



**ADOA - ASET**

Arizona Strategic Enterprise Technology

**Project Investment Justification**

**Version 01.02**

A Statewide Standard Document for Information Technology Projects

**Project Title:**

**DES Data Center Relocation - Network Implementation**

<b>Agency Name:</b>	Department of Economic Security (DES)
<b>Date:</b>	October 2014
<b>Agency Contact Name:</b>	Kim Hartleroad
<b>Agency Contact Phone:</b>	
<b>Agency Contact Email:</b>	

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## I. Management Summary\*

The Department of Economic Security (DES) is seeking approval to procure hardware and professional services needed to implement and connect the DES Data Center network within the new co-located multi-tenant data center. The proposed DES network solution will be an extension from the MAGNET network and therefore, is dependent on the network services being provided by AZNETII. The DES network solution is required to support the computing, processing and storage capacity that will be implemented in the next phases of the Data Center Relocation project.

## 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\**

The Arizona Department of Economic Security (AZDES) Data Center continues to rapidly deteriorate. The data center has experienced 3 significant facility outages (requiring emergency services & evacuation) over the last 18 months. These facility issues have included: fire, flood, power outages, leaks, asbestos abatement, generator issues and halon deployments.

The cost to repair this facility would require millions of dollars to repair, and repairs cannot take place while equipment is in the data center. Without immediate intervention, a catastrophic failure is inevitable. The only viable solution is to relocate the AZDES Data Center to the new co-located, multi-tenant site within the CenturyLink / IO facility site. The AZDES Data Center is essential to the daily functionality of the Arizona Department of Economic Security enterprise.

It is imperative to begin the necessary project activities to prepare for the actual relocation of the current AZDES Data Center. AZNETII will be providing the required connectivity to accommodate DES IP network traffic at the new facility.. The DES will require additional equipment and professional services to extend the AZNETII network beyond the demarcation point to build the local area network needed at the new co-location facility.

**B. Proposed Business Solution\***

The DES is requesting approval for the procurement of networking hardware and professional services to address the following operational needs:

- Network connectivity to the new co-location Data Center
- Prepares DES for build out and migration to data center
- Isolate traffic by division through dedicated subnets
- Meet regulatory and statute requirements

The installation of the hardware, configuration, and training of the DES DTS staff on the new environment will be performed by contract personnel (professional services).

With the approval of this procurement request the DES will be prepared to begin the next steps of the Data Center Relocation project.

**C. Quantified Benefits\***

<input type="checkbox"/>	Service enhancement
<input type="checkbox"/>	Increased revenue
<input type="checkbox"/>	Cost reduction
<input checked="" type="checkbox"/>	Problem avoidance
<input checked="" type="checkbox"/>	Risk avoidance

Explain:

Problem Avoidance – Problems associated with the current data center environment.

Risk Avoidance – The risk associated with potential system/service failures induced by the current data center conditions.

**IV. Technology Approach**

**A. Proposed Technology Solution\***

The proposed solution will involve building the DES local area network to support the DES Data Center that will eventually be located at the new co-location site. CenturyLink will be the primary contractor for provisioning data center products and services to be co-located off-site at IO Data Center facilities. The solution includes firewalls implemented to receive the handoff from the AZNETII network. Behind the firewalls are the new core switches. The core switches support both the access layer and storage fabric that will be required for the complete build out of the data center.

The following requirements are built into the proposed network design:

- All network paths are redundant
- Isolation of traffic per division through dedicated subnets
- Removes all dependency on the old data center
- Provides end-point to end-point encryption
- Fiber channel storage network isolated from user network
- Full auditability of network traffic
- Meet regulatory and statute requirements

## **B. *Technology Environment***

Cisco Core/Top of Rack/Fiber Channel Switches:

- Nexus 9508 Core Switches
- Nexus 9300 Switches for DC aggregation
- Nexus 3048 Switches for Server Access Layer
- Nexus 3062 Switches for Storage Network

Firewalls:

- Palo Alto Networks PA-5050

Server Load Balancers:

- BigIP F5 Load Balancers
- BigIP F5 ARX File Virtualization

Switches for DES Main Office:

- Cisco Catalyst 3850
- Cisco Catalyst 4500

DNS/DHCP/IPAM Appliances:

- 45 Servers – BlueCat DNS & DHCP
- 3000 Server - BlueCat Address Manager
- XMB2 Server - BlueCat DNS & DHCP
- 1000 Virtual LAB - BlueCat Address Manager

45 LAB - BlueCat DNS & DHCP

## **C. *Selection Process***

Selection for the new co-location site was done under an RFP issued by the Arizona Department of Administration (ADOA) which has been awarded. DES intends to leverage the recently established state contract with CenturyLink Technology Solutions, in strategic partnership with the IO Data Centers, LLC.

In conjunction with the AZNETII network connectivity to the co-location facility, DES will procure the required products in compliance with current state contracts and purchasing policies. Hardware products will be procured that are compatible with both the current DES infrastructure and ADOA-ASET established standards.

## V. Project Approach

### A. Project Schedule\*

Project Start Date: 10/27/2014 Project End Date: 1/24/2015

### B. Project Milestones

Major Milestones	Start Date	Finish Date
Acquire, Install, Initial configuration of network routers	10/27/2014	12/31/2014
Acquire, Install, Initial configuration of firewalls	10/27/2014	12/31/2014
Acquire, Install, Initial configuration of load balancers	10/27/2014	12/31/2014
Configure and validate environment for PCI compliance	1/5/2015	1/16/2015
Configure and validate environment for HIPAA compliance	1/5/2015	1/16/2015
Network testing, tuning and validation	1/20/2015	1/24/2015
Post Implementation Review	1/20/2015	1/24/2015

## VI. Roles and Responsibilities

### A. Project Roles and Responsibilities

Sponsor	Executive	Initiate project, obtain funding, champion project, team staffing	Mike Dellner, DTS AD
Project Governance	DTS Enterprise Architecture	Manage and review overall project architecture	Albert A. Barbieri – DTS Todd B. Templeton – DTS
Project Manager	DTS Project Manager	Manage project schedule and tasks to include test and acceptance	Dwayne Carter - DTS
Program Manager	DTS Program Manager	Works with project managers in support of each work stream	John Peckardt - DTS
Manager, Division of Technology Services	Project Finance and Budgeting	Manage project budgeting and expenditures	Robert Navarro – DTS
Manager, Division of Technology Services	Hardware Coordinator	Project Manager, works with Hardware Vendor Project Manager and DCSSO to install and setup network hardware	Alan Platt – DTS
Network engineer	Configuration and deployment; testing and evaluation	Provide staff to install, configure, deploy, and coordinate setup and verification of network hardware	Vendor Staff - ENS

**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**

<b>Total Full-Time Employee Hours</b>	320
<b>Total Full-Time Employee Cost</b>	\$16,000

**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 <a href="http://aset.azdoa.gov/security/policies-standards-and-procedures">http://aset.azdoa.gov/security/policies-standards-and-procedures</a> , and applicable to this project? If <b>NO</b> , 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 <b>YES</b> , 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	\$0
Total Development Cost	VII. PIJ Financials tab	\$2,465,183
Total Project Cost	VII. PIJ Financials tab	\$2,881,043
FTE Hours	VI. Roles and Responsibilities	320

### C. Agency Approvals\*

Contact	Printed Name	Signature	Email and Phone
Agency CIO:	Mike Dellner		
Agency Director:	Clarence H Carter		

## IX. Optional Attachments

### Glossary

AZ – Arizona

ACA – Affordable Care Act

ADOA – Arizona Department of Administration

DES – Department of Economic Security

DPM – Microsoft System Center Data Protection Manager

DTS – Division of Technology Services

ENS – Enterprise Networking Services (Vendor)

FTE – Full Time Employee

UCS – Cisco Unified Computing System

VM – Virtual Machine

## X. Additional Information

The DES Chief Information Security Officer (CISO) will ensure that the recommended solution is in compliance with all State and Federal data security requirements (NIST, HIPAA, etc.) and addresses any outstanding audit issues related to the management and backup of Agency data.

Links:

[ADOA-ASET Website](#)

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

Email Addresses:

[Strategic Oversight](#)

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