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An Audit Report on

The Department of Information Resources and State Data Center Consolidation

August 2009

Report No. 09-051



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Overall Conclusion

To ensure the success of the state data center consolidation project, the Department of Information Resources (Department) should improve its oversight of the processes IBM (the Department's contractor) uses to transfer agency systems and data into state data centers. Auditors identified the following issues:

- The Department has not provided sufficient guidance to agencies in upgrading their applications and systems (a process referred to as "application remediation") to prepare for transfer to the state data centers. Application remediation is an important part of the state data center consolidation process, and its success or failure will significantly affect the Department's and IBM's ability to consolidate state data centers.

Background Information

The Department of Information Resources (Department) entered into a contract with IBM for the provision of data center services under Texas Government Code, Chapter 2054 (specifically pursuant to House Bill 1516, 79th Legislature, Regular Session).

According to the Department, the goals of the contract were effective management of in-place services; migration of services to the consolidated data centers; and improvements to services, security, and disaster recovery capabilities.

- The Department has not ensured that all of the agency systems and applications that are within the state data center consolidation project have been completely identified and documented, including the applications that need to be remediated. This has hindered the Department's and IBM's ability to adhere to the state data center consolidation time line, ensure the accuracy of IBM's reported service levels (also referred to as "performance metrics"), and renew agency software licenses in a timely manner.

State Data Centers and the Data Center Consolidation Project

As of June 2009, IBM was managing data processing systems and storage at data centers located at many of the 27 agencies involved in the data center consolidation project.

Four data centers maintain systems for multiple agencies: the Winters Data Center in Austin, the Network Security Operations Center in Austin, the Austin Data Center, and the San Angelo Data Center.

IBM's long-term plan, under its contract with the Department, is to move the systems and data for all 27 agencies involved in the data center consolidation project to the two primary data centers: the Austin Data Center and the San Angelo Data Center.

Some agencies have systems and data stored at the Austin or San Angelo data centers but still need to complete IBM's consolidation process.

- The Department should improve its monitoring of the processes IBM uses to calculate and report its service levels. Auditors identified deficiencies in the processes that IBM uses to collect service level data and calculate its reported service levels. Auditors also identified weaknesses in the Department's processes for verifying the accuracy and completeness of the service levels that IBM reports.

This audit was conducted in accordance with Texas Government Code, Section 321.0134.

For more information regarding this report, please contact Ralph McClendon, Audit Manager, or John Keel, State Auditor, at (512) 936-9500.

The implementation of recommendations made by another contractor the Department hired may help resolve the difficulties IBM has experienced in procuring hardware and software for state agencies. However, the Department should ensure that IBM implements additional controls to ensure that IBM procures equipment and software for agencies within the timeframes defined in the contract.

Suspension of the Contract and Agency Certification Requirements

In November 2006, the Department and IBM signed a contract for a seven-year period with three optional one-year extensions. The State had paid IBM \$276 million for services under the contract as of May 2009. According to the contract, IBM was required to consolidate state data center services for 27 agencies within two state data centers in Austin and San Angelo by April 1, 2009. Based on documentation obtained from IBM, as of June 2009, most of the 27 agencies had moved some of their equipment and data into the state data centers, but none had completely consolidated systems and data within the two primary state data centers.

On October 28, 2008, Governor Perry suspended consolidation of agency equipment and data within the two state data centers due to IBM's failure to back up data for some state agencies. The Department then required IBM to implement a plan and demonstrate that it could comply with the backup requirements in its contract. The Department also required each agency to certify that IBM had identified and documented the agency's critical data and prepared an appropriate schedule for routine backups. Each certification must be approved by the affected agency and the Department before an agency's equipment and data can be consolidated into the state data centers. As of August 2009, 23 (85 percent) of the 27 agencies in the state data center consolidation project had signed certification letters.

Key Points

The Department's oversight of the application remediation process has been insufficient.

The Department's contract with IBM made IBM responsible for performing assessments to identify the need for agencies to perform application remediation necessary to move systems and data to the state data centers. The contract also made agencies responsible for performing necessary application remediation. Agencies' responses to a State Auditor's Office survey, as well as documentation that IBM provided, indicate that the application remediation process is behind schedule. Interviews with agency information technology directors, survey responses, and documentation the Department provided indicate that the Department has not provided agencies with sufficient guidance on application remediation. For application remediation to occur, all parties must play an active role. The Department's role is to provide guidance and direction over the process.

The Department's monitoring of IBM's reported service levels has been insufficient.

There are deficiencies in the Department's process for monitoring IBM's reporting of service levels (see text box for additional details regarding service levels). The Department's service level validation procedures are not adequate and are poorly documented. The Department also does not perform a complete validation of IBM's reported service levels each month and relies on data "cleaned" by IBM, instead of independently verifying data from the original source.

Service Level Definitions

Critical Service Levels: The Department's contract with IBM designated 32 service levels as "critical." The Department may receive service level credits (financial credits) if IBM does not satisfy minimum performance standards for these service levels as defined in the contract.

Key Measurements: The Department's contract with IBM designated 27 service levels as "key measurements." There are no service level credits associated with these service levels.

IBM's service level reporting is unreliable, and there are deficiencies in IBM's processes for collecting and calculating service levels. For example, the criteria IBM backup administrators used to classify backups as either successful or unsuccessful varied from administrator to administrator. Weaknesses such as this made it difficult to determine whether IBM is accurately reporting successful backups as required. Other deficiencies identified included:

- Poor controls over data collection.
- Errors in formulas used to calculate service levels.
- Manual processes with a high risk for errors and little or no oversight.

The Department has not ensured that the procurement of equipment and software for agencies has occurred in a timely manner.

The Department and IBM did not implement a formal process to report procurement service levels until November 2008. In addition, the Department and IBM have not classified procurement as a critical service level, which means there are no contractual financial penalties for poor performance with regard to procurement. Furthermore, the contractually defined calculation for procurement time does not include installation time as part of the process.

As a result, procurements have taken long periods of time to complete, which delays agency projects and increases agency frustration with the state data center consolidation project. For example, IBM took 86 days from agency approval to delivery (not including installation time) to complete the purchase of upgraded servers for the Department of State Health Services.

In their responses to the State Auditor's Office's survey, agencies stated that state resources are still being used to support state data center services.

Continued high turnover of IBM employees, agency-reported use of agency employees to support state data center services, and agency dissatisfaction expressed in the survey suggest that the skills and knowledge gap the State Auditor's Office previously reported in June 2008¹ still exists. Agency responses to the State Auditor's Office's most recent survey and follow-up questions indicated that agency staff are still performing duties that IBM is responsible for, but agencies are not requesting reimbursement from IBM. A Department requirement that agencies obtain prior approval before performing this work may have led agencies not to request reimbursement for work they perform.

Summary of Management's Response

The Department agreed with the recommendations in this report, and it provided the following summary of its management's response:

The Department appreciates the audit team's detailed review of the complex objectives of the data center services project. The Department has already begun implementation of many of the recommendations and will continue to focus management attention on the critical areas identified by the audit.

The Department agrees with the recommendations and appreciates the auditor's recognition that there are joint responsibilities between the Department, agencies and IBM that greatly influence the success of the data center services program. Moving from 27 separate agencies, with diverse hardware platforms, software versions, and work processes, to a shared services environment is a significant undertaking for Texas. DIR, the agencies, and IBM have worked diligently over the first 24 months of the contract to transition services, manage current operations, and plan for transformation and consolidation activities.

Summary of Objectives, Scope, and Methodology

The audit objectives were to determine:

- Whether selected state agencies, the Department, and the state data center contractor have identified, clearly defined, and effectively managed application changes that are required to move systems and data from agencies to the state data centers.

¹ See *An Audit Report on the Department of Information Resources and the Consolidation of the State's Data Centers*, State Auditor's Office Report No. 08-038, June 2008.

- The extent to which state resources are used to support state data center service levels and whether the state data center contractor's calculations of service levels are accurate, complete, and reported correctly to the Department.
- Whether the state data center contractor procures hardware and software needed to support agency operations in a timely manner.

The audit scope included all the Department's and IBM's activities related to the audit objectives from the time the contract between the Department and IBM was signed in November 2006 to June 2009 (except for information related to the status of application remediation and consolidation of agency equipment into the state data centers, for which auditors obtained updated data through August 7, 2009). Auditors' review of procurement covered the time period from September 2007 through April 2009. Auditors' review of service levels covered the time period from September 2008 through January 2009. Auditors' review of service level exceptions covered the time period from April 2007 to February 2009.

The audit methodology included interviewing Department and IBM personnel; interviewing information technology directors from several agencies; reviewing the November 2006 contract signed by IBM and the Department including subsequent amendments; and analyzing policies, procedures, and other applicable supporting documentation. Auditors also conducted a telephone survey of all information technology directors from the 27 agencies involved in the state data center consolidation project. Auditors used survey results to focus a portion of audit testing.

Auditors also identified less significant issues that were communicated separately to the Department in writing.

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Detailed Results

Chapter 1

Application Remediation Is Behind Schedule, and the Department and IBM Have Not Developed a Methodology that Ensures That Invoices for Agencies That Share Equipment Are Accurate

The Department of Information Resources (Department) should improve its oversight of the processes (referred to as “application remediation”) that agencies use to upgrade their applications and equipment to prepare for transfer to the state data centers.

As of August 2009, more than two years into the Department’s contract with IBM, only 3 (11 percent) of the 27 agencies in the state data center consolidation project had completed application remediation for all of their servers scheduled for transfer into the data centers. An additional 6 agencies (22 percent) were on schedule to complete remediation of their server applications.

Key Transformation Terminology

Consolidation: The process of combining applications from multiple servers on a single server to reduce the number of servers used as well as improve efficiency. At the same time, IBM moves some equipment and data from agency data centers to the two primary state data centers.

Transformation: The activities necessary to evolve from the existing agency environment to the consolidated data center environment.

Transformation Plan: Identifies all material transformation activities and deliverables to be completed and provided by IBM in connection with the consolidation and transformation by IBM, and the dates by which each is to be completed. The transformation process includes application remediation.

Application Remediation: The process used to upgrade, enhance, or modify state agency applications and equipment in preparation for transfer into the consolidated data centers.

The Department’s contract with IBM made IBM responsible for performing assessments to identify the need for agencies to perform application remediation needed to move systems and data to the state data centers. The contract also made agencies responsible for performing necessary application remediation. According to the Department’s contract with IBM, agencies are required to ensure that their applications are at “the most recently released and generally available version of software or the next most recent software release.”

Delays in completing application remediation have negatively affected the transformation process. According to the Department’s contract with IBM, IBM is responsible for preparing transformation plans that define, among other things, the roles and responsibilities of the Department, IBM, and the agency during transformation. The contract required IBM to complete these plans by June 2007. The Department and IBM subsequently amended the contract to extend this due date to June 2008. However, according to Department documentation, as of August 2009, six agencies were not satisfied with the accuracy or completeness of the transformation plans that IBM prepared, and those agencies declined to approve those plans. According to the contract between the Department and IBM, agencies have the authority to approve or decline their transformation plans.

According to the Department's original contract with IBM, transformation of agency data centers (which includes application remediation) was to be complete by April 2009. The Department and IBM subsequently amended the contract to extend this due date to December 2009. However, the difficulties that IBM is experiencing in preparing transformation plans acceptable to state agencies, as well as other issues discussed in this report, raise concerns about whether the Department, IBM, and agencies will be able to complete the transformation process by the new due date.

IBM also has started the process of consolidating multiple agencies' applications on a single server. However, the Department and IBM have not developed and finalized a formal methodology to divide the costs of co-hosting those applications among the agencies. According to IBM, as of June 2009 there were 223 servers from 16 agencies at the Austin data center and 379 servers from 16 agencies at the San Angelo data center. Three of the servers host multiple agencies' applications and data.

Chapter 1-A

The Application Remediation Effort Is Behind Schedule

Documentation obtained from IBM and state agencies indicates that only a small portion of necessary application changes had been completed as of August 2009. Specifically, only 3 (11 percent) of the 27 agencies involved in the state data centers consolidation project had completed remediation of their server applications as of August 2009. Two other agencies had completed the remediation of some of their server applications but had not yet scheduled remediation for the rest of their applications. Six other agencies were on schedule to complete remediation of their server applications. One other agency was on schedule to complete remediation of some of its applications but had not yet established a schedule to remediate the rest. The remaining 15 agencies (56 percent) had not yet scheduled remediation of their server applications.

Agencies are also working on remediation of applications on servers that will not be moved to the state data centers (referred to as "remote" servers). However, none of the agencies had completed the remediation of applications on the remote servers. The Department's contract with IBM projected that consolidation of the remote servers would be complete by April 2010.

Nine (33 percent) of the 27 agencies that auditors surveyed reported that they did not know which applications needed remediation. The Department provided auditors with documentation showing that, on April 23, 2009, it sent agency information technology directors a list showing software versions required to consolidate into the two state data centers. The Department also provided auditors with documentation of its efforts to provide agency information technology directors with guidance on application remediation through multiple meetings and e-mails. Despite those efforts, 12 (44 percent)

of the 27 agencies stated that the Department had provided no guidance to them regarding what application remediation was necessary. Agencies' responses to the State Auditor's Office's survey, as well as subsequent interviews with four agency information technology directors, indicate that the Department's methods of communication have not been effective.

The Department's original contract projected that data center server transformation (which includes application remediation and consolidation) would be completed for all agency data centers by April 2009 (a subsequent contract amendment extended this due date to December 2009). However, according to IBM's records, as of August 2009, no agency had completed the entire transformation process.

Partially as a result of the delays in application remediation, the transformation of agency equipment and data into the state data centers has been significantly delayed. According to the Department's contract with IBM, agency transformation plans should have been completed by June 2008. As of August 2009, 15 agencies had accepted the transformation plans that IBM prepared for them, and the remaining 12 agencies had rejected their transformation plans as incomplete or inaccurate or had not yet submitted a response to the Department.

As of August 2009, only 3 (11 percent) of 27 agencies with servers had completed the consolidation of their servers in the two data centers. These three agencies (the Department itself, the Texas Veterans Commission, and the State Library and Archives Commission) have moved all servers involved in the consolidation project to the two state data centers. However, IBM and the agencies have not completed all the tasks required for transformation. Of the three agencies, the Texas Veterans Commission has 2 servers in the consolidated data centers, the State Library and Archives Commission has 23 servers in the consolidated data centers, and the Department has 24 servers in the consolidated data centers. Both the State Library and Archives Commission and the Department have additional servers that will remain at the agency locations.

The Department, IBM, and agencies have been more successful at consolidating mainframes and print/mail servers. According to documentation obtained from the Department and IBM, as of August 2009, 9 (82 percent) of 11 agencies with print and mail servers had completed the consolidation of their print/mail servers at the two state data centers. In addition, all four agencies with mainframes had completed the consolidation of their mainframes into the two state data centers.

According to IBM, it had assigned 27 employees to the transformation process as of June 2009. During the course of this audit, the Department also reported

assigning 14 additional employees to the transformation process, including 8 employees on loan from other agencies.

IBM has initiated a process to help agencies determine when servers, operating systems, middleware, and databases are ready to be transferred to a state data center. However, auditors could not verify the status of the process at the agencies because 7 (88 percent) of the 8 agencies that auditors contacted contradicted the information that IBM provided. Specifically, these seven agencies did not agree with IBM's assertion that application remediation was complete at their agencies. In addition, 4 (50 percent) of the 8 agencies contacted disagreed with IBM's records regarding the total number of servers at their agencies.

According to the Department, IBM has allowed one agency—the Department of State Health Services—to establish a remediation environment in one of the state data centers to help facilitate that agency's application remediation project. That agency's applications will be upgraded inside the state data center. This is particularly helpful when an agency's equipment cannot support the software needed to run in the state data centers. It is also advantageous to both the agency and IBM because the agency does not have to use additional resources to move its applications to the state data center after remediation.

Agency applications and equipment must be remediated to receive the benefits of consolidation, including reduced administrative and maintenance costs due to fewer platforms and configurations. Because technology is constantly changing, agencies that have already completed application remediation may be required to perform additional application remediation in the future unless their systems are transferred into the state data centers promptly.

Recommendations

The Department should:

- Work with agency management to prioritize application remediation to meet agreed-upon transformation schedules.
- Consider implementing incentives to encourage agencies to help in accelerating the remediation and transformation processes for all applications, including any unremediated applications that may be moved into the state data centers.
- Consider modifying the classification of agencies that delay transformation to "remote." Classification as "remote" would mean that the agencies would have to pay IBM more for support and the agencies

would maintain responsibility for hardware upgrades, enhancements, and keeping up with changes in technology.

- Consider assisting agencies by preparing guidelines for the remediation of commonly used software.
- Identify agencies that could benefit from setting up a remediation environment in a state data center and assist them to do so.

Management's Response

The Department agrees with the recommendation. While the Department has actively advised agencies of their responsibility to remediate applications in anticipation of planned transformation, the Department is committed to taking additional steps to encourage and facilitate timely application remediation. The Department will implement more vigorous methods for promoting active agency participation such as those recommended.

The Department has provided information to each agency identifying the levels of software required to move agency applications into the consolidated data centers. The Department will require each agency to identify each agency application that requires remediation, including a schedule of when each agency application will be remediated. The Department will be able to use this information to assess which agencies would benefit from creating a remediation environment in the state data center.

Estimated completion date: September 2009

Title of person responsible: Transformation Manager

The Department will develop guidelines for remediation of commonly used software and distribute to the agencies to facilitate timely consolidation.

Estimated completion date: October 2009

Title of person responsible: Transformation Manager

The Department and IBM Have Not Developed a Formal Billing Methodology to Calculate Amounts on Agency Invoices for Shared Assets

One of the benefits of consolidation is combining multiple applications from various agencies onto the same server, which would result in lower hardware costs. According to IBM, six agencies are currently sharing server hardware; however, the Department and IBM have not developed and finalized a formal fractional billing methodology to divide the costs of co-hosting those applications. As a result, it is possible that agencies may have been charged incorrectly for services.

Recommendations

The Department should:

- Work with IBM to develop and finalize an accurate formal fractional billing methodology.
- After developing a formal fractional billing methodology, review all prior invoices to ensure that both agencies and the Department are adjusted for any changes in billing.

Management's Response

The Department agrees with the recommendation and acknowledges the need to establish a formal billing methodology for allocating shared resources. The three shared servers identified at the time of the audit for fractional billing have not been invoiced, therefore no credits are required at this time. The Department will work with IBM to finalize a formal fractional billing methodology. In the interim, all shared servers have been flagged to review for proper allocation of charges once the formal billing methodology has been implemented.

Estimated completion date: October 2009

Title of person responsible: Data Center Services Finance Manager

Weaknesses in Department and IBM Processes Make Reported Service Levels Unreliable

Auditors identified deficiencies in the process the Department uses to monitor IBM's reporting of service levels. In addition, the Department has modified the terms of its contract with IBM by extending due dates for the fulfillment of key contract provisions.

Service Levels

There are two categories of service levels:

- **Critical Service Levels:** The Department's contract with IBM designated 32 service levels as "critical." The Department may receive service level credits (compensation for diminished value of services) if IBM does not satisfy minimum or expected performance standards for these service levels as defined in the contract.
- **Key Measurements:** The Department's contract with IBM designated 27 service levels as "key measurements." There are no service level credits associated with these service levels. The Department may change the designation of a key measurement to a critical service level.

Service levels have minimum and expected requirements:

- **Minimum Service Level:** The Department's contract with IBM specified that this is a level of service below which IBM would be providing "unacceptable service." Performance below the minimum service level is considered a service level default and results in the Department assessing IBM a service level credit.
- **Expected Service Level:** The Department's contract with IBM specified that this is a desired level of performance for critical service levels.

Auditors also identified weaknesses in IBM's controls over the service levels it regularly reports to the Department. The Department should be able to use service level information that IBM reports to assess IBM's progress in fulfilling its responsibilities under its contract. However, the weaknesses in service levels that auditors identified make it difficult to determine whether the service levels IBM reports to the Department are complete and accurate. The weaknesses identified include poorly documented and inconsistently applied procedures, inaccurate calculation methodologies, and reliance on unverified data regarding information technology assets. Auditors tested 6 of 59 service levels and identified errors in 5 (83 percent) of them.

The Department's contract with IBM specifies that IBM is responsible for performing at agreed-upon levels of service in multiple areas related to the management of the state data centers. IBM is required to submit a monthly report on its performance for each of 59 service levels to the Department. As of May 2009, IBM was reporting on 53 service levels. Service levels fall into two categories:

critical service levels and key measurements (see text box for additional details on service levels and Appendix 2 for each service level's performance requirements).

Chapter 2-A

The Department Has Not Established Effective Procedures for Monitoring IBM's Service Level Reporting

The Department does not have an effective process to monitor IBM's reported service levels. The Department's monitoring procedures rely on IBM-generated data and do not include an independent recalculation of reported service levels. As a result, the Department failed to identify the process deficiencies and reported service level errors detailed in Chapter 2-B of this report.

Although the Department asserts that it reconciles the monthly data from the automated system that IBM uses to calculate and report service levels, it could not provide sufficient evidence of any such reconciliation. In addition, although the Department asserts that it has reviewed IBM's service level calculations twice by duplicating IBM's procedures, it could not provide any evidence of such reviews.

According to the Department, it has acted on information provided by the State Auditor's Office during the course of this audit, and it has started implementing an automated review of some of IBM's monthly service level data. The Department told auditors that it plans to automate as many of these reviews as possible.

Recommendations

The Department should:

- Perform monthly reviews of IBM's service level reports for accuracy and completeness. This should include a review of source data and an independent recalculation of all service levels.
- Perform semi-annual reviews of the entire service level reporting process, including code reviews and processes to collect data outside of standard reporting, and document the results of these reviews and any necessary corrections.

Management's Response

The Department agrees with the recommendation and recognizes the importance of consistency and reliability in calculating monthly service levels. While we believe that the issues identified caused no material change in the IBM service level outcomes, the Department agrees that the data collection process should ensure the highest levels of accuracy. The Department performs a monthly review of IBM's service level reports for accuracy and completeness. The Department agrees to increase the level of validation performed on the monthly service levels and to maintain documentation of the validation process. IBM is in the process of automating the calculation of the monthly service levels. Once implemented and validated, the Department believes the automated processes in conjunction with other ongoing contract management controls will provide the confidence and reliance such that monthly independent recalculation is not required.

The Department agrees to perform semi-annual reviews of the entire service level reporting process and to document the results.

Estimated completion date: January 2010

Title of person responsible: Data Center Services Manager

The Department agrees to semi-annually validate the automated processes used to calculate the service levels once implemented.

Estimated completion date: January 2010

Title of person responsible: Data Center Services Manager

The Department agrees to independently recalculate the monthly levels every 3 months until the automated processes are implemented.

Estimated completion date: January 2010

Title of person responsible: Data Center Services Manager

Chapter 2-B

IBM's Reported Monthly Service Level Data Is Unreliable

Errors in IBM's Documented Procedures and Processes for Calculating Service Levels

The data IBM uses to calculate and report monthly service levels is unreliable. Because auditors could not verify the accuracy or completeness of the source data that IBM used in the calculation of service levels, auditors were unable to determine whether IBM reported accurate service levels.

Auditors reviewed IBM's desk procedures for collecting, calculating, and reporting monthly service level data and identified deficiencies in those procedures. The procedures were informally written by an IBM employee for the employee's own use, and there was no evidence of management review of the procedures. The procedures also rely on questionable source data and manual processes that are susceptible to error. Specifically,

- IBM's documented procedures for reporting service levels are incomplete. The procedures do not document how IBM calculates certain service levels. The original procedures IBM provided to auditors in March 2009 did not include the calculations for the "Fulfillment of instance/server/mainframe service requests" (procurements) key measurement, even though IBM began reporting this service level in November 2008.

IBM's procedures also do not include procedures for calculating the following service levels:

- Projects completed within 10 percent of the agreed-upon due date.
 - Disaster recovery test restoration for certain applications within established timeframes.
 - Disaster recovery test restoration for other disaster recovery milestones within established timeframes.
- IBM's documented procedures for reporting service levels contain errors. One of the procedure steps incorrectly uses 1,400 minutes instead of 1,440 minutes to calculate the number of minutes in a 24-hour period. However, because the spreadsheet that IBM uses does not contain formulas, auditors were unable to determine from that spreadsheet whether IBM calculated the service levels on that spreadsheet correctly.
 - IBM's documented procedures for reporting service levels rely heavily on manual processes with insufficient oversight. IBM's procedures include warnings about procedure steps that may not work correctly the first time, potential data errors that may occur and need to be corrected, and instructions to correct program code that should be adjusted each time the code is run. For example:
 - Instructions in the procedures state that there is a problem executing one of the program code queries. The procedures identify the part of the code that causes an error and advise that the code should be deleted and manually retyped.
 - Other IBM procedures require the preparer to go to the Remedy system (a system IBM uses to capture and report all requests for data center services) to research incidents when calculated values do not make sense or when column values are blank or contain multiple values. The procedures indicate that data may be missing from IBM's asset database (referred to as the Configuration Master Database or CMDB) or entered incorrectly in Remedy. In these situations, the preparer manually modifies the worksheet. The use of manual processes with little or no oversight increases the risk that calculation results may be manipulated.

In addition, auditors identified weaknesses in the processes IBM staff use to collect service level data. These weaknesses include:

- Inconsistent use of data collection procedures. Information in Remedy indicates that IBM staff did not always follow the procedures documented in their training manual when creating requests for services

(the requests are referred to as “tickets”). Auditors identified Remedy tickets for which IBM staff selected “IBM” as the affected company, even though the tickets were directly related to a specific agency and should have specified an agency as the affected company. This prevented the agencies from seeing and tracking the status of their Remedy tickets. In addition, these tickets were automatically excluded from IBM’s service level calculations. The Department confirmed that these tickets were not coded correctly.

- Reliance on unverified asset data from the CMDB. IBM staff use data in the CMDB to calculate most of the service levels that IBM reports. IBM also maintains agency asset information in the CMDB. However, the data in the CMDB had not been verified as of July 2009. Although the Department’s contract with IBM requires IBM to conduct annual inventories to verify the CMDB’s accuracy, IBM has been unable to complete a reconciliation of this inventory. According to IBM, it performed several physical inventories, but the Department disagreed with the results. The Department asserted that the most recent reconciliation IBM performed used a faulty methodology. As a result, according to the Department, it found the results to be unreliable and asked IBM to perform a new inventory using better methodology (see Chapter 4-D for additional details).

Errors in IBM’s Calculations of Reported Service Levels

Auditors identified errors in 5 (83 percent) of 6 service levels tested. Table 1 lists the service levels tested.

Table 1

Service Levels That Auditors Tested		
Performance Category	Service Level	Description
Application Infrastructure Availability	Critical Application Infrastructure Availability (Categorized as a critical service level)	Percentage of time all critical application servers are available. Critical application servers must be available 24 hours a day, 7 days a week.
Application Infrastructure Availability	High Complexity Application Infrastructure Availability (Categorized as a critical service level)	Percentage of time all high complexity application servers are available. High complexity application servers should be available 24 hours a day, 7 days a week.
Batch Processing	Successful Backups (Categorized as a critical service level)	Percentage of backups completed successfully and on time each month. Backups that fail but are rerun within an agency’s established time frame are considered successful.

Service Levels That Auditors Tested		
Performance Category	Service Level	Description
Cross-Functional	Projects Completed within 10 percent of the Agreed-Upon Due Date (Categorized as a critical service level)	Percentage of projects completed within 10 percent of the due date specified in the project plan.
Incident Response	Incident Management Communication for Severity 1 Problems (Categorized as a key measurement)	Percentage of time users are notified at the end of each hour that a Severity 1 problem remains unresolved.
Project Management	Fulfillment of Instance/Server/Mainframe Service Requests (Procurement) (Categorized as a key measurement)	Percentage of time that procurements are completed within agreed-upon time frames.

It is important to note that auditors were testing whether IBM correctly used its documented calculation methodologies. Although auditors could not verify the accuracy of reported service levels, they reviewed IBM’s calculation methodology and identified the following errors:

- **Critical Application Infrastructure Availability service level.** IBM did not update the formulas it used to calculate this service level to reflect changes in the number of business days and/or number of days in a month. It also did not update the number of servers and mainframes in its calculations, even though those numbers changed from month to month. This data is necessary to correctly determine the total “up time” for critical servers and mainframes. According to the Department, IBM correctly reported the service level for March 2009 after the Department made IBM aware of the errors. However, IBM’s April 2009 reported service level still contained errors.

In addition, when auditors attempted to correctly calculate this service level, they determined that many of IBM’s procedure steps were necessary to correct errors in CMDB data (see Chapter 4 for additional details).

- **Successful Backups service level.** IBM did not classify backup results consistently. IBM’s staff defined a successful backup as any backup that runs successfully within the timeframe specified by an agency; regardless of how many times backups were rerun. However, some IBM backup administrators documented every backup that failed as a failed backup,

regardless of whether a backup was subsequently rerun successfully within an agency's timeframe. Because IBM does not record backup data using consistent criteria, auditors were unable to determine whether the backup data was accurately reported.

In addition, auditors identified errors in 8 (30 percent) of the 27 backup reports that IBM prepared for November 2008. These errors indicate that IBM is not performing a review of its backup reports.

- **Projects Completed within 10 percent of the Agreed-upon Due Date service level.** IBM first reported this service level in December 2008. Auditors tested the December 2008 data on which the reported service level was based. There was only one project in December 2008—a server move requested by the Department of State Health Services (DSHS). Although auditors identified no errors in IBM's calculation, project planning documents that IBM used to measure this service level had not been developed when the DSHS project began. Furthermore, information documented on the Remedy ticket for this project did not indicate the project was completed within the DSHS's time frame.
- **Incident Management Communication for Severity 1 Problems service level.** Neither the data nor the program code that IBM used to calculate this service level was documented in IBM's primary source document for this service level (the primary source document is an Excel spreadsheet referred to as a Service Level Agreement or SLA workbook). IBM uses the SLA workbook to calculate and document all service levels it reports each month. With the Department's assistance, auditors recalculated the total population reported for this service level for September 2008 through January 2009. Only one month, January 2009, correctly matched what IBM reported.
- **Fulfillment of Instance/Server/Mainframe Service Requests (Procurement) service level.** IBM first reported this service level in November 2008. Auditors reviewed the program code IBM used to calculate this service level each month and determined that it contains an error. The program code excludes certain types of requests, even though they may involve procurement. After auditors' review, the Department performed an informal review for requests that met the excluded criteria and determined that the error had not yet affected IBM's reported service levels. Left uncorrected, however, this error could affect IBM's reporting of future service levels.

Service level reporting is complicated by the fact that all agencies are not yet consolidated in the state data centers. This forces IBM to rely on manual processes to collect and consolidate data obtained from multiple agencies that use multiple applications and equipment for their operations. After it

completes the consolidation of agency applications and equipment, IBM should be able to automate many of the processes it uses to collect data and report performance. However, reported service levels will remain unreliable until IBM is able to (1) update the CMDB with the results from a complete, accurate, and certified physical inventory; (2) reconcile the related hardware information; (3) properly test and review the procedures it uses to calculate the service levels; and (4) ensure the consistent use of its service level calculation procedures.

Recommendations

The Department should:

- Require IBM to develop, implement, and formally document processes, including reviews and verifications, designed to ensure that the data IBM uses to calculate service levels is complete and accurate.
- Require IBM to document and maintain historical reports, including the methods and code it uses to collect and calculate monthly service levels, for the end of the reporting period plus four years.
- Consider involving representatives from IBM, the Department, and the agencies when performing a physical inventory at each agency's data center.
- Update the CMDB with certified hardware and software information each time a physical inventory is completed and verified at each agency.

Management's Response

The Department agrees with the recommendations and will continue to actively monitor IBM's processes for calculating monthly service levels. The Department recognizes the opportunity to improve the service level calculations by addressing weaknesses caused by manual or undocumented processes and technical complexities.

The Department will require IBM to further develop, test, and formally document processes used to calculate service levels. The Department will review for completeness and accuracy.

Estimated completion date: December 2009

Title of person responsible: Data Center Services Manager

The Department agrees with this recommendation and will reinforce the contract requirements to document and maintain historical reports, including

the methods and code IBM uses to collect and calculate monthly service levels.

Estimated completion date: August 2009

Title of person responsible: Data Center Services Manager

The Department agrees with the recommendation and will closely review and monitor the inventory asset reconciliation process. The Department is already in progress of updating the asset inventory and reconciliation processes to update the CMDB after each inventory is validated by the agency.

Estimated completion date: December 2009

Title of person responsible: Data Center Services Manager

Chapter 2-C

The Department's Process for Approving or Denying IBM Exceptions for Missing Required Service Levels Is Subjective and Not Adequately Documented

The Department does not adequately document its reasons for approving or denying IBM's requests for exceptions for unmet service levels. The Department has a process that allows IBM to request exceptions from agreed-upon targets for service levels when the reasons for not meeting the targets are beyond IBM's control. The Department reviews the exception requests and has discretion to approve or deny them. When the Department approves an exception request for a service level, the item is excluded from the monthly calculations of service levels.

Auditors reviewed the Department's documentation of service level exceptions from the commencement of the contract in April 2007 through February 2009. The Department approved 759 (78 percent) of the 973 exceptions IBM requested during that time. However, auditors could not determine whether the exceptions were properly approved or denied because the Department did not adequately document the reasons it approved or denied IBM's exception requests. Auditors observed improvement in the Department's documentation of the exceptions it denied between September 2008 and February 2009. However, the Department did not document the reasons it approved some exception requests.

Recommendation

The Department should document its reasons for approving and denying each service level exception that IBM requests.

Management's Response

The Department agrees with the recommendation and has modified the procedures so that documentation is consistently maintained. As of February 2009, proper documentation has been consistently entered for all exception approvals and denials.

Estimated completion date: Completed February 2009

Title of person responsible: Data Center Services Manager

Chapter 2-D

The Department Has Not Enforced a Contract Requirement Related to Service Levels

The Department's contract with IBM requires IBM to provide the Department with an improvement plan 30 days after IBM misses a key measurement service level. However, as of March 2009, the Department had not yet received any improvement plans for key measurement service levels that IBM has missed.

Auditors reviewed all 21 key measurement service levels that IBM reported between December 2007 and December 2008 (there are 27 key measurement service levels, but 6 had not yet been reported as of December 2008) and determined that:

- IBM did not meet 16 of the 21 key measurement service levels at some point during the 13-month period.
- IBM did not meet minimum service levels for 5 of the 21 key measurement service levels at least half of the time that it reported the service levels. For example, IBM has reported the key measurement "Resolution of Invoice Disputes" ten times, but IBM has met the minimum service level only once.

Recommendation

The Department should enforce the contract requirement for IBM to submit an improvement plan when IBM does not meet a key measurement service level.

Management's Response

The Department agrees with the recommendation. The Department takes contract enforcement very seriously as evidenced by the over \$8 million in service level penalties (credits) assessed against IBM for not meeting critical service levels (there are no penalties associated with key service levels). While the Department did not request a formal, written plan from IBM, the Department has been actively working with IBM to identify and implement actions to improve the key service levels measures. The Department has already initiated the request to have IBM submit a formal written key service level improvement plan.

Estimated completion date: September 2009

Title of person responsible: Data Center Services Manager

Chapter 2-E

The Department Amended the Contract to Postpone Two Deliverables That Were Already Due

The Department and IBM executed a contract amendment effective April 1, 2009, that postponed two deliverables. One of the deliverables was already past the due date, while the other deliverable was due on the date the contract amendment became effective. Specifically:

- The original contract required that the Department and IBM review reported service levels and increase the minimum and expected levels for critical service levels and key measurement service levels by April 1, 2009. The amendment changed the due date for this review to April 1, 2010.
- The original contract required IBM to provide the Department with the results of a customer satisfaction survey performed by a third-party vendor in December 2007. The amendment changed the due date to May 2009. The survey was in progress at the time the due date was amended.

Recommendation

The Department should ensure that IBM completes all deliverables by the due date specified in its contract with the Department.

Management's Response

The Department agrees with the recommendation and recognizes the concern created by formally executing a contract amendment subsequent to the deliverable due date. From a contract management perspective, it may be necessary to modify deliverable due dates when it is in the best interest of the State. Many of the contract deliverable dates were set 12 to 36 months in advance. In the instances cited in the audit, the revised deliverable dates were necessary due to delays in interdependent project milestones, and were discussed and contemplated prior to the deliverable due dates. However, the Department acknowledges that it should have ensured that the formal contract amendments were executed prior to the deliverable due dates and is committed to ensuring in the future that all required contract amendments are executed timely.

Estimated completion date: Ongoing

Title of person responsible: Data Center Services Contract Manager

The Procurement of Hardware and Software Needed to Support Agency Operations Has Not Been Conducted in a Timely Manner, But the Timeliness of Software License Renewals Is Improving

The Department's contract with IBM requires IBM to procure hardware and software within the scope of the data center consolidation project on behalf of the Department and the 27 agencies participating in the state data center consolidation project. However, the original contract's description of how the Department would measure IBM's performance was not clear. As a result, the

Department had to negotiate with IBM on the measurement of procurement performance, and the Department did not receive a formal report from IBM on hardware and software procurement until November 2008, more than 19 months after the commencement of the Department's contract with IBM.

As of June 2009, the Department and IBM had not agreed on the metrics for installation of procured equipment and services, and installation was not yet included in IBM's calculation of the procurement service level. In addition, the contract does not classify procurement as a critical service level with financial penalties for poor performance.

Agency responses to a State Auditor's Office survey indicate that some agencies are not satisfied with IBM's procurement services. A study the Department commissioned also documented problems with IBM's procurement processes and recommended improvements.

The Department is aware of the problems in IBM's procurement process and engaged a consultant to review IBM's procurement processes. The Department also provided auditors with a draft corrective action plan that includes proposed actions to address those problems.

Phases in IBM's Procurement Process

Requirements Gathering: During this phase, IBM obtains and verifies agency requirements. This phase is not included in the calculation for the Procurement key measurement service level.

Request to Proposal (RTP): During this phase, IBM creates a solution proposal based on the requirements of the request. This phase is included in the calculation for the Procurement key measurement service level. This phase starts when IBM begins designing a solution for the agency, and it ends when the solution proposal is ready for agency approval.

Proposal to Approval (PTA): During this phase, IBM obtains both the Department's and the agency's approvals of the solution proposal. This phase is not included in the calculation for the Procurement key measurement service level. This phase begins when IBM requests approval of the proposal from the agency and the Department, and it ends when the approvals are received.

Approval to Purchase (ATP): During this phase, IBM creates a purchase order for item(s) to be procured. This phase is included in the calculation of the Procurement key measurement service level. This phase begins when all agency and Department approvals are received, and it ends when the purchase order is created and sent to the vendor.

Purchase to Installation (PTI): During this phase, IBM manages the delivery and receipt of the item(s) ordered. This phase is included in the calculation of the Procurement key measurement service level. This phase does not include installation. This phase begins when the purchase order is sent to the vendor, and it ends when IBM receives the item(s).

Installation of Product: During this phase, IBM manages the installation of the item(s) ordered. This phase is not included in the calculation of the Procurement key measurement service level. This phase begins after IBM receives the item(s), and it ends after all item(s) included in the procurement are installed and working properly.

The Procurement of Hardware and Software Needed to Support Agency Operations Has Not Been Conducted in a Timely Manner

Auditors' review of procurement requests identified significant gaps in time between steps in IBM's procurement processes. These gaps contribute to the amount of time taken to complete procurement requests. The Department's contract with IBM does not require IBM to include the time between the date an agency submits a procurement request and the date that IBM initiates its procurement process when calculating the Procurement key measurement service level. The contract also does not classify procurement as a critical service level with financial incentives for good performance. In addition, the Department has not required IBM to include the time taken to install procured hardware and software in its calculation of the Procurement key measurement service level.

Twenty-two (81 percent) of the 27 agencies the State Auditor's Office surveyed stated that the current procurement process negatively affects their operations. Five (19 percent) of the 27 agencies stated that IBM does not provide them with sufficient information on the status of their procurement requests. Keeping agencies updated on the status of their procurement requests could help the agencies understand why the process takes time and could help reduce agency frustration.

Auditors selected a sample of 20 items from the 3 different categories of procurements in the contract and used IBM's methodology to calculate procurement time. IBM did not complete most of the procurement requests tested within the timeframes required by its contract with the Department. Specifically:

Procurement Categories In the Contract

Commodity Software: Purchase of new licenses for software that is already being used under the state data center consolidation project.

Standard Solution: Regularly and widely used, available, or supplied items that are already being used under the state data center consolidation project.

Custom Solution: Specialized item designed to meet a client's specific needs.

- All 8 commodity software procurement requests tested took more than the 15-business-day maximum allowed by the contract for commodity software procurements. These 8 procurements took an average of 46 business days.
- Seven (78 percent) of 9 standard solution procurement requests tested exceeded the 33-business-day maximum allowed by the contract. These 9 procurements took an average of 80 business days.
- Two (67 percent) of 3 custom solution procurement requests tested exceeded the 45-business-day maximum allowed by the contract. These 3 procurements took an average of 70 days.

For instance, although a standard solution procurement is supposed to take no more than 33 business days, IBM took 86 days to complete the purchase of upgraded servers for the Department of State Health Services (86 days was the time from agency approval to delivery of the servers and does not include installation time).

Auditors also determined that IBM took an average of 22 business days to install the 20 items tested. This time is not included in the calculation of the Procurement key measurement service level. Nineteen (70 percent) of the 27 agencies surveyed stated that they found it difficult to get IBM to install hardware and software after the purchased items were delivered.

In addition, auditors identified significant gaps in time between the steps in IBM's procurement process for the 20 items tested. For example:

- There was an average of 6 business days between the date an agency submitted a procurement request and the date that IBM initiated its procurement process.
- There was an average of 16 business days between the date that IBM created a purchase order and the date it sent the purchase order to a vendor.
- There was an average of 8 business days between the date that IBM received an item and the date it began installation.

It is important to note that the information used in audit testing was based on information (including dates) that IBM staff had entered manually into Remedy. Auditors were not able to independently verify that information.

Agencies and IBM have differing procurement objectives. Agencies want a solution that addresses their immediate needs as quickly and inexpensively as possible, while IBM would like to purchase equipment and software that can be used in the state data centers over the long term. That means IBM is likely to propose solutions that agencies may consider expensive but that are standardized for the state data centers.

Recommendations

The Department should:

- Revise the methodology it uses to calculate the Procurement key measurement service level to include installation time.
- Consider revising its contract with IBM to ensure that it holds IBM accountable for the time IBM takes to initiate its process after an agency submits a procurement request.

- Include procurement among the critical service levels, with associated penalties for poor performance.
- Review the manner in which IBM communicates the status of procurement requests, and make necessary changes to ensure that IBM keeps agencies aware of issues affecting their procurement requests.
- Work with IBM to ensure that it accurately records procurement data in the Remedy system.

Management's Response

The Department agrees with the recommendations. The Department is in the process of revising the methodology for calculating the Procurement key measure service level to include installation time and will consider including process initiation time.

Estimated completion date: November 2009

Title of person responsible: Data Center Services Manager

The Department is currently undergoing an entire review of the critical and key service levels. The Department will consider elevating the key measure for procurement to a critical service level during this review.

Estimated completion date: January 2010

Title of person responsible: Data Center Services Manager

The Department will review the manner in which IBM communicates the status of procurement requests, and make necessary changes to ensure that IBM keeps agencies aware of issues affecting their procurement requests, including recording accurate and timely information in the Remedy system.

Estimated completion date: October 2009

Title of person responsible: Data Center Services Manager

Chapter 3-B

The Timeliness of Software License Renewals Is Improving

The Department's contract with IBM requires IBM to manage compliance with all software licenses for software for which it has operational responsibility. However, the Department has not enforced those contractual requirements. Auditors determined that IBM has not renewed some agency software licenses before they expired. Specifically, IBM did not renew 6 (26

percent) of the 23 software license renewal requests auditors tested before those licenses expired. In addition, auditors were unable to determine whether IBM had processed an additional 5 (22 percent) of the 23 software license renewal requests tested before they expired because IBM did not maintain a record of the previous expiration date.

Based on a review of IBM's documentation, IBM did not renew the software licenses in a timely manner for various reasons, including the following:

- IBM opened the renewal ticket in the Remedy system shortly before the expiration of the license (within one week of expiration) or after the expiration date had already passed.
- Delays occurred while IBM verified whether the software was within the scope of the contract.
- Timely software license renewals are dependent on the accuracy and completeness of IBM's SoftRec system, its software tracking database. However, auditors were unable to determine whether SoftRec data was complete because none of the six agencies auditors contacted for verification maintains records of software that could be compared to SoftRec data. In addition, the Department and IBM have not yet been able to reconcile the inventory of agency assets, including software, since the contract began (this issue is discussed further in Chapter 4-D of this report).

The Department recognizes that the software license renewal process should be improved, and it engaged a consultant to review the process and recommend improvements.² IBM has implemented a process known as the "30/60/90 Report" based on a recommendation by the consultant. According to IBM, it uses information in SoftRec to develop a report of software licenses requiring renewal within 30, 60, or 90 days. IBM staff use the information in that report to enter software license renewal requests into IBM's Remedy system before the software licenses expire. According to IBM, its internal goal is to initiate all software license renewal requests at least 90 days before the software expiration dates.

This process appears to be helping IBM identify upcoming software license renewals and initiate the renewal process in timely manner. Auditors tested three software license renewals processed after IBM implemented the "30/60/90 Report" process in November 2008 and determined that IBM had renewed 2 (67 percent) of these licenses before they expired.

² *The Department of Information Resources New Work Process Analysis*, October 1, 2008, CIBER.

Recommendations

The Department should:

- Monitor IBM's compliance with the contract software license requirements each month and require IBM to report on software licenses that it did not renew before expiration.
- Require IBM to maintain historical software license information.
- Work with IBM to perform a complete inventory of software licenses and update the database used to track software.

Management's Response

The Department agrees with the recommendation and acknowledges the importance of renewing software timely. IBM has made great improvements in this area within the last year. IBM currently maintains a database of software licenses to track renewals. IBM has implemented a series of reports that identify software that will be expiring in 30, 60 and 90 days. The Department will require IBM to provide a monthly report of software that was not renewed before expiration.

Estimated completion date: September 2009

Title of person responsible: Data Center Services Sourcing Administration Manager

The Department's Implementation of Four Prior State Auditor's Office Recommendations Is Incomplete or Ongoing

Auditors reviewed the status of the Department's implementation of prior audit recommendations related to the scope of this audit that the State Auditors' Office made in June 2008 (see *An Audit Report on the Department of Information Resources and the Consolidation of the State's Data Centers*, State Auditor's Office Report No. 08-038). The prior recommendations reviewed were that the Department should:

- Require that agency staff discontinue performance of outsourced activities on behalf of IBM.
- Monitor IBM's compliance with the contract staffing requirements on a quarterly basis throughout the data center consolidation project.
- Work with IBM to automate processes for collecting data for monthly invoices and service levels.
- Establish a schedule to reconcile IBM's database of information resources to the physical resources that IBM manages.

The Department's implementation of these four recommendations is incomplete or ongoing.

Chapter 4-A

Agency Staff May Still Be Performing Outsourced Activities on Behalf of IBM

June 2008 State Auditor's Office Recommendation

The Department should require that agency staff discontinue performance of outsourced activities on behalf of IBM.

The Department instructed agencies to discontinue performance of outsourced activities on behalf of IBM. However, agency responses to auditors' survey and requests for additional information suggest that some agency staff are still performing outsourced activities. Because agencies are not tracking or requesting reimbursement for these services, however, the Department's reimbursement process is not detecting when agencies perform outsourced activities.

In response to the State Auditor's Office's survey, 22 agencies reported that their employees are still providing support for systems within the scope of the state data center consolidation project. (The State Auditor's Office previously reported this same issue in June 2008.) Individual agency estimates of the number of full-time equivalent (FTE) employees who provide this type of support ranged from 0.25 FTE to 25 FTEs. It is important to note that the agency that stated it used an average of 25 FTEs did not transfer any of its employees to IBM as the Department required; instead, it transferred 19 vacant positions to IBM.

Auditors contacted 12 agency information technology directors whose survey responses indicated that their agencies were performing outsourced work and asked them whether they were tracking the work performed and whether they were asking for reimbursement from IBM. Four (33 percent) of the 12 agency information technology directors stated that they had a mechanism to track the outsourced work they performed. With regard to whether the 12 agencies were requesting reimbursement from IBM:

- 2 (17 percent) stated that they requested reimbursement from IBM.
- 10 (83 percent) stated that they did not request reimbursement from IBM. Of those:
 - 4 stated that they did not request reimbursement because the process the Department created for obtaining reimbursement was too time-consuming.
 - 3 stated that they had stopped requesting reimbursement because the Department and IBM had denied previous requests for reimbursement.
 - 2 stated that they did not request reimbursement because they did not have a mechanism in place to track the work performed.
 - 1 stated that it did not request reimbursement because the time spent on outsourced work was minimal.

In addition, most agencies still have administrative control over servers that IBM is responsible for under its contract with the Department. According to both IBM and the Department, as of May 18, 2009, IBM had assumed administrative control over servers for only the Texas State Library and Archives Commission. The other 26 agencies in the state data center consolidation project still had control over their servers, including administrative access. Administrative access allows the agencies to perform outsourced tasks used to assist IBM in meeting data center service levels. IBM has used the agencies' continued administrative access as an explanation for not achieving service levels and requesting exceptions to service levels.

In May 2009, the Department and IBM met with each agency to discuss the process of transferring the control of administrative access to servers to IBM. Agencies' continued control of administrative access to outsourced systems makes it difficult to determine whether IBM is unable to perform required functions.

Recommendation

The Department should work with IBM to review agency staff with system administration (infrastructure) access and ensure that this access is limited to only what is required for security and oversight.

Management's Response

The Department strongly agrees that agency staff should not be performing in scope activities. The Department strongly agrees that agencies should only be allowed to perform outsourced activities with justification and the advanced approval of the Department as required by the current contingency staff approval procedure. Otherwise, it creates an undesirable incentive for agencies to perform work that should be performed by the vendor, thus undermining the Department's ability to aggressively ensure IBM's accountability to deliver the full service for the contracted charges.

The Department strongly believes that agency staff with system administration (infrastructure) access should be limited to prevent agencies from performing outsourced activities. The Department will work with IBM to ensure that this access is limited to only what is required for security and oversight.

Estimated completion date: April 2010

Title of person responsible: Data Center Services Security Manager

Chapter 4-B

The Department is Monitoring IBM's Compliance with the Contracted Turnover Target and IBM's Turnover Rate Is Improving; However, the Turnover Rate Continues to Exceed the Target

June 2008 State Auditor's Office Recommendation

The Department should monitor IBM's compliance with the contract staffing requirements on a quarterly basis throughout the data center consolidation project.

Despite the Department's efforts, IBM's staff turnover rate exceeds the target turnover rate. The Department's contract with IBM requires IBM not to exceed 15 percent turnover for any rolling 12-month period. However, the contract does not include a financial incentive for IBM to meet this requirement. This requirement was established to ensure that IBM would be capable of providing services at a level that was at least equivalent to the level previously provided by the agencies.

The Department receives monthly turnover reports from IBM. These reports indicate that IBM is not complying with turnover requirements in its contract with the Department. According to IBM's turnover reports, turnover was at its highest in August 2007, when the turnover rate was 44.3 percent. At the end of the first year of the contract (March 2008), IBM's turnover rate

was 36.3 percent. One year later (in March 2009) the turnover rate was 30.5 percent. The turnover reports indicate that, beginning in February 2009, IBM's turnover rate began to improve slightly, and it continued improving during the next three months. For the first time, IBM's turnover rate fell below 30 percent in April 2009. The reported turnover rate for April 2009 was 29.6 percent.

IBM's continued high turnover rate, with the associated loss of valuable knowledge and skills, may be partly responsible for some of the issues discussed elsewhere in this report, such as:

- The delay in the transfer of agency equipment to the state data centers.
- Delays in installation of equipment and software that IBM has procured for agencies.

In March 2008, the Department met with IBM to discuss its concerns about IBM's reported turnover rate, and in April 2008, the Department formally requested that IBM provide an improvement plan. In April 2008, IBM complied with the Department's request by providing the Department with a plan to reduce turnover and achieve compliance with the contracted turnover requirement.

The October 2008 Department Board meeting minutes indicate that the Department and IBM agreed that staffing was the most significant complaint that agencies had made. In February 2009, the Department's Board chair requested that IBM develop a more detailed plan to address turnover issues. At the Board's request, IBM presented a plan with additional details to the Board at its May 2009 meeting.

Recommendation

The Department should continue to monitor IBM's efforts to implement IBM's plan to reduce turnover.

Management's Response

The Department has been actively monitoring IBM's turnover rate monthly and the Department's Board of Directors has also required improvements. The Department has complied with contractual requirements to request a turnover improvement plan from IBM on two occasions. The Department has noted that IBM's turnover rate has decreased 16.5% since August 2007. The Department will continue to monitor IBM's efforts towards an improved turnover rate each and every month.

Estimated completion date: Ongoing

Title of person responsible: Data Center Services Sourcing Administration Manager

Chapter 4-C

IBM Has Not Fully Implemented Automated Data Collection Processes

June 2008 State Auditor's Office Recommendation

The Department should work with IBM to automate processes for collecting data for monthly invoices and service levels.

The Department and IBM have documented automated processes for collecting some resource utilization data regarding server storage and backup tapes. Resource utilization data is collected using both automated and manual processes, and the Department asserts that IBM also has documented the manual processes. However, according to the Department, the processes are still being tested and are not yet being used to provide data for the creation of monthly invoices and service level reports. The Department stated that the development of processes for manual tape volume reporting has been delayed due to the backup remediation activities that IBM has carried out.

Automating the collection of utilization data on server storage and backup tapes would help resolve some of the service level data collection and calculation issues discussed in Chapter 2 of this report. However, it will be difficult to automate this process until agency applications, equipment, and data are remediated and consolidated into the state data centers where a single monitoring tool can be used to collect and report utilization data. According to the Department, the 27 agencies involved in the data center consolidation project use 22 different data collection tools.

Recommendation

The Department should work with IBM to complete the testing and implementation of automated processes for collecting utilization data regarding server storage and backup tapes by December 2009.

Management's Response

The Department agrees and has established a goal to complete the server storage and tape collection processes by the end of the calendar year. Data collection has been hampered by technical issues related to using automated collection tools on certain aged agency systems. The Department has advised IBM to resolve these technical issues or use alternative data collection methods in order to meet the deadline.

Estimated completion date: September 2009 for storage

Title of person responsible: Data Center Services Finance Manager

Estimated completion date: December 2009 for tapes

Title of person responsible: Data Center Services Finance Manager

Chapter 4-D

IBM's Database of Agency Physical and Software Resources Is Unreliable

June 2008 State Auditor's Office Recommendation

The Department should establish a schedule to reconcile IBM's database of information resources to the physical resources that IBM manages.

The Department's contract with IBM required IBM to perform an initial, wall-to-wall, complete inventory of all equipment, peripherals, devices, software, and related services provided or supported by IBM at Department, IBM, or relevant agency facilities. The contract also required IBM to conduct an annual physical inventory of all assets covered under the contract. However, as of June 2009, IBM had not been able to reconcile its inventory database. IBM last attempted to take an inventory in December 2008, but the Department informed auditors that it did not accept the inventory results because the inventory reconciliation was conducted using poor procedures and there were errors in the reports the Department received from IBM.

IBM created its inventory database (the CMDB) based on asset listings provided by agencies at the beginning of its contract with the Department. The CMDB contains details regarding the software, equipment, and systems that are used in the provision and management of data center services. IBM uses the CMDB to (1) prepare state agency invoices for services, (2) document maintenance and location of equipment, and (3) calculate service levels.

CMDB information, however, has not been verified by a complete and reconciled inventory of the actual physical and software resources at the agencies and, therefore, may not be accurate. Five agencies that responded to the State Auditor's Office's survey stated that their inventory information in the CMDB was not accurate (see Appendix 3 for survey results). Because the information in the CMDB has not been verified, there is a risk that the invoices and service levels reports prepared using the information in CMDB are inaccurate; however, auditors did not identify any such inaccuracies.

Recommendations

The Department should:

- Work with IBM to develop a reliable methodology for conducting the annual inventory and reconciliation required by the contract.
- Perform inventory reconciliations within two weeks of physical inventories at each agency, and include a representative from the Department, the agency, and IBM on each inventory team to ensure that all parties agree with the inventory and reconciliation results.
- Review all previous invoices and ensure that IBM corrects any billing errors after it completes an accurate, reconciled inventory.

Management's Response

The Department agrees with the recommendation and acknowledges that the configuration management database (CMDB) is a pivotal resource in the provisioning and management of the data center services. The Department is already in the process of updating the asset inventory processes to update the CMDB after each inventory is validated by the agency and will complete and reconcile the inventory based upon the improved processes.

Estimated completion date: December 2009

Title of person responsible: Data Center Services Manager

The Department will review the invoices once reconciliation is completed to identify invoice corrections.

Estimated completion date: January 2010

Title of person responsible: Data Center Services Finance Manager

Appendices

Appendix 1

Objectives, Scope, and Methodology

Objectives

The audit objectives were to determine:

- Whether selected state agencies, the Department of Information Resources (Department), and the state data center contractor have identified, clearly defined, and effectively managed application changes that are required to move systems and data from agencies to the state data centers.
- The extent to which state resources are used to support state data center service levels and whether the state data center contractor's calculations of service levels are accurate, complete, and reported correctly to the Department.
- Whether the state data center contractor procures hardware and software needed to support agency operations in a timely manner.

Scope

The audit scope included all the Department's and IBM's activities related to the audit objectives from the time the contract between the Department and IBM was signed in November 2006 to June 2009 (except for information on the status of application remediation and consolidation of agency equipment into the state data centers, for which auditors obtained updated data through August 7, 2009). Auditors' review of procurement covered the time period from September 2007 through April 2009. Auditors' review of service levels covered the time period from September 2008 through January 2009. Auditors' review of service level exceptions covered the time period from April 2007 to February 2009.

This audit did not include a review of information technology. The State Auditor's Office previously reported on the security of state data centers in *An Audit Report on the Department of Information Resources and Security of the State's Data Centers* (State Auditor's Office Report No. 08-030, April 2008).

Methodology

The audit methodology included interviewing Department and IBM personnel; interviewing information technology directors from several agencies; reviewing the November 2006 contract signed by IBM and the

Department including subsequent amendments; and analyzing policies, procedures, and other applicable supporting documentation. Auditors also conducted a telephone survey of all information technology directors from the 27 agencies involved in the state data center consolidation project. Auditors used survey results to focus a portion of audit testing.

Information collected and reviewed included the following:

- Contract between IBM and the Department signed on November 22, 2006, and subsequent amendments.
- Relevant policies and procedures developed by IBM.
- The Department of Information Resources New Work Process Analysis, October 1, 2008, CIBER, Inc.
- Turnover reports prepared by IBM.
- Service level reports prepared by IBM.
- Application remediation and other transformation-related data provided by IBM.
- Procurement records provided by IBM.
- Customer support information from IBM's Remedy system.

Procedures and tests conducted included the following:

- Interviewed key staff from the Department, IBM, and selected agencies.
- Surveyed information technology directors from the 27 agencies participating in the state data center consolidation project.
- Analyzed service level reports and related data.
- Reviewed the Department's monitoring of IBM's service levels.
- Tested the timeliness of IBM's hardware and software procurements.
- Tested the timeliness of IBM's software license renewals.
- Reviewed procurement and other customer support data in IBM's Remedy system.

Criteria used included the following:

- Contract between IBM and the Department signed on November 22, 2006, including subsequent amendments.

- IBM policies and procedures.
- Department policies and procedures.

Project Information

Audit fieldwork was conducted from March 2009 through June 2009. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The following members of the State Auditor's staff performed the audit:

- Joseph Mungai, CIA, CISA (Project Manager)
- Cyndie Holmes, CISA (Assistant Project Manager)
- Scott Armstrong, CGAP
- Michelle Lea DeFrance, CPA
- Kenneth Manke
- Brenda Zamarripa
- Shelby Cherian, CISA (Information Systems Audit Team)
- Serra Tamur, MPAff, CISA, CIA (Information Systems Audit Team)
- Dennis Ray Bushnell, CPA (Quality Control Reviewer)
- Ralph McClendon, CISSP, CCP, CISA (Audit Manager)

IBM Service Level Performance Summary from September 2007 to December 2008

Table 2 lists all service levels IBM reported, the required minimum and expected levels, the percentage of time IBM met each required level, and the number of months IBM has reported the service level from September 2007 through December 2008. Auditors compiled this information from IBM's *Enterprise Dashboard Service Level Reports*.

Table 2

IBM Service Level Performance September 2007 to December 2008					
Service Level	Required Minimum Level	Required Expected Level	Percentage of Months IBM Met Minimum	Percentage of Months IBM Met Expected	Number of Months Reported
Critical Service Levels					
1.1.1 - Critical Application Infrastructure Availability	99.50%	99.75%	100.00%	100.00%	16
1.1.2 - Critical - Single Application Infrastructure Outage not to Exceed	2	1	100.00%	100.00%	16
1.1.3 - Servers - High Complexity Application Infrastructure	99.20%	99.50%	100.00%	100.00%	16
1.1.4 - Servers - High Single Application Infrastructure Outage not to Exceed	4	2	81.25%	43.75%	16
1.1.5 - Servers Medium Complexity Application Infrastructure	99.00%	99.20%	100.00%	100.00%	16
1.1.6 - Servers - Medium Single Application Infrastructure Outage not to Exceed	6	3	37.50%	25.00%	16
1.1.7 - Servers - 7x24 Application Infrastructure Availability	99.20%	99.50%	100.00%	100.00%	16
1.1.8 - Servers - 7x24 Single Application Infrastructure Outage not to Exceed	4	2	25.00%	0.00%	16
1.1.9 - Priority 1 - Single Application Infrastructure Outage not to Exceed	4	2	68.75%	37.50%	16
1.1.10 - Mainframe Application Infrastructure Availability	99.50%	99.90%	100.00%	93.75%	16
1.1.11 - Mainframe Single Application Infrastructure Outage not to Exceed	4	2	93.75%	75.00%	16
1.1.12 - Federal Application Availability	99.90%	99.90%	93.75%	93.75%	16
1.2.1.1 - Severity 1 Incident Resolution - Servers High Complexity	97.00%	98.50%	62.50%	31.25%	16
1.2.1.2 - Severity 1 Incident Resolution - Servers Medium Complexity	95.50%	97.00%	75.00%	62.50%	16
1.2.1.3 - Severity 1 Incident Resolution - Servers Low Complexity	94.00%	95.50%	87.50%	81.25%	16
1.2.2.1 - Severity 2 Incident Resolution - Servers High Complexity	96.50%	98.00%	62.50%	31.25%	16
1.2.2.2 - Severity 2 Incident Resolution - Servers Medium Complexity	95.00%	96.50%	87.50%	87.50%	16
1.2.2.3 - Severity 2 Incident Resolution - Servers Low Complexity	90.00%	95.00%	100.00%	93.75%	16
1.2.3 - Root Cause Analysis Delivery Total	90.00%	95.00%	100.00%	100.00%	16
1.2.4 - Chronic Problems	5	3	100.00%	81.25%	16
1.3.1 - Successful Backup	95.00%	99.00%	100.00%	0.00%	16
1.3.2 - Successful Recoveries	97.50%	99.00%	87.50%	56.25%	16
1.3.3 - Percentage of Batch Processing Completed Successfully	98.00%	99.00%	100.00%	100.00%	16

IBM Service Level Performance
September 2007 to December 2008

Service Level	Required Minimum Level	Required Expected Level	Percentage of Months IBM Met Minimum	Percentage of Months IBM Met Expected	Number of Months Reported
1.4.1 - Severity 1 Incidents response time < 15 Minutes	90.00%	95.00%	100.00%	100.00%	16
1.4.2 - Severity 2 Incidents response time < 30 Minutes	90.00%	95.00%	100.00%	100.00%	16
1.5.1 - On time Completion of Recurring Critical Jobs	97.50%	99.00%	87.50%	81.25%	16
1.5.2 - On time Completion of One Time Critical Jobs ^a	97.50%	99.00%	100.00%	100.00%	6
1.5.3 - On time Completion of Standard Daily Mailings	90.00%	96.00%	93.75%	68.75%	16
1.5.5 - Quality of Critical Infrastructure Mail Output	99.81%	99.91%	100.00%	100.00%	16
1.6.1 - Projects completed within +10% of the agreed upon due date	90.00%	95.00%	100.00%	100.00%	1
1.6.2 - Meet Customer Satisfaction Surveys	3.5	4	100.00%	87.50%	16
1.6.3 - DR Test Restoration for D0 and D1 Applications within Established Timeframes ^a	100.00%	100.00%	100.00%	100.00%	3
Key Measure Service Levels					
2.1.1 - Servers Low Complexity Application Infrastructure Availability	99.25%	99.50%	100.00%	100.00%	13
2.1.2 - Servers Low Single Application Infrastructure Outage not to Exceed	8	4	46.15%	7.69%	13
2.1.3 - Priority 2 - Single Application Infrastructure Outage not to Exceed	6	3	92.31%	84.62%	13
2.2.1 - Resolution Time Severity 3 Incidents	90.00%	95.00%	100.00%	40.00%	10
2.2.2 - Resolution Time Severity 4 Incidents	90.00%	95.00%	100.00%	100.00%	10
2.3.1 - Percent of Batch Scheduling Launched On Time	98.50%	99.00%	100.00%	76.92%	13
2.3.2 - Reports Delivered On Time	95.00%	98.00%	88.89%	22.22%	9
2.3.3 - Completion of Special Batch Processing Within Committed Time Frames	95.00%	98.00%	92.31%	84.62%	13
2.4.1 - Incident Management Communication for Severity 1 Problem	90.00%	95.00%	38.46%	15.38%	13
2.4.2 - Severity 3 Incidents response time < 60 Minutes	90.00%	95.00%	92.31%	46.15%	13
2.4.3 - Severity 4 Incidents response time < 240 Minutes	90.00%	95.00%	100.00%	92.31%	13
2.5.1 - Inventory Levels	90.00%	100.00%	100.00%	84.62%	13
2.5.2 - On time Delivery of Output Per Production Schedule	97.50%	99.00%	100.00%	92.31%	13
2.5.4 - Quality of Print and Mail Output	98.58%	99.37%	100.00%	100.00%	13
2.6.1 - Security Vulnerability Remediation	90.00%	95.00%			0
2.6.2 - Security Patching Status	90.00%	95.00%			0
2.6.3 - Support Center - Average Call Answer Time	30	27	100.00%	92.31%	13
2.6.4 - Support Center - Abandon Rate	5.00%	3.80%	100.00%	61.54%	13
2.6.6 - Change Management Effectiveness	85.00%	90.00%	100.00%	100.00%	13
2.6.7 - DR Test Restoration for Other Disaster Recovery Milestones within Established Timeframes ^a	100.00%	100.00%	50.00%	50.00%	2
2.6.8 - Asset Inventory Accuracy	95.00%	98.00%	100.00%	100.00%	13
2.6.9 - Train the Trainer	90.00%	95.00%			0
2.7.1 - Projects Delivered to Approved Budget	90.00%	95.00%			0

IBM Service Level Performance
September 2007 to December 2008

Service Level	Required Minimum Level	Required Expected Level	Percentage of Months IBM Met Minimum	Percentage of Months IBM Met Expected	Number of Months Reported
2.7.2 - Fulfillment of Instance/Server/Mainframe Service Requests	90.00%	95.00%	0.00%	0.00%	2
2.7.3 - Fulfillment of Service Requests within Committed Timeframes	95.00%	95.00%			0
2.7.4 - Project Management Delivery Customer Satisfaction Survey	3.75	4			0
2.7.5 - Resolution of Invoice Disputes	95.00%	95.00%	10.00%	10.00%	10

^a These service levels are related to activities that do not occur each month. IBM reports on these service levels only in months with applicable activity.

Source: Auditors' analysis of IBM's *Enterprise Dashboard Service Level Reports*.

Agency Survey Results

All information technology directors for the 27 agencies involved in the state data center consolidation project participated in a survey that the State Auditor's Office conducted via telephone in February 2009. The purpose of the survey was to follow up on the survey the State Auditor's Office conducted in 2008 and to ascertain the agencies' understanding of application remediation efforts, procurement process, and service level reporting. The survey results are summarized in Table 3.

Table 3

Agency Survey Results						
Audit Objective	Survey Question	Response				
		Yes	No	Not Applicable	Do Not Know	
Remediation	1 Has the Department of Information Resources provided you with any guidance/direction in identifying and making changes to applications in preparation for moving to the data center?	9	12	6	0	
	2 Are there any applications that are being remediated as part of a larger modification/updating of that application?	4	6	16	1	
Procurement	3 Do you know what the current procurement process is for purchasing software and hardware under the contract with IBM?	25	2	0	0	
	4 Is there any problem getting the equipment or parts installed after they are purchased?	17	8	2	0	
Service Level Agreements (SLAs)	5 Do you receive a report of IBM's performance on your agency's service levels from IBM (or the Department of Information Resources) on a routine basis?	25	2	0	0	
	6 (If they receive a report on service levels) Do you receive an enterprise level report?	22	4	1	0	
	7 Do you or your staff monitor and review the "Remedy" tickets for your agency?	26	0	1	0	
	8 Are agency staff still performing outsourced data center responsibilities?	25	2	0	0	

Table 4 lists auditors' summary of the agencies' responses to survey questions requiring detailed answers.

Table 4

Auditors' Summary of Agency Responses to Survey Questions Requiring Detailed Answers	
Survey Question	Summary of Responses
Remediation	
1 How many of your applications will need to be remediated? How many of these are critical? How are you planning to pay for the remediation (out of existing budget, have requested more funding from Department of Information Resources' funds, or requested exceptional funding)?	<ul style="list-style-type: none"> ▪ 19 (70 percent) of 27 agencies stated they had applications that needed remediation. Three of those 19 stated they had critical applications that needed remediation. ▪ 9 (33 percent) of 27 agencies stated they would not know which applications needed remediation until after IBM had completed reviewing their systems. Most of these agencies anticipated having some applications that would require upgrading. ▪ 2 (7 percent) of 27 agencies stated they were concerned that the shift in the consolidation schedule would cause budgetary problems because they had funds available only for the 2008-2009 biennium. Five (19 percent) of 27 agencies stated they were using existing funds to perform remediation.
2 What has been done so far?	<ul style="list-style-type: none"> ▪ None of the 19 agencies that stated they had applications that needed to be remediated had completed remediation on the applications.
Procurement	
3 Are there any issues? Do you have specific examples of procurements that have not gone as expected?	<ul style="list-style-type: none"> ▪ 11 (41 percent) of 27 agencies stated that IBM had failed to renew software prior to the expiration date. ▪ 6 (22 percent) of 27 agencies stated the procurement solutions proposed by IBM often cost more than what the agency could have obtained on its own. ▪ 5 (19 percent) of 27 agencies stated that IBM kept them updated on the status of procurement after they approved a purchase. ▪ 4 (15 percent) of 27 agencies stated that IBM had recommended solutions that did not meet agency requirements.
4 On average how long does the procurement process take (for instance, purchasing additional disk space for a server)? How does this time frame compare to pre-consolidation procurement time frames? To your knowledge, are there any defined/required metrics on how long different types of purchases should take?	<ul style="list-style-type: none"> ▪ 24 (89 percent) of 27 agencies stated that the procurement process took much longer (two, three, or more times longer) than their internal procurement time frames prior to consolidation.
5 Is there any problem getting equipment or parts installed after they are purchased?	<ul style="list-style-type: none"> ▪ 19 (70 percent) of 27 agencies stated they had experienced problems getting IBM to install or configure hardware or software after equipment or parts were delivered.

Auditors' Summary of Agency Responses to Survey Questions Requiring Detailed Answers	
Survey Question	Summary of Responses
6 How does this process impact your work/projects?	<ul style="list-style-type: none"> ▪ 22 (81 percent) of 27 agencies stated that the procurement process adversely affects their work. ▪ 14 (52 percent) of 27 agencies stated that the quality of service IBM provided was poor.
Service Level Agreements	
7 How do you keep track of missed service levels and other issues that you experience? Do you track down time? Resolution time on "Remedy" tickets?	<ul style="list-style-type: none"> ▪ All 27 agencies stated they relied on IBM's automated system to track incident tickets. Four of the agencies stated they also maintained their own tracking spreadsheets.
8 What three service levels cause you the most concern?	<ul style="list-style-type: none"> ▪ 18 (67 percent) of 27 agencies stated that backup issues were their main service level concern. ▪ 13 (48 percent) of 27 agencies stated they were concerned about the length of time IBM took to respond to critical incidents. ▪ 11 (41 percent) of 27 agencies stated that system availability was an area of concern. ▪ 10 (37 percent) of 27 agencies stated they were concerned about procurement services. ▪ 5 (19 percent) of 27 agencies stated they did not understand how service levels were calculated.

Other Issues

Auditors identified other issues based on agency responses to selected survey questions. Specifically:

- Five agencies stated they did not think IBM's Configuration Management Database (CMDB), which is used to maintain records of agency information resources, was accurate.
- Three agencies stated they would like to see the Department of Information Resources do a better job managing the state data center consolidation contract.

Entities That Were Participating in the State Data Center Consolidation Project During This Audit

Table 5 lists the entities that had interagency agreements with the Department to move their applications and systems into the state data centers during this audit.

Table 5

Entities Participating in the State Data Center Consolidation Project During This Audit	
1	Angelo State University
2	Department of Aging and Disability Services
3	Department of Assistive and Rehabilitative Services
4	Department of Criminal Justice
5	Department of Family and Protective Services
6	Department of Information Resources
7	Department of Licensing and Regulation
8	Department of State Health Services
9	Health and Human Services Commission
10	Office of the Attorney General
11	Public Utility Commission of Texas
12	Railroad Commission
13	Office of the Secretary of State
14	Alcoholic Beverage Commission
15	Texas Facilities Commission
16	Commission of Environmental Quality
17	Department of Agriculture
18	Department of Insurance
19	Department of Transportation
20	Texas Education Agency
21	Higher Education Coordinating Board
22	Parks and Wildlife Department
23	Library and Archives Commission
24	Veterans Commission
25	Texas Workforce Commission
26	Texas Youth Commission
27	Water Development Board

Source: Department of Information Resources Web site.

The Department's Transmittal Letter



TEXAS DEPARTMENT OF INFORMATION RESOURCES

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BRIAN S. RAWSON
Chief Technology Officer
State of Texas

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August 21, 2009

Mr. John Keel, CPA
State Auditor
State Auditor's Office
1501 N. Congress Avenue
Austin, TX 78701

Dear Mr. Keel:

The Department of Information Resources (Department) appreciates the audit, *The Department of Information Resources and State Data Center Consolidation*, and recommendations to ensure the success of the state data center consolidation project.

Technology consolidation on this scale is a rigorous and complicated process. The State of Texas' consolidation is one of the largest and most complex state consolidations in the nation. Much progress has been made, as evidenced by completion of the significant mainframe and print/mail consolidations. The Department's primary goal is to ensure consolidation is done right in order to achieve the intended benefits for the State.

To ensure that consolidation is done right, the Department has established a stringent and comprehensive contract management function. The function consists of many distinct activities which, taken together, provide the ability to monitor and enforce contract performance from multiple perspectives (such as financial, technical, and customer service). The Department agrees that implementing procedures to ensure the consistency and reliability of monthly service level calculations and other recommendations included in the audit report will serve to strengthen the Department's contract oversight function in these respective areas.

In addition, as the audit notes, application remediation across the enterprise is required for successful, timely consolidation. Recognizing that 27 participating agencies are each unique in their technology platforms, software currency levels, types of applications and available technology resources, each agency must identify specific application remediation requirements unique to that agency and then plan and budget their application remediation efforts accordingly. The Department appreciates the auditor's recognition of the complexity of roles and responsibilities within the data center consolidation and the recommendations for the Department to provide additional guidance on the remaining application remediation projects.

The Department remains committed to the successful consolidation of data center services for all agencies and appreciates the auditor's recommendations

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to further strengthen the Department's oversight of the contract. The Department will continue to work with agencies and IBM leadership to foster clear lines of communication and accountability for all stakeholders, fulfilling the state's vision and goals of data center services consolidation.

Sincerely,



Brian S. Rawson
Executive Director
Department of Information Resources
Chief Technology Officer – State of Texas

Related State Auditor's Office Work

Related SAO Work		
Number	Product Name	Release Date
08-038	An Audit Report on the Department of Information Resources and the Consolidation of the State's Data Centers	June 2008
08-030	An Audit Report on the Department of Information Resources and Security of the State's Data Centers	April 2008

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