



Setting up Aruba Instant and AirWave

John Schaap
Director Systems Engineering EMEA
jschaap@arubanetworks.com
+31622407110

There are two ways of provisioning Aruba Instant into AirWave.

1. The manual mode
2. The Automatic mode using DHCP option 43 & 60

Manually setting up Aruba Instant

On the Aruba Instant homepage you can check if AirWave is setup or not.

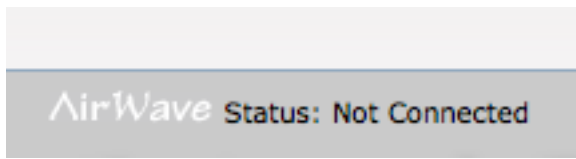
Click 'Set Up Now'

The screenshot shows the Aruba Instant Virtual Controller interface for 'Instant-C4:40:92'. At the bottom, the 'AirWave' status is 'Not Set Up', and a red circle highlights the 'Set Up Now' link. The interface includes a top navigation bar with 'Users', 'Settings', 'Servers', 'Roles', 'Maintenance', 'Support', and 'Help Logout'. Below the navigation bar, there are three main sections: '3 Networks', '1 Access Point', and '1 Client'. The '3 Networks' section lists 'Instant-employee' (0 clients), 'Instant-guest' (1 client), and 'Instant-mgmt' (0 clients). The '1 Access Point' section lists 'dB:c7:c8:c4:40:92' (1 client). The '1 Client' section lists '172.16.11.34' (Network: instant-guest, Access Point: dB:c7:c8:c4:40:92). Below these sections, there is an 'Info' panel with details for 'Instant-C4:40:92', including Country code (NL), IP Address (0.0.0.0), Content filtering (disable), Organization (--), AirWave IP (0.0.0.0), and Band (all). To the right of the 'Info' panel is an 'RF Dashboard' with 'Signal', 'Speed', 'Utilization', 'Noise', and 'Errors' indicators. Further right is a 'Usage Trends' section with 'Clients' and 'Throughput (bps)' graphs. At the bottom right, there is a 'Monitoring' section with '0 Client Alerts' and 'IDS'.

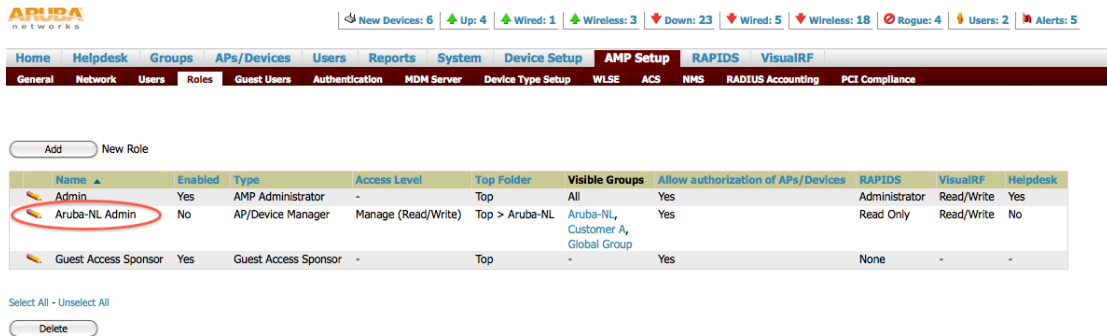
This will open this window. Type name (organization) for this Instant and IP address of AirWave and type a shared key.

The screenshot shows the 'Settings' dialog box for AirWave configuration. The 'Basic' tab is selected. The 'Local' section has 'Authentication' set to 'Internal', 'Username' as 'admin', and 'Password' and 'Retype' fields. The 'AirWave' section has 'Organization' as 'Aruba-NL', 'AirWave IP' as '192.168.1.211', and 'Shared key' and 'Retype' fields. The 'OK' and 'Cancel' buttons are at the bottom right.

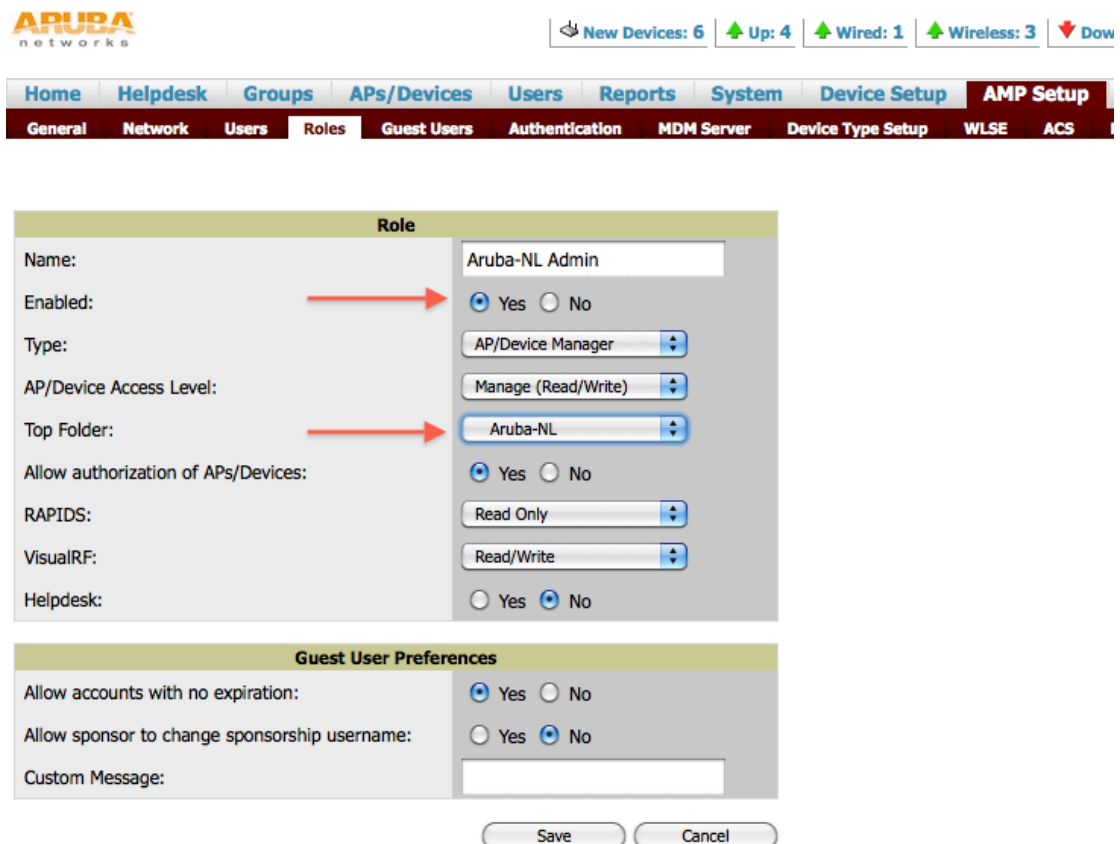
After this you will see that the Status is “Not Connected”



Go to AirWave and find the role that Instant automatically created for you. The role will have the name of the ‘organization’ that you configured in Instant. The name is appended by Admin so in this case ‘Aruba-NL Admin’



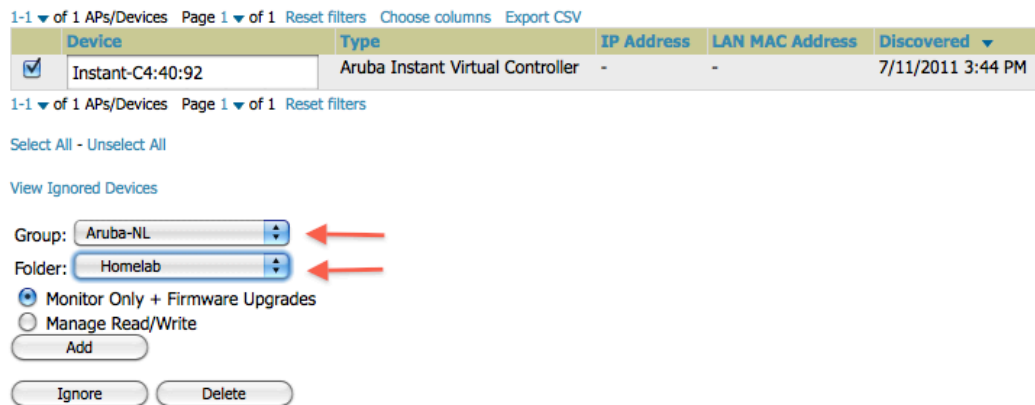
Click the pencil symbol and enable the role and save. You will also see here that AirWave created a folder for you with the name of the organization.



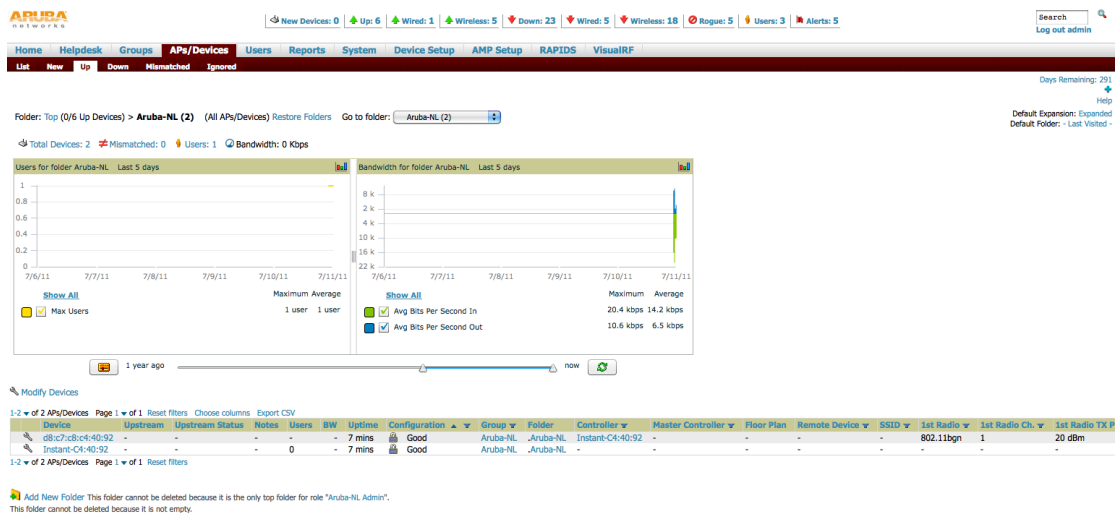
You will now see that AirWave discovered a new device (New Devices: 1). Click the New Devices link and select the device and put it in the folder that was created for this device and in a group of your choice. Always add a new device in Monitor Only mode.



To discover more devices, visit the [Discover](#) page.



You will now find 2 devices (virtual controller and AP) in your folder. It can take some minutes before the devices show up here.



Additional Instant AP's added to this virtual controller will automatically show up in the folder once they are added and active.

AirWave will automatically make a template from the config of the virtual controller.



New Devices: 0 Up: 6 Wired: 1 Wireless: 5

Home Helpdesk Groups **APs/Devices** Users Reports System Device Setup AMP S
List Monitor Manage **Audit** Compliance New Up Down Mismatched Ignored

Device Configuration of **Instant-C4:40:92** in group **Aruba-NL** in folder [Top](#) > [Aruba-NL](#)

This Device is in monitor-only-with-firmware-upgrades mode.

Configuration read from device at 7/11/2011 5:02 PM

Template: [Aruba Instant Virtual Controller - 5.0.3.0-1.1.0.0_29082](#)

Configuration: Good

Audit the device's current configuration.

[Refresh this page](#)

```
Controller Settings
Template: version 5.0.3.0-1.1.0
virtual-controller-country NL
virtual-controller-key 2d77648f01b093a17613a4cd9ec5ebd4b462a6ccf14fc054c1
name Instant-C4:40:92
organization Aruba-NL

ntp-server 195.121.1.68
rf-band all
ams-ip 192.168.1.211
ams-key 4dac0db3b5905cd6b86ef5ea4b0744c69c625fb38776d6ae

allow-new-aps
allowed-ap d8:c7:c8:c4:40:92

user guest1 b902f4b8c62b252bad14e193c5d0fae2 portal
user guest2 30fdb95c479c616b155a646365b0df84 portal
user guest3 938e7fa9b8126fa9e8d76ba7c66c2e8f portal

user employee1 f06fbc90f5f17bdb0008a8c20d9340c9723c8e889799b31d radius

mgmt-user admin c3041a5a33944a064a21ca9041c49d32

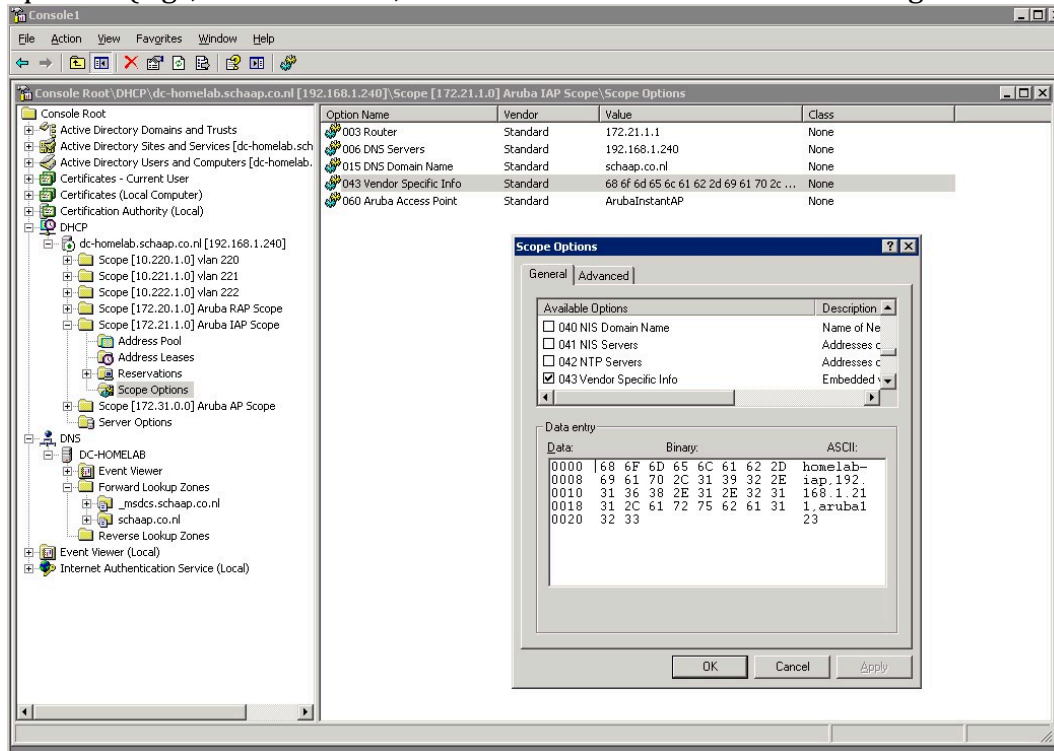
wlan ssid-profile instant-guest
index 0
type guest
ssid instant-guest
opmode opensystem
vlan guest
rf-band all
captive-portal internal
```

Automatically setting up Aruba Instant

Configure your DHCP scope with Option 43 and 60

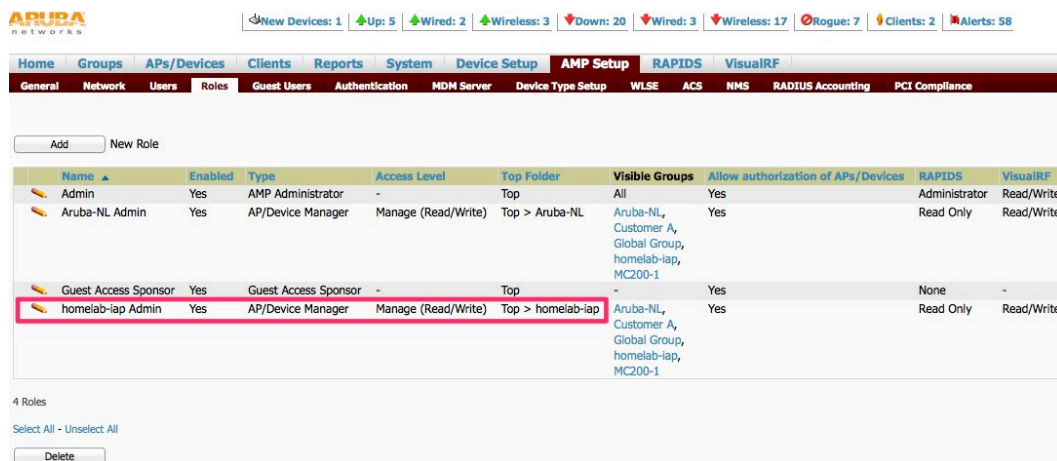
Option 43 = ArubaInstantAP

Option 60 = name,amp-ip-address,password. The three pieces of information should be specified using comma separators without any spaces. Organization is optional (e.g '192.168.1.211,aruba123' is allowed. Note the leading comma.



Reset your IAP to factory default state and reboot the IAP. You will see that the IAP will create a new role automatically with the name that you have used in option 43. It will append the name with "Admin" so it becomes "homelab-iap Admin".

Click the pencil symbol to edit the role and enable the role.



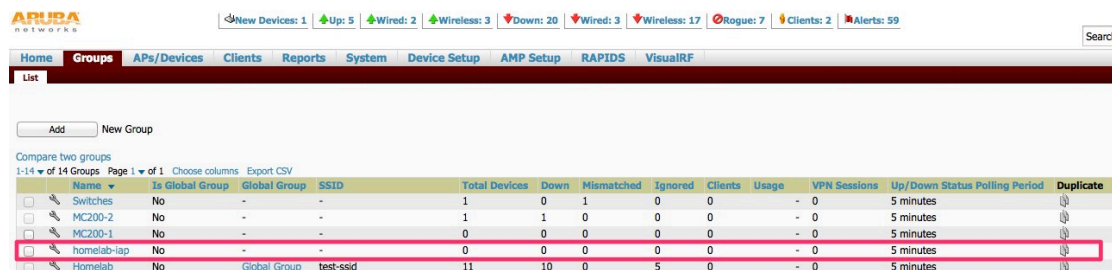
You will also see that a user is created automatically



The screenshot shows the Aruba AMP Setup interface. At the top, there are status indicators: New Devices: 1, Up: 5, Wired: 2, Wireless: 3, Down: 20, Wired: 3, Wireless: 17, Rogue: 7, Clients: 2, Alerts: 59. The navigation bar includes Home, Groups, APs/Devices, Clients, Reports, System, Device Setup, AMP Setup, RAPIDS, and VisualRF. The AMP Setup sub-menu is active, showing options like General, Network, Users, Roles, Guest Users, Authentication, MDM Server, Device Type Setup, WLSE, ACS, NMS, RADIUS Accounting, and PCI Compliance. The 'Users' tab is selected, and a 'New User' button is visible. A table lists users with columns for Username, Role, Role Enabled, Type, Access Level, Top Folder, Name, and Email Address. The 'homelab-iap Admin' user is highlighted with a red box. Below the table, there are options to 'Add', 'Delete', and 'Select All - Unselect All'.

And a group is created automatically

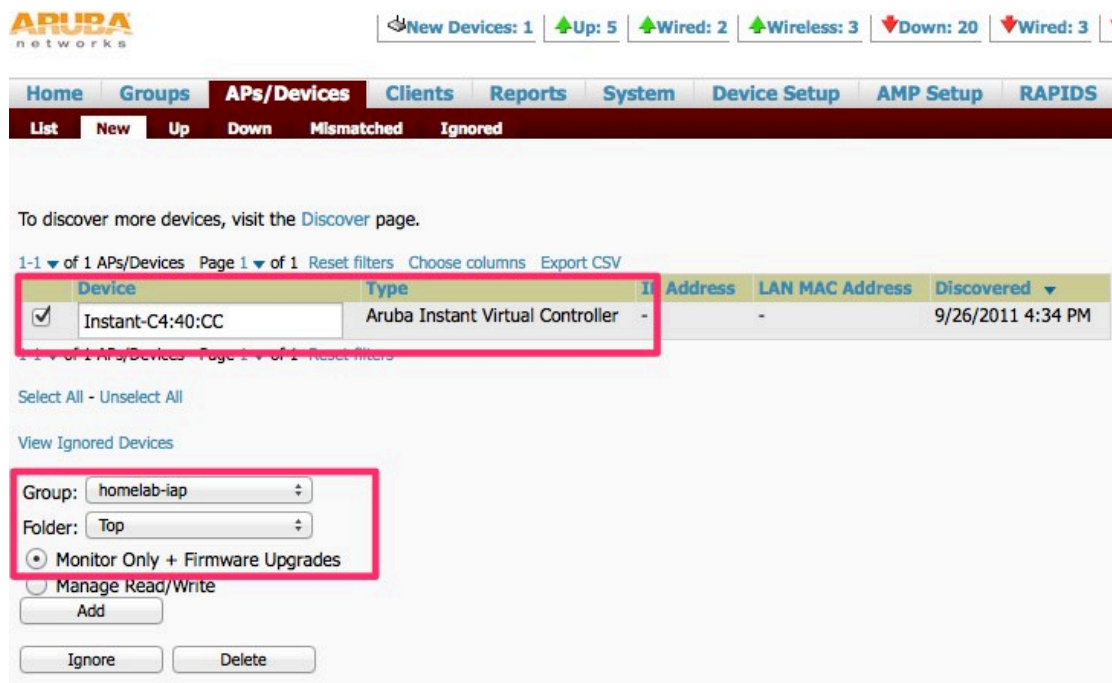
Also note that 1 new device is discovered.



The screenshot shows the Aruba AMP Setup interface. At the top, there are status indicators: New Devices: 1, Up: 5, Wired: 2, Wireless: 3, Down: 20, Wired: 3, Wireless: 17, Rogue: 7, Clients: 2, Alerts: 59. The navigation bar includes Home, Groups, APs/Devices, Clients, Reports, System, Device Setup, AMP Setup, RAPIDS, and VisualRF. The 'Groups' tab is selected, and a 'New Group' button is visible. A table lists groups with columns for Name, Global Group, Global Group, SSID, Total Devices, Down, Mismatched, Ignored, Clients, Usage, VPN Sessions, Up/Down Status, Polling Period, and Duplicate. The 'homelab-iap' group is highlighted with a red box. Below the table, there are options to 'Add', 'Delete', and 'Select All - Unselect All'.

Click "New Devices" and add them to the group that was created automatically. You can add the devices to the default folder or any other folder of your choice.

Add the devices in Monitor Only mode for now.



The screenshot shows the Aruba AMP Setup interface. At the top, there are status indicators: New Devices: 1, Up: 5, Wired: 2, Wireless: 3, Down: 20, Wired: 3. The navigation bar includes Home, Groups, APs/Devices, Clients, Reports, System, Device Setup, AMP Setup, and RAPIDS. The 'APs/Devices' tab is selected, and a 'New' button is visible. Below the navigation bar, there are options to 'List', 'New', 'Up', 'Down', 'Mismatched', and 'Ignored'. The 'New' button is selected, and a 'Discover' page is shown. A table lists discovered devices with columns for Device, Type, Address, LAN MAC Address, and Discovered. The 'Instant-C4:40:CC' device is highlighted with a red box. Below the table, there are options to 'Select All - Unselect All', 'View Ignored Devices', and a form to add the device to a group. The form includes a 'Group' dropdown set to 'homelab-iap', a 'Folder' dropdown set to 'Top', and radio buttons for 'Monitor Only + Firmware Upgrades' (selected) and 'Manage Read/Write'. There are 'Add', 'Ignore', and 'Delete' buttons.

In the group "homelab-iap" you will now find both the VC and AP

Device	Status	Detailed Status	Upstream	Upstream Status	Notes	APs	Clients	Usage	VPN Sessions	Uptime	Configuration	Aruba AP Group	Folder	Controller
d8:c7:c8:c4:40:cc	Up	OK	-	-	-	-	-	-	-	11 mins	Good	-	.homelab-iap	Instant-C4:40:CC
Instant-C4:40:CC	Up	OK	-	-	-	1	0	-	-	11 mins	Good	-	.homelab-iap	-

You need to connect to the IAP to set the Country Code.

Note that the IAP will now also show the AirWave IP address and that the AirWave status is: Connected

Info
Name: Instant-C4:40:CC
Country code: NL
IP Address: 0.0.0.0
Content filtering: disable
Organization: homelab-iap
AirWave IP: 192.168.1.211
Band: all

AirWave Status: Connected

AMP will import a template of the config of the IAP and you can decide to move the IAP from Monitor Only mode to Manage Read/Write. Config changes made on the template will then automatically be send to the IAP.

The screenshot displays the Aruba AMP web interface. At the top left is the Aruba Networks logo. To its right is a status bar with the following indicators: New Devices: 0, Up: 7, Wired: 2, Wireless: 5, and Down: 20. Below this is a navigation menu with tabs for Home, Groups, APs/Devices (selected), Clients, Reports, System, Device Setup, and AMP Setup. Under the APs/Devices tab, there are sub-tabs: List, Monitor, Manage, Audit (selected), Compliance, New, Up, Down, Mismatched, and Ignored. The main content area shows the configuration for device Instant-C4:40:CC in the homelab-iap group. It indicates the device is in monitor-only mode and that the configuration was read at 9/26/2011 4:44 PM. The template used is Aruba Instant Virtual Controller - 5.0.3.0-1.1.0.1_29974, and the configuration is good. An 'Audit' button is present with the text 'Audit the device's current configuration.' Below this is a 'Refresh this page' link. The 'Controller Settings' section is highlighted in yellow and contains the following configuration text:

```
Template: version 5.0.3.0-1.1.0
virtual-controller-key f5e6f0110193551c9c43c4a1d8a85a7a64da7a3f0f92d6a72a
name Instant-C4:40:CC

rf-band all

allow-new-aps
allowed-ap d8:c7:c8:c4:40:cc

mgmt-user admin 20f6e8bface1eabf7bea5fda4466584a

wlan ssid-profile instant
index 0
type employee
ssid instant
opmode opensystem
vlan guest
rf-band 2.4
captive-portal disable

enet-vlan guest

wlan access-rule instant
index 0
rule 172.21.1.10 255.255.255.255 match tcp 80 80 permit
rule 172.21.1.10 255.255.255.255 match tcp 443 443 permit
rule any any match udp 67 68 permit
rule any any match udp 53 53 permit

wlan external-captive-portal
server localhost
port 80
url "/"
auth-text "Authenticated"
```