Ribbon Academy
Partner Onboarding
Certification Training Tracks

11-Dec-25

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Introduction

Ribbon believes that the best partner is an educated partner.
Our Education Services department has been instructing partners on the benefits of Ribbon technology and solutions for more than a decade. 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 instructors, 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:

Virtual instructor-led training.
Partners 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 virtually look over the shoulder of students and provide individual assistance and feedback.

Blended Learning
Support Certifications for PSX, SBC Core, SBC Edge, Edgmarc and EdgeView are now offered in a blended learning solution which contains a mandatory self-paced Overview and Fundamentals session, the theoretical exam and a final Leader-Led practical lab session.

Training Services – Purchase Terms and Conditions.
A Customer may purchase Ribbon Training Services subject to the terms and conditions attached to the end of this catalog on page 57.

Training Certification Tracks by product and Functional Role

Ribbon offers training certification curriculums designed to ensure our partners are capable of selling, deploying, and supporting Ribbon products. Certifications are comprised of self-paced courses (eLearning) and in-depth Instructor led courses (Workshops) that provide extensive hands-on exercises. Information about classes scheduled at a Ribbon facility or in a virtual environment are posted on the Ribbon Training Page and on the Partner Portal.

SBC CORE

SBC CORE Sales and Sales Engineer Professional Certification
SBCC200 - SBC Core Sales and Sales Engineer Professional – 16-Hrs - Self-Paced
Certification Expiration - 2 Years

SBC CORE Support Professional Certification
SBCC20 - SBC Core Support

- Part 1: SBC Core Support Technical Prerequisites – 16-Hrs - Self-Paced component
- Part 2: SBC Core Support Practical Exercises – 3-Days - Leader-Led component

Certification Expiration – 2-Years

SBC CORE Implementation Professional Certification
SBCC25 - SBC Core Implementation Class – 4-Days - Leader-Led
Note: SBCC20 is a required prerequisite course
Certification Expiration – 2-Years

SBC EDGE

SBC EDGE Sales and Sales Engineer Professional Certification
SBCE200 - SBC Edge Sales and Sales Engineer Professional – 8-Hrs – Self-Paced
Certification Expiration - 2 Years

SBC EDGE Implementation and Support Professional Certification
SBCE20 - SBC Edge Support and Implementation

- Part 1: SBC Edge Support and Implementation Technical Prerequisites – 16-Hrs Self-Paced component
- Part 2: SBC Edge Support and Implementation Practical Exercises – 2-Days - Leader-Led component

Certification Expiration – 2-Years

SBC SWe Lite and TEAMS Direct Routing Implementation Certification
SBC SWe Lite and TEAMS Direct Routing Implementation – 1-Hr - Self-Paced
Certification Expiration - Perpetual

Ribbon Edge 8000

Ribbon Edge 8000 Sales and Sales Engineer Professional Certification
RE8K200 – Ribbon Edge 8000 Sales and Sales Engineer Professional – 3-Hrs - Self-Paced
Certification Expiration – 2-Years

Ribbon Edge 8000 Implementation and Support Professional Certification
If you have previous experience and/or certification with the SBC EDGE Implementation and Support Professional Certification, you can achieve the Ribbon Edge 8000 Implementation and Support Professional Certification by taking the:

- RE8K21 – Ribbon Edge 8000 Implementation and Support Condensed– 3-Hrs - Self-Paced
- Ribbon Edge 8000 Implementation and Support Professional Certification Exam

Else, you will need to take:

- RE8K20 – Ribbon Edge 8000 Implementation and Support – 3-Days - Leader-Led
- Ribbon Edge 8000 Implementation and Support Professional Certification Exam

Certification Expiration – 2-Years

PSX

PSX Sales and Sales Engineer Professional Certification
PSX200 - PSX Sales and Sales Engineer Professional– 4.5-Hrs - Self-Paced
Certification Expiration – 2-Years

PSX Support Professional Certification
PSX20 - PSX Support

- Part 1: PSX Support Technical Prerequisites – 16-Hrs Self-Paced component
- Part 2: PSX Support Practical Exercises – 2-Days Leader-Led component

Certification Expiration – 2-Years

RAMP

RAMP Support Professional Certification
If you have previous experience and/or certification with the Insight EMS, you can achieve the RAMP Support Professional Certification by taking the:

- RAMP10 – Ribbon Application Management Platform Overview – 2-Hours - Self-Paced
- RAMP Support Professional Certification Exam

Else, you will need to take:

- RAMP15 – Ribbon Application Management Platform Basics Class – 2-Days - Leader-Led
- RAMP Support Professional Certification Exam

Certification Expiration – 2-Years

RAMP Implementation Professional Certification
RAMP16 – RAMP Implementation – 1-Day - Leader-Led
Certification Expiration – 2-Years

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AS

AS Sales and Sales Engineer Professional Certification
AS200 - AS Sales and Sales Engineer Professional– 1-Hr - Self-Paced
Certification Expiration – 2-Years

AS Support Professional Certification
AS11 – Application Server (AS) Standalone Overview – 8-Hrs - Self-Paced
AS30 – Application Server (AS) Standalone Accounting – 8-Hrs - Self-Paced
AS21 - Application Server (AS) Standalone Administration, Provisioning and Fault Management Class – 4-Days Leader-Led
Certification Expiration – 2-Years

G5

G5 Sales and Sales Engineer Professional Certification
G5200 - G5 Sales and Sales Engineer Professional – 1-Hr Self-Paced
Certification Expiration – 2-Years

G5 Support Professional Certification
G5SE10 - G5 SIP ESA Overview – 4 Hrs - Self-Paced
G515 - G5- Access Line Gateway Operations, Maintenance, Fault Management Class – 2-Leader-Led
Certification Expiration – 2-Years

EdgeMarc and EdgeView

EdgeMarc and EdgeView Sales and Sales Engineer Professional Certification
EMV200 – EdgeMarc and EdgeView Sales and Sales Engineer Professional – 2-Hrs - Self-Paced
Certification Expiration – 2-Years

EdgeMarc and EdgeView Support Professional Certification
EMV20 - EdgeMarc & EdgeView Implementation and Support

- Part 1: EdgeMarc & EdgeView Implementation and Support Technical Prerequisites – 16-Hrs Self-Paced component
- Part 2: EdgeMarc & EdgeView Implementation and Support Practical Exercises – 2-Days Leader-Led component

Certification Expiration – 2-Years

Ribbon Analytics

Ribbon Analytics Sales and Sales Engineer Professional Certification
RP200 – Ribbon Analytics Sales and Sales Engineer Professional – 1-Hr - Self-Paced
Certification Expiration – 2-Years

Ribbon Analytics Support Professional Certification
RA15 – Ribbon Analytics Basics – 2-Days - Leader-Led
RA26 – Ribbon Analytics Advanced – 2-Days - Leader-Led
Certification Expiration – 2-Years

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Packet Optical Networks

Packet Optical Networks Sales and Sales Engineer Professional Certification
Packet Optical Network Sales and Sales Engineer Professional – 2-Hrs Self-Paced
Certification Expiration – 2-Years

Packet Optical Networks Planner Professional Certification
Neptune Network Planner – 30-Mins - Self-Paced
Apollo Network Planner – 1.5-Hrs - Self-Paced
Certification Expiration – Perpetual

Direct Routing as a Service

Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Sales and Sales Engineer Professional Certification
RC100 – Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Sales and Sales Engineer Professional – 1-Hr - Self-Paced
Certification Expiration – 2-Years

Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Technical Onboarding Professional Certification
RC300 – Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Technical Onboarding Professional – 1-Hr - Self-Paced
Certification Expiration - Perpetual

Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Customer Support Professional Certification
RC500 – Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Customer Support Professional – 1-Hr - Self-Paced
Certification Expiration - Perpetual

Tactical Edge Solution

Tactical Edge Sales and Sales Engineer Professional Certification
TES200 - Ribbon Tactical Edge Solution – 35-Mins - Self-Paced
Certification Expiration – 2-Years

Tactical Edge Support Professional Certification
TES20 – Tactical Edge Solution: Provisioning, Operations, Administration, and Fault Management – 2-Days Leader-Led
Certification Expiration – Perpetual

Tactical Edge Implementation Professional Certification
TES40 - Tactical Edge Solution Deployment – 2-Days Leader-Led
Certification Expiration – Perpetual

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Certification Time Requirement

Product	Sales & Sales Engineering	Support Professional	Implementation Professional	Admin	Network Planner
SBC Edge	8 Hrs	4 Days			
SBC Core	16 Hrs	5 Days	4 Days		
Ribbon Edge 8000	3 Hrs	3 Days or 3 Hours			
PSX	4.5 Hrs	4 Days	NA		
RAMP		2 Hrs or 2 Days	1 Day		
AS	1 Hr	6 Days			
G5	1 Hr	2.5 Days			
EdgeMarc	2 Hrs	4 Days			
Ribbon Analytics	1 Hr	4 Days			
PON	2 Hrs				2 Hrs
DRaaS	1 Hr	1 Hr		1 Hr	
Tactical Edge	35 Mins	2 Days	2 Days		

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SBC Core Sales and Sales Engineer Professional Certification

SBCC200 - SBC Core Sales and Sales Engineer Professional

Course Description:
This course provides the Partner Sales and Sales Engineer employee with the working knowledge to position Engineer and sell the SBC Core product.

Course Length and Delivery Method: 16-Hrs - Self-Paced

Intended Audience:
Channel Partners working toward SBC Core Sales and Sales Engineering Certification.

Key Topics:

- SBC 5000 Series Sales
- SBC 7000 Sales
- SBC 5000/SWe Implementation
- SBC 5000 SWe Sales
- SBC 5000 Video Primer
- SBC 5400 Hardware Overview
- SBC 5400 Configuration and Interface Options
- SBC 5400 Licensing
- SBC 5400 Sales
- EMS Overview
- SBC 5000 Series Deployment Considerations – Part 1
- SBC 5000 Series Deployment Considerations - Part 2
- SBC 5000 Series Deployment Considerations – Part 3
- SBC 5000 Series Licensing Structure
- SBC 5000 Series Product Architecture
- SBC 5000 Security and Best Practices Overview – Part 1
- SBC 5000 Security and Best Practices Overview – Part 2
- SBC 5000 Security and Best Practices Overview – Part 3
- SBC 5000 Series Video Capabilities
- SBNC 7000 Overview and Hardware Architecture
- SBC Opportunity #1: Providing SIP trunks to Enterprises
- SBC Opportunity #1: SIP Trunks in Enterprises
- SBC Opportunity #2: Enablement of Hosted Services
- SBC Opportunity #2: Microsoft Lync and PBX Interworking
- SBC Opportunity #3: The Over-the-Top Service Providers
- SBC Opportunity #4: Wholesaler Peering Enablement
- SBC Opportunity #5: SBC Managed Services
- SBC SWe Licensing Structure
- SBC 5000 SIP Message Manipulation (SMM)
- Where to sell the SBC 5X00 Series in the Service Provider Market
- Where to Sell the SBC Solution Suite in The Enterprise Market
- Ribbon Insight Element Management System

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SBC Core Support Professional Certification

SBCC20 - SBC Core Support

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

- Part 1 – SBC Core Support Technical Prerequisites – Self-Paced component – 16-Hrs
- Part 2 - SBC Core Support Practical Exercises - Leader-Led component – 3-Days

You **must** complete the Part 1 – SBC Core Support Technical Prerequisites Self-Paced component Part before you can enroll and attend the Part 2 - SBC Core Support Practical Exercises Leader-Led Part. After completing Part1 and Part 2, to achieve the certification you must pass the theoretical exam with a score of 80% or higher.

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.

This Blended Learning Course is designed for Partners 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 Parts that make up this Blended Learning training.

Part 1 - SBC Core Support Technical Prerequisites

Part 1 Description:
The purpose of this Part 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 the Part 1 – SBC Core Support Technical Prerequisites Self-Paced component Part before you can enroll and attend the Part 2 - SBC Core Support Practical Exercises Leader-Led Part.

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 Part, a student will be able to:

- Understand the Solution Architecture and Components

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- 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

Part 1 Prerequisite Skills: None

Course Length and Delivery Method: 16-Hrs – Self-Paced

Part 2 – SBC Core Support Practical Exercises

Part 2 Description:
The purpose of this Part is to reinforce the content you learn in Part 1 - SBC Core Support Technical Prerequisites component by immersing you in hands-on lab exercises.

You **must** complete Part 1 – SBC Core Support Technical Prerequisites Self-Paced component Part before you can enroll and attend the Part 2 - SBC Core Support Practical Exercises Leader-Led Part. After completing Part1 and Part 2, to achieve the certification you must pass the theoretical exam with a score of 80% or higher.

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 Part, 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 to collect system information.

Prerequisite: Part 1 – SBC Core Support Technical Prerequisites

Part 2 Length and Delivery Method: 3-Days – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PUBLIC-0034	SBCC20-SBC CORE SUPPORT - PUBLIC SEAT - BLENDED LEARNING
SRV-EDU-PRIVATE-0241	SBCC20-SBC CORE SUPPORT- BLENDED LEARNING

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SBC Core Implementation Professional Certification

SBCC25 - SBC Core Implementation Class

Course Description:
This course provides training and tools to channel partners who will be deploying Ribbon SBC 5K Hardware/Software Edition solutions on their own. During this hands-on workshop, students will use Ribbon documentation to perform a “basic” deployment on SBCs in a Ribbon lab in accordance with the Service Description.

All the Key topics required for a successful SBC deployment to your customers include Network design, site preparation, SBC configuration, licensing, testing, and software upgrades. End of the class practical and theoretical exam are required for assessment purposes. To achieve certification, you must pass the theoretical exam with a score of 80% or higher.

Course Length and Delivery Method: 4 - Days – Leader-Led

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 the Ribbon SBC Core product.

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

- Successfully deploy an SBC 5K/SWe at a customer site without assistance from Ribbon
- Gather relevant information for the deployment.
- Use the Ribbon customer questionnaire to document the deployment.
- Install and deploy a customer using information from the questionnaire and any applicable Ribbon documentation of procedures (application notes) for a given scenario.
- Successfully install software and perform a software upgrade (with the aid of documentation)
- Add SBC configurations for a deployment.
- Verify and test configurations using the Ribbon Verification Test Plan as a guideline
- Perform basic troubleshooting.
- Interpret alarms for EMA.
- CDR analysis using “toolbox.”
- Wireshark (Tshark from SBC EMA/Troubleshooting tab)
- Call trace/packed trace with EMA and LX Tool

Key Topics:

- Network Design and Preparation
- Lab Details and Tour
- Installation of equipment at customer location – discussion
- VM (SWe) installation
- SBC software (SWe) installation
- SBC Configuration
- Call testing
- Debugging
- Test Plan Execution
- Post Implementation Topics
- SBC Software Upgrades

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Prerequisites:
SBCC20 or SBCC21- SBC Core Support Class

SKU:

Part Number	Description
SRV-EDU-PUBLIC-0040	SBCC25-SBC CORE IMPLEMENTATION CERT - PUBLIC SEAT
SRV-EDU-PRIVATE-0249	SBCC25-SBC CORE IMPLEMENTATION CERTIFICATION

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SBC Edge Sales and Sales Engineering Professional Certification

SBCE200 – SBC Edge and Sales and Sales Engineer Professional

Course Description:
This course provides the Partner Sales and Sales Engineer employees with the working knowledge to position, sell, and engineer the SBC Edge product.

Course Length and Delivery Method: 4-Hrs - Self-Paced

Intended Audience:
Channel Partners working toward SBC EDGE sales and sales engineering certification.

Key Topics:

- Product Overview
- Support Tools and Documentation
- Hardware Architecture
- Deployment Scenarios
- System Setup and User Interface
- SWe Lite
- Selling the SBC Edge
- Where to Sell the Ribbon SBC Solutions Suite in the Enterprise Market
- SBC Opportunity #1: SIP Trunks in Enterprises
- SBC 1000 and SBC 2000 Licensing Structure
- SBC Edge Logs

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SBC Edge Implementation & Support Professional Certification

SBCE20 - SBC Edge Support and Implementation

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

- Part 1 – SBC Edge Support and Implementation Technical Prerequisites – Self-Paced component – 16-Hrs
- Part 2 - SBC Edge Support and Implementation Practical Exercises - Leader-Led component – 2-Days

You **must** complete Part 1 - SBC Edge Support and Implementation Technical Prerequisites Self-Paced Part before you can enroll and attend Part 2 - SBC Edge Support and Implementation Practical Exercises Leader-Led component. After completing Part1 and Part 2, to achieve the certification you must pass the theoretical exam with a score of 80% or higher.

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.

This Blended Learning Course provides Partners 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 Parts that make up this Blended Learning training.

Part 1 – SBC Edge Support and Implementation Technical Prerequisites

Part 1 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. To achieve certification and take the follow-on course SBCE20, you must pass the practical exam with a score of 100%.

You **must** complete Part 1 - SBC Edge Support and Implementation Technical Prerequisites Self-Paced Part before you can enroll and attend Part 2 - SBC Edge Support and Implementation Practical Exercises Leader-Led component.

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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 Part, 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 describe 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 functionalities.
- 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 as ISDN, SIP, and CAS. Basic familiarity with Regular Expressions (Regex).

Part 1 Length and Delivery Method: 16-Hrs – Self-Paced

Part 2 – SBC Edge Support and Implementation Practical Exercises

Part 2 Description:

The purpose of this Part is to reinforce the content you learned in the Part 1 – SBC Edge Support and Implementation Technical Prerequisites component by immersing you in hands-on lab exercises.

You **must** complete Part 1 - SBC Edge Support and Implementation Technical Prerequisites Self-Paced Part before you can enroll and attend Part 2 - SBC Edge Support and Implementation Practical Exercises Leader-Led component. After completing Part1 and Part 2, to achieve the certification you must pass the theoretical exam with a score of 80% or higher.

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 Part, 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 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.

Part 2 Prerequisite Skills: Microsoft Active Directory, Skype for Business / MS Teams competency and an understanding of PBX and IP telephony concepts such as ISDN, SIP, and CAS. Basic familiarity with Regular Expressions (Regex).

Part 2 Prerequisite: Part 1 – SBC Edge Support and Implementation Technical Prerequisites

Part 2 Length and Delivery Method: 2-Days – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PUBLIC-0043	SBCE20-SBC EDGE IMP & SUPPORT - PUBLIC SEAT - BLENDED LEARNING
SRV-EDU-PRIVATE-0253	SBCE20-SBC EDGE IMPLEMENTATION & SUPPORT - BLENDED LEARNING

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SBC SWe Lite and TEAMS Direct Routing Implementation Professional Certification

SBC SWe Lite and TEAMS Direct Routing Implementation Professional

Course Description:
This course provides the Partner Support Engineer employee with knowledge necessary to implement the SBC SWe Lite and TEAMS Direct Routing in the Azure cloud.

Course Length and Delivery Method: 1-Hr - Self-Paced

Intended Audience:
Channel Partners deploying SBC SWe Lite in the Azure Cloud using the Quick Launch and setting up Teams Direct Routing

Objectives:

- Explain the network architecture of a SWe Lite deployment in Azure
- Prepare Azure to deploy SWe Lite using Quick Launch
- Initiate Quick Launch and complete the steps for deploying SWe Lite
- Connect into the newly deployed SWe Lite instance
- Run the Easy Configuration Wizard for the first time to set up Teams
- DirectRouting a connection to an outside SIP Server

Prerequisites:
SBC Edge Implementation and Support Certification

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Ribbon Edge 8000 Sales and Sales Engineer Professional Certification

RE8K200 – Ribbon Edge 8000 Sales and Sales Engineer Professional Course

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

Course Length and Delivery Method: 3-Hrs - Self-Paced

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

Key Topics:

- Market Influences
- Introducing Ribbon Edge 8000
- Routing Solution
- SBC Solution
- Gateway Solution
- Selling Edge 8000
- Competition
- Ordering and Configuration Information

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Ribbon Edge 8000 Implementation & Support Professional Certification

If you have previous experience and/or certification with the SBC EDGE Implementation and Support Professional Certification, you can achieve the Ribbon Edge 8000 Implementation and Support Professional Certification by taking the:

- RE8K21 – Ribbon Edge 8000 Implementation and Support Condensed– 3-Hrs - Self-Paced
- Ribbon Edge 8000 Implementation and Support Professional Certification Exam

Else, you will need to take:

- RE8K20 – Ribbon Edge 8000 Implementation and Support – 3-Days - Leader-led
- Ribbon Edge 8000 Implementation and Support Professional Certification Exam

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.

Course Length and Delivery Method: 3-Days - Leader-Led

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
- 6Wind Router operations
- 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
- High Availability (HA)

Objectives:

- 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.

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- Understand the 6Wind Router CLI/GUI command structure.
- 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.
- Activate High Availability (HA)

Prerequisite Certifications: None

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0294	RE8K20-RIBBON EDGE 8000 IMPLEMENTATION AND SUPPORT
SRV-EDU-PUBLIC-0080	RE8K20-RIBBON EDGE 8000 IMPLEMENTATION AND SUPPORT - PUBLIC SEAT

RE8K21 – Ribbon Edge 8000 Implementation and Support Condensed

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

Course Length and Delivery Method: 3-Hrs - Self-Paced

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
- 6Wind Router operations
- Licensing
- Analog Port Provisioning (PRI, FXS, and FXO)
- Planning, Support, and Troubleshooting
- Operations and Maintenance
- High Availability (HA)

Objectives:

- 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 6Wind Router CLI/GUI command structure.
- Understand the licensing requirements needed to support the Ribbon Edge 8000.
- Provision the Ribbon Edge 8000 SBC SWe Edge to support Analog Ports (FXS/FXO).
- 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.
- Activate High Availability (HA)

Prerequisite Certifications: SBC Edge Implementation & Support Professional Certification

SKU:

Part Number	Description
SRV-EDU-SPEL-0050	RE8K21 - RIBBON EDGE 8000 IMPLEMENTATION AND SUPPORT (CONDENSED)

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PSX Sales and Sales Engineer Professional Certification

PSX200 - PSX Sales and Sales Engineer Professional Course

Course Description:
This curriculum provides the Partner Sales and Sales Engineer employees with the working knowledge to position and sell the PSX product.

Course Length and Delivery Method: 4-Hrs - Self-Paced

Intended Audience:
Channel Partners working toward PSX Sales and Sales Engineering certification.

Key Topics:

- Policy Solutions Positioning Training
- Selling the Policy Solution
- Where to sell Policy in the Enterprise Market
- Policy Enterprise Opportunity #1: Dial Plan
- Policy Enterprise Opportunity #2: Call Centers
- Policy Enterprise Opportunity #3: Call Centers
- Policy Product and Architecture
- Policy Deployment and Redundancy Models
- Policy Licensing Guidelines
- Internal Architecture and Call Processing Part 1 and 2
- Where to Sell the Policy in The Service Provider Market
- Policy Services Provider Opportunity #1 Consolidated Routing
- Policy Service Provider Opportunity #2: Number Portability
- Policy Service Provider Opportunity #3: Least Cost Routing

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PSX Support Professional Certification

PSX20 – PSX Support

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

- Part 1 – PSX Support Technical Prerequisites – Self-Paced component – 16-Hrs
- Part 2 - PSX Support Practical Exercises - Leader-Led component – 2-Days

You **must** complete Part 1 - PSX Support Technical Prerequisites Self-Paced component before you can enroll and attend Part 2 - PSX Support Practical Exercises Leader-Led component. After completing Part1 and Part 2, to achieve the certification you must pass the theoretical exam with a score of 80% or higher.

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

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 Parts that make up this Blended Learning training.

Part 1 – PSX Support Technical Prerequisites

Part 1 Description:
The purpose of this course is to familiarize the students 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 the Part 1 - PSX Support Technical Prerequisites Self-Paced component before you can enroll and attend the Part 2 - PSX Support Practical Exercises Leader-Led component.

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

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- Treatment Services
- Routing Services
- Enhanced Services
- Digit Manipulation
- Local Database Translation
- Command Line Interface

Objectives:
Upon completion of this Part, 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

Part 1 Prerequisite: None

Part 1 Length and Delivery Method: 16-Hrs – Self-Paced

Part 2 – PSX Support Practical Exercises

Part 2 Description:
The purpose of this Part is to reinforce the content you learn in Part 1 - PSX Support Technical Prerequisites component by immersing you in hands-on lab exercises.

You **must** complete the Part 1 - PSX Support Technical Prerequisites Self-Paced component before you can enroll and attend the Part 2 - PSX Support Practical Exercises Leader-Led component. After completing Part1 and Part 2, to achieve the certification you must pass the theoretical exam with a score of 80% or higher.

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

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- Routing Services
- Digit Manipulation
- Local Database

Objectives:
Upon completion of this Part, 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 to manipulate a called Number based on DM Criteria's and rules.
- Provision the PSX to do number translations.

Prerequisite Skills: None

Part 2 Prerequisite Courses: Part 1 – PSX Support Technical Prerequisites

Part 2 Length and Delivery Method: 2-Days – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PUBLIC-0022	PSX20- PSX SUPPORT IN IP ENV - PUBLIC SEAT - BLENDED LEARNING
SRV-EDU-PRIVATE-0221	PSX20- PSX SUPPORT IN IP ENVIRONMENTS - BLENDED LEARNING

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RAMP Support Professional Certification

If you have previous experience and/or certification with the Insight EMS, you can achieve the RAMP Support Professional Certification by taking the:

- RAMP10 – Ribbon Application Management Platform Overview – 2-Hrs _ Self-Paced
- RAMP Support Professional Certification Exam

Else, you will need to take:

- RAMP15 – Ribbon Application Management Platform Basics Class – 2-Days - Leader-Led
- RAMP Support Professional Certification Exam

RAMP10 — Ribbon Application Management Platform 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

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

Prerequisite Courses: None

Course Length and Delivery Method: 2-Hrs – Self-Paced

SKU:

Part Number	Description
SRV-EDU-SPEL-0043	RAMP10 - RIBBON APPLICATION MANAGEMENT PLATFORM (RAMP) OVERVIEW

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 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 and Delivery Method: 2-Days – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0289	RAMP15 - RIBBON APPLICATIONS MANAGEMENT PLATFORM - 2 DAYS
SRV-EDU-PUBLIC-0075	RAMP15 - RIBBON APPLICATIONS MANAGEMENT PLATFORM - PUBLIC SEAT - 2 DAYS

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RAMP Implementation Professional Certification

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:
Achieved the Ramp Support Professional Certification

Course Length and Delivery Method: 1-Day – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0293	RAMP16-RIBBON APPLICATION MANAGEMENT PLATFORM IMPLEMENTATION
SRV-EDU-PUBLIC-0078	RAMP16-RIBBON APPLICATION MANAGEMENT PLATFORM IMPLEMENTATION - PUBLIC SEAT

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AS Sales and Sales Engineer Professional Certification

Course Description:
This course provides the Partner Sales and Sales Engineer employee with the working knowledge to position and sell the AS “Application Server” product.

Course Length and Delivery Method: 1-Hr - Self-Paced

Intended Audience:
Channel Partners working toward AS Sales and Sales Engineer Certification.

AS200 – AS Sales and Sales Engineer Professional

Key Topics:

- AS Hybrid
- AS On-Premises
- AS Private Cloud
- AS Provisioning Portal
- AS Public Cloud

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AS Support Professional Certification

Curriculum Description:
This curriculum provides the Partner Support employee with the working knowledge to support the AS "Application Server" product.

Intended Audience:
Channel Partners working towards AS Support Certification.

AS11 — Communications Application Server (AS) – Standalone Overview

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

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 is used

Prerequisite Skills: None

Prerequisite Courses:
None

Course Length and Delivery Method: 1-Day – Self-Paced

SKU:

Part Number	Description
SRV-EDU-SPEL-0001	AS11-COMS APP SERVER (AS) – STANDALONE OVERVIEW

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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 - Communication Application Server (AS) – Standalone Overview

Course Length and Delivery Method: 1-Day – Self-Paced

SKU:

Part Number	Description
SRV-EDU-SPEL-0002	AS30-COMS APP SERVER - STANDALONE ACCOUNTING

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

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.

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- Application Server (AS) – Standalone Overview

Course Length and Delivery Method: 4-Days – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0007	AS21-COMS APP SERVER (AS) - SA ADM, MNT, PROV, FLT
SRV-EDU-PUBLIC-0062	AS21-COMS APP SERVER (AS) - SA ADM, MNT, PROV, FLT R - PUBLIC SEAT

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G5 Sales and Sales Engineer Professional Certification

Course Description:
This curriculum provides the Partner Sales and Sales Engineer employees with the working knowledge to position and sell the G5 product.

Course Length and Delivery Method: 4-Mins Self-Paced

Intended Audience:
Channel Partners working toward G5 Sales and Sales Engineer Certification.

G5200- G5 Sales Engineer Professional

Key Topics:

- Introduction
- Media Gateway Portfolio
- Applications

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G5 Support Professional Certification

Curriculum Description:
This curriculum provides the Partner Support employee with the working knowledge to support the G5 product.

Course Length and Delivery Method: 4-Hrs - Self-Paced and 2-Day Instructor Led

Intended Audience:
Channel Partners working toward G5 Support Certification.

G515 - G5- Access Line Gateway Operations, Maintenance, Fault Management Class

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 provides 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 and Delivery Method: 2-Days – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0173	G515-LINE ACCESS GATEWAY
SRV-EDU-PUBLIC-0056	G515-LINE ACCESS GATEWAY - PUBLIC SEAT

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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 provides 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 and Delivery Method: 4-Hrs – Self-Paced

SKU:

Part Number	Description
SRV-EDU-SPEL-0011	G5SE10-G5 SIP ESA OVERVIEW

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EdgeMarc and EdgeView Sales and Sales Engineer Professional Certification

Course Description:
This Course provides the Partner Sales and Sales Engineer employee with the working knowledge to position and sell the EdgeMarc and EdgeView product.

Course Length and Delivery Method: 2-Hrs - Self-Paced

Intended Audience:
Channel Partners working toward EdgeMarc and EdgeView Sales and Sales Engineer Certification.

EMV200 - EdgeMarc and EdgeView Sales and Sales Engineer Professional

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

- Understand the Network Edge Orchestration.
- Understand hardware and software strategy.
- Deploy common architectures.
- Locate available training and support.
- Identify sales opportunities.
- Quote and purchase Edgeview and EdgeMarc products.
- Setup the System and User Interface
- Identify available logs and captures.

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EdgeMarc and EdgeView Support & Implementation Professional Certification

EMV20 - EdgeMarc & EdgeView Implementation and Support

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

- Part 1 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites – Self-Paced component – 16-Hrs
- Part 2 - EdgeMarc & EdgeView Implementation and Support Practical Exercises - Leader-Led component – 2-Days

You **must** complete the Part 1 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites component before you can enroll and attend the Part 2 - EdgeMarc & EdgeView Implementation and Support Practical Exercises Leader-Led component. After completing Part1 and Part 2, to achieve the certification you must pass the theoretical exam with a score of 80% or higher.

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.

This Blended Learning Course is designed for Partners 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 Parts that make up this Blended Learning training.

Part 1 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites

Part 1 Description:
The purpose of this Part 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 the Part 1 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites component before you can enroll and attend the Part 2 - EdgeMarc & EdgeView Implementation and Support Practical Exercises Leader-Led component.

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 Part, 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 EdgeView.
- Understand how to do bulk actions on EdgeMarcs using EdgeView.
- Understand the Zero Touch Provisioning (ZTP) process.
- Identify different EdgeMarc configuration and deployment scenarios.

Part 1 Prerequisite: None

Part 1 Length and Delivery Method: 16-Hrs – Self-Paced

Part 2 – EdgeMarc & EdgeView Implementation and Support Practical Exercises

Part 2 Description:
The purpose of this Part is to reinforce the content you learn Part 1 - EdgeMarc & EdgeView Implementation and Support Technical Prerequisites component by immersing you in hands-on lab exercises.

You **must** complete the Part 1 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites component before you can enroll and attend the Part 2 - EdgeMarc & EdgeView Implementation and Support Practical Exercises Leader-Led component. After completing Part1 and Part 2, to achieve the certification you must pass the theoretical exam with a score of 80% or higher.

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 Part, 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.

Part 2 Prerequisite: Part 1 – EdgeMarc & EdgeView Implementation and Support Technical Prerequisites

Part 2 Length and Delivery Method: 2-Days – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0276	EMV20 - EDGEMARC AND EDGEVIEW IMPLEMENTATION AND SUPPORT - BLENDED LEARNING
SRV-EDU-PUBLIC-0067	EMV20 - EDGEMARC AND EDGEVIEW IMPLEMENTATION AND SUPPORT - PUBLIC SEAT - BLENDED LEARNING

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Ribbon Analytics Sales and Sales Engineer Professional Certification

Course Description
This course provides the Partner Sales and Sales Engineer employee with the working knowledge to position and sell the Ribbon Analytics product.

Course Length and Delivery Method: 1-Hr - Self-Paced

Intended Audience:
Channel Partners working toward Ribbon Analytics Sales and Sales Engineer Certification.

RP200- Ribbon Analytics Sales and Sales Engineer Professional

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

- Describe the Analytics platform and architecture.
- Describe the differences between Static, Dynamic and ML.
- Determine Security Landscapes.
- Architect the Sale
- Describe the Applications.
- Understand what to lead with in a sale.
- Identify Use Cases.

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Ribbon Analytics Support Professional Certification

Curriculum Description
This curriculum provides the Partner Support employee with the working knowledge to support the Ribbon Analytics product.

Course Length and Delivery Method: 4 Days – Leader-Led

Intended Audience:
Channel Partners working toward Ribbon Analytics Support Certification.

RA15- Ribbon Analytics Basics Class

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, a student 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 Devics
- 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: None

Course Length and Delivery Method: 2-Days - Leader-Led

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0261	RA15 - RIBBON ANALYTICS SUPPORT
SRV-EDU-PUBLIC-0053	RA15 - RIBBON ANALYTICS SUPPORT - PUBLIC SEAT

RA26- Ribbon Analytics Advanced Class

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, a student 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: RA15 Ribbon Analytics Basics

Course Length and Delivery Method: 2-Days – Leader-Led

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0280	RA26 - RIBBON ANALYTICS ADVANCED
SRV-EDU-PUBLIC-0070	RA26 - RIBBON ANALYTICS ADVANCED - PUBLIC SEAT

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Packet Optical Network Sales and Sales Engineer Professional Certification

Course Description:
This course provides the Partner Sales and Sales Engineer employees with the working knowledge to position and sell the Packet Optical Network products.

Course Length and Delivery Method: 2-Hr - Self-Paced

Intended Audience:
Channel Partners working toward Packet Optical Network Sales and Sales Engineer Certification.

Key Topics:

- Apollo Optical Systems
- Neptune Packet Systems
- Network Management
- Light INSIGHT
- Cyber Security Suite
- Muse Networks and Services Applications
- Muse Framework
- Muse Networks and Services Applications
- Muse Framework

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Ribbon Communications Confidential and Proprietary

Packet Optical Networks Planner Professional Certification

Curriculum Description
"Neptune Network Planner" and "Apollo Network Planner Courses" both lead to a Network Planner Professional Certification certificate. This certification is a mandatory requirement for Partner Users of the Muse Network Planner tool which is available as part of the Ribbon Partner Program, allowing Ribbon Silver, Gold and Platinum tier partners to create custom IP Wave network configurations to optimally serve their customer's needs and to collaborate with Ribbon technical experts to optimize the detailed designs.

Course Length and Delivery Method: 2-Hrs 10-Mins - Self-Paced

Intended Audience:
The courses are intended for Sales and Solution Engineers and Network Architects of Ribbon Authorized Silver, Gold and Platinum Partners who have the right to resell Ribbon's IPWave products.

Apollo Network Planner course

Key Topics:

- Network Topology creation
- CIR/EIR bandwidth Requirements and Forecasting
- Protection and Restoration Requirements
- Optimization Goal Setting
- Power budget
- Service and Transmission Performance Determination
- Traffic Stress and Failure Condition Simulation
- Network Site Equipment Provisioning and Installation documentation,
- Power, Inventory ERP and Topology Reporting

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

- Use the Network Planner to plan multi-node networks of Ribbon's Apollo product family.
- Create network topologies and model customer demand.
- Execute the multi-level optimization and simulation capabilities of the tool to map the required services, network interconnections and protection schemes to optical cables and service ports.
- Produce and export detailed bills of materials and card-level schematics of the required network elements which can form the basis for quotations from Ribbon.

Prerequisite: Certified IPWave Sales and Sales Engineering Professional

Course Length and Delivery Method: 1-Hr 40-Mins – Self-Paced

Neptune Network Planner course

Key Topics:

- Network Topology creation
- CIR/EIR bandwidth Requirements and Forecasting
- Protection and Restoration Requirements

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- Optimization Goal Setting
- Power budget
- Service and Transmission Performance Determination
- Traffic Stress and Failure Condition Simulation
- Network Site Equipment Provisioning and Installation documentation,
- Power, Inventory ERP and Topology Reporting

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

- Use the Network Planner to plan multi-node networks of Ribbon's Neptune product family.
- Create network topologies and model customer demand.
- Execute the multi-level optimization and simulation capabilities of the tool to map the required services, network interconnections and protection schemes to optical cables and service ports.
- Produce and export detailed bills of materials and card-level schematics of the required network elements which can form the basis for quotations from Ribbon.

Prerequisite: Certified IPWave Sales and Sales Engineering Professional

Course Length and Delivery Method: 30-Mins – Self-Paced

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Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Sales and Sales Engineer Professional Certification

Course Description:
This curriculum provides the Partner Sales employee with the working knowledge to position and sell TEAMS DRaaS.

Course Length and Delivery Method: 1-Hr - Self-Paced

Intended Audience:
Channel Partners.

Ribbon Connect Direct Routing as a Service Sales and Sales Engineer Professional

Key Topics:

- Common Terms
- Future of Microsoft Teams Calling.
- Value of Microsoft Teams.
- Common Barriers
- Solution Overview
- SIP Trunking
- Existing PBX
- Portal Based Cloud Integration Service
- Native Calling
- Teams Offer Structure
- Branding
- Consumption Model
- End Customer Trials
- Competitive Analysis
- Creating Indirect Partners
- Partner Ordering Process
- Creating and managing a customer

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Ribbon Communications Confidential and Proprietary

Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Technical Onboarding Professional Certification

Course Description:
This Course provides the Partner Support employee with the working skills to onboard Partners and Customers for TEAMS DRaaS.

Course Length and Delivery Method: 1-Hr - Self-Paced

Intended Audience:
Channel Partners.

Ribbon Connect Direct Routing as a Service Technical Onboarding Professional

Key Topics:

- Ribbon Connect Overview
- Ribbon Connect Users and Accounts
- Ribbon Connect Admin Portal
- Creating a new Portal
- Creating a new Customer
- Changing the Subscriptions for a Customer
- Deleting a customer
- Troubleshooting
- Open a Support Ticket

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Ribbon Communications Confidential and Proprietary

Ribbon Connect for Microsoft TEAMS Direct Routing as a Service Customer Support Professional Certification

Course Description:
This course provides the Partner Support employee with the working skills to support TEAMS DRaaS.

Course Length and Delivery Method: 1-Hr - Self-Paced

Intended Audience:
Channel Partners.

Ribbon Connect Direct Routing as a Service Customer Support Professional

Key Topics:

- Ribbon Connect Direct Routing as a Service Requirements
- Ribbon Connect Platform in the Solution
- Navigation in the Ribbon Connect Platform
- Service Offering
- One Click Setup for Teams in the Ribbon Connect Platform.

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Tactical Edge Sales and Sales Engineer Professional Certification

TES200 - Ribbon Tactical Edge Solution Sales and Sales Engineer Professional

Course Description:
This course provides the Partner Sales and Sales Engineer employees with the working knowledge to position, Engineer and sell the Tactical Edge Solution.

Course Length and Delivery Method: 35-Mins - Self-Paced

Intended Audience:
Channel Partners working toward the Tactical Edge Sales and Sales Engineering Certification.

Key Topics

- Customer Need
- What's in the Box
- Application Server
- Session Border Controller
- Tactical Core and Service Anywhere
- Competition
- How is it Ordered?
- How is it Deployed?
- Learn More
- EMS Overview

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Ribbon Communications Confidential and Proprietary

Tactical Edge Support Professional Certification

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

Course Description:
This course provides Channel Partners and Customers with the knowledge of how to Provision, Maintain, and Administer the Tactical Edge Solution. To achieve certification, you must pass the practical exam with a score of 100% and the theoretical exam with a score of 80% or higher.

Course Length and Delivery Method: 2-Days – Leader-Led

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

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

- 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

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Tactical Edge Implementation Professional Certification

TES40 - Tactical Edge Solution Deployment

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

End of the class practical and theoretical exam are required for assessment purposes. To achieve certification, you must pass the theoretical exam with a score of 80% or higher.

Course Length and Delivery Method: 2-Days – Leader-Led

Intended Audience:
System engineers, consultants, and integrators, including members of Ribbon Channel Partners working toward technical accreditation, responsible for the implementation 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

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

- 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

SKU:

Part Number	Description
SRV-EDU-PRIVATE-0291	TES40 TACTICAL EDGE SOLUTION DEPLOYMENT
SRV-EDU-PUBLIC-0077	TES40 TACTICAL EDGE SOLUTION DEPLOYMENT

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Ribbon Communications Confidential and Proprietary

Ribbon Training – Terms, Conditions & Policies

Ribbon Communications Operating Company, Inc. and its affiliates, (individually and collectively, "Ribbon") and Customer and its affiliates (individually and collectively, "Customer") agree that the following Ribbon purchase terms and conditions will exclusively apply to the purchase by Customer of Ribbon's training services ("Training Services" or "Services") as set forth below (the "Agreement").

TRAINING SERVICES
Ribbon Training Services are defined by the applicable course description under the Ribbon Academy Customer Course Catalog or as otherwise provided in writing by Ribbon ("Training Description"). A Customer may order Training Services by the applicable Training Description course number (SKU). All purchase orders for Training Services are subject to Ribbon's acceptance. Subject to Customer's payment of the applicable Training Services fee, Ribbon agrees to deliver the Training Services in accordance with the Training Description and this Agreement. Customer acknowledges and agrees that by submitting an order for Training Services, Customer agrees to pay the applicable Training Service fee and accept the terms and conditions under the applicable Training Description and this Agreement.

A Student acknowledges and agrees that by registering and attending a Ribbon training class or course ("Training Course"), the Student accepts the terms and conditions under the applicable Training Description and this Agreement. "Student" means an individual who is registered for a Training Course purchased by a Customer for its employees, contractors, agents, or other individuals, or for itself to attend training (individually and collectively "Student").

Ribbon Training Services may include online, classroom, customer site and self-paced training as described under the applicable Training Description.

PAYMENT
Customer agrees to have a valid method of payment to pay the applicable Training Service fee prior to being registered in any Ribbon training class or course ("Training Course"). Payment details must be received by Ribbon a minimum of fifteen (15) business days prior to the scheduled Course date.

Customer agrees to submit a valid signed purchase order by email to the applicable regional Ribbon Education Services contact. The Ribbon Education Services contact details are available on the Ribbon Education Services website: https://ribboncommunications.com/services/education-services.

Credit Card payments will be billed upon Ribbon confirmation of the Training Course registration.

TRAINING COURSE SELECTION
Each Student accepts that it is that Student's responsibility to verify that the Training Course selected is suitable for the needs of the individual Student attending and that the Student has the necessary level of competence to be able to achieve the objectives of the Course. Ribbon will have no liability for any use of, or any inability to use, any material supplied, or knowledge gained from participation in the Training Course. All Training Course prerequisites and pre-work requirements are listed in the applicable Training Description available on the Ribbon Education Services website: https://ribboncommunications.com/services/education-services .

TRAINING COURSE CONFIRMATION
Ribbon will send a Training Course registration confirmation (notification via email) as part of the Training Services registration process. Ribbon will send (via e-mail), as applicable, access credentials for self-paced and eLearning Training Courses, and the training location information for classroom training.

CANCELLATION OF INSTRUCTOR LED COURSES
(Ribbon Site /Customer Site / Online eLearning)
A Customer may reschedule or cancel a Training Course registration without any cancellation fee up to fifteen (15) business days prior to the scheduled Training Course start date.

Cancellation Fee. If a Customer reschedules or cancels a Training Course registration within fifteen (15) business days prior to the scheduled Training Course start date, a cancellation fee will apply in the amount of 100% of the Training Course fee. A Customer cancellation or rescheduling request must be sent to Ribbon at: training_admin@rbbn.com .

CANCELLATION BY RIBBON
Ribbon reserves the right to cancel a Training Course when necessary for reasons beyond Ribbon's control. If Ribbon cancels a Training Course, every effort will be made to notify a registered Student a minimum of ten (10) business days prior to the scheduled Training Course starting date. Upon such cancellation, a Student may request to reschedule to another Training Course or request a refund of the applicable Training Service fee. Ribbon will not be responsible for any travel-related expenses incurred by a Student due to such cancellation or rescheduling.

TERMINATION BY RIBBON (UNUSED TRAINING FORFEITED)
Customer agrees to schedule and use all ordered Training Services within one year from the applicable purchase date ("Training Period"), (except for Subscription Services as described below). For any ordered Training Services which remain unused, in whole or part, at the end of a Training Period, all such unused Training Services shall be immediately forfeited and terminated without any termination notice and are completely void without any cash value. The customer is liable to pay for all ordered Training Services including any unused Training Services forfeited under this section.

CUSTOMER SITE (ON-SITE) TRAINING CLASSES
Customer site training events require confirmation from the customer that all on-site facilities requested by Ribbon are available and in working order at least fourteen (14) days prior to the scheduled Training Course start date.

TRAINING TRAVEL ARRANGEMENTS
The Training Service fees are exclusive of any Student travel and expenses. A Student is responsible to arrange and pay for their own travel, accommodations, and expenses while attending a Ribbon Training Course or other training event. The Ribbon Training Facility location information is available from your Ribbon Education Services contact.

MAXIMUM AND MINIMUM COURSE SIZES
All Ribbon Training Courses are subject to minimum and maximum number of Students. Further details are available from your Ribbon Education Services contact.

If, at the start of a Training Course, the number of Students exceeds the maximum number of Students permitted for that Training Course (as agreed in writing by Ribbon prior to the scheduled Training Course), the start of the Training

Course will be delayed until resolved by the Customer. The Customer agrees to take the necessary action to adhere to the agreed number of Students permitted for the Training Course. Ribbon reserves the right to cancel the Training Course if there is a significant delay to the course start time.

TRAINING COURSE STUDENT SUBSTITUTION
A Student substitution for an instructor led Training Course at a Ribbon or Customer site may be made anytime up to one working day (24 hours) prior to scheduled Training Course start date. A Student substitution for a virtual Training Course is required to be made at least seven (7) calendar days prior to the scheduled Training Course start date. Substitute students are required to meet any prerequisite and pre-work requirements for the applicable Training Course. A Student substitution for self-paced eLearning courses is allowed at no extra charge provided the original registered Student has not accessed or activated the Training Course, (otherwise a Training Service fee for substituted Student will apply).

TRAINING COURSE PARTICIPATION
For successful completion of a Training Course, Student attendance of one hundred percent (100%) is required. If a registered Student fails to complete the entire session, full payment of the applicable Training Service fee will still apply and be charged.

TRAINING DRESS
Appropriate business casual attire is required for class, i.e., dress slacks, collared shirts.

NON-SMOKING REQUIREMENT
The use of tobacco products is not permitted in Ribbon buildings. Smoking outside is allowed in designated smoking areas where available.

TRAINING LAB EQUIPMENT ACCESS
Student access to training lab equipment is solely limited to only the lab equipment supporting the applicable Training Course being attended, and only for the duration of the Training Course. Any Student attempts to gain unauthorized access to any other training lab, equipment facility and/or training will result in the Student's immediate removal from the Training Course. The full payment of the applicable Training Service fee will still apply and be charged for such a removed Student.

NETWORK OUTAGES/DELAYS
Ribbon may be required to cancel a scheduled Training Course with little or no prior notice in the event of a network problem or outage which affects the training facility, lab, or connectivity required for a Training Course. In these rare cases, a new Training Course date will be scheduled and communicated by your Ribbon Education Services contact. In the event a network problem or outage occurs during a Training Course, the scheduled duration of the Training Course may need to be extended to cover the period of such training interruption. For any such extension which extends the hours of a class day, Student attendance for such extended hours to a class day is optional in the Student's discretion. No order cancellation nor refunds are permitted due to training interruptions or delays under this section.

INCLEMENT WEATHER
Ribbon reserves the right to cancel a Training Course due to inclement weather. To inquire about the possibility of inclement weather impacting a scheduled

Training Course at a Ribbon training location, contact your Ribbon Education Services contact.

WEAPON-FREE REQUIREMENT
For everyone's safety, no weapons of any type are allowed in any Ribbon building, facility, property, or site, including parking lots, garages, and vehicles brought onto Ribbon property. This "Weapon-Free" policy applies to any type of firearm or device intended or designated to be able to cause personal injury or death, whether licensed, legal, illegal, concealed, or carried openly.

VIRTUAL CLASSROOM REQUIREMENTS
It is a requirement that a Student validates remote access to Ribbon's Virtual Classroom system fourteen (14) days prior to the start of a scheduled Virtual Training Course, to help avoid delays in the course start time. Access problems encountered after eLearning class has started may require a Student to be rescheduled into a different eLearning Training Course. A Student is responsible for contacting Ribbon Education Services, if needed, to resolve any technical support issues prior to the Virtual Course start date. The Ribbon Education Services contact information will be included in the Training Course registration confirmation email sent by Ribbon to a Student.

SELF-PACED TRAINING COURSE ACCESS AND SOFTWARE LICENSE REQUIREMENT
Access to a Self-study web delivered Training Course is restricted to the individual Student registered for that Training Course and such access is limited to a period no greater than ninety (90) days from the registration date, (unless purchased under a Training Subscription Agreement). Payment for a Self-study web delivered Training Course is non-refundable from the course activation date. If reactivation of course access is required after expiration of the above ninety (90) day period, the full Training Course fee will be chargeable by Ribbon for such reactivation.

TRAINING SUBSCRIPTIONS
Ribbon Training Subscriptions are valid for one calendar year from the date of activation, unless otherwise agreed in writing. All access to the Training Services purchased shall cease on expiry of the calendar year. The type and quantity of Services available to the customer are as stated in writing in the Subscription Agreement between the Customer and Ribbon.

INTELLECTUAL PROPERTY RIGHTS
Ribbon will exclusively retain all rights, title and ownership of copyrights, patents, trademarks, or any other intellectual property in all Ribbon training materials provided or made available to a Student (the "Training Materials"). Ribbon grants to a Student a non-exclusive, perpetual, royalty-free, non-transferable right and license to use the Training Materials solely and exclusively for a Student's personal use in completing the coursework. A Student is prohibited from copying, reproducing, modifying, or adapting the Training Material without the express advance written consent of Ribbon. A Student agrees to ensure that all patent, copyright, trademark, and other proprietary notices of Ribbon affixed to or displayed on the Training Material will not be removed or modified.

DATA PROTECTION
In conjunction with the use of the Training Services, Customer and each Student may provide to Ribbon and Ribbon may collect, generate and/or process certain personal data for the purposes of (i) student registration, communication and billing, (ii) delivery of training content, (iii) maintenance of your online training

profile/transcript, (iv) maintenance of Training Service consumption metrics, and (v) and student survey data (collectively "Student Data"). Ribbon acting as the data controller in the context of delivering the Training Services shall process Student Data in accordance to the Ribbon Privacy Policy which may be updated from time to time. The processing of Student Data corresponding to the purposes identified above in items (i) through (iii) is necessary for the performance of Training Services under these terms. Processing of Student Data associated with item (iv) and (vi) shall be undertaken on the basis of Ribbon's legitimate interests in improving or evolving the Training Services.

Ribbon will not maintain identifiable Student Data corresponding to Students who have not registered for a training unit within the last 10 years. Accordingly, Students are encouraged to download their respective profile/transcript upon completion of each Training Course.

Customer and each Student grants to Ribbon and its subcontractors a right and license to use, host, cache, copy, process, organize, structure, adapt, alter, store, display, disclose, retrieve and erase/destroy information associated with the Student Data for the purpose of and in conjunction with the use of the Transition Services and subject to applicable data protection laws. Customer and each Student hereby expressly consent to transfer of Student Data to Ribbon and to processing of the Student Data in conjunction with the Training Services.

Customer and each Student agrees that Ribbon may transfer Student Data to its affiliates and subprocessors in the United States, Israel and/or another country outside of your country of residence in conjunction with the use of the Training Services and subject to the terms of this agreement and applicable data protection law including where applicable Regulation 2016/679 of the European Parliament and of the Council (General Data Protection Regulation).

You acknowledge and agree that Ribbon may, in performing its obligations pursuant to this agreement, be dependent upon or use Student Data, material and other information furnished by you without any independent investigation or verification thereof, and that Ribbon shall be entitled to rely upon the accuracy and completeness of such information.

In addition to its other rights and remedies, Ribbon may remove Student Data from the Training Service at any time if Ribbon in its sole discretion determines that use of the Training Services, are in violation of this Agreement or applicable data protection law.

DISCLAIMER

Training Materials are for training information only and provided "AS IS," with all faults, and without any warranties whatsoever, express, or implied, including, but not limited, warranties of Merchantability, Performance, or Fitness for a Particular Purpose. While reasonable efforts have been made in the preparation of this training information to assure its accuracy, Ribbon assumes no liability resulting from technical or editorial errors or omissions, or for any damages whatsoever (including, but not limited to, indirect, incidental, special, exemplary, punitive or consequential damages) resulting from the furnishing, performance, or use of the Training Materials..

LIMITATION ON LIABILITY

Ribbon's liability for loss and damage shall be limited as set forth below. Except for damages for personal injury to a Student, the maximum aggregate liability of Ribbon for direct damages, whether based on warranty, contract, tort (including negligence), product liability or otherwise, will not exceed the price Customer paid for the Training Course out of which the loss or damage has arisen. Ribbon shall

not be liable for any indirect, incidental, special, exemplary, punitive, or consequential damages, foreseeable or unforeseeable, of any kind (including loss of anticipated profit or data or loss of goodwill), howsoever arising, even if it has been advised of such potential damages. The foregoing limitations shall apply notwithstanding the failure of any exclusive remedies.

ASSIGNMENT
A Customer's and Students' rights with respect to a purchased Training Course and Training Materials may not be transferred or assigned to any third party. A Customer and Student are not authorized to resell any participant places to any external or third parties without the prior written agreement of Ribbon.

AMENDMENT AND WAIVER
This Agreement may not be amended except in a writing signed by an authorized representative of both Ribbon and Customer. No waiver of any term herein occurs unless in a writing signed by the party waiving its rights. Waiver by Ribbon of any of the terms herein or the granting of time or indulgence by Ribbon to the Student shall in no way affect Ribbon' rights hereunder.

FORCE MAJEURE
Ribbon shall not be liable or deemed to be in default for any delay or failure in performance of Training Services resulting directly or indirectly from acts of God, or any causes beyond the reasonable control of Ribbon.

NOTICES
All notices requests, demands, waivers and other communications required by this Agreement between Ribbon and Customer shall be in writing and shall be deemed to have been duly given if delivered personally or by electronic mail or mailed (certified or registered mail, postage prepaid). If to Ribbon, the following e-mail address may be used: training_admin@rbbn.com. For communications to a Student, Ribbon may use the e-mail or postal address provided during the registration process.

GENERAL
This Agreement represents a complete statement of the agreement between the parties and supersede all prior discussions, correspondence, and representations. Ribbon' brochures and advertisements are for information purposes only and are not intended to form any agreement between Ribbon and the recipient. Ribbon reserves the right to change the Training Services at any time without notice. Such changes will only apply to any orders for Training Services received after the date of such a change. If any provision herein is held to be invalid, illegal, or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be affected or impaired.