

PGW 2200 Training overview

Course duration: 5 days

PGW software overview

- Basic system commands
- Basic element commands
- Starting and stopping the PGWs
- Unix system information retrieval
- PGW reference material on CCO
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Redundancy and Failover for SS7 Interconnect Solutions for Voice Calls

- Explain Redundancy and Failover architecture
- Explain Redundancy and Failover operations
- Configure the redundant PGW2200 and execute Failover procedures

SS7 Overview: Communicating between SS7 Devices

- Describe the SS7 signaling network
- Explain the function of the MTP layers SS7 Interconnect for Voice Gateways, including the functions of the MTP2 signaling units

Configuring the SLT

- Explain SLT functionality
- Troubleshoot and debug SLT operation
- Describe SS7 signaling backhaul over IP
- Configure the SLT for IP and SS7 Connectivity
- Provisioning SS7 and bearer trunks

Optional - Configuring the IP Transfer Points (ITPs)

- Explain ITP M3UA SUA functionality
- Troubleshoot and debug ITP operation
- Configure the ITP for IP and SS7 Connectivity

Provisioning the PGW2200 for SS7 Interconnect Support

- Configure and deploy SS7 and Bearer trunks on the PGW
- Document PGW2200 configuration parameters
- Use MML to configure and verify components on the PGW2200

Export PGW provisioning

- Export all PGW configuration files
- Locate configuration information in .dat files
- Viewing Active Sessions
- Uploading/Downloading Configuration

PGW Least Cost routing

- Load sharing and Percentage based Routing
- Percentage based routing

Gateway, RLM and NFAS:

Gateways and MGCP and Trunk Group configuration

- MGCP AS5400 configuration
- PGW configuration MGCP
- PGW configuration TRNKGRP
- PGW configuration IPROUTES

SIP configuration

- SIP Automatic Switchover Using Dual-VLAN
- SIP Automatic Switchover Using Dual-VLAN
- SIPPATH and Siplnk
- Incoming SIP Trunkgrp
- Outgoing SIP Trunkgrp

SIP DNS and DNS Provisioning

- SIP DNS Entries
- Using Siptool to debug and trace SIP
- Filter Configuration

Debugging PGW issues:

- Snooping
- PGW MML tracing
- PGW Simwriter

Dial plans and Simwriter

- PGW call analysis and routing stages
- Pre-Analysis stages
- Dial Plan Selection
- A & B number analysis
- Simwriter: /opt/CiscoMGC/bin/simWriter

PGW Logs:

- MML logs
- Alarm logs
- PGW debug levels
- Managing log rotations
- Cron jobs which manage the log rotation

PGW Backups to NFS mounted machine:

Patching the PGW

- Patching overview
- Patch set combinations
- Understanding the changes in each new patch
- Retrieving Patches from CCO
- Preparing patches on PGW

PGW Security:

- SSH installation and configuration
- Restricted MML access

Optional Topics

CDR configuration options.

MGCToolkit

Snooper: Advanced features of Cisco's IP based protocol analyser

SNMP configuration and forwarding to NMS platform

Syslog forwarding to syslog server

Classroom requirements

Fully redundant PGW test platform

Instant messenger and Internet access

Whiteboard

Overhead projector

Each student with own laptop or computer
Direct IP access to both Lab and production system from Classroom
Optional but useful: Tracing machine with Wireshark (Ethereal) located on PGW LAN where all SS7 / SIP / RLM messaging is port-spanned to.

Prerequisites

The following prerequisites are required for all students:

- UNIX
- CCNA or equivalent
- SS7 fundamentals
- SIP fundamentals

Not covered

- Building the Solaris machines or installing PGW software can't be covered under the timeframe of this course. This subject would require a separate 5 day course