

Element Management	
TMN Standards	<ul style="list-style-type: none"> ITU-T recommendation M.3010 series; FCAPS functionality support
Fault Management switch-over	<ul style="list-style-type: none"> Media Gateways and SBC status monitoring. Summary of element status in one screen with "drill down" hierarchy. Color scheme shows failure severity, redundant modules, state Alarm & state management according to ITU X.731, X.733 Context-sensitive current and historical alarms with various filtering and search options
Configuration & Management	<ul style="list-style-type: none"> Provisioning based on hierarchy of management objects concept Parameters search, online help with detailed description of parameters Supports multiple actions on set of Media Gateways and SBCs: configuration download, upload, master profile apply, reset, software upgrade and regional files download For large media gateways, support all maintenance actions including online software upgrade via Wizard
Performance Management	<ul style="list-style-type: none"> Real-time and historical data monitoring Counters, periodical reports, data collection and threshold setting Statistics and graphical presentation
Security Management & Network Security	<ul style="list-style-type: none"> Security Management according to T1M1.5/2003-007R4 EMS client-server communication: secured using Remote Method Invocation protocol over Secure Sockets Layer EMS Server - Mediant 5000 / 8000: All protocols (SNMPv2c, Telnet and FTP) run over IPsec provisioned with a IKE preshared key EMS Server - Mediant 500 up to Mediant 4000, Mediant 9000, Mediant SE, Mediant VE and MediaPack: SNMPv2c and HTTPS

User Interfaces	
Graphical User Interfaces (GUI) functions	<ul style="list-style-type: none"> Complete set of operations to perform fault, performance, provisioning and administration
Internationalization	<ul style="list-style-type: none"> Multi-language support ready

External Interfaces	
Northbound	<ul style="list-style-type: none"> Fall-through NMS into EMS application SNMP traps from media gateways, Session Border Controllers and servers: send to NMS - either directly or aggregated, Via the EMS
Southbound	<ul style="list-style-type: none"> Mediant 5000/8000: SNMPv2c, Telnet, FTP Mediant 500 up to Mediant 4000, Mediant 9000, Mediant SE, Mediant VE and MediaPack: SNMPv2c, HTTP 400 HD IP Phone family

Operation & Maintenance	
Device Auto Detection	<ul style="list-style-type: none"> Automatic detection of MediaPack and Mediants - upon connection to the network - and addition to the managed nodes hierarchical tree
EMS Hardware Server	<p>EMS may be provided as h/w appliance from AudioCodes</p> <ul style="list-style-type: none"> Hardware - HP DL360 with G8 processor Operating System- Linux (CentOS) Memory - 32 GB RAM Disk Space - 1.2TB RAID 0
EMS Software on VMWare	The EMS may be provided as software running on VMWare ESXi Version 4.1 or higher
EMS Software on Hyper-V	The EMS may be provided as software running on Hyper-V running on Windows 2012 R2 SP1 or higher

Minimal Platform Requirement		
Resource	EMS VMWare or Hyper-V s/w	EMS Client
Processor	2 GHz single core	600 MHz Pentium III
Operating System		Windows™ 2000/XP/Vista/7/8
Memory	4 GB RAM	512 MB RAM
Disk space	170 GB	300 MB
CD/DVD-ROM	SATA DVD	

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The **AudioCodes' Element Management System (EMS)** is an advanced solution for centralized standards-based management of AudioCodes' One Voice™ product portfolio, including Mediant™ and MediaPack™ Session Border Controllers (SBC) and media gateways, Microsoft Survivable Branch Appliances (SBA) and IP phones.

The AudioCodes' EMS covers all aspects of efficient operation, administration, management and provisioning (OAM&P) of these voice network products. AudioCodes' EMS enables service providers, hosted services and large enterprises deploying Unified Communications (UC) networks to cost-effectively manage their voice network throughout its complete life cycle.



Benefits:

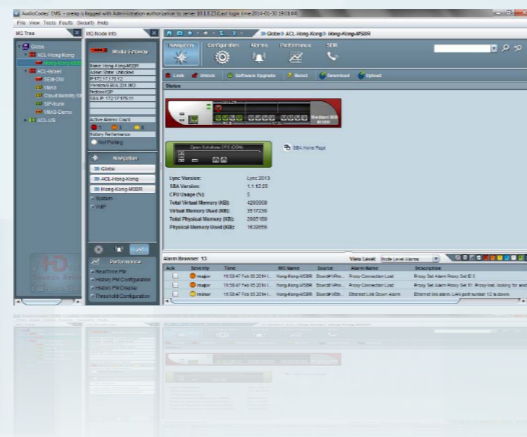
- **Uniform end-to-end management** of AudioCodes voice network elements
- **Mass upgrades, updates and operations**
- **Easy and secure transition to VoIP deployments** including UC, hosted business services and contact centers
- **OpEx and TCO reduction** by using centralized tools to remotely operate the voice network components
- **Efficiency and simplified device operation**, administration and fault management
- **Optimized to support day-to-day** Network Operations Center (NOC) activities
- **Easy drill-down** to low level configuration
- **Ensures smooth integration** with higher layer network management

AudioCodes One Voice Operations Center™

EMS

Configuration Manager

- Graphical status screen of the managed devices and their interfaces
- Hierarchical provisioning concept
- Easy drill-down to specific device configuration parameters
- Online help with detailed description of parameters
- Additional actions:
 - *Export and import device configuration*
 - *Device reset*
 - *Software upgrade and regional files download*



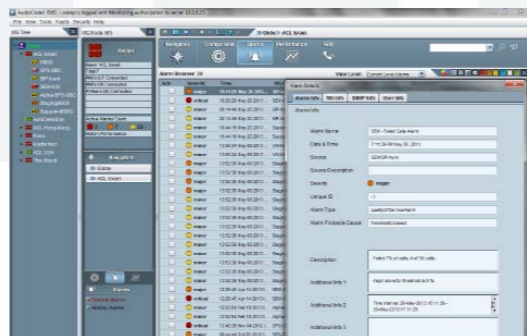
Performance Manager

- Real-time and historical network performance monitoring
- Isolate a problem after it is detected by the fault management
- Long-term network analysis and planning
- Periodical reports and data collection
- Threshold setting for performance alarm generation
- Statistics and graphical presentation



Administration Management

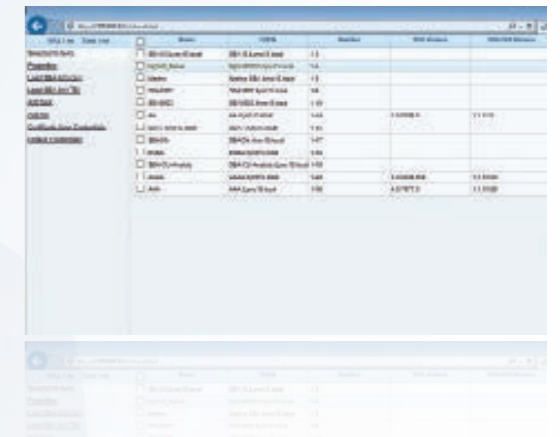
- Various options for managing user lists and user rights:
 - *Local on EMS storage*
 - *Integration with Active Directory*
 - *RADIUS or TACACS+ server authentication & authorization*
- Provides four levels of security rights configuration
- Multi-tenancy. Definable regions and users
- Activity journal to track EMS users' activities



SBA PRO Connect

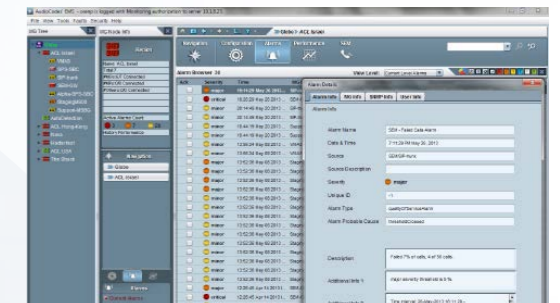
Mass upgrade of Microsoft Lync Survivable Branch Appliance software. Integrates with the Lync Server Topology server for seamless operation. SBA Pro Connect provides the following features:

- Mass Microsoft Cumulative Updates (CU)
- Mass Microsoft Lync SBA versions upgrades (eg. from Lync 2010 to Lync 2013)
- Upgrade process monitoring and notifications
- Task scheduling
- Allows segmentation of SBAs into groups for selective upgrade



Fault Management

- Session border controller, media gateway, SBA and IP phone status monitoring
- Summary of element status in one screen with "drill down" hierarchy
- Color scheme shows failure severity, redundant modules and switch-over state
- Alarm & state management according to ITU X.731, X.733
- Context-sensitive current and historical alarms with various filtering and search options
- Rich graphical status screen
- Traps forwarding via SNMP, e-mail, SMS and Syslog protocols to multiple trap destinations



400 HD IP Phone Family

- Web based interface to manage up to 10,000 4XXHD IP Phones
- Integral part of the EMS application and installation
- Mass 4XXHD configuration and firmware files download
- Auto provisioning
- Comprehensive configuration templates
- Users management
- Real time IP Phone status and dashboards including:
 - *Registration*
 - *User based information (phone number, IP address, status)*
 - *Device based information (health, MAC address, location)*
 - *Alarms*

