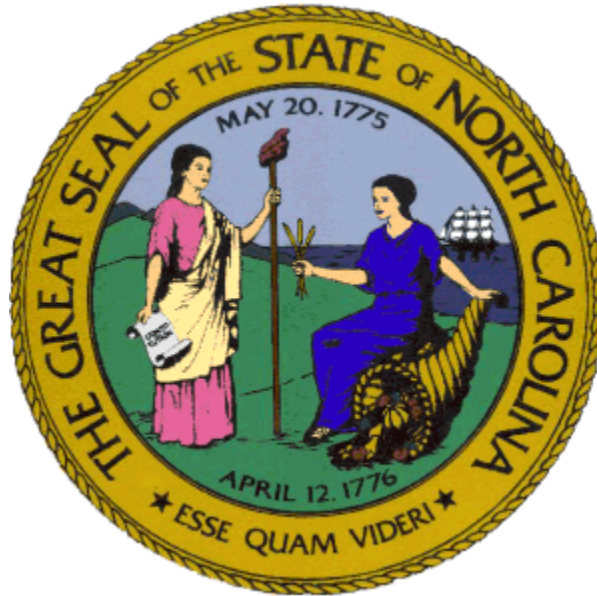


**Information Technology Consolidation Report**

**As directed by House Bill 200, Section 6A.7.(c)**

**September 2011**



*Prepared By:*

*Office of State Budget and Management*

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## **INTRODUCTION**

**SECTION 6A.7.(c)** of Senate Bill 202 states that “beginning September 1, 2011, and quarterly thereafter, the Office of State Budget and Management, in conjunction with the State CIO, shall provide written reports to the Joint Legislative Commission on Governmental Operations, the Joint Legislative Oversight Committee on Information Technology, and the Fiscal Research Division relating to State information technology consolidation.” This report addresses the first quarter of 2011.

This report will provide an overview of the Consolidation Initiative based on the requirements set forth in this year’s appropriations bill. This is the first of four quarterly reports and as such, it will only provide a high level overview. Subsequent reports will provide more detail as additional work is completed.

## **BACKGROUND**

Various stages of IT consolidation have occurred in the State since the 1980s, when the State Information Processing Services, the predecessor to the Office of Information Technology Services, consolidated 18 mainframes in the executive branch. Actions by the General Assembly and the administration increased consolidation activity in recent years.

Senate Bill 991 (2004) required OSBM and ITS to develop a plan to consolidate IT infrastructure, staffing, and expenditures in Executive Branch departments where a statewide approach would be more economical. ITS, with the approval of OSBM, has consolidated thirteen individual State agencies, departments and institutions.

Infrastructure consolidation has been executed in phases. Initially, the focus was on five core areas of IT infrastructure: the network that links state departments to each other, and to the rest of the world; security; data centers; end user computing, and the management of intra-department networks that link department employees with each other. Phase 1 started in 2005 and consisted of smaller agencies. They were the “government” within state government, they were located close to each other physically—most of them in the same building, including the Governor’s Office. Phase 2 started in 2007 with larger agencies and was completed in 2009. As a result, 5,600 personal computers, 251 servers, and the LAN infrastructure located at 219 sites in four agencies, six offices, and three commissions have been migrated to ITS management. The infrastructure for each of these agencies now resides with and/or is the responsibility of ITS. Agencies are billed monthly for the services associated with infrastructure. Below please find the agencies in the first two phases:

- Phase I – (2005 – 2006)
  - Governor’s Office
  - Lt. Governor’s Office
  - Department of Administration (DOA)
  - Office of State Budget Management (OSBM)
  - Office of State Personnel (OSP)

- Phase II – (2007 – 2009)
  - Industrial Commission (NCIC)
  - Office of Administrative Hearings (OAH)
  - Department of Cultural Resources (DCR)
  - Department of Juvenile Justice and Delinquency Prevention (DJJDP)
  - Alcoholic Beverage Control Commission (ABC)
  - NC Commissioner of Banks (COB)
  - Department of Commerce
  - Office of the State Controller (OSC)

Session Law 2008-107 (2008) required the State CIO to develop a plan to transition all State agencies, departments and institutions (outside of the General Assembly, Judicial Department and The University of North Carolina) to a single statewide electronic mail system.

In July, 2009, Governor Purdum issued Executive Order Number 18, “E-mail Retention and Archiving Policy.” The order made it clear that e-mail messages sent and received in the transaction of state business are public records and Executive Branch agencies must handle and maintain them in compliance with the Public Record Law and records retention policies, just as with paper documents. It directed ITS to maintain backups for a longer period and to procure an e-mail archive system as soon as practical. That archiving system is being phased in for users of the centralized e-mail system.

In August 2009, Senate Bill 202, Section 6.19 directed OSBM, in conjunction with the State CIO, to continue to consolidate State government’s IT infrastructure where a statewide approach would be more economical, reduce security risks, or minimize potential disruption to service. In setting consolidation priorities, it told OSBM and the State CIO to target IT infrastructure issues that pose significant risk to agency operations or data, or that provide opportunities for immediate cost savings to the State.

Economic and budget conditions forced ITS and the agencies to approach Phase III and subsequent consolidation activities differently. Instead of using an agency-wide approach, as was done in the first two phases, the effort now focuses on IT infrastructure issues that pose significant risk to agency operations or data, and opportunities that provide early cost savings to the State. Those opportunities may include infrastructure or the greater use of shared services. The goal of this effort has been to identify areas where consolidation would reduce cost while improving service and/or functionality. For example, Phase III began with an inventory assessment at the Department of Transportation. ITS completed IT site assessments for an initial 37 DOT sites (out of a reported 586 total sites). These sites were chosen by DOT as representative of DOT as a whole. ITS assessed the IT infrastructure in these 37 sites against a common set of measurements, by service, to determine what investment would be required to fully bring the sites up to best-practice standards.

These investment numbers for the initial 37 sites were then averaged and applied to DOT as a whole. Based on the numbers, the total investment necessary to bring DOT fully up to best-practice standards would exceed \$18 million – far more than the budget allotted. Deferring less critical items and other steps could have reduced that total to \$7.7 million, still more than budgeted. Due to budgetary issues this effort was placed on hold.

In addition, DENR approached OSBM and ITS to consolidate its Downtown Raleigh server farms that would move to Green Square. The implementation of this consolidation is well underway and when Green Square opens in the Fall of 2011 DENR's Downtown Raleigh servers will be fully consolidated at ITS. Details about this effort can be found later in the report.

## **QUARTERLY REPORTING**

As stated above, this is the first of four quarterly reports outlined in this year's appropriations bill. While this report will provide an overview and overall direction of the initiative, future reports will provide details. The quarterly reports will focus on the following areas, 1) the Consolidation Plan, 2) the Enterprise Grants Management System, 3) the Public Safety Consolidation Effort, and 4) DENR/ Green Square Server Consolidation.

## **CONSOLIDATION PLAN**

Based on the criteria outlined in SECTION 6A.7.(a) of this year's appropriations bill, "by February 1st, 2012, the State Chief Information Officer (State CIO), in conjunction with the Office of State Budget and Management (OSBM), shall develop a detailed plan for consolidating the information technology infrastructure and applications of all State agencies, departments, and institutions in the executive branch. Information technology infrastructure includes personal computers, hosting and network environments, the help desk, call centers, and information technology security. Applications include enterprise software, on demand software, and customized software".

As discussed with legislative staff, the State CIO is currently doing the preliminary work necessary to create this high level strategic plan for the consolidation of information technology across the executive branch. This plan will look at the relationships and interdependencies of infrastructure and applications. The plan will document synergies as well as the reuse of common components and functions among executive branch agencies. The plan will also outline the proper utilization of existing IT resources.

At its core, the principles of the state's consolidation approach have not changed since its inception. It remains true that the state is best served when a centralized approach is adopted for those efforts that are common among agencies. Individual agencies should focus their efforts on those things that make them unique. This holds true for infrastructure as well as business processes.

The plan will elaborate on this as well as other key consolidation principals using industry best practices, state expertise, and lessons learned from the first few phases of the consolidation effort. The State CIO would like to ensure that work is not a duplication of the work that will be conducted as part of SECTION 6A.19(a) Evaluation of State Information Technology Operations of this year's appropriations bill and will provide Information related to this plan to the General Assembly.

## **IT INFRASTRUCTURE STUDY AND ASSESSMENT (INSA)**

In a memorandum dated July 21, 2010, Governor Bev Perdue directed the SCIO to engage a third-party consulting firm to conduct a thorough assessment of information technology (IT) infrastructure costs and related services provided by the Office of Information Technology Services (ITS) and other Cabinet-level agencies within the Executive Branch of government. This IT Infrastructure Study and Assessment (INSA) Project was in line with the Governor's efforts to reduce costs and improve service within state government through consolidation and/or the utilization of private sector IT services.

As a result of the Governor's memorandum, the INSA Project Team was formed to perform a range of tasks and activities in support of this project, and Technology Partners International (TPI), a leading global sourcing advisory firm, was selected to conduct the study. In addition to the Project Team, an Executive Business Sponsor group was formed to represent all of the agencies that were in scope for this study. This group participated in the project's overall governance and the development of recommendations.

The TPI Final Report included recommendations, supporting business cases, and implementation timelines for potential sourcing solutions. Some of TPI's major recommendations include:

- outsourcing the mainframe service
- outsourcing WAN services
- consolidating the IT service desks for DOR, ESC, WRC, DENR, and CCPS into ITS, and
- consolidating servers for ESC, DHHS, CCPS, DOT, and WRC into ITS.

The Administration does not believe that additional study is required and looks forward to partnering with the General Assembly to implement those recommendations that are in the best interest of the State.

## **GRANTS MANAGEMENT CONSOLIDATION**

As part of the consolidation initiative, the SCIO will develop and implement a single enterprise grants management system. It is OSBM's expectation that this end-to-end solution will address statewide needs associated with application, management, accounting, monitoring, reporting, and auditing processes.

To date the office of the SCIO has met with 18 grant-making agencies about their various grants and associated processes, inventorying 21 applications of various types and configurations. Five agencies currently have no IT applications supporting grants management activities, instead relying on manual processes. Staff has seen demos from multiple existing agency grants management systems and is working to determine the most reasonable and cost-effective approach for the state. The SCIO will be working closely with OSBM to gain a full understanding of the entire grants management process for statewide accounting, reporting, monitoring, and auditing requirements.



## **PUBLIC SAFETY CONSOLIDATION**

In her effort to create the Department of Public Safety, the Governor has asked that the State CIO to participate in the Information Technology aspects of the consolidation. The State CIO will work with OSBM, and IT staffs within the existing agencies to begin the consolidation effort. Not all executive leadership has been appointed at this time. When that happens, the State CIO will be able to work with OSBM, and the leadership team to work through technical as well as business issues.

## **DENR/GREEN SQUARE SERVER CONSOLIDATION**

### **Progress to-date:**

The IT Consolidation Program team with the Office of the SCIO has been actively engaged with DENR to perform a server consolidation over the past year. This is a limited server consolidation, focused on those locations impacted by the relocation to the new Green Square complex and the resulting back-fill into the Archdale building. These locations include Archdale, Capital Blvd., Oberlin Road, and the Museum

DENR has reduced its server inventory by 72%, from 240 to 69. Of the 69 remaining servers, 40 will be virtual and 29 will be physical. The main Production servers are in the ITS Western Data Center. The Development/Test environment is located in the ITS Eastern Data Center, giving DENR an initial base for Disaster Recovery. All applications have been migrated from the current servers to the new server environments. Testing is nearly complete. To-date, 15 of the new servers are in production.

The scope of this consolidation was recently expanded to include the Division of Air Quality. A new group of servers will be deployed to replace the existing outdated servers for the division. This cluster was old and under high risk of failure. These servers issue air quality actions and alerts (Code Green, Code Orange, etc.) and interface with the EPA. Testing is currently in-progress.

### **Plans for the coming quarter:**

Implementation of the remaining servers will be completed. Move-in dates for Green Square have been pushed back to late-October through early-November, with the Archdale back-fill moves occurring in December and January. This will delay the set up of some of the servers for Green Square, but will not impact the production schedule for servers in the Eastern and Western Development Centers. Testing for the new servers for Air Quality will wrap up and the servers will go into production.

DENR has a long-term goal of rolling out an Enterprise Active Directory solution. DENR's reliance on Novell (which goes end-of-life in 2012) must be eliminated, so this rollout will take priority as the server consolidation component winds down. ITS will be working with DENR to ensure that this transition takes place in a timely manner.