



TOWN OF
QUEEN CREEK
ARIZONA

Virtualization, Data Storage, Tape Library Replacement Project

February 2, 2011





Project Scope

- Replace existing Storage Area Network solution
- Replace existing tape library device
- Begin the process of consolidating servers using virtualization technology



Consolidation/Storage

- Why consolidate servers?
 - Cost savings
 - Reduction of energy consumption
 - Ease of administration
 - Better disaster recovery if planned well
- Why increase storage?
 - Running out of disk space
 - Ongoing initiatives = increased demand for space
 - need for increased performance (consolidation)

Virtualization

Virtualization: A method of partitioning one physical server computer into multiple “virtual” servers, giving each the appearance and capabilities of running on its own dedicated machine.





Benefits of Project

- Cost Savings
 - Removal of Aging Equipment
 - Reduce Power Consumption (at least 22,000 BTUs per hour)
 - Reduction of Microsoft licensing costs
- Safeguarding of Data
 - System Redundancy through Clustering
 - Snapshots
- Scalability
 - Ability to Add and Grow in the Future



Benefits (cont.)

- Efficiency
 - Reduce Storage Needs
 - Increase Speed of Deployment
 - Centralized Management
 - Increase RAM, CPU and Disk Space on the fly
 - Testing Environment
 - Multiple Platform Support
 - Monitoring
 - Real-time view of system health



Recommendation

1. Energy Efficiency and Conservation Block Grant
 - Department of Commerce has approved the use of \$100,000 towards this project
2. Capital Improvement Project (CIP) funds
 - \$130,000 was assigned to this project from the Town Buildings and Vehicles portion of CIP in this year's budget.
3. Remaining funds (\$30,000) will come from the salary savings from the current IT Division Manager vacancy and current maintenance agreements.



Alternatives

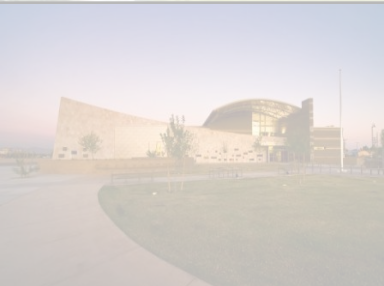
1. Buy the current equipment at end-of-lease rate of \$10,570.
 - Significant concerns with current space capacity
 - Inability to receive timely parts
 - Much of equipment is out of warranty
 - Staff can't guarantee avoidance of hardware failure
2. Continue with a professional services contract with GTSI for a new lease and financing agreement
 - Will probably require upfront costs of \$100,000.
 - 5-year lease will be approximately \$78,000/year

Alternatives (cont.)

3. Implement the Project into Two Phases

- Phase I will include the purchase of the VMware cluster and infrastructure at approximately \$160,000
- Phase II will include hardware and software to support back-ups at approximately \$100,000 from the Energy Grant after the Solar Water Heater program is set to expire in April





Questions?