VIAVI Solutions

xSIGHT User
Mobile Broadband (2G & 3G)

(VVS0009)

Course Outline

xSIGHT User - Mobile Broadband (2G & 3G)

This one day course provides network engineers responsible for the end to end assurance of the 2G / 3G Mobile Broadband networks with an understanding of the xSIGHT product portfolio using instructor led demonstrations of the xSIGHT products and student activities. The course is broken down into six sections and covers the principles behind the xSIGHT portfolio, the 2G / 3G Mobile Broadband network technology and also provides analysis of the key signaling procedures in terms of initial procedures, session management, data transfer and mobility.

Section 1: xSIGHT Product Familiarization

Duration: 1.5 hours

- Introduction to the xSIGHT Portfolio – centric to the xSIGHT products that customer has deployed
- High level capabilities of xSIGHT and product network integration
- Portal Navigation and Operation – including demonstration of xSIGHT product capabilities

Section 2: Network Orientation

Duration: 0.5 hour

- Network Architecture and Interfaces – orientation with the key elements and interfaces supporting 2G / 3G mobile broadband

Section 3: Initial Procedures

Duration: 1.5 hours

- Demonstration of the GPRS Attach on 2G / 3G network using PE Mobility, CEA and Session Trace
- 2G / 3G Packet Switched Identities
- End to end synopsis of identities encountered in the network and picked up by xSIGHT
- PLMN and Cell Selection in 2G / 3G – synopsis of events leading up to the attach process
- Complete breakdown of both the 2G / 3G GPRS Attach procedure
- Using xSIGHT to discover common failure scenarios
- Using xSIGHT PE Mobility to identify underperforming network elements involved in the GPRS Attach

Section 4: Session Management

Duration: 1.5 hours

- Demonstration of the PDP Context on either the 2G / 3G network using a combination of PE Mobility, CEA and Session Trace
- Using xSIGHT products to analyze typical fault scenarios based upon industry KPIs
- Session Management – covering the significance of a session and its relationship to the PDP Context Activation, Modification and Deletion procedures
- Breakdown of the 2G / 3G PDP Context Activation procedure
- Using xSIGHT to discover common failure scenarios
- Using xSIGHT PE Mobility to identify underperforming network elements involved in the PDP Context Activation

Section 5: Mobility in the Packet Core

Duration: 1 hour

- Demonstration of the Routing Area Update and RNC Relocation
- Complete breakdown of the Routing Area Update procedure
- Analysis of the 2G Packet Handover
- Complete breakdown of the RNC Relocation procedure in a 3G network
- Mobility procedures pertinent to 2G / 3G networks
- Demonstration of how the xSIGHT products can be used to analyze typical fault scenarios
- Using xSIGHT to discover common failure scenarios

- Using xSIGHT PE Mobility to identify underperforming network elements involved in the Routing Area Update and RNC Relocation procedures

Section 6: xSIGHT Session Trace

Duration: 0.5 hour

- Demonstration of how a Session Trace search is configured and executed
- Key stages associated with configuring a search in xSIGHT Session Trace
- Key techniques used in Session Trace in order to customize the displaying of results