



STATE OF MICHIGAN

GRETCHEN WHITMER
GOVERNOR

DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET
LANSING

MICHELLE LANGE
DIRECTOR

April 11, 2023

Mr. Richard Lowe, Chief Internal Auditor
Office of Internal Audit Services
Office of State Budget
George W. Romney Building
111 South Capitol, 6th Floor
Lansing, Michigan 48913

Dear Mr. Lowe:

In accordance with the State of Michigan, Financial management Guide, part VII, following is a summary table identifying our ongoing responses and corrective action plans to address recommendations contained within the Office of the Auditor General's audit report of Software License Management (071-0527-22).

If you have any questions, or if we can be of further assistance, please don't hesitate to contact me directly.

Sincerely,

Michelle Lange
DTMB Director

cc: Senator Sam Singh, Chair, Senate Oversight Committee
Senator John Cherry, Chair, Senate General Government Appropriations Subcommittee
Representative Felicia Brabec, Chair, House General Government Appropriations Subcommittee
Patti Tremblay, Executive Office of the Governor
Doug Ringle, Auditor General
Laura Clark, Chief Information Officer
Caleb Buhs, Chief Deputy Director
Jack Harris, Chief Technology Officer
Jayson Cavendish, Acting Chief Security Officer
Cindy Peruchietti, Director Agency Services
Eric Swanson, Director Center for Shared Solutions
Sherri Irwin, Director of Office of Support Services, DTMB ICCO

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DTMB

Software License Management audit

Summary of Agency Responses to Recommendations

1. Audit recommendations DTMB remediated: None
2. Audit recommendations DTMB fully agreed with: None
3. Audit recommendations DTMB partially agreed with and is partially remediating:
#1, #2, #3
4. Audit recommendations DTMB disagreed with: None

DTMB's Responses to Recommendations:

Finding #1 – Monitoring of the State's software licenses needed

DTMB partially agrees.

DTMB agrees with the need for State agencies (including DTMB) to determine, track, and monitor software license position using a risk-based approach. DTMB disagrees with the need to monitor the software license position for all commercially licensed software. DTMB also disagrees DTMB is solely responsible for monitoring software license position; this responsibility is shared by all State agencies, including DTMB. Software licensing models vary across products and providers. Software licenses are purchased for single users, single devices, or for an enterprise-wide license which covers users across the enterprise. User based license software is licensed to a specific user and may only be used by the assigned user, regardless of device. The risk of over-utilization is significantly reduced for software purchased for single users or under an enterprise-wide license agreement. As such, monitoring (onboarding) software licenses and entitlements should focus on and factor in the risk differential (risk-based approach) between the various software licensing models, or the implemented technical controls which prevent over-utilization of licenses.

The OAG based their review on the State's Technical Standard 1340.00.060.10 Information Technology Asset Management (ITAM) Standard alone, without taking into consideration the State's Configuration Management Standard 1340.00.060.01, section CM-10. The State's Configuration Management Standard is the authoritative Standard governing the topic and states it supersedes all standards that may conflict with this standard. DTMB updated the State's Technical Standard 1340.00.060.10 Information Technology Asset Management (ITAM) to clarify that State agencies are responsible for monitoring their license positions (May 2022).

Beginning in June 2020, DTMB implemented a statewide risk-based approach for onboarding and monitoring commercial licensed software into the DTMB offered tool (FlexNet).

Using the risk-based approach, DTMB will continue to onboard software license and entitlement information into the DTMB offered tool to enable State agencies to track and monitor software license position. DTMB will continue to inform State agencies of the State agencies' responsibility to track and monitor their State agency software license positions via communications with State agencies. DTMB will assess providing State agencies with update access to the DTMB offered tool to enable State agencies to track and monitor their agencies' software license position in the DTMB offered tool (June 2023). DTMB will formalize DTMB's risk-based approach (October 2023) for onboarding software license information into the DTMB offered tool.

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DTMB does not agree with the audit comments regarding lack of controls. Specifically, DTMB does not agree with the audit comments related to:

- The State's processes to negotiate or achieve cost savings or the processes to procure software licenses. The audit scope did not include a review of the State's processes to negotiate or achieve cost savings or the processes to procure software licenses.
 - The reference to the GAO's publication and references to cost avoidance achieved by the Federal government are not a relevant comparison of organization size, use of licenses, or cost savings/avoidance achieved.
 - Reviewing software license position solely within the DTMB offered tool does not always reflect a full picture regarding potential software under-utilization or whether cost savings are available when negotiated "Tiers" are not taken into consideration. Negotiations include consideration for current license use, anticipated license use, and discounts for bulk and multi-year license purchases and tiered pricing.
 - The software costs cited do not accurately reflect the underlying software costs and the included discounts the State received.
- The State's processes to identify and address potential over-utilization.
 - DTMB implements an effective process to identify and address potential over-utilization. When DTMB identifies potential over-utilization (inside or outside of the DTMB offered tool), DTMB initiates a formal review to confirm whether the over-utilization exists. DTMB's review results in a determination within 30 – 90 days and results in the mitigation. The OAG was aware of the existence of this process.
- DTMB had not implemented formal processes to review information such as unrecognized software installed on devices.
 - DTMB reduces the risk that unrecognized or unapproved software can be installed on devices by technically preventing end-users from installing software without following the formal State processes DTMB has implemented for software installation. All requests for software installations are required to be submitted through an automated process. DTMB validates the Agency has authorized the software and that the Agency validated its ownership of the license. DTMB then approves the installation of the software. If the software is not recognized or approved, the software request is validated to ensure the End User License Agreement (EULA) and security standards are approved by the End-User Standards Committee (EUSC). After the software request is validated by the EUSC, it becomes recognized software. In addition, DTMB utilizes a Software Librarian to control the receipt and installation of software. The OAG did not review these processes.

Finding #2 – Improvements needed to the State's inventory of software licenses

DTMB partially agrees.

Subpart a and subpart b:

DTMB agrees with the need for State agencies, including DTMB, to track software used and monitor software license position using a risk-based approach. DTMB does not agree it is an

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effective use of State resources to onboard and maintain an inventory of all commercial software licenses and software entitlement information in the DTMB offered tool. Software licensing models vary across products and providers. Software licenses are purchased for single users, single devices, or for an enterprise-wide license which covers users across the enterprise. User based license software is licensed to a specific user and may only be used by the assigned user, regardless of device. The risk of over-utilization is significantly reduced for software purchased for single users or under an enterprise-wide license agreement. As such, tracking and monitoring (onboarding) software licenses and entitlements should focus on and factor in the risk differential (risk-based approach) between the various software licensing models, or the implemented technical controls which prevent over-utilization of licenses.

Beginning in June 2020, DTMB implemented a statewide risk-based approach for onboarding and monitoring commercial licensed software into the DTMB offered tool (FlexNet). As part of the risk-based onboarding process, purchases of commercial software licenses and entitlements (usage) are verified, and software license agreements are verified against the related software application, including the licensing agreements which DTMB maintains in registers.

Using the risk-based approach, DTMB will continue to onboard software license and entitlement information into the DTMB offered tool to enable State agencies to track and monitor software license position. DTMB will formalize DTMB's risk-based approach (October 2023) for onboarding software license information into the DTMB offered tool. DTMB will continue to inform State agencies of the State agencies responsibility to track and monitor their State agency software licenses position via communications with State agencies. DTMB will assess providing State agencies with update access to the DTMB offered tool to enable State agencies to track and monitor their agencies' software license position in the DTMB offered tool (June 2023).

DTMB does not agree with the audit comments regarding:

- Further integration or reconciling financial transactions with the DTMB offered tool to ensure all purchases of licensed software are identified and inventoried: Purchases of software licenses are reconciled as part of the process to onboard commercial software licenses into the DTMB offered tool. As noted above, DTMB agrees with the need for State agencies, including DTMB, to track software used and monitor software license position using a risk-based approach, not for all commercial software licenses and entitlements.

DTMB agrees with and has integrated the DTMB offered tool with relevant enterprise tools to discover devices containing software into the DTMB offered tool (2018 – current). DTMB will continue to pursue further integrations as DTMB deems them necessary as part of its ongoing operations.

- Ensuring proofs of license, including verification directly with publishers when software is purchased through a reseller, are linked to each software license: The audit scope did not include a review of processes for ensuring proofs of license. SIGMA contains the proof of purchase for all software licenses, with the associated software license agreement. All software resellers under the Michigan Master Computing Program (MMCP) provide proof of purchase for all products or services purchased under the MMCP through the contract release process.

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- Linking software licensing agreements to individual software applications: For each license that has been onboarded, the current FlexNet Product Use Rights Library attributes specific application titles, versions rights and consumption specifications within the licenses. FlexNet also contains entitlement information (record of purchase) for each license that has been onboarded.

DTMB agrees and was aware not all software license and usage information was contained within the DTMB offered tool. DTMB realizes not all devices can currently report through automation to the DTMB offered tool due to business needs to isolate the devices from the State's network. According to the State of Michigan Technical Standards 1340.00.060.01 and 1340.00.060.10, the State agencies, including DTMB, are responsible for tracking the use of software and for ensuring their inventories are accurate. Per the State of Michigan Technical Standard 1340.00.060.01, the "*software license tracking can be accomplished by manual methods (e.g., simple spreadsheets) or automated methods (e.g., specialized tracking applications) depending on organizational needs*", and as such is not required to be included within the DTMB offered tool. DTMB initiated a project in 2019 to help increase the number of devices connecting to the State's network and thus reporting to the DTMB offered tool (anticipated enforcement September 30, 2023). DTMB will continue its reconciliation process to identify devices which are not reporting to the DTMB offered tool.

Finding #3 – Improved software license governance needed

DTMB partially agrees.

DTMB believes its overall software license governance structure is appropriate. DTMB established the IT Asset Management Governance Board in 2015. The Board now provides for governance of the IT Asset Management program and the Software License Management program. The IT Asset Management Governance Board reports to executive level DTMB personnel.

For subpart a – DTMB partially agrees.

DTMB agrees with the need to periodically assess Software License Management program metrics appropriate to the SOM's environment to gauge the achievement of program goals as the Software License Management program continues to mature. DTMB will periodically assess the Software License Management program metrics to determine whether additional or updated metrics, tailored to the State's environment, are necessary. DTMB does not agree the "generic non-financial" Information Technology Infrastructure Library (ITIL) metrics cited in the audit report are necessarily the most appropriate metrics for the State's environment since they have not been tailored to the State's environment or might not align with the future objectives of the State's program. Similar to other published IT governance and operations frameworks, ITIL is not expected to be implemented in its entirety without tailoring to the organization's business context and maturity level. According to ITIL, "*ITIL is not a standard that has to be followed; it is guidance that should be read and understood, and used to create value for the service provider and its customers. Organizations are encouraged to adopt ITIL best practices and to adapt them to work in their specific environments in ways that meet their needs.*"

For subpart b – DTMB disagrees. DTMB believes the current centralized approach for the Software License Management program is appropriate for the State of Michigan's environment and IT operational model; specifically, that the agencies retain responsibility for the effective use

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of their budgets, including the Inter-Departmental Grant (IDG) for IT equipment and services. The responsibility for expenditure of the agencies' IDG budget extends to the agencies' decisions to purchase approved IT software. DTMB provides guidance and IT services, both centralized and federated, to support the agencies' business needs, and to advance the agencies' use of IT for their programs. DTMB is not responsible for and does not control the organizational structure of agencies outside of DTMB.