



# Release Notes for Campus Manager 3.2 on Windows 2000

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**Caution**

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If the Y2K Compliance Assessment Tool is installed on your system, you must uninstall it before installing this version. Otherwise, the installation will fail.

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These release notes are for use with Campus Manager 3.2, part of the CiscoWorks2000 family of products, running on Windows 2000.

These release notes provide:

- [New Features, page 2](#)
- [Campus Manager 3.2 Documentation, page 2](#)
- [Supported Devices, page 4](#)
- [Known Problems, page 4](#)
- [Resolved Problems, page 37](#)
- [Obtaining Documentation, page 40](#)
- [Obtaining Technical Assistance, page 41](#)

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# New Features

Campus Manager Release 3.2 has the following new features:

- Support for new devices (For more information on supported devices refer [“Supported Devices” section on page 4](#))
- Path Analysis provides Layer 2 support for HSRP
- Multiple sort feature in User Tracking

## Campus Manager 3.2 Documentation

**Note**

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Although every effort has been made to validate the accuracy of the information in the printed and electronic documentation, you should also review the Campus Manager documentation on Cisco.com for any updates.

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The following documents are provided in PDF on your product CD:

- *Installation and Setup Guide for Campus Manager 3.2 on Windows 2000*
- User Guide for Campus Manager

**Note**

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Adobe Acrobat Reader 4.0 is required.

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Use these publications to learn how to install and use Campus Manager 3.2 (CiscoWorks2000):

- *User Guide for Campus Manager (DOC-7813973=)*—Provides information about the use and operation of Campus Manager, including application descriptions, scenarios, and troubleshooting. This publication is available in PDF format on CD-ROM and from Cisco.com.
- *Installation and Setup Guide for Campus Manager 3.2 on Windows 2000 (DOC-7813986=)*—Provides information about Campus Manager installation requirements and procedures on Windows 2000. This publication is available in PDF format on CD-ROM and from Cisco.com.

- *User Guide for CiscoWorks2000 Server (DOC-7814072=)*—Provides information about setting up, administrating, and diagnosing the CiscoWorks2000 Server, including the ANI Server.
- *Installation and Setup Guide for CD One on Windows 2000 (DOC7814068=)*—Provides information about CD One installation requirements and procedures on Windows 2000. This publication is available in PDF format on CD-ROM and from Cisco.com.
- *Release Notes for CD One, 5th Edition on Windows 2000 (78-14070-01)*—Provides a list of known problems for the CiscoWorks2000 CD One, 5th Edition software.
- *Campus Manager online help*— Provides task-oriented and context-sensitive help from every window that contains a Help button and includes all of the information available in the *User Guide for Campus Manager*. This ensures you have complete information even if you do not have the manual readily available while using Campus Manager.

## Additional Information Online



### Tip

For the latest technical tips, suggestions for troubleshooting common issues, and frequently asked questions (FAQs) on most Essentials applications, you can go to the following URL:

<http://www.cisco.com/warp/public/477/Campus/index.html>

The Incremental Device Update (IDU) for Resource Manager Essentials (Essentials) 3.4 is a collection of updated files necessary for Essentials 3.4 to support new Cisco devices. In addition to the devices supported, this package also contains fixes to known problems, as well as additional newly discovered problems.

If you are a registered user, you can download IDU 2.0 for Essentials 3.4 from:

<http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus>

# Supported Devices

Device packages for all supported devices are installed when you install Campus. Campus Manager 3.2 supports all devices supported in Campus Manager 3.1, plus additional devices.

For a list of devices supported in Campus Manager 3.2, refer to the following URL:

[http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/camp\\_mgr/sup\\_dev/cm\\_3\\_2.htm](http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/camp_mgr/sup_dev/cm_3_2.htm)

# Support Information

Campus Manager 3.2 supports only US-English and Japanese versions of Windows 2000. Set the default locale to US-English for US-English version and Japanese for Japanese version

# Known Problems

Known problems (bugs) in Campus Manager 3.2 are graded according to severity level. These release notes contain descriptions of:

- All severity level 1 or 2 bugs.
- Significant severity level 3 bugs.
- All customer-found bugs (regardless of severity level).

You can search for problems using the Cisco Software Bug Toolkit. To access the Software Bug Toolkit:

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- Step 1** Log into Cisco.com.
  - Step 2** Select **Service & Support > Technical Support Help—Cisco TAC > Tool Index**.
  - Step 3** In the Jump to: links at the top of the page, click the letter **S**, then select **Software Bug Toolkit**.
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You can also access the Software Bug Toolkit by entering the following URL in your web browser:

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

**Note**

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If an operation does not work, open the Java Console. The Java Console reports any Java errors, but slows performance of Java applications. For detailed instructions on opening the Java Console, as well as a listing of which versions of the Java Plug-in Campus Manager 3.2 supports, refer to the CD One, 5th Edition Release Notes.

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This section contains notes and caveats for Campus Manager 3.2, as follows:

- [General Notes and Known Problems, page 5](#)
- [Netscape Navigator Known Problems, page 12](#)
- [Path Analysis Known Problems, page 13](#)
- [User Tracking Known Problems, page 22](#)
- [Topology Services Known Problems, page 29](#)
- [Resolved Problems, page 37](#)

**Note**

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Refer to General Known Problems and Server, Browser, and Desktop Known Problems sections of the *Release Notes for CiscoWorks2000 CD One, 5th Edition* for additional ANI Server-related known problems.

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## General Notes and Known Problems

Note the following:

- Your browser must be properly configured. If it is not properly configured, Campus Manager might not work correctly. Refer to *Installation and Setup Guide for CD One on Windows 2000* for information on properly setting up client systems.
- Campus Manager requires a DNS server to function properly. Many commands operate erratically or not at all if there is no DNS server on the network.

- Running Campus Manager from a browser invoked from an x-window connection is not supported. Install a browser on the client from which you wish to connect.
- Virus checker applications on Windows 2000 systems might slow Campus response times.
- You can upgrade your operating system (OS) either before or after you upgrade Campus Manager. However, if you upgrade the OS after upgrading Campus Manager, you will not receive any OS-related patch warnings or service pack-related warnings.
- Verify that the latest version of all required OS patches, service packs, and third-party device drivers are installed before proceeding with an OS upgrade.
- Visio Caveats:
  - It is recommended that you do not export an entire topology map to Visio. Instead, select and export particular devices or a segment of the network.
  - After selecting **Export to Visio**, be sure to enter a filename in the Export to Visio dialog box for the file Visio will generate.
  - Before opening a topology map exported to Visio, you need to download the cm\_cisco.vss file and place it in the Visio/Solutions directory.
  - When opening a topology map exported to Visio, select the comma (,) as the delimiter to use.

# General Known Problems

**Table 1** General Known Problems

Bug ID	Summary	Explanation
None	Catalyst 3500 series is supported in IP mode only.	<p>Campus Manager supports Catalyst 3500 series in IP mode only. Cluster mode is not supported. If your network has a Catalyst 3500 in cluster mode, the links display incorrectly.</p> <p>Workaround:</p> <p>None.</p>
CSCdm77812	Non-empty <i>CLASSPATH</i> environment variable might produce erratic browser behavior.	<p>If your system has a non-empty <i>CLASSPATH</i> environment variable, your browser might behave unpredictably (for example, returning a <code>ClassNotFoundException</code> for no apparent reason).</p> <p>Workaround:</p> <p>Unset <i>CLASSPATH</i> variable non globally:</p> <ul style="list-style-type: none"> <li>• Solaris—unset <i>CLASSPATH</i> variable from terminal window from which you launch browser.</li> <li>• Windows NT—unset <i>CLASSPATH</i> variable in MS-DOS prompt window and launch browser from the prompt.</li> </ul>
CSCdm83204	Campus Manager applications do not work when CiscoWorks2000 is accessed using <code>http://localhost:1741</code> .	<p>If you access CiscoWorks2000 applications using <code>http://localhost:1741</code> from browser on same machine CiscoWorks2000 server is installed on, Campus Manager suite of applications will not work.</p> <p>Workaround:</p> <p>Use full DNS name or IP address of server, even when accessing it locally.</p>

**Table 1** General Known Problems (continued)

Bug ID	Summary	Explanation
CSCdm88520	Minimized windows do not become visible when selected from a Window menu.	<p>If a window is minimized, you cannot make it visible by selecting it from a Window menu.</p> <p>Workaround:</p> <ul style="list-style-type: none"> <li>• On Solaris, double-click icon of window on desktop.</li> <li>• On NT, click icon of window in task bar.</li> </ul>
CSCdp48040	When you attempt to launch an application, the message <i>Application already running</i> displays, where <i>application</i> is the name of the application you attempted to launch.	<p>If you close application window and Loading Files popup window while application is loading, this message is displayed. Problem occurs because browser is still loading files.</p> <p>Workaround:</p> <p>Close all browser windows, then start application again.</p>
CSCdp74251	Application performance is very slow with HTTP proxy.	<p>Accessing Campus Manager via HTTP proxy might cause significant performance degradation.</p> <p>Workaround:</p> <p>Access CiscoWorks2000 Server directly from client.</p>
CSCdr85739	Logging out of CiscoWorks2000 does not log user out of Campus Manager.	<p>If you click <b>Logout</b> in the CiscoWorks2000 Main Window, you are logged out of all applications except for Campus Manager. Thus, you can still add and delete VLANs, as well as look at topology layouts.</p> <p>Workaround:</p> <p>Close all topology windows after logging out of CiscoWorks2000.</p>

**Table 1** General Known Problems (continued)

Bug ID	Summary	Explanation
CSCds05957	Gatekeeper configuration file must be modified in order to run Campus Manager 3.1 on multi-homed machines.	<p>Campus Manager 3.1 is supported by multi-homed machines (machines with multiple NIC cards, each configured with different IP addresses). Owing to CORBA restrictions, only one IP address can be used by client to access CiscoWorks2000 Server.</p> <p>Workaround:</p> <p>To ensure Campus Manager runs properly on multi-homed machines, open gatekeeper configuration file and enter appropriate IP address in the following fields:</p> <pre> vbroker.gatekeeper.backcompat.callback.host=&lt;external-IP-address&gt; vbroker.se.exterior.host=&lt;external-IP-address&gt; vbroker.se.iiop_tp.host=&lt;external-IP-address&gt; vbroker.se.interior.host=&lt;external-IP-address&gt; </pre>
CSCds88388	Cannot launch CiscoView on an IGX series device.	<p>The following procedure results in this problem:</p> <ol style="list-style-type: none"> <li>1. Launch Topology Services.</li> <li>2. Open LAN Edge view.</li> <li>3. Right-click on IGX series device and select <b>CiscoView</b> from context menu.</li> <li>4. A dialog box appears. Enter appropriate community strings, and CiscoView attempts to launch, but error message is displayed.</li> </ol> <p>Workaround:</p> <p>Launch CiscoView on IGX series devices via Cisco WAN Manager.</p>

**Table 1**     *General Known Problems (continued)*

Bug ID	Summary	Explanation
CSCdt19019	CiscoWorks2000 sessions do not timeout with Campus Manager running.	<p>As long as Campus Manager is running, you are not logged out of current CiscoWorks2000 session, even if idle for a few hours.</p> <p>Workaround:</p> <p>Log out of CiscoWorks2000 after using Campus Manager.</p>
CSCdt22462	Download of Java applets on Windows 2000 machines may take longer than expected if virus checker application is enabled.	<p>On some Windows 2000 systems, the initial download of large Java applets (or subsequent downloads of the same applets that are not cached locally) might take longer than expected (up to six minutes in some instances). After the applet has been loaded and cached locally, the problem no longer occurs.</p> <p>The delay is caused by client side filtering mechanisms such as virus scanning. Some virus scanners are configured to automatically scan content downloaded by browsers. Scanning consumes a lot of memory and results in disk paging on most systems.</p> <p>Owing to this, downloading is significantly slower than expected. (The effect is less on systems with large amounts of RAM and virtual memory.)</p> <p>Workaround:</p> <p>Disable the automatic scanning of all downloaded files, and instead enable the scanning of program files only (specified by file extension).</p> <p>Exact instructions vary depending on the virus scanner installed on your system.</p>

Table 1 General Known Problems (continued)

Bug ID	Summary	Explanation
CSCdt42318	Unable to copy and paste IP addresses from Topology Services to Path Analysis when keyboard shortcuts are used.	<p>The following actions result in a problem:</p> <ol style="list-style-type: none"> <li>1. After selecting an IP address in Topology Services, type Ctrl+C to copy address.</li> <li>2. With cursor active in Path Analysis “From” field, type Ctrl+V; the following is pasted in instead of IP address:  <pre>java.lang.NullPointerException</pre> </li> </ol> <p>Ctrl+X, Ctrl+C, and Ctrl+V (keyboard shortcuts for cut, copy, and paste commands) are not supported by summary tables in the Topology Services main window or most tables displayed by Campus Manager applications.</p> <p>Also, in applications that support the copying of table cells by selecting <b>Edit &gt; Copy</b>, a carriage return is added to the end of the last cell copied.</p> <p>Workaround: None.</p>
CSCdt55303	Launching a Campus Manager application with the Print dialog box open in another Campus Manager application results in error.	<p>The following actions result in a problem:</p> <ol style="list-style-type: none"> <li>1. Select <b>Print</b> from active Campus Manager application.</li> <li>2. With Print dialog box displayed, launch another Campus Manager application. New application window does not respond to user input.</li> </ol> <p>Workaround: Close the Print dialog box and relaunch application.</p>

## Netscape Navigator Known Problems

**Table 2** *Netscape Navigator Known Problems*

ID	Summary	Explanation
CSCdp43999	Maps and configuration dialogs display offset menus and list boxes in Netscape on a Solaris client.	<p>Sometimes, when a map or a configuration dialog is launched, menus or list boxes are not displayed below the menu. This offset occurs in Navigator on a Solaris client.</p> <p>Workaround: Move or resize window.</p>
CSCdt11838	You are not prompted to install the Java plug-in when launching an application that utilizes the plug-in for the first time.	<p>If RealJukebox Plug-in for Navigator is already installed on a Windows client before the first launch of application utilizing Java Plug-in, you will not be prompted to install Java Plug-in.</p> <p>Workaround: Uninstall RealJukebox Plug-in. Another option is to rename nprjplug.dll file in Navigator Plug-ins directory with new extension—for example, nprjplug.dll.bak.</p> <p>After Java Plug-in is installed, you can reactivate RealJukebox Plug-in by changing renamed file back to nprjplug.dll.</p>

## Path Analysis Known Problems


**Table 3** Path Analysis Known Problems

ID	Summary	Explanation
CSCds70102	Layer 2 is missing from a trace run on devices connected by a Fast Ethernet Channel or a Gigabit Ethernet Channel.	<p>When a trace is run on two devices connected by a Fast Ethernet Channel or a Gigabit Ethernet Channel, Path Analysis main table displays interface type as <code>Unknown</code> even though devices are in a managed state.</p> <p>Workaround: None.</p>
CSCds77438	Path Analysis Map tab does not refresh properly.	<p>This problem is mainly observed when running both client and server on same machine. It occurs after running a large number of Path traces on client browser.</p> <p>Work around: Close browser and relaunch Campus Manager.</p> <p><b>Note</b> We recommend that you run client and server on different machines. Doing so does not eliminate problem, but does limit its occurrence because you need to run a large number of traces before problem manifests itself.</p>
CSCds77461	Call Detail Records (CDR) query results are sometimes displayed after pressing <b>Cancel</b> .	<p>Multiple threads are launched to query every Cisco CallManager for information specified in user's CDR query. Since all query activities can take a second or two to cancel, query results are sometimes displayed even after pressing <b>Cancel</b>.</p> <p>Workaround: None.</p>

**Table 3 Path Analysis Known Problems (continued)**

ID	Summary	Explanation
CSCds79693	Voice trace query results are always displayed using local time zone.	<p>Local time zone always displayed in voice trace query results, even if user selects GMT time zone when specifying call start time.</p> <p>Workaround: None.</p>
CSCds92510	ICS 7750 device running Cisco CallManager does not appear in list of Cisco call managers.	<p>To verify that software is installed and configured correctly, open web browser and navigate to following URL: <b><code>http://hostname/ccn/clusterinfo.asp</code></b>. One line of alphanumeric characters should be displayed.</p> <p>If software is installed and configured correctly, then the problem occurred because ccmStatus cannot be retrieved via SNMP from ICS 7750 device (both primary and secondary SBC).</p> <p>By default, log tracing is disabled for performance reasons when System Manager and Cisco CallManager are both installed on device. Since log tracing is disabled, you cannot retrieve ccmStatus with SNMP.</p> <p>Workaround: Manually enable tracing through Cisco CallManager:</p> <ol style="list-style-type: none"> <li>1. Ensure SDI Trace settings are as follows: <ul style="list-style-type: none"> <li>- User Mask: 11</li> <li>- Level: ERROR</li> <li>- Event: INFORMATION</li> </ul> </li> <li>2. For SNMP agent to work, enable: <ul style="list-style-type: none"> <li>- EnableSNMP in CCM Service Parameters.</li> <li>- Trace On in CCM Trace Configuration.</li> </ul> </li> </ol>

**Table 3 Path Analysis Known Problems (continued)**

ID	Summary	Explanation
CSCds92510 (continued)	ICS 7750 device running Cisco CallManager does not appear in list of Cisco call managers.	<p><b>3.</b> Restart SPE through System Manager:</p> <ul style="list-style-type: none"> <li><b>a.</b> Enter following URL in browser: <code>\\ip_address\icsconfig</code></li> <li><b>b.</b> Click Shutdown/Restart link.</li> <li><b>c.</b> Click <b>Restart</b> for Primary SPE in list.</li> </ul> <p> <b>Note</b> On dual SPE systems, this will trigger a failover. But when procedure is repeated to restart secondary SPE, box will switch back to primary SPE.</p> <p>See CSCds07414 and CSCdt54829 for more information.</p>
CSCdt04978	Highlighted path trace in Topology Services map may be difficult to view.	<p>It may be difficult to view highlighted path trace in Topology Services map, especially if “Fit to Window” view is selected.</p> <p>Workaround:</p> <p>Zoom into Topology Services Map view by selecting Select All Highlighted Objects &gt; Zoom to Selected.</p>

**Table 3 Path Analysis Known Problems (continued)**

ID	Summary	Explanation
CSCdt16279	<p>Uninformative or confusing error message displayed in Voice Trace Query Status tab after running CDR query.</p>	<p>Status tab of Voice Trace Query window may display uninformative error message. For example:</p> <p>Error querying CCM noname            Probable cause            noname</p> <p>Workaround:</p> <ol style="list-style-type: none"> <li>1. Verify that CCM machine is accessible by pinging it from your Campus Manager server.</li> <li>2. If CCM host is accessible, then verify that web server is running. Open web browser and navigate to the following URL:  <code>http://ccm_ip_address/ccn/cdr.asp?type=all</code></li> <li>3. If web server is running, you will see a response to your URL request in browser window. Response may provide more detailed diagnostic information to troubleshoot problem:               <ol style="list-style-type: none"> <li>a. If web browser response indicates database query error, contact TAC for help in diagnosing this CCM database layer problem.</li> <li>b. If 404 Not Found error message is displayed, web server is probably running, but ASP script that queries CDR records cannot be located—ensure that Cisco CallManager Serviceability software is installed on this CCM.</li> <li>c. If The page cannot be displayed error message is displayed, then web server may not be running—start it on CCM host.</li> </ol> </li> </ol>

**Table 3 Path Analysis Known Problems (continued)**

ID	Summary	Explanation
CSCdt42404	Trace tab displays GMT as time zone, even though server is set to local time zone.	<p>A number of Java bugs involve incorrect interpretation of time zones. Usually, the correct time zone is displayed if local time zone is set to appropriate three-letter abbreviation—for example, PST for Pacific Standard Time.</p> <p>This problem is observed on Solaris clients with TZ environment variable set to "American/Tijuana."</p> <p>Workaround:</p> <p>If TZ environment variable is instead set to "PST8PDT," then Java interprets local time zone correctly.</p>
CSCdt42600	To and From fields may not function properly after selecting <b>Print</b> in Path Analysis.	<p>This problem is caused by Java Virtual Machine bug. After selecting <b>Print</b> in Path Analysis, "To" and "From" fields may not accept mouse focus, or focus may appear in both fields simultaneously.</p> <p>Workaround:</p> <p>Resize Java console window. If problem persists, close Path Analysis window and open another window.</p>
CSCdv70125	Path Analysis does not perform layer 2 traces when IfType=unknown.	<p>Path Analysis tool fails to get the Layer 2 path trace for Layer 2 devices. It lists (IfType=unknown) for both L2 devices across the trace.</p> <p>Workaround:</p> <p>None.</p>

**Table 3 Path Analysis Known Problems (continued)**

ID	Summary	Explanation
CSCdw03315	Path Analysis fails to show layer 2 for RFC 1918 address endstations.	<p>Cisco Enterprise Solutions Engineering recommends (AVVID solution architecture recommendations) that customers use RFC 1918 private addressing for IP Phones (to conserve public address space).</p> <p>In such a situation, where the network devices use one address space for their management addresses (sc0 on switches, etc.), but endstations use a different (private) address space (such as 10.x.x.x), path is unable to provide layer 2 information.</p> <p>Workaround: None.</p>
CSCdw03353	Path Analysis fails for certain configurations of DSBU switches.	<p>Path Analysis fails to show layer 2 information for certain configurations of DSBU switches (cat 2900XL, 3500XL) due to differences in mib instrumentation for VLAN information (as compared to mainstream Cat models 4K, 5K, 6K, etc.).</p> <p>For example, a customer might prefer to have a single VLAN going to the access-layer switch (cat 3500XL), and in that situation it is possible that customer will do minimum configuration on that switch and leave all ports in default VLAN 1.</p> <p>However on an upstream Distribution layer switch, it is possible that the port connecting to the 3500 is in a different VLAN (66 or whatever). Path Analysis apparently gets confused by this and fails to show layer 2 info.</p> <p>Workaround: None.</p>

**Table 3 Path Analysis Known Problems (continued)**

ID	Summary	Explanation
CSCdw03370	Path Analysis does not cope well with multiple paths.	<p>Path Analysis needs to give better information in situations where there are multiple paths (Cisco recommends redundant architectures to customers, after all). Path Analysis may show correctly that there are multiple paths, but the manner of displaying this is confusing, and the accompanying messages (path is too complex) are not of much help to the user.</p> <p>Also, when there are multiple paths, in cases where both paths are used (such as equal cost eigrp scenarios) there may be routing information that causes one path to be favored, but Path Analysis does not appear to be aware of this.</p> <p>Workaround: None.</p>
CSCdw03400	Path trace needs to give better information when trace fails.	<p>Path trace gives little or no information when trace fails. This severely limits the usefulness of the tool for troubleshooting. Path Analysis needs to provide better information to user on the reasons for trace failures.</p> <p>Workaround: None.</p>

**Table 3 Path Analysis Known Problems (continued)**

ID	Summary	Explanation
CSCdw03410	Path Voice Trace does not consider transcoding points.	<p>Current Campus Path Analysis Voice Trace is valid only in the case where the two endpoints are IP Phones registered with the same CCM cluster. For other cases (involving transcoding), Path does not know how to get correct path info.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Phone call from IP phone to POTS phone off H.323 gateway (e.g. 3640)</li> <li>• Phone call from one CCM cluster to another (where path would be from phone 1 to CCM 1, then from CCM 1 to CCM 2 via H.323 inter-cluster trunk, then from CCM 2 to phone 2)</li> <li>• Phone call to gateway (PSTN, analog, etc.)</li> <li>• Phone call to other servers (voicemail, conference, etc.)</li> </ul> <p>This is a very complex issue, and most likely will require new instrumentation from telephony servers, etc.</p> <p>Workaround:</p> <p>None.</p>

**Table 3 Path Analysis Known Problems (continued)**

ID	Summary	Explanation
CSCdw15555	Voice trace fails to get CCM cluster information if CCM HTTPD shuts down.	<p>Campus Path Analysis Voice Trace needs to query call managers known to ANI in order to see what cluster membership is.</p> <p>This is done via a HTTP query  <b>http://&lt;ccm-name&gt;/ccn/clusterinfo.asp</b></p> <p>EVVBU recommends customers to disable the webserver on all cluster members except one, as a security precaution (because they use IIS, and can be badly damaged by viruses such as Code Red and NIMDA). If cluster members have webserver shut off, then Path cannot get information on cluster membership and cannot retrieve CDRs.</p> <p>Workaround:  Turn the webserver on the CCM back on.</p>
CSCdw36518	Layer2 not shown between switches in different VTP Domains.	<p>When a trace is done between switches lying in different VTP domains, Layer2Trace will not be shown.</p> <p>Workaround:  None.</p>
CSCdw37811	PATH: Ifindex empty when traced to AP340 or AP350.	<p>IfIndex will not be shown properly for AP340/AP350.</p> <p>Workaround:  None.</p>
CSCin00624	PATH: Ifindex empty after trace -- HSRP.	<p>IfIndex may be empty after performing a trace involving HSRP route.r</p> <p>Workaround:  None.</p>

## User Tracking Known Problems

Information displayed in a row might not reflect the most current network state. Because User Tracking discovery takes information from routers and switches, which collect their information at different times, the information in a row reflects the state of the network or subnet at the time displayed in the Last Seen field.

**Table 4** *User Tracking Known Problems*

ID	Summary	Explanation
None	User Tracking discovery could span more than desired subnet.	<p>When you start subnet discovery of user nodes, devices in that subnet are marked for discovery. Since switches support multiple VLANs, discovery could span more than the desired subnet. User Tracking could discover additional end host nodes not in selected subnet.</p> <p>Workaround: None.</p>
CSCdk20561	Catalyst 3000 devices shown as multiple host entries with same MAC addresses but different VLAN information, causing duplicate entries after each User Tracking discovery.	<p>Catalyst 3000 devices appear as multiple host entries with same MAC addresses but different VLAN information, causing duplicate entries after each User Tracking discovery.</p> <p>Workaround: None.</p>
CSCdp83349	Cannot run User Tracking through command line without setting DISPLAY environment variable.	<p>DISPLAY environment variable must be set in order to run User Tracking through command line or standalone mode.</p> <p>Workaround: None.</p>

**Table 4** *User Tracking Known Problems (continued)*

ID	Summary	Explanation
CSCdr45212	IP phone table does not display SoftPhone entries.	<p>SNMP agent in Cisco CallManager 3.0 does not report any SoftPhone entries. Thus, User Tracking will not display SoftPhone entries in IP phone table.</p> <p>See CSCdr55949 for more information.</p> <p>Workaround:</p> <p>None.</p>
CSCdr53022	Cisco CallManagers are not discovered if there are CDP devices connected to the same hub.	<p>When Cisco CallManager (or host or IP phone) and CDP device are connected to same hub, User Tracking cannot discover that Cisco CallManager.</p> <p>Workaround:</p> <p>None.</p>
CSCdr85384	Phone entries displayed by User Tracking differ from entries displayed by Cisco CallManager.	<p>User Tracking phone entries acquired via SNMP for each Cisco CallManager may be different from entries in Cisco CallManager.</p> <p>Cisco CallManager database displays historical record of all phones registered to Cisco CallManager. SNMP agent retains only record of phones registered since agent was started, accounting for differences.</p> <p>Workaround:</p> <p>None.</p>
CSCds01217	Change in IP phone directory number is not recognized by User Tracking.	<p>When IP phone directory number is added, deleted, or changed, you must restart Cisco CallManager before User Tracking recognizes changes.</p> <p>See CSCdr55953 for more information.</p> <p>Workaround:</p> <p>None.</p>

**Table 4** *User Tracking Known Problems (continued)*

ID	Summary	Explanation
CSCds81070	IP phone entry in User Tracking main table may not have subnet information.	<p>When User Tracking discovers MAC entry belonging to network IP phone but is not able to find corresponding ARP (from router) to resolve its MAC to IP address, User Tracking attempts to match IP address with entries from phone table. When this happens, subnet information will be missing from phone entry.</p> <p>Workaround: None.</p>
CSCdt06183	User Tracking main table may not display all entries displayed in phone table.	<p>User Tracking entries shown in main table are discovered from network, whereas User Tracking entries shown in phone table are read from Cisco CallManager.</p> <p>If User Tracking cannot discover particular phones in network, entries for those phones in User Tracking phone table will not have device and port information.</p> <p>Workaround: None.</p>
CSCdt25525	User Tracking main table sometimes displays CDP-enabled devices that are outside of ANI discovery boundary.	<p>During User Tracking discovery, User Tracking reads entries from CAM table, which may include MAC addresses of devices that fall outside of ANI discovery boundary.</p> <p>Workaround: None.</p>

**Table 4** *User Tracking Known Problems (continued)*

ID	Summary	Explanation
CSCdt42619	Unable to save changes using keyboard shortcut (Ctrl+S).	<p>After modifying a cell, if you use keyboard shortcut (Ctrl+S) with cursor in editable cell, changes are not saved. Problem also occurs if you use any shortcut involving Ctrl key and then select File &gt; Save Changes.</p> <p>Workaround:</p> <p>Do not use any keyboard shortcuts involving Ctrl key when the cursor is in a editable cell.</p>
CSCdt74810	User Tracking, running on HP-UX clients, unable to load and display 30,000 rows in main table.	<p>By default, User Tracking, running on HP-UX clients, can load and display up to 20,000 rows in main table.</p> <p>Workaround:</p> <p>To enable User Tracking to load and display up to 40,000 rows in User Tracking main table, specify Java Virtual Machine (JVM) run-time parameters to use more memory.</p> <ol style="list-style-type: none"> <li>1. Launch Java Plug-in control panel.</li> <li>2. In Run Time Parameters field, enter <b>-mx128m</b></li> <li>3. Click <b>Apply</b>.</li> </ol>

**Table 4** User Tracking Known Problems (continued)

ID	Summary	Explanation
CSCdv17242	Printing User Tracking entries to a printer does not work if the client is a Windows2000 platform.	<p>This is because Java Plug-in for Windows2000 can generate hundreds of MB for the print job. Java Plug-in converts the print job to graphics (Postscript) format. For User Tracking with 250 entries, if the client is an NT 4.0 box, then the print job would be around 50MB.</p> <p>If the client is a Windows2000 box, then the print job is more than 160MB. Most printers may not have enough memory or spooler space to hold huge print jobs. It may take a long time to print.</p> <p>Workaround:</p> <p>Try to export User Tracking to a .txt file and then use Excel to print it out.</p>
CSCdw04486	User Tracking does not work for C2950 versions <12.0(5) WC2.	<p>In the catalyst 2950 version releases 12.0*WC(1), an agent bug CSCdu88701 has been filed.</p> <p>This states that an ‘agent skips rows in snmpgetnext request of dot1dTpFdbTable’.</p> <p>Hence, User Tracking will not be able to show up end hosts connected to this version of the device.</p> <p>Workaround:</p> <p>This has been fixed in the 12.0(5)WC2 release. Upgrade to this version.</p>

**Table 4** *User Tracking Known Problems (continued)*

ID	Summary	Explanation
CSCdw04499	User Tracking does not work for C3550 versions up to 12.1(6)EA1.	<p>User Tracking does not work for 3550 XL version releases 12.1(4)EA1 and 12.1(6)EA1. This is due to an agent bug CSCdu55510. This states that there is ‘No access to second STP instance using community instance index.’</p> <p>Hence, User Tracking will not be able to show up end hosts connected to the devices which run the above releases.</p> <p>Workaround:</p> <p>It has been fixed in the 12.1(6)EA1a release. Upgrade to this version.</p>
CSCin00181	Last seen field gets updated for disconnected ip phones.	<p>The Last Seen in Phone Tracking corresponds only to Last Seen on CCM and not to Last Seen on Network.</p> <p>Workaround:</p> <p>None.</p>
CSCdw09818	VLANE: Port attribute shows incorrect information.	<p>This problem is observed only with down ports, and the mib values returned by the devices seem to latch on the previous up speed and duplex. This is a problem in the agent side.</p> <p>Workaround:</p> <p>None.</p>
CSCdw13857	UT does not work for C4224 devices.	<p>This is caused by the agent not supporting VLAN-indexing for the BRIDGE-MIB. Hence the end hosts/phones connected to this device will not be shown up in the UT table.</p> <p>Workaround:</p> <p>None.</p>

**Table 4** User Tracking Known Problems (continued)

ID	Summary	Explanation
CSCdw15109	UT does not recognize VLAN change to default-VLAN.	<p>When a switch port is moved from an externally reachable VLAN to an unreachable VLAN, User Tracking will not recognize the change in VLAN.</p> <p>Workaround: None.</p>
CSCin00363	End host is not showing if obsolete ANI device IP address is assigned.	<p>If a CDP device is connected to the port and then a new end host is added, the new end host will not be learnt because ANI is not aware of such a change.</p> <p>Workaround: Delete the specific device and then do a ANI device specific discovery, followed by UT discovery.</p>
CSCin00365	A change of CCM registration adds a new record in phone table.	<p>CCM entries themselves respond with two entries. The change should be done in the CCM and not in the UT.</p> <p>Workaround: None.</p>
CSCdw44519	UTLite should, but does not, support all Windows clients.	<p>UT Lite does not work for Windows 98 clients.</p> <p>Workaround: None.</p>
CSCin06554	UT: Discover Subnet field empty sometimes.	<p>UT: Discover Subnet field will be empty sometimes. Initially it will have a list of all the discovered subnets. However, after the last discovery (for example, discovery of a specific end host), the subnet list becomes empty.</p> <p>Workaround: None.</p>
CSCdv18014	UTLite process utlite.exe does not terminate after running.	<p>UTLite process utlite.exe does not terminate after utlite runs on a workstation and sends the data to cw2k server.</p>

## Topology Services Known Problems

**Table 5**     *Topology Services Known Problems*

ID	Summary	Explanation
None	<b>OAM Ping</b> is only supported if ATM Switch Processor version is 4.0 or above for devices with FC-PFQ card.	If a device has an FC-PFQ feature card, <b>OAM Ping</b> is supported only if ATM Switch Processor version is 4.0 or later.  Workaround: None.
None	The supported ILMI configuration interface types are UNI, PNNI, and IISP.	In ATM Management Interface Configuration window, the only supported choices for ILMI Configuration Interface Type are UNI, PNNI, and IISP.  Workaround: None.
None	Multilayer Switch Module gigabit ports displayed as unknown-duplex.	Multi layer Switch Module does not have the MIB to support half- and full-duplex on gigabit ports. Therefore, those ports are displayed as unknown-duplex.  Workaround: None.
CSCdp47638, CSCdp47670	After a port change, both the old and the new link are displayed.	After a link is changed to a different port on same device, both old and new links appear. Instead of being displayed as a dashed red line, old link remains a solid red line.  Workaround:  Delete all links originating from both devices and rediscover the two devices.

**Table 5** *Topology Services Known Problems (continued)*

ID	Summary	Explanation
CSCdp69800	Correct last fail cause not shown for LAN Emulation client.	<p>If you select <b>Diagnosis&gt;LE Client&gt;LE Client Status</b>, last fail cause shown for a LAN Emulation client is cause reported by LAN Emulation server.</p> <p>Workaround: None.</p>
CSCdp88318	Link attributes are not updated after a change is made.	<p>If you change link attributes, ANI Server does not properly discover and display change in reports.</p> <p>Workaround: To update link attributes, close and relaunch Topology Services.</p>
CSCdr11577	Virtual Circuit (VC) error chart is blank.	<p>A blank chart could mean either a continuous polling failure or a failure due to other problems.</p> <p>For example, a blank VC error chart might be due to a continuous polling failure (of VC error related data) or because these statistics might not be supported on certain image versions of ATM switch being polled.</p> <p>Workaround: None.</p>
CSCds01210	Delete VLAN window remains open after a VLAN is deleted.	<p>The following actions result in problem:</p> <ol style="list-style-type: none"> <li>1. Launch Topology Services.</li> <li>2. Delete an existing VLAN. "Operation successful" dialog box appears.</li> <li>3. Click <b>OK</b>.</li> </ol> <p>Delete VLAN window does not close as expected. Busy icon is displayed, and user is unable to perform any operations within window.</p> <p>Workaround: Use Window close button to close.</p>

**Table 5** *Topology Services Known Problems (continued)*

ID	Summary	Explanation
CSCds61359, CSCds71941	Unable to select main topology window from Window menu.	<p>The following actions result in the problem:</p> <ol style="list-style-type: none"> <li>1. Launch Topology Services.</li> <li>2. Open Layer 2 topology map.</li> <li>3. Select main topology window from Window menu. The main topology window is not selected.</li> </ol> <p>Workaround: None.</p>
CSCin01977	Position of devices connected to SwitchCloud changed after upgrade.	<p>Switch clouds and fabrics represent the collection of LAN switches and ATM switches respectively. These logical entities are very specific to the currently discovered network i.e if there is a new switch discovered it can affect either of them to a very large extent. So uniquely identifying a switch cloud/fabric across ANI databases is not possible by current mechanisms.</p> <p>Workaround: None.</p>
CSCdt00478	Printing display view map from Topology Services sometimes results in errors.	<p>Labels may not be printed properly if display view map is printed with Labels option selected.</p> <p>Workaround: None.</p>
CSCdt21487	When the topology map of a large network is exported to Visio, an illegible Visio file is produced.	<p>Export topology map of large network into Visio and open resulting file. Device icons are positioned haphazardly and are difficult to make sense of.</p> <p>Workaround: Do not export entire topology map to Visio. Instead, select and export particular devices or segment of network.</p>

**Table 5** Topology Services Known Problems (continued)

ID	Summary	Explanation
CSCdt27824	Entire list of ports in a VTP domain is displayed when certain Transparent VTP domains are selected from VLAN Assignment dialog box.	<p>When similar VLAN definitions exist on a VTP server and transparent devices, VLAN is added under parent folder and all transparent devices. Thus, VLAN ports are displayed under all transparent devices.</p> <p>Workaround:</p> <p>Run <b>Find Ports</b> query and enter device name/address to view ports for that device.</p>
CSCdt28061	Unable to view map displaying highlighted device in Trace Report window.	<p>The following actions result in the problem:</p> <ol style="list-style-type: none"> <li>1. Install Campus Manager 3.2.</li> <li>2. Click <b>Display VCs Per Device</b>.</li> <li>3. Select device and click <b>Get Info</b>. All VCs in device are displayed.</li> <li>4. Select a VC and click <b>Trace Report</b>.</li> <li>5. In Trace Report window, click <b>Highlight Map</b>. Map displaying highlighted device is not launched.</li> </ol> <p>Workaround:</p> <p>None.</p>
CSCdt33558	ICS System Manager does not launch from Topology Services context menu.	<p>With Topology Services running in Internet Explorer browser, if you select <b>ICS System Manager</b> from context menu, it does not launch.</p> <p>Workaround:</p> <ol style="list-style-type: none"> <li>1. Open new Internet Explorer browser and type device IP address as URL— <b>http://device_ip_address</b>.</li> <li>2. Launch ICS System Manager from Topology Services running in Navigator browser.</li> </ol>

**Table 5** *Topology Services Known Problems (continued)*

ID	Summary	Explanation
CSCdt50396, CSCdt51095	Display VC Per Device window unusable after selecting a row and clicking <b>Get Info</b> .	<p>The following actions result in a problem: (Scenario #1)</p> <ol style="list-style-type: none"> <li>1. Launch Display VC Per Device window.</li> <li>2. With all VCs highlighted, select a device/port and click <b>Get Info</b>.</li> <li>3. After Get Info button becomes active again, select a different device/port.</li> <li>4. Select one of the displayed rows and click <b>Get Info</b>.</li> </ol> <p>(Scenario #2)</p> <ol style="list-style-type: none"> <li>1. Launch Display VC Per Device window.</li> <li>2. With all VCs highlighted, select a device/port and click <b>Get Info</b>.</li> <li>3. Before Get Info button becomes active again, select one of the displayed rows.</li> </ol> <p>Exception is returned in Java console, and Display VC Per Device window becomes unusable.</p> <p>Workaround: Close and relaunch Display VC Per Device window.</p>
CSCdt50619	Two devices, connected by multiple links, appear to be connected by only one link.	<p>When two devices are connected by multiple links, deleting and then rediscovering either devices or links causes all links to be stacked on top of each other. Consequently, devices appear as if they are connected by only one link.</p> <p>Workaround: Do a relayout.</p>

**Table 5** *Topology Services Known Problems (continued)*

ID	Summary	Explanation
CSCdv00136	VLAN management always adds VLAN 1 to trunk.	<p>If the trunk is not forwarding traffic for VLAN 1 (VLAN 1 is not added to the trunk) and you add any other VLAN, such as VLAN 7, to the trunk, VLAN 1 will also be added to the trunk, although it was not included in the add operation.</p> <p>Workaround:</p> <p>This has been fixed in the CatOS 6.3 version. Upgrade to this version.</p>
CSCdv21768	Discrepancy Report missing detail for C6509 v5.4.	<p>The Campus Manager Discrepancy report does not include trunking information under the "Detail" for a C6509 running Cat OS 5.4.</p> <p>Workaround:</p> <p>None.</p>
CSCdv41860	Topo Map: Fetching LANE components details gives AniSQLException.	<p>In Topology Services, If you create a LANE component in an atm switch(LS1010) and launch its view, all the Profile and Diagnosis menu items related to this component throws exception and displays the error message "Internal error".</p> <p>Workaround:</p> <p>None.</p>
CSCdw66262	ANI does not show devices using sysName.	<p>ANI does not show discovered devices using sysName even though sysName is defined.</p> <p>Workaround:</p> <p>Install CM32.IDU.v2-0.sol.tar.Z available at <a href="http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus">http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus</a></p>

**Table 5** Topology Services Known Problems (continued)

ID	Summary	Explanation
CSCdw49136	A break in connection between LANE and VLAN.	<p>When the LEC from the Catalyst is removed the connection between ATM-VLAN and VLAN is broken for 2900XL devices. This bug is due to the bug in the 2900XL agent devices wherein the CISCO-LEC-EXT-MIB is not supported.</p> <p>Workaround: None.</p>
CSCdw78798	Campus Map does not print well for a large map > 180 devices.	<p>Campus Manager has about 180+ devices on the Layer 2 Map. If the customer uses the Print All option, it prints the map on one page but the font size is too small and un-readable.</p> <p>Workaround: None.</p>
CSCdw83624	ANI does not support more than 2GB physical memory.	<p>ANIServer runs out of memory when server has more than 2GB physical memory.</p> <p>Workaround: Reduce the amount of physical memory to 1GB.</p>
CSCin00665	TOPO:Voice Port information not shown for C4224 images up to 12.1(5)YE3.	<p>This is due to a bug in the agent and the bug id is CSCdu08256.</p> <p>Workaround: This has been fixed in the images after 12.1(5)YE3. Upgrade to this version.</p>
CSCin01451	Cannot launch Customer Response Application URLs from Service Attributes window.	<p>The sysAppInstallPkgLocation MIB object returns /AppAdmin/ where as <a href="http://ip-address/AppAdmin">http://ip-address/AppAdmin</a> cannot launch the application as the application web server was running in a different port 6293.</p> <p>Workaround: Use CRA version 3.0(0.25) and higher to avoid this problem.</p>

**Table 5** *Topology Services Known Problems (continued)*

ID	Summary	Explanation
CSCdw19557	LANE: Peer Host and elan not shown for backup peers (LES).	<ol style="list-style-type: none"> <li>1. In a VTP domain map of the atm-vlan, select a switch that has LECS configured.</li> <li>2. Invoke Diagnosis &gt; LE Config Server &gt; Control Connections.</li> <li>3. Open Config Server control Connections for host. The list of control connections does not show the peer host and elan name.</li> </ol> <p>Workaround: None.</p>
CSCdw19584	VLANE: Error on invoking LES status whose mastership is unknown.	<p>Invoke VTP domain map of the atm-vlan and select a switch that has LES configured whose mastership state is unknown.</p> <p>From the map, Select Diagnosis &gt; LE/BU server &gt; LE Server Status. This gives an Exception.</p> <p>Workaround: None.</p>
CSCdw20967	VLANE: Missing info in Client ARP Information window.	<ol style="list-style-type: none"> <li>1. Create ELAN, LECS, LES, a backup LES and LEC.</li> <li>2. Select the ATM-VLAN, invoke view of the ATM-VLAN</li> <li>3. Invoke VTP domain map of the ATM-VLAN.</li> <li>4. Select a switch that has LECS and LEC configured.</li> <li>5. Select Diagnosis &gt; LE Client &gt; ARP Information</li> </ol> <p>This list shows all information for other clients in the same device, but does not show Host and Interface in other devices.</p> <p>Workaround: None.</p>

**Table 5** *Topology Services Known Problems (continued)*

<b>ID</b>	<b>Summary</b>	<b>Explanation</b>
CSCin06940	All 3550 flavours shown as Switch in Topo and as Router in Path.	All 3550 devices supported in Campus Manager 3.2 are shown as Switch in Topology Services and as Router in Path Analysis.  Workaround: Install CM32.IDU.v2-0.sol.tar.Z available at <a href="http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus">http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus</a>
CSCin08530	3550: Cannot assign Fast Ethernet ports to VLANs.	Could not assign Fast Ethernet ports to VLANs using VLAN Port Assignment for 3550 devices.  Workaround: None.
CSCin08900	3550: Port Attributes - Port Type is shown as other.	Port Attributes shows the port type as other for certain 3550 device flavours.  Workaround: None.
CSCdv42025	Cannot open Campus map on Visio 2002.	Export of Campus Manger map to microsoft visio 2002 fails.  Workaround: Export map to visio 5 or 2000 and then open the file in visio 2002.

## Resolved Problems

The following table lists the problems resolved since the last release of Campus Manager.

**Table 6**    *Resolved Problems*

<b>ID</b>	<b>Summary</b>	<b>Additional Information</b>
CSCdt06568	Layer 2 not shown from end station to HSRP router.	When a trace is done between the end-host and HSRP Virtual router, Path Analysis shows intermediate Layer 2 information correctly.
CSCdt26665	A line of text printed from most Topology Services dialogs that exceed the width of the page is truncated.	This problem has been resolved.
CSCdu14078	User Tracking does not age correctly.	User tracking is able to detect the change of IP address, VLAN and subnet information.
CSCdu32808	Campus Manager cannot get all detailed discrepancy reports exported into one file.	This problem has been resolved.
CSCdu69142	UT unable to discover hosts if multiple subnets are in same VLAN.	This problem has been resolved.
CSCdu84069	Physical Discrepancy Report shows MSFC port, i.e. 15/1 and 16/1, has portfast enabled.	This problem has been resolved.
CSCdv00632	Capability to sort using multiple keys is not present in CM 3.1.	The multiple sort feature has been added. An additional option has been added to Advanced Query tab which provides sort feature for both main table and phone table.
CSCdv12524	User Tracking PortName does not read correct object for CatOS/IOS.	This problem has been resolved.
CSCdv18629	User Tracking may show duplicate devices on channeled trunk links.	This problem has been resolved.

**Table 6** *Resolved Problems (continued)*

ID	Summary	Additional Information
CSCdv40526	User Tracking should dynamically update host changes (DHCP env).	User Tracking is able to detect the change of IP address of an end-host. (In ANIServer, properties set UTIPChange=1) However, when the end-host moves to a different VLAN (say across subnets) that normally leads to a change of IP address and when UTIPChange parameter is set to 1, IP address change is sometimes not recognized.
CSCdw00411	User Tracking does not poll all discovered VLANs.	This problem has been resolved.
CSCdw04677	Campus Manager Topology needs to trim domain suffix for sysName.	This problem has been resolved.
CSCdw68567	Cannot trim the domain suffixes from the sysName.	This problem has been resolved.
CSCdw73370	Cannot launch Telnet from Sever.	Now the application uses the telnet:// protocol from the browser. The browser should be configured properly for the telnet protocol.
CSCdw77105	Custom layout doesn't work via the CLI in User Tracking.	A new hash table was added to read the position of columns from the layout, and filter them when displaying data. The fix has been applied to createcolumnVisibilityTable function and the showdata function.

# Obtaining Documentation

These sections explain how to obtain documentation from Cisco Systems.

## World Wide Web

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com>

Translated documentation is available at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

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San Jose, CA 95134-9883

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## Obtaining Technical Assistance

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## Technical Assistance Center

The Cisco Technical Assistance Center (TAC) is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two levels of support are available: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Cisco TAC inquiries are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

The Cisco TAC resource that you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

### Cisco TAC Web Site

You can use the Cisco TAC Web Site to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to this URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

<http://www.cisco.com/register/>

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC Web Site, you can open a case online by using the TAC Case Open tool at this URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, we recommend that you open P3 and P4 cases through the Cisco TAC Web Site.

## Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

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