NS1 - MARVELL 88E6061/6061B/6031 Ethernet switches

This course covers Marvell Link Street 100 Mbps Soho switches

Objectives

- Providing the basic knowledge on 802.3 and 802.1.
- Understanding the parameters that determine the QoS.
- Implementing the Dynamic Queue Limit architecture.
- Description of the Address Lookup engine.
- Clarifying the bridge loop prevention mechanism.
- Becoming familiar with the API defined by Marvell.

- This course has been delivered several times to companies involved in the design of embedded equipments.

Practical labs using the Marvell GUI allow attendees to understand the various operation modes offered by this class of switch devices.

A more detailed course description is available on request at training@ac6-training.com

Prerequisites

- Knowledge of IEEE 802.3 and IEEE 802.1: see our course Ethernet and switching, reference N1 - Ethernet and switchingcourse

Course Environment

- Theoretical course
  - PDF course material (in English) supplemented by a printed version for face-to-face courses.
  - Online courses are dispensed using the Teams video-conferencing system.
  - The trainer answers trainees' questions during the training and provide technical and pedagogical assistance.
- At the start of each session the trainer will interact with the trainees to ensure the course fits their expectations and correct if needed

Target Audience

- Any embedded systems engineer or technician with the above prerequisites.

Evaluation modalities

- The prerequisites indicated above are assessed before the training by the technical supervision of the traineein his company, or by the trainee himself in the exceptional case of an individual trainee.
- Trainee progress is assessed by quizzes offered at the end of various sections to verify that the trainees have assimilated the points presented
- At the end of the training, each trainee receives a certificate attesting that they have successfully completed the course.
  - In the event of a problem, discovered during the course, due to a lack of prerequisites by the trainee a different or additional training is offered to them, generally to reinforce their prerequisites,in agreement with their company manager if applicable.

Plan

100 Mbps ETHERNET BASICS

- MAC layer
- PHY layer
- Auto-negotiation

802.1Q BASICS

- Spanning tree
- VLAN tag
- Management functions
- Automatic address learning
- Handling multicasts, GVRP

INTRODUCTION TO 88E6061 SWITCHES

- Block diagram
- Application examples
- Software architecture

SWITCH CORE FUNCTIONAL DESCRIPTION

- Architecture, embedded memory
- Operation of the integrated MACs
- IGMP snooping
- Ingress policy
- Queue controller
- Egress policy
- Spanning tree support
- Handling of management frames

PHY INTERFACE

- Transmit PCS and PMA
- Receive PCS and PMA
- Far End Fault indication
- Auto MDI/MDIX crossover
- Accessing PHY registers, MDC/MDIO interface
- Register description
- Auto-configuration

SOFTWARE ARCHITECTURE

- Multi-layer architecture
- Source code organization
- Platform specific routines
- SMI interface functions
- Semaphore related routines
- Accessing global registers
- API layer

Renseignements pratiques

Duration : 3 days
Cost : 1650 € HT