

# ITS Strategic Roadmap – FY16

## Server Infrastructure Services

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### Background

To successfully manage servers supporting key business applications it takes more than management of the servers themselves, but also a set of related services.

Infrastructure support services are enterprise-level infrastructure tools which includes:

- EMC data storage environment is a highly redundant and easily expandable mixture of hardware and software to provide the level of storage needed by a large organization like the Metro Government. This fiber channel environment is extremely reliable and built with many fail-safe features and currently hosts over 700 terabytes of storage. According to a 2013 study by Gartner, the demand for storage capacity is currently increasing at an annual average growth rate of 50%.
- The VMware Virtual Infrastructure utilizes the storage environment using that storage to create virtual servers that host 60% of servers running applications for the government. These virtual servers are easily configurable by using standard templates, they require considerably less down time due to “on the fly” resource allocation and short reboot times. This environment is also made to enhance business continuity and disaster recovery with its many key features. It can also be combined with other technology to create a warm DR site.
- The Commvault backup and recovery system provides for scheduled backups of critical systems and data as well as allowing for the ability to restore files on demand. It also allows us to archive stale data, which can in turn save on storage costs by minimizing its footprint.

Primary stakeholders for these services are the Public Health Department, Planning Commission, Public Works, Fire Department, Water Services, Public Library and other departments and agencies for whom ITS manages servers.

### Current Strategic Drivers

1. **Open Records/litigation holds** (Game Changing) – Public records requests and litigation holds prompted by legal actions are time-consuming and intensive process.
2. **Continual explosion of data retained** (High) – Our customers continue to follow the documented technology trend of users storing more and more data. This trend is not expected to slow in the foreseeable future.
3. **Customer Demand: Storage around Video Projects** (High) – Customer projects have led to an increase need to manage and store video data centrally.
4. **Business Continuity/DR** (High) – Customer need fail safes and recovery processes for critical data.



5. **Demand for Secure Government systems** (High) – With massive data breaches in the news on seemingly a daily basis, we must strive at all times to protect the security, availability and integrity of all systems and services entrusted to our management.
6. **Regulatory Compliance Obligations** (High) – Regulations and standards such as HIPAA/HITECH, PCI-DSS, TCA 47-18-2107, GLBA, and FERPA have specific information security control needs that must be addressed to realize appropriate levels of compliance with applicable laws, standards, and regulations.
7. **Cloud services** (High) - Cloud services have entered the mainstream and can provide a functionally attractive and cost effective way to offer industry standard services, assuming that security concerns can be effectively addressed by the cloud vendor.
8. **Manual and time consuming capacity planning and data reporting** (Medium) – Currently we do not have the ability to trend data space at a granular level.
9. **Customer demand: Store servers in their physical locations** (Low) – Some Metro departments have the legitimate need to store servers at their location outside the Primary data center.

### On the Horizon Strategic Drivers

1. **End of Life: EMC Storage Arrays** (High) – Support for the current EMC Storage solutions reach End of Life on 12/31/2019.
2. **New Backup Data Center** (High) – While ITS manages the backup data site for Metro departments, the 2012 review illustrates the need for a new shared backup data center for Metro departments and agencies.
3. **Demand for the option to virtualize desktops** (Medium) – Customer’s would like the option to investigate and virtualize their employee’s desktops to eliminate the reliance on a standard hardware.

### Short Term Goals (0-6 months) 7/1/15 – 12/31/15

#	Goal/Objective	Est. Start	Est. Duration
1	Define, plan for, and implement sufficient storage and resources for video projects.	7/1/15	ongoing
2	Plan and Implement new storage solution for data backups. (will require funding)	current	3-6 months
3	Implement and configure Commvault’s E-Discovery Solution	7/1/15	6 -9 months
4	Define and document an updated process of Capacity Planning reporting.	7/1/15	3 months
5	Research the benefits of thin provisioning for VMware.	7/1/15	2 months
6	Research additional storage requirements needed for cloud based storage.	9/1/15	2 months
7	Research encryption capabilities for data at rest. (may require funding)	8/1/15	2 months
8	Research feasibility in expanding the virtual infrastructure to other sites.	8/1/15	3 months



## Medium Term Goals (6-18 months) 1/1/16 - 12/31/16

#	Goal/Objective	Est. Start	Est. Duration
1	Plan for and implement increased Storage capacity for production, backup, and archiving solutions at primary and off-site storage data centers.	1/1/16	3 months
2	Revisit financial and technology benefits of adding Microsoft's Virtual Platform (Hyper-V) to our Infrastructure.	2/1/16	6-9 months

## Long Term Goals (18-36 months) 1/1/17 - 6/30/18

#	Goal/Objective	Est. Start	Est. Duration
1	Feasibility study toward a plan for increasing storage to allow for virtualizing desktops.	1/1/17	3-6 months
2	Continue to monitor and expand the Virtual Infrastructure to keep up with the needs of the Enterprise as well as other departments.	1/1/17	TBD
3	Define, plan for and implement new storage solution for end of life equipment. (will require funding)	5/1/2018	6-9 months

### Related Roadmaps:

- Data Center and Environmental Support
- Enterprise Server

