Hands-On

5ESS Emergency Action and Recovery

Course Description

This Hands-On 5ESS Switch Emergency Action and Recovery course begins by presenting the 5ESS Switch structure, Administrative Module basics, Communication Module basics, Switching Module basics and pumpable peripheral units.

The course presents power considerations and the impact of power issues. The Administrative Module manual Emergency Action and Recovery lesson presents recovery procedures as stated in System Recovery document, 235-105-250 plus Processor Recovery Message (PRM) analysis, poke command definitions for the Emergency Action Interface (EAI) display, EAI Display attributes functions, critical Administrative Module hardware component impacts and Administrative Module Postmortem analysis.

The Switching Module manual Emergency Action and Recovery lesson presents recovery procedures as stated in System Recovery document, 235-105-250 plus 1800 Switching Module Inhibit and Recovery Control display definitions, Switching Module Progress Markers, Switching Module Phase Triggers, Switching Module Initialization Severity and Switching Module Initialization Postmortem / Event History analysis.

The Communication Module manual Emergency Action and Recovery lesson presents recovery procedures as stated in System Recovery document, 235-105-250 plus 1850 Communication Module Primary Inhibit and Recovery Control display definitions, 1851 Communication Module Mate Inhibit and Recovery Control display definitions, Communication Module Progress Markers, Communication Module Phase Triggers, Communication Module Initialization Severity and Communication Module Primary / Mate Initialization Postmortem and Event History analysis. 5ESS Dyna Text Switch documentation is referenced throughout this course.

The objective of 5ESS Switch Emergency Action and Recovery is to train maintenance personnel to perform Emergency Action Recovery procedures as defined in System Recovery document, 235-105-250.

Students Will Learn

- **State the service impact of a dead or initializing Administrative Module, Communication Module Processor and Switching Module Processor**
- **Identify the physical location of power circuitry and fuse assignments**
- **Identify manual Recovery Procedures for the Administrative Module in the System Recovery document, 235-105-250**
- **Identify manual Recovery Procedures for the Communication Module (CM2 and CM3) in the System Recovery document, 235-105-250**
- **Identify manual Recovery Procedures for the Switching Module (SM/SM2000) in the System Recovery document, 235-105-250**
- **Analyze Post Initialization printouts**
- **And More...**

Prerequisites

5ESS Switch Emergency Action and Recovery is a midlevel course addressing Alcatel-Lucents documented 5ESS Switch Emergency Action and Recovery procedures. Because of the technical level of this course, students should have the following prerequisites

Understand the functions of the 5ESS Switchs Modules and Units
&8722Administrative Module (AM)
&8722Communications Module (CM)
&8722Switching Module Processor (SMP) Module Controller and Time Slot Interchanger (MCTSI)
&8722Switching Module Peripheral Units, such as Line Unit, Access Interface Unit, Integrated Services Line Unit, Digital Line Trunk Unit, Digital Service Unit, etc.

Recognize the type of connections between 5ESS Switch Modules and Units
&8722Network Control and Timing (NCT/NCT2) Links and Time Multiplexed Switch (TMS) Links
&8722Peripheral Control and Timing (PCT) Links
&8722Peripheral Interface Data Bus (PIDB)
&8722Peripheral Interface Control Bus (PICB)
Familiar with using Alcatel-Lucents Input Manual (235-600-700) to develop and input messages into the 5ESS Switch
Familiar with using Alcatel-Lucents Output Messages Manual (235-600-750) to decipher output messages obtained from a 5ESS Switch
Ability to reference Alcatel-Lucents 5ESS Dyna Text Switch documentation

Course Outline

Lesson 1 5ESS Switch Basics
This lesson presents the 5ESS structure and how the different modules relate to each other. The Administrative Module portion of this lesson defines the functions of the Administrative Module and the service impact incurred if it initializes or becomes non-functional. The Communication Module Processor portion of this lesson presents its Primary versus Mate structure and the functions of the Communication Module Processor. The lesson also identifies the service impact incurred if the Communication Module initializes or becomes non-functional. The Switching Module Processor portion of this lesson defines the basic structure of a Switching Module and the functions performed by the Switching Module Processor. The lesson also describes the service impact caused by a Switching Module Processor initialization and inoperability. The lesson completes by identifying smart pumpable peripheral units and their ability to initialize.

Lesson 2 5ESS Power Circuitry and Fusing
The 5ESS Power Circuitry and Fusing are critical components to its operation. 5ESS power circuitry and fusing arrangements usually function very reliably but, periodically, do incur problems. This lesson presents power from the Power/Global Power Distribution Frames to the circuits they feed. This lesson addresses Power Buses, Power Filters, Filter Fuses, Load Fuses, Circuit Fuses, Power Converters and procedures to work on these components. The lesson also addresses System Recovery, 235-105-250, procedures to care for power problems.

Lesson 3 Administrative Module Emergency Action and Recovery

This lesson addresses Administrative Module manual Emergency Action and Recovery procedures as presented in Alcatel-Lucents System Recovery document, 235-105-250. Initially, the students are required to locate Administrative Module recovery procedures in the System Recovery document. From this point, the different procedures are explained. When the System Recovery, Administrative Module procedures address Processor Recovery Messages (PRMs), the lesson uses Alcatel-Lucents Processor Recovery Messages Manual, 235-600-601, to decipher the PRM messages. When the System Recovery document discusses the Emergency Action Interface (EAI) display, the lesson explains and defines the different indicators and poke commands on the display. The lesson also relates EAI items to their physical locations on the Administrative Module. During this lesson the different Administrative Module initialization levels are described and their impact on the Administrative Module and 5ESS System Operation are discussed. The lesson goal is to assist the student in becoming comfortable with the System Recovery document and to understand the procedures presented in it.

Lesson 4 Administrative Module Postmortem Analysis

This lesson presents procedures for Administrative Module Postmortem analysis. Subsequent to an Administrative Module recovery, it is important to identify why the Administrative Module initialized so the initialization does not reoccur. This lesson identifies how to obtain an Administration Module Postmortem printout and how to analyze it.

Lesson 5 Switching Module Emergency Action and Recovery

This lesson addresses manual Switching Module Emergency Action and Recovery procedures as presented in Alcatel-Lucents System Recovery document, 235-105-250. Initially, the students are required to locate Switching Module recovery procedures in the System Recovery document. From this point, the different procedures are explained with emphasis placed on SM/SM-2000 Initialization Faults and SM/SM-2000 Initializations. The lesson also briefly addresses Peripheral Unit failures. The lesson defines the indicators and poke commands on the 1800 Switching Module Inhibit and Recovery Control display along with their impact on the Switching Module. This is followed by a description of the Switching Module Progress Markers, Phase Triggers and the severity of the different levels of Initialization. The lesson goal is to assist the student in becoming comfortable with the System Recovery document and to understand the procedures presented in it.

Lesson 6 Switching Module Postmortem / Event History Analysis

This lesson presents procedures for Switching Module Initialization Postmortem and Event History analysis. Following a Switching Module recovery, it is important to identify why the Switching Module initialized so the initialization does not reoccur. This lesson identifies how to obtain a Switching Module Postmortem / Event History printout, output messages for the last initialization and how to analyze the Postmortem / Event History printouts.

Lesson 7 Communication Module Emergency Action and Recovery

This lesson presents Communication Module manual Emergency Action and Recovery procedures as presented in Alcatel-

Lucents System Recovery document, 235-105-250. Initially, the students are required to locate the Communication Module recovery procedures in the System Recovery document. From this point, the lesson presents System Recovery procedures for:

- ? Administrative Module Communication Module Isolation
- ? Communication Module Duplex Hardware Failure
- ? Communication Module Unit Hardware Problems
- ? Communication Module Processor Initialization

The lesson also identifies the recovery differences between the CM2 and CM3 Communication Module configurations. The Communication Module Primary Inhibit and Recovery Control display 1850 and the Communication Module Mate Inhibit and Recovery Control display 1851 are presented next. This includes defining the indicators and poke commands on the displays, identifying the Communication Module Progress Markers, listing the Communication Module Phase Triggers and defining the severity of the different levels of Initialization. The lesson goal is to assist the student in becoming comfortable with the System Recovery document and to understand the procedures presented in it.

Lesson 8 Communication Module Postmortem / Event History Analysis
This lesson presents procedures for Communication Module, Primary and Mate, Initialization Postmortem and Event History analysis. After a Communication Module recovery, it is important to identify why the Communication Module incurred the problem so it will not reoccur. This lesson identifies how to obtain a Communication Module Primary and Mate Postmortem / Event History printout, output messages for the last initialization and how to analyze the Postmortem / Event History printouts.

Delivery Method

Instructor-Led with numerous Hands-On labs and exercises.

Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

Course Length

4 Days