配置与AP的基本WLAN连接

目录

<u>简介</u> <u>先决条件</u> <u>要求</u> <u>使用的组件</u> 配置 <u>说明</u> <u>验证</u> 故障排除

简介

本文档说明如何使用运行Cisco IOS®版本15.²⁽2)JB自主代码的Cisco接入点(AP)设置基本无线 LAN(WLAN)连接。

先决条件

要求

Cisco建议在尝试此配置之前先了解以下主题的基本知识:

- 无线射频(RF)技术
- 思科AP接入

本文档假设已安装PC或笔记本电脑的无线客户端卡的驱动程序。

使用的组件

本文档中的信息基于运行Cisco IOS软件版本15.2(2)JB的Aironet 1040系列AP。

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原 始(默认)配置。如果您使用的是真实网络,请确保您已经了解所有命令的潜在影响。

配置

本节介绍如何使用GUI配置AP。

使用 GUI 访问 AP 有两种方法:

- 在通过 GUI 连接之前为设备分配 IP 地址。
- 使用 DHCP 获取 IP 地址。

说明

配置IP地址后,您可以通过浏览器访问AP以配置AP。

请完成以下步骤:

1. 要使用GUI访问AP并打开"摘要状态"(Summary Status)窗口,请完成以下步骤:

- 打开Web浏览器,在地址行中输入AP的IP地址。
- 输入用户名和口令。默认用户名和密码为Cisco。

此时将显示"汇总状态"窗口,如下所示:

Home Summary	cisco	Cisco Airor	net 1040 Series Access Point	10 4		
· casi semp	Hostname Autonomous		Autonomous uptime is 2 days, 1 hour, 4	8 minutes		
	Home: Summary Status					
	Association					
	Clients: 0		missituture clients: 0			
	Network Identity					
	IP Address		10.105.127.39			
	MAC Address		4055.39f2.0c9c			
	Network Interfaces					
	Interface	MAC Address	Transmission Rate			
	GigabitEthernet	4055 3912 0c9c	1Gaps			
	Radio0-802.11N2-40Ha	1caa.076184c0	Mcs Index 15			
	Radio1-002.111950Hz	1caa.0767.5580	Mcs Index 15			
	EventLog					
	Time	Severity	Description			
	Nar 1 00:00:27.414	+Warning	No VL4Ns configured in MBSSID mode. Dot11RadioD not started			
	Mar 1 00:00:26.413	 Warning 	Full power - NEGOTIATED Inline power source			
	Mar 1 00:00:19.045	Notification	Line protocol on Interface Dot11Radio0, changed state to down			
	Mar 4 05:00-49 243	delatification .	Line protocol so interface DURL despend data to un	_		

2. 单击左侧的Easy Setup,然后单击Network Configuration。

系统随即会显示"轻松设置"窗口。您可以使用此窗口配置建立无线连接所必需的一些基本参数 。以下是此窗口的示例:

CISCO	HOME NETWORK ASS	formation represent generall general	S SOFTWARE EVENTLOS	
me	Hostname Autonomous			Autonomous uptime is 2 days, 1 hour, 52 minutes
Summary	Network Configur	ration		Reboot AP Factory Reset
Network. Configuration	Host Name: Server Protocol: IP Address: IP Subnet Nesk: Default Gateway: Usemarne: Password:	Autonamous OHCP Static IP 10.106.127.39 255.255.255.0 10.106.127.1	Current	ant SS3D List(Read Only) W >
	SNNP Community:	sam © Read-Only 🕷 Read-Write		×
	SNIP Community: Apply: Cancal Radio Configurati Radio 2 AGM2	sem © Read-Only I Read-Write Ion	Badio 45Hz	*
	SNIP Community: Apply: Cancal Radio Configurati Radio 2.4GHz SSID :	sem Read-Only Read-Write	Radio 5GHz SSID :	
	SNHP Community: Apply: Cancal Radio Configurati Radio 2.4GHz SSID : VLAN :	sem Read-Only Read-Write Ion Read-set SSID in Reacon Ro VLAN © Enable VLAN ID: [1-4054] Native VLAN	Radio 5GHz SSID : VLAN :	Broadcast SSID in Reacon No VLAN © Enable VLAN ID: (1-4094) Native VLAN
	SNHP Community: Repty: Cancal Radio Configurati Radio 2.4GHz SSID : VLAN : Security :	sem © Read-Only © Read-Write Ion © <u>Proadcest SSID in Beacon</u> © No VLAN © Enable VLAN ID: [1-4054] © Native VLAN No Security •	Radio SGHz SSID : VLAN : Security :	Broadcent SSID in Rescon No VLAN © Enable VLAN ID: (1-4094) © Native VLAN No Security
	SMIP Community: Apply: Cancal Radio Configurati Radio 2.4GHz SSID : VLAN : Security : Role in Radio Networ	sem Read-Only Read-Write Ion Preadcest SSID in Bezoon No VLAN Carable VLAN ID: (1-4094) Native VLAN No Security = *: Access Point =	Radio SGHz SSID : VLAN : Security : Role in Radio Network	Broadcast SSID in Rescon No VLAN © Enable VLAN ID: (1-4094) Native VLAN No Security Access Point Access Point

- 3. 在Easy Setup窗口中输入以下配置参数:
 - AP的主机名
 - AP的IP地址配置(如果IP地址是静态的)
 - 默认网关
 - 用户名/密码
 - 无线电2.4GHz和无线电5GHz的服务集标识符(SSID)
 - SSID Security配置和其他特定参数

提示:您可以在"Easy Setup(简易设置)"下重新启动AP或"Factory Reset(出厂重置)"配置。

以下是示例窗口:

cisco	HOME NETWORK ASS	OCIATION WIRELESS SECURITY SERVICES S	OFTWARE EVENT LOG	Says Configuration Drig Logout Befrea	
Home Summery * Easy Schup Network Configuration	IP Subnet Mask: Default Gateway: Usemame: Password: SNMP Community: Apply) Cancel	255 255 255 0 10.106.127.1	Clament 4 NEX Test	t SSID List(Read Only)	
	Radio Configuratio	on	Radio 5GHz.		
	SSID :	ciscol M Broadcast SSID in Beacon M Broadcast SSID in Beacon	SSID :	cisco2 Streadcast 5500 in Beacon No. 10 All Streads 10 All 10-	
	Security :	10 (1-4094) V Netive VLAN	Security :	20 (1-4094) Native VLAN	
	Optimize Radio Netwo Aironet Extensions:	Access Font Im Access Font Im Prk I Repeater Root Bridge Non-Root Bridge	Optimize Radio Network : Aironet Extensions:	Access Pork	
	Channel: Power: Apply Cancel	Workgroup Bindge Universit Workgroup Bridge Scenner	Channel: Power: Acoly Cancel	Dynamic Frequency Selection 💌 Naximum 💌	

- 4. 单击Apply以保存对同一页上特定部分的更改。
- 5. 要查看网络接口摘要,请导航到网络>网络接口>摘要。

CISCO L	ONE NETWORK ASSOCIATION V	VIPELESS SECURITY SERVICES SOFTWARE	EVENTLOG							
TWORK	Hostname Autonomous			Autonomous uptime is 2 days, 2 hours, 5 minute						
	Network Interfaces: Summary									
Summary	System Settings									
djecent Nodes	IP Address (Static)	10.105.127.39								
UTIMARY	IP Subnet Mask	255 255 255 0								
Address	Default Gateway	10.106.127.1								
dio0-802.11n 2G.Hz	MAC Address	4055.3912.0090								
adio0-802.11n SG.Hz	Interface Status	GloabiEthemet	Radio0-802.11N2.40Hz	Radio1-802.11N504						
	Software Status	Enabled 🛉	Disabled 🗸	Disabled						
	Hardware Status	Up 😭	Down 🖊	Down						
	Interface Resets	2	2							
	Receive									
	Input Rate Timespan	5 minute	5 minute	5 minu						
	Input Rate (bits/sec)	3000	0							
	Input Rate (packets/sec)	4	0							
	Time Since Last Input	00:00:00	never	nev						
	Total Packets Input	673846	0							
	Total Bytes Input	53910892	0							
	Broadcast Packets	560263	0							
	Total Input Errors	0	0							

6. 要查看或编辑GigabitEthernet端口、Radio 2.4GHz和Radio 5GHz设置,请导航至Network Interface部分。

屏幕截图如下:

alialia cisco	HOME NETWORK ASSOCIATION WIRELESS	SECURITY SERVICES SOFTWAR	E EVENTLOS	Saye Configuration ging Logout Befre				
NETWORK		SETTINGS						
* NETWORK MAP	Hostname Autonomous			Autonomous uptime is 2 days, 2 hours, 6 minutes				
Adjacent Nodes	Notarrik Istanfacor Ginabili fihansat Status							
 NETWORK INTERFACE Summary 	Configuration							
IP Address	Software Status	Enabled 1	Hardware Status	Up 🕈				
GigabitEthernet	Maximum Rate		Duplex					
Radio0-802.11n 2G.Hz	Interface Statistics							
100000000000000000000000000000000000000	Interface Resets	2	No Carrier	0				
	Lost Carrier	0						
	Receive / Transmit Statistics							
	Receive		Transmit					
	6 Min Input Rate (bits/sec)	10000	5 Min Output Rate (bits/sec)	32000				
	5 Min Input Rate (packets/sec)	13	5 Min Output Rate (packets/sec)	11				
	Time Since Last Input	00:00:00	Time Since Last Output	00:00:00				
	Total Packets Input	675503	Total Packets Output	23910				
	Total Bytes Input	54057620	Total Bytes Output	6604913				
	Broadcast Packets	560676						
	Error Statistics							
	Receive		Transmit					
	Total Input Errors	0	Total Output Errors	0				
	Overrun Errors	D	Underrun Errors	0				
	Ignored Packets	0	Deferred Packets	0				
	Framing Errors	D	Babbles	0				

RADIO0-802.11N ^{2.40HZ} STATUS	DETALED STATUS	ETTINGS LE CARRIER BUS	SYTEST
Hostname Autonomous			Autonomous uptime is 2 days, 2 hours, 7 minute
Network Interfaces: Radio0-802.11N ^{2.40Hz} Stat	us		
Configuration			
Software Status	Disabled	Hardware Status	Down
Operational Rates	10, 20, 55, 110, 60, 9.0, 120, 180, 240, 360, 480, 540, m9-2, m1-2, m2-2, m3-2, m4-2, m5-2, m5-2, m5-2, m7-2, m8-2, m9-2, m10-2, m11-2, m12-2, m13-2, m14-2, m15-2 Mbitec	Basic Rate	10,20,55,110 Mate
Airanet Extensions	Enabled	Carrier Set	America
Configured Radio Channel	0 MHz Channel 0	Transmitter Power	0 dBm (1.0 to m23b4
Active Radio Channel	0 MHz Channel 0	Channel Width	20 MH
Role in Network	Access Point		
Antenna Gain	0 d0		
Interface Statistics			
Interface Resets	2		
Receive / Transmit Statistics			
Receive		Transmit	
5 Min Input Rate (bits/sec)	0	5 Min Output Rate (bits/sec)	
5 Min Input Rate (packets/sec)	0	5 Min Output Rate (packets/sec)	
Time Since Last Input	never	Time Since Last Output	neve
Total Packets Input	0	Total Packets Output	
Total Bytes Input	0	Total Bytes Output	
Error Statistics			
Receive		Transmit	
Total Input Errors	0	Total Output Errors	

7. 单击Association选项卡以检查客户端关联:

uluilu cisco	HOME NETWORK ASSOCIATION	WIRELESS SECURITY S	ERVICES SOFTWARE	EVENTLOG	Saye C	onfiguration <u>P</u> ing Logout Befreat
Association Activity Timeout	Hostname Autonomous				Autonomou	s uptime is 2 days, 2 hours, 9 minutes
	Association Clients: 0	infrastr	ucture clients: 0			
	View: Client Client Infrastructure	lient				Apply
	Radio0-802.11N ^{2.40Hz}					
	Radio1-802.11M ^{NGH1}					
						Refresh
	Close Window	_	_	_	Сор	right (c) 1992-2012 by Cisco Systems, inc

8. 自治AP也可用于无线域服务(WDS)。单击Wireless选项卡以配置或查看WDS设置:

cisco	BOME NETWORK ASSOCIATION WIRELESS SECURITY SERVICES SOFTWARE EVENTLOG	ation <u>B</u> ing Logout Befresh
Wireless Services	WDS STATUS GENERAL SET UP SERVER GROUPS Hostname Autonomous Autonomous uptime	e is 2 days, 2 hours, 10 minutes
WDS	Wineless Services: WDS/WNM - General Set-Up WDS - Wireless Domain Services - Global Properties	
	Use this AP as Wireless Domain Services Wireless Domain Services Priority: DISABLED (1-255) Use Local MAC List for Client Authentication	
	WNM - Wireless Network Manager - Global Configuration	
	Configure Wireless Hetwork Manager Wireless Network Manager Address: DISABLED (P Address or Hestname)	
		Apply Cancel
	Close Window Copyright (c) 1992-2000	9, 2011-2012 by Cisco Systems, Inc.

- 9. 要配置以下AP参数,请单击Security选项卡:
 - 管理员访问 设置用户名和密码,并使用本地或身份验证服务器
 - Encryption Manager 设置无线电的加密
 - SSID管理器 配置SSID
 - 服务器管理器 添加RADIUS服务器
 - AP身份验证 为AP使用证书

- 入侵检测 配置管理帧保护
- 本地RADIUS服务器 将无线接入点配置为RADIUS服务器
- 高级安全 使用MAC地址或访问控制列表配置MAC地址身份验证

下面是屏幕截图:

cisco	HOME NETWORK	ASSOCIATION	wjaeless :	ECURIT	Y SERV	ices go	FTWARE EVEN	ITLOG	-	-	Saye Co	nfiguration	Ding	Logout
ecurity Admin Access	Hostname Autonor	nous								Auto	nomous upt	me is 2 days	s, 2 hour	s, 19 minut
incryption Manager	Security Summ	ary												
SID Manager	Administrators													
P Authentication	Username					Re	ad-Only				Read-W	rite		
trusion Detection	Cisco						1							
ocal RADIUS Server	Service Set Identi	flers (SSIDs)												-
avance securicy	SSID		VLAN	Ban	dSelect	Radio BSSID/Gues		BSSID/Guest M	lode	Open	Shared	Network	EAP	MEP
	test			Di	sabled	Radico	Radic0-802.11N2.40Hz 1caa.076f.Bfc0		with EAP				Disabled	
	Radio0.802.1182	AGHIS Encryption Se	ettinas											
	Formation Made			WEP				Ciphe	Cipher				Key Rotation	
	Encryption Mod			MIC	PPK	TKIP	WEP40bit	WEP128bit	CKIP	CMIC	AES C	CM	Fully IS	ocation
	Cipher										1			
	Radio1-802.118	Encryption Set	ings											
	En en el en el en el			WEP				Ciphe	Cipher				N. D	
	Encryption Mod	e		MIC	РРК	ткір	WEP40bit	WEP128bit	CKIP	CMIC	AES C	CM	ney R	068000
	Cipher				1						1			
	Server-Based Ser	arity				E	-	-	and the second			-		
	Server Name/IP	Address			Туре		EAP	MAC	Admin		Accou	unting		
	1.1.1.1				RADIUS		1							

10. Services选项卡允许您配置可用于AP的服务,例如Telnet、Secure Shell(SSH)或Cisco发现协议(CDP):

alialia cisco	HOME NETWORK ASSOCIATION WIRELESS SECURITY SERVICES SOFTWARE EVENTLOS	Sage Configuration <u>P</u> ing Logaut Bofresh
Services Telaet/SSH	Hostname Autonomous	Autonomous uptime is 2 days, 2 hours, 20 minutes
Hot standby CDP	Services Summary	
DNS Filters		
QOS Stream SNNP	Cics+ Window	Copyright (c) 1992-2009, 2011-2012 by Clace Bystems, Inc.
SNTP VLAN		
Band Select		

11. 要检查AP软件版本或升级AP,请点击AP Software选项卡:



ftware upgrade			nie is z deys, z nieurs, zz minie
System configuration	System Software: System Configuration	1000	
	Current Startup Configuration File:	config tot	
	Load New Startup Configuration File:	Load Choose File No file chosen	
	Technical Support Information:	Show tech-support	
	Reset to Factory Defaults:	Reset to Defaults	
	Reset to Factory Defaults (Except IP Address):	Reset to Defaults (Except IP)	
	Restart Now:	Restart	
	System Power Settings		
	Power State: FU	LL POWER	
	Power Source: NE	GOTIATED	
	Power Settings:	Power Negotiation	
	Power Injector:	Installed on Port with MAC Address: DISABLED (HHHH.HHHH.HHHH)	
			Apply
	Locate Access Point		
	Blink the Access Point LEDs:	Orable OFFE	Anniv

验证

完成配置并激活配置文件后,客户端适配器将连接到AP。

以下是事件日志示例,可在Event Log选项卡下访问:

cisco	HOME NET	WORK ASSOCIATION WIRELESS	SECURITY SERVICES	Sage Configuration Bing Logout . SOFTWARE EVENT LOG
nt Log afiguration Options	Hostname	Autonomous		Autonomous uptime is 2 days, 2 hours, 24 minute
	Event Lo	og	inglass in the second second	
	Start Dis	iplay at Index: 1 Max Num	ber of Events to Display:	20 Previous Next Refresh Clear
	Index Ti	ime	Severity	Description
	1 M	lar 1 00:00:27.414	Wiaming	No VLANs configured in MBSSID mode. Dot11RadioD not started
	2 M	lar 1 00:00:26.413	•Wiaming	Full power - NEGOTIATED inline power source
	3 M	lar 1 00:00:19.045	 Notification 	Line protocol on interface Dot11Radio0, changed state to down
	4 M	lar 1 00:00:18.312	 Notification 	Line protocol on interface BVI1, changed state to up
	6 M	lar 1 00:00:18.288	 Notification 	Line protocol on interface Dot11Radio1, changed state to down
	6 M	ar 1 00:00:18.038	 Notification 	Interface Dot11Radio0, changed state to reset
	7 M	ar 1 00:00:18.033	 Notification 	SSH 1.99 has been enabled
	8 M	ar 1 00:00:17.969	 Notification 	SNMP agent on host Autonomous is undergoing a cold start
	9 M	ar 1 00:00:17.969	 Notification 	System restated
	10 M	ar 1 00:00:17.550	 Notification 	Configured from memory by console
	11 M	ar 1 00:00:17.283	 Notification 	Interface Dot11Radio1, changed state to administratively down
	12 M	ar 1 00:00:16.995	 Wiaming 	Warning: Server radius 1 is not defined.
	13 M	ar 1 00:00:16.661	 Notification 	Line protocol on interface GigabilEthernel0, changed state to up
	14 M	lar 1 00:00:15.535	Information	Interface Gigab#Ethemet0, changed state to up
	15 14	ar 100:00 13 610	College	BaDiO minh RPS saFlast cassad on interface Dol118 and o 18ses Ethemat MaC anthrasy 49.5519 F2 0C 0C

可以更改事件日志以显示所需的内容。使用左侧导航窗格上的Configuration Options更改设置:

Log	Event Log: Configuration Options					
Configuration Options	Disposition of Events (by Severity Lev	vell:				
		Display on Event Log	Notily via SNMP /Syslog Trap	Record for SNIIP /Syslog History Table	Display on Telnet /SSH Monitor	
	Emergency	I Display	Motify	Record	R Monitor	
	Alert	V Display	Notity	Record	Monitor	
	Critical	I Display	IN Notify	Record	R Monitor	
	•Error	V Display	IN Notity	Record	Monitor	
	•Warning	I Display	Notify	Record	Monitor	
	Notification	Display	Notify	C Record	Monitor	
	Information	I Display	R Notity	E Record	Monitor	
	Debugging	I Display	🖾 Notify	Record	Monitor	
	Syslog Server Host Name or IP Addre	-		1		
	Syslog Facility:		Local use 7			
	Time Stamp Format for Future Event		🗇 System Uptime 🔎 Global Stan	dard Time 🔘 Local Time		
	Event Log Size:		4096 (4096-13258788) Aut	allable Bytes		
	History Table Size:		1 (0-500) Messages			

在此屏幕上,您还可以从AP GUI Ping、Save Configuration和Logout:

cisco	HOME NETWORK ASSOCIATION WIRELESS SECURITY SERVICES SOFTWARE EVENTLOG	Sage Configuration Eing Logout Befresh
Event Log	Event Log: Configuration Options	

故障排除

目前没有针对此配置的故障排除信息。

关于此翻译

思科采用人工翻译与机器翻译相结合的方式将此文档翻译成不同语言,希望全球的用户都能通过各 自的语言得到支持性的内容。

请注意:即使是最好的机器翻译,其准确度也不及专业翻译人员的水平。

Cisco Systems, Inc. 对于翻译的准确性不承担任何责任,并建议您总是参考英文原始文档(已提供 链接)。