

FTTH PON Testing

This one-day course provides an overview of training of FTTH passive optical networks (PON) and how to test a network at every steps of its architecture. Using the complete FTTH testing products, all test phases will be covered: construction, activation and troubleshoot.

EXFO Equipment Required

Construction

- › OLS and OPM
- › OLTS
- › OTDR
- › FIP

Activation

- › PPM
- › OLS and OPM
- › Live OTDR
- › FIP

Troubleshooting

- › PPM
- › Live OTDR
- › FIP

Content

- › Fiber-optics basics
- › Major FTTH topologies
- › Standards
- › Passive equipment
- › Active equipment
- › Handling and care
- › Connector cleaning and inspection (all connector points)
- › Loss budget
- › Optical return loss
- › Loss and ORL testing with automated test set
- › OTDR theory
- › OTDR testing techniques
- › OTDR limitations
- › Reflectance and loss values
- › Service activation scenarios
- › Service activation testing
- › Hands-on session

Pre-Requisites

- › Basic comprehension of physics and mathematics
- › EXFO's FE-1031 – Basic fiber-optics and loss testing (IL and ORL) or equivalent

Methodology

The first part of this course consists of lectures and Power Point presentations, while the second part consists of specific hands-on testing exercises and experiments on critical parameters such as:

Construction

- › Bad connections
- › Macrobends
- › Bad splices

Activation

- › Bad connections at the drop terminal
- › Bad drop cables
- › Faulty ONT

Troubleshooting

- › Macrobends
- › Fiber breaks
- › Faulty splitters branches

In-field practice is also possible if the appropriate on-site resources are available.

Equipment

For the second part of this course, all equipment reviewed during this course – loss tests sets, FIP and OTDR – must be made available at the trainee's location. Rental arrangements can be made with EXFO should some equipment is not available.

Documentation

Attendees will receive a binder containing copies of presentations and other hand outs. An electronic version is also available if required.