Release Notes

AudioCodes One Voice™ Operations Center

AudioCodes Routing Manager (ARM)

Version 7.6

HD VoIP Sounds Better

AudioCodes

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Notice

This document describes the new features and known issues in Version 7.6 of the AudioCodes Routing Manager (ARM).

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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
Mediant 800B Gateway and E-SBC
Mediant 500 E-SBC User's Manual
EMS Server IOM Manual
EMS User's Manual

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1 Overview

This document describes the new features and known issues in Version 7.6 of the AudioCodes Routing Manager (ARM).

1.1 Managed Devices

The following AudioCodes products are supported by ARM Version 7.6:

Table 1-1: Products Supported by ARM Version 7.6

Product	Major Versions
Mediant 9000 SBC	7.0, 7.2.100 and 7.2.150
Mediant 4000 SBC	7.0, 7.2.100 and 7.2.150
Mediant SE/VE SBC	7.0, 7.2.100 and 7.2.150
Mediant 1000B Gateway and E-SBC	7.0, 7.2.100 and 7.2.150
Mediant 800B Gateway and E-SBC	7.0, 7.2.100 and 7.2.150
Mediant 500 E-SBC	7.0, 7.2.100 and 7.2.150

1.2 Supported Node Firmware

ARM Version 7.6 supports nodes (SBCs / Gateways) version 7.0.x and later, version 7.2.100 and later and version 7.2.150 and later.

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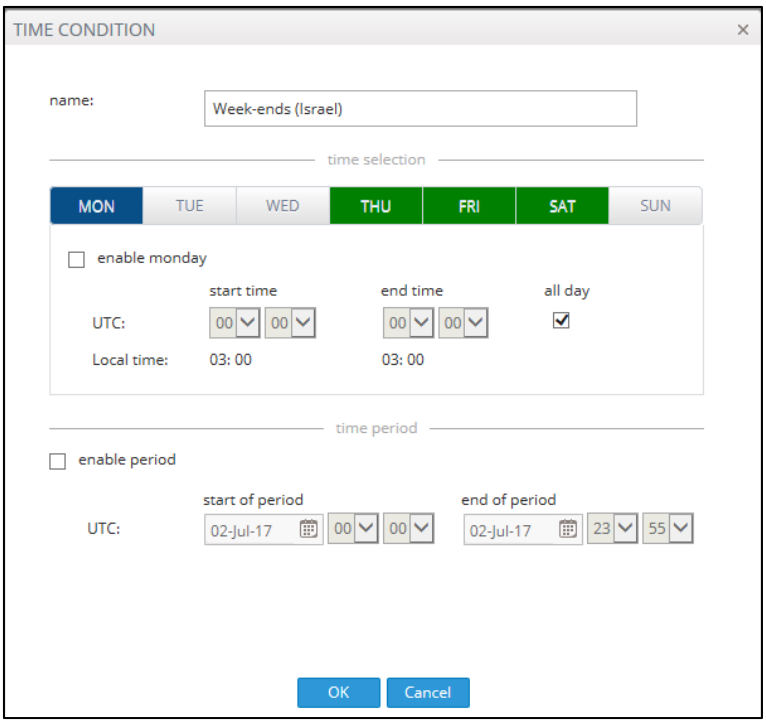
2 What's New in Version 7.6

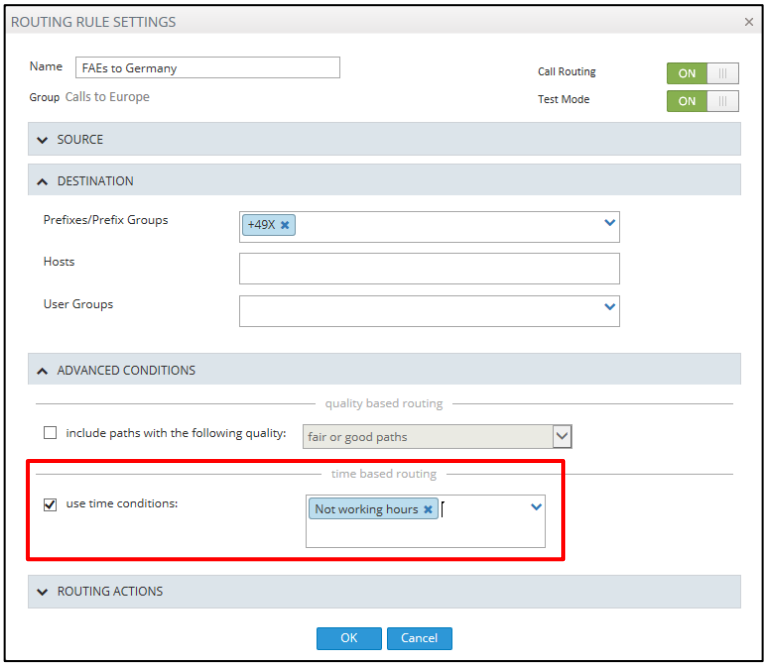
This section describes the new features introduced in Version 7.6 of the ARM.

2.1 Time-Based Routing

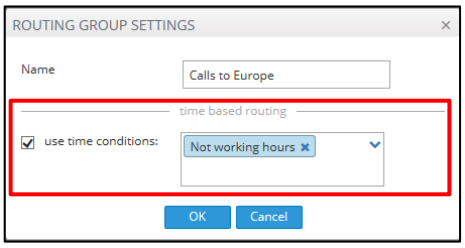
The new time-based routing feature allows ARM customers to configure a routing rule activated only at the time specified in a time condition. Flexible and user-friendly time conditions are supported.



Operators can specify daily or weekly, a day - or days - of a week, hours in a day, or a calendar period. The condition can be recurring (periodical) or non-recurring. In the figure below, operators specified that the routing rule be activated only outside working hours.



The time condition can be associated with a specific Routing Rule as well as with an entire Routing Group:

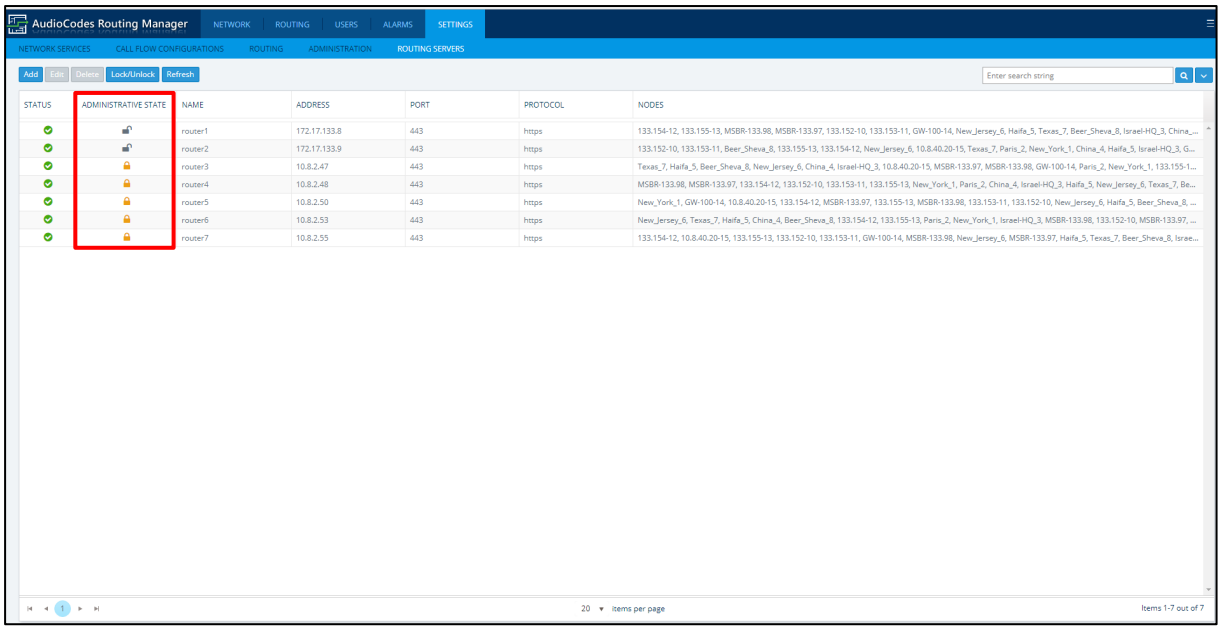


2.2 ARM Router Administrative State

Version 7.6 supports ARM Router Administrative State. Lock and Unlock actions are available. These can be applied to any particular ARM Router. The new functionality allows operators to gracefully take a particular router temporarily out of service.

A locked router responds to all keep-alive and login requests, from all nodes, with a standard 'Service Unavailable' HTML error. This behavior causes all nodes to be disconnected from the router, effectively taking the router out of service. The router still responds to any other request from the nodes or the configurator, which makes the lock action graceful since calls and statistical calculations are unaffected.

Lock/Unlock actions are added to the Routing Servers table in the ARM GUI.

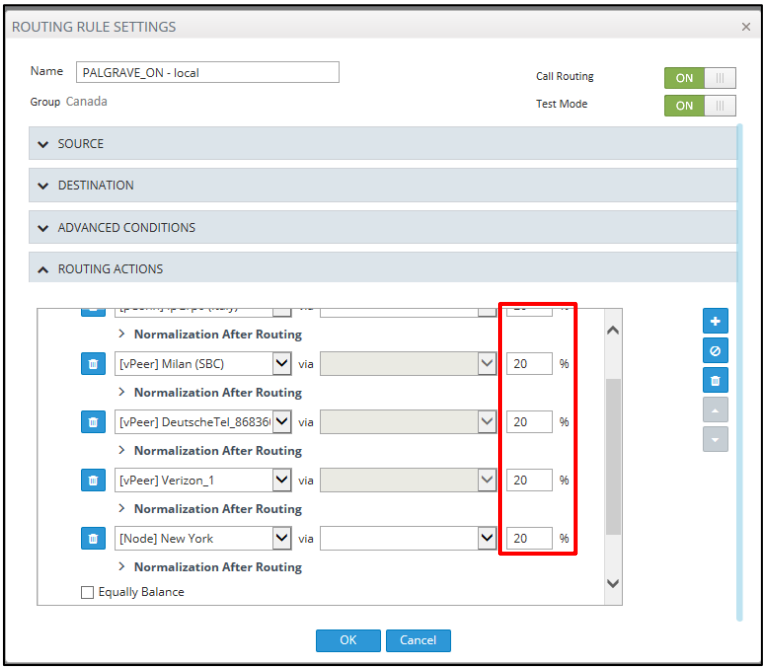


A Lock action displays a warning and prompts for the operator's confirmation. A Routing Server's Locked or Unlocked Administrative State is graphically represented in the GUI by designated icons.

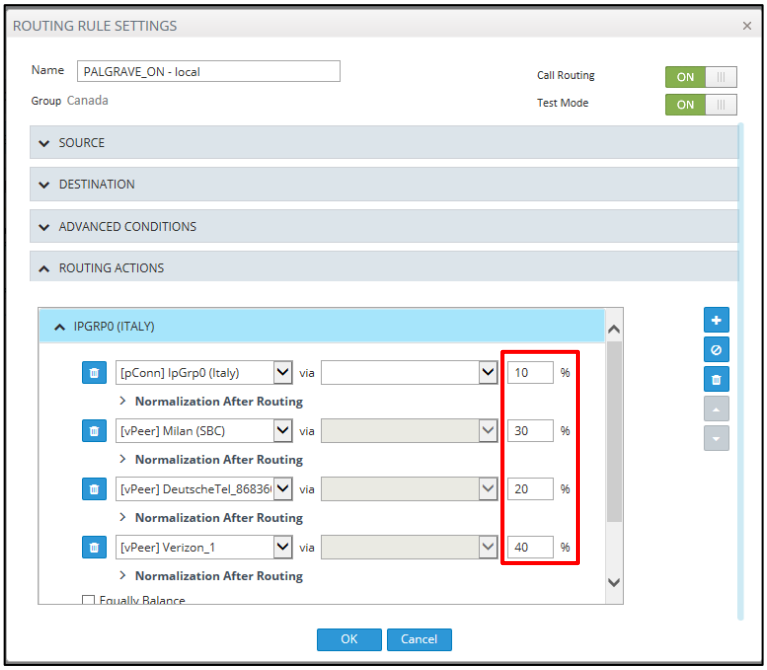
2.3 Flexible Load Balancing

Version 7.6 of the ARM supports flexible load balancing between more than one Peer Connection, Node or VoIP Peer.

By default, Peer Connections, Nodes or VoIP Peers are *equally balanced*, i.e., the same percentage is assigned for each option, as shown in the figure below.



Operators can optionally *define their own percentage* by clearing the 'Equally Balance' option. Any distribution can be chosen, i.e., any percentage of calls can be handled by a specific routing option. Several routing destinations (more than two) are supported using the **Add load balancing** button.

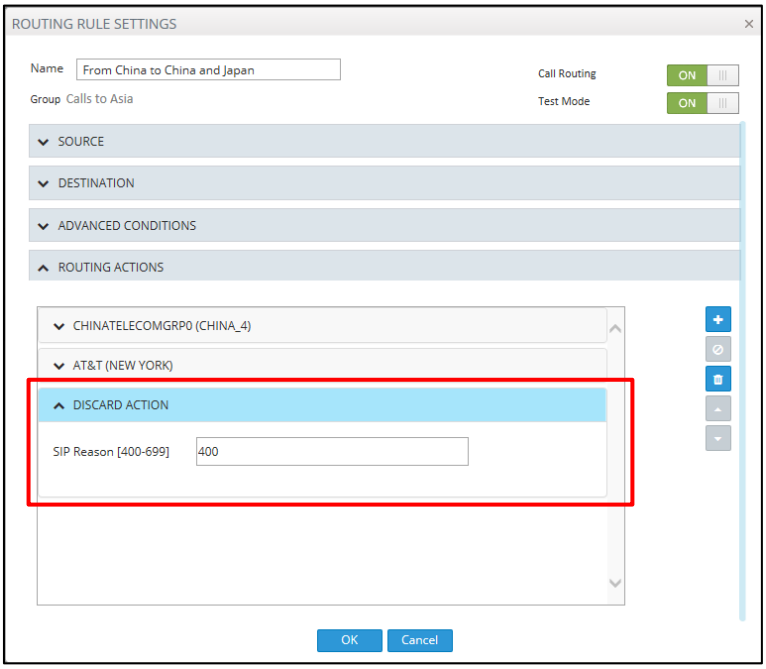


Customers can distribute traffic between multiple Peer Connections of the same SBC/Gateway, or between different nodes in the network. Flexibility in assigning

percentages of traffic distribution provides an additional benefit in terms of calls pricing or through-put capacity of topology elements.

2.4 New Routing Rule Action: Discard Call

Version 7.6 supports a new action type in Routing Rules: Discard a call.

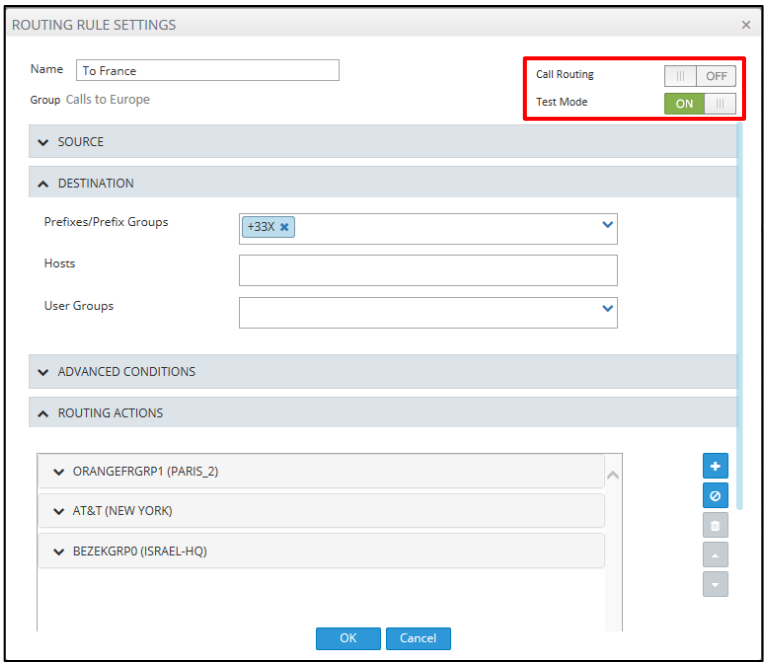


Operators can in a routing rule apply a policy to attempt a number of routing options and to discard the call if none succeed. The **Discard call** routing action can be used - in addition to other routing actions of the same rule - as a last routing rule action. In this way, the previously supported 'Discard Call' rule type changes to a ‘private case’ of the new routing rule, with a discard call option. Not only can the operator provide a specific SIP reason for 'Discard Call' but they can also use the last SIP reason received from the SBC or the Gateway.

2.5 Configuring and Testing a Routing Rule without Impacting Live Calls Traffic

Version 7.6 supports new capability to test a Routing Rule offline without impacting live calls. Two modes allow operators to choose either:

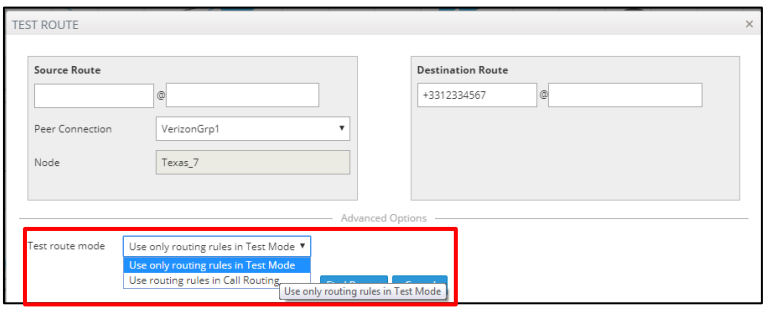
- **Call Routing**. When set to **ON**, the rule will be taken into consideration for live calls traffic.
- **Test Mode**. When set to **ON**, the route is tested offline, without impacting traffic.



By default, new routing rules are added with 'Test Mode' set to **ON** and 'Call Routing' set to **OFF**.

The Test Route screen in Version 7.6 displays a new 'Test route mode' dropdown from which operators can select one of two options before testing a route:

- **Use only routing rules in Test Mode**. Lets operators test the Routing Rule or Dial Plan offline without impacting or disrupting live calls.
- **Use routing rules in Call Routing**. When a new call destination is calculated, the Routing Rule is taken into consideration and live traffic may be impacted.

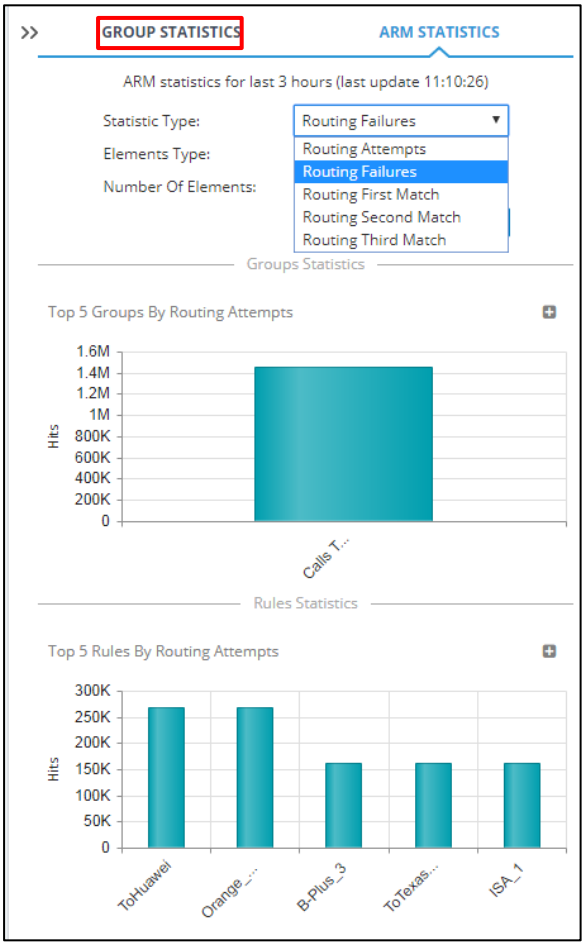


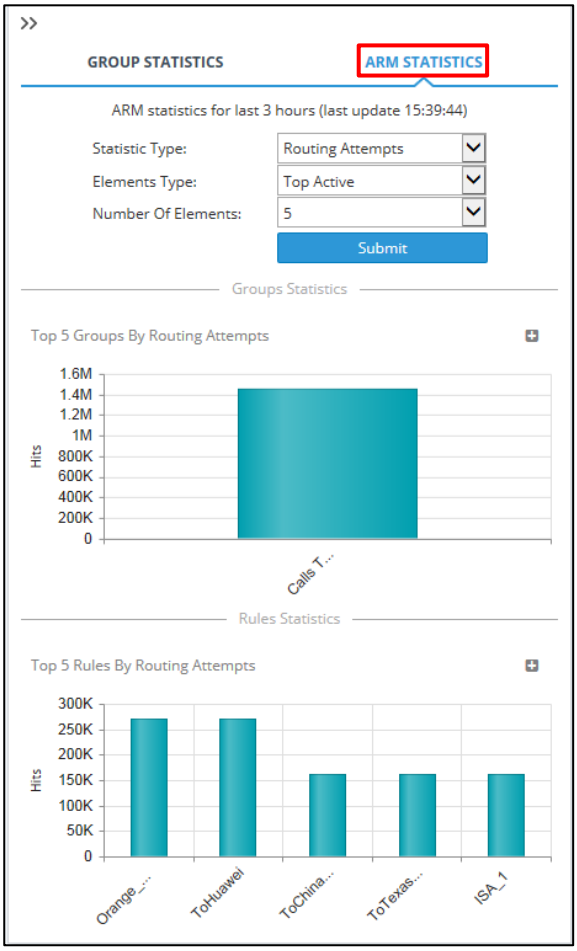
The following combinations of states are supported for a Routing Rule:

Combination of States	Explanation
Call Routing is ON and Test Mode is ON	The rule will be taken into account for both options of 'Test route mode' and for real traffic.
Call Routing is ON and Test Mode is OFF	The rule will be taken into account when 'Test route mode' is set to **Use routing rules in Call Routing**, and for real traffic. This combination is used to simulate routing rule removal.
Call Routing is OFF and Test Mode is ON	The rule will only be taken into account for **Use only routing rules in Test Mode**. This combination is used to simulate and test a newly added Routing Rule.
Call Routing is OFF and Test Mode is OFF	The rule will not be used for testing nor for live traffic. This combination is used in the preparatory stages of a Dial Plan.

2.6 Hits Statistics for Routing Rules, Groups and Actions

Version 7.6 features hits distribution statistics for Routing Rules, Routing Groups and Routing Actions. A new pane displaying routing statistics has been added to the right side of the **Routing** tab window. ARM operators can now see at a glance the top used Routing Groups or Routing Rules (for example):





When a specific Routing Group is selected, operators can see the hits distribution among the Routing Group's associated Routing Rules or specific Rule's Actions. A wide range of statistics and viewing options is supported, including 'Routing attempts', 'Routing failures', top or least active Routing Rules, and more.

The feature lets operators quickly and easily determine network calls distribution. The feature can furthermore be used as a powerful tool for Dial Plan debugging, tuning and optimization.

2.7 Directly Accessing a Node's Web Interface (Single Sign-On) from the ARM GUI

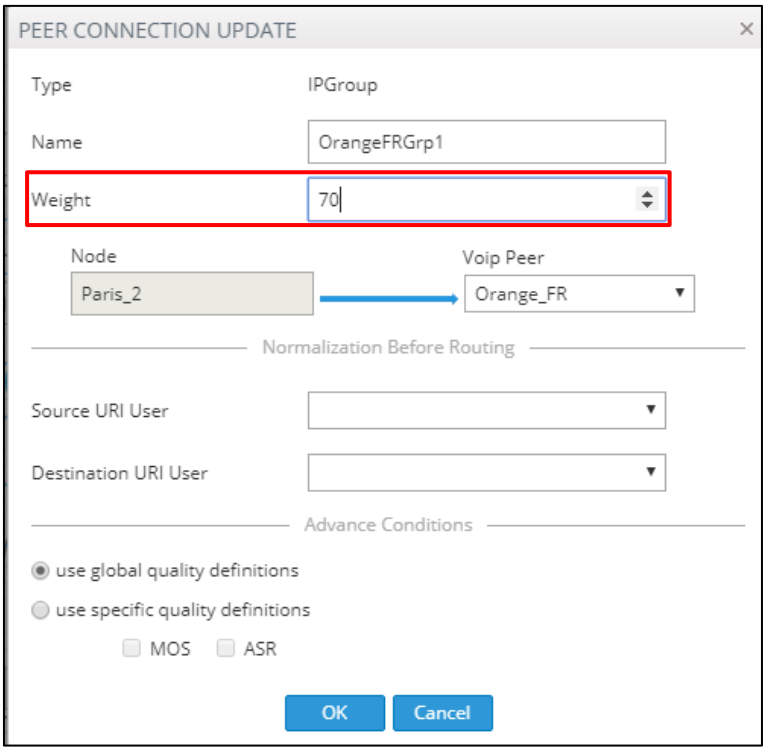
Version 7.6 of the ARM provides a new option to directly configure a node (or SIP module) from the ARM's GUI without needing to provide the node's credentials (Single Sign-on) to the node's Web interface.

Selecting the **Configure** option from the node's popup menu automatically opens a new tab displaying the node's Web interface, without prompting the operator for credentials.

Nodes version 7.2.150 and later are supported. Earlier node versions do not support single sign-on; operators must provide credentials before they can access the Web interface of earlier node versions.

2.8 Assigning Weight for Peer Connections

Version 7.6 supports 'weight' assignment for Peer Connections. The default Peer Connection weight is 50. It can be configured within the range of 0 to 100.

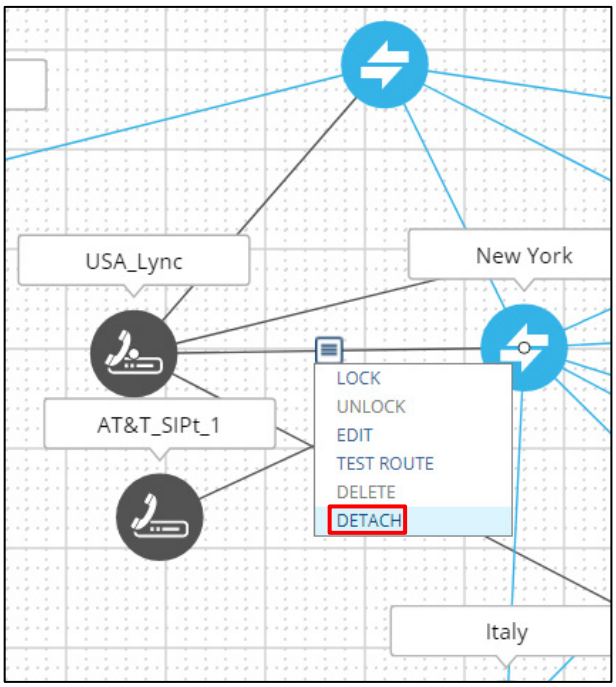


The ARM handles Peer Connection weight in the same way as Connection Weight in order to calculate the optimal call path. Configuring Peer Connection weight is essential when the customer has a VoIP Peer as a Routing Rule action and wants to prioritize a specific Peer Connection (such as SIP trunk) to be chosen for calls routing.

Peer Connection weight can also be used to reflect Peer Connection cost or bandwidth.

2.9 Detaching a Peer Connection

Version 7.6 provides a new option to detach a Peer Connection from an associated VoIP Peer if multiple Peer Connections lead to the same VoIP Peer:



In the example above, four Peer Connections lead to the VoIP Peer 'USA_Lync', so a Peer Connection can be detached.

When a Peer Connection is detached, the operator is prompted to define a name for a new VoIP Peer.

2.10 DNS Support in ARM

Version 7.6 supports using DNS names in the ARM, instead of IP addresses. The ARM application can work with DNS names for ARM Configurator, ARM Routers and nodes (SBCs or Gateways). To use DNS names rather than IP addresses, the DNS server must be configured using the ARM machine's Linux-level TUI (Text-Based User Interface) (see the *ARM Installation Manual* for more information).

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3 Supported Platforms

ARM Version 7.6 provides support for the platforms shown in the table below.

Table 3-1: ARM Version 7.6 Supported Platforms

ARM	Platform	Application
GUI	Web Browser	Firefox, Chrome, Internet Explorer (Version 10)
Deployment	Hypervisor	VMWare 5.5; allowed to run with VMWare Tools 6.0

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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 and Workaround
133974	Version 7.6 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.	The ARM Configurator should be available in HA.
-	The quality-based routing feature is not supported when operating with nodes (SBCs or Gateways) Version 7.0 and Version 7.2.100.	This feature requires nodes Version 7.2.150 and later.
145640 / 145921	For a Gateway node, if the call source is Peer Connection of TrunkGroup type and its routing destination (action in the Routing Rule) is a VoIP Peer connected to the same Gateway or the Gateway itself, the call fails.	In the rule's Routing Actions, the operator should define the Peer Connection instead of the VoIP Peer or Node.
145881	For both ARM Configurator and Router, it's possible to log in to the tomcat management application with the default credentials.	To block the option to log in to the management application, the operator should comment out all users defined in the *tomcat-users.xml* file under */opt/apache-tomcat-8.0.33/conf*
GUI Incidents		
136428	In the Network map, there's no indication of the number of Connections or Peer Connections between two nodes. Any number is seen as a single Connection.	Use the Connections and Peer Connections table views to see and perform actions on multiple Connections.
-	In the Network map, clicking between the icon and title of a node, as well as anywhere in the minimal containing rectangle that contains both, results in the selection of that node rather than of the node that's behind it.	In the Network map, avoid positioning nodes so that they eclipse one another. If unavoidable, zoom in as much as possible so that the area not covered by the node in front is maximized.

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