Substitute HB 2331

Senate Ways & Means Committee
April 04, 2017

1. The cybersecurity aspect of this policy can only be properly implemented if the KITE consolidation aspect is also passed.

2. While KITE leadership would prefer all Executive Branch agencies be included in the cybersecurity and purchasing provided by KITE, note that the current version of the bill "carves out" Non-Cabinet small agencies for two years.

3. KITE makes best use of taxpayer dollars. Currently IT service and product vendors are getting premium prices paid by individual agencies (Cabinet and Non-Cabinet alike). KITE will ensure tax- and fee-payer dollars are spent in a much more coordinated and efficient manner.

4. The Chief Information Technology Officer (CITO) has many of the authorities codified in Sub HB 2331 due to Executive Order 11-46. By passing the bill with both elements (cybersecurity and KITE), the Senate Ways & Means Committee can ensure greater accountability and oversight, which were added to the bill in the House.

Kansas

April 3, 2017

Senator Carolyn McGinn
Chair, Senate Ways & Means Committee
State of Kansas Capitol, Room 545-S

Dear Chairwoman McGinn,

Thank you for the opportunity to address the questions and concerns from members of your committee regarding mainframe and cloud operations for the State of Kansas.

This cover letter serves to clarify one important point: The situations covered by the December 2016, article in the *Topeka Capital-Journal*, and referenced by Senator Vicki Schmidt and others, are two related, but ultimately separate, situations. Unfortunately, as we are all aware, the press doesn't always report the full story. The two documents that follow address each separately. They are:

1. The outsourcing of mainframe operations to Ensono.
2. The vBlock and data center equipment ("the equipment in the basement of Docking") and the requisition of cloud storage services.

What these two programs have in common is that doing nothing is not an option. Current State mainframe and data centers are highly vulnerable due to age and obsolescence.

We respectfully ask that you share both documents with your committee. After they have had the opportunity to read and understand these issues, we are hopeful you will allow us the opportunity to engage in productive dialogue with the full committee about our sincere belief that our plans moving forward are best for the State of Kansas and the tax- and fee-paying citizens of Kansas.

While there are elements of these situations, which are addressed by the legislation we have before you, we ask that you allow our team and advocates and your committee to debate the merits of Substitute House Bill 2331 in a manner that looks to the future of what this policy will achieve for Kansas, rather than focusing on past decisions. We look forward to discussing this further with you.

Sincerely,

Phil Wittmer
Executive Branch Chief Information Technology Officer
State of Kansas

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Kansas

Office of the Governor
Kansas Information
Technology Enterprises

Phil Wittmer
Chief Information Technology Officer

Sam Brownback, Governor

To: Kansas Senate Ways & Means Committee, via Senator Carolyn McGinn

From: Phil, Wittmer, Kansas Executive Branch Chief Information Security Office

Re: Executive Branch Mainframe Operations and Private Government Cloud ("GovCloud," aka
        "vBlock," aka "the equipment in the basement of the Docking building")

Date: April 3, 2017

What is a mainframe?

A mainframe is a centralized computer, which supports multiple other computers. Kansas uses
mainframe computers to:
- Process thousands of transactions such as unemployment benefits payments.
- Support tens of thousands, sometimes hundreds of thousands, of users – both State employees
  and citizen end-users of State technology.
- Ensure adequate bandwidth to run the thousands of devices State employees use at once.

What led Kansas to explore replacing its mainframe operations?

Mainframes have been in use since the 1960's. Organizations everywhere have found their machines
and operational models for running those machines to be inadequate for the ever-growing number of
devices, users and transactions running on the machines. Kansas is no exception to this trend.

When Phil Wittmer became CITO in August of 2015, many in IT leadership had already observed the
ways in which Kansas' mainframe infrastructure and operations were putting Kansas at risk. Those
risks included:
1. MAINFRAME LOCATIONS – Both the mainframe and the backup mainframe were located
   within ten miles of each other in and around Topeka. If disaster struck, Kansas would be in an
   unrecoverable situation.
2. SILVER TSUNAMI – Like so many organizations, Kansas' State workforce is aging. Because
   mainframe technology is especially old, education and private sector decreasingly produce
   qualified operators. Kansas mainframe workforce specifically was nearly all retirement-eligible.
3. UNSUSTAINABLE FINANCIAL MODEL – Because Kansas' mainframe infrastructure was
   underperforming, its "customers" (Kansas Executive Branch agencies) were finding other ways
   to get their IT needs met. But because the mainframe costs were fixed, as agencies moved off
   the mainframe to other technology, the "last man standing" would have to pay 100% of the cost.

What led to the decision to replatform mainframe operations?

It was clear the state of mainframe equipment and operations was not sustainable. The OITS
leadership team, in consultation with industry experts, determined the most **highly performant** and
financially responsible path for Kansas mainframe operations was to replatform those operations to a
"Platform as a Service" model.

1. PAY ONLY FOR WHAT WE USE – By replatforming we can pay for only what we use. If our collective usage decreases, our costs decrease.
2. SUSTAINABLE OPERATIONS – The State of Kansas will no longer be in the position of having to decide whether we can afford to replace mainframes every five years (and then fail to do so when the State budget isn't conducive).
3. SAFE LOCATIONS – With a primary mainframe located in Illinois and the backup located in Arkansas, our State no longer needs to worry about a disaster paralyzing mainframe operations.
4. INDUSTRY-LEADING FACILITIES – As a private-sector company, which specializes in operating only the most secure, modern mainframes, Ensono can ensure the State of Kansas will always have adequate support for our technology, State employees and citizens.

What has been the impact on State operations, workforce, etc.?
We understand every significant shift in operations for the State of Kansas has significant implications for our workforce. We knew it was important to communicate in a timely and transparent manner with all stakeholders, which is why we held the meeting referenced by Senator Schmidt in December of 2016 with all IT employees who might be impacted by this project.

As described above, we also knew when it came to the mainframe, we were looking at many employees who were retirement-eligible. There were, of course, others who are talented technologists who would find employment elsewhere. To date, these are the facts:

- At this time, no State employees have been laid off.
- Ensono has rebadged (hired) four State employees, and continues to explore current State employees for future employment with their firm.
- Some affected employees have retired, while others have moved to positions within State government or outside State service.
- Application Developers who administer applications using Kansas mainframes will remain State employees.

Private Government Cloud ("GovCloud," aka "vBlock," aka "the equipment in the basement of the Docking building")

What is "the cloud?"
Cloud computing means storing and accessing data and applications over the Internet instead of your computer's hard drive. Nearly all consumer applications are now stored and run "in the cloud," such as Gmail, Facebook, YouTube and Netflix. It's the technology that allows you to post a photo in the Facebook app on your phone, then walk over to your desktop computer and see the likes and comments in your internet browser.

There are three main ways for an organization like the State of Kansas to access the cloud:
- Public Cloud – Services and infrastructure are provided off-site over the Internet. These clouds offer the greatest level of efficiency in shared resources; however, they can be more vulnerable than private clouds.
- Private Cloud – Services and infrastructure are maintained on a private network. These clouds offer the greatest level of security and control, but they require the enterprise to still purchase and maintain all the software and infrastructure, which reduces the cost savings.
- Hybrid Cloud – Includes a variety of public and private options. By spreading applications and storage out over a hybrid cloud, each aspect of the enterprise can be run in the most efficient environment possible.

In 2015, 90% of U.S. companies said they have already moved to or would soon be pursuing a hybrid cloud solution.

How did Kansas IT leaders approach cloud storage prior to 2015?
In the fall of 2012, then-CITO Anthony Schlinsog, along with agency CIO's, decided to pursue a private cloud solution for Kansas. They called this program Executive Branch Technology Modernization (EBTM). As referenced above, because this was a "private cloud," the decision meant equipment and operations would be located exclusively on State of Kansas property, in State of Kansas Data Centers.

The group released an RFP for private GovCloud equipment and services in September of 2013 and selected a vendor in August of 2014. Two locations were selected for the data center equipment: BNSF in Topeka and the Johnson Co Emergency Management facility.

What were the anticipated costs associated with the GovCloud solution?
The EBTM/GovCloud program required the purchase of equipment (vBlocks*) and the full data centers that would be built up around the equipment to run the equipment. The vBlocks were leased, and more than $10million was used for that initial purchase. However, it was determined the full cost of the private GovCloud including data center operations would be as much as $55million.

*The "v" in vBlock stands for Virtual Computing Environment, which is the term used to describe the cloud computing going on inside the equipment.

Where does the $17million figure come from?
The $10,794,272.66 spent on the vBlock equipment is described above. The remaining $6.3million has been applied to the Kansas Wide Area Network (WAN) and broadband fiber projects, and therefore is not considered a "sunk cost."

Why did Phil Wittmer put the EBTM program on hold in September of 2015?

Phil Wittmer was appointed by the Governor as CITO in August of 2015. The 2015 SB112 mandated that Mr. Wittmer find $15million in savings within Executive Branch IT. Within his first 90 days, CITO Wittmer began a financial analysis of IT spend across the executive branch agencies.

During this analysis, Mr. Wittmer and IT leadership reviewed the EBTM project and discovered the full cost to implement. The team realized they were looking at $10million in sunk costs (the vBlocks), but more importantly, another $44million in expenditures with no evidence those costs could be recovered in the manner which had been prescribed (agency charge-back fees). This figure did not include the significant ongoing costs to maintain and refresh the data centers.

Mr. Wittmer determined, along with IT leadership and industry experts, the best way to be **highly performant** and **financially responsible** with Kansas tax- and fee-payer dollars was to put the EBTM program on hold and pursue a more stable, sustainable cloud storage solution for the State.

Why did IT leadership decide to pursue a Hybrid Cloud model for the State of Kansas?
The decision to pursue an outsourced Hybrid Cloud solution was made based the following information:
1. PAY ONLY FOR WHAT WE USE – By outsourcing we can pay for only the cloud storage we use. If our collective usage decreases, our costs decrease.
2. SUSTAINABLE OPERATIONS – The State of Kansas will no longer be in the position of having to decide when and how we can pay to replace cloud equipment and data center operations.
3. INDUSTRY-LEADING PROVIDERS – The State of Kansas acknowledges that complex, ever-evolving technologies such as cloud storage are best operated, maintained and modernized by private-industry experts.

Was it possible to simply continue operating with the State's current data centers?
No, the State's current data centers are highly vulnerable, insecure and functionally obsolete. Like the mainframe, doing nothing is not an option.

What are the next steps in pursuing a Hybrid Cloud solution for Kansas?
An RFP is currently open for Hybrid Cloud solutions providers, and closes April 18, 2017. There has been overwhelming interest in the proposed scope of work. The RFP allows the flexibility for vendors to choose to purchase the leased vBlock equipment from the State of Kansas.

How will the move to a Hybrid Cloud model impact State IT employees?
At this time, there is no evidence this transition will lead to layoffs. Mr. Wittmer and IT leadership have been careful to communicate early and often with employees to keep them informed.