# **AudioCodes One Voice Operations Center**

# **EMS, SEM and IP Phone Management**

# **Release Notes**

## Version 7.0





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#### **Related Documentation**

Mai	nual	Man	nΔ
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Mediant 500 MSBR User's Manual

Mediant 500L MSBR User's Manual

Mediant 500L Gateway and E-SBC User's Manual

Mediant 800B Gateway and E-SBC User's Manual

Mediant 800B MSBR User's Manual

Mediant 1000B Gateway and E-SBC User's Manual

Mediant 1000B MSBR User's Manual

Mediant 2600 SBC User's Manual

Mediant 3000 User's Manual

Mediant 4000 SBC User's Manual

Mediant 9000 SBC User's Manual

Mediant Software SBC User's Manual

Element Management System (EMS) Server Installation, Operation and Maintenance Manual

Element Management System (EMS) Product Description

Element Management System (EMS) OAM Integration Guide

Element Management System (EMS) User's Manual

SEM User's Manual

Element Management System (EMS) Online Help

Mediant 500 E-SBC and Mediant 800 Gateway and E-SBC OAM Guide

Mediant 1000B Gateway and E-SBC OAM Guide

Mediant 2600-4000-9000-SW SBC Series OAM Guide

Mediant 3000 with TP-6310 OAM Guide

Mediant 3000 with TP-8410 OAM Guide

Mediant MSBR Series OAM Guide

#### **Document Revision Record**

LTRT	Description		
LTRT-90533	Initial document release for Version 7.0.		
LTRT-90540	Updated to remove support for the Mediant 5000 and Mediant 8000 products.		

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### 1 Managed VoIP Equipment

The following products (and product versions) can be managed by this EMS / SEM release (**bold** font indicates new products / versions):

- Mediant 9000 SBC versions 7.0, 6.8
- Mediant 4000 SBC versions 7.0, 6.8 and 6.6
- Mediant 4000B SBC version 7.0
- Mediant 2600 E-SBC versions 7.0, 6.8 and 6.6
- Mediant 2600B E-SBC version 7.0
- Mediant SE SBC versions **7.0** and 6.8
- Mediant SE-H SBC versions 7.0 and 6.8
- Mediant VE SBC versions 7.0 and 6.8
- Mediant VE-H SBC versions 7.0 and 6.8
- Mediant 3000 Media Gateways versions 7.0, 6.8 and 6.6
- Mediant 2000 Media Gateways version 6.6
- \*Mediant 1000 Gateway version 6.6
- Mediant 1000B Gateway and E-SBC versions 7.0, 6.8 and 6.6
- Mediant 1000B MSBR versions 6.6
- Mediant 800B Gateway and E-SBC versions 7.0, 6.8 and 6.6
- Mediant 800B MSBR versions 6.8 and 6.6
- \*Mediant 600 version 6.6
- Mediant 500L MSBR and Mediant 500 MSBR version 6.8
- MP-11x and MP-124 MediaPacks version 6.6
- \*Mediant 800B SBA, \*Mediant 1000B SBA, and \*Mediant 2600B SBA devices with SBA version 1.1.12.x and above and gateway version 6.6

#### Notes:



- \* Refers to products that are not supported by the SEM.
- All version 7.0 and 6.8 VoIP equipment work with the SIP control protocol.
- For detailed information on supported gateways and protocols for version 6.8, see Section 3.1.3 on page 21.

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#### 2 New Features in Version 7.0

#### 2.1 **SEM**

#### 2.1.1 Bandwidth and Concurrent Calls Alerts

The SEM now supports the following alarms/rules:

- Bandwidth Alarm this alarm is sent when the media bandwidth falls below, or exceeds, minimum or maximum threshold values (kbps), which users can configure in a rule. Minimum: 0. Minimum: 1000000 (1Gbps).
- Maximum Concurrent Calls Alarm this alarm is sent when the number of concurrent calls falls below, or exceeds, minimum or maximum threshold values, which users can configure in a rule. Minimum: 0. Maximum: 100000.

#### 2.1.2 Network page Map view per Operator (Multi-Tenancy)

The SEM's Network page Map view (in which users can drag and drop and reposition entities) now supports topology view per operator. Now, users whose security level is non-admin/superadmin can change entity locations and save the modified topology in their local browser for later viewing. By contrast, the user whose security level is admin/superadmin can modify entity locations; however, when the changed topology is saved, it's saved in the database, and the last save determines the topology view for all users.

#### 2.1.3 New Capability to Change Password

Users can now change their password using the SEM interface.

#### 2.1.4 SEM Monitoring of Microsoft Lync Calls

In this version, the SEM application has been extended to display VoIP calls from the Microsoft Lync Server. Now, in the Network map, users can define all the major Microsoft Lync-related components (Front End, Edge, SBA and Mediation servers) and their connecting links.

#### 2.1.5 New Microsoft Lync Devices and Network Map

Once the Lync components have been added to the Network map, the SEM server connects to the Microsoft Lync QoE server, retrieves the call quality-related data, and then represents this information in the Microsoft Lync and AudioCodes device icons in the Network map. The user can then view the calls success / failure rate, and the call quality statistics distribution over all the Lync components. In addition, new types of links are supported for Lync devices. The Device Actions and Link Actions are identical to the actions used for AudioCodes devices.



#### 2.1.6 Lync Calls in Network, Statistics & Report Views

Lync devices in the Network, Statistics and Reports views are displayed identically for AudioCodes and Microsoft Lync entities. All functionalities, views and filters are identical.

#### 2.1.7 Lync Calls Display in the Calls List and Call Details

A new field 'Call Source' indicates whether the source of the call is from Lync or from an AudioCodes device. In each case, the respective icon is displayed. The call details provide different sets of information which is relevant for each respective component i.e. calls from Lync and calls from AudioCodes devices.

#### 2.1.8 Users View

A new SEM view 'Users' enables the management of Active Directories organization users. Once the Active Directory is defined in the SEM, it is synchronized with the SEM database and then all the registered users are retrieved. You can then manage the telephony experience from this retrieved list of the enterprise's Active Directory listed employees.

This view comprises the following tabs:

- User Experience this tab shows the quality of experience for each AD user. For example, the number of calls the employee made during the time period and the total amount of time the employee spoke on their phone during the time period.
- User Details this tab lists personal contact details of the user including phone numbers and email.
- Active Directories lists the Active Directories where the organization users are defined. For example, host and server details. In addition, the AD database Sync times are also displayed.
  - SEM automatically synchronizes with Active Directories according to a user-configured Sync time scheduling interval. In addition, the user may also randomly perform the Sync operation.

The 'User's Experience' and 'User's Details' tabs include a powerful feature which enables the following:

- Viewing call statistics for the user including charts and data tables (similar to the display in the Statistics view). For example, the ratio of successful calls to failed calls and the ratio of calls whose voice quality was Good, to those calls whose voice quality was Fair, Poor and Unknown.
- Making Lync calls and as a result, view the statistics for these calls in real-time.
- Sending Lync messages and send emails.
- Managing other user details, such as User's details and Lync User details.

#### 2.1.9 SEM-Defined QoE Threshold Profiles

The Utilities view now includes a new tab 'QoE Thresholds'. In this tab, the user can apply QoE Threshold profiles for voice quality metrics (MOS, Delay, Packet Loss, Echo and Jitter). The QoE Threshold profile consists of threshold values set for each of these metrics for the following different call quality categories: 'Poor', 'Fair' and 'Good'. This feature includes the following three pre-defined profiles:

- Low Sensitivity Threshold pre-defined threshold values representing recommended data for the 'Low' sensitivity level.
- Medium Sensitivity Threshold pre-defined threshold values representing recommended data for the 'Medium' sensitivity level.
- High Sensitivity Threshold pre-defined threshold values representing recommended data for the 'High' sensitivity level.

In addition, the user can optionally define their own custom profile in which they can manually define threshold values and include or exclude specific metrics. For example, the user can define values for excluding the definition of threshold values for MOS, Delay and Echo; however, exclude 'Packet Loss' and 'Jitter' metrics from the profile. Once you define the profile, you can do the following:

- Save and attach it to specific devices and/or links.
- Save and attach it to all devices and links.

The saved profile can then be optionally set as the default profile for specific or all devices and/or specific or all links.



#### 2.1.10 Server Storage

The Utilities view now includes a new tab 'Server Storage'. In this tab, the user can view SEM server storage capacity and configure specific parameters for optimizing database storage. The following information is displayed in this tab:

- Calls Details Storage Represents detailed information per call (stored according to the number of days). This information represents actual call records (as displayed in the 'SEM Calls' view). The call details storage capacity is shown in the table below. Once this storage level reaches its full capacity, the oldest call details data is purged from the database to free space.
- Calls Statistics Storage Represents statistic information storage (stored according to the number of days with intervals). This information represents statistics calculations that are associated with each call (as displayed in the 'Network', Statistics' and 'Reports' tabs). The Calls statistics storage capacity is shown in the table below. Once this storage level reaches its full capacity, the oldest call statistics data is purged from the database to free space.

#### 2.1.10.1 Storage Level Configuration

A new configuration pane for setting the Storage Level Configuration is now provided. In this pane, you can determine the composition and level of the data that is stored in the SEM database for the following components:

- Calls representing the actual call records ('Calls Details Storage').
- Trends representing the total call trends i.e. the changes in the call quality over the duration of the call.

Based on the above components, you can set the following compositions:

- All Calls, All Trends All calls and all trends are saved to the SEM server.
- All Calls, Partial Trends All calls; however, no trends for good quality calls are saved to the SEM server (default).
- All Calls, No Trends − All calls; however, no trends are saved to the SEM server. This option is recommended if you are operating with more than 50 CAPs.
- Partial Calls, No Trends Only failed, poor and fair quality calls, and no trends are saved to the SEM server.

This option is recommended if you are operating with more than 100 CAPs.

In summary, the larger the number of CAPs that you are managing, the more critical it is efficiently manage the SEM database size. Consequently, the best practice is to save mission - critical data, such as poor quality call statistics and to relinquish less critical data, such as good quality calls statistics.

If you are managing only Lync calls, then the option 'All Calls, No Trends' should be used because call trends are not generated for Lync calls.

#### 2.1.10.2 SEM Performance and Data Storage

The following table shows the SEM performance and data storage capacities for this version.

#### **SEM Performance and Data Storage**

Parameter	Capacity
Maximum number of CAPS per device.	160
Maximum number of CAPS per server.	300
Maximum concurrent sessions	30,000
Maximum number of devices per region	500
Maximum number of managed devices.	5000 devices
Maximum number of links between devices.	6000
Call Details Storage - Detailed information per Call	Up to one month or 80 million calls.
Calls Statistics Storage - Statistic information storage.	Up to six months or 150 million intervals.

#### 2.1.11 Concurrent Calls Statistics

A new calculation displaying the concurrent call statistics has been added to the SEM Summary pane in the Statistics view. The maximum number of concurrent calls calculates the cumulative total number of calls from all devices at a specific point in time (the maximum concurrent sessions is specified in the table above).

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#### 2.1.12 **SEM Licensing Enhancements**

The SEM licensing mechanism has been enhanced. The SEM license is determined by the following parameters:

- The maximum number of monitored devices
- The maximum number of concurrent sessions

When the SEM application reaches 80% of the maximum number of monitored devices or 80% of the maximum number of concurrent sessions, the 'License Key' alarm is raised on the device with the 'Major' severity. When the maximum number of monitored devices reaches full capacity, each new device trying to establish connection with the SEM is refused, and an additional 'License Key' alarm per device is raised with the severity 'Critical'. When the maximum number of concurrent sessions reaches full capacity, each subsequent new session will not be monitored by the SEM (all the relevant information is dropped) and an additional 'License Key' alarm per device is raised with the severity 'Critical'.

#### **Notes:**

- The SEM license is enforced on AudioCodes devices only. Lync calls are not covered by this mechanism.
- When full capacity is reached, customers should contact their AudioCodes representative to purchase a new license according to their capacity requirements.

#### 2.1.13 SEM Actions Updated to the EMS Actions Journal

All the user actions that are performed in the SEM application, such as devices / links updates, alert rules and reports scheduler changes are updated to the EMS Actions Journal. All SEM actions are identified in the EMS Actions Journal in the 'Source' field by the entry "SEM Server".

#### 2.2 IP Phones Management

AudioCodes' IP Phone Management server enables enterprise network administrators to easily set up, configure, and maintain up to 10000 AudioCodes 400HD Series IP phones in globally distributed corporations. The IP Phone Management Server client can be run on any standard web browser, such as Internet Explorer, Firefox or Chrome. REST (Representational State Transfer) based architecture, an extension of HTTP, enables statuses, commands and alarms to be communicated between the IP phones and the server and also with the EMS. The IP phones send their status to the server periodically for display in the user interface. Accessed from AudioCodes' Element Manager Server (EMS), the IP Phone Management Server user interface enables network administrators to effortlessly load configuration files and firmware files on up to 10000 IP phones. A configuration file template feature lets network administrators customize configuration files per phone model, region, and device. Integrated into the EMS, the IP Phone Management Server provides added value to AudioCodes 400HD Series IP phones.



#### 2.3 EMS Features

#### 2.3.1 Single Sign-On

Device provisioning is no longer performed in the EMS. Instead, the device's Status screen now includes a link to the device's embedded Web server. When this link is clicked, the EMS logins to the device's Web server with a Single Sign-On implementation (the Web server home page is opened directly and the user is not prompted to enter their login credentials). The Web server user and password is configured when adding the device to the EMS (in the MG Information screen).

Device status screens, alarms, performance monitoring metrics and actions (for single devices and for multiple devices) functionality remains unchanged. In addition, the configuration of digital PSTN trunks, such as those for the Mediant 3000, can still be performed using the EMS.

#### 2.3.2 Auto-Provisioning

When a device is added to the EMS, the user now has the option in the MG Information scene to preprovision the device with an existing configuration or firmware file (ini or .cmp), which has been pre-loaded to the EMS Software Manager. The user firstly adds those devices that they wish to provision to the EMS, and then when the non-configured device is powered up, it sends a keep alive trap to the EMS, which recognizes the device, connects it and uploads the preprovisioned configuration or firmware file. A journal action is displayed in EMS to confirm the successful file load.

#### 2.3.3 Trap Forwarding: Extended Filtering Criteria

The Destination Rule Configuration window has been improved with the following new filtering criteria for all destination types:

- Alarm Names allows the user to forward alarms according to specific alarm names. For example, setting this filter to forward the 'Power Supply' alarm.
- Alarm Types allows the user to forward alarms according to specific alarm types. For example, setting this filter to forward only 'communications-related' alarms.
- Source allows the user to forward alarms according to the alarm source as displayed in the Alarm Browser 'Source' field. For example, 'EMS server' or a specific device board number.
- Alarm Origin table This table has been extended to allow you to forward alarms/events from the SEM and the IP Phone Manager, in addition to the EMS and Gateways.

Additional Filters – In addition, there are new filters for preventing or allowing the forwarding of specific alarms according to the filtering criteria specified in the 'Destination Rule' Configuration window. When you select the 'Prevent Forward' or 'Allow Forward' buttons, and then specify additional filter criteria, then alarms are forwarded according to the specified filter criteria. For example, when you select 'Prevent Forward' and then select the 'Minor Alarms' severity icon, then minor alarms are not forwarded (according to the entities selected in the 'Alarm Origin' table). Alternatively, when you select 'Prevent Forward', and then in the 'Source' field, you specify 'Board#1/EthernetLink#2', then whenever LAN port #2 is down, an Ethernet link alarm is not forwarded.

#### 2.3.4 Alarm Suppression Mechanism

A new feature for suppressing "flickering" alarms has been added. When the EMS server recognizes that there are greater than a threshold-defined number of alarms of the same type and from the same source that are generated in a threshold-defined time, a new 'Alarm Suppression' alarm is generated. At this point, these alarms are not added to the database and are not forwarded to configured destinations.

This feature is configured in the 'Alarm Settings' window. In this window, the user enables the option, and then configures a counter threshold (default - 10 alarms) and interval (default - 10 seconds). This feature applies for alarms of the same type and from the same source. For example, if there are 10 alarms generated from 'Board#1/EthernetLink#2 in 10 seconds, then alarms from this source are suppressed and the 'Suppression' alarm is generated. This alarm is cleared when in the subsequent 10 second interval, less than 10 alarms are sent from this source. At this point, updating to the EMS database is resumed (the last received alarm is updated).

During the time that the Suppression alarm is active, the EMS server updates the database with a single alarm (with updated unique ID) database every minute, until the alarm is cleared.

#### 2.3.5 Different Sounds per Alarms Severity

When the Alarm sound feature is enabled (by selecting the 'Alarm Sound Enabled' icon in the Alarm Browser), a different sound is heard for each severity type.

#### 2.3.6 Alarm Details Screen Enhancements

The Alarm Details screen now displays both the time the alarm was raised on the gateway device and when it was raised on the EMS (previously only the time that the alarm was raised on the EMS was displayed). You can also now print the information that is displayed in this screen (the information displayed in each tab is printed).



### 2.3.7 Topology File Enhancements

The following new parameters are now supported by the EMS Topology file:

- SNMP Version
- SNMP Read
- SNMP Write
- SNMP User Profile
- Gateway User
- Gateway Password
- HTTPS Enabled

#### 3 New Features in Version 6.8

#### 3.1 General

#### 3.1.1 Improved/Enlarged Capacity of Managed Products

- EMS
  - Up to 5000 devices per installation.
  - Up to 500 devices per region.
- SEM see Section 3.3 on page 23.

#### 3.1.2 New Hardware Requirements

The new hardware platform for the EMS / SEM 6.8 version is defined as follows:

- HP DL360 G8 server with the following minimum requirements:
  - CPU: Intel Xeon E5-2690 (8 cores 2.9 GHz each)
  - Memory: 32 GB
  - Disk: 2 X 1.2 TB SAS 10K RPM in RAID 0

#### 3.1.3 New Products Management

In this version, the following new products are supported by EMS and SEM:

- Mediant 4000 E-SBC: versions 6.6, 6.8
- Mediant 2600 E-SBC: versions 6.6, 6.8
- Mediant SE SBC and Mediant VE SBC: 6.8
- Mediant 500 MSBR: version 6.8
- Mediant 500 E-SBC and Mediant 500 MSBR: version 6.8
- \*Mediant 800 SBA, \*Mediant 1000 SBA and \*Mediant 2000 SBA devices with SBA version **1.1.13.0** and above and gateway versions 6.6 and **6.8**

#### 3.1.4 Virtualized EMS Server on HyperV

In this version the EMS server, is delivered as a virtual appliance on the HyperV Virtual Servers (in addition to previously released setups).

The virtual environment allows the IT manager, carriers and all EMS customers to minimize dedicated hardware per application usage, which leads to IT maintenance cost savings.

#### 3.1.5 Supporting High Availability in Virtualized Solutions

On both the VMWare and HyperV servers, EMS can run as Standalone application or as part of a High Availability solution supported by a virtualization vendor.

For a list of all supported configurations, refer to the EMS Server IOM Guide.

<sup>\*</sup> Refers to products that are not supported by the SEM



#### 3.1.6 EMS Client Support on Windows 8

In this version, the EMS client application is supported on the Windows 8 Operating System.

#### 3.1.7 EMS Server: Server Manager Improvements

The EMS Server Manager user experience has been enhanced with new features such as color-coded statuses, improved menu design and navigation, as well as improved responses. These changes are described in the *EMS Server IOM* document.

#### 3.2 EMS New Features

# 3.2.1 Security: Integration with LDAP Server for User Authentication and Authorization

EMS application users can now be authenticated and authorized using an LDAP server, in addition to the existing methods (local users on the EMS server) storage, RADIUS or TACACS+ server).

#### 3.2.2 Devices Configuration Backup and Data Synchronization

Starting this version, device configuration is backed up in the EMS server as an *ini* file. EMS server updates the device *ini* file each time the device configuration is updated via EMS. In addition, periodic checks are performed to detect configuration changes on the device. As a consequence of these checks, a backup file is generated on the EMS server several times each day, based upon these most recent updates. Up to 10 backup files can be stored per device.

#### 3.2.3 Performance Management Extensions

- A new option to print detailed summary reports has been added in the History PM Display.
- In the History PM Display, new parameters 'Min Value Time' and 'Max Value Time' have been added. These parameters display the time interval at which the minimum and maximal values occurred during the polling interval period.
- New History PM Configuration performance management metrics 'IP Group Statistics' can be defined per IP Group. For example, you can poll 'SIP IP Group Dialogs' and 'SIP IP Group Invite Dialogs IP Max'.

#### 3.3 **SEM New Features**

#### 3.3.1 Improvements in SEM Performance and Data Storage

The table below describes enhancements in SEM performance and data storage.

#### **SEM Performance and Data Storage**

Parameter	Capacity
Maximal number of CAPS per device.	160
Total maximal number of CAPS per server.	300
Maximal number of managed devices.	3000 devices
Maximal number of links between devices.	6000
Detailed information per Call (*)	Up to 1 month or 80 million calls.
Statistic information storage.	Up to 6 months or 150 million intervals.
Network, Statistics and Reports Views.	Improved Capacity Volumes.

#### Note the following:

- (\*) Our recommendation for high capacity setups (100 CAPS and Higher) is to set the SEM parameter 'SEM Server Storage Level' to 'Failed, Poor or Fair Quality Calls, No Trends'.
- In this version, the Network, Statistics and Report Views enable the user to view up to six months of archived information (instead of the 10 million calls limitation in the previous version).

#### 3.3.2 New SEM Licensing Mechanism

In this version, a new SEM Licensing mechanism has been implemented.

The Licensing mechanism applied by the customer is based on EMS/SEM server machine identifier, which can be extracted from the machine after it's installed.

After applying the new SEM license to the EMS/SEM server machine, SEM will work according to the license key definition. You no longer need to apply the QoE feature licenses at the device level.



#### 3.3.3 Support New Link Types between Devices

The following links between devices are supported in this version:

- IP Group
- Media Realm
- Remote Media Subnet
- Trunk Group
- Phone/URI Prefix
- Control IP Address
- Media IP Address

#### Notes:



- In this release, support has been added for the Media Realm, Remote Media Subnet and the Media IP Address links. This extension is relevant for devices from version 6.8 and later.
- For the IP Group, Media Realm and Sub-Media Realm link types, different QoE calls threshold per each link may be configured (e.g. calls are colored red on MOS < 3.0).
- This configuration should be performed on the VoIP device using any of the supported management interfaces.

#### 3.3.4 New Links Table in Network View

- Improved links table design allows the management of a larger number of links.
- Fast and Easy link search according to name, source or destination devices is supported.

A summary of the most important link statistics, such as Calls Number and Calls Success Rate, Quality, and the most important metrics with sorting options are supported.

#### 3.3.5 SEM Application Multi - Tenancy

The EMS user permissions per region feature, introduced in the previous version to the EMS application, have now been extended to the SEM. Each operator will now be able to view/change only those devices and links defined in the region upon which they have access privileges. This includes the entire set of SEM pages: Network, Statistics, Calls, Alarms and Reports.

#### 3.3.6 Scheduled Reports

You can now automate report generation using scheduling criteria. The following summarizes the scheduling criteria that you can define in the scheduled reports:

- Setting the type of report. For example, 'Call Statistics by Device' or 'Call Statistics by Link'.
- Setting further report type criteria; for example in the event of a Links report, you can define link filter settings. For example, generate a report for a specific IP Group or Media Realm.
- Set the scheduler to generate hourly, daily, weekly or monthly reports.
- Set the time of the day to run the report.
- Set the number of times to run the report.
- Send the reports to an email addresses or view a separate list of the generated reports for each specific report type. For example, view a list of generated reports for "Call Utilization by Device". You can generate reports for all existing SEM report types.

#### 3.3.7 Calls List: Add Calling Name Information

When the device is integrated with the Active Directory server (when LDAP is enabled on the device) and manages the users list, the SEM will be able to display the user with their Calling Name as it appears in Active Directory definitions. This Calling Name will be displayed in the Calls List in the 'Caller' field, and in the 'Top Users' reports in the "User Name" field. In addition, users can sort, or search according to this Calling Name in the Calls List.

#### 3.4 Changes from the Previous Version

- Installation Process: this version does not support an upgrade from any previous version for working with Oracle Enterprise Edition. Import of the managed devices should be performed using the latest version of the Topology file. Server machine format and clean install using three DVDs (DVD1, DVD2 and DVD3) is required. A minor version 6.8 upgrade is supported.
- EMS: The Master Profile is not supported in EMS version 6.8. The suggested method for replicating a configuration to multiple devices is by using an incremental INI file.
- SEM: The Calls List, Voice and Fax Calls buttons have been removed.
- SEM: The Calls List screen is not auto-refreshable. To initially retrieve the Calls List, set filter parameters, and then click the Refresh button each time to update the list.
- SEM: Statistics view: The Failed Calls Termination Reasons distribution has been removed.
- SEM: Links. When adding or modifying link it will affect only to the next calls.



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## 4 Known Limitations and Workarounds

The table below lists the Known Limitations and Workarounds in this release.

#### **Known Limitations and Workarounds**

Issue	Problem/Limitation	Comments and Workaround
First-time login	Important note for first-time users (this is not a problem; however first-time users may encounter the following):	-
	When logging in for the first time:	
	<ol> <li>Login as user 'acladmin' with password 'pass_1234' or with 'pass_12345'</li> </ol>	
	<ol> <li>From the main screen, open the 'Users List' (menu 'Security' &gt; option 'Users List') and add new users according to your requirements.</li> </ol>	
Number of MGs in one region	For optimal system performance, do not define more than 500 Media Gateways in any one region.	-
Online Help	The Online Help is not available in this version.	It will be available in one of the future fixes.
EMS Server – Virtual Platform	The Multiple Ethernet redundancy with EMS server HA is not supported in this version for the Virtualized server.	It will be supported in one of the future fixes.
EMS Server – High Availability	The IP Phones Management System does not support the GEO HA feature.	-

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# **AudioCodes One Voice Operations Center**

# **EMS, SEM and IP Phone Management**

# **Release Notes**

