ADOA-ASET
Arizona Strategic Enterprise Technology

Project Investment Justification

Version 01.05

A Statewide Standard Document for Information Technology Projects

Project Title: Crisis Seat VDI

Agency Name:	**Arizona Dept. of Emergency and Military Affairs**
Date:	**5/22/14**
Agency Contact Name:	**Owen Zorge**
Agency Contact Phone:	
Agency Contact Email:	

Hover for Instructions

I. Management Summary*

The Arizona Department of Emergency and Military Affairs (DEMA) needs to implement a solution to replace the Windows XP Operating System on all of our Crisis Seat computers. The chosen solution is to use Virtual Desktop Interfaces (VDI) running on Thin/ Zero Client computer hardware technology.

Crisis Seat Computers are used for preparation, response and recovery from disasters in the State of Arizona. These Crisis Seat Computers are located in facilities such as the State Emergency Operations Center, Alternate Emergency Operations Center, AZEIN Call Center and Joint Information Center.

The proposed VDI and Thin Client hardware solution will allow for a more secure and continued joint sharing of common technology and resources with the Arizona National Guard, which is required for future success and ease of use in state emergencies.

II. Project Investment Justification (PIJ) Type*

☐ **Yes** ☒ **No** Is this document being provided for a Pre-PIJ / Assessment phase?

If Yes,

Identify any cost to be incurred during the Assessment phase.	$
Based on research done to date, provide a high-level estimate or range of development costs anticipated for the full PIJ.	$

Explain:

☐ **Yes** ☒ **No** Will a Request for Proposal (RFP) be issued as part of the Pre-PIJ or PIJ?

III. Business Case

*A. Business Problem**

Microsoft Corporation will be ending Windows XP operating system security and patch support by April 2014 leaving any system running Windows XP vulnerable to malware and security breaches. DEMA computers in our Crisis Seats (SEOC, Alternate SEOC, Call Center, Joint Information Center, and Emergency Vehicles) are still using Windows XP operating system on computers, which are out of warranty.

*B. Proposed Business Solution**

DEMA will implement a Virtual Desktop Infrastructure (VDI) solution, which will allow DEMA to secure the information being used on new thin/zero client hardware infrastructure. A VDI implementation fixes the End of Life (EOL) issue with Windows XP, reduces support cost for hardware, improves security, and allows for secure remote access to the DEMA-State network systems by remote users and DEMA employees on the National Guard network.

Furthermore, The VDI and Thin Client Technology being put in place are already in use by the Arizona National Guard. Using the same technology solution will insure continued inter-operability, cost savings in shared resources, and less staff training.

*C. Quantified Benefits**

X	Service enhancement
	Increased revenue
X	Cost reduction
X	Problem avoidance
X	Risk avoidance

Explain:

After April 2014, any computer systems running Windows XP will be vulnerable to new computer viruses, malware, and hacking. Using a VDI solution running on thin client hardware will help to reduce that threat by removing Windows XP computers still in use at DEMA for Crisis Seats.

The thin client hardware and VDI solution will allow for DEMA staff and other disaster response partners to use crisis computers for both disaster response and training. Additionally, DEMA will be able to provide a unified DEMA-State desktop to remote (VPN) users as well as DEMA employees with a DEMA-National Guard desktop. This unified DEMA-State desktop will consolidate some DEMA employees from two computer systems down to one.

IV. Technology Approach

*A. Proposed Technology Solution**

Proposed Technology for Project Development:
Quantity 2: Two node Nutanix NX-1250 chassis, 6x Intel Xeon E5-2620 processor, 64GB, 400GB SSD, 4TB HDD each node. Nutanix is a converged infrastructure that consolidates compute and storage into a single, integrated appliance. Each Nutanix chassis holds four nodes. These devices will provide computing and storage for virtual desktops.

Quantity 80: VMWare Horizon View 5 licenses for concurrent use of virtual desktops.

Quantity 100: Microsoft Windows Virtual Desktop Access subscription licenses, per device, for running Windows desktop operating system in the VDI. Subscription expires June 2016, State of Arizona Microsoft Select Plus agreement expiration.

Quantity 70: LG Cloud Monitor 23CAV42K All-in-One Zero Client with integrated CPU and monitor - Teradici Tera2321- for crisis seat access to virtual desktops.

Quantity 3: VMWare Horizon View training for 3 DEMA IT staff.

Proposed Operational Costs:

Year 2:
1 Year Nutanix NX-1250 Platinum Support - $11462.47
1 Year VMWare Horizon View 5 Production Support - $5007.79
Total: $16470.26

Year 3:
MS-Windows Virtual Desktop Access Subscription 36 Months (State of AZ Microsoft Select Plus Renewal Estimate) - $19800
1 Year Nutanix NX-1250 Platinum Support - $11462.47
1 Year VMWare Horizon View 5 Production Support - $5007.79
Total: $36270.26

Year 4:
1 Year Nutanix NX-1250 Platinum Support - $11462.47
1 Year VMWare Horizon View 5 Production Support - $5007.79
Total: $16470.26

Year 5:
1 Year Nutanix NX-1250 Platinum Support - $11462.47
1 Year VMWare Horizon View 5 Production Support - $5007.79
Total: $16470.26

5 year total operational costs: $85681.04

B. Technology Environment

The proposed solution will replace the existing physical desktop and laptop systems in DEMA crisis locations (Emergency Operations Centers, Call Center, Joint Information Center) with thin/zero clients and virtual desktops. It will also provide secure client and browser based virtual desktops to DEMA employees connecting from outside the DEMA-State network. This VDI project will be implemented on equipment optimized and dedicated to hosting and serving only virtual desktops.

C. Selection Process

DEMA-State IT collaborated with DEMA-National Guard IT and Logicalis to develop a plan and requirements. There were no costs incurred in the process of this collaboration and research. DEMA has worked successfully with Logicalis on past projects. Logicalis is on State of Arizona contract and sells Nutanix solutions. Nutanix is a product being used in production on the DEMA-National Guard network and is the chosen technology in the interest of alignment between the two groups. Other State of Arizona contract vendors also sell Nutanix. Prior to final technology purchase DEMA will attempt to obtain quotes from multiple State of Arizona contract vendors for the Nutanix hardware and zero/thin clients.

V. Project Approach

*A. Project Schedule**

Project Start Date: 7/1/2014 **Project End Date**: 10/30/2014

B. Project Milestones

Major Milestones	Start Date	Finish Date
Purchase hardware and software	7/1/14	8/15/14
Install data center hardware	8/15/14	9/1/14
Install, configure and test VDI servers and desktops	9/1/14	10/1/14
Install workstation hardware	10/1/14	10/15/14
Deploy and train DEMA employees	10/15/14	10/30/14

VI. Roles and Responsibilities

A. Project Roles and Responsibilities

Project Team:
Owen Zorge, IT Director / CIO
Tim Barndt, Network Engineer/Administrator
Eric Curry, Network Engineer/Administrator
James Young, Endpoint Technician

Project Roles and Responsibilities:
Owen Zorge - PIJ and Hardware/Software purchase
Tim Barndt and Eric Curry - Install hardware and software (data center)
Tim Barndt, Eric Curry and James Young - Coordination and scheduling with vendor for installation and configuration, install hardware and software (workstation), configure and test virtual desktops, attend training.

B. Project Manager Certification

- [ ] Project Management Professional (PMP) Certified
- [ ] State of Arizona Certified
- [x] Project Management Certification not required

C. Full-Time Employee (FTE) Project Hours

Total Full-Time Employee Hours	240
Total Full-Time Employee Cost	$7200

VII. Risk Matrix, Areas of Impact, Itemized List, PIJ Financials

VIII. Project Approvals

A. *Agency CIO Review**

Key Management Information	Yes	No
1. Is this project for a mission-critical application system?	X	
2. Is this project referenced in your agency's Strategic IT Plan?	X	
3. Is this project in compliance with all agency and State standards and policies for network, security, platform, software/application, and/or data/information as defined in http://aset.azdoa.gov/security/policies-standards-and-procedures, and applicable to this project? If **NO**, explain in detail in the "XI. Additional Information" section below.	X	
4. Will this project transmit, store, or process sensitive, confidential or Personally Identifiable Information (PII) data? If **YES,** in the "XI. Additional Information" section below, describe what security controls are being put in place to protect the data.		X
5. Is this project in compliance with the Arizona Revised Statutes (A.R.S.) and GRRC rules?	X	
6. Is this project in compliance with the statewide policy regarding the accessibility to equipment and information technology for citizens with disabilities?	X	

B. *Project Values**

The following table should be populated with summary information from other sections of the PIJ.

Description	Section	Number or Cost
Assessment Cost (if applicable for Pre-PIJ)	II. PIJ Type - Pre-PIJ Assessment Cost	**$**
Total Development Cost	VII. PIJ Financials tab	**$166,724.35**
Total Project Cost	VII. PIJ Financials tab	**$252,405.39**
FTE Hours	VI. Roles and Responsibilities	**240**

C. *Agency Approvals**

Contact	Printed Name	Signature	Email and Phone
Project Manager:	Owen Zorge		
Agency Information Security Officer:	Owen Zorge		
Agency CIO:	Owen Zorge		
Project Sponsor:	Renee Dudden		
Agency Director:			

IX. Optional Attachments

A. Vendor Quotes[EC1]

X. Glossary

XI. Additional Information

Links:

ADOA-ASET Website

ADOA-ASET Project Investment Justification Information Templates and Contacts

Email Addresses:

Strategic Oversight

ADOA-ASET_Webmaster@azdoa.gov