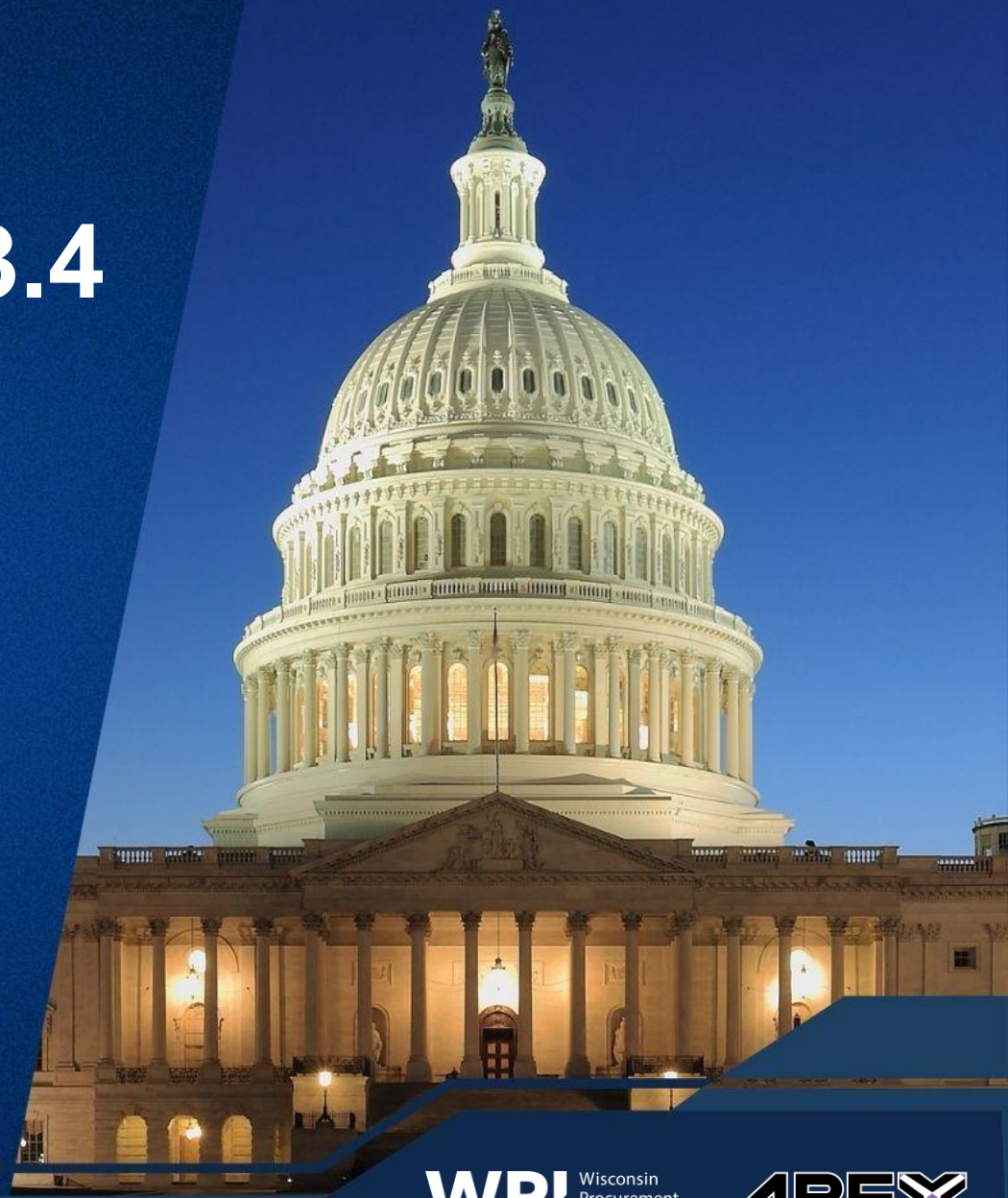
Cyber Thursday:

CMMC: Control Set Series: 3.4 Configuration Management

May 28| 11:00 am - Noon

Presented by:

Matt Frost, Wisconsin Procurement Institute



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APEX ACCELERATORS

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WPI is Wisconsin's APEX ACCELERATOR

The APEX Accelerators program, under management of the Department of Defense (DOD) Office of Small Business Programs (OSBP), plays a critical role in the Department's efforts to identify and engage with a wide range of businesses entering and participating in the defense supply-chain. The program provides the education and training that all businesses need to participate to become capable of participating in DOD and other government contracts.

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- Conferences the Governors Marketplace, The Contracting Academy (TCA), WEDCs Small Business Academy, Wisconsin Federal Contractor Forum [DC and in-state], Government Opportunities Business Conference GOBC) with WI military bases, End of Year Federal Contractor Update, Annual DOD Contract Management Update, and more……

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- **MADISON**
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  - *Dane County Latino Chamber of Commerce*
  - *Madison Area Technical College (MATC)*
- **CAMP DOUGLAS**
  - *Juneau County Economic Development Corporation (JCEDC)*
- **EAU CLAIRE**
  - *Western Dairyland*
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  - *Envision Greater Fond du Lac*
- **GREEN BAY**
  - *NWTC Startup Hub*
- **LACROSSE**
  - *Veterans in Professions*
- **MANITOWOC**
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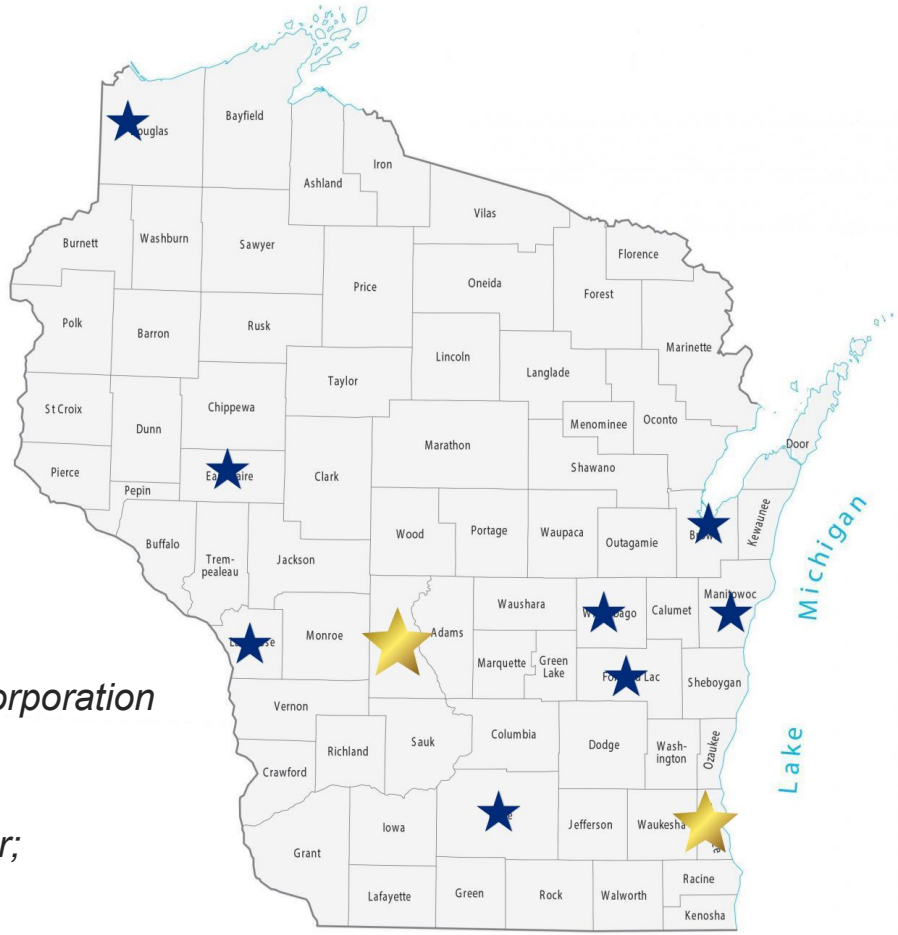
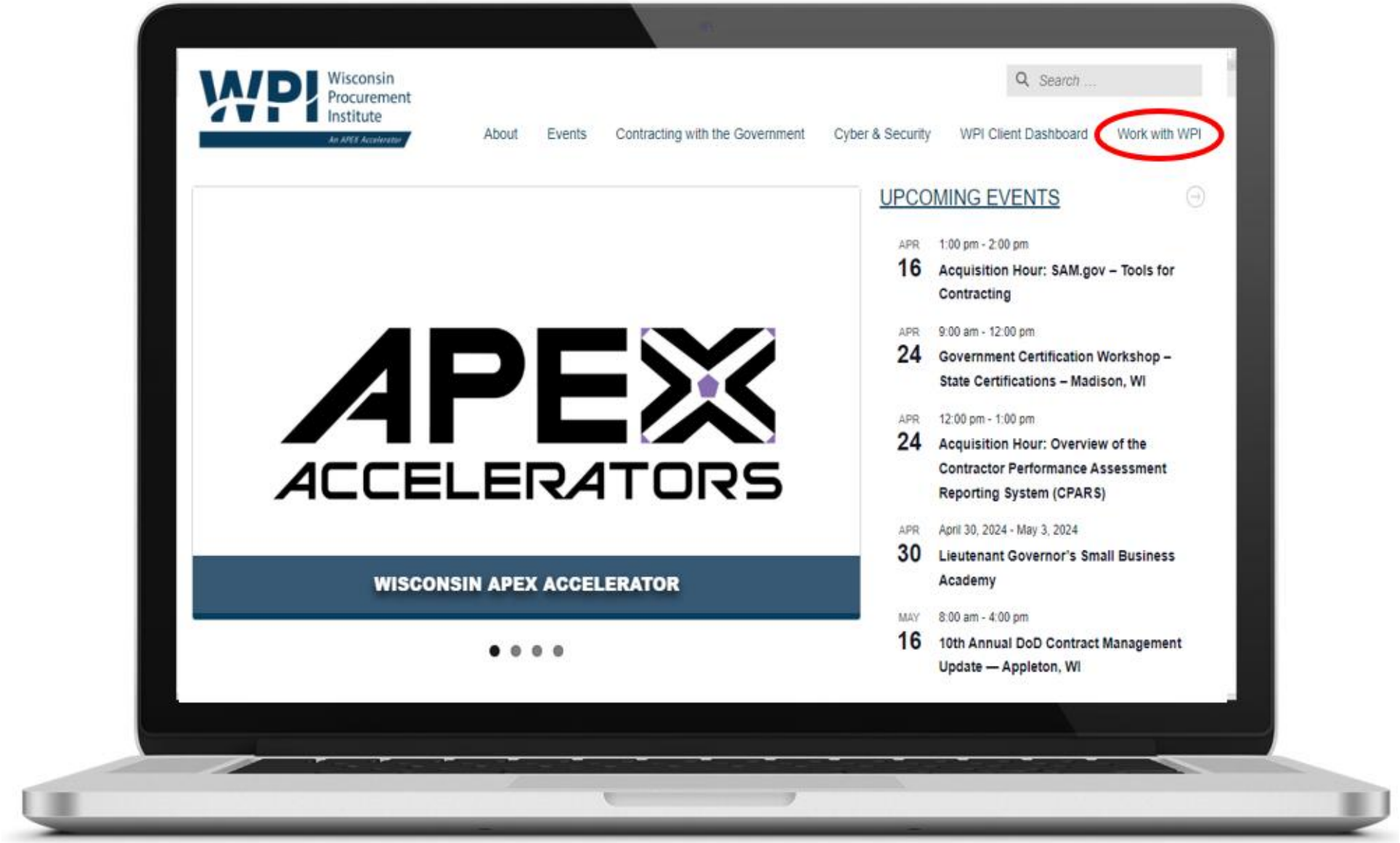
- **OSHKOSH**
  - *Greater Oshkosh Economic Development Corporation*
- **SUPERIOR**
  - *Small Business Dev Center; UW Superior*

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UPCOMING EVENTS
APR 16 1:00 pm - 2:00 pm
Acquisition Hour: SAM.gov – Tools for Contracting
APR 24 9:00 am - 12:00 pm
Government Certification Workshop – State Certifications – Madison, WI
APR 24 12:00 pm - 1:00 pm
Acquisition Hour: Overview of the Contractor Performance Assessment Reporting System (CPARS)
APR 30 April 30, 2024 - May 3, 2024
Lieutenant Governor's Small Business Academy
MAY 16 8:00 am - 4:00 pm
10th Annual DoD Contract Management Update — Appleton, WI

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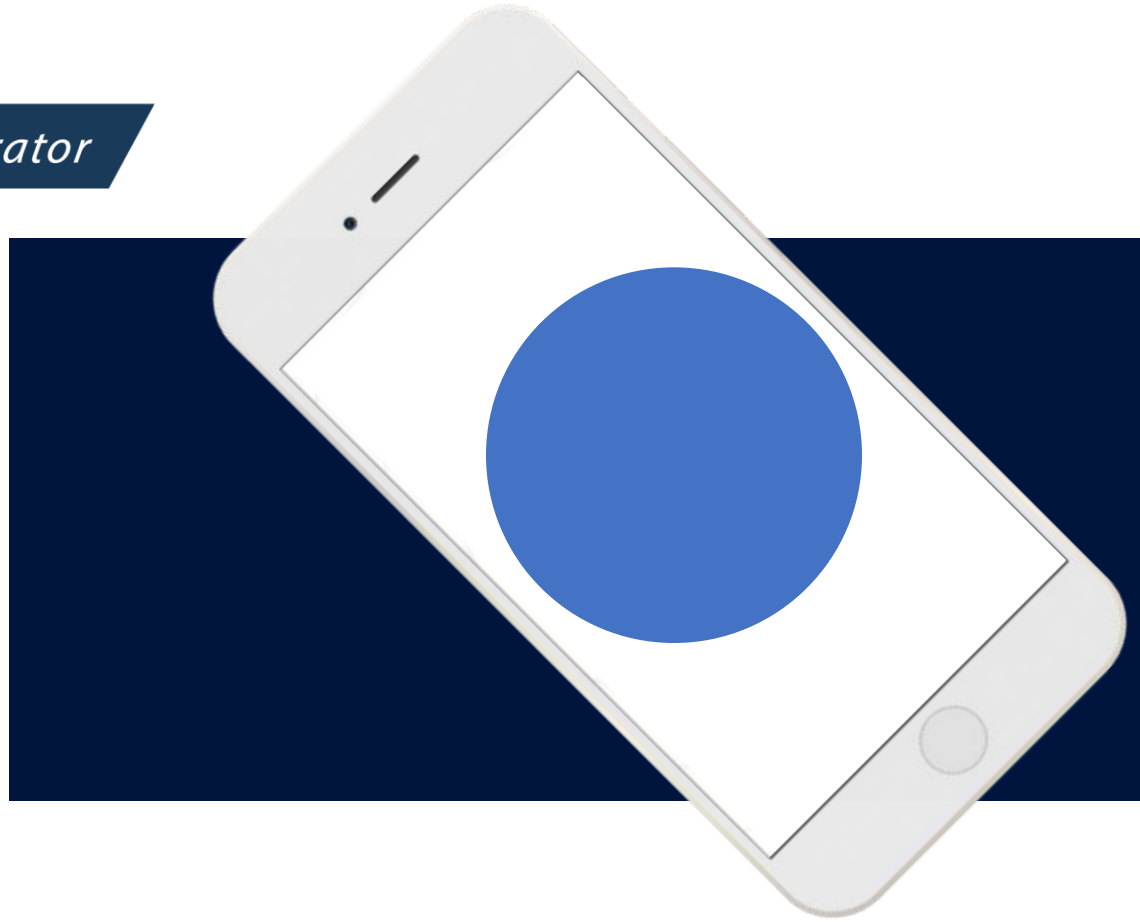
Configuration Management



Cyber Thursday – May 28th, 2026


LOCKHEED MARTIN
3103

14 Families – 110 Controls – 320 Audit Objectives

- Access Control
- Awareness and Training
- Audit and Accountability
- **Configuration Management**
- Identification and Authentication
- Incident Response
- Maintenance
- Media Protection
- Personnel Security
- Physical Protection
- Risk Assessment
- Security Assessment
- System and Communications Protection
- System and Information Integrity

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CMMC Assessment Guide

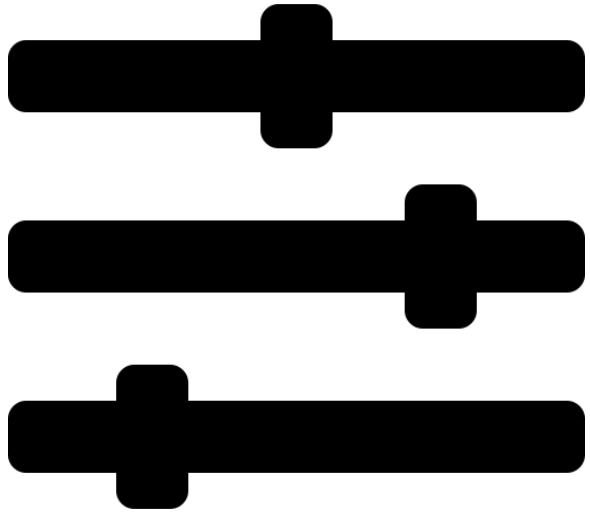
Level 2

Version 2.0 | December 2021

1. CMMC Assessment Guide (Level 2)
2. NIST Special Publication 800-171A
   Assessing Security Requirements for
   Controlled Unclassified Information
3. DoD Memo
   DoD Guidance for Reviewing System
   Security Plans and the NIST SP 800-
   171 Security Requirements

DOMAIN 3.4 · CONFIGURATION MANAGEMENT

Configuration Management



You can't secure what you can't see — and you can't trust what you can't control.

Know What You Have

THE BIG IDEA

Every configuration management program starts with a documented, accurate picture of your systems. You cannot enforce a standard, detect a change, or investigate an incident if you don't first know what's supposed to be there.

1

BASELINE & INVENTORY

Document the Known-Good State

Establish and maintain baseline configurations — the approved, documented settings for your hardware, software, and firmware — plus an inventory of the systems those baselines apply to. The baseline is your reference point for everything else.

2

SECURITY SETTINGS

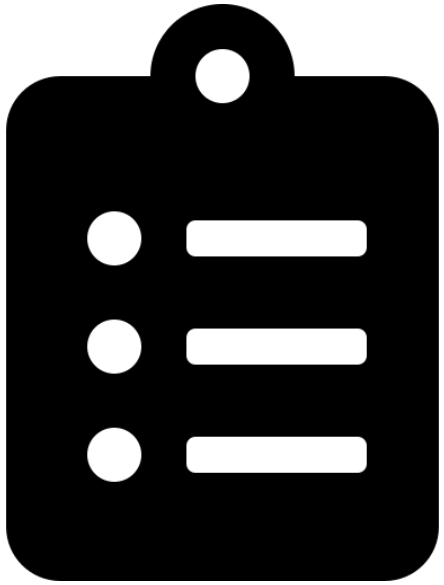
Define Secure Settings

Establish and enforce security configuration settings built into the products you use. Industry benchmarks (CIS, DISA STIGs, vendor hardening guides) give you a defensible, documented starting point instead of factory defaults.

BOTTOM LINE A baseline isn't a one-time document — it's the living reference that the rest of Domain 3.4 measures change against.

DOMAIN 3.4 · CONTROL CM.L2-3.4.1

Baseline Configurations & Inventories



Write down the known-good state — and keep a list of what it applies to.

CM.L2-3.4.1 – The Requirement & What Assessors Check

SECURITY REQUIREMENT

Establish and maintain baseline configurations and inventories of organizational systems (including hardware, software, firmware, and documentation) throughout the respective system development life cycles.

ASSESSMENT OBJECTIVES — All six must be MET:

[a]	A baseline configuration is established.
[b]	The baseline configuration includes hardware, software, firmware, and documentation.
[c]	The baseline configuration is maintained (reviewed and updated) throughout the system development life cycle.
[d]	A system inventory is established.
[e]	The system inventory includes hardware, software, firmware, and documentation.
[f]	The inventory is maintained (reviewed and updated) throughout the system development life cycle.

CM.L2-3.4.1 – Building Baselines and Inventories

Step 1: Inventory Everything

- Catalog all hardware, software, firmware, and key documentation in scope
- Capture make/model, OS version, location, owner, and purpose
- Use automated discovery tools where possible — manual lists drift fast

Step 2: Define the Baseline

- Document the approved configuration for each system type
- Include installed software, settings, accounts, and patch level
- Reference CIS Benchmarks or vendor hardening guides as a starting point

Step 3: Store & Version It

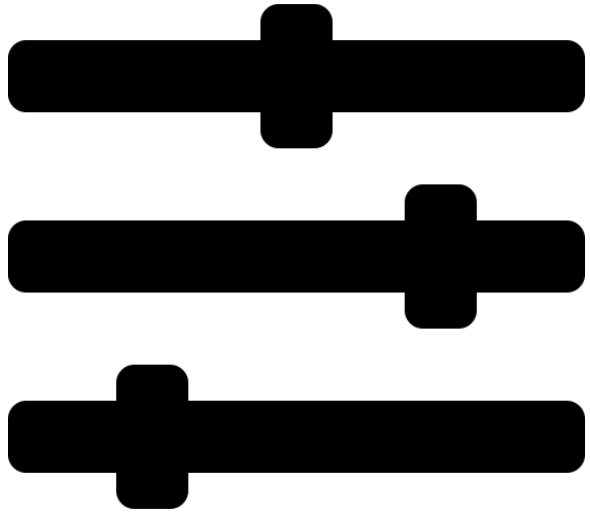
- Keep baselines under version control with dates and approvers
- Treat the baseline as a controlled document — not a one-off snapshot
- Make it retrievable; assessors will ask to see it

Step 4: Maintain Over Time

- Review and update baselines and inventory on a defined schedule
- Update when systems are added, retired, or significantly changed
- Tie maintenance to your change-control process (3.4.3)

DOMAIN 3.4 · CONTROL CM.L2-3.4.2

Security Configuration Settings



Don't ship factory defaults — define and enforce hardened settings.

CM.L2-3.4.2 – The Requirement & What Assessors Check

SECURITY REQUIREMENT

Establish and enforce security configuration settings for information technology products employed in organizational systems.

ASSESSMENT OBJECTIVES — All two must be MET:

[a]	Security configuration settings for information technology products employed in the system are established and included in the baseline configuration.
[b]	Security configuration settings for information technology products employed in the system are enforced.

CM.L2-3.4.2 – Establishing & Enforcing Secure Settings

Step 1: Pick a Standard

- Adopt recognized benchmarks: CIS Benchmarks, DISA STIGs, or vendor guides
- Choose the level appropriate to your risk and operational needs
- Document which standard applies to which product

Step 2: Bake Into Baseline

- Fold the chosen settings into your baseline configuration (3.4.1)
- Cover OS, browsers, productivity apps, network gear, and cloud tenants
- Record any deviations and the business reason for them

Step 3: Enforce Automatically

- Use Group Policy, Intune, MDM, or configuration tools to push settings
- Prevent users from changing security-relevant settings where possible
- Automated enforcement beats hoping people configure things correctly

Step 4: Monitor for Drift

- Scan periodically to confirm systems still match the secure settings
- Alert on drift and remediate; record the results as evidence
- Configuration scanners (e.g., compliance scanners) make this provable

Control How It Changes

THE BIG IDEA

Once you know your known-good state, the next job is making sure it only changes deliberately. Uncontrolled change is how secure systems quietly become insecure — these controls put a process, a review, and a gate around every change.

1

CHANGE CONTROL

Track & Approve Changes

Track, review, approve or disapprove, and log changes to your systems. A documented change-control process ensures every modification is intentional, recorded, and reversible — not a surprise discovered after something breaks.

2

IMPACT ANALYSIS

Analyze Before You Act

Analyze the security impact of a change before implementing it. A small change can open a large hole; impact analysis is the habit of asking "what does this affect?" before the change goes live, not after.

3

ACCESS RESTRICTION

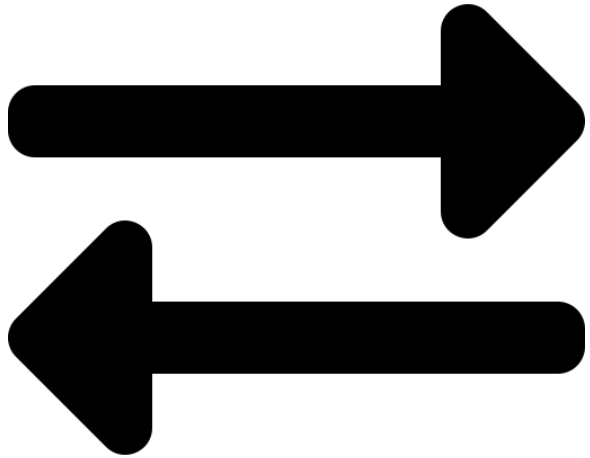
Limit Who Can Change

Define, document, approve, and enforce physical and logical access restrictions for making changes. Not everyone who can use a system should be able to reconfigure it — change rights are a privilege, granted deliberately.

BOTTOM LINE Change control is where configuration management becomes a discipline: every change is intentional, reviewed, authorized, and logged.

DOMAIN 3.4 · CONTROL CM.L2-3.4.3

Change Control & Tracking



Every change gets tracked, reviewed, approved or rejected, and logged.

CM.L2-3.4.3 – The Requirement & What Assessors Check

SECURITY REQUIREMENT

Track, review, approve or disapprove, and log changes to organizational systems.

ASSESSMENT OBJECTIVES — All four must be MET:

[a]	Changes to the system are tracked.
[b]	Changes to the system are reviewed.
[c]	Changes to the system are approved or disapproved.
[d]	Changes to the system are logged.

CM.L2-3.4.3 – Discussion Questions

DISCUSSION

Change control doesn't have to be heavyweight — even a small business can run a simple, documented process. The point is that changes are intentional and traceable, not made on a whim and forgotten.

CONSIDER THE FOLLOWING:

1	Do you have a defined process — even a simple ticket or form — for requesting and approving changes to in-scope systems?
2	Who reviews and approves changes, and is that authority documented? What happens with emergency changes?
3	Can you produce a log showing what changed, when, who approved it, and why — going back over time?

DOMAIN 3.4 · CONTROL CM.L2-3.4.4

Security Impact Analysis

Ask 'what could this break or expose?' before the change goes live.

CM.L2-3.4.4 – The Requirement & What Assessors Check

SECURITY REQUIREMENT

Analyze the security impact of changes prior to implementation.

ASSESSMENT OBJECTIVE — must be MET:

[a]	The security impact of changes to the system is analyzed prior to implementation.

CM.L2-3.4.4 – Discussion Questions

DISCUSSION

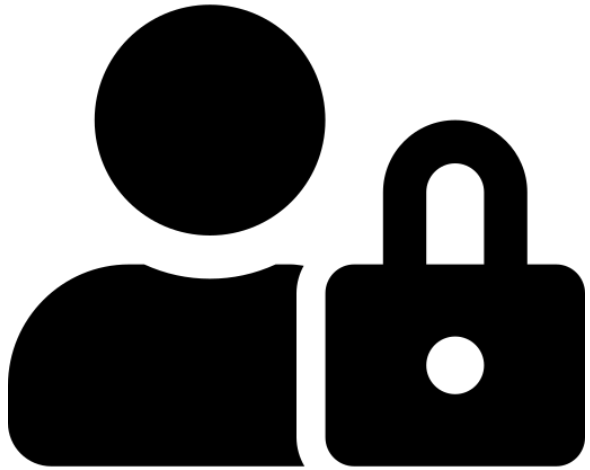
Security impact analysis is a step inside your change process: before a change is approved, someone considers how it affects the security posture of the system. It can be a checklist field on your change ticket — it doesn't require a separate program.

CONSIDER THE FOLLOWING:

1. When a change is proposed, does someone explicitly assess its security implications before it's approved?
2. Is the impact analysis recorded — for example, a required field or section in your change request?
3. For significant changes, do you test in a non-production environment before rolling out?

DOMAIN 3.4 · CONTROL CM.L2-3.4.5

Access Restrictions for Change



Reconfiguring a system is a privilege — grant it deliberately and enforce it.

CM.L2-3.4.6 – The Requirement & What Assessors Check

SECURITY REQUIREMENT

Employ the principle of least functionality by configuring organizational systems to provide only essential capabilities.

ASSESSMENT OBJECTIVES — All two must be MET:

[a]	Essential system capabilities are defined based on the principle of least functionality.
[b]	The system is configured to provide only the defined essential capabilities.

Readiness Checklist — CM.L2-3.4.1, 3.4.2

CM.L2-3.4.1, 3.4.2

Know What You Have

You can't enforce or defend a configuration you haven't documented. These two controls establish your reference point.

- [ ] 1 **Baseline configuration documented and approved**
  Covers hardware, software, firmware, and documentation for each system type — final, not draft
- [ ] 2 **System inventory established and current**
  All in-scope assets cataloged with owner, location, version; reviewed and updated on a schedule
- [ ] 3 **Baseline maintained across the lifecycle**
  Updated when systems are added, changed, or retired — tied to your change-control process
- [ ] 4 **Security configuration settings defined**
  A recognized standard (CIS Benchmarks, DISA STIGs, vendor guides) chosen and folded into the baseline
- [ ] 5 **Secure settings enforced, not just written**
  Pushed via Group Policy / Intune / MDM; users can't change security-relevant settings
- [ ] 6 **Configuration drift detected and remediated**
  Periodic scans confirm systems still match the baseline; results retained as evidence

✓ **Key evidence bundle: baseline configuration document + asset inventory + chosen hardening standard + drift-scan results**

Readiness Checklist — CM.L2-3.4.3, 3.4.4, 3.4.5

CM.L2-3.4.3, 3.4.4, 3.4.5

Control How It Changes

Uncontrolled change is how secure systems quietly become insecure. These three controls put a gate around every change.

- [ ] 1 **Documented change-control process exists**
  Even a simple ticket/form — changes are requested, reviewed, approved or disapproved, and logged
- [ ] 2 **Change log maintained over time**
  Shows what changed, when, who approved it, and why; retrievable for the assessment period
- [ ] 3 **Security impact analysis built into the process**
  Security implications of a change are assessed and recorded before approval
- [ ] 4 **Significant changes tested before production**
  Non-production testing for higher-risk changes where feasible
- [ ] 5 **Change access restrictions defined and approved**
  Both physical and logical — documented list of who may make configuration changes
- [ ] 6 **Change restrictions actually enforced**
  Privileged rights limited technically; physical access to equipment controlled; enforcement demonstrable

✓ **Key evidence bundle: change-management policy + change log/tickets + impact-analysis records + approved change-access list**

Readiness Checklist — CM.L2-3.4.6, 3.4.7, 3.4.8, 3.4.9

CM.L2-3.4.6, 3.4.7, 3.4.8, 3.4.9

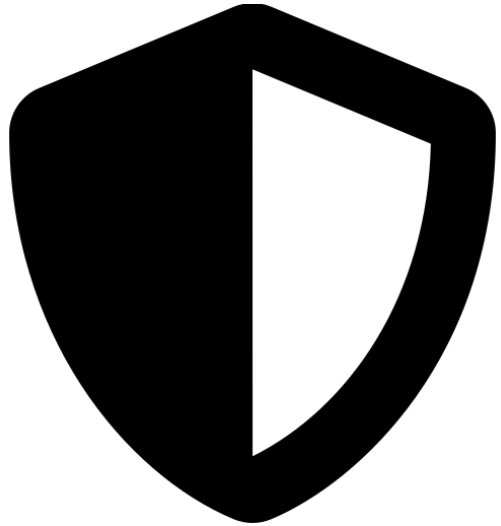
Reduce Your Attack Surface

The most secure component is the one that isn't running. These four controls turn off, lock down, and account for everything nonessential.

- [ ] 1 **Essential capabilities defined; rest removed**
  Least functionality — systems configured to provide only what they need; unused features uninstalled/disabled
- [ ] 2 **Nonessential ports, protocols, services closed**
  Defined and restricted/disabled at host and network; legacy insecure protocols turned off; verified by scan
- [ ] 3 **Execution policy chosen and documented**
  Allowlisting (preferred) or denylisting decided, with the list of allowed/denied software maintained
- [ ] 4 **Execution policy technically enforced**
  AppLocker, WDAC, or endpoint tooling enforces the policy — not just a written statement
- [ ] 5 **User software-installation policy established**
  Clear rules on what users may install; admin rights removed from standard users; approval path defined
- [ ] 6 **User-installed software monitored**
  Regular software inventory compared against policy; unauthorized installs flagged and reviewed

✓ **Key evidence bundle: least-functionality definitions + port/service scans + execution-policy config + user-install policy + software inventory**

Key Takeaways



- Domain 3.4 tells one story in three parts: know what you have, control how it changes, and reduce your attack surface
- Everything starts with the baseline and inventory — you can't enforce, detect, or investigate against a state you never documented
- Change control is the discipline at the center: every change tracked, reviewed, authorized, impact-analyzed, and logged, by a limited set of people
- Attack-surface reduction is the highest-leverage payoff — least functionality, closed ports/services, execution allowlisting, and governed user installs
- Most of these controls are about documentation plus enforcement: assessors want to see the policy AND proof it's actually applied (scans, logs, configs)

KEY REFERENCES

CMMC Assessment Guide – Level 2 v2.13
dodcio.defense.gov/CMMC/Documentation

NIST SP 800-171 Rev 2
nvlpubs.nist.gov

NIST SP 800-171A (Assessment Methods)
nvlpubs.nist.gov

NIST SP 800-128 (Config Management)
csrc.nist.gov/publications

CIS Benchmarks
cisecurity.org/cis-benchmarks

DISA STIGs
public.cyber.mil/stigs

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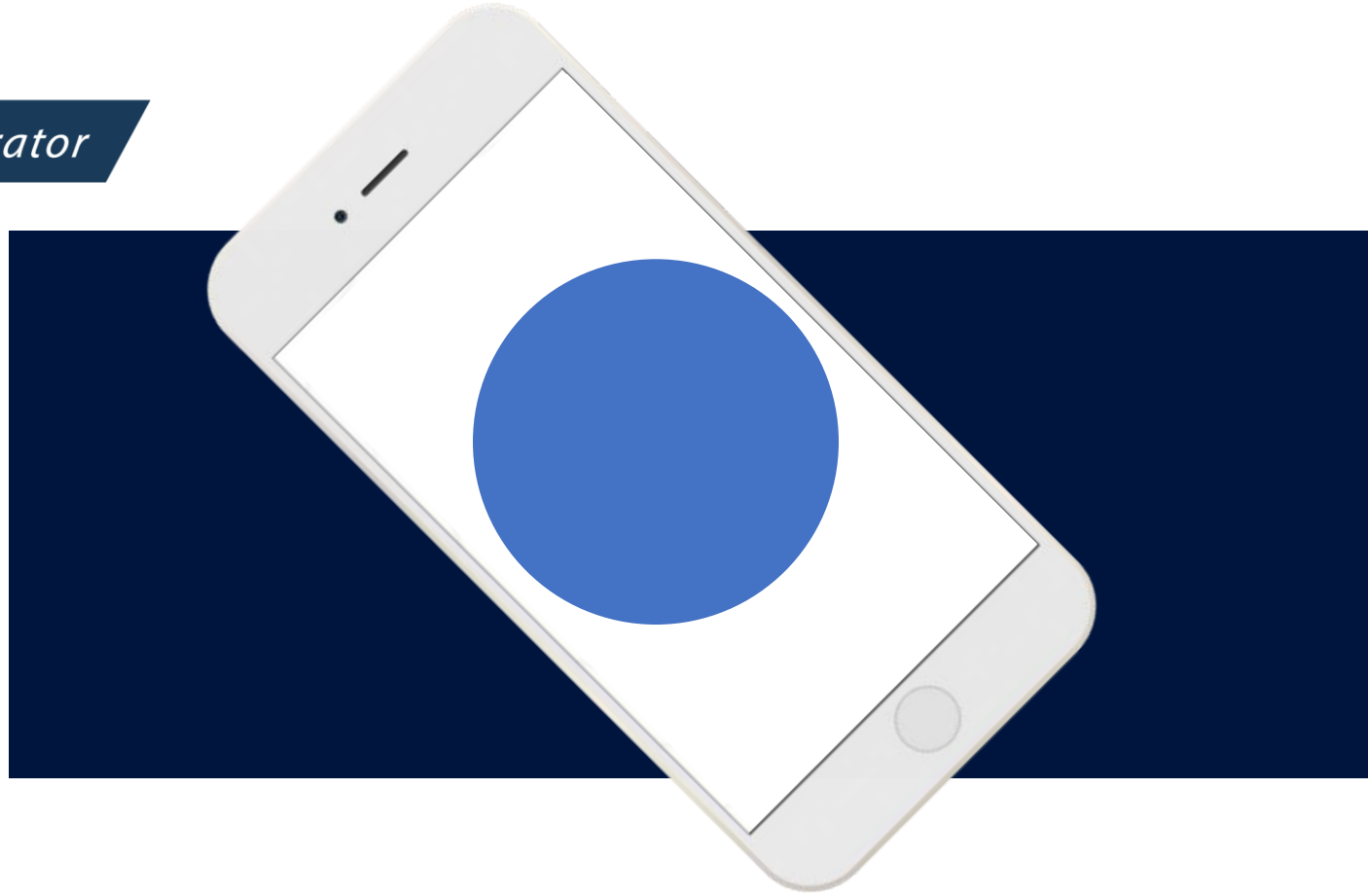

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Cyber Thursday

Cyber Friday is a series of one-hour webinars focusing on critical topics for DOD contractors and subcontractors in cyber security, data security, and CMMC. Attendees receive 1 CPE credit for attending.

- ~~May 28 – CMMC: Control Set Series: 3.4 Configuration Management~~
- June 25 – Cybersecurity Requirements for Non-Department of War Contractors and Suppliers
- July 16 – A Guide to Strong Supporting Documentation
- August 27 – Determining Your Real CMMC Compliance Responsibilities

…More information and registrations at wispro.org/events

Federal Market Insights

Federal Market Insights [FMI] is an informal podcast designed to provide valuable information about the government marketplace for businesses interested in government contracting.

- ~~May 12 – Navigating the Federal Laboratory Consortium: A Guide for Small Business Innovators~~
- ~~May 19 – Federal Innovation Sites Every Inventor Should Know~~
- ~~May 26 – IP, Data Rights, and Federal Awards: What Every Company Should Know~~
- June 2 – Unsolicited Proposals & NSF Project Pitches: Paths Beyond SBIR Topics
- June 9 – Beyond the Capabilities Statement

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The Acquisition Hour webinar series covers a range of topics from market entry, sales growth, small business certifications, compliance, and more. Attendees receive 1 CPE credit for attending.

- June 3 – Things to Know When Contracting with the Federal Government
- June 17 – Update on SBIR – STTR

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