Release Notes

AudioCodes One Voice™ Operations Center

AudioCodes Routing Manager (ARM)

Version 8.2

audiocodes

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Notice

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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Related Documentation

Manual Name
ARM Installation Manual
ARM User's Manual
Mediant 9000 SBC User's Manual
Mediant 4000 SBC User's Manual
Mediant SE SBC User's Manual
Mediant SE-H SBC User's Manual
Mediant VE SBC User's Manual
Mediant VE-H SBC User's Manual
Mediant 1000B Gateway and E-SBC User's Manual
Mediant 800B Gateway and E-SBC User's Manual
Mediant 500 Gateway and E-SBC User's Manual
Mediant 500 MSBR User's Manual
Mediant 500L Gateway and E-SBC User's Manual
Mediant 500L MSBR User's Manual
MP-1288 High-Density Analog Media Gateway User's Manual
One Voice Operations Center Server Installation, Operation and Maintenance Manual
One Voice Operations Center Integration with Northbound Interfaces
One Voice Operations Center User's Manual
One Voice Operations Center Product Description
One Voice Operations Center Alarms Guide
One Voice Operations Center Security Guidelines

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1 Overview

This document describes the new features and known issues in Version 8.2 of the AudioCodes Routing Manager (ARM).

1.1 Managed Devices

ARM Version 8.2 supports the following AudioCodes products:

Table 1-1: AudioCodes Products Supported by ARM Version 8.2

Product	Major Versions
Mediant 9000 SBC	7.2.158 and later
Mediant 4000 SBC	7.2.158 and later
Mediant SE/VE SBC	7.2.158 and later
Mediant 1000B Gateway and E-SBC	7.2.158 and later
Mediant 800B Gateway and E-SBC	7.2.158 and later
Mediant 500 E-SBC	7.2.158 and later
Mediant 3000 Gateway only	7.00A.129.004 and later

1.2 Supported Node Firmware

ARM Version 8.2 supports nodes (SBCs / Gateways) version 7.0 for Mediant 3000 and version 7.2.158 and later for all Linux-based devices (Gateways and SBCs).

Note: Customers are strongly recommended to upgrade their devices to Version 7.2.158 or later as issues were encountered with device version releases earlier than 7.2.158.

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2 What's New in Version 8.2

This section describes the new features introduced in ARM Version 8.2.

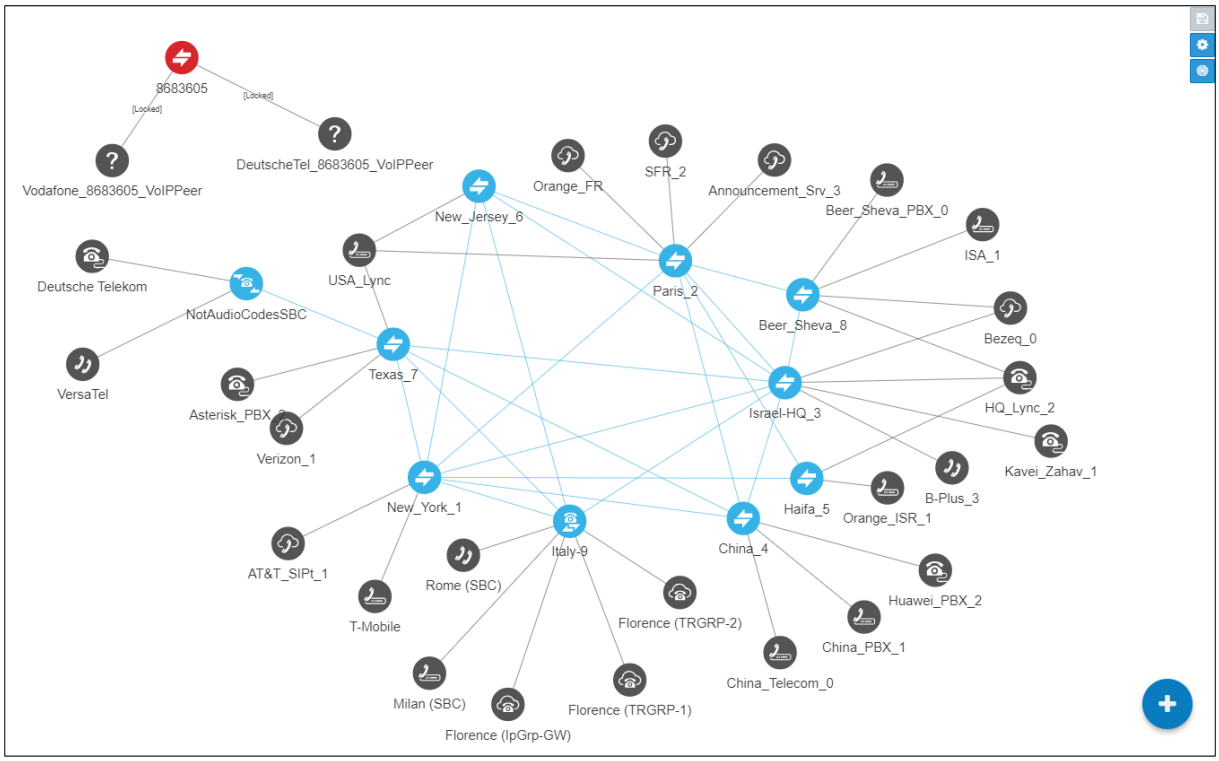
2.1 Redesigned Map with New Capabilities and Extended Capacity

ARM Version 8.2 introduces a completely redesigned ARM Map, including new capabilities and capacity.

2.1.1 Support for Very Large Networks and More Topology Elements

The ARM Version 8.2 supports agile and graceful operations in the Network Map even when managing very large customer networks with extended numbers of topology elements (Nodes and VoIP Peers).

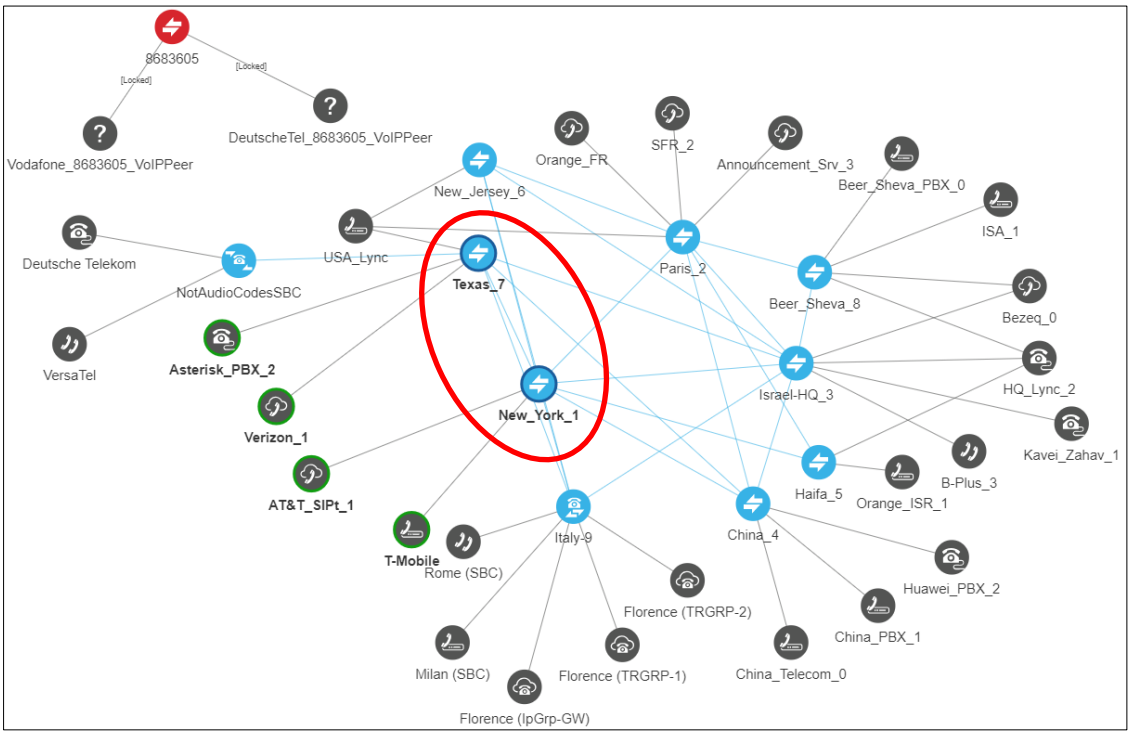
Operations include moving and relocating elements in the Map from one position to another and zooming in and zooming out.



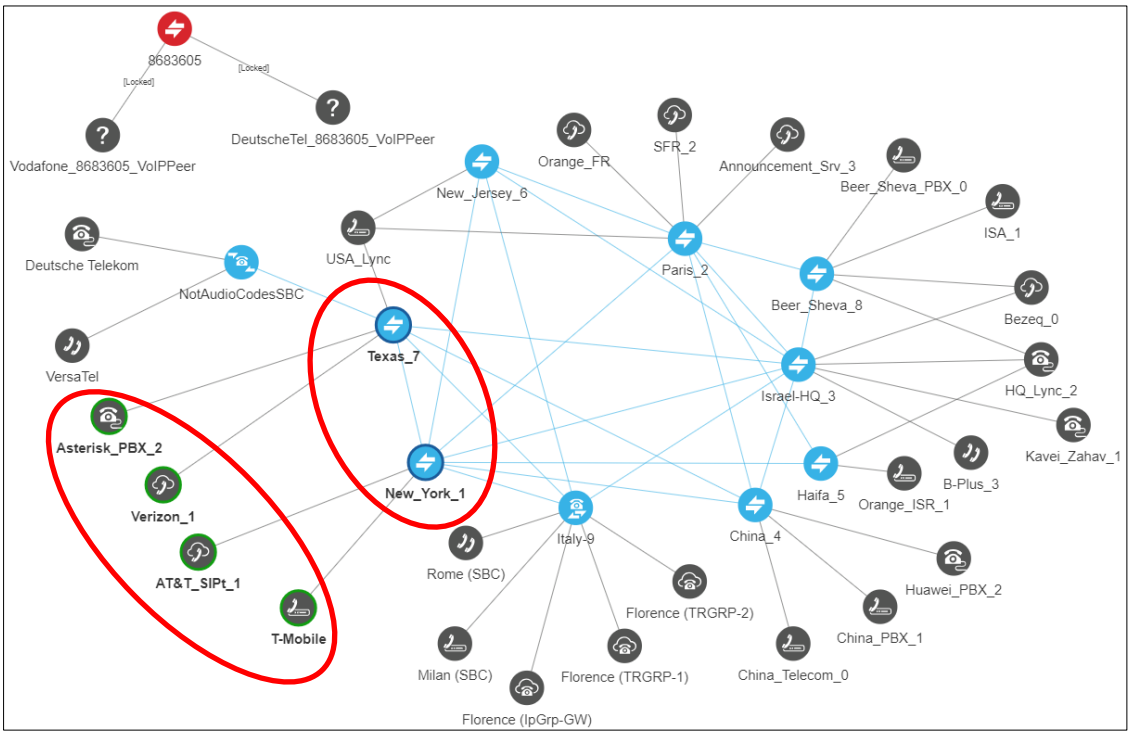
2.1.2 Multiple Topology Elements can be Moved / Repositioned Simultaneously

ARM Version 8.2 supports moving / repositioning multiple selected elements - Nodes and VoIP Peers – simultaneously to facilitate a friendlier operator experience and to decrease operator vulnerability to routing configuration errors. Operators can select a combination of elements and move / reposition them simultaneously with the mouse. See in the example below how two Nodes + four VoIP Peers are selected and relocated:

Before Relocation [Clutter]

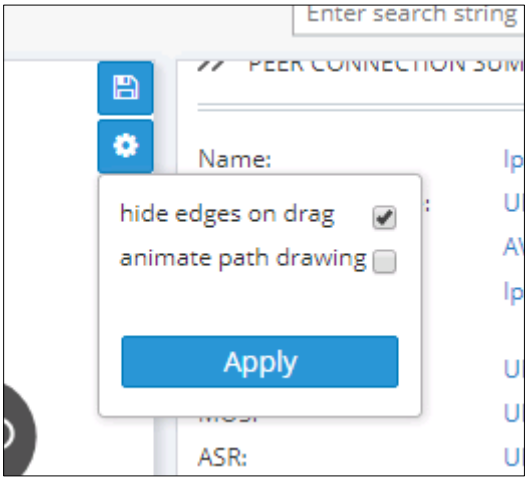


After Relocation [Less clutter]



2.1.3 Support for Very Large Networks with High Numbers of Edges

When moving / repositioning elements in the Network Map of ARM Version 8.2, operators can benefit from a new **hide edges on drag** option available from the 'Diagram Configurations' menu.

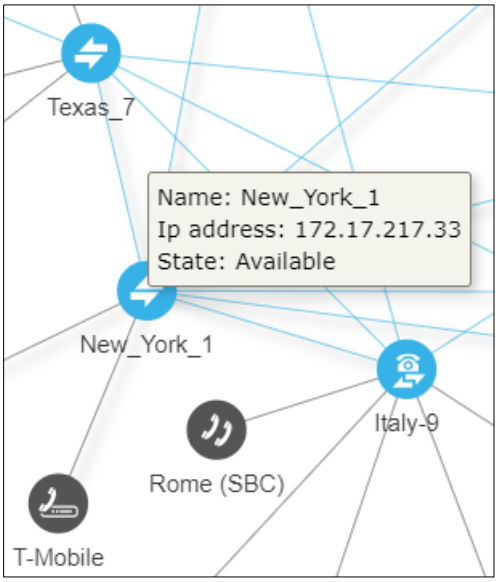


With this option, Connections and Peer Connections (graph edges) are not displayed (hidden) when the operator relocates Map elements (for example).

Even when managing very large networks with high numbers of edges, the Map in this version agilely and gracefully performs relocations and other operations.

2.1.4 Lighter Hoover for each Topology Element

The hoover for each element now only includes *minimal* information related to that element.



Extended information is presented for a selected element in the page's rightmost Summary pane.

Although Actions are no longer available in the *hoover*, when managing a very large and busy network topology Actions can be made operational by selecting the element and then right-clicking to select an Action from the Actions menu that pops up.

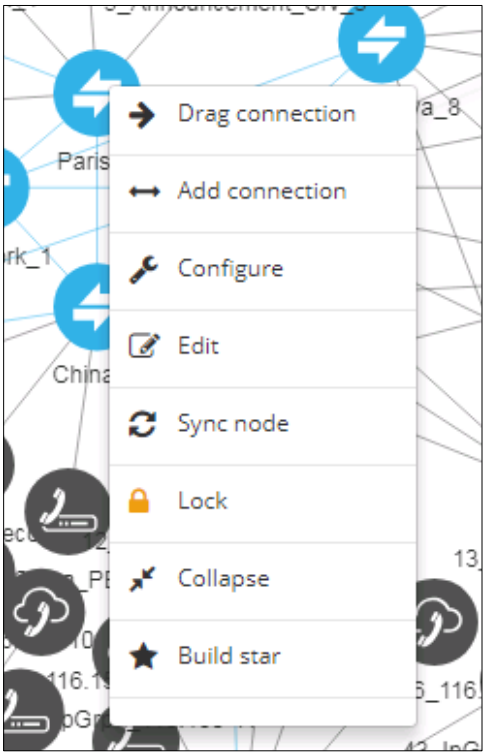
2.1.5 Activating Actions Associated with a Topology Element

Actions on a topology element such as a Node, VoIP Peer, etc., can be activated by the operator as follows:

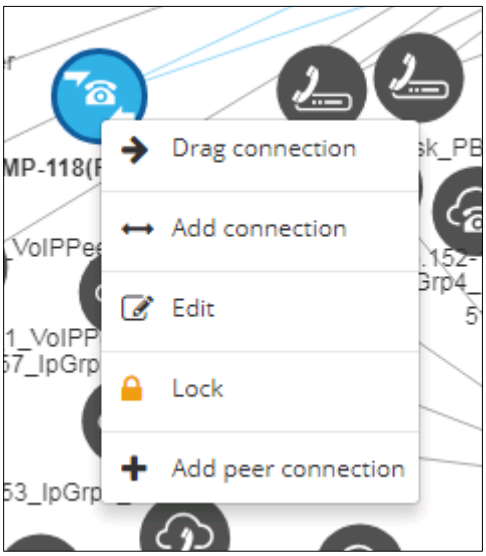
1. Select it
2. Right-click
3. Choose the Action

The screens below show the Actions that can be activated on each element:

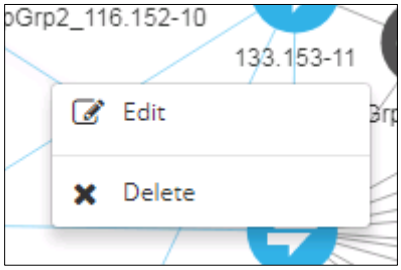
- **Actions on a Node (SBC or Gateway)**



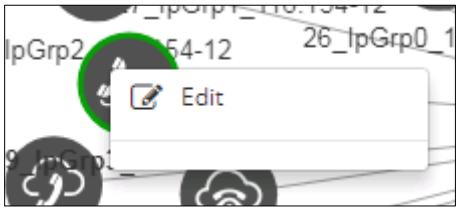
- **Actions on a third-party device (non-AudioCodes)**



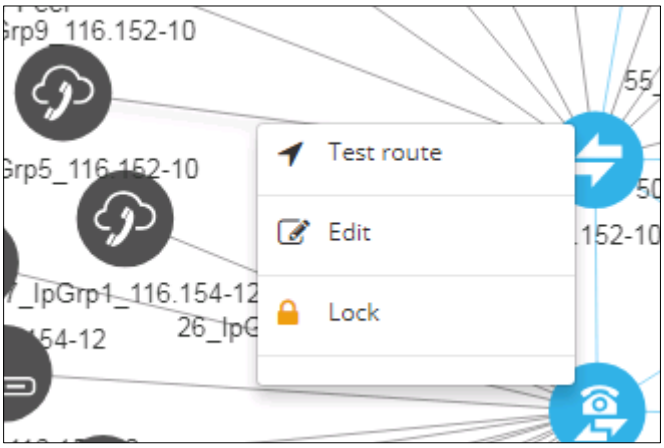
Actions on a Connection



Actions on a VoIP Peer



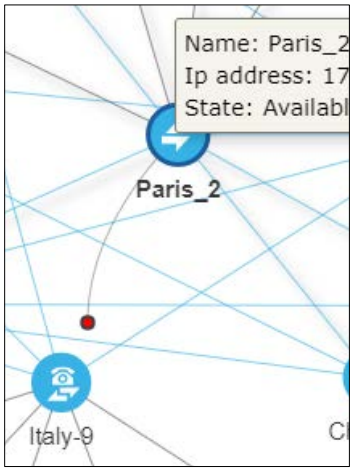
Actions on a Peer Connection



2.1.6 New Options to Add a Connection to the ARM Topology

ARM Version 8.2 features new optional ways of adding to the ARM topology a new Connection between two Nodes:

- **Add Connection**
  - If this action is activated without selecting a specific Node, that is, by clicking the **Add Connection** button, the operator must select Nodes from drop-down lists at both ends of the Connection in the Add Connection screen.
  - If this action is activated when one Node is selected, that is, by selecting a Node and then clicking the **Add Connection** button, only Node-2 must be provided.
- **Drag Connection**
  - This option allows the operator to draw (drag) a connection between two Nodes on the ARM Map (**Paris_2** and **Italy-9** in the figure below).
    The operator can either:
    - click the new **Drag Connection** button and then drag from one Node to the other
    - select a Node, right-click, choose menu option → **Drag connection** and then drag from that Node to the other

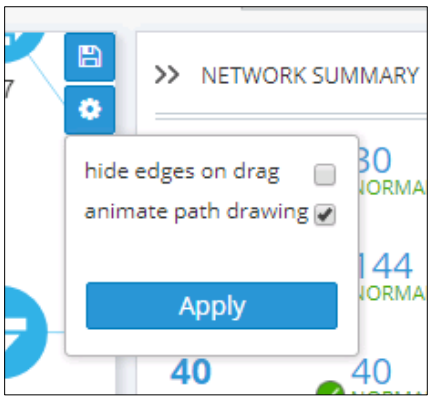


2.1.7 Animated Path for Test Route and Top Routes

ARM Version 8.2 features animated visualization of the Call Path. It's provided for the visualization of Test Route and Top Route actions.

ARM Version 8.2 also features presentation of the static call path.

To apply visualization of an animated path, the operator needs to select and apply the option **animated path drawing** from the 'Diagram Configurations' menu.

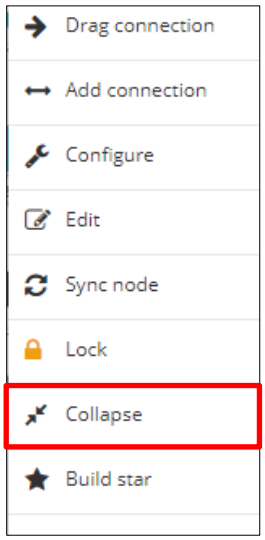


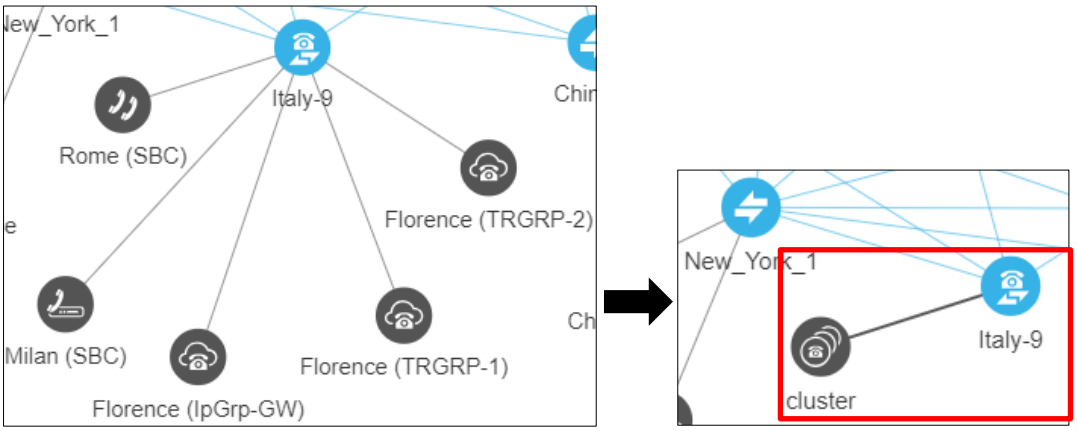
2.1.8 Extended VoIP Peers Collapse, Expand and Clustering Capabilities

ARM Version 8.2 provides extended functionality for the VoIP Peers Collapse / Expand feature and new VoIP Peers clustering capability.

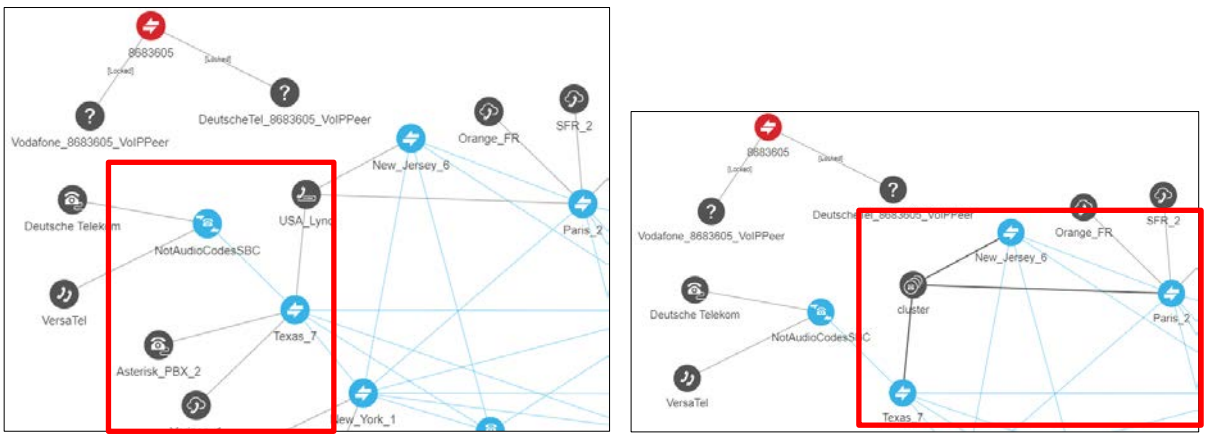
2.1.8.1 Collapse

The Collapse action is now activated by selecting a Node, right-clicking it and then choosing **Collapse** from the popup menu:



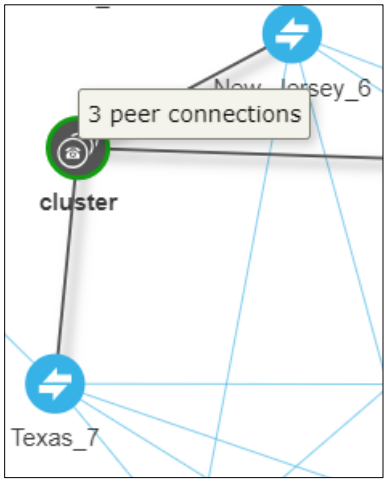


A cluster of VoIP Peers created by a 'Collapse' action now also includes the VoIP Peers that have Peer Connections associated with other Nodes.

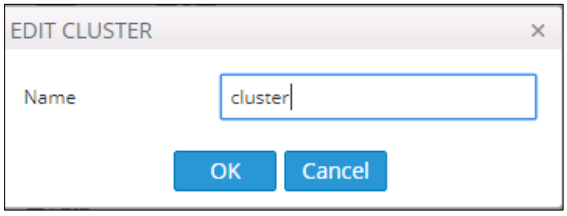


Peer Connections are emphasized by a bold line.

The tooltip on collapsed Peer Connections indicates the number of Peer Connections in the cluster (3 in the figure below).



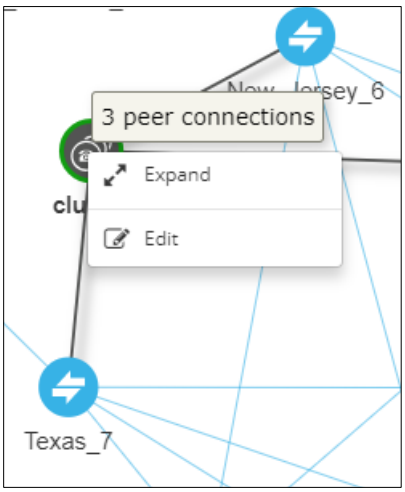
A set of collapsed VoIP Peers gets the name **cluster** by default. The default name can be edited.



The name of a cluster is preserved (stored on the ARM Configurator server side).

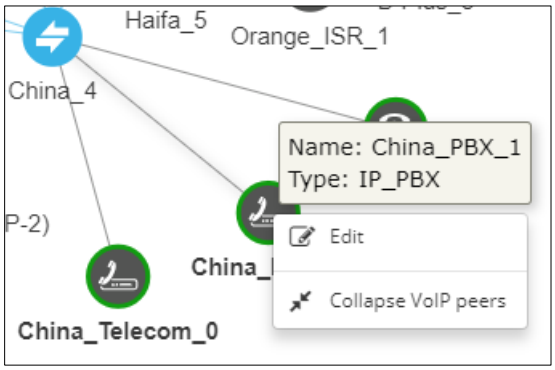
2.1.8.2 Expand

Expand is now activated from a cluster of collapsed VoIP Peers by right-clicking the cluster icon and selecting the **Expand** action.



2.1.8.3 Clustering

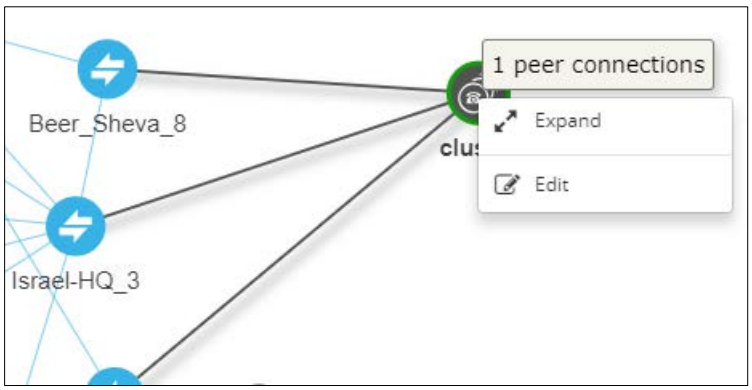
ARM Version 8.2 provides new VoIP Peers clustering capabilities; an operator can select multiple VoIP Peers in the Map, right-click and then choose from the popup menu the action **Collapse VoIP peers**.



Note that even if the selected VoIP Peers are attached to different Nodes, the **Collapse VoIP peers** action will still be applicable.

By pointing the mouse device over a cluster icon following collapse, the operator can view from a tooltip the number of collapsed Peer Connections. The cluster will be assigned the name ‘cluster’.

A cluster can be expanded by right-clicking its icon and then choosing **Expand** from the popup menu.

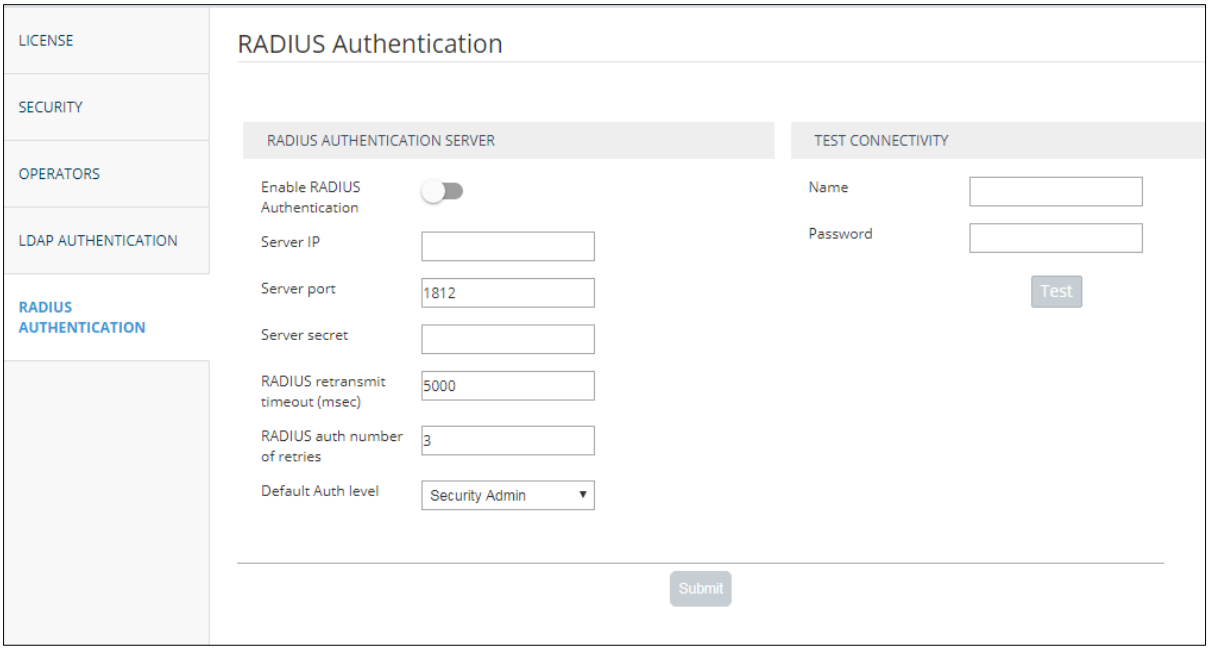


2.2 Operator Login Authentication with an External RADIUS Server

ARM Version 8.2 supports using the enterprise's external RADIUS server for operator login authentication. This new feature augments local operator login authentication supported in previous ARM releases, and comes in addition to LDAP authentication.

The RADIUS server is added to the ARM in a new RADIUS Authentication page.

Figure 2-1: RADIUS Authentication Page



Only operators with a security level of 'Security_Admin' can edit RADIUS authentication server attributes.

ARM Version 8.2 also features capability to *test the connectivity* to the RADIUS authentication server (under the screen section 'Test Connectivity' in the figure above).

Note that the default AudioCodes dictionary definition must be used with the RADIUS authentication server for the operator's role definition (same as for the SBC or OVOC).

Note that enabling and using both the LDAP server and the RADIUS server for authentication is not allowed.

If LDAP / RADIUS authentication is enabled, the order used is:

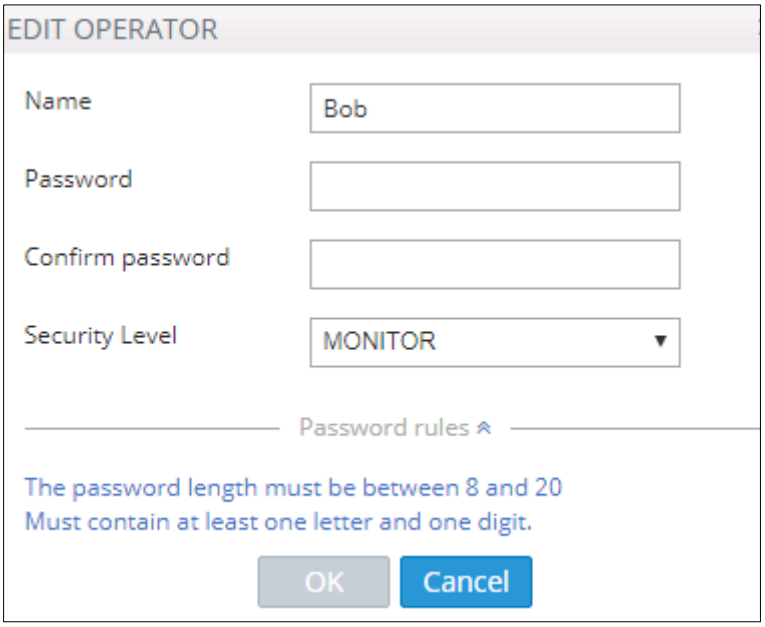
- LDAP or RADIUS
- Local storage (Database)

If the RADIUS server is down or if the user can't be authenticated with the RADIUS server (either the user isn't found or the password doesn't match), the local operators table is used.

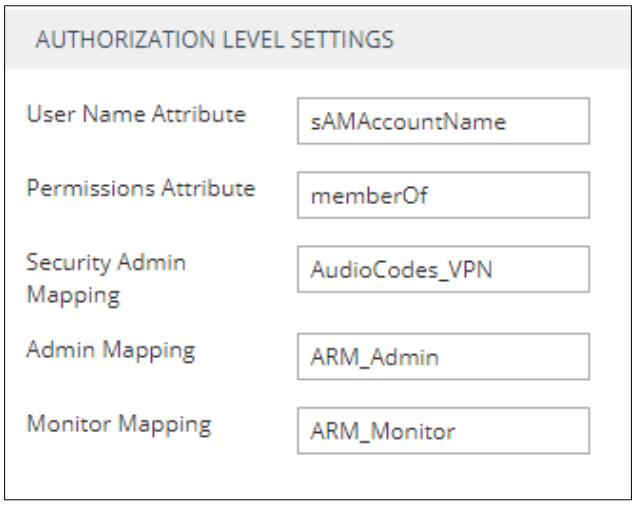
2.3 Operators Permission Level

Up to Version 8.2, ARM supported two types of operators, 'Admin' and 'Security admin', where both have read and write permissions.

ARM Version 8.2 adds support for a new type of operator, 'Monitor', who has read-only permissions. The new 'Monitor' operator's role is added in the operator's configuration page:

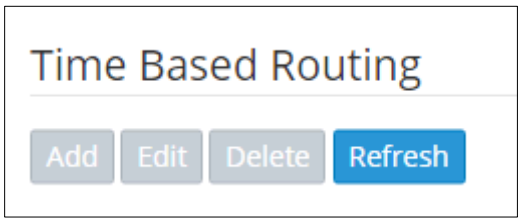


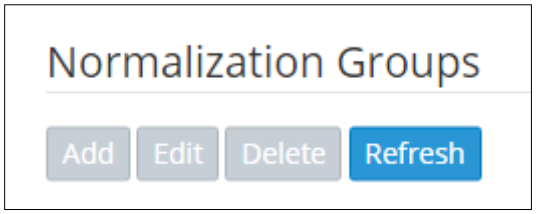
The new 'Monitor' operator's role is also supported for LDAP and RADIUS authentication:

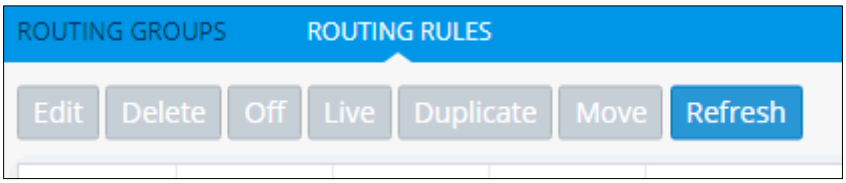


The user with 'Monitor' permissions is not allowed to edit the ARM configuration. For example, they cannot add or edit Routing Rules, Routing Groups, Users, User Groups, LDAP servers, Property dictionary, SNMP destination and other settings.

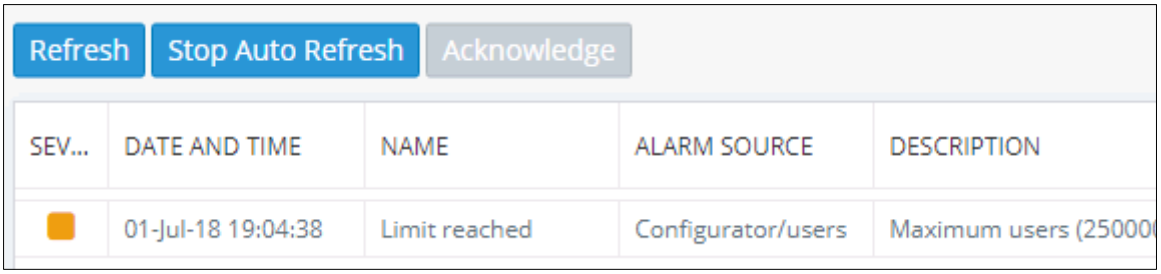
All the relevant actions are disabled at the GUI level. Here are some examples (buttons are disabled):



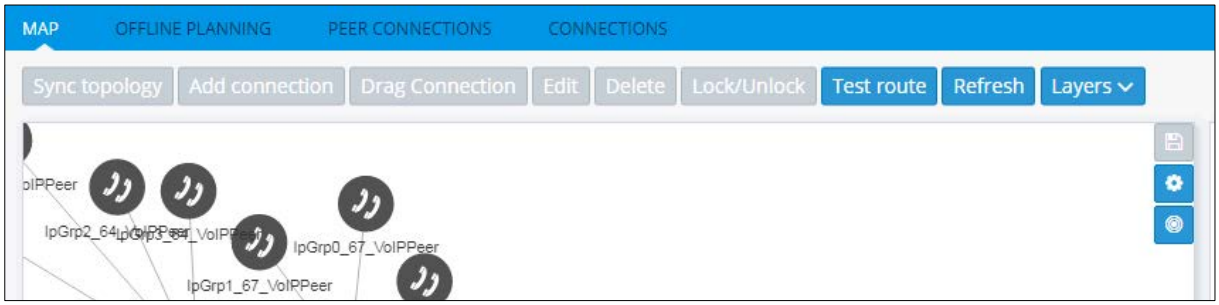




The 'Monitor' operator also cannot acknowledge alarms:



For the ARM Map (network management), the 'Monitor' operator is not allowed to sync topology, add or delete a connection, apply, lock/unlock and save items location.



For Offline Planning, the 'Monitor' operator is not allowed to sync topology, add or delete a connection or peer connection, apply, lock/unlock, import topology or node, clear map and save items location.

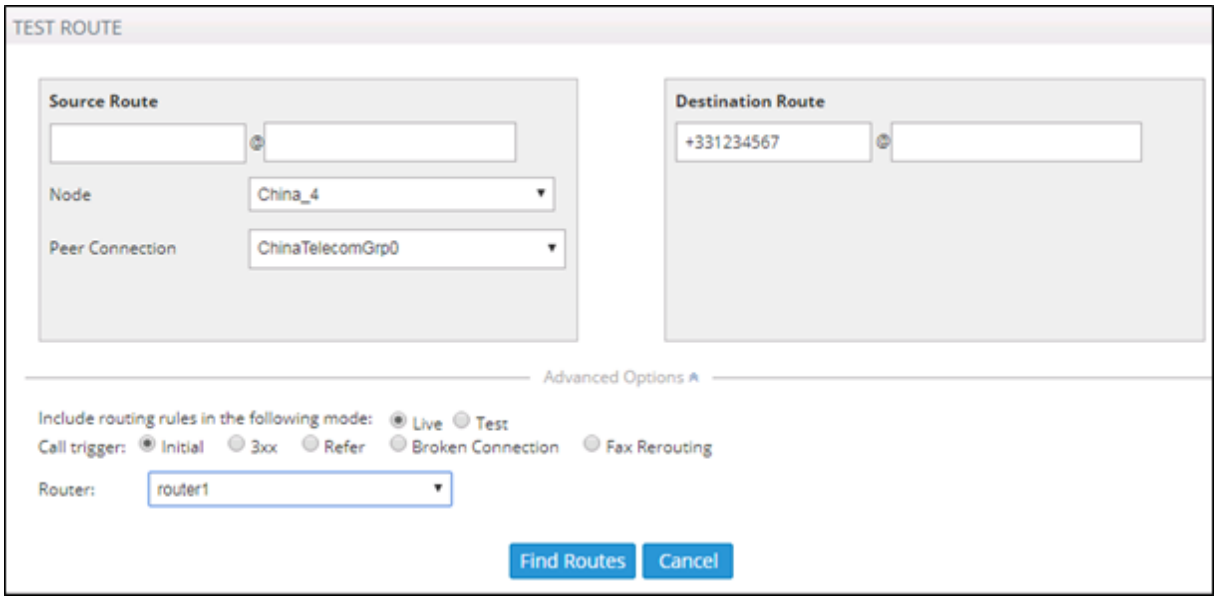
Even though the **Edit** button is enabled, it can be used only for viewing because the **OK** button is disabled for the 'Monitor' operator.

An operator with 'Monitor' permission cannot see operators with higher permissions ('Admin' and 'Security Admin').

Note that all restrictions that apply to the 'Monitor' operator also apply to the ARM's northbound REST API.

2.4 Test Route with a Specific ARM Router

Up to Version 8.2, the ARM Configurator contacted any ARM Router to perform a 'Test Route' and get the results. The ARM Router was chosen randomly. ARM Version 8.2 allows operators to select a specific ARM Router for a test call:



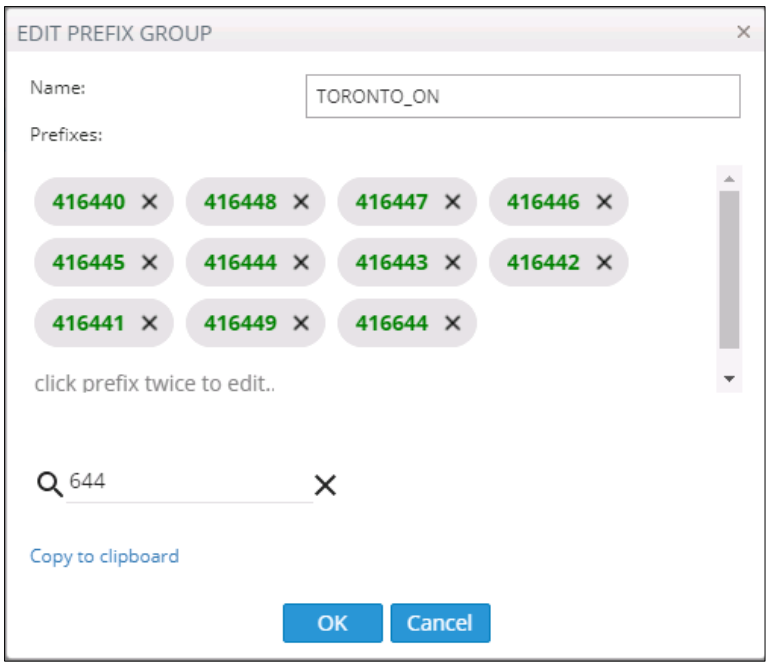
By default, **Any** ARM router is used. The ARM router's selection is also supported in a Test Route activated from 'Offline Planning'.

This capability should be used for debugging and locating of potential issues.

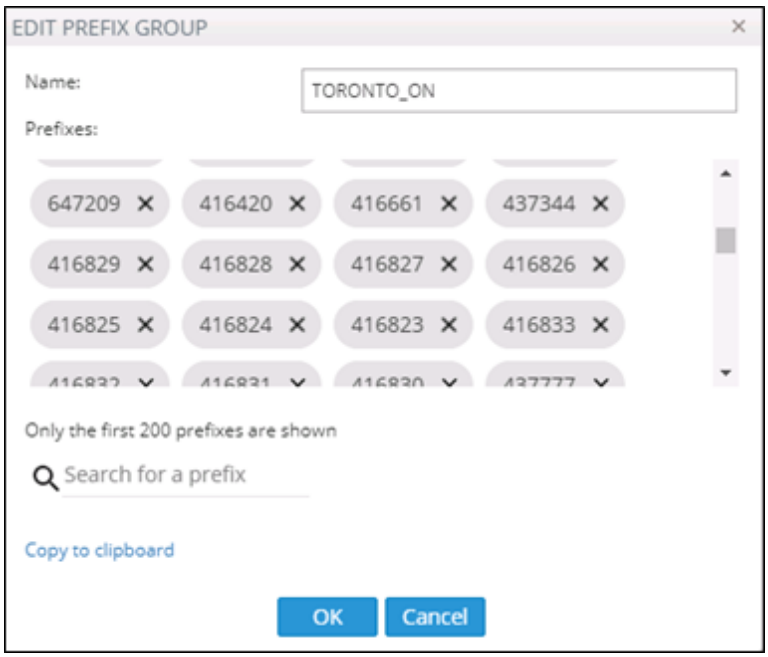
2.5 Improvements to the Prefix Groups User Interface Design

ARM Version 8.2 introduces a new user interface design for Prefix Groups. The new design features:

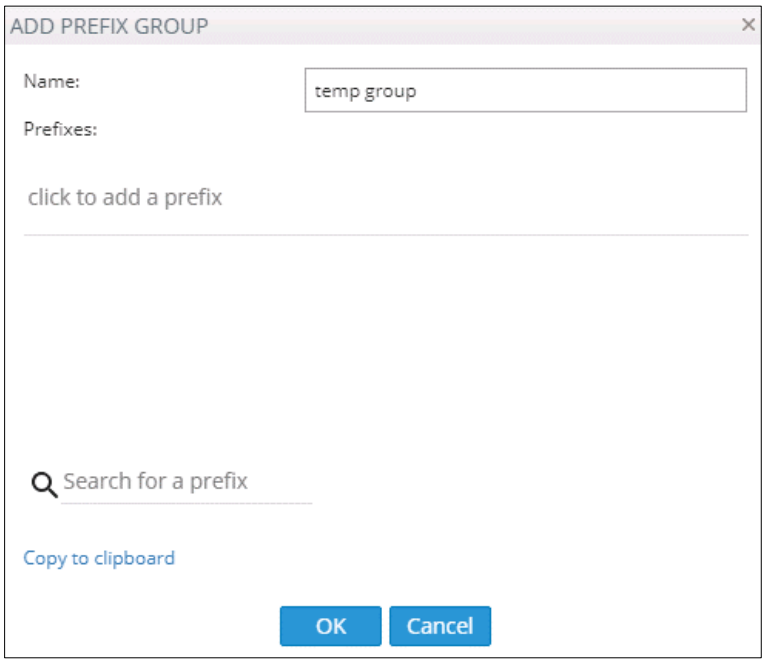
- Convenient search for a specific string



- Smoother editing inside the Prefix Group or specific prefix
- A larger number of prefixes inside a group with an easy and smooth user interface
- Copying all (or part) of the prefixes to the clipboard using 'Copy to clipboard' capability



- Easy copy/paste of a very large set of prefixes from an external file



2.6 Centralized Log Collection Utility

ARM Version 8.2 introduces a new utility for centralized log collection from all ARM elements. The ARM's logs, including logs from all the available ARM Routers, can now be collected from the Configurator.

The new log collection utility can optionally collect

- all available logs from all ARM elements
- logs for a predefined number of days (provided by the operator)

The second option results in a smaller file and shorter network transfer time.

In addition, there is an option to include logs from all ARM Routers or to specify a Router to collect the logs from.

2.7 ARM Machine OS Upgraded with Latest CentOS6.9 Security Patches

ARM Version 8.2 runs on the latest edition of CentOS 6 (CentOS 6.9) Operating System. The latest security patches are automatically applied during the upgrade to ARM Version 8.2. The changes in the upgrade procedure are described in the *ARM Installation Manual*.

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3 Supported Platforms

ARM Version 8.2 provides support for the platforms shown in the table below.

Table 3-1: ARM Version 8.2 Supported Platforms

ARM	Platform	Application
GUI	Web Browser	Firefox, Chrome, Internet Explorer (Version 11)
Deployment	Hypervisor	VMWare 5.5; allowed to run with VMWare Tools 6.0 and 6.5

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4 Known Limitations and Workarounds

The table below lists the known limitations and workarounds in this version release.

Table 4-1: Known Limitations and Workarounds

Incident	Problem / Limitation	Comments/Workaround
-	Version 8.2 of the ARM does not implement a carrier-grade alarm feature. If the indication for a certain alarm's clearance is issued either by a node or by a Router when the Configurator is unavailable, the alarm is not cleared.	This feature will be part of the ARM-OVOC integration in the upcoming version.
-	The quality-based routing feature is not supported when operating with nodes (SBCs or Gateways) Version 7.0 (for Mediant 3000).	This feature requires nodes Version 7.2.158 and later.
-	The capability to define a separate interface at node level for ARM traffic is not supported when operating with nodes prior to Version 7.2.154 (for Mediant 3000).	This feature requires nodes Version 7.2.158 and later
-	The call preemption for emergency calls feature is not supported when operating with nodes (SBCs or Gateways) Version 7.20A.154.044 or earlier (not applicable for Mediant 3000).	This feature requires nodes Version 7.2.158 and later
-	Operators who want to use a node's IP Group of type 'User' as the ARM Peer Connection must define a dummy IP Profile (with a dummy IP address) at the node's level, to be associated with this IP Group.	-
-	Attaching / detaching a user to / from an Active Directory Group is reflected in the ARM's Users page (and Users Groups page) only after performing a full update (synchronization) with the LDAP server (by default performed automatically every 24 hours).	Operators must take this into consideration
GUI Incidents		
-	In the ARM Map, the 'drag' feature used to 'draw' a connection between two Nodes does not complete successfully when the 'hide edges on drag' option is selected. When the option is selected, if the operator starts the 'Drag connection' action but does not end it at the Node (does not complete the 'Drag Connection' action), the Map remains in a state in which edges are hidden.	Moving (repositioning) any Map element (Node or VoIP Peer) fixes the situation.
-	Search Menu selected from Settings > Call Flow Configurations > Prefix Groups remains open (stuck) even when moving to another tab under the 'Call Flow Configurations' tab.	Pressing 'Cancel' dismisses it.
-	When editing a specific prefix entry (under the 'Prefix Group' tab), if you remove all characters and enter a new value the change does not take effect.	Remove the entry and add the new one. Don't edit inside if the value will be changed completely.
-	The maximum number of aggregated Peer Connections in a VoIP Peers cluster is 99.	-

Incident	Problem / Limitation	Comments/Workaround
-	In the Offline Planning page, the action 'Test Route' is missing from the actions menu that pops up after right-clicking a Peer Connection associated with a third-party device (non-AudioCodes node).	The 'Test Route' action can be performed on a Peer Connection associated with a third-party device by selecting the Peer Connection and then using the Test route button available on the Network Map's Actions Bar.

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