



ADOA - ASET

Arizona Strategic Enterprise Technology

Project Investment Justification

Version 01.01

A Statewide Standard Document for Information Technology Projects

Project Title: ASRS Switch Replacement

| | |
|------------------------------|---------------------------------|
| Agency Name: | Arizona State Retirement System |
| Date: | 9/02/2014 |
| Agency Contact Name: | Molly Mahai |
| Agency Contact Phone: | |
| Agency Contact Email: | |

[Hover for Instructions](#)

I. Management Summary*

Our switch architecture consists of a data center switch, core switch, and the switches on all floors (managed by AZNet) which connect the workstations to our core switch. Our core switch is more than 12 years old and has failed twice in recent months. This resulted in a network outage that affected the whole agency. We would like to replace the old switch with a redundant solution to prevent further outages and better support our strategic goals.

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:

6T

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

III. Business Case

A. **Business Problem***

Our core switch is more than 12 years old and has failed twice in the last few months. This has resulted in 2 network outages. The switch is end of life and parts are difficult to find and there is no support. This switch connects our floor switches to our data center switch and is the center of our network.

B. **Proposed Business Solution***

We would like to purchase two new core switches to replace the existing failing switch, and provide redundancy in case of a failure.

C. **Quantified Benefits***

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

Explain:

We would like to prevent another network outage as we have strategic goals related to maintaining the network with negligible downtime.

IV. Technology Approach

A. Proposed Technology Solution*

Our plan is to purchase two Cisco 3850 48 port switches. This solution provides the appropriate bandwidth, modular uplinks, and built-in stack technology. By purchasing two switches, we can incorporate redundancy, and prevent a single point of failure.

B. Technology Environment

This replacement will not change our infrastructure. It is simply replacing a component with 2 new components (for redundancy). We have used this manufacturer before and the vendor is on state contract. These switches integrate seamlessly with our other Cisco switches.

C. Selection Process

We had 3 options in this particular endeavor. The first was to do nothing, which would result in a network outage and require an emergency purchase with significant downtime (if we could find the parts). The second was to purchase 2 Cisco 3650 switches. We reviewed the features available with this switch and found that it made more sense to go with the third option, 2 Cisco 3850 switches. This solution provided significantly more bandwidth (480 Gbps compared to 160 Gbps), modular uplinks instead of fixed, and built-in stack technology. The modular uplinks can be swapped out and provide more flexibility in the way the switches connect to each other. This allows for more flexibility with our current environment and in the future as the infrastructure changes.

V. Project Approach

A. Project Schedule*

Project Start Date: 9/2/2014 Project End Date: 10/10/2014

B. Project Milestones

| Major Milestones | Start Date | Finish Date |
|-------------------------|------------|-------------|
| Procure equipment | 9/5/2014 | 9/5/2014 |
| Receive equipment | 9/19/2014 | 9/19/2014 |
| Install and configure | 9/22/2014 | 10/3/2014 |
| Implement in production | 10/10/2014 | 10/10/2014 |
| Troubleshoot any issues | 10/10/2014 | 10/12/2014 |
| | | |

VI. Roles and Responsibilities

A. Project Roles and Responsibilities

Kent Smith – TSD Assistant Director – Project Sponsor
Molly Mahai – Project Manager
James Jarrel – Network Administrator
Vendors: Nexus (vendor on state contract), Cisco - manufacturer

B. Project Manager Certification

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

C. Full-Time Employee (FTE) Project Hours

| | |
|---------------------------------------|--------|
| Total Full-Time Employee Hours | 80 |
| Total Full-Time Employee Cost | \$6000 |

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 | \$42888.85 |
| Total Project Cost | VII. PIJ Financials tab | \$74073.81 |
| FTE Hours | VI. Roles and Responsibilities | 80 |

C. Agency Approvals*

| Contact | Printed Name | Signature | Email and Phone |
|--------------------------------------|--------------|-----------|-----------------|
| Project Manager: | Molly Mahai | | |
| Agency Information Security Officer: | Gary Hummel | | |
| Agency CIO: | Kent Smith | | |
| Project Sponsor: | Kent Smith | | |
| Agency Director: | Paul Matson | | |

IX. Optional Attachments

A. *Vendor Quotes*

X. Glossary

XI. Additional Information

At the ASRS, we utilize industry best practices (e.g. firewall, anti-virus, log review.) In addition, we are in the process of implementing security controls based on the state-recommended NIST standards. We also participate in external security assessments on a bi-annual basis.

Links:

[ADOA-ASET Website](#)

[ADOA-ASET Project Investment Justification Information Templates and Contacts](#)

Email Addresses:

[Strategic Oversight](#)

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