

# 无线局域网控制器模块故障排除

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## [Introduction](#)

本文为基本问题提供故障检修程序以Cisco无线LAN控制器模块(WLCM)。

## [Prerequisites](#)

## [Requirements](#)

Cisco 建议您了解以下主题：

- 了解轻量接入点协议 (LWAPP)。
- 基础知识如何配置WLCM模块参加Cisco Unified无线网络。**Note:** 如果是一个新用户和在WLCM未工作，请参见[Cisco WLAN控制器网络模块功能指南](#)。

## [Components Used](#)

本文档中的信息基于以下软件和硬件版本：

- 该的Cisco 2811 Integrated Services Router (ISR)运行运行版本3.2.116.21的版本12.4(11)T以WLCM
- Cisco 1030和Cisco 1232 AG轻量APs (膝部)
- Cisco 802.11a/b/g运行版本2.5的无线局域网(WLAN)客户端适配器
- 该的思科安全访问控制服务器(ACS)运行版本3.2

**Note:** 列出的组件这里是使用写作本文仅的设备。关于支持WLCM和膝部WLCM支持ISR的完全列表的信息在本文的[Troubleshoot部分](#)被提供。

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

## [Conventions](#)

Refer to [Cisco Technical Tips Conventions](#) for more information on document conventions.

## [背景信息](#)

Cisco WLCM设计提供中小型企业(SMBs)和企业分支机构用户802.11无线网络解决方案为Cisco 2800和Cisco 3800系列ISR和Cisco 3700 Series Routers。

管理六个WLAN访问点的Cisco WLCM enable (event) Cisco ISR和Cisco 3700 Series Routers (APs)，和简化WLANs的配置和管理。使用操作系统的安全(OSS)，操作系统管理所有数据客户端，通信和系统管理功能，执行高级无线电资源管理(RRM)功能，管理全系统的移动性策略使用OSS框架，并且协调所有安全功能。

Cisco WLCM与Cisco Aironet膝部、思科无线控制系统(WCS)和Cisco Wireless Location Appliance一道工作支持目标关键无线数据、语音和视频应用。

## [Troubleshoot](#)

此部分与WLCM讨论基本问题故障检修程序。

### [ISR不认可WLCM](#)

这些ISR平台仅支持WLCM：

- Cisco 3725和3745路由器
- Cisco 2811，2821和2851 ISR
- Cisco 3825和3845 ISR

如果任何其他ISR比在此列表指定的那个出现，则没有发现WLCM。保证您使用正确的硬件。

**Note:** 网络模块插槽仅支持WLCM。EVM slot不支持它可用在Cisco 2821和Cisco 2851 ISR。

**Note:** 您只能在单个路由器机箱上安装一Cisco WLCM。

也有WLCM的一些最低的软件要求。

ISR必须使用Cisco IOS软件版本12.4(2)XA1 (路由器软件)或ISR以后认可WLCM。

## [能否升级在WLCM的闪存？](#)

Cisco WLCM装备并且从一安装的256 MB CompactFlash闪存卡引导。CompactFlash闪存卡包含启动加载器、Linux内核、Cisco WLCM和APs可执行文件和Cisco WLCM配置。

在Cisco WLCM的CompactFlash闪存卡不现场可换的。

## [WLCM是否是可热交换的？](#)

WLCM不是可热交换的在所有ISR平台。在线插拔控制器Cisco 3745 Router和Cisco 3845 ISR仅支持模块。

## [支持WLCM膝部](#)

支持所有LWAPP启用Cisco Aironet APs，包括Cisco Aironet 1000，1100，和1200系列。不支持HWIC-AP接口卡。

## [无法访问在WLCM的快速以太网](#)

这是预料之中的行为。不支持在Cisco WLCM的面板的外部快速以太网端口。NM-WLC (WLCM模块)只有一个快速以太网端口内部地被连接到主机路由器和在NM面板的外部快速以太网端口是失效和不可用的。

## [检查WLCM的状态](#)

发出**show version**命令从ISR为了检查WLCM是否由路由器认可和正确地安装。

```
2800-ISR-TSWEB#show version
```

```
Cisco IOS Software, 2800 Software (C2800NM-ADVSECURITYK9-M), Version 12.4(11)T,  
RELEASE SOFTWARE (fc2)  
Technical Support: http://www.cisco.com/techsupport  
Copyright (c) 1986-2006 by Cisco Systems, Inc.  
Compiled Sat 18-Nov-06 17:16 by prod_rel_team
```

```
ROM: System Bootstrap, Version 12.4(1r) [hqluong 1r], RELEASE SOFTWARE (fc1)
```

```
2800-ISR-TSWEB uptime is 50 minutes  
System returned to ROM by power-on  
System image file is "flash:c2800nm-advsecurityk9-mz.124-11.T.bin"
```

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws.

By using this product you agree to comply with applicable laws and regulations.  
If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:  
<http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to [export@cisco.com](mailto:export@cisco.com).

Cisco 2811 (revision 53.50) with 249856K/12288K bytes of memory.  
Processor board ID FTX1014A34X  
2 FastEthernet interfaces  
1 terminal line  
1 Virtual Private Network (VPN) Module  
**1 cisco Wireless LAN Controller(s)**

DRAM configuration is 64 bits wide with parity enabled.  
239K bytes of non-volatile configuration memory.  
62720K bytes of ATA CompactFlash (Read/Write)

Configuration register is 0x2102

发出**status**命令**service-module wlan-controller**的插槽/端口为了查找WLCM的状态。

```
2800-ISR-TSWEB#service-module wlan-controller 1/0 status  
Service Module is Cisco wlan-controller1/0  
Service Module supports session via TTY line 66  
Service Module is in Steady state  
Getting status from the Service Module, please wait..
```

**Cisco WLAN Controller 3.2.116.21**

您能也发出**statistics**命令**service-module**的**wlan-controller1/0**为了查找WLCM的模块重置统计数据。

```
2800-ISR-TSWEB#service-module wlan-controller 1/0 statistics  
Module Reset Statistics:  
  CLI reset count = 0  
  CLI reload count = 0  
  Registration request timeout reset count = 0  
  Error recovery timeout reset count = 0  
  Module registration count = 4
```

有时，您看到此错误：

```
Router#service-module wlan-controller 4/0 status  
Service Module is Cisco wlan-controller4/0  
Service Module supports session via TTY line 258  
Service Module is trying to recover from error  
Service Module status is not available
```

Or this:

```
Router#service-module wlan-controller 1/0 status  
Service Module is Cisco wlan-controller1/0  
Service Module supports session via TTY line 66  
Service Module is failed  
Service Module status is not available
```

此错误的原因也许是硬件问题。开TAC案例进一步排除此问题故障。为了开TAC案例，您需要有与Cisco的一个有效合同。参考[技术支持](#)为了与Cisco TAC联系。

发出显示sysinfo命令为了获得关于WLCM的更多信息。

```
(Cisco Controller) >show sysinfo
```

```
Manufacturer's Name..... Cisco Systems, Inc
Product Name..... Cisco Controller
Product Version..... 3.2.116.21
RTOS Version..... 3.2.116.21
Bootloader Version..... 3.2.116.21
Build Type..... DATA + WPS

System Name..... WLCM
System Location.....
System Contact.....
System ObjectID..... 1.3.6.1.4.1.14179.1.1.4.5
IP Address..... 60.0.0.2
System Up Time..... 0 days 0 hrs 39 mins 18 secs

Configured Country..... United States

State of 802.11b Network..... Enabled
State of 802.11a Network..... Enabled
Number of WLANs..... 1
3rd Party Access Point Support..... Disabled
Number of Active Clients..... 0
```

## 我们如何做CLI配置向导的更正

当您第一次配置WLCM (或在重置对默认值以后)使用CLI配置向导，-键用于为了做更正到配置。以下是一个示例：

这里，而不是输入admin，用户输入adminn更正它。在下个提示，请进入-，然后点击进入。系统回到早先提示。

```
(Cisco Controller)
```

```
Welcome to the Cisco Wizard Configuration Tool
Use the '-' character to backup
System Name [Cisco_e8:38:c0]: adminn
!--- The user enters adminn instead of admin.
```

```
Enter Administrative User Name (24 characters max): -
!--- In order to make the corrections, the user enters -.
```

```
System Name [Cisco_e8:38:c0] (31 characters max): admin
!--- The user is again prompted for the system name and !--- then enters the correct system name
admin.
```

## LAP不向ISR WLCM登记- WLCM带有不正确证书

NM-AIR-WLC6-K9和NM-AIR-WLC6-K9= WLCMs装备不正确证书。这造成WLCNM不由Cisco/Aireospace APs验证。WLCM被发运在2006年2月1日和2006年3月22日之间受影响。制造过程故障没有复制正确的证书到WLCNM设备。不正确认证创建RSA密钥不匹配，造成基于LWAPP的APs发生故障加入/关联/寄存器对WLCNM。

有关此问题的示例，请参阅 [Field Notice : FN - 62379 -无线局域网控制器网络模块不用Cisco/Aireospace接入点验证-硬件升级](#)关于此的更多信息。此问题信息通告(Field Notice)包含解决方

法、以及受影响的网络模块部件号和序列号。

## LAP不向WLCM登记-没设置的系统时间

WLCM必须配置有系统时间和日期。它可能或者手工执行，或者可以配置WLCM使用Ntp server。如果没有设置时间与日期，膝部不向WLCM登记。在CLI向导中，提示您输入系统时间和日期。如果不输入日期和时间，您看到此警告消息：

```
Warning! No AP will come up unless the time is set  
Please see documentation for more details.
```

发出从WLCM CLI的此命令为了手工配置时间：

```
Warning! No AP will come up unless the time is set  
Please see documentation for more details.
```

如果希望WLCM使用Ntp server，请发出此命令：

```
Warning! No AP will come up unless the time is set  
Please see documentation for more details.
```

## WLCM的密码恢复

当登陆的密码对WLCM丢失时，进入的唯一方法WLCM是重新设置WLCM到默认设置。这也意味着重置在WLCM的整个配置并且必须从头被配置。

请参见[重置WLCM对默认设置](#)关于如何重置WLCM的信息到工厂默认值。

## Cisco WLCM LED

此表列出Cisco WLCM LED和含义：

LED	含义
CF	CompactFlash闪存卡是活跃的。
EN	模块通过了自检并且对路由器是可用的。
PWR	功率对控制器模块是可用的。

## 升级控制器固件发生故障

在升级进程中，您能遇到影响升级进程的一些错误。此部分说明什么错误信息平均值和如何排除错误和升级控制器。

- **编码文件传输从TFTP server的failed-No回复**—您收到此错误信息，如果TFTP server不是活跃的。请检查以确定是否在服务器上启用了TFTP服务。
- **Code file transfer failed - Error from server:未找到文件。中止转移**—，如果操作系统文件不是

存在TFTP server的默认目录里，您收到此错误信息。为了排除此错误，请复制图像文件到在TFTP server的默认目录。

- **TFTP Failure while storing in flash!**当有TFTP server时的一个问题—您收到此错误。一些TFTP 服务器对于可以传输的文件大小有限制。请使用一个不同的TFTP server工具。有是可用许多自由TFTP server工具。Cisco推荐使用Tftpd32版本2.0 TFTP server。参考[Tftpd32](#)为了下载此TFTP server。
- **毁坏安装分区或镜像**是损坏的—，如果是不成功的，在尝试升级软件后，有可能性您的镜像损坏的。请与协助的[Cisco技术支持联系](#)。

参考[升级Cisco WLAN控制器模块软件](#)关于如何升级在WLCM的固件的更多信息。

## [不能Enable \(event\) CDP](#)

在3750个ISR上不能在WLCM的enable (event)思科设备发现协议(CDP)安装的用户。此消息出现：

```
Warning! No AP will come up unless the time is set
Please see documentation for more details.
```

用户发出**设置cdp enable命令**为了enable (event) CDP，但是仍然看到此同样消息：

```
Warning! No AP will come up unless the time is set
Please see documentation for more details.
```

这是由于Cisco Bug ID CSCsg67615。虽然3750G集成无线局域网控制器不支持CDP，CDP CLI命令为此控制器是可用的。这在4.0.206.0被解决。

## [请使用IP辅助地址和ip-forward协议命令对寄存器膝部与WLCM](#)

使用WLCM，发现WLCM通过IP子网广播LAP是难的。这是由于WLCM如何在ISR的底板集成，并且LAP如何典型地在也是好推荐)的一个不同的IP子网(。如果要进行IP子网广播发现与成功，请发出**IP辅助工具地址和ip forward-protocol udp 12223命令**。

一般来说，这些命令的目的将传送或传递所有可能性IP广播帧。此中继和处理它对WLC管理接口应该是足够的确定WLC回应回到LAP。

必须产生**ip helper-address命令**在LAP被连接到的接口下，并且**ip helper-address命令**必须指向WLC的管理接口。

```
Warning! No AP will come up unless the time is set
Please see documentation for more details.
```

**ip forward-protocol命令**是一个全局配置命令。

```
Warning! No AP will come up unless the time is set
Please see documentation for more details.
```

## WLCM故障检修命令

此部分提供您能使用为了排除WLCM配置故障的调试指令。

调试指令验证LAP向控制器登记：

请使用这些调试指令为了验证膝部是否向WLCM登记：

- 调试MAC地址<AP-MAC-address xx : xx : xx : xx : xx : xx> —配置LAP的MAC地址调试。
- 调试lwapp事件enable (event) —配置LWAPP事件和错误信息调试。
- 调试pm pki enable (event) —配置安全策略管理器模块调试。

这是输出示例的debug lwapp events enable命令，当LAP向WLCM登记时：

```
Mon Mar 12 16:23:39 2007: Received LWAPP DISCOVERY REQUEST from AP 00:0b:85:51:5a:e0
to 00:15:2c:e8:38:c0 on port '1'
Mon Mar 12 16:23:39 2007: Successful transmission of LWAPP Discovery-Response to
AP 00:0b:85:51:5a:e0 on Port 1
Mon Mar 12 16:23:52 2007: Received LWAPP JOIN REQUEST from AP 00:0b:85:51:5a:e0 to
00:15:2c:e8:38:c0 on port '1'
Mon Mar 12 16:23:52 2007: LWAPP Join-Request MTU path from AP 00:0b:85:51:5a:e0
is 1500, remote debug mode is 0
Mon Mar 12 16:23:52 2007: Successfully added NPU Entry for AP 00:0b:85:51:5a:e0
(index 49)Switch IP: 60.0.0.3, Switch Port:
12223, intIfNum 1, vlanId 0 AP IP: 10.77.244.221, AP Port: 5550,
next hop MAC: 00:17:94:06:62:98
Mon Mar 12 16:23:52 2007: Successfully transmission of LWAPP Join-Reply to
AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:52 2007: Register LWAPP event for AP 00:0b:85:51:5a:e0 slot 0
Mon Mar 12 16:23:52 2007: Register LWAPP event for AP 00:0b:85:51:5a:e0 slot 1
Mon Mar 12 16:23:53 2007: Received LWAPP CONFIGURE REQUEST from AP 00:0b:85:51:5a:e0
to 00:15:2c:e8:38:c0
Mon Mar 12 16:23:53 2007: Updating IP info for AP 00:0b:85:51:5a:e0 --
static 0, 10.77.244.221/255.255.255.224, gtw 10.77.244.220
Mon Mar 12 16:23:53 2007: Updating IP 10.77.244.221 ==> 10.77.244.221 for
AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:53 2007: spamVerifyRegDomain RegDomain set for slot 0 code 0
regstring -A regDfromCb -A
Mon Mar 12 16:23:53 2007: spamVerifyRegDomain RegDomain set for slot 1 code 0
regstring -A regDfromCb -A
Mon Mar 12 16:23:53 2007: spamEncodeDomainSecretPayload:Send domain secret
WLCM-Mobility<bc,73,45,ec,a2,c8,55,ef,14,1e,5d,99,75,f2,f9,63,af,74,d9,02> to
AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:53 2007: Successfully transmission of LWAPP Config-Message to
AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:53 2007: Running spamEncodeCreateVapPayload for SSID 'WLCM-TSWEB'
Mon Mar 12 16:23:53 2007: Running spamEncodeCreateVapPayload for SSID 'WLCM-TSWEB'
Mon Mar 12 16:23:53 2007: AP 00:0b:85:51:5a:e0 associated. Last AP failure was due to
AP reset
Mon Mar 12 16:23:53 2007: Received LWAPP CHANGE_STATE_EVENT from AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:53 2007: Successfully transmission of LWAPP Change-State-Event
Response to AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:53 2007: Received LWAPP Up event for AP 00:0b:85:51:5a:e0 slot 0!
Mon Mar 12 16:23:53 2007: Received LWAPP CONFIGURE COMMAND RES from AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:53 2007: Received LWAPP CHANGE_STATE_EVENT from AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:53 2007: Successfully transmission of LWAPP Change-State-Event
Response to AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:53 2007: Received LWAPP Up event for AP 00:0b:85:51:5a:e0 slot 1!
```



```
Mon Mar 12 16:23:54 2007: Received LWAPP CONFIGURE COMMAND RES from AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:54 2007: Received LWAPP CONFIGURE COMMAND RES from AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:54 2007: Received LWAPP CONFIGURE COMMAND RES from AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:54 2007: Received LWAPP CONFIGURE COMMAND RES from AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:54 2007: Received LWAPP CONFIGURE COMMAND RES from AP 00:0b:85:51:5a:e0
Mon Mar 12 16:23:54 2007: Received LWAPP CONFIGURE COMMAND RES from AP 00:0b:85:51:5a:e0
```

这是enable命令调试pm的pki的输出示例，当LAP向WLCM登记时：

```
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: locking ca cert table
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: calling x509_alloc() for user cert
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: calling x509_decode()
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: <subject> C=US, ST=California,
L=San Jose, O=airespace Inc, CN=000b85515ae0,
MAILTO=support@airespace.com
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: <issuer> C=US, ST=California,
L=San Jose, O=airespace Inc, OU=none, CN=ca,
MAILTO=support@airespace.com
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: Mac Address in subject is
00:0b:85:51:5a:e0
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: Cert is issued by Airespace Inc.
Mon Mar 12 16:30:40 2007: sshpmGetCID: called to evaluate <bsnDefaultCaCert>
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 0, CA cert >bsnOldDefaultCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 1, CA cert >bsnDefaultRootCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 2, CA cert >bsnDefaultCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: called to get cert for CID 2816f436
Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 0, certname
>bsnOldDefaultCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 1, certname
>bsnDefaultRootCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 2, certname
>bsnDefaultCaCert<
Mon Mar 12 16:30:40 2007: ssphmUserCertVerify: calling x509_decode()
Mon Mar 12 16:30:40 2007: ssphmUserCertVerify: failed to verify AP cert
>bsnDefaultCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: called to evaluate <bsnOldDefaultCaCert>
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 0, CA cert
>bsnOldDefaultCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: called to get cert for CID 226b9636
Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 0, certname
>bsnOldDefaultCaCert<
Mon Mar 12 16:30:40 2007: ssphmUserCertVerify: calling x509_decode()
Mon Mar 12 16:30:40 2007: ssphmUserCertVerify: user cert verified using
>bsnOldDefaultCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: ValidityString (current):
2007/03/12/16:30:40
Mon Mar 12 16:30:40 2007: sshpmGetIssuerHandles: AP sw version is 0x3027415,
send a Cisco cert to AP.
Mon Mar 12 16:30:40 2007: sshpmGetCID: called to evaluate <cscDefaultIdCert>
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 0, CA cert >bsnOldDefaultCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 1, CA cert >bsnDefaultRootCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 2, CA cert >bsnDefaultCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 3, CA cert >bsnDefaultBuildCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 4, CA cert
>cscDefaultNewRootCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 5, CA cert >cscDefaultMfgCaCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 0, ID cert >bsnOldDefaultIdCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 1, ID cert >bsnDefaultIdCert<
Mon Mar 12 16:30:40 2007: sshpmGetCID: comparing to row 2, ID cert >cscDefaultIdCert<
Mon Mar 12 16:30:40 2007: sshpmGetCertFromHandle: calling sshpmGetCertFromCID()
with CID 0x15b4c76e
Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: called to get cert for CID 15b4c76e
Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 0, certname
```

```

>bsnOldDefaultCaCert<
  Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 1, certname
>bsnDefaultRootCaCert<
  Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 2, certname
>bsnDefaultCaCert<
  Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 3, certname
>bsnDefaultBuildCert<
  Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 4, certname
>cscsDefaultNewRootCaCert<
  Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 5, certname
>cscsDefaultMfgCaCert<
  Mon Mar 12 16:30:40 2007: sshpmGetCertFromCID: comparing to row 0, certname
>bsnOldDefaultIdCert<
  Mon Mar 12 16:30:44 2007: sshpmGetCertFromCID: comparing to row 1, certname
>bsnDefaultIdCert<
  Mon Mar 12 16:30:44 2007: sshpmGetCertFromCID: comparing to row 2, certname
>cscsDefaultIdCert<
  Mon Mar 12 16:30:44 2007: ssphmPublicKeyEncrypt: called to encrypt 16 bytes
  Mon Mar 12 16:30:44 2007: ssphmPublicKeyEncrypt: successfully encrypted, out is 192 bytes
  Mon Mar 12 16:30:44 2007: sshpmPrivateKeyEncrypt: called to encrypt 196 bytes
  Mon Mar 12 16:30:44 2007: sshpmGetOpensslPrivateKeyFromCID: called to get key for
CID 15b4c76e
  Mon Mar 12 16:30:44 2007: sshpmGetOpensslPrivateKeyFromCID: comparing to row 0, certname
>bsnOldDefaultIdCert<
  Mon Mar 12 16:30:44 2007: sshpmGetOpensslPrivateKeyFromCID: comparing to row 1, certname
>bsnDefaultIdCert<
  Mon Mar 12 16:30:44 2007: sshpmGetOpensslPrivateKeyFromCID: comparing to row 2, certname
>cscsDefaultIdCert<
  Mon Mar 12 16:30:44 2007: sshpmGetOpensslPrivateKeyFromCID: match in row 2
  Mon Mar 12 16:30:44 2007: sshpmPrivateKeyEncrypt: calling RSA_private_encrypt
with 196 bytes
  Mon Mar 12 16:30:44 2007: sshpmPrivateKeyEncrypt: RSA_private_encrypt returned 256
  Mon Mar 12 16:30:44 2007: sshpmPrivateKeyEncrypt: encrypted bytes: 256

```

## 调试指令验证Web认证：

请使用这些调试指令为了验证Web认证是否在WLCM运作正如所料：

- **debug aaa all enable** - 配置所有 AAA 消息的调试。
- **debug pem state enable** — 配置策略管理器状态机的调试。
- **debug pem events enable** — 配置策略管理器事件的调试。
- **debug pm ssh-appgw enable** — 配置应用程序网关的调试。
- **debug pm ssh-tcp enable** — 配置策略管理器 tcp 处理的调试。

下面是其中一些 debug 命令的输出范例：

```

(Cisco Controller) >debug aaa all enable

User user1 authenticated
00:40:96:ac:e6:57 Returning AAA Error 'Success' (0) for mobile 00:40:96:ac:e6:57
AuthorizationResponse: 0xbadff97c
  structureSize.....70
  resultCode.....0
  protocolUsed.....0x00000008
  proxyState.....00:40:96:AC:E6:57-00:00
  Packet contains 2 AVPs:
    AVP[01] Service-Type.....0x00000001 (1) (4 bytes)
    AVP[02] Airespace / WLAN-Identifier.....0x00000001 (1) (4 bytes)
00:40:96:ac:e6:57 Applying new AAA override for station 00:40:96:ac:e6:57
00:40:96:ac:e6:57 Override values for station 00:40:96:ac:e6:57 source: 48,

```

valid bits: 0x1 qosLevel: -1, dscp: 0xffffffff, dot1pTag: 0xffffffff, sessionTimeout: -1  
dataAvgC: -1, rTAvgC: -1, dataBurstC: -1, rTimeBurstC: -1 vlanIfName: '', aclName:  
00:40:96:ac:e6:57 Unable to apply override policy for  
station 00:40:96:ac:e6:57 - VapAllowRadiusOverride is FALSE

AccountingMessage Accounting Start: 0xa62700c

Packet contains 13 AVPs:

AVP[01] User-Name.....user1 (5 bytes)  
AVP[02] Nas-Port.....0x00000001 (1) (4 bytes)  
AVP[03] Nas-Ip-Address.....0x0a4df4d2 (172881106) (4 bytes)  
AVP[04] NAS-Identifier.....0x574c4331 (1464615729) (4 bytes)  
AVP[05] Airespace / WLAN-Identifier.....0x00000001 (1) (4 bytes)  
AVP[06] Acct-Session-Id.....45e84f50/00:40:96:ac:e6:57/9 (28 bytes)  
AVP[07] Acct-Authentic.....0x00000002 (2) (4 bytes)  
AVP[08] Tunnel-Type.....0x0000000d (13) (4 bytes)  
AVP[09] Tunnel-Medium-Type.....0x00000006 (6) (4 bytes)  
AVP[10] Tunnel-Group-Id.....0x3330 (13104) (2 bytes)  
AVP[11] Acct-Status-Type.....0x00000001 (1) (4 bytes)  
AVP[12] Calling-Station-Id.....10.0.0.1 (8 bytes)  
AVP[13] Called-Station-Id.....10.77.244.210 (13 bytes)

when web authentication is closed by user:

(Cisco Controller) >

AccountingMessage Accounting Stop: 0xa627c78

Packet contains 20 AVPs:

AVP[01] User-Name.....user1 (5 bytes)  
AVP[02] Nas-Port.....0x00000001 (1) (4 bytes)  
AVP[03] Nas-Ip-Address.....0x0a4df4d2 (172881106) (4 bytes)  
AVP[04] NAS-Identifier.....0x574c4331 (1464615729) (4 bytes)  
AVP[05] Airespace / WLAN-Identifier.....0x00000001 (1) (4 bytes)  
AVP[06] Acct-Session-Id.....45e84f50/00:40:96:ac:e6:57/9 (28 bytes)  
AVP[07] Acct-Authentic.....0x00000002 (2) (4 bytes)  
AVP[08] Tunnel-Type.....0x0000000d (13) (4 bytes)  
AVP[09] Tunnel-Medium-Type.....0x00000006 (6) (4 bytes)  
AVP[10] Tunnel-Group-Id.....0x3330 (13104) (2 bytes)  
AVP[11] Acct-Status-Type.....0x00000002 (2) (4 bytes)  
AVP[12] Acct-Input-Octets.....0x0001820e (98830) (4 bytes)  
AVP[13] Acct-Output-Octets.....0x00005206 (20998) (4 bytes)  
AVP[14] Acct-Input-Packets.....0x000006ee (1774) (4 bytes)  
AVP[15] Acct-Output-Packets.....0x00000041 (65) (4 bytes)  
AVP[16] Acct-Terminate-Cause.....0x00000001 (1) (4 bytes)  
AVP[17] Acct-Session-Time.....0x000000bb (187) (4 bytes)  
AVP[18] Acct-Delay-Time.....0x00000000 (0) (4 bytes)  
AVP[19] Calling-Station-Id.....10.0.0.1 (8 bytes)  
AVP[20] Called-Station-Id.....10.77.244.210 (13 bytes)

(Cisco Controller) >**debug pem state enable**

Fri Mar 2 16:27:39 2007: 00:40:96:ac:e6:57 10.0.0.1  
**WEBAUTH\_REQD (8) Change state to START (0)**  
Fri Mar 2 16:27:39 2007: 00:40:96:ac:e6:57 10.0.0.1  
**START (0) Change state to AUTHCHECK (2)**  
Fri Mar 2 16:27:39 2007: 00:40:96:ac:e6:57 10.0.0.1  
**AUTHCHECK (2) Change stateto L2AUTHCOMPLETE (4)**  
Fri Mar 2 16:27:39 2007: 00:40:96:ac:e6:57 10.0.0.1  
L2AUTHCOMPLETE (4) Change state to WEBAUTH\_REQD (8)  
Fri Mar 2 16:28:16 2007: 00:16:6f:6e:36:2b 0.0.0.0  
START (0) Change state to AUTHCHECK (2)  
Fri Mar 2 16:28:16 2007: 00:16:6f:6e:36:2b 0.0.0.0  
AUTHCHECK (2) Change state to L2AUTHCOMPLETE (4)  
Fri Mar 2 16:28:16 2007: 00:16:6f:6e:36:2b 0.0.0.0

```
L2AUTHCOMPLETE (4) Change state to DHCP_REQD (7)
Fri Mar 2 16:28:19 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_REQD (8) Change state to WEBAUTH_NOL3SEC (14)
Fri Mar 2 16:28:19 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_NOL3SEC (14) Change state to RUN (20)
Fri Mar 2 16:28:20 2007: 00:16:6f:6e:36:2b 0.0.0.0
START (0) Change state to AUTHCHECK (2)
Fri Mar 2 16:28:20 2007: 00:16:6f:6e:36:2b 0.0.0.0
AUTHCHECK (2) Change state to L2AUTHCOMPLETE (4)
Fri Mar 2 16:28:20 2007: 00:16:6f:6e:36:2b 0.0.0.0
L2AUTHCOMPLETE (4) Change state to DHCP_REQD (7)
Fri Mar 2 16:28:24 2007: 00:40:96:af:a3:40 0.0.0.0
START (0) Change state to AUTHCHECK (2)
Fri Mar 2 16:28:24 2007: 00:40:96:af:a3:40 0.0.0.0
AUTHCHECK (2) Change state to L2AUTHCOMPLETE (4)
Fri Mar 2 16:28:24 2007: 00:40:96:af:a3:40 0.0.0.0
L2AUTHCOMPLETE (4) Change state to DHCP_REQD (7)
Fri Mar 2 16:28:25 2007: 00:40:96:af:a3:40 40.0.0.1
DHCP_REQD (7) Change stateto RUN (20)
Fri Mar 2 16:28:30 2007: 00:16:6f:6e:36:2b 0.0.0.0
START (0) Change state to AUTHCHECK (2)
Fri Mar 2 16:28:30 2007: 00:16:6f:6e:36:2b 0.0.0.0
AUTHCHECK (2) Change state to L2AUTHCOMPLETE (4)
Fri Mar 2 16:28:30 2007: 00:16:6f:6e:36:2b 0.0.0.0
L2AUTHCOMPLETE (4) Change state to DHCP_REQD (7)
Fri Mar 2 16:28:34 2007: 00:16:6f:6e:36:2b 30.0.0.2
DHCP_REQD (7) Change stateto WEBAUTH_REQD (8)
```

(Cisco Controller) >**debug pem events enable**

```
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
START (0) Initializing policy
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
L2AUTHCOMPLETE (4)Plumbed mobile LWAPP rule on AP 00:0b:85:5b:fb:d0
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_REQD (8) Adding TMP rule
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_REQD (8) Replacing Fast Path rule
    type = Temporary Entry on AP 00:0b:85:5b:fb:d0, slot 0,
interface = 1 ACL Id = 255,
Jumbo Frames = NO, 802.1P = 0, DSCP = 0, TokenID = 1506
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_REQD (8) Successfully plumbed mobile rule (ACL ID 255)
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_REQD (8) Deleting mobile policy rule 27
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57
Adding Web RuleID 28 for mobile 00:40:96:ac:e6:57
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_REQD (8)Adding TMP rule
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_REQD (8)ReplacingFast Path rule type = Temporary Entry
on AP 00:0b:85:5b:fb:d0, slot 0, interface = 1 ACL Id = 255,
Jumbo Frames = NO, 802.1P = 0, DSCP = 0, TokenID = 1506
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1
WEBAUTH_REQD (8)Successfully plumbed mobile rule (ACL ID 255)
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1 Removed NPU entry.
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1 Added NPU entry of type 8
Fri Mar 2 16:31:06 2007: 00:40:96:ac:e6:57 10.0.0.1 Added NPU entry of type 8
```

**调试指令验证DHCP运作：**

请使用这些调试指令为了检查DHCP客户端和服务端活动：

- **debug dhcp消息enable (event)** —显示关于DHCP客户端活动的调试信息和监控DHCP信息包的状态。
- **debug dhcp信息包enable (event)** —显示DHCP信息包级别信息。

这是这些调试指令输出示例：

```
(Cisco Controller) >debug dhcp message enable
00:40:96:ac:e6:57 dhcp option len,including the magic cookie = 64
00:40:96:ac:e6:57 dhcp option: received DHCP REQUEST msg
00:40:96:ac:e6:57 dhcp option: skipping option 61, len 7
00:40:96:ac:e6:57 dhcp option: requested ip = 10.0.0.1
00:40:96:ac:e6:57 dhcp option: skipping option 12, len 3
00:40:96:ac:e6:57 dhcp option: skipping option 81, len 7
00:40:96:ac:e6:57 dhcp option: vendor class id = MSFT5.0 (len 8)
00:40:96:ac:e6:57 dhcp option: skipping option 55, len 11
00:40:96:ac:e6:57 dhcpParseOptions: options end, len 64, actual 64
00:40:96:ac:e6:57 Forwarding DHCP packet (332 octets)from 00:40:96:ac:e6:57
-- packet received on direct-connect port requires forwarding to external DHCP server.
   Next-hop is 10.0.0.50
00:40:96:ac:e6:57 dhcp option len, including the magic cookie = 64
00:40:96:ac:e6:57 dhcp option: received DHCP ACK msg
00:40:96:ac:e6:57 dhcp option: server id = 10.0.0.50
00:40:96:ac:e6:57 dhcp option: lease time (seconds) =86400
00:40:96:ac:e6:57 dhcp option: skipping option 58, len 4
00:40:96:ac:e6:57 dhcp option: skipping option 59, len 4
00:40:96:ac:e6:57 dhcp option: skipping option 81, len 6
00:40:96:ac:e6:57 dhcp option: netmask = 255.0.0.0
00:40:96:ac:e6:57 dhcp option: gateway = 10.0.0.50
00:40:96:ac:e6:57 dhcpParseOptions: options end, len 64, actual 64

(Cisco Controller) >debug dhcp packet enable

Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57 dhcpProxy: Received packet:
Client 00:40:96:ac:e6:57 DHCP Op: BOOTREQUEST(1), IP len: 300,
switchport: 1, encap: 0xec03
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57 dhcpProxy: dhcp request,
client: 00:40:96:ac:e6:57: dhcp op: 1, port: 1, encap 0xec03,
old mscb port number: 1
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57 Determing relay for 00:40:96:ac:e6:57
dhcpServer: 10.0.0.50, dhcpNetmask: 255.0.0.0, dhcpGateway: 10.0.0.50,
dhcpRelay: 10.0.0.10  VLAN: 30
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57 Relay settings for 00:40:96:ac:e6:57
Local Address: 10.0.0.10, DHCP Server: 10.0.0.50, Gateway Addr: 10.0.0.50,
VLAN: 30, port: 1
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57 DHCP Message Type received: DHCP REQUEST msg
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57   op: BOOTREQUEST,
htype: Ethernet,hlen: 6, hops: 1
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57   xid: 1674228912, secs: 0, flags: 0
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57   chaddr: 00:40:96:ac:e6:57
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57   ciaddr: 10.0.0.1, yiaddr: 0.0.0.0
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57   siaddr: 0.0.0.0, giaddr: 10.0.0.10
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57 DHCP request to 10.0.0.50,
len 350,switchport 1, vlan 30
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57 dhcpProxy: Received packet:
Client 00:40:96:ac:e6:57 DHCP Op: BOOTREPLY(2), IP len: 300,
switchport: 1, encap: 0xec00
Fri Mar  2 16:06:35 2007: DHCP Reply to AP client: 00:40:96:ac:e6:57,
frame len412, switchport 1
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57   DHCP Message Type received: DHCP ACK msg
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57   op: BOOTREPLY, htype: Ethernet,
hlen: 6, hops: 0
Fri Mar  2 16:06:35 2007: 00:40:96:ac:e6:57   xid: 1674228912, secs: 0, flags: 0
```

```
Fri Mar 2 16:06:35 2007: 00:40:96:ac:e6:57 chaddr: 00:40:96:ac:e6:57
Fri Mar 2 16:06:35 2007: 00:40:96:ac:e6:57 ciaddr: 10.0.0.1, yiaddr: 10.0.0.1
Fri Mar 2 16:06:35 2007: 00:40:96:ac:e6:57 siaddr: 0.0.0.0, giaddr: 0.0.0.0
Fri Mar 2 16:06:35 2007: 00:40:96:ac:e6:57 server id: 1.1.1.1
rcvd server id: 10.0.0.50
```

## 调试指令验证TFTP升级：

- **show msglog** —显示给Cisco无线LAN控制器数据库被写的消息日志。如果有超过15个条目，提示您显示在示例表示的消息。
- **调试转移跟踪**—配置转移或升级的调试。

这是trace命令调试的转移的示例：

```
Cisco Controller) >debug transfer trace enable
```

```
(Cisco Controller) >transfer download start
```

```
Mode..... TFTP
Data Type..... Code
TFTP Server IP..... 172.16.1.1
TFTP Packet Timeout..... 6
TFTP Max Retries..... 10
TFTP Path..... d:\WirelessImages/
TFTP Filename..... AIR-WLC2006-K9-3-2-78-0.aes
```

This may take some time.

Are you sure you want to start? (y/n) y

```
Mon Feb 13 14:06:56 2006: RESULT_STRING: TFTP Code transfer starting.
```

```
Mon Feb 13 14:06:56 2006: RESULT_CODE:1
```

TFTP Code transfer starting.

```
Mon Feb 13 14:06:59 2006: Still waiting! Status = 2
```

```
Mon Feb 13 14:07:00 2006: Locking tftp semaphore, pHost=172.16.1.1
```

```
pFilename=d:\WirelessImages/AIR-WLC2006-K9-3-2-78-0.aes
```

```
Mon Feb 13 14:07:00 2006: Semaphore locked, now unlocking, pHost=172.16.1.1
```

```
pFilename=d:\WirelessImages/AIR-WLC2006-K9-3-2-78-0.aes
```

```
Mon Feb 13 14:07:00 2006: Semaphore successfully unlocked, pHost=172.16.1.1
```

```
pFilename=d:\WirelessImages/AIR-WLC2006-K9-3-2-78-0.aes
```

```
Mon Feb 13 14:07:02 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:05 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:08 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:11 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:14 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:17 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:19 2006: tftp rc=0, pHost=172.16.1.1 pFilename=d:\WirelessImages/
AIR-WLC2006-K9-3-2-78-0.aes pLocalFilename=/mnt/download/local.tgz
```

```
Mon Feb 13 14:07:19 2006: tftp = 6, file_name=d:\WirelessImages/
AIR-WLC2006-K9-3-2-78-0.aes, ip_address=172.16.1.1
```

```
Mon Feb 13 14:07:19 2006: upd_get_code_via_tftp = 6 (target=268435457)
```

```
Mon Feb 13 14:07:19 2006: RESULT_STRING: TFTP receive complete... extracting components.
```

```
Mon Feb 13 14:07:19 2006: RESULT_CODE:6
```

TFTP receive complete... extracting components.

```
Mon Feb 13 14:07:20 2006: Still waiting! Status = 2
```

```
Mon Feb 13 14:07:23 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:23 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:23 2006: Still waiting! Status = 1
```

```
Mon Feb 13 14:07:25 2006: RESULT_STRING: Executing init script.
```

```
Mon Feb 13 14:07:25 2006: RESULT_STRING: Executing backup script.
```

Executing backup script.

```

Mon Feb 13 14:07:26 2006: Still waiting! Status = 2
Mon Feb 13 14:07:29 2006: Still waiting! Status = 1
Mon Feb 13 14:07:31 2006: RESULT_STRING: Writing new bootloader to flash disk.

Writing new bootloader to flash disk.
Mon Feb 13 14:07:32 2006: Still waiting! Status = 2
Mon Feb 13 14:07:33 2006: RESULT_STRING: Executing install_bootloader script.

Executing install_bootloader script.
Mon Feb 13 14:07:35 2006: Still waiting! Status = 2
Mon Feb 13 14:07:35 2006: RESULT_STRING: Writing new RTOS to flash disk.
Mon Feb 13 14:07:36 2006: RESULT_STRING: Executing install_rtos script.
Mon Feb 13 14:07:36 2006: RESULT_STRING: Writing new Code to flash disk.

Writing new Code to flash disk.
Mon Feb 13 14:07:38 2006: Still waiting! Status = 2
Mon Feb 13 14:07:41 2006: Still waiting! Status = 1
Mon Feb 13 14:07:42 2006: RESULT_STRING: Executing install_code script.

Executing install_code script.
Mon Feb 13 14:07:44 2006: Still waiting! Status = 2
Mon Feb 13 14:07:47 2006: Still waiting! Status = 1
Mon Feb 13 14:07:48 2006: RESULT_STRING: Writing new APIB to flash disk.

Writing new APIB to flash disk.
Mon Feb 13 14:07:50 2006: Still waiting! Status = 2
Mon Feb 13 14:07:51 2006: RESULT_STRING: Executing install_apib script.

Executing install_apib script.
Mon Feb 13 14:07:53 2006: Still waiting! Status = 2
Mon Feb 13 14:07:53 2006: Still waiting! Status = 1
Mon Feb 13 14:07:53 2006: Still waiting! Status = 1
Mon Feb 13 14:07:53 2006: Still waiting! Status = 1
Mon Feb 13 14:07:53 2006: Still waiting! Status = 1
Mon Feb 13 14:07:54 2006: RESULT_STRING: Writing new APIB to flash disk.
Mon Feb 13 14:07:56 2006: RESULT_STRING: Executing install_apib script.

Executing install_apib script.
Mon Feb 13 14:07:56 2006: Still waiting! Status = 2
Mon Feb 13 14:07:59 2006: RESULT_STRING: Writing new APIB to flash disk.

Writing new APIB to flash disk.
Mon Feb 13 14:08:00 2006: Still waiting! Status = 2
Mon Feb 13 14:08:00 2006: RESULT_STRING: Executing install_apib script.

Executing install_apib script.
Mon Feb 13 14:08:03 2006: Still waiting! Status = 2
Mon Feb 13 14:08:03 2006: RESULT_STRING: Writing new Cert-patch to flash disk.
Mon Feb 13 14:08:03 2006: RESULT_STRING: Executing install_cert_patch script.
Mon Feb 13 14:08:03 2006: RESULT_STRING: Executing fini script.
Mon Feb 13 14:08:04 2006: RESULT_STRING: TFTP File transfer is successful.
Reboot the switch for update to complete.
Mon Feb 13 14:08:06 2006: Still waiting! Status = 2
Mon Feb 13 14:08:08 2006: ummounting: <umount /mnt/download/> cwd = /mnt/application
Mon Feb 13 14:08:08 2006: finished unmounting

```

## 802.1X/WPA/RSN/PMK缓存的调试指令：

- **debug dot1x所有enable (event)** —显示802.1X调试信息。这是此命令输出示例：：  
(Cisco Controllor) >**debug dot1x all enable**

```

Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_USER_NAME(1) index=0

```

Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_CALLING\_STATION\_ID(31) index=1  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_CALLED\_STATION\_ID(30) index=2  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_NAS\_PORT(5) index=3  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_NAS\_IP\_ADDRESS(4) index=4  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_NAS\_IDENTIFIER(32) index=5  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_VAP\_ID(1) index=6  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_SERVICE\_TYPE(6) index=7  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_FRAMED\_MTU(12) index=8  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_NAS\_PORT\_TYPE(61) index=9  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_EAP\_MESSAGE(79) index=10  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_MESS\_AUTH(80) index=11  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
**AAA EAP Packet created request = 0xbbdfe944.. !!!!**  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
**AAA Message 'Interim Response' received for mobile 00:40:96:ac:e6:57**  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
**Received EAP Attribute (code=1, length=24,id=1, dot1xcb->id = 1)**  
**for mobile 00:40:96:ac:e6:57**  
**Fri Mar 23 21:35:01 2007: 00000000: 01 01 00 18 11 01 00 08 38 93 8c 47 64 99**  
**e1 d0 .....8..Gd...**  
**00000010: 45 41 50 55 53 45 52 31** **EAPUSER1**  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Skipping AVP (0/80) for mobile 00:40:96:ac:e6:57  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_USER\_NAME(1) index=0  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_CALLING\_STATION\_ID(31) index=1  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_CALLED\_STATION\_ID(30) index=2  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_NAS\_PORT(5) index=3  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_NAS\_IP\_ADDRESS(4) index=4  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_NAS\_IDENTIFIER(32) index=5  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_VAP\_ID(1) index=6  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_SERVICE\_TYPE(6) index=7  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_FRAMED\_MTU(12) index=8  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_NAS\_PORT\_TYPE(61) index=9  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_EAP\_MESSAGE(79) index=10  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Adding AAA\_ATT\_MESS\_AUTH(80) index=11  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
AAA EAP Packet created request = 0xbbdfe944.. !!!!  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
AAA Message 'Interim Response' received for mobile 00:40:96:ac:e6:57  
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57  
Received EAP Attribute (code=3, length=4,id=1, dot1xcb->id = 1)



```

for mobile 00:40:96:ac:e6:57
Fri Mar 23 21:35:01 2007: 00000000: 03 01 00 04
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57 Skipping AVP (0/80)
for mobile 00:40:96:ac:e6:57
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_USER_NAME(1) index=0
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_CALLING_STATION_ID(31) index=1
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_CALLED_STATION_ID(30) index=2
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_NAS_PORT(5) index=3
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_NAS_IP_ADDRESS(4) index=4
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_NAS_IDENTIFIER(32) index=5
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_VAP_ID(1) index=6
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_SERVICE_TYPE(6) index=7
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_FRAMED_MTU(12) index=8
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_NAS_PORT_TYPE(61) index=9
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_EAP_MESSAGE(79) index=10
Fri Mar 23 21:35:01 2007: 00:40:96:ac:e6:57
Adding AAA_ATT_MESS_AUTH(80) index=11
Fri Mar 23 21:35:05 2007: 00:40:96:ac:e6:57
AAA EAP Packet created request = 0xbbdfe944.. !!!!
Fri Mar 23 21:35:05 2007: 00:40:96:ac:e6:57
AAA Message 'Success' received for mobile 00:40:96:ac:e6:57

```

- **调试dot11所有enable (event) — Enable (event)调试无线电功能。**
- **显示客户端概略的 <mac> — 由MAC地址显示客户端被总结的信息。这是此命令输出示例：**  
(Cisco Controller) >**show client summary**

```

Number of Clients..... 1

MAC Address          AP Name              Status              WLAN  Auth  Protocol  Port
-----
00:40:96:ac:e6:57   AP0015.63e5.0c7e    Associated          1     Yes   802.11a   1

```

## [Related Information](#)

- [Cisco 无线 LAN 控制器命令参考](#)
- [Cisco WLAN控制器网络模块功能指南](#)
- [无线局域网控制器模块\(WLCM\)配置示例](#)
- [无线局域网控制器 Web 身份验证配置示例](#)
- [与WLAN控制器\(WLC\)配置示例的EAP验证](#)
- [Technical Support & Documentation - Cisco Systems](#)