# How to Use the CISA CSET Tool for Risk Assessments Across Multidisciplinary Business Sectors

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# Topics Covered

- Overview of CSET Tool
- Performing a Self-Assessment
- How it Works
- The Assessment Process
- Preparing for an Assessment
- Getting Started
- CSET Tool Demo
- Q&A

# Overview of CSET Tool

What is CSET tool?

- The Cyber Security Evaluation Tool (CSET®) is a stand-alone desktop application that guides asset owners and operators through a systematic process of evaluating Operational Technology and Information Technology.

# Overview of CSET Tool

The Cyber Security Evaluation Tool (CSET®) provides the following:

1. A framework for analyzing cybersecurity vulnerabilities associated with an organization’s overall industrial control system (ICS) and information technology (IT) architecture.

2. A consistent and technically sound methodology to identify, analyze, and communicate to security professionals the various vulnerabilities and consequences that may be exploited by cyber means.

3. The ability for the user to document a process for identifying cybersecurity vulnerabilities.

4. Suggested methods to evaluate options for improvement based on existing Standards and recommended practices.

# Performing a Self-Assessment

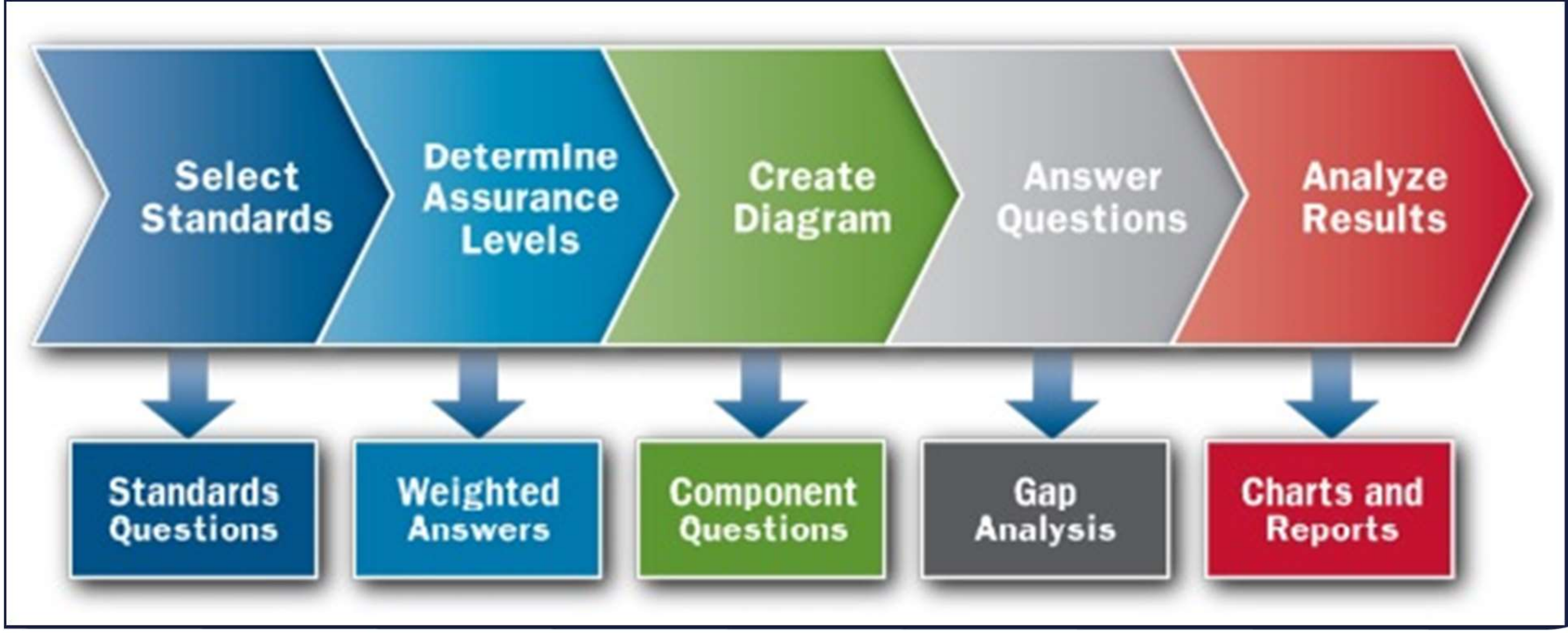
- Provides a systematic, disciplined, and repeatable approach for evaluating an organization’s security posture.
- It is a desktop software tool that guides asset owners and operators through a step-by-step process to evaluate their industrial control system (ICS) and information technology (IT) network security practices.
- Users can evaluate their own cybersecurity stance using many recognized government and industry standards and recommendations.
- The Department of Homeland Security’s (DHS) National Cybersecurity and Communications Integration Center (NCCIC) developed the CSET application and offers it at no cost to end users.

# How it Works

- CSET helps asset owners assess their information and operational systems cybersecurity practices.
  - By asking a series of detailed questions about system components and architectures, as well as operational policies and procedures.
- These questions are derived from accepted industry cybersecurity standards.
- When the questionnaires are completed, CSET provides:
  - A dashboard of charts showing areas of strength and weakness,
  - A prioritized list of recommendations for increasing the site's cybersecurity posture.
- CSET includes solutions, common practices, compensating actions, and component enhancements or additions.
- CSET supports the capability to compare multiple assessments, establish a baseline, and determine trends.

# The Assessment Process

- This assessment process can be used effectively by organizations in all sectors to evaluate ICS or IT networks.

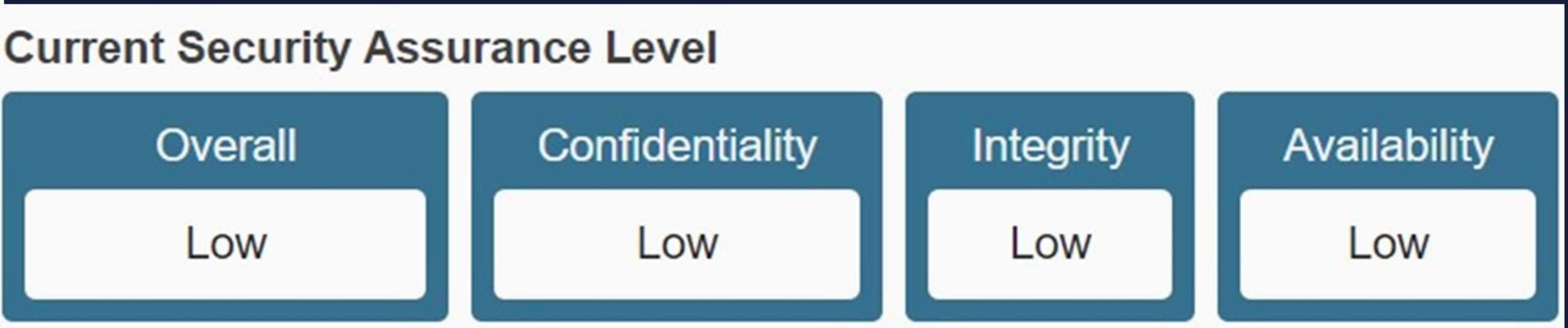


# 1. Select Standards

- Users select one or more government and industry recognized cybersecurity standards.
- CSET then generates questions that are specific to those requirements. Some sample standards include:
  - DHS Catalog of Control Systems Security: Recommendations for Standards Developers
  - NERC Critical Infrastructure Protection (CIP) Standards 002-009
  - NIST Special Publication 800-82, Guide to Industrial Control Systems Security
  - NIST Special Publication 800-53, Recommended Security Controls for Federal Information Systems
  - NIST Cybersecurity Critical Infrastructure Framework

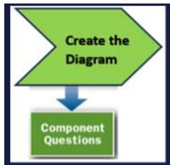
# 2. Determine Assurance Level

- The Security Assurance Level or SAL determines the number of questions to be answered and the level of rigor of the assessment.
- For example, a typical high SAL will contain 350-1000 questions where a low SAL will typically contain 30-350 questions, depending on the selected standard.

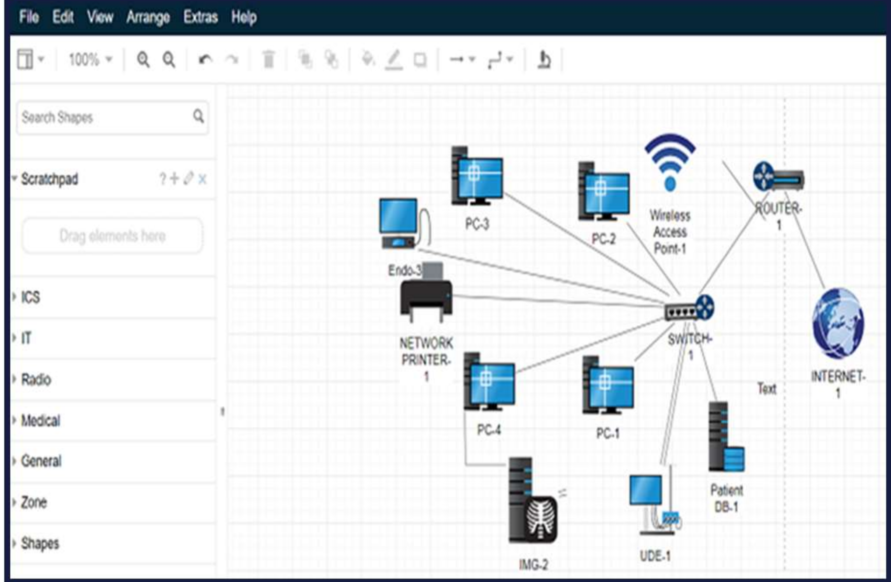


Current Security Assurance Level

| Overall | Confidentiality | Integrity | Availability |
|---|---|---|---|
| Low | Low | Low | Low |



# 3. Create the Diagram

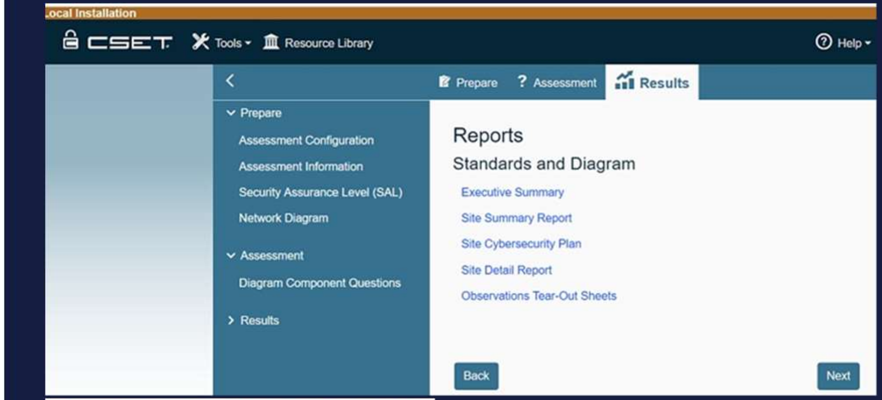


- CSET contains a graphical user interface that allows users to diagram network topology and identify the “criticality” of the network components.
- Users can create a diagram from scratch, import a pre-built template diagram, or import an existing MS Visio® diagram.
- Users are able to define cybersecurity zones, critical components, and network communication paths.
- An icon palette featuring system and network components allows users to build and modify diagrams by simply dragging and dropping components into place.

# 4. Answer the Questions

- CSET then generates questions using the network topology, selected security standards, and SAL as its basis.
- The assessment team can select the best answer to each question using the organization’s actual network configuration and implemented security policies and procedures.
- Notes can be entered or files attached to individual questions, flagging them for further review or providing clarification.
- Each question has associated reference information that is provided for clarification.
- The system also displays the underlying requirements, any supplemental text, and additional resources to help address the problem identified.

# 5.Review Analysis and Reports

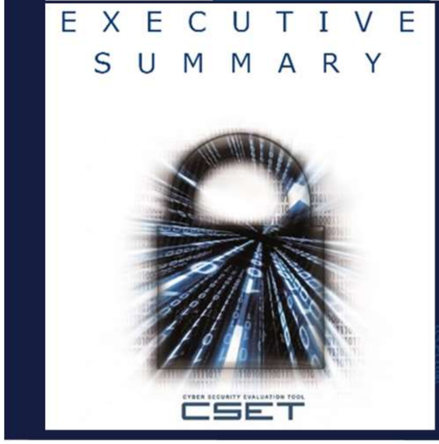


- Prepare
  - Assessment Configuration
  - Assessment Information
  - Security Assurance Level (SAL)
  - Network Diagram
- Assessment
  - Diagram Component Questions
- Results

Reports

Standards and Diagram

- Executive Summary
- Site Summary Report
- Site Cybersecurity Plan
- Site Detail Report
- Observations Tear-Out Sheets


EXECUTIVE SUMMARY

CYBER SECURITY EVALUATION TOOL

CSET

- The Analysis dashboard provides interaction with graphs and tables that present the assessment results in both summary and detailed form.
- Users are easily able to filter content or “drill down” to look at more granular information.
- It also provides the top areas of concern that are prioritized based on current threat information.
- Professionally designed reports can be printed to facilitate communication with management and other staff members.

# Preparing for an Assessment

- To get the most out of a CSET assessment, NCCIC (US-CERT) recommends selecting a cross-functional team from many areas of the organization.
- To adequately prepare for a CSET self-assessment, this team should review:
  - ✓Policies and procedures
  - ✓Network topology diagrams
  - ✓Inventory lists of critical assets and components
  - ✓Previous risk assessments
  - ✓IT and ICS network policies and practices
  - ✓Organizational roles and responsibilities
- Staff should also understand their operational data flow.

# Getting Started

- Get started by downloading CSET V11.5 at

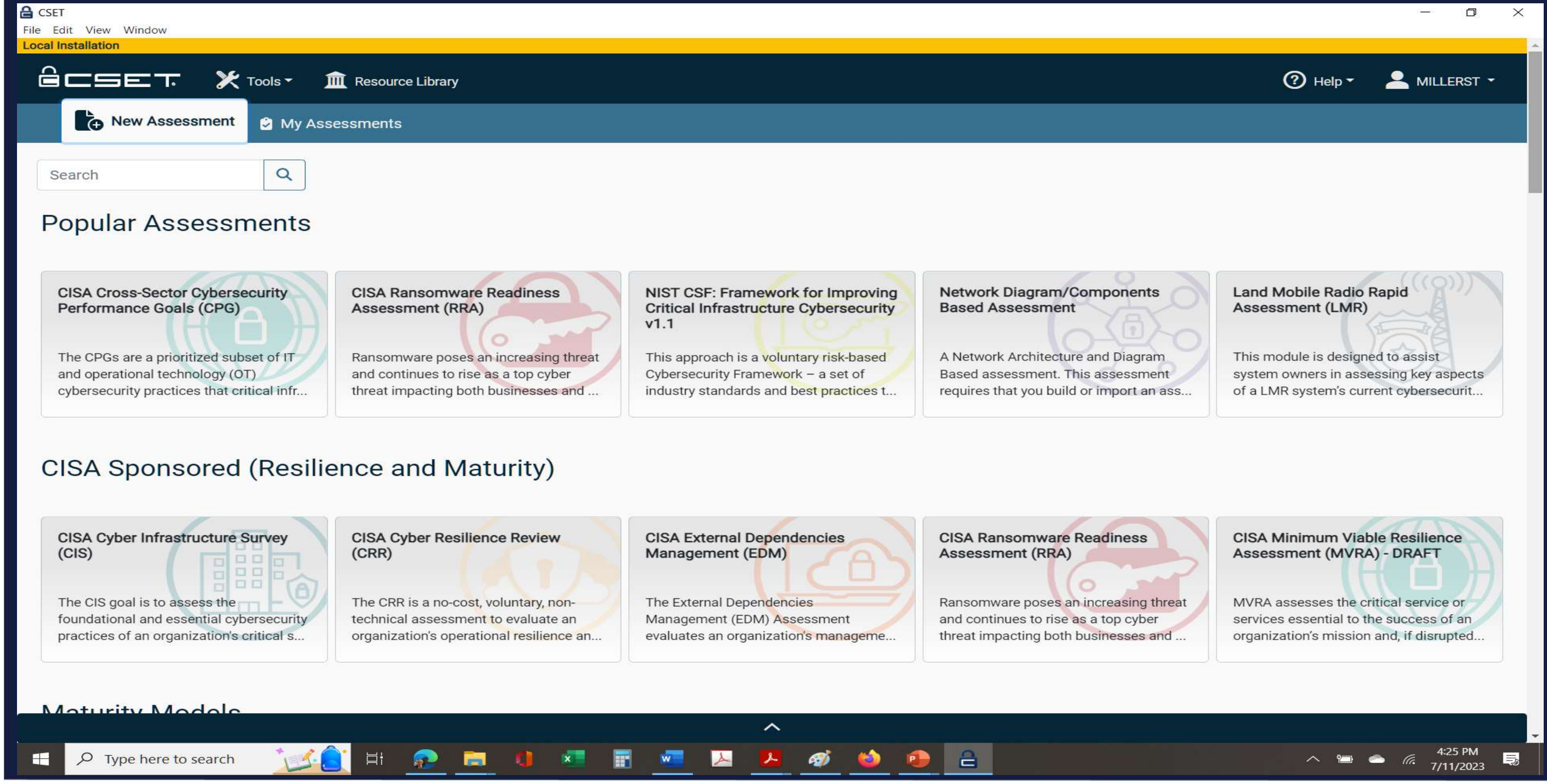
https://www.cisa.gov/uscert/ics

- Downloading-and-Installing-CSET.
- Get started by downloading CSET at
- https://www.cisa.gov/downloading-and-installing-cset
- https://github.com/cisagov/cset
- Downloading-and-Installing-CSET.
    - Two options Local PC and Enterprise

# PC platform System Requirements Local Installation:

- It is recommended that users meet the minimum system hardware and software requirements prior to installing CSET.
- This includes:
  - Pentium dual core 2.2 GHz processor (Intel x86 compatible)
  - 6 GB free disk space
  - 4 GB of RAM
  - Microsoft Windows 10 or higher
  - Microsoft .NET 7 Runtime (included in CSET installation)
  - Microsoft ASP.NET Core 7 Runtime (included in CSET installation)
  - Microsoft SQL Server 2022 LocalDB (included in CSET installation)
- MAC Not Supported

# CSET Tool Demo & Workshop



## Popular Assessments

**CISA Cross-Sector Cybersecurity Performance Goals (CPG)**
The CPGs are a prioritized subset of IT and operational technology (OT) cybersecurity practices that critical infr...

**CISA Ransomware Readiness Assessment (RRA)**
Ransomware poses an increasing threat and continues to rise as a top cyber threat impacting both businesses and ...

**NIST CSF: Framework for Improving Critical Infrastructure Cybersecurity v1.1**
This approach is a voluntary risk-based Cybersecurity Framework – a set of industry standards and best practices t...

**Network Diagram/Components Based Assessment**
A Network Architecture and Diagram Based assessment. This assessment requires that you build or import an ass...

**Land Mobile Radio Rapid Assessment (LMR)**
This module is designed to assist system owners in assessing key aspects of a LMR system's current cybersecurit...

## CISA Sponsored (Resilience and Maturity)

**CISA Cyber Infrastructure Survey (CIS)**
The CIS goal is to assess the foundational and essential cybersecurity practices of an organization's critical s...

**CISA Cyber Resilience Review (CRR)**
The CRR is a no-cost, voluntary, non-technical assessment to evaluate an organization's operational resilience an...

**CISA External Dependencies Management (EDM)**
The External Dependencies Management (EDM) Assessment evaluates an organization's manageme...

**CISA Ransomware Readiness Assessment (RRA)**
Ransomware poses an increasing threat and continues to rise as a top cyber threat impacting both businesses and ...

**CISA Minimum Viable Resilience Assessment (MVRA) - DRAFT**
MVRA assesses the critical service or services essential to the success of an organization's mission and, if disrupted...

## Maturity Models

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# Q&A

- QUESTIONS?
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