COURSE NAME Advanced Networking and Integration Lab

FORMAT   Instructor-led training in a lab-intensive, realistic environment.

DURATION   One Week (32 hours over five days).

SCHEDULE   Mon-Thu 8:30am to 5:00pm with one hour for lunch and two 15-minute breaks

                  Fri 8:30am to 11:30am (Practical examination).

ASSESSMENT A series of lab exercises allow students to self-assess their comprehension of the material covered in the pre-requisite courses, Network Fundamentals and Advanced Networking and Integration-Online; followed by a comprehensive, examination on the last day of the course. Final grade is a composite of an online written exam and a final lab exam.

AUDIENCE

This course is targeted to seasoned building automation and control system technicians, application/field engineers, programmers who work with Alerton's BACtalk and Ascent control systems. It is recommended 1-2 years of field experience.

OVERVIEW

The Alerton Advanced Networking and Integration Lab, is the Fourth course in Alerton's technologies curriculum. Advanced Networking and Integration Lab is an instructor-led lab intensive training course wherein students configure and implement the BACtalk and Ascent products using BACnet/Ethernet and BACnet/IP protocols. The class also covers how to integrate the Alerton's legacy Ibex protocol and the Modbus protocol using the ACM global controller.

The course is designed to give Alerton dealers the knowledge and skills necessary to design, implement, and troubleshoot an Alerton Control System on a customer's enterprise network or on a network installed and managed by the dealer.

OBJECTIVES

After completion of this course, students should be able to:

- Identify the network interface cards (NICs) available in a computer
- Document the network addressing & configuration of available NICs within a computer
- Identify the quantity of BACnet network types available with the BACnet/Ethernet protocol
- Identify the Alerton devices that function as BACnet routers
- Upgrade a customer's Envision for BACtalk system to Compass
- Merge multiple projects into a single project
- Configure a system that has Compass server & client workstations
- Identify the quantity of BACnet network types available with the BACnet/IP protocol

Alerton Reserves the right to revise or update this training course syllabus without prior notice.

©Honeywell All Rights Reserved   Advanced Networking & Integration Lab Syllabus Rev001 03Jan2019

- Configure the Alerton system to communicate using the BACnet/IP protocol

- Identify the Alerton devices that can act as a BACnet Broadcast Management Device (BBMD) on a BACnet/IP network

- Configure a BBMD for multiple subnets

- Identify the Alerton devices that can act as a Public BBMD (support an IP Router running a Network Address Translation program) on a BACnet/IP network

- Understand when to implement both BACnet/IP and BACnet/Ethernet protocols on the same subnet

- Understand when to configure a Compass workstation to either "Use Local IP Address" or "Register with BBMD as Foreign Device"

- Understand when and where to use Wireshark captures as well as how to analyze the BACnet information contained in the packets

- Troubleshoot network communication issues having to do with BACnet/IP and TCP/IP by employing useful tools such as Wireshark

- Integrate an Alerton's legacy Ibex controller to an Ascent system using an ACM

- Integrate a third-party Modbus device to an Ascent system using an ACM

PREREQUISITES

- A working knowledge of computers and current Microsoft operating systems
- Successful completion of the Alerton Networking Fundamentals course or CompTIA Network+ certification
- Successful completion of the Alerton Advanced Networking and Integration-Online course
- Student must be an **Alerton Certified Engineer** (Includes any one of the following: BACtalk, Ascent, Ascent Engineering & Commissioning or Ascent Programming Certifications)

Alerton Reserves the right to revise or update this training course syllabus without prior notice.

©Honeywell All Rights Reserved   Advanced Networking & Integration Lab Syllabus Rev001 03Jan2019