



### *Performance Audit*

**Report Number:**  
**071-0565-14**

### *Statewide Oracle Database Controls*

### *Department of Technology, Management, and Budget (DTMB)*

**Released:**  
**March 2015**

The State maintains approximately 500 Oracle databases that are used for transaction processing and reporting by the State's various information technology systems. DTMB's Agency Services includes database administrator (DBA) teams that manage State agencies' Oracle databases. The State's Oracle database security and access controls are the responsibility of the DBA teams in conjunction with the data owners at the various State agencies.

Audit Objective			Conclusion
Objective 1: To assess the effectiveness of DTMB's efforts to implement security and access controls over the State's Oracle databases.			Moderately effective
Findings Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
DTMB did not fully establish and implement effective security configurations for the State's Oracle databases. Potentially vulnerable security configurations existed on the databases reviewed that may hinder management's ability to prevent or detect inappropriate access to or modification of the State's data ( <a href="#">Finding 1</a> ).	X		Agrees
DTMB, in conjunction with State agencies, did not fully establish and implement effective user access controls over the State's Oracle databases. Weaknesses were present in the user access controls that could result in inappropriate access to or modification of the State's data ( <a href="#">Finding 2</a> ).		X	Agrees

<b>Audit Objective</b>		<b>Conclusion</b>	
Objective 2: To assess the effectiveness of DTMB's efforts to establish an effective governance structure over the State's Oracle database environment.		Moderately effective	
<b>Findings Related to This Audit Objective</b>	<b>Material Condition</b>	<b>Reportable Condition</b>	<b>Agency Preliminary Response</b>
DTMB did not establish a formal training program or take other steps to ensure that all DBAs managing the State's Oracle databases received sufficient training. A training program would help ensure that DBAs have the knowledge and skills to effectively manage a secure Oracle database environment ( <u>Finding 3</u> ).	X		Agrees
DTMB did not fully establish policies and procedures for the security of the State's Oracle databases. As a result, DTMB cannot ensure that Oracle databases were securely configured to protect the confidentiality and integrity of critical data stored within the databases. Also, DTMB cannot ensure that audit logs capture the critical information necessary to detect unauthorized activity within the databases ( <u>Finding 4</u> ).		X	Agrees
DTMB should consider implementing a real-time system to manage its inventory of Oracle database software licenses. Inaccuracies existed because of the current manual process, which limited DTMB's ability to make inventory management decisions ( <u>Finding 5</u> ).		X	Agrees

A copy of the full report can be obtained by calling 517.334.8050 or by visiting our Web site at: <http://audgen.michigan.gov>

Office of the Auditor General  
201 N. Washington Square, Sixth Floor  
Lansing, Michigan 48913

**Doug A. Ringler, CPA, CIA**  
Auditor General

**Laura J. Hirst, CPA**  
Deputy Auditor General