



Managing the WLSE System via the CLI

This chapter describes some of the system administration tasks that you can perform by using the command line interface (CLI).

For information about performing system administration tasks from the the Web interface, see [Chapter 16, “Managing the WLSE System.”](#)

This chapter contains the following topics:

- [Using CLI Commands, page 17-1](#)
- [Using a Console with the WLSE, page 17-2](#)
- [Logging In and Out via CLI, page 17-2](#)
- [User Management via CLI, page 17-3](#)
- [Backing Up and Restoring via CLI, page 17-5](#)
- [Upgrading WLSE Software via CLI, page 17-10](#)
- [Shutting Down and Powering Off the WLSE, page 17-10](#)
- [Rebooting the WLSE via CLI, page 17-10](#)
- [Setting WLSE System Date and Time via CLI, page 17-11](#)
- [Configuring Ethernet Interfaces, page 17-12](#)
- [Administering Management Services via CLI, page 17-15](#)
- [Viewing System Information via CLI, page 17-15](#)
- [Managing Disk Space, page 17-17](#)
- [Recovery Management, page 17-17](#)

Using CLI Commands

Any user with CLI access can log in to the command-line interface. Most CLI commands require access level 15. This access can be assigned in the Web interface (**Admin > User Admin > Manage Users**) or through the CLI (**username** CLI command).

For details on all of the CLI commands, see [Appendix A, “Command Line Interface \(CLI\) Commands.”](#)

Using a Console with the WLSE

Some of the procedures in this chapter require that you connect a console to the console/serial port.

Procedure

- Step 1** If there is a monitor or keyboard connected to the WLSE, remove it.
- Step 2** Connect a console terminal or PC running Hyper Terminal to the WLSE's console/serial port. Use the cable supplied with the WLSE and, if necessary, the DB-9-to-RJ-45 console adapter.
- For the [WLSE 1130 series](#), use the serial port on the back panel.
 - For the WLSE 1030, use the console/serial port on the back panel.



Note Use the console/serial port; do not use the video port.

For more information on the console/serial port, see the relevant *Installation and Configuration Guide for the CiscoWorks Wireless LAN Solution Engine* on Cisco.com at http://www.cisco.com/en/US/products/sw/cscowork/ps3915/prod_installation_guides_list.html.

Logging In and Out via CLI

Use the following commands to log in and out of the WLSE via the CLI. By using this method of logging in, you can use the WLSE's CLI commands.



Note The CLI has a pre-set timeout of 15 minutes. This is not configurable. After 15 minutes of inactivity, you will be logged out of the CLI.

Logging In

To use the CLI to log in:

Procedure

- Step 1** Attach a console or connect via Telnet or SSH to the WLSE.
- If you are using a console:
- For the [WLSE 1130 series](#), use the serial port on the back panel.
 - For the WLSE 1030 (WLSE express), use the console/serial port on the back panel.
- Step 2** At the login prompt, enter `admin` or use another account that has CLI privileges.
- Step 3** At the password prompt, enter the password.

Result: The system prompt appears.

**Note**

Users must have CLI privileges to use the CLI. Users who have only level 0 privileges can use only a small subset of the CLI commands. Users who have level 15 privileges can use all commands. For information on setting these privileges via CLI, see [Managing User Accounts, page 17-3](#). For information on setting CLI privileges via the Web interface, see [Managing User Accounts, page 16-51](#).

Logging Out

To log out, use the **exit** command.

User Management via CLI

This section contains the following topics:

- [Managing User Accounts, page 17-3](#)
- [Setting Up TACACS+ or RADIUS Authentication for CLI Login, page 17-4](#)

Managing User Accounts

You can create users via the CLI and grant them CLI privileges. Such users appear in the user management screens of the Web interface, but they do not have access to the Web interface features unless you modify them in the Web interface to add access.

Creating and Modifying User Accounts

**Note**

Your login determines whether you can use this command.

To create or modify user accounts, use the following command for each user account you want to add or modify:

```
username name password password privilege 0 | 15
```

where:

- *name* is the username of the account.

Usernames can be up to 32 characters in length, are case sensitive, and must not begin with a number. Passwords cannot contain a colon, semi-colon, comma, single quote, double quote, or space.

- *password* is the user's password.

Passwords are unlimited in length and are case sensitive. You can use any character except for the single quote or double quote.

- **privilege 0** allows access to a subset of the CLI commands (see [CLI Command Details, page A-7](#)). This is the default and is assigned to the account even if you omit this argument.
- **privilege 15** allows access to all CLI commands.

To allow access to the Web interface, log into the Web interface and modify the user's account to add roles and privileges (see [Managing User Accounts, page 16-51](#) or the online help).

Deleting User Accounts

To delete a user, enter the following command:

```
no username name
```

where *name* is the user to be deleted.

Setting Up TACACS+ or RADIUS Authentication for CLI Login

You can use an authentication server for logging in through Telnet or SSH. This requires configuring the authentication server and setting up the authentication module on the WLSE.

To configure the authentication server, add the WLSE as a client, configure the shared secret, and add the users. The users must also exist on the WLSE; see [Creating and Modifying User Accounts, page 17-3](#).



Note

WLSE does not support MS NT Domain authentication.



Note

Your login determines whether you can use this command.

To set up the WLSE's RADIUS module, enter the following command:

```
auth cli failover radius secret server
```

where *secret* is the shared secret and *server* is the hostname or IP address of the authentication server.

To set up the WLSE's TACACS+ module:

```
auth cli failover tacacs secret server
```

where *secret* is the shared secret and *server* is the hostname or IP address of the authentication server.



Note

If you use CLI remote authentication, you must create a local user on the WLSE. You do not need to create a local user on the WLSE for HTTP authentication.

For more information about using alternative authentication, see [auth, page A-7](#), and [Overview: Authentication Modules, page 16-15](#).

Backing Up and Restoring via CLI

You should backup the WLSE at regular intervals and before software updates or system recoveries.

Before attempting to backup or restore your WLSE, make sure you have the following:

- A remote FTP or SCP host to serve as the backup location.
- A valid username and password on the backup location.
- A backup directory on the backup location that has the proper permissions for the username and password you will be using.

Backups preserve the database, flash memory (network information and users' CLI privileges), and the user configuration (including users, roles, templates, firmware images, device credentials, policies, and threshold settings).

Backups do not preserve startup templates, the mail route, and AAA server trend data. Also, the four system-defined user roles will be reset to their default privileges.

This section contains procedures for specifying the backup location, backing up the WLSE, and restoring the WLSE. For an example backup sequence, see the description of the **backup** CLI command in [backup](#), page A-8.



Note

You can replace one WLSE with another by backing up and restoring the data from the old WLSE to the new one. See [Installing a Replacement WLSE](#), page 17-8.



Note

You can restore a backup made on one WLSE to another WLSE. For information, see [Copying Configuration Data to another WLSE via CLI](#), page 17-9.

Setting Up the Backup Location

Before backing up, you must specify an FTP or SCP server as the backup location. Please observe the following cautions about the backup location:

- Backup has been tested on the standard Windows 2000, Windows XP, and Unix FTP and SCP servers only. Therefore, only these servers are explicitly supported for WLSE backups. However, any server that uses standard FTP commands and protocol should work.
- Make sure the target FTP or SCP directory has enough free space, especially if you are running frequent backups. If there is not enough space, the backup may fail or the backup data may be corrupted.
- If you are using a Windows 2000 or Windows XP server as the backup location, you must configure the server for UNIX directory mode. See [Configuring a Windows System as a Backup Location](#), page 16-22.
- SCP uses keys to identify the remote host and stores these keys on the WLSE. If the key on the remote host changes, the backup cannot be transferred. If you know that a key was legitimately changed on the remote host, you can use the **clearbackuphosts** CLI command to clear the stored keys. After that, the new keys can be stored.



Note

Your login determines whether you can use the commands described in this section.

Specifying the Backup Location

To specify the backup location, enter the following command:

```
backupconfig hostname username password (FTP|SCP) [timeout [directory]]
```

where:

- *hostname* is the hostname or IP address of the backup system.
- *username* is the username of a user on the backup system.
- *password* is the password of the user on the backup system.
- *FTP* or *SCP* is the protocol used for the backup transfer
- *timeout* is the timeout value in seconds for backup restore jobs. The default is 7200seconds, You can enter any value between 3600 and 43200 seconds.
- *directory* is the pathname of the backup directory, if different from user's default directory.



Note To specify a backup directory, you must specify a timeout value.

This backup location information will be used by the **backup**, **listbackup**, and **restore** commands.

Displaying the Backup Location

If a backup location has been specified, you can display the hostname and username by entering the following command:

```
show backupconfig
```

Removing the Backup Location

To remove the backup location, enter the following command:

```
no backupconfig
```

Backing Up the WLSE

When backing up via the CLI, you can perform manual, one-time backups. To schedule regular backups, use the Web interface; for information, see [Backing Up and Restoring Data, page 16-20](#).



Note WLSE operations continue during the backup.



Note Your login determines whether you can use this command.

Procedure

To back up the WLSE:

Step 1 Make sure the backup location has been configured. See [Setting Up the Backup Location, page 17-5](#).

Step 2 To test the availability of the backup location enter:

```
backup test
```

Step 3 To backup the WLSE, enter:

```
backup
```

Result: The WLSE will be backed up to the location you specified in the **backupconfig** command.

Restoring WLSE Configuration

During the restore procedure, the following occur in sequence:

1. The WLSE shuts down automatically.
2. Data is restored.
3. The WLSE reboots.

**Note**

The WLSE shuts down during the restore operation and reboots afterwards.

**Note**

Your login determines whether you can use these commands.

To restore the WLSE configuration:

Step 1 Set up the backup location by using the **backupconfig** command.

Step 2 To list the available backups, enter:

```
listbackup
```

Step 3 Enter the following command:

```
restore backup_name
```

where *backup_name* is the name of the backup you want to restore.

To restore without overwriting the WLSE flash memory, use the following command:

```
restore -n backup_name
```

The flash memory contains the WLSE's network settings (WLSE hostname, IP address, domain name, name servers, NTP server, and firewall settings) and users' CLI privileges.

For information about restoring from one WLSE to another, see:

- [Installing a Replacement WLSE, page 17-8](#)

- [Copying Configuration Data to another WLSE via CLI, page 17-9](#)

Installing a Replacement WLSE

This section describes tasks you should perform when installing a replacement WLSE (replacing an existing WLSE with a new one). If you are simply using a backup from one WLSE to restore data on another WLSE, see [Copying Configuration Data to another WLSE via CLI, page 17-9](#).

Removing the Old WLSE



Note

Your login determines whether you can use these commands.

Procedure

Before removing the old WLSE:

-
- Step 1** Record the WLSE's configuration (the information that you entered when you initially set up the WLSE). Use the following command to display the configuration:
- ```
show config
```
- Step 2** Back up the data from the old WLSE. See [Backing Up and Restoring via CLI, page 17-5](#) for details.
- Step 3** Enter the following command:
- ```
shutdown
```
- Step 4** Power down and remove the old system.
-

Installing the Replacement WLSE



Note

Your login determines whether you can use this command.

Procedure

To install the replacement WLSE:

-
- Step 1** Install and power on the new WLSE, using the instructions in the *Installation and Configuration Guide*.
- Step 2** For the [WLSE 1130 series](#):
- If you are using the same basic network information (for example, IP address and hostname) that you used on the old WLSE:
 - Run the setup program.
 - Enter the following command to restore all the configuration data from the old system, including the basic network information:

```
restore backup_name
```

- If you are *not* using the same basic configuration (for example, IP address and hostname) that you used on the old WLSE:
 - Run the setup program.
 - Enter the following command to restore all the configuration data from the old system except the basic network information:

```
restore -n backup_name
```

Step 3 For the WLSE 1030 Express:

- a. Configure the new WLSE, using the instructions in the *Installation and Configuration Guide*.
- b. If you are using the same basic network information (for example, IP address and hostname), enter the following command to restore all the configuration data from the old system:

```
restore backup_name
```

- c. If you are *not* using the same basic network configuration, enter the following command to restore all configuration data except the basic network information:

```
restore -n backup_name
```

Copying Configuration Data to another WLSE via CLI

You can back up data from one WLSE and copy it to another by using the backup and restore features. If you are replacing one WLSE with another, see [Installing a Replacement WLSE, page 17-8](#).



Note

Your login determines whether you can use this command.

Procedure

To restore a backup from one WLSE to another:

- Step 1** Back up the data on the original WLSE. For more information, see [Backing Up and Restoring via CLI, page 17-5](#).
- Step 2** If you installed a new WLSE and have not yet configured it, perform the initial setup. For information on initial setup, see the relevant *Installation and Configuration Guide* for your WLSE hardware on Cisco.com at http://www.cisco.com/en/US/products/sw/cscowork/ps3915/prod_installation_guides_list.html.
- Step 3** Restore the configuration data from your backup by entering the following command. Use the backup image name as the argument.

```
restore -n backup_name
```

**Note**

Be sure to use the **-n** option. Otherwise, the network information in flash memory will be overwritten and you will have to erase the WLSE's configuration and run the setup program to reenter the network information.

Upgrading WLSE Software via CLI

For information about installing software updates on the WLSE by using the CLI, see the the following documents:

- *Upgrading CiscoWorks Wireless LAN Solution Engine Software, 2.13* on Cisco.com at http://www.cisco.com/en/US/products/sw/cscowork/ps3915/prod_installation_guides_list.html
- The Readme.txt files on Cisco.com at <http://www.cisco.com/kobayashi/sw-center/cw2000/crypto/wlan-sol-eng/>

Rebooting the WLSE via CLI

**Caution**

All processes running on the system stop and restart when you run the **reload** command. The WLSE will not respond while it is reloading.

Rebooting the system restarts its management services, even if the services were stopped prior to the reboot.

**Note**

Your login determines whether you can use this command.

To restart the WLSE, enter the following command:

```
reload
```

Result: You are prompted to verify the reload. Enter **yes** to confirm or **no** to cancel the reload.

Shutting Down and Powering Off the WLSE

**Caution**

If you power off the WLSE improperly, you might disable the system.

**Note**

Your login determines whether you can use this command.

To shut down the WLSE:

Step 1

Enter the following command:

`shutdown`

Step 2 Power off the WLSE.

Setting WLSE System Date and Time via CLI

The WLSE uses Universal Coordinated Time (UTC) for the system time and date. The WLSE uses UTC to display the time and date when you are connected via Telnet/SSH or the console and when you are viewing log files. The WLSE uses the client's local time to display the time and date when connected via the Web interface.

You can set and maintain the system date and time by:

- [Setting the System Clock Using NTP via CLI, page 17-11](#) (the recommended method).
- [Setting the System Clock Manually via CLI, page 17-12](#).



Note

You can also set the current time by using the Web interface. For information, see [Setting Time, Time Servers, Name Servers, and Web Session Timeout, page 16-43](#).

To display the system time, use the **show clock** command. For more information on this command, see [clock set, page A-12](#).

Setting the System Clock Using NTP via CLI

NTP is the recommended method for configuring time and date on the system. If your network uses NTP to set the date and time on devices, you can specify the NTP servers on the WLSE. If NTP is not enabled, you can set the system clock to UTC manually as described in [Setting the System Clock Manually via CLI, page 17-12](#).



Note

Your login determines whether you can use this command.

To specify NTP servers, enter the following command:

```
ntp server ip-address
```

where *ip-address* is the IP address of an NTP server.

To remove NTP servers and disable NTP, enter the following command for each NTP server that you specified:

```
no ntp server ip_address
```



Caution

If you do not set the system clock manually after disabling NTP, the system clock might become inaccurate.

Setting the System Clock Manually via CLI

If your network does not use NTP to set the system time on devices and the time is not set correctly, set the date and time manually.

**Note**

Your login determines whether you can use this command.

To set the date and time manually:

Step 1 Stop services:

```
services stop
```

Step 2 Enter the following command:

```
clock set hh:mm:ss month day year
```

where:

- *hh:mm:ss* is the current time (for example, 13:32:00).
- *month* is the current month (for example, December).
- *day* is the day of the month (for example, 31).
- *year* is the current year (for example, 2003).

Step 3 Restart services:

```
services start
```

For more information about the **clock set** command, see [clock set, page A-12](#).

Configuring Ethernet Interfaces

This section contains the following topics:

- [WLSE 1130 Series Interfaces, page 17-13](#)
- [WLSE 1030 Interface, page 17-13](#)
- [Configuring Protocols on Ethernet Interfaces, page 17-13](#)
- [Configuring Interface Parameters, page 17-14](#)
- [Changing the WLSE's IP Address, page 17-14](#)
- [Using Both Interfaces on the WLSE 1130 Series, page 17-14](#)

WLSE 1130 Series Interfaces

The [WLSE 1130 series](#) have two 10/100/1000 Mbps Ethernet interfaces. The Ethernet 0 interface is configured during initial setup of the WLSE, and all protocols are enabled on the Ethernet 0 interface.

For the WLSE 1130 platform, the Ethernet interface labeled “A” on the back panel corresponds to Ethernet 0 in software (such as CLI commands). The Ethernet interface labeled “B” corresponds to Ethernet 1 in software.

For the WLSE 1130-19, the interfaces are labeled 0 and 1.

WLSE 1030 Interface

The WLSE 1030 (WLSE Express) has one 10/100/1000 Mbps Ethernet connector. The Ethernet interface is configured by default to use DHCP to retrieve network parameters for configuring the WLSE.

Configuring Protocols on Ethernet Interfaces

All protocols are enabled by default on the Ethernet 0 interface. On the Ethernet 1 interface of dual-interface WLSEs, all protocols except for CDP are enabled.

Any Ethernet interface can be individually configured to allow or prevent connections via the following protocols:

- Cisco Discovery Protocol (CDP)
- Hypertext transfer protocol (HTTP)
- Hypertext transfer protocol secure (HTTPS)
- Internet Control Message Protocol (ICMP)
- Secure shell (SSH) 1 and 2
- Simple network management protocol (SNMP)
- Telnet



Note

Your login determines whether you can use this command.

To allow CDP on an interface, enter the following command:

```
cdp run port
```

where *port* is the Ethernet interface, for example, eth0.

To disable CDP, enter the following command:

```
no cdp run port
```

For more information on this command, see [cdp](#), page A-10.

To allow or prevent any of the other protocols on an interface, use the **firewall** command. For information on this command, see [firewall](#), page A-19.

Configuring Interface Parameters

To enable or disable Ethernet interfaces and set parameters on the interfaces, use the following commands.

```
interface eth[ernet] [0-5] [ up | down ]
```

```
interface eth[ernet] [0-5] dhcp
```

```
interface eth[ernet] [0-5] ipaddress netmask [default-gateway address]
[ up | down ] [ auto | speed [ 10|100|1000 ] duplex [ half | full ]
mtu [ 46-1500 ]
```

For more details on these commands, see [interface, page A-25](#).



Note

Your login determines whether you can use this command.

Changing the WLSE's IP Address

If you use the **interface** command to change the IP address, append **up** to the command line if the interface is down. Append **down** if the interface is up when you change the IP address:

```
interface eth0 209.165.201.8 255.255.255.224 default-gateway 209.165.201.1 up
```

Using Both Interfaces on the WLSE 1130 Series



Note

Your login determines whether you can use the commands described in this section.

The Ethernet 0 interface is configured by the setup program when you initially install and set up the WLSE. The Ethernet 1 interface is not automatically configured, but you can configure it manually by using the **interface** and **cdp run** commands.

You can connect each interface to a different network and use both interfaces to manage devices, or use one interface to manage devices and use the other interface to communicate with a network management system.

The **interface** command creates a routing table entry that directs traffic to the correct interface. For example, when you configure Ethernet 1 with the gateway address 192.168.1.0 and the IP address 192.168.1.1, the **interface** command also creates an entry in the routing table that directs all 192.168.1.0 subnet traffic to Ethernet 1. Subsequently, if you use the **route** command to add new routes, packets for the second interface will still be properly routed.

If you are using both interfaces to manage devices, you must configure the second interface as follows:

- Make sure CDP is enabled on the Ethernet 1 interface—See [Configuring Protocols on Ethernet Interfaces, page 17-13](#).
- Configure Ethernet 1 interface parameters—See [Configuring Interface Parameters, page 17-14](#).



Note

If you have configured both the Ethernet 0 and Ethernet 1 interfaces with IP addresses and you are using an AAA server in the network, you must configure both IP addresses as clients on the AAA server.

Configuring the Mail Route via CLI

To ensure that email arrives at its proper destination, you can specify an SMTP server. This affects email notifications about firmware and configuration jobs, emailing reports, and emailing fault notifications.



Note

Your login determines whether you can use this command.

To specify a mail server, enter the following command:

```
mailroute server
```

where *server* is the IP address or hostname of your email server.

Administering Management Services via CLI

The WLSE allows you to stop and start all management services at once. All commands that affect management services affect all of them, and the logs that collect services information collect information about all of them.

You can stop and restart the management services if the system is not responding correctly. This should cause the services to reset and function properly again. Management services are restarted automatically when you reboot the WLSE.



Note

Your login determines whether you can use this command.

To stop management services, enter the following command:

```
services stop
```

To start management services, enter the following command:

```
services start
```

To view management services status, enter the following command:

```
services status
```

Viewing System Information via CLI

To view system information, you can use the CLI commands listed in [Table 17-1 on page 17-15](#).

Table 17-1 *Commands for Viewing System Information*

Command	Information Displayed
apptyp	Type of hardware platform—WLSE 1130 series or WLSE 1030
dumptcp	Displays the content of TCP/IP packets
ps	Linux processes running on the WLSE
show auth-cli	Type of authentication used for secure CLI access

Table 17-1 Commands for Viewing System Information (continued)

Command	Information Displayed
show auth-http	Type of authentication used for secure HTTP access
show backupconfig	Current backup and restore location and username
show backuplog	Contents of backup log
show bootlog	Messages from the last system boot
show cdp neighbor	The WLSE's nearest neighbor on the network
show cdp run	CDP configuration of the WLSE
show clock	System data and time (UTC)
show config	System information and network configuration
show daemonslog	Daemons log
show dmgtldlog	Daemon manager log
show domain-name	WLSE's domain name
show hosts	Information about the hosts file
show http-server	Access control settings for HTTP and HTTPS
show import hosts	Imported hosts file
show install	Installation log files or names and descriptions of software updates and images in the repository
show interfaces	Network interface information
show ipchains	IP chains for Ethernet interface
show maillog	Email log
show mailroute	Current mailroute
show proc[ess]	Statistics for active processes
show redundancy	Redundancy status and settings of redundancy parameters
show repository	Status or access log of repository
show route	Routes that are currently configured
show securitylog	Security log
show snmp-server	WLSE's SNMP configuration
show ssh-server	SSH access control information
show ssh-version	Type of SSH enabled on the WLSE
show syslog	Syslog
show tech	Information necessary for Cisco TAC to assist you
show telnetenable	Telnet status
show time	Time zone and NTP server
show tomcatlog	Tomcat log
show version	Currently installed software and hardware information
show webaccesslog	Web access log

Table 17-1 Commands for Viewing System Information (continued)

Command	Information Displayed
show weberrorlog	Web error log
show websslaccesslog	Web SSL log

Managing Disk Space

To view disk use, use the **df** command; for example:

```
df
Filesystem      Size  Used Avail Use% Mounted on
/dev/hda12      298M   78M  220M  26% /
/dev/hda1        53M   5.1M   45M  10% /boot
/dev/hda7       2.7G  338M   2.2G  13% /extra
/dev/hda11      596M   33M   564M   6% /home
/dev/hda6       2.8G  269M   2.5G  10% /opt
none            1.5G     0   1.4G   0% /dev/shm
/dev/hda5       1.9G   33M   1.8G   2% /tftpboot
/dev/hda9       596M   33M   563M   6% /tmp
/dev/hda10      571M  254M   288M  47% /usr
/dev/hda13      27G   1.8G   25G   7% /var
```

To remove old system log files from the /var partition, use the **clearvar** command.



Caution

This command stops services before purging old log files. Upon completion, system services restart.

clearvar

```
Warning: This command will restart all services.
Continue? (Y/N):y
Daemon Management stopping. This may take a few minutes.
INFO: All processes are terminated.
INFO: All processes are terminated.
```

Database Connection Information

```
Database server      = DB2/LINUX 7.2.9
SQL authorization ID = CASUSER
Local database alias = WLSEDB
```

```
DB20000I The PRUNE command completed successfully.
DB20000I The SQL command completed successfully.
```

Recovery Management

Use the following procedures to recover from problems:

- [Erasing System Configuration and Resetting to Factory Defaults, page 17-18](#)
- [Using the Maintenance Image, page 17-18.](#)
- [Using the Recovery CD, page 17-19.](#)
- [Using the Rescue Image, page 17-21](#)

- [Recovering from the Loss of All Administrator Passwords, page 17-21](#)

Erasing System Configuration and Resetting to Factory Defaults



Note Your login determines whether you can use these commands.



Note The following commands stop and restart system services.

To reset the WLSE to factory defaults, but leave the database and logs in place, enter the following command:

```
erase config
```

To purge the database, enter the following command:

```
reinitdb
```

Using the Maintenance Image

The WLSE's maintenance image consists of an operating system image and default system configuration stored in flash memory. You can use the maintenance image to recover from serious problems.

The following commands are available while the WLSE is running the maintenance image:

- **reload**
- **erase config**
- **fsck**—This command is available only in the maintenance and rescue images.

While the maintenance image is running, you can do the following tasks, which you cannot do when the system is booted normally from the disk:

- Recover from loss of all administrative passwords. See [Recovering from the Loss of All Administrator Passwords, page 17-21](#).
- Perform disk filesystem integrity checks or recover from filesystem corruption. See [fsck, page A-73](#).

Booting from the Maintenance Image

As a security measure, you can boot from the maintenance image only while connected to the system console.

-
- Step 1** Connect a console to the WLSE, using the procedure in [Using a Console with the WLSE, page 17-2](#).
- Step 2** Log in as **admin**.
- For the [WLSE 1130 series](#), use the serial port on the back panel.
 - For the WLSE 1030 (WLSE express), use the console/serial port on the back panel.
- Step 3** Reboot the system by doing one of the following:
- Enter the following command to reload the system if it is running:

```
reload
```

- Power on the system, if it is powered off.
- Power the system off and then back on if you have lost all passwords.

Step 4 When the `GRUB boot :` prompt appears, press the Tab key.

Step 5 When the `boot :` prompt appears, enter:

```
CiscoBreR
```

Step 6 After you complete all necessary tasks, reboot the system by entering the following command and allowing the system to boot from the disk (the default boot order)

```
reload
```

Using the Recovery CD

With the Recovery CD included with your WLSE, you can:

- Reimage the WLSE—See [Reimaging the WLSE—Local Installation Method, page 17-19](#) or [Reimaging the WLSE—Remote Installation Method, page 17-20](#).
- Boot from the rescue image—See [Using the Rescue Image, page 17-21](#).



Caution

Before using the Recovery CD, check the relevant Readme file on the CD for possible changes to procedures, for example, `WLSE-2.13.ISO-Readme-v1.txt`.



Note

If you do not have a recovery CD, you can create one by downloading recovery disk files from Cisco.com and reassembling them. Before attempting to make a recovery CD, check the relevant Readme file, for example `WLSE-2.13.ISO-Readme-v1.txt`. The recovery CD files are located on Cisco.com at <http://www.cisco.com/cgi-bin/tablebuild.pl/wlan-sol-eng>.

Reimaging the WLSE—Local Installation Method

Please review the following notes and cautions before using this method to reimage a WLSE:

- This procedure will destroy all data and install a new image. You will need to replace the data by restoring a backup. For information on backups, see [Backing Up the WLSE, page 17-6](#).
- Although every effort has been made to validate the accuracy of the software version on the Recovery CD, you must review the WLSE's software versions on <http://www.cisco.com> and download any necessary earlier software updates. See the Readme files included with the updates to perform the update procedure.
- Reimaging the WLSE by using the recovery CD and the local installation method does not erase the network information in flash memory. After installing the recovery CD, network details and the admin password do not get erased. If you need to erase this information, run the [erase config](#) command either before or after reimaging.

Procedure

To reimage your WLSE, perform the following steps:

-
- Step 1** Connect a console to the WLSE, using the procedure in [Using a Console with the WLSE, page 17-2](#).
- Step 2** Log in as the **admin** user, and enter the password created when the WLSE was configured.
- Step 3** Put the Recovery CD in the WLSE's CD drive.
The CD drive is located on the front panel, under the bezel.
- Step 4** Enter the following command. The WLSE will reboot.
`reload`
- Step 5** At the following prompt, enter **yes** to start the Recovery CD:
Do you wish to continue (Yes/[No]/Rescue) **yes**

**Caution**

If you do not want to re-image the WLSE, enter **rescue**. For more information about the rescue image, see [Using the Rescue Image, page 17-21](#).

- Step 6** When the WLSE ejects the Recovery CD, remove it.
- Step 7** At the following prompt, enter **yes**:
Do you wish to reload and start the install?(yes/[no]) **yes**

Result: The WLSE is re-imaged and reboots.
- Step 8** When the Recovery CD ejects from the CD drive, remove it.
When the installation completes, the login prompt appears on the console.
-

Reimaging the WLSE—Remote Installation Method

**Note**

Although every effort has been made to validate the accuracy of the software version on the Recovery CD, you must review the WLSE's software versions on <http://www.cisco.com> and download any necessary software updates. See the Readme files included with the updates to perform the update procedure.

**Caution**

This procedure will destroy all data and install a new image. You will need to replace the data by restoring a backup. For information on backups, see [Backing Up the WLSE, page 17-6](#).

To reimage your WLSE, perform the following steps:

-
- Step 1** Insert the Recovery CD into the CD drive of a system running Microsoft Windows 2000.
- Step 2** Double-click on the CD drive to display the contents of the Recovery CD.
- Step 3** Double-click on the autorun.bat file.
A command prompt window appears and as well as a pop-up window displaying instructions for installing the Recovery CD.
- Step 4** Follow the installation instructions in the pop-up window.



Note Make sure you keep both the command prompt window and pop-up window open until the installation finishes.

Using the Rescue Image

The rescue image is similar to the maintenance image, but is accessible via the Recovery CD. The rescue image is mainly used to aid technical support when diagnosing issues. Use the rescue image if you cannot use the maintenance image, but need to. You can use the rescue image to boot the system to perform some system administration tasks and disaster recovery. For information about the uses of the maintenance image, see [Using the Maintenance Image, page 17-18](#).

You are limited to the following commands while the system is running the rescue image: **reload**, **erase config**, and **fsck**.

To boot from the rescue image, perform the following steps:

-
- Step 1** Connect a console, using the procedure in [Using a Console with the WLSE, page 17-2](#).
 - Step 2** Log in as the **admin** user. The **admin** user's password was created when the WLSE was initially configured.
 - Step 3** Put the Recovery CD in the WLSE's CD drive.
The CD drive is located on the front panel, under the bezel.
 - Step 4** Enter the following command. The WLSE will reboot.
reload
 - Step 5** At the following prompt, enter **rescue**.
A prompt appears, and you can run the following CLI commands:

Command	Description
fsck	Check and repair the file system.
reload	Reboot the WLSE.
erase config	Erase the configuration in flash memory and reload the WLSE.

For more information on these commands, see [Appendix A, "Command Line Interface \(CLI\) Commands."](#)

Recovering from the Loss of All Administrator Passwords

If you cannot log on to the system and perform administrative tasks, perform the following procedure.

Procedure

- Step 1** Connect a console, using the procedure in [Using a Console with the WLSE, page 17-2](#).
- Step 2** Power the system off, then power it back on. Boot messages appear, and then following prompt appears:

```
-----
0: CiscoBre
1: CiscoBreR
-----
```

- Step 3** Use the Up Arrow and Down Arrow keys to select **1** for CiscoBreR and press **Enter**. The following prompt appears:

```
bash-2.05a#
```

- Step 4** Enter the following command. This erases the WLSE's configuration, returns the WLSE to factory defaults, and reloads the WLSE.

```
bash-2.05a# erase config
```

- Step 5** After the WLSE starts up, a login prompt appears.

- For the [WLSE 1130 series](#), log in as setup, and use the setup program to configure the system. This allows you to add a password for the admin user.

For more information about the setup program, see the relevant *Installation and Configuration Guide for the Wireless LAN Solution Engine* on Cisco.com at

http://www.cisco.com/en/US/products/sw/cscowork/ps3915/prod_installation_guides_list.html.
