Release Notes for Cisco Wireless Control System for Windows or Linux, Release 7.0.240.0

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These release notes describe open caveats for the Cisco Wireless Control System 7.0.240.0 for Windows or Linux, which comprises part of the Cisco Unified Wireless Network Solution (Cisco UWN).

The Cisco Wireless Control System is hereafter referred to as WCS.

Contents

These release notes contain the following sections:

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Cisco Unified Wireless Network Solution Components

The following components are part of the Cisco UWN Solution and are compatible in this release:

- Operating system (Wireless LAN Controller and Cisco Aironet Lightweight Access Point)
- Cisco Wireless Control System (Cisco WCS)
- Cisco Mobility Services Engine
- Cisco WCS Navigator
- Cisco 2000 Series Wireless LAN Controllers
- Cisco 2100 Series Wireless LAN Controllers
- Cisco 2500 Series Wireless Controllers
- Cisco 4400 Series Wireless LAN Controllers
- Cisco 5500 Series Wireless Controllers
- Catalyst 3750G Wireless LAN Controller Switches
- Cisco Wireless Services Modules (WiSMs) for Cisco Catalyst 6500 Series Switches
- Cisco Wireless Services Module 2 (WiSM2) for Cisco Catalyst 6500 Series Switches
- Cisco Wireless Controller on SRE for ISR G2 Routers
- Cisco Flex 7500 Series Wireless Controllers
- Cisco WLAN Controller Network Modules for Cisco Integrated Services Routers
- Cisco Aironet 1040, 1100, 1130, 1140, 1200, 1230, 1240, 1250, 1260, 1310, 1500, 1524, 1552, 3500i, 3500e, 3500p Series Lightweight Access Points
- Cisco Aironet 801, 1040, 1100, 1130, 1141, 1142, 1200, 1240, 1250, and 1260 Autonomous Access Points
- Autonomous Access Points for 1801, 1802, 1803, 1811, 1812, 801, 802, 851, 857, 871, 876, 877, and 878 Cisco Integrated Services Routers

  Note Autonomous APs that are integrated in ISR are supported.

- Cisco Aironet 1310 and 1410 Bridges

  Note Only bridges in autonomous modes are supported.

- Cisco 600 Series OfficeExtend Access Points
- Cisco Aironet Access Points running Lightweight Access Point Protocol (LWAPP) or Control and Provisioning of Wireless Access Points protocol (CAPWAP).

The AP801 is an integrated access point on the Cisco 800 Series Integrated Services Routers (ISRs). For more information on the SKUs for the access points and the ISRs, refer to the following data sheets:

- AP860:
  - http://www.cisco.com/en/US/prod/collateral/routers/ps380/data_sheet_c78_461543.html
- AP880:

  - http://www.cisco.com/en/US/prod/collateral/routers/ps380/data_sheet_c78_459542_ps380_Products_Data_Sheet.html
  - http://www.cisco.com/en/US/prod/collateral/routers/ps380/data_sheet_c78-613481.html
  - http://www.cisco.com/en/US/prod/collateral/routers/ps380/ps10082/data_sheet_c78_498096.html
  - http://www.cisco.com/en/US/prod/collateral/routers/ps380/ps10082/data_sheet_c78-682548.html
- AP890:
  - http://www.cisco.com/en/US/prod/collateral/routers/ps380/data_sheet_c78-519930.html

Note The AP802 is an integrated access point on the Next Generation Cisco 880 Series Integrated Services Routers (ISRs).

Cisco WCS Requirements

The following server hardware and software is required to support the WCS for Windows or Linux.

Server Hardware Requirements

The WCS can be run on a workstation or server, and access points can be distributed unevenly across controllers.

High-end Server

- Supports up to 3000 Cisco Aironet lightweight access points, 1250 standalone access points, and 750 Cisco wireless LAN controllers.
- 3.16 GHz Intel Xeon Quad processor X5406 or better.
- 8-GB RAM.
- 200-GB minimum free disk space is needed on your hard drive.

Note If you choose a CPU configuration that is different from what is provided for guidance, you may use a website like the following to perform the benchmark tests and assess whether the alternate CPU meets the WCS minimum requirements:
http://www.cpubenchmark.net

Note If you use multiple CPU configurations, the benchmarking sites (like the above website) also allow you to make comparisons based on the number of cores that are being selected per CPU.

Note The free disk space listed is a minimum requirement but may be different for your system, depending on the number of backups.

This section contains the following topics:

Unified Computing System

The following Cisco Unified Computing System (UCS) C-Series servers provide guidance to plan your system requirements for either UCS or equivalent hardware platform. Any server can be used if it meets the minimum requirements.

Cisco UCS C-Series M1 Server

The following are the recommended specifications for the Cisco UCS C-Series M1 Server, but you can choose higher processing capabilities:

- One Intel Xeon 5500 series processor X5570 (4-core 2.93-GHz).

Note If your processor speed is less than this, we recommend that you use two processors.

- 8-GB RAM.
- 200-GB minimum free disk space on your hard drive.

Cisco UCS C-Series M2 Server

The following are the recommended specifications for the Cisco UCS C-Series M2 Server, but you can choose higher processing capabilities:

- One Intel Xeon 5600 series processor X5680 (6-core 3.33-GHz) or one Intel Xeon 5600 series processor X5670 (6-core 2.93-GHz).
- 8-GB RAM.
- 200-GB minimum free disk space on your hard drive.

Standard Server

- Supports up to 2000 Cisco Aironet lightweight access points, 1000 standalone access points, and 450 Cisco wireless LAN controllers.
- 3.2-GHz Intel Dual Core processor or better.
- 2.13-GHz Intel Quad Core X3210 processor.
- 2.16-GHz Intel Core2 processor.
- 4-GB RAM.
- 80-GB minimum free disk space is needed on your hard drive.

Note If you choose a CPU configuration that is different from what is provided for guidance in this section, you may use a website like the following to perform the benchmark tests and assess whether the alternate CPU meets the WCS minimum requirements:
http://www.cpubenchmark.net

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Unified Computing System

The following Cisco Unified Computing System (UCS) C-Series servers provide guidance to plan your system requirements for either UCS or equivalent hardware platform. Any server can be used if it meets the minimum requirements.

Cisco UCS C-Series M1 Server

The following are the recommended specifications for the Cisco UCS C-Series M1 Server, but you can choose higher processing capabilities:

- One Intel Xeon 5500 series processor X5570 (4-core 2.93-GHz) or one Intel Xeon 5500 series processor X5550 (4-core 2.66-GHz) or one Intel Xeon 5500 series processor E5540 (4-core 2.53-GHz).
- 4-GB RAM.
- 80-GB minimum free disk space on your hard drive.

Cisco UCS C-Series M2 Server

The following are the recommended specifications for the Cisco UCS C-Series M2 Server, but you can choose higher processing capabilities:

- One Intel Xeon 5600 series processor X5650 (6-core 2.66-GHz) or one Intel Xeon 5600 series processor X5670 (6-core 2.93-GHz).
- 4-GB RAM.
- 80-GB minimum free disk space on your hard drive.

Low-end Server

- Supports up to 500 Cisco Aironet lightweight access points, 200 standalone access points, and 125 Cisco wireless LAN controllers.
- 3.06-GHz Intel processor or better.
- 1.86-GHz Intel Dual core processor.
- 2-GB RAM.
- 50 GB minimum free disk space is needed on your hard drive.

Note If you choose a CPU configuration that is different from what is provided for guidance in this section, you may use a website like the following to perform the benchmark tests and assess whether the alternate CPU meets the WCS minimum requirements: http://www.cpubenchmark.net

Note For all server levels, AMD processors equivalent to the listed Intel processors are also supported.

Note The free disk space listed is a minimum requirement, but several variables (such as backups) impact the disk space.

This section contains the following topics:

Unified Computing System

The following Cisco Unified Computing System (UCS) C-Series servers provide guidance to plan your system requirements for either UCS or equivalent hardware platform. Any server can be used if it meets the minimum requirements.

Cisco UCS C-Series M1 Server

The following are the recommended specifications for the Cisco UCS C-Series M1 Server, but you can choose higher processing capabilities:

- One Intel Xeon 5500 series processor X5550 (4-core 2.66-GHz).
- 2-GB RAM.
- 50-GB minimum free disk space on your hard drive.

Cisco UCS C-Series M2 Server

The following are the recommended specifications for the Cisco UCS C-Series M2 Server, but you can choose higher processing capabilities:

- One Intel Xeon 5600 series processor X5650 (6-core 2.66-GHz).
- 2-GB RAM.
- 50-GB minimum free disk space on your hard drive.

Operating Systems Requirements

The following operating systems are supported:

- Windows 2003/SP2 and Windows 2003 R2/SP2 32-bit installations with all critical and security Windows updates installed.

  Windows 2003/SP2 64-bit installations are not supported. A 32-bit operating system running on a 64-bit capable hardware is supported.

Note WCS does not support Physical Address Extension (PAE) for Windows 2003 32-bit installations. A workaround is to disable PAE and use less memory (not more than 4 GB). See the instruction from Microsoft at the following URL: http://msdn.microsoft.com/en-us/library/windows/desktop/aa366778(v=vs.85).aspx#physical_memory_limits_windows_server_2003_sp2.

- Red Hat Linux Enterprise Server 5.X 32-bit operating system installations.

  Red Hat Linux Enterprise Server 5.X 64-bit operating system installations are not supported. A 32-bit operating system running on a 64-bit capable hardware is supported.

- Windows 2003 and Red Hat Linux version support on VMware ESX version 3.0.1 and later with either local storage or SAN over fiber channel.

  Individual operating systems running WCS in VMware must follow the specifications for the size of WCS that you intend to use.

Client Requirements

The WCS user interface supports the following browsers:

- Internet Explorer 8.0 or later with the Flash plugin.
- Mozilla Firefox 16.0 or later releases.

The WCS user interface does not support the following browsers:

- Internet Explorer 6.0.
- Google Chrome.

Note We strongly advise that you do not enable third-party browser extensions. In Internet Explorer, you can disable third-party browser extensions by choosing Tools > Internet Options and unselecting the Enable third-party browser extensions check box on the Advanced tab.

Using a web browser running on Windows 2003 to access the WCS web GUI is not recommended because Windows 2003 security settings may cause browsing problems.

The client running the browser must have a minimum of 1-GB RAM and a 2-GHz processor. The client device should not be running any CPU or memory-intensive applications.

Note The minimum screen resolution recommended for both WCS and Navigator use is 1024 x 768 pixels.

Table 1-1 lists the WCS supported versions of controller, location, and mobility services engine (MSE),

Table 1-1 WCS Versions

WCS Version	Supported Controller Versions	Supported Location Server Versions	Supported MSE Versions	Release Date	Upgrade Supported From	Operating System Requirement
7.0.240.0	7.0.240.0 7.0.235.3 7.0.235.0 7.0.230.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0 6.0.202.0 6.0.199.4 6.0.196.0 6.0.188.0 6.0.182.0 6.0.108.0 5.2.193.0 5.2.178.0 5.2.157.0 4.2.209.0 4.2.207.0 4.2.205.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	–	7.0.240.0	January 2013	7.0.230.0 7.0.220.0 7.0.172.0 7.0.164.3 7.0.164.0 6.0.202.0 6.0.196.0 6.0.181.0 6.0.170.0 6.0.132.0 5.2.148.0 5.2.130.0 5.2.125.0 5.2.110.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

Table 1-1 WCS Versions (continued)

WCS Version	Supported Controller Versions	Supported Location Server Versions	Supported MSE Versions	Release Date	Upgrade Supported From	Operating System Requirement
7.0.230.0	7.0.235.3 7.0.235.0 7.0.230.0 7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0 6.0.202.0 6.0.199.4 6.0.196.0 6.0.188.0 6.0.182.0 6.0.108.0 5.2.193.0 5.2.178.0 5.2.157.0 4.2.209.0 4.2.207.0 4.2.205.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	–	7.0.230.0	January 2012	7.0.220.0 7.0.172.0 7.0.164.3 7.0.164.0 6.0.202.0 6.0.196.0 6.0.181.0 6.0.170.0 6.0.132.0 5.2.148.0 5.2.130.0 5.2.125.0 5.2.110.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

Table 1-1 WCS Versions (continued)

WCS Version	Supported Controller Versions	Supported Location Server Versions	Supported MSE Versions	Release Date	Upgrade Supported From	Operating System Requirement
7.0.220.0	7.0.220.0 7.0.116.0 7.0.98.218 7.0.98.0 6.0.202.0 6.0.199.4 6.0.196.0 6.0.188.0 6.0.182.0 6.0.108.0 5.2.193.0 5.2.178.0 5.2.157.0 4.2.209.0 4.2.207.0 4.2.205.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	–	7.0.220.0	October 2011	7.0.172.0 7.0.164.3 7.0.164.0 6.0.202.0 6.0.196.0 6.0.181.0 6.0.170.0 6.0.132.0 5.2.148.0 5.2.130.0 5.2.125.0 5.2.110.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
7.0.172.0	7.0.116.0 7.0.98.218 7.0.98.0 6.0.202.0 6.0.199.4 6.0.196.0 6.0.188.0 6.0.182.0 6.0.108.0 5.2.193.0 5.2.178.0 5.2.157.0 4.2.209.0 4.2.207.0 4.2.205.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	–	7.0.201.0	April 2011	7.0.164.3 7.0.164.0 6.0.202.0 6.0.196.0 6.0.181.0 6.0.170.0 6.0.132.0 5.2.148.0 5.2.130.0 5.2.125.0 5.2.110.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

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Table 1-1 WCS Versions (continued)

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6.0.202.0	6.0.202.0 6.0.199.4 6.0.199.0 (pulled from CCO) 6.0.196.0 6.0.188.0 6.0.182.0 6.0.108.0 5.2.193.0 5.2.178.0 5.2.157.0 5.1.163.0 5.1.151.0 4.2.209.0 4.2.207.0 4.2.205.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	6.0.202.0	6.0.202.0	April 2011	6.0.196.0 6.0.181.0 6.0.170.0 6.0.132.0 5.2.148.0 5.2.130.0 5.2.125.0 5.2.110.0 5.1.65.4 5.1.64.0 4.2.128.0 4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
6.0.196.0	6.0.199.4 6.0.199.0 (pulled from CCO) 6.0.196.0 6.0.188.0 6.0.182.0 6.0.108.0 5.2.193.0 5.2.178.0 5.2.157.0 5.1.163.0 5.1.151.0 4.2.209.0 4.2.207.0 4.2.205.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	6.0.102.0	6.0.105.0	15 July 2010	6.0.181.0 6.0.170.0 6.0.132.0 5.2.148.0 5.2.130.0 5.2.125.0 5.2.110.0 5.1.65.4 5.1.64.0 4.2.128.0 4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

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6.0.170.0	6.0.188.0 6.0.182.0 6.0.108.0 5.2.193.0 5.2.178.0 5.2.157.0 5.1.163.0 5.1.151.0 4.2.207.0 4.2.205.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	6.0.97.0	6.0.97.0	8 Nov 2009	6.0.132.0 5.2.148.0 5.2.130.0 5.2.125.0 5.2.110.0 5.1.65.4 5.1.64.0 4.2.128.0 4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
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5.2.148.0	5.2.193.0 5.2.178.0 5.2.157.0 5.1.151.0 5.0.148.2 5.0.148.0 4.2.207.0 4.2.205.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	5.2.100.0	5.2.100.0	25 June 2009	5.2.130.0 5.2.125.0 5.2.110.0 5.1.65.4 5.1.64.0 5.0.72.0 5.0.56.2 5.0.56.0 4.2.128.0 4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
5.2.130.0	5.2.178.0 5.2.157.0 5.1.151.0 5.0.148.2 5.0.148.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	5.2.91.0	5.2.91.0	21 Feb 2009	5.2.125.0 5.2.110.0 5.1.65.4 5.1.64.0 5.0.72.0 5.0.56.2 5.0.56.0 4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
5.2.125.0	5.2.178.0 5.2.157.0 5.1.151.0 5.0.148.2 5.0.148.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	5.2.91.0	5.2.91.0	10 Feb 2009	5.2.110.0 5.1.65.4 5.1.64.0 5.0.72.0 5.0.56.2 5.0.56.0 4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

Table 1-1 WCS Versions (continued)

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5.2.110.0	5.2.157.0 5.1.151.0 5.0.148.2 5.0.148.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	5.2.91.0	5.2.91.0	24 Nov 2008	5.1.64.0 5.0.72.0 5.0.56.2 5.0.56.0 4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.1 RHEL 5.0 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
5.1.65.4	5.1.163.0 5.1.151.0 5.0.148.2 5.0.148.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	5.1.35.0	5.1.35.0	9 Jan 2009	5.1.64.0 5.0.72.0 5.0.56.2 5.0.56.0 4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.x RHEL 5.x Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
5.1.64.0	5.1.151.0 5.0.148.2 5.0.148.0 4.2.176.0 4.2.173.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0	5.1.30.0	5.1.30.0	21 July 2008	5.0.56.2 5.0.56.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0	Windows 2003 SP2 32-bit RHEL 5.1 RHEL 5.0 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
5.0.72.0	5.0.148.2 5.0.148.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0 4.1.185.0 4.1.171.0	4.0.38.0	–	5 Aug 2008	5.0.56.2 5.0.56.0 4.2.62.11 4.2.62.0 4.1.91.0 4.1.83.0	Windows 2003 SP2 32-bit RHEL 5.1 RHEL 5.0 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

Table 1-1 WCS Versions (continued)

WCS Version	Supported Controller Versions	Supported Location Server Versions	Supported MSE Versions	Release Date	Upgrade Supported From	Operating System Requirement
5.0.56.2	5.0.148.0 4.2.61.0 4.1.x.x	4.0.33.0	–	14 Apr 2008	5.0.56.0 4.2.62.11 4.2.62.0 4.1.91.0 4.1.83.0	Windows 2003 SP2 32-bit RHEL 5.0 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
5.0.56.0	5.0.148.0 4.2.61.0 4.1.x.x	4.0.32.0	–	16 Feb 2008	4.2.62.11 4.2.62.0 4.1.91.0 4.1.83.0	Windows 2003 SP2 32-bit RHEL 5.0 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
4.2.128.0	4.2.207.0 4.2.205.0 4.2.176.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0 4.1.185.0 4.1.171.0 4.0.216.0 4.0.206.0 4.0.179.11 4.0.179.8 4.0.155.0	3.1.43.0	–	13 May 2009	4.2.110.0 4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0 4.1.91.0 4.1.83.0 4.0.100.0 4.0.97.0 4.0.96.0 4.0.87.0 4.0.81.0 4.0.66.0	Windows 2003 SP2 32-bit RHEL 4.0 RHEL 5.0 (5.1 and later no supported) Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

Table 1-1 WCS Versions (continued)

WCS Version	Supported Controller Versions	Supported Location Server Versions	Supported MSE Versions	Release Date	Upgrade Supported From	Operating System Requirement
4.2.110.0	4.2.176.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0 4.1.185.0 4.1.171.0 4.0.216.0 4.0.206.0 4.0.179.11 4.0.179.8 4.0.155.0	3.1.42.0	–	29 Sep 2008	4.2.97.0 4.2.81.0 4.2.62.11 4.2.62.0 4.1.91.0 4.1.83.0 4.0.100.0 4.0.97.0 4.0.96.0 4.0.87.0 4.0.81.0 4.0.66.0	Windows 2003 SP2 32-bit RHEL 4.0 RHEL 5.0 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
4.2.97.0	4.2.176.0 4.2.130.0 4.2.112.0 4.2.99.0 4.2.61.0 4.1.185.0 4.1.171.0 4.0.216.0 4.0.206.0 4.0.179.11 4.0.179.8 4.0.155.0	3.1.38.0	–	3 Jun 2008	4.2.81.0 4.2.62.11 4.2.62.0 4.1.91.0 4.1.83.0 4.0.100.0 4.0.97.0 4.0.96.0 4.0.87.0 4.0.81.0 4.0.66.0	Windows 2003 SP2 32-bit RHEL 4.0 RHEL 5.0 Windows/RHEL on ESX 3.0.1 and later No support for 64 bit
4.2.81.0	4.2.99.0 4.2.61.0 4.1.185.0 4.1.171.0 4.0.216.0 4.0.206.0 4.0.179.11 4.0.179.8 4.0.155.0	3.1.36.0	–	17 Mar 2008	4.2.62.11 4.2.62.0 4.1.91.0 4.1.83.0 4.0.100.0 4.0.97.0 4.0.96.0 4.0.87.0 4.0.81.0 4.0.66.0	Windows 2003 SP2 32-bit RHEL 4.0 RHEL 5.0 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

Table 1-1 WCS Versions (continued)

WCS Version	Supported Controller Versions	Supported Location Server Versions	Supported MSE Versions	Release Date	Upgrade Supported From	Operating System Requirement
4.2.62.11	4.2.61.0 4.1.185.0 4.1.171.0 4.0.216.0 4.0.206.0 4.0.179.11 4.0.179.8 4.0.155.0	3.1.35.0	–	25 Jan 2008	4.2.62.0 4.1.91.0 4.1.83.0 4.0.100.0 4.0.97.0 4.0.96.0 4.0.87.0 4.0.81.0 4.0.66.0	Windows 2003 SP2 32-bit RHEL 4.0 Update 5 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit
4.2.62.0	4.2.61.0 4.1.185.0 4.1.171.0 4.0.216.0 4.0.206.0 4.0.179.11 4.0.179.8 4.0.155.0	3.1.35.0	–	9 Nov 2007	4.1.91.0 4.1.83.0 4.0.100.0 4.0.97.0 4.0.96.0 4.0.87.0 4.0.81.0 4.0.66.0	Windows 2003 SP2 32-bit RHEL 4.0 Update 5 Windows/ RHEL on ESX 3.0.1 and later No support for 64 bit

WCS on WLSE Appliance

The WCS on a WLSE appliance supports up to 1500 Cisco Aironet lightweight access points and 161 Cisco wireless LAN controllers. The required processor is a 3.16-GHz Intel Xeon processor (or AMD equivalent) with 3-GB RAM and 38 GB of free hard drive space.

The Windows operating system is not supported with the Cisco WCS on the WLSE appliance.

Finding the Software Release

To find the software release that the WCS is running, see the *Cisco Wireless Control System Configuration Guide*. If WCS is already installed and connected, verify the software release by choosing **Help > About the Software**.

Upgrading WCS

This section provides instructions for upgrading the WCS on either a Windows or Linux server. It handles the steps you normally follow to accomplish a manual upgrade (shut down WCS, perform a backup, remove the old WCS version, install the new version, restore the backup, and start WCS). If you choose to use the installer, it searches for any previous WCS versions.

If you choose to use the easy upgrade process, it provides error checking at each step and gives an informative message if an error that causes an exit occurs. An upgrade-*version*.log is also produced and provides corrective measures.

Note For steps on upgrading WCS in a high availability environment, see Chapter 14, "Performing Maintenance Operations" of the *Cisco Wireless Control System Configuration Guide*.

Note If the WCS is configured to use TACACS+ or RADIUS for external authentication, you should update the custom vendor attribute list in the TACACS+ or RADIUS server with any new permissions. The attribute list for the appropriate UserGroup can be found at Administration > AAA > UserGroups. Click the **Export** link for the appropriate user group. See Chapter 14 "Performing Maintenance Operations" of the *Cisco Wireless Control System Configuration Guide* for additional information regarding upgrading.

Using the Installer to Upgrade WCS for Windows

To upgrade WCS (on a Windows platform) using the automated upgrade, follow these steps:

Step 1 Insert the Windows Cisco WCS CD into the CD-ROM drive and double-click the WCS-STANDARD-K9-7.0.X.Y.exe file where 7.0.X.Y is the software build. If you downloaded the installer from Cisco.com, double-click the WCS-STANDARD-WB-K9-7-0-X-Y.exe file that you downloaded to your local drive. The Install Anywhere window appears and prepares the system for installation. After a few seconds, the Introduction window appears, followed by the license agreement window.

Step 2 Click the **I accept the terms of the License Agreement** option to continue. At this point, the install wizard detects whether a previous version of the WCS is installed and specifies whether the current version is eligible for an automated upgrade. If your most recent WCS version cannot participate in the automated upgrade, you receive such a notice.

Step 3 Choose **Install** and switch to the manual upgrade. (See the *Cisco Wireless Control System Configuration Guide* for manual upgrade instructions.) If your WCS version is eligible for an automated upgrade and the previous qualifying version of WCS is detected, choose **Upgrade** and continue to Step 4. This method is preferred.

Several of the values from the previous installation are retained as part of the upgrade. These include the following:

- The ports
- The root password
- The root FTP password
- The TFTP server file location
- The FTP server file location
- The multi-homed server interfaces

Step 4 Choose a folder in which to install the WCS at the Choose Install Folder page. It must be a different location than the previous installation. Click **Next** to continue.

Step 5 Choose a folder location in which to store the shortcuts. It must be a different location than the previous installation.

Step 6 Continue to follow the prompts that appear. You are notified when the system checks for required space, uninstalls previous versions, backs up files, restores, and so on. A prompt appears asking if you are ready to start WCS as a service. Click **Yes**.

Note The upgrade log is located in the standard log directory (\webnms\logs) if the automated upgrade completes. If the automated upgrade did not complete, the upgrade log is located in the user home directory.

Using the Installer to Upgrade WCS for Linux

To upgrade the WCS (on a Linux platform) using the automated upgrade, follow these steps:

Step 1 Using the command-line interface, perform one of the following:

a. If you are installing from a CD, switch to the /media/cdrom directory.

b. If you are installing from Cisco.com, switch to the directory in which the install file was downloaded. For example, if the install file was placed in /root/Desktop, enter **cd /root/Desktop**.

Step 2 Enter **./WCS-STANDARD-K9-7.0.X.Y.bin** (for CD users) or **./WCS-STANDARD-LB-K9-7-0-X-Y.bin** (for Cisco.com users) to start the install script. The Install Anywhere message appears and prepares the system for installation. After a few seconds, the Introduction appears, followed by the license agreement statement.

Step 3 Accept the license agreement to continue.

At this point, the install wizard detects whether a previous version of WCS is installed and specifies whether the current version is eligible for an automated upgrade. You receive a notification whether or not your most recent WCS version is eligible for the automated upgrade.

Step 4 If you cannot continue to the automated upgrade because your current WCS version is not eligible, choose **Install** and continue to the manual upgrade (see the *Cisco Wireless Control System Configuration Guide* for manual upgrade instructions). You can also choose to do a manual upgrade rather than the recommended automated upgrade by choosing **Install** and continuing to the manual upgrade, but this action is not recommended. If your current WCS version is eligible for the recommended automated upgrade, choose **Upgrade** and continue to Step 6.

Several of the values from the previous installation are retained and carried over as part of the upgrade. These include the following:

- The ports
- The root password
- The root FTP password
- The TFTP server file location
- The FTP server file location
- The multi-homed server interfaces

Step 5 Choose a folder in which to install the WCS. It must be a different location than the previous installation. Click **Next** to continue.

Step 6 Choose a folder location to store the shortcuts. It must be a different location than the previous installation.

Step 7 Continue to follow the prompts that appear. You are notified when the system checks for required space, uninstalls previous versions, backs up files, restores, and so on. A prompt appears asking if you are ready to start the WCS as a service. Click **Yes**.

Note The upgrade log is located in the standard log directory (\webnms\logs) if the automated upgrade completes. For an incomplete automated upgrade, the upgrade log is located in the user home directory.

Restoring the WCS Database in a High Availability Environment

During installation, you are prompted to determine if a secondary WCS server would be used for high availability support to the primary WCS server. If you opted for this high availability environment and enabled it in the Administration > High Availability page, the status appears as *HA enabled*. Before performing a database restore, you must convert the status to *HA not configured*.

Note If the restore is performed while the status is set to *HA enabled*, unexpected results may occur.

Follow one of these procedures to change the status from *HA enabled* to *HA not configured*:

- Click **Remove** in the HA Configuration page (Administration > High Availability).
- Restart the primary server. Go to the secondary HealthMonitor GUI (https://<SecondaryWCS>:8082) and click **Failback**.

This procedure is used when one of the following instances has occurred:

- The primary server is down and a failover has not been executed, so the secondary server is in the SecondaryLostPrimary state.
- The primary server is down and a failover is already executed, so the secondary server is in the SecondaryActive state.

The primary server now is in HA Not Configured mode, and you can safely perform a database restore.

Important Notes

This section describes important information about the WCS.

If you change the report repository path in Administration > Settings > Report, then the existing saved download report no longer works. To fix this problem, manually move the files to the new directory by cutting and pasting the files.

WPlus License Features Included in Base License

All features included in a Wireless LAN Controller WPlus license are now included in the base license; this change is introduced in controller Release 6.0.196.0. There are no changes to WCS BASE and PLUS licensing.

These WPlus license features are included in the base license:

- Office Extend AP
- Enterprise Mesh
- CAPWAP Data Encryption

The licensing change can affect features on your wireless LAN when you upgrade or downgrade controller software releases, so you should be aware of these guidelines:

- If you have a WPlus license and you upgrade from 6.0.18x to 6.0.195.0, your license file contains both Basic and WPlus license features. You do not see any disruption in feature availability and operation.
- If you have a WPlus license and you downgrade from 6.0.195.0 to 6.0.18x, the license file in 6.0.195.0 contains both Basic and WPlus license features, so you do not see any disruption in feature availability and operation.
- If you have a base license and you downgrade from 6.0.195.0 to 6.0.18x: When you downgrade, you lose all WPlus features.

Note Some references to Wireless LAN Controller WPlus licenses remain in WCS and in the controller CLI and GUI in release 6.0.196.0. However, WPlus license features have been included in the Base license, so you can ignore those references.

Duplicate AP Name

If you see access points with the same name while applying controller templates or adding them to the map, perform a refresh config. The duplicates in the database are eliminated.

High Availability

An e-mail address is now optional when you configure high availability. However, if you enter a properly formatted e-mail address, you must also configure a WCS e-mail server.

Note High availability is supported on Linux, on Windows 2003, and on VMware environments. Specific operating system support is listed in the "Operating Systems Requirements" section on page 6.

Client Session Report

The new client session report replaces the existing Client Association and Client Detail Reports. If you perform an upgrade, Client Association no longer appears on the Reports menu. The data pertaining to these reports migrates successfully, and saved report entries for Client Association and Client Detail reports are migrated. However, the new ClientSessionInfo table is not populated with data from the previous reporting period; the table is populated with client-related data that occurred after the upgrade. The new client detail report contains the details of association time, disassociation time, and session timeout with details of VLAN, session length, client location, Megabit information used, SNR, RSSI, and throughput.

Cisco WCS Supported on Windows 2003 English and Japanese Operating Systems Only

The WCS is supported only on English or Japanese versions of the Windows 2003 operating system. Display problems sometimes occur when you install and run the WCS on operating systems translated to other languages or with locale settings other than English or Japanese.

Notifications in Junk E-mail Folder

If a domain name is not set in the e-mail settings, notifications may end up in the junk e-mail folder. When the primary device is down, no e-mail notifications are received, but the log message indicates that an e-mail was successfully sent.

Internet Explorer Error

When you click certain links that call JavaScript code, you may get an Internet Explorer error as follows:

Problems with this web page might prevent it from being displayed properly or functioning properly. In the future, you can display this message by double-clicking the warning icon displayed in the status bar.

This problem appears if another program has deregistered the dynamic-link library (DLLs). Reregistering them corrects the problem.

To reregister the DLLs, follow these steps:

Step 1 Open a command-line window in Windows XP (Choose **Start > All Programs > Accessories > Command Prompt**).

Step 2 Enter the following commands one at a time in the following order. After each command successfully runs, you should receive a message that the DllRegisterServer in_*something*.dll succeeded.

1. regsvr32 msscript.ocx
2. regsvr32 dispex.dll
3. regsvr32 vbscript.dll
4. regsvr32 scrrun.dll
5. regsvr32 urlmon.dll
6. regsvr32 actxprxy.dll
7. regsvr32 shdocvw.dll

Step 3 Restart the computer.

Notes About Google Earth

When you launch Google Earth, the following message appears:

```
Google Earth could not write to the current cache or myplaces file location. The values
will be set as follows:
My Places Path:"C:\Document and Settings\userid\Application Data\Google\GoogleEarth"
```

```
Cache Path: "C:\Documents and Settings\userid\Local Settings\Application
Data\Google\GoogleEarth"
```

This behavior is expected.

Also, if you visit the AP Details page a second time, you get an "invalid path / googleArthLradDetails was requested" HTTP status message. This Google Earth problem can be resolved by deleting the first AP Details occurrence.

Windows XP Cannot Load CAD Files

Internet Explorer 7 running on Windows XP cannot load CAD files because of missing DLLs (C:\Windows\system\DWMAPI.DLL). These DLLs are present only on Windows Vista.

Leave IE7 and install the missing DLLs.

Deletion of TFTP Server is Not Updated in the Configuration Backup

To add a TFTP server, choose **Configure > Controller Templates**, choose **TFTP server** from the left navigation pane, and choose **Add TFTP Server** from the drop-down list. To add the TFTP server, enter the name and IP address, and click **Save**. If you later delete this TFTP server and back up the configuration (Administration > Background Task > Configuration Backup), the IP address of the TFTP server still appears in the TFTP Server page when only the default server appears.

Conflicting Ports Interrupt WCS Start

The WCS fails to start if there is a conflicting port in use. You receive a "Failed to start WCS server" message, but you do not receive a list of conflicting ports. Go to WCS/webnms/logs/wcs-0-0.log and view the conflicting ports. Enter the following to get a list of the process IDs associated with each connection:

In Windows XP and Windows Server 2003, enter **netstat -na0**.

In Linux, enter **netstat -nlp**.

In the Task Manager, you see the respective PID and can stop the process using the port that the WCS requires.

Removing and Reconfiguring HA

After removing and reconfiguring high availability, the primary and secondary WCS do not work. This is caused if you open any file under the <WCSROOT> while an HA operation is performed. During normal HA operation in windows environment, do not open any file or directory under the <WCSROOT> directory.

CleanAir

To enable CleanAir on the WCS, you must have the WCS Plus License installed.

Upgrading the Controllers

When upgrading controllers from prior releases to Version 7.0.240.0, we recommend that you perform a refresh of the controller configuration to obtain all new 7.0.240.0 features updated into the WCS database. This is to avoid configuration mismatches with the upgraded controller. This refresh can be performed manually using the **Refresh Config from Controller** command in the Controller list page or by using the **Auto refresh After Upgrade** option in Administration > Settings > Controller Upgrade Settings.

Resolving WCS 7.0.220.0 Installation Issues in Windows

If you encounter a problem while installing WCS 7.0.220.0 on Windows, you can use the following troubleshooting solution.

The log file may contain the following information:

```
java.io.IOException: Cannot run program "C:\Program
Files\WCS7.0.220.0\webnms\apache\bin\httpd.exe": CreateProcess error=14001, This
application has failed to start because the application configuration is incorrect.
Reinstalling the application may fix this problem
Apache startup failed.
```

This installation issue may occur because of one of the following reasons:

- Microsoft Visual C++ 2008 SP1 Redistributable Package (x86) is not installed in your system.
- Microsoft Visual C++ 2005 SP1 Redistributable Package (x86) is installed in your system.

To resolve the installation issue, follow these steps:

Step 1 Check whether Microsoft Visual C++ 2008 SP1 Redistributable Package (x86) is installed on your system. If it is installed, then you can install WCS 7.0.240.0 for Windows directly. If it is not installed, download the Microsoft Visual C++ 2008 SP1 Redistributable Package (x86) from the Microsoft website:

http://www.microsoft.com/download/en/details.aspx?id=5582

Note If your system has any older versions of Microsoft Visual C++ Service Packs installed, such as Microsoft Visual C++ 2005 SP1 Redistributable Package, uninstall them.

Step 2 Install Microsoft Visual C++ 2008 SP1 Redistributable Package (x86). To install this, run the vcredist_x86.exe file and follow the installation procedure provided at the following URL: http://www.microsoft.com/download/en/details.aspx?id=5582#instructions

Step 3 Install WCS 7.0.240.0 for Windows.

Increasing the Maximum Heap Size

If you are performing a standard WCS installation (low-end server with 2 GB RAM that supports up to 500 Cisco Aironet lightweight access points, 200 standalone access points, and 125 Cisco wireless LAN controllers in the setup), modify the MAX_HEAP_SIZE value in the startserver.bat and startserver.sh files to 1024 M. Do not exceed 1024 M for MAX_HEAP_SIZE on a 2-GB memory machine.

For systems with memory greater than 2 GB, modify the MAX_HEAP_SIZE value in the startserver.bat (for Windows OS) and startserver.sh (for Linux OS) files to 1240 M. Do not exceed 1240 M for MAX_HEAP_SIZE.

Resolving the Java Native Memory Issue with the WCS

If you encounter a Java native memory issue with the WCS, you can try the following workaround:

Step 1 Stop the WCS.

Step 2 Access either the startServer.bat (for Windows OS) or startServer.sh (for Linux OS) file and add -XX:-DoEscapeAnalysis to the JAVA_OPTS line.

The following example shows how you can add this option:

```
JAVA_OPTS=-server -Xms256m -Xmx%MAX_HEAP_SIZE% -XX:MaxPermSize=256m -XX:-DoEscapeAnalysis
```

Step 3 Restart the WCS.

AP Disassociation/Association Alarms are Not Displayed (CSCtx19980)

If only the WLC is assigned to a virtual domain but the APs of that WLC are not explicitly assigned, the users of that VD will not be able to see or get notified for AP association/disassociation alarms. In this case, you need to explicitly assign the APs of the WLC to the virtual domain as well for the alarms to start showing up for those APs.

New Features

There are no new features in this maintenance release.

Caveats

The following sections list open and resolved caveats in the WCS 7.0.240.0 for Windows and Linux. For your convenience in locating caveats in Cisco's Bug Toolkit, the caveat titles listed in this section are taken directly from the Bug Toolkit database. These caveat titles are not intended to be read as complete sentences because the title field length is limited. In the caveat titles, some truncation of wording or punctuation might be necessary to provide the most complete and concise description. The only modifications made to these titles are as follows:

- Commands are in **boldface** type.

- Product names and acronyms may be standardized.
- Spelling errors and typos may be corrected.

Note If you are a registered cisco.com user, view Bug Toolkit on cisco.com at the following website: https://tools.cisco.com/Support/BugToolKit/.

Note To become a registered cisco.com user, go to the following website: http://tools.cisco.com/RPF/register/register.do.

Open Caveats

Table 1-2 lists the open caveats in WCS 7.0.240.0.

Table 1-2 Open Caveats

ID Number	Description
CSCtx41427	**WCS Controller License Status task fails with COMMON error** **Symptom:** WCS Controller License Status task fails with COMMON error **Conditions:** While getting Controller License status by Background tasks , Here we are getting Controller license for all Controllers whatever added to WCS And got license for all Controllers from WLCLicnese Table After we are updating License details in WlcLicense table. At that time we are facing this issue like Issue: SOLID Database Error 10005: Unique constraint (WLCLICENSE_UNIQUEKEY) violation. In UI reason column we are getting COMMON error **Workaround:** None.
CSCtx27746	**Error opening Event Details when accessing from RRM >Channel Change.** **Symptom:** Error dialog pops up when clicking on Event Details via the RRM Page > Channel Change APs **Conditions:** Happens when a heavily loaded System is run for long time **Workaround:** None.

Table 1-2 Open Caveats (continued)

ID Number	Description
CSCtx54924	**WCS does not allow configuration of all AP Policies** **Symptom:** On the WLC GUI, there are 5 AP policy configurations: Accept Self Signed Certificates (SSC) Accept Manufatured Installed Certificate (MIC) Accept Local Significant Certificate (LSC) Authorize MIC APs against auth-list or AAA Authorize LSC APs against auth-list In WCS, however, there is no AP configuration template that allows the configuraiton of these policies. Under the individual WLC configuration in WCS, you can only configure 'Authorize APs' and 'Accept SSC-APs'. The WCS AP Poicies template and WLC configuraiton options should allow the same options as the WLC itself. **Conditions:** None. **Workaround:** None.
CSCtx51860	**WCS Config groups wrong WLC mac address used** **Symptom:** When trying to add mobility group members via WCS Config Groups, the task fails due to wrong management mac address being used. If LAG is enabled on the WLC, the management interface mac address will not end with a 0. So the mac address will be different than the base mac of the WLC. **Conditions:** N/A **Workaround:** Use the WLC GUI to add mobility group members Use the WCS Configure -> Controllers -> System -> Mobility to add mobility group members
CSCtw95416	**WCS Lobby Ambassador unable to see SSID with Web auth as fallback** **Symptom:** If we're using Web Auth as fallback mechanism for L2 MAC filtering, the lobby ambassador is unable to see the SSID when connecting to the WCS portal in order to create guest credentials. **Conditions:** WCS 7.0.172.0; SSID configured for MAC Filtering and Web Auth as fallback **Workaround:** None

Resolved Caveats

Table 1-3 lists caveats resolved in Cisco WCS 7.0.240.0.

Table 1-3 Resolved Caveats

ID Number	Caveat Title
CSCts78184	Red triangle alarm on map for AP not on WCS and also not joined to WLC
CSCtu34277	WCS Unique clients report missing Disassociated client
CSCtx06810	"Guest Client Count in the Network" reports as 0
CSCtx90034	Incorrect duplex setting in controller inventory report
CSCty75270	WLC does not keep max RSSI used when classifying rogue AP
CSCub76958	Virtual domain user can see other virtual domain information
CSCuc72514	During template push MSE synchronization should run as a separate thread

If You Need More Information

If you need information about a specific caveat that does not appear in these release notes, you can use the Cisco Bug Toolkit to find caveats of any severity. Click this URL to browse to the Bug Toolkit:

http://tools.cisco.com/Support/BugToolKit/

(If you request a defect that cannot be displayed, the defect number might not exist, the defect might not yet have a customer-visible description, or the defect might be marked Cisco Confidential.)

Troubleshooting

For the most up-to-date, detailed troubleshooting information, see the Cisco TAC website at the following location:

http://www.cisco.com/en/US/support/index.html

Click **Wireless** and **Wireless LAN Management** and then choose **Autonomous Wireless LAN** and **Unified Wireless LAN Management**.

Related Documentation

For information on the Cisco Unified Wireless Network Solution and for instructions on how to configure and use the Cisco UWN, see the *Cisco Wireless Control System Configuration Guide* and the *Cisco Wireless LAN Controller Configuration Guide.*

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 a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

This document is to be used in conjunction with the documents listed in the "Related Documentation" section.