



180 - System Maintenance

Purpose

The Maintenance Standard provides documentation to plan, schedule, and provide routine and non-routine maintenance to State IT systems and system environments as required by the Maintenance Policy.

Standard

This standard uses the NIST SP 800-53 Rev. 5 framework as the guideline to establish control objectives to address a diverse set of security and privacy requirements. Not all controls within NIST SP 800-53 Rev. 5 may be selected for the Statewide baseline policies and standards. Agencies must categorize their data and identify the potential impact (high, moderate, or low), and select controls appropriately. This standard uses Table 3-1 in NIST SP 800-53B for the allocated impact levels (high, moderate, low) of controls and control enhancements. At a minimum, all low controls are selected, and certain moderate controls are selected. Agencies are to reflect their controls through the annual reporting process to DOA-DET.

Executive Branch Agencies must ensure that no system or software for infrastructure systems/services, as defined in the Configuration Management Database, CMDB, is allowed to fall out of vendor maintenance/support without approval via the Enterprise Exception Procedure.

Executive Branch Agencies are to develop policies, procedures, or processes for their own State information systems and system environments to protect State information, if applicable. Implementation of the standard controls within this document can be (1) a common (inheritable) control, (2) a system-specific control, or (3) a hybrid control. The control implementation defines the scope of applicability for the control, the shared nature or inheritability of the control, and the responsibility for control development, implementation, assessment, and authorization. Agencies should consider the following for inclusion in their policies, procedures, or processes:

Controlled Maintenance (MA-2):

- Scheduling, documenting, and reviewing records of maintenance, repair, and replacement on system components in accordance with manufacturer or vendor specifications and with consideration to incur the least amount of service interruption for the end-users, while being able to coordinate with vendors and staff, as needed. Executive Branch Agency maintenance and freeze dates may be established to accommodate known fluctuations in staffing levels (e.g., holidays) or business needs (e.g., high processing times);
- Approving and monitoring all maintenance activities, whether performed on site or remotely, and whether the system or system components are serviced onsite or removed to another



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location;

- Require certain personnel or those with certain roles explicitly approve the removal of their own system or system components from their agency facilities for off-site maintenance, repair, or replacement;
- Sanitize their own equipment prior to the removal of equipment that stored, processed, or transmitted data with the classification of sensitive or above when it is removed from the facilities for off-site maintenance, repair, or replacement. This includes, but not limited to, any equipment that stored, processed, or transmitted FTI, Federal PII, State PII, and PHI;
- Check all potentially impacted controls to verify that the controls are still functioning properly following maintenance, repair, or replacement actions; and
- Document all maintenance services (e.g., via Cherwell).

Maintenance Tools (MA-3):

- Approving, controlling, and monitoring the use of system maintenance tools;
- Review previously approved system maintenance tools annually to ensure the maintenance tools are not outdated, unsupported, irrelevant, or no-longer used;
 - A periodic review of maintenance tools facilitates the withdrawal of approval for outdated, unsupported, irrelevant, or no-longer-used tools.
 - Agencies have flexibility in determining roles for the approval of maintenance tools and how that approval is documented.
 - Maintenance tools can include hardware, software, and firmware items and may be pre-installed, brought in with maintenance personnel on media, cloud-based, or downloaded from a website.

Inspect Media (MA-3(2)):

- All electronic media containing diagnostic software must be scanned for malicious code (e.g., virus, malware, trojans) before the media is utilized as part of the maintenance services.

Prevent Unauthorized Removal (MA-3(3)):

- Prevent the removal of maintenance equipment that contains State information by:
 - Verifying that there is no State information contained on the equipment;
 - Sanitizing or destroying the equipment;
 - Retaining the equipment within the secure area; or
 - Obtain an exception from certain personnel or defined personnel with certain roles, that explicitly authorizes the removal of equipment from the facility.

Non-local Maintenance (MA-4):

- Approving and monitoring nonlocal maintenance and diagnostic activities;
- Allowing the use of nonlocal maintenance and diagnostic tools as consistent with the IT Policy Handbook and this standard, and document in the system security plan for the system, if a system security plan is required.
- Employ strong authentication in the establishment of nonlocal maintenance and diagnostic



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sessions; and

- Terminate session and network connections when nonlocal maintenance is completed.

Maintenance Personnel (MA-5):

- Establishing a process for maintenance personnel authorization and maintain a list of authorized maintenance personnel or organizations (e.g., specific individuals that provide maintenance or organizations like DOA-DFM).
- Verifying that non-escorted personnel performing maintenance on the system possess the required access authorizations; and
- Designating personnel with required access authorizations and technical competence to supervise the maintenance activities of personnel who do not possess the required access authorizations.

Timely Maintenance (MA-6):

- Obtain maintenance support and/or spare parts for State information systems and system environments within an Agency-defined time period of failure. This can be based on the RTO within the disaster recovery or contingency plans.

Additional Documentation:

- [DET Change Management Policy](#)
- [DET Change Management Procedure](#)
- [DET Pre-Approved Change List](#)
- [DET Communication Listservs](#)
- [DET Weekly OPCOM Change Planning and Coordination \(CPAC\) Reports](#)

Definitions

Executive Branch Agency - State of Wisconsin legislatively defined Departments and all customers of DET services, equipment, and/or technologies.

State information - Any information that is created, accessed, used, stored, or transmitted by an Executive Branch Agency.

State information systems and system environments - All equipment or services used to input, store, process, transmit, and output information, including, but not limited to: network devices, servers, databases, printers, Internet, email, physical, virtual, cloud, and applications accessible to and/or managed the agency.

Exception Process

Exceptions to any Executive Branch Agencies Security Policies, Procedures or Standards must follow the Executive Branch Agencies Exception Procedure.



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Document History/Owner

This standard was developed as required by the State of Wisconsin Information Technology Security Policy Handbook, under the authority of Wisconsin State Statute 16.971

This standard is effective upon approval and publication until retired. Revisions and updates continue the effective date by documenting required changes over time.

Ownership for this standard is assigned to DOA, DET Bureau of Security. As such, the DOA, DET Bureau of Security is responsible for the maintenance, update(s), and review of this document annually before the anniversary of the effective date.



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Authorized and Approved by:

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