

# Net.Campus

## Certified Allied Telesis Expert / Multicast Enterprise Solution

Certified Allied Telesis  
Expert (CAE)

Certified Allied Telesis  
Professional (CAP)

Certified Allied Telesis  
Technician (CAT)

### Introduction

This course is designed to teach attendees how to design, install and perform advanced multicast configuration on the Layer 2 and Layer 3 core switches. The participants will have the opportunity to practice in a lab environment.

<b>Duration</b>	Two days
<b>Delivery format</b>	Classroom based with hands on practice
<b>Certification</b>	CAE-M/ENT
	Attendees will have to pass a Web exam
	Valid for two years
<b>Intended audience</b>	Engineers who wish to plan, install and maintain multicast networks with Allied Telesis enterprise switches
<b>Prerequisites</b>	CAP/ENT
<b>Key products / technology</b>	AlliedWare Plus, x-Series switches

### Prerequisites

Candidates must be certified to the Allied Telesis Professional / Enterprise Solution (CAP/ENT) level.

### Objectives

After successful completion candidates will be able to:

- Demonstrate the ability to design an end-to-end multicast solution with different Allied Telesis enterprise products and by using multiple Layer 2 and Layer 3 multicast technologies and protocols.

## Learn More

For more information or further assistance please contact your local sales office.

 [alliedtelesis.com/support](http://alliedtelesis.com/support)

### Course Outline

#### Layer 2 and Layer 3 Multicast

This module describes Layer 2 and Layer 3 multicasting: the structure of a multicast network, the role of routers and switches in a multicast network, the differences between unicast forwarding and multicast forwarding. Candidates will study creating a forwarding tree in a Layer 2 multicast network using IGMP snooping and IGMP query and Layer 3 multicast forwarding with PIM sparse mode and Layer 3 multicast forwarding with PIM dense mode.

#### PIM Dense Mode

The module includes an overview of operations with PIM-DM, neighbour discovery, pruning and grafting, state refreshes, assert mechanism, generation ID and packet formats.

#### PIM Sparse Mode

This presentation includes a comparison between dense mode and sparse mode, an overview of PIM sparse mode, as well as BSR election and RP distribution, registering streams, tree information bases, obtaining a stream, joining and pruning PIM-SM packet formats.

#### Source-Specific Multicast

Overview of source-specific multicasting, changes made to IGMP and PIM to support SSM, terminology, the address range used and how to use older versions of IGMP with source-specific multicasting.

### TECHNICAL CERTIFICATION