

XCP-ng training

3 days (21 hours)

Presentation

Discover advanced solutions for resource and virtual machine management with our XCP-ng training course. This user-friendly, high-performance open-source virtualization platform will enable you to optimize your virtual workloads.

You'll learn to master concepts such as live migration, restore and backup virtual machines and virtual networking. In particular, you'll be able to create and monitor as many [virtual machines](#) as you like.

At the end of this course, you'll be challenged to acquire skills in virtualization, problem solving and all aspects of server management.

As with all our training courses, this one will introduce you to the latest version of XCP-ng (at the time of writing: [XCP-ng 8.2](#)).

Objectives

- Efficient use of the local management interface and Xen Orchestra
- Master the installation and initial configuration of XCP-ng
- Learn to create and manage Virtual Machines, resources and backups
- Implement backup and high-availability strategies

Target audience

- System and Network Administrators
- Developers
- IT engineers

Prerequisites

- Basic knowledge of systems administration
- Experience with virtualization

Technical requirements

- 16 GB RAM minimum - 32 GB RAM recommended

XCP-NG TRAINING PROGRAM

Introduction to XCP-ng

- Introducing XCP-ng: history, benefits and use cases
- Comparison with other virtualization solutions (VMware, Hyper-V)
- XCP-ng ecosystem: Xen hypervisor, management tools (Xen Orchestra)

Installing XCP-ng

- Hardware and software requirements
- Installation process and pools
- Migrating a system to XCP-ng
- Initial configuration: network and interface access

Local and large-scale management

- Using XCP-ng's local management interface
- Local management: XO Lite, XCP-ng API and xe CLI
- Large-scale management: Xen Orchestra Web UI, Xen Orchestra CLI and Xen Orchestra API
- Updating XCP-ng and managing additional packages
- Best practices and load balancing for virtual machines (VMs)

Configuring XCP-ng networks

- Basic network configuration in XCP-ng
- Configuration of physical and virtual networks (VLANs, bonds, private networks)
- Network security and VM isolation
- Network performance and troubleshooting
- Practical workshop on advanced network configuration

Storage management

- Storage in XCP-ng: SR, VDI, ISO SR

- Configuration of different types of storage (local, shared, iSCSI, etc.)
- Disk and volume management
- Storage performance and optimization
- Practical workshop on storage configuration

Virtual machine management

- VM creation and management
- Configuration of allocated resources (CPU, memory, disk, network)
- High availability for mission-critical VMs
- VM import and export
- VM snapshot and clone management
- Best practices for optimizing VM performance

Infrastructure as code

- Management tools and automation
- Management via Ansible
- Integration Netbox

Backup and replication

- Backup strategies
- Restore VMs, files and metadata
- Replication and disaster recovery
- Using cloud-based features for backup
- Practical workshop on setting up regular backups

Resource management

- CPU and RAM management
- GPU/vGPU configuration and PCI passthrough
- Supervision and alerts
- Practical workshop on optimizing computing resources

Diagnostics and troubleshooting

- Methodology for troubleshooting after an upgrade
- Diagnosis and resolution of common problems
- Analysis of log files
- Solving storage-related problems
- Installing Linux and Windows tools

User management and permissions

- User creation and management
- Roles and permissions under Xen Orchestra
- Securing access to XCP-ng and Xen Orchestra

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.