SkyPilot OS Installation: Fedora Core 5
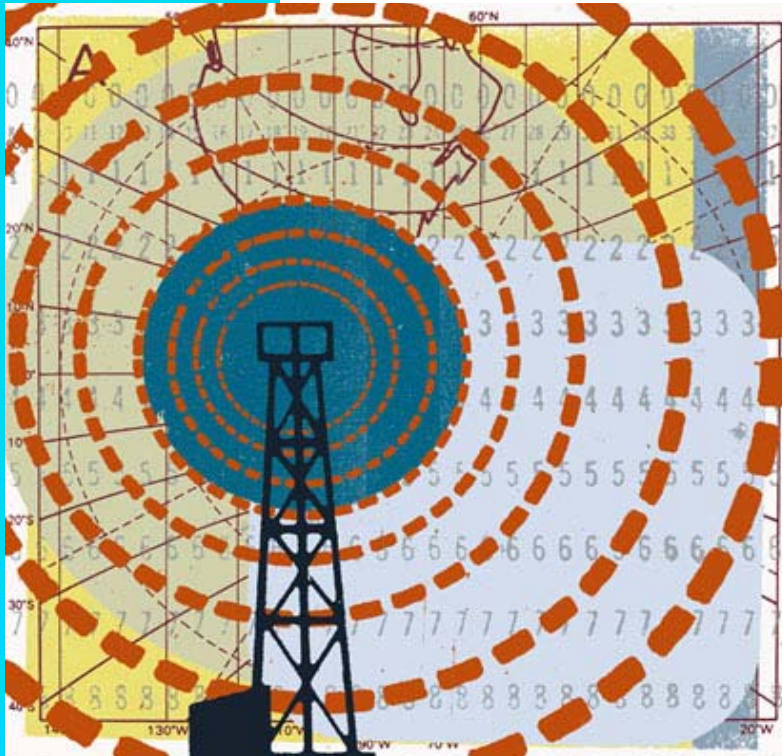
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SkyPilot Firmware 1.4
Document Last Revised: October 2, 2006

Contents

About This Guide

This guide provides directions for installing the Fedora Core 5 operating system on the server you'll use to configure and manage nodes on your SkyPilot wireless network.

This guide assumes administrator-level knowledge of IP networks, basic knowledge of wireless networking, and a familiarity with the information in *Getting Started with the SkyPilot Network*.

This guide is organized as follows:

- "Preparing for Installation" lists the server requirements for installation.

- "Installing Fedora Core 5" provides detailed instructions for performing a custom installation of the Fedora Core 5 operating system.

- "Configuring a Firewall for SkyPilot Operations" tells you which ports to open for data traffic from SkyPilot devices if your server is behind a firewall.

Complete SkyPilot documentation is available from the SkyPilot website at www.skypilot.com/support/.

1

Preparing for Installation

If you're setting up a SkyPilot network to use automatic provisioning of devices under the Fedora Core 5 operating system, you must perform a custom installation of the operating system. This custom installation prepares your server for the installation of SkyPilot EMS software that will provide unattended configuration of SkyPilot devices from a central server at your network operations center (NOC).

Requirements

Table 1 lists the hardware and software requirements for the server on which you'll install the Fedora Core 5 operating system and, later on, the SkyPilot EMS software.

Table 1. Server Requirements

	Minimum	Recommended
CPU (RAM)	2 GHz Pentium	3 GHz Xenon
Memory	512 MB	1 GB
Hard disk space	10 GB	40 GB
Network	10/100 Mbps Ethernet	10/100 Mbps Ethernet

2

Installing Fedora Core 5

To prepare your server for provisioning and managing devices on a SkyPilot wireless network, you must perform a custom installation (or reinstallation) of the operating system. This installation will, among other things, exclude software packages or services that are duplicated by the SkyPilot EMS server software installation: the Apache HTTP server, MySQL database server, VSFTPD server, and DHCP server.

Installation Procedure

WARNING   This installation procedure will reformat your server's hard drive, overwriting its contents. If you have important data on the drive, back it up before proceeding.

To perform a custom installation of Fedora Core 5:

1   Insert the Fedora Core 5 installation disk (either a DVD or Disk 1 of a CD set) in the CD-ROM drive of the server and reboot.

After the server reboots, the installer's welcome screen appears.

2   Click **Next**.

3   Follow the prompts to select options on the language selection screen and additional configuration screens, until either the upgrade examine screen (for OS upgrades) or the disk partitioning setup screen (for new installations) appears.

If you're performing a new installation, the Disk Partitioning Setup screen appears, offering you options for partitioning the disk.
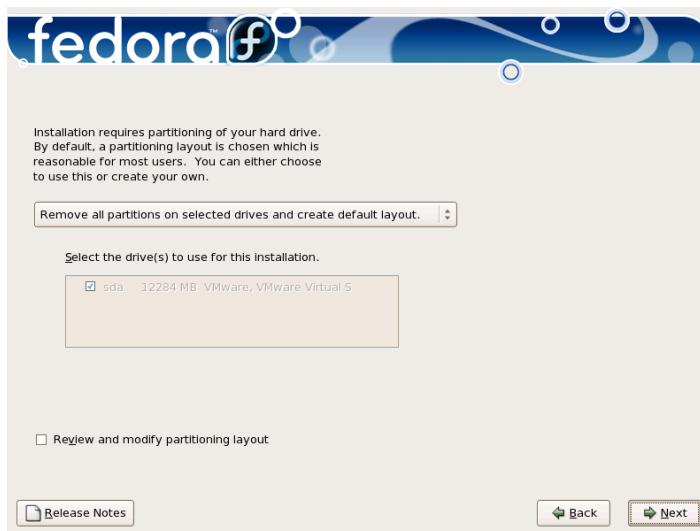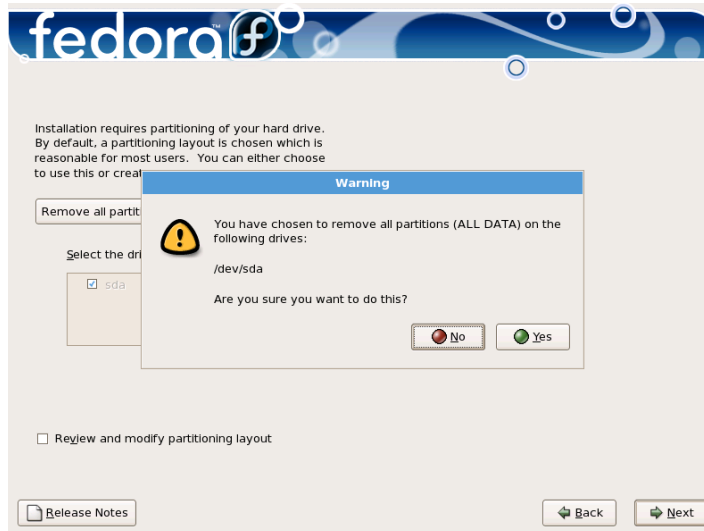
For this installation, you must remove all partitions (Linux and otherwise) from the drive on which you're installing Fedora Core.

4 Select **Remove all partitions on selected drives and create default layout** and click **Next**.

The installer displays a warning dialog asking you to confirm the removal of all partitions.

Figure 3. Partition warning dialog

5 Click **Yes**.

The network configuration screen appears, listing the network devices on your system and providing options for IP addressing and DNS settings. (Automatic configuration of devices on a SkyPilot network requires a provisioning server with a static IP address.)

6 Click the radio button in the Hostname area to select the option for manually setting a host name.

Selecting this option makes the IP address fields in the Miscellaneous Settings area available for entry.

7 Enter a host name of your choice and supply gateway and DNS addresses in the Miscellaneous Settings area of the screen. Click **Next** to continue.

The time zone selection screen appears.

Figure 5. Time zone selection screen

8 Select a location from the drop-down menu, or click in the vicinity of your location on the map to zoom in and select the closest city. Click **Next** to continue.

The root password screen appears.
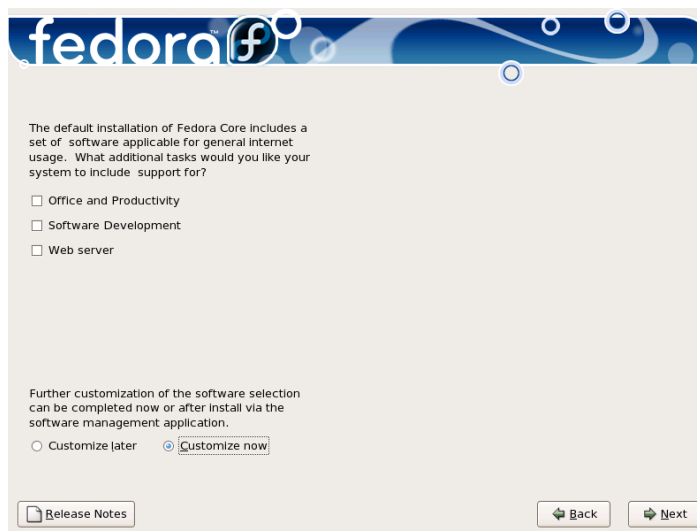
Figure 6. Root password screen

A root account password is required for administering the system.

9 Enter a password in both of the provided fields. Click **Next** to continue.

The software options screen appears, offering you options for extending the default installation with additional applications and services.

Figure 7. Software options screen

Fedora Core 5 offers predefined installations for different types of work environments, but this installation requires a custom selection.

10 Click **Customize now**, then click **Next**.

The package selection screen appears.

Figure 8. Package selection screen

Selecting a category in the left pane displays a listing of installation options in the right pane. Table 2 shows which packages you must select or deselect for SkyPilot. For packages not listed in this table, you're free to include or exclude each, depending on your requirements.

Table 2. Fedora Core 5 Package Options for SkyPilot (Page 1 of 2)

Include (box checked)	Exclude (box unchecked)
Desktop environment	
☑ GNOME Desktop Environment	No exclusion requirement.
Applications	
☑ Editors	No exclusion requirement
☑ Graphical Internet	
Development	
☑ Development Tools	No exclusion requirement

Include (box checked)	Exclude (box unchecked)
Servers	
☑ Server Configuration Tool	☐ Web Server
	☐ SQL database server and clients
	☐ FTP Server
	☐ Network Servers
Base System	
☑ Administrative Tools	No exclusion requirement
☑ System Tools	
☑ X Windows System	
Languages	
No requirement	

11 Click check boxes to select or deselect packages for your SkyPilot software installation (see Table 2). Click **Next** to continue.

A progess meter is displayed as the installer checks for dependencies in the packages you selected.

When dependency checking is complete, a pre-installation screen appears providing information about the log file generated by the process.

12 Click **Continue**.

The installer copies package files to an installation image file, displaying a meter tracking progress of the operation.

If additional media is required to complete the installation, the installer prompts you for the media.

When all package files are copied, the installer presents a screen asking you to confirm the installation.

Figure 9. Installation screen

13 Click **Next**.

The installer formats the drive and transfers the installation image to the hard disk. A progress meter tracks the installation.

When installation is complete, a series of screens appear on which you select system options and identify hardware components.

14 Follow the prompts to make installation selections that correspond to your system setup, clicking **Next** on each screen to continue.

Finally, the installer prompts you to prepare the system for rebooting. Remember to remove any installation media (diskette from the diskette drive or CD from the CD-ROM drive) if they haven't been ejected.

15 Click **Reboot** to reboot the server under Fedora Core.

When you boot Fedora Core for the first time, the Setup Agent starts and guides you through system configuration.
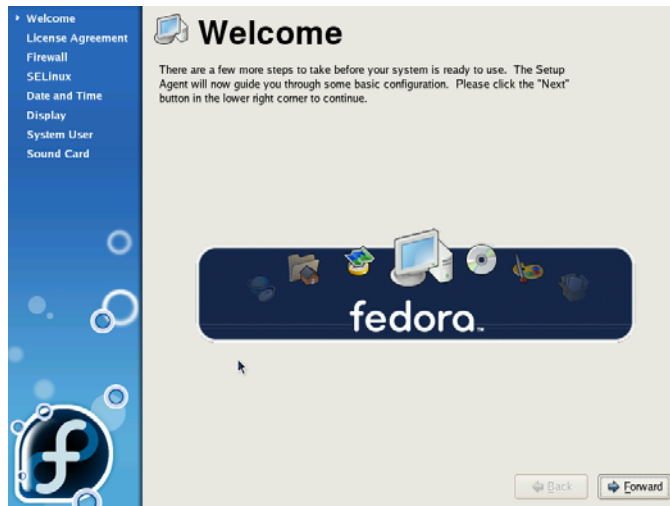
16 Use the Setup Agent to configure the system for use with basic information, including firewall settings, a user profile, and the type of display. A resolution of 1024 x 768 is recommended for easier navigation of EMS.

NOTE To ensure that the SkyPilot wireless network operates properly, it's recommended that you install the operating system without firewall protection. If security concerns force you to use a firewall, follow the instructions in the next chapter, "Configuring a Firewall for SkyPilot Operations."

What's Next

With your server running Fedora Core, you can now install the SkyPilot EMS software that you'll use to provision and manage SkyPilot devices.

For instructions on installing the EMS software, refer to the *SkyPilot EMS Installation Guide*, available from the SkyPilot web site at www.skypilot.com/support/.

Configuring a Firewall for SkyPilot Operations

For optimal SkyPilot operations, you should configure Fedora Core 5 to run without a firewall. However, if security concerns or other issues force you to use a firewall, you must set up the firewall to allow incoming data traffic on ports that SkyPilot clients and devices use for server communications (see Table 3).

NOTE   Each port you open reduces the overall security provided by the firewall.

Table 3. Ports to Open

To...	Open these ports...
Allow EMS clients to connect to the EMS server	80 TCP (JBoss RMI port)
	1098 TCP (JBoss RMI port)
	1099 TCP (JBoss RMI port)
	4444 TCP (JBoss RMI object port)
	3306 TCP (MySQL DB port)
	32007 TCP (Notification port)
Allow SkyProvision™ to configure SkyPilot devices outside the firewall	8000 TCP (HTTP server)
	20 TCP (FTP server)
	21 TCP (FTP server)
	67 TCP/UDP (DHCP server)
Allow SkyControl™ to monitor SkyPilot devices outside the firewall	161 TCP/UDP (SNMP Read)
	162 UDP (SNMP Traps)