Ribbon Academy
Cloud and Edge
Customer Course Catalog

19-Dec-23

Introduction

Ribbon believes that the best customer is an educated customer.

Our Education Services department has been instructing customers on the benefits of Ribbon technology and solutions for decades. Our courses are available on a wide range of topics, from network provisioning to advanced network service development and multivendor interworking. Each class is led by an experienced, certified instructor with deep knowledge of real-time communications disciplines including voice, interworking of data networks, security, Unified Communications, service definition, wireless/broadband technologies, and database design.

Our approach is simple and effective: experienced teachers, small classes, stimulating lesson plans and hands-on laboratories. Instructor led workshops have a maximum of 12 students so that classes are interactive, and an effective transfer of knowledge is achieved.

Classes are available through a variety of methods:

Open enrollment classes hosted at a Ribbon or partner location. Training is offered at any of the following facilities: Plano (Texas), RTP (North Carolina), Prague (Czech Republic), and Maidenhead (UK). In addition, Ribbon partners with Westcon to host open enrollment sessions in the UK at their London, Crawley and Bracknell locations. Ribbon provides a training curriculum designed to meet the day-to-day requirements of our customers as they test, deploy and manage Ribbon products. Course lengths range from one to five days, depending on subject matter and course objectives.

Open Enrollment Virtual instructor-led training. Customers can receive live, interactive training from a Ribbon trainer from their secure location(s). Available through Microsoft Teams and a remote laboratory environment accessed through a PC or laptop browser for a maximum of 12 students. Students receive instruction from the same instructors who teach face to face classes. The same content is addressed as in live classes including hands-on access to lab systems. Using the remote lab capability, instructors are able to virtually look over the shoulder of students and provide 1:1

Customer dedicated classes. Ribbon's courses can be delivered in a private session dedicated to the specific needs of the customer. Customers can attend training at a Ribbon Training Center worldwide, online in a virtual session or at the customer location. Customers will need to provide the necessary environment for instructing (i.e., wide screen LCD projector, seating, network connectivity, computers for each attendee). Contact your Ribbon sales representative for further information on how to purchase a class dedicated to a customer.

Course Catalog by Function

Ribbon offers training courses designed to ensure our customers are capable of operating Ribbon products. Our courses are comprised of self-paced courses (eLearning) and in-depth Instructor led courses (face to face or virtual) that provide extensive hands-on exercises. Some courses are offered in a blended learning solution which is the combination of self-paced and leader led training. Information about classes scheduled to be held at a Ribbon facility or in a virtual environment are posted on the Ribbon Training Page.

Applications

AS11 - Communications Application Server (AS) – Standalone Overview
1 Day – Self-Paced

AS21 - Communications Application Server (AS) - Standalone Administration, Maintenance, Provisioning and Fault Management
4 Days – Leader-Led

AS30 - Communications Application Server (AS) - Standalone Accounting
1 Day – Self-Paced

AS10 - C20 Communications Application Server (AS) - Overview
1 Day – Self-Paced

AS20 - C20 Communications Application Server Administration, Maintenance, Provisioning and Fault Management
4 Days – Leader-Led

ASD15.0 – AS15.0/MCP_22.0 Feature Delta Overview
1 Hour – Self-Pace

GBM15 - GENView Billing and Mediation Operators Course
2 Days – Self-Paced

PP10 - Ribbon Provisioning and Portals Overview
1/2 Day – Self-Paced

PP15 - Ribbon Provisioning and Portals System Administration
1 Day – Leader-Led

PP20 – Ribbon Provisioning and Portals – Setup, Administration, Provisioning, Fault Management, Reporting and Auditing
4 Days – Leader-Led

RAMP10 — Ribbon Application Management Platform Overview
2 Hours – Self-Paced

RAMP15 — Ribbon Application Management Platform
2 Days – Leader-Led

RAMP16 — RAMP Implementation
1 Day – Leader-Led

REMS10 — Ribbon Insight Element Management System Overview
1 Hour – Self-Paced

REMS15 — Ribbon EMS Support
1 Day – Leader Led

REMS17 — Ribbon EMS Cloud Support
1 Day – Leader-Led

RIDH10 — Ribbon Identity Hub (IDH) Overview
2.25 Hrs – Self-Paced

RIDH11— Ribbon Identity Hub (IDH) for Enterprise Overview
2.3 Hrs – Self-Paced

RSTI10 — STIR/SHAKEN & Ribbon Secure Telephone Identity (STI) Overview
1.5 Hrs – Self-Paced

RSTI15 — Ribbon STI – Operations, Administration and Ribbon Element Provisioning
3 days – Leader-Led

SPBX15 - C20 SIP-PBX Trunk Provisioning
2 Days – Self-Paced

SPBX16 - AS Standalone SIP PBX Trunking Configuration, Operations and Administration
2 Days – Leader-Led

VNFM15 - VNF Manager (VNFM) Installation, Operations, Administration, and Maintenance
2 Days – Leader-Led

VS10 – Voice Sync Solution Overview
2 hours – Self-Paced

RC15 – Ribbon Connect Service Portal Operations and Support
1 Hour – Self-Pace

RC16 – Ribbon Connect for Operator Connect Service Portal Provisioning
1 Hour – Self-Pace

RP15 - Ribbon Analytics Basics
2 Days – Leader-Led

RP26 - Ribbon Analytics Advanced
2 Days – Leader-Led

GMS16 - Media Server (MS) Operations, Maintenance and Configuration
2 Days – Self-Paced

TES20 - Tactical Edge Solution: Provisioning, Operations, Administration, and Fault Management
2 Days – Leader-Led

TES40 - Tactical Edge Solution Deployment
2 Days – Leader-Led

Call Control

C1511 — C15 Product Overview and Fundamentals
1 Day – Self-Paced

C1515 — C15 Operations, Maintenance and Fault Management
5 Days – Leader-Led

C1520 — C15 Line Administration
1 Day – Self-Paced

C1521 — C15 Business VoIP Configuration and Provisioning
3 Days – Leader-Led

C1535 — C15 Translations
5 Days – Leader-Led

C310 — C3 Signaling Controller Overview
3 Hours – Self-Paced

C20RMS11 - C20 on RMS Solution Overview
1 Day – Self-Paced

C20RMS15 - C20 on RMS Solution Operations, Maintenance and Fault Management
5 Days – Leader-Led

C20RMS35 - C20 on RMS Class 5 Planning & Capacities
1/2 Day – Self-Paced

CallP26 - Advanced Call Processing Tools for Trunks
4 Days – Leader-Led

DSC20 - DSC - STP Operations, Administration, Maintenance, and Provisioning
4 Days – Leader-Led

DSC21 - DSC - Diameter Operations, Administration, Maintenance, and Provisioning
4 Days – Leader-Led

GEN11 - C20 on GENiUS Solution Overview
1 Day – Self-Paced

GEN15 - C20-GENiUS - Operations, Maintenance, and Fault Management
5 Day – Leader-Led

GEN35 - C20 on GENiUS Class 5 Planning & Capacities
1/2 Day – Self-Paced

GMS15 - Ribbon Media Server Operations and Provisioning
2 Days – Self-Paced

GVM15 - GENview Manager Operations
2 Days – Leader-Led

NPM35 - CVoIP: Network Patch Manager
1/2 Day – Self-Paced

OSSG20 - C20 OSSGate and Servord+
1 Day – Self-Paced

PSX10 — PSX Overview
3 Hours – Self-Paced

PSX Support Blended Learning Course

- Part 1: PSX11 – PSX Support Technical Prerequisites – 2 Days Self-Pace
- Part 2: PSX20 – PSX Support Practical Exercises – 2 Days Leader-Led

PSX36 — PSX Cloud Support
4 Days – Leader-Led

SG10 — Signaling Gateway Overview
1 Day – Self-Paced

SP2K15 - Signaling Platform 2000 Operations, Administration, Maintenance and Provisioning
3 Days – Leader-Led

SST16 - C20 on GENiUS/RMS - Session Server Trunks Provisioning and Maintenance
3 Day – Leader-Led

UXLA37 - C20 Universal Translations
5 Days – Leader-Led

vC2010 - Virtual C20 Solution Overview
1 Day – Leader Led

vC2011 - Virtual C20 Solution Overview
1 Day – Self-Paced

vC2015 – Virtual C20 Solution Operations, Maintenance, and Fault Management
5 Days – Leader-Led

vC2035 – Virtual C20 Class 5 Planning & Capacities
2 Days – Leader-Led

XLA35 - C20 Basic Translations
5 Days – Leader-Led

Media Gateways

C3G915 — C3 Hosted Converged Gateway Operation, Administration, Provisioning and Maintenance
5 Days – Leader-Led

C20G915 - G9 Converged Gateway - Operations, Administration and Maintenance Deploy with C20
3 Days – Leader-Led

G515 - Line Access Gateway
2 Days – Leader-Led

G5SE10 - G5 SIP ESA Overview
1/2 Day – Self-Paced

G610 - Universal Media Gateway Basic Overview
4 Hours – Self-Paced

G616 - Universal Media Gateway Operations, Administration and Maintenance for Packet Line Gateway and Trunk Gateway
3 Days – Leader-Led

G910 - Media Gateway Basic Overview
4 Hours – Self-Paced

GSX20 — GSX Trunk Provisioning (ISDN PRI & ISUP)
1 Day – Self-Paced

WRG15 — WebRTC Gateway Operations and Configuration
1 Day – Self-Paced

Session Border Controllers – Security

EdgeMarc & EdgeView Implementation and Support Blended Learning Course

- Part 1: EMV11 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites – 2 Days Self-Pace
- Part 2: EMV20 – EdgeMarc & EdgeView Implementation and Support Practical Exercises – 2 Days Leader-Led

QSBC10 – Q-Series SBC Overview
1/2 Day – Self-Paced

QSBC15 – Q-Series SBC and GENView-RSM Fundamentals, Operations and Maintenance
1 Day Self-Paced

QSBC25 – Q-Series SBC Recovery, Security and Troubleshooting
1 Day – Self-Paced

QSBC26 – Q-Series SBC Advanced Configuration and Operations
1 Day – Self-Paced

RE8K20 — Ribbon Edge 8000 Implementation and Support
3 Days – Leader-Led

RFE20 – Ribbon Federal Edge Implementation and Support
3 Days – Leader-Led

SBCC10 — SBC Core Overview
4 Hours – Self-Paced

SBC Core Support Blended Learning Course

- Part 1: SBCC11 – SBC Core Support Technical Prerequisites – 2 Days Self-Pace
- Part 2: SBCC20 – SBC Core Support Practical Exercises – 3 Days Leader-Led

SBCC22 — SBC Core Cloud Support
4 Days – Leader-Led

SBCC23 — SBC Core Advanced Configuration and Operations
4 Days – Leader-Led

SBCC24 - SBC Core Direct Routing Configuration
1.5 Hrs – Self-Paced

SBCE10 — SBC Edge Overview
1/2 Day – Self-Paced

SBC Edge Support and Implementation Blended Learning Course

- Part 1: SBCE11 – SBC Edge Support and Implementation Technical Prerequisites – 2 Days Self-Pace
- Part 2: SBCE20 – SBC Edge Support and Implementation Practical Exercises – 2 Days Leader-Led

APPLICATIONS

AS11 — Communications Application Server (AS) – Standalone Overview

Course Description:
This course provides a technical overview of the Application Server – Standalone configuration.

Intended Audience:
Managers, administrators, and anyone needing a technical overview of the Application Server – Standalone

Key Topics:

- Identify the AS subscriber services and applications.
- Describe the OAMP functions of the System Manager.
- Describe the purpose of the Provisioning Manager.
- Describe the AS call processing components.
- Identify AS Media and voicemail servers.
- Learn how to access the AS GUI interfaces.
- Describe the purpose of the Session Border Controller.

Objectives:
Upon completion of this course, you will be able to:

- Identify the types of subscriber services and key concepts provided by the Application Server – Standalone configuration.
- Describe the System Manager and the GUI used for the system configuration, fault, and performance management of the Application Server – Standalone configuration.
- Describe how the Provisioning Manager is responsible for the creation and customization of customer-unique data in the Application Server – Standalone configuration.
- Describe the purpose of each of the Application Server – Standalone call processing components.
- Describe the Media Application Server and the GUI used for the configuration, fault, and performance management of the MAS in the Application Server – Standalone configuration.
- Describe the Session Border Controller in the Application Server – Standalone configuration.
- Describe each process used for accessing the Application Server applications and why each access process would be used.

Prerequisite Skills: None

Prerequisite Courses:
None

Course Length:
1 Day – Self-Paced

Back to Course Listing

AS21 — Communications Application Server (AS) - Standalone Administration, Maintenance, Provisioning and Fault Management

Course Description:
The purpose of this course is to teach students Provisioning, Administration, Maintenance, and Fault Management tasks for the AS Application Server Standalone platform.

Intended Audience:
This course is designed for people interested in learning about Provisioning, Administration, Maintenance, and Fault Management tasks for the AS Standalone.

Key Topics:
- Element Manager Access
- Network Element Administration
- Managing Domains
- Managing Telephony Routes
- Managing Users
- Provisioning a SIP Gateway
- Routine Maintenance
- Fault Management

Objectives:
Upon completion of this course, you will be able to:
- Understand the element managers by performing navigational tasks
- Administer the element managers by building user accounts
- Understand the relationship between domains and subdomains
- Describe how telephony routes are used to perform translations
- Use the provisioning client to manage subscribers
- Manage gateway service nodes and trunks
- Perform network maintenance activities
- Maintain the network elements using the fault management systems

Prerequisite Skills:
None

Prerequisite Courses:
AS11 or AS12 Application Server (AS) – Standalone Overview

Course Length:
4 Days – Leader-Led

Back to Course Listing

AS30 — Communications Application Server (AS) - Standalone Accounting

Course Description:
This course teaches students how to manage and interpret the Internet Protocol Detail Record (IPDR) for Communication Application Server - Standalone.

Intended Audience:
Managers, administrators, and anyone responsible for the management of accounting information in the Communication Application Server - Standalone.

Key Topics:

- Introduction to the Accounting Manager
- Accounting Manager
- Internet Protocol Detail Record (IPDR) interpretation

Objectives:
Upon completion of this course, you will be able to:

- Describe accounting terms and concepts in the Communication Application Server- Standalone configuration.
- Describe how to configure the Accounting Manager and access the Accounting Manager files.
- Interpret the Internet Protocol Detail Record (IPDR) accounting files and records generated in various call flow scenarios.

Prerequisite Skills:
None

Prerequisite Courses:
AS11 or AS12 - Communication Application Server (AS) – Standalone Overview

Course Length:
1 Day – Self-Paced

Back to Course Listing

AS10 - C20 Communications Application Server (AS) - Overview

Course Description:
This course provides a technical overview of the C20 – Application Server configuration.

Intended Audience:
Managers, administrators, and anyone needing a technical overview of the C20 – Application Server.

Key Topics:

- Identify the AS subscriber services and applications.
- Describe the OAMP functions of the System Manager.
- Describe the purpose of the Provisioning Manager.
- Describe the AS call processing components.
- Identify AS Media and voicemail servers.
- Learn how to access the AS GUI interfaces.
- Describe the purpose of the Session Border Controller.

Objectives:
Upon completion of this course, you will be able to:

- Identify the types of subscriber services and key concepts provided by the C20 – Application Server configuration.
- Describe the System Manager and the GUI used for the system configuration, fault and performance management of the C20 – Application Server configuration.
- Describe how the Provisioning Manager is responsible for the creation and customization of customer-unique data in the C20 – Application Server configuration.
- Describe the purpose of each of the C20 – Application Server call processing components.
- Describe the MAS and the GUI used for the configuration, fault and performance management of the MAS in the C20 – Application Server configuration.
- Describe the Session Border Controller in the C20 – Application Server configuration.
- Describe the process of provisioning a C20 – Application Server user.
- Describe each process used for accessing the Application Server applications and why each access process would be used.

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
1 Day – Self-Paced

Back to Course Listing

AS20 - C20 Communications Application Server Administration, Maintenance, Provisioning and Fault Management

Course Description:
The purpose of this course is to teach students how to provision, maintain, administer, and troubleshoot the C20 hosted Communications Application Servers.

Intended Audience:
This course is designed for people interested in learning about Provisioning, Administration, Maintenance, and Fault Management tasks for the C20 hosted Communications Application Servers.

Key Topics:

- Infrastructure Configuration
- Element Manager Access
- Network Element Administration
- Managing Domains
- Manage Subscribers
- GENCom Client
- Routine Maintenance
- Fault Management

Objectives:
Upon completion of this course, you will be able to:

- Correlate key data across network components
- Navigate the Provisioning Client, the SMCG, and the MAS GUI
- Create and manage User Accounts
- Manage Domains, Locations, and Services
- Navigate OSSGate and use the Batch Provisioning tool
- Navigate the Personal Agent and the GENCom Client
- Perform maintenance on server components
- Manage faults on the server platforms

Prerequisite Skills:
None

Prerequisite Courses:
AS10 or AS13 – C20 Application Server (AS) Overview

Course Length:
4 Days – Leader-Led

Back to Course Listing

ASD15.0 – AS 15.0 / MCP_22.0 Features Delta Overview

Course Description
This course provides personnel with an overview of the new features added in AS 15.0 – (MCP_22.0).

Intended Audience
Managers, technicians, and anyone needing to know what is new in AS 15.0.

AS 15.0 new features:

- Reduction of the Platform-Core Dependency with the introduction of the Ribbon Automation Framework
- Upgrade Wizard Replaced with Ribbon Automation Framework
- Migration (Major Software Upgrade) to AS 15.0 using Ribbon Automation Framework
- Support for RHEL8-based PLE5 as Guest OS
- Ribbon Automation Framework as a Replacement for the Install Wizard
- System Engineering Parameters Preserved after Upgrade
- AS Image-Based Software Delivery
- VMWare Tools Integration into PLE5
- AS Endpoint Device Provisioning
- Enhanced Support for Operational Measurement Data Storage
- MAS Support for PLE5
- MAS Manual Install/Upgrade Procedure Productization for MAS20.0/AS15.0
- Increase MAS Conferencing MeetMe Participants from 250 to 350
- MAS Quantum Security Removal and Replacement
- Service Anywhere across Multiple AS Systems
- Service Anywhere Across Multiple AS Systems with Line Service Set
- Service Anywhere Continuity Plan for Dynamic SIP PBX
- Network Wide Call Admissions Control Counting with Ringing Session Counts
- Flexible Presentation Number Screening
- Advertised Trunk Groups Routing for Dynamic and Static PBXs
- Logging Web Services added to Flight Recorder
- AS Integration with the Ribbon Database
- Call Trace for SIP Calls
- AS Billing Interface Enhancements
- Simplified GMS Maintenance Release Patch Upgrade Procedure
- Disposable AS Virtual Machines and Personalities
- System Overload and Performance Improvements
- Overwrite From Header with Public Charge Number for Originated Call
- Call Return Based on From Header
- Microsoft Teams Plugin to Enable AS Call Control
- AS Support for VMware Cloud Director

Prerequisite Courses: None

Course Length: Self-Pace 1Hour

Back to Course Listing

GBM15 — GENView Billing and Mediation Operators Course

Course Description:
The objective of this course is to provide the students with the knowledge and experience that they will need to navigate, monitor, and perform daily or weekly tasks on the GENView Billing and Mediation solution. Additional notes and explanations are covered to ensure the students understanding of the topics.

Intended Audience:
Operators, Technicians, and Support Personnel who will be supporting GENView Billing and Mediation Platform.

Key Topics:

- Introduction to the GENView Billing and Mediation solution
- Overview of the GENView Billing and Mediation solution
- GENView Billing and Mediation Web Interface
- GENView Billing and Mediation Configuration
- GENView Billing and Mediation System Operations and Reporting
- GENView Billing and Mediation System Administration
- GENView Billing and Mediation Troubleshooting

Objectives:
Upon completion of this course, a student will be able to:

- Recognize the GENView Billing and Mediation product line and how to access Technical Documentation.
- Understand the GENView Billing and Mediation environment, purpose, and features.
- Understand the basic GENView Billing and Mediation Web Interface and its general use
- Understand the GENView Billing and Mediation Configuration for:
  - Network Element
    - Understand the Network Element Interface
    - Understand the Schedule Configuration
    - Understand the Global Parameters
  - Understand the Process Group Configuration
    - Understand the Output Destination Configuration
    - Understand the Transfer Task Configuration
    - Understand the Process Group Creation
    - Understand the Application Processes
    - Understand the Task Related Files
    - Understand the creation and use of the FTP log files
- Understand the GENView Billing and Mediation Surveillance and Reporting options:
  - Understand the Reporting Tools
  - Understand the Monitoring Tools
  - Understand the Network Element List
  - Understand the Report Generation
  - Understand the Support Menu
  - Understand the Help Menu
  - Understand the System Tools
  - Understand the available Unix Utilities
  - Understand the Alarm Monitoring and Reporting
- Understand the GENView Billing and Mediation System Utilities:

- Understand the Application Tools
- Understand the Application Control
- Understand the Tertiary Reprocessing (When applicable)
- Understand the Data Viewers
- Understand the Alarm Files and utilities
- Understand the Network Element Information
- Understand the Unix Utilities
- Understand the GENView Billing and Mediation System Administration
- Understand the System Administrative Functions
- Understand the Deleting Elements
- Understand the System Control
- Understand the Application Utilities
- Understand the Configuration Files
- Understand the Performance Graphs
- Understand the Creating a new user
- Understand the Access Control and logging
- Understand the Alarm Monitoring
- Understand the Scheduled Tasks

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
2 Days – Self-Paced

Back to Course Listing

PP10 — Ribbon Provisioning and Portals Overview

Course Description:
This course provides a technical overview of the Ribbon Provisioning and Portals software suite, its main user interfaces and the hardware and software platforms used.

Intended Audience:
Managers, administrators, and anyone needing a technical overview of the Provisioning and Portals software.

Key Topics:

- The General High-Level Operation of Provisioning and Portals System
- Introduction to the Provisioning and Portals Interfaces: Portal Server, Reseller Interface, Small and Medium Business Interface, and End User Interface.
- Description of the Hardware and Software requirements of the P&P System.
- Description and usage of common Terms and Terminology in the P&P System.

Objectives:
Upon completion of this course, you will be able to:

- Understand the P&P Terms and Definitions
- Understand the P&P Hardware and Software
- Identify the steps to setup and provision the P&P application
- Identify the different P&P GUI management interfaces

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
1/2 Day – Self-Paced

Back to Course Listing

PP15 — Ribbon Provisioning and Portals System Administration

Course-Description:
The 1-Day Leader Led P&P15 – Ribbon Provisioning and Portals System Administration Course is designed to familiarize students with all of the necessary topics to configure, maintain, and troubleshoot the Ribbon Provisioning and Portals application.

Intended Audience:
Network and System Administrators in charge of maintaining the Ribbon Provisioning and Portals Application

Key Topics:
- Hardware and Software
- Configuration
- Administration
- Maintenance and Patching
- Reporting
- Troubleshooting

Objectives:
Upon completion of this course, you will be able to:
- Understand the P&P Application
- Manage Hardware and Software
- Manage and Administer the P&P Configuration
- Perform Maintenance, Backup and Patching on the P&P platform
- Manage P&P Reporting
- Understand P&P Fault Management
- Perform Troubleshooting on the P&P platform

Prerequisite Skills:
None

Prerequisite Courses:
PP10

Course Length:
1 Day – Leader-Led

Back to Course Listing

PP20 — Ribbon Provisioning and Portals – Setup, Administration, Provisioning, Fault Management, Reporting and Auditing

Course-Description:
This course familiarizes students with the setup, administration, provisioning, fault management and reporting capabilities of the P&P System and its four main interfaces. Through the course the student will be introduced to the core network setup activities for network elements used in the P&P system, provisioning and management of voice service Subscribers, SIP Devices voice service Groups, as well as Reporting, Fault Management and Log File Tracking. The course includes lessons on the Reseller, SMB, and End User Interface as standalone videos, allowing you choose which lesson/video you want take.

Intended Audience:
System Administrators, Provisioning Managers, Reseller and Customer Admins as well as anyone who will use the P&P system to provision and manage subscribers and subscriber voice services

Key Topics:
- Setup of Administration Tasks such as Network Elements, Voice Mail Servers, Voice Feature Packages and SIP Device Templates
- Creation and management of Service Providers and Customers
- Provisioning Customer Groups, Domains, and Voice Services
- Managing Subscribers in the Portal Server, SMB Interface, and End User Interface
- Viewing Logs and Fault Management

Objectives:
Upon completion of this course, you will be able to:
- Setup and manage Network Elements, Voice Feature Packages, and SIP Device Templates that will be used by the P&P System
- Setup Service Providers in the P&P System
- Build Customers along with the required, switch-dependent Customer Elements
- Provision Subscribers, Stations, SIP Devices and Station Templates in the Portal Server
- Uses the Order Explorer to navigate orders generated by the system, as well as use the Bulk Order Editor.
- Build and Manage Groups and Authorization Codes in the Portal Server
- Identify the main components of the P&P System, it's four main interfaces and how to access them

Prerequisite Skills:
None

Prerequisite Courses:
PP10

Course Length:
4 Days – Leader-Led
Back to Course Listing

RAMP10 — Ribbon Application Management Platform (RAMP) Overview

Course Description:
The objective of this course is to provide the students with the knowledge and experience that they will need to navigate, monitor, and perform daily or weekly tasks on the Ribbon Application Management Platform (RAMP) solution. Additional notes, demos and explanations are covered to ensure the student's understanding of the topics.

Intended Audience:
Operators, Technicians, and Support Personnel who will be supporting RAMP solution.

Key Topics:

- Introduction to the RAMP solution
- Overview of the RAMP solution
- RAMP Web Interface
- Provisioning of RAMP Objects
- Device Management
- RAMP Licensing
- Fault Management
- RAMP System Operations and Reporting
- Provisioning, Backup, Restore and Upgrade Activities
- RAMP System Administration
- CDRs and Log Management
- Ribbon Customer Support Portal

Objectives:
Upon completion of this course, a student will be able to:

- Describe the role of Ribbon Application Management Platform (RAMP) in your network
- Identify how to access and navigate the RAMP interface
- Operate the GUI to create different RAMP objects
- Demonstrate the process to add nodes and clusters to RAMP
- List the main features of Node-locked and NWDL licensing and verify licensing information
- Explain the main features of RAMP's Fault Management category
- Practice the different reporting capabilities of RAMP
- Manage provisioning, backup, restore and upgrade activities
- Assess the main RAMP settings
- Evaluate the RAMP Call Trace Tool for SBC Core devices
- Test the log in procedure to access Ribbon Documentation

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
2 Hours – Self-Paced

Back to Course Listing

RAMP15 — Ribbon Application Management Platform

Course Description
The objective of this course is to provide the students with the knowledge and experience that they will need to navigate the RAMP, monitor the network, and perform daily or weekly tasks on RAMP, PSX and SBC Edge and Core product lines. Students will learn how to perform baseline monitoring and maintenance tasks using the RAMP as the managing tool.

Intended Audience
System engineers, Network Operations Center Tier 1 and 2 technicians, consultants, and integrators, including members of Ribbon Channel Partners working toward technical accreditation, responsible for the management, monitoring and support of Ribbon equipment via the RAMP.

Key Topics:

- Login and RAMP Administration
- Users, Roles, User Groups, Roles and Tenants
- Fault Management
- Advanced Fault Management
- Performance Management
- Accounting — SBC 5000/7000
- Call Trace — SBC 5000/7000 and PSX
- Backup and Restore — SBC 5000/7000 and SBC 1000/2000
- Network Provisioning
- Device Registration and Access
- Authentication and Authorization

Objectives:
Upon completion of this course, a student will be able to:

- Navigate the RAMP GUI and identify the proper application to use to perform tasks on different Ribbon devices
- Create new users, user groups, roles, and tenants, assigning security privileges, logins, and passwords
- Register and monitor individual devices
- Monitor the network, and to recognize problems in the network using alarms as well as what action to take to clear the alarm
- Perform routine maintenance, such as backup and restore activities, on the PSX and SBC suites
- Create and read Call Detail Records and Trace Files to troubleshoot call problems
- Create and implement Collection/Export Profiles, which in turn are used to run performance reports that provide real-time and historical information regarding the status of the network
- Configure RAMP to run only the software versions required by network devices and understand how to enable/disable them as required.

Prerequisite Skills: Basic knowledge of the functions of the different devices in the Ribbon product suite.

Prerequisite Courses: None
Course Length:
2 Day – Leader Led Back to Course Listing

RAMP16 — RAMP Implementation

Course Description:
The purpose of this course is to gain the skills required to install RAMP on VMware manually using assembled OVA and configuration .iso files.

Intended Audience:
This course is designed for people who are responsible for deploying RAMP.

Key Topics:

- CentOS Linux server build
- RAMP Deployment via OVA
- RAMP Backup and Restore

Objectives:

- Understand the requirements to install RAMP on VMware.
- Install a RAMP SWe on a VMware host manually via OVA.
  - Deploy CentOS 8 stream to support the deployment
  - Gather the required files needed
  - Configure the files needed
  - Install RAMP onto VMware Manually
- Backup and Restore a RAMP configuration
- Adding Licenses

Prerequisite Skills:
Linux administration
File transfer
VI editor

Prerequisite Courses:
If you have previous experience with the Insight EMS, you will need to take the:

- RAMP10 – Ribbon Application Management Platform Overview – 2 Hours Self-Pace

Else, you will need to take:

- RAMP15 – Ribbon Application Management Platform Basics Class – 2 Days Leader-Led

Course Length:
1 Day – Leader Led with hands-in exercises

Back to Course Listing

REMS10 — Ribbon Insight Element Management System Overview

Course Description:
The purpose of this event is to provide staff with an overview of the product and basic functionality of the Ribbon Insight Element Management System.

Intended Audience:
This course is designed for staff who require a basic understanding of the functions and role of the Ribbon Insight Element Management System.

Key Topics:

- EMS Product Overview
- EMS Launching and Navigation
- EMS Device Management
- EMS Application Launching
- EMS Administration
- EMS Fault Management
- EMS Performance Management
- EMS Tools
- Ribbon Customer Support Portal

Objectives:
Upon completion of this course, you will be able to:

- Understand the EMS's role in the Ribbon Network.
- Identify EMS hosting and deployment options.
- Identify how to launch and navigate the EMS interface.
- Identify how the EMS manages Devices.
- Identify how to launch a Device's interface.
- Identify EMS Administration functionality.
- Identify EMS Fault Management functionality.
- Identify EMS Performance Management aspects
- Identify the EMS Call Trace Tool for SBC and PSX
- Identify how to log in and view Ribbon Documentation

Prerequisite Skills: A basic understanding of element management systems

Prerequisite Courses:
None

Course Length:
1 Hour – Self-Paced

Back to Course Listing

REMS15 — Ribbon EMS Support

Course Description
The object of this course is to provide the students with the knowledge and experience that they will need to navigate the EMS, monitor the network, and perform daily or weekly tasks on the EMS/EMSWe, PSX and SBC Edge and Core product lines. Students will learn how to perform baseline monitoring and maintenance tasks using the EMS as the managing tool. Since there is no difference between the provisioning of a virtual EMSWe versus a physical device, the information provided in this course will be valid for monitoring, configuring or provisioning both types of installations.

Intended Audience
System engineers, Network Operations Center Tier 1 and 2 technicians, consultants and integrators, including members of Ribbon Channel Partners working toward technical accreditation, responsible for the management, monitoring and support of Ribbon equipment via the Insight EMS

Key Topics:

- Login and Insight Administration
- Users and Roles
- Fault Manager
- Advanced Fault Manager
- Performance
- Accounting — SBC 5000/7000
- Call Trace — SBC 5000/7000
- Backup and Restore — SBC 5000/7000 and SBC 1000/2000
- Network Provisioning — SBC 1000/2000 only
- Device Access

Objectives:
Upon completion of this course, a student will be able to:

- Navigate the Insight EMS GUI and identify the proper application to use to perform task on the different Ribbon devices
- Create new users and groups, assigning security privileges, logins, and passwords
- Monitor the individual devices or the network as a whole, and to recognize when alarms indicate problems in the network; as well as what action to take to clear the alarm
- Perform routine maintenance, such as backups and restores, on the EMS, PSX and SBC suite
- Create and read Call Detail Records and Trace Files to troubleshoot call problems
- Create and implement Data Collection Profiles, which in turn are used to run the performance reports that provide real-time and historical information as to the status of the network
- Configure the EMS to run only the versions of software required by the actual devices in the network and understand how to enable or disable them as required.

Prerequisite Skills: Basic knowledge of the functions of the different devices in the Ribbon product suite.

Prerequisite Courses: None
Course Length:
1 Day – Leader-Led Back to Course Listing

REMS17 — Ribbon EMS Cloud Support

Course Description
The object of this course is to provide the students with the knowledge and experience that they will need to navigate the EMS, monitor the network, and perform daily or weekly tasks on the EMS, PSX and SBC Core Cloud product lines. Students will learn how to perform baseline monitoring and maintenance tasks using the EMS as the managing tool.

Intended Audience
System engineers, Network Operations Center Tier 1 and 2 technicians, consultants, and integrators, responsible for the management, monitoring and support of Ribbon equipment via the Insight EMS

Key Topics:

- Virtualization
- EMS VM in Openstack
- Login and Insight Administration
- Users and Roles
- Fault Manager
- Performance
- EMS Cluster Management and Node Registration
- License Management
- Device Access

Objectives:
Upon completion of this course, a student will be able to:

- Explain conceptually the move to Virtualization
- Explain components of a EMS SWe in NFV (Openstack requirements and building blocks)
- Navigate the Insight EMS GUI and identify the proper application to use to perform task on the different Ribbon devices
- Create new users and groups, assigning security privileges, logins and passwords
- Monitor the individual devices or the network, and to recognize when alarms indicate problems in the network; as well as what action to take to clear the alarm
- Perform routine maintenance, such as backups and restores, on the EMS, PSX and SBC suite
- Define VNF Clusters for node registration to the EMS and manage the licenses for those nodes
- Create and implement Data Collection Profiles, which in turn are used to run the performance reports that provide real-time and historical information as to the status of the network
- Configure the EMS to run only the versions of software required by the actual devices in the network and understand how to enable or disable them as required.

Prerequisite Skills: Basic knowledge of the functions of the different devices in the Ribbon product suite.

Prerequisite Courses: VNFM15 – if the Ribbon VNF Manager is part of the cloud solution.

Course Length:
1 Day – Leader-Led Back to Course Listing

RIDH10 - Ribbon Identity Hub (IDH) Overview

Course Description:
The purpose of this event is to introduce you to Ribbon Identity Hub product and how it fits in the Ribbon Call Trust Architecture.

Intended Audience:
This course is designed for individuals who require knowledge of the Identity Hub, its sub-component aspects, and interaction with the Ribbon's implementation of STIR/SHAKEN.

Key Topics:

- Introduction to Ribbon Call Trust Solution and the Ribbon Identity Hub
- Identity Hub Attributes
- Identity Hub Services
- Identity Hub Use Cases
- Identity Hub Access
- Identity Hub Access: Service APIs
- Identity Hub Manager and STI Manager GUI Interfaces
- Identity Hub Customer Procedures
- Ribbon Online Documentation
- Identity Hub Access: Management APIs

Objectives:

- Upon completion of this course, you will be able to:
- Identify the problem
- Introduce the Ribbon Call Trust Solution, it's architecture and components
- Introduce the Identity Hub and identify its services
- Identify the Identity Hub Attributes and Ribbon/Customer Responsibilities
- Identify the Identity Hub Services and how they are selected
- View selected Identity Hub Use Cases
- Identify the Identity Hub Access APIs
- Identify the Identity Hub Service APIs
- Identify the Identity Hub User Interfaces
- Identify the Identity Hub Customer Procedures
- Identify how to access Online Documentation
- Identify the Management APIs

Prerequisite Skills: Understanding of VoIP Telephony

Prerequisite Courses:
None

Course Length:
2.25 hrs – Self-Paced

Back to Course Listing

RIDH11 - Ribbon Identity Hub for Enterprise Overview

Course Description:
The purpose of this event is to introduce you to the Ribbon Identity Hub for Enterprise, and its part within the Ribbon Call Trust Solution.

Intended Audience:
This course is designed for individuals who require knowledge of the Identity Hub, its sub-component aspects, and interaction with the Ribbon's implementation of STIR/SHAKEN.

Key Topics:

- Introduction to Ribbon Call Trust Solution and the Ribbon Identity Hub
- Voice Threat Use Cases Examples
- Identity Hub Services for Enterprise
- Identity Hub Customer Procedures
- Identity Hub Access - API
- Identity Hub Access: Identity Hub Manager
- Identity Hub Configuration
- Identity Hub Access: Management Part 1 – Service Framework
- Access – Management Part2: Call Treatment – Execution Profiles & Custom Lists
- Identity Hub Statistics
- Ribbon Online Documentation

Objectives:

- Identify the problem
- Introduce the Ribbon Call Trust Solution
- Introduce the Ribbon Identity Hub
- Identify selected Identity Hub Use Cases
- Identify Identity Hub Customer Procedures
- Identify the Identity Hub Services and how they are selected
- Introduce the Identity Hub Access APIs
- Introduce the Identity Hub Manager
- Introduce Identity Hub Configuration
- Introduce the Identity Hub Service APIs
- Introduce the Identity Hub Management APIs
- Identify how to access Online Documentation

Prerequisite Skills: Understanding of VoIP Telephony

Prerequisite Courses:
None

Course Length:
2.3 hrs – Self-Paced

Back to Course Listing

RSTI10 - STIR/SHAKEN & Ribbon Secure Telephone Identity (STI) Overview

Course Description:
The purpose of this event is to introduce you to STIR/SHAKEN and the Ribbon Secure Telephone Identity (STI) product.

Intended Audience:
This course is designed for individuals who require knowledge of the functionality of STIR/SHAKEN and the Ribbon Secure Telephone Identity (STI) in an On-Prem or STIR/SHAKEN-as-a-Service solution to implement STIR/SHAKEN in the Ribbon environment.

Key Topics:

- Introduction to the problem
- STIR/SHAKEN in more detail
- Ribbon STIR/SHAKEN Solutions
- Ribbon STI API
- Ribbon STI STI-AS/VS Implementation
- Ribbon STI User Interfaces
- Ribbon STI Performance and Alerts
- Ribbon STI Logs
- Ribbon Online Documentation

Objectives:

- Identify the problems
- Identify what STIR/SHAKEN is, its concepts and operations
- Identify Ribbon's STIR/SHAKEN Solutions
- Describe Ribbon's STI API
- Identify Ribbon's STI-AS/VS Implementation and operation
- Identify how to launch and navigate the Ribbon STI User Interfaces
- Identify the Performance and Alert information available from the Ribbon STI product
- Identify the STI Log aspects of the Ribbon STI product
- Identify how to access Ribbon Documentation for STIR/SHAKEN

Prerequisite Skills:
Understanding of VoIP Telephony

Course Length:
Approx. 2.5 hrs. Self-Paced

Back to Course Listing

RSTI15 - Ribbon STI - Operations, Administration and Ribbon Element Provisioning

Course Description:
The purpose of this course is to introduce you to the provisioning requirements to establish the Ribbon STI Service and provision the Ribbon PSX and SBC Core to support the STIR/SHAKEN framework. To reinforce learning, you will complete several exercises based on the topics covered.

Intended Audience:
This course is designed for individuals who are responsible for provisioning STIR/SHAKEN services in the Ribbon PSX and SBC Core.

Key Topics:
- Introduction to the problem and the fix
- Ribbon STIR/SHAKEN Provisioning Interfaces Introduction
- SBC Core Provisioning
- PSX Basic Call Routing
- STIR/SHAKEN Service Configuration - an appreciation
- PSX STIR/SHAKEN Signing Provisioning
- PSX STIR/SHAKEN Verification Provisioning
- PSX Call Validation Treatment Routing Configuration

Objectives:
- Identify the STIR/SHAKEN Framework
- Identify the Ribbon components involved and introduce their management interfaces
- Identify and datafill an SBC Core to support a basic call scenario
- Identify and datafill a PSX to support a basic call scenario
- Identify PSX STI Service configuration aspects
- Identify PSX STIR/SHAKEN relevant log files
- Identify and datafill the data required to implement STIR/SHAKEN Signing/Authentication
- Identify and datafill the data required to implement STIR/SHAKEN Verification
- Identify the Call Validation Treatment (CVT) Service available on the PSX
- Datafill an example CVT scenario
- Test datafill using utilities and live calls

Prerequisite Skills:
Understanding of VoIP Telephony
Preferable - Basic knowledge/experience of SBC Core EMA and PSX Manager interfaces

Prerequisite Skills:
RSTI10

Course Length:
3 days Leader-Led

Back to Course Listing

SPBX15 - C20 SIP-PBX Trunk Provisioning

Course Description:
This course introduces you to the SIP-enabled VoIP VPN and the terminology and interfaces. This course will lead you through the procedures to provision a SIP-enabled VoIP VPN. In addition, this course will familiarize you with the maintenance fundamentals of the SIP-enable VoIP VPN.

Intended Audience:
Anyone who is expected to commission, provision, or maintain Session Initiation Protocol-enabled Voice over Internet Protocol Virtual Private Network (SIP-Enabled VoIP VPN) on the C20

Key Topics:
- SIP-enabled VoIP VPN Configuration Overview
- SIP-enabled VoIP VPN Configuration Gateway Controller, Communication Server
- SIP-enabled VoIP VPN Configuration SSL System Manager, Media Portal Insertion
- SIP-enabled VoIP VPN Configuration Domains, Number Qualifiers and Service Packages, OSSGate XML Interface
- SIP-enabled VoIP VPN Maintenance Fundamentals
- Survival SIP Proxy (SSP)

Objectives:
Upon completion of this course, you will be able to:
- Describe, at a high level, the Session Initiation Protocol-enabled Voice over Internet Protocol Virtual Private Network (SIP-Enabled VoIP VPN) solution for C20.
- Identify tools and procedures required to implement SIP-enabled VoIP VPN.
- Perform Gateway Controller configuration to the SIP-enabled VoIP VPN.
- Perform provisioning required to set up the PRI interface between the core and the SIP-Enabled VoIP VPN.
- Perform provisioning required at the System Management Console to set up the interface for the SIP-Enabled VoIP VPN.
- Provision Media Portal insertion for the SIP-Enabled VoIP VPN.
- Perform provisioning required at the Provisioning Client for the SIP-Enabled VoIP VPN.
- List the capabilities of the OSSGate XML interface for SIP-Enabled VoIP VPN.
- Use the new and changed maintenance tools available for SIP-Enabled VoIP VPN.
- Describe, at a high level, the Survival SIP Proxy (SSP)

Prerequisite Skills:
Basic PC skills, Network Surveillance and Fault Management, switching operation and switching procedures

Prerequisite Courses:
AS10 or AS13 – C20– Communication Application Server (AS) Overview

Course Length:
2 Days – Self-Paced Back to Course Listing

SPBX16 - AS Standalone SIP PBX Trunking Configuration, Operations and Administration

Course Description:
The purpose of this course is to provide you with the skills and knowledge to configure and operate the AS Standalone SIP PBX Trunking Feature.

Intended Audience:
This course is designed for individuals who are responsible for configuring and maintaining the SIP PBX Trunking Feature of the AS Standalone.

Key Topics:

- SIP PBX Trunking
- Software requirements
- Management interfaces
- Configuration – System Manager, Provisioning Manger, PBX Extensions and EN ranges.
- Call Feature Configuration based on Screening services
- Performance and Fault Management
- SBC requirements.

Objectives:
Upon completion of this course, you will be able to:

- Describe the purpose of the SIP PBX Trunking Feature
- Identify the software requirements for SIP PBX Trunking Feature
- Identify the different management interfaces.
- Configure System Management Console Parameters.
- Configure Provisioning Manager interface
- Configure PBX Extension Users
- Configure PBX DN Ranges
- Identify requirements to configure the Call Forward Variants and Call Type Based Screening services
- Examine and use performance and fault management tools available for the SIP PBX Trunking Feature.
- Identify SBC requirements with AS SIP PBX Trunking Feature

Prerequisite Skills:
Basic PC skills, Network Surveillance and Fault Management, switching operation and switching procedures

Prerequisite Courses:
AS11 or AS12 – Application Server (AS) Standalone Overview

Course Length:
2 Days – Leader-Led

Back to Course Listing

VNFM15 — VNF Manager (VNFM) Installation, Operations, Administration, and Maintenance

Course Description:
The purpose of this course is to provide you with the skills and knowledge to configure, manage, and maintain the VNFM. You will also learn how to use the VNFM to manage the Life Cycle of Virtual Network Functions (VNFs), as well as learn basic VNFM fault and performance management methods. To reinforce learning, you will complete several exercises based on the topics covered

Intended Audience:
This course is designed for individuals who are responsible for installing and maintaining the VNFM in an NFV OpenStack environment.

Key Topics:

- Introduction to NFV and the VNFM
- VNFM and Dashboard User Interfaces
- Deploying and Configuring the VNFM in the OpenStack Environment
- VNF Onboarding, Deployment, and Life Cycle Management using the VNFM
- VNFM Maintenance, Fault, and Performance management
- VNFM Database Backup and Restore
- VNFM and VNF removal

Objectives:
Upon completion of this course, you will be able to:

- Identify the purpose of NFV and how the VNFM works with the OpenStack Architecture
- Access and navigate the VNFM GUI, CLI interfaces and the OpenStack Dashboard
- Demonstrate how to deploy and configure the VNFM and test that it is operational
- Create and Manage VNFM User ID's
- Onboard, Deploy, and Manage Virtual Network Functions (VNFs) using the VNFM
- Identify VNFM and VNF maintenance, fault, and performance capabilities
- Demonstrate how to Backup and Restore the VNFM Database
- Un-deploy a VNF and VNFM.

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
2 Days – Leader-Led

Back to Course Listing

RC15 — Ribbon Connect Service Portal Operations and Support

Course Description
The objective of this course is to provide the students (Service Providers) with the skills and knowledge to use the Ribbon Connect Service Portal to maintain and support Unified Communications (UC) services to their enterprise customers.

Intended Audience
Service Providers as direct partners for Ribbon Communications.

Key Topics:

- The purpose of the Ribbon Connect for Unified Communications
- The Service Provider and UC Providers requirements to interwork with the Ribbon Connect for Unified Communications.
- Deployment options for the Service Provider.
- Interfaces and service capabilities provided by the Ribbon Connect for Unified Communications
- Access and navigation on the Ribbon Connect Portal.
- Ribbon Connect for Unified Communications service operational status and support process.

Objectives:
Upon completion of this course, a student will be able to:

- Describe the purpose of the Ribbon Connect for Unified Communications
- Understand the Service Provider and UC Providers requirements to interwork with the Ribbon Connect for Unified Communications.
- Understand the different deployment options for the Service Provider.
- Identify the different interfaces provided by Ribbon Connect for Unified Communications
- Identify the different service capabilities provided by Ribbon Connect for Unified Communications
- Understand how to access and navigate Ribbon Connect Portal and how to configure new RC Portal accounts and permissions
- Monitor the overall Ribbon Connect for UC service and how get support if service providers are experiencing issues.

Prerequisite Skills: Service Providers at this stage should have worked with the Ribbon onboarding team which should have taken them through prerequisites checklist and onboarding sequence.

Prerequisite Courses: None

Course Length: Self-Pace, 1 Hour

Back to Course Listing

RC16 — Ribbon Connect for Operator Connect Service Portal Provisioning

Course Description
The objective of this course is to provide the Service Provider with the skills and knowledge to use the Ribbon Connect Service Portal to provision and implement Operator Connect services.

Intended Audience
Service Providers as direct partners for Ribbon Communications.

Key Topics:

- How the Service Provider can integrate Ribbon Connect for UC into their network to provide Operator Connect services to an enterprise customer.
- How to associate Operator Connect and to configure the different parameters to establish the service.
- Operator Connect service operational status and support process.

Objectives:
Upon completion of this course, a student will be able to:

- Describe how the Service Provider can integrate Ribbon Connect for UC into their network
- Understand the process to do automated Service Flows (Journeys) to provision Operator Connect end-to-end service.
- Describe how to do number provisioning and management for Operator Connect.
- Understand how the Enterprise customer can login into the Service Portal to do number and Voice application assignments with Operator Connect.
- Monitor the overall Ribbon Connect for UC service and how get support if service providers are experiencing issues.

Prerequisite Skills: Service Providers at this stage should have worked with the Ribbon onboarding team which should have taken them through prerequisites checklist and onboarding sequence.

Prerequisite Courses: RC15

Course Length: Self-Pace, 1 Hour

Back to Course Listing

VS10 — Voice Sync Solution Overview

Course Description:
The purpose of this course is to provide the student with the understanding of the Voice Sync Solution components.

Intended Audience:
This course is designed for people who would like an introduction to the Voice Sync Solution.

Key Topics:

- Voice Sync Architecture
- Application Server Components
- SBC, PSX, and EMS
- Call Flows

Objectives:

- Describe the Voice Sync solution
- Identify the Voice Sync platform and VM requirements
- Understand the SIP lines Application Server, including:
  - SM (including DB, Prov, FPM, AM)
  - SESM
  - PA
  - MAS/MAS UCM
- Describe the function of the PSX in the solution
- Describe the role of the SBC
- Describe the role of the EMS to monitor and manage the SBC and PSX
- Identify the testing capabilities of the Test VM.
- Discuss the call flow through the Voice Sync solution.

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
2 Hours – Self Paced

Back to Course Listing

RP15 — Ribbon Analytics Basics

Course Description:
The purpose of this course is to provide you with the knowledge and skills needed to understand the Architecture, Operation, Administration, and Management of the Ribbon Analytics Product.

Intended Audience:
This course is designed for individuals who are responsible for performing analysis on and securing Unified Communication Networks.

Key Topics:

- Ribbon Analytics Overview and Purpose
- Software and Hardware Architecture and Resiliency
- Visual and Dashboard Management
- Device and System Administration
- Creating Dashboard Reports and Network Ladder Diagrams
- Creating and Managing Visuals and KPI Monitors
- Security Applications, and Managing Incident Mitigations

Objectives:
Upon completion of this course, you will be able to:

- Understand the Platform hardware and software
- Describe the Platform Resiliency Characteristics
- Access and Navigate the Web Interface
- Understand and Manage supported Devices
- Understand Userid and Role Management
- Create Ladder Diagrams
- Manage Visuals, Dashboards, Reports, and Alerting Actions
- Customize Dashboards and Visuals
- Create and Manage KPI Monitors
- Manage Incidents, Events, and Mitigations
- Create and Manage Incident Types and Enforcement Profiles
- Understand the NetProtect Security Application
- Manage the TDoSProtect and RoboProtect Security Applications

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
2 Days – Leader Led

Back to Course Listing

RP26 — Ribbon Analytics Advanced

Course Description:
The purpose of this course is to provide the student with the knowledge and skills for working with the advanced features of the Ribbon Analytics Product. This course will cover working with advanced dashboard and visual features including data customization via filters and axes labels as well as creating derived fields, and custom metrics. The student will also build KPI Sets, Incident Types, Incident Detectors, and Data Sources.

Intended Audience:
This course is designed for individuals who are responsible for configuring and Managing the advanced features of the Ribbon Analytics product.

Key Topics:
- Advanced Chart and Dashboard Tools
- Derived Fields and Custom Metrics
- Upgrades, Add-Ons, Package Management, and Troubleshooting
- Fraud and Incident Detectors
- Creating and Managing Data Sources
- Data Enrichment

Objectives:
Upon completion of this course, you will be able to:
- Customize Chart Data with Filters, Sort and Limit, and Axes Labels
- Create and Manage Dashboard Reports
- Perform CDR searches and Analyze Specific Call Information
- Create Derived Fields and Custom Metrics in Customized Visuals
- Work with Software Packages and Add-Ons
- Identify troubleshooting tools on the Ribbon Analytics platform
- Describe the FraudProtect Security Applications
- Create and Manage KPI Sets, Incident Types, and Incident Detectors
- Create and Manage and Data Sources
- Understand the Data Enrichment Feature

Prerequisite Skills:
None

Prerequisite Courses:
RP15 – Ribbon Analytics Basics

Course Length:
2 Days – Leader Led

Back to Course Listing

GMS16 — Media Server (MS) Operations, Maintenance and Configuration

Course Description:
The purpose of this course is to provide you with the skills and knowledge to understand the operations, configuration, and maintenance of the Media Server (MS).

Intended Audience:
This course is designed for individuals who are responsible for installing and maintaining the MS hosted by an Application Server in a Voice over IP network.

Key Topics:

- Introduction to the Media Server (MS)
- Hardware and Software Architect
- Management Interfaces
- IP Network Integration
- Base Configuration
- AS integration configuration
- Fault and Performance Management

Objectives:
Upon completion of this course, you will be able to:

- Describe the purpose of the Media Server (MS).
- Identify the hardware and software requirements for MS.
- Identify the different MS management interfaces.
- Understand the IP network integration for the MS.
- Define the MS – Base Configuration
- Understand the MS – AS integration configuration.
- Examine and use fault and performance management tools

Prerequisite Skills:
Knowledge and basic understanding of communications

Prerequisite Courses:
GEN10 or GEN11 or C20RMS10 or C20RMS11

Course Length:
2 Days – Self-Paced

Back to Course Listing

TES20 — Tactical Edge Solution: Provisioning, Operations, Administration, and Fault Management

Course Description:
The purpose of this course is to provide the student with the knowledge of how to Provision, Maintain, and Administer the Tactical Edge Solution.

Intended Audience:
This course is designed for people interested in learning about the Provisioning and Management of the components that make up the Tactical Edge Solution.

Key Topics:

- Tactical Edge Solution Overview
- Element Manager Administration
- Provision the Application Server Services
- Manage Application Server Subscribers
- Manage Session Border Controller Services and Provisioning
- Administer and Monitor the Application Server Environment
- Alarm Management and Troubleshooting

Objectives:

- Describe the Solution Architecture and associated Components
- Manage the AS with the System Manager
- Manage AS/SBC Userids
- Manage AS Subscribers and Devices
- Provision AS Services, Service Profiles, and Service Sets
- Configure GENCom Softphones
- Manage SIP Hard Phones with the Endpoint Device Provisioning Tool
- Understand Translations and Routing
- Understand SBC Security Services
- Manage SBC Interfaces, Trunks, and Peers
- Monitor AS Servers and configure alarm thresholds
- Manage Alarms and Troubleshoot Faults

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
2 Days – Leader-Led

Back to Course Listing

TES40 — Tactical Edge Solution Deployment

Course Description:
The purpose of this course is to provide the student with the knowledge of how to deploy and configure the Tactical Edge Solution components to create a working system.

Intended Audience:
This course is designed for people interested in learning about the Deployment and Configuration of the Tactical Edge Solution.

Key Topics:

- Tactical Edge Solution Overview
- Deployment Builder Install
- Creating Configuration Files with the Deployment Builder
- Issuing the stackctl commands to Deploy the Solution
- Element Manager Access and Verification
- Linux Userid Management

Objectives:

- Understand the purpose of the Tactical AS Solution
- Manage the Docker Application
- Download Software and Manage File Sets
- Understand the design of the Edge and Core Networks
- Configure VMWare ESXI Settings
- Create Configurations using the Deployment Builder Application
- Deploy and verify the Tactical Edge Solution
- Login to the Application Server and MAS Element Managers
- Login to the Tactical Edge Dashboard and view alarms
- Login and view the Personal Agent Settings
- Login to the SBC EMA Element Manager
- Login to the AS/MAS console and reset management ID passwords
- Register the GENCom client to the Application Server
- Reset AS/MAS Management User Passwords

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
2 Days – Leader-Led

Back to Course Listing

CALL CONTROL

C1511 — C15 Product Overview and Fundamentals

Course Description:
The purpose of this course is to provide the learner with a comprehensive overview of the C15 system including how the C15 fits into the network. Other topics include the C15 hardware architecture, input/output system, password security, documentation, as well as the available services and features. Instructions are provided for using the C15 documentation and communicating with the C15 via the Command Line Interface (CLI) and Graphical User Interface (GUI).

Intended Audience:
This course is intended for anyone needing a general overview of the GENBAND C15 product.

Key Topics:
- C15 Hardware Overview
- C15 Documentation
- C15 Features and Services
- Basic Input/output
- Password Security
- VoIP – SIP Gateway and Gateway Line
- Vendor Hardware

Objectives:
Upon completion of this course, you will be able to:
- Describe the C15 hardware architecture
- Use the C15 documentation
- List features and services available on the C15
- Describe vendor hardware used in the C15
- Perform basic input/output on the C15
- Access the Graphical User Interface (GUI), and perform basic tasks
- Configure C15 password security options
- Configure VoIP - SIP subscriber lines on the C15

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
1 Day – Self Paced

Back to Course Listing

C1515 — C15 Operations, Maintenance and Fault Management

Course Description:
The purpose of this course is to provide the learner with the skills required to perform maintenance activities on the C15 system. Topics include the Core Controllers, IP Switching Fabric, SIP Lines, SIP Trunks, CCS7, AIN, and LNP. The lab exercises equip the learner to conduct maintenance activities and perform troubleshooting procedures.

Intended Audience:
This course is intended for anyone responsible for performing maintenance on the C15.

Key Topics:
- Troubleshooting
- Routine Maintenance
- Replace Core Controller
- Replace Port Controller
- System Initialization
- System Reload
- Alarm Indicators
- Gateways and Gateway Lines – Configure
- Gateways and Gateway Lines – Troubleshoot registration issues
- C15 Call History Recording Server

Objectives:
Upon completion of this course, you will be able to:
- Use appropriate documentation and trouble-shooting techniques to clear faults in a C15 office
- Verify the Ethernet physical layer connections between C15 components, including cable color coding
- Identify cables connecting from the Rear Transition Modules (RTMs) to Time Division Multiplex (TDM) equipment
- Troubleshoot problems with configuring VoIP lines
- Configure alarm indicators in a C15 office, which requires making configuration changes in the NetGuardian and in the C15
- Replace Core Controllers and Port Controllers, both Copper and Optical
- Add DS1 spans and Trunks including returning to service
- Use Translations Verification (TRVR) to troubleshoot basic call issues
- Launch queries to databases on the CCS7 network
- Use the Call History Recording Server to access C15 call history files.

Prerequisite Skills:
None

Prerequisite Courses:
C1510 C15 Product Overview and Fundamentals Leader Led or C1511 C15 Product Overview and Fundamentals Self-Paced

Course Length:
5 Days – Leader-Led
Back to Course Listing

C1520 — C15 Line Administration

Course Description:
The purpose of this course is for the student to learn the process for configuring subscriber lines, as well as basic information for configuring VoIP phones. Topics include logging into the C15, loading programs and entering commands, using the documentation, and interpreting output messages. Instructions will be provided for using both the Graphical User Interface (GUI), and the Command Line Interface (CLI).

Intended Audience:
This course is intended for anyone responsible for performing administrative tasks on subscriber lines in the C15.

Key Topics:

- C15 Service Order Procedures (SOPs)
- C15 Station Options
- Graphical User Interface
- Station Profiles
- Directory Number Hunt Groups
- Voice Mail
- Lines
- Gateways and Gateway Lines
- Stations

Objectives:
Upon completion of this course, you will be able to:

- Configure subscriber lines in the C15
- List the station options available to subscribers in the C15
- Use Service Order Procedures (SOPs) to perform data modifications in the C15
- Use the C15 Command Line Interface (CLI) to configure subscriber lines
- Configure VoIP phones for use with the C15
- Use the C15 Graphical User Interface (GUI) to configure subscriber lines

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
1 Day Self-Paced

Back to Course Listing

C1521 — C15 Business VoIP Configuration and Provisioning

Course Description:
The purpose of this course is to introduce the student to C15 Enhanced Business Services and Centrex EBS and IBS. Students will create EBS groups and lines, configure services on IP Phones. Students will also learn about APMAX, SAC and MADN.

Intended Audience:
This course is designed for those who need to have a better understanding of Enhanced Business Services (EBS) or Centrex on C15.

Key Topics:

- C15 Hosted services overview
- SIP Attendant Console and ACD features
- Service Bundles
- Centrex – Enhanced Business Services (EBS)
- Centrex – Integrated Business Services (IBS)
- APMAX Automated Configuration Services (ACS)
- C15 Service Order Procedures (SOP)

Objectives:
Upon completion of this course, you will be able to:

- Understand Enhanced Business Services (EBS) on the C15
- Create an EBS Group and Lines
- Configure SIP Phones via APMAX Automated Configuration Service (ASC)
- Create a Multiple Appearance Directory Number (MADN)
- Create C15 SIP Lines using the C15 GUI
- Understand how a SIP Attendant Console (SAC) is configured

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
3 Days – Leader-Led

Back to Course Listing

C1535 — C15 Translations

Course Description:
The purpose of this course is to for the student to learn the fundamental aspects of C15 translations, including tracing calls and modifying office data. This course includes lecture and hands-on activities. The hands-on activities include, configuring VoIP phones, making changes in translations data, performing Translations Verification (TRVR), and making test calls to confirm the changes.
Digit translations is the process of taking any set of arbitrary dialed digits and defining a call process path to either a working line or a route. This course is designed to take the student through the C15 data blocks and translators required for digit translations.

Intended Audience:
This course is intended for anyone responsible for performing translations on the C15.

Key Topics:
- C15 Call Processing
- Prefix, Address, and Screening Translators
- Data Blocks
- Translations Verification (TRVR)
- Equal Access
- Local Number Portability
- Centrex – Business Applications
- ISDN Primary Rate Interface (PRI)

Objectives:
Upon completion of this course, you will be able to:
- Use the Command Line Interface (CLI) and appropriate documentation to query, add, and modify the data blocks and translators in the C15
- Configure Gateways and Gateway Lines in the C15
- Modify translators to support CLASS features
- Add an Equal Access carrier
- Port numbers in and out of a C15 office
- Add a Directory Number Hunt (DNH) group
- Add a Centrex business group
- Modify translators to support Centrex features
- Setup a Primary Rate Interface (PRI) Line Trunk Group (LTG)

Prerequisite Skills:
None

Prerequisite Courses:
C1510 C15 Product Overview and Fundamentals Leader Led or C1511 C15 Product Overview and Fundamentals Self-Paced

Course Length:
5 Days – Leader-Led

Back to Course Listing

C310 — C3 Signaling Controller Overview

Course Description:
This self-paced overview course provides the basic understanding of the functions and capabilities of the GENBAND C3 Signaling Controller. It provides general information of the configurations and scenarios where the C3 Signaling Controller can be utilized and the services it can provide as Media Gateway Controller, Signaling Gateway and Application Gateway. It describes the hardware, modules and software that enable its operation.

Intended Audience:
This course is purposed for anybody that needs to engage in any discussion related to the GENBAND C3 Signaling Controller. It is the course for business or administrative associates that requires a general understanding of the solution and is the foundation for those to become technical experts with the equipment.

Key Topics:
- C3 Functions
- C3 Hardware
- C3 Scalability
- C3 Management

Objectives:
Upon successful completion of this course, you will be able to:
- Position Genband C3 in a VoIP network as Application Gateway
- Position Genband C3 in a VoIP network as Signaling Gateway
- Position Genband C3 in a VoIP network as Media Gateway Controller
- Identify the hardware that supports Genband C3 Signaling Controller and its optional modules
- Idenitfy minimum and maximum configuration of a Genband C3 Signaling Controller
- Describe GenView as the Graphical User Interfaces and its functional modules
- Describe the Command Line Interface, the structure of commands and navigation

Prerequisite Skills:
Enrollees are also expected to have a basic understanding of switching and networks

Prerequisite Courses:
None

Course Length:
3 Hours – Self-Paced

Back to Course Listing

C20RMS11 - C20 on RMS Solution Overview

Course Description:
The C20RMS11 is a one-day Self-Paced C20 on RMS Solution Overview course. Each component is discussed to show its role in the solution as well as its hardware platform and associated user interfaces.

Intended Audience:
This course is intended for anyone requiring a basic understanding of the C20 on RMS solution. It is a pre-requisite course for advanced courses in the curriculum. This course was designed for both technical and managerial personnel.

Key Topics:
Overview of GENBAND's C20 on RMS network components:

- C20 on RMS Solution Overview
- GENView Manager (GVM)
- C20 on GENiUS
- Application Server (AS)
- Session Server Trunks (SST)
- Signaling Point 2000 (SP2000)
- Gateway Controller (GWC)
- Media Server
- G6 Media Gateway
- G5 Media Gateway
- G9 Media Gateway

Objectives:

- Describe the GENBAND RMS Solution
- Identify the role of the GENView Manager
- Identify the C20 on RMS hardware and software components
- Understand the GENBAND SIP lines Application Server
- Describe the purpose of the Session Server Trunks application
- Describe and identify the Signaling Platform 2000
- Describe and identify the function of the Gateway Controller
- Describe the function of the Media Server
- Understand the function of the G6 Universal Gateway
- Describe the function of the G5 Line Access Gateway
- Describe the function of the G9 Converged Gateway
- Describe the function of the G5 SIP ESA

Prerequisite Skills:
Enrollees are expected to have a basic understanding of switching and networks
Prerequisite Courses:
None

Course Length:
1 Day – Self-Paced

Back to Course Listing

C20RMS15 - C20 on RMS Solution Operations, Maintenance and Fault Management

Course Description:
The purpose of this course is to familiarize the student with the operations and maintenance of the C20-RMS platform. The student will also become familiar with basic troubleshooting techniques using network element level GUI managers, and Command Line interfaces. The student will also use documentation to locate and resolve component level faults.

Intended Audience:
This course is designed for personnel responsible for operating and maintaining the C20-RMS Server technologies, as well as troubleshooting the platform and associated network element components in the C20-RMS Call Session Controller environment.

Key Topics:

- C20-RMS Solution Overview
- C20-RMS Platform Hardware and Software
- C20-RMS EMS and CLI User Interfaces
- GENWare Application Management
- C20-RMS Routine Maintenance
- GENWare Fault Management
- GENView Manager Alarms
- Application Server Fault Management
- G6 Media Gateway Fault Management
- G9 Media Gateway Fault Management

Objectives:
Upon completion of this course, you will be able to:

- Understand the C20-RMS Solution Architecture and Components
- Understand the RMS Hardware and Connectivity
- Understand the RMS Hardware and view the Hardware\Software Detail from the CLI
- Manage the C20 with the Core Element Manager and the GENWare CLI
- Manage Userid Authentication and Authorization
- View Service Groups, Units, and High Availability Status
- Manage the C20 Management Module Application Set
- Manage the C20 Virtual Call Agent
- Provision and Maintain Applications at the GENWare CLI
- Manage the Data Manager File System
- Execute System Level Health Check on the C20-RMS Platform
- Execute Routine Exercise Testing on the C20-RMS Platform
- Manage Software Patching and Backup Operations from the GENWare CLI
- Manage GENWare Events, Alarms, and Security Logs
- View Alarms and Launch Applications with GENView Manager
- View Fault data on the AS, G6, and G9 Network Elements

Prerequisite Skills: None
Prerequisite courses:C20RMS10 or C20RMS11 (C20-RMS Solution Fundamentals)
Course Length:
5 Days – Leader-Led

Back to Course Listing

C20RMS35 - C20 on RMS Class 5 Planning & Capacities

Course Description:
The purpose of this course is to introduce you to the basic considerations when configuring a C20 on RMS platform by reviewing the System Engineering Bulletin, SEB_09-00-021 (C20 on RMS Engineering Rules) and other related SEBs.

Intended Audience:
The learning audience for the C20RMS35 GENBAND C20 on RMS Planning and Capacities course are engineers responsible for managing the network architecture.

Key Topics:

- C20 on RMS Overview
- C20 on RMS Capacities, including:
  - Call Agent (CA)
  - Gateway Controllers (GWC)
  - Session Server Trunks (SST)
  - Application Server (AS)
  - SP2000 (Signaling Platform 2000)
- Media Servers: GMS and MAS Capacities
- G9, G6 and G5 Overview and Capacities

Objectives:
In this course, you will learn how to:

- Identify the components and topology of a C20 on RMS deployment
- Understand the limitations of the C20 on RMS components:
  - Call Agent (CA)
  - Gateway Controllers (GWC)
  - Session Server Trunks (SST)
  - Application Server (AS)
  - SP2000 (Signaling Platform 2000)
- the G9 Trunk, G6 Trunk / Packet Line and G5 Gateways

Prerequisite Skills:
Knowledge and basic understanding of communications.

Prerequisite Courses:
C20RMS10 or C20RMS11

Course Length:
1/2 Day – Self-Paced

Back to Course Listing

CALLP26 - Advanced Call Processing Tools for Trunks

Course Description:
This course introduces Tools for customers to use to capture Signaling Protocol messaging involved in Call Processing for Call Session Control. This course will focus on SIP based call scenarios based on GENBAND Application Server lines, Session Server Trunks and the C20 Call Session Controller deployed within the C20 on GENiUS and C20 on RMS platforms. In addition, this course will also cover H.248 message capture on the G9 Media gateway.
You will understand the resource relationship between the AS lines and SIP/SIP-T DPT trunks, their associated Gateway Controllers and gateway endpoints definitions.
C20 Call Agent, AS and Session Server Trunk GUI and CLUI/CLI tools are introduced to discover relevant IP addressing, to locate key data and to capture various call flow messages. SIP/SIP-T, GCP and PPVM protocol messages are explored as they relate to captured messages and to the phases of line to line, line to trunk, trunk to trunk call scenarios in a Carrier VoIP environment. Activities are included to reinforce all the concepts introduced in this course.

Intended Audience:
Tier II/III and NOC level engineers responsible for troubleshooting the CVoIP solution.

Key Topics:
Base network topologies, signaling hops, bearer paths and protocols supporting the CVoIP line environments involving the C20 Call Agent, AS and Session Server Trunks gateways.
Access of key data resources across the following components in support of the CVoIP line call environment:

- Call Session Controller
  - SIP-T Trunks GWCs
  - SIP Line GWCs
  - Session Server Trunks
  - Application Server

Tools to capture key data and call messages:

- CallTrak/MSGTRACE/GWTRACE
- GWCAdmin
- AS Debug CLUI capture tools
- SST CLUI capture tools
- GWCTRACI

Discussion of protocols supporting SIP line / trunk call environment and the information flow between protocols for the call phases.
Protocols include:

- PPVM - Peripheral Processor Virtual Machine
- GCP - Generic Call Processing
- SIP / SIP-T - Session Initiation Protocol / Session Initiation Protocol-Trunks
- H.248 messages on the G9

Objectives:

Upon completion of this course, you will be able to:

- Describe signaling protocols supporting various call path scenarios within the CVoIP environment supporting AS and the Session Server Trunks (SST).
- Use data gathering tools in the C20 Call Agent and the Gateway Controller to locate connectivity information and other key endpoint data in support of call processing.
- Access and capture key data across the SST gateway, the related GWC and the C20 in support of connectivity and troubleshooting the SIP trunks environment in the CVoIP network.
- Use specific tools to capture and view signaling protocol messages associated with Call Processing on the AS and Session Server Trunks.
- Interpret key fields within SIP and GCP messages captured by trace tools in the AS and SST gateway and associate these messages to the basic phases of a SIP/SIP-T call.
- Access the CallTrak utility in the C20 Call Agent to trace data during active calls with the CallTrak tools MSGTRACE.
- Interpret key fields within PPVM messages captured by the C20 CA CallTrak MSGTRACE tool and align the PPVM messages with the basic phases of a SIP/SIP-T call.
- Identify and define individual components that define an endpoint and use selected tools to display nodes, terminal identifiers and endpoints.
- Identify how to use CALLTRAK GWTRACE to capture H.248 messages on the G9

Prerequisite Skills:

This course requires students to have the basic fundamental knowledge of the Network Elements taught in this course. Shown are the three major elements. Fundamental knowledge can be obtained from the Prerequisite courses shown below.

- Functional knowledge of the C20 Call Agent
- Functional knowledge of Application Server (AS)
- Functional knowledge of Session Server Trunks

Prerequisite Courses:

C20 on GENiUS Prerequisite courses:

GEN15:	C20-GENiUS Operations, Maintenance, and Fault Management
SST16:	C20 on GENiUS – Session Server Trunks Provisioning and Maintenance
A213:	Application Server (AS) C20 Hosted Overview
C20G915:	G9 Converged Gateway – Operations, Administration and Maintenance

C20 on RMS Prerequisite courses:

C20RMS15:	C20-RMS Solution Operations, Maintenance, and Fault Management
SST16:	C20 on GENiUS – Session Server Trunks Provisioning and Maintenance
A213:	Application Server (AS) C20 Hosted Overview
C20G915:	G9 Converged Gateway – Operations, Administration and Maintenance

NOTE:
The C20G915 is optional and is not necessary if the customer does not have the G9 in the network.

Course Length:
4 Days – Leader-Led

Back to Course Listing

DSC20 - DSC - STP Operations, Administration, Maintenance, and Provisioning

Course Description:
The DSC STP training course provides operations personnel with the necessary skills to provision and operate the product. It does not include customer specific system installation, provisioning or turn up activities.

Intended Audience:
Managers, administrators and anyone needing to be able to operate, configure, and maintain the DSC as an STP node.

Key Topics:

- Introduction to the DSC system
- System Hardware (DSC 8000 specific)
- Software Overview
- System Operation and Maintenance
- Features Configuration
    - MTP level 2
    - MTP Level 3
    - Signaling Connection Control Part (SCCP)
    - Global Title Translation (GTT)
    - Point Code Emulation (PCE)
    - Gateway Screening and MSU Tracing (GWST)
    - Signaling Gateway
    - L4 Converter

Objectives:
Upon completion of this course, you will be able to:

- Provide an Overview of the DSC STP.
- Explain how the DSC is used in SS7 networks
- Detail the inter-process communications.
- Demonstrate system tools for troubleshooting and analysis.
- Present the various DSC software components.
- Supply configuration instructions for the various software components of the DSC.

Prerequisite Skills:

- Experience with building SS7 networks and a basic understanding of SS7 telephony
- Signaling protocols, architecture, TCP/SCTP connections
- IP knowledge such as configuration parameters and routing
- Basic working knowledge of Linux/Unix

Prerequisite Courses:
None

Course Length:
4 Days – Leader-Led

Back to Course Listing

DSC21 - DSC - Diameter Operations, Administration, Maintenance, and Provisioning

Course Description:
The DSC Diameter training course provides operations personnel with the necessary skills to provision and operate the DSC product. It does not include customer specific system installation, provisioning or turn up activities.

Intended Audience:
Managers, administrators and anyone needing to be able to operate, configure, and maintain the DSC as a Diameter node.

Key Topics:

- Diameter Protocol Tutorial
- Introduction to the DSC system
- System Hardware (DSC 8000 specific)
- Software Overview
- System Operation and Maintenance
- DSC Diameter Provisioning
- DSC IWF Provisioning

Objectives:
Upon completion of this course, you will be able to:

- Provide an Overview of the DSC.
- Explain how the DSC is used in Diameter networks
- Detail the inter-process communications.
- Demonstrate system tools for troubleshooting and analysis.
- Present the various DSC software components.
- Supply configuration instructions for the various software components of the DSC.

Prerequisite Skills:

- Experience with building Diameter networks such as signaling protocols, architecture, TCP/SCTP Connections and routing
- IP knowledge such as configuration parameters and routing
- Basic working knowledge of Linux/Unix

Prerequisite Courses:
None

Course Length:
4 Days – Leader-Led

Back to Course Listing

GEN11 - C20 on GENiUS Solution Overview

Course Description:
The GEN11 is a one-day self-paced C20-GENiUS Solution Overview course. Component content is provided to show its role in the solution. Component hardware and user interfaces are provided as well.
Intended Audience:
The Learning audience for the GEN11 GENBAND Solution Network Overview includes those responsible for maintaining the network. This course is targeted for both technical and managerial personnel.

Key Topics:
Overview of GENBAND's C20-GENiUS network components:

- C20-GENiUS Solution Overview
- GENView Manager (GVM)
- C20 on GENiUS
- Application Server (AS)
- Session Server Trunks (SST)
- Signaling Point 2000 (SP2000)
- Gateway Controller (GWC)
- Media Server
- G6 Media Gateway
- G5 Media Gateway
- G9 Media Gateway

Objectives:

- Describe the C20-GENiUS Solution
- Identify the role of the GENView Manager
- Identify the C20-GENiUS hardware and software components
- Understand the Application Server SIP lines application
- Describe the purpose of the Session Server Trunks application
- Describe and identify the Signaling Point 2000
- Describe and identify the function of the Gateway Controller
- Describe the function of the Media Server
- Understand the function of the G6 Media Gateway
- Describe the function of the G5 Access Lines Gateway
- Describe the function of the G9 Media Gateway

Prerequisite Skills:
Knowledge and basic understanding of communications.

Prerequisite Courses:
None

Course Length:
1 Day – Self-Paced

Back to Course Listing

GEN15 - C20-GENiUS - Operations, Maintenance, and Fault Management

Course Description:
The purpose of this course is to familiarize the student with the operations and maintenance of the C20-GENiUS platform. The student will also become familiar with basic troubleshooting techniques using network element level GUI managers, and Command Line interfaces. The student will also use documentation to locate and resolve component level faults.

Key Topics:

- C20-GENIUS Solution Overview
- C20-GENIUS Platform Hardware and Software
- C20-GENIUS EMS and CLI User Interfaces
- GENWare Application Management
- C20-GENIUS Routine Maintenance
- GENWare Fault Management
- GENView Manager Alarms
- Application Server Fault Management
- G6 Media Gateway Fault Management
- G9 Media Gateway Fault Management

Objectives:

- Understand the C20-GENIUS Solution Architecture and Components
- Discuss the shelf and blade components
- Describe the Multi-Application Rack Mount Server Hardware
- Show GENiUS Hardware and Software Detail from the CLI
- Understand the Platform User Interfaces
- Access the Core Element Manager (CEM)
- Access the Command Line Interface (CLI) and understand the syntax and modes
- Manage GENWare Users and Groups
- Understand the Application Inventory Manager (AIM) CLI Level
- Manage the C20 Management Module Applications
- Access Application Management Commands from GENView Manager
- Execute System Health Checks
- Perform Routine Exercise (REx) testing
- Manage and Replace Disk Drives and Blades in the GENiUS shelf
- Manage Backups in the GENiUS Shelf
- Manage GENWare Events, Alarms, and Security Logs
- View Alarms and Launch Applications with GENView Manager
- View Fault data on the AS, G6, and G9 Network Elements

Prerequisite Skills:
None

Prerequisite Courses:
GEN10 or GEN11 (C20-GENIUS Solution Overview)

Course Length:
5 Day – Leader Led

Back to Course Listing

GEN35 - C20 on GENiUS Class 5 Planning & Capacities

Course Description:
The purpose of this course is to introduce you to the basic considerations when configuring a C20 on GENiUS platform by reviewing the System Engineering Bulletin, SEB_09-00-003 (C20 on GENiUS Capacity Engineering) and other related SEBs.

Intended Audience:
The learning audience for the GEN35 GENBAND Class 5 Planning and Capacities course are engineers responsible for managing the network architecture.

Key Topics:

- C20 on GENiUS Overview
- C20 on GENiUS Capacities, including:
  - Call Agent (CA)
  - Gateway Controllers (GWC)
  - Session Server Trunks (SST)
  - A2 Converged Application (A2)
  - SP2000 (Signaling Platform 2000)
- G9 & G6 Overview and Capacities

Objectives:
In this course, you will learn how to:

- Identify the components and topology of a GENiUS deployment
- Understand the limitations of GENiUS ATCA components:
  - Call Agent (CA)
  - Gateway Controllers (GWC)
  - Session Server Trunks (SST)
  - A2 Converged Application (A2)
  - SP2000 (Signaling Platform 2000)
- Describe the G9 Trunk and G6 Trunk / Packet Line Gateways

Prerequisite Skills:
Knowledge and basic understanding of communications.

Prerequisite Courses:
GEN10 or GEN11

Course Length:
1/2 Day – Self-Paced

Back to Course Listing

GMS15 - Ribbon Media Server Operations and Provisioning

Course Description:
The purpose of this course is to provide you with the skills and knowledge to understand the operations, configuration, and maintenance of the GENBAND Media Server (MS) in a C20 hosted office.

Intended Audience:
This course is designed for individuals who are responsible for installing and maintaining the GENBAND MS in a C20 solution.

Key Topics:

- Introduction to the GENBAND Media Server (MS)
- Hardware and Software Architect
- Management Interfaces
- IP Network Integration
- Base Configuration
- C20 integration configuration
- AS integration configuration
- Fault and Performance Management

Objectives:
In this course, you will learn how to:

- Describe the purpose of the GENBAND Media Server (MS).
- Identify the hardware and software requirements for GENBAND MS.
- Identify the different GENBAND MS management interfaces.
- Understand the IP network integration for the GENBAND MS.
- Define the GENBAND MS – Base Configuration
- Identify the GENBAND MS – C20 integration configuration.
- Understand the GENBAND MS – AS integration configuration.
- Examine and use fault and performance management tools available for the GENBAND MS.

Prerequisite Skills:
Knowledge and basic understanding of communications.

Prerequisite Courses:
GEN10 or GEN11 or C20RMS10 or C20RMS11 or vC2010 or vC2015

Course Length:
2 Days – Self Paced

Back to Course Listing

GVM15 - GENview Manager Operations

Course Description:
The GENView Manager (GVM) Operations course covers the usage of the GVM application for working with alarms, logs, performance management, launching applications, administration, and topology management. It also covers topics related to system administration and management of the network. Lab exercises help to reinforce the course topics.

Intended Audience:
Personnel responsible for supporting network elements and managers in the Carrier Voice over IP environment.

Key Topics:

- GVM Purpose
- GVM Platform
- GVM User Interfaces
- GVM Fault Management
- GVM Performance Management
- GVM Application Launching
- GVM Inventory Management
- GVM Maintenance
- GVM Security
- GVM Administration

Objectives:
Upon completion of this course, you will be able to understand and perform as follows:

- Understand the architecture of the GENView application
- Understand the GENView Manager Platform
- Login and navigate the GENView Manager clients
- Utilize GENView Manager for managing faults
- Create and manage performance jobs
- Launch element management systems and command lines
- Manage the GENView Manager Inventory
- Perform maintenance actions on network elements
- Understand the GENView Security (GSEC) application
- Perform Administrative actions on the GENView Manager application

Prerequisite Skills: None

Prerequisite Courses:
GEN10 or GEN11 or C20RMS10 or C20RMS11 - C20 - Solution Fundamentals

Course Length:
2 Days – Leader Led

Back to Course Listing

NPM35 - CVoIP: Network Patch Manager

Course Description:
The Network Patch Manager (NPM) utility is used to patch selected components of a customer's Carrier Voice over IP (CVoIP) network. CVoIP: Network Patch Manager explains patching generally, followed by an introduction to the NPM and hands-in practice using NPM.

Intended Audience:
Operations and Maintenance personnel

Key Topics:

- How a patch works
- NPM patching architecture and applications
- Patching sequence
- Manual patching using NPM
- Automatic patching using NPM
- Troubleshooting
- Hands-in exercises for patching and troubleshooting

Objectives:
Upon completion of this course, you will be able to use NPM from GUI or command line to:

- Launch NPM, retrieve and apply patches
- Remove patches
- Restart devices
- Verify results
- Setup automatic patching
- Troubleshoot patching

Prerequisite Skills:
Basic knowledge of hardware and software architecture of GENBAND CVoIP networks

Prerequisite Courses:
None

Course Length:
½ Day – Self Paced

Back to Course Listing

OSSG20 - C20 OSSGate and Servord+

Course Description:
An Introduction to OSSGate and Servord+ provides a brief understanding of the OSSGate server and its functionality in provisioning and testing CVoIP lines using SERVORD+.

Intended Audience:
This course is designed for anyone that needs to provision CVoIP lines.

Key Topics:

- Introduction to OSSGate; what it is and its physical connectivity
- Review of Servord; Servord compared to OSSGate's Servord
- Explanation of OSSGate Servord + ; Server access, Commands and the Construction of Servord+ commands
- Explanation of the OSSGate's line test interface for the MG9000

Objectives:
Upon completion of this course, you will be able to:

- Identify OSSGate as an application for CVoIP provisioning and testing
- Understand differences between OSSGate SERVORD+ and Legacy SERVORD
- Distinguish OSSGate as part of the C20 Management Tools application
- Understand OSSGate Connections
- Define OSS/Telnet Secure and Non-secure connections
- Recognize commonly used SERVORD+ commands
- Understand command provisioning for lines using CI and SERVORD +
- Configure new lines using OSSGate commands

Prerequisite Skills:
Data entry or Service Order administration skills

Prerequisite Courses:
GEN10 or GEN11 or C20RMS10 or C20RMS11 - C20 Solution Fundamentals

Course Length:
1 Day – Self-Paced

Back to Course Listing

PSX10 — PSX Overview

Course Description:
The purpose of this event is to provide staff with an overview of the product and basic functionality of the Ribbon Policy Server PSX.
This includes introduction to the Ribbon Insight Element Management System (EMS), PSX Manager and Softswitch Request (SSReq) Tool.

Intended Audience:
This course is designed for staff who require basic knowledge of the Ribbon PSX functionality, introduction to the interfaces used for PSX provisioning.

Key Topics:
- PSX Overview
- PSX Product Information
- PSX Manager
- Basic Routing
- Softswitch Request Tool (SSReq)
- Ribbon Support Portal

Objectives:
Upon completion of this course, you will be able to:
- Describe what the PSX is and what it does.
- Identify different PSX configurations.
- Describe how the PSX processes a Policy Request.
- Identify the PSX Manager through the Ribbon Insight EMS.
- Identify the Entities to support basic routing.
- Identify the SS Request tool.
- Identify how to access Ribbon Support Portal and the Routing Analysis Tool.

Prerequisite Skills: A basic understanding of telephony principles, session border controllers and soft switches

Prerequisite Courses:
None

Course Length:
3 Hours – Self-Paced

Back to Course Listing

PSX Support Blended Learning Course

Course Description:
This is a Blended Learning Course. This Blended Learning training has two components which is made up of both Self-Pace and Leader-Led content. The following two courses make up this Blended Learning training:

- PSX11 – PSX Support Technical Prerequisites – Self-Paced – 2 days
- PSX20 - PSX Support Practical Exercises - Leader-Led – 2 days

You **must** complete the PSX11 prerequisite Self-Pace course before you can enroll and attend the PSX20 Leader-Led course.

This Blended Learning Course is designed for PSX Call routing specialists who are tasked with how to provision the PSX Policy Server to perform call routing/translations.

Below, you will find the course syllabi for the two courses that make up this Blended Learning training.

Part 1: PSX11 – PSX Support Technical Prerequisites

Course Description:
The purpose of this course is to familiarize the student on PSX Call Routing in IP Environments. This course teaches how to provision the PSX Policy Server to perform call routing/translations for calls processed by an SBC. It teaches how to fill essential database tables on the PSX Policy Server implemented either as a standalone PSX or as an ePSX embedded within an SBC, based on the most common Ribbon applications.

You **must** complete this course before you can enroll and attend the PSX20 - PSX Support Practical Exercises Leader-Led course.

Intended Audience:
System engineers, consultants and integrators, including Channel Partners working toward technical certification, who are responsible for the implementation, management and support of Ribbon VoIP equipment

Key Topics:

- Architecture
- PSX Navigation
- Basic Simulated Call Trace Tools SSReq
- PSX IP (SIP) Trunk Group Setup
- Simulated Call Trace Tool (SSReq)
- Advanced Routing Techniques
- Announcements and Service Profile Editor
- Treatment Services
- Routing Services
- Enhanced Services
- Digit Manipulation
- Local Database Translation
- Command Line Interface

Objectives
Upon completion of this course, a student will be able to:

- Describe what the PSX is and what it does
- Describe how the PSX processes a Policy Request
- Identify different PSX configurations
- Access and navigate the PSX Manager through Ribbon Insight
- Access the PSX documentation from the Online Library or the Ribbon Support Portal
- Provision the PSX database to support basic routing
- Access and use the SS Request tool from the PSX Manager to test routes provisioned
- Build a Trunk Group record
- Provision the PSX database using Advanced Routing techniques
- Understand the use of announcements and creation of scripts
- Configure and test Treatment Services to block or screen calls
- Provision and test Special Routing Services
- Create Digit Manipulation rules
- Translate numbers using the PSX database

Prerequisite Skills: None

Prerequisite Courses: None

Course Length:
2 Days – Self-Pace

Part 2: PSX20 – PSX Support Practical Exercises

Course Description:
The purpose of this course is to reinforce the content you learn in the PSX11 - PSX Support Technical Prerequisites course by immersing you in hands-on lab exercises.

You **must** complete the PSX11 - PSX Support Technical Prerequisites Self-Pace course before you can enroll and attend this course.

Intended Audience:
System engineers, consultants and integrators, including Channel Partners working toward technical certification, who are responsible for the implementation, management and support of Ribbon VoIP equipment

Key Topics:

- Basic routing
- Basic SSReq use
- Trunk Group provisioning
- Least Cost Routing
- TAR Routing
- Entity Based Routing
- Route Hopping

- Originating Entity Routing
- Off Net Routing
- Screening
- International Blocking
- Routing Services
- Digit Manipulation
- Local Database

Objectives

Upon completion of this course, a student will be able to:

- Create a Routing Label and a Standard Route to trunk group, gateway and peer combination.
- Use the SSReq tool to validate the entities you built in the PSX.
- Create a trunk group and associate with a routing label and verify that routing is working correctly.
- Using the SSReq tool verify and troubleshoot the output of the Policy Response.
- Create a route label that uses Least Cost Routing and verify.
- Create and test TAR routes.
- Create and test an entity based standard route.
- Create and test Route Hopping.
- Create and test 911/112 calls.
- Test the effects of the Routing Criteria and verify its relationship with the carrier selected while processing a call.
- Complete a Screening Exercise to analyze trunk group screen and trunk screening with an exception.
- Establish International Call Blocking.
- Establish Hifraud Country Blocking.
- Using Digit Manipulation manipulate a called Number based on DM Criteria's and rule's.
- Provision the PSX to do number translations.

Prerequisite Skills: None

Prerequisite Courses: PSX11 – PSX Support Technical Prerequisites

Course Length:
2 Days – Leader-Led

Back to Course Listing

PSX36 — Ribbon PSX Cloud Support

Course Description
PSX Cloud Call Routing is designed for routing specialists who have their PSX deployed in a NFV network. This course teaches how to provision the PSX Policy Server to perform call routing/translations for calls processed by an SBC. It teaches how to fill essential database tables on the PSX Policy Server implemented either as a standalone PSX or as a PSX Diameter+ when deployed with SBC SWe, based on the most common Ribbon applications.

Key Topics

- Virtualization
- PSX VM in Openstack
- Architecture
- PSX Navigation
- Call Routing
- Basic Simulated Call Trace Tools SSReq
- PSX IP (SIP) Trunk Group Setup
- Simulated Call Trace Tool (SSReq)
- Additional advanced call routing techniques
- PSX Services and the Service Profile Editor
- Number Translation and Digit Manipulation
- PSX as a SIP Proxy or Redirector

Objectives
Upon completion of this course, a student will be able to:

- Explain conceptually the move to Virtualization
- Explain components of a PSX SWe in NFV (Openstack requirements and building blocks)
- Describe the different PSX SWe deployment options
- Trace a policy request as it is processed through the PSX
- Navigate through the Insight PSX Manager graphical user interface
- Provision the PSX database to support basic routing
- Test routes provisioned in the PSX using the SSREQ tool
- Debug PSX SWe VM for cloud issues (aka VM Lifecycles)
- Configure the routing scenarios required in your network
- Define number translations and digit manipulation rules
- Configure PSX Services other than call routing
- Configure the PSX to handle SIP messages directly (SIP Proxy or Redirector)

Prerequisite Skills: None

Prerequisite Courses: VNFM15 – if the Ribbon VNF Manager is part of the cloud solution.

Course Length:
4 Days – Leader-Led

Back to Course Listing

SG10 — Signaling Gateway Overview

Course Description:
This course provides an overview of the Ribbon Signaling Gateway, the SGX4000. Targeting SGX SS7 network engineers responsible for installing, provisioning, and managing the SGX SS7 Gateways to handle ISUP and TCAP message traffic, it addresses the role of the SGX in the SS7 network and how to provision.

Key Topics:
- SGX Management & Initial Configuration
- SGP Provisioning
- ASP TDM Provisioning
- ASP M2PA Provisioning
- ASP M3UA Provisioning
- Geographic Redundancy Provisioning
- PSX TCAP/INAP Provisioning

Objectives:
Upon completion of this course, a student will be able to:
- Understand the role an SGX4000 Signaling Gateway plays in a Sonus solution.
- Demonstrate provisioning of the SGX4000 for both IP and TDM based SS7 signaling
- Provision a GSX9000 to register to and work with an SGX
- Provision the PSX and SGX4000 to pass TCAP messaging

Prerequisite Skills:
Telephony terms and concepts, including SS7 network elements and signaling
Basic IP addressing and subnet concepts
Windows desktop environment and programs

Prerequisite Courses:
None

Course Length:
1 Day – Self-Paced

Back to Course Listing

SP2K15 - Signaling Platform 2000 Operations, Administration, Maintenance and Provisioning

Course Description:
The SP2000 Operations, Administration, Maintenance, & Provisioning course familiarizes the student with the Architecture, Configuration, Administration, Fault Management and Maintenance of the Signaling Platform 2000 as a signaling gateway with R3 hardware and software.

The students are presented with structured hands-in exercises to practice the commands and navigating both the Menu Driven and Graphical User Interfaces (GUIs).

Intended Audience:
The learning audience for the SP2K15 OAMP course includes those responsible for maintaining and updating the SP2000 platform components and the SS7 network. This course targets both maintenance technicians and technical support personnel.

Key Topics:
- Architecture
- Access
- Configuration
- Administration and Security
- Fault Management
- Maintenance
- Glossary
- MSU Tracing Reference

Objectives:
- Identify key concepts of the SP2000 architecture.
- Access and log in to an SP2000.
- Identify the configurations of the SP2000 to function as an SG.
- Configure a system with links and routeset.
- Perform security and administration functions.
- Perform fault management and troubleshooting tasks.
- Perform maintenance tasks

Prerequisite Skills:
Knowledge and basic understanding of SS7 messaging.

Prerequisite Courses:
None

Course Length:
3 Days – Leader-Led

Back to Course Listing

SST16 - C20 on GENiUS/RMS - Session Server Trunks Provisioning and Maintenance

Course Description:
The purpose of this course is to provide you with the skills and knowledge to configure and maintain Session Server Trunks on GENiUS ATCA platform. You will also learn basic fault and performance management methods. To reinforce learning, you will complete several exercises based on the topics covered.

Intended Audience:
This course is designed for individuals responsible for installing and maintaining Session Server Trunks in a Carrier VoIP network.

Key Topics:

- Session Server Trunks Overview
- Session Server Trunks hardware
- Session Server Trunks User Interfaces
- DPT Trunk provisioning requirements
- Basic Session Server Trunks configuration
- Advanced Session Server Trunks configuration
- Basic Session Server Trunks fault management
- Session Server Trunks fault management tools

Objectives:
Upon completion of this course, you will be able to:

- Describe the purpose of the Session Server Trunks.
- Identify the hardware components required for Session Server Trunks.
- Navigate the different Session Server Trunks user interfaces.
- Datafill Dynamic Packet Trunks used with Session Server Trunks.
- Perform basic Session Server Trunks configuration.
- Perform advanced Session Server Trunks configuration.
- Perform basic fault management of the SIP Gateway Application and the Session Server Trunks platform.
- Examine advanced fault management tools available for the SIP Gateway Application and the Session Server Trunks platform.

Prerequisite Skills:
Basic user interface navigation skills
Basic understanding of DMS technology and MAPCI
Familiarity with IP and other technology protocols
Basic understanding of purpose, hardware, and connectivity of each network component a VoIP network solution

Prerequisite Courses:
GEN10 or GEN11 or C20RMS10 or C20RMS11

Course Length:
3 Days – Leader-Led

Back to Course Listing

UXLA37 - C20 Universal Translations

Course Description:
This course provides the students with the key skills to implement the datafill required to support a C20 Universal Translations scheme. The course is instructor led with a high degree of practical content and student activity.

Intended Audience:
Personnel responsible for the initial datafill and database management of C20 Universal Translations.

Key Topics:

- Centrex Translations overview
- Trunk group tables
- Route tables
- Universal Translations overview
- Universal Translations datafill
- Call Control and Universal Screening datafill

Objectives:
On successful completion the student will be able to:

- Explain the function of a customer group and datafill customer group tables
- Describe the function of trunk tables and datafill trunk groups
- Describe the function of the route tables and datafill route lists using appropriate selectors
- Describe the function of Universal Translations tables
- Apply Universal Translations to resolve - Line to Trunk - Trunk to Line -Line to Line calls -Trunk to Trunk calls
- Describe screening of CLI's in Universal Translations and the use of White v Blacklists.
- Datafill Tables to screen CLI's in Universal Translations
- Datafill Tables to screen calls using Call Control and Universal Screening
- Use TRAVER and TRANSVER to verify correct call routing through translations

Prerequisite Skills:
Knowledge and basic understanding of Centrex Translations is desirable.

Prerequisite Courses:
GEN10 or GEN11 or C20RMS10 or C20RMS11 - C20 - Solution Fundamentals

Course Length:
5 Days – Leader-Led

Back to Course Listing

vC2010 — Virtual C20 Solution Overview

Course Description:
The VC2010 is a one-day Leader-Led C20 Solution Overview course. Each component is discussed to show its role in the solution as well as its hardware platform and associated user interfaces.

Intended Audience:
This course is intended for anyone requiring a basic understanding of the Virtual C20 solution. It is a pre-requisite course for advanced courses in the curriculum. This course was designed for both technical and managerial personnel.

Key Topics:

- Virtual C20 Solution Overview
- GENView Manager (GVM)
- Virtual C20
- Application Server (AS)
- Session Server Trunks (SST)
- Signaling Point 2000 (SP2000)
- Gateway Controller (GWC)
- Media Server
- G6 Media Gateway
- G5 Media Gateway
- G9 Media Gateway

Objectives:
Upon completion of this course, you will be able to:

- Describe the Virtual C20 Solution
- Identify the role of the GENView Manager
- Identify the Virtual C20 hardware and software components
- Understand the SIP lines Application Server
- Describe the purpose of the Session Server Trunks application
- Describe and identify the Signaling Platform 2000
- Describe and identify the function of the Gateway Controller
- Describe the function of the Media Server
- Understand the function of the G6 Universal Gateway
- Describe the function of the G5 Line Access Gateway
- Describe the function of the G9 Converged Gateway
- Describe the function of the G5 SIP Emergency Standalone (ESA).

Prerequisite Skills: None

Prerequisite Courses:
None

Course Length:
1 Day – Leader-Led

Back to Course Listing

vC2011 — Virtual C20 Solution Overview

Course Description:
The VC2011 is a one-day Self-Paced Virtual C20 Solution Overview course. Each component is discussed to show its role in the solution as well as its hardware platform and associated user interfaces.

Intended Audience:
This course is intended for anyone requiring a basic understanding of the Virtual C20 solution. It is a pre-requisite course for advanced courses in the curriculum. This course was designed for both technical and managerial personnel.

Key Topics:

- Virtual C20 Solution Overview
- GENView Manager (GVM)
- Virtual C20
- Application Server (AS)
- Session Server Trunks (SST)
- Signaling Point 2000 (SP2000)
- Gateway Controller (GWC)
- Media Server
- G6 Media Gateway
- G5 Media Gateway
- G9 Media Gateway

Objectives:
Upon completion of this course, you will be able to:

- Describe the Virtual C20 Solution
- Identify the role of the GENView Manager
- Identify the Virtual C20 hardware and software components
- Understand the SIP lines Application Server
- Describe the purpose of the Session Server Trunks application
- Describe and identify the Signaling Platform 2000
- Describe and identify the function of the Gateway Controller
- Describe the function of the Media Server
- Understand the function of the G6 Universal Gateway
- Describe the function of the G5 Line Access Gateway
- Describe the function of the G9 Converged Gateway
- Describe the function of the G5 SIP Emergency Standalone (ESA).

Prerequisite Skills: None

Prerequisite Courses:
None

Course Length:
1 Day – Self-Paced

Back to Course Listing

vC2015 – Virtual C20 Virtual C20 Solution Operations, Maintenance, and Fault Management

Course Description:
The purpose of this course is to familiarize the student with the operations and maintenance of the Virtual C20 Solution Platform. The student will also become familiar with basic troubleshooting techniques using component element managers and Command Line interfaces as well as documentation to locate and resolve component level faults.

Intended Audience:
This course is designed for personnel responsible for operating and maintaining the Virtual C20 technologies, as well as troubleshooting the platform and associated network element components in the vC20 Call Session Controller environment.

Key Topics:

- vC20 Solution Overview
- vC20 Platform Hardware and Software
- vC20 EMS and CLI User Interfaces
- GENWare Application Management
- vC20 Routine Maintenance
- GENWare Fault Management
- GENView Manager Alarms
- Application Server, G6, and G9 Fault Management

Objectives:

- Understand the vC20 Solution Architecture and Components
- Understand the RMS Hardware and Connectivity
- View the Hardware and Software Detail from the CLI
- Navigate the Virtual C20 Command Line Interface
- Manage the Virtual C20 Administrative Users
- View Service Groups, Units, and High Availability Status
- Manage the C20 Management Module Application Set
- Manage the C20 Virtual Call Agent
- Provision and Maintain Applications on the Virtual C20 Platform
- Manage the Data Manager File System
- Execute System Level Health Check on the Virtual C20 Platform
- Execute Routine Exercise Testing on the Virtual C20 Platform
- Manage Software Patching
- Backup the Virtual C20 Platform
- Manage Events, Alarms, and Security Logs
- View Alarms and Launch Applications with GENView Manager
- View Fault data on the AS, G6, and G9 Network Elements

Prerequisite Skills: None

Prerequisite Course:
vC2010 or vC2011 (vC20 Solution Fundamentals)

Course Length:
5 days Leader-Led

Back to Course Listing

vC2035 – Virtual C20 Class 5 Planning & Capacities

Course Description:
The purpose of this course is to introduce you to the basic considerations when configuring a vC20 platform by reviewing the System Engineering Bulletin SEB_09-00-051, Virtual C20 (vC20) Engineering Rules and other related SEBs.

Intended Audience:
The learning audience for the vC2035 Ribbon vC20 Planning and Capacities course are engineers responsible for managing the network architecture.

Key Topics:

- vC20 Overview
- Dell R740 hardware
- Networking
- vC20 Capacities, including:
  - Call Agent (CA)
  - Gateway Controllers (GWC)
  - Session Server Trunks (SST)
  - Application Server (AS)
  - SP2000 (Signaling Platform 2000)
- Media Servers: GMS and MAS Capacities
- G9, G6, and G5 Overview and Capacities

Objectives:
In this course, you will learn how to:

- Identify the components and topology of a VC20 deployment.
- Understand the limitations of the VC20 components:
  - Call Agent (CA)
  - Gateway Controllers (GWC)
  - Session Server Trunks (SST)
  - Virtual Signaling Platform 2000 (vSP2K)
  - General Media Server (GMS)
  - Application Server (AS & MAS)
- G9 Trunk, G6 Trunk / Packet Line, and G5 Line Access Gateways

Prerequisite Skills:
Knowledge and basic understanding of telecommunications.

Prerequisite Courses:
None

Course Length:
2 Days – Leader-Led

Back to Course Listing

XLA35 - C20 Basic Translations

Course Description:
This course assumes you have no previous DMS translations experience. It gives you the ability to create translations that are used to process line-to-line, line-to-trunk, and trunk-to-line calls. You will have hands-on practice creating the information necessary to process these call types.

Intended Audience:
Translations engineers and support personnel, maintenance technicians, anyone who needs to understand basic translations for the Voice over IP network.

Key Topics:
- Table Editor
- Introduction to SERVORD
- Introduction to Documentation
- Introduction to Translations
- TRAVER Syntax
- Line Tables
- Standard Pretranslator Screening Tables
- Code Validation Screening Tables
- Operator Services Traffic Screening Tables
- Class-of-Service Screening Tables
- Local Calling Area Screening Tables
- Treatment Tables
- Office Route Tables
- Trunk Group Tables
- Announcement Tables

Objectives:
Upon completion of this course, you will be able to:
- Apply Table Editor commands to maneuver, manipulate, and locate information in the data tables.
- Put phones in service for verification purposes and to identify the appropriate pointer tables for call processing.
- Explain how to locate procedures in GENBAND documentation.
- Describe how data tables are used to process the following types of calls: line-to-line, line-to-trunk, trunk-to-line
- Identify the proper syntax for initiating a TRAVER.
- Describe the purpose of the translations data tables that relate to lines, screening, routing, and trunks.
- Create datafill used for line-to-line, line-to-trunk, and trunk-to-line translations.
- Initiate TRAVERs through the Communication Server's translations data tables to verify tuple datafill.

Prerequisite Skills:
None.

Prerequisite Courses:
GEN10 or GEN11 or C20RMS10 or C20RMS11 - C20 Solution Fundamentals

Course Length:
5 Days – Leader-Led
Back to Course Listing

MEDIA GATEWAYS

C3G915 — C3 Hosted Converged Gateway Operation, Administration, Provisioning and Maintenance

Course Description:
The C3G915 – C3 Hosted Converged Gateway - Operation, Administration, Provisioning & Maintenance Course is geared toward Service Personnel, Administrators and Maintenance personnel who require an understanding of the G9 Converged Gateway System when hosted with a C3 call controller. The student is equipped with an understanding of hardware, Operating System as well as software and database for the C3 hosted G9 system. Note: this course is only required for C3 controller implementations. For C20 controllers and third-party controllers, customers should register for the G915 course.

Key Topics:

- Overview of the Element Management System (EMS) Graphical User Interface (GUI)
- System hardware and software on the G9 gateway
- System Administration and applications
- Events and Alarms
- Security
- Performance Management
- Accounting Management
- System Status reporting tools
- Configuration Database
- Trunk Database

Objectives:

- Understanding standard G9 Media Gateway Documentation and usage
- Understanding basic utilization with the Genband C3 Media Gateway Controller
- Understanding the design, navigation and operations of the Genview EMS in conjunction with the C3/G9 products
- Understanding EMS functional areas
- Understanding Ancillary Equipment used in conjunction with the G9 product
- Understand the architecture of the G9 Converged Media Gateway
- Understanding operation and functionality of gateway cards
- G9 call flow examples
- Understanding gateway maintenance
- Discussion of G9 Fault monitor and reporting sub-system
- Security management understanding
- Understanding of performance statistical reports and their operations
- Understanding of G9 status displays and their meaning
- Call trace operations and execution
- Call Detail Record retrieval and understanding
- Create Configuration Database for a variety of interface components
- Create Physical Facilities

Prerequisite Skills:
Enrollees are expected to have a basic understanding of switching and networks

Prerequisite Courses:
G910 Media Gateway Basic Overview
C310 Media Gateway Controller Basic Overview

Course Length:
5 Days – Leader-Led

Back to Course Listing

C20G915 - G9 Converged Gateway - Operations, Administration and Maintenance Deploy with C20

Course Description:
The C20G915 is a 3-day, Leader Led, G9 Converged Gateway - Operation, Administration & Maintenance Course that is geared toward Service Personnel, Administrators and Maintenance personnel who require an understanding of the G9 Converged Gateway deployed with a GENBAND C20 Call Session Controller for Gateway Call Control. The student is equipped with an understanding of the G9 Hardware, Virtual Media Gateway, Fault Management, Security, Performance and C20 Call Session Controller association for Trunk Group application and support.

Intended Audience:
This course is intended for anyone requiring a basic understanding of the Design, Architecture, Features and Capabilities of the GENBAND G9 Converged Gateway Product when deployed with a GENBAND C20 Call Session Controller.

Important Note:
Customers that deploy the G9 CMG with the GENBAND C3 Call Session Controller should not attend this course; instead, they require the C3G915 Course.

Key Topics:

- Overview of the Element Management System (EMS) Graphical User Interface (GUI)
- System hardware and configuration on the G9 Converged Gateway
- G9, GWC and C20 Trunk Group and Carrier associations
- C20 Call Session Controller associations to support G9 Converged Gateway
- System Administration and applications
- Events and Alarms
- Security
- Performance Management
- System Status reporting tools

Objectives:

- Understanding the design, navigation, and operations of the Genview EMS in conjunction with the G9 Converged Gateway
- Understanding G9 Genview EMS functional areas
- Understanding C20 and GWC associations used in conjunction with the G9 Converged Gateway
- Understand the architecture of the G9 Converged Gateway
- Understand Megaco (H.248) Call Control of the G9 Converged Gateway
- Understand G9 Signaling Gateway functionality to support IUA and M3UA backhaul
- Understanding operation and functionality of Interface, Service and Control cards
- Understanding G9 Converged Gateway maintenance
- Discussion of G9 Fault monitor and reporting sub-system

- Security management understanding
- Understanding of performance statistical reports and their operations
- Understanding of G9 status displays and their meaning

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
3 Days – Leader-Led

Back to Course Listing

G515 - Line Access Gateway

Course Description:
This 2-day Leader Led G515 Line Access Gateway course provides the skills required to deploy the G5 Line Access Gateway by understanding the physical connections and interfaces. It also will discuss how the features of the G5 Line Access Gateway will fit in the network.

Intended Audience:
This course is intended for anyone requiring a basic understanding of the Design,
Architecture, Features and Capabilities of the G5 Line Access Gateway.

Objectives:

- Understand the benefits of deploying the G5 Line Access Gateway
- Understand the physical connections and interfaces on the system
- Understand the features of the G5 Line Access Gateway and how it fits in the network
- Understand how to connect a PC to the G5 Line Access Gateway
- Understand how to access the TL1 Interface
- Understand how to access the Web Interface
- Learn how to do basic provisioning on the G5 Line Access Gateway
- Learn how to monitor and troubleshoot the G5 Line Access Gateway

Prerequisite Skills:
Basic Understanding of TDM or IP Theory
Basic Unix or Linux commands.

Prerequisite Courses:
None

Course Length:
2 Days – Leader-Led

Back to Course Listing

G5SE10 - G5 SIP ESA Overview

Course Description:
The G5SE10 SIP ESA is a half day, Self-Paced, G5 SIP ESA course that is geared toward Service Personnel, Administrators and Maintenance personnel who require an understanding of the G5 SIP ESA.

Intended Audience:
This course is intended for anyone requiring a basic understanding of the GENBAND G5 SIP ESA.

Key Topics:

- Identify the differences between G5 SIP ESA and G5 SIP Monitor
- Access and log into the G5 SIP GENBAND Compact Sever
- Navigate the G5 SIP ESA View functional areas
- Navigate the G5 SIP ESA Configure functional areas
- Navigate the G5 SIP ESA Update functional areas
- Navigate the G5 SIP ESA Support functional areas

Objectives:

- Identify the purpose and modes of the G5 SIP ESA
- Identify the Hardware components of the GENBAND Compact Server
- Access the G5 SIP ESA GUI and CLI
- Identify the key G5 SIP ESA GUI commands
- Basic Provisioning
- Software Update
- Backup and Restore

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
1/2 Day – Self-Paced

Back to Course Listing

G610 - Universal Media Gateway Basic Overview

Course Description:
The G610 Universal Media Gateway Basic Overview, which is 4 hours in length, will provide the student with a high-level understanding of the G6's Basic Hardware, Provisioning, Alarms, Events, and the Packet Line Gateway. The course is divided into six lessons. Each lesson contains a quiz to determine if the user needs to review any information. At the completion of the course, a final test is presented. The user must achieve an 85% on the final test to pass the course. The G610 Basic Overview is the pre-requisite to the G6 classes.

Intended Audience:
This course is intended for anyone requiring a basic understanding of the Design, Architecture, Features and Capabilities of the GENBAND G6 Universal Media Gateway Product

Key Topics:

Product Architecture

- Carrier Class Chassis Design
- Carrier Class Redundancy
- Carrier Class System Architecture
- Carrier Class Central Office Design
- Access Gateway Functionality
- Low – High Scalability
- Universal Media Gateway Interfaces
- Anatomy of a G6 – The Midplane

Module Types

- System Controller Module (SCM)
- SCM2
- SCM1 & SCM2 Comparison
- Access to Network Module (ANM)
- GbE1 ANM
- GbE2 ANM
- GbE ANM – IP Capabilities
- GbE2 LACP Implementation
- Link Aggregation Modules
- OC3 / STM-1 and DS3 Cards
- Telephony Port Modules (TPM)
- TPM Functions
- SCM1 & STS-1 / chDS3 TPM
- SCM2 & STS-2 / chDS3 TPM
- Module Redundancy

Platform Enabling Multiple Solutions

- Class 5 Voice over Broadband
- Trunking Media Gateway
- Reverse Media Gateway
- Wide Array of Internetworking
- Interoperability
- Security Summary
- Release 10.2 Security Feature Enhancements

GENView EMS Manager

- System Integration & Network Elements
- Advanced Client / Server Framework
- G6 Management – CLI
- GENView Benefits
- Fault Management
- Configuration Management
- Performance Management
- Security Management
- GENView Server Recommendation
- GENView Solaris Workstation Recommendation
- GENView Windows Workstation Recommendation

Maintenance

- SCM LEDs
- ANM LEDs
- DS3 LEDs
- OC3 / STM-1 and Gbe ANM LEDs
- ANM CIM LEDs
- T1 / E1 TPM LEDs
- Differentiating Between a TPM1 & a TPM2
- T1 / E1 TPM CIM
- TPM Redundancy
- STS-1 TPM
- Fan Control Module
- Power Source
- BITS or Composite Clock Installation

Cabling

- SCM Craft Port Connector
- DS3 ANM connectors
- OC3 / STM-1 ANM connectors
- GbE ANM connectors
- TPM T1 Connector / Pin outs
- STS-1 TPM Connectors
- E1 TPM Connectors

Prerequisite Skills:
Basic Windows Skills
Basic Telephony Knowledge

Prerequisite Courses:
None

Course Length:
4 Hours – Self-Paced

Back to Course Listing

G616 - Universal Media Gateway Operations, Administration and Maintenance for Packet Line Gateway and Trunk Gateway

Course Description:
The G616 is a 3-day, Leader Led, G6 Universal Gateway - Operation, Administration & Maintenance for Packet Line and Trunk Gateway Course that describes and illustrates the ability of the G6 to function as a Packet Line Gateway to support physical and logical interfaces for the G5 Line Access Gateway and Access Bridging Interface for legacy GENBAND XPM migration. This course will also address the capability of the G6 Universal Gateway to function as a Trunk Gateway in support of ISUP, PRI and CAS trunk circuits. The student is equipped with an understanding of the G6 Hardware, H.248 Softswitch Interface Virtual Media Gateway, Interface Groups, Fault Management, Security, Performance and C20 Call Session Controller and Gateway Controller associations to support the Packet Line Gateway (PLG) and Trunk Gateway (TGW) applications defined on the G6.

Intended Audience:
This course is intended for Service Personnel, Administrators and Maintenance personnel who require an understanding of the G6 Universal Gateway deployed with GENBAND C20 Converged Softswitch that provides the G6 Gateway Call Control.

Important Note:
This course is based on G6 Universal Gateway deployment with the Ribbon C20 Softswitch. Customers deploying the G6 without a C20 should not attend this course; they should attend the G615 Course.

Key Topics:
- G6 Universal Gateway Command Line Interface (CLI) and Element Management System (EMS) to manage and maintain G6 operations
- System hardware and configuration on the G6 Universal Gateway
- Description and illustration of the Interface Groups for PLG and TGW
- C20 Call Session Controller associations to support G6 PLG and TGW functions
- G6 Events and Alarms
- Emergency Service Module (ESM) and Emergency Stand Alone (ESA) capability
- G6 Maintenance and Testing capabilities

Objectives:
Upon completion of this course, you will be able to:
- Provide an Overview of the GENBAND C20 Solution to support G6 Packet Line Gateway (PLG) and Trunk Gateway (TGW) applications
- Identify and describe the G6 Gateway hardware and protection schemes
- Describe the navigation and operations of the G6 Command Line Interface (CLI)
- Describe the navigation and operations of the G6 GenView Element Management System (EMS)
- Describe the operation and function of the G6 H.248 Softswitch Interface (SSI) Virtual Media Gateway (VMG) to support Call Control signalling in support of Packet Line Gateway (PLG) and Trunk Gateway (TGW) functionality on the G6 Gateway

- Describe the operation and function of GR-303 Interface Groups (IG) to support the G6 PLG application to support the G5 Line Access Gateway
- Describe the operation and function of ABI Interface Groups (IG) to support the G6 PLG application to support the legacy GENBAND XPM via Access Bridging Interfaces (ABI)
- Describe the Trunk Gateway (TGW) functionality of the G6 Universal Gateway to support Interface Groups (IG); CCS for ISUP or PRI, CAS for CAS-R1.
- Identify Gateway Controller (GWC) profiles to support G6 PLG and TGW
- Identify C20 Tables used in conjunction for PLG and TGW applications
- Describe the Emergency Service Modules and Emergency Stand Alone capabilities of the G6 Gateway
- Discussion of G6 Alarm and Event monitoring for Fault clearing
- Understanding G6 Universal Gateway maintenance and testing capabilities
- Understanding of G6 and EMS Security management
- Understanding of performance statistical reports and their operations

Prerequisite Courses:
N/A

Course Length:
3 Days – Leader-Led

Back to Course Listing

G910 - Media Gateway – Basic Overview

Course Description:
The G910 Media Gateway Basic Overview, which is 4 hours in length, is intended as an overview to the
G9 product line, architecture, features, capabilities, and physical equipment for the G9 in both Class 4 and
Class 5 offices. It is divided into five lessons which provide a basic understanding of the components that make up the G9 Media Gateway. After completion of the CBT, a final test is presented. The user must achieve an 85% score or better to achieve a passing grade and credit for completing this course. The user must have a passing grade to enroll in any other G9 courses.

Intended Audience:
This course is intended for anyone requiring a basic understanding of the Design, Architecture, Features and Capabilities of the GENBAND G9 Media Gateway Product

Key Topics:
Hardware

- Provides a basic understanding of the Chassis Design
- Provides a basic understanding of the Chassis Cooling
- Provides a basic understanding of the Card Layout
- Provides a basic understanding of the Front Panel
- Provides a basic understanding of the Rear Panel
- Provides a basic understanding of the Shelf Interface Unit
- Provides a basic understanding of the G9 Gateway Architecture

Media Gateway Technology

- Provides a System Level Overview
- Provides a Product Level Overview
- Provide a basic understanding of the G9 Media Gateway
- Provide a basic understanding of the G9 Media Gateway Supported Applications
- Provide a basic understanding of the Management of the G9 Media Gateway
- Provide a basic understanding of the Control of the G9 Media Gateway
- Provide a basic understanding of the Signaling Gateway Functionality

Signaling Protocols

- Provides an overview of the Wireless Protocols
- Provides an overview of the Wireline Protocols
- Provides an overview of the IP Protocols
- Provides an overview of the Control Protocols
- Provides an overview of the Management Protocols
- Provides an overview of the Signaling Gateway Protocols

Traffic Flow

- Provides an understanding of the wireline voice Traffic Path
- Provides an understanding of the TDM Traffic
- Provides an understanding of the Packet Traffic
- Provides an understanding of the Signaling Traffic
- Provides an understanding of the Wireless Traffic

Product Redundancy & Protection

- Provides a basic understanding of the Redundancy Design
- Provides a basic understanding of the Protection Schemes
- Provides a basic understanding of the Card Protection
- Provides a basic understanding of the Interface Protection Schemes

Prerequisite Skills:
Basic understanding of switching and networks

Prerequisite Courses:
None

Course Length:
4 Hours – Self-Paced

Back to Course Listing

GSX20 — GSX Trunk Provisioning (ISDN PRI & ISUP)

Course Description:

GSX Basics (GSXB) is targeted at circuit switch provisioners. Through hands-on experience using the Insight EMS GUI this course teaches how to create, test and turn-up ISUP & ISDN PRI trunk groups, with an appendix covering NFAS and IP trunk groups. This course also covers an introduction to using Command Line Interface commands.

Intended Audience:

Anyone responsible for building, testing, and turning up circuit trunk groups connected to a GSX9000 Open Services Switch.

Key Topics:

- Task Configurator Navigation
- Creating ISDN PRI Trunk Groups
- Creating ISUP Trunk Groups
- Trunk Group Administration
- GSX900 Command Line Interface
- NFAS Trunk Groups (North America)
- IP Trunk Groups

Objectives:

Upon completion of this course, a student will be able to:

- Describe the structure of ISUP and ISDN trunk groups
- Create, test, and turn up ISDN PRI and SS7 ISUP trunk groups
- Navigate through the Task Configurator
- View trunk group records in the PSX database
- Perform tone testing and continuity testing on circuits
- Manage the state and mode of both logical trunk group resources and physical circuits
- Augment the capacity of existing trunk groups
- View basic statistics on GSX9000 circuit usage
- Rename trunk groups that are currently carrying live traffic
- Build an ISUP or ISDN trunk group using CLI commands

Prerequisite Skills:

Trunking Product Overview

Prerequisite Courses:

None

Course Length:

1 Days – Self-Paced

Back to Course Listing

WRG15 — WebRTC Gateway Operations and Configuration

Course Description:
The purpose of this course is to provide you with the skills and knowledge to understand the Operations, Configuration, and Maintenance of the WebRTC Gateway.

Intended Audience:
This course is designed for individuals who are responsible for installing and maintaining the WebRTC Gateway in a Voice over IP network.

Key Topics:

- Overview
- Hardware and Software
- Deployment Models
- Capacity, Scalability and Redundancy
- Network integration
- Management Interfaces
- Configuration
- Performance Management
- Fault Management
- Troubleshooting

Objectives:
Upon completion of this course, you will be able to:

- Describe the purpose of the WebRTC Gateway
- Identify the hardware and software requirements for the WebRTC Gateway
- Identify the different deployments models available for the WebRTC Gateway
- Discuss capacity, scalability and redundancy figures associated with the WebRTC Gateway
- Understand IP network integration for the WebRTC Gateway
- Identify the different WebRTC Gateway management interfaces.
- Configure WebRTC Gateway Service Parameters.
- Identify and configure WebRTC Gateway External Provider interfaces.
- Identify and configure WebRTC Gateway Client Adapter interfaces.
- Configure WebRTC Gateway Subscriber Accounts.
- Examine and use Performance and Fault management tools available for the WebRTC Gateway.

Prerequisite Skills:
None

Prerequisite Courses:
None

Course Length:
1 Day – Self Paced

Back to Course Listing

SESSION BORDER CONTROLLERS — SECURITY

EdgeMarc & EdgeView Implementation and Support Blended Learning Course

Course Description:
This is a Blended Learning Course. This Blended Learning training has two components which is made up of both Self-Pace and Leader-Led content. The following two courses make up this Blended Learning training:

- EMV11 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites – Self-Paced – 2 days
- EMV20 - EdgeMarc & EdgeView Implementation and Support Practical Exercises - Leader-Led – 2 days

You **must** complete the EMV11 prerequisite Self-Pace course before you can enroll and attend the EMV20 Leader-Led course.

This Blended Learning Course is designed for Customers tasked with implementing converged voice and data solutions using session border controllers in their network.

Below, you will find the course syllabi for the two courses that make up this Blended Learning training.

Part 1: EMV11 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites

Course Description:
The purpose of this course is to familiarize the student with the Ribbon EdgeMarc and EdgeView products, their interfaces, and basic functionality as well as the operations, administration, fault, maintenance and provisioning will be discussed.

You **must** complete this course before you can enroll attend the EMV20 - EdgeMarc & EdgeView Implementation and Support Practical Exercises Leader-Led course.

Intended Audience:
System engineers, consultants, and integrators, including Channel Partners working toward technical certification, who are responsible for the implementation, management and support of the Ribbon EdgeMarc and EdgeView products.

Key Topics:

- Overview of EdgeMarc (EM) and EdgeView (EV) Product line
- EdgeMarc installation and core configuration process
- EdgeMarc Web Interface and configure key functionality
- EdgeMarc Management tasks
- EdgeMarc Advanced Management tasks
- EdgeView installation and core configuration process
- EdgeMarc Configuration using EdgeView
- EdgeView Bulk Management
- Zero Touch Provisioning
- EdgeMarc Advanced Topics

Objectives
Upon completion of this course, a student will be able to:

- Introduction to EdgeMarc (EM) and EdgeView (EV) Products line.
- Understand the EdgeMarc Installation and core configuration process.
- Understand the EdgeMarc Web Interface and how to use it to configure different functionality.
- Identify the different EdgeMarc basic management tasks
- Identify the different EdgeMarc advanced management tasks
- Understand the EdgeView Installation and core configuration process.
- Understand how to manage EdgeMarc devices using the EdgeView.
- Understand how to do bulk actions on EdgeMarcs using the EdgeView.
- Understand the Zero Touch Provisioning (ZTP) process.
- Identify different EdgeMarc configuration and deployment scenarios.

Prerequisite Skills: None

Prerequisite Courses: None

Course Length:
2 Days – Self-Pace

Part 2: EMV20 – EdgeMarc & EdgeView Implementation and Support Practical Exercises

Course Description:
The purpose of this course is to reinforce the content you learn in the EMV11 - EdgeMarc & EdgeView Implementation and Support Technical Prerequisites course by immersing you in hands-on lab exercises.

You **must** complete the EMV11 - EdgeMarc & EdgeView Implementation and Support Technical Prerequisites Self-Pace course before you can enroll and attend this course.

Intended Audience:
System engineers, consultants and integrators, including Channel Partners working toward technical certification, who are responsible for the implementation, management and support of Ribbon VoIP equipment

Key Topics:

- EdgeMarc Initial Configuration
- How to Login to the EdgeMarc
- EdgeMarc WAN Failover Configuration
- How to Backup/ Restore EdgeMarc
- Securing the EdgeMarc
- How to Make a Simple SIP Call In a Hosted Environment
- Configuring Class of Service on an EdgeMarc

- Reading Basic Log Debug
- Registering an EdgeMarc to EdgeView
- Logging In to EdgeView
- SD-WAN Configuration
- How to Backup/ Restore the EdgeMarc from EdgeView
- EdgeMarc Zero Touch Provisioning (ZTP)

Objectives

Upon completion of this course, a student will be able to:

- Perform an Initial Configuration for the EdgeMarc.
- Login to the EdgeMarc from a Web browser, navigate the Configuration Menu, and identify the components that need to be configured after an initial configuration.
- Configure the EdgeMarc's WAN interfaces for Failover supporting Voice and Data.
- Perform a backup and restore a configuration file on an EdgeMarc.
- Secure an EdgeMarc and allow it to be accessed remotely.
- Configure the EdgeMarc to support simple SIP calls.
- Provision the Traffic Shaper class of service features on an EdgeMarc.
- Learn how to perform EdgeMarc basic log debug.
- Register an EdgeMarc to EdgeView.
- Login to an EdgeView and navigate through its Web user Interface.
- Configure the EdgeMarc to support SD-WAN.
- Backup and restore a configuration file on an EdgeMarc from the saved configuration file on the EdgeView.
- Perform a Zero Touch Provisioning configuration on an EdgeMarc.

Prerequisite Skills: None

Prerequisite Courses: EMV11 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites

Course Length:
2 Days – Leader-Led

Back to Course Listing

QSBC10 – Q-Series SBC Overview

Course Description:
The QSBC10 Basic Overview is a 3 – 4-hour self-pace course which will provide the student with an introduction to the Q-Series SBC Session Border Controller and the GENView-Real-Time Session Manager (RSM). This course is divided into six lessons. At the end of each lesson, the student will have the ability to check their knowledge and a final exam is presented at the end of the course. The student must achieve an 85% or greater on the exam to pass the course and to move onto the QSBC15 Combination Q-Series SBC & GENView-RSM Fundamentals, Operation & Maintenance course. The QSBC10 Basic Overview is the pre-requisite to all future Q-Series SBC courses.

Intended Audience:
This course is intended for anyone requiring basic knowledge/functionality of the Q-Series SBC and GENView-RSM Fundamentals.

Objectives:
The purpose of this training is to gain a better understanding of the Q-Series SBC by learning the components associated with the Q-Series Session Border Controller (SBC) and the GENView Real-Time Session Manager (GENView-RSM). Upon completion of this course, the student will be able to:

- Understand what a Q-Series Session Border Controller is
  - Distinguish the difference between a Proxy Server and a B2BUA
  - Identify features of the Q-Series SBC regarding Session Management
  - Identify features of the Q-Series SBC regarding Network Interworking
  - Identify features of the Q-Series SBC regarding Service Level Assurance
- Gain a better understanding of the Q-Series SBC Architecture
  - Understand the acronyms associated with the Q-Series SBC
  - Identify the roles and responsibilities of the Q-Series SBC and the GENView-RSM
  - Identify internal components of the Q-Series SBC and the GENView-RSM and their interactions
- Gain a better understanding of the Q-Series SBC Hardware Requirements
  - The hardware supported for the Q-Series SBC and the GENView-RSM
  - Hardware modules used
  - Media processing card used in the Q-Series SBC
  - System requirements
- Understand the Q-Series SBC software requirements, licensing and interfaces used to configure your SBC
  - Identify the Q-Series SBC Software requirements
  - Identify the Q-Series SBC Database type
  - Identify Q-Series SBC License information
  - Identify GENView-RSM Software requirements
  - Identify the GENView-RSM Database type
  - Identify GENView-RSM License information
  - Identify the three Q-Series SBC Configuration interfaces
  - Identify Q-Series SBC Command Line utilities
  - Identify GENVIEW-RSM Web interface
  - Identify GENView-RSM Console

- Understand the concepts of configuring Partitions, Outbound Proxy and Mirror Proxy, Least Cost Routing, Lossless Least Cost Routing and identify the building components of a Realm
  - Identify the concept of Partitioning
  - Identify how users are associated to Partitions
  - Describe what a Realm
  - Identify the concept of Outbound Proxy Mode
  - Identify the concept of Mirror Proxy Mode
  - Identify the concept of Least Cost Routing / Lossless Least Cost Routing within the GENView-RSM and the Q-Series SBC
- Understand CDRs, Reporting, Events, Actions and Alarms using the GENView-RSM
  - Identify Call Detail Records (CDRs)
  - Identify Reports, Events, Actions and Alarms from the GENView-RSM

Prerequisite Skills:
Basic Understanding of TDM or IP Theory and should know basic UNIX or Linux commands.

Prerequisite Courses:
None

Course Length:
1/2 Day – Self-Paced

Back to Course Listing

QSBC15 – Q-Series SBC and GENView-RSM Fundamentals, Operations and Maintenance

Course Description:
The 1-day Self-Pace QSBC15 – Combination Q-Series SBC & GENView-RSM Fundamentals, Operation & Maintenance course provides individuals with the skills necessary to support the Q-Series SBC Session Border Controller (SBC) and the GenView-Real-time Session Manager (RSM. Students will learn how to install and commission the Q-Series SBC, provision, operate and maintain signaling and media traffic between the SBC and other network components as well as Signaling and Media Vnets, Realms, EndPoints and Calling Plans.

Intended Audience:
This course is intended for anyone requiring basic knowledge/functionality of the Q-Series SBC and GENView-RSM Fundamentals.

Objectives:
Upon completion of this course, you will be able to:

- Getting Started
  - Understand how to cable the Q-Series SBC and the GENView-RSM
  - Understand how to check the hardware platform
  - Understand how to Stop and Start the iServer Process
  - Understand Licensing on the Q-Series SBC and GENView RSM
- Basic Configuration
  - Understand how to Configure Partitions through the GENView-RSM
  - Understand how to Configure Administrative Users and Passwords through the GENView-RSM
  - Understand the Q-Series SBC Configuration Interface using:
  - Command Line Interface (CLI)
  - GENView-RSM Console
  - Creating Signaling Vnets
  - Creating Media Vnets
  - Creating Media Resource and Media Routing Pools
  - Creating Realms
- Endpoint Provisioning
  - Understand how to configure the Q-Series SBC for:
    - Endpoints
    - Outbound Proxy Configuration
    - Mirror Proxy Configuration
    - Header Manipulation
  - Understand how to do traces using tethereal/tshark utility and Wireshark for display
  - Understand Basic Media Troubleshooting (Statclient Utility)

- Routing
  - What is a Calling Plan
  - What are Call Legs
  - Understand how to create Calling Plans
  - Understand how to use the Call Trace Route Utility
  - Phone-Context Manipulation
- Call Detail Records
  - Examine records generated by the Q-Series SBC when handling calls:

    - Identify Call Detail Record Types
    - Identify and Set Call Detail Record Configuration Settings
    - Locate Call Detail Record Log Files
    - Identify and use CDR scripts
    - View Call Detail Record Log files
    - Identify the GENView-RSM Agent CDR Transfer Utility
    - Identify the GENView-RSM Agent Configuration Settings
    - Troubleshoot the GENView-RSM Agent CDR Transfer Utility
- Reporting
    - Identify and generate CDR Reports
    - Identify and generate ASR reports
    - Identify and generate NER Reports
    - Identify and generate QoS Reports
    - Identify Business Reports
    - Configure SNMP Settings
    - Identify Events
    - Identify and create Actions
    - Identify and create Alarms
- Maintenance
    - Understand how to use the nxconfig.pl Utility
    - Understand how to monitor the Q-Series SBC in a Redundant Environment (HA)
    - Understand how to monitor the System Status
    - Understand Redundancy using the RSM Console
    - Understand and use Database Utilities
    - How to contact Ribbon Support
- Appendix A – RSM Provisioning
    - Understand how to Monitor the Q-Series SBC in a Redundant Environment
    - Understand how to Monitor the System Status
    - Understand Redundancy using the GENView-RSM Console
- Appendix B – SIP Trunking

Prerequisite Skills:
Basic Understanding of TDM or IP Theory and should know basic Unix or Linux commands.

Prerequisite Courses:
QSBC10 Q-Series Basic Overview

Course Length:
1 Day – Self-Paced

Back to Course Listing

QSBC25 – Q-Series SBC Recovery, Security and Troubleshooting

Course Description:
The purpose of this course is to provide you with the skills and knowledge to understand how to perform disaster recovery, implement security configurations, and advanced troubleshooting techniques on the Q-Series SBC.

Intended Audience:
This course is designed for individuals who need an advanced understanding on how to recover the Q-Series SBC from a disaster scenario, implement security, and advanced troubleshooting.

Objectives:
Upon completion of this course, you will be able to:

- Understand how to recover the Q-Series SBC from a disaster scenario.
  - Required Documentation
  - Network LAN Configuration
  - Software Install/Patching/Upgrades
  - Software installs of optional components
  - Database Restore
- Identify and implement different Q-Series SBC security implementations.
  - Rogue RTP Detect
  - Rate Limiting
  - Call Admission Control
  - Blacklisting
- Identify and utilize Q-Series SBC troubleshooting tools and techniques.
  - Understand Q-Series SBC signaling and media message flows.
  - Capture signaling and media packet flows on the Q-Series SBC.
  - Media Card connectivity testing.

Prerequisite Skills:
Basic Understanding of TDM or IP Theory and should know Basic UNIX or LINUX commands.

Prerequisite Courses:
QSBC10 and QSBC15 or equivalent working knowledge of the Q-Series SBC product.

Course Length:
1 Day – Self-Paced

Back to Course Listing

QSBC26 - Q-Series SBC Advanced Configuration and Operations

Course Description:
The purpose of this course is to provide you with the skills and knowledge to understand the advanced operations and configurations of Trunking, Routing, Transcoding (Internal and external), Media Interworking and Flexible Messaging Manipulation (FMM)

Intended Audience:
This course is designed for individuals who need an advanced understanding on how to configure and maintain the Q-Series SBC Trunking, Routing, Transcoding configurations, Media Interworking and FMM.

Objectives:
Upon completion of this course, you will be able to:

- Understand trunk group and routing support for the Q-Series SBC.
- Perform the trunk group routing lab exercise and test operational functionality.
- Describe the Q-Series SBC SIP to SIP-I interworking function.
- Perform the Q-Series SIP to SIP-I lab exercise and test operational functionality.
- Identify the transcoding configurations supported on the Q-Series SBC.
- Perform the transcoding lab exercises and test operational functionality.
- Understand Flexible Message Manipulation functionality on the Q-Series SBC.
- Perform the FMM lab exercises and test operational functionality.

Prerequisite Skills:
Basic Understanding of TDM or IP Theory and should know Basic UNIX or LINUX commands.

Prerequisite Courses:
QSBC10 and QSBC15 or equivalent working knowledge of ’s Q-Series SBC product

Course Length:
1 Day – Self-Pace

Back to Course Listing

RE8K20 — Ribbon Edge 8000 Implementation and Support

Course Description:
The purpose of this course is to provide you with the skills and knowledge to install and support the Ribbon Edge 8000.

Intended Audience:
This course is designed for customers and partners who are responsible for installing and maintaining the Ribbon Edge 8000.

Key Topics:

- Overview
- Software Architecture
- Hardware Architecture
- Initial Setup
- User Interfaces
- Licensing
- RAMP Integration
- SIP Provisioning (Local SIP Registrar)
- Analog Port Provisioning (PRI, FXS, and FXO)
- Call Flow Architecture
- Planning, Support, and Troubleshooting
- Operations and Maintenance

Objectives:
Upon completion of this course, you will be able to:

- Describe the purpose of the Ribbon Edge 8000.
- Identify the different software architecture for the Ribbon Edge 8000.
- Identify the hardware architecture of the Ribbon Edge 8000.
- Understand and Perform the Initial Setup of the Ribbon Edge 8000.
- Understand and navigate the different user interfaces of the Ribbon Edge 8000.
- Understand the licensing requirements needed to support the Ribbon Edge 8000.
- Define the Ribbon Edge 8000 and RAMP interworking's.
- Provision the Ribbon Edge 8000 SBC SWe Edge to support SIP UA (local SIP Registrar).
- Provision the Ribbon Edge 8000 SBC SWe Edge to support Analog Ports (FXS/FXO).
- Understand and build Ribbon Edge 8000 SBC SWe Edge call flows.
- Identify the required planning and troubleshooting tools for use on the Ribbon Edge 8000 SBC SWe.
- Identify and perform different operational maintenance activities for the Ribbon Edge 8000 system.

Prerequisite Courses:
None

Course Length:
3 Days – Leader-Led

Back to Course Listing

RFE20 — Ribbon Federal Edge Implementation and Support

Course Description
The objective of this course is to provide you with the skills and knowledge to understand the operations, configuration, and maintenance of the Ribbon Federal Edge Solution.

Intended Audience
Federal agency employees responsible for implementing communications networks that are JITC/FIPS compliant.

Key Topics:

- Overview and purpose of the Ribbon Federal Edge (RFE) Solution
- SBC Call Flow Logic in SWe Core and SBC Edge platforms
- Hardware requirements for SBC 1K/2K
- GUI management interfaces for SWe Core and Edge
- VMWare (ESXi) settings for the RFE SWe Core
- Provisioning the SBC SWe Core for RFE
- Provisioning the SBC Edge for the RFE
- Manage User ids on the RFE Management Interfaces
- Monitor Resources on the SBC Platform
- Viewing Alarms on the RFE Management Interfaces
- Federal Edge Documentation

Objectives:
Upon completion of this course, a student will be able to:

- Describe the purpose of the Ribbon Federal Edge (RFE) Solution
- Understand call flow configurations
- Identify the hardware requirements and configurations of the RFE
- Know how to navigate the RFE SBC GUI management interfaces
- Understand the requirements to configure VMWare for the RFE
- Understand how to configure the SBC SWe Core for the RFE
- Gain knowledge of how to configure the SBC Edge for the RFE
- Knowledge on how manage User ids on the RFE Management Interfaces for SWe Core and SBC Edge
- Know how to monitor resources on the RFE platform
- Understand alarms on the RFE Management Interfaces
- Know how to access Federal Edge Documentation

Prerequisite Skills: None

Prerequisite Courses: SBCC20, SBCE20

Course Length:
Leader-Led, 3 days

Back to Course Listing

SBCC10 — SBC Core Overview

Course Description:
The purpose of this course is to familiarize the student with the Ribbon SBC Core technologies and associated product line. Basic SBC Concepts as well as the operations, administration, fault, maintenance and provisioning will be discussed.

Intended Audience:
This course is designed for staff who require basic knowledge of the Ribbon SBC Core product.

Key Topics:
- SBC Core Introduction
- SBC Core Platforms
- Management Interfaces
- Software Architecture and Call Flows
- Transcoding
- Security and Traffic Policing
- Fault Management
- Performance Monitoring

Objectives:
Upon completion of this course, you will be able to:
- Understand the Solution Architecture and Components.
- Understand the SBC Hardware, Connectivity, Redundancy, and Failover.
- Describe the SBC Interfaces.
- Understand Architecture, Routing, and Call Flow.
- Understand the role of the PSP for Transcoding.
- Understand the role of the ACL in security.
- Understand Faults management and troubleshooting tools
- Understand how to monitor and view SBC Performance.

Prerequisite Skills: A basic understanding of telephony principles, session border controllers and soft switches

Prerequisite Courses:
None

Course Length:
4 Hours – Self-Paced

Back to Course Listing

SBC Core Support Blended Learning Course

Course Description:
This is a Blended Learning Course. This Blended Learning training has two components which is made up of both Self-Pace and Leader-Led content. The following two courses make up this Blended Learning training:

- SBCC11 – SBC Core Support Technical Prerequisites – Self-Paced – 2 days
- SBCC20 - SBC Core Support Practical Exercises - Leader-Led – 3 days

You **must** complete the SBCC11 prerequisite Self-Pace course before you can enroll and attend the SBCC20 Leader-Led course.

This Blended Learning Course is designed for Customers tasked with implementing converged voice and data solutions using session border controllers in their network.

Below, you will find the course syllabi for the two courses that make up this Blended Learning training.

Part 1: SBCC11 – SBC Core Support Technical Prerequisites

Course Description:
The purpose of this course is to familiarize the student with the Ribbon SBC Core technologies and associated product line. Basic SBC Concepts as well as the operations, administration, fault, maintenance, and provisioning will be discussed.

You **must** complete this course before you can enroll and attend the SBCC20 - SBC Core Support Practical Exercises Leader-Led course.

Intended Audience:
System engineers, consultants, and integrators, including Channel Partners working toward technical certification, who are responsible for the implementation, management and support of Ribbon VoIP equipment

Key Topics:

- Introduction
- SBC Platforms
- Management Interfaces
- Software Architecture and Call Flows
- Transcoding
- Security and Traffic Policing
- Fault Management
- Performance Monitoring

Objectives
Upon completion of this course, a student will be able to:

- Understand the Solution Architecture and Components
- Understand the SBC Hardware, Connectivity, Redundancy, and Failover

- Describe the SBC Interfaces
- Understand Architecture, Routing, and Call Flow
- Understand the role of the PSP for Transcoding
- Understand the role of the ACL in security
- Understand Faults management and troubleshooting tools
- Understand how to monitor and view SBC Performance

Prerequisite Skills: None

Prerequisite Courses: None

Course Length:
2 Days – Self-Pace

Part 2: SBCC20 – SBC Core Support Practical Exercises

Course Description:
The purpose of this course is to reinforce the content you learn in the SBCC11 - SBC Core Support Technical Prerequisites course by immersing you in hands-on lab exercises.

You **must** complete the SBCC11 - SBC Core Support Technical Prerequisites Self-Pace course before you can enroll and attend this course.

Intended Audience:
System engineers, consultants and integrators, including Channel Partners working toward technical certification, who are responsible for the implementation, management and support of Ribbon VoIP equipment

Key Topics:

- Management Access and Navigation
- Basic Provisioning and verification
- Route Provisioning and verification
- Packet Service Profiles Provisioning and verification
- Call Trace
- Packet Capture
- Alarms/Live Monitor
- SBC CLI
- Security/Access Control List
- Additional Configurations
- Troubleshooting
- System Backup
- Exploring the SBC Configuration off-board
- Debugging and Gathering Information

Objectives
Upon completion of this course, a student will be able to:

- Use and navigate the SBC EMA, CLI, and the Insight EMS SBC Manager.

- Perform basic provisioning on the SBC to connect to a SIP Peer.
- Perform route provisioning to route calls though the SBC.
- Provision the SBC with Packet Service Profiles to transcoding of calls.
- Access Call Detail Records and analyze it for specific information.
- Create Call Trace filters and analyze the captures to understand the call flows.
- Implement Packet Capture capabilities and collect files for viewing.
- Navigate and use the SBC EMA interface to understand alarms.
- Using the SBC CLI interface practice issuing commands to understand the syntax.
- Create an Access Control List (ACL) and test to see that it is working properly.
- Provision and test a SIP trunk connection.
- Troubleshoot call completion failures.
- Perform a SBC System backup and download it.
- Download a SBC Configuration file for off-board viewing.
- Understand debugging techniques and tools that you can use for to collect system information.

Prerequisite Skills: None

Prerequisite Courses: SBCC11 – SBC Core Support Technical Prerequisites

Course Length:
3 Days – Leader-Led

Back to Course Listing

SBCC22 — SBC Core Cloud Support

Course Description:
This course is designed for Customers tasked with implementing converged voice and data solutions using session border controllers in their Cloud (NFV) network. The hands-on training addresses application components used to configure, manage, and troubleshoot the SBC SWe platforms. These components include: The EMS, PSX, and all provisioned elements required for peer-to-peer call/session environments.

Intended Audience:
System engineers, consultants, and integrators, who are responsible for the implementation, management and support of Ribbon VoIP equipment

Key Topics:

- Virtualization
- SBC SWe Positioning
- SBC VM in Openstack
- Access and Navigation
- Software Architecture
- Provisioning
- Packet Service Profiles
- Troubleshooting
- Command Line Interface
- Security
- Architecture and Signal Flows
- System Configuration Backup/Restore
- Debugging Activities
- SMM Introduction

Objectives
Upon completion of this course, a student will be able to:

- Understand the usage and implementation scenarios for deploying the SBC applications into peering & access environments
- Explain conceptually the move to Virtualization
- Explain the Key benefits to NFV and Openstack,
- Describe the different SBC SWe deployment options (D-SBC vs I-SBC)
- Utilize the SBC Application Web Interface through the EMS and direct Command Line Interface for provisioning and troubleshooting
- Describe various external call flow scenarios
- Perform system backup and restore
- Read and manage event logs
- Debug the system for fault resolution
- Debug SBC SWe VM for cloud issues (aka VM Lifecycles)
- Effectively use the packet capture tools
- Review system calls and perform troubleshooting tasks
- peering & access environments
- Explain components of a SBC SWe in NFV (Openstack requirements and building blocks)
- Use advance troubleshooting to resolve packet audio problems
- Provision access control lists (ACLs) and call admission controls (CAC) for system security

Prerequisite Skills: Knowledge of SIP, SIP & IP Internetworking, IP PBX

Prerequisite Courses: VNFM15 – if the Ribbon VNF Manager is part of the cloud solution.

Course Length:
4 Days – Leader-Led

Back to Course Listing

SBCC23 — SBC Core Advanced Configuration and Operations

Course Description:
The purpose of this course is to familiarize the student with the advanced provisioning, Operations, and Maintenance of the SBC Core Technologies Platforms. The student will also become familiar with advanced features that are frequently used in day-to-day operations. Additionally, the student will learn to access online resources and documentation for supporting the SBC in a production environment.

The hands-on training addresses application components (including hardware where appropriate) used to configure, manage, and troubleshoot the SBC 5x00, SBC 7000, and the SBC SWe platforms.

Intended Audience:
System engineers, consultants and integrators who are responsible for the implementation, management and support of Ribbon VoIP equipment

Key Topics:
- Architecture and signal flows
- Advanced Trunk Group Configuration
- Call Trace and Basic SSReq
- Advanced Routing Techniques
- Digit & Parameter Manipulation
- Message Manipulation
- Access Configuration
- Signaling and Media Encryption
- Call Admission Control
- SBC Software Upgrade Process
- SBC Integration to Ribbon Products

Objectives
Upon completion of this course, a student will be able to:
- Understand the call flow in an SBC.
- Create a Path Check and verify the blacklisting operations.
- Configure advanced parameters in a Trunk Group.
- Understand the processing of a call done in the ERE.
- Create routes using different routing techniques.
- Create Digit Manipulation rules.
- Create SMM rules.
- Configure an SBC for Access scenarios.
- Apply encryption to SBC connections.
- Create call limits associated to Trunk Groups.
- Integrate an SBC to a PSX.
- Understand SBC GW to GW operation.
- Perform a Software Upgrade in the SBC.

Prerequisite Skills: None

Prerequisite Courses: SBCC20 or SBCC21 or SBCC22

Course Length: 4 Days – Leader-Led

Back to Course Listing

SBCC24 — SBC Core Direct Routing Configuration

Course Description:
The purpose of this course is to familiarize the student with the different ways that the SBC Core devices can be deployed in the Direct Routing solution. The student will also become familiar with the configurations required in the SBC to allow the communication between Microsoft Teams and the PSTN to happen.

Intended Audience:
Managers, administrators, and anyone needing a technical overview of the SBC Core and Direct Routing.

Key Topics:

- Understand the different ways that Direct Routing can be deployed in a network.
- How to configure the Ribbon Session Border Controller to communicate with the Microsoft Data Centers.
- How to configure the Session Border Controller to communicate with a Service Provider.
- How to establish call routing toward Microsoft Teams and the PSTN

Objectives:
Upon completion of this course, you will be able to:

- Understand the different ways that Direct Routing can be deployed in a network.
- Differentiate between a standalone and hybrid scenario.
- Understand the different configurations that are required to configure the Direct Routing scenario.
- List the different objects required to enable the communication between the SBC and Microsoft Data Centers.
- Identify the multiple parameters required in each object to adapt the signaling and media to a format that the Microsoft Data Centers can understand.
- List the different objects required to enable the communication between the SBC and the Service Provider.
- Identify and configure the parameters required in each object to adapt the signaling and media to a format that the Service Provider can understand.
- Create the routing necessary to route calls towards Microsoft Teams.
- Create the routing necessary to route calls towards the PSTN.

Prerequisite Skills: None

Prerequisite Courses:
None

Course Length:
1.5 Hours – Self-Paced

Back to Course Listing

SBCE10 — SBC Edge Overview

Course Description
This course provides attendees with a solid competency in the SBC Edge Product set, which includes SBC 1000, SBC 2000 and SWe Edge. This dives into the technical challenges in enterprise voice, Microsoft and BroadSoft environments and will highlight the importance of highly scalable and flexible Unified Communications devices to meet the needs of today's advanced VoIP deployments at the Enterprise environment.

Intended Audience
System engineers, consultants, and integrators, including members of Ribbon Channel Partners working toward technical accreditation, responsible for the implementation, management and support of Ribbon VoIP equipment within enterprise environments.

Key Topics:

- Hardware Architecture
- Demarcation, Security, and Interoperability
- Deployment Options
- User Interface
- Initial Setup
- Support Portal and LX Tool

Objectives:
Upon completion of this course, a student will be able to:

- Define the positioning of the SBC Edge system within the portfolio of Ribbon SBCs
- Describe the basic features of the SBC 1000/2000 and SWe Edge
- Identify the different interface cards available for the SBC Edge 1000 and 2000
- Describe the purpose of the Application Solution Module
- Explain a typical deployment of an SBC Edge within an enterprise network
- Describe different deployment scenarios in Microsoft Unified Communications environments
- Describe how the Ribbon Application Management (RAMP) can be used to manage SBC Edge systems
- Define the use of Active Directory in user migration and call handling
- Explain how the Survivable Branch Appliance in the SBC Edge supports Microsoft Teams users in remote offices
- Describe how the Cloud Connector Edition in the SBC Edge supports enterprise customers integrating with Microsoft
- Explain how the SBC Edge supports Broadsoft users

Prerequisite Skills: Basic knowledge of Unified Communications networks and an understanding of PBX and IP telephony concepts, such as ISDN, SIP, and CAS.

Prerequisite Courses: None

Course Length: 1/2 Day – Self-Paced
Back to Course Listing

SBC Edge Support and Implementation Blended Learning Course

Course Description:
This is a Blended Learning Course. This Blended Learning training has two components which is made up of both Self-Pace and Leader-Led content. The following two courses make up this Blended Learning training:

- SBCE11 – SBC Edge Support and Implementation Technical Prerequisites – Self-Paced – 2 days
- SBCE20 - SBC Edge Support and Implementation Practical Exercises - Leader-Led – 2 days

You **must** complete the SBCE11 prerequisite Self-Pace course before you can enroll and attend the SBCE20 Leader-Led course.

This Blended Learning Course provides attendees with a solid competency in the SBC 1000, SBC 2000 and SWe Lite. It dives into the technical challenges in enterprise voice, Microsoft and BroadSoft environments, and will highlight the importance of highly scalable and flexible Unified Communications devices to meet the needs of today's advanced VoIP deployments, both in the Enterprise as well as Service Provider environments.

Below, you will find the course syllabi for the two courses that make up this Blended Learning training.

Part 1: SBCE11 – SBC Edge Support and Implementation Technical Prerequisites

Course Description:
The purpose of this course is to build equipment implementation planning, configuration and troubleshooting skills required for all deployments such as ISDN trunks, SIP Trunks and integration into Microsoft and BroadSoft environments. With an emphasis on understanding call flows through the devices, different call routing scenarios are presented and configured, including Active Directory and Survivable Branch Appliance integration. At the end of the class, a theoretical exam will be taken for assessment purposes. In order to achieve certification and take the follow-on course SBCE20, you must pass the practical exam with a score of 100%.

You **must** complete this course before you can enroll and attend the SBCE20 - SBC Edge Support and Implementation Practical Exercises Leader-Led course.

Intended Audience:
System engineers, consultants, and integrators, including members of Ribbon Channel Partners working toward technical accreditation, responsible for the implementation, management and support of Ribbon VoIP equipment within enterprise VoIP and Microsoft UC environments.

Key Topics:

- Introduction
- Support Tools and Documentation

- Hardware Architecture
- Deployment Scenarios
- Initial Setup
- User Interface
- Local SIP Provisioning
- Deployment Options
- Call Flow Architecture
- Planning, Support, and Troubleshooting
- Features and Enhancements
- Partner Deployment Options

Objectives
Upon completion of this course, a student will be able to:

- Understand the SBC Edge Architecture and Components.
- Explain the features, interfaces, and cards for the SBC 1000 and SBC 2000, and describes the options for the Application Solution Module.
- Describe the different deployment scenarios for the SBC Edge, including connecting with legacy PBXs and/or Skype for Business and/or Teams
- Understand the process on how to install and login into the SBC Edge device for initial setup.
- Understand the SBC Edge Web Interface and how to use it to configure and manage different functionality.
- Describe the process to provision the SBC Edge to support SIP call processing.
- Understand the different deployment options and scenarios
- Understand call flow routing and transformation tables and how they affect call processing.
- Understand how to access and use relevant Support Tools and Documentation.
- Describe the different features supported by the SBC Edge.
- Understand how the SBC Edge is deployed for different Partner scenarios.

Prerequisite Skills: Microsoft Active Directory, Skype for Business / MS Teams competency and an understanding of PBX and IP telephony concepts such has ISDN, SIP, and CAS. Basic familiarity with Regular Expressions (Regex).

Prerequisite Courses: None

Course Length:
2 Days – Self-Pace

Part 2: SBCE20 – SBC Edge Support and Implementation Practical Exercises

Course Description:
The purpose of this course is to reinforce the content you learn in the SBCE11 - SBC Edge Support Implementation Technical Prerequisites course by immersing you in hands-on lab exercises.

You **must** complete the SBCE11 - SBC Edge Support and Implementation Technical Prerequisites Self-Pace course before you can enroll and attend this course.

Intended Audience:
System engineers, consultants, and integrators, including members of Ribbon Channel Partners working toward technical accreditation, responsible for the implementation, management and support of Ribbon VoIP equipment within enterprise VoIP and Microsoft UC environments.

Key Topics:

- Getting Connected, First Time Checks
- Local SIP Client Calls
- Provisioning SIP Trunks
- Provisioning ISDN PRI Trunks
- Reading Log Files with LX
- Call Forking
- Integrating Active Directory
- Preparing for the Practical Assessment

Objectives
Upon completion of this course, a student will be able to:

- Access the SBC Edge and verify its initial configuration.
- Define a local registrar for SIP endpoints and configure a signaling group with call routing to enable these endpoints to call each other.
- Build a SIP trunk to an “ITSP” and verify its operations.
- Establish an ISDN PRI trunk and manipulate call routing and transformation tables to control the how the call is processed.
- Open a log file using LX and analyze it to answer questions about the call that was captured and the configuration of the SBC Edge.
- Configure Call Forking so that an incoming call will ring multiple local clients and verify that it works as expected.
- Provision your SBC Edge to connect to an Active Directory server and replicate parts of its database to the SBC for use in call routing.
- Prepare your SBC Edge to ensure it is ready for you to use during the Practical Lab assessment.

Prerequisite Skills: Microsoft Active Directory, Skype for Business / MS Teams competency and an understanding of PBX and IP telephony concepts such has ISDN, SIP, and CAS. Basic familiarity with Regular Expressions (Regex).

Prerequisite Courses: SBCE11 – SBC Edge Support and Implementation Technical Prerequisites

Course Length:
2 Days – Leader-Led

Back to Course Listing