AudioCodes Academy

Course Catalog

Version 19.04

audiocodes

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Notice

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This document is subject to change without notice.

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Contact Information

AudioCodes Training and Knowledge Services can be contacted at the following:

- AudioCodes Technical Training Public Web site - https://www.audiocodes.com/services-support/audiocodes-academy
- AudioCodes Technical Training group e-mail - training@audiocodes.com

Introduction

AudioCodes' Academy is responsible for technical training targeted at service personnel who provide support for AudioCodes products.

This technical training covers the following areas:

- Installation and configuration of AudioCodes equipment
- Operation and maintenance of AudioCodes equipment
- Basic interoperability and support services
- In-depth analysis of operational and diagnostics capabilities
- Troubleshooting and support of AudioCodes equipment

Technical Training Courses Offered

In this document, you will find all AudioCodes off the shelf courses.

In addition to generic technical training courses, AudioCodes offers customized training courses on request. For more information, contact AudioCodes Training and Knowledge Services at training@audiocodes.com.

AudioCodes Training Centers

AudioCodes offers a full range of international training courses at its Training Centers in eight different locations worldwide:

- **AudioCodes Headquarters:** Airport City, Israel
- **EMEA:** AudioCodes France, AudioCodes Germany, AudioCodes Netherlands, AudioCodes UK
- **APAC:** AudioCodes Singapore
- **North America:** AudioCodes Research Triangle Park (Raleigh), North Carolina, USA
- **South America:** AudioCodes Argentina, Buenos Aires, Argentina

These Training Centers are equipped with all the AudioCodes products necessary for conducting professional training courses. All types of courses are available at the centers.

Note: AudioCodes can also provide training courses on customer premises on request; provided that the site meets training course requirements (see the following section On-site Training Requirements).

Pre-scheduled training sessions are available at specific AudioCodes offices worldwide: https://www.audiocodes.com/services-support/audiocodes-academy/technical-training-list. On-demand sessions can be arranged, depending on the number of trainees and location, as well as available equipment.

On-site Training Requirements

The following requirements are necessary for AudioCodes on-site training:

- The training room should be in a classroom-style layout with a PC projection facility and a screen in the front of the class. Each attendee should be able to see the screen easily.
- Hands-on will be delivered using a remote laboratory environment to which users will access using the well-known software TeamViewer.
- The training room should be large enough to host 12 people.
- The training room should have high-speed Internet access for PCs/laptops used by the attendees.
- Attendees should bring their own laptop to access the remote online lab environment with the following requirements:
  - Browser (Firefox, Explorer or Chrome)
  - Acrobat Reader
  - TeamViewer client application installed
  - Wi-Fi access to the Internet

AudioCodes Career Certifications Levels

Certification	Description
ACA AudioCodes Certified Associate 	Basic level certification required for the installation and maintenance of AudioCodes' CPE, Access Media Gateways and SBCs in different customer scenarios.
ACP AudioCodes Certified Professional 	Advanced level certification required for the installation, maintenance and advanced troubleshooting of all AudioCodes networking products in advanced customer scenarios.

Notes:

- Certificates are valid for two years.
- Re-certification training is offered based on the list of available courses.

AudioCodes Training Courses

AudioCodes SBC: Essentials & Configuration

Course Code	Public/Per Seat: TR-SBC-BSC-S Dedicated Course: TR-SBC-BSC-C
Course Name	**AudioCodes SBC: Essentials & Configuration**
Course Details	
Course	AudioCodes training for Session Border Controller (SBC) course is designed to provide engineers with experience in configuring, maintaining, and troubleshooting AudioCodes devices configured as an SBC.
Products	AudioCodes SBC Series, AudioCodes Gateway Series
Student Profile	Engineers with experience in configuring, maintaining, and troubleshooting AudioCodes devices as an SBC.
Duration	4 days
Delivery Method	Classroom Instructor Led or Online Instructor Led
Certification	The course includes an ACA (AudioCodes Certificate Associated) certification exam. 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in the use and support of AudioCodes SBC products. On completion of the course, students will be able to: • Identify the AudioCodes products that support the Session Border Controller (SBC) features • Identify the functions of the SBC • Describe how the SBC handles SIP messages • Understand the reasons for message manipulation • Understand the survivability concept • List SBC security features • Configure SBC message manipulation rules • Configure the parameters required by the SBC • Configure the SBC for SIP trunking • Configure AudioCodes Gateways for PSTN fallback needs

Course Code	Public/Per Seat: TR-SBC-BSC-S Dedicated Course: TR-SBC-BSC-C
Course Name	AudioCodes SBC: Essentials & Configuration
Course Details	
Prerequisites	Students are expected to have an applicable professional background with a minimum of one year of practical experience with: • PSTN protocols and knowledge of analog and digital telephony systems • VoIP and SIP network architecture • Understanding of SIP control protocol signaling stacks • IP networking
Course Outline	• AudioCodes Presentation • User Interface Introduction: ✓ Basic configuration ✓ Management and maintenance options ✓ Web Interface • Documentation • AudioCodes SBC Platforms: ✓ Hardware SBCs: ✓ Mediant 2600/4000/9000 ✓ Hybrid SBC Portfolio ✓ Mediant 500/8xx/1000/3000 ✓ Integrated SBC and MSBR: ✓ Mediant 500/8xx/1000 ✓ Software SBC • SBC Description: ✓ SBC definition ✓ SBC functions ✓ SBC topologies and deployment ✓ Logical and physical connections • SBC Features: ✓ NAT traversal ✓ Transcoding ✓ Topology hiding ✓ VoIP firewall ✓ SIP routing ✓ SIP normalization ✓ Survivability • SBC Basic Terminology: ✓ Signaling Routing Domain (SRD) ✓ SIP Interface ✓ Media Realm ✓ IP Groups ✓ Proxy Sets ✓ SIP dialog initiation process description ✓ IP-to-IP routing ✓ Multi-tenancy Concepts

Course Code	Public/Per Seat: TR-SBC-BSC-S Dedicated Course: TR-SBC-BSC-C
Course Name	AudioCodes SBC: Essentials & Configuration
Course Details	

- ✓ Routing Policy
- SBC Configuration:
  - ✓ Parameters and tables
  - ✓ General parameters settings
  - ✓ Table assignments
  - ✓ Configuration example
  - ✓ SBC Configuration Wizard
- Debugging Tools:
  - ✓ Syslog and Syslog Viewer
  - ✓ Wireshark
  - ✓ SIP Test Calls
- SBC Media Handling:
  - ✓ Media capabilities
  - ✓ Media security
  - ✓ Media handling modes
  - ✓ Transcoding
  - ✓ Extended and Allowed coders process
  - ✓ Media handling example
- SBC Message Manipulation:
  - ✓ Reasons for SIP message manipulation
  - ✓ Message manipulation configuration
  - ✓ Message Manipulation Set
  - ✓ Message manipulation rules
  - ✓ IP-to-IP number manipulation
- SBC Security Brief Overview:
  - ✓ Security needs
  - ✓ Network security feature:
    - Topology hiding
    - Firewall
  - ✓ SBC security feature:
    - SIP firewall filtering rules (classification rules)
    - Call Admission Control (CAC) to enforce limits
    - SIP protection – filter methods
    - Signaling security – TLS
    - Media security – SRTP
    - Block unregistered users
  - ✓ Management security feature:
    - HTTPS
    - SSH
    - SNMP
  - ✓ IDS
- AudioCodes Gateways Introduction:

Course Code	Public/Per Seat: TR-SBC-BSC-S Dedicated Course: TR-SBC-BSC-C
Course Name	AudioCodes SBC: Essentials & Configuration
Course Details	
	✓ VoIP gateways ✓ Configuration basics ✓ IP-to-IP concept ✓ Inbound and outbound routing ✓ IP-to-IP SIP trunking scenario configuration example • SBC Survivability: ✓ Concepts ✓ Configuration • SBC High Availability: ✓ Concepts ✓ Configuration
Lab Activities	• Getting familiar with the GUI • SBC Routing • SBC Transcoding • Header Manipulation • SBC Survivability and PSTN Fallback

AudioCodes SBC: Advanced Interworking & Security

Course Code	Public/Per Seat: TR-SBC-ADI-S Dedicated Course: TR-SBC-ADI-C
Course Name	AudioCodes SBC: Advanced Interworking & Security
Course Details	
Course	Hands-on technical instruction covering advanced Manipulation, Media Handling and Security configuration as well as a high-level administration of AudioCodes Session Border Controllers (SBCs) for interoperability in a secured environment.
Products	AudioCodes SBC Series
Student Profile	Systems Engineers, Network Architects, Consultants, and Integrators responsible for the planning, design, implementation and management of Session Border Controllers in their networks.
Duration	4 days
Delivery Method	Classroom Instructor Led
Certification	The course includes an ACP (AudioCodes Certificate Professional) certification exam. 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in their use and support of AudioCodes SBCs. On completion of the course, students will be able to: • Identify the concept and needs of Interworking • Have a deeper understanding of AudioCodes' SBC application for SIP normalization, media handling, message manipulation • Understand the SBC security risks and know how to prevent them
Prerequisites	• ACA Certification • 6 months of AudioCodes field experience with AudioCodes SBC products
Course Outline	• AudioCodes SBC Application Review: ✓ IP Interfaces ✓ Physical Interfaces ✓ Basic Entities: SRD, Media Realm, SIP Interface, IP Group and Proxy Set ✓ SIP Dialog Initiation Process Description ✓ Classification Process ✓ IP Profile ✓ IP-to-IP routing ✓ SIP Message Manipulations ✓ Entities and Tables Relations • Advanced SBC Interworking Features:

Course Code	Public/Per Seat: TR-SBC-ADI-S Dedicated Course: TR-SBC-ADI-C
Course Name	AudioCodes SBC: Advanced Interworking & Security
Course Details	
	✓ IP Profile ✓ Example of terminations for IP-PBX integration ✓ Handling Modes ✓ Handling of Early Media, REFER, 3xx and other messages • Advanced SBC Media Handling: ✓ SBC Media Handling Concepts ✓ Extension and Allowed Coders ✓ Media Handling Examples ✓ Advanced Transcoding ✓ Media Handling Security Features • Quality of Experience (QoE) Related Profiles: ✓ QoE Profile ✓ Bandwidth Profiles ✓ Media Subnets ✓ Performance Profiles ✓ Quality of Service (QoS) Rules • SBC Message Manipulation: ✓ Number Manipulations ✓ Reasons for Message Manipulation ✓ Message Manipulation Operation ✓ Message Normalization ✓ Regular Expressions (Regex) Based Message Manipulation • Advanced SBC Security: ✓ Enterprise Security Threats ✓ AudioCodes SBC Security Capabilities ✓ Separation ✓ Topology Hiding ✓ Secured SIP using TLS ✓ TLS Contexts and Certificates ✓ Authentication ✓ Classification table ✓ Call Admission Control Profiles ✓ IDs ✓ Registration ✓ Message Policies ✓ Routing ✓ Events Logging • SBC Access ✓ Access using HTTPS ✓ Access using Telnet-SSH ✓ Access using LDAP ✓ Access using SNMP
Lab Activities	• Configuration with Advanced Interworking Capabilities • SBC Configuration using Transcoding • Configuration for Bandwidth Profiles

Course Code	Public/Per Seat: TR-SBC-ADI-S
	Dedicated Course: TR-SBC-ADI-C
Course Name	AudioCodes SBC: Advanced Interworking & Security
Course Details	
	• Message Manipulation based on Regex and Regular Rules • SBC Security • Device Access using LDAP

AudioCodes SBC: Advanced Routing & Multitenancy

Course Code	Public/Per Seat: TR-SBC-ADR-S Dedicated Course: TR-SBC-ADR-C
Course Name	AudioCodes SBC: Advanced Routing & Multitenancy
Course Details	
Course	Hands-on technical instruction covering advanced configuration, maintenance, troubleshooting and administration of AudioCodes Session Border Controllers (SBCs). Routing: Hands-on technical instruction covering advanced Routing and Multitenancy configuration as well as a high level administration of AudioCodes Session Border Controllers (SBCs) for different routing needs.
Products	AudioCodes SBC Series
Student Profile	Systems Engineers, Network Architects, Consultants, and Integrators responsible for the planning, design, implementation and management of Session Border Controllers in their networks.
Duration	4 days
Delivery Method	Classroom Instructor Led
Certification	The course includes an ACP (AudioCodes Certificate Professional) certification exam. 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in their use and support of AudioCodes SBCs. On completion of the course, students will be able to: • Identify the AudioCodes implementation of different techniques related to routing • Understand the concept of Call Setup Rules and its usage with LDAP based Routing, Dial Plan based routing and ENUM based routing • Have a deep understanding of the different models of Multitenancy and the way of configuring them
Prerequisites	• Complete AudioCodes SBC: Advanced Interworking & Security course.
Course Outline	• Basic Routing Overview ✓ Proxy Sets and IP Groups ✓ IP Group Sets ✓ Redundancy and load balancing • Call Setup Rules ✓ Concepts and Configuration ✓ Assignment to IP to IP Routing Table ✓ Assignment to IP Groups

Course Code	Public/Per Seat: TR-SBC-ADR-S
	Dedicated Course: TR-SBC-ADR-C
Course Name	AudioCodes SBC: Advanced Routing & Multitenancy
Course Details	
	✓ Example of usage • LDAP Routing ✓ LDAP Settings Review ✓ LDAP with Call Setup Rules ✓ Example of usage • Dial Plan Concepts ✓ Needs for Dial Plans ✓ Managing Dial Plans ✓ Using Dial Plans for Routing • Tagging Enhancements ✓ Concepts and definition ✓ Tag Configuration ✓ Tag Assignments ✓ Call Setup Rule with Tagging ✓ Usage and Examples • Routing Back to Sender ✓ Concepts and Configuration • Multitenancy ✓ Concepts and Definition ✓ Routing Policy ✓ Multitenancy based on SRDs ✓ Access SBC: Customer Separation Concepts ✓ Customer Separation based on IP/VLANs ✓ Customer Separation based on Ports ✓ Customer Separation based on TGRPs ✓ Customer Separation based on Prefixes ✓ Prefixes with LDAP Query and REST
Lab Activities	• Redundancy and Load Balancing (IP Group-based) • Routing Based on Call Setup Rules • LDAP Routing using Call Setup Rules • Dial Plan-based Routing • Tag-based Routing • Call Setup Rules and Tag-based Routing • Implementing a Redirect Service • Customer Separation Based on TGRPs • Customer Separation Based on Prefixes

AudioCodes VoIP & Data Applications: Essentials & Configuration

Course Code	Public/Per Seat: TR-VDA-S Dedicated Course: TR-VDA-C
Course Name	**AudioCodes VoIP & Data Applications : Essentials & Configuration**
Course Details	
Course	AudioCodes training for VoIP Applications is designed to provide basic knowledge of AudioCodes Gateway , Session Border Controller (SBC) and Multi-Service Business Router (MSBR) operation concept and configuration.
Products	AudioCodes SBC Series, AudioCodes Gateway Series, AudioCodes MSBR Series
Student Profile	Engineers who would like to gain knowledge on AudioCodes devices
Duration	Four days
Delivery Method	Classroom Instructor Led
Certification	The course includes an ACA (AudioCodes Certificate Associated) certification exam. 
General Objectives	On completion of the course, students will be able to: • Identify the AudioCodes products that support the Gateway & SBC & MSBR features • Identify the functions of the Gateway • Configure the Gateway for PSTN connectivity • Identify the functions of the SBC • Configure the SBC for SIP trunking • Describe the MSBR Data Networking features • Get the MSBR managed • Identify the MSBR debugging tools
Prerequisites	Students are expected to have an applicable professional background in: • VoIP and SIP network architecture • Understanding of SIP control protocol signaling stacks • Basic Knowledge of Data Terminology
Course Outline	• AudioCodes Presentation • User Interface Introduction • Documentation ✓ Gateway Hardware description ✓ Management and maintenance options ✓ Gateway Configuration ✓ Basic Debugging tools

Course Code	Public/Per Seat: TR-VDA-S Dedicated Course: TR-VDA-C
Course Name	AudioCodes VoIP & Data Applications : Essentials & Configuration
Course Details	
	• SBC Overview ✓ SBC Basic Terminology: ✓ Signaling Routing Domain (SRD) ✓ SIP Interface ✓ Media Realm ✓ IP Groups ✓ Proxy Sets ✓ SIP Dialog Initiation Process Description ✓ IP-to-IP routing ✓ Multi-tenancy Concepts ✓ Routing Policy • SBC Configuration: ✓ Parameters and Tables ✓ General Parameters Settings ✓ Table Assignments ✓ Configuration Example ✓ SBC Configuration Wizard • Introduction to MSBR: ✓ MSBR Data Networking ✓ MSBR Management ✓ MSBR Debugging tools

Course Code	Public/Per Seat: TR-VDA-S Dedicated Course: TR-VDA-C
Course Name	AudioCodes VoIP & Data Applications : Essentials & Configuration
Course Details	
Lab Activities	• Management Interface Usage • Gateway PRI Interface configuration • SIP Trunk configuration • MSBR Lab exercise

AudioCodes SBC: Fundamentals

Course Code	Public/Per Seat: TR-SBC-ONL-FNML-S Dedicated Course: TR-SBC-ONL-FNML-C
Course Name	**AudioCodes SBC: Fundamentals**
Course Details	
Course	AudioCodes training for Session Border Controller (SBC) Basics course is designed to provide basic knowledge of the SBC operation concept and configuration.
Products	AudioCodes SBC Series, AudioCodes Series
Student Profile	Engineers who would like to gain knowledge on AudioCodes SBC
Duration	Four half-days
Delivery Method	Online Instructor Led
Certification	Record of participation
General Objectives	On completion of the course, students will be able to: • Identify the AudioCodes products that support the Session Border Controller (SBC) features • Identify the functions of the SBC • Describe how the SBC handles SIP messages • List SBC security features • Configure SBC message manipulation rules • Configure the parameters required by the SBC • Configure the SBC for SIP trunking
Prerequisites	Students are expected to have an applicable professional background in: • VoIP and SIP network architecture • Understanding of SIP control protocol signaling stacks

Course Code	Public/Per Seat: TR-SBC-ONL-FNML-S Dedicated Course: TR-SBC-ONL-FNML-C
Course Name	**AudioCodes SBC: Fundamentals**
Course Outline	• AudioCodes Presentation • User Interface Introduction: ✓ Basic configuration ✓ Management and maintenance options ✓ Web Interface • AudioCodes Product Line: ✓ Mediant 2600/4000/9000 ✓ Hybrid SBC Portfolio ✓ Mediant 500/8xx/1000/3000 ✓ Mediant 500/8xx/1000 ✓ Software SBC • SBC Basic Terminology: ✓ Signaling Routing Domain (SRD) ✓ SIP Interface ✓ Media Realm ✓ IP Groups ✓ Proxy Sets ✓ SIP Dialog Initiation Process Description ✓ IP-to-IP routing ✓ Multi-tenancy Concepts ✓ Routing Policy • SBC Configuration: ✓ Parameters and Tables ✓ General Parameters Settings ✓ Table Assignments ✓ Configuration Example ✓ SBC Configuration Wizard • Basic Debugging Tools: ✓ Syslog and Syslog Viewer ✓ Wireshark • SBC Media Handling: ✓ Media Capabilities ✓ Media Security ✓ Media Handling Modes ✓ Transcoding ✓ Extended and Allowed Coders Process ✓ Media Handling Example • SBC Message Manipulation: ✓ Reasons for SIP Message Manipulation ✓ Message Manipulation configuration ✓ Message Manipulation Set ✓ Message Manipulation Rules ✓ IP-to-IP Number Manipulation • SBC Security Brief Overview: ✓ Concepts

Course Code	Public/Per Seat: TR-SBC-ONL-FNML-S Dedicated Course: TR-SBC-ONL-FNML-C
Course Name	**AudioCodes SBC: Fundamentals**
Lab Activities	• Management Interface Usage • SBC Routing • SBC Transcoding • Header Manipulation

AudioCodes Solutions for Skype for Business: Essentials & Configuration

Course Code	Per Seat: TR-LYNC-BSC-S Dedicated Course: TR-LYNC-BSC-C
Course Name	**AudioCodes Solutions for Skype for Business: Essentials & Configuration**
Course Details	
Course	Hands-on technical instruction covering installation, configuration, maintenance, troubleshooting and administration of AudioCodes equipment in a Skype for Business environment.
Products	AudioCodes MediaPack (MP) Series, AudioCodes SBC Series, AudioCodes Gateway Series, AudioCodes IP-Phone Series
Student Profile	Systems Engineers, Network Architects, Consultants, and Integrators who are responsible for the planning, design, implementation and management of Skype for Business networks.
Duration	4 days
Delivery Method	Classroom Instructor Led or Online Instructor Led
Certification	The course includes an ACA (AudioCodes Certificate Associate) certification exam. 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in their use and support of AudioCodes products in a Skype for Business environment. On completion of the course, students will be able to: • Install and configure AudioCodes equipment using various management tools • Demonstrate and understand the operation, maintenance and monitoring tools of AudioCodes equipment • Troubleshoot and debug AudioCodes equipment • Demonstrate familiarity with Skype for Business related voice configuration aspects • Integrate AudioCodes Mediant Gateways and Mediant SBC series in United Communication (UC) environments that require integrated voice components • Configure the Survivable Branch Appliance (SBA) • Understand the advantages of connecting SIP Trunks using Mediant SBCs • Understand how to avoid VoIP security risks resulting from familiarity with them • Understand the requirements and features of an SBC • Configure a Skype for Business SIP Trunk using a Mediant SBC

Course Code	Per Seat: TR-LYNC-BSC-S Dedicated Course: TR-LYNC-BSC-C
Course Name	AudioCodes Solutions for Skype for Business: Essentials & Configuration
	Course Details
	• Integrate AudioCodes Skype for Business compatible IP phones in the overall topology • Demonstrate familiarity with AudioCodes' complementary solutions for Microsoft Skype for Business environment
Prerequisites	Students are expected to have an applicable professional background with a minimum of one year of practical experience with: • PSTN protocols and knowledge of analog and digital telephony systems. • VoIP and SIP network architecture • Understanding of SIP control protocol signaling stack. • Knowledge of IP networking
Course Outline	• AudioCodes Solutions - Brief Overview • AudioCodes User Interface Introduction • Documentation Description • Debugging Tools • AudioCodes Gateways Hardware Description • Analog Gateways: MediaPack Family • Digital Gateways: Mediant Family • AudioCodes Devices Basic Concepts and Terminology • Signaling Routing Domain - SRD • SIP Interface: ✓ Media Realm ✓ IP Groups ✓ Proxy Sets ✓ Routing ✓ Accounts • Multi-tenant Concepts • Gateways Configuration • Trunks, Routing Tables, Manipulations • Skype for Business System Overview: ✓ Skype for Business Topology ✓ Voice Features ✓ Analog Devices in Skype for Business Environment ✓ SBA Behavior in Normal and Failover Modes • SBA Hardware Platforms • Open System Network - OSN • Emergency Management Services - EMS • SBA Installation and Configuration: ✓ Topology Builder Configuration ✓ SBA Step-by-Step Configuration

Course Code	Per Seat: TR-LYNC-BSC-S Dedicated Course: TR-LYNC-BSC-C
Course Name	AudioCodes Solutions for Skype for Business: Essentials & Configuration
Course Details	
	✓ SBA Management Tools ✓ SBA Upgrade and Recovery ✓ *RecoveryUtil.ini* File Parameters ✓ Installation Process Monitoring • Enhanced Gateway Configuration: ✓ Central-site Enhanced Media Gateway Configuration ✓ Branch-site SBA Enhanced Media Gateway Configuration • AudioCodes Skype for Business Compatible IP Phone: ✓ AudioCodes Skype for Business compatible IP Phone portfolio ✓ Login process ✓ Troubleshooting • AudioCodes SBC Overview • SBC Application Description • SBC Application Features • SBC Hardware Platforms • AudioCodes SBC Basic Terminology • Classification • Routing Policy • Call Admission Control • SIP Dialog Initiation Process description • IP-to-IP Routing • SIP Message Manipulations • SIP Trunk Basic Configuration • SBC Security brief overview
Lab Activities	• Getting Familiar with the GUI • MP-11x and Mediant 1000 Configuration Setup • SBA Configuration • Enhanced Gateway Configuration to Connect Skype for Business to PSTN • SIP Trunking Configuration in Skype for Business Environments

AudioCodes SBC in a Microsoft Teams Environment: Essentials & Configuration

Course Code	Per Seat: TR-Teams-BSC-S Dedicated Course: TR-Teams-BSC-C
Course Name	AudioCodes SBC in Microsoft Teams Environment Essentials & Configuration
Course Details	
Course	Hands-on technical instruction covering installation, configuration, maintenance, troubleshooting and administration of AudioCodes equipment in Microsoft Teams.
Products	AudioCodes MediaPack (MP) Series, AudioCodes SBC Series, AudioCodes Gateway Series
Student Profile	Systems Engineers, Network Architects, Consultants, and Integrators who are responsible for the planning, design, implementation and management of Microsoft Teams.
Duration	4 days
Delivery Method	Classroom Instructor Led or Online Instructor Led
Certification	The course includes an ACA (AudioCodes Certificate Associate) certification exam. 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in their use and support of AudioCodes products in a Microsoft Teams environment. On completion of the course, students will be able to: • Install and configure AudioCodes equipment using various management tools • Demonstrate and understand the operation, maintenance and monitoring tools of AudioCodes equipment • Troubleshoot and debug AudioCodes equipment • Demonstrate familiarity with Microsoft Teams related voice configuration aspects • Integrate AudioCodes Mediant SBC series in Microsoft Teams environment that require integrated voice components • Understand the advantages of connecting SIP Trunks using Mediant SBCs • Understand the requirements and features of an SBC • Configure SIP Trunk connection to Teams using a Mediant SBC • Understand how to perform basic SIP headers Manipulations

Course Code	Per Seat: TR-Teams-BSC-S Dedicated Course: TR-Teams-BSC-C
Course Name	AudioCodes SBC in Microsoft Teams Environment Essentials & Configuration
Course Details	
Prerequisites	Students are expected to have an applicable professional background with a minimum of one year of practical experience with the following: • PSTN protocols and knowledge of analog and digital telephony systems. • VoIP and SIP network architecture • Understanding of SIP control protocol signaling stack. • Knowledge of IP networking
Course Outline	• AudioCodes Solutions - Brief Overview • AudioCodes User Interface Introduction • Documentation Description • Debugging Tools • AudioCodes Gateways Hardware Description • Analog Gateways: MediaPack Family • Digital Gateways: Mediant Family • SBC Application description • SBC Basic Terminology • Signaling Routing Domain - SRD • SIP Interface: ✓ Media Realm ✓ IP Groups ✓ Proxy Sets ✓ Routing ✓ Accounts • Multi-tenant Concepts • SBC Configuration • Debugging tools • Teams System Brief Overview: ✓ High level Architecture ✓ Teams Logical Architecture ✓ Teams as your phone ✓ Moving to the Cloud ✓ Connecting Phone System to the PSTN ✓ Microsoft Teams Direct Routing ✓ Direct Routing Signaling Path ✓ Teams Direct Media call without Media ByPass ✓ Teams Direct Media call with Media ByPass ✓ Voice Routing Basics ✓ Direct Routing Benefits ✓ Direct Routing Enterprise Model ✓ Direct Routing Hosting Model ✓ Direct Routing Solution Components

Course Code	Per Seat: TR-Teams-BSC-S
	Dedicated Course: TR-Teams-BSC-C
Course Name	AudioCodes SBC in Microsoft Teams Environment Essentials & Configuration
Course Details	

- ✓ SBC FQDN Requirements
- ✓ Public Trusted Certificate for the SBC
- ✓ SBC Domain Names in Enterprise and Hosting Model

- SBC Direct routing configuration for Teams
  - ✓ Prerequisites
  - ✓ Configure VLAN's & IP Interface's
  - ✓ NTP Servers
  - ✓ TLS Contexts
  - ✓ How to Configure Certificate
  - ✓ Trusted root certificate
  - ✓ SRV Record
  - ✓ SRV Table Configuration
  - ✓ Coder Group
  - ✓ Teams & ITSP IP Profiles
  - ✓ SDP Codecs offered list manipulation
  - ✓ Coder Transcoding Flow
  - ✓ ICE Lite
  - ✓ Candidates list
  - ✓ ICE and Candidates example
  - ✓ STUN Server
  - ✓ Generic call flow from PSTN to Teams
  - ✓ SIP and STUN messages
  - ✓ Media security
  - ✓ Condition Table
  - ✓ Classification Table
  - ✓ IP to IP Routing table
- SBC Number & Message Manipulation:
  - ✓ CMR Process (CMR = Classify, Manipulate, Route)
  - ✓ SBC Number Manipulation
  - ✓ SBC Inbound Number Manipulations
  - ✓ SBC Outbound Number Manipulations
- Message Manipulation:
  - ✓ Message manipulation reasons
  - ✓ Pre & Post Message Manipulation
  - ✓ Inbound & Outbound message manipulation
  - ✓ Message Manipulation Configuration
  - ✓ Mandatory Headers Handling
  - ✓ SIP Interface Pre-Parsing Manipulation Sets
  - ✓ Message Manipulation Table
  - ✓ Message Manipulation – Manipulation Set ID
  - ✓ Message Manipulation – Syntax
  - ✓ Auto Completion Editor
  - ✓ Message Manipulation parameters description
  - ✓ SIP Message Manipulation – Examples
  - ✓ SIP Message Normalization

Course Code	Per Seat: TR-Teams-BSC-S Dedicated Course: TR-Teams-BSC-C
Course Name	AudioCodes SBC in Microsoft Teams Environment Essentials & Configuration
Course Details	
	• Digital Gateways Basic Configuration • SBC Survivability ✓ Survivability Methodology ✓ Alternative Routing Reasons ✓ PSTN Fallback • SBC High Availability ✓ High Availability Overview ✓ High Availability Architecture ✓ HA License Key ✓ High Availability Configuration ✓ IP Interfaces table ✓ HA Setting ✓ Preempt Mode ✓ HA Status in the Monitor Page ✓ Initialization Process ✓ Direct and in-direct Physical Connections ✓ HA Software Upgrade ✓ Device Failure Detection ✓ High Availability Maintenance
Lab Activities	• Getting Familiar with the GUI • Basic SIP Trunk Configuration • Teams to SIP Trunk Connection • SBC Message Manipulation • SBC Survivability and PSTN Fallback

AudioCodes Comprehensive Solutions for Skype for Business: Essentials & Configuration

Course Code	TR-CSFB-BSC
Course Name	**AudioCodes Comprehensive solutions for Skype for Business: Essentials & Configuration**
Course Details	
Course Description:	AudioCodes training for AudioCodes Solutions course is designed to provide engineers with experience in configuring, maintaining, and troubleshooting AudioCodes devices in Microsoft Skype for Business Environment.
Products	AudioCodes MediaPack (MP) Series, AudioCodes SBC Series, AudioCodes Gateway Series, AudioCodes IP-Phone Series
Student Profile	Systems Engineers and Site Administrators responsible for the administration, installation and implementation of the Microsoft Unified Communications network.
Duration	4 days
Delivery Method	Classroom Instructor Led or Online Instructor Led
Certification	The course includes an ACA (AudioCodes Certificate Associate) certification exam. 
General Objectives	The installation and configuration of the Cloud Connector Edition (CCE) for Skype for Business online demonstrates the use of the Skype for Business Online E5 Cloud PBX with on premise PBX. On completion of the course, students will be able to do the following: • Be familiar with AudioCodes product line • Understand the integration between AudioCodes devices and Microsoft Skype for Business • Deploy and configure the Survivable Branch Appliance (SBA) • Understand the reasons for AudioCodes CloudBond • Deploy AudioCodes User Management Pack (UMP) • Understand the reasons for AudioCodes Cloud Connector Edition • Deploy and configure AudioCodes Cloud Connector Edition • Integrate AudioCodes Mediant Gateway/SBC in Microsoft UC environments • Be familiar with Skype for Business Compatible IP Phone • Understand the operating, maintenance and monitoring tools of AudioCodes equipment • Troubleshoot and debug AudioCodes equipment
Prerequisites	Students are expected to have an applicable professional background and actual experience with: • Knowledge of telephony • Knowledge of IP networking

Course Code	TR-CSFB-BSC
Course Name	AudioCodes Comprehensive solutions for Skype for Business: Essentials & Configuration
Course Details	
Course Outline	• AudioCodes Introduction • Skype for Business System Overview: ✓ Skype for Business Topology ✓ Voice Features ✓ Analog Devices in Skype for Business Environment ✓ SBA Behavior in Normal and Failover Modes • SBA Hardware Platforms • SBA Configuration: ✓ Topology Builder Configuration ✓ SBA Step-by-Step Configuration ✓ SBA Management Tools ✓ SBA Upgrade and Recovery ✓ SBA Wizard • CloudBond Introduction: ✓ CloudBond Topology ✓ CloudBond Deployment Scenarios ✓ CloudBond Hardware Platforms • AudioCodes User Management Pack (UMP): ✓ UMP Installation ✓ Management GUI • Cloud Connector Edition (CCE): ✓ System Overview ✓ CCE Installation • AudioCodes Product Line: ✓ Mediant 2600/4000/9000 ✓ Hybrid SBC Portfolio ✓ Mediant 500/8xx/1000/3000 ✓ Mediant 500/8xx/1000 ✓ Software SBC • AudioCodes Devices management Interface Introduction: ✓ Basic configuration ✓ Management and maintenance options ✓ Web Interface • Documentation • AudioCodes Devices – Basic Concepts and Terminology: ✓ Signaling Routing Domain (SRD) ✓ SIP Interface ✓ Media Realm ✓ IP Groups ✓ Proxy Sets ✓ SIP Dialog Initiation Process Description ✓ IP-to-IP Routing ✓ Multi-tenancy Concepts

Course Code	TR-CSFB-BSC
Course Name	AudioCodes Comprehensive solutions for Skype for Business: Essentials & Configuration
Course Details	
	✓ Routing Policy • Enhanced Gateway Configuration: ✓ Central-site Enhanced Media Gateway Configuration ✓ Branch-site SBA Enhanced Media Gateway Configuration • Debugging Tools: ✓ Syslog and Syslog Viewer ✓ Wireshark • Session Border Controller (SBC) Application Overview • SBC Wizard • Skype for Business Compatible IP-Phone: ✓ AudioCodes Skype for Business compatible IP Phone portfolio ✓ Login Process ✓ Troubleshooting
Lab Activities	• SBA Configuration Wizard • CCE Installation Wizard • Management Interface Usage • Enhanced Gateway Configuration • SIP Trunk Configuration in Skype for Business environment

AudioCodes CloudBond 365

Course Code	Public/Per Seat: TR-OB-ONL-BSC-S
	Dedicated Course: TR-OB-ONL-BSC-C
Course Name	AudioCodes CloudBond 365
Course Details	
Course Description:	Installation and configuration of CloudBond 365 is an online introductory session that demonstrates how to install CloudBond 365 and enable Enterprise forest users for the CloudBond 365 Skype for Business solution, using the CloudBond 365 Management Suite. This course consists of a remote e-learning environment that includes interactive live theory lectures with an AudioCodes trainer, as well as remote hands-on instructor-guided lab practice, using a direct connection to AudioCodes training lab equipment.
Products	CloudBond 365
Student Profile	Systems Engineers and Site Administrators responsible for the administration, installation and implementation of the Microsoft Unified Communications network.
Duration	Four half-days
Delivery Method	Online Instructor Led
Certification	The course includes an APSS certification exam.
General Objectives	The Installing and Configuring CloudBond 365 for Skype for Business online session demonstrates the use of the CloudBond 365 management suite to Skype for Business-enable enterprise forest users. On completion of the course, students will be able to: • Demonstrate and understand the CloudBond 365 management suite for day-by-day operation • Join a CloudBond 365 solution to an enterprise environment • Add, remove or modify CloudBond 365 Skype for Business users and configure them for basic telephony features • Perform basic troubleshooting
Prerequisites	Students are expected to have an applicable professional background and actual experience with: • Knowledge of telephony • Knowledge of IP networking • Understanding of Windows Active Directory environments
Course Outline	• AudioCodes Profile • AudioCodes CloudBond 365 Introduction: ✓ Domain Controller ✓ Skype for Business Servers ✓ Certificate Authority (CA) ✓ Reverse Proxy • Hyper-V Manager & Hardware Platforms: ✓ CloudBond 365 Standard Edition ✓ CloudBond 365 Standard+ Edition

Course Code	Public/Per Seat: TR-OB-ONL-BSC-S
	Dedicated Course: TR-OB-ONL-BSC-C
Course Name	AudioCodes CloudBond 365
Course Details	

- ✓ CloudBond 365 Pro Edition
- ✓ CloudBond 365 Enterprise Edition

- Deployment Scenarios:
  - ✓ Typical deployment/network topologies where CloudBond 365 can be deployed (standalone on premise, Office 365, etc.)
- Deployment Wizard & Installation Process:
  - ✓ Site preparation requirements to deploy CloudBond 365 (including Firewall settings, Certificates, DNS server settings, Reverse Proxy, etc.)
- CloudBond 365 SysAdmin Management GUI:
  - ✓ Manage CloudBond 365 Servers
  - ✓ Create Local Users
  - ✓ Import Individual Enterprise Forest Users
  - ✓ Import Enterprise Forest Users in Bulk
  - ✓ Automatic User Management
  - ✓ Advanced Features
- Integrate with Enterprise Environment:
  - ✓ Setting up and provisioning CloudBond 365 (including Configuring DNS, Setting up an Active Directory forest trust)
- Skype for Business Enterprise Voice Configuration:
  - ✓ Topology Builder
  - ✓ Skype for Business Control Panel
  - ✓ Skype for Business Logging
- Data Replication with the Enterprise Domain:
  - ✓ Automatic Sync Rules
- Troubleshooting:
  - ✓ Monitoring and Debugging of the CloudBond 365 Skype for Business environment
- Skype for Business IP Phone Edition Support:
  - ✓ DHCP options
- Edge Server & Federation:
  - ✓ Edge Server Brief Overview
  - ✓ Federation Configuration
- Office 365 Connector:
  - ✓ Office 365 Management GUI
  - ✓ CloudBond 365 Connector Management for Office 365
- Report Server & Basic Troubleshooting:
  - ✓ Troubleshooting by using MICROSOFT REPORT SERVER
  - ✓ Advanced Troubleshooting Tips
- Security Brief Overview:
  - ✓ Enterprise Security Threats
  - ✓ AudioCodes SBC Security Capabilities

Course Code	Public/Per Seat: TR-OB-ONL-BSC-S
	Dedicated Course: TR-OB-ONL-BSC-C
Course Name	AudioCodes CloudBond 365
Course Details	
Lab Activities	• CloudBond 365 Installation Wizard • CloudBond 365 Certify with Enterprise DC • CloudBond 365 Integration with Enterprise DC • CloudBond 365 Administration GUI • CloudBond 365 Data Replication with Enterprise DC • CloudBond 365 Pin-Point DNS Configuration (Optional)

AudioCodes CCE: Installation & Configuration

Course Code	Public/Per Seat: TR-CCE-ONL-BSC-S Dedicated Course: TR-CCE-ONL-BSC-C
Course Name	AudioCodes CCE: Installation & Configuration
Course Details	
Course Description:	Installation and configuration of the CCE is an online introductory session that demonstrates how to install CCE and enable Enterprise Voice with the Skype for Business Online solution. This course consists of a remote e-learning environment that includes interactive live theory lectures with an AudioCodes trainer, as well as remote hands-on instructor guided lab practice using a direct connection to AudioCodes training lab equipment.
Products	Mediant CCE Appliance
Student Profile	Systems Engineers and Site Administrators responsible for the administration, installation and implementation of the Microsoft Unified Communications network.
Duration	Two half-days
Delivery method	Online Instructor Led
Certification	Record of Participation
General Objectives	The Installation and Configuration of CCE for Skype for Business online demonstrates the use of the Skype for Business Online E5 Cloud PBX with on premise PBX. On completion of the course, students will be able to do the following: • Demonstrate and understand the CCE installation and implementation. • Understand the flow of a voice call with a Cloud PBX solution. • Perform basic troubleshooting.
Prerequisites	Students are expected to have an applicable professional background and actual experience with: • Knowledge of telephony • Knowledge of IP networking • Understanding of Windows Active Directory environments • Knowledge with Office 365

Course Code	Public/Per Seat: TR-CCE-ONL-BSC-S Dedicated Course: TR-CCE-ONL-BSC-C
Course Name	AudioCodes CCE: Installation & Configuration
Course Details	
Course Outline	• AudioCodes Profile • Hyper-V Manager & Hardware Platforms: ✓ CCE Standard+ Edition ✓ CCE Enterprise Edition • Deployment Scenarios: ✓ Typical deployment/network topology where CCE can be deployed (standalone on premise with Office 365 tenant) • Deployment Wizard & Installation Process: ✓ Site preparation requirements to deploy CCE (including Firewall settings, Certificates, DNS server settings, Office 365 tenant, etc.) • Troubleshooting: ✓ Monitoring and Debugging of the CCE Skype for Business environment • Gateway/SBC GUI Introduction • SBC Application Description • SBC Configuration for CCE
Lab Activities	• CCE Installation Wizard Demonstration • SIP Trunking Configuration in Skype for Business Environments

AudioCodes Enterprise GW: Essentials & Configuration

Course Code	Public/Per Seat: TR-GW-SIP-S Dedicated Course: TR-GW-SIP-C
Course Name	**AudioCodes Enterprise GW: Essentials & Configuration**
Course Details	
Description	Hands-on, technical instruction covering installation, configuration, maintenance, troubleshooting and administration of AudioCodes CPE gateways (MediaPack-1xx, Mediant 500, Mediant 800, Mediant 1000).
Products	AudioCodes MediaPack (MP) Series, AudioCodes Gateway Series
Student Profile	Tier 1, 2 and 3 supports, Sales Engineers, Trainers, Technical Writers, Developers, and other technical staff supporting AudioCodes gateways.
Duration	4 days
Delivery Method	Classroom Instructor Led
Certification	This course includes an ACA (AudioCodes Certificate Associate) certification exam. 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in the use and support of AudioCodes analog and digital gateway products. On completion of the course, students will be able to: • Install and configure AudioCodes CPE equipment using various management methods • Operate and maintain AudioCodes CPE equipment for functions such as performing backups, updating versions, changing configuration • Identify and isolate relevant configuration parameters for a variety of services, including SIP proxy, fax, modems and DTMF transport and dialing • Identify and isolate relevant configuration parameters for a variety of services, including SIP proxy, DTMF transport and dialing • Provision digital trunks • Describe and demonstrate AudioCodes gateway functionality with regarding Call Processing and Routing for Tel-to-IP and IP-to-Tel Call scenarios • Collect diagnostic and troubleshooting logs
Prerequisites	Working knowledge of IP networking.
Course Outline	• Telephony, VoIP, and SIP Fundamentals • MediaPack-11x Overview • Introduction to the Web Interface • Introduction to Diagnostic Tools: Syslog

Course Code	Public/Per Seat: TR-GW-SIP-S Dedicated Course: TR-GW-SIP-C
Course Name	AudioCodes Enterprise GW: Essentials & Configuration
Course Details	
	• Test call feature • Gateway Initialization and Installation • Coder Selection and Dialing Options • Hunt Groups and Trunk Groups • FXO Operation • Analog Call Termination • IP and Telephony Profiles • SIP Routing • SIP Proxy and Registration • Mediant 500/800 Overview • Mediant 1000 Overview • Software Upgrade Keys • Digital Gateway Configuration • Number Manipulation Tables • Dual Tone Multi-Frequency (DTMF) • Diagnostic Tools: Debug Recording
Lab Activities	• Basic Call Configuration • SIP Cal Tests • SIP Call using Proxy • Hunt Group Configuration • Alternative Routing • Digital Gateway Configuration • Local to Remote Call Routing and Manipulation • Debug Recording

AudioCodes Mediant 3000

Course Code	Public/Per Seat: TR-GW-M3K-S Dedicated Course: TR-GW-M3K-C
Course Name	**AudioCodes Mediant 3000**
Course Details	
Course	Hands-on technical instruction covering installation, configuration, maintenance, troubleshooting and administration of the AudioCodes Mediant 3000 gateways for TP-6310 and TP-8410 configurations.
Products	Mediant 3000
Student Profile	Tier 1, 2 and 3 support, Sales Engineers, Trainers, Technical Writers, Developers, and other technical staff who support the Mediant 3000.
Duration	3 days
Delivery Method	Classroom Instructor Led
Certification	The course includes an ACA (AudioCodes Certificate Associate) certification exam. 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in the use and support of AudioCodes products. On completion of the course, students will be able to: • Install and configure AudioCodes' Mediant 3000 • Operate and maintain AudioCodes' Mediant 3000 • Provision DS3/Optical and E1/T1 interfaces • Describe and demonstrate AudioCodes' Mediant 3000 functionality regarding call processing and routing for Tel-to-IP and IP-to-Tel Call scenarios • Configure basic SBC based SIP trunks • Collect diagnostic and troubleshooting logs • Analyze diagnostic logs and traces to solve real-world problems
Prerequisites	Working knowledge of IP networking
Course Outline	• Telephony, VoIP, and SIP Fundamentals • Mediant 3000 Hardware Overview • Mediant 3000 Hardware Installation • Mediant 3000 Initial HA & Networking Configuration • Introduction to the Web Interface • Mediant 3000 Software Overview and Installation • Mediant 3000 Software Upgrades • Introduction to the Command Shell • Basic Diagnostic Tools: Syslog • Introduction to Session Border Control:

Course Code	Public/Per Seat: TR-GW-M3K-S Dedicated Course: TR-GW-M3K-C
Course Name	AudioCodes Mediant 3000
Course Details	
	✓ SBC Fundamentals ✓ Basic SBC configuration • TP-6310/8410 PSTN Configuration • SIP Trunk Group Settings • SIP Routing • Mediant 3000 VLAN Settings • SIP Proxy and Registration • DTMF Configuration • Manipulation Tables • Coders and Dialing • Faxes and Modems • Stand Alone Survivability • Diagnostic Tools - Debug Recording • Diagnostic Tools – Wireshark and Network Monitoring • Mediant 3000 High Availability (HA)
Lab Activities	• Mediant 3000 Gateway Installation • Mediant 3000 Software Upgrade • PSTN Link Provisioning • Debug Trunk-to-Trunk Calls • Debug Recording

AudioCodes Routing Manager (ARM)

Course Code	Public/Per Seat: TR-ARM-ONL-BSC-S Dedicated Course: TR-ARM-ONL-BSC-C
Course Name	AudioCodes Routing Manager (ARM)
Course Details	
Course Description:	This course covers the configuration, maintenance and administration of the AudioCodes Routing Manager. The course will cover a general introduction, its usage and the main features included in ARM. Through the explanation and online demos, students will gain experience in configuring and monitoring the operation of ARM.
Products	ARM
Student Profile	Systems Engineers, Network Architects, Consultants, and Integrators who are responsible for the planning, design, implementation, maintenance and troubleshooting of call routing and policy management in a heterogeneous voice network.
Duration	Two half-days
Delivery Method	Online Instructor Led
Certification	Record of Participation
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on demonstration of all the tools and features included in the product to help students become self-sufficient in the use and support of the AudioCodes Routing Manager. On completion of the course, students will be able to do the following: • Manage and configure the ARM • Identify the AudioCodes products that are supported in ARM • Identify the functions of ARM • Describe how ARM handles routes • Describe how ARM handles number manipulation • Describe how ARM administers users • Understand the QBR (Quality Based Routing) concept • List the ARM security features • How to migrate AudioCodes devices (SBCs and gateways) to ARM • How to integrate non-AudioCodes devices with ARM
Prerequisites	Students are expected to have an applicable professional background and actual experience with: • IP networking • AudioCodes Gateways and/or SBCs • Knowledge of analog and digital telephony systems • Knowledge of VoIP and SIP network architectures
Course Outline	• AudioCodes Presentation • Introduction to ARM: ✓ Features

Course Code	Public/Per Seat: TR-ARM-ONL-BSC-S
	Dedicated Course: TR-ARM-ONL-BSC-C
Course Name	AudioCodes Routing Manager (ARM)
Course Details	

- ✓ Benefits
- ARM Architecture:
  - ✓ Configurator
  - ✓ Router
  - ✓ Database
  - ✓ SIP Module
  - ✓ getRoute Mechanism
- ARM Management Interface:
  - ✓ Main Functional Areas
  - ✓ Network Page
  - ✓ Topology Entities
  - ✓ Peer Connections Page
  - ✓ Connections Page
- Basic Network Definition:
  - ✓ Adding and Defining a Connection
  - ✓ Defining the Topology
  - ✓ Testing a Connection
- Call Flows:
  - ✓ Configuration
  - ✓ Manipulation and Prefix Groups
  - ✓ Number Manipulation
  - ✓ Routing Settings
- ARM Routing:
  - ✓ Routing Groups
  - ✓ Routing Rules
  - ✓ Testing Routes
  - ✓ Quality Based Routing
  - ✓ Adding a Routing Server
- ARM Alarms
- Users Administration:
  - ✓ Users and User Groups Administration
  - ✓ Property Dictionary Administration
  - ✓ LDAP Servers Administration
- ARM Administration:
  - ✓ Software License
  - ✓ Security
  - ✓ Web Users
- ARM additional functionalities:
  - ✓ Syslog Settings
  - ✓ NTP Settings
- Migration of AudioCodes devices (SBCs and gateways) to ARM
- Integration of non-AudioCodes device with ARM:
  - ✓ SIP module

Course Code	Public/Per Seat: TR-ARM-ONL-BSC-S
	Dedicated Course: TR-ARM-ONL-BSC-C
Course Name	AudioCodes Routing Manager (ARM)
Course Details	
	• Basic ARM maintenance actions
Lab Activities	• On-Line Demo

AudioCodes OVOC

Course Code	Public/Per Seat: TR-OVOC-S Dedicated Course: TR-OVOC-C
Course Name	**AudioCodes OVOC:**
Course Details	
Description	Online technical learning module covering OVOC FCAPS (Fault, Configuration, Accounting, Performance, Security) capabilities and voice quality measurements and statistics including IP Phones management
Products	OVOC
Student Profile	Tier 1, 2 and 3 supports, Sales Engineers, Trainers, Technical Writers, Developers, and other technical staff supporting AudioCodes equipment
Duration	12 Hours
Delivery Method	Online Instructor Led
Certification	Record of Participation
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in the use and support of AudioCodes products. On completion of the course, students will be able to: • Perform gateway configuration and maintenance actions using the OVOC • Define new OVOC System/global and tenant users • Work with alarms • Understand AudioCodes OVOC solution for real-time management of VoIP traffic • Know OVOC features and abilities • Be able to configure enterprise/ITSP network in OVOC • Be able to navigate in the OVOC and find required information • Be familiar with the IP Phone Manager Pro server application
Prerequisites	Working knowledge of IP networking.
Course Outline	• OVOC Overview • OVOC - Getting started • Topology View • System Management • License Pool • Alarms Management • Configuration Management • Security Management • Voice Quality Measurement • OVOC for Voice Quality Measurement • OVOC Server Preparation • Network Quality View • Statistics

Course Code	Public/Per Seat: TR-OVOC-S
	Dedicated Course: TR-OVOC-C
Course Name	AudioCodes OVOC:
Course Details	
	• Quality Statistics on Calls • Information on User Experience • Producing Reports • IP Phone Manager Pro
Lab Activities	• Basic Management • License Management • Provisioning • Monitoring

VoIP & SIP Fundamentals

Course Code	Public/Per Seat: TR-VoIP-S Dedicated Course: TR-VoIP-C
Course Name	**VoIP & SIP Fundamentals**
Course Details	
Description	Online tutorial learning module covering basic topics related to Legacy network, voice over IP communication and SIP protocol.
Products	None
Student Profile	Telecommunication Technical staff intending to attend an AudioCodes ACA certification course (recommendation).
Duration	4 Hours
Delivery Method	Online Instructor Led
Certification	Record of Participation
General Objectives	On completion of the course, students will be able to: • Explain the basics on telephone networks • Describe how digital signaling differs from analog signaling • Explain the basic concept of voice over IP communications • Describe the purpose of the Gateway in a VoIP network • Explain the basic SIP Call Flow • Identify the SIP Network Entities • Follow a SIP trace signaling in a call set-up and tear-down
Prerequisites	None
Course Outline	• Introduction to Legacy Telephony ✓ The Telephone Network ✓ Typical Analog Circuit ✓ DTMF - Dual Tone Multi-Frequency ✓ Call Progress Tones ✓ Digital Communication ✓ Analog Voice Signal Conversion to Digital Stages ✓ Pulse Code Modulation (PCM) ✓ Digital Signals Multiplexing ✓ Time Division Multiplexing (TDM) ✓ E1/T1 ✓ Signaling Methods ✓ Integrated Services Digital Network – ISDN ✓ ISDN (Q.931) Call Flow Messages ✓ ISDN Basic Rate Interface (BRI) • Introduction to IP Telephony ✓ What is VoIP ✓ Circuit vs. Packet Switching ✓ VoIP Architecture ✓ VoIP Protocol Stack ✓ What is RTP/RTCP ✓ Introduction to RTP

Course Code	Public/Per Seat: TR-VoIP-S Dedicated Course: TR-VoIP-C
Course Name	VoIP & SIP Fundamentals
Course Details	
	✓ Voice Codecs ✓ Voice Compression ✓ VoIP Challenges ✓ Voice Quality Measurement ✓ RTCP-XR ✓ Voice Quality Metrics • Introduction to SIP ✓ SIP Network Entities ✓ SIP Terminology ✓ SIP Servers ✓ Basic SIP Call Flow ✓ SIP Requests: Basic Methods ✓ SIP Requests: Extended Methods ✓ SIP Responses ✓ SIP Addressing ✓ General Main Header Fields ✓ Session Description Protocol (SDP) ✓ Early Media ✓ Call Flow with Proxy ✓ SIP Servers – Registrar ✓ Registration Call Flow ✓ Number Once ✓ FXS/FXO Gateways ✓ Digital Gateway

AudioCodes SBC: ACA Re-certification

Course Code	Public/Per Seat: TR-SBC-R-ACA-S Dedicated Course: TR-SBC-R-ACA-C
Course Name	AudioCodes SBC: ACA Re-certification
Course Details	
Course	Online technical learning for the Session Border Controller (SBC) designed to provide engineers with experience in configuring, maintaining, and troubleshooting AudioCodes devices configured as an SBC.
Products	AudioCodes SBC Series, AudioCodes Gateway Series
Student Profile	Tier 1, 2 and 3 supports, Sales Engineers, Trainers, Technical Writers, Developers, and other technical staff supporting AudioCodes equipment holding an expired ACA certificate.
Duration	Three half-days
Delivery Method	Online Instructor Led
Certification	ACA (AudioCodes Certificate Associated) certification renewal 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in the use and support of AudioCodes SBC products. On completion of the course, students will be able to: • Identify the AudioCodes products that support the Session Border Controller's features • Identify the functions of the SBC • Describe how the SBC handles SIP messages • Understand the reasons for message manipulation • Configure SBC message manipulation rules • Configure the parameters required by the SBC • Configure the SBC for SIP trunking
Prerequisites	• An expired SBC ACA certificate
Course Outline	• AudioCodes Presentation • New User Interface Introduction • AudioCodes SBC Platforms • SBC Terminology • SBC Configuration • SBC Media Handling • SBC Message Manipulation
Lab Activities	• Getting Familiar with the GUI • SBC Routing

Course Code	Public/Per Seat: TR-SBC-R-ACA-S
	Dedicated Course: TR-SBC-R-ACA-C
Course Name	AudioCodes SBC: ACA Re-certification
Course Details	
	• SBC Transcoding • Header Manipulation

AudioCodes for Skype for Business: ACA Re-certification

Course Code	Public/Per Seat: TR-SFB-R-ACA-S Dedicated Course: TR-SFB-R-ACA-C
Course Name	**AudioCodes for SfB: ACA Re-certification**
Course Details	
Course	Online technical learning for installation, configuration, maintenance, troubleshooting and administration of AudioCodes equipment in a Skype for Business environment.
Products	AudioCodes MediaPack (MP) Series, AudioCodes SBC Series, AudioCodes Gateway Series
Student Profile	Tier 1, 2 and 3 supports, Sales Engineers, Trainers, Technical Writers, Developers, and other technical staff supporting AudioCodes equipment holding an expired ACA certificate.
Duration	Three half-days
Delivery Method	Online Instructor Led
Certification	ACA (AudioCodes Certificate Associated) certification renewal 
General Objectives	Students are expected to be active participants in the learning process. Emphasis is placed on diagnostic tools and troubleshooting strategies to help students become self-sufficient in their use and support of AudioCodes products in a Skype for Business environment. On completion of the course, students will be able to: • Install and configure AudioCodes equipment using various management tools • Troubleshoot and debug AudioCodes equipment • Demonstrate familiarity with Skype for Business related voice configuration aspects • Integrate AudioCodes Mediant Gateways and Mediant SBC series in UC environments that require integrated voice components • Configure the Survivable Branch Appliance (SBA) • Understand the advantages of connecting SIP Trunks using Mediant SBCs • Configure a Skype for Business SIP Trunk using a Mediant SBC
Prerequisites	• An expired SBC ACA certificate
Course Outline	• AudioCodes User Interface Introduction • Basic Concepts and Terminology • SBA Hardware Platforms • SBA Configuration • Enhanced Gateway Configuration

Course Code	Public/Per Seat: TR-SFB-R-ACA-S
	Dedicated Course: TR-SFB-R-ACA-C
Course Name	AudioCodes for SfB: ACA Re-certification
Course Details	
	• SBC Basic Terminology • SIP Trunk Basic Configuration
Lab Activities	• Getting Familiar with the GUI • SBA Configuration • Enhanced Gateway Configuration to Connect Skype for Business to PSTN • SIP Trunking Configuration in Skype for Business Environments

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