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Kahel OS Enterprise Linux Server Edition
Installation Guide

Minimum System Requirements

- Kahel OS Enterprise Linux (Server Edition) Installation Media (Download at http://www.kahelos.org)
- An i686-based or x86-64 computer
- At least Intel Pentium Pro, Intel Pentium 3 or AMD Athlon/Duron.
  - Note that AMD K6, Transmeta Crusoe, CyrixIII, and VIA-C3 are NOT supported.
- At least 256 MB RAM
- 5 GB Free Disk Space

SETUP AND INSTALLATION MODE

I. Insert the CD installer in your CD drive. You will see this screen on boot up. For server on SATA, select the first option. Otherwise, select the second.

II. Selecting the 1st or 2nd Option will boot up the installer as shown in this screenshot:


II. Selecting the 1st or 2nd Option will boot up the installer as shown in this screenshot:
III. When the loading of modules is done, you will be prompted for a login. There are two login accounts: “root” and “kahelserver”. For full administrative access and ability to edit configurations as needed, you have to login as “root”. For normal user privileges, you can use “kahelserver” as login.

IV. After logging in as “root”, you will see the welcome message below. To start installation proper, type “/kahelserver/setup”.
V. You will see the KahelOS introductory page upon execution of the setup command. Click **OK** to proceed with the installation process. You will then be directed to the Main Menu.

**MAIN MENU OPTIONS**

I. **Set Clock.** You can configure system time settings through (a) UTC or Coordinated Universal Time, or (b) local or defining your own time setup.
(a) **UTC** or Coordinated Universal Time

1. Select region/continent by typing the number corresponding to your location. Option 11 will let direct you to set your own default time and time zone.

2. Next, type in the appropriate number for your country.

3. The next screen will ask you to confirm the selections you made. Enter 1 (Yes) to save your selections or 2 (No) to go back to selecting your region/continent and country.
4. After setting up your time zone, the next screen will let you set your date values. Choose OK after selecting your current date settings.

5. After confirming your date settings, the next screen will let you set your time values. Choose OK after selecting your current time settings and to go back to the Main Menu.
1. **Choosing local** will show the screen below that will allow you to choose your region/continent. Enter the number corresponding to your region/continent.

2. After defining the country/region, you will be asked to select a country. Enter the corresponding number of the country.
3. The next screen will ask you to confirm the selections you made. Enter 1 (Yes) to save your selection or 2 (No) to go back to selecting your region/continent and country.

4. After setting up the time zone, next is the date values. Select **OK** to save your date values.

5. After setting the date values, next are the time values. Choose **OK** when done to go back to the Main Menu.
II. Prepare Hard Drive. In Hard drive preparation, the partitions and the filesystem mountpoints are defined.

After selecting OK in Prepare Hard Drive, you will see the following options (1) Auto-Prepare, (2) Partition Hard Drives, (3) Set Filesystem Mountpoints, and (4) Return to Main Menu.

1. Auto-Prepare. This option will erase the ENTIRE hard drive and skips options 2 and 3 because autoprepare will already partition your hard drive (Option 2) and set mounting points for your filesystem (Option 3).
(a) **Partitioning /boot.** In Kahel OS, the default /boot partition is **32MB.** You can enter other values then select **OK** to save it.

(b) **Swap partition.** Default value is **256MB** but you can define your own. Then, select **OK** to save.

![Swap partition screen](image)

(c) **Partitioning / or root directory.** Default value of **7500MB.** Enter other values as may be desired, then select **OK.**

![Root directory partition screen](image)

(d) **Partitioning /srv.** As prompted during the root partitioning, the remaining disk space shall be allocated to /srv. Select **Yes** to proceed with partitioning the remaining space to /srv. Else, select **No** to enter desired value and partition the remaining space as desired.
Select filesystem for / and /srv. There are six options you can choose for your filesystem: (1) ext4, (2) ext3, (3) ext2, (4) btrfs, (5) nilfs2, and, (6) udf-hd.

(1) **Ext4** – This is recommended because it has a good support for large files. We also recommend this for production. See [http://en.wikipedia.org/wiki/Ext4](http://en.wikipedia.org/wiki/Ext4) for more info.

(2) **Ext3** – This has in-place upgrades from the ext2 file system without having to back up and restore data. See [http://en.wikipedia.org/wiki/Ext3](http://en.wikipedia.org/wiki/Ext3).

(3) **Ext2** – For more info on this file format check [http://en.wikipedia.org/wiki/Ext2](http://en.wikipedia.org/wiki/Ext2).

(4) **Btrfs** – Claiming a “focus on fault tolerance, repair and easy administration” is said to be a next-generation filesystem. You can browse more on its features at [http://en.wikipedia.org/wiki/Btrfs](http://en.wikipedia.org/wiki/Btrfs).

(5) **Nilfs2** – Its offer minimal damage to file data and system consistency on hardware failure for more info check this link [http://en.wikipedia.org/wiki/NILFS2](http://en.wikipedia.org/wiki/NILFS2).

(6) **udf** - An operating-system-independent file system commonly used on DVD and other digital media UDF can also be used as a replacement for FAT32, without the limitations of FAT32.

Select **OK** after choosing what filesystem you wish to use.
(f) Next screen asks you to confirm the filesystem you selected. Select YES to proceed.

(g) Partitioning /dev/sda. Another warning prompt will notify the user that the /dev/sda will be COMPLETELY ERASED. Select <YES> to proceed in formatting /dev/sda.
(h) When **Auto Prepare** is done, the screen prompts for successful execution. Select **OK** to go back to the **Main Menu**.

**III. Installation of Kahel OS Enterprise Linux Packages**

a. Select **OK** to begin the installation of Kahel OS Enterprise Linux packages.
b. The screen prompts complete installation of packages. Click Continue to confirm installation and return to the Main Menu.

IV. Configure System. In this option you will begin configuration of needed and available system settings and resources.
Select **OK** to proceed.

a. Select a text editor for you to use and hit **OK**.

b. Next screen shows the list of configurations that you can setup. *In editing configuration in any field you must delete the “#” to enable the syntax.*
1. `/etc/rc.conf` for configurations such as hostname, IP address and gateway.
2. `/etc/php/php.ini` for PHP and PHP behavior configuration.
3. `/etc/httpd/conf/httpd.conf` for configuring the Apache HTTP in case your server is used as a web server.
4. `/etc/resolv.conf` for name server or DNS configurations.
5. `/etc/hosts` is where you can find the static table for host name.
6. `/etc/hosts.deny` for blocking network services and daemons.
7. `/etc/hosts.allow` for services and daemons allowed to be used in the network.
8. `/etc/fstab` for mounting additional filesystem (i.e. FAT32, NTFS, etc.)
9. `/etc/mkinitcpio.conf` is where you find the modules, binaries, files and hooks.
10. `/etc/modprobe.conf` is where modules are added to or removed from the Linux kernel.

11. `/etc/locale.gen` is where the list of supported locales and the list of locales generated by the `locale.gen` command.
12. `/etc/pacman.d/mirrorlist` is where you can select repository mirrorlist uses for server updates.
13. **Root Password** is where you set a password for root access. You will need to enter your root password twice.
14. **MySQL Password** is where you set the password for MySQL access. When prompted to enter current password for root, just hit `<Enter>` and then type in your new password when asked.

Select **Return** to save the configuration and **OK** to go back to the **Main Menu**.
V. **Installing Bootloader.** This is to give you an option of what application to use to boot Kahel OS. Select **OK** to proceed.

a. Included in this package is **Grub**. If you want another bootloader, you need to manually install it. Choose **GRUB**, then select **OK** to proceed.

b. Selecting your text editor is the next step. Choose **OK** after making your selection.
In the editor, you need to configure where your system will boot. If you will be using a USB Flash Drive, you have to change the drive mappings manually by changing ‘root (hd1,0)’ to ‘root (hd0,0)’

c. Select your Grub bootloader mounting point.

d. When Grub bootloader is done, the next window prompts for successful installation. Select OK to go back to the Main Menu. Choose Exit install on the Main Menu and select OK.
e. Type “reboot” on the terminal to restart the system.

SUCCESSFUL INSTALLATION

When your Kahel Server starts up, you will see this welcome screen:

This Operating system is a flexible and customizable Linux + Apache + MySQL + PHP (LAMP) Server.

The Kahel OS Server Edition is optimized for i686 system. Intentionally designed with a rolling release package management model, you are guaranteed to get the latest updates from pure upstream sources.

Fast and Modern, Kahel OS gives you hands-down choices between the best of breed filesystems: btrfs, nilfs2 and ext4. This also ensures you of the latest available kernel and newest kernel features.

Get ready! This is Kahel OS Enterprise Linux. Everyone is encouraged and legally entitled to copy, reinstall, modify, and redistribute Kahel OS.

For more information, visit http://www.kahelos.org

HELP AND SUPPORT

For any suggestions or comments regarding this documentation, please email us at feedback@8layertech.com.

If you need technical support with regard Kahel OS, email us at support@8layertech.com.

Get in the Kahel loop!

- Kahel OS Website http://www.kahelos.org/
- Bugs, Fixes and Feature Requests http://www.kahelos.org/issue/
- Forum and Discussion http://www.kahelos.org/forum/
- Mailing List http://groups.google.com/group/kahel/