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Feature Guide

RingMaster Software Version 7.4 Mobility System Software Version 7.3



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Feature Guide

This document outlines the new features available in Trapeze Mobility System Software Version 7.3 and RingMaster Software Version 7.4.

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What's New in MSS Version 7.3

MSS Version 7.3 contains the following enhancements:

- □ Support for the MP-522 The MP-522 is an Enterprise class 2x2 dual-radio 802.11n AP that provides price-performance benefits. These are the features supported by MSS 7.3:
 - Easy installation and provisioning
 - Secure and easy manageability
 - Better overall Network Throughput performance and RF coverage than previous generation (MP-432/ MP-82)
 - O Handle >25 active wireless client connections per radio
 - O Robust and reliable platform
 - Extensible plug-in architecture enabling applications related to complementary technologies such as VoIP, Location, and Video
 - Efficient Diagnostic and Troubleshooting
- □ Support for the MX-800 Support for the MX-800 The MX-800 is a next-generation wireless controller supporting from 16 to 128 Access Points. The MX-800 is a 1U system with 8 Gigabit Ethernet ports (4 x 1000BASE-T, 4 x SFP) and built-in redundant power supplies.

Database Improvements in RingMaster Software

With the release of RingMaster Version 7.4, a new relational database is supported that allows you greater scalability with larger deployments of RingMaster. While this is transparent to you when you install this version, you should be aware of the changes as you upgrade your current version of RingMaster or perform a fresh installation of RingMaster.

Reporting Enhancements in RingMaster Software

You can now store reports on an FTP server in your network or store them locally. On the Reports page, click Report Settings.

쭒 Report Settings	×
Report Settings	
Please set FTP information and	purge interval information.
FTP Server Info	
IP Address	· · ·
Port	21 -
User Name	
Password	
	Test FTP Setting
Purge Interval for Locally S	tored Reports
Report Purge Interval [days]	10 🔹
Generated Report File Form	nat
Report File Type	HTML V
	OK Cancel

To configure the FTP Server Info, you need the following information:

- **IP Address** The IP address of the FTP server
- **Port** the default port is 21.
- **User Name** The username to log into the FTP server (if required).
- **D Password** The password for the FTP server (if required).

Once you have entered the FTP Server Info, you can test the connection by clicking Test FTP Setting.

You can also purge locally stored reports by configuring the interval, in days, to delete them from the RingMaster server. The default value is 10 days.

There are two available formats for RingMaster reports:

- **HTML**
- D PDF

Select the format from the **Report File Type** list. Click **OK** to save the settings.

Once you click Generate Report, you can configure the options for the report format.

쭒 Generate MX Conf	iguration Report	×
MX Configuration	Report	Ø
The MX Configuration	Report shows configuration data for the selected MX.	
Generated Report C	ptions	
Report Format (HTML -	
Email Options		
Email Address(s)		
Email report as	Hyperlink 🔻	
FTP Option		
Copy to FTP server [
	< Previous Next > Finish	Cancel

You can select from the following options:

- **Generated Report Options** HTML or PDF
- **E-mail Options** send as a link or attachment to your e-mail address
- **• FTP Options** send the report to your configured FTP server.

Report Scheduling

You can now schedule the time that a report is generated and manage the attributes of that schedule. To create a Report Schedule, use the following steps:

1. In the Tasks panel, under Create, click Schedule. The Report Schedule wizard is displayed.

📅 Create Report Schedule	×
Report Schedule	
Please enter basic information for schedule	Λ
Schedule Name Enabled V	
Schedule Name	
	hish Cancel

2. Create a name for the schedule and enter it in the **Schedule Name** field. The report is enabled by default. To disable the Report Schedule, clear the **Enabled** checkbox. Click **Next**.

😪 Create Report Schedule	×
Report Schedule	
Please enter report period information for schedule	
Schedule Type One Time 👻	
Execute DateTime 10/02/04-24:00 💌	
< Previous Next > Finish	Cancel

- **3.** From the **Schedule Type**, select one of the following types:
 - **One Time** the Report Schedule runs once at the scheduled time.
 - **Recurring** the Report Schedule runs at the designated times.

If you select **Recurring**, then you can select specific days and times to run the report as well as the range of the schedule.

Click Next.

🐨 Create Report Schedule	×
Report Schedule	Ø
Please enter report related information for schedule	Λ
Generated Report Options	
Report Format	
Email Options	
Email Enabled 🔽	
Email Address(s)	
Email Report As Hyperlink -	
FTP Option	
Copy To FTP Server 🔽	
Updated [Email Enabled] Value [Yes]	
Previous Next > Finish	Cancel

4. Configure the **Report Type**, either HTML or PDF. If you want the report e-mailed to you, select **E-mail Enabled**, and enter your e-mail address. You can also select the e-mail format for the report, either as a hyperlink or a PDF.

If you want to copy the report to an FTP server, select **Copy to FTP Server**. Click **Next**.

- 5. If you have configured any **Report Definitions**, you can include them here.
- **6.** Click **Finish** to complete the configuration.

Report Organization

Reports are now grouped by feature and listed alphabetically in the Organizer panel.



You can expand each topic to see available reports. Selecting a report then allows you to configure scheduled reports or generate a report immediately.

Managing the LA-200E



The integration of the LA-200E into RingMaster is supported by software version 6.4.1 or higher on the LA-200E.

With the acquisition of Newbury Networks, the LA-200E is now a premier product for Trapeze Networks. Integrating the LA-200E with RingMaster allows you to manage an LA-200E using network management software. After adding the LA-200E to your network plan, you can manage, plan, and configure RFID listening APs from a central server.

Adding an LA-200E to RingMaster

To add an LA-200E to RingMaster, you must install an LA-200E in your wiring closet or located somewhere in your network. After installation, you need the following information to add the LA-200E to RingMaster:

- IP Address
- User Name
- D Password

You also need a Location Appliance license in order to activate the feature in RingMaster. After installing the license, the Create Location Server task is available in the RingMaster interface.

Ring	gMaster 7.4					
Home	Setup	Access Control	Plan Management	Reports	Maintenance	
Server Settings						
Server Certificate	License Informat	ion				
Licensing						
MX Connection Settings	Base Serial	#:				
Monitoring Settings	Base Licens	e Kev		Current Ho	ost Name:	
SNMP Notification						
Audit Trail	Maximum AP Count: 5 Current AP Count: 0					
	Please enter the and must be ent Serial #:	e new serial number a ered exactly as prin	and license key below. ⁻ ted.	These are case-ser	nsitive	
	License Key:		Save			
tion Appliance Lic	ense					
	Current Licenses					
\backslash	Details Produc	t Serial #	License Key	Activat	ed	
,	Show RMTS			Yes		
	1 M					

RingMaster 7.4 with an activated Location Appliance license.

🐨 RingMaster	7.4: Plan (Def	fault)							_ 🗆 🗙
<u>File</u> <u>S</u> ervices	<u>T</u> ools Help								
♦ ♦	Policies	RF Planning Configur	ation Verification	E Devices	S) Monitor	🧐 Security) Alarms	💽 Reports	
Organizer	🖉 🌱 P	Configuration - Applica	tion Servers					Tasks	Р
Default	#1							Create	*
Application Se	y APs ervers	Location Servers -						😌 Create Lo	cation Server
🖵 🗐 la200-t	ac2	# Name	IP Address	Port	Version	Man	aged 🔳		
		1 a200-tac2	10.9.0.14	443	6.4.1	Yes			

To add an LA-200E to RingMaster, follow these steps:

- 1. Open RingMaster and click **Configuration** from the menu bar.
- 2. From the Organizer panel, select Application Servers.
- 3. From the Task list, select Create Location Server and the associated wizard opens.

쭒 Create Location Ser	ver	×
Location Server Inf	ormation	
Enter the information to value.	connect to the server. The name and IP address must be unique	Χ
Managed	\checkmark	
Name		
IP Address	· · ·	
User Name		
Password		
Management Password		
Enter a unique name		
	< Previous Next > Finish	Cancel

- 4. Select Managed to allow RingMaster to manage the location appliance.
- 5. In the Name field, enter the name of the LA-200E.
- 6. Enter the IP address.
- 7. Enter the User Name.
- 8. Enter the Password.
- 9. If there is a management password, enter the password in the Management Password field.
- 10. Click Next. RingMaster connects to the LA-200E and establishes a connection.
- 11. Click **Finish** to complete the configuration.

The LA-200E now appears in the Organizer panel under Application Servers.

To review LA-200E settings, highlight the Location Appliance in the list and click **Properties**. You can then change any of the original settings for the server.

Available Tasks for All Managed LA-200E Location Appliances

There is a list of available tasks for all location appliances managed by RingMaster. You can select any of the following tasks:

- **Create Location Server**
- Setup Synchronization Parameters
- **D** Edit a Location Server
- Configure a Snoop Filter
- Configure SNMP Settings

From the **Other** List, you can select from the following tasks:

- Description Platform Management
- Appliance Logs
- Backup and Restore
- **Configuration**
- □ Factory Reset
- **Schedule Reboot**
- System Update
- User Management

Selecting any of the **Other** tasks opens the corresponding software feature on the location appliance. For more information on using these features, refer to the Trapeze Networks LA-200E User's Guide.

Available Location Appliance Tasks

If the location appliance already has a configuration, the details are displayed when you select the LA-200E in the Organizer panel.

Ele Services Tools Help Policies Policies Policies Policies <th>🐨 RingMaste</th> <th>er 🔜: Plan (De</th> <th>fault)</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>_ 🗆 ×</th>	🐨 RingMaste	er 🔜: Plan (De	fault)								_ 🗆 ×
Policies RF Planning Organizer Image: Configuration Pefault Save Image: Part APS Application Servers Managed Yes Pot 443 Name Image: Part APS Image: Part APS <tr< td=""><td><u>Eile</u> <u>S</u>ervices</td><td><u>T</u>ools Help</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>	<u>Eile</u> <u>S</u> ervices	<u>T</u> ools Help									
Organizer Y P Configuration - la200-tac2 Tasks P Default Save Discard Create X Image: TechPubs#1 Image: TechPubs#1 <td< td=""><td></td><td>Policies</td><td>C RF Planning</td><td>Configuration</td><td>🔀 Verification</td><td>E Devices</td><td>Si Monitor</td><td>🤯 Security</td><td>) Alarms</td><td>[Reports</td><td></td></td<>		Policies	C RF Planning	Configuration	🔀 Verification	E Devices	Si Monitor	🤯 Security) Alarms	[Reports	
Default Save Docard Create A Imaged Yes Port 443 Imaged Yes Oreate Imaged Yes Oreate Locale Imaged Yes Oreate Locale Imaged Yes Oreate Locale Imaged Yes Oreate Locale Imaged Yes Imaged Yes Imaged Yes Oreate Locale Imaged Yes Imaged Yes<	Organizer	🔤 🌱 P	Configuratio	n - la200-tac2						Tasks	₽
	Default	s#1 ty APs Servers -tao2	Location 3 Managed Name IP Address Locales – # 1 -Elsewi 2 TAC 3 techput RF Finger # 1 techput 2 Juluyi	Server Yes Ia200-tac2 I0.9.0.14 Name Name So Prints Name So-fp Config:	Descripti Tac area for tes floor 1	on Assoc Not A sting p Not Description mbn	Port 443 ersion 6.4.1 iated RF Fingerp ssigned ubs-fp, ubyl Prope techno	Save	I Floor	Create Create Local Create RF Fil Setup Synchronize Edit Location Shop Filter Platform Mar Applance Backup and Configuration Factory Res Schedule Re System Upd User Manage	le ngerprint ngerprint n Server nagement xgs Restore n et zboot late ement

After it is selected, the following information is displayed:

- Location Server
- Managed
- □ Name
- Port
- □ Version
- IP Address
- Locales
- □ Name
- **Description**
- Associated Fingerprints
- Associated Floor
- RF Fingerprints
- Name
- **Description**
- **D** Associated Locale

In the Tasks panel, you can select from a list of available tasks. Under Create, you can select

Create Locale

Create RF Fingerprint

Under **Setup**, you can select

- Synchronize
- **D** Edit Location Server
- Snoop Filter
- □ SNMP

Under **Other**, you can select

- Description of the second s
- **D** Appliance Logs
- Backup and Restore
- **Configuration**
- **Gaterian Factory Reset**
- **Schedule Reboot**
- **D** System Update
- User Management

Selecting any tasks under **Other**, opens the operating system of the location appliance and you can perform any of these tasks directly on the location appliance.

Creating Locales Using RingMaster

Select an LA-200E from the **Application Servers** list in the **Organizer** panel. The **Task** list is now populated with available tasks to perform on the location appliance. To create a locale, use the following steps:

1. Under Create, click Create Locale. The Create Locale Wizard is displayed.

🐨 Create Locale	×
Locale Information	
Enter a unique name for the locale.	
Name	
Description	
Create RF Fingerprint	
Enter the locale name	
Previous	Cancel

2. Enter the name and description of the locale in the appropriate fields. **Create RF Fingerprint** is selected by default. If you do not want to create an RF Fingerprint, clear the checkbox. If you are

also using Active Asset on the location appliance, you must follow a specific format for the description. The format is Campus:Building:Floor. Click **Next**.

쭒 Create Lo	cale	×
RF Fingerp	rint Information	
Enter a uniq	ue name for the RF Fingerprint.	Λ
Name	area51-fp	
Description	warehouse	
		,
Lindated [Dags	ristian] Velus [usedasusa]	
opuated [Dest	ripuorij value [warenouse]	
	< Previous Next >	Finish Cancel

3. Enter the RF Fingerprint information including Name and Description. Click Next.

📅 Create Locale		×
Associate RF Fingerprint		
Select the RF Fingerprint(s) that you want t	to associate to this locale.	
Available RF Fingerprints	Current RF Fingerprints	
	Add III	
	revious Next > Finish	Cancel

4. If there are other RF Fingerprints configured on the location appliance, they are displayed in the **Available RF Fingerprints** list. You can select one and add it to the **Current RF Fingerprints** list. You can also remove RF Fingerprints by selecting one from the **Current RF Fingerprints** list and clicking **Remove**.

5. Click **Finish** to complete the configuration. The new locale and RF Fingerprints appear in the Location Server and RF Fingerprints section. You can view the properties of a RF Fingerprints by selecting it and then clicking **Properties**.

	뿖 RingMaster	: Plan (Def	ault)								_ 🗆 ×
	<u>File</u> <u>S</u> ervices	<u>T</u> ools Help									
	♦ ♦	C) Policies	C RF Planning	Configuration	遂 Verification	E Devices	S) Monitor	🤯 Security) Alarms	[Reports	
	Organizer	Jan 🖓 म्	Configuration	n - la200-tac2						Tasks	₽
	Default TechPubs# Third Party Application Ser [a200-ta	¥1 ∕APs rvers ac2	Location S Managed	erver Yes			Port 443	Save	Discard	Create Create Locale Create RF Fing	¢
			Name	la200-tac2		Ver	sion 6.4.1			Setup	\$
A al al			IP Address	10.9.0.14						 Synchronize Edit Location S 	Server
Aaa				Name a						Snoop Filter	
			# 1Elsewh	ere	Descripu	Not Associa	sianed	Not Associated		SNMP	
			2 TAC		Tac area for tes	ting p Not As	signed	Not Assigned			
		-	3 area51		warehouse	area51	-fp	Not Assigned		Other	^
			4 techpub	S	floor 1	techpu	bs-fp, uiuyi	Not Assigned		Platform Mana	gement
Add	ed RF Fing	erprint	RF Fingerp	orints ———			Prop	erties D	Delete	 Appliance Logs Backup and Re Configuration 	s estore
			#	Name	*	Description		Associated Loc	ale 🛛 🕅	Factory Reset	
		-	1 area51-f	p	wareho	use	areas	51	-	Schedule Rebo	bot
			2 techpub	s-tp	cube	u la m	techr	Dubs		System Updat	e
			3 uuyi		rioriorii	non	lech	DUDS		User Managem	hent
				Config:	1 Error; 4 Warr	nings Local Ch	anges: none	Network Chan	iges: none Alarr	ms 0 0 0 0	0 🛃

Creating Locales Using RF Planning

You can also create Locales using the RF Planning feature of RingMaster. Click **RF Planning** and select a plan from the **Organizer**. You can also import locales from CAD drawings.



Under Location Services, click Create Locale. The Create Locale wizard is displayed.

📆 Rin	gMaster	7.3: Plan (D	efault)									_ 🗆 🗙
Elle	Services	Tools Help										
4		Policies	RF Planning	Configuration	🔀 Verification	E Devices	S Monitor	🧐 Security) Alarms	💽 Reports		
RF Pla	nning - Flo	or 1 (Level : :	1)									
Crea	e Loca	le										
Selec from	t a shape the select	from the Toc ed layer(s).	ols box and draw	the locale. You o	an also use the	pre-defined lay	ver(s) for locale	, select a unique	locale for each l	layer and auti	comatically create the locale shapes	X
P										Tas	sks	Р
											ocation	\$
											Draw Locale	
										- F	Insert RF Fingerprint	
										N	viscellaneous Tools	\$
										ſ		
										A	Auto Create Locale	¥
	_											
]
												Cancel
						Con	ifig: 1 Error; 5	Warnings Loc	al Changes: nor	ne Networ	rk Changes: none Alarms 000	000 🛃

When you use the Drawing tools to draw the Locale, the **Create a Locale** wizard is displayed.

🐨 Create Locale	×
Select a Location Server	
Select a Location Server which the Locale and RF Fingerprint will be created.	Λ
Server la200-tac2 -	
< Previous Next > Finish	Cancel

1. Select a Location Server from the list and click **Next**.



2. You can now select an existing locale or create a new locale. If you select an existing locale, click **Finish** to complete the configuration. If you select **Create a Locale**, click **Next**.

😪 Create Locale	×
Locale Information	
Enter a unique name for the locale.	Λ
Name	
Description	
-	
Enter the locale name	
<pre>Previous Next > Finish</pre>	Cancel

3. Type a name and description of the Locale in the **Name** and **Description** fields. Click **Finish** to complete the configuration.

Adding RF Fingerprints Using RF Planning

You can add RF Fingerprints to the Locale you just created by clicking **RF Fingerprint** in the **Task** list. When you move your cursor over the locale, it changes to a crosshair. Click and drag to display the RF Fingerprint wizard.

쭒 Create RF	Fingerprint	×
RF Fingerp	rint Information	
Enter a uniq	ue name for the RF Fingerprint.	
Name	AP!	
Description	rear corner of cafeteria	
		_
Updated [Desc	ription] Value [rear corner of cafeteria]	
	(OK Cancel

Enter a name and description for the RF Fingerprint and click **OK**. The RF Fingerprint now appears on the Locale.

Calibrating RF Fingerprints Using RF Planning

To calibrate an RF Fingerprint, click on the fingerprint icon in the locale to select it. Then click **Calibrate RF** Fingerprint.

쯂 Calibrate RF Fingerprint		×
Calibrate		
Enter a MAC address of the target device and select Start to calibrate the	RF Fingerprint.	Λ
Action		
MAC Address Start		
Progress 0%		
		_
		•
Fingerprint		
	<pre></pre>	Cancel

Enter the MAC address of the device and click **Start**. You can see the status in the Progress bar. Once the process is complete, you can click **Next** to add it to the locale.

Creating RF Fingerprints

Select an LA-200E from the **Application Servers** list in the **Organizer** panel. The **Task** list is now populated with available tasks to perform on the location appliance. To create a RF Fingerprint, use the following steps:

1. Under Create, click Create RF Fingerprint. The wizard is displayed.

쭒 Create RF	Fingerprint	×
RF Fingerp	rint Information	
Enter a uniq	ue name for the RF Fingerprint.	Λ
Name	studio54	
Description	ballroom	
Updated [Desc	riptionj Value [baliroom]	
	< Previous Next >	Finish Cancel

- 2. Enter a name and description for the RF Fingerprint.
- 3. Click Next.

📅 Create RF Fingerprint	×
Associate Locale	Ø
Associate a Locale to this RF Fingerprint.	
Associated Locale area51 -	
< Previous Next > Finish	Cancel

- 4. Select a locale from the Associated Locale list to associate with the RF Fingerprint.
- 5. Click **Finish** to complete the configuration.

The RF Fingerprint now appears in the Locales list and the RF Fingerprints list.

Setting Up a Location Appliance Using RingMaster

Select an LA-200E from the **Application Servers** list in the **Organizer** panel. The **Task** list is now populated with available tasks to perform on the location appliance.

Synchronizing Changes on a Location Appliance using RingMaster

To synchronize configurations on a location appliance, use the following steps:

- 1. In the Task list, click Synchronize.
- 2. The **Review Changes** panel is displayed.

쭒 Synchronize					×
Review Changes					6
Any Locales, RF Fingerprints or SNMP ob Location Server. WARNING: This operati	jects that have been created, modifi on cannot be undone.	ed or deleted in RingMaster or on th	e Location Server are displayed belo	ow. Select an action to synchronize RingMaster and	X
Action Deploy Changes to la200-tac2					
Changes made in RingMaster will be d	eployed to the la200-tac2. Any exist	ing changes on la200-tac2 will be lo	it.		
O Accept Changes from Ia200-tac2					
Changes made on la200-tac2 will be u	iploaded into RingMaster. Any existir	ig changes on RingMaster will be los			
Dataile					
4 No.	nn A			Action	
F Type: Locale (2)	ne	IP	pe	Acuon	
1 area51		Locale		Created on RingMaster	
2 techpubs		Locale		Modified by RingMaster or Ia200-tac2	
E Type: BE Eingerprint (3.)		20000			
3 area51-fp		RE Eingerprint		Created on RingMaster	
4 studio54		PE Eingerprint		Created on RingMaster	
E LARA		DE Eingerprint		Created on Indightase	
				< Previous Next > Finish	Cancel

- 3. You can select from two types of action:
 - **Deploy Changes to the location appliance** changes made using RingMaster are applied to the location appliance.
 - Accept Changes from the location appliance changes made on the location appliance are uploaded to RingMaster.



You cannot undo this operation. Once you click **Next**, the changes are synchronized between RingMaster and the LA-200.

4. Click Next. The changes are synchronized between RingMaster and the location appliance.

5. Click **Finish** to complete the operation.



The LA-200 image created using RingMaster is transferred to the LA-200 where it is used by other applications such as Active Asset. It is recommended that you create a backup of your current image before transferring the new on to the LA-200.

Editing Location Appliance Attributes Using RingMaster

To edit a location appliance, select it from the list of Application Servers. Then follow these steps:

1. Click Edit Location Server to display the attributes for the server.

쭒 Edit Location Server	×
Edit Properties	
Modify the attributes for	Location Server.
Managed	V
Name	a200-tac2
IP Address	10 . 9 . 0 . 14
Port	443
User Name	admin
Password	•••••
Management Password	•••••
Management Port	8003
Enter a unique name	
	Previous Next > Finish Cancel

- 2. You can modify any of the listed attributes, and click Next.
- 3. RingMaster establishes a connection with the location appliance.
- 4. Click Finish to send the changes to the location appliance.

Configuring a Snoop Filter for a Location Appliance

You can configure a snoop filter on an MX using RingMaster and apply it to a location appliance. To configure a snoop filter, follow these steps:

1. In the Task list, under Setup, click Snoop Filter.

쭒 Create Snoop Filter	×
Select Target MX	Ø
Select the targeted MX.	Λ
Select a MX TechPubs#1 -	
Previous	Cancel

- 2. Select an MX to target from the Select a MX list.
- 3. Click Next.
- 4. If there is an existing Snoop Filter on the MX, you can select it from the **Filters** list. If a Snoop Filter is not configured, you can select **Create a Filter**. Click **Next**.

쭒 Create Snoop Filter		×
Snoop Filter Information		
Enter the Snoop Filter Name.		Λ
Snoop Filter Name nosy		
Enabled 🔽		
Undated [Enabled] Value [Vec]		
opoacoa [Enablea] Valle [163]		
	< Previous Next > Finish	Cancel

5. In the **Snoop Filter Name** field, enter a name for the filter. Select **Enabled** to begin using the filter. Click **Next**.

쭒 Create Snoop F	ilter			×
Snoop Filter Ob	server			Ø
Please specify the s	noop filer obser∨er IP ade	dress, snap length, and fi	rame gap.	
Target IP Address	10.9.0.14			
Snap Length Limit			24 🔹	
Frame Gap Limit			50 🔹	
	< Pr	evious Next >	Finish	Cancel

- 6. Configure the Snoop Filter Observer. You must specify the following information:
 - Target IP Address
 - o Snap Length Limit (optional)
 - Frame Gap Limit (optional)
- 7. Click Next.

🐨 Create Snoop Filter	×
Optional: Snoop Filter Condition	
Specify snoop filter with a list of conditions that match the criteria conditions in the list are applied.	a for packets. All
Properties	Create Delete
	Frame type
	Channel
	BSSID

- 8. Optionally, you can create **Snoop Filter Conditions** by specifying a list of conditions that match the criteria for packets. The following conditions can be added to the Snoop Filter:
 - \circ Direction
 - o Frame Type
 - o Channel
 - o **BSSID**
 - o Source MAC
 - Destination MAC
 - o Host MAC

o MAC Pair

When you select a condition, a list of attributes is displayed that can be applied to it. Click Next

🔭 Create Snoop Filter	×
Optional: Snoop Mapping	
Select a list of radios that can be mapped to the snoop filter.	Λ
Available AP Radios AP Radio AP:P01:AP01:Radio1 AP:P01:AP01:Radio2 Add Remove	Current AP Radio
Previous	ext > Finish Cancel

- 9. You can also configure optional **Snoop Mapping** by selecting radios on an MP to map the **Snoop Filter**. Click **Next**.
- Additionally, you can map a Snoop Filter to a specific radio profile. Select one from the Available Radio Profiles list and click Add to move it into the Current Radio Profiles list.
- 11. Click Finish to complete the Snoop Filter configuration.

Configuring SNMP for a Location Appliance

You can configure SNMP settings for the Location Appliance using the RingMaster interface. Select a Location Appliance from the list in the **Organizer** panel and then click **SNMP**.

😿 Setup SNMP		×
Configure the SNMP	Targets	
Configure the Primary SNN	1P target.	Λ
Destination Host		
Destination Port	162	
Version	v2c ▼	
SNMPv2c Settings		
Community	trap	
SNMPv3 Settings		
Use Authentication		
Use Encryption		
Authentication Protocol	MD5 -	
User Name		
Authenticaion Passphrase		
Privacy Passphrase		
Context Engine ID		
Context Name		
Enter host name or IP addre	\$5.	
	< Previous Next >	Finish Cancel

You need the following information to configure SNMP targets on the Location Appliance:

- **Destination Host**
- Destination Port
- SNMP Version

If you select SNMP Version v2c, then you configure the SNMPv2c Settings. If you select SNMPv3, then you configure the SNMPV3 settings. Click **Next** to continue with the configuration.

🐨 Setup SNMP		x
Configure the SNMP	Targets	
Configure the Secondary	SNMP target.	Λ
Destination Host		
Destination Port	162	
Version	v2c -	
SNMPv2c Settings		
Community	trap	
SNMPv3 Settings		
Use Authentication		
Use Encryption		
Authentication Protocol	MD5 -	
User Name		
Authenticaion Passphrase		
Privacy Passphrase		
Context Engine ID		
Context Name		
Enter host name or IP addre		
	< Previous Next >	Finish Cancel

If you a secondary SNMP target, you can configure it by entering the appropriate information. Click **Finish** to complete the configuration.

All tasks listed under Other are performed on the LA-200E using the LA-200E user interface. Consult the documentation for the LA-200E to perform any of these tasks. Coverage of these tasks is beyond the scope of this document.

Monitoring the LA-200E

You can see the following status information on the LA-200E when you click Monitoring and then select the LA-200E from the Organizer panel.

🔭 R	ingMaste	· 7.3: Plan (Del	fault)										_ C
Eile	<u>S</u> ervices	<u>T</u> ools Help											
~	_		.	2	1		S	11	0	5			
		Policies	RF Planning	Configuration	Verification	Devices	Monitor	Security	Alarms	Reports			
Ora	mizer	a s i	la200-tac2										
Defa	ult.	J=1 1 Ŧ											
	MXR2												
÷	TechPubs	#1	Status Sun	nmary ———					Alarm Summ	ary —			
=Ap	- 🔲 la200-	tac2	Appliance	Name		la200-tac2							
			Status			Up							
			Admin Sta	tus		Enabled							
			IP Address	6		10.9.0.14							
			Server Typ	be		Location			0 -				
			Manageme	ent Port		8003							
			Version			6.4.1							
			Up Time			34d:23h:42	?m						
									Sys	tem f	Performance	Client	Security
										• 1	Info <mark>–</mark> Minor <mark>–</mark> Ma	ior 📕 Critical	
									_				
								Details	36 🖽				Det
			Clients By L	_ocale					Tracked Devi	ices By Type			
						Lasti	update: 14:32:3	3 07 Jan				Last updat	e: 14:32:33 07:
155555555													
🛲 E	quipmen	t											
<u> </u>	lites												
		»	1 1				Fir	nd Clients	36 🖽				
L							onfia: 1 Error: 5	Warnings I	ocal Changes: n	one Networ	rk Changes: none	Alarms 0 0	
						00	ang. renol, J	trainings t	Local on angos. Th	140000	in changes none		

The Monitor feature displays the following information:

- **Status Summary** click **Details** for more information.
 - o Appliance Name
 - o Status
 - o Admin Status
 - o IP Address
 - o Server Type
 - Management Port
 - o Version
 - o **Up Time**
- Alarm Summary click Details for more information.

🐨 Find Clients		×
Find Clients		
Please select searcl	n scope and criteria to proceed.	Λ
Search Scope —		
Scope Type	Network Plan 👻	
Scope Instance	Default	
Search Criteria -		
Session Type	All	
User Name		
IP Address	· · ·	
MAC Address		
VLAN Name		
SSID		
Access Type	All	
Radio Type	All 👻	
Voice Search Crit	teria	
Local Endpoint		
Remote Endpoint		
Location Search	Criteria	
Locale	All	
		OK Cancel

Clients by Locale — you can also click **Find Clients** to search for clients on the network.

D Tracked Devices by Type

Additional LA-200E Areas Monitored by RingMaster

There are additional features on the LA-200E that can be monitored by RingMaster. When you select a floor with a LA-200E, a new Show Devices task is available. This task displays all the devices tracked by the LA-200E including:

- **Clients**
- **D** Tags
- □ APs
- **D** Rogue APs

You can filter the devices displayed using the following strings:

- \square SSID
- User Name
- MAC Address
- **IP Address**
- End Address for SIP
- Radio Technology

When you use the filtering capabilities, only the devices matching the filter are displayed. Once you clear the criteria, all devices are displayed again.

You can also hide or display the following items on the Monitoring interface:

- Locales
- Fingerprints
- □ APs

- Clients (Voice and Data)
- □ Tags
- **Rogue APs**
- **Client and AP Connections**

When you select **Show Devices** and then select an asset tag, you can see the temperature of the tag as well as the battery life for the tag.

Configuring NAS-ID for an MP Using the CLI

To set the NAS-ID of an MP, use the following command:

MX# set ap apnum ap-nas-id string

The maximum length of the string value is 24 hexadecimal characters.

To set the URL format, use the following command:

MX# set service-profile profilename web-redirect-url-format [standard |cmcc]

To set the NAS-ID for the MX as a RADIUS attribute, use the following command:

MX# set radius nas-id *string*

The maximum length of the string value is 24 hexadecimal characters.

To display the status of external sessions, use the following command:

MX# show sessions external-web-auth [client-ip ipaddr] verbose

Client	Portal	SessionID	User Name	State
192.168.111.21	192.168.10.10	0 4	user-1	Exchange

If verbose is specified, the output is displayed as follows:

192.168.111.21
user-1
192.168.10.10
12345
0xabcd
10
Accounting
0

For RingMaster, the configuration is located under Access Points.

Organizer 🖉 🖓 🖗	Configuration - Access Points	Tasks	ņ
Default MX-Paul MX-R-2 System Ports Ports Nanagement Services Log	Save Discard Access Points Security Mode Optional Enable Auto AP Load Balancing	MXR-2 Changes 2 O Review O Deploy Create 2	
	AP Nu † Name v Descript v Connect v Serial# v Model v Type v NAS ID v	AP Setup AP AP Redundancy Load Balancing AP Boot Configuration Auto AP	:
		Other 2 Image: Convert Auto AP Image: Convert Direct AP	:

LA-200E Alarms Displayed by RingMaster

The following LA-200E alarms are displayed in the Alarms panel of RingMaster:

- **D** AP Snoop Status
- a Agent Status
- Asset Tag Button Pressed
- Asset Tag Battery Low
- Asset Tag Detached



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