

# Hardening Linux and Windows servers according to CIS and STIG

Course code: LXHARD

In this four-day course, participants will gain both theoretical and practical skills in applying CIS and STIG recommendations, auditing, and automating hardening (Ansible, SCAP tools).

## Who is the course for

IT administrators, security specialists, DevOps/SecOps engineers.

## What you will learn

- Understand the principles of CIS and STIG, their differences, and practical application.
- Gain the ability to manually and automatically harden Linux and Windows servers.
- Develop skills in using audit tools (OpenSCAP, CIS-CAT, STIG Viewer / SCAP).
- You will have a ready-made Ansible playbook for hardening and reporting scripts.

## Prerequisite knowledge

Basic Linux and Windows administration (working with the command line, basic GPO/AD knowledge).

## Course materials

Presentations, PDF outlines, VM images/virtual machines, sample scripts and playbooks, participation certificate.

## Course outline

- Introduction + CIS for Linux & Windows
- Introduction to hardening: principles (attack surface minimization, least privilege), common threats and regulations (PCI DSS, NIST).
- Overview of CIS Benchmarks: structure, Level 1 vs Level 2, how to obtain and read the benchmark.
- Examples of CIS recommendations for Linux and Windows (accounts, services, logging, network).
- Practical exercise: analysis of CIS Benchmark (e.g., Ubuntu and Windows Server) and demo scanning (CIS-CAT Lite/Pro).
- STIG, comparison of STIG vs CIS + tools
- Introduction to STIG (DISA, CAT I-III), SCAP, differences compared to CIS, and when to use each standard.
- Working with STIG Viewer and SCAP tools, demo SCAP/OSCAP scanning.
- Group activity: comparing a specific rule (e.g., password policy) in CIS vs STIG.
- Hands-on: Hardening Linux
- Kernel & sysctl, systemd services, firewall (firewalld/ufw), file permission management, SELinux/AppArmor.
- Examples of CIS and STIG rules for Linux (explanation and impact).
- Practical lab: manual hardening of Ubuntu/RHEL according to CIS Level 1; implementation of selected STIG CAT I rules.
- Compliance verification: OpenSCAP / CIS-CAT scanning and result interpretation.
- Hands-on: Windows Hardening + Ansible Automation
- Hardening Windows Server (Group Policy, registry, firewall, Windows Defender), CIS and STIG examples (SMBv1, audit, ACL).
- Introduction to Ansible (inventory, playbooks) + overview of CIS/STIG roles and WinRM for Windows.
- Workshop: creating and running Ansible playbooks — Linux and Windows hardening.
- Final project: deploy the playbook and verify compliance (CIS-CAT / OpenSCAP).

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