

# 配置与AP的基本WLAN连接

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## 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

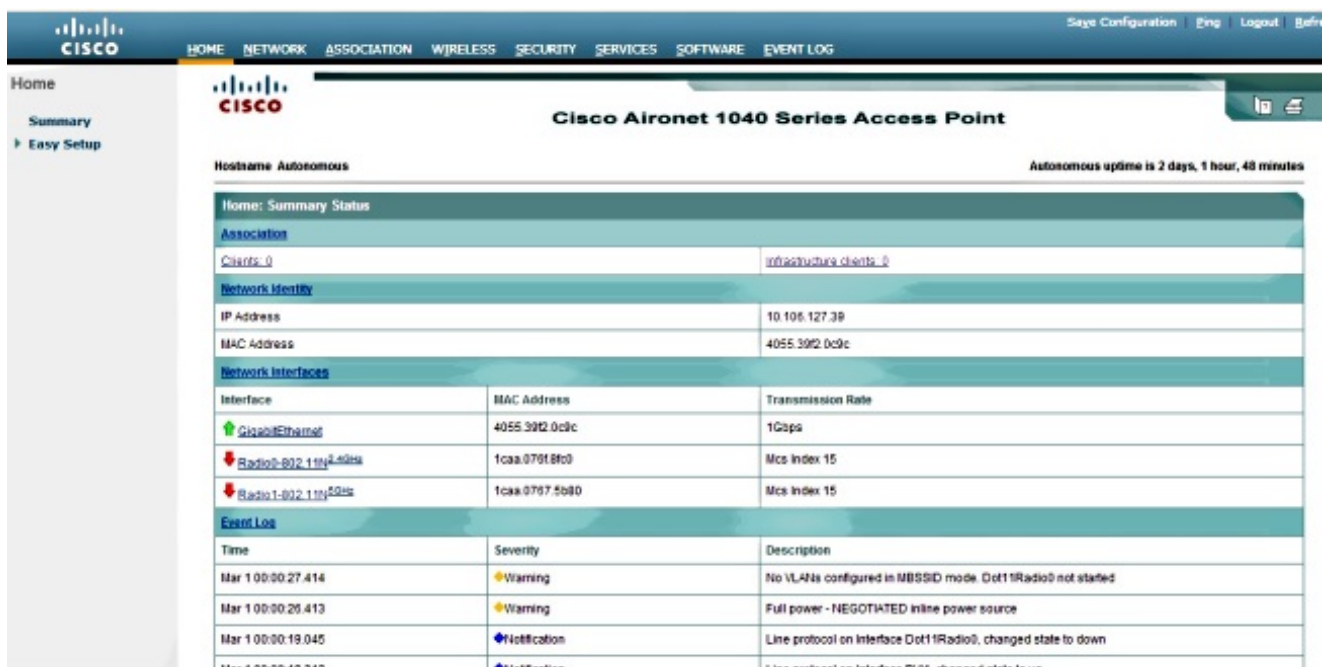
配置IP地址后，您可以通过浏览器访问AP以配置AP。

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。
- 输入用户名和密码。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：



The screenshot displays the Cisco Aironet 1040 Series Access Point web interface. The page title is "Cisco Aironet 1040 Series Access Point". The main content area shows the "Home: Summary Status" page. The page includes a navigation menu on the left with "Home", "Summary", and "Easy Setup". The main content area is divided into several sections: "Association", "Network Identity", "Network Interfaces", and "Event Log".

**Association**

Client 0	infrastructure clients_0
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**Network Identity**

IP Address	10.106.127.39
MAC Address	4055.3902.0c0c

**Network Interfaces**

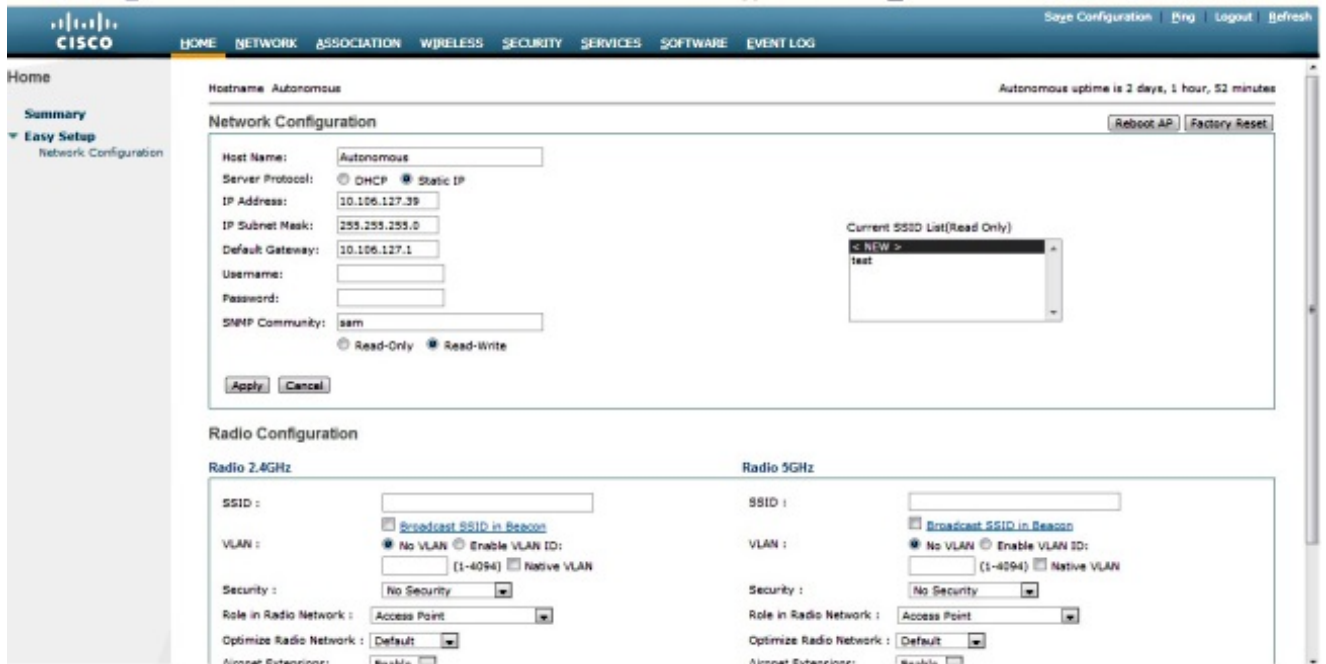
Interface	MAC Address	Transmission Rate
GigabitEthernet0	4055.3902.0c0c	1Gbps
Radio0-802.11n-4.4055a	1caa.0791.8fa0	Mcs Index 15
Radio1-802.11n-5055a	1caa.0797.5b00	Mcs Index 15

**Event Log**

Time	Severity	Description
Mar 1 00:00:27.414	Warning	No VLANs configured in MBSSID mode. Dot11Radio0 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 1 00:00:19.045	Notification	Line protocol on Interface Dot11Radio0, changed state to up

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：



3. 在Easy Setup窗口中输入以下配置参数：

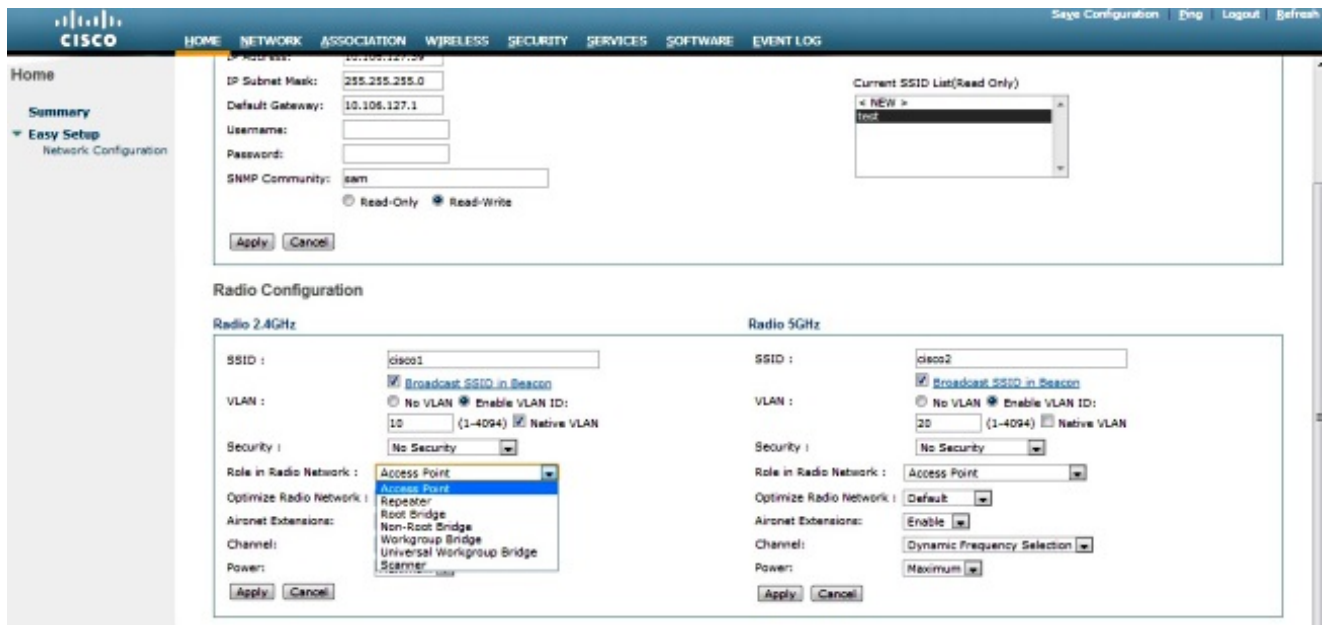
- AP的主机名
- AP的IP地址配置（如果IP地址是静态的）
- 默认网关
- 用户名/密码
- 无线电2.4GHz和无线电5GHz的服务集标识符(SSID)
- SSID Security配置和其他特定参数

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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。

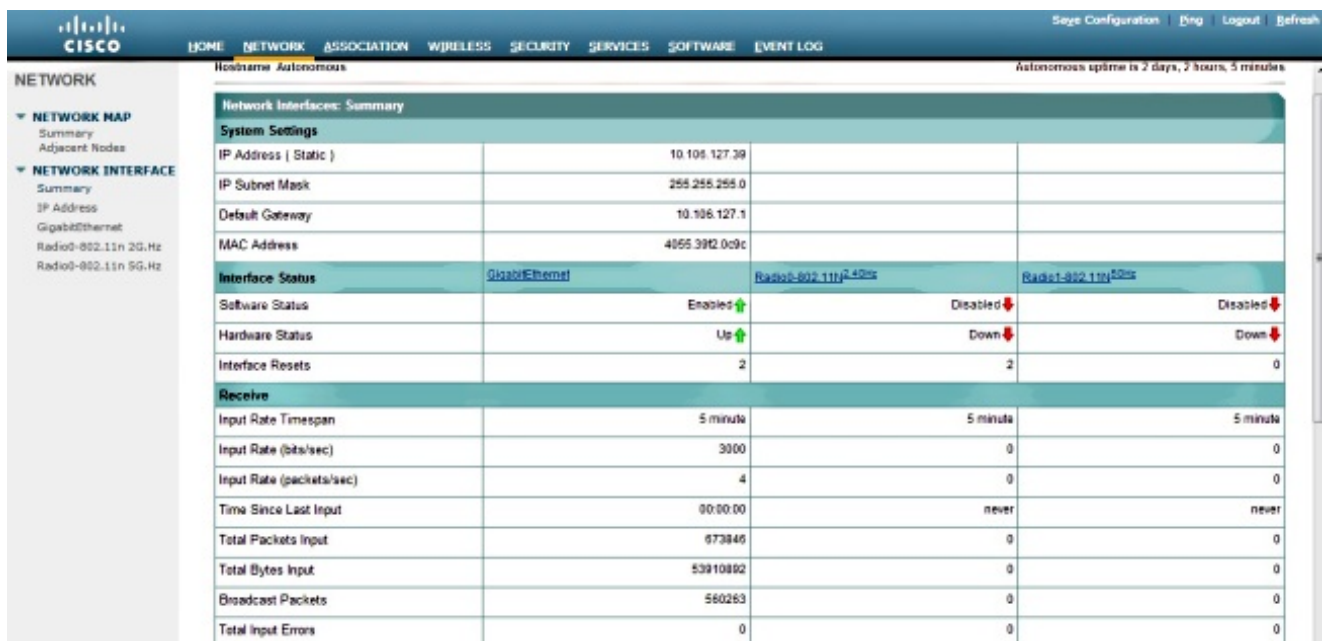
---

以下是示例窗口：



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。



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：

HOME **NETWORK** ASSOCIATION WIRELESS SECURITY SERVICES SOFTWARE EVENT LOG
Size Configuration | Eng | Logout | Refresh

**NETWORK**  
 NETWORK MAP  
 Summary  
 Adjacent Nodes  
 NETWORK INTERFACE  
 Summary  
 IP Address  
 GigabitEthernet  
 Radio0-802.11n 2G-Hz  
 Radio0-802.11n 5G-Hz

**GIGABITETHERNET STATUS** SETTINGS  
 Hostname Autonomous Autonomous uptime is 2 days, 2 hours, 6 minutes

**Network Interfaces: GigabitEthernet Status**

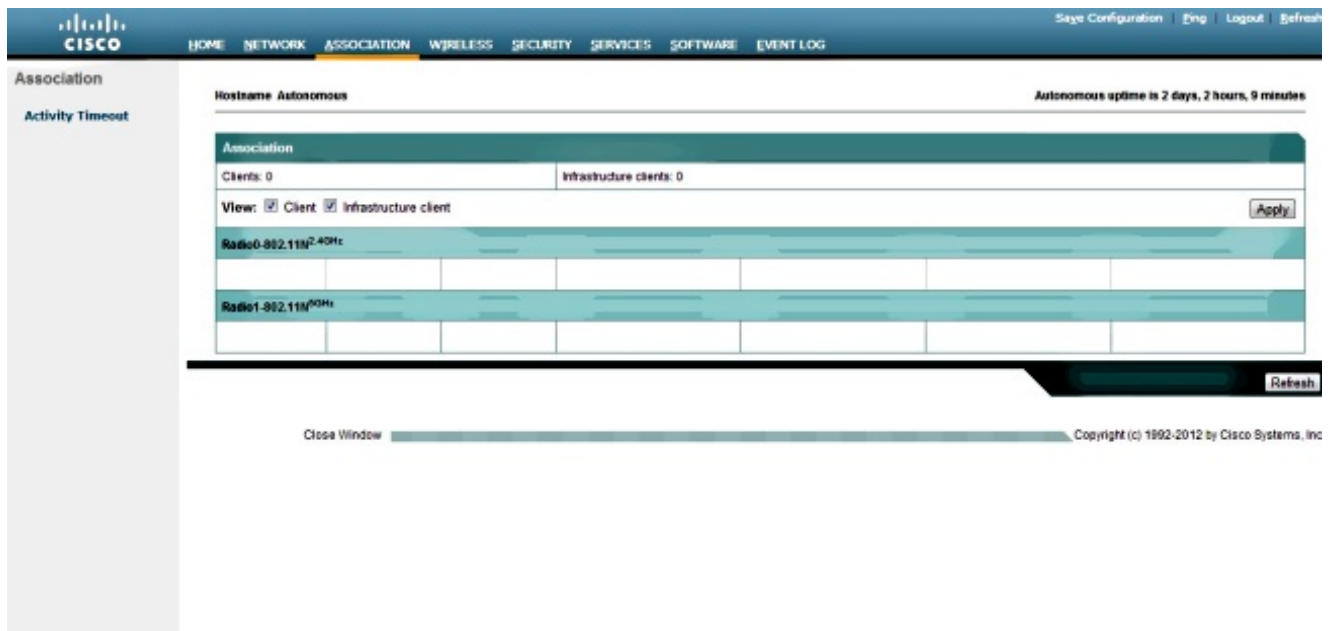
Configuration			
Software Status	Enabled <span style="color: green;">↑</span>	Hardware Status	Up <span style="color: green;">↑</span>
Maximum Rate		Duplex	
Interface Statistics			
Interface Resets	2	No Carrier	0
Lost Carrier	0		
Receive / Transmit Statistics			
Receive		Transmit	
5 Min Input Rate (bits/sec)	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	54067620	Total Bytes Output	6604913
Broadcast Packets	595676		
Error Statistics			
Receive		Transmit	
Total Input Errors	0	Total Output Errors	0
Overrun Errors	0	Underrun Errors	0
Ignored Packets	0	Deferred Packets	0
Framing Errors	0	Babblers	0

RADIO0-802.11N<sup>2.4GHZ</sup> STATUS DETAILED STATUS SETTINGS CARRIER BUSY TEST  
 Hostname Autonomous Autonomous uptime is 2 days, 2 hours, 7 minutes

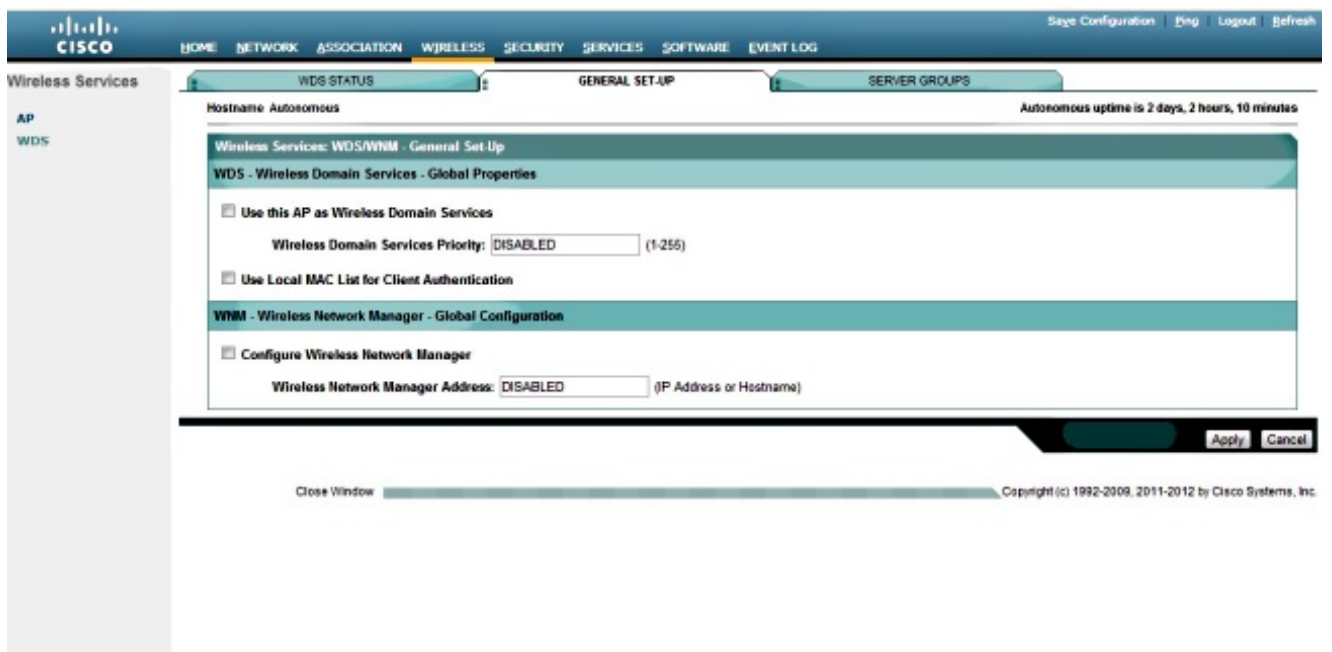
**Network Interfaces: Radio0-802.11N<sup>2.4GHZ</sup> Status**

Configuration			
Software Status	Disabled <span style="color: red;">↓</span>	Hardware Status	Down <span style="color: red;">↓</span>
Operational Rates	1.0, 2.0, 5.5, 11.0, 6.0, 9.0, 12.0, 18.0, 24.0, 36.0, 48.0, 54.0, m0-2, m1-2, m2-2, m3-2, m4-2, m5-2, m6-2, m7-2, m8-2, m9-2, m10-2, m11-2, m12-2, m13-2, m14-2, m15-2 Mb/sec	Basic Rate	1.0, 2.0, 5.5, 11.0 Mb/sec
Aironet Extensions	Enabled	Carrier Set	Americas
Configured Radio Channel	0 MHz Channel 0	Transmitter Power	0 dBm (1.0 to m2304)
Active Radio Channel	0 MHz Channel 0	Channel Width	20 MHz
Role in Network	Access Point		
Antenna Gain	0 dB		
Interface Statistics			
Interface Resets	2		
Receive / Transmit Statistics			
Receive		Transmit	
5 Min Input Rate (bits/sec)	0	5 Min Output Rate (bits/sec)	0
5 Min Input Rate (packets/sec)	0	5 Min Output Rate (packets/sec)	0
Time Since Last Input	never	Time Since Last Output	never
Total Packets Input	0	Total Packets Output	0
Total Bytes Input	0	Total Bytes Output	0
Error Statistics			
Receive		Transmit	
Total Input Errors	0	Total Output Errors	0

7. 单击Association选项卡以检查客户端关联：



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：



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：

The screenshot shows the Cisco configuration page for 'Hostname Autonomous'. The 'Security' tab is selected. The main content area displays the following sections:

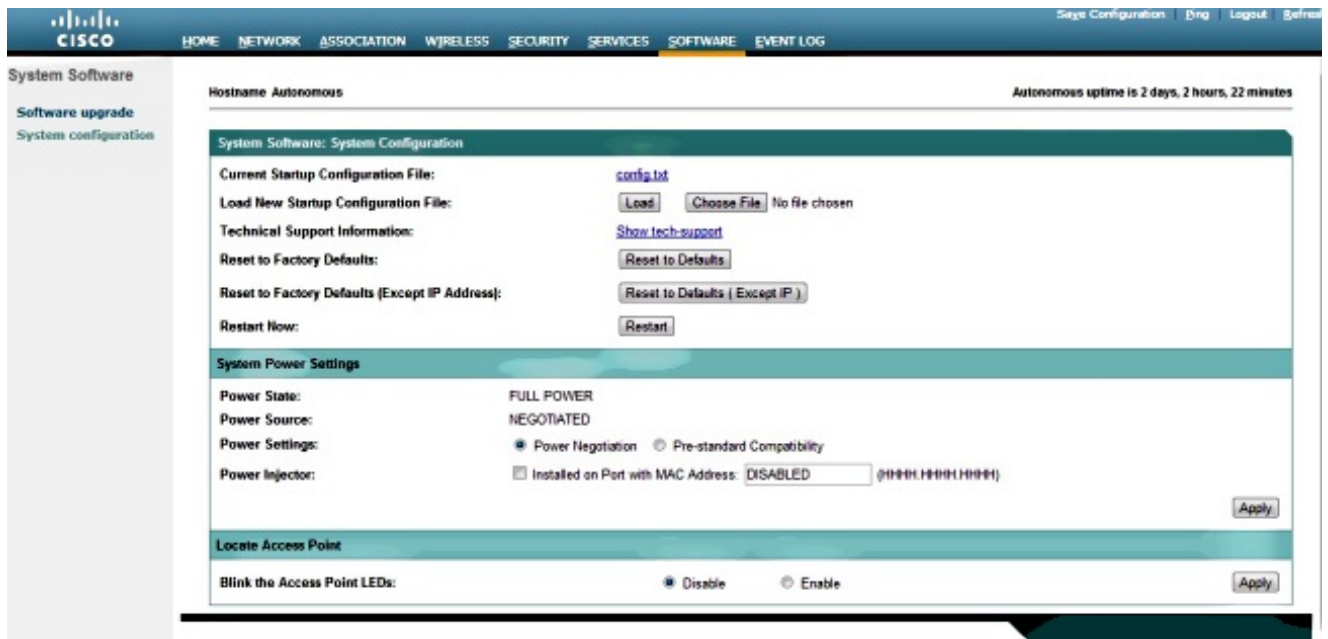
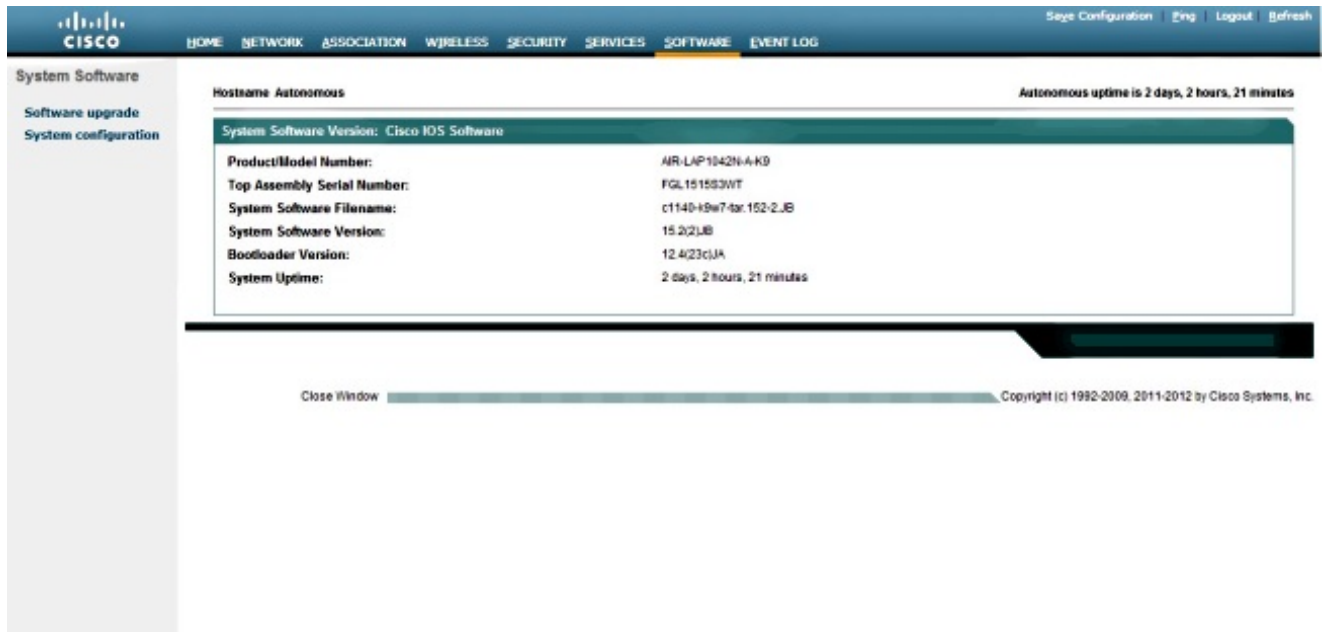
- Security Summary:** Shows 'Administrators' with 'Cisco' as a Read-Only user.
- Service Set Identifiers (SSIDs):** A table with columns: SSID, VLAN, Band Select, Radio, BSSID/Guest Mode, Open, Shared, Network EAP, MFP. One entry is visible: SSID 'test', Band Select 'Disabled', Radio 'Radio0-302 11N 2.4GHz', BSSID/Guest Mode '1caa 079f Bfc0', Open 'with EAP', MFP 'Disabled'.
- Radio0: 802.11N 2.4GHz Encryption Settings:** A table for encryption modes. Under 'WEP', MIC and PPK are disabled. Under 'Cipher', WEP128bit is selected, and 'Key Rotation' is disabled.
- Radio1: 802.11N 2.4GHz Encryption Settings:** Similar to Radio0, WEP128bit is selected.
- Server-Based Security:** A table with columns: Server Name/IP Address, Type, EAP, MAC, Admin, Accounting. One entry is visible: Server Name/IP Address '1.1.1.1', Type 'RADIUS', EAP checked.

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):

The screenshot shows the Cisco configuration page for 'Hostname Autonomous' with the 'Services' tab selected. The main content area displays the 'Services Summary' section, which is currently empty. The left navigation menu lists the following services:

- Telnet/SSH
- Hot standby
- CDP
- DNS
- Filters
- HTTP
- QOS
- Stream
- SNMP
- SNTP
- VLAN
- ARP Caching
- Band Select

11. 要检查AP软件版本或升级AP，请点击AP Software选项卡：



## 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：



Save Configuration | Ping | Logout | Refresh

HOME NETWORK ASSOCIATION WIRELESS SECURITY SERVICES SOFTWARE **EVENT LOG**

Event Log

Configuration Options

Hostname: Autonomous Autonomous uptime is 2 days, 2 hours, 24 minutes

Event Log

Start Display at Index:  Max Number of Events to Display:  Previous Next Refresh Clear

Index	Time	Severity	Description
1	Mar 1 00:00:27.414	Warning	No VLANs configured in MBSSID mode. Dot11Radio0 not started
2	Mar 1 00:00:26.413	Warning	Full power - NEGOTIATED inline power source
3	Mar 1 00:00:19.045	Notification	Line protocol on interface Dot11Radio0, changed state to down
4	Mar 1 00:00:18.312	Notification	Line protocol on interface Bvi1, changed state to up
5	Mar 1 00:00:18.288	Notification	Line protocol on interface Dot11Radio1, changed state to down
6	Mar 1 00:00:18.038	Notification	Interface Dot11Radio0, changed state to reset
7	Mar 1 00:00:18.033	Notification	SSH 1.99 has been enabled
8	Mar 1 00:00:17.969	Notification	SNMP agent on host Autonomous is undergoing a cold start
9	Mar 1 00:00:17.969	Notification	System restarted --
10	Mar 1 00:00:17.550	Notification	Configured from memory by console
11	Mar 1 00:00:17.283	Notification	Interface Dot11Radio1, changed state to administratively down
12	Mar 1 00:00:16.995	Warning	Warning: Server radius1 is not defined.
13	Mar 1 00:00:16.661	Notification	Line protocol on interface GigabitEthernet0, changed state to up
14	Mar 1 00:00:15.635	Information	Interface GigabitEthernet0, changed state to up
15	Mar 1 00:00:13.610	Critical	RADIO crypto PPS self test passed on interface Dot11Radio1Base Ethernet MAC address: 40:55:30:F2:0C:9C

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：

Save Configuration | Ping | Logout | Refresh

HOME NETWORK ASSOCIATION WIRELESS SECURITY SERVICES SOFTWARE **EVENT LOG**

Event Log

Configuration Options

Event Log: Configuration Options

Disposition of Events (by Severity Level):

Severity	Display on Event Log	Notify via SNMP / Syslog Trap	Record for SNMP / Syslog History Table	Display on Telnet / SSH Monitor
Emergency	<input checked="" type="checkbox"/> Display	<input checked="" type="checkbox"/> Notify	<input checked="" type="checkbox"/> Record	<input checked="" type="checkbox"/> Monitor
Alert	<input checked="" type="checkbox"/> Display	<input checked="" type="checkbox"/> Notify	<input checked="" type="checkbox"/> Record	<input checked="" type="checkbox"/> Monitor
Critical	<input checked="" type="checkbox"/> Display	<input checked="" type="checkbox"/> Notify	<input checked="" type="checkbox"/> Record	<input checked="" type="checkbox"/> Monitor
Error	<input checked="" type="checkbox"/> Display	<input checked="" type="checkbox"/> Notify	<input checked="" type="checkbox"/> Record	<input checked="" type="checkbox"/> Monitor
Warning	<input checked="" type="checkbox"/> Display	<input checked="" type="checkbox"/> Notify	<input checked="" type="checkbox"/> Record	<input checked="" type="checkbox"/> Monitor
Notification	<input checked="" type="checkbox"/> Display	<input checked="" type="checkbox"/> Notify	<input type="checkbox"/> Record	<input checked="" type="checkbox"/> Monitor
Information	<input checked="" type="checkbox"/> Display	<input checked="" type="checkbox"/> Notify	<input type="checkbox"/> Record	<input checked="" type="checkbox"/> Monitor
Debugging	<input checked="" type="checkbox"/> Display	<input type="checkbox"/> Notify	<input type="checkbox"/> Record	<input checked="" type="checkbox"/> Monitor

Syslog Server Host Name or IP Address:

Syslog Facility:

Time Stamp Format for Future Events:  System Uptime  Global Standard Time  Local Time

Event Log Size:  (4096-13258788) Available Bytes

History Table Size:  (0-500) Messages

Apply Clear Cancel

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

Save Configuration | Ping | Logout | Refresh

HOME NETWORK ASSOCIATION WIRELESS SECURITY SERVICES SOFTWARE **EVENT LOG**

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。

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