



# Release Notes for Cisco NAC Guest Server, Version 2.0.4

---

Revised: April 12, 2012, OL-18373-01

## Contents

These release notes provide late-breaking and release information for Cisco NAC Guest Server, Release 2.0.4. This document describes new features, changes to existing features, limitation and restrictions (“caveats”), upgrade instructions and related information.

These release notes supplement the *Cisco NAC Guest Server Installation and Configuration Guide, Release 2.0*.

- [Cisco NAC Guest Server Releases, page 1](#)
- [System Requirements, page 2](#)
- [New and Changed Information, page 7](#)
- [Caveats, page 14](#)
- [Documentation Updates, page 38](#)
- [Obtaining Documentation and Submitting a Service Request, page 39](#)

## Cisco NAC Guest Server Releases

Cisco NAC Guest Server Version	Release Date
2.0.4.ED	April 10, 2012
2.0.3 ED	November 30, 2010
2.0.2 ED	February 23, 2010
2.0.1 ED	May 12, 2009
2.0.0 ED	February 9, 2009



---

**Americas Headquarters:**  
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

**Note**

Any ED release of software should be deployed to a test network first before being deployed to a production environment.

## System Requirements

The Cisco NAC Guest Server can be integrated with the Cisco NAC Appliance Clean Access Manager through its API, or with Cisco Wireless LAN controllers through the RADIUS protocol. Cisco NAC Guest Server is compatible with the Cisco NAC Appliance and Cisco Wireless LAN Controller component versions shown in [Table 1](#).

**Table 1** *Components Supported by Cisco NAC Guest Server*

Cisco NAC Guest Server Version	Cisco NAC Appliance Version	Wireless LAN Controller Version
1.0.0 and later	4.0(1) and later	4.0.219 and later

## Hardware Supported

The Cisco NAC Guest Server is a standalone hardware appliance based on the following Cisco NAC Appliance platforms:

- NAC-3315
- NAC-3310

**Note**

Next generation Cisco NAC Appliance platform (NAC-3315) supports fresh installation of only Release 2.0.2 and later.

**Note**

Releases 1.x.x can be installed only on Cisco NAC Appliance platform, NAC-3310.

**Note**

The NAC-3310 appliance is based on the HP ProLiant DL140 G3 server and is subject to any BIOS/firmware upgrades required for the DL140 G3. Refer to [Supported Hardware and System Requirements for Cisco NAC Appliance \(Cisco Clean Access\)](#) for additional details.

For details on Cisco NAC Appliance hardware platforms, refer to the *Cisco NAC Appliance Hardware Installation Quick Start Guide* available on Cisco.com at

[http://www.cisco.com/en/US/products/ps6128/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps6128/prod_installation_guides_list.html)

## Browsers Supported

The Cisco NAC Guest Server is supported by the following web browsers:

- Internet Explorer 9.0 is supported starting from NAC Guest Server Release 2.0.4
- Internet Explorer 8.0, 7.0, and 6.0
- Safari
- Google Chrome
- Firefox

## Determining the Software Version

The bottom left of the Cisco NAC Guest Server administrator console displays the software version. You can also click the **About** button to get more details of the release. To determine the current software version, login to the administration interface.

To view the software version from the command line:

1. SSH or console to the Cisco NAC Guest Server.
2. Issue the following command on an appliance running release 1.x software:
 

```
cat /guest/www/admin/includes/version.html
```
3. Issue the following command on an appliance running release 2.0.0 and later software:
 

```
/guest/utlils/version.sh
```

## Upgrading to Software Release 2.0.4 from 2.0.x

The steps to upgrade to 2.0.4 are different for upgrading from 2.0.x or 1.x. For instructions on upgrading a 1.x.x release see [Upgrading to Software Release 2.0.4 from 1.x.x](#).



### Note

If the Cisco NAC Guest Server has replication active, you will need to do the following steps simultaneously on both Cisco NAC Guest Servers that form the replicating pair. You will also need to guarantee that there is connectivity between both.



### Note

If you are running an older software version of NAC Guest Server Release 2.0.2 or earlier, you must first upgrade your system to Release 2.0.3 and then to Release 2.0.4.

The following steps need to be performed to install the 2.0.4 update.

### Step 1

Download the **nac-guest-upgrade-2-0-4.bin** upgrade file from the Cisco NAC Guest Server download page. Log in with your Cisco.com user credentials to the Cisco Software Download Site at <http://www.cisco.com/cisco/web/download/index.html> and navigate to **Security >Network Admission Control > Cisco NAC Guest Server > Cisco NAC Guest Server 2.0**.

**Step 2** Connect to the Cisco NAC Guest Server with an SFTP client such as WinSCP. You will need to log in using root account credentials. The default password for the account is **cisco**.

**Step 3** Copy the **nac-guest-upgrade-2-0-4.bin** file using the SFTP client to the **/guest/upgrade** directory.



**Note** Ensure that the file is transferred in binary mode. Some clients (like WinSCP, for example) default to ASCII mode, which can corrupt the upgrade file.

**Step 4** Connect to the Cisco NAC Guest Server console using SSH, a keyboard and monitor, or a serial connection and log in using root account credentials.

**Step 5** Navigate to the **/guest/upgrade** directory

```
cd /guest/upgrade
```

**Step 6** Run the following command at the console to ensure that the md5 value listed matches the MD5 value obtained by clicking the link to the upgrade file at <http://www.cisco.com/public/sw-center/index.shtml>:

```
md5sum nac-guest-upgrade-2-0-4.bin
```

**Step 7** Execute the upgrade script.

```
sh /guest/upgrade/nac-guest-upgrade-2-0-4.bin
```

**Step 8** When the upgrade has finished, the appliance automatically reboots and the login prompt appears.



**Note** A backup of the existing database is taken before the upgrade and is stored in **/guest.bak**. Cisco recommends backing up this directory from the appliance via SFTP.



**Note** The upgrade process is recorded in the **/guest/logs/upgrade.log** file. You can view the log file by entering **less /guest/logs/upgrade.log** in a command prompt window.

## Upgrading to Software Release 2.0.4 from 1.x.x

### Upgrading to Software Release 2.0.4 Without Replication

The Cisco NAC 3310 Guest Server comes pre-installed with initial software release 1.0.0. Software release 2.0.4 can be applied to an existing release 1.1.2, 1.1.3, 2.0.0, 2.0.1, or 2.0.2 installation. If you are running release 1.0.0, 1.1.0, or 1.1.1 upgrade to release 1.1.3 before running the upgrade to the latest 2.0.4 release.

If the appliance needs to be re-imaged, refer to the instructions in the installation chapter of the *Cisco NAC Guest Server Installation and Configuration Guide, Release 2.0* before applying the release 2.0.4 upgrade.



**Note** If the Cisco NAC Guest Server has replication active, you will need to follow the steps in [Upgrading to Software Release 2.0.4 With Replication Enabled from 1.x.x, page 6](#),

- Step 1** Create a manual backup snapshot of the Cisco NAC Guest Server from the **Server > Backup > Snapshot** page of the Administration interface.

**Warning**

**Because there is a possibility for data loss with upgrade, Cisco strongly recommends creating a backup snapshot to ensure your previous database is preserved prior to upgrade.**

- Step 1** Download the **cisco-nac-guest-server-2.0.4-K9.iso** ISO image file from the Cisco NAC Guest Server download page. Log in with your Cisco.com user credentials to the Cisco Software Download Site at <http://www.cisco.com/public/sw-center/index.shtml> and navigate to **Security >Network Admission Control > Cisco NAC Guest Server > Cisco NAC Guest Server 2.0**.

- Step 2** Burn the ISO to a blank CDR disc.

- Step 3** Insert the CD into the Cisco NAC Guest Server.

- Step 4** Connect to the Cisco NAC Guest Server console using SSH, a keyboard and monitor, or a serial connection and log in using root account credentials.

- Step 5** Enter the following command:

```
reboot
```

The Cisco NAC Guest Server will reboot and run the upgrade from the CD ROM.

**Caution**

If your Cisco NAC Guest Server does not read the software on the CD ROM drive and instead attempts to boot from the hard disk, before proceeding you will need to change the appliance settings to boot from CD ROM as described in section “Configuring Boot Settings on NAC-3310 Based Appliances” in the *Cisco NAC Guest Server Installation and Configuration Guide, Release 2.0*.

- Step 6** At the upgrade screen:

- If choosing to upgrade from keyboard and monitor, enter the **upgrade** command and press the Enter key:

```
upgrade
```

- If choosing to upgrade via a serial connection, enter the **upgradeserial** command and press the Enter key:

```
upgradeserial
```

**Note**

Before the 2.0.4 upgrade, a backup snapshot of the existing 1.x or 2.0.x database is automatically created and stored in the **/guest.bak** directory. In the event of an upgrade failure, Cisco recommends making a local backup of this directory.

- Step 7** When the upgrade has finished, the appliance automatically reboots and the login prompt appears.

- Step 8** Login with the root user ID and change the password as instructed. The password needs to be a minimum of 6 characters, should not be based on a dictionary word and should contain at least 5 different characters.

The Cisco NAC Guest Server will be upgraded and running release 2.0.4.

## Upgrading to Software Release 2.0.4 With Replication Enabled from 1.x.x

The Cisco 3310 NAC Guest Server comes pre-installed with initial software release 1.0.0. Software release 2.0.4 can be applied to an existing release 1.1.2, 1.1.3, 2.0.0, 2.0.1, or 2.0.2 installation. If you are running release 1.0.0, 1.1.0, or 1.1.1 upgrade to release 1.1.3 before running the upgrade to the latest 2.0.4 release.

If the appliance needs to be re-imaged, refer to the instructions in the installation chapter of the *Cisco NAC Guest Server Installation and Configuration Guide, Release 2.0* before applying the release 2.0.4 upgrade.

Use the following upgrade instructions if you have configured Cisco NAC Guest Server replication, where the database is synchronized between two boxes.

- 
- Step 1** Create a manual backup snapshot of one of the Cisco NAC Guest Servers in the replication pair from the **Server > Backup > Snapshot** page of the Administration interface.



**Warning**

---

**Because there is a possibility for data loss with upgrade, Cisco strongly recommends creating a backup snapshot to ensure your previous database is preserved prior to upgrade.**

---

- Step 2** Download the **cisco-nac-guest-server-2.0.4-K9.iso** ISO image file from the Cisco NAC Guest Server download page. Log in with your Cisco.com user credentials to the Cisco Software Download Site at <http://www.cisco.com/public/sw-center/index.shtml> and navigate to **Security > Network Admission Control > Cisco NAC Guest Server > Cisco NAC Guest Server 2.0**.

- Step 3** Burn the ISO to a blank CDR disc.

- Step 4** Insert the CD into the NAC Guest Server.

- Step 5** Connect to the Cisco NAC Guest Server console using SSH, a keyboard and monitor, or a serial connection and log in using root account credentials.

- Step 6** Enter the following command

```
reboot
```

- Step 7** The Cisco NAC Guest Server will reboot and run the upgrade from the CD ROM.



**Caution**

---

If your Cisco NAC Guest Server does not read the software on the CD ROM drive and instead attempts to boot from the hard disk, before proceeding you will need to change the appliance settings to boot from CD ROM as described in section “Configuring Boot Settings on NAC-3310 Based Appliances” in the *Cisco NAC Guest Server Installation and Configuration Guide, Release 2.0*.

---

- Step 8** At the upgrade screen:

- If choosing to upgrade from keyboard and monitor, enter the **upgrade** command and press the Enter key:

```
upgrade
```

- If choosing to upgrade via a serial connection, enter the **upgradeserial** command and press the Enter key:

```
upgradeserial
```

**Note**

Before the 2.0.4 upgrade, a backup snapshot of the existing 1.x or 2.0.x database is automatically created and stored in the **/guest.bak** directory. In the event of an upgrade failure, Cisco recommends making a local backup of this directory.

**Step 9** When the upgrade has finished, the appliance automatically reboots and the login prompt appears.

**Step 10** Login with the root user ID and change the password as instructed. The password needs to be a minimum of 6 characters, should not be based on a dictionary word and should contain at least 5 different characters.

The Cisco NAC Guest Server will be upgraded and running release 2.0.4.

**Step 11** Perform Steps 1 to 10 on the other Cisco NAC Guest Server unit in the pair.

**Step 12** Once both Cisco NAC Guest Server appliances have been upgraded to release 2.0.4, you will need to reconfigure replication between the appliances. Replication is turned off as part of the upgrade process to avoid any inconsistencies in the upgrade.

**Warning**

**Failure to reconfigure replication immediately after upgrade will cause the two units to be unsynchronized and will cause data loss from one of the units when replication is set up at a later date.**

## New and Changed Information

This section describes new features and enhancements for this release of Cisco NAC Guest Server:

- [Enhancements in Release 2.0.4, page 7](#)
- [Enhancements in Release 2.0.3, page 9](#)
- [Enhancements in Release 2.0.2, page 9](#)
- [Enhancements in Release 2.0.1, page 10](#)
- [New Software Features in Release 2.0, page 10](#)

## Enhancements in Release 2.0.4

Release 2.0.4 is a general and important bug fix release for the Cisco NAC Guest Server that addresses the caveats described in [Resolved Caveats - Release 2.0.4, page 15](#).

Cisco NAC Guest Server Release 2.0.4 supports the following features:

- [AD SSO on Multiple Domains and Multiple Forest, page 8](#)
- [Deleting Suspended and Expired Guest User Accounts, page 8](#)
- [Purging Unwanted Accounting Requests, page 8](#)
- [Closing Dangling Sessions, page 8](#)

## AD SSO on Multiple Domains and Multiple Forest

Starting from NAC Guest Server Release 2.0.4, you can configure AD SSO on multiple domains and multiple forests. Refer to the [Cisco NAC Guest Server Installation and Configuration Guide, Release 2.0](#) for more details.

## Deleting Suspended and Expired Guest User Accounts

The guest user accounts can be only suspended or it would automatically get expired upon crossing a specified time.

In NAC Guest Server Release 2.0.4, the guest accounts can be deleted by using the script “**deleteSuspendedExpired.sh**” present under **/guest/utills**. The following options are available:

- Deleting all the suspended and expired guest user accounts created by a particular sponsor.
- Deleting all the suspended and expired guest user accounts irrespective of the sponsor who created them.

Go to **/guest/utills** and enter the following:

```
# sh deleteSuspendedExpired.sh <sponsor name>
```

Replace <sponsor name> with the name of the sponsor for which you want to delete the suspended/expired guest accounts

To delete the suspended/expired guest accounts of all the sponsors, execute the following:

```
# sh deleteSuspendedExpired.sh --closeAll
```

See Also [CSCte05145, page 15](#).

## Purging Unwanted Accounting Requests

When accounting requests are sent to NAC Guest Server and the corresponding authentications are not done by the server, it causes performance issues. This happens because of mis-configuration in AAA client.

In NAC Guest Server 2.0.4, these requests can be removed by using the script **clean\_radacct.php**, which is available in the **/guest/utills** directory.

The script can be run as **/usr/bin/php /guest/utills/clean\_radacct.php**

In NAC Guest Server 2.0.4, this script has been placed in crontab so that it runs automatically at a regular interval of 23 hours. See Also [CSCtl78360, page 15](#).

## Closing Dangling Sessions

There could be a lot of active sessions of guest users present in the server for a very long period of time. This could happen when devices are not sending accounting stop requests. For example, there are many accounting starts generated from the device, but, if device suddenly goes down, then, account stop requests are not sent to the Guest Server. Over a period of time, there are lot of such sessions maintained in the Guest Server.

The script **closeSession.sh** can close out these active sessions. This script would be available under **/guest/utills**. This script can be invoked as follows:

```
# sh closeSession.sh <username>
```

Replace `<username>` with the username of the guest for which the session needs to be closed.

```
# sh closeSession.sh --closeAll
```

This will close all open sessions. See Also [CSCty08793, page 16](#).

## Enhancements in Release 2.0.3

Release 2.0.3 is a general bug fix release for the Cisco NAC Guest Server that addresses the caveats described in [Resolved Caveats - Release 2.0.3, page 16](#).

Cisco NAC Guest Server Release 2.0.3 supports the following feature:

- [External Guest Authentication, page 9](#)

### External Guest Authentication

Cisco NAC Guest Server Release 2.0.3 supports External Guest Authentication. This feature enables guest users to authenticate to the Cisco NAC Guest Server using their existing RADIUS user accounts. In addition, it allows guest users to create their own Guest Access without involving the sponsors.

## Enhancements in Release 2.0.2

Release 2.0.2 is a general bug fix release for the Cisco NAC Guest Server that addresses the caveats described in [Resolved Caveats - Release 2.0.2, page 18](#).

Cisco NAC Guest Server Release 2.0.2 supports the following features:

- [New Hardware Platform Support, page 9](#)
- [External Portal Support Extended to Switches, page 9](#)

### New Hardware Platform Support

The Cisco NAC Guest Server Release 2.0.2 supports a new hardware platform, Cisco NAC Appliance (NAC-3315), which is based on the IBM System x3250 M2 server platform.



#### Note

Next generation Cisco NAC Appliance platform (NAC-3315) supports fresh installation of Release 2.0.2 and later.

### External Portal Support Extended to Switches

In Release 2.0.2, the External Portal Support has been extended to the Switches, which allows the Cisco NAC Guest Server to host the authentication portal for guest access. This allows pages to be fully customized for the [Credit Card Billing Support](#) and [Guest Self Service](#) features.



#### Note

Release 2.0.2 is a bug fix release as well for the Cisco NAC Guest Server that addresses the caveats described in [Resolved Caveats - Release 2.0.2, page 18](#).

## Enhancements in Release 2.0.1

Release 2.0.1 is a general and important bug fix release for the Cisco NAC Guest Server that addresses the caveats described in [Resolved Caveats - Release 2.0.1, page 23](#).

## New Software Features in Release 2.0

- [Access Restrictions](#)
- [Account Lockout](#)
- [Active Directory Single Sign On](#)
- [Common Cisco User Interface](#)
- [Common Cisco User Interface](#)
- [Credit Card Billing Support](#)
- [Date/Time Formatting](#)
- [External Portal Support](#)
- [Group Account Permission](#)
- [Guest Password Change](#)
- [Guest Restrictions by the Minute](#)
- [Guest Self Service](#)
- [Hide Passwords](#)
- [Management Reports](#)
- [Note to Guest](#)
- [NTP Enhancements](#)
- [RADIUS Administrator Authentication](#)
- [Reporting Enhancements](#)
- [Restrict Concurrent Logins](#)
- [Show Sponsor Username](#)
- [SNMP Monitoring Support](#)
- [SNMP Trap Support](#)
- [Syslog Reporting](#)
- [Time Profiles](#)
- [Time Restrictions](#)
- [Username Policy Enhancements](#)
- [Warning on Duplicate Account Names](#)

## Access Restrictions

Administrators can restrict access to the administrator and sponsor interfaces from defined IP addresses.

## Account Lockout

Guest accounts can automatically be disabled after a configured number of incorrect authentications.

## Active Directory Single Sign On

Cisco NAC Guest Server 2.0 can be joined to an Active Directory Domain and then automatically authenticate Internet Explorer browsers using Integrated Windows Authentication. This removes the need for sponsors to enter their username and password.

## Application Programming Interface

Cisco NAC Guest Server 2.0 introduces an HTTP/HTTPS Application Programming Interface (API) which can easily be used to access functions using POST or GET methods.

The API enables applications to add, delete and edit guest accounts with authentication via sponsor credentials. The API also provides the ability to get reporting information on guest accounts.

## Common Cisco User Interface

The Cisco NAC Guest Server user interfaces now feature the Cisco product common look and feel, accessibility features and enhanced ease of use.

## Credit Card Billing Support

Cisco NAC Guest Server 2.0 provides the ability for guests to purchase accounts via credit card support.

## Date/Time Formatting

This feature allows the date and time shown in various forms and printouts to be formatted appropriately.

## External Portal Support

External Portal Support allows the Cisco NAC Guest Server to host the authentication portal for guest access. This allows pages to be fully customized for the [Credit Card Billing Support](#) and [Guest Self Service](#) features.

## Group Account Permission

This feature provides an additional account permission to allow sponsors to access accounts created by members of their sponsor group.

## Guest Password Change

This feature provide guests with the ability to change their password when they authenticate using the External Portal (see [External Portal Support](#)).

## Guest Restrictions by the Minute

Sponsors were previously restricted from creating accounts longer than a specified number of days. With release 2.0, account duration can be specified in minutes.

## Guest Self Service

Guest Self Service allows guests to create their own accounts by entering their details.

## Hide Passwords

This feature restricts sponsors from viewing the passwords of their guests. When this option is enabled, guests can only receive their account details via email or SMS.

## Management Reports

Management reports are enhanced to provide the following guest network usage information:

- Total Guest Accounts Created
- Total Authenticated Guests
- Total Cumulative Connect Time
- Sponsor Usage Reporting
- Access Summaries by Device

## Note to Guest

Provides the ability to output any of the guest's details that are entered at account creation into the print, email or SMS templates. This enables the 5 optional fields to be used so that additional notes can be entered and sent to the guest.

## NTP Enhancements

Cisco NAC Guest Server 2.0 allows 3 NTP Servers to be configured and also displays the NTP server associations and statistics.

## RADIUS Administrator Authentication

Cisco NAC Guest Server 2.0 now allow access to the administration interface to be authenticated via an external RADIUS server. This feature also provides a backup RADIUS server configuration and the ability for administrators to fall through to local authentication if necessary.

## Reporting Enhancements

The reporting interface is enhanced to provide the ability to sort the data in any format that is required.

## Restrict Concurrent Logins

Guest Roles can now be restricted to a maximum number of concurrent logins. Any account created with the guest role can be limited to a specified number of concurrent user logins when authenticating via RADIUS.

## Show Sponsor Username

Release 2.0 now displays the username of the sponsor who is logged in at the top of the page.

## SNMP Monitoring Support

SNMP Monitoring support allows the NAC Guest Server to be monitored via an SNMP agent.

## SNMP Trap Support

Cisco NAC Guest Server 2.0 can send SNMP traps or informs based upon the Guest Server appliance exceeding administrator configured levels.

## Syslog Reporting

The Cisco NAC Guest Server can receive syslog reporting from network devices and will correlate the data with the IP address of logged-in guests. This allows the sponsor to audit and report on the exact activity undertaken by the guest.

## Time Profiles

Time profiles allow the following options for defining when accounts are created for guests:

- Start/End - Manually choose the start and end time.
- From First Login - Specify a period of time the account is active starting from the first login.
- Duration within - Specify a period of time the account is valid from the first login within a certain time period.

## Time Restrictions

Time restrictions allow the administrator to define periods when the guest cannot access the network, such as outside working hours.

## Username Policy Enhancements

Provides the ability for the username to be created as lowercase, UPPERCASE or the case that was entered by the sponsor.

## Warning on Duplicate Account Names

When sponsors create accounts which duplicate an existing account name, the sponsor is warned that the condition has occurred and the new account name is appended with a random number to make it unique.

# Caveats

This section describes caveats related to the Cisco NAC Guest Server:

- [Open Caveats - Release 2.0.4, page 14](#)
- [Resolved Caveats - Release 2.0.4, page 15](#)
- [Resolved Caveats - Release 2.0.3, page 16](#)
- [Resolved Caveats - Release 2.0.2, page 18](#)
- [Resolved Caveats - Release 2.0.1, page 23](#)
- [Resolved Caveats - Release 2.0, page 34](#)


**Note**

If you are a registered cisco.com user, you can view Bug Toolkit on cisco.com at the following website:

<http://www.cisco.com/cgi-bin/Support/Bugtool/home.pl>

To become a registered cisco.com user, go to the following website:

<http://tools.cisco.com/RPF/register/register.do>

## Open Caveats - Release 2.0.4

**Table 2** *List of Open Caveats*

DDTS Number	Software Release 2.0.4	
	Corrected	Caveat
CSCsz40132	No	<p>Sponsors Activity Report circle users overlay on each other</p> <p>When running a sponsor activity report if the numbers for a sponsor are too close together the text can overlap.</p> <p>If there are certain sponsors with very large numbers of accounts and certain sponsors with very small numbers of accounts, the ones with very small numbers could have numbers that overlap on the screen.</p> <p><b>Note</b> The numbers can still be seen in the table below the report.</p>
CSCty77644	No	<p>Invalid SSL certificates should not be allowed to be uploaded in the NGS server.</p> <p>When the administrator tries to install an SSL Certificate that is not relevant in the NAC Guest Server, the following error message is displayed: "The Current Private Key does not Correspond to the Current Certificate".</p> <p>If the user clicks the <b>Reboot Server</b> option, the invalid certificate is uploaded and the GUI becomes inaccessible.</p> <p><b>Workaround</b> Generate and install a self-signed SSL Certificate using CLI. This enables the user to access the GUI. Refer to <a href="#">Known Issues, page 37</a>.</p>

## Resolved Caveats - Release 2.0.4

**Table 3** *List of Resolved Caveats*

DDTS Number	Software Release 2.0.4	
	Corrected	Caveat
CSCtq64462	Yes	NGS does not work with Internet Explorer 9. NAC Guest Server does not accept login if Internet Explorer 9 is used as browser.
CSCte05145	Yes	Enhancement Request for Deleting Guest Accounts Sponsors should be able to delete guest accounts per sponsor or sponsor group that created the guest accounts.
CSCtj49064	Yes	An error message should be displayed when user clicks the Upload button without selecting SSL Certificate or CA Certificate.
CSCtj72988	Yes	When broadcast address is entered for access restriction, a blank page is displayed.
CSCtk58872	Yes	Update Kerberos used within NAC Guest Server
CSCtl78360	Yes	When RADIUS accounting is configured with NAS that are sending a lot of messages for non-authenticated hosts, Guest Server becomes sluggish over time and software upgrade may fail or take a very long time.
CSCtn17463	Yes	Guest accounts created with time profile "time used" remain inactive.
CSCto50121	Yes	Excessive logging of "could not find sponsor for guest" found on NAC Guest Server.
CSCto62212	Yes	Crafted HTTP URL allows sponsors to fetch guest accounts from other sponsors.
CSCto99295	Yes	API allows blank passwords with auth servers that permit anonymous bind.
CSCtq36092	Yes	While writing a program to utilize API, the following issues are encountered: <ul style="list-style-type: none"> <li>• Cisco Web Service returns invalid HTTP header specifying HTML content and in reality it is XML</li> <li>• Some Status XML Messages are returned with tag = &lt;message&gt; (typo in web service - it has 3 Ss) instead of &lt;message&gt;</li> <li>• Able to insert only one email address in a Guest Account record.</li> </ul>
CSCtq86155	Yes	When creating StartEnd accounts between 12:00 PM and 12:59 PM, the start time is shown as AM instead of PM.
CSCtq86581	Yes	NAC Guest Server only supports DES as the encryption algorithm for Kerberos tickets. Support of rc4-hmac to be included.

Table 3 *List of Resolved Caveats*

DDTS Number	Software Release 2.0.4	
	Corrected	Caveat
CSCtr09461	Yes	Unable to remove RADIUS mappings  <b>Workaround</b> Removing a guest role will remove all radius mappings pointing to it.
CSCtr57602	Yes	Unable to display AUP in NGS for External Guest
CSCts41870	Yes	Security Issue in Apache
CSCtw66362	Yes	NGS changes hostname on submitting SSO configuration
CSCtw82088	Yes	Java Vulnerability with NGS uses 2.5.2 and 2.6.0 version of YUI.
CSCtx42578	Yes	NGS 2.0.3 patch 6 does not work for API notification of sms/email
CSCty08793	Yes	Option to close dangling guest user sessions to be included.
CSCty19273	Yes	User Interface not accessible with Fresh install on 3315  After installing and configuring NAC Guest Server 2.0.4 on NAC-3315 platform, the UI is not accessible.

## Resolved Caveats - Release 2.0.3

Table 4 *List of Resolved Caveats*

DDTS Number	Software Release 2.0.3	
	Corrected	Caveat
CSCtf36849	Yes	NAS-IP-Address missing from Access Request.  NGS server does not send NAS-IP-Address in the Access Request. This creates an interoperational issue with Juniper RADIUS server, which expects the field to be there, so it sends an Access Reject. As a result, sponsor authentication fails. Per RADIUS RFC, NAS-IP-Address is mandatory in the Access Request.
CSCtf35011	Yes	Guest Hotspot Switch scripts do not handle ngsOptions elements correctly.  NAC Guest Server hotspot customization does not work for switch.
CSCtg45409	Yes	XSS on Sponsor and Admin pages.  External researcher reports potential cross-site-scripting (XSS) on NAC Guest Server.
CSCtg59379	Yes	MIT Kerberos issues.  There is a possibility that the NAC Guest Server is affected by MITKRB5-SA-2010-005, CVE-2010-132. This vulnerability has medium impact. Authentication would be required to carry out this exploit and currently it is POC exploit only.

Table 4 *List of Resolved Caveats*

DDTS Number	Software Release 2.0.3	
	Corrected	Caveat
CSCti65223	Yes	Users IP Address field under Guest User Accounting Report will show MAC.  If the calling-station-id of the packet from the WLC in the Radius accounting start packet is the mac-address of the client, then the NGS will show the MAC address in the field titled "Users IP Address". If the WLC sends the real clients IP address in the "Framed IP Address" attribute, it will be ignored.
CSCtg31005	Yes	NGS fails to make CAM API calls when Admin password contains & character.  When attempting to integrate NGS to CCA Manager, the NGS will fail to make API calls correctly against the CAM if the admin password contains special characters (notably the & symbol).
CSCth43152	Yes	Twin configuration errors out when trying to apply it.
CSCtf02132	Yes	Cannot delete account restriction in Time Profile.
CSCtf02802	Yes	Guest server max failed attempts only restrict after f+1 fail instead of f.
CSCtf11035	Yes	Backup restore does not create previous Hotspot directory.  hss does not exists under sites even though it can be seen on Hotspot>Sites UI.
CSCti13657	Yes	Log pages and backup page are inaccessible.  The NGS log table maintenance process appears to have failed to remove old records. The high levels of logging that were set led to the database table growing considerably, to the point of making some parts of the admin application (log pages and backup snapshot) unusable.
CSCti37563	Yes	Adding guest accounts in a natted network.  The NGS needs a RADIUS client entry for the IP address of the source address of the RADIUS packet (what the NAT changes the WLC address to), and also the NAS-IP-ADDRESS attribute in the packet (probably the original address of the WLC).
CSCti67880	Yes	User activity is not visible through the web interface.  On checking user activity through GUI for a particular user, not all entries are seen.
CSCtf51215	Yes	Hostname field accepts FQDN causing domain to appear twice.  The hostname field in the configuration screen accepts an FQDN, resulting in the domain name appearing twice in the configuration files.
CSCtg13979	Yes	Time profile duration not working as expected.

Table 4 *List of Resolved Caveats*

DDTS Number	Software Release 2.0.3	
	Corrected	Caveat
CSCtg35579	Yes	Norwegian characters are not read by NGS in CSV file.  There are two Norwegian characters that cause this problem. It is the A with a O on top of it, the "AE" in one char and the O with a stroke inside.

## Resolved Caveats - Release 2.0.2

Table 5 *List of Resolved Caveats*

DDTS Number	Software Release 2.0.2	
	Corrected	Caveat
CSCsz80188	Yes	NGS does not populate month dropdown when using non-default template.  When the sponsor template is other than the default template, while accessing the Create Guest Account page, sponsors receive an empty month dropdown. This prevents them from creating a guest account. When this issue occurs, the Manage Account and Manage Bulk Account pages are also not displayed.  <b>Workaround</b> In the Administration interface, go to the Common tab. From the <b>Select Template for</b> dropdown, choose the <b>Formats</b> option. In the Format settings, set the date/time format for all the templates in use.
CSCtb70650	Yes	NGS LDAP bind fails if admin password includes a "+" (plus) character.  LDAP binding fails on NGS 2.0.1, if the admin user password includes a '+' character. The sniffer trace shows that the '+' character is replaced by a space.  <b>Workaround</b> Avoid using the '+' character in passwords.
CSCsy95597	Yes	Incorrectly encoded headers cause e-mail to display improperly  When the e-mail Subject field contains non ASCII characters, the e-mail headers are incorrectly encoded and the message is displayed incorrectly by e-mail clients.
CSCsz58979	Yes	The Postgres configuration file is not updated after upgrading from 1.x.x to 2.0.x  <b>Workaround</b> Overwrite the postgresql.conf and pg_hba.conf files with the versions shipped with 2.0.x and reboot the Cisco NAC Guest Server.

Table 5 List of Resolved Caveats

Software Release 2.0.2		
DDTS Number	Corrected	Caveat
CSCta13651	Yes	<p>Authentication widgets fail on hotspot pages</p> <p>When using authentication widgets, they will fail to authenticate a guest.</p> <p><b>Workaround</b> A patch is available from the Cisco TAC at <a href="http://www.cisco.com/en/US/support/tsd_cisco_worldwide_contacts.html">http://www.cisco.com/en/US/support/tsd_cisco_worldwide_contacts.html</a>.</p>
CSCtb53416	Yes	<p>AUP Page not finding user credentials on page refresh.</p> <p>When the AUP page is refreshed, the user credentials are not found. While using AUP, the following error occurs: 'data.response.html' is null or not an object.</p> <p><b>Workaround</b> Contact Cisco TAC to obtain a patch for this problem.</p>
CSCtb47500	Yes	<p>Print page doesn't show password when created by role with no view right.</p> <p>While printing a user account created by a sponsor in a different role, the print page shows password as asterisks.</p> <p>For example, "RoleA" has permission to create accounts but not to view or print the password. "RoleB" has permissions to manage and print any guest account. "RoleB" can view the password of "RoleA" in the Guest Server GUI on the manage page, but while printing, the password is printed as asterisks.</p> <p><b>Workaround</b> Provide permission to the sponsors in "RoleA" to view the password (but not to print). Then sponsors in "RoleB" will be able to print the password properly.</p>
CSCtb52569	Yes	<p>NGS doesn't remove user from CAM after suspension or deletion.</p> <p>If the user is logged in to the NAC, Guest server does not remove the user from the CAM, even after the user is suspended or deleted from the NGS.</p> <p><b>Workaround</b> Contact the TAC to obtain a patch for this problem.</p>
CSCta25485	Yes	<p>Accounts of type "From Creation" generate e-mail with blank values</p> <p>When you create a guest user and generate an e-mail with the account details, the mail which is generated contains blank values for start time, end time, and timezone.</p>

Table 5 List of Resolved Caveats

DTS Number	Software Release 2.0.2	
	Corrected	Caveat
CSCta60026	Yes	<p>Guest server new users start time doesn't default to current time</p> <p>When a sponsor creates a new user in the Guest Server, the time zone for the new user is based on time zone of the sponsor. However, if the Guest Server is located in a different time zone, then the start time is based on the time zone on the Guest Server. This leads to manual adjustment of the start and end time.</p>
CSCtb15889	Yes	<p>CSV file does not show the accounts in the correct order</p> <p>When generating random accounts in the Guest Access Server, the order in which they are created and printed does not match the order they are displayed in the exported CSV file.</p>
CSCtb53845	Yes	<p>NGS New Sponsor group named 'default' unable delete</p> <p>NGS allows to create a new Sponsor group named 'default', but does not allow to delete the group.</p>
CSCtb60157	Yes	<p>JavaScript Pages Not Working on IE8 and Firefox Browsers</p> <p>With the AUP option turned on, IE7 displays properly and the guest user can accept and be redirected to the web, but IE8 and Firefox simply reload the sign-in page and does not redirect to Acceptable User Policy (AUP) page.</p>
CSCtc26885	Yes	<p>NAC Guest server sponsor AD SSO can fail with large kerberos tickets</p> <p>Sponsor authentication to NAC Guest server via AD SSO fails and displays the following error:</p> <p>"Bad request: Your browser sent a request that this server could not understand Size of request header filed exceeds server limit"</p> <p>This happens for users with large kerberos tickets and when they are members of several groups.</p>
CSCtc27554	Yes	<p>Accessing hotspot page requires using the HTML file name too</p> <p>When setting up a hotspot page for Guest Server, the default file names like index.html or default.html are not recognized by NGS.</p> <p><b>Workaround</b> Use the full URL including the full file name to access the site.</p>
CSCtc43307	Yes	<p>NAC Guest server Sponsor Access Restrictions can fail</p> <p>Sponsor access restrictions as defined in the access server fail to be enforced and allow users from guest hotspot locations to log into the device as a sponsor.</p>

Table 5 List of Resolved Caveats

DDTS Number	Software Release 2.0.2	
	Corrected	Caveat
CSCtc45617	Yes	<p>Syslog settings changes not always acted upon</p> <p>When modifying the syslog settings for the guest server the settings are not always modified in real time.</p> <p><b>Workaround</b> After making the changes, enter the following commands from the command line:</p> <pre>service syslog-ng stop service syslog-ng start</pre>
CSCtc76589	Yes	<p>20 character passwords do not work on AD Auth Sponsor accounts</p> <p>Sponsor accounts with 20 characters in the password fail authentication.</p> <p><b>Workaround</b> Use passwords with less number of characters or contact the TAC to obtain a patch.</p>
CSCtc87168	Yes	<p>Cancel button on guest account edit screen has no effect.</p> <p>While editing a Guest account, even if the <b>Cancel</b> button is clicked, the changes are saved.</p>
CSCtc91472	Yes	<p>Nov 1st 2009 appears twice in the calendar when creating guest account.</p> <p>The November 2009 calendar shown when creating a guest account shows November 1st twice and the rest of the days in the month are off by one day.</p>
CSCtc98345	Yes	<p>Replication Not Working with Large Database.</p> <p>When the servers have a large amount of data in the database, the replication between two NAC Guest servers fails.</p>
CSCtd01462	Yes	<p><b>IMPORTANT TLS/SSL SECURITY UPDATE</b></p> <p>An industry-wide vulnerability exists in the Transport Layer Security (TLS) protocol that could impact any Cisco product that uses any version of TLS and SSL. The vulnerability exists in how the protocol handles session renegotiation and exposes users to a potential man-in-the-middle attack.</p>
CSCtd45002	Yes	<p>NAC Guest server 2.0.1 IE 8 on Window 7/XP/Vista does not work.</p> <p>Internet Explorer 8 on Window 7/XP/Vista does not work with the NAC Guest Server.</p> <p><b>Workaround</b> Contact Cisco TAC to get a patch.</p>
CSCtd69495	Yes	<p>Some Telephone Country codes not available when creating Guest user</p> <p>When creating a guest user account, in the Mobile phone number field, some country codes are not available in drop down list (for example, +420 for Czech Republic and +421 for Slovakia).</p>

Table 5 List of Resolved Caveats

DDTS Number	Software Release 2.0.2	
	Corrected	Caveat
CSCtd78595	Yes	<p>NGS 2.0.1 do not accept special character in template name</p> <p>When a template name contains special characters like "&amp;", the template name cannot be referred or deleted.</p> <p><b>Workaround</b> Contact Cisco TAC to get a patch.</p>
CSCte21166	Yes	<p>Setting server access restrictions on host IPs can lock admin out</p> <p>If you set host IPs for the access allowed feature to access the server then it denies the users. Needs to have a larger subnet than the host.</p> <p><b>Workaround</b> Set valid subnet range larger than /32.</p>
CSCte47471	Yes	<p>NGS Guest accounts inactive for accounts with &gt;= 90 day time profile</p> <p>Guest accounts with time profiles of long duration (90 days) cause RADIUS server timeouts for NAS (wireless controller, WLC, etc).</p> <p><b>Workaround</b> Contact Cisco TAC to get a patch.</p>
CSCte97799	Yes	<p>AD auth Test connection fails when password has + char</p> <p>The bind to AD fails, when trying to login to AD server with password containing a plus (+) character.</p>
CSCte98202	Yes	<p>Blank log settings page when entered invalid input</p> <p>In the <b>Server &gt; System Logs &gt; Log Settings</b>, if any invalid syslog server address is entered, then the <b>Log Settings</b> page becomes blank.</p>
CSCtf00725	Yes	<p>Guest Manager view 08:00 the same as 18:00 when using the XML interface</p> <p>While using CLI to create an account, if the time is setup as 18:00, it is saves as 8:00. This leads to the Start time being later than the End time and causes error.</p> <p><b>Workaround</b> This happens only when using the CLI. Use the GUI to create an account.</p>

## Resolved Caveats - Release 2.0.1

**Table 6** List of Resolved Caveats

DDTS Number	Software Release 2.0.1	
	Corrected	Caveat
CSCso26993	Yes	<p>Logo file is not replicated between two Cisco NAC Guest Servers configured as a replication pair</p> <p>This issue affects Cisco NAC Guest Server Release 1.1.0.</p> <p><b>Workaround</b> Manually upload the logo on the second Guest Server by editing the template (using the same method as on the first Guest Server).</p>
CSCsv59139	Yes	<p>Guest Server printuser.php page incorrectly parses “\$” signs in passwords</p> <p>After creating a user, Guest Server randomly creates a password based on the policies set on the server. If the server creates a password with a dollar sign (\$) followed by a numerical string, then Guest Server cuts out that portion of the text from the password when attempting to print out the user page from the Active Accounts section.</p> <p>This occurs when using the printuser.php print page under Active Accounts. It does not occur when initially printing out the user page after creation (that uses the print.php script).</p> <p>Examples of passwords that are affected:</p> <ul style="list-style-type: none"> <li>• x13\$14 has a problem; it becomes x13</li> <li>• ihR\$94XIQ has a problem; it becomes ihRXIQ</li> <li>• mIYm\$035G does not have a problem</li> <li>• iA23Z\$Kmg does not have a problem</li> </ul> <p><b>Workaround</b> You can address this issue as follows:</p> <ol style="list-style-type: none"> <li>1. Remove the “\$” from the password policy on the Guest Server.</li> <li>2. Print the initial user information after creating the account instead of using the Active Accounts page.</li> </ol> <p>Email the password from the Active Accounts page to the user outside of the Guest Server application (the Email script correctly parses the “\$” signs).</p>

Table 6 List of Resolved Caveats

DTS Number	Software Release 2.0.1	
	Corrected	Caveat
CSCsv59906	Yes	<p>The Preferences page under My Settings is missing, but configurable</p> <p>When sponsors using Guest Server click on the web page under My Settings, they are redirected to the setdefaults.php page, even though there is no link in the main Sponsor page.</p> <p>When sponsors go to the setdefaults.php page, they can override global settings such as default template and timezone and you can manually verify which templates each Sponsor is using as follows:</p> <ol style="list-style-type: none"> <li>1. Log in to the Guest Server console via SSH.</li> <li>2. Enter <code>psql gapdb -U postgresql</code>.</li> <li>3. Enter <code>SELECT username,userdefaults_language FROM userdefaults;</code></li> </ol> <p>There is no known workaround for this issue.</p>
CSCsv94401	Yes	<p>Login is not case sensitive</p> <p>Credentials entered on the Sponsor login page are not case sensitive.</p> <p><b>Workaround</b> If Sponsors log in to the admin page with the admin username using any upper/lower case combination, the credentials are accepted and the user immediately sees the default settings page.</p>
CSCsw19750	Yes	<p>SMS sent successfully with blank mobile phone field</p> <p>When a Guest Policy is configured required to include a mobile phone number, new user accounts can be created with blank mobile phone number fields and Guest Server indicates that the SMS is sent successfully.</p>
CSCsx09573	Yes	<p>1.x.x Duration Functionality not supported</p> <p>With the introduction of time profiles in 2.0.0, the 1.x.x Duration feature is not supported. The 1.x.x Duration feature was to create accounts for a certain time period with the start time being the same as the account creation. There is no exact feature in 2.0.0; this will be added back in a later version. Upgrades from 1.x.x which use Durations are moved to use Start/End accounts.</p> <p><b>Workaround</b> Use Start/End accounts.</p>

Table 6 List of Resolved Caveats

Software Release 2.0.1		
DDTS Number	Corrected	Caveat
CSCsx20876	Yes	<p>Setting in <b>Guest Role &gt; NAC Role</b> is forced even if unchecked</p> <p>Even though the checkbox for provisioning guest roles on NAC Managers is disabled, the account is still provisioned on the manager.</p> <p><b>Workaround</b> Specify the role type as “unauthenticated.” That way, even if the account is provisioned, the user is placed in a role that does not grant access.</p>
CSCsx34376	Yes	<p>Cisco NAC Guest Server rendered unusable after applying an incorrect license file</p> <p>“System Error, contact your administrator.”</p> <p><b>Note</b> You can find further details on this error in the application log.</p>
CSCsx44023	Yes	<p>CSV Export does not export all data</p> <p>When performing a CSV Export from the Manage Accounts page the resulting CSV does not include all the fields from the guest user.</p> <p><b>Note</b> There is no known workaround for this issue.</p>
CSCsx46550	Yes	<p>Error messages on Guest Server console while rebooting</p> <p>Error text:</p> <ul style="list-style-type: none"> <li>• “ngs: PHP Fatal error: Exception thrown without a stack frame in Unknown on line 0”</li> <li>• “Fatal error: Exception thrown without a stack frame in Unknown on line 0”</li> </ul>
CSCsx46564	Yes	<p>Cumulative time in Access Report should account for guest logins only</p> <p>The Access Report is also taking into account the time the user was logged onto the network.</p>
CSCsx46581	Yes	<p>Trying to generate very large number of random guest accounts locks up the Guest Server</p>
CSCsx46817	Yes	<p>System error in User Interface when CSV is downloaded in the Activity Log web page</p> <p>The Cisco NAC Guest Server returns a “System Error, contact your administrator.” error message in the User Interface. This issue is appears when:</p> <ol style="list-style-type: none"> <li>1. Have an entry in Activity report in sponsor User Interface.</li> <li>2. Click <b>Download CSV</b> button in Accounting Log web page (<b>Manage Accounts &gt; View Detailed Report &gt; Download CSV</b>).</li> </ol> <p><b>Note</b> You can find further details on this error in the application log.</p>

Table 6 List of Resolved Caveats

DDTS Number	Software Release 2.0.1	
	Corrected	Caveat
CSCsx46932	Yes	<p>The Logs web page in admin User Interface is rendered blank if all the logs are selected.</p> <p>Steps to reproduce:</p> <ol style="list-style-type: none"> <li>1. Login to Guest Server administrator User Interface.</li> <li>2. Go to <b>Server &gt; System Logs &gt; Audit logs</b>.</li> <li>3. Select <b>All</b> in an attempt to display all logs in one screen.</li> </ol> <p>The result is that the HTTPS utilization on Guest Server reaches 100% and the User Interface page either returns an error or blanks out.</p>
CSCsx47140	Yes	<p>The Guest Server system becomes unstable after restoring a snapshot</p> <p>Steps to reproduce:</p> <ol style="list-style-type: none"> <li>1. Take a snapshot in the Admin User Interface.</li> <li>2. Delete the Cisco NAC appliances which were added in Guest Server. (This is to change the database.)</li> <li>3. Now restore the data base taken earlier. User Interface returns a “System Error, contact your administrator.” error after Data Base snapshot is complete.</li> </ol> <p>As a result, the system becomes unstable and requires a reboot to recover.</p> <p><b>Note</b> You can find further details on this error in the application log.</p>
CSCsx47161	Yes	<p>User Interface returns an error while trying to configure AD SSO</p> <p>Steps to reproduce:</p> <ol style="list-style-type: none"> <li>1. Log in to the Guest Server administrator User Interface.</li> <li>2. Go to <b>Authentication &gt; AD Single Sign On</b> and enter server settings and AD admin credentials.</li> <li>3. Click <b>Save Settings</b>.</li> <li>4. User Interface returns an error and blanks out.</li> <li>5. Check the Syslog for the following error:  “Message: dns_get_record(): res_nsend() failed; Type: Warning (2); Filename: Dns.class.php; Line: 24; Script: AdSingleSignOnConfig.php”</li> </ol>
CSCsx47434	Yes	<p>When saving the Administrator RADIUS Authentication web page, it gives message 'Backup settings saved'.</p> <p>This message seems to be misplaced from the Backup configuration web page.</p>
CSCsx49325	Yes	<p>Some of the Guest Server Config is lost after restoring the backed up snapshot.</p>

Table 6 List of Resolved Caveats

Software Release 2.0.1		
DDTS Number	Corrected	Caveat
CSCsx49548	Yes	The calendar component in the Sponsors Activity Report or Access Report becomes hidden behind the chart when selected.
CSCsx49619	Yes	<p>Trying to search based on IP address in Manage Accounts page returns a database error</p> <p>The Cisco NAC Guest Server returns a “System Error, contact your administrator.” error and the Application log has following error message:</p> <p>“Message: SQLSTATE[42P18]: Indeterminate datatype: 7 ERROR: could not determine data type of parameter \$7; Query: SELECT; distinct(guestusers.id),; guestusers.firstname,; guestusers.surname,”</p> <p><b>Note</b> You can find further details on this system error in the application log.</p>
CSCsx52443	Yes	<p>Activity reports are not being filtered correctly based on dates</p> <p>To reproduce this issue:</p> <ol style="list-style-type: none"> <li>1. Go to Sponsor Activity Report &gt; Summary Report after logging into sponsor console page.</li> <li>2. Select Feb 6th as the End Date.</li> <li>3. Guest Server only filters out entries till Feb 5th.</li> </ol>
CSCsx62268	Yes	<p>Not able to delete second admin account</p> <p><b>Symptom</b> Not able to delete “admin” account from the NAC Guest Server Authentication &gt; Administrators page.</p> <p>The UI should not allow the user to create a second "admin" account with the same username.</p> <p><b>Conditions</b> When creating more than one “admin” account.</p> <p><b>Note</b> There is no known workaround for this issue.</p>

Table 6 List of Resolved Caveats

DDTS Number	Software Release 2.0.1	
	Corrected	Caveat
CSCsx64570	Yes	<p>Cannot access AD mappings page</p> <p>Trying to is access the AD mappings page (<b>Sponsor User Groups &gt; Edit User Group &gt; Active Directory Mapping</b>) yields a system error.</p> <p>The following message appears in the application log:</p> <pre>“ldap_search(): Partial search results returned; sizelimit exceed; type: warning(2); filename:adLDAP.php; Line: 503; Script: UserGroups.php”</pre> <p>This error is triggered when the Guest Server does an LDAP search to fetch all the AD groups and the number of results is over the Page limit set on the AD server (MaxPageSize setting). If the AD server is using the default setting, this problem occurs when the customer has more than 1000 groups.</p> <p><b>Workaround</b> Increase the MaxPageSize setting on your AD server (<a href="http://support.microsoft.com/?kbid=315071">http://support.microsoft.com/?kbid=315071</a>).</p>
CSCsx66219	Yes	<p>AD group mapping not working when querying domain controller</p> <p><b>Symptom</b> GUI: “System error, contact your administrator”</p> <p>Application log:</p> <pre>admin Message: ldap_search(): Partial search results returned; Sizelimit exceeded; Type: Warning (2); Filename: adLDAP.php; Line: 503; Script: UserGroups.php</pre> <p><b>Conditions</b> Domain controller has more than 1000 AD groups.</p> <p><b>Note</b> There is no known workaround for this issue.</p>
CSCsx67500	Yes	<p>Application log counter always shows 0</p> <p>The application log file appears as being 0 lines in length.</p> <p>The application.log file is no longer used in release 2.0. All of the pertinent information is available in the <b>Server &gt; System Logs &gt; Application Log</b> screen.</p> <p>The link to the application.log file will be removed in a future release to remove any confusion</p>
CSCsx67509	Yes	<p>The application.log data is saved in developer_log.csv. It should be saved under application.log file in the support logs.</p> <p><b>Workaround</b> Find the developer_log.csv in logs.zip</p>

Table 6 List of Resolved Caveats

Software Release 2.0.1		
DDTS Number	Corrected	Caveat
CSCsy07460	Yes	<p>Activity Logging doesn't display seconds, or sort within a second</p> <p>When running an activity log report on a guest, the time of each message is displayed with hour:minute only, the :seconds part of the time is not displayed. Also when sorting the data, the data is not specifically sorted in order within the same second.</p> <p><b>Workaround</b> There is no current workaround.</p>
CSCsy10102	Yes	<p>The start time and end time fields on the Creation/Modification page show incorrect values</p> <p>Either the Start/End fields are empty by default when you create a new guest user, or they show random values when modified.</p> <p>Cisco TAC has issued a patch to resolve this issue.</p>
CSCsy15587	Yes	<p>Some guest users remain inactive</p> <p>When creating and scheduling guest users, some remain inactive and cannot access the network.</p>
CSCsy18473	Yes	<p>Setting logging level for Clean Access Manager fails</p> <p>When specifying the logging level for <i>some</i> of the Clean Access Manager log settings to debug, the CAM web console page still shows default values.</p> <p><b>Workaround</b> Set <i>all</i> components to “debug” and save them to get the CAM debug level to display correctly.</p>
CSCsy18502	Yes	<p>Following a link on a page that has not finished loading results in an error</p> <p>When the user clicks a link or a button on a page that has not finished loading, an error can occur and the following message may be displayed:</p> <p>System Error, please contact your administrator.</p> <p><b>Note</b> Further details of the error are in the application log.</p>
CSCsy18504	Yes	<p>Users should show what time profile they are using once created</p> <p>In the current version, it is not possible to tell what time profile the guest users are assigned to, once the profile has been created. This situation occurs when users are created and assigned with a time profile from the Cisco NAC Guest Server graphical user interface.</p>
CSCsy20297	Yes	<p>RADIUS Attributes input boxes size limit is to low</p> <p>The maximum character limit needs to be increased. For example, “auth-proxy:proxyacl#1=permit ip any any” does not fit in the current version.</p>

Table 6 List of Resolved Caveats

DDTS Number	Software Release 2.0.1	
	Corrected	Caveat
CSCsy20315	Yes	<p>RADIUS attributes are not being urldecoded before insert quotes and other characters are not displayed</p> <p>The URL encoded value is displayed instead.</p> <p><b>Workaround</b> Insert the value directly to the database.</p>
CSCsy20333	Yes	<p>Guest RADIUS authentication script does not support multiple attributes with the sa</p> <p>If you set up a RADIUS client with several attributes that all have the same name, the RADIUS authentication script only returns the last entry.</p> <p>For example, you can configure a RADIUS client with the following attributes:</p> <ul style="list-style-type: none"> <li>• cisco-AVPair "priv-lvl=15"</li> <li>• cisco-AVPair "auth-proxy:proxyacl#1=permit ip any any"</li> </ul> <p>When you then authenticate with a sponsor using this RADIUS client, the authentication reply only shows the last key value pair.</p>
CSCsy20353	Yes	Notification e-mail not being sent to sponsor when appropriate option is enabled
CSCsy20401	Yes	<p>Provisioning process exits without updating/provisioning accounts</p> <p>This situation can occur when the Guest Server fails to connect to the remote node. By the time the Guest Server stops trying to connect, another instance of the script starts, thus forcing the first script to terminate/exit.</p>
CSCsy20423	Yes	<p>Backup restore does not reset Twin configuration</p> <p><b>Workaround</b> Reset twin settings manually after restore.</p>
CSCsy29531	Yes	<p>Date/Time format settings missing</p> <p>Date/Time format settings are missing from the user interface in 2.0.</p>
CSCsy29982	Yes	<p>Select timezone to apply for time profile</p> <p>Guest Server should let you select the Timezone that applies to your Timeprofile.</p>
CSCsy44746	Yes	<p>The Self Service js object does not display a Submit button</p> <p>The Self service object embedded in the Hotspot page does not display a button to submit user data.</p>
CSCsy45448	Yes	<p>Authentication order cannot be modified for two servers with the same name</p> <p>When using Sponsor authentication for login, and configuring an AD or LDAP server, then the authentication order can not be modified if two servers have the same name.</p>

Table 6 List of Resolved Caveats

Software Release 2.0.1		
DDTS Number	Corrected	Caveat
CSCsy69893	Yes	<p>Guest Hotspot WLC scripts do not handle error messages correctly</p> <p>When using the Guest Hotspot configuration with a WLC, invalid user names and passwords fail authentication, but none of the error messages display as intended.</p> <p>Some examples of error messages to display on the system are:</p> <pre>ngsOptions.messages[1] = "You are already logged in. No further action is required on your part."</pre> <pre>ngsOptions.messages[2] = "You are not configured to authenticate against web portal. No further action is required on your part."</pre> <pre>ngsOptions.messages[3] = "The username specified cannot be used at this time. Perhaps the username is already logged into the system?"</pre> <pre>ngsOptions.messages[4] = "The User has been excluded. Please contact your administrator."</pre> <pre>ngsOptions.messages[5] = "Invalid username and password. Please try again."</pre>
CSCsy77998	Yes	<p>After upgrading a pair of NAC Guest servers, the TWIN service will not start. The problem can be observed in the Secondary server's GUI. In the replication logs you may see: ERROR could not LOCK table hotspot.access_plans: ERROR: permission denied for schema hotspot FATAL unable to complete twinning process</p> <p><b>Workaround</b> Run the following command on the secondary Guest Server after the upgrade:</p> <pre>psql gapdb -U postgres \dn+ \q grant all on schema hotspot to twin;</pre>
CSCsy79077	Yes	<p>When NAC Guest Server is sending a notification email, the header will not be correctly formatted: ~~snip~~ From: "" &lt;guest@cisco.com&gt; ~~snip~~ The empty string "" is creating issue on some mail server.</p>
CSCsy90148	Yes	<p>The MIT krb5 implementation has multiple vulnerabilities that need to be addressed on the product.</p>
CSCsz18581	Yes	<p>NGS does not provision accounts provisioned by Hotspot self service portal. This is only supported for RADIUS authentication.</p>
CSCsz19146	Yes	<p>The "Check the group object (group DN)" within the Guest server GUI is restricted to 40 characters</p>

Table 6 List of Resolved Caveats

DDTS Number	Software Release 2.0.1	
	Corrected	Caveat
CSCsz31445	Yes	<p>When an invalid license is installed the NAC Guest Server redirects a user to the license page</p> <p>The URL is generated based upon the IP address of the eth0 interface. If the user is accessing behind NAT, then this will fail.</p> <p><b>Workaround</b> To resolve this issue, the administrator must access the box using the real IP address of the server to re-install a valid license.</p>
CSCsz34223	Yes	<p>Suspend all only suspend some guests when there is network outage</p> <p>If Cisco NAC Guest Server cannot contact the Clean Access Manager when suspending accounts using the sponsor interface, the accounts will not be deleted from the CAM.</p> <p><b>Workaround</b> Only suspend accounts when the Clean Access Manager is available on the network.</p>
CSCsz34243	Yes	<p>Suspend All always leave 1 guest in NGS &amp; guests on CAM</p> <p>Immediately suspending accounts created on the Guest Server may result in accounts not being deleted from the Clean Access Manager. This issue has been confirmed when suspending a relatively large number of accounts within 1 minute of creation.</p> <p><b>Workaround</b> Wait at least 1 minute after creating accounts before using the “Suspend All” function.</p>
CSCsz34493	Yes	<p>Trying to display activity report on certain users shows a blank page</p> <p>Sponsor is unable to see the Guest Account Activity Report when the guest has not logged out yet and the RADIUS accounting record has a blank start time.</p> <p><b>Workaround</b> Wait until the user has logged out and you can then view the record.</p>
CSCsz34646	Yes	<p>Guest Server maximum failed attempts doesn't restrict number of failures</p> <p>Release 2.0.0 guest users authenticating with RADIUS are not subject to the failed logins policy set under the user template.</p> <p><b>Note</b> There is no known workaround for this issue.</p>
CSCsz39985	Yes	<p>Blank Access Report if date is invalid</p> <p>If searching the Access Report (RADIUS account) of a guest and you enter an invalid date (February 31st, for example), Guest Server returns a blank page.</p> <p><b>Workaround</b> To avoid this issue, ensure all dates for which you are searching guest reports are correct.</p>

Table 6 List of Resolved Caveats

Software Release 2.0.1		
DDTS Number	Corrected	Caveat
CSCsz50705	Yes	<p>“Device sends Calling Station IP” option always checked</p> <p>When editing an existing RADIUS client on the Guest Server and configuring it to not require the Calling Station IP radius attribute, the option “Device sends Calling Station IP” option is checked whenever you go to the <b>Devices &gt; Radius Clients &gt; Edit</b> page, even if you have unchecked it and saved the settings.</p> <p><b>Note</b> This is a cosmetic issue. The database is updated correctly. Continue to uncheck/disable the option if you must make any changes in the Clean Access Server.</p>
CSCsz51110	Yes	<p>Syslog sync between twins fails due to SSL errors</p> <p>When viewing Activity Logs for a guest user under <b>Manage Accounts</b> in the Sponsor interface, Guest Server returns the following error message:</p> <p>“Could not access replicated server to retrieve logs. It is possible not all the logs are shown. Contact your administrator or retry later.”</p> <p>This can occur in Guest Server release 2.0 when twinning is configured and syslog data is sent to the Guest Server to track users’ network access.</p> <p><b>Workaround</b> Disable HTTPS by selecting HTTP only on the Administrator interface <b>SSL Settings</b> page.</p>
CSCsz56267	Yes	<p>Guest account status remains inactive after creation</p> <p>When there are active <b>From First Login/Time Used</b> accounts that do not have a start and end time set yet, the provisioning process fails trying to compare the dates to see if they should be expired/restricted. Guest Server then does not proceed with any start/end time accounts.</p> <p><b>Workaround</b> Use a pre-defined template (e.g., 1 day template) or only use Start/End time accounts when using the Clean Access Manager.</p>

## Resolved Caveats - Release 2.0

**Table 7** List of Resolved Caveats

DDTS Number	Software Release 2.0	
	Corrected	Caveat
CSCsq76185	Yes	<p>Variable names being printed after creating a guest user account rather than the values inputted by the sponsor.</p> <p><b>Workaround</b> After creation go into Active Accounts page and print from there</p>
CSCsq86376	Yes	<p>Authentication attempts fail when “calling-station-id” is set to a MAC address</p> <p>After upgrading to Cisco NAC Guest Server, Release 1.1.1, authentication fails if the wireless controller is set to send the MAC address for the “calling-station-id” attribute.</p> <p><b>Workaround</b> Change the attribute to use the IP address instead of the MAC address. Alternatively, Cisco TAC can edit the configuration to remove the IP check, but the location feature does not work.</p>
CSCsq86714	Yes	<p>When using internet explorer to connect to NAC Guest Server over a HTTPS connection certain files do not download correctly. This is due to a bug with the IE browser.</p> <p><b>Workaround</b> Connect using HTTP instead of HTTPS with Internet Explorer 6.0, alternatively use a later version of Internet Explorer or use a different browser such as Firefox or Safari.</p>
CSCsq92773	Yes	<p>Unable to edit additional active directory server because the Guest Server adds a space in front of the AD server name, the edit page comes up blank as it looks for a server name without a space in the database.</p> <p><b>Workaround</b> You can delete the server and insert it again without the space character at the end of the name or:</p> <ol style="list-style-type: none"> <li>1. Login to the box through ssh.</li> <li>2. Connect to the database: <code>psql -U postgres gapdb.</code></li> <li>3. Execute the following SQL statements (note the server name is 'dc4 RWS Domain Controller ' here in this example):                     <pre>UPDATE adservers SET domain = 'dc4 RWS Domain Controller' WHERE domain = 'dc4 RWS Domain Controller ';</pre> <pre>UPDATE serverorder SET servername = 'dc4 RWS Domain Controller' WHERE servername = 'dc4 RWS Domain Controller ';</pre> </li> </ol>

Table 7 List of Resolved Caveats

DDTS Number	Software Release 2.0	
	Corrected	Caveat
CSCsq94240	Yes	<p>NAC Guest Server can fail to parse/sanity check the AD DC entry with certain misconfigurations of Active Directory Server entries and will fail to display all entries in group mapping.</p> <p><b>Workaround</b> Correct the entry for the domain controller IP address or hostname</p>
CSCsq94602	Yes	<p>Server creates bad username when importing a CSV file with Username Policy option 2</p> <p><b>Workaround</b> There are two possible workarounds:</p> <ol style="list-style-type: none"> <li>1. Open the CSV file in notepad, copy the contents and paste into the text entry form. User Accounts &gt; Multiple Accounts &gt; Create Multiple Accounts</li> <li>2. Or, change the username policy to use email address instead of first/last names.</li> </ol>
CSCsr19498	Yes	<p>Twin service stops intermittently when performing a lot of failovers.</p> <p><b>Note</b> There is no known workaround for this issue.</p>
CSCsr22834	Yes	<p>LDAP users allowed to login without permissions to do so as the authentication function is not setting the user as invalid.</p> <p><b>Workaround</b> Remove all the permissions for the local group, the user will be able to login but not perform any actions, however, there is a patch available from Cisco TAC</p>
CSCsr68115	Yes	<p>When calling the CAM API with the getuserinfo or getoobuserinfo operations, the Guest Server makes an incorrect call to CCA causing all users to get removed from the OUL.</p> <p><b>Note</b> There is no known workaround for this issue.</p>
CSCsr82031	Yes	<p>Changing a search whilst paging in a full report and viewing a page greater than the amount of results returned by a future query will show no results.</p> <p><b>Workaround</b> Return to page 1 before changing the search</p>
CSCsu00058	Yes	<p>Radius Authentications fail when Role option set to Unused</p> <p>Radius authentications for all users created on the Guest Server release 1.1.1 will fail even though password and shared secrets are correct. This occurs when the “Roles” setting under <b>Guest Policy &gt; Guest Details</b> is set to unused.</p> <p><b>Workaround</b> Set the Roles option to “Displayed” or “Not Displayed” (anything other than unused).</p>

Table 7 List of Resolved Caveats

DDTS Number	Software Release 2.0	
	Corrected	Caveat
CSCsu70899	Yes	<p>Hal Daemon using all available CPU prevents Radius daemon from running.</p> <p><b>Workaround</b> Login to the command line as root, then issue the following commands:</p> <pre>service haldaemon stop chkconfig haldaemon off</pre> <p>This will stop the CPU issue by turning off the unneeded haldaemon service</p>
CSCsu87661	Yes	<p>Guest Server database only supports 32 character account session IDs, if the NAS sends a larger session ID it could cause the Radius service to crash.</p> <p><b>Note</b> There is no known workaround for this issue.</p>
CSCsu88136	Yes	<p>The LDAP server configuration on the NAC Guest server ignores any values in the “port” field and always applies the default value (389) irrespective of the value configured.</p> <p><b>Workaround</b> Specify the port in the LDAP server URL, for example:</p> <pre>ldap://10.0.0.1:3387</pre>
CSCsx20606	Yes	<p>Users can't login when password policy has a space or ampersand in it</p> <p><b>Conditions</b> If the password policy includes spaces or ampersands then the passwords are not correctly created on the NAC Manager. This means guests cannot login with this account.</p> <p><b>Workaround</b> Remove any spaces (“ ”) or ampersands “&amp;” from the Other characters field of the password policy.</p>

Table 7 List of Resolved Caveats

DDTS Number	Software Release 2.0	
	Corrected	Caveat
CSCsx20876	Yes	<p>Setting in Guest Role &gt; NAC Role is forced even if it's unchecked</p> <p>The enabled checkbox for provisioning guest roles on NAC Managers doesn't work. The account is provisioned on the manager regardless of the enabled setting.</p> <p><b>Workaround</b> The workaround is to set the role to be "unauthenticated." By doing this, even if the account is provisioned it will be placed in a role that the user cannot log in to.</p>
CSCsx21004	Yes	<p>IDE Error messages seen on Guest server during upgrade</p> <p>When upgrading, depending on the status of the CD-ROM drive, "hdc: packet command error" errors may be seen on the console. These are purely cosmetic and do not affect the functioning of the box. After the upgrade all will be fine.</p> <p><b>Workaround</b> There is no workaround to the errors; however if they are seen no damage is caused and they will not be seen again.</p>

## Known Issues

When the administrator tries to install an SSL Certificate that is not relevant in the NAC Guest Server, the following error message is displayed: "The Current Private Key does not Correspond to the Current Certificate".

If the user clicks the **Reboot Server** option, the invalid certificate is uploaded and the GUI becomes inaccessible. The workaround is to generate and install a self-signed SSL Certificate using CLI. This enables the user to access the GUI. See Also [CSCty77644](#), page 14.

Perform the following steps to generate self-signed SSL Certificate using the CLI:

**Step 1** Generate key and certificate file by entering the following command:

```
openssl req -new -key /etc/pki/tls/private/localhost.key -nodes -x509 -days 365 -out /etc/pki/tls/certs/localhost.crt
```

**Step 2** Enter the appropriate information to be incorporated into your certificate request, as follows:

```
Country Name (2 letter code) [GB]:
State or Province Name (full name) [Berkshire]:
Locality Name (eg, city) [Newbury]:
Organization Name (eg, company) [My Company Ltd]:
Organizational Unit Name (eg, section) []:
Common Name (eg, your name or your server's hostname) []:
Email Address []:
```

**Step 3** Provide a copy of the certificate and key to the postgres by entering the following commands:

```
cp /etc/pki/tls/certs/localhost.crt /var/lib/pgsql/data/server.crt
chmod 600 /var/lib/pgsql/data/server.crt
chown postgres:postgres /var/lib/pgsql/data/server.crt
```

```
cp /etc/pki/tls/private/localhost.key /var/lib/pgsql/data/server.key
chmod 600 /var/lib/pgsql/data/server.key
chown postgres:postgres /var/lib/pgsql/data/server.key
```

**Step 4** Reboot the server.

You can access the GUI after rebooting the server.

## Documentation Updates

**Table 8** Updates to Release Notes for Cisco NAC Guest Server

Date	Description
4/9/12	<ul style="list-style-type: none"> <li>Added <a href="#">Enhancements in Release 2.0.4</a>, page 7</li> <li>Added <a href="#">Open Caveats - Release 2.0.4</a>, page 14</li> <li>Added <a href="#">Resolved Caveats - Release 2.0.4</a>, page 15</li> <li>Added <a href="#">Known Issues</a>, page 37</li> <li>Moved caveat CSCtq64462 to <a href="#">Resolved Caveats - Release 2.0.4</a>, page 15</li> </ul>
10/28/11	<ul style="list-style-type: none"> <li>Added <a href="#">Browsers Supported</a> section under <a href="#">System Requirements</a>, page 2.</li> </ul>
10/11/11	<ul style="list-style-type: none"> <li>Added caveat CSCtq64462 to <a href="#">Open Caveats - Release 2.0.4</a>, page 14</li> </ul>
11/30/10	<ul style="list-style-type: none"> <li>Added <a href="#">Enhancements in Release 2.0.3</a>, page 9</li> <li>Added <a href="#">Resolved Caveats - Release 2.0.3</a>, page 16</li> </ul>
5/25/10	<ul style="list-style-type: none"> <li>Added <a href="#">New Hardware Platform Support</a>, page 9</li> </ul>
2/23/10	<ul style="list-style-type: none"> <li>Added <a href="#">Enhancements in Release 2.0.2</a>, page 9</li> <li>Updated <a href="#">Resolved Caveats - Release 2.0.2</a>, page 18</li> <li>Added <a href="#">Resolved Caveats - Release 2.0.2</a>, page 18</li> <li>Moved caveats CSCsz80188, CSCtb70650, CSCtb52569, CSCtb47500, CSCta13651, and CSCsz58979 to <a href="#">Resolved Caveats - Release 2.0.2</a>, page 18</li> <li>Moved caveats CSCsz34646, CSCsv59139, CSCsv59906, CSCsv94401, CSCsw19750, CSCsx20876, CSCsx09573, CSCsx44023, CSCsx67500, CSCsy07460, CSCsy18473, CSCsy18504, CSCsy20297, CSCsy20333, CSCsy20353, CSCsy20401, CSCsy20423, CSCsy07460, CSCsx66219, and CSCsx62268 to <a href="#">Resolved Caveats - Release 2.0.1</a>, page 23</li> </ul>
6/12/09	<ul style="list-style-type: none"> <li>Added caveat CSCsz34646 to <a href="#">Resolved Caveats - Release 2.0.1</a>, page 23</li> </ul>
6/3/09	<ul style="list-style-type: none"> <li>Updated software download link to <a href="http://www.cisco.com/public/sw-center/index.shtml">http://www.cisco.com/public/sw-center/index.shtml</a></li> <li>Updated upgrade from release-to-release message</li> </ul>

**Table 8**      **Updates to Release Notes for Cisco NAC Guest Server**

Date	Description
5/12/09	Updates in Cisco NAC Guest Server Release 2.0.1: <ul style="list-style-type: none"> <li>• Updated <a href="#">Cisco NAC Guest Server Releases, page 1</a></li> <li>• Added <a href="#">Enhancements in Release 2.0.1, page 10</a></li> <li>• Added <a href="#">Resolved Caveats - Release 2.0.1, page 23</a></li> </ul>
2/9/09	Cisco NAC Guest Server Release 2.0

## Related Documentation

For the latest updates to Cisco NAC Guest Server and Cisco NAC Appliance documentation on Cisco.com see: [http://www.cisco.com/en/US/products/ps6128/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps6128/tsd_products_support_series_home.html) or simply <http://www.cisco.com/go/nac/appliance>

- [Release Notes for Cisco NAC Guest Server, Release 2.0.4](#) (this document)
- [Cisco NAC Guest Server Installation and Configuration Guide, Release 2.0](#)
- [Cisco NAC Appliance Service Contract/Licensing Support](#)
- [Cisco NAC Guest Server Data Sheet](#)
- [Cisco NAC Guest Server Q & A](#)
- [Cisco NAC Appliance - Cisco Clean Access Manager Installation and Configuration Guide](#)
- [Cisco Wireless LAN Controller Configuration Guide, Release 4.0](#)

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as an RSS feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service. Cisco currently supports RSS Version 2.0.

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: [www.cisco.com/go/trademarks](http://www.cisco.com/go/trademarks). Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

© 2012 Cisco Systems, Inc. All rights reserved.

