Deployment Guide

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Intended Audience

This document is a step-by-step guide on how to use the RUCKUS WAN Gateway (RWG) to migrate WLANs from ZoneDirector 1200 to SmartZone.

The audience for this document is System Engineers, RUCKUS customers and partners using ZoneDirector 1200 and SmartZone controllers. It is expected that the reader possesses a working knowledge on RWG and RUCKUS controllers.

For more information on how to configure RUCKUS products, please refer to the appropriate RUCKUS user guide available on the RUCKUS support site at https://support.ruckuswireless.com/

Overview

RWG can be used to migrate WLANs from ZoneDirector 1200 to SmartZone. There are two migration methods available:

- **One by one:** Uses the RWG WLANs scaffold to migrate the WLANs one by one.
- **In bulk:** Uses RWG's YAML config templates to migrate multiple WLANs at the same time.

The migration works because RWG can adopt different types of wireless controllers, such as the SmartZone and ZoneDirector 1200 controller, and the relevant configuration sections for those controllers get stored in the RWG database.

RWG uses SSH to connect to a ZD 1200 controller and import its configuration, and it can use API calls or a HTTP POST (for bulk changes) to push the WLAN configuration to a SmartZone controller.
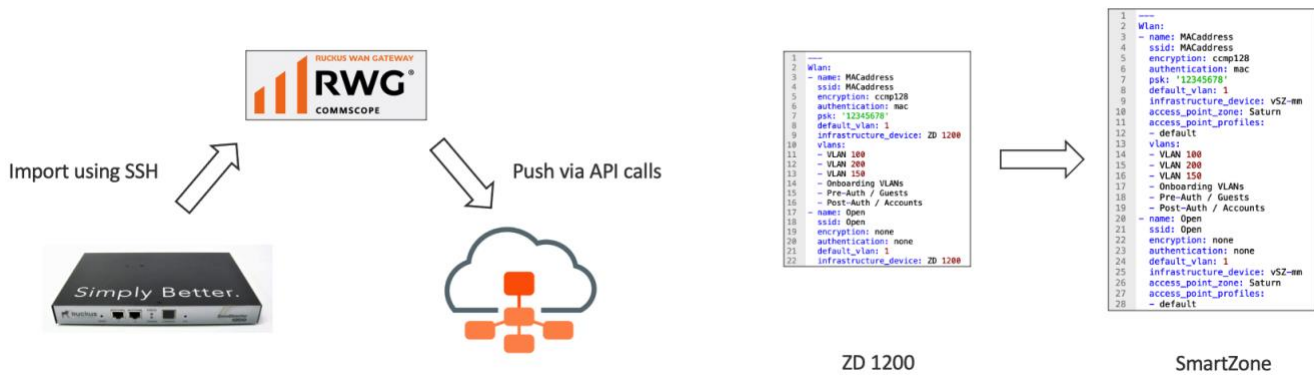

FIGURE 1 – WLAN MIGRATIONS USING API CALLS AND YAML TEMPLATES

Only WLANs can be migrated over from ZD 1200 to SmartZone. The WLANs can remain on ZD 1200 or be removed during the migration process.

For this document, we used the following software releases:

- **RWG**: build 14.825
- **ZoneDirector 1200**: 10.4.1.0 build 257
- **SmartZone High-Scale**: 6.1.1.0.959

We recommend RWG 14.825 or later for WLAN migrations. Older releases of ZoneDirector 1200 and SmartZone should work too.

The following table details the types of WLANs that can be migrated.

	ZD 1200 name	SmartZone name	RWG name	RWG imports from ZD 1200	RWG exports to SmartZone	Notes
Authentication Type	Standard	Standard usage	none	Yes	Yes	
	Hotspot Service (WISPr)	Hotspot (WISPr)	--------------------------	No	No	
	Guest	Guest Access	--------------------------	No	No	
	--------------------------	Web Authentication	--------------------------	No	No	
	Hotspot 2.0	Hotspot 2.0 Access	--------------------------	No	No	
	--------------------------	Hotspot 2.0 Onboarding	--------------------------	No	No	
	--------------------------	Wechat	--------------------------	No	No	
	Autonomous	--------------------------	--------------------------	No	No	
Authentication Methods	Open	OPEN	none	Yes	Yes	
	802.1x EAP	802.1X	802.1X EAP	Yes	Yes	
	MAC Address	MAC Address	MAC Authentication Bypass	Yes	Yes	
	802.1x EAP + MAC Address	802.1X EAP & MAC	802.1X EAP-MAC	Yes	Yes	Needs encryption method to push to SmartZone
	Open/External	External DPSK	Multiple PSK	Yes	Yes	
Encryption Methods	WPA2	WPA2	WPA2	Yes	Yes	
	WPA3	WPA3	WPA3	Yes	Yes	
	WPA2/WPA3-Mixed	WPA2/WPA3-Mixed	WPA2/WPA3	No	Yes	
	OWE	OWE	--------------------------	No	No	
	--------------------------	OWE-Transition	--------------------------	No	No	
	WPA-Mixed	WPA-Mixed	WPA Mixed	No	Partial	Pushes to SmartZone as WPA2
	WEP-64 (40 bit)	WEP-64	--------------------------	Partial	Partial	Imports and pushes using encryption None
	WEP-128 (104 bit)	WEP-128	WPA 128-bit	Yes	Yes	
	None	None	none	Yes	Yes	

TABLE 1 – SUPPORTED WLANS

Migrating WLANs One by One

Step 1 – Adopt the ZD 1200

Navigate to **Network/Wireless** and click **Create New** under WLAN Controllers. Enter the following information:

- **Name**: Enter a name for the controller.
- **Type**: Select **RUCKUS Unleashed/ZoneDirector**.
- **Host**: Enter the FQDN or IP address for the ZD 1200.
- **Username**: Enter the admin account name.
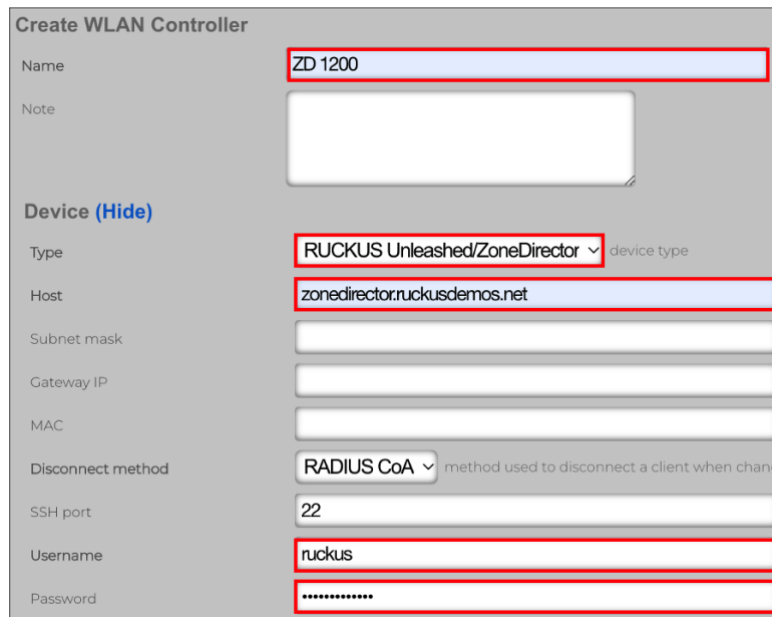- **Password**: Enter the password.

FIGURE 2 – ADOPT THE ZD 1200 CONTROLLER

Scroll down and click **Create New.**

A new entry will show. After a few second the Online icon should turn green.

FIGURE 3 – ZD 1200 IS ONLINE, BUT NOT IN SYNC

Considerations on the Sync Status

The sync status for the ZD 1200 will govern whether or not the WLANs will be deleted from ZoneDirector right after the migration to SmartZone:

- **Sync is disabled**: all WLANs will remain in ZoneDirector after the migration to SmartZone. The WLANs are effectively copied to SmartZone. That's the preffered setting to do a gradual migration, perform tests in SmartZone, and to be able to continue using the ZD 1200 WLANs if anything goes wrong.

- **Sync is enabled**: all WLANs are deleted from ZD 1200 right after they migrate to SmartZone.

In general, we recommend to keep sync disabled in the ZD 1200 controller during the migration process. On the other hand, sync must be always enabled for the SmartZone controller.
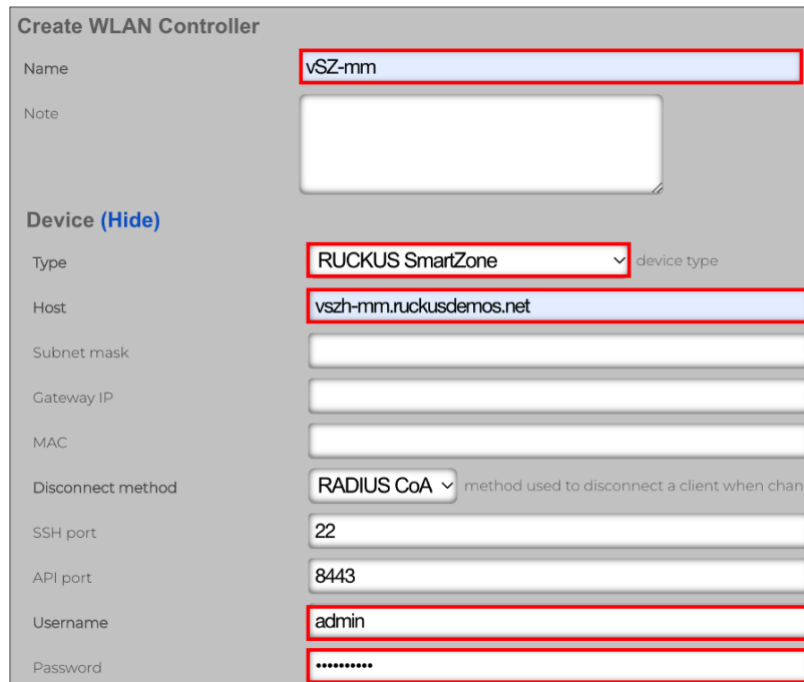
Step 2 – Adopt the SmartZone Controller

Navigate to **Network/Wireless** and click **Create New** under WLAN Controllers. Enter the following information:

- **Name**: Enter a name for the controller.
- **Type**: Select **RUCKUS SmartZone**.
- **Host**: Enter the FQDN or IP address for controller.
- **Username**: Enter the admin account name.
- **Password**: Enter the password.

Scroll down and click **Create New.**

A new entry will show. After a few second the Online icon should turn green.

FIGURE 4 – ADOPT THE SMARTZONE CONTROLLER

Enable config synchronization for the SmartZone controller and await the sync process to complete.

FIGURE 5 – SMARTZONE IS ONLINE AND IN SYNC

Step 3 – Import the ZD 1200 WLANs to RWG

The ZD 1200 WLANs can be imported even when sync is not enabled.

To import the WLANs to RWG, navigate to Network/Wireless, select the ZD 1200 entry, scroll to the right and click **Import**:

Config sync status	WLANs	Location events	Model	Version	Access Points	Monitoring interval	Front image	Rear image	Other image	Manual	Other
⊗ Sync not enabled	-	☑	ZD1200	10.4.1.0 build 257	RuckusAP [d8:38:fc:1a:c0:c0], RuckusAP [74:3e:2b:00:3f:10], RuckusAP [84:23:88:01:d3:40], ... (14)	10					Import

Select Zones

Import Access Points	☐ Create missing Access Points in local database
Import WLANs	☑ Import WLANs from the controller
Import AP Profiles	☐ Import Access Point Profiles from the controller
Import	Import

Close

FIGURE 6 – IMPORT THE WLANS

Mark the checkbox **Import WLANs from the controller**.

Click **Import**. All supported WLANs should be imported into RWG. Click **Close** when complete.

Step 4 – Migrate a WLAN to SmartZone

When using the **WLANs** scaffold, the ZD 1200 WLANs need to be migrated one by one. For example, to migrate WLAN 8021xEAP, click **Edit** at the WLAN entry.

WLANs

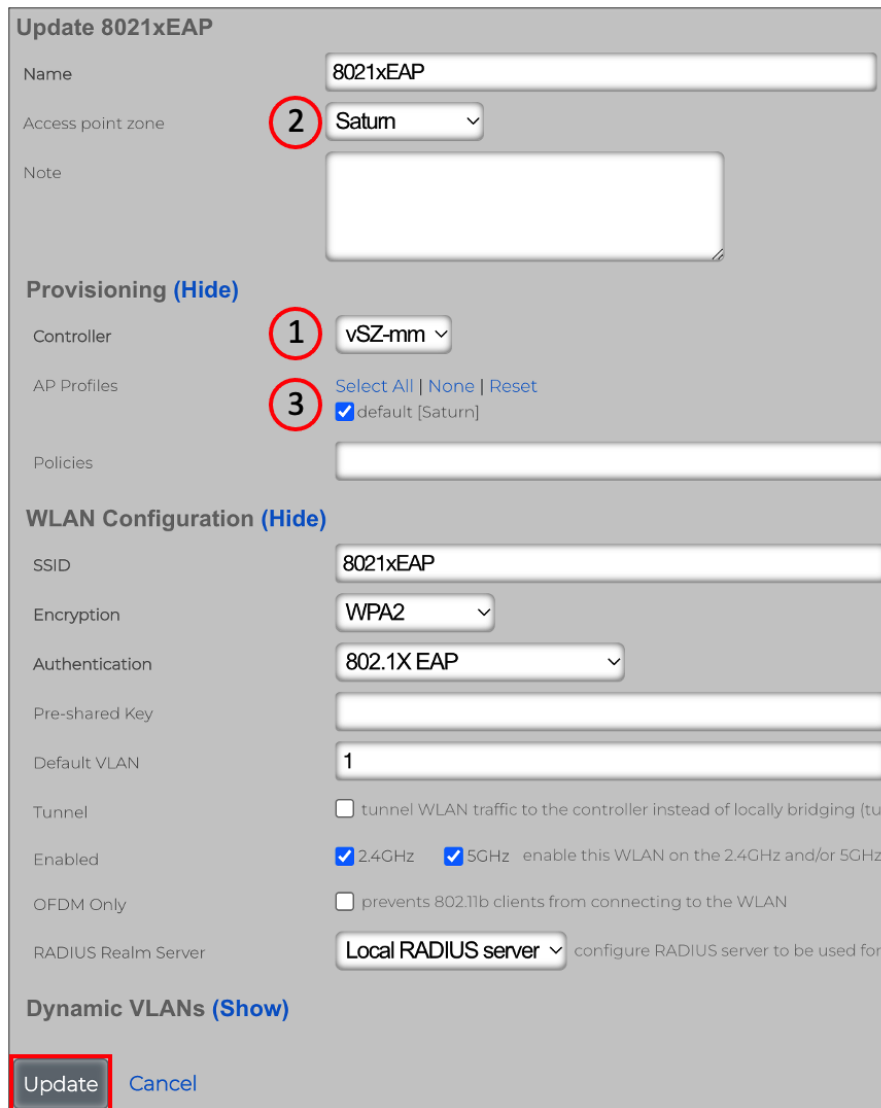|	Name	Controller	AP Profiles	Access point zone	SSID	Encryption	Authentication	VLANs				
☐	8021xEAP	ZD 1200	-	-	8021xEAP	WPA2	802.1X EAP	VLAN 100, VLAN 200, VLAN 150, ... (6)	Clients	Generate QR Code	Edit	Delete	Show
☐	8021xEAPMAC	ZD 1200	-	-	8021xEAPMAC	none	802.1X EAP-MAC	VLAN 100, VLAN 200, VLAN 150, ... (6)	Clients	Generate QR Code	Edit	Delete	Show
☐	Autonomous	ZD 1200	-	-	Autonomous	none	none	-	Clients	Generate QR Code	Edit	Delete	Show
☐	DPSK	ZD 1200	-	-	DPSK	WPA2	Multiple PSK	VLAN 100, VLAN 200, VLAN 150, ... (6)	Clients	Generate QR Code	Edit	Delete	Show
☐	Guest	ZD 1200	-	-	Guest	none	none	-	Clients	Generate QR Code	Edit	Delete	Show
☐	MACaddress	ZD 1200	-	-	MACaddress	WPA3	MAC Authentication Bypass	VLAN 100, VLAN 200, VLAN 150, ... (6)	Clients	Generate QR Code	Edit	Delete	Show
☐	Open	ZD 1200	-	-	Open	none	none	-	Clients	Generate QR Code	Edit	Delete	Show
☐	WEP-128	ZD 1200	-	-	WEP-128	WEP 128-bit	none	-	Clients	Generate QR Code	Edit	Delete	Show

8 Found

FIGURE 7 – MIGRATE WLAN 8021XEAP

Step 5 – Change the Controller to SmartZone

Make the following changes:

- **Controller**: Select the SmartZone controller.
- **Access point zone**: Select the zone.
- **AP Profiles**: Select the AP profile for the zone.

Scroll down and click **Update**.

FIGURE 8 – CHANGING THE CONTROLLER

If sync is disabled in ZD 1200, the WLAN will be maintained in ZD 1200, and a copy will be created in SmartZone.

If sync is enabled, the WLAN will be deleted in ZD 1200, and a copy will be created in SmartZone.

Step 6 – Check the WLAN in SmartZone

Navigate to **Wireless LANs** in SmartZone to see the new WLAN.
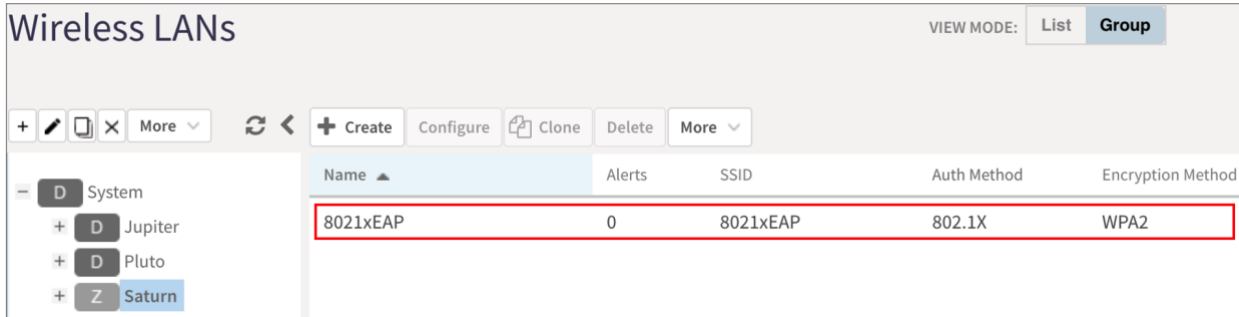

FIGURE 9 – CHECK THE NEW WLAN IN SMARTZONE

Repeat steps 4 and 5 for other WLANs that need to migrate to SmartZone.

Migrating WLANs in Bulk

Bulk migration uses configuration templates, which can be exported directly from any RWG scaffold. A config template is a human-readable configuration file using the YAML model.

The same adoption process used in one by one migration applies to bulk migration. You need to adopt both controllers first. We recommend that the ZoneDirector controller stay not in sync, and the SmartZone controller must always be in sync.

Step 1 – Export the Configuration Template

Navigate to **Network/Wireless** and click **Export/RWG Config Template** under WLANs. Click **Export** to download a YAML file for the configuration of all WLANs.
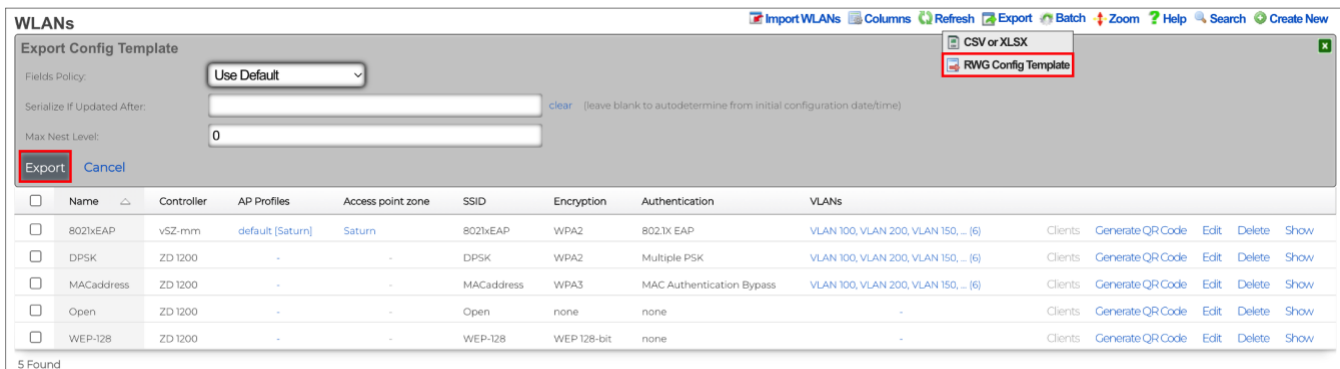

FIGURE 10 – EXPORT THE CONFIG TEMPLATE

Note: If you mark WLAN entries using the checkboxes at the left, only the configuration for those entries will be exported.

Step 2 – Edit the YAML File

Use any text editor to edit the YAML file. You need to change the controller for each WLAN, and add the zone and access point profile to each WLAN.

In this example, we show the changes made for two WLANs only: **MACaddress** and **Open**.

FIGURE 11 – EDIT THE YAML FILE

Step 3 – Upload the New Config Template

Navigate to **System/Backup**, then scroll down and click **Create New** at the **Config Templates** section:

FIGURE 12 – CREATE A NEW CONFIG TEMPLATE

Enter the following information:

- **Name**: Enter a name for the template.
- **File Upload**: Select the edited YAML file.
- **Apply Template**: Scroll down to the bottom of the form and make sure the checkbox is not selected.

FIGURE 13 – UPLOAD THE EDITED YAML FILE

Click **Create** to finish.

Step 4 – Test the Config Template

A new config template entry will show. Click **Test** to test the template:

FIGURE 14 – TEST THE CONFIG TEMPLATE

If all goes well, the test will succeed. This is just a test of the template syntax. No configurations are made to SmartZone at this step.

FIGURE 15 – SUCCESS

If required, click **Edit** to modify the template.

Step 5 – Apply the Config Template

Click **Apply** to execute the changes, then click **OK** in the confirmation form that shows next.
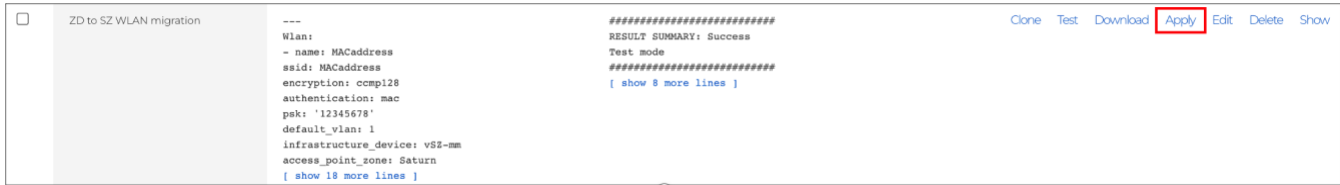

FIGURE 16 – APPLY THE CONFIG TEMPLATE
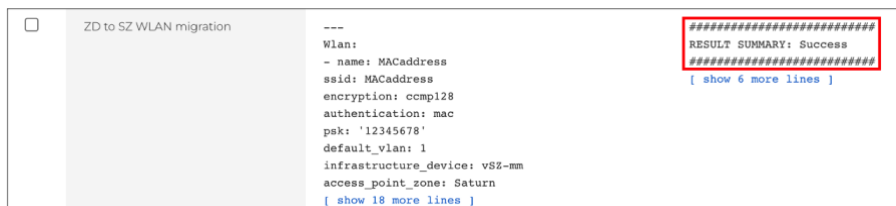
If all goes well, the changes will succeed.

FIGURE 17 – SUCCESS

After a few moments, RWG will resync with the SmartZone controller:

FIGURE 18 – RWG RESYNCS WITH SMARTZONE

Step 6 – Check the WLANs in SmartZone

Navigate to **Wireless LANs** in SmartZone to see the new WLANs.
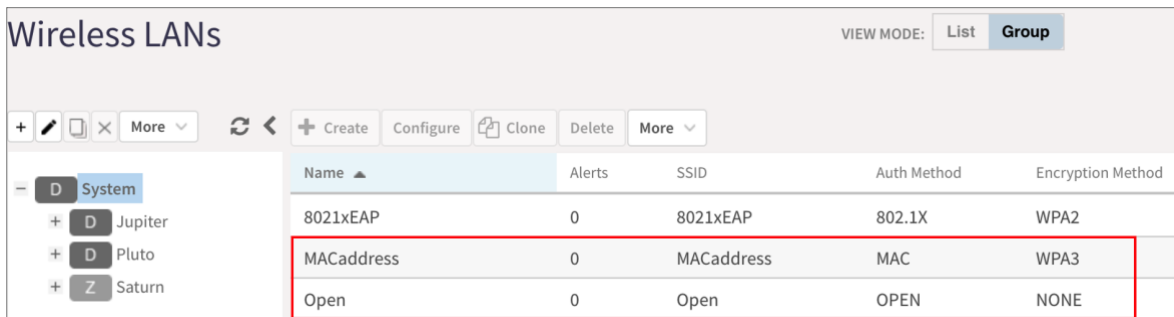

FIGURE 19 – CHECK NEW WLANS IN SMARTZONE

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