



Planning to Install Cisco Wireless Manager

This chapter contains the following sections:

- [Overview of the Cisco Wireless Manager, page 1-1](#)
- [System Components for the Cisco Wireless Manager, page 1-7](#)
- [Hardware Requirements for the Cisco Wireless Manager, page 1-8](#)
- [Software Requirements for the Cisco Wireless Manager, page 1-9](#)
- [Cisco Wireless Manager Client Requirements, page 1-10](#)
- [Requirements for Local and Remote Users, page 1-10](#)
- [About Cisco uBR7200 Series Universal Broadband Router Requirements, page 1-11](#)
- [Wireless Subscriber Unit Requirements, page 1-13](#)
- [About Cisco IP Manager, page 1-14](#)

Overview of the Cisco Wireless Manager

Cisco Wireless Manager is a UNIX-based solution that you can run locally from the Cisco Wireless Manager server console or remotely (rlogin, Telnet, rsh) from a UNIX workstation or a PC.

**Note**

Cisco Wireless Manager runs as a part of the Cisco Element Management Framework (CEMF). Refer to the CEMF documentation for a description of the CEMF features.

Cisco Wireless Manager enables you to perform the following network management functions:

- Fault management
- Configuration management
- Security management
- Performance management
- Inventory management
- Software download
- Troubleshooting Customer Premises Equipments (CPEs)

Cisco Wireless Manager supports the following features:

- Displays graphical views of the network.
- Manages Cisco uBR7200 series universal broadband routers and wireless subscriber units.
- Displays a network inventory report of Cisco uBR7200 series universal broadband router.
- Generates predefined and customized reports for the utilization, performance, and statistics of Cisco uBR7200 series universal broadband router and wireless subscriber units.
- Utilizes system-wide fault management with SNMP-based alarm and threshold notifications.
- Isolates flapping modems with a flapping modem report by using the Cisco Broadband Troubleshooter (Flaplist Analyzer).
- Uses Find and Ping tools to troubleshoot and verify connectivity.
- Starts CiscoView to display chassis views and manage devices.
- Performs IP and MAC layer connectivity tests.
- Monitors real-time configuration and performance status with CiscoView.

- Displays object status, and commission and decommission device states.
- Allows you to use (optional) Cisco IP Manager for template-based configurations.
- Allows you to send out trap notifications to specified e-mail addresses when a trap of critical severity is detected.

About Autodiscovery

The Autodiscovery feature of the Cisco Wireless Manager:

- Locates devices already physically installed on the network by the IP address range of the Cisco uBR7200 series universal broadband routers.
- Automatically deploys the devices as CEMF objects in a decommissioned state in the CEMF tree .
- Discovers the subscriber units under each Cisco uBR7200 series universal broadband router.

About the Topology View

The Topology view provides the following hierarchical view of the network and its elements:

SITE

NETWORK

uBR

P2MPLine Card

Downstream

Upstream

SU

CPEs

Other SNMP discoverable objects

About Fault Management

Cisco Wireless Manager integrates fault management with Cisco EMF/EM, so that you can use the following features:

- Event Browser
- Alarm Management

The Event Browser allows you to:

- View the alarm summary for selected elements.
- Support alarm filtering and clearing.
- Define scripts (for example, e-mail, e-page) to notify you of events.

The Alarm Management feature:

- Allows you to view tree nodes that are color-coded to reflect the most current alarm severity.
- Displays an alarm counter for a selected object.
- Propagates alarms in the topology tree.
- Forwards traps.
- Sends out trap notifications to specified e-mail addresses.
- Percolates an alarm status through container and element objects in the tree.



Note

Refer to the Cisco EMF/EM documentation for a detailed explanation of these fault management features.

About Configuration Management

Optionally, you can run the Cisco Wireless Manager with Cisco IP Manager, so that you can create templates and configure Cisco uBR7200 series universal broadband routers in a single or batch mode.

The configuration templates contain a template body and template data.

- The template body contains attribute variables that are converted to Cisco IOS configuration files that can be downloaded to the routers.
- The template data is a matrix of devices identified by IP address and attribute variable values for each device.

You can also perform device-specific configurations with the help of CiscoView. You can start CiscoView for Cisco uBR7200 series universal broadband routers and for subscriber units.

For detailed information on CiscoView, refer to the *CiscoView Quick Reference Guide*.

About Security Management

Cisco Wireless Manager provides security management on the Cisco uBR7200 series universal broadband routers. You can use the CEMF launchpad to create and set the User Name and Password Authentication feature.

For detailed information, refer to the *CEMF Users' Guide*.

About Performance Management Reports

You can obtain the following graphical and tabular performance reports for the point-to-multipoint wireless system and for all the routers deployed under a site.

With tabular reports, you can see a selected group of performance parameters for a selected Cisco uBR7200 series universal broadband router or a group of routers.

The following predefined reports are available for subscriber unit performance:

- Graphical Reports for:
 - uBR downstream utilization
 - uBR upstream utilization
 - SU Tx throughput
 - SU Rx throughput
 - uBR interface statistics
 - Rx/TX octet discards

- Tabular Reports for:
 - uBR Receive/Transmit power level
 - uBR utilization
 - SU utilization
 - SU usage
 - SID report

About Inventory Management Reports

You can obtain the following uBR inventory reports from the Cisco Wireless Manager:

- IOS Versions of Cable Modem Transmission System (CMTS)
- Environmental statistics
 - Power supply
 - Temperature
 - Voltage
 - Memory Pool
- Flash file
- Flash devices
- uBR card info

Additional information for uBR, radio linecard, upstream, downstream, subscriber units, and CPEs is available through Management dialog boxes.

About the Software Download Feature

With the software download feature, you can:

- Upgrade software images of wireless SUs in batch mode.
- Download images on demand or on a scheduled basis.
- Download summary reports.

About the Troubleshooting Feature

With the troubleshooting tool, you can:

- Ping SU MAC/IP to test connectivity between a uBR and an SU.
- Use the Cisco Broadband Troubleshooter.
- Detect subscriber units with provisioning and link-related problems by using uBR Flaplist Analysis.

System Components for the Cisco Wireless Manager

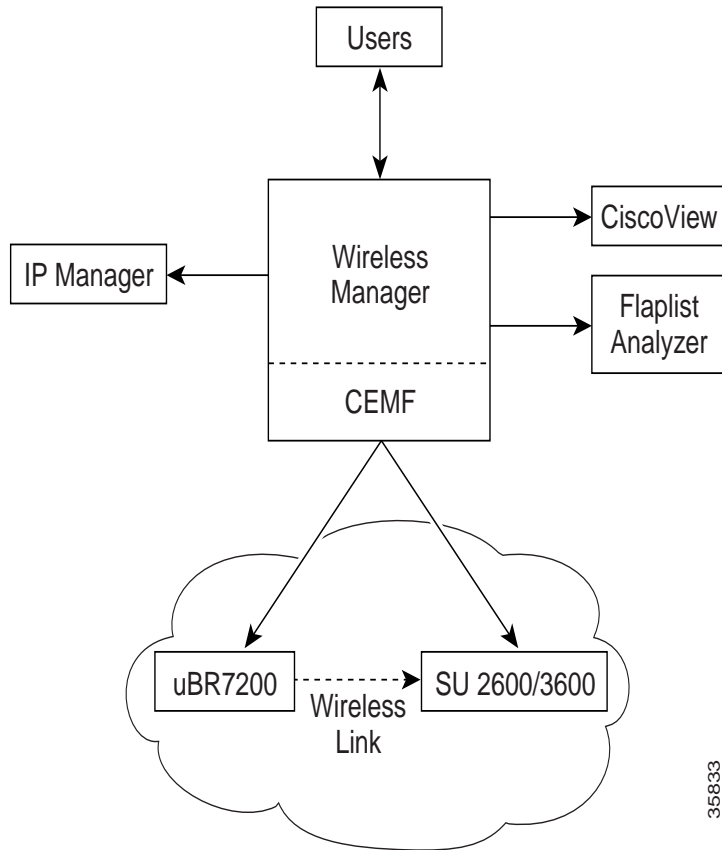
The Cisco Wireless Manager system includes the following components:

- Cisco Wireless Manager server:
 - Cisco Element Manager Framework (CEMF 3.x)
 - Cisco Wireless Manager, Release 1.0
 - CiscoView
 - (Optional) Cisco IP Manager 2.0 Lite
 - (Optional) Oracle 8.x
- Cisco Wireless Manager client
- Cisco uBR7200 series universal broadband routers
- Wireless Subscriber Units



Note

Additional machines with identical settings are required to support redundancy. Cisco Wireless Manager 1.0 supports only hardware redundancy. You can use multiple Cisco Wireless Manager servers to manage the devices throughout a network simultaneously. However, the Cisco Wireless Manager servers function independently from each other—with no synchronization between the management systems.

Figure 1-1 Components of the Cisco Wireless Manager System

You can add additional wireless modem management with multiple Cisco Wireless Manager servers. When multiple Cisco Wireless Managers are used, management data is not distributed or synchronized between the management systems.

Hardware Requirements for the Cisco Wireless Manager

- Sun Ultra 60 or E250 with Solaris 2.6 OS installed
- With a minimum of 4-GB hard drive and the following free disk space, you can maintain up to 30 days of performance and report data on the server:



Note Any data over 30 days old is replaced with current data.

- 2 GB in /opt
- 1 GB in /tmp (swap space)
- 500 MB in /var



Note These are the minimum requirements if you install CEMF 3.1 in /opt directory.

- 512 MB of RAM
- CD-ROM drive
- IP connectivity to the managed devices

Software Requirements for the Cisco Wireless Manager

Each Cisco Wireless Manager server contains the following software components. Each component is packaged on a separate CD-ROM.

- Cisco Element Management Framework (CEMF) 3.1
- Cisco Wireless Manager
- Broadband Modem Troubleshooter
- CiscoView

- Optional requirements for template-based configuration management of Cisco uBR7200 series universal broadband routers:
 - Cisco IP Manager 2.0 Lite
 - Oracle database 8.x

Cisco Wireless Manager Client Requirements

- Sun Ultra 5 with Solaris 2.6 with the following minimum requirements:
 - 512 MB of RAM
 - 2-GB hard drive
 - CD-ROM drive
 - Ethernet connectivity to the Cisco Wireless Manager server

**Note**

Use multiple Wireless Manager servers if you require a large number of clients to run simultaneously because the performance of the Cisco Wireless Manager is affected with the increase in the number of user sessions.

Requirements for Local and Remote Users

Local users can start the Cisco Wireless Manager from the Sun machine with the software installed. There are no additional requirements for local users.

You can also remotely log in to the Cisco Wireless Manager (rlogin, Telnet, rsh) by running Cisco Wireless Manager from an X-session display on a UNIX workstation or a PC.

See the following requirements for a UNIX workstation for the Cisco Wireless Manager:

- Sun Ultra 5
- 256 MB of RAM
- 1-GB hard drive
- Ethernet connection to Cisco Wireless Manager server

See the following requirements for a PC for the Cisco Wireless Manager:

- Windows NT 4.0 or Windows 95
- Pentium I/II
- 200–MHz processor
- 64 MB of RAM
- Ethernet connection to Cisco Wireless Manager server

**Note**

If not configured correctly, the X session software may truncate icons or cause other display anomalies. To solve this problem, either use the XDMCP option to log in to the Solaris desktop, or change the X session settings. Also, you may need to reset color and keyboard map settings.

About Cisco uBR7200 Series Universal Broadband Router Requirements

Cisco Wireless Manager supports the management of Cisco uBR7200 series universal broadband routers with the following Cisco IOS releases:

- Cisco IOS Release 12.1(3)XQ1
- Cisco IOS Release 12.2(5)XM
- Cisco IOS Release 12.0(1)T
- Cisco Release 12.0(6)SC and later releases

Enabling SNMP on the Cisco uBR7200 Series Routers

The Cisco uBR7200 series universal broadband router must be SNMP enabled in order to be managed by Cisco Wireless Manager. You can do this by using the Cisco IOS command-line interface (CLI).



Note

You can set the SNMP read-only string used by Cisco Wireless Manager to read Cisco uBR7200 series universal broadband routers data as part of the autodiscovery process. This read-only string must match the Cisco uBR7200 series universal broadband router string setting. If the strings do not match, Cisco Wireless Manager will not discover the Cisco uBR7200 series universal broadband routers.

To set Read-Only (RO) and Read-Write (RW) community strings as public and private respectively, enter the following commands on the router in privileged mode:

```
snmp-server community public RO
```

```
snmp-server community private RW
```

Enabling SNMP Traps on the Cisco uBR7200 Series Routers

Configure a destination for SNMP traps, so that the Cisco Wireless Manager can receive and process SNMP traps from the Cisco uBR7200 series universal broadband routers.



Tips

You can enter multiple host IP addresses to forward traps to multiple SNMP management stations.

For more information about SNMP configuration, refer to the Cisco IOS documentation.

-
- Step 1** To enable the wireless specific SNMP traps, configure the Cisco uBR7200 series universal broadband routers by entering the following commands:
- ```
snmp-traps enable traps radiomp
snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
snmp-server trap-source [interface port/slot]
snmp-server host [IP address] [community string]
```
- Step 2** On the radio interface, enter the following commands:
- ```
radio-su-onoff-trap  
radio-su-onoff-trap interval [interval]
```
-

Wireless Subscriber Unit Requirements

Cisco Wireless Manager supports the following Wireless subscriber units:

- Cisco 2600 series routers
- Cisco 3600 series routers

You must enable SNMP on the subscriber units, so that they can be managed by the Cisco Wireless Manager. Set the community strings to the same community strings that are set for the uBR.

Enabling SNMP on the Subscriber Units

To set Read-Only (RO) and Read-Write (RW) community strings as public and private respectively, enter the following commands on the router in privileged mode:

```
snmp-server community public RO
```

```
snmp-server community private RW
```

About Cisco IP Manager

Optionally, you can install Cisco IP Manager 2.0 Lite to provide Cisco uBR7200 series universal broadband router configuration by using Cisco IP Manager templates.

Refer to the Cisco IP Manager 2.0 installation documentation for a complete list of the Cisco IP Manager 2.0 Lite requirements.



Note

For CiscoView requirements and Cisco Broadband Troubleshooter (Flaplist Analyser) requirements, refer to the documentation for the respective devices.
