CYBERSECURITY SERVICES FOR BUILDING CYBER RESILIENCE AND MANAGE RISK

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CYBERSECURITY & INFRASTRUCTURE SECURITY AGENCY

Who We Are

CISA works with public sector, private sector, and government partners to share information, build greater trust, and lead the national effort to protect and enhance the resilience of the Nation's physical and cyber infrastructure.

FEDERAL NETWORK PROTECTION

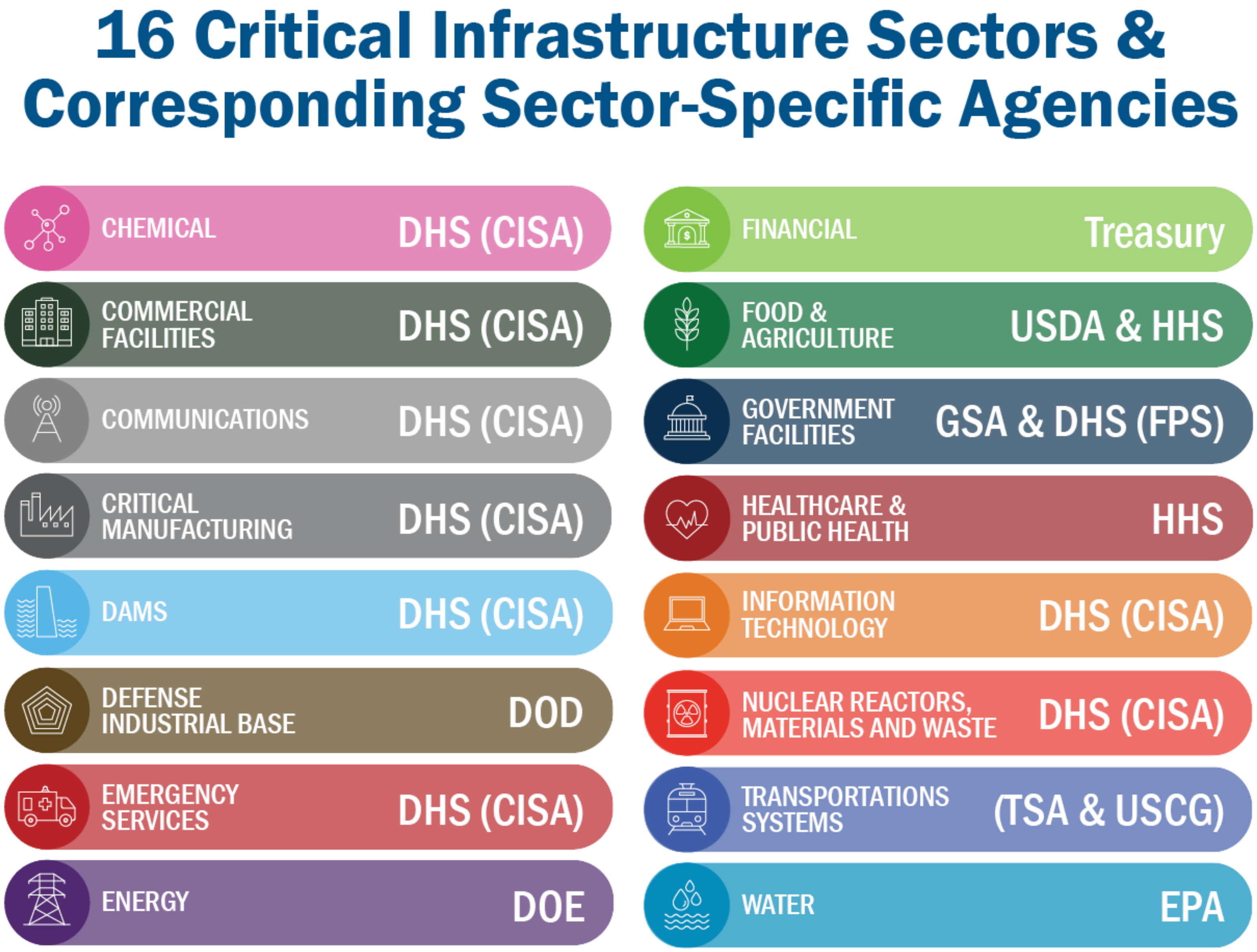
PROACTIVE CYBER PROTECTION

INFRASTRUCTURE RESILIENCE & FIELD OPERATIONS

EMERGENCY COMMUNICATIONS

CISA Mission and Vision

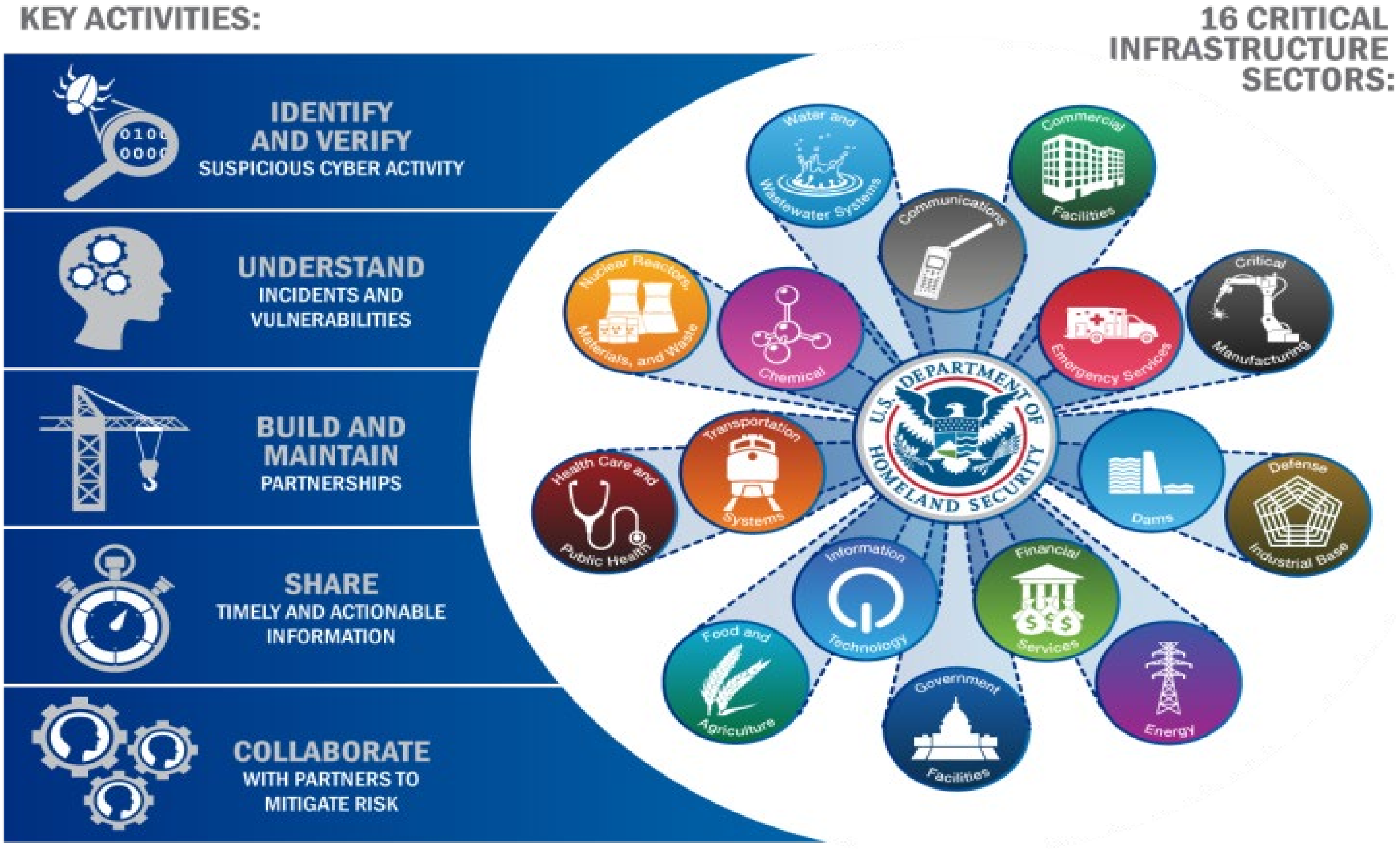
- Cybersecurity and Infrastructure Security Agency (CISA) mission:
  - Lead the collaborative national effort to strengthen the security and resilience of America’s critical infrastructure
- CISA vision:
  - A Nation with secure, resilient, and reliable critical infrastructure upon which the American way of life can thrive



16 Critical Infrastructure Sectors & Corresponding Sector-Specific Agencies

CHEMICAL	DHS (CISA)
COMMERCIAL FACILITIES	DHS (CISA)
COMMUNICATIONS	DHS (CISA)
CRITICAL MANUFACTURING	DHS (CISA)
DAMS	DHS (CISA)
DEFENSE INDUSTRIAL BASE	DOD
EMERGENCY SERVICES	DHS (CISA)
ENERGY	DOE
FINANCIAL	Treasury
FOOD & AGRICULTURE	USDA & HHS
GOVERNMENT FACILITIES	GSA & DHS (FPS)
HEALTHCARE & PUBLIC HEALTH	HHS
INFORMATION TECHNOLOGY	DHS (CISA)
NUCLEAR REACTORS, MATERIALS AND WASTE	DHS (CISA)
TRANSPORTATIONS SYSTEMS	(TSA & USCG)
WATER	EPA

Serving Critical Infrastructure



KEY ACTIVITIES:

IDENTIFY AND VERIFY
SUSPICIOUS CYBER ACTIVITY

UNDERSTAND
INCIDENTS AND VULNERABILITIES

BUILD AND MAINTAIN
PARTNERSHIPS

SHARE
TIMELY AND ACTIONABLE INFORMATION

COLLABORATE
WITH PARTNERS TO MITIGATE RISK

16 CRITICAL INFRASTRUCTURE SECTORS:

CYBERSECURITY ADVISOR PROGRAM

Presidential Policy Directive 41 – Concurrent Lines of Effort

- **Threat Response**
  - **Threat response activities include conducting appropriate law enforcement and national security investigative activities; collecting evidence and gathering intelligence; providing attribution; linking related incidents; identifying additional affected entities; identifying threat pursuit and disruption opportunities; developing and executing courses of action to mitigate the immediate threat; and facilitating information sharing and operational coordination with asset response.**
- **Asset Response**
  - **Asset response activities include furnishing technical assistance to affected entities to protect their assets, mitigate vulnerabilities, and reduce impacts of cyber incidents; identifying other entities that may be at risk and assessing their risk to the same or similar vulnerabilities; assessing potential risks to the sector or region, including potential cascading effects, and developing courses of action to mitigate these risks; facilitating information sharing and operational coordination with threat response; and providing guidance on how best to utilize Federal resources and capabilities in a timely, effective manner to speed recovery.**
- **Intelligence Support**
  - **Intelligence support and related activities facilitate the building of situational threat awareness and sharing of related intelligence; the integrated analysis of threat trends and events; the identification of knowledge gaps; and the ability to degrade or mitigate adversary threat capabilities.**

Cybersecurity Advisor Program

CISA mission: Lead the collaborative national effort to strengthen the security and resilience of America's critical infrastructure

In support of that mission: Cybersecurity Advisors (CSAs):

- **Assess**: Evaluate critical infrastructure cyber risk.
- **Promote**: Encourage best practices and risk mitigation strategies.
- **Build**: Initiate, develop capacity, and support cyber communities-of-interest and working groups.
- **Educate**: Inform and raise awareness.
- **Listen**: Collect stakeholder requirements.
- **Coordinate**: Bring together incident support and lessons learned.

CSA Program Activities

CSAs support four key DHS goals:

Cyber Preparedness

Risk Mitigation

Incident & Information Coordination

Cyber Policy Promotion & Situational Awareness

CSAs facilitate three assessments:

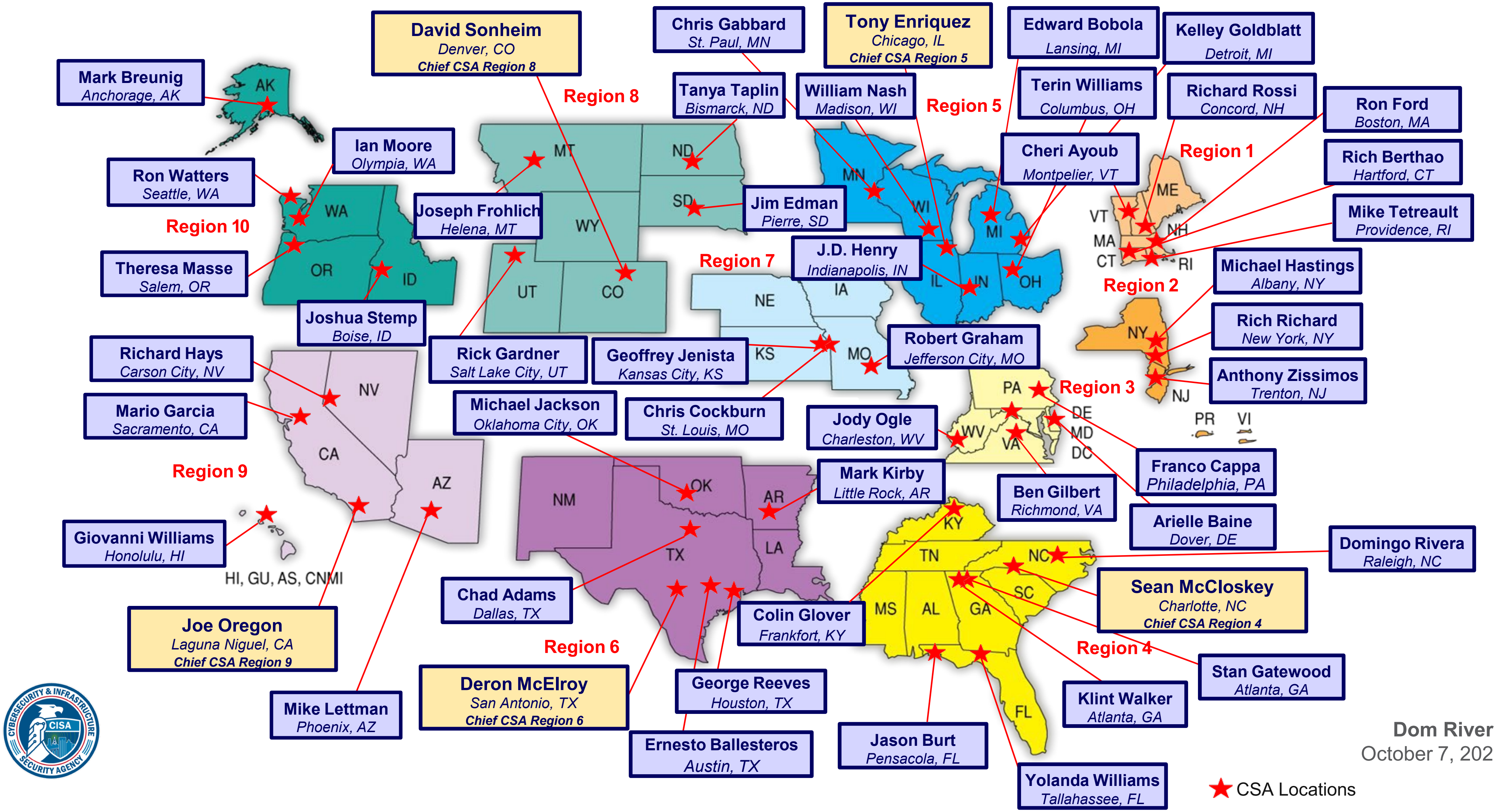
Cyber Resilience Reviews (CRR)

Cyber Infrastructure Surveys (C-IST)

External Dependency Reviews (EDM)

CSAs participate in local / regional cyber working groups, mostly organized by Federal and state partners

CSA Deployed Personnel



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Columbus, OH

Richard Rossi
Concord, NH

Ron Ford
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★ CSA Locations

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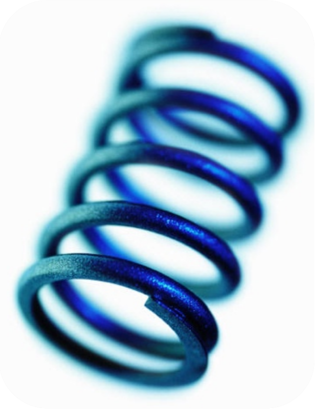
October 7, 2021

CYBERSECURITY AND RESILIENCE

Resilience Defined

"… the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents…"

- Presidential Policy Directive 21
February 12, 2013



Protect (Security)	**Sustain (Continuity)**
Perform (Capability)	**Repeat (Maturity)**

Emergent Property of Operational Resilience

- The **emergent property** of infrastructure requires an entity to
  - Prevent disruptions from occurring and
  - Respond quickly and recover from disruptions in its most critical business processes.
- Emergent property of operational resilience is essential to critical infrastructure.

What Is An Emergent Property?

- Consider your health.
  - How do you become healthy?
  - Can you buy good health?
  - Can you "manufacture" good health?
- *Good health* and *resilience* are both emergent properties.
- They develop – or emerge – from what we do.

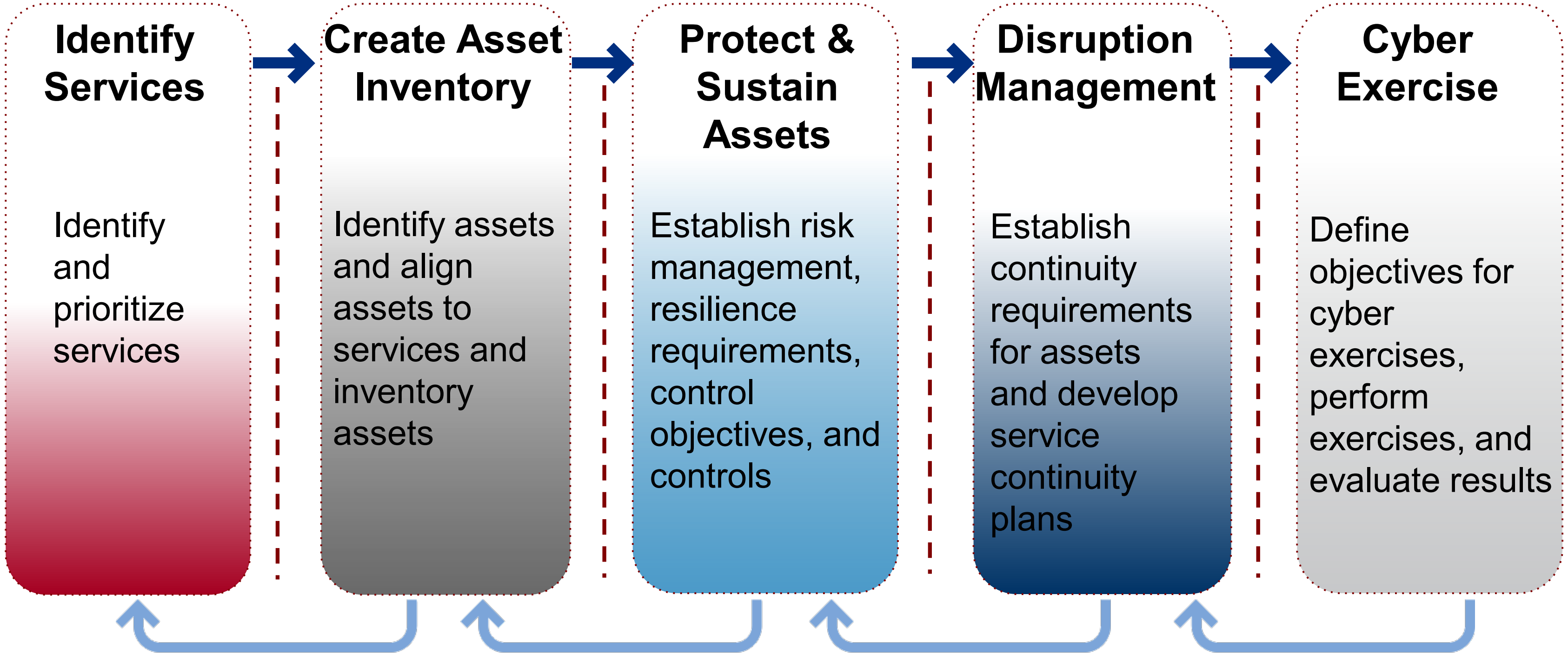
Operational Resilience in Practice

Operational resilience emerges from what we do, such as:

- Identifying and mitigating risks,
- Planning for and managing vulnerabilities and incidents,
- Performing service-continuity processes and planning,
- Managing IT operations,
- Managing, training, & deploying people,
- Protecting and securing important assets, and
- Working with external partners.

Working toward Cyber Resilience

- Follow a framework or general approach to cyber resilience. One successful approach includes:



Identify Services

Identify and prioritize services

Create Asset Inventory

Identify assets and align assets to services and inventory assets

Protect & Sustain Assets

Establish risk management, resilience requirements, control objectives, and controls

Disruption Management

Establish continuity requirements for assets and develop service continuity plans

Cyber Exercise

Define objectives for cyber exercises, perform exercises, and evaluate results

Process Management and Improvement

CISA CYBERSECURITY SERVICES

Cybersecurity Services for All

- Cybersecurity Advisors
- State, Local, Tribal, and Territorial engagements
- Cyber Resilience Reviews (CRR™)
- External Dependencies Management (EDM) Assessments
- Cyber Infrastructure Surveys
- Cyber Education and Awareness
- Federal Virtual Training Environment (Fed VTE)
- National Initiative for Cybersecurity Careers and Studies (NICCS)
- Stop. Think. Connect.™

Sampling of Cybersecurity Offerings

- **Preparedness Activities**
  - Information / Threat Indicator Sharing
  - Cybersecurity Training and Awareness
  - Cyber Exercises and “Playbooks”
  - National Cyber Awareness System
  - Vulnerability Notes Database
  - Information Products and Recommended Practices
  - Cybersecurity Evaluations
    - Cyber Resilience Reviews (CRR™)
    - Cyber Infrastructure Surveys
    - Phishing Campaign Assessment
    - Vulnerability Scanning
    - Risk and Vulnerability Assessments (aka “Pen” Tests)
    - External Dependencies Management Reviews
    - Cyber Security Evaluation Tool (CSET™)
    - Validated Architecture Design Review (VADR)

- **Response Assistance**
  - Remote / On-Site Assistance
  - Malware Analysis
  - Hunt and Incident Response Teams
  - Incident Coordination

- **Cybersecurity Advisors**
  - Assessments
  - Working group collaboration
  - Best Practices private-public
  - Incident assistance coordination

- **Protective Security Advisors**
  - Assessments
  - Incident liaisons between government and private sector
  - Support for National Special Security Events

Protected Critical Infrastructure Information Program

Protected Critical Infrastructure Information (PCII) Program Guards Your Information

- Sensitive critical infrastructure information voluntarily given to CISA is protected by law from
  - Public release under Freedom of Information Act requests,
  - Public release under State, local, tribal, or territorial disclosure laws,
  - Use in civil litigation and
  - Use in regulatory purposes.

ASSESSMENTS

Range of Cybersecurity Assessments

- Cyber Resilience Review (Strategic)
- External Dependencies Management (Strategic)
- Cyber Infrastructure Survey (Strategic)
- Cybersecurity Evaluations Tool (Strategic/Technical)
- Phishing Campaign Assessment (EVERYONE)
- Vulnerability Scanning / Hygiene (Technical)
- Validated Architecture Design Review (Technical)
- Risk and Vulnerability Assessment (Technical)

STRATEGIC
(C-Suite Level)

TECHNICAL
(Network-Administrator Level)

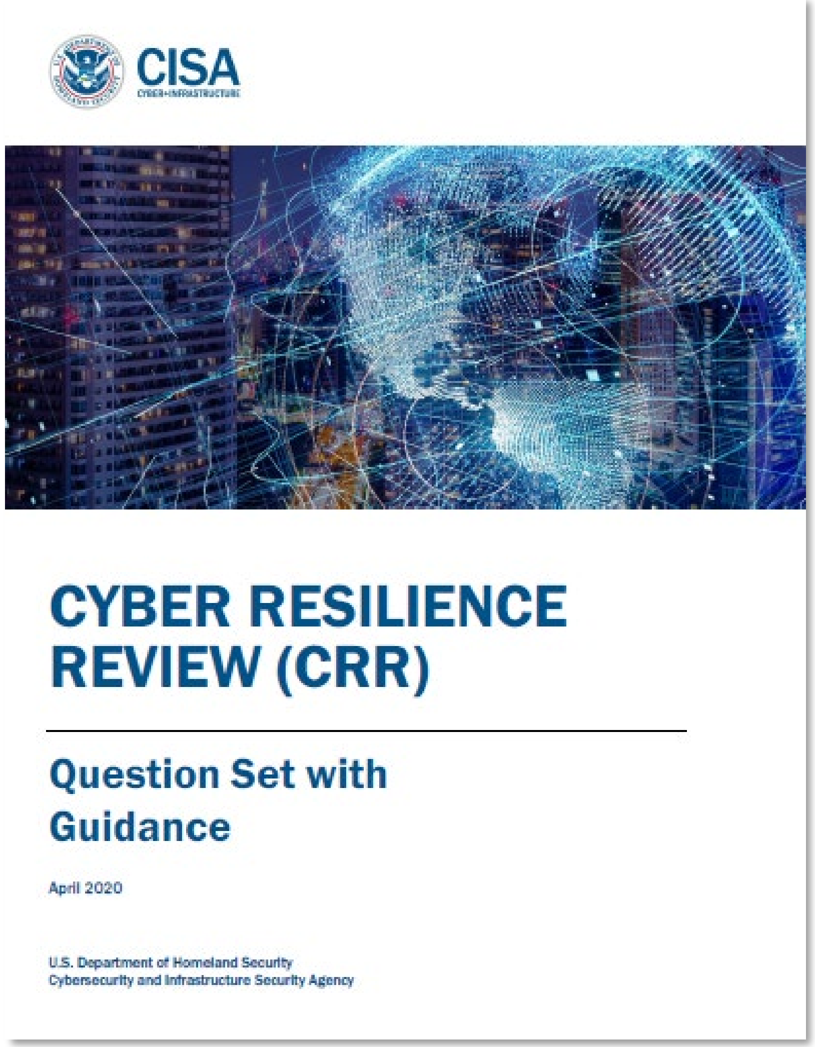
CYBER RESILIENCE REVIEW

Cyber Resilience Review

- **Purpose:** Evaluates that maturity of an organization’s capacities and capabilities in performing, planning, managing, measuring, and defining cybersecurity capabilities across the following 10 domains:

Asset Management	Service Continuity Management
Controls Management	Risk Management
Configuration and Change Management	External Dependency Management
Vulnerability Management	Training and Awareness
Incident Management	Situational Awareness

- Benefits include: Helps public and private sector partners understand and measure cybersecurity capabilities as they relate to operational resilience and cyber risk



CYBER RESILIENCE REVIEW (CRR)

Question Set with Guidance

April 2020

U.S. Department of Homeland Security
Cybersecurity and Infrastructure Security Agency

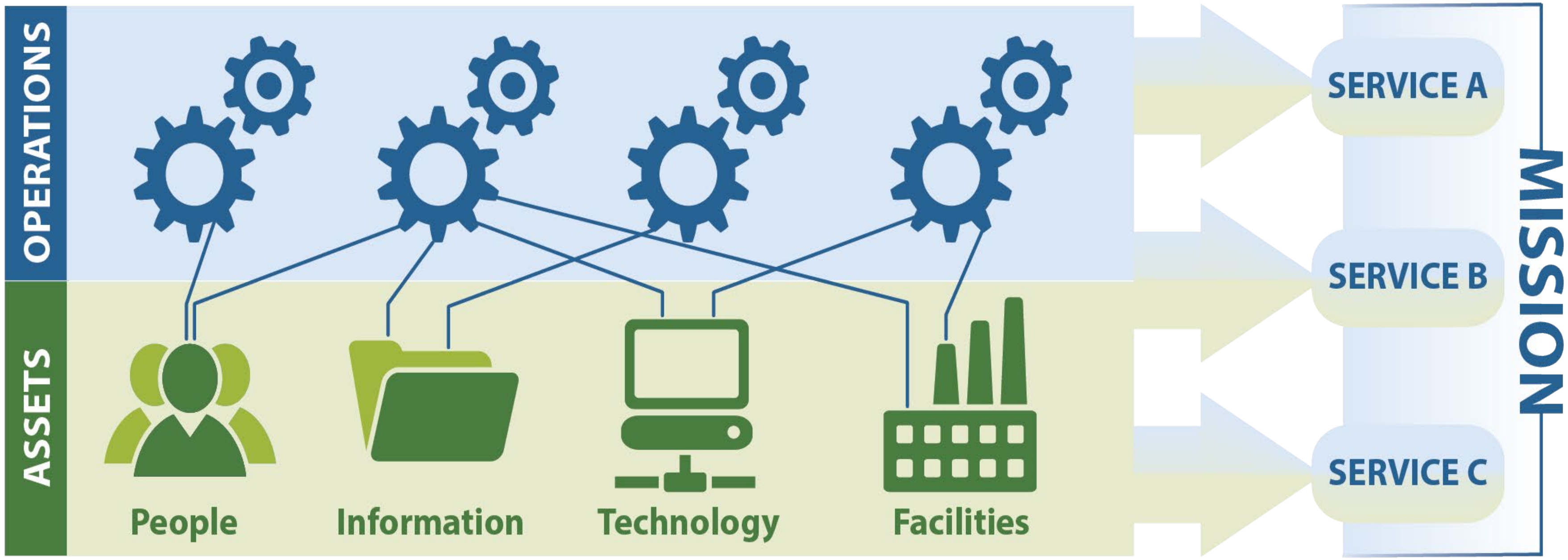
Cyber Resilience Review Domains

Asset Management Know your assets being protected & their requirements, e.g., CIA	**Risk Management** Know and address your biggest risks that considers cost and your risk tolerances
Configuration and Change Management Manage asset configurations and changes	**Service Continuity Management** Ensure workable plans are in place to manage disruptions
Controls Management Manage and monitor controls to ensure they are meeting your objectives	**Situational Awareness** Discover and analyze information related to immediate operational stability and security
External Dependencies Management Know your most important external entities and manage the risks posed to essential services	**Training and Awareness** Ensure your people are trained on and aware of cybersecurity risks and practices
Incident Management Be able to detect and respond to incidents	**Vulnerability Management** Know your vulnerabilities and manage those that pose the most risk

For more information: https://www.cisa.gov/cisa-cybersecurity-resources

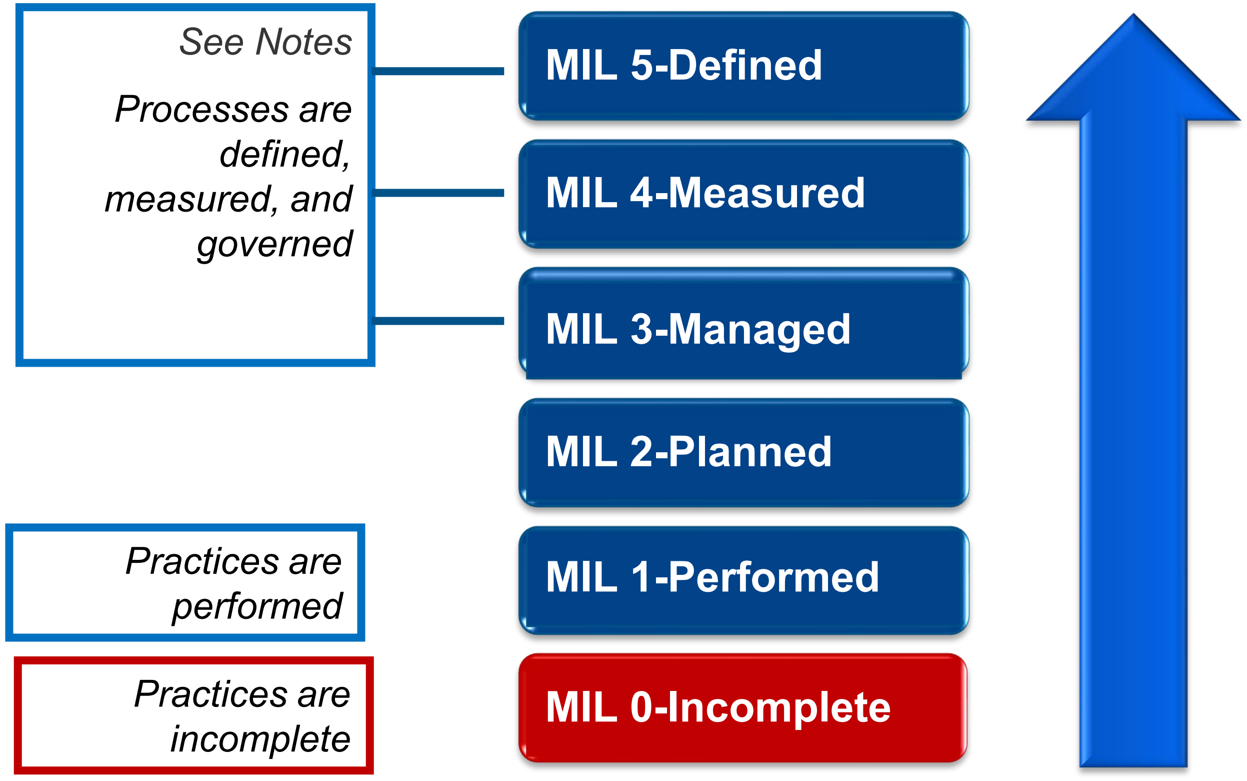
Critical Service Focus

Organizations use **assets (people, information, technology, and facilities)** to provide operational **services** and accomplish **missions**.



Process Institutionalization

CRR maturity indicator levels (MILs) are to measure process institutionalization:



See Notes

Processes are defined, measured, and governed

MIL 5-Defined

MIL 4-Measured

MIL 3-Managed

MIL 2-Planned

Practices are performed

MIL 1-Performed

Practices are incomplete

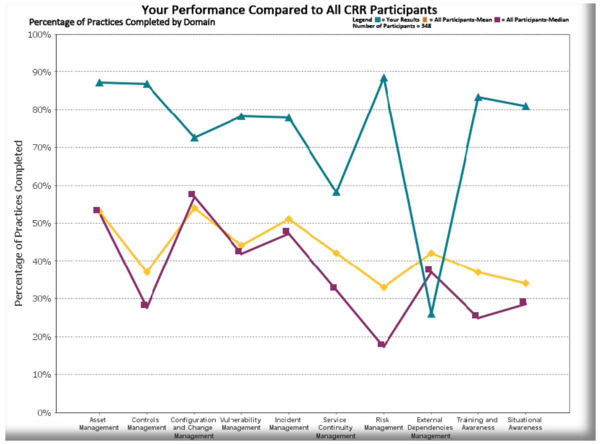
MIL 0-Incomplete

Higher MIL degrees translate to more stable processes that:

- Produce consistent results over time
- Are retained during times of stress

CRR Sample Report

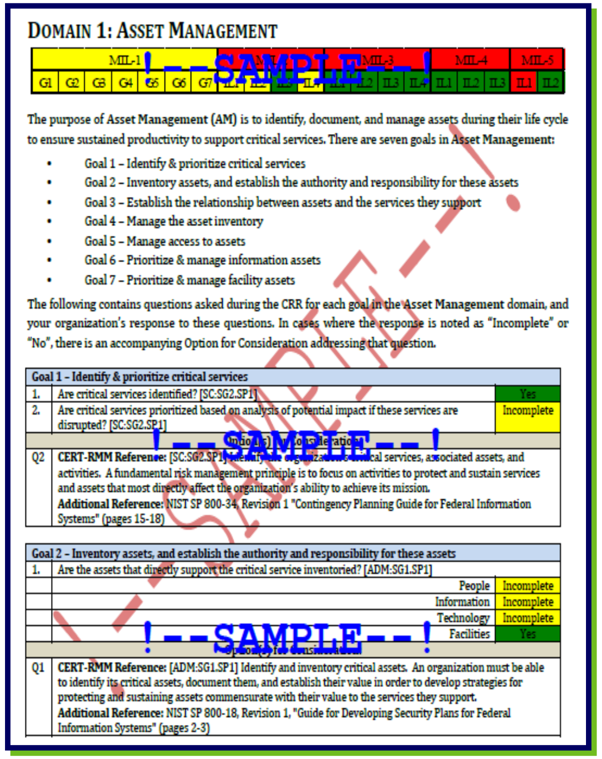
Each CRR report includes:



Comparison data with other CRR participants
facilitated only

A summary “snapshot” graphic, related to the **NIST Cyber Security Framework**.

Domain performance of existing cybersecurity capability and options for consideration for all responses



Domain 1: Asset Management

MIL-1							MIL-2				MIL-3				MIL-4			MIL-5	
G1	G2	G3	G4	G5	G6	G7	IL1	IL2	IL3	IL4	IL1	IL2	IL3	IL4	IL1	IL2	IL3	IL1	IL2

The purpose of Asset Management (AM) is to identify, document, and manage assets during their life cycle to ensure sustained productivity to support critical services. There are seven goals in Asset Management:

- Goal 1 – Identify & prioritize critical services
- Goal 2 – Inventory assets, and establish the authority and responsibility for these assets
- Goal 3 – Establish the relationship between assets and the services they support
- Goal 4 – Manage the asset inventory
- Goal 5 – Manage access to assets
- Goal 6 – Prioritize & manage information assets
- Goal 7 – Prioritize & manage facility assets

The following contains questions asked during the CRR for each goal in the Asset Management domain, and your organization's response to these questions. In cases where the response is noted as “Incomplete” or “No”, there is an accompanying Option for Consideration addressing that question.

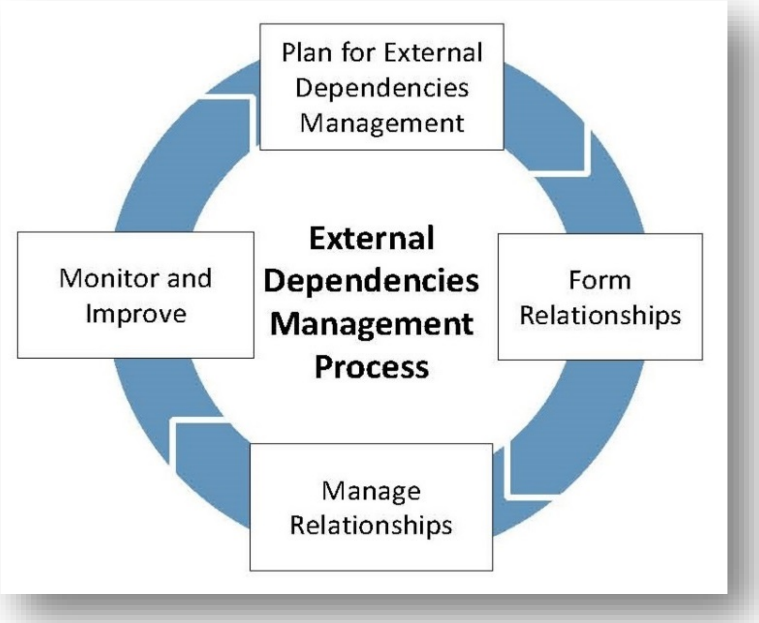
Goal 1 – Identify & prioritize critical services		
1.	Are critical services identified? [SC:SG2.SP1]	Yes
2.	Are critical services prioritized based on analysis of potential impact if these services are disrupted? [SC:SG2.SP1]	Incomplete
	Option(s) for Consideration	
Q2	**CERT-RMM Reference:** [SC:SG2.SP1] Identify the organization's critical services, associated assets, and activities. A fundamental risk management principle is to focus on activities to protect and sustain services and assets that most directly affect the organization's ability to achieve its mission. **Additional Reference:** NIST SP 800-34, Revision 1 "Contingency Planning Guide for Federal Information Systems" (pages 15-18)	

Goal 2 – Inventory assets, and establish the authority and responsibility for these assets		
1.	Are the assets that directly support the critical service inventoried? [ADM:SG1.SP1]	
	People	Incomplete
	Information	Incomplete
	Technology	Incomplete
	Facilities	Yes
	Option(s) for Consideration	
Q1	**CERT-RMM Reference:** [ADM:SG1.SP1] Identify and inventory critical assets. An organization must be able to identify its critical assets, document them, and establish their value in order to develop strategies for protecting and sustaining assets commensurate with their value to the services they support. **Additional Reference:** NIST SP 800-18, Revision 1, "Guide for Developing Security Plans for Federal Information Systems" (pages 2-3)	

EXTERNAL DEPENDENCIES MANAGEMENT ASSESSMENTS

External Dependencies Management Assessment

- **Purpose:** Evaluate an entity's management of their dependencies on third-party entities
- **Delivery:** CSA-facilitated
- **Benefits**:
  - Better understanding of the entity's cyber posture relating to external dependencies
  - Identification of improvement areas for managing third parties that support the organization


Plan for External Dependencies Management
Form Relationships
Manage Relationships
Monitor and Improve
External Dependencies Management Process

EDM process outlined per the External Dependencies Management Resource Guide

Note: graphic edits will need time to be recreated and adjusted.

EDM Assessment Organization and Structure

- ❑ Structure and s
- ❑ Uses one Matu

Relationship Fo

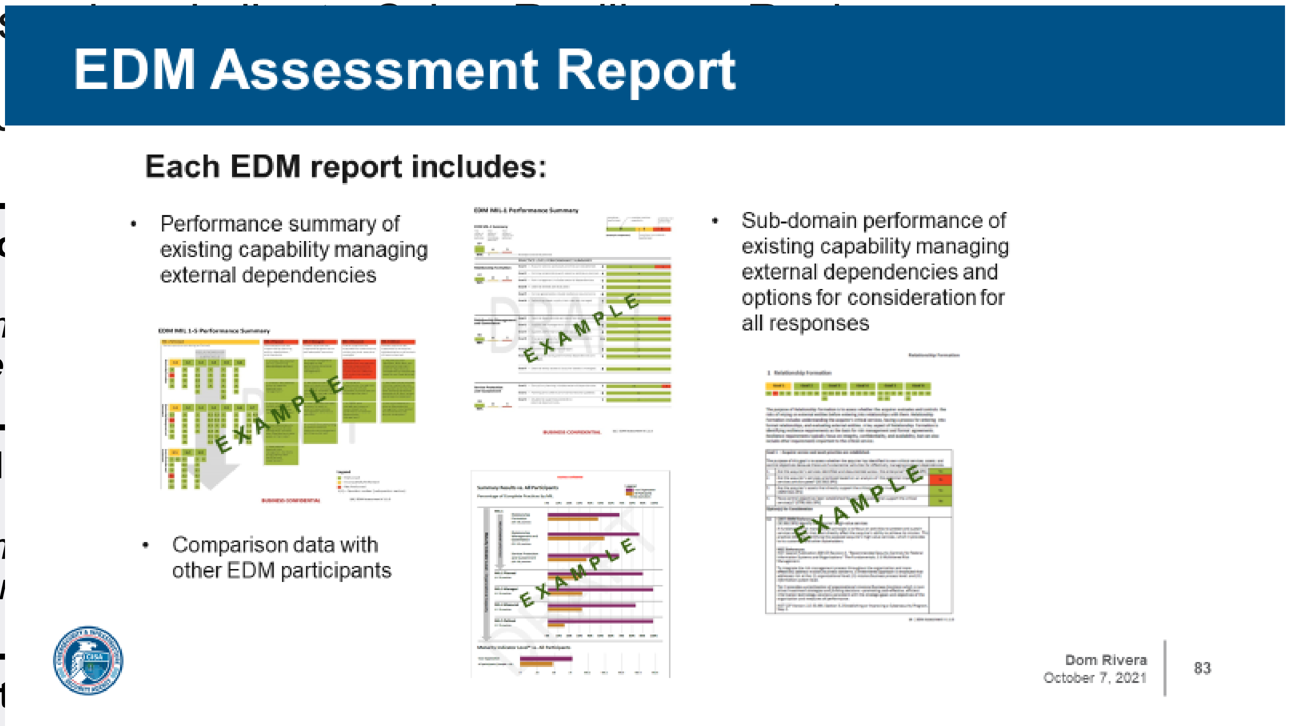
Assesses wheth
entities before e

Relationship M

Assesses wheth
of the critical se

Service Protect

Assesses whether the acquirer accounts for its dependence on external entities as part of its operational activities around managing incidents, disruptions, and threats.



EDM Assessment Report

Each EDM report includes:

- Performance summary of existing capability managing external dependencies
- Comparison data with other EDM participants
- Sub-domain performance of existing capability managing external dependencies and options for consideration for all responses

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October 7, 2021

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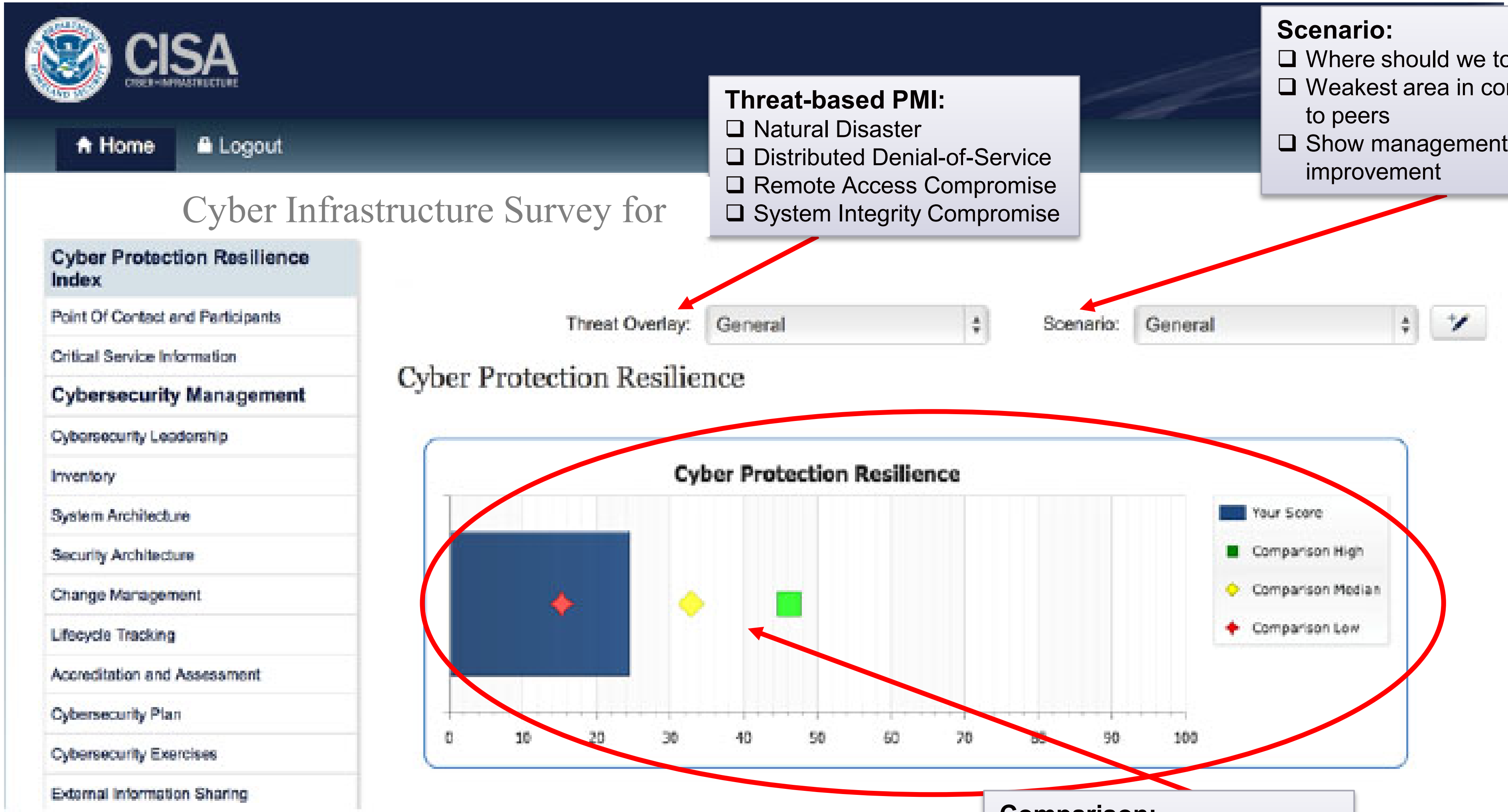
CYBER INFRASTRUCTURE SURVEY

Cyber Infrastructure Survey Highlights

- Purpose: Evaluate security controls, cyber preparedness, overall resilience.
- Delivery: CSA-facilitated
- Benefits:
  - Effective assessment of cybersecurity controls in place for a critical service,
  - Easy-to-use interactive dashboard to support cybersecurity planning and resource allocation), and
  - Access to peer performance data visually depicted on the dashboard.

Example of CIS Dashboard



Cyber Infrastructure Survey for

Threat Overlay: General

Scenario: General

Cyber Protection Resilience

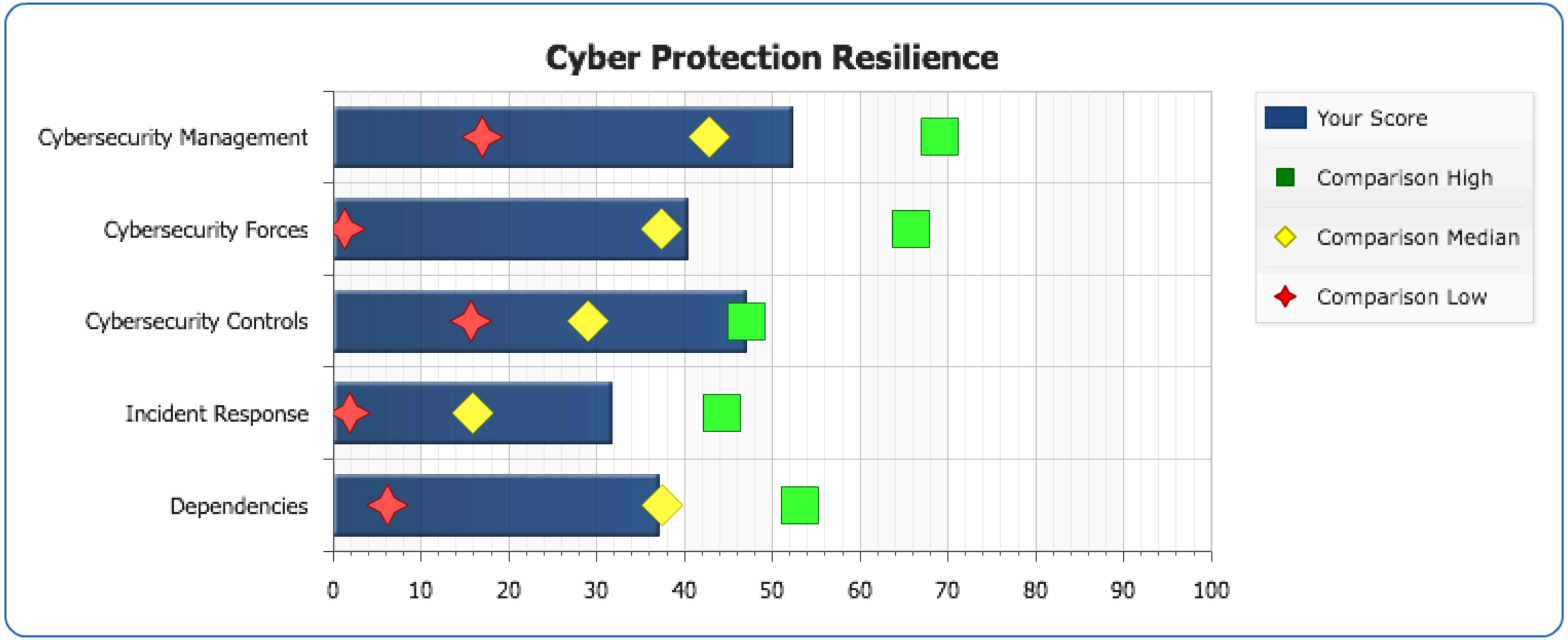
Threat-based PMI:
- ❑ Natural Disaster
- ❑ Distributed Denial-of-Service
- ❑ Remote Access Compromise
- ❑ System Integrity Compromise

Scenario:
- ❑ Where should we to invest?
- ❑ Weakest area in comparison to peers
- ❑ Show management improvement

Comparison:
- ❑ Low Performers
- ❑ Median Performers
- ❑ High Performers

CIS Dashboard - Comparison

- Shows the low, median, and high performers
- Compares your organization to the aggregate



CYBER SECURITY EVALUTION TOOL

Cyber Security Evaluation Tool

- **Purpose:** Assesses control system and information technology network security practices against industry standards.
- **Facilitated:** Self-Administered, undertaken independently
- **Benefits:**
  - Immediately available for download upon request
  - Understanding of operational technology and information technology network security practices
  - Ability to drill down on specific areas and issues
  - Helps to integrate cybersecurity into current corporate risk management strategy

PHISHING CAMPAIGN ASSESSMENT

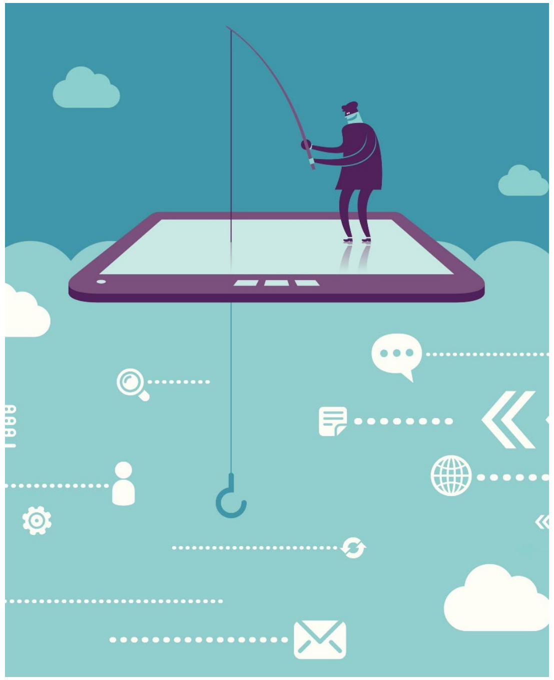
Phishing Campaign Assessment

Purpose: Test an organization’s susceptibility and reaction to phishing emails.

Delivery: Online delivery by CISA

Benefits:

- Identify the risk phishing poses to your organization
- Decrease risk of successful malicious phishing attacks, limit exposure, reduce rates of exploitation
- Receive actionable metrics
- Highlight need for improved security training
- Increase cyber awareness among staff



CYBER HYGIENE: WEB APPLICATION SCANNING (WAS)

Cyber Hygiene: Web Application Scanning (WAS)

The CISA Assessments team supports Federal, State, Local, Tribal and Territorial Governments and Critical Infrastructure partners by providing proactive testing and assessment services. CISA's Cyber Hygiene Web Application Scanning is "internet scanning-as-a-service." This service assesses the "health" of your publicly accessible web applications by checking for known vulnerabilities and weak configurations. Additionally, we can recommend ways to enhance security in accordance with industry and government best practices and standards.

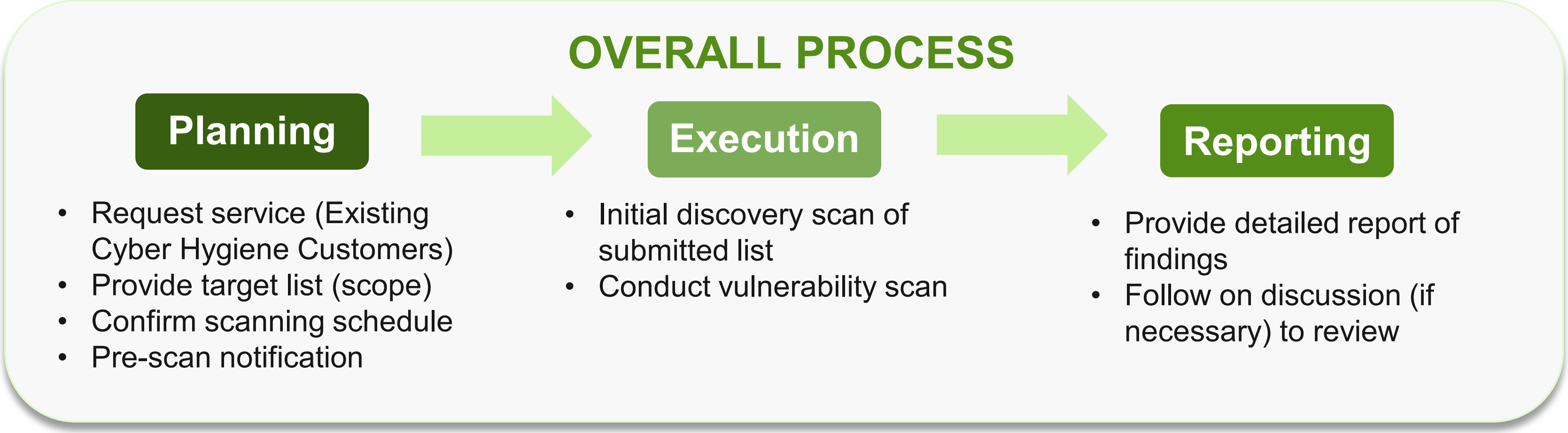
SCANNING OBJECTIVES

- Maintain enterprise awareness of your publicly accessible web-based assets
- Provide insight into how systems and infrastructure appear to potential attackers
- Drive proactive mitigation of vulnerabilities to help reduce overall risk

SCANNING PHASES AND OVERALL PROCESS

Scanning Phases

- **Discovery Scanning:** Identify active, internet-facing web applications
- **Vulnerability Scanning:** Initiate non-intrusive checks to identify potential vulnerabilities and configuration weaknesses



OVERALL PROCESS

Planning

- Request service (Existing Cyber Hygiene Customers)
- Provide target list (scope)
- Confirm scanning schedule
- Pre-scan notification

Execution

- Initial discovery scan of submitted list
- Conduct vulnerability scan

Reporting

- Provide detailed report of findings
- Follow on discussion (if necessary) to review

VULNERABILITY SCANNING

Vulnerability Scanning

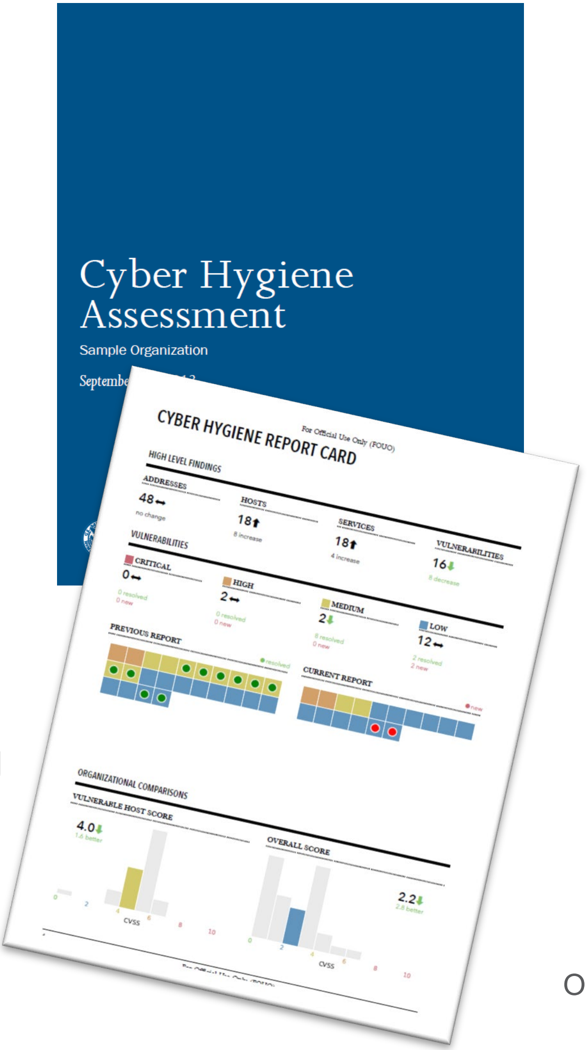
Purpose: Assess Internet-accessible systems for known vulnerabilities and configuration errors.

Delivery: Online by CISA

Benefits:

- Continual review of system to identify potential problems
- Weekly reports detailing current and previously mitigated vulnerabilities
- Recommended mitigation for identified vulnerabilities

  - **Network Vulnerability & Configuration Scanning**
    - Identify network vulnerabilities and weakness



Cyber Hygiene Assessment

Sample Organization

Septembe

CYBER HYGIENE REPORT CARD

For Official Use Only (FOUO)

HIGH LEVEL FINDINGS

ADDRESSES 48 ↔ no change

HOSTS 18 ↑ 8 increase

SERVICES 18 ↑ 4 increase

VULNERABILITIES 16 ↓ 8 decrease

VULNERABILITIES

CRITICAL 0 ↔ 0 resolved 0 new

HIGH 2 ↔ 0 resolved 0 new

MEDIUM 2 ↓ 8 resolved 0 new

LOW 12 ↔ 2 resolved 2 new

PREVIOUS REPORT ● resolved

CURRENT REPORT ● new

ORGANIZATIONAL COMPARISONS

VULNERABLE HOST SCORE 4.0 ↓ 1.6 better

OVERALL SCORE 2.2 ↓ 2.8 better

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VALIDATED ARCHITECTURE DESIGN REVIEW

Validated Architecture Design Review

Purpose: Analyze network architecture, system configurations, log file review, network traffic and data flows to identify abnormalities in devices and communications traffic.

Delivery: CISA staff working with entity staff

Benefits:

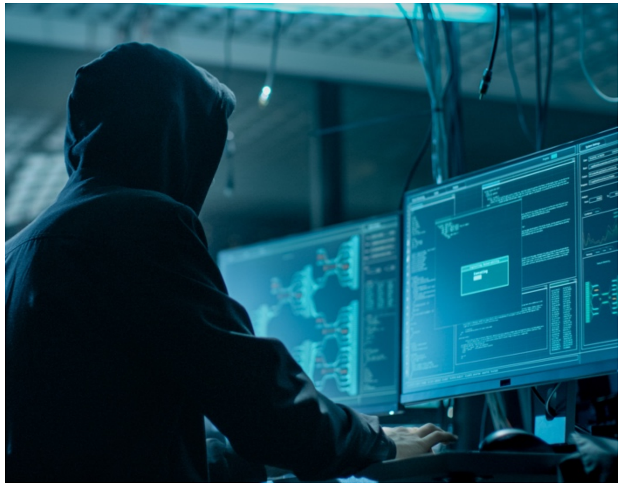
- In-depth review of network and operating system
- Recommendations to improve an organization's operational maturity and enhancing their cybersecurity posture
- Evaluation of network architecture

RISK AND VULNERABILITY ASSESSMENT

[PENETRATION TEST]

Risk and Vulnerability Assessment

- **Purpose**: Perform network penetration and deep technical analysis of enterprise IT systems and an organization’s external resistance to specific IT risks
- **Delivery**: Onsite by CISA
- **Benefits**:
  - Identification of vulnerabilities
  - Specific remediation recommendations
  - Improves an entity’s cyber posture, limits exposure, reduces rates of exploitation
  - Increases speed and effectiveness of future cyber attack responses.



Risk and Vulnerability Assessment Specifics

Assessment Aspects

Service	Description
Vulnerability Scanning and Testing	Conduct Vulnerability Assessments
Penetration Testing	Exploit weakness, test responses in systems, applications, network, and security controls
Social Engineering	Craft e-mail at targeted audience to test security awareness, used as an attack sector to internal network
Wireless Discovery & Identification	Identify wireless signals and rogue wireless devices, and exploit access points
Web Application Scanning and Testing	Identify web application vulnerabilities
Database Scanning	Security Scan of database settings and controls
Operating System Scanning	Security Scan of operating system to do compliance checks

CISA Cyber Assessments in Brief, 1 of 2

Name	Cyber Resilience Review	Cyber Infrastructure Survey	External Dependencies Management Review	Cybersecurity Evaluation Tool Assessment
Purpose	Identify cybersecurity management capabilities and maturity	Calculate a comparative analysis and valuation of protective measures in-place	Assess the activities and practices utilized by an organization to manage risks arising from external dependencies	Provide detailed, effective, and repeatable methodology for assessing control systems security encompassing the organization's infrastructure, policies, and procedures
Scope	Critical service view	Critical service view	Critical service view	Information Technology and Operational Technology systems
Time to Execute	8 Hours (1 business day)	2 ½ to 4 Hours	2 ½ to 4 Hours	Varies greatly (min 2 Hours), unknown for self-assessment
Information Sought	Capabilities and maturity indicators in 10 security domains	Protective measures in-place	Capabilities and maturity indicators across third-party relationship management lifecycle domains	Architecture diagrams, infrastructure, policies, and procedures documents
Preparation	1-hour questionnaire and planning call(s)	Planning call to scope evaluation	Planning call to scope evaluation	Self-assessment available from web site and used locally
Participants	IT / Security Manager, Continuity Planner, and Incident Responders	IT / Security Manager	IT / Security Manager with Continuity Planner and Contract Management	Operators, engineers, IT staff, policy / management personnel, and subject matter experts
Delivered By	CSAs iodregionaloperations@cisa.dhs.gov	CSAs iodregionaloperations@cisa.dhs.gov	CSAs iodregionaloperations@cisa.dhs.gov	Self-administered / CSAs https://ics-cert.us-cert.gov/

CISA Cyber Assessments in Brief, 2 of 2

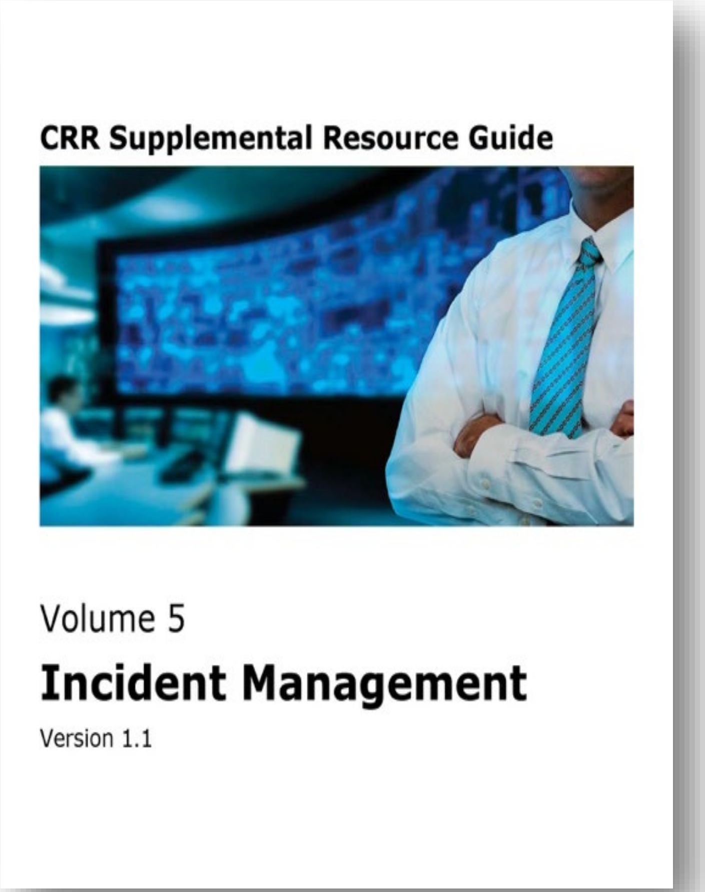
Name	Validated Architecture Design Review	Phishing Campaign Assessment	Risk and Vulnerability Assessment	Vulnerability Scanning
Purpose	Provide analysis and representation of asset owner's network traffic, data flows, and relationships between devices and identifies anomalous communications flows.	Measure the susceptibility of an organization's personnel to social engineering attacks, specifically email phishing attacks.	Perform penetration and deep technical analysis of enterprise IT systems and an organization's external resistance to specific IT risks	Identify public-facing Internet security risks, at a high-level, through service enumeration and vulnerability scanning
Scope	Industrial Control Systems / Network Architecture, Traffic	Organization / Business Unit / Email Exchange Service	Organization / Business Unit / Network-Based IT Service	Public-Facing, Network-Based IT Service
Time to Execute	Variable (Hours to Days)	Approximately 6 Weeks	Variable (Days to Weeks)	Variable (Hours to Continuous)
Information Sought	Network design, configurations, log files, interdependencies, data flows and its applications	Click rate metrics gathered during phishing assessment	Low-level options and recommendations for improving IT network and system security	High-level network service and vulnerability information
Preparation	Coordinated via Email. Planning call(s).	Formal rules of engagement and pre-planning	Formal rules of engagement and extensive pre-planning	Formal rules of engagement and extensive pre-planning
Participants	Control system operators/ engineers, IT personnel, and ICS network, architecture, and topologies SMEs	IT/Security Manager and Network Administrators, end users	IT/Security Manager and Network Administrators	IT/Security Manager and Network Administrators
Delivered By	VM VM@CISA.DHS.GOV	VM VM@CISA.DHS.GOV	VM VM@CISA.DHS.GOV	VM VM@CISA.DHS.GOV

INCIDENT MANAGEMENT

Incident Management Planning Helps Mitigate Effects

1. Get leadership support for incident management planning.
2. Establish an event-detection process.
3. Establish a triage-and-analysis process.
4. Establish an incident-declaration process.
5. Establish an incident-response and recovery process.
6. Establish an incident-communications process.
7. Assign roles and responsibilities for incident management.
8. Establish a post-incident analysis and improvement process.

Resource: CRR Supplemental Resource Guide, Incident Management.



CRR Supplemental Resource Guide

Volume 5

Incident Management

Version 1.1

Federal Incident Response, 1 of 2

Federal Incident Response

- **Threat Response:** Attributing, pursuing, and disrupting malicious cyber actors and malicious cyber activity. Conducting criminal investigations and other actions to counter the malicious cyber activity.
- **Asset Response:** Protecting assets and mitigating vulnerabilities in the face of malicious cyber activity, reducing the impact to systems and data; strengthening, recovering, and restoring services; identifying other entities at risk; and assessing potential risk to broader community.

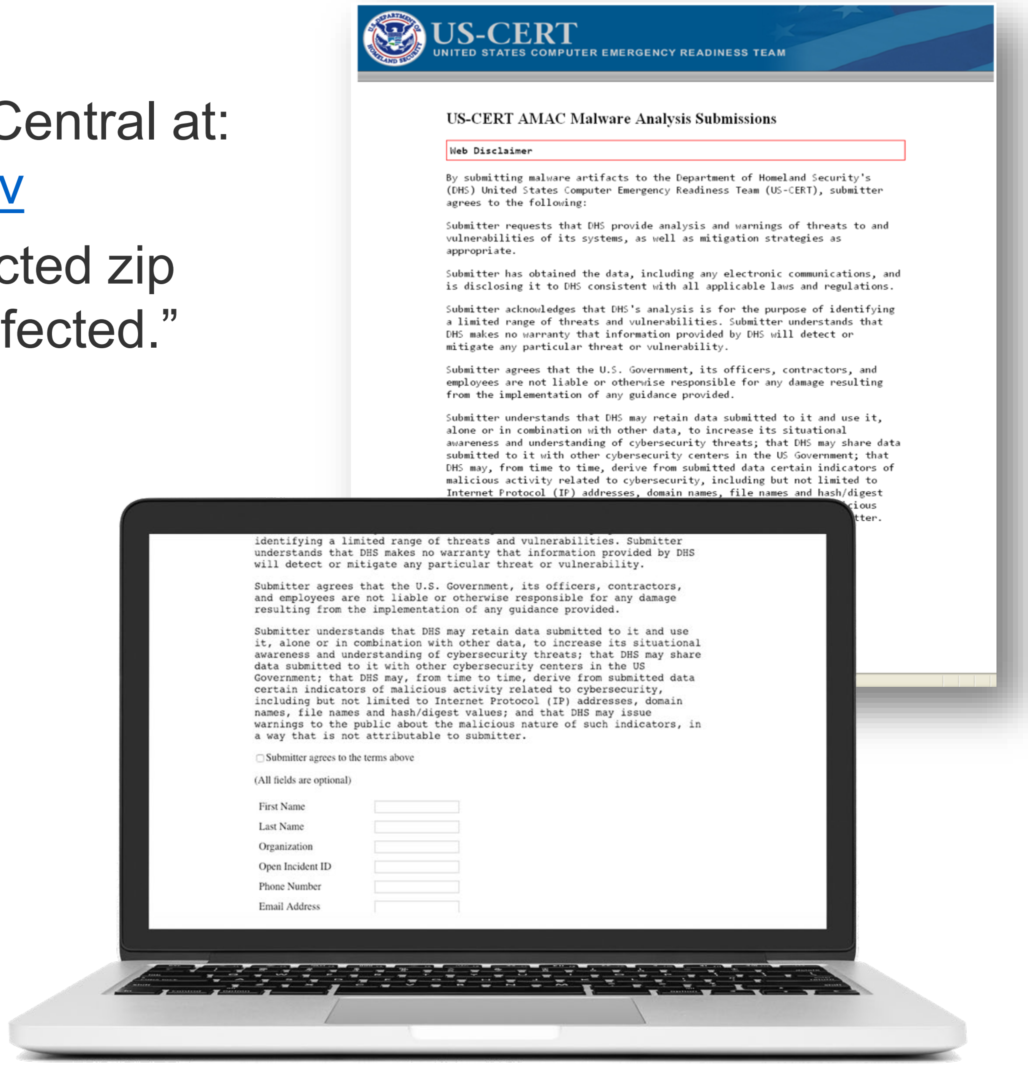
Federal Incident Response, 2 of 2

Threat Response	Asset Response
Federal Bureau of Investigation 855-292-3937 or cywatch@ic.fbi.gov	**CISA Central** 888-282-0870 or central@cisa.DHS.gov Report suspected or confirmed cyber incidents, including when the affected entity may be interested in government assistance in removing the adversary, restoring operations, and recommending ways to further improve security.
U.S. Secret Service secretservice.gov/contact/field-offices	
Immigration and Customs **Homeland Security Investigations** 866-347-2423 or ice.gov/contact/hsi	**Report Internet Crimes**: FBI Internet Crime Complaint Center ic3.gov

Malware Analysis

To submit malware:

- Email submissions to CISA Central at: submit@malware.us-cert.gov
  - Send in password-protected zip file(s). Use password “infected.”
- Upload submission online: https://malware.us-cert.gov



US-CERT AMAC Malware Analysis Submissions

Web Disclaimer

By submitting malware artifacts to the Department of Homeland Security's (DHS) United States Computer Emergency Readiness Team (US-CERT), submitter agrees to the following:

Submitter requests that DHS provide analysis and warnings of threats to and vulnerabilities of its systems, as well as mitigation strategies as appropriate.

Submitter has obtained the data, including any electronic communications, and is disclosing it to DHS consistent with all applicable laws and regulations.

Submitter acknowledges that DHS's analysis is for the purpose of identifying a limited range of threats and vulnerabilities. Submitter understands that DHS makes no warranty that information provided by DHS will detect or mitigate any particular threat or vulnerability.

Submitter agrees that the U.S. Government, its officers, contractors, and employees are not liable or otherwise responsible for any damage resulting from the implementation of any guidance provided.

Submitter understands that DHS may retain data submitted to it and use it, alone or in combination with other data, to increase its situational awareness and understanding of cybersecurity threats; that DHS may share data submitted to it with other cybersecurity centers in the US Government; that DHS may, from time to time, derive from submitted data certain indicators of malicious activity related to cybersecurity, including but not limited to Internet Protocol (IP) addresses, domain names, file names and hash/digest
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☐ Submitter agrees to the terms above

(All fields are optional)

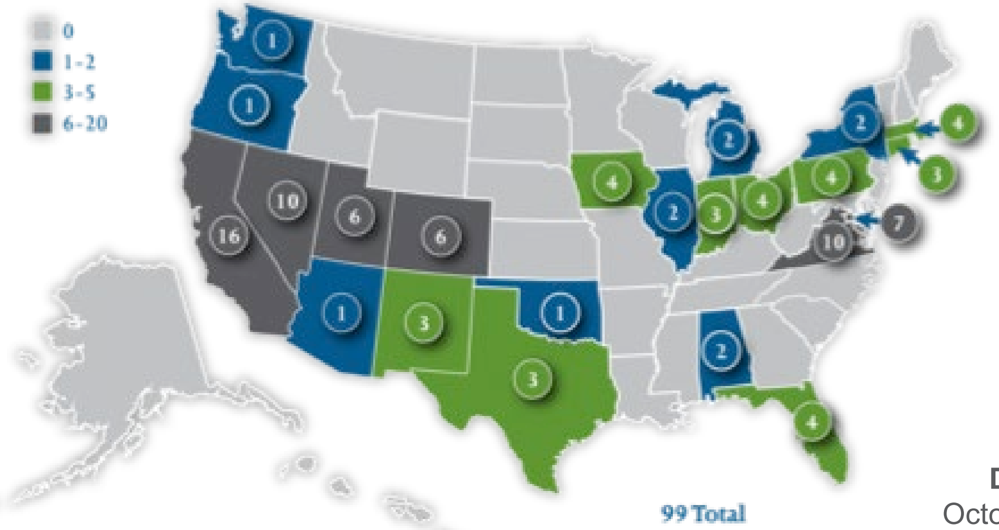
First Name ______
Last Name ______
Organization ______
Open Incident ID ______
Phone Number ______
Email Address ______

ADDITIONAL CYBERSECURITY RESOURCES

Cyber Exercises and Planning

CISA's National Cyber Exercise and Planning Program develops, conducts, and evaluates cyber exercises and planning activities for state, local, tribal and territorial governments and public and private sector critical infrastructure organizations.

- Cyber Storm Exercise – DHS's flagship national-level biennial exercise
- Exercise Planning and Conduct
- Cyber Exercise Consulting and Subject Expertise Support
- Cyber Planning Support
- Off-the-Shelf Resources

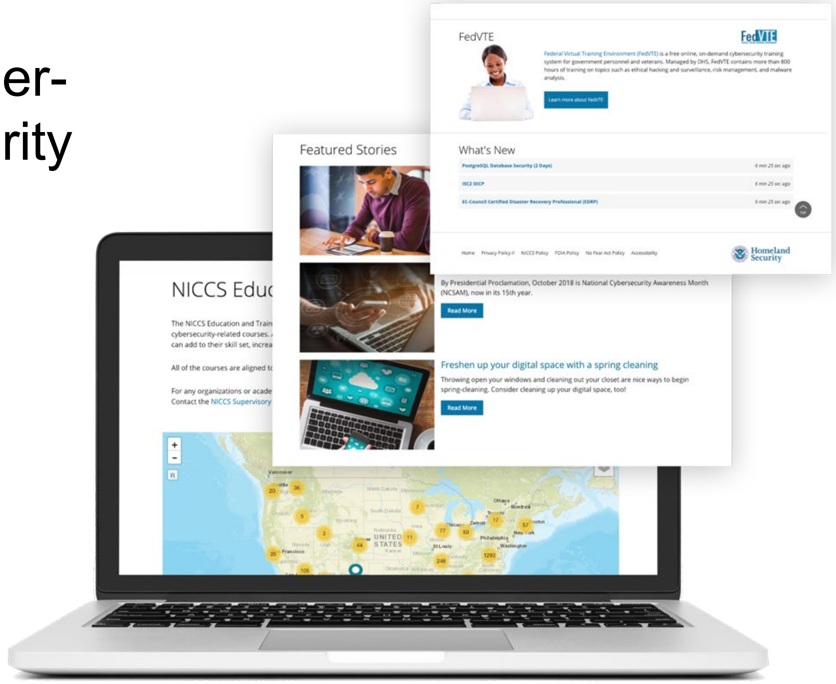


Cybersecurity Training Resources

CISA offers easily accessible education and awareness resources through the National Initiative for Cybersecurity Careers and Studies (NICCS) website.

The NICCS website includes:

- Searchable Training Catalog with 4,400 plus cyber-related courses offered by nationwide cybersecurity educators
- Interactive National Cybersecurity Workforce Framework
- Cybersecurity Program information: FedVTE, Scholarships for Service, Centers for Academic Excellence, and Cyber Competitions
- Tools and resources for cyber managers
- Upcoming cybersecurity events list



Federal Virtual Training Environment (FedVTE) is a free online, on-demand cybersecurity training system for government personnel and veterans. Managed by DHS, FedVTE contains more than 800 hours of training on topics such as ethical hacking and surveillance, risk management, and malware analysis.

PostgreSQL Database Security (2 Days) — 6 min 25 sec ago

ISC2 SSCP — 6 min 25 sec ago

EC-Council Certified Disaster Recovery Professional (EDRP) — 6 min 25 sec ago

By Presidential Proclamation, October 2018 is National Cybersecurity Awareness Month (NCSAM), now in its 15th year.

Freshen up your digital space with a spring cleaning

Throwing open your windows and cleaning out your closet are nice ways to begin spring-cleaning. Consider cleaning up your digital space, too!

For more information, visit NICC.US-CERT.gov

Our Nation’s Cyber Workforce Foundation

The **National Cybersecurity Workforce Framework** is a collection of definitions that describe types of cybersecurity work and skills requires to perform it.

- ✓ When used nationally, the definitions help establish universally applicable cybersecurity skills, training/development, and curricula
- ✓ 7 Categories, 30+ Specialty Areas
- ✓ Baselines knowledge, skills, and abilities & tasks

Operate & Maintain

Securely Provision

Analyze

Collect & Operate

Oversight & Development

Protect & Defend

Investigate

Free Federal Cyber Training

FedVTE enables cyber professionals to continue growing skills.

FedVTE is an online, on-demand training center that provides **free** cybersecurity training for U.S. veterans and federal, state, local, tribal, and territorial government employees. **As of January 2017,** there are:

- Over 140,000 registered users, including employees at all levels of government
- Over 18,000 veteran users (through non-profit partner, Hire Our Heroes™)
- Over 5,000 SLTT registered users

FedVTE FEDERAL VIRTUAL TRAINING ENVIRONMENT

Resource Guides

- **Resource Guides:** Created to help organizations enhance their resilience in specific Cyber Resilience Review (CRR) domains.
- **CRR Tools:** Helps move organizations from initial capability to well-define capability in security management areas
- **CRR Domains**: Includes the CRR 10 “domains” each representing a capability area foundational to an organization’s cyber resilience.
- **Content**: While the guides were developed for organizations to utilize after conducting a CRR, these publications provide content useful for all organizations with cybersecurity equities.
- **Flexibility in Use**: Moreover, the guides can be utilized as a full set or as individual components, depending on organizational preference and/or need.
- For more information, visit https://www.cisa.gov/cyber-resource-hub

CRR Supplemental Resource Guide
Volume 1
Asset Managem
Version 1.1

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Incident Mana
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Situational Awareness
Version 1.1

CRR Supplemental R
Volume 6
Service Conti
Management
Version 1.1

CRR Supplemental Re
Volume 7
Risk Management
Version 1.1

Contact

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Cybersecurity and Infrastructure Security Agency

CYBERSECURITY & INFRASTRUCTURE SECURITY AGENCY

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