# Effective Information Systems Security Officer (ISSO) Training



2013 Joint Security Awareness Council Seminar

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**8-104. Information System Security Officer(s) (ISSO).** <u>ISSOs may be appointed by the</u> <u>ISSM in facilities with multiple accredited IS. The ISSM will determine the responsibilities</u> <u>to be assigned to the ISSO that may include the following:</u>

- a. Ensure the implementation of security measures, in accordance with facility procedures.
- b. Identify and document any unique threats.

c. If so directed by the GCA and/or if an identified unique local threat exists, perform a risk assessment to determine if additional countermeasures beyond those identified in this chapter are required.

d. Develop and implement a certification test as required by the ISSM/CSA.

e. Prepare, maintain, and implement an SSP that accurately reflects the installation and security provisions.

f. Notify the CSA (through the ISSM) when an IS no longer processes classified information, or when changes occur that might affect accreditation.

g. Ensure:

(1) That each IS is covered by the facility Configuration Management Program, as applicable.

(2) That the sensitivity level of the information is determined prior to use on the IS and that the proper security measures are implemented to protect this information.

(3) That unauthorized personnel are not granted use of, or access to, an IS.

(4) That system recovery processes are monitored to ensure that security features and procedures are properly restored.

h. Document any special security requirement identified by the GCA and the protection measures implemented to fulfill these requirements for the information contained in the IS.

- i. Implement facility procedures:
- (1) To govern marking, handling, controlling, removing, transporting, sanitizing, reusing, and destroying media and equipment containing classified information.

(2) To ensure that vendor-supplied authentication (password, account names) features or security-relevant features are properly implemented.

(3) For the reporting of IS security incidents and initiating, with the approval of the ISSM, protective or corrective measures when a security incident or vulnerability is discovered.

(4) Requiring that each IS user sign an acknowledgment of responsibility for the security of IS and classified information.

(5) For implementing and maintaining security-related software for the detection of malicious code, viruses, and intruders (hackers), as appropriate.

j. Conduct ongoing security reviews and tests of the IS to periodically verify that security features and operating controls are functional and effective.

k. Evaluate proposed changes or additions to the IS, and advises the ISSM of their security relevance.

I. Ensure that all active user Ids are revalidated at least annually.

**TECHNICAL SECURITY** 

Computer Systems Security Analysts (CSSA)

INFORMATION TECHNOLOGY

Closed Area Support Team (CAS Team)

PROGRAM ENGINEERS

**Program Engineers** 

ASSIGNED RESPONSIBILITIES:

- Ensure that unauthorized personnel are not granted use of, or access to an IS.
- Ensure that system recovery processes are monitored to ensure that security features and procedures are properly restored.
- Conduct ongoing security reviews and tests of the IS to periodically verify that security features and operating controls are functional and effective.
- Evaluate proposed changes or additions to the IS (including hardware, software or connectivity, and advise the ISSM of their security relevance.
- Verify that prior to being granted access to an IS, user clearances and accesses are verified and the user is trained on there is responsibilities. (i.e., IS Access Authorization and Briefing Form has been completed)
- Ensure that all active user IDs are revalidated at least annually.
- Perform IS weekly audit reviews.

- Initial Training from ISSM
- CSSA meets with ISSO
  - •Sign ISSO Delegation Record
  - •Distribute ISSO Task Checklist
  - •Distribute Link to Dallas ISSO Sharepoint
  - •Distribute the Weekly Audit Record
  - •Distribute ISSO Quick Reference Guide
  - •Monthly Meetings between the CSSA and ISSO
  - •Quarterly ISSO Meetings All Facility ISSOs

# **ISSO** Responsibilities

- ISSO duties and responsibilities as outlined in the National Industrial Security Program Operating Manual and Industrial Security Field Operating Manual
  - Ensure that unauthorized personnel are not granted use of, or access to a system.
  - Conduct ongoing security reviews and tests of the IS to periodically verify that security features and operating controls are functional and effective.
  - Notify ISSM of any proposed changes and wait for approval.
  - Train and brief users on appropriate IS use and procedures.
  - Notify ISSM of any changes to duty assignment.
  - Ensure systems are decertified according to approved procedures.

Who Should Be Notified When?

- Equipment not functioning
  - ISSO & ISSM
- Equipment requiring sanitizing
  - ISSO & ISSM
- Suspicious use of the systems (usually associated with Need-To-Know)
  - ISSO & ISSM
- Visitors not being escorted
  - ISSO & ISSM
- When someone no longer needs access to the system



## Train and brief users on IS use and procedures.

- As the ISSO you are responsible for training users on the policies and procedures for classified processing. This includes:
  - Processing Procedures
  - Marking Requirements
  - Unattended Processing
  - Password Creation
  - Restricted or Closed Area Requirements
    - Many problems associated with use can be solved by reading the Protection Profile. It is acceptable, and even preferred, for the user to follow step by step instructions by reading from the Protection Profile.

## Audit Records

- Who fills out what?
  - ISSOs & Users
- What logs are required? <u>Manual</u>
  - Maintenance
    - Hardware & Software
  - Upgrade/Downgrade
  - Sanitization
  - Weekly Audit Log
    - Custodian
  - Seal Log (If Applicable)



ISSO DELEGATION RECORD (Check all that apply)					
Develop and implement a	certification test as required.				
Prepare, maintain, and implement an SSP and/or Profile that accurately reflects the installation and security provisions.					
Ensure that each IS is cov applicable.	ered by the facility Configuration Man	agement Program, as			
	level of the information is determined res are implemented to protect this inf				
Ensure that unauthorized	personnel are not granted use of, or a	access to, an IS.			
Ensure that system recover procedures are properly restore	ery processes are monitored to ensure ed.	e that security features and			
	urity requirement identified by the Go on measures implemented to fulfill the				
Conduct ongoing security features and operating controls	reviews and tests of the IS to periodic are functional and effective.	ally verify that security			
	es or additions to the IS (including har SSM of their security relevance.	dware, software, or			
	ranted access to an IS, user clearanc IS responsibilities (i.e. IS Access Aut				
Ensure that all active user	IDs are revalidated at least annually.				
Perform IS weekly audit re	views.				
ISSM printed name:	ISSM signature:	Date:			
ISSO printed name:	ISSO signature:	Date:			
1					

This form may be used to document activities delegated to ISSO.

## MFC DEVELOPED ISSO TOOLS FOR TRAINING







#### Information System Security Officer Tasks

Tasks listed herein may be performed by the Information System Security Officer (ISSO), Computer System Security Analyst (CSSA) or System Administrator (SA). Special Access Program (SAP) ISSOs, CSSAs, and SAs must coordinate with the Contractor Program Security Officer (CPSO) for program specific requirements regarding media storage, labeling and destruction requirements. Also refer to each SAP System Security Plan (SSP) for update frequency of anti-virus definition files

#### Daily

Perform random visual inspection of Protected Distribution System (PDS)

Review area for unmarked media. If found secure and label in accordance with program directives. (Reference "Template" folder on ISSO Share Point for collateral programs label format. SAP label formats available via the CPSO).

#### Weekly

Review and/or run Audit logs

Review SSP Reports and Logs (i.e. Hardware Reports, Software Reports, Maintenance Logs, Sanitization Forms and Seal Logs)

Review ISSO Share Point for new information

CompleteWeekly Audit Record form

#### Monthly

Perform Backup of Audit History. Maintain 1 Inspection Cycle of history records. Destroy older records in accordance with media destruction procedures.

Update Anti-Virus Definition files

Review and complete encryptor audit log

#### Quarterly

Attend ISSO briefings

#### Annually

Revalidate user accounts and access

Remove logs more than 1 Inspection Cycle

Perform technical inspection of PDS

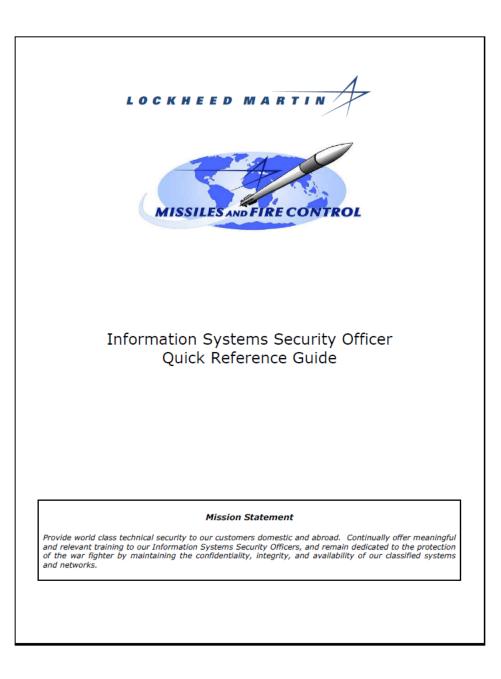
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		Education	8/25/2008 9:54 PM	Snyder, Jon	
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		Terminations	8/25/2008 9:55 PM	Snyder, Jon	
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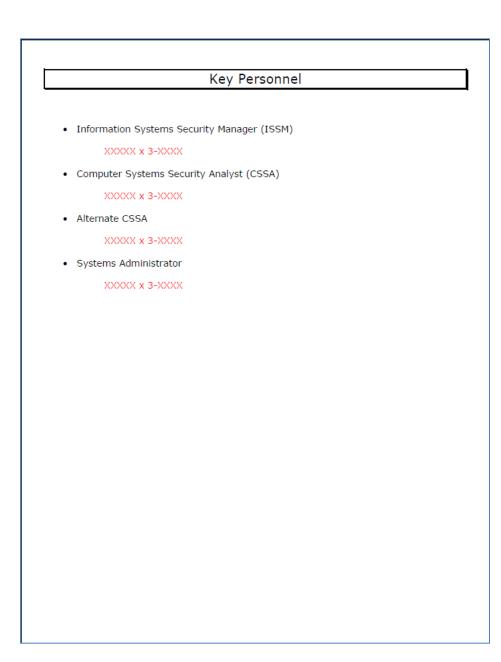
#### Weekly Audit Record Complete a "NEW" form each week for each Protection Profile. This form maybe maintained electronically or hard copy format. All Fields Must Be Completed. Protection Profile Weekly Audit took Date IS Number: place on: First Name Last Name Individual Signature (When Printed) Completing Audit: Email: Extension: Were the required weekly audits for the system(s) identified in this Yes [Required audits were performed] Protection Profile completed? No [Enter reason then contact CSSA] Were there any system anomalies which warranted further Yes [Enter in Significant Actions Log and contact CSSA] 2 investigation or notification to the CSSA/ISSM? [No anomalies] No No Yes [Logs were backed up within the last month] З. Were the automated audit logs backed up to removable media or a different system within the last month? No [Enter reason then contact CSSA] N/A Enter reason] Yes 4. If Tamper Proof Seal Numbers are used, are all seals, including any new ones, recorded in the Seal Log? Seals will be checked No [Enter reason then contact CSSA] weekly to ensure tampering has not occurred. This includes N/A [Numbered seals are not used] drives that have been archived. 5. Were any new user accounts created this week? Yes [Verify access authorization on ISSO SharePoint] No [No new user accounts created this week] 6. Have any user accounts been terminated this week? Yes [Verified account disabled and documented] No [No accounts terminated this week] 7. Is virus detection software installed? Yes [Virus detection software installed] No [Explain in comments] N/A [Explain in comments] Yes [Virus definitions current] Are the Windows (updated monthly), UNIX or other OS (updated in accordance with the Master Plan) virus definitions current? No [Explain in Comments, contact CSSA immediately] N/A [Explain in Comments. contact CSSA immediately] 9. Did Software or Hardware Maintenance take place during the Yes [Maintenance took place that impacts profile] reporting period (to include Encryptors if applicable) which would No [No maintenance took place that impacts profile] impact the software and/or hardware list of the Protection Profile? 10. If a hard drive was permanently removed/replaced or sent to Yes [Sanitization form completed] Security for destruction did you complete a Sanitization Form? No [Form not completed, enter reason, contact CSSA N/A [No hard drive permanently removed/replaced] 11. Were any systems or components sanitized and/or replaced during Yes [Systems/Components sanitized/replaced] the reporting period? No [No Systems/Components sanitized/replaced] 12. If Yes to question 9 and/or 10, were Hardware/Software Reports Yes [Hardware/Software report completed] completed? No [Report not completed, enter reason] N/A [No report(s) required this week] 13. Did Trusted Download take place during the reporting period? Yes [Trusted Download took place and documentation completed] No [No Trusted Download took place] N/A [Trusted Download not permitted on this IS] 14. Were personnel performing the Trusted Download trained and Yes [Personnel trained, knowledgeable and designated] knowledgeable of the procedure and are designated in writing to No [Enter reason, contact CSSA] perform the Trusted Download? N/A [No Trusted Download took place]

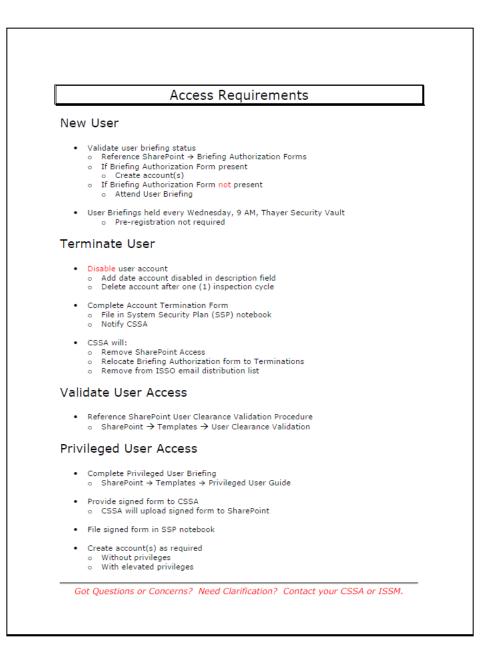
Reasons/Commen	ts
As required above, enter reasons or comments in this section. Begin with the maintaining by hardcopy, circle the question number; if maintaining electronica (1).	
Failure to comply with the Master System Security Plan, Protecti Manual can result in an Infraction, Security Violation, Suspensio Accredited Computer System(s). By submitting this weekly aud herein is correct.	n of Access, or Decertification of the
Weekly Record Au	dit
Auditing involves recognizing, recording, storing and analyzing information rela be backed up either to Tape, CD, DVD, External Drive, Hardcopy etc., at least	
Virus Detection	
All PCs and UNIX/LINUX systems must have Virus detection software installer code before being introduced on an IS. IRIX and other legacy computers not su Protection Profile how files are scanned for viruses and malicious code prior to	pported by antivirus products shall be identified in the
Maintenance Action	on
All maintenance actions (Software and Hardware) shall be recorded in maintenance action, nomenclature or system/device description, unique identil components shall correspond to the DSS Clearing and Sanitization Matrix or sy Sanitization by overwriting hard drives is <b>NOT</b> approved. Classified hard dri and destroyed by prescribed methods or cleared and reused at the same or hig	fier, serial number and or personnel etc.). Sanitization or pecialized procedures identified in the Protection Profile ves shall be returned to the appropriate security office
Unless otherwise directed by the ISSM, memory shall be cleared in accordance the following methods:	with the DSS Clearing and Sanitization Matrix by one of
Remove of all power including battery power     Overwrite all addressable locations with a single character     Perform a full chip erase as per manufacturer's data sheets     Perform an ultraviolet erase according to manufacturer's recommendation a	eccording to Memory type
Trusted Download	ds
Trusted Downloads are limited to only the file formats identified in the DSS Approved	procedure.
Marking Classified Ma	aterial
All classified material must have cover sheets (front and back), as well as the for	ollowing required markings:
Overall classification     Title or subject     Origination Date     Declassify On	
<ul> <li>Identity of Originating Agency (i.e. Lockheed Martin Missiles and Fire Control</li> </ul>	ol, PO Box 650003, Dallas, TX 75265)

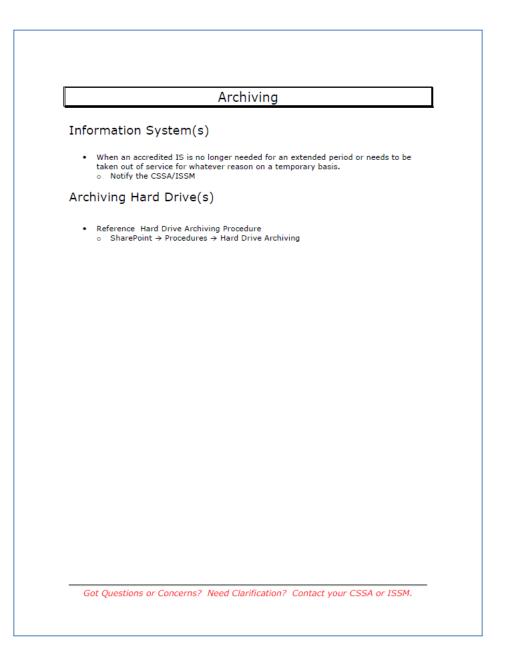
# But wait.....can it get any better???? Well, YES IT CAN!!!!

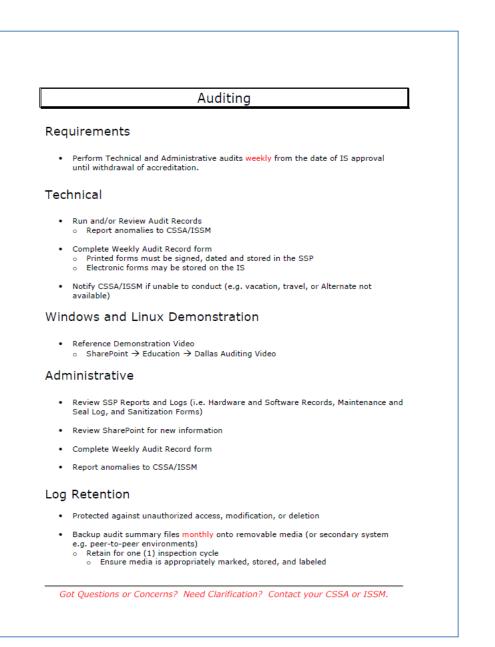












#### Backups

Backup Requirements and strategies vary from program to program based upon requirements located in the DD-254 and other Program Directives. For the purpose of the ISSO Quick Reference Guide "Backups" are limited to audit history data.

- Backup audit summary files monthly onto removable media (or secondary system e.g. peer-to-peer environments)
  - External devices (e.g. USB drives, CDRs, DVRs)
    - Add device to Hardware Baseline
    - Complete Maintenance, Operating System & Security Software Change Log on each use
- Retain one (1) inspection cycle worth of audit summary files
- · Ensure media/device is appropriately marked, stored, and labeled

#### Hardware Addition Coordinate with CSSA/ISSM prior to introduction Validate through Configuration Management process Complete Hardware Report (Addition) Request Management System (RMS) New Desktops and Miscellaneous Hardware Coordinate with CSSA/ISSM prior to introduction Removal · Coordinate with CSSA/ISSM prior to removal Perform sanitization procedure Complete Hardware Report (Removal) Unclassified components Coordinate pickup with Glenn Zabojnik x 3-3412 or email glenn.zabojnik@lmco.com **Baseline Requirements** · All components that process classified information and contain memory All components sanitized by removal of power: o Device type, manufacturer and model, and types of memory · All components with sanitization procedures other than removal of power: o Device type, manufacturer and model, and types of memory size/capacity of all memory and media that retains classified information, and serial/document control numbers

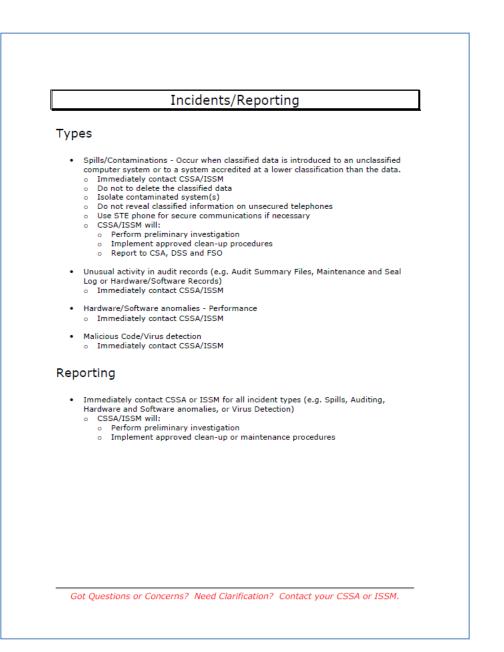
#### Marking

- Components with potential to retain classified information must be labeled at the highest level of classified processing
- · Co-located unclassified systems must be labeled "Unclassified"

#### Hardware (Continued)

External Devices (e.g. USB drives, CDRs, DVRs)

- Add to Hardware Baseline
- Mark, store, and label appropriately
- Complete Maintenance, Operating System& Security Software Change Log on each use



#### ISSO Responsibilities

#### Responsibility

Personnel assigned as ISSOs or Alternate ISSOs are responsible for ensuring that system assurance is maintained.

#### Briefings

The ISSWCSSA will provide in-depth briefings and training of the ISSO position prior to the assumption of ISSO duties. After briefings and training are completed the CSSA will:

- File signed ISSO Delegation Record in SSP
- File signed Privileged User Briefing in SSP
- Upload signed Privileged User Briefing to SharePoint
- Create account(s) as required
  - Without privileges
  - With elevated privileges
- Grant SharePoint access
- Add ISSO to distribution list

#### Tasks

- Daily
  - Perform visual inspection of Protected Distribution System (PDS) (if applicable)
     Report anomalies to CSSA/ISSM
  - Review area for unmarked media, if found, ensure media is marked, stored, and labeled appropriately
- Weekly
  - Review and/or run audit logs
  - Review SSP Reports and Logs (i.e. Hardware and Software Records, Maintenance and Seal Log, and Sanitization Forms)
  - o Review Share Point for new information
  - Complete Weekly Audit Record form

#### Monthly

- Create/Ensure Backup of Audit History
  - Maintain one inspection cycle worth of records
  - Ensure media is marked, stored, and labeled appropriately
  - Remove logs older than 1 inspection cycle
- Update Windows and Linux Anti-Virus Definition files
- Quarterly
  - Attend ISSO briefings
- Annually
  - Revalidate user accounts and access

#### Media

#### Marking/Labeling

- · All media to include Unclassified must be appropriately marked, stored, and labeled
- · Unclassified media must be marked upon breakage of the original external wrapping

#### Introduction

- · Virus scan prior to entry onto Information System
- Complete Media Entry form if required
- · Complete Software Authorization and Installation Record Report if required

#### Destruction

- Complete Hardware Report
- Complete Sanitization Report if required
- Notify CSSA

#### Extraction

- Lower level extractions reference Trusted Downloading requirements
- Same level follow marking, labeling and storage requirements

#### Dormant Hard drives

Reference SharePoint Archiving Hard Drive Procedure
 o Procedures → Archiving Hard Drive Procedure

#### Mobile Systems

#### Description

An IS accredited by the CSA or self-certified by the ISSM under an MSSP to process
classified information at one location and temporarily relocate to another location for
classified or unclassified processing. The mobile system may be a complete system
or components of a larger more complex system.

#### Requirements

- The ISSM shall notify DSS no later than five business days prior to shipping the system to/from any off-site location.
- IS may be offsite for no more than 120 days.

#### Alternate Site Processing (Off-Campus)

- Relocations to Contractor or Government sites require unique operating procedures.
   Complete Mobile Processing Procedure
  - SharePoint → Templates → Mobile Processing Procedure
  - CSSA/ISSM will notify DSS

#### Alternate Site Processing (On-Campus)

- Classified computers may be temporarily relocated to locations within the facility for briefings, presentations, customer meetings, and related purposes. Temporary relocation will only be during the periods required and will be returned to the closed or restricted area immediately at the conclusion of classified processing.
- If the alternate site is an approved Closed Area the system can remain in the location over night for operations that require an extended stay period.
  - Complete Alternate Site Processing form
    - SharePoint → Templates → Alternate Site Processing Within the Facility
    - Forward to CSSA for approval

#### Sanitization

#### Requirements

- Sanitizing removes information from media to render the information unrecoverable by technical means. Any piece of hardware that has memory or stores data must have an associated sanitization procedure if it will be used to process classified data. Sanitization of memory and media is required if a system is being "released" to users with access level lower than the accreditation level.
- · DSS approved procedures must be included in each SSP

#### Process

- Perform the approved sanitization procedure (located in your SSP) if an item will no longer be used to process classified information.
  - Document removal on the Maintenance, Operating System and Security Software Change Log.
  - Contact your CSSA if the appropriate sanitization procedure is not included in your SSP. DO NOT RELEASE THE HARDWARE.

#### Approved Hardware List

- Reference SharePoint for the MFC DSS Approved Hardware List.
   SharePoint → Procedures → MFC Approved Hardware List
- Contact your CSSA to add an MFC DSS Approved Sanitization Procedure(s) to your SSP.
- Contact your CSSA if an MFC DSS Approved Sanitization Procedure is not located on SharePoint.
  - Requestor will:
    - o Obtain Certificate of Certificate of Volatility from the manufacturer
    - Develop Sanitization Procedures
- CSSA will:
  - Review developed Sanitization Procedures
  - Obtain DSS Approval
  - Add DSS Approved Procedure to your SSP
  - Post to DSS Approved Procedure to SharePoint

# Software General Rules • Security Relevant Software (e.g. Operating System, Sanitization, Auditing, Virus Screening) must be: • Authorized in advance • Authorized in advance • Added to Software Baseline • Stored and safeguarded at the highest level of processing • Labeled "Unclassified For Maintenance Use Only" • Labeled "Unclassified For Maintenance Use Only" • Installed by Authorized personnel only • Screened and tested for malicious code or logic Commercial Off-the-Shelf (COTS) • Tested to provide reasonable assurance that malicious code or security vulnerabilities cd on ot exist Free Open Source Software (FOSS) • Must be approved in advance

- Submit requests via Management System (RMS)
  - Lead Ray Hiller / <u>Raymond.hiller@lmco.com</u>
  - Specialist Michael Steele / Michael.a.steele@Imco.com
  - Reviewer Minh Dang / <u>Minh.dang@lmco.com</u>
- FOSS approved list located:
  - <u>http://mfcnet1.orl.lmco.com/toar/Fossil/BlessedProductsListing.aspx</u>
- After FOSS Approval:
  - o Complete Software Authorization and Installation Record
  - Forward to CSSA

#### Software Baseline Requirements

 Must include the name, vendor, and major version number/release number of security-relevant software (e.g. operating system, access control, sanitization, virus screening software, etc.)

#### Trusted Downloads

#### Description

A procedure, or series of procedures, that permits information to be released below the accredited level of the Information System (IS).

Alternate (non-DSS) procedures must first be documented, demonstrated to the ISSP, submitted to the Government Customer for approval and included within the SSP.

#### **General Rules**

- Must be performed by two Trusted Downloading briefed users

   Verify via SharePoint → Trusted Downloading Authorizations
- If Briefing Authorization Form not present

   Attend Trusted Downloading User Briefing
  - Briefings held every Wednesday, 10 AM, Thayer Security Vault
     Pre-registration not required
- CSSA will upload signed briefing authorization form on SharePoint

   SharePoint → Trusted Downloading Authorizations

#### Virus Updates

#### Requirement

Virus detection software shall be employed and configured to automatically check all files that are opened or accessed on the IS.

#### Policy

- All files and media will be checked using a current virus detection tool prior to, or at the time of introduction to an IS
- Virus signature files will be updated at an interval not to exceed 30 days
- If a virus is detected:
  - Discontinue interaction with the infected IS.
  - Immediately contact your CSSA/ISSM who will perform a preliminary investigation.
    - investigation
    - If a compromise or suspected compromise is suspected the CSSA/ISSM will immediately notify DSS.

#### Monthly Updates

- Windows signature files obtained from:
  - SharePoint McAfee Virus Definitions
    - SharePoint → Procedures → McAfee Virus Definitions
- Linux signature files obtained from:
  - Endpoint Data Protection (EDP) SharePoint
    - Reference <u>ftp://mcafeeupdates-edp.global.lmco.com/</u>

