

Release Notes

AudioCodes One Voice™ Operations Center

One Voice Operations Center

Version 7.4



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Notice

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WEEE EU Directive

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Customer Support

Customer technical support and services are provided by AudioCodes or by an authorized AudioCodes Service Partner. For more information on how to buy technical support for AudioCodes products and for contact information, please visit our Web site at <https://www.audiocodes.com/services-support/maintenance-and-support>.

Related Documentation

Manual Name
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
One Voice Operations Center Server Installation, Operation and Maintenance Manual
One Voice Operations Center Product Description
One Voice Operations Center Integration with Northbound Interfaces Guide
One Voice Operations Center User's Manual
IP Phone Manager Pro Administrator's Manual
IP Phone Manager Express Administrator's Manual
One Voice Operations Center Security Guidelines
One Voice Operations Center Alarms Guide
ARM User's Manual

Documentation Feedback

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1 Managed VoIP Equipment

Table 1-1: Managed VoIP Equipment

Product	Supported Software Version
Gateway, SBC and MSBR Devices	
Mediant 9000 SBC	versions 7.2 (including support for MTC), 7.0, 6.8
Mediant 4000 SBC –	versions, 7.2, 7.0 and 6.8
Mediant 4000B SBC	version 7.2, 7.0
Mediant 2600 E-SBC	versions 7.2, 7.0 and 6.8
Mediant 2600B E-SBC	version 7.2 and 7.0
Mediant Server Edition (SE) SBC	versions 7.2.2x ,7.2, 7.0 and 6.8
Mediant Virtual Edition (VE) SBC	versions, 7.2 (including support for MTC), 7.0 and 6.8
Mediant Cloud Edition	version 7.2
Mediant 3000 Media Gateways (TP-8410 and TP-6310)	versions 7.0 (SIP), 6.8 (SIP) and 6.6 (SIP)
Mediant 2000 Media Gateways	version 6.6
Mediant 1000 Gateway ¹	version 6.6 (SIP)
Mediant 1000B Gateway and E-SBC	versions 7.2., 7.0, 6.8 and 6.6
Mediant 800B Gateway and E-SBC	versions 7.2, 7.0, 6.8 and 6.6
Mediant 800C	version 7.2
Mediant 1000B MSBR	version 6.6
Mediant 800 MSBR	versions, 7.2, 6.8 and 6.6
Mediant 500 MSBR	version, 7.2 and 6.8
Mediant 500L MSBR	versions, 7.2 and 6.8
Mediant 500 E-SBC	version, 7.2
Mediant 500L E-SBC	version 7.2
Mediant 600 ²	version 6.6
MediaPack MP-11x series	version 6.6 (SIP)
MediaPack MP-124	version 6.6 (SIP) Rev. D and E
MP-1288	version 7.2.2x, 7.2

¹ This product does not support Voice Quality Management.

² As above

SBA³	
Mediant 800B SBA	SBA version 1.1.12.x and later and gateway versions 7.2, 7.0 and 6.8
Mediant 1000B SBA	SBA version 1.1.12.x and later and gateway versions 7.2, 7.0 and 6.8
Mediant 2600B SBA devices	SBA version 1.1.12.x and later and gateway versions 7.2, 7.0 and 6.8
CloudBond⁴	
Standard Edition (Mediant 800B platform)	version 7.4
Standard Plus Edition (Mediant 800B platform);	version 7.4
Pro Edition (Mediant Server platform)	version 7.4
Enterprise Edition (Mediant Server platform)	version 7.4
Virtualized Edition (Mediant Server platform).	version 7.4
CCE Appliance⁵	
*Mediant 800 CCE Appliance	version 2.1
*Mediant Server CCE Appliance	version 2.1
IP Phones	Supported Software Versions/Models
400HD Series Lync server	From version 2.0.13: 420HD, 430HD 440HD
400HD Series Non-Lync server	From version 2.2.2: 420HD, 430HD 440HD and 405
400HD Series Skype for Business	From version 3.0.0: 420HD, 430HD 440HD and 405HD
400HD Series Skype for Business	From version 3.0.1: 420HD, 430HD 440HD, 405HD and 450HD
	From version 3.0.2: HRS (with Jabra firmware support)



Note:

- All versions VoIP equipment work with the SIP control protocol.
- **Bold** refers to new product support and version support.

³ As above

⁴ To support Voice Quality Management for these devices, customers should add the SBC/Media Gateway platform of the CloudBond 365 /CCE Appliances as standalone devices to the OVOC. Once this is done, the SBC/Gateway calls passing through the CloudBond 365 /CCE Appliances can be monitored.

⁵ As above.

2 OVOC- Minimal Platform Requirements

The table below describes the minimum platform requirements for the One Voice Operations Center Server.



Note: For enhanced service provider specifications, refer to the Appendix “Service Provider - Enhanced Specifications” in the OVOC IOM.

Table 2-1: OVOC- Minimum Platform Requirements

Resource	OVOC Server			OVOC Web Client	
	Dedicated OVOC Server - Linux OS	Amazon	Virtual OVOC High Profile	Virtual OVOC Low Profile	
Hardware	HP DL360p G8		–	–	Browser Document Size: 1280 x 768
Operating System	Linux CentOS Version 7.3-1611 64-bit, Rev.18	Linux CentOS Version 7.3-1611 64-bit, Rev.19	–	–	Windows™ 10/Windows 8/Windows 8.1/Windows 7/Windows 7 Enterprise/Windows Server 2012 R2 Standard
		Amazon Cloud	VMware: ESXi 6.0 ⁶		

⁶ * The VMware and VMware HA cluster with OVOC Server Version 7.4 (ESXi 6.0) are backward compatible with Version 7.2 (ESXi 5.5).

Resource	OVOC Server				OVOC Web Client
	Dedicated OVOC Server - Linux OS	Amazon	Virtual OVOC High Profile	Virtual OVOC Low Profile	
Virtualization platform		c4.4xlarge Instance Type	VMware HA cluster: VMware ESXi 6.0 Microsoft Hyper-V Windows server 2012R2 Microsoft Hyper-V Windows server HA cluster: 2012R2		–
Memory	32 GB RAM	As defined in Amazon c4.4xlarge	32 GB RAM	16 GB RAM	8 GB RAM
Disk space	Disk: 2 X 1.2 TB SAS 10K RPM in RAID 0	AWS EBS: General Purpose SSD (GP2)	1.2 TB	500 GB	–
Processor	CPU: Intel Xeon E5-2690 (8 cores 2.9 GHz each)	As defined in Amazon c4.4xlarge	6 cores not less than 2 GHz	1 core not less than 2.5 GHz	–
DVD-ROM	Local	–	–	–	–

- The working space requirements on the OVOC server are as follows:
 - Linux: Executable bash
- The OVOC server works with the Java Development Kit (JDK) version 1.8 (JDK 1.8 for Linux™).
- The Oracle database used is version 12.1.0.2.
- Supported browsers for Web client applications are as follows:
 - Internet Explorer version 11 and higher
 - Mozilla Firefox version 38 and higher
 - Google Chrome version 60 and higher
- Flash Version 11 is required for generating Statistics Reports



Note: The JDK and Oracle database component versions mentioned above are provided as part of the OVOC installation image.

3 Centralized SBC Licenses

The table below shows the SBC device types that can be managed for both the Fixed License and the Floating License features.

Product	Fixed License	Base Version	Floating License	Base Version
Mediant 500 Gateway & E-SBC	√	7.0	√	7.2.202
Mediant 500 Gateway & E-SBC	√	7.0	√	7.2.202
Mediant MSBR 500	√	7.2.150	×	
Mediant 500L Gateway & E-SBC	√	7.0	√	7.2.202
Mediant MSBR 500L	√	7.2.150	×	
Mediant 800 Gateway & E-SBC	√	7.0		7.2.202
Mediant MSBR 800	√	7.0	×	7.2.202
Mediant 1000B Gateway & E-SBC	√	7.0	√	7.2.202
Mediant 2600B E-SBC	√	7.2.150	√	7.2.202
Mediant SBC 4000	√	7.0	√	7.2.202
Mediant SBC 9000	√	7.0	√	7.2.202
Mediant Virtual Edition SBC	√	7.0	√	7.2.202
Mediant Software Edition SBC	√	7.0	√	7.2.202
MP-1288	√	7.2.150	×	

**Note:**

- **Fixed License:** The Mediant 2000 and Mediant 3000 do not support the fixed license. In addition, the Transcoding session license is applicable only to the Mediant Virtual Edition and Mediant 9000.
- **Floating License:** AudioCodes no longer uses the advance quality package for implementing the floating license. Customers who have previously ordered OVOC for floating license only, will have their voice quality monitoring functionality de-activated.
- For ordering details, contact your AudioCodes sales representative.

4 New Features in Version 7.4.3000

4.1 Infrastructure

4.1.1 Server Manager Security Extensions

- A new EMS Server Manager option allows the enabling and disabling of TLSv1.0 and TLSv1.1. Previously this action could only be performed using a script procedure. When TLS Version 1.1 is disabled using this option, TLS Version 1.0 is also disabled. Likewise, if TLS Version 1.0 is enabled, TLS Version 1.1 is also enabled.
- A new EMS Server option “TLS Contexts for Apache” allows users to edit SSLCipherSuite settings for Apache server. You can also display all of the entries and restore to the default values.

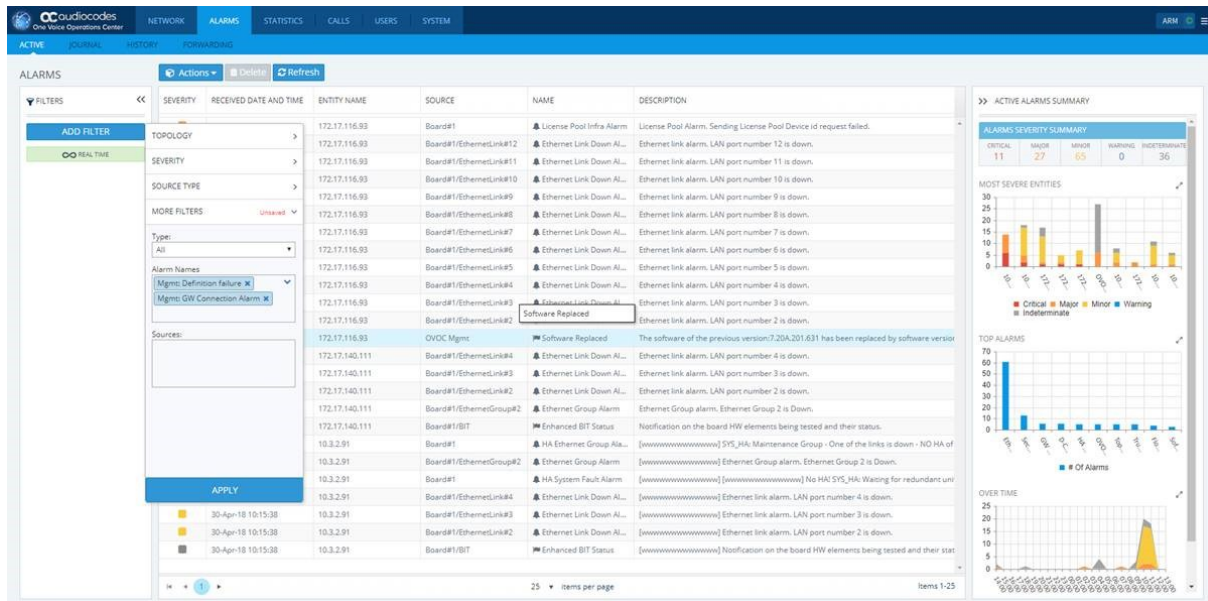
4.2 Management

4.2.1 Quick Access to Topology Page

You can now quickly access the Topology page by clicking the AudioCodes logo in the toolbar.

4.2.2 Alarm Filters

- Active and History alarms views:
 - A new parameter “Type” enables you to filter to view either alarms or events.
 - A new filter parameter “Alarms Name” enables you to filter to view specific alarms / events.
 - For the “Alarms Name” and “Severity” filters, new filtering options for selecting All, None, or inverting a selection has been added.
- Display currently active filter: when a new filter is added, the name of the filter is displayed in the Filters pane for the selected Topology entity.



4.2.3 Floating License Service

The Floating License service, managed as an AudioCodes Cloud service provides a network-wide license intended for customer deployments with multiple SBCs sharing a dynamic pool of SBC resources. The Floating License simplifies network capacity planning, and provides cost benefits related to aggregated calls statistics, follow-the-sun scenarios and on disaster recovery setups which involve two or more data centers.

The AudioCodes' 'Floating License' licensing feature effectively allows customers to 'pay as they grow' by eliminating the need to manually purchase additional SBC licenses when their capacity requirements are increased. Customers initially purchase license capacity based on their estimated requirements. Later, they may experience business growth and therefore require enhanced session capacity. In this case, customers are billed for the additional sessions.

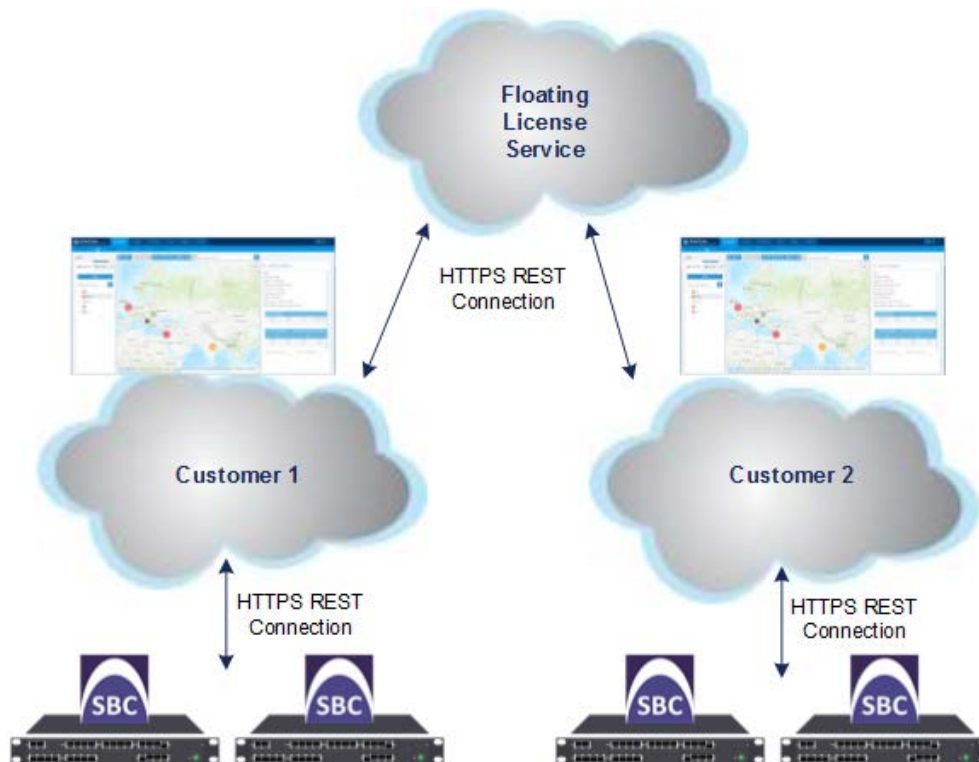
The SBCs deployed in the network are "open" to utilize the maximum hardware capacity of the device based on pre-defined profiles or alternatively can be configured by users with customized session capacity profiles. The Floating License feature applies to the following SBC call functionality:

- SBC Sessions (# of concurrent SBC call sessions-media and signaling)
- SBC Signaling Sessions (# of concurrent SIP messages- only signaling)
- Far End Users (FEU) (# of concurrent users that can be registered on the device)
- Transcoding Sessions (# of concurrent codec types)

When an SBC is configured to operate with Floating License, and an SNMP connection is successfully established with OVOC, the device is connected to OVOC's Floating License application mode. The managed SBC devices report their capacity consumption to OVOC for the abovementioned SBC call functionalities every five minutes. OVOC then sends this information in interim usage reports (current daily; however, configurable in the Floating License service) to AudioCodes Floating License cloud service for all SBCs managed by OVOC for this feature. Based on this information, the Floating License service monitors whether customers have exceeded their purchased license limit (as described above). In addition, if a customer hasn't met the terms of payment, their license may be revoked and this action is reported to OVOC, which blocks the calling service for all managed SBC devices.

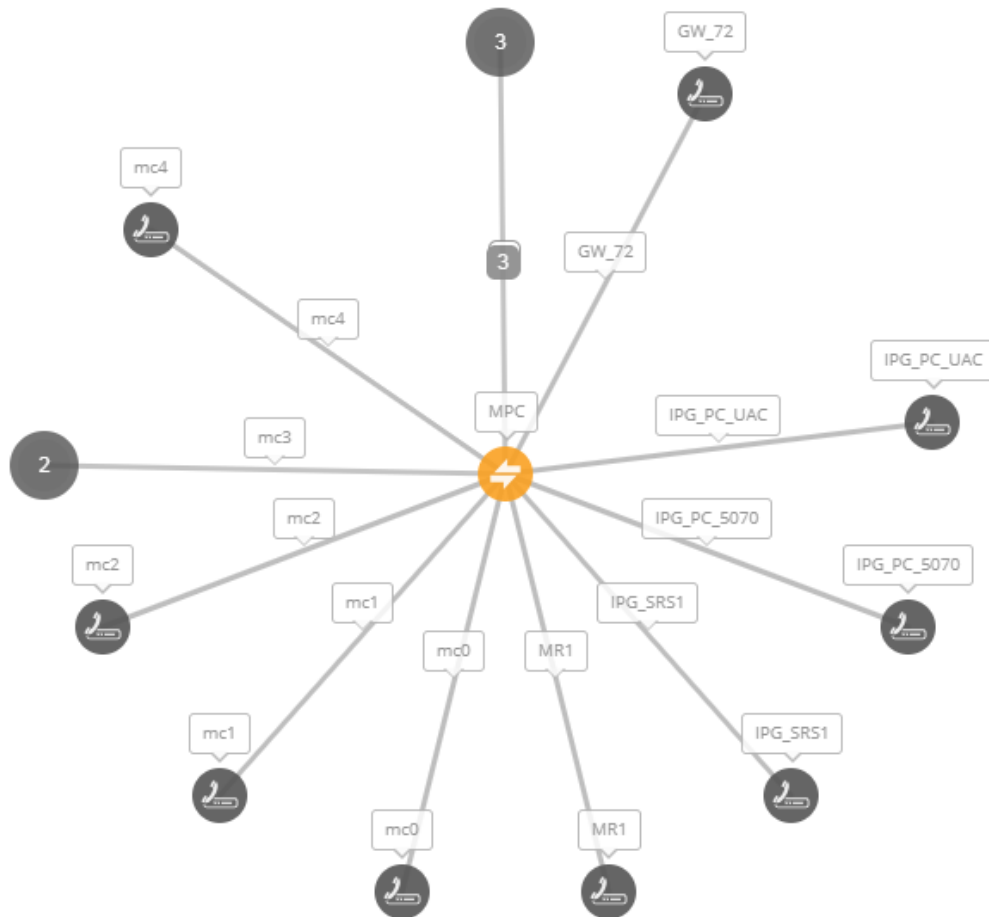
If a disconnection of the service between the SBC and the OVOC occurs or between the OVOC and the Floating License service, a one-month grace period is given without affecting SBC call service.

The figure below illustrates an example topology with two OVOC managed customer sites connected to AudioCodes Cloud License Manager Web service.



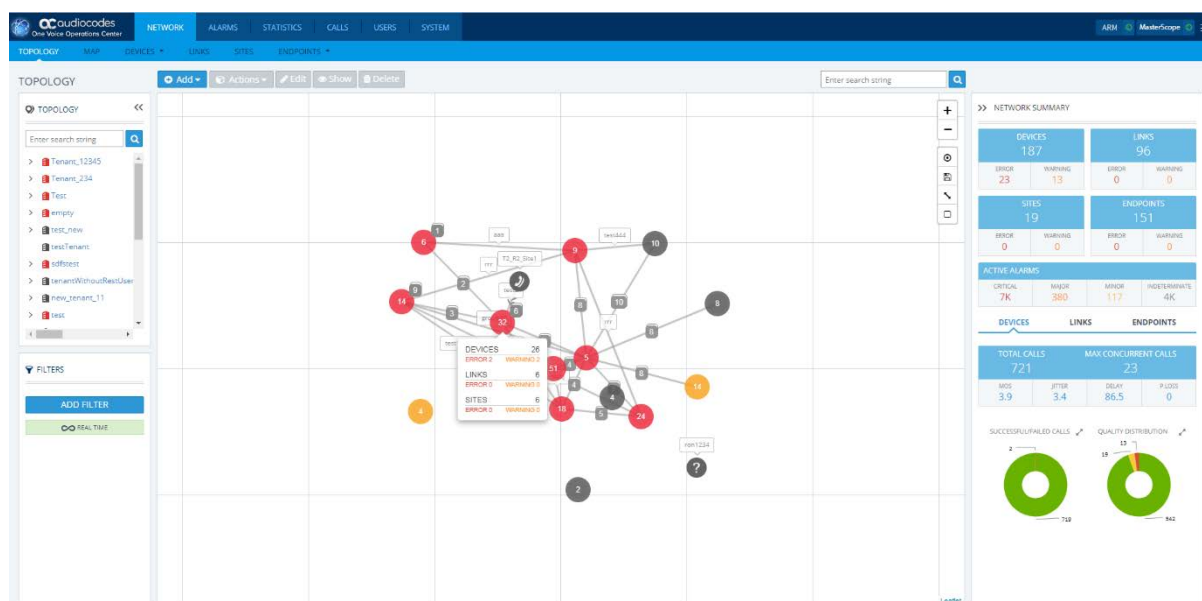
4.2.4 Support for Media Cluster Devices (Mediant Cloud Edition)

OVOC Version 7.4.3000 supports AudioCodes' Mediant Cloud Edition. This feature is offered by the Mediant VE SBC in AWS-based environments. It provides similar functionality to the Media Transcoding Cluster feature; however, in the cloud, and its Media Components handle transcoding as well as all media directly, without traversing the Mediant VE SBC.



4.2.5 Smart Devices and Links Aggregation in Network Map View

Support for viewing aggregating of device statuses (Network Topology view). Previously this feature was only available in the Network Map view (viewing of devices in clusters according to geographic location). Devices and links are aggregated into clusters where the number of devices and links in each cluster are indicated. Clicking the parent cluster node, opens the sub-nodes or sub-clusters according to the next aggregation level. In addition, you can select shift and click (make area selection) and drag to select specific devices. For links, an indication is also provided whether the link is configured to show only incoming or outgoing calls with an arrow showing the link direction. You can zoom in and out to display different aggregated clusters of devices and links i.e. when you zoom out to the maximum, you see the total aggregated devices and links for the installation.



4.2.6 OVOC on Amazon (AWS)

This release includes support for OVOC on AWS platform. Refer to the IOM document for the exact specification.

4.2.7 Mediant 2000 with two TPMs

AudioCodes' Mediant 2000 Media Gateway device with two TP-1610 blades is managed as two separate Mediant 2000 Media Gateway devices with *one* TP-1610 blade. It can be added to OVOC using a *single* IP address rather than using two IP addresses (one for each blade) as was the case in OVOC versions earlier than Version 7.4.3000.

Existing customers must remove any Mediant 2000 device housing two TP blades that was added to the OVOC using two IP addresses in OVOC versions earlier than Version 7.4.3000, and then add them again using a single IP address.

4.2.8 Displaying Login Permissions

The logged-in OVOC operator's authentication type (LDAP, RADIUS or local) and security level are now displayed in the application information window dialog.

4.2.9 Update to Device Actions Menu

Right-click device actions have been updated as follows:

- “Software Upgrade” to “Update Firmware”
- “Download” to “Restore Configuration File”
- “Upload” to “Backup Configuration File”
- “Sync Links” to “Create/update links”
- “Save Configuration” Save Configuration to Flash”
- “Save Config File” to “Export Configuration to File”
- “Set Config Factory Defaults” to “Restore Default Configuration”
- In addition, a new action “Download Auxiliary File” was previously executed under “Update Firmware”

4.3 Quality of Experience (QoE)

4.3.1 Improved QoE Performance for Large Deployments

QoE summaries for Devices, Links, Sites, and Users are extended with hourly and daily data. This improves QoE calculations performance which is reflected in Network Summaries, Statistics, Reports and User screens especially when retrieving data for wide time range (days, weeks) in large deployments.

4.3.2 Call Details Debug Information Download

A new troubleshooting option has been added to the Call Details (Call Summary) screen for downloading a file containing debug information. The debug file can be used by AudioCodes FAEs for analysis.

4.4 IP Phone Manager Pro

4.4.1 IP Phones Configuration Profile Wizard

This feature enables the quick setup for connecting and initial provisioning of the Skype for Business IP Phones to the OVOC server. The wizard includes the following:

- Associate to tenant and performing first time tenant configuration actions
- Associate phone template
- Configure DHCP server settings

4.4.2 IP Phone Status Table: New Columns

The Device Status screen now displays the following new statuses:

- USB Headset Type:
When a device is connected via the IP Phone’s USB port, displays a USB icon and the USB Headset Type.

Phone Number	Last Update Status	Mac Address	IP Address	IPP Model	Firmware	Tenant	Site	Template	Report Time	Location	BToE Version	USB Headset Type
+97239789501ext=5501	25.04.2018 17:24:49	00908f8b6da	172.17.123.3	445HD	UC_3.1.0.308	BeerSheva	AutoDetection	Audiocodes_445HD_LYNC	26.04.2018 10:31:45		unknown	
+97239789508ext=9068	25.04.2018 10:37:04	00908f48706	172.17.131.4	440HD	UC_3.1.0.528	BeerSheva	AutoDetection	Audiocodes_440HD_LYNC	25.04.2018 14:04:00	16 H.Haor St., Israel, BS, IL, 7028900, IL	2.0.13.0	GN Netcom A/S Jabra EVOLVE 20 MS

- HRS phones:
Displays the HRS type (457/458) and the speaker firmware version.

Last Update Status	Mac Address	IP Address	IPP Model	Firmware	Tenant	Site	Template	Report Time	Location	BToE Version	USB Headset Type	HRS Speaker Model	HRS Speaker FW
26.04.2018 12:18:51	00908f1a032	172.17.131.2 / 10.38.2.9	UC-HRS-457	UC_3.1.0.478_110	BeerSheva	AutoDetection	Audiocodes_HRS_LYNC	26.04.2018 10:19:20	2.0.13.0		HRS_457	110	

4.4.3 Support for Spectralink 8440 Phone

This release includes support for the Spectralink 8440 in the Devices Status page including the following:

- Support for monitoring and configuration
- New configuration template from Spectralink (similar to the Polycom Trio 8800 template).
- View the status in the image below.

Phone Number	Last Update Status	Mac Address	IP Address	IPP Model	Firmware	Tenant	Site	
	22.04.2018 18:20:29	00907a136031	172.30.251.34	Spectralink 8440	5.5.8.1175	ShayTenant	AutoDetection	4
+97239764720	04.09.2017 10:57:58	00908f61fdc7	10.38.2.13 / 10.2.2.2	450				1
	16.08.2017 18:00:15	00908f484688	10.13.22.9 / 10.1.1.2	440				1 4



4.4.4 Online Help

This release includes context-sensitive online help.

5 New Features in Version 7.4.2000

5.1 Infrastructure

5.1.1 Enhanced Service Provider Capacity

This release includes support for enhanced capacity for service providers for running OVOC. The following machine enhancements are implemented:

- 256GB memory; 24 cores at 2.60GHz; SSD 6TB; 1x10GB + 4x1GB ports

The following table specifies the enhanced service provider capacities:

- Up to 8,000 OVOC managed devices (if OVOC links are not defined, then up to 10,000 managed devices are supported).
- Up to 800 CAPS per server (SBC and Skype for Business)
- Up to 100 devices per region
- Up to 8,000 managed devices
- Up to 16,000 links between devices
- Up to one year or 250 million calls for Call Details Storage (detailed information per call).
- Up to one year or 500 million intervals for Calls Statistics Storage (statistic information storage).

5.1.2 Security Version Extensions for OVOC Server Components

This release includes the following OVOC server component versions:

Component	Version
Linux CentOS	7.3.1611
Oracle DB	12.1.0.2.
Apache	2.4.6 (CentOS)
Tomcat	8
NTP	4.2.6
Java Development Kit (JDK) for Linux™	1.8

5.2 Management

5.2.1 Dynamic IP Phones License Allocation

When phones are added to OVOC, license availability is checked and as a result, if there are insufficient licenses currently assigned to the phones tenant, OVOC *dynamically allocates* licenses to the tenant according to the license parameters “Managed Endpoints” and “Voice Quality Total Endpoints”. This feature eases the deployment of the IP Phones in OVOC. This feature applies to all AudioCodes phones whose management is supported by IP Phone Manager Pro, and to all phones which support SIP PUBLISH protocol and whose QoE management is supported by the

OVOC's Voice Quality Management package. Previously, if a tenant's allocation was full, the OVOC dropped the phone and the user had to manually add it to another tenant in the OVOC GUI.

5.2.2 Adding Devices using FQDN

AudioCodes devices can now be added to OVOC using an FQDN instead of using an IP address (for manually adding single devices only). Devices that are deployed behind a NAT and devices added using auto-detection are not supported by this feature.

The screenshot shows a dialog box titled "AUDIO CODES DEVICE DETAILS" with a close button (X) in the top right corner. The dialog has five tabs: "GENERAL", "SNMP", "HTTP", "SBA", and "FIRST CONNECTION". The "GENERAL" tab is selected and underlined. Below the tabs are several input fields and radio buttons:

- Name: Text input field
- Description: Text input field
- Tenant: Dropdown menu with "Zipora" selected
- Region: Dropdown menu with "Region_1" selected
- FQDN: Radio button (selected) and text input field
- IP Address: Radio button and text input field (disabled)
- Serial Number 1: Radio button and text input field (disabled)
- Serial Number 2: Radio button and text input field (disabled)
- Location: Text input field

At the bottom of the dialog are "OK" and "Cancel" buttons.

5.2.3 Support for the New Mediant 800C Device

This release includes support for the new Mediant 800C device.

5.2.4 Associating Value to Link Category Type

When adding a Link, you can enter the value of the selected Category Type. For example, for an IP Group, you can then enter the ID of the IP Group or for "Phone Prefix", a regular expression can be entered.

5.2.5 Alarms

5.2.6 New Management Alarm

A new event "Floating License Allocation Extended" is raised when IP Phones are added to OVOC using dynamic License allocation (as described above).

5.2.7 New IP Phone Alarm

When there is new Jabra speaker firmware available and a user does not upgrade when prompted, the speaker is disabled and the new alarm “IP Phone Requires Reset” is raised advising users to reset their phone. During the reset, the latest firmware is installed and the speaker is enabled.

5.2.8 New SBC Device Alarms

The following new alarms have been added for SBC devices:

- acNGINXConfigurationIsInvalidAlarm
- acNGINXPprocessIsNotRunningAlarm
- acCloudLicenseManagerAlarm
- acMediaClusterAlarm
- acMediaClusterRemoteInterfaceAlarm
- acHANetworkMismatchAlarm
- acHANetworkMonitorAlarm
- acHAEthernetGroupAlarm

5.2.9 Alarms and Alarm Forwarding Performance Improvements

The mechanisms for Alarm forwarding and for Resync requests (for the Active Alarms table) sent from OVOC to Northbound interfaces have been enhanced. As a consequence, the UDP port range has been extended with 40 additional UDP ports (range 1180 –1220). Port 1163 (previously used for forwarding Voice Quality alarms to Northbound interfaces) has become obsolete. Ports 1164-1165 are dedicated for Alarm Resync operations (unchanged)

5.2.10 Alarm Forwarding via Internal Mail Server

The Alarms Forwarding configuration now includes a new feature to forward alarms to an external mail server using an internal mechanism without the need to configure the credentials of the mail server. This infrastructure was previously implemented for Scheduled Reports.

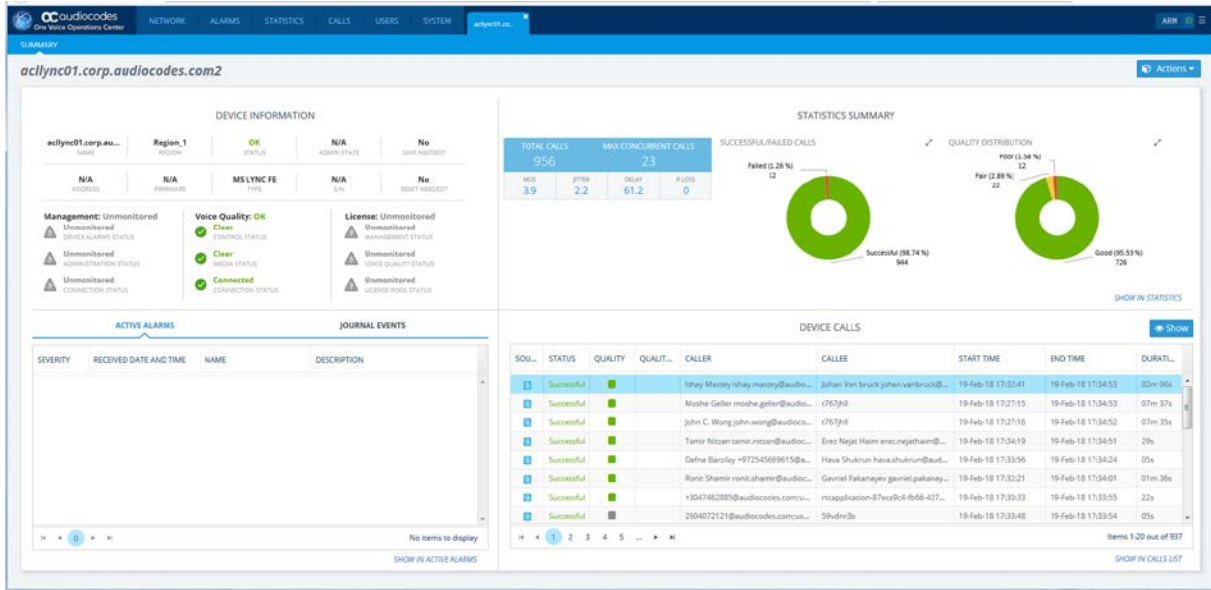
5.3 Quality of Experience (QoE)

5.3.1 Enhancement for the Max Concurrent Streams Parameter

The accuracy of the calculation of the “Maximum Concurrent Streams” parameter for the “Links” entity has been enhanced.

5.3.2 Open Call Details Dynamic Tab From User/Device/Link Details

You can now access the Call Details screen from the User Details screen, the Device Details screen and from the Link Details screen.



5.4 Integration with AudioCodes Routing Manager (ARM)

You can connect directly from OVOC using Single Sign-on to the ARM (AudioCodes Routing Manager) to manage calls routing over the network.

6 New Features in Version 7.4.1000

6.1 Infrastructure

6.1.1 Documentation Packaging as part of the Server

User Documentation is now added to the /nbif/documentation folder. For DVD5, the clean install is a separate folder in the image. For DVD3, the clean install or upgrade the files are retrieved from the ISO and copied to the above folder. For upgrades, the documentation set is overwritten with the available new document.

6.2 OVOC Application Related

6.2.1 Geo Maps View

The OVOC interface includes a new view with a world map transposed on the Topology map showing the geographic locations of managed devices. Zooming in on the map shows the devices installed in a specific location. For example, you can zoom in on the London metropolitan area and view all devices that are managed in this location.

6.2.2 SBC Call Flow

An SBC call flow graphical diagram is displayed in the Call Details page. This diagram displays SIP call dialogs that can be used by the Voice Quality Management package for debug and other purposes. The call flow displays all the SIP messages related to the call session, including requests (e.g., INVITEs) and responses (e.g., 200 OK). For SBC calls, the call flow reflects messages as sent "over the wire" - incoming messages before manipulation and outgoing messages after manipulation.

OVOC displays the call flow using vertical and horizontal lines where the vertical lines represent the SIP entities (including the device itself) involved in the dialog and where the horizontal lines represent the SIP requests and responses.

This information is sent to OVOC over the XML based connection (ports 5000/5001).

This feature is supported for AudioCodes devices installed with firmware versions **7.20A.156.009** and later. When this feature is enabled, Voice Quality Management is affected, for more information; refer to the *One Voice Operations Center IOM* manual.

6.2.3 Configuring Regular Expressions in QoE Links

When adding a Link and configuring the 'Category Type' as 'Phone Prefix', 'Control IP' or 'Media IP', you can now enter a regular expression instead of a string in the field 'Category Value'. If the regular expression is matched, the call is sent over the link. For example, a.* indicates any value beginning with the letter 'a' will be accepted, for example, abc, a, abc123.

6.2.4 Logging in to Devices with LDAP or RADIUS Credentials

When OVOC users are authenticated with an LDAP or RADIUS server, it is possible to configure OVOC to use the LDAP or RADIUS credentials to login to AudioCodes devices over Single Sign-on instead of using the HTTP/S (Device Admin User and Device Admin Password) credentials in the device settings or in the tenant's SNMP profile.

6.2.5 New Calls List Fields

The Calls table includes the following new fields:

- Call Type: displays the call type as string
- Device: displays the device/s through which the call passed
- Link: displays the link/s through which the call passed
- Termination Reason displays the termination reason as string

6.2.6 Show Grid

A new option enables display and hiding of the grid in the Network Topology page.

6.2.7 Single Sign-on to ARM

Single Sign-on from the OVOC Web client to the ARM Web client is supported starting ARM version 8.0. For prior ARM versions, a username and password must be entered.

7 New Features in Version 7.4

7.1 Infrastructure

7.1.1 OS CentOS 7

This version upgrades to Linux CentOS Version 7.3-1611 64-bit, Rev.180C.

7.1.2 DB Oracle 12

This version upgrades to Oracle Database version 12.

7.1.3 New Web Interface

The OVOC features a new sophisticated Web architecture, enabling customers to manage multiple remotely located work centers and workstations over a secure HTTPS connection. The OVOC includes support for multi tenancy where managed entities can be associated with tenants and sites (see Section 4.2.1). OVOC entities are provisioned through an intuitive Management interface that consists of the following modules:

- **Network:** This view consists of a Topology map showing all currently connected devices and the links between them. When you hover over a device, you can view the basic device information and key status indicators. A network summary pane displays an overall picture of the network topology including statistics for all currently managed entities (devices, links, sites and endpoints), an active alarms summary with severity indicators, the total number of calls and concurrent calls, the call quality distribution and successful calls percentage. From this pane, you can also double-click a specific alarm severity to open the details screen, which includes all of the alarms with this severity. For example, if there are four Warnings in the system, you can click this area to open details for all of these warnings. From the Network view, you can access pages containing detailed entity information for devices, links, sites and endpoints.
- **Alarms:** This view consists of separate pages for Active alarms, Journal actions, History alarms and the configuration of Alarm Forwarding rules. For Active alarms, detailed information is displayed in a separate pane including SNMP Info. For Journal and History pages, informative graphs are displayed in a separate pane including statistical breakdowns for devices, alarm severities, hour of the day and most common journal actions. Topology filters have been added to the Alarm Forwarding rules filter criteria e.g. forwarding according to tenants, regions, devices, sites or links.
- **Statistics:** This view consists of separate listings of Call Statistics for Devices, Links, Sites and Endpoints. You can also open the Statistics report tool to generate reports based on these statistics. Analyzed statistics for devices include successful/failed calls, maximum concurrent calls, and call quality. Statistics displayed for links sites and endpoints include successful/failed calls, calls quality and utilization distribution. A Statistics Summary pane is displayed on each managed entities page including the Voice Quality Metrics scores for MOS, Jitter, Delay and Packet Loss.

- **Calls:** This view includes a listing of all calls made by Active Directory users and enables you to configure QOE Thresholds and Alert Rules.
- **Users:** This view includes a listing of all Active Directory users and summarized data for calls made. This data includes the number of calls made, total call duration, successful/failed calls and call quality and call metric data (Moss, Jitter, Delay and Packet Loss). You can also view Active Directory details for each user and manage the Active Directory database, for example to synchronize the database with OVOC.
- **System:** This view enables you to manage the global settings of the OVOC. This includes the License Pool Manager, operator security permissions, global alarm settings, downloading and uploading files to and from the Software Manager, global settings for HTTP/S and SNMP settings, QoE Thresholds and QoE Alerts and automatic device backup settings.

7.2 OVOC Application Related

7.2.1 Tenants and Sites

This release includes support for new entities in the One Voice Operations Center Topology: “Tenants” and “Sites”. The creation of these entities enables large enterprises and service providers to install the One Voice Operations Center application in a central Data Center and to remotely manage VoIP topology across multiple sites for multiple vendors. The “Tenant” is defined as the highest node in the Topology which can include multiple sites. The “Tenant” may represent a specific service provider account or for a large enterprise, it may represent a corporate subsidiary or subset of multiple sites. The following summarizes the supported configurations:

- **ITSP Multi-Tenancy:** an ITSP can purchase a single instance of the OVOC application with a license to manage multiple tenants, where each tenant may represent an Enterprise customer.
- **Enterprise Multi-Tenancy:** an Enterprise can purchase a single instance of the OVOC application with a license to manage multiple tenants, where each tenant may represent a subset of sites.

When devices are added to the OVOC, they are added to the appropriate tenant and site according to the devices subnet IP address. If the devices subnet IP address cannot be matched, the device is added to a default tenant.

Tenant administrators and operators can be defined with specific permissions for managing tenant specific entities and resources. The Tenant operator can manage the License Pool for those devices that belong to the managed tenant and can move devices between managed tenants. The Tenant administrator, in addition to the Tenant Operator permissions can also create and remove Tenant operators. Only the Global System Administrator can add or remove tenants themselves.

7.2.2 Sync Links

The device action Sync Link allows links to be automatically generated and updated between AudioCodes SBC and gateway devices and its connected entities in the VoIP topology. Three different AudioCodes SBC/gateway device configuration tables are managed by the OVOC Sync Link feature:

- IP group: The IP Group represents an IP entity on the network with which the E-SBC communicates. This can be a server (e.g., IP PBX or ITSP) or it can be a group of users (e.g., LAN IP phones).
- Trunk group: A Trunk Group is a logical group of physical trunks and channels.
- Media realm: Generally represented by one Media Realm for internal (LAN) traffic and one for external (WAN) traffic

Sync Link checks each row in each table and then generates links between AudioCodes devices and generic devices for each row in each table for which a link does not already exist. A new generic device is created for each link. For example, if on an SBC device, two IP Groups are configured, Skype for Business Server 2015 and SIP Trunk ABC and two Media Realm are configured, LAN and WAN. When the Sync Link action is performed, four links are generated (two IP Groups and two Media Realms).

7.3 Active Alarms Resync Mechanism (Northbound Interfaces)

A new mechanism enables you to perform random SNMP SET requests to retrieve the Active alarms table from a Northbound Interface when there are network problems or a discontinuation of the alarm sequence. This feature is implemented on the existing EMS SNMP agent. In addition, a new MIB `audiocodes.acProducts.acEMS.acEMSConfiguration.acFaults` has been implemented.

7.4 IP Phone Manager Pro

7.4.1 Provisioning Phones according to Subnet Match

Phones can now be provisioned with their template file according to their subnet. If the network administrator does not define a tenant in the URL in DHCP Option 160, the phone is allocated a tenant/site according to *best* match i.e. according to either a tenant Subnet Mask or site Subnet Mask that is configured in Site/Tenant details in the OVOC Web.

7.4.2 Configuration Template Enhancements

This release includes the following configuration template enhancements:

- A configuration file template feature lets network administrators customize configuration files per phone model, tenant, site, device and user. Template configurations can be applied for specific features, for example, Daylight Savings Time. In this case, you can edit a template including all of the required parameters for implementing this feature. Configuration updates can also be performed on multiple users simultaneously in a single action.

- You can import (.csv files) and export (.zip files) the configuration of tenants, regions, sites, templates, system settings, template placeholders, tenant placeholders, site placeholders, phone firmware file. You can also import and export lists of users and devices.
- Once the phones have been loaded with their initial configuration, you can later provision specific phones with updates for groups of users or individual users.
- An interactive user-friendly template editor has been added.

7.4.3 Daylight Saving Time

System Settings now include the activation of daylight saving time and the configuration of the precise time when the phone starts and ends the daylight savings offset.

7.4.4 Network Topology Snapshot

A Network Topology Link on the Toolbar allows administrators to view a snapshot of the network's tenants and subnets. Devices are divided according to subnets. For example, it allows administrators to determine at a glance which subnets are causing traffic overload. Administrators can then point their mouse at a device in a subnet to view more detailed information.

7.4.5 Restoring User-configured Speed Dials and Programmable Keys in the Phones Configuration Files

User-configured Speed Dials and Programmable Keys can now be saved in the phone's cfg file and backed to the server. After they have been configured, the phone automatically updates the cfg file to the server. Consequently Speed Dials and Programmable Keys no longer have to be reconfigured and can be restored to the phone under the following circumstances:

- When the Speed Dials and Programmable Keys are accidentally deleted
- When the phone is restored to factory defaults
- When you start working with a new device
- When you deploy another device at your workstation
- When your phone is upgraded

7.4.6 Better Together Status (BToE Status)

BToE statuses are now displayed in the Devices Status screen.

8 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
High Availability on OVOC Bare Metal platform	High Availability is not supported for OVOC servers on Bare Metal platform.	
High Availability-AudioCodes devices	When there is active call traffic on AudioCodes HA devices during HA switchover, the OVOC QoE application does not recognize this traffic and therefore does not display and calculate the QoE data for this traffic. Applicable for all AudioCodes HA devices.	This will be fixed in a future release.
External Server Authentication	External Server Authentication is not supported for TACACS.	-
	Multi-tenancy is not supported for RADIUS and LDAP Active Directory users.	-
	<ul style="list-style-type: none"> • The option “Use LDAP Credentials for Device Page Opening” is not supported for operators when the LDAP “Level” parameter is set to Admin (1) • The option “Use RADIUS Credentials for Device Page Opening” is not supported for operators when the RADIUS “User Level” parameter is set to Administrator (100) 	This will be fixed in a future release.
Certificates	If you have installed SSL certificates for Microsoft Active Directory, MS-SQL Server or for LDAP User authentication and you then run the Server Certificates Update procedure in the EMS Server Manager, these Microsoft certificates are overwritten.	Before running the Server Certificates Update procedure, ensure that you have backed up the Microsoft Certificates to an external location. After running the Server Certificates Update procedure, reload the Microsoft Certificates in the OVOC Web.

Issue	Problem/Limitation	Comments and Workaround
Activate MIB browser & Putty.	MIB browser and Putty cannot be activated from the OVOC Web.	These applications can be activated as Stand-alone applications.
Network & server Hardware/Software configuration monitoring	(EMS > Help > server conf frame).	This will be fixed in a future release.
Private Labeling	This version does not support private labeling.	-
Automatic Updating of Device's SNMP Credentials.	When SNMPv2 or SNMPv3 settings are changed for the tenant, site or devices, the devices SNMP configuration is not automatically updated (only the OVOC database is updated).	Directly update the devices SNMP settings. This will be fixed in a future release.
Performance Monitoring	Performance Monitoring is not supported in this release.	This will be supported in a future release. Device Performance Monitoring Thresholds Setting can be performed via device local management (using SNMP or an ini file).
MEGACO support	MP-1xx and MP-124, Mediant 1000 and Mediant 3000 Version 6.6 are not supported in this release.	-
MP-20x B support	MP-20x B devices are not supported in this release.	-
Alarms	A unified History and Journal View is not yet available.	This will be fixed in a future release.
Alarms Forwarding	SNMP, Mail & Syslog forwarding is supported; however, Mail2SMS is not supported.	These issues will be fixed in a future release.
	The Overflow alarm is not cleared if raised during OVOC shutdown.	
	OVOC supports a maximum of 10 alarm forwarding rules for SNMP trap rule destination for the entire system.	Contact AudioCodes support to change this number per customer scenario.
Welcome & Advisory Messages	Welcome & Advisory Messages are not supported.	-
License Pool	Saving the License Pool configuration to a csv file is not supported.	-

Issue	Problem/Limitation	Comments and Workaround
	Operators with Monitor & Operator levels are logged out when accessing the License Pool screen.	This issue will be resolved in a future release.
	The License Pool works only if OVOC authentication type is "Local" and not "LDAP" or "Radius".	This issue will be resolved in a future release.
Mass Operations	Mass operations on AudioCodes devices such as reset or firmware upgrade can be done for a maximum of 500 devices (or maximum devices in a single table page).	
Voice Quality Package (SEM)	<ul style="list-style-type: none"> The Utilities > Server Configuration screen from Version 7.2 is not supported: Max calls drop time and Mail Source Address Configuration for Scheduler Reports and the Display Name are not supported. 	This will be supported in a future release.
	<ul style="list-style-type: none"> The Utilities > Server Storage screen from Version 7.2 is not supported: Max Storage Level and Max Stored Days for call details are not supported. 	This will be supported in a future release.
	The 'Save' option in the User Experience screen is not supported.	-
	Real time information, for example, in the Network/Statistics screens are only supported for the last three hours.	This will be supported in a future release.
	In the Statistics Screen, Quality Cause Statistics are not supported.	
	SBC calls in excess of pre-configured maximum monitored call duration of three hours (e.g., the session of a participant in a Skype for Business conference call over an SBC) or an SBC call that is incompletely reported to the OVOC server is not displayed in the Calls List.	This limit can be extended at the request of AudioCodes support.
Browser cache	Cache memory browser overload causes performance degradation. In addition, after upgrade to the new OVOC version its recommended to clear your browser cache.	See the following link for information on improving browser performance. https://7labs.io/tips-tricks/clear-site-specific-cookies-cache.html
Floating License	The Floating License does not support multi-tenancy.	

Issue	Problem/Limitation	Comments and Workaround
	The Floating License works only if the OVOC authentication type is "Local" and not with "LDAP" or "Radius".	This issue will be resolved in a future release.

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