

# CMMC PREPARATION Webinars: Steps to Take in Preparation for a CMMC Audit

CONNSTEP 6/1/2023

## **CMMC PREPARATION Webinars**



### **Four Webinar Series**

3/9 - 6/1

12 noon – 1 pm

March 9th

Understanding CMMC Timeline & Steps to Compliance

April 6th How to Develop & Implement Effective CMMC Policies & Procedures

May 4th How to Leverage Your IT Managed Service Provider (MSP) to Achieve CMMC Compliance

June 1st

Steps to Take in Preparation for a CMMC Audit

## Webinar #4 Agenda



## Steps to Take in Preparation for a CMMC Audit

- Current State of DoD Rulemaking
- CMMC Assessment Expectations
- Creating Assessment Scope Documentation
- Methods of CMMC Assessment
- Assessment Preparation Best Practices and Success Factors
- Transferring Quality System Expertise into Cybersecurity Bill Forthofer



# Guest Speakers:



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Cybersecurity Provider
CMMC-AB Professional



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## Guidance



Nothing in this presentation (written, spoken, expressed, or implied) is legal advice.

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# Poll

## **Current State of DoD Rulemaking**



News from the Cyber AB



Draft NIST SP 800-171r3

Important Insights

## **Current State of Rulemaking**





Department of Defense Chief Information Officer

Now under an upgraded cyber certification program, the Defense Department's chief information officer said he wants to focus on clarifying requirements and increasing engagements with small to medium-sized companies in hopes of raising the overall "waterline" of the Pentagon's cybersecurity defenses.



Department of Defense Senior Information Security Officer, and Deputy Chief Information Officer for Cybersecurity

### Draft NIST SP 800-171r3



On June 6, 2023, NIST will host a webinar to provide an overview of the significant changes in NIST Special Publication (SP) 800-171, Revision 3, <u>Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations</u>.

#### SP 800-171r3 Initial Public Draft Quick Takeaways

NIST Special Publication NIST SP 800-171r3 ipd Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations Initial Public Dead Rose Ross his politication is productly five of charge from per rubos, own Till ACCHINISTE SIR NOD 3 7365 and NIST

#### 110 Requirements\*

- 27 requirements "withdrawn"
- · 27 requirements added
- · Significant net increase

#### Formatted like SP 800-53

- Extensive use of "organizationally-defined parameters" (ODPs)
- FIPS-Validated crypto requirements relaxed ... sort of

#### Notable new requirements:

- Independent assessments (3.12.5)
- External System Services (3.16.3)

Public comments due by 14 July 2023

## Important Insights



### Why Take Action Now:

- Enhanced Cybersecurity
- Defense Contracting Requirements
- Protection of Controlled Unclassified Information
- Competitive Advantage classified Information (CUI)

### About the CMMC Assessments



### **CMMC Assessments Expectations:**

- Testing or evaluation of security controls:
  - implemented correctly
  - o operating as intended
  - producing the desired outcome
- Conducted by CMMC Third-Party Assessment Organization (C3PAO) and Certified Assessor
- Certification good for 3 years

### CMMC Level 1 vs. Level 2 Assessment



#### **CMMC Level 1**

addresses the protection of Federal Contract Information (FCI)

#### CMMC Level 2

addresses the protection of Controlled Unclassified Information (CUI)

Level 2 assessment is <u>cumulative</u> - demonstrate achievement of all Level 1 and Level 2 practices

<u>EXAMPLE</u>: CMMC Level 1 self-assessment for the boundary <u>containing FCI (e.g., the enterprise network)</u>, but obtain a CMMC Level 2 certification <u>for the boundary or enclave</u> of its network <u>within which all CUI must be processed, stored, or transmitted</u>

### Difference Between FCI vs. CUI



### **Federal Contract Information (FCI)**

"Information, not intended for public release, that is provided or generated for the Government under a contract to deliver a product or service to the Government."

- Official Government Definition of FCI
- Contract performance reports
- Organizational or programmatic charts
- Process documentation
- Proposal responses
- Past performance information
- Contract information
- Emails exchanged with the DoD or defense contractor

#### **Controlled Unclassified Information (CUI)**

"CUI is information the Government creates or possesses, or that an entity creates or possesses for or on behalf of the Government, that a law, regulation, or Government-wide policy requires or permits an agency to handle using safeguarding or dissemination controls."

- Official Government Definition of CUI
- Information Systems Vulnerability Information
- Personally Identifiable Information (PII) (Could be your employees, government employees, or even employees of a third party)
- Research and engineering data
- Engineering drawings, Technical reports & Technical orders
- Specifications & Standards
- Process sheets, manuals & catalog: item identification4

### CUI and CDI



#### **Controlled Unclassified Information (CUI)**

Information that requires safeguarding or dissemination controls pursuant to and consistent with applicable law, regulations, and government-wide policies but is not classified under Executive Order 13526 or the Atomic Energy Act, as amended

#### **Covered Defense Information (CDI)**

Unclassified information that-

- (1) Is-
  - (i) Provided to the contractor by or on behalf of DOD in connection with the performance of the contract; or
  - (ii) Collected, <u>developed</u>, received, <u>transmitted</u>, used, or <u>stored</u> by or on behalf of the contractor in support of the performance of the contract;

AND...

- (2) Falls in any of the following categories:
  - (i) Controlled technical information.
  - (ii) Critical information
  - (iii) Export control
  - (iv) Any other information, marked or otherwise identified in the contract, that requires safeguarding or dissemination controls pursuant to and consistent with law, regulations, and Government wide policies (e.g., privacy, proprietary business information)

## Achieving CMMC Certification



#### CMMC certification can be achieved for:

- an entire enterprise network,
- for particular segment(s), or
- for a specific enclave

→ It is dependent upon how the CMMC assessment is scoped!

### **Creating Scope Documentation**



# Which assets within the contractor's environment will be assessed?

### Need to develop <u>Assessment Scoping Documentation</u>:

- Scope the environment to be audited
- Map all assets into one of the following five categories:
  - 1. CUI Assets,
  - 2. Security Protection Assets,
  - 3. Contractor Risk Managed Assets,
  - 4. Specialized Assets, and
  - 5. Out-of-Scope Assets.

## **Assets Categorization**

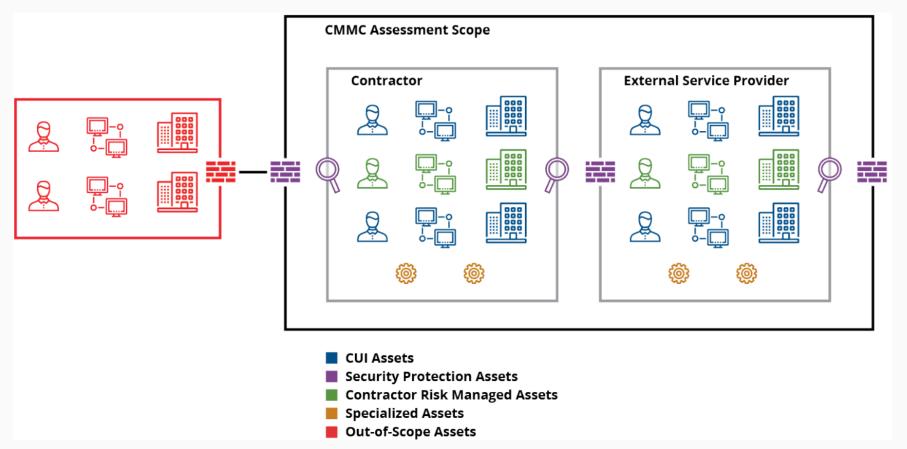


#### Assets can include:

- people
- other organizations
- computing device
- IT system
- IT network
- OT system
- software
- Virtual computing platform (common in the cloud and virtualized computing)
- related hardware (e.g., locks, cabinets, keyboards)

### CMMC Assessment Scope





### Scoping External Service Providers (ESP)



### **External Service Provider (ESP) may be:**

<u>external people, technology, or facilities</u> that the contractor uses

#### **Examples:**

including <u>cloud service providers</u>
<u>managed service providers</u>
<u>managed security service providers</u>
<u>cybersecurity-as-a-service providers</u>

For each of the <u>practice objectives</u> that an ESP performs, the SMM can <u>inherit the practice compliance</u>.

The SMM will need to demonstrate the performance of the practice objectives by the ESP and provide adequate evidence of compliance.

## Mapping CUI Flow EXERCISE



### How CUI flows through the organization?

•	CUI is received via (describe client portals)  Customer Portals  Email  Paper
•	CUI is stored.
•	CUI is transmitted.         o       Paper         o       Digital         o       Encryption
•	At end of job, CUI is:  Stored  Destroyed
•	CUI is shared. Please list everyone that has access to the organization's CUI.  o Internally (Which Employees)  o Externally (Vendors, Customers, etc.)



## Actions to Take

- 1. Map CUI data flow throughout your organization
- 2. List assets type and then categorize the assets
- 3. Document the CMMC Assessment Scope
- 4. Download the "CMMC Assessment Scope Level 2" document:

https://dodcio.defense.gov/Portals/0/Documents/CMMC/Scope\_Level2\_V2 .0\_FINAL\_20211202\_508.pdf

## **CMMC Certified Assessor**



#### The **Certified Assessor** will:

- Independently verify if the <u>assessment objectives</u> are met
- Evaluate if the controls are:
  - o <u>implemented</u> correctly
  - o operating as intended
  - o <u>producing</u> the desired outcome
- Determine the <u>assessment method</u>
   most useful in obtaining the desired results

#### \*NIST SP 800-171A

3.1.3	SECURITY REQUIREMENT  Control the flow of CUI in accordance with approved authorizations.		
	ASSESSMENT OBJECTIVE  Determine if:		
	3.1.3[a]	information flow control policies are defined.	
	3.1.3[b]	methods and enforcement mechanisms for controlling the flow of CUI are defined.	
	3.1.3[c]	designated sources and destinations (e.g., networks, individuals, and devices) for CUI within the system and between interconnected systems are identified.	
	3.1.3[d]	authorizations for controlling the flow of CUI are defined.	
	3.1.3[e]	approved authorizations for controlling the flow of CUI are enforced.	

## Methods of CMMC Assessment



#### Assessment Methods of Evaluation:

- EXAMINE the <u>assessment objects</u> (specifications, mechanisms, activities)
- 2. INTERVIEW <u>individuals or groups</u> of individuals <u>discussions</u>
- 3. TEST or <u>exercise assessment objects</u> (activities, mechanism of expected behavior)

#### \* CMMC Assessor's Guide

POTENTIAL ASSESSMENT METHODS AND OBJECTS [NIST SP 800-171A]

#### Examine

[SELECT FROM: Access control policy; information flow control policies; procedures addressing information flow enforcement; system security plan; system design documentation; system configuration settings and associated documentation; list of information flow authorizations; system baseline configuration; system audit logs and records; other relevant documents or records].

#### Interview

[SELECT FROM: System or network administrators; personnel with information security responsibilities; system developers].

#### Test

[SELECT FROM: Mechanisms implementing information flow enforcement policy].

### **Assessment Result**



### **Report with each practice's findings - possible findings:**

- MET,\*
- NOT MET, or
- NOT APPLICABLE

\*includes Alternate Solutions

**MET** or **NOT APPLICABLE** findings on <u>all CMMC practices</u> are required to meet compliance at a specific CMMC level.

## Repository



### **Assessment Objects Repository** - ORGANIZED and READILY AVAILABLE:

- Specifications and document-based artifacts that can include:
  - policies, processes, and procedures documents;
  - security plans and requirements, functional systems specifications, architectural designs
  - o training materials and records;
  - plans and planning documents; and
  - o Inventories, system-level, network, and data flow diagrams.
- Mechanisms are the hardware, software, or firmware safeguards deployed in a system
- Activities are the actions performed by people to support the systems (performing system backup or monitoring network traffic) that can be examined/observed

## Repository (cont.)



#### **Assessment Objects Repository** - ORGANIZED and READILY AVAILABLE:

- <u>Individuals or groups of individuals (possibly at different organizational levels)</u> that apply the activities, mechanisms, or specifications:
  - o Identify individuals responsible for each activity, mechanism, or specification
  - Ensure those individuals receive proper training on those practices
- <u>External Service Provider (ESP)</u> if it meets CUI asset criteria:
  - Create a shared responsibility matrix with the provider's responsibilities
  - Obtain necessary evidence of inherited compliance (ex. Cloud service provider's configuration settings and parameters)
  - Consider SLAs and contracts to enforce the EPS's security compliance objectives

### Schedule



Many practices repeat periodically or need to be reviewed, maintained, and updated frequently

-> create a SCHEDULE for the sustainment of your cybersecurity practices.

Ex. risk management, management reviews, training, assessments, etc.

Create a **schedule** that supports Maintenance, Reviews, and Updates:

- 1. Establish a frequency
- 2. Assign responsible parties
- Create a master schedule
- 4. Update repository

### **Pre-Assessment Communication**



### **Pre-Assessment Communication with the CMMC Assessor:**



Verbal or written communication outlining what the assessor would like to make available for review prior to the assessment, for example:

- Asset inventory
- System Security Plan
- Network diagram of the assessment scope (to include these assets)

### Making a Good Impression



#### **Ensure the documents are:**

- Well organized and clear to follow
- Complete and up to date
- Visually pleasing
- Impressive in content, as it reflects the state of your cybersecurity posture!

### Create a report/presentation that showcases your cybersecurity posture for:

- CMMC Pre-assessment review
- Customers
- DoD/Prime reps

### CMMC Assessment Pilot Program



#### Texas MEP client's CMMC Assessment feedback:

- Importance of documentation
- Using various assessment methods
- Verifying that you live what you built



### **Success Factors**



#### **CMMC Assessment Success Factors:**

- Internal pre-audit assessment
- Training employees on what to expect during the assessment
- Ensuring that the appropriate leadership team is available during the assessment
- Get help during the CMMC assessment assistance that speaks the cybersecurity language to interpret the questions and help you provide the answers





## Actions to Take

- 1. Create a repository for your assessment objects
- Develop a schedule for the sustainment of your cybersecurity practices
- 3. Prepare documentation for the pre-assessment review

## State Funding Available



State funding is available for

**Connecticut Manufacturing SIRI and CYBER Assistance Program (SAC)** 

for manufacturing companies or allied service providers located in Connecticut.

The SAC Program is Funded by:

The Connecticut Department of Economic and Community Development

"Strengthening Connecticut's Competitive Position"

Connecticut's Competitive Position

Department of Economic and Community Development

https://ctsac.ccat.us/



## **Solution** Specialty Company















June, 2023



# DoD's Cybersecurity Maturity Model Certification (CMMC) Compliance



#### **Background:**

Keeping confidential government/military information Secure from prying eyes is critical to our national sovereignty and economy.

### Cambridge Specialty Actions:

- "System Security Plan" in place with Enterprise IT and POAM Provider "TAB" Fully Engaged for the past year
- Working Compliance Requirements to DFAR's 252.204-7012, 7020 for Solicitations & Contracts and Cybersecurity Compliance to NIST 800- 171,CMMC 2.0
- Required Assessments Complete and Loaded in Government Procurement Integrated Enterprise Environment (PIEE)/Supplier Performance Risk System (SPRS).







## Key Reference Documents/Software

AS9100 Quality Management System (QMS) for Aerospace

#### 7.1.3 Infrastructure

The organization shall determine, provide, and maintain the infrastructure necessary for the operation of its processes and to achieve conformity of products and services.

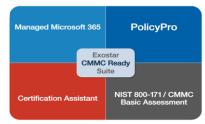
NOTE: Infrastructure can include:

- a. buildings and associated utilities;
- b. equipment, including hardware and software;
- transportation resources:
- d. information and communication technology
- Working Compliance Requirements to DFAR's 252.204-7012, 7020 for Solicitations & Contracts and Cybersecurity Compliance to NIST 800- 171,CMMC 2.0
- CONNSTEP CMMC Assessment Guide Level 2 Version 2.0, December 2021

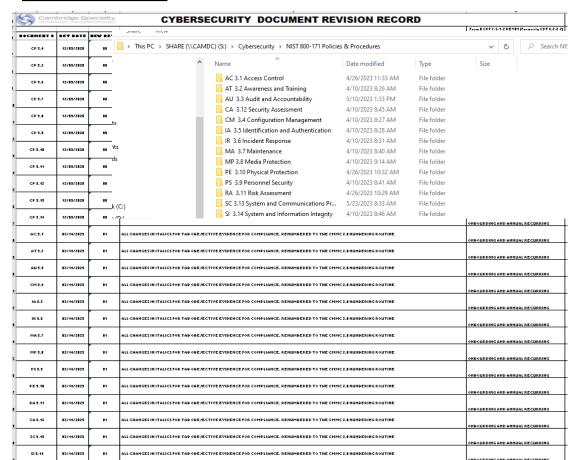




- Exostar Certification Assistance Software
  - System Security Plan (SSP)
  - Plan Of Actions & Milestones (POAM)



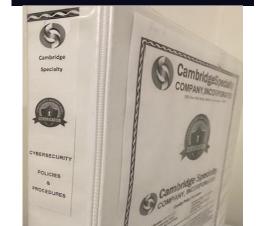
#### **Document Control**



#### **COMMENTS**

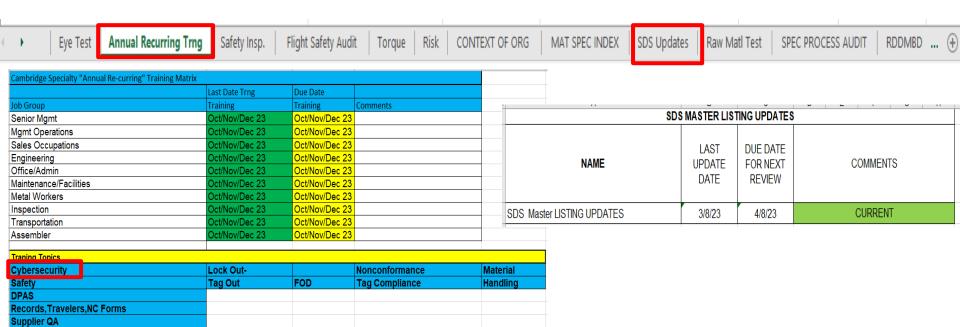
- CMMC Practices 3.1-3.14 all under Rev Control
- Utilized Exostar Policy Pro as Baseline for Policies & Procedures.



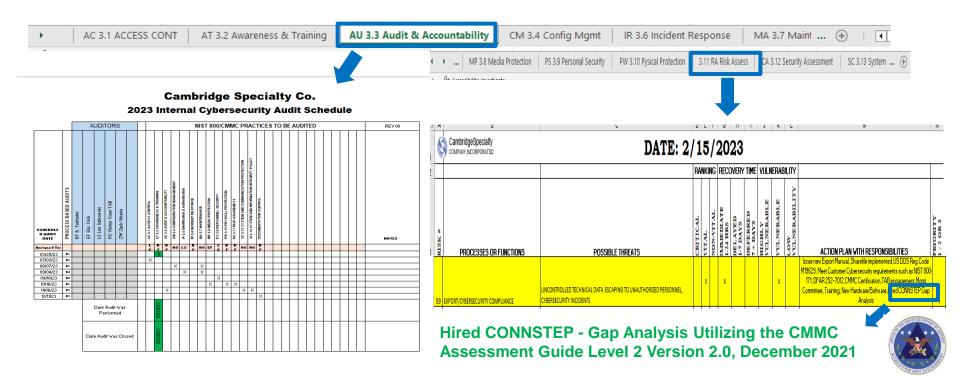


 Utilizing AS9100 QMS Compliance Methodology Excel Spreadsheet to ensure Practices are Compliant on a Monthly Basis – <u>Still In Development</u>

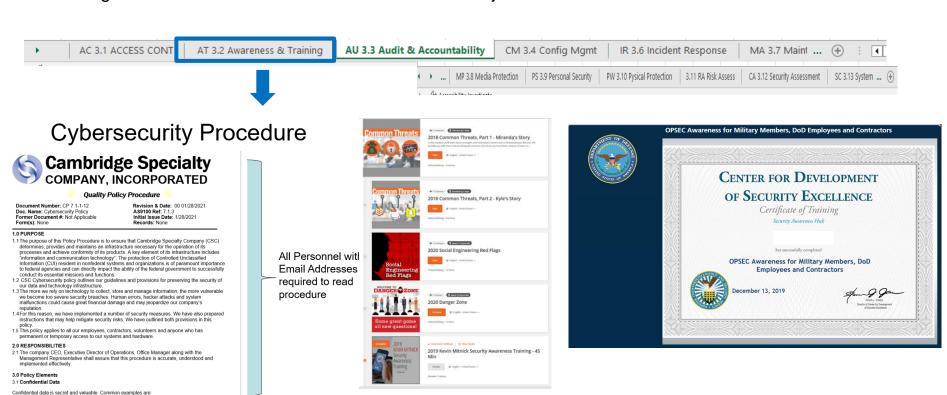
#### AS9100 Spreadsheet



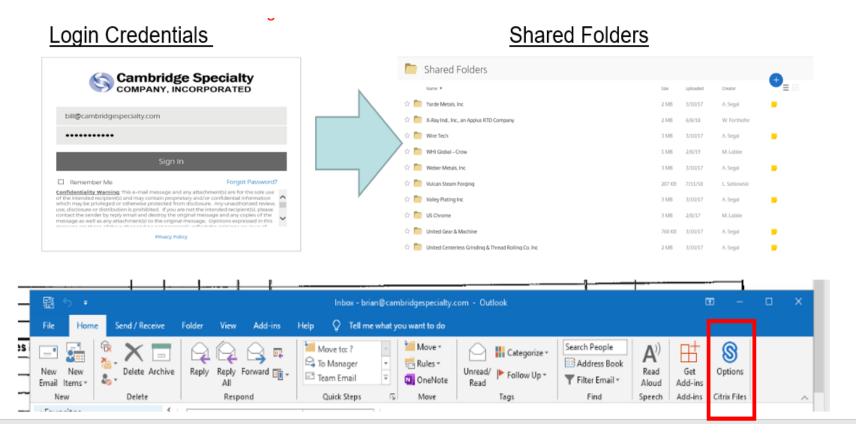
- Cybersecurity Utilizing AS9100 QMS Compliance Methodology Excel Spreadsheet to ensure Practices are Compliant on a Monthly Basis – <u>Still In Development</u>
- Utilizing CMMC Assessment Guide and Assessment Objectives

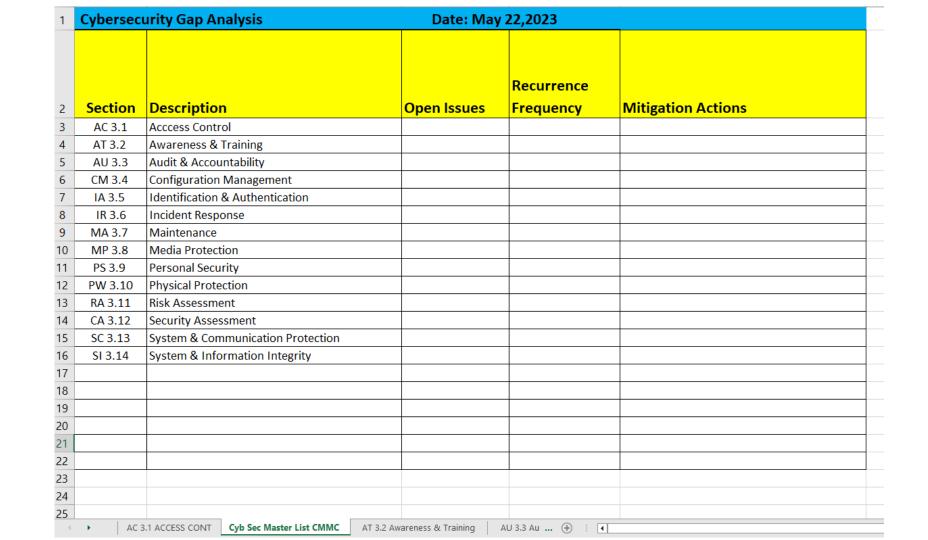


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- Utilizing CMMC Assessment Guide and Assessment Objectives



# Cybersecurity/QMS Compliance Management Methodology Technical Data Controls





# Access Control (AC)

#### Level 1 AC Practices

Determine if:

AC 3.1 ACCESS CONT

#### AC.L1-3.1.1 - AUTHORIZED ACCESS CONTROL

Limit information system access to authorized users, processes acting on behalf of authorized users, or devices (including other information systems).

## ASSESSMENT OBJECTIVES [NIST SP 800-171A]

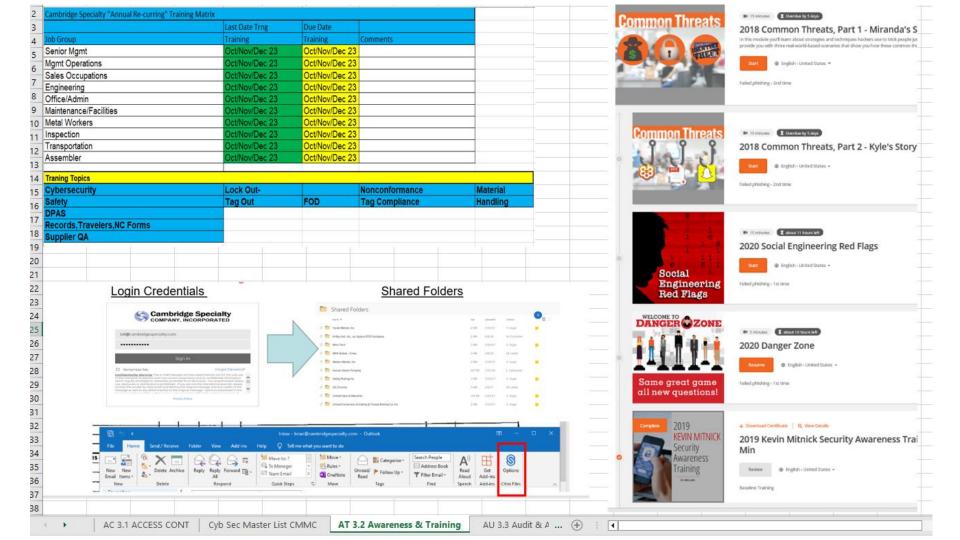
- [a] authorized users are identified;
- [b] processes acting on behalf of authorized users are identified;
- [c] devices (and other systems) authorized to connect to the system are identified;
- [d] system access is limited to authorized users;

[f] system access is limited to authorized devices (including other systems).

[e] system access is limited to processes acting on behalf of authorized users; and

AT 3.2 Awareness & Training

Cyb Sec Master List CMMC



Cambridge Specialty Co. 3 4 5 6 7 8 9 **2023 Internal Cybersecurity Audit Schedule AUDITORS** NIST 800/CMMC PRACTICES TO BE AUDITED REV 00 12 13 14 PROCESS BASED AUDITS 15 16 17 PW 3.10 PHY 3ICAL PROTECTI AU 1.1 AUDIT & ACCOUNTAB RA 3.11 RISK AWARENESS RC Richie Coan TAB LS Lori Satkowski ZW Zach Weeks BF B. Forthofer EF Bric Frick 18 SCHEDULE 19 20 D AUDIT DATE HOTES L B B RC LS B RC EF L B B RC RC B Arrigand Tax 21 22 03/20/23 #1 07/03/23 #2 Х 08/07/23 \$6 Х 23 09/04/23 \$4 Х 24 09/18/23 **\$**5 25 26 10/16/23 #6 XX Х XX 11/06/23 **\$**7 X #8 12/11/23 27 Date Audit Was 28 29 30 31 32 Performed Date Audit Was Closed AT 3.2 Awareness & Training AU 3.3 Audit & Accountability CM 3.4 Config Mgmt IR 3.1 ... (+)



# Questions?





## Glossary



CMMC – Cybersecurity Maturity Model Certification

CUI - Controlled Unclassified Information

DFARS - Defense Federal Acquisition Regulation Supplement

DIB - Defense Industrial Base

DIBCAC - Defense Industrial Base Cybersecurity Assessment Center

DCMA - Defense Contract Management Agency

IRP - Incident Response Plan

IT - Information Technology

MEP - Hollings Manufacturing Extension Partnership

MSP – Managed Service Provider

MSSP – Managed Security Service Provider

NIST - National Institute of Standards and Technology

NIST SP 800-171 – NIST Special Publication 800-171, Protecting Controlled Unclassified

Information in Nonfederal Systems and Organizations

POAM - Plan of Action and Milestones

SPRS - Supplier Performance Risk System

SSP - System Security Plan