

# Course : IIS 10, web server administration for Windows Server 2019

*Practical course - 3d - 21h - Ref. IIC*

*Price : 2150 CHF E.T.*

You will master all the tools needed to install, configure and administer an IIS 10 web server under Windows 2019. You'll also learn how to set up, administer and control sites and applications, taking into account the security and performance constraints associated with this server.

## Teaching objectives

**At the end of the training, the participant will be able to:**

- ✓ How to set up an IIS server
- ✓ Learn how to secure an IIS server
- ✓ Maintaining an IIS server
- ✓ Manage IIS server performance

## Intended audience

Administrators and system engineers in charge of web server administration.

## Prerequisites

Good knowledge of web protocols and architectures. Basic knowledge of Windows Server 2019 administration.

## Practical details

Alternating conceptual presentations and practical work.

## Teaching methods

From 50 to 70% practical work.

## Course schedule

### PARTICIPANTS

Administrators and system engineers in charge of web server administration.

### PREREQUISITES

Good knowledge of web protocols and architectures. Basic knowledge of Windows Server 2019 administration.

### TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

### ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.

Participants also complete a placement test before and after the course to measure the skills they've developed.

## 1 Configuration, installation and migration

- IIS 10 architecture, HTTP/2, nano server, generic host header, HTTP 308.
- Role services, modules, native modules.
- Common HTTP features, application development.
- Health and diagnostics, safety, performance, management tools. Scalability.
- Prerequisites IIS, request processing, http.sys.
- Application pool, workflows, IIS core.
- Administration tools, WMI, PowerShell, AppCmd.
- Migration of web sites and applications, migrating a web site to IIS.
- Methodology for migrating an IIS 8.0/8.5 website to IIS 10.

### Hands-on work

Install IIS 10 with Server Manager, DISM and unattend.xml. Handle modules. Install IIS with PowerShell. Configure the server. Create virtual sites, applications and directories.

## 2 IIS service management

- Main IIS components.
- WAS the Windows Process Activation Service.
- W3SVC the World Wide Web publishing service.
- IISADMIN the IIS administration service. FTPSVC the FTP service, AppHostSvc the application support service.
- Web management service, ASP.NET state service.
- Post-installation configuration.

### Hands-on work

Manage links between IIS services, understand the role of IISReset.

## 3 Settings files

- XML schema, IIS\_schema.xml file, IIS schema validation.
- Configuration files, inheritance and conflicts.
- Machine.config, web.config root, applicationHost.config.
- Application web.config files.

### Hands-on work

Set up the applicationHost.config file.

## 4 Administration tools

- Internet Services Manager (IIS), management editor module.
- Netsh, administration with WMI Windows management instrumentation, Windows PowerShell.
- Microsoft.Web.Administration API, AppCmd commands.
- Administration delegation, remote administration, WMSVC Web management service.

### Hands-on work

Handling AppCmd, the one-stop shop for IIS server administration. Configure with PowerShell. Configure remote administration.

### TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

### TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

### ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

## 5 Application pools and sites

- Static sites, host header, ISAPI filter.
- Application pools, website structure.
- Web server configuration, inheritance and conflict.
- Site links, IP addresses and multiple ports.
- Host name, generic host name, virtual directory.
- Configure ASP.NET, PHP and Fast-CGI applications.

### Hands-on work

Configure DNS, create different websites, install an ASP.NET application, install a PHP application.

## 6 Installation defaults

- DefaultAppPool, default web site.
- Pool, process model, orphan processes.
- Quick protection in case of failure, retraining, UC.
- Web, behavior, follow-up on failed requests.

### Hands-on work

Manage HTTP flows, detect anomalies.

## 7 Configuring functions

- Default document, directory browsing.
- HTTP error pages, HTTP redirection, HTTP response headers.
- MIME, WebSocket, NUMA types.
- Dynamic site activation, dynamic HTTP.sys listening.

### Hands-on work

Set default documents, customize messages, redirect HTTP feeds.

## 8 Security

- The main attacks: how to defend yourself? Security tools in IIS.
- Anonymous authentication, Windows authentication, certificates.
- Authorization, virtual account, application pool identity.
- Request filtering, IP and domain restrictions, URL authorization rules.
- Best practices for securing IIS.

### Hands-on work

Create a secure HTTPS site, restrict access by IP address, allow non-anonymous access, manage NTFS permissions.

## 9 Troubleshooting and supervision

- Checks on users, devices and client browsers.
- Log format, improved logging.
- Event tracking: ETW integration.
- Monitoring of work processes, configuration of request follow-up.
- Backup and restore.

### Hands-on work

Configure log files, view log files in different formats, restore a website.

## 10 Performance management

- Dynamic site activation.
- Compression, static and dynamic caching.
- Performance analyzer, the counters to watch.
- Configure website and application pool performance.

### Hands-on work

Limit consumption by other sites, debug applications, analyze performance.

## Dates and locations

### REMOTE CLASS

2026 : 3 June, 14 Oct.