

## N50/N70/ETS FOR SERVICE ENGINEERS (Update after SE OTN-X3M)

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### Course description

- **Target Audience**

OTN Service Engineers who are responsible for the configuration, daily maintenance and troubleshooting of OTN networks that are based on N50/N70, eventually in combination with ETS.

- **Course Prerequisites**

Basic knowledge of Ethernet, IP and its protocols is required.  
Course “OTN for Service Engineers - X3M” or equivalent by experience.

- **Course Objectives**

After the training, the students will be able to:

- install and replace the HW components of an N50/N70/ETS-based network;
- use the OTN Management System (OMS) monitor function to indicate and solve alarms;
- use the OMS to set up the network database;
- use the FEM (Front End Manager) to configure Ethernet- and IP-features;
- install OMS and perform upgrades;
- perform the OMS backup procedures.

- **Exercises**

Hands-on training is included.

- **Duration**

4 days

### Contents

- **N50/N70/ETS – Installation**

In this part of the course we will explain how to set up a basic N50/N70/ETS network. We will learn how to install the hardware and how the nodes are connected via optical fiber.

- **OMS**

We will discuss the changes or preparations in OMS if the OTN-X3M network has also N50/N70 and/or ETS-nodes.

- **FEM**

The FEM (Front-End Manager) is used to configure Ethernet- and IP-features. The topics below will be explained and illustrated with exercises.

- SLAN-concept & services in the OTN-network
- VLAN
- Spanning tree options
- IGMP
- Routing : VRF, VRRP