

Demystifying CMMC

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APEX Accelerator



Presenter Bios



Phillip has a 25+ year career in technology development, integration and compliance management from small to large enterprises. He is a co-founder of NOVO who provides technology, cybersecurity and compliance services to small and mid-sized businesses.





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Ghassan has a 25+ year career in developing and implementing management systems that serve the business objectives and meet regulatory requirements and applicable standards. His work covers enabling organizations for digital transformation and applying information technology. He is a business advisor in TMAC supporting companies in achieving compliance with CMMC, commonly through planning and implementing integrated systems and solutions that maintain regulatory and quality compliance and fulfill the controls of CMMC.

How to Ask a Question

1) Find the Q&A button in your Microsoft Teams toolbar

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2) Create Post with your question.





The Fundamentals

CMMC OVERVIEW

Market Drivers for the U.S. Defense Industrial Base

\$800_B

Estimated 2024 DOD spending in the U.S. economy ¹

Small-to-Mid size business contribution to Defense Industrial Base (DIB)²

70%

30ĸ

Direct Small Defense Industrial Base suppliers

- 1. Center for Strategic & International Studies (CSIS)
- 2. Brookings
- 3. Congressional Research Service

Why CMMC?

Numerous state and non-state actors have come to see cyberspace means as a powerful force multiplier. U.S. adversaries seek to use malicious cyber capabilities to achieve asymmetric advantages, targeting U.S. critical infrastructure, undermining U.S. economic security, and degrading U.S. military superiority. Hostile cyberattacks pose an outsized danger to defense industry **intellectual property and supply chains**. Secure, reliable defense technology research and development and industrial base production is simply not possible without robust industrial cybersecurity.

DoD CIO developed the Cybersecurity Maturity Model Certification (CMMC) program to reinforce the importance of defense industrial cybersecurity for safeguarding the information that support and enable our warfighters.

- Department of Defense



Key Protected Information Types

FEDERAL CONTRACT INFORMATION (FCI)

FCI is information, not intended for public release, provided by or generated for the government under a contract to develop or deliver a product or service to the government.



Federal Contract Information (FCI): is defined in FAR 52.204-21 and 48 CFR 4.1901 [3]

CONTROLLED UNCLASSIFIED INFORMATION (CUI)

CUI is information that requires safeguarding for national security purposes according to laws, regulations, or government-wide policies but is not classified.



Controlled Unclassified Information (CUI): is defined in <u>32 CFR § 2002.4 (h) [4]</u> More information available on the <u>CUI Registry</u>

FCI requires basic protection, generally covered by CMMC Level 1.

CUI is more sensitive, involving data that needs controlled access, requires CMMC Level 2 or higher protections.

What is CMMC?

Cybersecurity Maturity Model Certification (CMMC) is a framework created by the U.S. Department of Defense (DoD) to ensure that defense contractors implement and maintain adequate cybersecurity measures to protect Controlled Unclassified Information (CUI) and Federal Contract Information (FCI) within the Defense Industrial Base (DIB).

Aspect	Details
Purpose	Ensure DoD contractors have proper cybersecurity controls
Maturity Levels	Three (3) levels: Foundational, Advanced & Expert
Domains	14 Practice Areas (i.e. "Access Control", "Risk Assessment")
Key Frameworks Used	Based on NIST SP 800-171 r2, with additional requirements
Assessment Type	Self-Assessment or third-party certification (contract dependent)
Certification Bodies	CMMC Third-Party Assessor Organizations (C3PAOs), DIBCAC
Applicability	Mandatory for all DoD contractors/subcontractors handling FCI or CUI

Federal Register :: Cybersecurity Maturity Model Certification (CMMC) Program

CMMC Compliance Level Requirements



NIST SP 800-171 r2 Comparison with CMMC

Aspect	NIST SP 800-171 Rev. 2	СММС
Purpose	Provides a set of security requirements for protecting CUI.	Certification framework for DoD contractors. Certifies compliance with cybersecurity practices.
Applicability	Mandatory for all federal contractors handling CUI under DFARS 252.204-7012.	Specifically designed for DoD contractors. CMMC builds upon NIST 800-171.
Structure	Contains 110 controls in 14 families (self-implemented).	Organized into 3 levels (CMMC 2.0), with varying control requirements.
Assessment Type	Self-assessment by the contractor (may include audits by the DoD).	Third-party assessments by C3PAOs for Level 2 and above.
Certification	No certification required; compliance is self-attested.	Certification required for CMMC compliance (Level 2 and above).
Focus	Security controls to meet DFARS requirements for safeguarding CUI.	Expands on NIST 800-171 with maturity and accountability.
Scope	Focuses on implementing security controls for systems handling CUI.	Includes system controls and organizational maturity (e.g., processes and practices).
Oversight	Adherence monitored primarily by the contractor; DoD may audit.	DoD requires certification by independent assessors (C3PAOs) for Level 2 & 3. In addition, DIBCAC/DoD assessment required for Level 3.
Integration	Used as the baseline for CMMC Level 2 controls.	Incorporates NIST SP 800-171 controls, with additional requirements.
Key Documents	System Security Plan (SSP), Plan of Action and Milestones (POA&M)	SSP, POA&M, plus evidence of process maturity.

CMMC goes beyond NIST SP 800-171, adding accountability, process maturity, and certification to ensure consistent implementation.



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CMMC Key Events Timeline

September 2020	December 2023	Q1 2024	Q1 2025	October 2025
DoD issued an interim rule to amend the Defense Federal Acquisition Regulation Supplement (DFARS), known as DFARS Case 2019-D041, requiring contractors to assess and report their compliance with cybersecurity standards, including NIST SP 800-171. This rule established the basis for the CMMC framework.	Internal and industry review feedback led to CMMC 2.0 update (2021), which simplified the certification levels from five to three, aiming to reduce compliance costs and streamline the assessment process. <u>Title 32 CMMC Rule</u> <u>published</u> .	32 CFR Final Rule DoD published the Final <u>CMMC Program Rule</u> on Oct. 15, 2024. Phase 1: Begins on Dec 16, 2024, introducing initial self- assessment requirements	Estimated CMMC Assessments Start with provisions in DoD contracts. 48 C.F.R Part 204 CMMC Acquisition Rule Expected DFARS codification Q2 2025	Estimated Deadline for CMMC compliance for solicitation and new contracts.
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CMMC Requirements Implementation



Organizations Need to Understand Attestation Risk

Self-attesting invalid or falsified information for CMMC compliance can pose significant risks to an organization, both legally and operationally.





The Department of Defense (DoD) takes cybersecurity compliance seriously to protect sensitive information. Providing inaccurate information can lead to severe consequences.

CMMC Accreditation Ecosystem



Registered Practitioner (RP)

Registered Practitioners are training and tested against the Levels based on the CMMC Framework to obtain their designation. They are implementers that are providing consultative preparation services to the Organizations Seeking Certification (OSC) and either work as independent contractors or as members of a Registered Practitioner Organization (RPO).



Registered Practitioner Organization (RPO)

A Registered Practitioner Organization (RPO) delivers a non-certified advisory service through the employment of RPs. They are consultative organizations or MSPs; and do not conduct Certified CMMC Assessments. Any references to "non-certified" services are only referring to the fact that an RPO is not authorized to conduct a certified CMMC assessment.



Certified CMMC Assessors (CCP/CCA)

A CCP is eligible to become CMMC Certified Assessor (CCA), participates up to CMMC Level 2 assessments, and holds a valuable credential reflecting the training to understand the CMMC requirements for a Defense supplier.



CMMC Third Party Assessment Organization (C3PAO)

A CMMC Third-Party Assessment Organization (C3PAO) conducts assessments of OSCs through the employment of CCPs and CCAs based on their rigorous training and adherence to CMMC standards.



Key Requirements Summary



Self Assessments Begin in Phase I (Now)



Level 1 (FARS) and Level 2 (NIST 800-171)

Self Attestation Required as a stipulation of contract award.

CYBER AB provides DIB accreditation





Begin System Security Plan (SSP)



Achieving CMMC Compliance

The Journey Begins



Program Approach Designed to Manage Change



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NIST SP 800-171 r2 Control Families

Control Family	Description	Examples	Key Practices		
	Limits access to sustains and data to suthavined users processes and devices	- User role-based access	- Implement least privilege		
Access Control (AC)	Limits access to systems and data to authorized users, processes, and devices.	- Multi-factor authentication	- Account management policies		
		- Phishing training	- Conduct regular security training		
Awareness and Training (AT)	Ensures personnel are trained to recognize and respond to security risks.	- Security awareness programs	- Update policies based on emerging threats		
		- Log files	- Enable logging for critical systems		
Audit and Accountability (AU)	Iracks user activities and system changes to detect and respond to security incidents.	- SIEM (Security Information and Event Management)	- Regular audit log reviews		
		- Use of baseline configurations	- Apply patch management		
Configuration Management (CM)	establishes secure configurations for systems and prevents unauthorized changes.	- Version control	- Review configurations regularly		
		- Username and passwords	- Enforce password policies		
Identification and Authentication (IA)	Verifies the identities of users and devices to prevent unauthorized access.	- Biometrics	- Use secure authentication mechanisms		
Insident Besnense (IB)	Dranaras for detects and responds to security insidents offectively	- Incident playbooks	- Establish an incident response plan		
incident Response (IR)	Prepares for, detects, and responds to security incidents effectively.	- Cyberattack drills	- Conduct post-incident reviews		
	For was a stars are maintained securely and upsythesized maintanenes is	- Regular hardware checks	- Document maintenance activities		
Maintenance (MA)	prevented.	- Secure remote maintenance	- Approve maintenance tools and methods		
Madia Duatastian (MAD)		- Encrypt USB drives	- Label media properly		
Niedla Protection (NIP)	Protects digital and physical media containing sensitive information.	- Shred sensitive documents	- Use access-controlled storage areas		
Dersonnel Security (DS)	Ensures personnel are vetted and understand their security responsibilities	- Background checks	- Define access control for personnel		
Personnel Security (PS)	ensures personnel are verted and understand their security responsibilities.	- Termination procedures	- Conduct regular evaluations		
Physical Protection (PE)	Protects physical access to systems and information	- Security guards	- Use surveillance cameras		
	Frotects physical access to systems and mornation.	- Locking server rooms	- Control visitor access		
Rick Assessment (RA)	Identifies and assesses risks to the organization and its information	- Risk matrix	- Perform regular risk assessments		
		- Threat modeling	- Update risk mitigation plans		
Security Assessment (CA)	Evaluates the effectiveness of security controls and processes	- Third-party audits	- Conduct self-assessments		
	Evaluates the encetiveness of security controls and processes.	- Penetration tests	- Maintain continuous monitoring		
System and Communications Protection		- Data encryption	- Use secure protocols (e.g., TLS)		
(SC)	Protects information during processing, storage, and transmission.	- Firewalls	- Implement DLP (Data Loss Prevention) tools		
System and Information Intogrity (SI)	Detects and recoonds to information system vulnerabilities and incidents	- Anti-malware tools	- Apply security patches		
System and information integrity (SI)	Detects and responds to mormation system vulnerabilities and incidents.	- Vulnerability scans	- Monitor for unauthorized changes		



CMMC Level 1 - Foundational

Access Control (AC)	Audit & Accountability (AU)	Awareness & Training (AT)	Configuration Management (CM)	Identification & Authentication (IA)	Incident Response (IR)	Maintenance (MA)	Media Protection (MP)	Personnel Security (PS)	Physical Protection (PE)	Risk Assessment (RA)	Security Assessment (CA)	System & Communications Protection (SC)	System & Information Integrity (SI)
AC.L1-3.1.1				IA.L1-3.5.1			MP.L1-3.8.3		PE.L1-3.10.1			SC.L1-3.13.1	SI.L1-3.14.1
AC.L1-3.1.2				IA.L1-3.5.2					PE.L1-3.10.3			SC.L1-3.13.5	SI.L1-3.14.2
AC.L1-3.1.20									PE.L1-3.10.4				SI.L1-3.14.4
AC.L1-3.1.22									PE.L1-3.10.5				SI.L1-3.14.5
		-											
						D 50 00 4 04							
					FA	AR 52.204-21							
					Applies	to Endoral Con	tract						

Applies to Federal Contract Information (FCI), defined as information not intended for public release that is provided or generated for the federal government under a contract. Does not apply to classified information or Controlled Unclassified Information (CUI), which may require additional protections.

CMMC Level 2 - Advanced

AC.L2-3.1.21

Access Control (AC)	Audit & Accountability (AU)	Awareness & Training (AT)	Configuration Management (CM)	Identification & Authentication (IA)	Incident Response (IR)	Maintenance (MA)	Media Protection (MP)	Personnel Security (PS)	Physical Protection (PE)	Risk Assessment (RA)	Security Assessment (CA)	System & Communications Protection (SC)	System & Information Integrity (SI)
AC.L1-3.1.1	AU.L2-3.3.1	AT.L2-3.2.1	CM.L2-3.4.1	IA.L1-3.5.1	IR.L2-3.6.1	MA.L2-3.7.1	MP.L1-3.8.3	PS.L2-3.9.1	PE.L1-3.10.1	RA.L2-3.11.1	CA.L2-3.12.1	SC.L1-3.13.1	SI.L1-3.14.1
AC.L1-3.1.2	AU.L2-3.3.2	AT.L2-3.2.2	CM.L2-3.4.2	IA.L1-3.5.2	IR.L2-3.6.2	MA.L2-3.7.2	MP.L2-3.8.1	PS.L2-3.9.2	PE.L1-3.10.3	RA.L2-3.11.2	CA.L2-3.12.2	SC.L1-3.13.5	SI.L1-3.14.2
AC.L1-3.1.20	AU.L2-3.3.3	AT.L2-3.2.3	CM.L2-3.4.3	IA.L2-3.5.3	IR.L2-3.6.3	MA.L2-3.7.3	MP.L2-3.8.2		PE.L1-3.10.4	RA.L2-3.11.3	CA.L2-3.12.3	SC.L2-3.13.2	SI.L1-3.14.4
AC.L1-3.1.22	AU.L2-3.3.4		CM.L2-3.4.4	IA.L2-3.5.4		MA.L2-3.7.4	MP.L2-3.8.4		PE.L1-3.10.5		CA.L2-3.12.4	SC.L2-3.13.3	SI.L1-3.14.5
AC.L2-3.1.10	AU.L2-3.3.5		CM.L2-3.4.5	IA.L2-3.5.5		MA.L2-3.7.5	MP.L2-3.8.5		PE.L2-3.10.2			SC.L2-3.13.4	SI.L2-3.14.3
AC.L2-3.1.3	AU.L2-3.3.6		CM.L2-3.4.6	IA.L2-3.5.6		MA.L2-3.7.6	MP.L2-3.8.6		PE.L2-3.10.6			SC.L2-3.13.6	SI.L2-3.14.6
AC.L2-3.1.4	AU.L2-3.3.7		CM.L2-3.4.7	IA.L2-3.5.7			MP.L2-3.8.7					SC.L2-3.13.7	SI.L2-3.14.7
AC.L2-3.1.5	AU.L2-3.3.8		CM.L2-3.4.8	IA.L2-3.5.8			MP.L2-3.8.8					SC.L2-3.13.8	
AC.L2-3.1.6	AU.L2-3.3.9		CM.L2-3.4.9	IA.L2-3.5.9			MP.L2-3.8.9					SC.L2-3.13.9	
AC.L2-3.1.7				IA.L2-3.5.10								SC.L2-3.13.10	
AC.L2-3.1.8				IA.L2-3.5.11								SC.L2-3.13.11	
AC.L2-3.1.9												SC.L2-3.13.12	
AC.L2-3.1.11												SC.L2-3.13.13	
AC.L2-3.1.12												SC.L2-3.13.14	
AC.L2-3.1.13												SC.L2-3.13.15	
AC.L2-3.1.14												SC.L2-3.13.16	
AC.L2-3.1.15													
AC.L2-3.1.16													
AC.L2-3.1.17													
AC.L2-3.1.18													
AC.L2-3.1.19													

CMMC Level 3 - Expert

AC.L3-1

Access Control (AC)	Audit & Accountability (AU)	Awareness & Training (AT)	Configuration Management (CM)	Identification & Authentication (IA)	Incident Response (IR)	Maintenance (MA)	Media Protection (MP)	Personnel Security (PS)	Physical Protection (PE)	Risk Assessment (RA)	Security Assessment (CA)	System & Communications Protection (SC)	System & Information Integrity (SI)
AC.L1-3.1.1	AU.L2-3.3.1	AT.L2-3.2.1	CM.L2-3.4.1	IA.L1-3.5.1	IR.L2-3.6.1	MA.L2-3.7.1	MP.L1-3.8.3	PS.L2-3.9.1	PE.L1-3.10.1	RA.L2-3.11.1	CA.L2-3.12.1	SC.L1-3.13.1	SI.L1-3.14.1
AC.L1-3.1.2	AU.L2-3.3.2	AT.L2-3.2.2	CM.L2-3.4.2	IA.L1-3.5.2	IR.L2-3.6.2	MA.L2-3.7.2	MP.L2-3.8.1	PS.L2-3.9.2	PE.L1-3.10.3	RA.L2-3.11.2	CA.L2-3.12.2	SC.L1-3.13.5	SI.L1-3.14.2
AC.L1-3.1.20	AU.L2-3.3.3	AT.L2-3.2.3	CM.L2-3.4.3	IA.L2-3.5.3	IR.L2-3.6.3	MA.L2-3.7.3	MP.L2-3.8.2		PE.L1-3.10.4	RA.L2-3.11.3	CA.L2-3.12.3	SC.L2-3.13.2	SI.L1-3.14.4
AC.L1-3.1.22	AU.L2-3.3.4	AT.L3-2	CM.L2-3.4.4	IA.L2-3.5.4	IR.L3-6	MA.L2-3.7.4	MP.L2-3.8.4		PE.L1-3.10.5	RA.L3-9	CA.L2-3.12.4	SC.L2-3.13.3	SI.L1-3.14.5
AC.L2-3.1.10	AU.L2-3.3.5	AT.L3-3	CM.L2-3.4.5	IA.L2-3.5.5	IR.L3-7	MA.L2-3.7.5	MP.L2-3.8.5		PE.L2-3.10.2	RA.L3-10	CA.L3-4	SC.L2-3.13.4	SI.L2-3.14.3
AC.L2-3.1.3	AU.L2-3.3.6		CM.L2-3.4.6	IA.L2-3.5.6	IR.L3-8	MA.L2-3.7.6	MP.L2-3.8.6		PE.L2-3.10.6	RA.L3-11		SC.L2-3.13.6	SI.L2-3.14.6
AC.L2-3.1.4	AU.L2-3.3.7		CM.L2-3.4.7	IA.L2-3.5.7			MP.L2-3.8.7					SC.L2-3.13.7	SI.L2-3.14.7
AC.L2-3.1.5	AU.L2-3.3.8		CM.L2-3.4.8	IA.L2-3.5.8			MP.L2-3.8.8					SC.L2-3.13.8	SI.L3-13
AC.L2-3.1.6	AU.L2-3.3.9		CM.L2-3.4.9	IA.L2-3.5.9			MP.L2-3.8.9					SC.L2-3.13.9	SI.L3-14
AC.L2-3.1.7			CM.L3-3.4.8	IA.L2-3.5.10								SC.L2-3.13.10	
AC.L2-3.1.8			CM.L3-5	IA.L2-3.5.11								SC.L2-3.13.11	
AC.L2-3.1.9												SC.L2-3.13.12	
AC.L2-3.1.11												SC.L2-3.13.13	
AC.L2-3.1.12												SC.L2-3.13.14	
AC.L2-3.1.13												SC.L2-3.13.15	
AC.L2-3.1.14												SC.L2-3.13.16	
AC.L2-3.1.15												SC.L3-12	
AC.L2-3.1.16												SC.L3-3.13.2	
AC.L2-3.1.17													
AC.L2-3.1.18													
AC.L2-3.1.19													
AC.L2-3.1.21													

The Cyber Security Tool Landscape



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Technology Partner Differentiation



(MSP) Managed Service Provider | (CSP) Cloud Solution Provider | (MSSP) Managed Security Service Provider | (MDR) Managed Detection and Response

CMMC Technology Pathways





First Steps Toward Certification



Get educated & begin stakeholder awareness



Determine required CMMC level

Consolidate technology and solution vendors and ensure they meet CMMC compliance.

Conduct a self-assessment (link)

Begin CUI Boundary Work



Begin System Security Plan (SSP)



yesnovo.com/cmmc

Schedule Free CMMC Consultation



