在 CUWN 中使用 Cisco aIOS WGB 与 EAP-TLS 身份验证

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简介

本示例显示如何在思科统一无线网络(CUWN)中配置和使用EAP-TLS身份验证的在工作组网桥(WGB)模式下运行的自治IOS(aIOS)AP。 在本示例中，Microsoft证书颁发机构(Windows 2003)颁发了WGB的证书，并通过复制粘贴方法在WGB上手动输入这些证书。ACS充当RADIUS服务器。使用具有802.1X密钥管理的WPA1/TKIP加密。

先决条件

要求

尝试进行此配置之前，请确保满足以下要求：

- 具备 Cisco 自治解决方案和基于 Cisco IOS 的接入点的知识.
- 轻量接入点协议(LWAPP)知识

使用的组件

本文档中的信息基于以下软件和硬件版本：

- 运行Cisco IOS®软件版本12.4(10b)JA2的WGB

  使用Cisco IOS软件版本12.4(10b)JA2或更高版本非常重要，原因如下：

  - Cisco Bug ID CSCsl85710（仅限注册客户） — 802.11a WGB无法禁用DFS通道或启用“移动站”
  - Cisco Bug ID CSCsl85798（仅限注册客户） — 在DFS事件后，WGB不会重新扫描
  - Cisco Bug ID CSCsm37686（仅限注册客户） — 为TKIP配置的WGB不能关联到(WPA+TKIP)+(WPA2+AES)
  - Cisco Bug ID CSCsk85945（仅限注册客户） — WPA1 WGB无法与WPA1+WPA2 WLAN关联
  - Cisco Bug ID CSCsk52437(仅注册客户)- WGB重新传输在AP脱离信道时失败
  - Cisco Bug ID CSCsb85791（仅限注册客户）–1130在安装新映像后崩溃
  - Cisco Bug ID CSCsk63882（仅限注册客户） — 出现基于12.4的802.11 AP时，出现具有回溯功能的Bad Id错误
  - 思科漏洞ID CSCsl36227(仅注册客户)- WGB上的回溯：%SM-4-BADEVENT:事件“eapResp”无效
  - Cisco Bug ID CSCsl46209（仅限注册客户） — WGB 1242 11g无线电在重置时卡住，停止传输
  - Cisco Bug ID CSCsl58071(仅注册客户)- WGB在EAP-TLS中间歇性需要较长时间重新进行身份验证

- 运行版本4.2.99.0的WLC

  使用4.1.185.0或更高版本非常重要，原因如下：

  - 思科漏洞ID CSCsk41360(仅注册客户) — 控制器在收到EAPOL后继续处理EAPOL注销

注意：您需要是注册客户，才能查看Bug的详细信息。

ACS运行的是4.1;ca运行的是Microsoft Windows 2003 Advanced Server SP1。在任何情况下，当您浏览到CA时，客户端浏览器都是启用了Active X的Internet Explorer。

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。

规则

有关文档规则的详细信息，请参阅 Cisco 技术提示规则。

配置概述

1. 启动Microsoft CA（如有必要）
2. 在ACS中安装服务器证书
3. 在ACS上安装CA证书
4. 设置ACS以使用服务器证书
5. 将ACS配置为让WGB在EAP-TLS中进行身份验证
6. 配置WLC的WLAN以向ACS进行身份验证
7. 配置WGB证书
    a. 根据需要设置主机名、域名和时间
    b. 配置信任点。
    c. 安装CA证书。
    d. 生成AP证书请求。
    e. 向CA发送AP证书请求。
    f. 颁发证书。
    g. 安装AP证书
8. 根据需要配置WGB SSID、请求方和无线电
9. 配置被动客户端的条目（如有必要）
10. 如果使用802.11a(5 GHz)，则需特别注意
11. 同步Cisco IOS请求方的时钟并将其时间保存到NVRAM(适用于使用Cisco IOS软件版本12.4(21a)JY的系统)

配置

本部分提供有关如何配置本文档所述功能的信息。

注意：要获取有关本部分中所使用命令的更多信息，可使用命令查找工具（仅限已注册客户）。

启动Microsoft CA（如有必要）

要使用Windows 2003 Advanced Server打开Microsoft CA，请完成以下步骤：

1. 首先，安装IIS。选择控制面板>添加/删除程序> Windows组件>应用程序服务器。
2. 然后，安装CA。选择控制面板>添加删除程序> Windows组件>证书服务。
    a. 选择企业根CA。
    b. 为CA指定一个名称，并记下该名称。

在ACS中安装服务器证书

要在ACS中安装服务器证书，请完成以下步骤。

1. 在ACS服务器上运行的浏览器中，浏览到CA:http://ip.of.CA.server/certsrv
    a. 请求证书>高级请求>创建并向此CA提交请求。
    b. 在名称(CN)字段中，输入某些内容。记下它。
    c. 在Type of Certificate Needed下拉菜单中，选择Server Authentication Certificate。
    d. 在Key Options下，选择：
        - CSP - Microsoft Base加密提供程序v1.0
        - 密钥大小 — 1024
        - 选中标记密钥为可导出。
        - 选中Store cert in the local computer cert store。
    e. 保留所有其他内容为默认值，然后单击Submit。
    f. 您应该会看到Certificate Pending状态报告，其中显示您的证书请求已收到。如果您遇到问题，请参阅MS KB 323172，或可能会阻碍Active X的其他内容。
2. 现在，在CA上，进入CA管理实用程序并选择开始>管理工具>证书颁发机构。
    a. 在左侧，展开CA图标，并查看Pending Requests下。
    b. 在右侧，右键点击来自ACS的请求，然后选择All Tasks > Issue。现在该请求应该出现在Issued Certificates下。
3. 返回ACS服务器，再次浏览到http://ip.of.CA.server/certsrv。
    a. 单击View the status of a pending certificate request。
    b. 单击Server Authentication Certificate。

c. 单击 Install this certificate。

在ACS上安装CA证书

完成这些步骤：

在ACS服务器上运行的浏览器中，浏览到CA:http://ip.of.CA.server/certsrv

a. 单击 Download a CA certificate, certificate chain, or CRL。

b. 选择Encoding method:Base 64.

c. 选择Download CA certificate。

d. 打开.cer文件，然后单击安装证书。

e. 在“证书导入向导”中，单击下一步，然后单击将所有证书放入以下存储，然后单击浏览。

f. 选上 Show physical stores 方块.

g. 展开受信任的根证书颁发机构，选择“本地计算机”，并单击“确定”。

h. 单击导入成功框的下一步、完成和确定。

设置ACS以使用服务器证书

完成这些步骤：

1. 在 ACS 服务器上，选择 System Configuration。
2. 选择 ACS Certificate Setup。
3. 选择 Install ACS Certificate。
4. 从存贮选择使用身份验证。
5. 键入CN名称，与上一步中使用的名称相同。
6. 单击 submit。
7. 在ACS服务器中，单击System configuration。
8. 选择 ACS Certificate Setup。
9. 选择 Edit Certificate Trust List。
10. 选中 CA 复选框。
11. 单击 submit。

将ACS配置为让WGB在EAP-TLS中进行身份验证

完成以下步骤以配置ACS以使WGB在ACS中进行身份验证：

1. 将WLC添加为NAS（AAA客户端）。
    a. 在ACS GUI中，单击左侧的Network Configuration。
    b. 在AAA Clients下，单击Add Entry。
    c. 在AAA Client Hostname下输入名称。
    d. 在AAA Client IP Address下输入WLC的管理接口IP地址。
    e. 在Shared Secret（共享密钥）下输入RADIUS密钥并记录它。
    f. 在Authenticate Using下拉菜单中，选择RADIUS(Cisco Airespace)。
    g. 单击 Submit+Apply。
2. 在ACS中启用EAP-TLS。
    a. 选择System Configuration > Global Authentication Setup。
    b. 在EAP-TLS下（例如，顶级EAP-TLS），在EAP-FAST之后（而不是PEAP下的EAP-TLS），选中Allow EAP-TLS。
    c. 检查所有三个证书验证选项。
    d. 选择提交+重新启动。
3. 将WGB添加为ACS。
    a. 在User Setup中，在User面板中输入WGB的名称，然后单击Add/Edit。此示例使用“WGB”。
    b. 输入难以猜测的密码。这是必需的，但在EAP-TLS中未使用。
    c. 单击 submit。

配置WLC的WLAN以向ACS进行身份验证

完成这些步骤：

1. 浏览到WLC的GUI。
2. 将ACS添加到RADIUS服务器列表：
    a. 选择Security > AAA > RADIUS > Authentication，然后单击New。
    b. 在Server IP Address面板中输入ACS IP地址。
    c. 输入上一步的RADIUS共享密钥。

d. 单击 Apply。

3. 为EAP-TLS客户端添加WLAN:

a. 在WLANs下，单击New。

b. 输入SSID作为配置文件名称和WLAN SSID。

c. 在General选项卡中，选中Enabled复选框和Broadcast SSID（根据需要）。

d. 在Security选项卡下：

a. 在Layer 2选项卡下，在Layer 2 Security下拉菜单中选择WPA+WPA2，选中WPA Policy with TKIP encryption，取消选中WPA2 policy with AES encryption，然后选择802.1X for Auth Key Mgmt。

b. 在AAA Servers下，添加ACS，除非ACS是全局默认RADIUS服务器。

e. 单击 Apply。

配置WGB证书

完成这些步骤：

注意：此方法使用复制和粘贴方法。有关如何使用TFTP和SCEP方法的详细信息，请参阅Cisco 3200系列无线MIC软件配置指南中的使用加密pki CLI配置证书。

1. 根据需要设置WGB的主机名、域名和时间。

a. 主机名必须与在ACS中为其输入的用户名匹配，如前步骤:

```
<#root>

ap#

configure terminal

ap(config)#

hostname WGB

WGB(config)#
```

b. 时间必须正确，认证才能正常工作（时钟设置exec CLI或配置sntp服务器）。

2. 配置CA的信任点：

```
<#root>

WGB#
```

```
config term
WGB(config)#
crypto pki trustpoint CUT-PASTE
WGB(config)#
enrollment terminal
WGB(config)#
subject-name CN=WGB
```

注意： 主题名称CN=<ClientName>为必填项。如果没有此证书，Microsoft CA将无法颁发证书，因为请求主题名称无效或过长。0x80094001错误消息。

```
<#root>
WGB(config)#
revocation-check none
```

注意： 必须使用revocation-check none命令来避免Cisco Bug ID CSCsl07349（仅限注册客户）中描述的问题。WGB经常取消关联/重新关联，重新连接需要很长时间。

```
<#root>
WGB(config)#
rsakeypair manual-keys 1024
```

3. 在WGB上安装CA证书：

    a. 获取CA证书的副本：

        a. 浏览到CA:http://ip.of.CA.server/certsrv

        b. 单击 Download a CA certificate, certificate chain, or CRL。

        c. 选择Encoding method:Base 64.

        d. 点击Download CA certificate。

        e. 保存.cer文件。

    b. 安装CA证书：

```
<#root>
```

```
WGB(config)#
crypto pki authenticate CUT-PASTE
Enter the base 64 encoded CA certificate.
End with a blank line or the word "quit" on a line by itself
```

现在，请粘贴上一步中下载的.cer文件中的文本。

```
-----BEGIN CERTIFICATE-----
[ ... ]
-----END CERTIFICATE-----

quit

Certificate has the following attributes:

Fingerprint: 45EC6866 A66B4D8F 2E05960F BC5C1B76

% Do you accept this certificate? [yes/no]: yes

Trustpoint CA certificate accepted.

% Certificate successfully imported
```

4. 在WGB上请求并安装客户端证书：

   a. 在WGB上生成证书请求：

<#root>

```
WGB(config)#
crypto pki enroll CUT-PASTE
% Start certificate enrollment ..

% The subject name in the certificate will include: CN=WGB
% Include the router serial number in the subject name? [yes/no]: no
% Include an IP address in the subject name? [no]: no
Display Certificate Request to terminal? [yes/no]: yes
Certificate Request follows:

MIIBjzCB+QIBADAvMQwwCgYDVQQDEwNXR0IxHzAdBgkqhkiG9w0BCQIWEFdHQi5j
Y2lld2lmaS5jb20wgZ8wDQYJKoZIhvcNAQEBBQADgY0AMIGJAoGBAMuyZ0Y/xI3O
6Pwch3qA/JoBobYcvKHlcOBOqvqPgCmZgNb8nsFDV8ZFQKb3ySdIxlqOGtrn/Yoh
2LHzRKi+AWQHFGAB2vkFD0SJD8A6+YD/GqEdXGoo/e0eqJ7LgFqOwpUQoYlPxsPn
QUcK9ZDwd8EZNYdxU/jBtLG9MLX4gta9AgMBAAGgITAfBgkqhkiG9w0BCQ4xEjAQ
MA4GA1UdDwEB/wQEAwIFoDANBgkqhkiG9w0BAQQFAAOBgQAsCItCKRtu16JmG4rz
cDROO1QdmNYDuwkswHRgSHDMjVvBmoqA2bKeNsTj+svuX5S/Q2cGbzC6OLN/ftQ7
fw+RcKKm8+SpaEnU3eYGs3HhY7W9L4MY4JkY8I89ah15/V82SoIAOfCJDy5BvBP6
hk7GAPbMYkW9wJaNruVEvkYoLQ==
```

```
---End - This line not part of the certificate request---

Redisplay enrollment request? [yes/no]: no
WGB(config)#
```

b. 使用之前收集的输出向CA请求客户端/用户证书。使用具有CA访问权限的PC并使用此方法请求用户证书：

   a. 浏览到CA:http://ip.of.CA.server/certsrv

   b. 选择“Request a certificate”选项。

   c. 选择“高级证书请求”选项。

   d. 选择“Submit a certificate request by using a base-64-encoded CMC or PKCS #10 files or submit a renewal request by using a base-64-encoded PKCS #7 file”选项。

   e. 将之前使用的“crypto pki enroll”命令生成的IOS粘贴到证书请求中，然后提交请求。

   f. 最后，下载证书作为“Base 64 encoded”。

   注意：您需要确保证书是为WGB实际生成的，主题以“WGB”（您向WGB提供的用户名）作为CN。

c. 在WGB上安装用户证书：

<#root>

```
WGB(config)#

crypto pki import CUT-PASTE certificate

        Enter the base 64 encoded certificate.
        End with a blank line or the word "quit" on a line by itself
```

现在，请粘贴上一步中下载的.cer文件中的文本。

```
        -----BEGIN CERTIFICATE-----
        [ ... ]
        -----END CERTIFICATE-----

% Router Certificate successfully imported
```

5. 从WGB CLI验证认证：

<#root>

WGB#

show crypto pki certificates

```
Certificate
  Status: Available
  Certificate Serial Number: 1379B07200000000000C
  Certificate Usage: General Purpose
  Issuer:
    cn=AARONLAB
  Subject:
    Name: WGB
    cn=WGB
  CRL Distribution Points:
    http://wcswin/CertEnroll/AARONLAB.crl
  Validity Date:
    start date: 11:33:09 MST Mar 3 2008
    end   date: 11:43:09 MST Mar 3 2009
  Associated Trustpoints: COPY-PASTE

CA Certificate
  Status: Available
  Certificate Serial Number: 612683248DBA539B44B039BD51CD1D48
  Certificate Usage: Signature
  Issuer:
    cn=AARONLAB
  Subject:
    cn=AARONLAB
  CRL Distribution Points:
    http://wcswin/CertEnroll/AARONLAB.crl
  Validity Date:
    start date: 16:34:48 MST Feb 28 2008
    end   date: 16:41:25 MST Feb 28 2018
  Associated Trustpoints: COPY-PASTE
```

根据需要配置WGB SSID、请求方和无线电

完成这些步骤：

1. 配置SSID。这应该与上一步中在WLC上配置的SSID匹配:

```
dot11 ssid EAPTLS
   authentication network-eap eap_methods
   authentication key-management wpa version 1
   dot1x credentials EAPTLS
   dot1x eap profile EAPTLS
   infrastructure-ssid
```

2. 配置EAP-TLS请求方。用户名必须与信任点上的CN和ACS中的用户名条目匹配。

```
eap profile EAPTLS
 method tls
!
dot1x credentials EAPTLS
 username WGB
 pki-trustpoint CUT-PASTE
```

3. 根据需要配置无线电接口。在本示例中，使用2.4 GHz无线电(Dot11Radio0)。

```
interface Dot11Radio0
 encryption mode ciphers aes-ccm tkip
 ssid EAPTLS
 !
 packet retries 128 drop-packet
 station-role workgroup-bridge
```

注意：使用数据包重试次数128丢弃数据包，只要可以，WGB就会保持与其根AP的关联，因此，这是适用于不移动WGB的配置。对于物理漫游的WGB，可以按照日益积极的漫游顺序使用以下配置：

```
packet retries 128
```

注意：或

```
packet retries 128
mobile station period 5 threshold 82
(tune the mobile station command as needed for a specialized application)
```

配置被动客户端的条目（如有必要）

如果一个或多个“被动客户端”位于WGB之后，例如，具有静态IP地址且不会持续传输未经请求的IP数据的有线设备，则需要采取特殊步骤以确保WGB和CUWN可以找到这些客户端。在本示例中，客户端的IP地址为10.0.47.66,MAC地址为0040.96b4.7e8f。

要使用此方法，请完成以下步骤：

1. 在WGB上为客户端配置静态网桥条目：

<#root>

```
B(config)#
bridge 1 address 0040.96b4.7e8f
        forward fastethernet0
```

2. 在WLC上配置静态MAC到IP地址的映射：

a. 配置WLAN以启用MAC过滤、AAA覆盖和不需要DHCP:

```
<#root>
(Cisco Controller) >
show wlan summary

!--- Make a note of the WLAN ID for the SSID used for EAP-TLS.

(Cisco Controller) >
config wlan disable 6
(Cisco Controller) >
config wlan mac-filtering enable 6
(Cisco Controller) >
config wlan aaa-override enable 6
(Cisco Controller) >
config wlan dhcp_server 6 0.0.0.0

!--- Do not have DHCP required checked.
```

b. 为每个客户端添加MAC过滤器（MAC到IP映射）：

```
<#root>
(Cisco Controller) >
config macfilter add
          0040.96b4.7e8f 6 management "client1" 10.0.47.66
```

如果使用802.11a(5 GHz)，则需特别注意

由于802.11a支持的信道多于802.11b/g(2.4 GHz)，因此扫描WGB的所有可用信道可能需要更长的

时间。因此，当您在5 GHz内漫游，或在根AP出现连接问题后，中断可能会持续几秒钟。此外，如果使用DFS信道，信道扫描将需要更长的时间，并且可能会在DFS雷达检测事件之后发生短暂的中断。

因此，建议您如果使用802.11a，应避免使用DFS信道（例如，在FCC域中），并仅使用UNII-1和UNII-3波段。还应将WGB的Dot11Radio1接口配置为仅扫描覆盖区域中正在使用的信道。例如：

```
<#root>

WGB(config-if)#

mobile station scan
  36 40 44 48 149 153 157
```

配置

以下是AP1242的WGB配置示例，该配置使用Cisco IOS软件版本12.4(10b)JA2、采用WPA1-TKIP、2.4 GHz的EAP-TLS身份验证。

注意：由于空间限制，此配置的某些行已移至第二行。

```
version 12.4
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname WGB
!
logging buffered 200000 debugging
enable secret 5 $1$xPtX$hjxzdWVR9qa4ykoxLYba91
!
no aaa new-model
clock timezone MST -7
!
!
!
dot11 ssid EAPTLS
   authentication network-eap eap_methods
   authentication key-management wpa version 1
   dot1x credentials EAPTLS
   dot1x eap profile EAPTLS
   infrastructure-ssid
!
power inline negotiation prestandard source
eap profile EAPTLS
 method tls
!
!
crypto pki trustpoint COPY-PASTE
 enrollment terminal
 subject-name CN=WGB
```

```
 revocation-check none
 rsakeypair manual-keys 1024
!
!
crypto pki certificate chain COPY-PASTE
 certificate 1379B07200000000000C
[...]
  quit
 certificate ca 612683248DBA539B44B039BD51CD1D48
[...]
  quit
dot1x credentials EAPTLS
 username WGB
 pki-trustpoint COPY-PASTE
!
username Cisco password 0 Cisco
!
bridge irb
!
!
interface Dot11Radio0
 no ip address
 no ip route-cache
 !
 encryption mode ciphers tkip
 !
 ssid EAPTLS
 !
 packet retries 128 drop-packet
 station-role workgroup-bridge
 no dot11 qos mode
 bridge-group 1
 bridge-group 1 spanning-disabled
!
interface Dot11Radio1
 no ip address
 no ip route-cache
 shutdown
 !
 station-role root
 bridge-group 1
 bridge-group 1 subscriber-loop-control
 bridge-group 1 block-unknown-source
 no bridge-group 1 source-learning
 no bridge-group 1 unicast-flooding
 bridge-group 1 spanning-disabled
!
interface FastEthernet0
 no ip address
 no ip route-cache
 duplex auto
 speed auto
 bridge-group 1
 bridge-group 1 spanning-disabled
!
interface BVI1
 ip address dhcp client-id FastEthernet0
 no ip route-cache
!
ip http server
no ip http secure-server
ip http help-path
```

```
bridge 1 route ip
!
!
!
line con 0
line vty 0 4
 login local
!
sntp server 10.0.47.1
end
```

同步Cisco IOS请求方的时钟并将其时间保存到NVRAM(适用于使用Cisco IOS软件版本12.4(21a)JY的系统)

除非采取这些步骤，否则Cisco IOS设备(其请求方配置为对其网络连接执行基于证书的身份验证，该设备下文称为Supplicant)可能无法连接到网络。

为确保请求方在重新加载后但在连接到网络之前知道大约什么时间，以便验证服务器的证书，您必须配置请求方从NTP服务器获取时间，并将时间写入其NVRAM。这是运行Cisco IOS软件版本12.4(21a)JY的任何系统的要求。

完成这些步骤：

1. 配置请求方，使其时间与已知良好的NTP服务器（请求方可以访问网络）同步，并将其时间存储到其NVRAM中。

   示例1.1.（在具有SNTP且没有硬件日历的系统上）：

   ```
   <#root>
      Supp(config)#
   sntp server 10.0.47.1
      Supp(config)#
   clock save interval 8
      Supp(config)#
   end
      Supp#
   write memory
   ```

   示例1.2。（在具有NTP和硬件日历的系统上）：

   ```
   <#root>
   ```

```
   Supp(config)#
ntp server 10.0.47.1 iburst
   Supp(config)#
ntp update-calendar
   Supp(config)#
end
   Supp#
write memory
```

2. 确保请求方与NTP服务器具有网络连接，并且已同步其时间。

   示例 2.1：

```
<#root>
 Supp#
show sntp
 SNTP server     Stratum   Version    Last Receive
 10.0.47.1          3         1        00:00:09     Synced
```

   示例 2.2：

```
<#root>
Supp#
show ntp status
 Clock is synchronized, stratum 4, reference is 10.95.42.129
 [ ... ]
```

3. 确保将正确的时间保存到请求方的硬件日历中（如果有的话），或者保存到NVRAM（如果不有的话）。

   示例3.1.在没有硬件日历的系统上：

   重新加载Supplicant客户端，以确保将时间保存到NVRAM。重新加载后，即使在NTP服务器不可用时，也要验证时间大致正确：

```
<#root>
Supp#
```

```
show clock detail

 *08:24:30.103 -0700 Thu Apr 15 2010
 No time source
```

示例3.2.在具有硬件日历的系统上：

将当前正确的时间写入硬件日历：

```
<#root>

Supp#

clock update-calendar
```

验证日历是否正确：

```
<#root>

Supp#

show calendar
```

验证

使用本部分可确认配置能否正常运行。

命令输出解释程序（仅限注册用户）(OIT) 支持某些 show 命令。使用 OIT 可查看对 show 命令输出的分析。

检验WGB连接。

在WLC上，WGB的无线电MAC地址应显示为关联客户端。例如：

```
<#root>

(Cisco Controller) >

show client summary


Number of Clients.............................. 5

MAC Address       AP Name          Status     WLAN/    Auth Protocol Port Wired
                                              Guest-Lan
----------------- ---------------- ---------- --------- ---- -------- ---- -----

00:00:39:dd:4d:24 AP0019.e802.3034  Associated    6      Yes  N/A       4    No
00:0e:9b:cb:d3:9c AP0019.e802.3034  Associated    1      No   802.11b   4    No
```

```
00:16:6f:50:e1:25 AP0019.e802.3034  Probing       N/A   No   802.11b   4    No

00:19:56:b0:7e:b6 AP0019.e802.3034  Associated    6     Yes  802.11b   4    No

00:40:96:b4:7e:8f AP0019.e802.3034  Associated    6     Yes  N/A       4    No
Use "show client detail <MAC>" to see more information on the WGB:
(Cisco Controller) >

show client detail 00:19:56:b0:7e:b6

Client MAC Address.............................. 00:19:56:b0:7e:b6
Client Username ................................ WGB
AP MAC Address.................................. 00:19:a9:42:e4:10
Client State.................................... Associated

Workgroup Bridge................................ 2 client(s)

Wireless LAN Id................................. 6
BSSID........................................... 00:19:a9:42:e4:15
Channel......................................... 1
IP Address...................................... 10.0.47.23
```

在WGB上，您可以使用show dot11 associations和show dot11 associations all-clients命令查看有关AP关联的更多详细信息。使用ping w.x.y.z命令来ping WGB的默认网关。

检验WGB的客户端连接。

在WGB上，您可以使用show bridge 1 fastethernet0命令查看通过FastEthernet0接口获取的地址：

```
<#root>

WGB.Cisco.COM#

show bridge 1 fastethernet0


Total of 300 station blocks, 292 free
Codes: P - permanent, S - self

Bridge Group 1:

    Address       Action   Interface       Age   RX count   TX count

0000.39dd.4d24   forward   FastEthernet0    1         328         71

0040.96b4.7e8f   forward   FastEthernet0    P           0        352

On the WLC, the WGB's wired clients will show up as associated clients with
protocol "N/A":
(Cisco Controller) >

show client summary


Number of Clients............................... 5

MAC Address       AP Name          Status     WLAN/     Auth Protocol Port Wired
                                              Guest-Lan
----------------- ---------------- ---------- --------- ---- -------- ---- -----

00:00:39:dd:4d:24 AP0019.e802.3034  Associated        Yes    N/A      4    No
```

```
00:0e:9b:cb:d3:9c AP0019.e802.3034 Associated    1     No    802.11b  4    No
00:16:6f:50:e1:25 AP0019.e802.3034 Probing       N/A   No    802.11b  4    No
00:19:56:b0:7e:b6 AP0019.e802.3034 Associated    6     Yes   802.11b  4    No
00:40:96:b4:7e:8f AP0019.e802.3034 Associated    6     Yes   N/A      4    No

(Cisco Controller) >show client detail 00:00:39:dd:4d:24
Client MAC Address.............................. 00:00:39:dd:4d:24
Client Username ................................ N/A
AP MAC Address.................................. 00:19:a9:42:e4:10
Client State.................................... Associated

Workgroup Bridge Client......................... WGB: 00:19:56:b0:7e:b6

Wireless LAN Id................................. 6
BSSID........................................... 00:19:a9:42:e4:15
Channel......................................... 1
```

故障排除

本部分提供的信息可用于对配置进行故障排除。

故障排除命令

命令输出解释程序（仅限注册用户）(OIT) 支持某些 show 命令。使用 OIT 可查看对 show 命令输出的分析。

注意：在使用 debug 命令之前，请参阅有关 Debug 命令的重要信息。

调试示例

- WGB端示例
- WLC端示例

WGB端示例

在WGB上，此示例假定2.4 GHz;如果使用5 GHz，请指定`Dot11Radio1`而不是`Dot11Radio0`。

```
<#root>

WGB#

no debug dot11 dot11radio0 print printf


!--- This runs the radio debugs through !--- the standard Cisco IOS logger.

WGB#

debug dot11 dot11radio0 trace print mgmt uplink


!--- radio driver debugs: 802.11 management frames !--- and uplink events
```

```
WGB#
debug dot11 supp-sm-dot1x

!--- interface to the 802.1X supplicant
```

以下是在先前配置中给定的正常关联的示例：

WGB端示例

```
Mar  4 23:22:39.427: 108DD0BF-0 Uplink: Enabling active scan
Mar  4 23:22:39.427: 108DD0D0-0 Uplink: Not busy, scan all channels
Mar  4 23:22:39.427: 108DD0DE-0 Uplink: Scanning
Mar  4 23:22:39.430: 108DDF83-0 Uplink: Rcvd response from 0019.a942.e415
                                         channel 1 3237

!--- WGB scans the 2.4 GHz channels, !--- found an AP on channel 1.

Mar  4 23:22:39.470: 108E7B31-0 Uplink: dot11_uplink_scan_done: ssnie_accept
                       returns 0x0 key_mgmt 0x50F201 encrypt_type 0x20
Mar  4 23:22:39.470: 108E7B67-0 Uplink: ssid EAPTLS auth leap
Mar  4 23:22:39.471: 108E7B77-0 Uplink: try 0019.a942.e415, enc 20 key 1,
                       priv 1, eap 11
Mar  4 23:22:39.471: 108E7B93-0 Uplink: Authenticating
Mar  4 23:22:39.479: 108E9C71 t 1     0  - B000 13A 42E415 B07EB6 42E415 D9E0
                                                    auth 1 6
          algorithm 128
        sequence 1
        status 0
Mar  4 23:22:39.480: 108EA160 r 1    73/ 26- B000 13A B07EB6 42E415 42E415 5E70
                                     auth 1 37
          algorithm 128
        sequence 2
        status 0
        221 - 0 40 96 C 1 A 22 79 95 1A 7C 18 1 0 0 CA 4 0 0 0 0 74 52 EA
           31 F4 9E 89 5A

!--- WGB completes 802.11 authentication.

Mar  4 23:22:39.480: 108EA1EB-0 Uplink: Associating
Mar  4 23:22:39.481: 108EA951 t 1     0  - 0000 13A 42E415 B07EB6 42E415 D9F0
                                           assreq 1 119
        cap 431 infra privacy shorthdr
        listen interval 200
        ssid EAPTLS
        rates 82 84 8B C 12 96 18 24
        extrates 30 48 60 6C
        aironet WGB.Cisco.COM load 0 clients 0 hops 0 device 7C-2700
                refresh 15 CW 0-0 flags 0 distance 0
        ccxver 5
        221 - 0 40 96 14 0
        IP 10.0.47.23 1
```

```
        wpa1 mcst tkip ucst tkip keymgmt wpa cap 2800
        221 - 0 40 96 6 2
Mar  4 23:22:39.484: 108EB2C6 r 1      80/77 19- 1000 13A B07EB6 42E415 42E415
                                       5E80 assrsp l 101
        cap 31 infra privacy shorthdr
        status 0
        aid C003
        rates 82 4 B 16
        aironet AP0019.e802.3030 load 0 clients 0 hops 0 device 8F-2700
                refresh 15 CW 31-1023 flags 40 distance 0
        IP 10.0.47.6 0
        ccxver 5
        221 - 0 40 96 14 0
        221 - 0 40 96 C 1 A 22 7E 95 1A 7C 18 1 0 0 CB 4 0 0 0 0 FB 4C F3 7D D
                 29 71 E2


!--- WGB completes 802.11 association.


Mar  4 23:22:39.486: Uplink address set to 0019.a942.e415
Mar  4 23:22:39.486: Initialising common IOS structures for dot1x
Mar  4 23:22:39.486: Done.
Mar  4 23:22:39.486: DOT1X_SHIM: Start supplicant on Dot11Radio0
                                 (credentials EAPTLS)
Mar  4 23:22:39.486: DOT1X_SHIM: Starting dot1x_mgr_auth (auth type 128)
Mar  4 23:22:39.486: DOT1X_SHIM: Initialising WPA [or WPA-PSK or CCKM]
                                 key management module


!--- Starting the EAP-TLS supplicant


Mar  4 23:22:39.488: DOT1X_SHIM: Dot1x pkt sent (uplink)
                                 with dest 0019.a942.e415
Mar  4 23:22:39.489: DOT1X_SHIM: No AAA client found for 0019.a942.e415
                                 (on Dot11Radio0)
Mar  4 23:22:39.489: DOT1X_SHIM: Dot1x pkt sent (uplink)
                                 with dest 0019.a942.e415
Mar  4 23:22:39.490: DOT1X_SHIM: No AAA client found for 0019.a942.e415
                                 (on Dot11Radio0)


!--- The "No AAA client found" message appears !--- to be a bogon and can be ignored.

Mar  4 23:22:39.491: DOT1X_SHIM: Dot1x pkt sent (uplink)
                     with dest 0019.a942.e415
Mar  4 23:22:39.491: 108EB9B4-0 Uplink: EAP authenticating
Mar  4 23:22:39.491: 108EBD22 r 11     73/ 4 - 0802 13A B07EB6 42E415 42E415
                                               5E90 l64
   0100 0034 0101 0034 0100 6E65 7477 6F72 6B69 643D 4541 5054 4C53 2C6E
  6173 6964 3D74 7563 736F 6E2D 776C 6332 3030 362C 706F 7274 6964 3D34 0000
Mar  4 23:22:39.492: 108EC770 t 11     0  - 0801 13A 42E415 B07EB6 42E415
                                           DA00 l68
  EAPOL2 EAPOL start
Mar  4 23:22:39.492: 108ECA4D r 11     74/ 18- 0802 13A B07EB6 42E415 42E415
                                               5EA0 l64
   0100 0034 0102 0034 0100 6E65 7477 6F72 6B69 643D 4541 5054 4C53 2C6E
  6173 6964 3D74 7563 736F 6E2D 776C 6332 3030 362C 706F 7274 6964 3D34 0000
Mar  4 23:22:39.492: 108ECDE2 t 11     0  - 0801 13A 42E415 B07EB6 42E415
                                           DA10 l68
  EAPOL2 EAP id 1 resp ident "WGB"
```

```
Mar  4 23:22:39.493: 108ED000 t 11    0  - 0801 13A 42E415 B07EB6 42E415
                                           DA20 168
  EAPOL2 EAP id 2 resp ident "WGB"
Mar  4 23:22:39.524: 108F50C4 r 11     74/ 18- 080A 13A B07EB6 42E415 42E415
                                               5EC0 131
   0100 0013 01AF 0013 1101 0008 E23F 829E AE45 57EB 5747 4200 0000 0000
  0000 00


!--- The WGB sends an EAPOL START, !--- the WLC authenticator sends an EAP ID Request, !--- and the WG


Mar  4 23:22:39.525: DOT1X_SHIM: No AAA client found for 0019.a942.e415
                                 (on Dot11Radio0)
Mar  4 23:22:39.525: DOT1X_SHIM: Dot1x pkt sent (uplink)
                                 with dest 0019.a942.e415
Mar  4 23:22:39.526: 108F57D0 t 11    0  - 0801 13A 42E415 B07EB6 42E415
                                           DA30 168
  EAPOL2 EAP id 175 resp nak 0D
Mar  4 23:22:39.547: 108FA89C r 11     86/77 19- 080A 13A B07EB6 42E415 42E415
                                                 5ED0 118
   0100 0006 01B0 0006 0D20 0000 0000 0000 0000
Mar  4 23:22:39.547: DOT1X_SHIM: No AAA client found for 0019.a942.e415
                                 (on Dot11Radio0)
Mar  4 23:22:39.561: DOT1X_SHIM: Dot1x pkt sent (uplink)
                                 with dest 0019.a942.e415
Mar  4 23:22:39.561: 108FE059 t 11    0  - 0801 13A 42E415 B07EB6 42E415
                                           DA40 186
  EAPOL2 EAP id 176 resp tls 8000 0000 3216 0301 002D 0100 0029 0301 47CD
  D9BF CE1B 71B1 A815 CB99 8C80 8876 39F2 57A3 0F02 F382 147E 9D0C 657E 3AA7
Mar  4 23:22:39.572: DOT1X_SHIM: No AAA client found for 0019.a942.e415
                                           (on Dot11Radio0)
Mar  4 23:22:39.573: DOT1X_SHIM: Dot1x pkt sent (uplink)
                                           with dest 0019.a942.e415
Mar  4 23:22:39.573: 10900868 r 11     86/77 20- 0802 13A B07EB6 42E415 42E415
                                                               5EF0 11024
   0100 03F4 01B1 03F4 0DC0 0000 079D 1603 0100 4A02 0000 4603 0147 CDD9
  B413 0683 9734 4D26 136F EC8F ECD3 5D3B 77C7 4D20 7DA1 9B17 D7D3 E4A6 1720
Mar  4 23:22:39.574: 109012E6 t 11    1  - 0809 13A 42E415 B07EB6 42E415
                                                     DA50 168
  EAPOL2 EAP id 177 resp tls 00
Mar  4 23:22:39.582: DOT1X_SHIM: No AAA client found for 0019.a942.e415
                                           (on Dot11Radio0)
Mar  4 23:22:39.734: DOT1X_SHIM: Dot1x pkt sent (uplink)
                                 with dest 0019.a942.e415
Mar  4 23:22:39.735: 1090317E r 11     /78 19- 0802 13A B07EB6 42E415 42E415
                                           5F00 1965
   0100 03B9 01B2 03B9 0D00 C687 1DB6 065B 2467 2609 EE5F 9C64 F3A9 C199
  493E 2B79 F157 1765 6C2F C409 4D54 7DA4 6791 4859 ECAA 685B 0F66 C5E9 22A6
Mar  4 23:22:39.736: 10928A31 t 11    0  - 0801 13A 42E415 B07EB6 42E415
                                           DA60 11239
  EAPOL2 EAP id 178 resp tls 8000 0004 B316 0301 036D 0B00 0369 0003 6600
  0363 3082 035F 3082 0247 A003 0201 0202 0A13 79B0 7200 0000 0000 0C30 0D06
Mar  4 23:22:39.755: 1092D464 r 11     /78 18- 0802 13A B07EB6 42E415
                                             42E415 5F40 165
   0100 0035 01B3 0035 0D80 0000 002B 1403 0100 0101 1603 0100 20B8 EBFA
  2DDB 2E1A BF84 37A8 892C 84C5 50B2 B1A5 6F3E B2B5 981A 2899 1DE2 B470 6800
Mar  4 23:22:39.755: DOT1X_SHIM: No AAA client found for 0019.a942.e415
                                (on Dot11Radio0)
Mar  4 23:22:39.760: DOT1X_SHIM: Dot1x pkt sent (uplink)
                                 with dest 0019.a942.e415
Mar  4 23:22:39.760: 1092E92C t 11    0  - 0801 13A 42E415 B07EB6 42E415
```

```
                                          DA70 l68
  EAPOL2 EAP id 179 resp tls 00
Mar  4 23:22:39.770: 10930F50 r 11     75/80 19- 0802 13A B07EB6 42E415 42E415
                                                5F60 l16
   0100 0004 03B3 0004 0000 0000 0000 0000
Mar  4 23:22:39.770: DOT1X_SHIM: No AAA client found for 0019.a942.e415
                                 (on Dot11Radio0)
Mar  4 23:22:39.774: DOT1X_SHIM: Received Dot1x success - Authenticated
                           with EAP-TLS


!--- EAP-TLS authentication is successful, !--- now come the keys.


Mar  4 23:22:39.774: DOT1X_SHIM: treat key material as wpa-v1 v2 pmk
Mar  4 23:22:39.774: DOT1X_SHIM: WPA PMK key size truncated from 64 to 32
Mar  4 23:22:39.777: DOT1X_SHIM: Got Eapol key packet from dot1x manager
Mar  4 23:22:39.777: DOT1X_SHIM: Passing key packet to KM module
Mar  4 23:22:39.777: supp_km_processKey: descriptor type = 254
Mar  4 23:22:39.777: supp_km_processKey: key length = 137
Mar  4 23:22:39.778: 109319B7 r 11     /77 16- 080A 13A B07EB6 42E415 42E415
                                              5F70 l107
   0103 005F FE00 8900 2000 0000 0000 0000 006E 64D0 C659 1C91 11D2 6040
  C251 0592 E6B6 3799 0EDE B1BD B3A6 87B7 8C9B 0D5E DF00 0000 0000 0000 0000
Mar  4 23:22:39.779: 109332C2 t 11    1  - 0809 13A 42E415 B07EB6 42E415
                                          DA80 l133
  EAPOL key desc FE info 109 len 20 replay 0000000000000000
         nonce 11AADA303F5F9B2357A932B3093483905E69F8408D019FB2EF56F7AD706F0759
         iv 00000000000000000000000000000000 rsc 0000000000000000
         id 0000000000000000 mic DBD06C383B83E3478F802844095E9444
        datalen 1A key DD18 0050 F201 0100 0050 F202 0100 0050 F202 0100
           0050 F201
  2800
Mar  4 23:22:39.780: 109336C1 r 11     83/78 18- 0802 13A B07EB6 42E415 42E415
                                                5F80 l133
   0103 0079 FE01 C900 2000 0000 0000 0000 016E 64D0 C659 1C91 11D2 6040
  C251 0592 E6B6 3799 0EDE B1BD B3A6 87B7 8C9B 0D5E DF6E 64D0 C659 1C91 11D2
Mar  4 23:22:39.781: DOT1X_SHIM: Got Eapol key packet from dot1x manager
Mar  4 23:22:39.781: DOT1X_SHIM: Passing key packet to KM module
Mar  4 23:22:39.781: supp_km_processKey: descriptor type = 254
Mar  4 23:22:39.781: supp_km_processKey: key length = 457
Mar  4 23:22:39.781: dot1x_pakio_plumb_keys: trying to plumb PTK key
Mar  4 23:22:39.782: 10933E11 t 11    0  - 0801 13A 42E415 B07EB6 42E415
                                          DA90 l107
  EAPOL key desc FE info 109 len 20 replay 0000000000000001
         nonce 0000000000000000000000000000000000000000000000000000000000000000
         iv 00000000000000000000000000000000 rsc 0000000000000000
         id 0000000000000000 mic 3A59680D1130EC24B00F7246F9D0738F
        datalen 0 key
Mar  4 23:22:39.785: 10934749 r 11     88/77 17- 0842 13A B07EB6 42E415 42E415
                                                5F90 l155
  IV 0103007F-FE039100   2000 0000 0000 0000 026E 64D0 C659 1C91 11D2 6040
  C251 0592 E6B6 3799 0EDE B1BD B3A6 87B7 8C9B 0D5E D76E 64D0 C659 1C91 11D2
Mar  4 23:22:39.785: DOT1X_SHIM: Got Eapol key packet from dot1x manager
Mar  4 23:22:39.785: DOT1X_SHIM: Passing key packet to KM module
Mar  4 23:22:39.785: supp_km_processKey: descriptor type = 254
Mar  4 23:22:39.785: supp_km_processKey: key length = 913
Mar  4 23:22:39.786: dot1x_pakio_plumb_keys: trying to plumb vlan
                                            key - length: 32
Mar  4 23:22:39.787: %DOT11-4-UPLINK_ESTABLISHED: Interface Dot11Radio0,
                  Associated To AP AP0019.e802.303 0019.a942.e415 [EAP-TLS WPA]
Mar  4 23:22:39.787: %LINK-3-UPDOWN: Interface Dot11Radio0, changed state to up
```

```
Mar  4 23:22:39.789: 10934D63-0 Uplink: Done
Mar  4 23:22:39.789: 10934D94-0 Interface up
Mar  4 23:22:39.790: 10934ED7 t 11    0  - 0841 13A 42E415 B07EB6 42E415
                                            DAA0 l115
  EAPOL key desc FE info 311 len 0 replay 0000000000000002
         nonce 0000000000000000000000000000000000000000000000000000000000000000
         iv 00000000000000000000000000000000 rsc 0000000000000000
         id 0000000000000000 mic DA60CCDAE27E7362B9B720B52715E081
        datalen 0 key


!--- The keys are all distributed, !--- and the Dot11Radio0 interface is fully up.
```

WLC端调试

```
<#root>

(Cisco Controller) >

debug mac addr
                  00:19:56:b0:7e:b6


!--- Filter debugs on the radio !--- MAC address of the WGB.


(Cisco Controller) >

debug dot11 state enable


(Cisco Controller) >

debug dot1x events enable


(Cisco Controller) >

debug dot1x states enable


(Cisco Controller) >

debug pem events enable


(Cisco Controller) >

debug pem state enable


(Cisco Controller) >

debug aaa packet enable
```

```
(Cisco Controller) >
debuug aaa events enable

(Cisco Controller) >
debug aaa events enable

Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 Processing WPA IE type 221,
                          length 24 for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 10.0.47.23 RUN (20)
                          Change state to START (0) last state RUN (20)
Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 10.0.47.23 START (0)
                          Initializing policy
Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 10.0.47.23 START (0)
                          Change state to AUTHCHECK (2) last state RUN (20)
Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 10.0.47.23 AUTHCHECK (2)
                          Change state to 8021X_REQD (3) last state RUN (20)
Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 10.0.47.23 8021X_REQD (3)
                          Plumbed mobile LWAPP rule on AP 00:19:a9:42:e4:10
 Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 apfPemAddUser2 (apf_policy.c:209)
                           Changing state for mobile 00:19:56:b0:7e:b6 on
   AP 00:19:a9:42:e4:10 from Associated to Associated
Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 apfProcessAssocReq (apf_80211.c:4149)
                          Changing state for mobile 00:19:56:b0:7e:b6 on
                                  AP 00:19:a9:42:e4:10 from Associated to Associated

!--- WGB is associated in 802.11. !--- Note in this case that the WGB associated !--- when it was alre

Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 dot1x - moving
                          mobile 00:19:56:b0:7e:b6 into Connecting state
Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 Sending EAP-Request/Identity to
                          mobile 00:19:56:b0:7e:b6 (EAP Id 1)
Tue Mar  4 16:45:56 2008: 00:19:56:b0:7e:b6 10.0.47.23 Removed NPU entry.
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received EAPOL START from
                          mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 dot1x - moving
                          mobile 00:19:56:b0:7e:b6 into Connecting state
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Sending EAP-Request/Identity to
                          mobile 00:19:56:b0:7e:b6 (EAP Id 2)
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received EAPOL EAPPKT from
                          mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received EAP Response packet with
                          mismatching id (currentid=2, eapid=1) from mobile
   00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received EAPOL EAPPKT from
                          mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received Identity Response (count=2) from
                          mobile 00:19:56:b0:7e:b6

!--- WGB sends EAPOL START while !--- WLC sends its EAP ID-request, !--- which confuses the state mach

Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 EAP State update from Connecting to
                          Authenticating for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 dot1x - moving mobile
                          00:19:56:b0:7e:b6 into Authenticating state
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Response
```

```
                          state for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Successful transmission of
                          Authentication Packet (id 17) to 10.0.47.42:1812,
   proxy state 00:19:56:b0:7e:b6-00:00
Tue Mar  4 16:45:59 2008: 00000000: 01 11 00 9c 85 82 35 15
                          62 0f 50 bd 32 60 0c e6  ......5.b.P.2`..
Tue Mar  4 16:45:59 2008: 00000010: de 94 b2 40 01 05 57 47
                          42 1f 13 30 30 2d 31 39  ...@..WGB..00-19
Tue Mar  4 16:45:59 2008: 00000020: 2d 35 36 2d 42 30 2d 37
                          45 2d 42 36 1e 1a 30 30  -56-B0-7E-B6..00
Tue Mar  4 16:45:59 2008: 00000030: 2d 31 39 2d 41 39 2d 34
                          32 2d 45 34 2d 31 30 3a  -19-A9-42-E4-10:
Tue Mar  4 16:45:59 2008: 00000040: 45 41 50 54 4c 53 05 06
                          00 00 00 04 04 06 0a 00  EAPTLS..........
Tue Mar  4 16:45:59 2008: 00000050: 2f 06 20 10 74 75 63 73
                          6f 6e 2d 77 6c 63 32 30  /...tucson-wlc20
Tue Mar  4 16:45:59 2008: 00000060: 30 36 1a 0c 00 00 37 63
                          01 06 00 00 00 06 06 06  06....7c........
Tue Mar  4 16:45:59 2008: 00000070: 00 00 00 02 0c 06 00 00
                          05 14 3d 06 00 00 00 13  ..........=.....
Tue Mar  4 16:45:59 2008: 00000080: 4f 0a 02 02 00 08 01 57
                          47 42 50 12 c5 f3 f5 9c  O......WGBP.....
Tue Mar  4 16:45:59 2008: 00000090: c0 81 0e 3e 23 c0 a7 1b
                          03 f7 af 5b              ...>#......[
Tue Mar  4 16:45:59 2008: 00000000: 0b 11 00 47 54 d3 b6 45
                          75 eb 83 b7 97 7c 80 1b  ...GT..Eu....|..
Tue Mar  4 16:45:59 2008: 00000010: 13 03 71 1d 4f 15 01 b0
                          00 13 11 01 00 08 3d 17  ..q.O.........=.
Tue Mar  4 16:45:59 2008: 00000020: 4a 94 eb c7 3b 3e 57 47
                          42 18 0c 53 56 43 3d 30  J...;>WGB..SVC=0
Tue Mar  4 16:45:59 2008: 00000030: 2e 36 34 37 3b 50 12 67
                          50 d3 ad 88 7d 16 8b 5b  .647;P.gP...}..[
Tue Mar  4 16:45:59 2008: 00000040: d1 25 57 56 b2 ec 76.%WV..v
Tue Mar  4 16:45:59 2008: ****Enter processIncomingMessages: response code=11
Tue Mar  4 16:45:59 2008: ****Enter processRadiusResponse: response code=11
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Access-Challenge received from
                          RADIUS server 10.0.47.42 for mobile 00:19:56:b0:7e:b6
   receiveId = 7
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Processing Access-Challenge for
                          mobile 00:19:56:b0:7e:b6


!--- The WLC forwards the ID-request info, !--- that it had received !--- in 802.1X from the WGB suppl


Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Req state
                          (id=176) for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 WARNING: updated
                          EAP-Identifer 2 ===> 176 for STA 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Sending EAP Request from AAA to
                          mobile 00:19:56:b0:7e:b6 (EAP Id 176)
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received EAPOL EAPPKT from
                          mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received EAP Response from
                          mobile 00:19:56:b0:7e:b6 (EAP Id 176, EAP Type 3)
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Response
                          state for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Successful transmission of
                          Authentication Packet (id 18) to 10.0.47.42:1812,
   proxy state 00:19:56:b0:7e:b6-00:00
Tue Mar  4 16:45:59 2008: 00000000: 01 12 00 a6 d5 64 56 8a
                          e8 27 fa de ca 69 c4 2a  .....dV..'...i.*
```

```
Tue Mar  4 16:45:59 2008: 00000010: cd 06 26 0c 01 05 57 47
                          42 1f 13 30 30 2d 31 39  ..&...WGB..00-19
Tue Mar  4 16:45:59 2008: 00000020: 2d 35 36 2d 42 30 2d 37
                          45 2d 42 36 1e 1a 30 30  -56-B0-7E-B6..00
Tue Mar  4 16:45:59 2008: 00000030: 2d 31 39 2d 41 39 2d 34
                          32 2d 45 34 2d 31 30 3a  -19-A9-42-E4-10:
Tue Mar  4 16:45:59 2008: 00000040: 45 41 50 54 4c 53 05 06
                          00 00 00 04 04 06 0a 00  EAPTLS.........
Tue Mar  4 16:45:59 2008: 00000050: 2f 06 20 10 74 75 63 73
                          6f 6e 2d 77 6c 63 32 30  /...tucson-wlc20
Tue Mar  4 16:45:59 2008: 00000060: 30 36 1a 0c 00 00 37 63
                          01 06 00 00 00 06 06 06  06....7c........
Tue Mar  4 16:45:59 2008: 00000070: 00 00 00 02 0c 06 00 00
                          05 14 3d 06 00 00 00 13  ..........=.....
Tue Mar  4 16:45:59 2008: 00000080: 4f 08 02 b0 00 06 03 0d
                          18 0c 53 56 43 3d 30 2e  O.........SVC=0.
Tue Mar  4 16:45:59 2008: 00000090: 36 34 37 3b 50 12 43 6e
                          32 b6 e9 11 a3 47 8e 96  647;P.Cn2....G..
Tue Mar  4 16:45:59 2008: 000000a0: dc f0 37 a8 37 9e..7.7.
Tue Mar  4 16:45:59 2008: 00000000: 0b 12 00 4b 71 7a 36 1d
                          d9 24 16 8d c0 2f 45 52  ...Kqz6..$.../ER
Tue Mar  4 16:45:59 2008: 00000010: 82 3d 58 cf 4f 08 01 b1
                          00 06 0d 20 18 1d 45 41  .=X.O.........EA
Tue Mar  4 16:45:59 2008: 00000020: 50 3d 30 2e 32 30 32 2e
                          32 37 65 61 2e 31 3b 53  P=0.202.27ea.1;S
Tue Mar  4 16:45:59 2008: 00000030: 56 43 3d 30 2e 36 34 37
                          3b 50 12 71 bf 1f 5c c7  VC=0.647;P.q..\.
Tue Mar  4 16:45:59 2008: 00000040: 69 7e e8 cc 9d 71 18 de
                          b7 e5 b7                 i~...q.....
Tue Mar  4 16:45:59 2008: ****Enter processIncomingMessages: response code=11
Tue Mar  4 16:45:59 2008: ****Enter processRadiusResponse: response code=11
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Access-Challenge received from
                          RADIUS server 10.0.47.42 for mobile 00:19:56:b0:7e
   :b6 receiveId = 7
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Processing Access-Challenge for
                          mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Req state
                          (id=177) for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Sending EAP Request from AAA to
                          mobile 00:19:56:b0:7e:b6 (EAP Id 177)
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received EAPOL EAPPKT from
                          mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Received EAP Response from
                          mobile 00:19:56:b0:7e:b6 (EAP Id 177, EAP Type 13)
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Response
                          state for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:45:59 2008: 00:19:56:b0:7e:b6 Successful transmission of
                          Authentication Packet (id 19) to 10.0.47.42:1812,
   proxy state 00:19:56:b0:7e:b6-00:00
Tue Mar  4 16:45:59 2008: 00000000: 01 13 00 ed 30 a2 b8 d3
                          6c 6a e9 08 04 f9 b9 32  ....0...lj.....2
Tue Mar  4 16:45:59 2008: 00000010: 98 fe 36 62 01 05 57 47
                          42 1f 13 30 30 2d 31 39  ..6b..WGB..00-19
Tue Mar  4 16:45:59 2008: 00000020: 2d 35 36 2d 42 30 2d 37
                          45 2d 42 36 1e 1a 30 30  -56-B0-7E-B6..00
Tue Mar  4 16:45:59 2008: 00000030: 2d 31 39 2d 41 39 2d 34
                          32 2d 45 34 2d 31 30 3a  -19-A9-42-E4-10:
Tue Mar  4 16:45:59 2008: 00000040: 45 41 50 54 4c 53 05 06
                          00 00 00 04 04 06 0a 00  EAPTLS.........
Tue Mar  4 16:45:59 2008: 00000050: 2f 06 20 10 74 75 63 73
                          6f 6e 2d 77 6c 63 32 30  /...tucson-wlc20
Tue Mar  4 16:45:59 2008: 00000060: 30 36 1a 0c 00 00 37 63
```

```
                           01 06 00 00 00 06 06 06  06....7c........
Tue Mar  4 16:45:59 2008: 00000070: 00 00 00 02 0c 06 00 00
                           05 14 3d 06 00 00 00 13  ..........=.....
Tue Mar  4 16:45:59 2008: 00000080: 4f 3e 02 b1 00 3c 0d 80
                           00 00 00 32 16 03 01 00  O>...<.....2....
Tue Mar  4 16:45:59 2008: 00000090: 2d 01 00 00 29 03 01 47
                           cd df 36 c4 bc 40 48 75  -...)..G..6..@Hu
Tue Mar  4 16:45:59 2008: 000000a0: f4 09 ea 60 0c 40 fc 99
                           a0 e7 11 15 00 7e ca 90  ...`.@.......~..
Tue Mar  4 16:45:59 2008: 000000b0: da 5a d3 39 45 be ca 00
                           00 02 00 04 01 00 18 1d  .Z.9E...........
Tue Mar  4 16:45:59 2008: 000000c0: 45 41 50 3d 30 2e 32 30
                           32 2e 32 37 65 61 2e 31  EAP=0.202.27ea.1
Tue Mar  4 16:45:59 2008: 000000d0: 3b 53 56 43 3d 30 2e 36
                           34 37 3b 50 12 c0 6b 4c  ;SVC=0.647;P..kL
Tue Mar  4 16:45:59 2008: 000000e0: 37 6c 1a 4f 58 89 18 2b
                           c4 0e 99 cd 0f           7l.OX..+.....
Tue Mar  4 16:45:59 2008: 00000000: 0b 13 04 3f 5d 80 89 e2
                           e7 3f b0 c4 4c 99 d2 bd  ...?]....?..L...
Tue Mar  4 16:45:59 2008: 00000010: e5 e3 6e af 4f ff 01 b2
                           03 f4 0d c0 00 00 07 9d  ..n.O...........
Tue Mar  4 16:45:59 2008: 00000020: 16 03 01 00 4a 02 00 00
                           46 03 01 47 cd df 2a f3  ....J...F..G..*.
Tue Mar  4 16:45:59 2008: 00000030: 19 0f 6f 52 2f a7 c3 00
                           d4 c8 f0 50 1c 8f 47 f4  ..oR/......P..G.
Tue Mar  4 16:45:59 2008: 00000040: 97 1b f2 a0 ca a9 f4 27
                           0c 34 32 20 d9 33 c4 27  .......'.42..3.'
Tue Mar  4 16:45:59 2008: 00000050: 81 91 e4 97 d7 a6 6b 03
                           58 1a 4a c8 6d 4a e7 ef  ......k.X.J.mJ..
Tue Mar  4 16:45:59 2008: 00000060: 9d f8 fd ad c9 95 aa b5
                           3e f5 1b dc 00 04 00 16  ........>.......
Tue Mar  4 16:45:59 2008: 00000070: 03 01 07 37 0b 00 07 33
                           00 07 30 00 03 c2 30 82  ...7...3..0...0.
Tue Mar  4 16:45:59 2008: 00000080: 03 be 30 82 02 a6 a0 03
                           02 01 02 02 0a 61 0f c8  ..0..........a..
Tue Mar  4 16:45:59 2008: 00000090: d9 00 00 00 00 00 02 30
                           0d 06 09 2a 86 48 86 f7  .......0...*.H..
Tue Mar  4 16:45:59 2008: 000000a0: 0d 01 01 05 05 00 30 13
                           31 11 30 0f 06 03 55 04  ......0.1.0...U.
Tue Mar  4 16:45:59 2008: 000000b0: 03 13 08 41 41 52 4f 4e
                           4c 41 42 30 1e 17 0d 30  ...AARONLAB0...0
Tue Mar  4 16:45:59 2008: 000000c0: 38 30 32 32 39 30 30 30
                           32 35 30 5a 17 0d 30 39  80229000250Z..09
Tue Mar  4 16:45:59 2008: 000000d0: 30 32 32 38 30 30 31 32
                           35 30 5a 30 12 31 10 30  02280012250Z0.1.0
Tue Mar  4 16:45:59 2008: 000000e0: 0e 06 03 55 04 03 13 07
                           41 43 53 63 65 72 74 30  ...U....ACScert0
Tue Mar  4 16:45:59 2008: 000000f0: 81 9f 30 0d 06 09 2a 86
                           48 86 f7 0d 01 01 01 05  ..0...*.H.......
Tue Mar  4 16:45:59 2008: 00000100: 00 03 81 8d 00 30 81 89
                           02 81 81 00 e4 cb 25 a1  .....0........%.
Tue Mar  4 16:45:59 2008: 00000110: 96 3f df 4f ff 0d de 8a
                           89 6f 33 b1 b3 b9 fe 6e  .?.O.....o3....n
Tue Mar  4 16:45:59 2008: 00000120: df 6a 01 cf 7f b4 44 5b
                           6b 4e 91 17 9c 88 d3 6c  .j....D[kN.....l
Tue Mar  4 16:45:59 2008: 00000130: 1a 44 5e 1e e7 c1 c5 ae
                           c2 6f e7 ca 63 31 5f 3a  .D^......o..c1_:
Tue Mar  4 16:45:59 2008: 00000140: cf a9 da 83 0e c8 94 93
                           35 2e c8 f1 21 b0 78 1c  ........5...!.x.
Tue Mar  4 16:45:59 2008: 00000150: a1 ca f7 e9 40 a7 d1 7a
                           f1 85 d6 e9 36 46 51 a7  ....@..z....6FQ.
Tue Mar  4 16:45:59 2008: 00000160: a7 bf 70 db a7 47 da db
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```
                           59 69 17 db 06 a3 7e b1  ..p..G..Yi....~.
Tue Mar  4 16:45:59 2008: 00000170: 3c e5 ad 39 7f ee 61 cd
                           ab 3e 0e 8a d5 c1 47 d4  <..9..a..>....G.
Tue Mar  4 16:45:59 2008: 00000180: 65 62 09 22 f4 75 c5 5b
                           b1 42 94 14 9f c7 02 03  eb.".u.[.B......
Tue Mar  4 16:45:59 2008: 00000190: 01 00 01 a3 82 01 97 30
                           82 01 93 30 0e 06 03 55  .......0...0...U
Tue Mar  4 16:45:59 2008: 000001a0: 1d 0f 01 01 ff 04 04 03
                           02 04 f0 30 44 06 09 2a  ...........0D..*
Tue Mar  4 16:45:59 2008: 000001b0: 86 48 86 f7 0d 01 09 0f
                           04 37 30 35 30 0e 06 08  .H.......7050...
Tue Mar  4 16:45:59 2008: 000001c0: 2a 86 48 86 f7 0d 03 02
                           02 02 00 80 30 0e 06 08  *.H.........0...
Tue Mar  4 16:45:59 2008: 000001d0: 2a 86 48 86 f7 0d 03 04
                           02 02 00 80 30 07 06 05  *.H.........0...
Tue Mar  4 16:45:59 2008: 000001e0: 2b 0e 03 02 07 30 0a 06
                           08 2a 86 48 86 f7 0d 03  +....0...*.H....
Tue Mar  4 16:45:59 2008: 000001f0: 07 30 1d 06 03 55 1d 0e
                           04 16 04 14 b3 fe c9 de  .0...U..........
Tue Mar  4 16:45:59 2008: 00000200: 52 60 44 c8 9a c2 4a c2
                           b4 fd 98 2c 8b 39 5a a6  R`D...J....,.9Z.
Tue Mar  4 16:45:59 2008: 00000210: 30 13 4f ff 06 03 55 1d
                           25 04 0c 30 0a 06 08 2b  0.O...U.%..0...+
Tue Mar  4 16:45:59 2008: 00000220: 06 01 05 05 07 03 01 30
                           1f 06 03 55 1d 23 04 18  .......0...U.#..
Tue Mar  4 16:45:59 2008: 00000230: 30 16 80 14 f0 a4 3a c2
                           cd f5 d4 c8 b4 5e ee 03  0.....:......^..
Tue Mar  4 16:45:59 2008: 00000240: 4f 83 79 b1 f2 d4 e0 19
                           30 5f 06 03 55 1d 1f 04  O.y.....0_..U...
Tue Mar  4 16:45:59 2008: 00000250: 58 30 56 30 54 a0 52 a0
                           50 86 25 68 74 74 70 3a  X0V0T.R.P.%http:
Tue Mar  4 16:45:59 2008: 00000260: 2f 2f 77 63 73 77 69 6e
                           2f 43 65 72 74 45 6e 72  //wcswin/CertEnr
Tue Mar  4 16:46:00 2008: 00000270: 6f 6c 6c 2f 41 41 52 4f
                           4e 4c 41 42 2e 63 72 6c  oll/AARONLAB.crl
Tue Mar  4 16:46:00 2008: 00000280: 86 27 66 69 6c 65 3a 2f
                           2f 5c 5c 77 63 73 77 69  .'file://\\wcswi
Tue Mar  4 16:46:00 2008: 00000290: 6e 5c 43 65 72 74 45 6e
                           72 6f 6c 6c 5c 41 41 52  n\CertEnroll\AAR
Tue Mar  4 16:46:00 2008: 000002a0: 4f 4e 4c 41 42 2e 63 72
                           6c 30 81 84 06 08 2b 06  ONLAB.crl0....+.
Tue Mar  4 16:46:00 2008: 000002b0: 01 05 05 07 01 01 04 78
                           30 76 30 38 06 08 2b 06  .......x0v08..+.
Tue Mar  4 16:46:00 2008: 000002c0: 01 05 05 07 30 02 86 2c
                           68 74 74 70 3a 2f 2f 77  ....0..,http://w
Tue Mar  4 16:46:00 2008: 000002d0: 63 73 77 69 6e 2f 43 65
                           72 74 45 6e 72 6f 6c 6c  cswin/CertEnroll
Tue Mar  4 16:46:00 2008: 000002e0: 2f 77 63 73 77 69 6e 5f
                           41 41 52 4f 4e 4c 41 42  /wcswin_AARONLAB
Tue Mar  4 16:46:00 2008: 000002f0: 2e 63 72 74 30 3a 06 08
                           2b 06 01 05 05 07 30 02  .crt0:..+.....0.
Tue Mar  4 16:46:00 2008: 00000300: 86 2e 66 69 6c 65 3a 2f
                           2f 5c 5c 77 63 73 77 69  ..file://\\wcswi
Tue Mar  4 16:46:00 2008: 00000310: 6e 4f ff 5c 43 65 72 74
                           45 6e 72 6f 6c 6c 5c 77  nO.\CertEnroll\w
Tue Mar  4 16:46:00 2008: 00000320: 63 73 77 69 6e 5f 41 41
                           52 4f 4e 4c 41 42 2e 63  cswin_AARONLAB.c
Tue Mar  4 16:46:00 2008: 00000330: 72 74 30 0d 06 09 2a 86
                           48 86 f7 0d 01 01 05 05  rt0...*.H.......
Tue Mar  4 16:46:00 2008: 00000340: 00 03 82 01 01 00 67 35
                           f2 80 42 b5 a8 be f7 c4  ......g5..B.....
Tue Mar  4 16:46:00 2008: 00000350: 9b ea 19 10 67 39 78 cb
```

```
                           38 fb 36 15 69 2a f0 80  ....g9x.8.6.i*..
Tue Mar  4 16:46:00 2008: 00000360: 1e a1 7d 63 72 6a e0 7e
                           d4 51 7a 1d 64 ec ee b5  ..}crj.~.Qz.d...
Tue Mar  4 16:46:00 2008: 00000370: 2a 73 dc b0 d1 eb 0f 28
                           1d 66 7a bc 12 ef d8 61  *s.....(.fz....a
Tue Mar  4 16:46:00 2008: 00000380: 5d 05 7b 81 0f 57 20 4d
                           49 37 4d ba 0b 5a 96 65  ].{..W.MI7M..Z.e
Tue Mar  4 16:46:00 2008: 00000390: d6 a8 e1 bb 1f c6 0e 27
                           4c 4b d6 3a 00 c7 8d 83  .......'LK.:....
Tue Mar  4 16:46:00 2008: 000003a0: 22 a5 29 61 36 19 19 33
                           f2 41 18 f7 c6 42 23 36  ".)a6..3.A...B#6
Tue Mar  4 16:46:00 2008: 000003b0: 92 66 4a d9 ef fa 32 d7
                           a5 0a df 47 50 3c 72 23  .fJ...2....GP<r#
Tue Mar  4 16:46:00 2008: 000003c0: f0 0a d5 59 eb a8 79 f2
                           e0 56 a0 97 91 48 60 31  ...Y..y..V...H`1
Tue Mar  4 16:46:00 2008: 000003d0: 56 8d 2f b2 69 45 e5 44
                           3a 59 13 dd 66 eb c7 58  V./.iE.D:Y..f..X
Tue Mar  4 16:46:00 2008: 000003e0: 35 90 7c 79 69 ee dc 6e
                           19 68 b3 c3 4c ba 7d b3  5.|yi..n.h..L.}.
Tue Mar  4 16:46:00 2008: 000003f0: 8f a0 b9 e0 cf df 67 93
                           6f 01 d4 34 33 86 b6 95  ......g.o..43...
Tue Mar  4 16:46:00 2008: 00000400: 77 1b 19 61 34 46 82 4c
                           8e 6b b4 6b e2 4a c1 20  w..a4F.L.k.k.J..
Tue Mar  4 16:46:00 2008: 00000410: 18 1d 45 41 50 3d 30 2e
                           32 30 32 2e 32 37 65 61  ..EAP=0.202.27ea
Tue Mar  4 16:46:00 2008: 00000420: 2e 32 3b 53 56 43 3d 30
                           2e 36 34 37 3b 50 12 3a  .2;SVC=0.647;P.:
Tue Mar  4 16:46:00 2008: 00000430: f3 3b 7f 99 45 f4 e6 a6
                           29 c4 17 51 ce 97 df .;..E...)..Q...
Tue Mar  4 16:46:00 2008: ****Enter processIncomingMessages: response code=11
Tue Mar  4 16:46:00 2008: ****Enter processRadiusResponse: response code=11
Tue Mar  4 16:46:00 2008: 00:19:56:b0:7e:b6 Access-Challenge received from
                           RADIUS server 10.0.47.42 for mobile 00:19:56:b0:
   7e:b6 receiveId = 7
Tue Mar  4 16:46:00 2008: 00:19:56:b0:7e:b6 Processing Access-Challenge for
                           mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:46:00 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Req state
                           (id=178) for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:46:00 2008: 00:19:56:b0:7e:b6 Sending EAP Request from AAA to
                           mobile 00:19:56:b0:7e:b6 (EAP Id 178)
Tue Mar  4 16:46:00 2008: 00:19:56:b0:7e:b6 Received EAPOL EAPPKT from
                           mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:46:00 2008: 00:19:56:b0:7e:b6 Received EAP Response from
                           mobile 00:19:56:b0:7e:b6 (EAP Id 178, EAP Type 13)
Tue Mar  4 16:46:00 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Response
                           state for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:46:00 2008: 00:19:56:b0:7e:b6 Successful transmission of
                           Authentication Packet (id 20) to 10.0.47.42:1812,
   proxy state 00:19:56:b0:7e:b6-00:00
Tue Mar  4 16:46:00 2008: 00000000: 01 14 00 b7 e8 b0 94 59
                           96 a1 7f e5 af 22 0f 6c  .......Y.....".l
Tue Mar  4 16:46:00 2008: 00000010: 1e 33 6e ee 01 05 57 47
                           42 1f 13 30 30 2d 31 39  .3n...WGB..00-19
Tue Mar  4 16:46:00 2008: 00000020: 2d 35 36 2d 42 30 2d 37
                           45 2d 42 36 1e 1a 30 30  -56-B0-7E-B6..00
Tue Mar  4 16:46:00 2008: 00000030: 2d 31 39 2d 41 39 2d 34
                           32 2d 45 34 2d 31 30 3a  -19-A9-42-E4-10:
Tue Mar  4 16:46:00 2008: 00000040: 45 41 50 54 4c 53 05 06
                           00 00 00 04 04 06 0a 00  EAPTLS.........
Tue Mar  4 16:46:00 2008: 00000050: 2f 06 20 10 74 75 63 73
                           6f 6e 2d 77 6c 63 32 30  /...tucson-wlc20
Tue Mar  4 16:46:00 2008: 00000060: 30 36 1a 0c 00 00 37 63
```

```
                           01 06 00 00 00 06 06 06  06....7c........
Tue Mar  4 16:46:00 2008: 00000070: 00 00 00 02 0c 06 00 00
                           05 14 3d 06 00 00 00 13  ..........=.....
Tue Mar  4 16:46:00 2008: 00000080: 4f 08 02 b2 00 06 0d 00
                           18 1d 45 41 50 3d 30 2e  O.........EAP=0.
Tue Mar  4 16:46:00 2008: 00000090: 32 30 32 2e 32 37 65 61
                           2e 32 3b 53 56 43 3d 30  202.27ea.2;SVC=0
Tue Mar  4 16:46:00 2008: 000000a0: 2e 36 34 37 3b 50 12 a2
                           aa c7 ed 12 84 25 db 4b  .647;P.......%.K
Tue Mar  4 16:46:00 2008: 000000b0: 4c dc 45 09 06 44 c6 L.E..D.
Tue Mar  4 16:46:00 2008: 00000000: 0b 14 04 04 6b 98 3a 74
                           12 1f 77 54 77 d8 a8 77  ....k.:t..wTw..w
Tue Mar  4 16:46:00 2008: 00000010: 4e a8 a7 6b 4f ff 01 b3
                           03 b9 0d 00 c6 87 1d b6  N..kO...........
Tue Mar  4 16:46:00 2008: 00000020: 06 5b 24 67 26 09 ee 5f
                           9c 64 f3 a9 c1 99 49 3e  .[$g&.._.d....I>
Tue Mar  4 16:46:00 2008: 00000030: 2b 79 f1 57 17 65 6c 2f
                           c4 09 4d 54 7d a4 67 91  +y.W.el/..MT}.g.
Tue Mar  4 16:46:00 2008: 00000040: 48 59 ec aa 68 5b 0f 66
                           c5 e9 22 a6 09 8d 36 cf  HY..h[.f.."...6.
Tue Mar  4 16:46:00 2008: 00000050: e3 d9 00 03 68 30 82 03
                           64 30 82 02 4c a0 03 02  ....h0..d0..L...
Tue Mar  4 16:46:00 2008: 00000060: 01 02 02 10 61 26 83 24
                           8d ba 53 9b 44 b0 39 bd  ....a&.$..S.D.9.
Tue Mar  4 16:46:00 2008: 00000070: 51 cd 1d 48 30 0d 06 09
                           2a 86 48 86 f7 0d 01 01  Q..H0...*.H.....
Tue Mar  4 16:46:00 2008: 00000080: 05 05 00 30 13 31 11 30
                           0f 06 03 55 04 03 13 08  ...0.1.0...U....
Tue Mar  4 16:46:00 2008: 00000090: 41 41 52 4f 4e 4c 41 42
                           30 1e 17 0d 30 38 30 32  AARONLAB0...0802
Tue Mar  4 16:46:00 2008: 000000a0: 32 38 32 33 33 34 34 38
                           5a 17 0d 31 38 30 32 32  28233448Z..18022
Tue Mar  4 16:46:00 2008: 000000b0: 38 32 33 34 31 32 35 5a
                           30 13 31 11 30 0f 06 03  8234125Z0.1.0...
Tue Mar  4 16:46:00 2008: 000000c0: 55 04 03 13 08 41 41 52
                           4f 4e 4c 41 42 30 82 01  U....AARONLAB0..
Tue Mar  4 16:46:00 2008: 000000d0: 22 30 0d 06 09 2a 86 48
                           86 f7 0d 01 01 01 05 00  "0...*.H........
Tue Mar  4 16:46:00 2008: 000000e0: 03 82 01 0f 00 30 82 01
                           0a 02 82 01 01 00 c8 5a  .....0.........Z
Tue Mar  4 16:46:00 2008: 000000f0: 57 75 45 19 4a 8b 99 da
                           35 6c cb e0 b6 a0 ff 66  WuE.J...5l.....f
Tue Mar  4 16:46:00 2008: 00000100: e2 8f c1 44 89 09 32 13
                           c7 d8 70 6c 6d 74 2d e5  ...D..2...plmt-.
Tue Mar  4 16:46:00 2008: 00000110: 89 b8 23 4f ff ea 0a 0e
                           2d 57 1b 62 36 05 90 92  ..#O....-W.b6...
Tue Mar  4 16:46:00 2008: 00000120: e0 ea f9 a3 e2 fb 54 87
                           f4 cf 69 52 86 be 0b ca  ......T...iR....
Tue Mar  4 16:46:00 2008: 00000130: 14 d1 88 9d 82 01 9a f7
                           08 da ba cc c9 29 37 94  .............)7.
Tue Mar  4 16:46:00 2008: 00000140: 27 75 d4 6e ae 9e 60 06
                           84 94 9b 42 f6 c7 5e e0  'u.n..`....B..^.
Tue Mar  4 16:46:00 2008: 00000150: 29 34 b3 06 cb 24 b1 39
                           73 84 ba be ba d8 6f bb  )4...$.9s.....o.
Tue Mar  4 16:46:00 2008: 00000160: 94 f9 32 36 d6 68 68 f2
                           b2 43 e6 0e a9 b6 4b 62  ..26.hh..C....Kb
Tue Mar  4 16:46:00 2008: 00000170: b8 f9 6e 47 dc 0e c5 5b
                           16 a3 94 e9 96 08 e5 18  ..nG...[........
Tue Mar  4 16:46:00 2008: 00000180: f0 38 ad a2 98 d3 7c 73
                           39 80 4a ae 14 e3 f8 f7  .8....|s9.J.....
Tue Mar  4 16:46:00 2008: 00000190: 1e 14 27 bb 6a ce a1 2a
                           dc 18 66 59 ea b4 d9 b1  ..'.j..*..fY....
```

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Tue Mar  4 16:46:00 2008: 000001a0: a7 50 e9 ff 56 09 ea 93
                          df 31 08 09 17 ab e5 e9  .P..V....1......
Tue Mar  4 16:46:00 2008: 000001b0: 80 90 30 95 e4 54 90 75
                          bc f0 7f 13 b1 e7 cd 0b  ..0..T.u........
Tue Mar  4 16:46:00 2008: 000001c0: 88 33 81 e7 74 d2 81 d9
                          97 ab b2 57 f4 5f f6 8b  .3..t......W._..
Tue Mar  4 16:46:00 2008: 000001d0: 1e c2 62 d4 de 94 74 7f
                          8a 28 3b 64 73 88 86 28  ..b...t..(;ds..(
Tue Mar  4 16:46:00 2008: 000001e0: 92 74 b0 92 94 7e ce e1
                          74 23 f2 64 da 9a 88 47  .t...~..t#.d...G
Tue Mar  4 16:46:00 2008: 000001f0: 02 03 01 00 01 a3 81 b3
                          30 81 b0 30 0b 06 03 55  ........0..0...U
Tue Mar  4 16:46:00 2008: 00000200: 1d 0f 04 04 03 02 01 86
                          30 0f 06 03 55 1d 13 01  ........0...U...
Tue Mar  4 16:46:00 2008: 00000210: 01 ff 4f ff 04 05 30 03
                          01 01 ff 30 1d 06 03 55  ..O...0....0...U
Tue Mar  4 16:46:00 2008: 00000220: 1d 0e 04 16 04 14 f0 a4
                          3a c2 cd f5 d4 c8 b4 5e  ........:......^
Tue Mar  4 16:46:00 2008: 00000230: ee 03 4f 83 79 b1 f2 d4
                          e0 19 30 5f 06 03 55 1d  ..O.y.....0_..U.
Tue Mar  4 16:46:00 2008: 00000240: 1f 04 58 30 56 30 54 a0
                          52 a0 50 86 25 68 74 74  ..X0V0T.R.P.%htt
Tue Mar  4 16:46:00 2008: 00000250: 70 3a 2f 2f 77 63 73 77
                          69 6e 2f 43 65 72 74 45  p://wcswin/CertE
Tue Mar  4 16:46:00 2008: 00000260: 6e 72 6f 6c 6c 2f 41 41
                          52 4f 4e 4c 41 42 2e 63  nroll/AARONLAB.c
Tue Mar  4 16:46:00 2008: 00000270: 72 6c 86 27 66 69 6c 65
                          3a 2f 2f 5c 5c 77 63 73  rl.'file://\\wcs
Tue Mar  4 16:46:00 2008: 00000280: 77 69 6e 5c 43 65 72 74
                          45 6e 72 6f 6c 6c 5c 41  win\CertEnroll\A
Tue Mar  4 16:46:00 2008: 00000290: 41 52 4f 4e 4c 41 42 2e
                          63 72 6c 30 10 06 09 2b  ARONLAB.crl0...+
Tue Mar  4 16:46:00 2008: 000002a0: 06 01 04 01 82 37 15 01
                          04 03 02 01 00 30 0d 06  .....7.......0..
Tue Mar  4 16:46:00 2008: 000002b0: 09 2a 86 48 86 f7 0d 01
                          01 05 05 00 03 82 01 01  .*.H............
Tue Mar  4 16:46:00 2008: 000002c0: 00 17 eb b2 43 da 02 66
                          05 cd 76 c0 7b 2a 16 83  ....C..f..v.{*..
Tue Mar  4 16:46:00 2008: 000002d0: 95 bb 5e bf d3 db fc 23
                          7e 14 6e 52 f8 37 01 7c  ..^....#~.nR.7.|
Tue Mar  4 16:46:00 2008: 000002e0: dd e9 bf 34 60 49 f1 68
                          7e da 53 07 f6 b2 66 6d  ...4`I.h~.S...fm
Tue Mar  4 16:46:00 2008: 000002f0: 8c bd ca 26 f4 fa 3d 03
                          4f db be 92 33 7e 50 06  ...&..=.O...3~P.
Tue Mar  4 16:46:00 2008: 00000300: 5e b3 b9 35 c6 83 3c 90
                          1e 42 54 3e 63 17 9a 8a  ^..5..<..BT>c...
Tue Mar  4 16:46:00 2008: 00000310: d0 4f c4 68 24 97 90 a1
                          77 c9 c8 93 1f 58 ab ca  .O.h$...w....X..
Tue Mar  4 16:46:00 2008: 00000320: f7 18 e6 8c 36 12 44 9d
                          a6 ca 43 5f 03 07 16 99  ....6.D...C_....
Tue Mar  4 16:46:00 2008: 00000330: 1d a4 48 7d a4 e5 12 7c
                          d0 81 e7 35 9e ad 69 5e  ..H}...|...5..i^
Tue Mar  4 16:46:00 2008: 00000340: 15 d7 2a 7f 51 4e 8c 59
                          69 9f d1 41 9b 2e e1 05  ..*.QN.Yi..A....
Tue Mar  4 16:46:00 2008: 00000350: 95 15 bd b1 1a 97 a6 69
                          d3 9c 0b 93 00 16 e1 49  .......i.......I
Tue Mar  4 16:46:00 2008: 00000360: 66 e3 98 29 79 ba 14 69
                          cf 76 27 69 7d 43 d0 f4  f..)y..i.v'i}C..
Tue Mar  4 16:46:00 2008: 00000370: 86 3c 6b 58 55 d4 85 be
                          c5 da 71 e4 43 76 3d 0a  .<kXU.....q.Cv=.
Tue Mar  4 16:46:00 2008: 00000380: d3 4f 49 97 12 75 e3 7d
                          88 92 99 5d fc 7a 69 28  .OI..u.}...].zi(
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Tue Mar  4 16:46:00 2008: 00000390: f6 f0 20 70 33 b7 22 5a
                          bf c5 e5 28 43 35 00 2f  ...p3."Z...(C5./
Tue Mar  4 16:46:00 2008: 000003a0: 47 46 9a 5a 45 5c 56 d5
                          24 3d 44 bf e9 63 f2 05  GF.ZE\V.$=D..c..
Tue Mar  4 16:46:01 2008: 000003b0: 84 da 94 17 b7 ef c3 31
                          7d 04 30 87 e1 c3 31 8a  .......1}.0...1.
Tue Mar  4 16:46:01 2008: 000003c0: 2a e1 52 16 03 01 00 0d
                          0d 00 00 05 02 01 02 00  *.R.............
Tue Mar  4 16:46:01 2008: 000003d0: 00 0e 00 00 00 18 1d 45
                          41 50 3d 30 2e 32 30 32  .......EAP=0.202
Tue Mar  4 16:46:01 2008: 000003e0: 2e 32 37 65 61 2e 33 3b
                          53 56 43 3d 30 2e 36 34  .27ea.3;SVC=0.64
Tue Mar  4 16:46:01 2008: 000003f0: 37 3b 50 12 05 0e 3c e0
                          e4 5f 38 21 96 26 8e 39  7;P...<.._8!.&.9
Tue Mar  4 16:46:01 2008: 00000400: 96 a9 09 5d...]
Tue Mar  4 16:46:01 2008: ****Enter processIncomingMessages: response code=11
Tue Mar  4 16:46:01 2008: ****Enter processRadiusResponse: response code=11
Tue Mar  4 16:46:01 2008: 00:19:56:b0:7e:b6 Access-Challenge received from
                          RADIUS server 10.0.47.42 for mobile 00:19:56:b0:
   7e:b6 receiveId = 7
Tue Mar  4 16:46:01 2008: 00:19:56:b0:7e:b6 Processing Access-Challenge for
                          mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:46:01 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Req state
                          (id=179) for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:46:01 2008: 00:19:56:b0:7e:b6 Sending EAP Request from AAA to
                          mobile 00:19:56:b0:7e:b6 (EAP Id 179)
Tue Mar  4 16:46:01 2008: 00:19:56:b0:7e:b6 Received EAPOL EAPPKT from
                          mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:46:01 2008: 00:19:56:b0:7e:b6 Received EAP Response from
                          mobile 00:19:56:b0:7e:b6 (EAP Id 179, EAP Type 13)
Tue Mar  4 16:46:01 2008: 00:19:56:b0:7e:b6 Entering Backend Auth Response
                          state for mobile 00:19:56:b0:7e:b6
Tue Mar  4 16:46:01 2008: 00:19:56:b0:7e:b6 Successful transmission of
                          Authentication Packet (id 21) to 10.0.47.42:1812,
   proxy state
 00:19:56:b0:7e:b6-00:00
Tue Mar  4 16:46:01 2008: 00000000: 01 15 05 76 81 b7 fa 95
                                    63 1f 50 6f 98 4d a3 6b  ...v....c.Po.M.k
Tue Mar  4 16:46:01 2008: 00000010: db 3c bc 1d 01 05 57 47
                                    42 1f 13 30 30 2d 31 39  .<....WGB..00-19
Tue Mar  4 16:46:01 2008: 00000020: 2d 35 36 2d 42 30 2d 37
                                    45 2d 42 36 1e 1a 30 30  -56-B0-7E-B6..00
Tue Mar  4 16:46:01 2008: 00000030: 2d 31 39 2d 41 39 2d 34
                                    32 2d 45 34 2d 31 30 3a  -19-A9-42-E4-10:
Tue Mar  4 16:46:01 2008: 00000040: 45 41 50 54 4c 53 05 06
                                    00 00 00 04 04 06 0a 00  EAPTLS..........
Tue Mar  4 16:46:01 2008: 00000050: 2f 06 20 10 74 75 63 73
                                    6f 6e 2d 77 6c 63 32 30  /...tucson-wlc20
Tue Mar  4 16:46:01 2008: 00000060: 30 36 1a 0c 00 00 37 63
                                    01 06 00 00 00 06 06 06  06....7c........
Tue Mar  4 16:46:01 2008: 00000070: 00 00 00 02 0c 06 00 00
                                    05 14 3d 06 00 00 00 13  ..........=.....
Tue Mar  4 16:46:01 2008: 00000080: 4f ff 02 b3 04 bd 0d 80
                                    00 00 04 b3 16 03 01 03  O...............
Tue Mar  4 16:46:01 2008: 00000090: 6d 0b 00 03 69 00 03 66
                                    00 03 63 30 82 03 5f 30  m...i..f..c0.._0
Tue Mar  4 16:46:01 2008: 000000a0: 82 02 47 a0 03 02 01 02
                                    02 0a 13 79 b0 72 00 00  ..G........y.r..
Tue Mar  4 16:46:01 2008: 000000b0: 00 00 00 0c 30 0d 06 09
                                    2a 86 48 86 f7 0d 01 01  ....0...*.H.....
Tue Mar  4 16:46:01 2008: 000000c0: 05 05 00 30 13 31 11 30
                                    0f 06 03 55 04 03 13 08  ...0.1.0...U....
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Tue Mar  4 16:46:01 2008: 000000d0: 41 41 52 4f 4e 4c 41 42
                                    30 1e 17 0d 30 38 30 33  AARONLAB0...0803
Tue Mar  4 16:46:01 2008: 000000e0: 30 33 31 38 33 33 30 39
                                    5a 17 0d 30 39 30 33 30  03183309Z..09030
Tue Mar  4 16:46:01 2008: 000000f0: 33 31 38 34 33 30 39 5a
                                    30 0e 31 0c 30 0a 06 03  3184309Z0.1.0...
Tue Mar  4 16:46:01 2008: 00000100: 55 04 03 13 03 57 47 42
                                    30 81 9f 30 0d 06 09 2a  U....WGB0..0...*
Tue Mar  4 16:46:01 2008: 00000110: 86 48 86 f7 0d 01 01 01
                                    05 00 03 81 8d 00 30 81  .H............0.
Tue Mar  4 16:46:01 2008: 00000120: 89 02 81 81 00 a6 34 91
                                    20 dd 58 df b2 60 c0 6c  ......4...X..`.l
Tue Mar  4 16:46:01 2008: 00000130: d0 9d 10 86 01 a9 61 9f
                                    cb 2b 01 22 49 d7 38 ee  ......a..+."I.8.
Tue Mar  4 16:46:01 2008: 00000140: 00 fe be c9 cd 48 4b 73
                                    a0 75 6d bb d0 c9 20 24  .....HKs.um....$
Tue Mar  4 16:46:01 2008: 00000150: 0f cc f0 76 2f ad ef 43
                                    53 8f b7 ec c7 50 04 02  ...v/..CS....P..
Tue Mar  4 16:46:01 2008: 00000160: d8 03 4a 7d 08 9e b4 f2
                                    78 ab 36 06 ba f7 02 ab  ..J}....x.6.....
Tue Mar  4 16:46:01 2008: 00000170: a1 6e 26 6c 2d d4 10 08
                                    0d 25 82 1a d2 fc 14 4f  .n&l-....%.....O
Tue Mar  4 16:46:01 2008: 00000180: ff 86 fa fd 84 ec de be
                                    3c 3e f8 be d6 b6 7b 81  ........<>....{.
Tue Mar  4 16:46:01 2008: 00000190: 89 9a da a6 96 fd 7f e7
                                    dd bf 7f 26 6e 20 03 63  ...........&n..c
Tue Mar  4 16:46:01 2008: 000001a0: c4 a2 56 4c 8e 75 99 02
                                    03 01 00 01 a3 82 01 3c  ..VL.u.........<
Tue Mar  4 16:46:01 2008: 000001b0: 30 82 01 38 30 0e 06 03
                                    55 1d 0f 01 01 ff 04 04  0..80...U.......
Tue Mar  4 16:46:01 2008: 000001c0: 03 02 05 a0 30 1d 06 03
                                    55 1d 0e 04 16 04 14 41  ....0...U......A
Tue Mar  4 16:46:01 2008: 000001d0: 97 b6 32 83 7f c0 88 11
                                    4d 59 d5 44 70 e9 0f c6  ..2.....MY.Dp...
Tue Mar  4 16:46:01 2008: 000001e0: 3b a2 85 30 1f 06 03 55
                                    1d 23 04 18 30 16 80 14  ;..0...U.#..0...
Tue Mar  4 16:46:01 2008: 000001f0: f0 a4 3a c2 cd f5 d4 c8
                                    b4 5e ee 03 4f 83 79 b1  ..:......^..O.y.
Tue Mar  4 16:46:01 2008: 00000200: f2 d4 e0 19 30 5f 06 03
                                    55 1d 1f 04 58 30 56 30  ....0_..U...X0V0
Tue Mar  4 16:46:01 2008: 00000210: 54 a0 52 a0 50 86 25 68
                                    74 74 70 3a 2f 2f 77 63  T.R.P.%http://wc
Tue Mar  4 16:46:01 2008: 00000220: 73 77 69 6e 2f 43 65 72
                                    74 45 6e 72 6f 6c 6c 2f  swin/CertEnroll/
Tue Mar  4 16:46:01 2008: 00000230: 41 41 52 4f 4e 4c 41 42
                                    2e 63 72 6c 86 27 66 69  AARONLAB.crl.'fi
Tue Mar  4 16:46:01 2008: 00000240: 6c 65 3a 2f 2f 5c 5c 77
                                    63 73 77 69 6e 5c 43 65  le://\\wcswin\Ce
Tue Mar  4 16:46:01 2008: 00000250: 72 74 45 6e 72 6f 6c 6c
                                    5c 41 41 52 4f 4e 4c 41  rtEnroll\AARONLA
Tue Mar  4 16:46:01 2008: 00000260: 42 2e 63 72 6c 30 81 84
                                    06 08 2b 06 01 05 05 07  B.crl0....+.....
Tue Mar  4 16:46:01 2008: 00000270: 01 01 04 78 30 76 30 38
                                    06 08 2b 06 01 05 4f ff  ...x0v08..+...O.
Tue Mar  4 16:46:01 2008: 00000280: 05 07 30 02 86 2c 68 74
                                    74 70 3a 2f 2f 77 63 73  ..0..,http://wcs
Tue Mar  4 16:46:01 2008: 00000290: 77 69 6e 2f 43 65 72 74
                                    45 6e 72 6f 6c 6c 2f 77  win/CertEnroll/w
Tue Mar  4 16:46:01 2008: 000002a0: 63 73 77 69 6e 5f 41 41
                                    52 4f 4e 4c 41 42 2e 63  cswin_AARONLAB.c
Tue Mar  4 16:46:01 2008: 000002b0: 72 74 30 3a 06 08 2b 06
                                    01 05 05 07 30 02 86 2e  rt0:..+.....0...
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Tue Mar  4 16:46:01 2008: 000002c0: 66 69 6c 65 3a 2f 2f 5c
                                    5c 77 63 73 77 69 6e 5c  file://\\wcswin\
Tue Mar  4 16:46:01 2008: 000002d0: 43 65 72 74 45 6e 72 6f
                                    6c 6c 5c 77 63 73 77 69  CertEnroll\wcswi
Tue Mar  4 16:46:01 2008: 000002e0: 6e 5f 41 41 52 4f 4e 4c
                                    41 42 2e 63 72 74 30 0d  n_AARONLAB.crt0.
Tue Mar  4 16:46:01 2008: 000002f0: 06 09 2a 86 48 86 f7 0d
                                    01 01 05 05 00 03 82 01  ..*.H...........
Tue Mar  4 16:46:01 2008: 00000300: 01 00 2e a1 3f f3 52 52
                                    97 b5 83 43 0f 61 20 64  ....?.RR...C.a.d
Tue Mar  4 16:46:01 2008: 00000310: 40 fd d3 16 38 4f d9 5f
                                    64 94 a7 c2 59 53 53 52  @...8O._d...YSSR
Tue Mar  4 16:46:01 2008: 00000320: 90 5d ee 1c e0 2a 90 af
                                    f4 e8 51 3e 87 38 9a ce  .]...*....Q>.8..
Tue Mar  4 16:46:01 2008: 00000330: 88 0c 4f 1f ad f1 ef dd
                                    96 44 6b 51 4e 9f 2c a1  ..O......DkQN.,.
Tue Mar  4 16:46:01 2008: 00000340: 8a c5 0e bd d0 f9 7e 34
                                    fa 22 67 26 e1 26 e6 3e  ......~4."g&.&.>
Tue Mar  4 16:46:01 2008: 00000350: bd b8 9f 64 f0 65 6f 23
                                    f0 67 40 60 0f 4b f1 ff  ...d.eo#.g@`.K..
Tue Mar  4 16:46:01 2008: 00000360: c1 9c 3c 11 81 be b2 7a
                                    45 b6 bd f2 26 76 2a 3a  ..<....zE...&v*:
Tue Mar  4 16:46:01 2008: 00000370: 52 32 65 cf 62 0b 47 65
                                    b4 b5 fa db b4 4f ff 07  R2e.b.Ge.....O..
Tue Mar  4 16:46:01 2008: 00000380: ae 54 58 11 d8 52 8f f8
                                    e3 e5 00 f1 c4 1d 2a a4  .TX..R........*.
```

相关信息

- Cisco 统一无线网络中的工作组网桥配置示例
- 无线 LAN 控制器 (WLC) 配置最佳实践
- 技术支持和文档 - Cisco Systems

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