

# XTRAN FOR SERVICE ENGINEERS – TRANSPORT Profile

# **Course description**

# Target Audience

XTran Service Engineers who are responsible for the configuration, daily maintenance and troubleshooting of XTran networks in the TRANSPORT sector.

## Course Prerequisites

Basic knowledge of telecommunications (IP and WAN technologies) and electronics.

## Course Objectives

After the training, the students should be able to:

- position XTran and MPLS-TP technology;
- o setup a basic XTran network
- setup a basic set of tunnels and Ethernet-services
- o demonstrate TXCare
- install and replace the HW components of an XTran network
- use the XTran Management System (TXCare) monitoring functions to indicate and solve alarms
- use the TXCare to set up tunnels and services for Ethernet & E1/T1 applications
- o use the TXCare to set up basic routing functionality
- use the OAM-features of TXCare to perform measurements
- o install TXCare and perform upgrades
- o perform the TXCare backup procedures

# Exercises

Hands-on training is included.

## Duration

5 days

#### **Contents**

The course "XTran for Service Engineers – Getting Started" is part of this curriculum.

# XTran for Service Engineers – Getting Started

For more detailed information: see the description of this course.

- Introduction into MPLS-TP & XTran
- XTran Essential Components
- XTran Getting Started
- Tunnels & Services
- o TXCare

### XTran for Service Engineers – In-Depth

#### MPLS-TP Technology

In this module we expand on the underlying principles of MPLS and MPLS-TP and its implementation in XTran.

#### TXCare

We will explain more TXCare features, like the upgrade process, the Remote Client and various maintenance topics.

### XTran Ethernet Interface Modules

In this chapter we present an overview of all XTran Ethernet interface modules.

The students will install/replace, configure applications and (re)connect peripheral equipment on different LAN and WAN modules.

We discuss and implement the basic routing functionality of the 9-L3A-L.

We will explain and use advanced Ethernet features as PoE, E-Tree. Additionally we discuss QoS options in XTran.

#### XTran Circuit Emulation Interface Modules

In this chapter we present an overview of all XTran CES interface modules.

The students will install/replace, configure applications and (re)connect peripheral equipment on the 4-E1-L IFM.

## O XTran OAM

We discuss the OAM-features of XTran: performance measurements, logging options and some troubleshooting exercises.

#### o XTran Troubleshooting

We discuss some tips and tricks for troubleshooting in XTran networks.