ADOA-ASET
Arizona Strategic Enterprise Technology

Project Investment Justification

DTS Zero Trust Access Model

DE24007

Department of Economic Security

Contents

1. GENERAL INFORMATION

PIJ ID: DE24007
PIJ Name: DTS Zero Trust Access Model
Account: Department of Economic Security
Business Unit Requesting: DTS
Sponsor: Mark Darmer
Sponsor Title: Chief Information Officer
Sponsor Email: mdarmer@azdes.gov
Sponsor Phone: (602) 329-6233

2. MEETING PRE-WORK

2.1 What is the operational issue or business need that the Agency is trying to solve? (i.e....current process is manual, which increases resource time/costs to the State/Agency, and leads to errors…):

Device and application access is currently provided in a single authentication and implicit trust model which provides an attacker the ability to steal credentials and gain access to protected resources unchallenged.

2.2 How will solving this issue or addressing this need benefit the State or the Agency?

Implementation of this solution (zero trust architecture, Zscaler Digital Experience [ZDX] and Sandbox) will provide secure micro segmented connections from the user to the resources. This will better protect remote access to the agency for authorized users and significantly limit the potential for adversaries to access agency resources.

CStor was the vendor selected for Professional Services. Lowest cost.

Approved Mark Darmer, CIO, on xx/xx/xxxx.

Approved by Angie Rodgers, DES Director, on xx/xx/xxxx.

2.3 Describe the proposed solution to this business need.

DES personnel require access to agency resources from remote locations. Using a multi-phase deployment approach including system architecture design, administrative access controls, application review and control, and time of access permissions, more secure access to information and resources will be provided. This will reduce the attack exposure and surface to near zero.

ZScaler is currently used within DES. Carahsoft is the current provider. Therefore only one quote for Software was obtained.

3 quotes were received for Professional Services:

WWT

CStor

GMI

CStor was the vendor selected for Professional Services. Lowest cost and met the requirements.

Approved Mark Darmer, CIO, on 8/15/23.

Approved by Angie Rodgers, DES Director, on 8/18/23.

2.4 Has the existing technology environment, into which the proposed solution will be implemented, been documented?

Yes

2.4a Please describe the existing technology environment into which the proposed solution will be implemented.

2.5 Have the business requirements been gathered, along with any technology requirements that have been identified?

Yes

2.5a Please explain below why the requirements are not available.

Gathering the business requirements is in progress.

3. PRE-PIJ/ASSESSMENT

3.1 Are you submitting this as a Pre-PIJ in order to issue a Request for Proposal (RFP) to evaluate options and select a solution that meets the project requirements?

No

3.1a Is the final Statement of Work (SOW) for the RFP available for review?

3.2 Will you be completing an assessment/Pilot/RFP phase, i.e. an evaluation by a vendor, 3rd party or your agency, of the current state, needs, & desired future state, in order to determine the cost, effort, approach and/or feasibility of a project?

No

3.2a Describe the reason for completing the assessment/pilot/RFP and the expected deliverables.

3.2b Provide the estimated cost, if any, to conduct the assessment phase and/or Pilot and/or RFP/solicitation process.

3.2e Based on research to date, provide a high-level cost estimate to implement the final solution.

4. PROJECT

4.1 Does your agency have a formal project methodology in place?

Yes

4.2 Describe the high level makeup and roles/responsibilities of the Agency, Vendor(s) and other third parties (i.e. agency will do...vendor will do...third party will do).

Agency Responsibilities:

Security review and approval

Risk and compliance review and approval

Infrastructure execution of changes

Authentication and account management

Project management

Vendor Responsibilities:

Environment and architectural assessment

Environment and architectural changes

Shared:

Project planning

Assessment review

Implementation

Architectural design

Configuration

4.3 Will a PM be assigned to manage the project, regardless of whether internal or vendor provided?

Yes

4.3a If the PM is credentialed, e.g., PMP, CPM, State certification etc., please provide certification information.

4.4 Is the proposed procurement the result of an RFP solicitation process?

No

4.5 Is this project referenced in your agency's Strategic IT Plan?

Yes

5. SCHEDULE

5.1 Is a project plan available that reflects the estimated Start Date and End Date of the project, and the supporting Milestones of the project?

Yes

5.2 Provide an estimated start and finish date for implementing the proposed solution.

Est. Implementation Start Date	Est. Implementation End Date
10/9/2023 12:00:00 AM	9/30/2024 12:00:00 AM

5.3 How were the start and end dates determined?

Based on project plan

5.3a List the expected high level project tasks/milestones of the project, e.g., acquire new web server, develop software interfaces, deploy new application, production go live, and estimate start/finish dates for each, if known.

Milestone / Task	Estimated Start Date	Estimated Finish Date
Kickoff Meeting	10/09/23	10/13/23
Sign SOW	10/09/23	10/09/23
Assess current DES architecture	10/16/23	11/15/23
Payment for Software/Licensing	11/09/23	02/15/24
Payment for Professional Services (Upfront)	11/09/23	02/15/24
Delivery of Signed Project Plan Based on Assessment from Vendor	11/15/23	11/16/23
Design system architecture based on best practices	11/16/23	12/15/23
Training	12/01/23	12/15/23
Configure systems to meet zero trust architectural requirements	12/16/23	06/23/24
System health check	12/16/23	06/23/24
Testing	02/01/24	04/30/24

User Acceptance Testing (UAT)	05/01/24	05/31/24
ZDX and Advanced Sandbox Go-Live	06/01/24	06/30/24
Lessons learned	06/24/24	06/30/24
Payment for Professional Services (Upon Completion)	06/30/24	09/30/24
Project Closeout Report	09/01/24	09/30/24

5.4 Have steps needed to roll-out to all impacted parties been incorporated, e.g. communications, planned outages, deployment plan?

Yes

5.5 Will any physical infrastructure improvements be required prior to the implementation of the proposed solution. e.g., building reconstruction, cabling, etc.?

No

5.5a Does the PIJ include the facilities costs associated with construction?

5.5b Does the project plan reflect the timeline associated with completing the construction?

6. IMPACT

6.1 Are there any known resource availability conflicts that could impact the project?

No

6.1a Have the identified conflicts been taken into account in the project plan?

6.2 Does your schedule have dependencies on any other projects or procurements?

No

6.2a Please identify the projects or procurements.

6.3 Will the implementation involve major end user view or functionality changes?

No

6.4 Will the proposed solution result in a change to a public-facing application or system?

No

7. BUDGET

7.1 Is a detailed project budget reflecting all of the up-front/startup costs to implement the project available, e.g, hardware, initial software licenses, training, taxes, P&OS, etc.?

Yes

7.2 Have the ongoing support costs for sustaining the proposed solution over a 5-year lifecycle, once the project is complete, been determined, e.g., ongoing vendor hosting costs, annual maintenance and support not acquired upfront, etc.?

Yes

7.3 Have all required funding sources for the project and ongoing support costs been identified?

Yes

7.4 Will the funding for this project expire on a specific date, regardless of project timelines?

Yes

7.5 Will the funding allocated for this project include any contingency, in the event of cost over-runs or potential changes in scope?

Yes

8. TECHNOLOGY

8.1 Please indicate whether a statewide enterprise solution will be used or select the primary reason for not choosing an enterprise solution.

There is not a statewide enterprise solution available

8.2 Will the technology and all required services be acquired off existing State contract(s)?

Yes

8.3 Will any software be acquired through the current State value-added reseller contract?

Yes

8.3a Describe how the software was selected below:

ZScaler is currently used within DES. Carahsoft is the current provider. Therefore only one quote for Software was obtained.

8.4 Does the project involve technology that is new and/or unfamiliar to your agency, e.g., software tool never used before, virtualized server environment?

Yes

8.5 Does your agency have experience with the vendor (if known)?

Yes

8.6 Does the vendor (if known) have professional experience with similar projects?

Yes

8.7 Does the project involve any coordination across multiple vendors?

Yes

8.8 Does this project require multiple system interfaces, e.g., APIs, data exchange with other external application systems/agencies or other internal systems/divisions?

No

8.9 Have any compatibility issues been identified between the proposed solution and the existing environment, e.g., upgrade to server needed before new COTS solution can be installed?

No

8.9a Describe below the issues that were identified and how they have been/will be resolved, or whether an ADOA-ASET representative should contact you.

8.10 Will a migration/conversion step be required, i.e., data extract, transformation and load?

No

8.11 Is this replacing an existing solution?

No

8.11a Indicate below when the solution being replaced was originally acquired.

8.11b Describe the planned disposition of the existing technology below, e.g., surplused, retired, used as backup, used for another purpose:

8.12 Describe how the agency determined the quantities reflected in the PIJ, e.g., number of hours of P&OS, disk capacity required, number of licenses, etc. for the proposed solution?

Through collaboration with other state agencies and vendors.

8.13 Does the proposed solution and associated costs reflect any assumptions regarding projected growth, e.g., more users over time, increases in the amount of data to be stored over 5 years?

Yes

8.14 Does the proposed solution and associated costs include failover and disaster recovery contingencies?

Yes

8.14a Please select why failover and disaster recovery is not included in the proposed solution.

8.15 Will the vendor need to configure the proposed solution for use by your agency?

Yes

8.15a Are the costs associated with that configuration included in the PIJ financials?

Yes

8.16 Will any app dev or customization of the proposed solution be required for the agency to use the project in the current/planned tech environment, e.g. a COTS app that will req custom programming, an agency app that will be entirely custom developed?

No

8.16a Will the customizations inhibit the ability to implement regular product updates, or to move to future versions?

8.16b Describe who will be customizing the solution below:

8.16c Do the resources that will be customizing the application have experience with the technology platform being used, e.g., .NET, Java, Drupal?

8.16d Please select the application development methodology that will be used:

8.16e Provide an estimate of the amount of customized development required, e.g., 25% for a COTS application, 100% for pure custom development, and describe how that estimate was determined below:

8.16f Are any/all Professional & Outside Services costs associated with the customized development included in the PIJ financials?

8.17 Have you determined that this project is in compliance with all applicable statutes, regulations, policies, standards & procedures, incl. those for network, security, platform, software/application &/or data/info found at aset.az.gov/resources/psp?

Yes

8.17a Describe below the compliance issues that were identified and how they have been/will be resolved, or whether an ADOA-ASET representative should contact you:

8.18 Are there other high risk project issues that have not been identified as part of this PIJ?

No

8.18a Please explain all unidentified high risk project issues below:

9. SECURITY

9.1 Will the proposed solution be vendor-hosted?

Yes

9.1a Please select from the following vendor-hosted options:

Other

9.1b Describe the rationale for selecting the vendor-hosted option below:

The solution will be a hybrid between on-premise and vendor cloud environments.

9.1c Has the agency been able to confirm the long-term viability of the vendor hosted environment?

Yes

9.1d Has the agency addressed contract termination contingencies, e.g., solution ownership, data ownership, application portability, migration plans upon contract/support termination?

Yes

9.1e Has a Conceptual Design/Network Diagram been provided and reviewed by ASET-SPR?

No

9.1f Has the spreadsheet located at https://aset.az.gov/arizona-baseline-security-controls-excel already been completed by the vendor and approved by ASET-SPR?

Yes

9.2 Will the proposed solution be hosted on-premise in a state agency?

Yes

9.2a Where will the on-premise solution be located:

Other

9.2b Were vendor-hosted options available and reviewed?

Yes

9.2c Describe the rationale for selecting an on-premise option below:

The solution is not in-house. The solution will be a hybrid between on-premise and vendor cloud environments.

9.2d Will any data be transmitted into or out of the agency's on-premise environment or the State Data Center?

Yes

9.3 Will any PII, PHI, CGIS, or other Protected Information as defined in the 8110 Statewide Data Classification Policy be transmitted, stored, or processed with this project?

Yes

9.3a Describe below what security infrastructure/controls are/will be put in place to safeguard this data:

DES will continue to utilize FedRAMP and AZRamp solutions to safeguard data. Add-on to ZScaler current solution.

 DES data will be segregated from other clients.

 User attributes, MFA and authentication will be used to provide access.

 Data in transit will be encrypted and meets FIPS 140-2 standards.   No PII data is stored with the solution.

 Non-PII metadata (log events) will be housed in the Zero Trust cloud temporarily, then hosted in current DES environments.

Will the project follow the established DES architectural model for external vendors? Yes.

10. AREAS OF IMPACT

Application Systems

Database Systems

Software

Other

Configuration changes to the Zscaler applications to enable Zscaler Digital Experience (ZDX) and isolation (advanced sandbox).

Hardware

Hosted Solution (Cloud Implementation)

Amazon (AWS) GovCloud;Century Link - I/O Data Center;AWS (non-government) cloud;Microsoft Azure;Other

The solution will be a hybrid between on-premise and vendor cloud environments. Vendor is housed in their own data centers. (Zscaler solution already implemented) DES is currently in AWS, Azure and I/O.

Security

Encryption;Security Controls/Systems - Other

Remote access

Telecommunications

Enterprise Solutions

Other

Contract Services/Procurements

11. FINANCIALS

Description	PIJ Category	Cost Type	Fiscal Year Spend	Quantity	Unit Cost	Extended Cost	Tax Rate	Tax	Total Cost
"Premium Support Plus Zscaler, Inc - ZCES-SUP-PREM-PLUS Start Date: 09/28/2023 End Date: 07/31/2024"	Professional & Outside Services	Development	1	1	$18,217	$18,217	0.00 %	$0	$18,217
Contingency	Professional & Outside Services	Development	1	1	$65,791	$65,791	0.00 %	$0	$65,791
"Advanced Cloud Sandbox Zscaler, Inc - ZIA-SANDBOX Start Date: 09/28/2023 End Date: 07/31/2024"	Software	Development	1	10000	$12	$121,400	860.00 %	$10,440	$131,840
"Professional Services Credits Zscaler, Inc - ZCES-PRO-CREDITS Start Date: 09/28/2023 End Date: 09/27/2024"	Professional & Outside Services	Development	1	46	$288	$13,249	0.00 %	$0	$13,249
ZPA Isolation - ZPA-ISO-5 - Start: 9/28/2023 End: 9/27/2024	Software	Development	1	10000	$11	$111,700	860.00 %	$9,606	$121,306
ZDX Advanced - ZDX-ADVANCED - Start 9/28/2023 End 09/27/2024	Software	Development	1	10000	$25	$252,600	860.00 %	$21,724	$274,324
"Premium Support Plus - ZCES-SUP-PREM-PLUS - Start 9/28/2023 End 9/27/2024"	Professional & Outside Services	Development	1	1	$54,635	$54,635	0.00 %	$0	$54,635
Professional Services - Implementation for ZPA Isolation and ZDX Advanced	Professional & Outside Services	Development	1	166	$282	$46,807	0.00 %	$0	$46,807
Full Time Engagement	Professional &	Development	1	1	$525,000	$525,000	0.00 %	$0	$525,000

Professional Services - 23 weeks	Outside Services								
ZPA Isolation - ZPA-ISO-5 - YR 2	License & Maintenance Fees	Operational	2	10000	$11	$109,700	860.00 %	$9,434	$119,134
ZDX Advanced - ZDX-ADVANCED - YR 2	License & Maintenance Fees	Operational	2	10000	$25	$248,100	860.00 %	$21,337	$269,437
Premium Support Plus - ZCES-SUP-PREM - YR 2	Professional & Outside Services	Operational	2	1	$53,674	$53,674	0.00 %	$0	$53,674
ZPA Isolation - ZPA-ISO-5 - YR 3	License & Maintenance Fees	Operational	3	10000	$12	$115,200	860.00 %	$9,907	$125,107
ZDX Advanced - ZDX-ADVANCED - YR 3	License & Maintenance Fees	Operational	3	10000	$26	$260,500	860.00 %	$22,403	$282,903
Premium Support Plus - ZCES-SUP-PREM - YR 3	Professional & Outside Services	Operational	3	1	$56,358	$56,358	0.00 %	$0	$56,358
ZPA Isolation - ZPA-ISO-5 - YR 4	License & Maintenance Fees	Operational	4	10000	$12	$120,900	860.00 %	$10,397	$131,297
ZDX Advanced - ZDX-ADVANCED - YR 4	License & Maintenance Fees	Operational	4	10000	$27	$273,500	860.00 %	$23,521	$297,021
Premium Support Plus - ZCES-SUP-PREM - YR 4	Professional & Outside Services	Operational	4	1	$59,176	$59,176	0.00 %	$0	$59,176
ZPA Isolation - ZPA-ISO-5 - YR 5	License & Maintenance Fees	Operational	5	10000	$13	$127,000	860.00 %	$10,922	$137,922
ZDX Advanced - ZDX-ADVANCED - YR 5	License & Maintenance Fees	Operational	5	10000	$29	$287,200	860.00 %	$24,699	$311,899
Premium Support Plus - ZCES-SUP-PREM - YR 5	Professional & Outside Services	Operational	5	1	$62,134	$62,134	0.00 %	$0	$62,134

Base Budget (Available)	Base Budget (To Be Req)	Base Budget % of Project
$495,952	$0	16%
APF (Available)	APF (To Be Req)	APF % of Project
$0	$0	0%
Other Appropriated (Available)	Other Appropriated (To Be Req)	Other Appropriated % of Project
$17,713	$0	1%
Federal (Available)	Federal (To Be Req)	Federal % of Project
$1,201,924	$0	38%
Other Non-Appropriated (Available)	Other Non-Appropriated (To Be Req)	Other Non-Appropriated % of Project
$1,447,369	$0	46%

Total Budget Available		Total Development Cost	
$3,162,957		$1,251,168	
Total Budget To Be Req		**Total Operational Cost**	
$0		$1,906,062	
Total Budget		**Total Cost**	
$3,162,957		$3,157,231	

12. PROJECT SUCCESS

Please specify what performance indicator(s) will be referenced in determining the success of the proposed project (e.g. increased productivity, improved customer service, etc.)? (A minimum of one performance indicator must be specified)

Please provide the performance objective as a quantifiable metric for each performance indicator specified.
Note: The performance objective should provide the current performance level, the performance goal, and the time period within which that performance goal is intended to be achieved. You should have an auditable means to measure and take corrective action to address any deviations.
Example: Within 6 months of project completion, the agency would hope to increase "Neighborhood Beautification" program registration by 20% (3,986 registrants) from the current registration count of 19,930 active participants.

Performance Indicators

Key configurations to the agency environment will be completed to support zero trust architecture.

DES will be able to monitor end-user workstations for performance when connecting to critical DES applications. This can potentially decrease problem resolution times by 30%.

Ability to isolate and prevent emerging threats from compromising DES staff workstations, protecting 10,000 workstations from emerging threats.

13. CONDITIONS

Conditions for Approval

Should development costs exceed the approved estimates by 10% or more, or should there be significant changes to the proposed technology scope of work or implementation schedule, the Agency must amend the PIJ to reflect the changes and submit it to ADOA-ASET, and ITAC if required, for review and approval prior to further expenditure of funds.

Monthly reporting on the project status is due to ADOA-ASET no later than the 15th of the month following the start of the project. Failure to comply with timely project status reporting will affect the overall project health. The first status report for this project is due on November 15, 2023.

14. OVERSIGHT SUMMARY

Project Background

The current authentication system is OKTA. ZDX and Sandbox will provide benefits for security as well as troubleshooting. Because most users are not in the office, resolution times are lengthy as application performance cannot be monitored remotely and support is limited.

The existing DES resources/applications that will be involved with this architecture and monitored by ZDX include HEA Plus (https://www.healthearizonaplus.gov/Default/Default.aspx), My Family Benefits (https://myfamilybenefits.azdes.gov), and Mulesoft (https://mslb.azdes.gov).

Business Justification

DES personnel require access to agency resources from remote locations. Using a multi-phase deployment approach including system architecture design, administrative access controls, application review and control, and time of access permissions, more secure access to information and resources will be provided. This will reduce the attack exposure and surface to near zero. ZDX fills in the gap with remote workers by providing them support for specific applications. ZDX can show internet connection issues, produce user performance reports, and reduce resolution times for supporting remote workers. Sandbox is used against advanced threat actors that use different file formats, further increasing protection and security for DES users.

Implementation Plan

Agency Responsibilities:
Security review and approval
Risk and compliance review and approval
Infrastructure execution of changes
Authentication and account management
Project management

Vendor Responsibilities:
Environment and architectural assessment
Environment and architectural changes

Shared:
Project planning
Assessment review
Implementation
Architectural design
Configuration

Vendor Selection

ZScaler is currently used within DES. Carahsoft is the current provider, therefore, only one quote for software was obtained.

Three quotes were received for professional services:
WWT
GMI
CStor - selected vendor due to lowest cost that met requirements. Avertium is the vendor Cstor engaged for this project.

Budget or Funding Considerations

The budget will be available through the following sources:
16% Base Budget
    1% Other Appropriated
    38% Federal
    46% Other Non-Appropriated

Funding expiration
Start Date: 7/1/2023
End Date: 6/30/2024

15. PIJ REVIEW CHECKLIST

Agency Project Sponsor
_____
Mark Darmer

Agency CIO (or Designee)
_____
Mark Darmer

Agency ISO (or designee)
_____
Dan Wilkins

OSPB Representative
_____

ASET Engagement Manager
_____

ASET SPR Representative
_____
Emily Gross

Agency SPO Representative
_____
David Steuber

Agency CFO
_____
Roberta Harrison