

Interface Control Document
for
Aruba Wi-Fi Controller



Revision History

Date	Version	Revision	Made By
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Table of Contents

Introduction	1
Solution Design	1
Requirements.....	2
System Requirements	2
SNMP v2.....	2
SNMP v3.....	2
Network Requirements.....	2
Aruba Controller Configuration	3
Configure Trap Generation	3
Configure Trap Receiver.....	3
SNMP v3 Configuration.....	4
E911 Manager Configuration	5
SNMP v3 Configuration.....	5

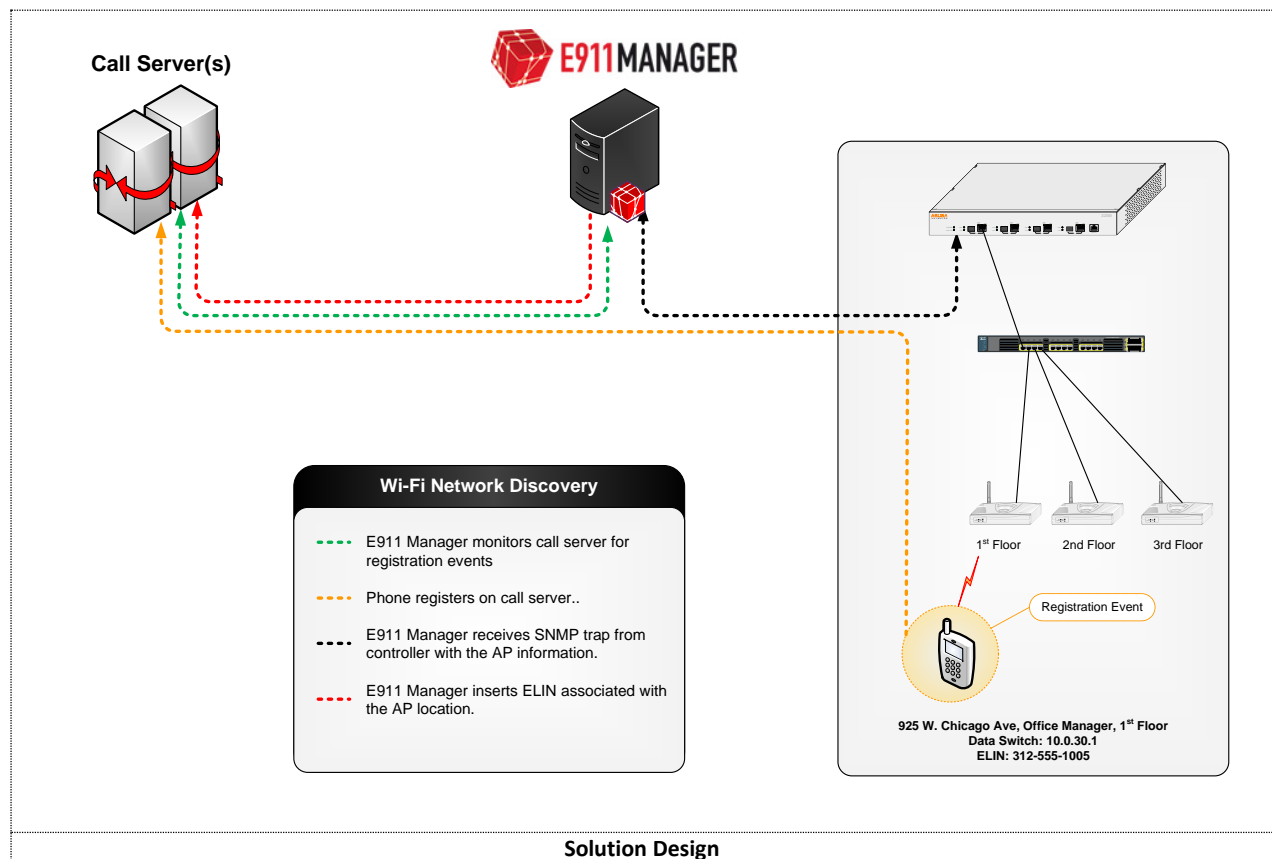
Introduction

This document details the technical aspects of the integration between RedSky's E911 Manager and Aruba Wi-Fi controller. E911 Manager provides an automated solution for Enhanced 9-1-1 Services. E911 Manager tracks the location of wireless phones and updates the location of the device as the device moves within the enterprise environment. Additionally, E911 Manager integrates with the Local Exchange Carriers (LECs) to ensure the proper location information is received by emergency responders.

This document is intended for E911 Administrators. After reading this document an administrator should be able to fully prepare the enterprise's wireless environment for integration with E911 Manager

Solution Design

E911 Manager requires IP connectivity to the Aruba Controllers. E911 Manager communicates with the Aruba controller via SNMP to receive AP information and device registrations. E911 Manager uses this information to identify the devices registered to each access point. E911 Manager can then map the location of each device to the location of the AP.



Requirements

System Requirements

SNMP v2

- Controller IP Address
- Read Community String
- SNMP Trap Destination

SNMP v3

- Controller IP Address
- Read Community String
- SNMP Trap Destination
- SNMPv3 User Name
- Authentication Protocol
- Authentication Protocol Password
- Privacy Protocol
- Privacy Protocol Password

Network Requirements

The RedSky support team will require remote access to the server, the below list outlines the necessary ports and protocols.

SNMP	UDP	162	SNMP Traps
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Aruba Controller Configuration

Configure Trap Generation

1. In the Aruba controller select Configuration>Management > SNMP.
2. Under System Group next to Read Community String enter a read only community string, click Add.
3. Select Enable Trap Generation.

The screenshot shows the Aruba Mobility Controller configuration interface for SNMP Management. The 'System Group' section is highlighted with a red box, showing the 'Read Community Strings' field with the value 'redsky' and the 'Enable Trap Generation' checkbox checked. Below this is a table of 'Trap Receivers' with two entries:

IP Address	SNMP Version	SECURITY NAME	UDP Port	Type	Retry	Timeout	Action
192.168.20.112	SNMPv2c	public	162	Trap	N/A	N/A	Delete
192.168.20.23	SNMPv2c	redsky	162	Trap	N/A	N/A	Delete

SNMP Management - Read Community String

Configure Trap Receiver

1. Under Trap Receivers click ADD.
2. Enter the IP address of the E911 Manager server
3. Select SNMPv2c.
4. For Type select Trap.
5. Enter the Security String provided by RedSky.
6. Use UDP port 162.
7. Click Add.

The screenshot shows the Aruba Mobility Controller configuration interface for SNMP Management. The 'Trap Receivers' section is highlighted with a red box, showing the 'Add' button and the form fields for a new receiver: IP Address (172.20.20.237), Version (SNMPv2c), Type (Trap), Security String (redsky911), and UDP Port (162).

SNMP Management - Trap Receivers

SNMP v3 Configuration

The Aruba Controller supports SNMP v3. To use SMNP v3 you must configure an SNMP v3 user along with the appropriate encryption methods.

1. Under SMNP v3 Users click Add.
2. The user must be configured with the following information:

- SNMPv3 User Name
- Authentication Protocol (MD5 or SHA)
- Authentication Protocol Password
- Privacy Protocol (DES or AES)
- Privacy Protocol Password


3. Click Add and then click Apply

The screenshot displays the Aruba Mobility Controller web interface. The left sidebar shows the navigation menu with 'SNMP' selected. The main content area is titled 'Management > SNMP'. It features a 'System Group' configuration form with fields for Host Name (Aruba3200), System Contact, System Location, Read Community Strings (set to redsky), and Enable Trap Generation (checked). Below this is a 'Trap Receivers' table with columns for IP Address, SNMP Version, SECURITY NAME, UDP Port, Type, Retry, Timeout, and Action. The table contains three entries for IP addresses 172.20.20.237, 192.168.20.112, and 192.168.20.23, all using SNMPv2c and security names redsky911, public, and redsky respectively. At the bottom, the 'SNMPv3 Users' section is active, showing a form for adding a new user. The form fields are: User Name (rst), Authentication Protocol (MD5), Authentication Protocol Password (masked), Retype Authentication Protocol Password (masked), Privacy Protocol (DES), Privacy Protocol Password (masked), and Retype Privacy Protocol Password (masked). 'Add' and 'Cancel' buttons are at the bottom of the form. An 'Apply' button is located at the bottom right of the main interface area.

SNMP Management - SMNP v3 User

E911 Manager Configuration

1. In E911 Manager go to Configuration>WiFi>Aruba Controllers and click Add.
2. Assign a name to the controller
3. Select Enabled.
4. Enter the IP address of the controller.
5. Select SNMP Version 2.
6. Enter the community string for the Aruba controller.



The screenshot shows the E911 Manager interface with a navigation bar containing 'CONFIGURATION', 'STATUS AND REPORTS', 'ADMINISTRATION', and 'HELP'. Below the navigation bar is a header for 'Add Aruba WiFi Controller'. A message states: 'You are licensed for 10 WiFi controllers, of which you have already created 1'. The main form area is titled 'Add Aruba WiFi Controller' and contains the following fields:

- * Name: Aruba
- Enabled:
- * IP Address: 192.168.20.242
- * SNMP Version: 2 3
- Community String*: redsky

Note: Fields marked "*" are required

Buttons: Cancel, Add

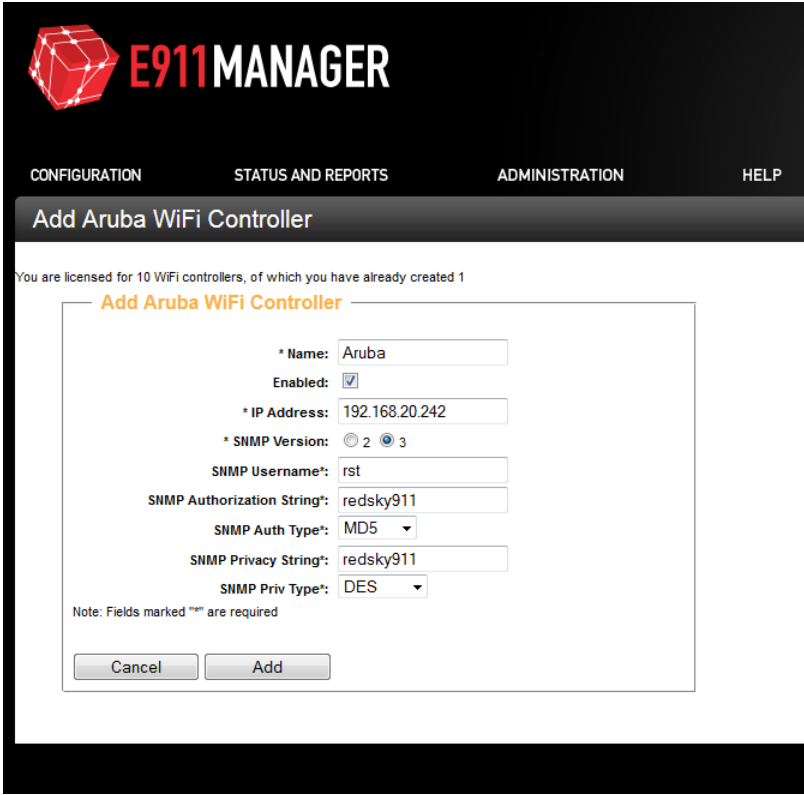
E911 Manager - Aruba Wi-Fi Controller SNMP v2

SNMP v3 Configuration

1. In E911 Manager go to Configuration>WiFi>Aruba Controllers and click Add.
2. Assign a name to the controller
3. Select Enabled.
4. Enter the IP address of the controller.
5. Select SNMP Version 3.

6. For the following, use the SMP v3 credentials used to configure the SNMP v3 User in the Aruba controller:

- SNMPv3 User Name
- Authentication Protocol - None, MD5 or SHA
- Authentication Protocol Password
- Privacy Protocol - None, DES or AES128. AES128 in E911 Manager in the equivalent to AES in the Aruba Controller.
- Privacy Protocol Password



The screenshot displays the E911 Manager web interface. At the top, there is a navigation bar with the E911 Manager logo and the text 'E911MANAGER'. Below the logo, there are four menu items: 'CONFIGURATION', 'STATUS AND REPORTS', 'ADMINISTRATION', and 'HELP'. The main content area is titled 'Add Aruba WiFi Controller'. Below this title, a message states: 'You are licensed for 10 WiFi controllers, of which you have already created 1'. The configuration form is titled 'Add Aruba WiFi Controller' and contains the following fields:

- * Name: Aruba
- Enabled:
- * IP Address: 192.168.20.242
- * SNMP Version: 2 3
- SNMP Username*: rst
- SNMP Authorization String*: redsky911
- SNMP Auth Type*: MD5
- SNMP Privacy String*: redsky911
- SNMP Priv Type*: DES

Note: Fields marked "*" are required

Buttons: Cancel, Add

E911 Manager - Aruba Wi-Fi Controller SNMP v3