Cybersecurity Challenges Protecting DoD's Unclassified Information

Implementing DFARS Clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting October 2018



Outline

- Protecting DoD's Unclassified Information on the Contractor's Internal Information System
- DFARS Clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting
 - Implementation and Guidance
- Resources





Cybersecurity Landscape

Cyber threats targeting government unclassified information have dramatically increased

Cybersecurity incidents have surged 38% since 2014

The Global State of Information Security ® Survey 2016

Cyber attacks cost companies \$400 billion every year

Inga Beale, CEO, Lloyds

Cybercrime will cost businesses over \$2 trillion by 2019

Juniper Research

Impacts of successful attacks included downtime (46%), loss of revenue (28%), reputational damage (26%), and loss of customers (22%)

AT&T Cybersecurity Insights Vol. 4

61% of breach victims are businesses with <1,000 employees

80% of breaches leverage stolen, weak, and/or guessable passwords

2017 Data Breach Investigations Report, Verizon

In a study of 200 corporate directors, 80% said that cyber security is discussed at most or all board meetings. However, two-thirds of CIOs and CISOs say senior leaders in their organization don't view cyber security as a strategic priority.

NYSE Governance Services and security vendor Veracode





DoD has a range of activities that include both regulatory and voluntary programs to improve the collective cybersecurity of the nation and protect U.S. interests:

- Securing DoD's information systems and networks
- Codifying cybersecurity responsibilities and procedures for the acquisition workforce in defense acquisition policy
 - Contractual requirements implemented through the Federal Acquisition Regulation (FAR) and Defense FAR Supplement (DFARS)
- DoD's DIB Cybersecurity Program for voluntary cyber threat information sharing
- Leveraging security standards such as those identified in National Institute of Standards and Technology (NIST) Special Publication 800-171 "Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations" (Revision 1 published Dec 2016)





DFARS Clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting

- Overview
- Covered Defense Information
- Subcontractor Flowdown
- Adequate Security
- Cloud Environment
- Implementation and Compliance

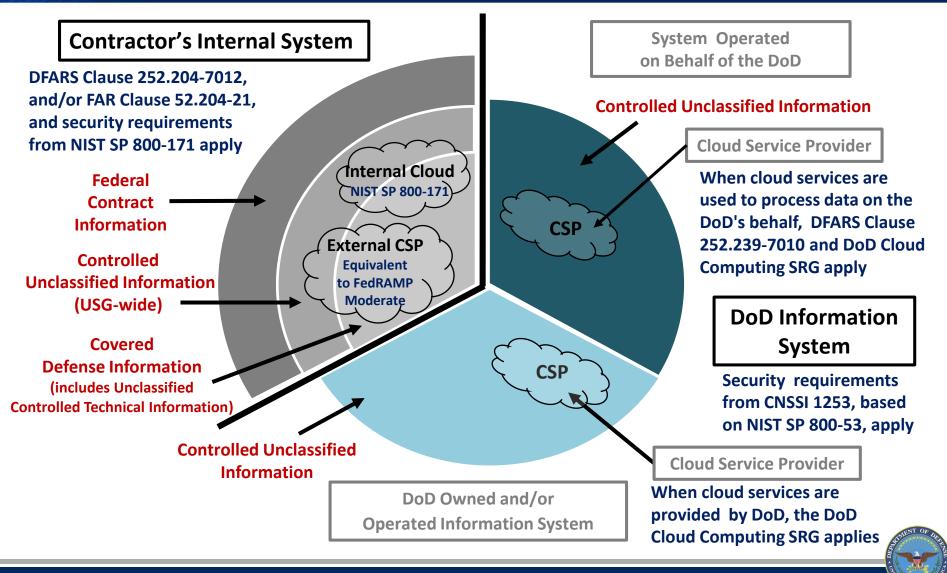




Protecting the DoD's Unclassified Information

See FAQ 32

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DFARS Clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting

Nov 18, 2013 <i>(Final Rule)</i>		Aug 26, 2015 / Dec 30, 2015 <i>(Interim Rules)</i>	October 21, 2016 <i>(Final Rule)</i>		
Scope – What Information	 Unclassified Controlled Technical Information 	 Covered Defense Information Operationally Critical Support 	 Revised/clarified definition for covered defense information 		
Adequate Security - Minimum Protections	Selected controls in NIST SP 800-53	• Aug 2015 NIST SP 800-171 (June 2015)	NIST SP 800-171 (currently Revision 1, published Dec 2016)		
Deadline for Adequate Security	Contract Award	 Dec 2015 – As soon as practical, but NLT 31 Dec 17 	 As soon as practical, but NLT 31 Dec 2017 		
Subcontractor/ Flowdown	 Include the substance of the clause in <u>all</u> subcontracts 	 Include in subcontracts for operationally critical support, or when involving covered contractor information system 	Contractor to determine if information required for subcontractor performance retains identity as CDI		

When Contractors are faced with implementing multiple versions of the clause, Contracting Officers may work with Contractors, upon mutual agreement, to implement the latest version of the clause





DFARS Clause 252.204-7012 requires contractors/subcontractors to:

- 1. Provide adequate security to safeguard covered defense information that resides on or is transiting through a contractor's internal information system or network
- 2. Report cyber incidents that affect a covered contractor information system or the covered defense information residing therein, or that affect the contractor's ability to perform requirements designated as operationally critical support
- **3.** Submit malicious software discovered and isolated in connection with a reported cyber incident to the DoD Cyber Crime Center
- 4. If requested, submit media and additional information to support damage assessment
- 5. Flow down the clause in subcontracts for operationally critical support, or for which subcontract performance will involve covered defense information





Covered Defense Information – Term used to identify information that requires protection under DFARS Clause 252.204-7012

- Unclassified controlled technical information (CTI) or other information, as described in the CUI Registry,¹ that requires safeguarding or dissemination controls pursuant to and consistent with law, regulations, and Government wide policies and is –
 - 1) Marked or otherwise identified in the contract, task order, or delivery order and provided to contractor by or on behalf of, DoD in support of the performance of the contract; <u>OR</u>
 - 2) Collected, developed, received, transmitted, used, or stored by, or on behalf of, the contractor in support of the performance of the contract²

¹ Referenced only to point to information that requires safeguarding or dissemination controls pursuant to and consistent with law, regulations, government-wide policies

² "In support of the performance of the contract" is not meant to include the contractor's internal information (e.g., human resource or financial) that is incidental to contract performance





Government/Requiring Activity is required to:

- Use DoDM 5200.01 Vol 4, DoD Information Security Program: CUI and DoDI 5230.24, Distribution Statements on Technical Documents to identify and mark covered defense information
- Use Section C, e.g., Statement of Work, of the contract to require development and delivery of covered defense information from the contractor
- Direct appropriate marking and dissemination for covered defense information in the contract (e.g., Block 9 of Contract Data Requirements List (CDRL) DD Form 1423). Additional markings (e.g., Export Control) can be placed in Block 16.
- Verify that covered defense information is appropriately marked when provided to the contractor as Government Furnished Information

The contractor is responsible for:

 Following the terms of the contract, which includes the requirements in the Statement of Work





DoDI 5230.24 – Distribution Statements on Technical Documents

Dissemination Limitation	Reason	Date	Controlling Org
Distribution A: Public Release* Distribution B: U.S. Govt Only Distribution C: U.S. Govt & Contractors Distribution D: DoD & US DoD Contractors Distribution E: DoD only Distribution F: Further dissemination only as directed by controlling office	Administrative or Operational Use Contractor Performance Evaluation Critical Technology Direct Military Support Export Controlled Foreign Government Information Operations Security Premature Dissemination	Note: Reason Determination Date	Note: Controlling Org can be different than the Authoring Org
* Distro A: Public Release – NO Dissemination limitation	Proprietary Information Software Documentation Specific Authority Test and Evaluation Vulnerability Information		

Example of Marking for Distribution Statement E

Distribution authorized to DoD only; Proprietary Information; 15 Apr 2017. Other requests for this document shall be referred to AFRL/VSSE, 3550 Aberdeen Ave. SE, Kirtland AFB, NM 87117-5776. REL TO UK

Example of Marking for Export Control Warning (Also requires separate distribution statement)

WARNING - This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751, et seq.) or the Export Administration Act of 1979 (Title 50, U.S.C., App. 2401 et seq.), as amended. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

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When should DFARS Clause 252.204-7012 flow down to subcontractors?

- The clause is required to flow down to subcontractors only when performance will involve operationally critical support or covered defense information
- The contractor shall determine if the information required for subcontractor performance is, or retains its identify as, covered defense information and requires safeguarding
- Flowdown is a requirement of the terms of the contract with the Government, which must be enforced by the prime contractor as a result of compliance with these terms
 - If a subcontractor does not agree to comply with the terms of DFARS Clause
 252.204–7012, then covered defense information shall not be shared with
 the subcontractor or otherwise reside on it's information system

The Department's emphasis is on the deliberate management of information requiring protection. Prime contractors should minimize the flowdown of information requiring protection.



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To provide adequate security to safeguard covered defense information:

DFARS 252.204-7012 (b) Adequate Security. ... the contractor shall implement, at a minimum, the following information security protections: ***

(b)(2)(ii)(A): The contractor shall implement NIST SP 800-171, Protecting CUI in Nonfederal Systems and Organizations, as soon as practical, but not later than December 31, 2017

(b)(3): Apply other information systems security measures when the Contractor reasonably determines that information systems security measures, in addition to those identified in paragraphs (b)(1) and (2) of this clause, may be required

DFARS 252.204-7012 directs <u>how</u> the contractor shall protect covered defense information; The requirement <u>to</u> protect it is based in law, regulation, or Government wide policy.





Most requirements in NIST SP 800-171 are about policy, process, and configuring IT securely, but some may require security-related software or hardware. For companies new to the requirements, a reasonable approach would be to:

- **1**. Examine each of the requirements to determine
 - Policy or process requirements
 - Policy/process requirements that require an implementation in IT (typically by either configuring the IT in a certain way or through use of specific software)
 - IT configuration requirements
 - Any additional software or hardware required

The complexity of the company IT system may determine whether additional software or tools are required

- 2. Determine which requirements can readily be accomplished by in-house IT personnel and which require additional research or assistance
- 3. Develop a plan of action and milestones to implement the requirements





Approach to Implementing NIST SP 800-171 Requirements

	AC	AT	AU	СМ	IA	IR	MA	MP	PS	PE	RA	CA	SC	SI
Desis	3.1.1	3.2.1	3.3.1	3.4.1	3.5.1	3.6.1	3.7.1	3.8.1	3.9.1	3.10.1	3.11.1	3.12.1	3.13.1	3.14.1
Basic (FIPS 200)	3.1.2	3.2.2	3.3.2	3.4.2	3.5.2	3.6.2	3.7.2	3.8.2	3.9.2	3.10.2	3.11.2	3.12.2	3.13.2	3.14.2
(FIPS 200)								3.8.3			3.11.3	3.12.3		3.14.3
												<mark>(3.12.4)</mark>		
Derived	3.1.3	3.2.3	3.3.3	3.4.3	3.5.3	3.6.3	3.7.3	3.8.4		<mark>3.10.3</mark>			3.13.3	3.14.4
(800-53)	3.1.4		3.3.4	3.4.4	3.5.4		3.7.4	3.8.5		<mark>3.10.4</mark>			3.13.4	3.14.5
	3.1.5		3.3.5	3.4.5	3.5.5		3.7.5	3.8.6		3.10.5			3.13.5	3.14.6
	3.1.6		3.3.6	3.4.6	3.5.6		3.7.6	3.8.7		<mark>3.10.6</mark>			3.13.6	<mark>3.14.7</mark>
	3.1.7		3.3.7	3.4.7	3.5.7			3.8.8					3.13.7	
	3.1.8		3.3.8	3.4.8	3.5.8			3.8.9					3.13.8	
	3.1.9		3.3.9	3.4.9	3.5.9								3.13.9	
	3.1.10				3.5.10								3.13.10	
	3.1.11				3.5.11								3.13.11	
	3.1.12												3.13.12	
	3.1.13												3.13.13	
	3.1.14												3.13.14	
	3.1.15				Policy/P	rocess		Policy o	or Softwar	e Requiren	nent		3.13.15	
	3.1.16												3.13.16	
	3.1.17				Configu	ration		Configu	ration or	Software				
	3.1.18													
	3.1.19				Software	2		Configu	ration or	Software o	r Hardwa	re		
	3.1.20													
	3.1.21				Hardwa	re		Softwar	e or Hard	ware				
	3.1.22					U	nclassifie	d						15



- To document implementation of NIST SP 800-171, companies should have a system security plan in place, in addition to any associated plans of action:
 - <u>Security Requirement 3.12.4 (System Security Plan</u>): Requires the contractor to develop, document, and periodically update, system security plans that describe system boundaries, system environments of operation, how security requirements are implemented, and the relationships with or connections to other systems
 - Security Requirement 3.12.2 (Plans of Action): Requires the contractor to develop and implement plans of action designed to correct deficiencies and reduce or eliminate vulnerabilities in their systems, and to describe how and when any unimplemented security requirements will be met





- Per DFARS Clause 252.205-7012(b)(2)(ii)(B), if the offeror proposes to vary from NIST SP 800-171, the Offeror shall submit to the Contracting Officer, for consideration by the DoD CIO, a written explanation of -
 - Why security requirement is not applicable; OR
 - How an <u>alternative but equally effective</u> security measure is used to achieve equivalent protection
- When DoD CIO receives a request from a contracting officer, representatives in DoD CIO review the request to determine if the proposed alternative satisfies the security requirement, or if the requirement for non-applicability is acceptable
 - The assessment is documented and provided to the contracting officer, generally within 5 working days
 - If request is favorably adjudicated, the assessment should be included in the contractor's system security plan





Cyber Incident Reporting

What is a cyber incident?

A "Cyber incident" is an action(s) taken through the use of computer networks that result in a compromise or an actual or potentially adverse effect on an information system and/or the information residing therein.

"Compromise" means disclosure of information to unauthorized persons, or a violation of the security policy of a system, in which unauthorized intentional or unintentional disclosure, modification, destruction, or loss of an object, or the copying of information to unauthorized media may have occurred.

DFARS 204.7302 (d)

A cyber incident that is reported by a contractor or subcontractor <u>shall not, by</u> <u>itself, be interpreted as evidence that the contractor or subcontractor has failed to</u> <u>provide adequate security</u> on their covered contractor information systems, or has otherwise failed to meet the requirements of the clause at 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting.

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When a cyber incident occurs, the contractor/subcontractor shall:

- Review contractor network(s) for evidence of compromise of covered defense information using contractor's available tools, including, but not limited to, identifying compromised computers, servers, specific data, and user accounts
- Identify covered defense information that may have been affected in the cyber incident
- If contract contains requirement for operationally critical support, determine if the incident affects the contractor's ability to provide operationally critical support
- Rapidly report (within 72 hours of the discovery of an incident) directly to DoD
 - Subcontractors provide the incident report number, automatically assigned by DoD, to the prime Contractor (or next higher-tier subcontractor) as soon as practicable

DFARS Clause 252.204-7012(c)(1)





When reporting a cyber incident, contractors/subcontractors submit to DoD—

- A cyber incident report via https://dibnet.dod.mil/
- Malicious software if detected and isolated
- Media or access to covered contractor information systems and equipment when requested by the requiring activity/contracting officer

Upon receipt of a cyber incident report —

- The DoD Cyber Crime Center (DC3) sends the report to the contracting officer(s) identified on the Incident Collection Format (ICF) via encrypted email; the contracting officer(s) provide the ICF to the requiring activity(ies)
- DC3 analyzes the report to identify cyber threat vectors and adversary trends
- DC3 contacts the reporting company if the report is incomplete (e.g., no contract numbers, no contracting officer listed)





Cyber Incident Reporting

The cyber incident report – contractors shall report as much of the following information as can be obtained within 72 hours of discovery of a cyber incident:

Company name and point of contact information	Date incident discovered		
Data Universal Numbering System (DUNS) Number	Incident/Compromise narrative		
Contract number(s) or other type of agreement affected or potentially affected	Type of compromise (unauthorized access, unauthorized release, unknown, not applicable)		
Contact or other type of agreement clearance level	Description of technique or method used in cyber incident		
Contracting Officer or other agreement contact			
USG Program Manager point of contact (address, position, telephone, email)	Incident outcome (successful compromise, failed attempt, unknown)		
Facility Clearance Level (Unclassified, Confidential, Secret, Top Secret, Not applicable)	Impact to Covered Defense Information		
Facility CAGE code	Impact on ability to provide operationally critical support		
Incident location CAGE code	DoD programs, platforms or systems involved		
Location(s) of compromise	Any additional information relevant to incident		

OMB Information Collection # 0704_0489, expiration 10/31/2019



DIB CS Web Portal

DIB CS Participant Login

Welcome to the DIBNet portal

DoD's gateway for defense contractor cyber incident reporting and voluntary participation in DoD's Cybersecurity Program

Report a Cyber Incident



A DoD-approved Medium Assurance Certificate is required to access the reporting module. To obtain a DoD-approved Medium Assurance Certificate, please click here.

Do you know what to report? See below.

Need assistance?

Contact DoD Cyber Crime Center (DC3)

DCISE@dc3.mil
 Hotline: (410) 981-0104
 Toll Free: (877) 838-2174

DoD's DIB Cybersecurity (CS) Program

The DIB CS Program is a voluntary cyber threat information sharing program established by DoD to enhance and supplement DIB participants' capabilities to safeguard DoD information that resides on or transits DIB unclassified networks or information systems.

To apply to the DIB CS Program, a DoD-approved Medium Assurance Certificate is required. To obtain a DoD-approved Medium Assurance Certificate, please click here.



Need assistance?

Contact the DIB CS Program Office

▲ OSD.DIBCSIA@mail.mil
 ▲ (703) 604-3167
 ▲ Toll Free: (855) DoD-IACS
 ➡ Fax: (571) 372-5434

Access beyond this page requires a DoD-approved medium assurance certificate. For more information please visit the <u>ECA website</u>.

https://www.DIBNet.dod.mil





Purpose of the cyber incident damage assessment —

- Determine impact of compromised information on U.S. military capability underpinned by the technology
- Consider how the compromised information may enable an adversary to counter, defeat, or reverse engineer U.S. capabilities
- Focus on the compromised intellectual property impacted by the cyber incident – not on the compromise mechanism

DoD decision to conduct a cyber incident damage assessment -

- Contracting officer verifies clause is included in the contract
- The Requiring Activity and the DoD Component damage assessment office (DAMO) will determine if a cyber incident damage assessment is warranted
- Decision to request media must be made within 90 days of the cyber incident report





Cloud Computing

Safeguarding Covered Defense Information and Cyber Incident Reporting 48 CFR Parts 202, 204, 212, and 252, DFARS Clause 252.204-7012

- Applies when a contractor uses an external cloud service provider to store, process, or transmit Covered Defense Information <u>on the contractor's behalf</u>
- Ensures that the cloud service provider:
 - Meets requirements equivalent to those established for the Federal Risk and Authorization Management Program (FedRAMP) Moderate baseline
 - Complies with requirements for cyber incident reporting and damage assessment

Cloud Computing Services 48 CFR Parts 239 and 252, DFARS Clause 252.239-7010

- Applies when a cloud solution is being used to process data <u>on the DoD's behalf</u> or DoD is contracting with Cloud Service Provider to host/process data in a cloud
- Requires the cloud service provider to:
 - Comply with the DoD Cloud Computing Security Requirements Guide
 - Comply with requirements for cyber incident reporting and damage assessment



DFARS Clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting

Compliance

- Compliance with DFARS Clause 252.204-7012
- Demonstrating Implementation of the Security Requirements in NIST SP 800-171
- Considering a Contractor's Internal Information System in Source Selection





- By signing the contract, the contractor agrees to comply with the terms of the contract and all requirements of the DFARS Clause 252.204-7012
- It is the contractor's responsibility to determine whether it is has implemented the NIST SP 800-171 (as well as any other security measures necessary to provide adequate security for covered defense information)
 - DoD will not certify that a contractor is compliant with the NIST SP 800-171 security requirements
 - Third party assessments or certifications of compliance are not required, authorized, or recognized by DoD
- Per NIST SP 800-171, federal agencies may consider the submitted system security plan and plans of action as critical inputs to an overall risk management decision to process, store, or transmit CUI on a nonfederal organization





Assessing Compliance of a Contractor's Internal Unclassified Information System

OBJEC	TIVE	SOLICITATION	SOURCE SELECTION	CONTRACT			
Pre-Award	Pre-Award (Solicitation and Source Selection)						
 Require Establish requirer a. 'Go b. Co c. On sys d. Red 	 Require enhanced cybersecurity measures in addition to NIST SP 800-171 Establish measures to assess/affirm contractor compliance with cybersecurity requirements a. 'Go/No Go' evaluation criteria/threshold b. Compliance as a separate technical evaluation factor c. On-site government assessment of Contractor's internal unclassified information system 						
Post-Award							
f. On sys							
4. Governr	Government/Contractor identification of information requiring protection						



Actions DCMA will take in response to DFARS Clause 252.204-7012:

- Encourage industry to adopt corporate, segment, or facility-level system security plans as may be appropriate in order to ensure more consistent implementations and to reduce costs
- Verify that system security plans and any associated plans of action are in place (DCMA will not assess plans against the NIST 800-171 requirements)
- If potential cybersecurity issue is detected –notify contractor, DoD program office, and DoD CIO
- During the normal Contract Receipt and Review process -verify that DFARS Clause 252.204-7012 is flowed down to sub-contractors/suppliers as appropriate
- For contracts awarded before October 2017 -verify that contractor submitted to DoD CIO notification of security requirements not yet implemented
- Verify contractor possesses DoD-approved medium assurance certificate to report cyber incidents
- When required, facilitate entry of government assessment team into contractor facilities via coordination with cognizant government and contractor stakeholders



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Resources –

Frequently Asked Questions (FAQs)

Quick Look for FAQ Topics				
Safeguarding Covered Defense Information and Cyber Incident Reporting (DFARS 252.204-7008	NIST SP 800-171General Implementation Issues			
and 252.204-7012)	Q49 – Q67			
• General Q1 – Q18	• Specific Security Requirements Q68 – Q98			
• Covered Defense Information Q19 – Q30	Cloud Computing General 			
Operationally Critical Support Q31	 Q99 – 101 Cloud solution being used to store data on 			
• Safeguarding Covered Defense Information Q32 – Q34	DoD's behalf (DFARS 252.239-7009 and 252.204-7010, Cloud Computing Services)			
• Cyber Incidents and Reporting Q35 – Q45	 Q102 Contractor using cloud solution to store 			
 Submission of Malicious Software Q46 	covered defense information (DFARS 252.204-7008 and 252.204-7012 apply)			
Cyber Incident Damage Assessment Q47	Q103 – Q109			
Basic Safeguarding of Contractor Information Systems (FAR Clause 52.204.21)	Limitations on the use or disclosure of third-party contractor reported cyber incident information			
Q48	(DFARS Clause 252.204-7009) Q47			



Resources

- NIST Manufacturing Extension Partnership (MEP)
 - Public-private partnership with Centers in all 50 states and Puerto Rico dedicated to serving small and medium-sized manufacturers
 - Published "Cybersecurity Self-Assessment Workbook for Assessing NIST SP 800-171 Security Requirements in Response to DFARS Cybersecurity Requirements", November 2017

https://nvlpubs.nist.gov/nistpubs/hb/2017/NIST.HB.162.pdf

- Procurement Technical Assistance Program (PTAP) and Procurement Technical Assistance Centers (PTACs)
 - Nationwide network of centers/counselors experienced in government contracting, many of which are affiliated with Small Business Development Centers and other small business programs

http://www.dla.mil/HQ/SmallBusiness/PTAP.aspx

- Cybersecurity Evaluation Tool (CSET)
 - No-cost application, developed by DHS, provides step-by-step process to evaluate information technology network security practices

https://ics-cert.us-cert.gov/Downloading-and-Installing-CSET





Resources

- <u>Cybersecurity in DoD Acquisition Regulations</u> page at (http://dodprocurementtoolbox.com/) for Related Regulations, Policy, Frequently Asked Questions, and Resources, June 26, 2017
- DPAP Website (http://www.acq.osd.mil/dpap/dars/dfarspgi/current/index.html) for DFARS, Procedures, Guidance and Information (PGI), and Frequently Asked Questions
- NIST SP 800-171, Revision 1 (http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-171r1.pdf)
- NIST SP 800-171A, Assessing Security Requirements for Controlled Unclassified Information (https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-171a.pdf)
- DoDI 5230.24, Distribution Statements on Technical Documents (www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/523024p.pdf)
- Cloud Computing Security Requirements Guide (SRG) (http://iasecontent.disa.mil/cloud/SRG/)
- DoD's Defense Industrial Base Cybersecurity program (DIB CS Program) (https://dibnet.dod.mil)



