


## ***AudioCodes Training: AudioCodes SBC in Teams Environment: Essentials & Configuration***

<b>Course Code</b>	<b>Per Seat: TR-Teams-BSC-S</b>
	<b>Dedicated Course: TR-Teams-BSC-C</b>
<b>Course Name</b>	<b>AudioCodes SBC in Microsoft Teams Environment Essentials &amp; Configuration</b>
<b>Course Details</b>	
<b>Course</b>	Hands-on technical instruction covering installation, configuration, maintenance, troubleshooting and administration of AudioCodes equipment in Microsoft Teams.
<b>Products</b>	AudioCodes MediaPack (MP) Series, AudioCodes SBC Series, AudioCodes Gateway Series
<b>Student Profile</b>	Systems Engineers, Network Architects, Consultants, and Integrators who are responsible for the planning, design, implementation and management of Microsoft Teams.
<b>Duration</b>	4 days
<b>Delivery Method</b>	Classroom Instructor Led or Online Instructor Led
<b>Certification</b>	<p>The course includes an ACA (AudioCodes Certificate Associate) certification exam.</p> 
<b>General Objectives</b>	<p>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:</p> <ul style="list-style-type: none"> <li>• Install and configure AudioCodes equipment using various management tools</li> <li>• Demonstrate and understand the operation, maintenance and monitoring tools of AudioCodes equipment</li> <li>• Troubleshoot and debug AudioCodes equipment</li> <li>• Demonstrate familiarity with Microsoft Teams related voice configuration aspects</li> <li>• Integrate AudioCodes Mediant SBC series in Microsoft Teams environment that require integrated voice components</li> <li>• Understand the advantages of connecting SIP Trunks using Mediant SBCs</li> <li>• Understand the requirements and features of an SBC</li> <li>• Configure SIP Trunk connection to Teams using a Mediant SBC</li> <li>• Understand how to perform basic SIP headers Manipulations</li> </ul>

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<b>Prerequisites</b>	<p>Students are expected to have an applicable professional background with a minimum of one year of practical experience with the following:</p> <ul style="list-style-type: none"> <li>• PSTN protocols and knowledge of analog and digital telephony systems.</li> <li>• VoIP and SIP network architecture</li> <li>• Understanding of SIP control protocol signaling stack.</li> <li>• Knowledge of IP networking</li> </ul>
<b>Course Outline</b>	<ul style="list-style-type: none"> <li>• AudioCodes Solutions - Brief Overview</li> <li>• AudioCodes User Interface Introduction</li> <li>• Documentation Description</li> <li>• Debugging Tools</li> <li>• AudioCodes Gateways Hardware Description</li> <li>• Analog Gateways: MediaPack Family</li> <li>• Digital Gateways: Mediant Family</li> <li>• SBC Application description</li> <li>• SBC Basic Terminology</li> <li>• Signaling Routing Domain - SRD</li> <li>• SIP Interface: <ul style="list-style-type: none"> <li>✓ Media Realm</li> <li>✓ IP Groups</li> <li>✓ Proxy Sets</li> <li>✓ Routing</li> <li>✓ Accounts</li> </ul> </li> <li>• Multi-tenant Concepts</li> <li>• SBC Configuration</li> <li>• Debugging tools</li> <li>• Teams System Brief Overview: <ul style="list-style-type: none"> <li>✓ High level Architecture</li> <li>✓ Teams Logical Architecture</li> <li>✓ Teams as your phone</li> <li>✓ Moving to the Cloud</li> <li>✓ Connecting Phone System to the PSTN</li> <li>✓ Microsoft Teams Direct Routing</li> <li>✓ Direct Routing Signaling Path</li> <li>✓ Teams Direct Media call without Media ByPass</li> <li>✓ Teams Direct Media call with Media ByPass</li> <li>✓ Voice Routing Basics</li> <li>✓ Direct Routing Benefits</li> <li>✓ Direct Routing Enterprise Model</li> <li>✓ Direct Routing Hosting Model</li> <li>✓ Direct Routing Solution Components</li> </ul> </li> </ul>

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	<ul style="list-style-type: none"> <li>✓ SBC FQDN Requirements</li> <li>✓ Public Trusted Certificate for the SBC</li> <li>✓ SBC Domain Names in Enterprise and Hosting Model</li> <li>• SBC Direct routing configuration for Teams <ul style="list-style-type: none"> <li>✓ Prerequisites</li> <li>✓ Configure VLAN's &amp; IP Interface's</li> <li>✓ NTP Servers</li> <li>✓ TLS Contexts</li> <li>✓ How to Configure Certificate</li> <li>✓ Trusted root certificate</li> <li>✓ SRV Record</li> <li>✓ SRV Table Configuration</li> <li>✓ Coder Group</li> <li>✓ Teams &amp; ITSP IP Profiles</li> <li>✓ SDP Codecs offered list manipulation</li> <li>✓ Coder Transcoding Flow</li> <li>✓ ICE Lite</li> <li>✓ Candidates list</li> <li>✓ ICE and Candidates example</li> <li>✓ STUN Server</li> <li>✓ Generic call flow from PSTN to Teams</li> <li>✓ SIP and STUN messages</li> <li>✓ Media security</li> <li>✓ Condition Table</li> <li>✓ Classification Table</li> <li>✓ IP to IP Routing table</li> </ul> </li> <li>• SBC Number &amp; Message Manipulation: <ul style="list-style-type: none"> <li>✓ CMR Process (CMR = Classify, Manipulate, Route)</li> <li>✓ SBC Number Manipulation</li> <li>✓ SBC Inbound Number Manipulations</li> <li>✓ SBC Outbound Number Manipulations</li> </ul> </li> <li>• Message Manipulation: <ul style="list-style-type: none"> <li>✓ Message manipulation reasons</li> <li>✓ Pre &amp; Post Message Manipulation</li> <li>✓ Inbound &amp; Outbound message manipulation</li> <li>✓ Message Manipulation Configuration</li> <li>✓ Mandatory Headers Handling</li> <li>✓ SIP Interface Pre-Parsing Manipulation Sets</li> <li>✓ Message Manipulation Table</li> <li>✓ Message Manipulation – Manipulation Set ID</li> <li>✓ Message Manipulation – Syntax</li> <li>✓ Auto Completion Editor</li> <li>✓ Message Manipulation parameters description</li> <li>✓ SIP Message Manipulation – Examples</li> <li>✓ SIP Message Normalization</li> </ul> </li> </ul>

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	<ul style="list-style-type: none"> <li>• Digital Gateways Basic Configuration</li> <li>• SBC Survivability                             <ul style="list-style-type: none"> <li>✓ Survivability Methodology</li> <li>✓ Alternative Routing Reasons</li> <li>✓ PSTN Fallback</li> </ul> </li> <li>• SBC High Availability                             <ul style="list-style-type: none"> <li>✓ High Availability Overview</li> <li>✓ High Availability Architecture</li> <li>✓ HA License Key</li> <li>✓ High Availability Configuration</li> <li>✓ IP Interfaces table</li> <li>✓ HA Setting</li> <li>✓ Preempt Mode</li> <li>✓ HA Status in the Monitor Page</li> <li>✓ Initialization Process</li> <li>✓ Direct and in-direct Physical Connections</li> <li>✓ HA Software Upgrade</li> <li>✓ Device Failure Detection</li> <li>✓ High Availability Maintenance</li> </ul> </li> </ul>
<b>Lab Activities</b>	<ul style="list-style-type: none"> <li>• Getting Familiar with the GUI</li> <li>• Basic SIP Trunk Configuration</li> <li>• Teams to SIP Trunk Connection</li> <li>• SBC Message Manipulation</li> <li>• SBC Survivability and PSTN Fallback</li> </ul>