Introduction

• Upon completion of this presentation, you will understand:
  – The history of and future plans for ASSET
  – The purpose of ASSET
  – The capabilities of ASSET
  – Information security considerations of ASSET
Agenda

• Background
• Assessment Process
• ASSET Description
• Installation and Administration
• ASSET Demonstration
• Information Security Considerations
IT Security Self-Assessment

Background

- Federal IT Security Assessment Framework
- Government Information Security Reform Act
Federal IT Security Assessment Framework

- Five levels of IT security program effectiveness
- Each level contains criteria to determine whether the level is adequately implemented
- The degree of sensitivity of information must first be determined
- The asset owner determines whether the measurement criteria are being met
Framework Benefits

- Identifies a standard way of performing self assessments
- Provides flexibility in assessments based on the size and complexity of the asset
- Built on collaboration among the Federal CIO Council, OMB, GAO, NIST, the Congress, and Industry
Security Self-Assessment Guide for IT Systems

- Introduction
- Questionnaire structure
Self-Assessment Guide

Introduction

• Questions directed at the system
• Specific control objectives that a system can be measured against
• Blending requirements and guidance from GAO’s FISCAM and NIST documents
Questionnaire Structure

Cover Sheet
- Control of completed questionnaire
- System identification
- Assessor information
- Criticality of information

Questions
- Critical elements
- Subordinate elements
ASSET - Purpose

The purpose of ASSET is to assist managers in gathering system data and creating reports in support of NIST Special Publication 800-26 IT security self-assessment questionnaire.
Assessment Process
Assessment

The entire process of collecting and analyzing system data
Assessment Process Steps

Data Collection
– The process of gathering and entering system data
Assessment Process Steps

Reporting

– Creating aggregate data so that it can be analyzed
Assessment Process Steps

Analysis

– The process of understanding, evaluating, and making judgments upon a set of system data
ASSET Role

- Asset facilitates data collection and reporting and thus supports assessment process.
Roles and Responsibilities 1 of 5

Manager (CIO / Program Official)

Collector

Information Flow

Information Flow

Information Flow

Information Flow

Reporter

Subject Matter Expert (SME)
Roles and Responsibilities 2 of 5

Manager

– Individual(s) with the responsibility for the assessment
– Responsible for analysis of the results
Roles and Responsibilities 3 of 5

Reporter

– Must understand deployment, installation, and execution of ASSET
– Responsible for importing multiple system data into ASSET
– Ensures that all questions are answered for all systems
– Aggregates results from all systems within an agency or enterprise
– Generates reports
Roles and Responsibilities 4 of 5

Collector

– Ensures that all questions are answered for each system under a collector’s review
– Interacts with the SME to gather system information
– Responsible for conferring with SME(s) for clarification where necessary
– Enters individual system data into ASSET
Roles and Responsibilities 5 of 5

Subject Matter Expert

– Knowledgeable about the system or topic areas (i.e. physical security) being assessed
– Provides specific responses to assessment questions
– Interacts with the Collector on an as-needed basis
A typical assessment will have multiple ‘Collectors’ and one ‘Reporter’
ASSET Description
ASSET is comprised of two separate host-based applications
ASSET – System 1 of 3

Individual system information

ASSET – System

Individual system reports
System data
ASSET – System 2 of 3

- Provides for data entry and storage of individual system data
- Generates single system summary reports providing immediate picture of single system assessment results
- Reports are intended for the user who completes the questionnaire
- Tracks all collectors and SMEs who provide answers to ASSET questions
ASSET – System 3 of 3

- Reports can be exported to any popular spreadsheet or charting program
- Reports
  - Summary of topic areas by levels of effectiveness
  - List of N/A questions
  - List of risk-based decisions
  - System summary
ASSET – Manager

Individual system data → ASSET – Manager

→ Aggregated system reports
Individual system reports
ASSET – Manager 2 of 3

- Aggregates data from multiple systems so that agency-wide reports can be developed
- Tracks all collectors and SMEs who provide answers to ASSET questions
ASSET – Manager 3 of 3

• Intended to generate reports (exportable to any spreadsheet application) that are interpreted by the managers who request an assessment

• Reports
  – Summary of all systems
  – Summary of system types
  – Summary by system sensitivities
  – Summary by organization
ASSET Scope

- It assists in gathering data and reporting results for IT systems.
- It is a stand-alone java-based software application; host-based security is a must.
- It is the first of a number of modules that will assist IT security managers in providing for effective security.
ASSET Limitations

- It does not
  - Establish new security requirements
  - Analyze report results
  - Assess system or program risk
- It is not web-based (client:server)
- Users are responsible for security of data (host-based security)
Future Plans for ASSET

- Enhance current capabilities of ASSET
- Additional capabilities under consideration:
  - Performance measures
  - Plan of action and milestone report
  - Certification and accreditation
  - Linkage to system inventory
  - Customization of application
- What do you need?
ASSET Installation
Minimum System Requirements

• Hardware
  – Pentium II – 266 MHz processor

• Operating Systems
  – Designed to operate on all Windows 9X operating systems
  – Initial operating capability on W2000 Professional

• Memory Requirements
  – 120 MB free space
ASSET Installation

• Installation wizard –
  – Guides the user through installation process
  – Follows Windows conventions
ASSET Delivery Media

- **CD**
  - Contains all needed ASSET - System and ASSET - Manager files
  - User Manual and Help files
  - NIST Special Publication 800-26

- **Web site**
  - IT Security Self-Assessment web site will be developed to host ASSET software and documentation
  - Spreadsheet templates for report analysis
BREAK
ASSET – System Demonstration

- Log in
- New Assessment
- Existing Assessment
- Export Data
- Generate Individual System Reports
- Export Reports
ASSET - System Log In
ASSET - System
Open New / Existing Assessment
ASSET - System
New Assessment
ASSET - System Identification

![System Identification screenshot]
ASSET - System Policy Tab
ASSET - System Assessment Questions
ASSET - System Summary
ASSET - System
Export Data
ASSET – System Generate Reports
ASSET – System Export Reports

Save to tab delimited text file, compatible with spreadsheet applications.
Information Security Considerations
Data Sensitivity

- Agencies should determine report and data sensitivity
- Agencies are responsible for data protection
- ASSET does NOT provide for any security of data, such as encryption, while the data is stored or in transit
Data Sensitivity

- Application-based security is not provided for data transmitted between data collector and reporter
- ASSET uses Microsoft SQL Server Desktop Engine (MSDE) and therefore has the vulnerabilities of MSDE. Users should mitigate these vulnerabilities before using ASSET
- ASSET – System should be uninstalled after an assessment is completed as a best practice of all assessments
File Back-up Considerations

- Data collection efforts represent a substantial expenditure of labor.
  - ASSET saves the current file on specified intervals but does not provide automated back up for data.
  - Organizations should determine and implement an appropriate back up strategy.
Access Controls

• Access controls are provided by operating system log in requirements
• New ASSET user accounts are created when ASSET is installed
  – Log in consists of user name and e-mail address
• No password protection is provided for accessing application or data
Summary

- ASSET System and ASSET Manager work together to assist an organization in collecting and reporting IT security self-assessment data
Questions