in VA's internet gateways. Specifically, the current Citrix infrastructure consists of over 1,400 servers spread across the VA enterprise that can only work with Citrix software. This is due to the proprietary constraints that Citrix has within its software. No other brand name software would be able to communicate with these servers. If another brand name software was to be utilized the current infrastructure would have to be completely replaced with a non-Citrix based solution which would require a similar number of servers to be procured, along with all the associated load balancing software and remote access software. This solution would need to be deployed parallel to the existing Citrix solutions to ensure there was seamless coverage. The Government estimates that this effort would take over one year to design, implement and test before it would be available to support production user load and would result in duplicated cost at approximately twice the

value of this effort to restructure the entire infrastructure. This duplicated cost estimate is based on previous efforts in constructing the existing infrastructure.

Only Citrix is utilized for remote access to over 400 applications, which include CPRS, VBMS and BOSS. Only the Citrix software can provide this access to these 400 applications due to the proprietary constraints of the software. Users from non-VA furnished endpoint devices are required to utilize Citrix for remote access to these applications and approximately 60,000 unique remote access users use Citrix on a monthly basis from non-VA issued endpoints thus avoiding the need for VA to purchase, deploy, and maintain an equivalent number of VA issued endpoint devices and associated software licensure for these users at a sizable capital and operational expense to OI&T. The purchase of VA issued endpoints and associated software licenses for 60,000 new endpoint devices for remote users would cost VA in excess of \$120M in duplicated cost. This duplicated cost estimate is based on previous efforts in obtaining the VA issued endpoints and associated software licenses.

Additionally, under this procurement, VA has a requirement to procure and provide technical support for up to an additional 36 Citrix NetScaler load balancing and gateway proxy devices. VA requires these Citrix NetScaler load balancing and gateway proxy devices to satisfy several security and functional requirements. These load balancing and gateway proxy devices are the basis for VA's utilization of the Citrix XenDesktop Platinum Edition software. Specifically, VA utilizes Citrix NetScaler load balancing and gateway proxy devices in its Trusted Internet Connection (TIC) gateway in providing remote accessibility from internet endpoints to 30 internal Citrix farms across the enterprise since 2009. Additional Citrix load balancing capability is needed within the VA network to ensure that individual server software or hardware failures do not negatively impact user access to Citrix from inside or outside the VA network. Additionally, only Citrix NetScaler load balancers provide required VA security features called Smart Access filters. This feature provides VA with a centrally-managed, policy-based access control. VA leverages Smart Access filters to restrict the ability of users in less secure environments to copy, email or print data, or to save confidential files to removable media. These restrictions are leveraged heavily by VA Citrix administrators in restricting endpoint actions for externally (internet) connected endpoints as well as kiosks within the VA environment. Citrix NetScalers by their integrated nature with the underlying Citrix software uniquely provides built in configuration wizards within the graphical user interface for configuring all the advanced features VA leverages with the NetScaler devices and proprietary Citrix software.

Only Citrix brand name load balancing software and associated hardware are capable of providing the required capabilities. Specifically the ability to provide advanced troubleshooting capabilities on the proprietary Citrix ICA and HDX protocols in use by VA. The Citrix load balancers advanced knowledge of how the proprietary protocol should function from various endpoints and under various operating and network conditions provides VA administrators graphical performance monitoring and troubleshooting metrics valuable in ensuring end user satisfaction. These advanced troubleshooting metrics have proven invaluable in assisting VA technical experts to

rapidly determine the root cause of end user performance issues by pinpointing the source of the issues from the user endpoint, to the network connection from the users endpoint to the VA internet gateway, to the network performance across the VA wide area network or to the Citrix servers themselves in VA datacenters and consolidation points. No other load balancer vendor has the ability to provide the proprietary performance analysis features Citrix can provide due to their unique knowledge of the proprietary protocols in use. Citrix recommends a pair of load balancers in front of each VA Citrix server farm as well as a pair in each internet gateway to ensure maximum performance with respect to high availability and disaster recovery. As VA has Citrix environments in 30 separate consolidation points and VA has four internet gateways, plus VA's engineering department has the need for a development and test environment, VA determined that up to 36 pairs of load balancers may be needed over time as budget permits their purchase. Additionally, Citrix brand name NetScaler devices provide the only supported method to proxy proprietary Citrix protocols. The use of non-Citrix load balancers is an unsupported operation and may invalidate the Citrix software support agreement. Furthermore, Citrix NetScaler load balancers have the unique integrated capability with Citrix XenDesktop software to monitor application and desktop performance by sending specific application level requests to ensure security and efficiency and only when a proper response is received from the Citrix hosted application, the application is considered fully functional. Non-Citrix load balancers only monitor the reachability of the server resource, not whether the server itself is properly responding to user commands and requests due to their inability to see inside the proprietary Citrix communication protocols. This would not meet VA's requirements.

The Citrix brand name software licenses and associated hardware require technical support. Citrix has proprietary rights to the software licenses and associated technical support. Therefore, the required associated technical support must be compatible with the existing software licenses. Only Citrix, or an authorized Citrix reseller, has the rights to perform the associated technical support. Any other source must have access to the proprietary rights to ensure all the associated technical support provided is properly configured to both the software and infrastructure. Also without access to the proprietary rights, another source would not be able to push through updates. Also due to VA's large complex Citrix environment, customized training is required. Standard Citrix Authorized Learning Centers (CALCs), offered by many Citrix Certified Instructors, are not permitted to customize course content. Citrix Education is the only authorized provider of Citrix Customized Training and is the only source that can offer the appropriate tailored training for VA, through a variety of methods, such as customized lectures and tailored hands-on labs to meet VA's technical training requirement in support of VA's Citrix environment. The tailored training better prepares the VA staff to maintain and improve VA's Citrix environments than they would receive by taking generic, off-the-shelf training. By choosing Citrix Education's customized training VA reduces the length of a standard Citrix offering from 40 to 30 hours a week allowing staff to continue to support existing Citrix environments part time even while in training. A Citrix training partner is required to teach the full 40 hour course exposing VA staff to

material that they will not use as VA often uses a reduced subset of Citrix' product capabilities due to the uniqueness of VA's requirements.

The impact of not renewing the Citrix software licenses and associated technical support would result in a loss of the ability for VA to migrate to a new operating system on endpoint devices being implemented with zero disruption to users, downtime, or loss of data provided by Citrix application and desktop virtualization solutions. Furthermore, if Citrix software licenses were not renewed, VA's entire remote access infrastructure would need to be re-engineered and revalidated or VA would have to purchase, deploy and maintain 60,000 additional endpoint devices. Failure to renew Citrix software licenses would impact 24x7 application accessibility from outside the VA firewall to key critical and business applications including CPRS, VBMS and BOSS utilized by a large number medical, benefits and burial personnel daily. In addition, Citrix virtual desktops are currently a key component of VA's telework and continuity of operations strategy and is utilized daily for both remote network and system access needs of staff and in emergent situations when weather or other disasters impact abilities of VA personnel to report to physical office spaces. Thus technical support of existing Citrix software licenses are vital to ensure the security and availability of VA's information technology infrastructure for over 100,000 Citrix users, 60,000 of which access Citrix remotely. If VA does not renew technical support on existing Citrix software licenses annually, VA will be required to purchase brand new licenses each year at a substantial cost in order to use the supported version.

6. Efforts to Obtain Competition: Market research was conducted, details of which are in the market research section of this document. This effort did not yield any additional sources that can meet the Government's requirements. It was determined, however, that limited competition is viable among authorized resellers for the required brand name items and associated technical support services. In accordance with FAR 5.301 and 16.505(b)(2)(ii)(D), the award notice for this action will be synopsized within 14 days of award on the Federal Business Opportunities Page (FBO) along with a copy of this justification. Further, this justification will also be posted to the NASA SEWP V GWAC website along with the Request for Quotation.

7. Actions to Increase Competition: In order to remove or overcome barriers to competition in future acquisitions for this requirement, the agency will work with the program office to perform additional market research so that other solutions can be considered.

8. Market Research: During November and December 2016, the Government technical experts reviewed similar software and technical support and determined that no other products or services would be compatible or interoperable with VA's existing virtual infrastructure consisting of Citrix hardware and software. The software reviewed by the Government technical experts included Microsoft Terminal Services and VMware View both of which provide similar capabilities, however neither of these solutions are compatible or able to interoperate with the existing architecture established within VA necessitating the building of a parallel infrastructure if VA were to migrate from Citrix to

one of these alternatives. The costs of standing up new Microsoft Terminal Services or VMware View infrastructure would require extensive duplicated back office infrastructure as detailed in section 5. Citrix has proprietary rights to the software licenses and associated hardware currently being used by VA throughout the virtual infrastructure. Given that only Citrix has the proprietary rights, there are no other authorized vendors that can provide the technical support services without voiding the licenses currently in use. Only Citrix, or an authorized Citrix reseller, has the right to provide Citrix license technical support renewals, and only they can provide the required training, consulting, and dedicated technical support.

Citrix NetScaler load balancers are the only solution that satisfies VA requirements as documented in section 5 above. Citrix NetScalers are the only supported load balancers that Citrix supports for use with its software products and deep integration is provided between the NetScaler hardware and the Citrix proprietary software and proprietary protocols. Although there are other load balancer vendors within the marketplace such as F5 and A10, VA has determined that only the Citrix NetScaler, as documented in section 5 above, is compatible with the existing Citrix environments in production today due to the proprietary nature of the Citrix protocols in use.

Additional Market Research was completed via review of the NASA SEWP V Product Lookup Tool to identify authorized resellers of the required services and products. It was determined that there are multiple sources capable of providing the necessary items and services. Therefore, limited competition is anticipated for this effort.

9. Other Facts: None.