



Fundamentals of SELinux – Detailed Syllabus

Course Description

Our two-day, hands-on training courses will teach you how SELinux can bolster the security of your data, your systems, and your organization. Topics include:

- An overview of its access control architecture
- The specific security challenges it was developed to address
- The differences between SELinux and other access control or security mechanisms
- An understanding of Type Enforcement concepts
- The fundamentals of SELinux policy language and how to write and analyze an SELinux policy

2 Day Course Content:

- Introduction to SELinux
 - Benefits
 - References
- Access Control Overview
 - Access Control Concepts
 - Standard Linux access control
 - SELinux access control
 - Access control policies (DAC, MAC)
 - Linux and SELinux comparison
- SELinux Policy High Level Concepts
 - Policy enforcement decisions
 - SELinux modes
 - Security attributes and contexts
 - Type Enforcement Access Control
 - Types
 - Classes
 - Permissions
 - Privilege Levels
 - Benefits and Challenges of Type Enforcement
- Solving Security Challenges using SELinux
 - System Integrity
 - Application Integrity
 - Least Privilege
 - Controlled Information Flow
 - Assured Pipelines
 - Domain Isolation
 - System Hardening
- Implementation Strategies

TRESYS

- Security Planning
- Choosing an SELinux platform
- Security Evaluation and Accreditation
- SELinux Policy Configuration and Development
- SELinux Policy Analysis
- Maintenance Planning
- SELinux Policy Language
 - Types and Attributes
 - Access Vector Rules
 - Type Transition Rules
 - Conditional Policy
 - Roles
 - Users
 - Multi-Level Security
 - Network Access Control
- SELinux Policy Development
 - Policy Development Steps
 - Workflow
 - Reading Audit Messages
- Writing Reference Policy Modules
 - Module-related constructs
 - Encapsulation
 - Interfaces and Abstraction
 - Writing Interfaces
 - Labeling policy
- Write an SELinux policy (for an application) (hands-on exercise)
- Perform analysis of an SELinux policy (hands-on exercise)