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RedCONNEX Product Support Certification Program

Redline Certified Support Professional (RCSP) – AN5030 Course Description

Course name:

AN-50e-30e Operation, Installation Commissioning and Maintenance (AN-50e-30e OICM)

Objective:

The AN-50e-30e OICM certification course consists of 7 modules focusing on enabling the attendees acquire the following abilities through the 3-days of hands-on training:

- Understand the technologies enabling the AN-50e deliver 72 Mbps over the air at a range of over 60 miles while ensuring a BER level of 1E-09 (PER of 1E-06).
- Understand the application and working of the AN-30e TDM over Ethernet wireless solution supporting simultaneous transmission of TDM (full/fractional E1 and T1) traffic and IP data.
- Understand how the AN-50e/AN-30e OFDM engine eliminates multipath and overcomes selective frequency fading, in LOS, OLOS and NLOS deployments.
- Understand how the AN-50e/AN-30e address asymmetric traffic using dynamic TDD and dynamic Adaptive modulation for link adaptation on burst by burst basis.
- Understand the AN-50e platform products' operation and working at the Ethernet, MAC, PHY and RF stages and as a system in PTP and PMP applications.
- Learn the AN-50e PTP and PMP system installation, configuration and performance tuning in hands-on real world situation and hence be able to make the most optimal use of its features and transmission capabilities.
- Learn how the AN-30e can be provisioned to transmit data and TDM (E1/T1) simultaneously and understand the configuration performance parameters of the AN-30e
- Learn how the RedAccess (AN-50e/AN-30e Element Management System), can be used to manage the AN-50e and AN-30e networks elements.
- Learn effective and efficient methods of fault isolation trouble shooting of RF links deploying the AN-50e platform products and interference mitigation using product features.

Certification Criteria:

In order to receive the certification, students must:

- Pass the RCSP-AN-5030 certification exam

Course Duration: 3 days

Target Audience:

The target audience for this workshop includes Network Administrators, Installers, system analysts, product support groups.

Delivery format:

This course is Instructor-Led or Self-Paced-Learning for students with RCSA-AN-5030 certification. The instructor-led class will have hands-on training.

Pre-requisite Knowledge Requirement:

- The OSI network model, TCP/IP protocol suite, working of routers, bridges.
- The Transmit and Receive path of a digital communications system, Digital modulation schemes such as BPSK, QPSK, QAM, digital communications systems performance parameters such as BER, PER, Latency
- Radio Frequency (RF) Systems: Basic understanding of RF signal propagation as a function of signal frequency, path loss models, fading models, frequency selective nature of the wireless channel, channel delay spread and Doppler effect

RSCP-AN5030 Course Content Details

This course consists of 7 modules described below. The modular nature of the course makes it possible to customize the content to address learning requirements of different category of customer employees such as network administrators, System Engineers, technical managers, Installers, Field Support personnel and technicians

Module-1: AN-50e/AN-30e Overview, Application and Deployment

This module provides general information on Redline as a company, defines AN-50e PTP and PMP, defines AN-30e. The module discusses in detail the foundation technologies of the AN-50e/AN-30e such as OFDM and dynamic TDD, explains the various differentiators of the products, discusses link configurations, AN-50e/AN-30e applications deployment in various networks. Typical field examples of AN-50e PTP, PMP and AN-30e links are reviewed.

Module-2: AN-50e PTP Building Blocks, Config and Performance parameters

This module covers in a very detailed hands-on set up the AN-50e system elements, installation, configuration, management and performance tuning. This module provides for hands on training on interference source identification and mitigation techniques, RF link design using the link budget tool, software upgrade, grounding procedures and deployment rules, PTP application and deployment peculiarities.

Module- 3: AN-50e PMP Operation, Config and Performance Parameters

This module covers the operation and configuration of the AN-50e PMP system including base station (BS) and subscriber station (SS) configuration, CID assignment, QoS assignment and performance statistics. System configuration in typical deployment such VLAN environments, pass through of different traffic streams, and Link management are very thoroughly explained and exercised in hands on setup.

Module-4: AN-30e (TDM Over Packet Solution)

This module begins with a brief overview of the TDM systems and introduces the concepts of transporting TDM traffic on packet networks with an emphasis on TDM encapsulation in Ethernet frame. This module covers in details the AN-30e Wireless and TDM configuration parameters, setting the configuration parameters to the appropriate values for best performance. The module also discusses effective ways of the AN-30e configuration tuning and performance gauging.

Module-5: RedAccess(NMS for AN-50e/AN-30e)

This module covers the RedAccess capabilities to manage the AN-50e platform products, that is the AN-50e PTP, AN-50e PMP and the AN-30e. The module focuses on Node and network discovery, performance monitoring and Faults and Alarms.

Module-6: RedCare Services

This module covers the RedCare Premium Service, RedCare Enhanced Service, RedCare Basic Service. Customer care and system problem escalation process and the use of the RedCare Tool to open tickets, generate temporary option keys and get access to important product documentation are explained.

Module-7: Fault Simulation, Troubleshooting and Performance Validation

This module is the hands on part of the RCSP-AN-50e-30e course. Well known system fault scenarios are simulated, common field-found faults are inflicted on the system and get the students trouble shoot it. Students are provided an opportunity to apply their learning from the training and exercise product performance validation exercises.

During the execution of the exercises and hands-on work in this module, the student's performance is monitored and if the student is found not performing to the desired level, she/he can be asked to attend another session in order to qualify for the RCSP-AN-50e-30e examination.

More Information

For further information on training and certification, please contact the Redline Training Department at training@redlinecommunications.com.

About Redline Communications

Redline Communications is the leading provider of standards-based wireless broadband solutions. Redline's WiMAX Forum Certified™ systems and award-winning backhaul and transport products enable service providers and other network operators to cost-effectively deliver high-bandwidth services including voice, video and data communications. Redline is committed to maintaining its wireless industry leadership with the continued development of WiMAX and other advanced wireless broadband products. With more than 30,000 installations in 75 countries, and a global network of over 100 partners, Redline's experience and expertise helps service providers, enterprises and government organizations roll out the services and applications that drive their business forward. For more information, visit www.redlinecommunications.com.