FIXSTARS
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A GUIDE TO INSTALLING

YELLOW DOG LINUX 6.1

FOR PowerStation

Rev 1.0 November 18, 2008

A Guide to Installing Yellow Dog Linux 6.1– For YDL PowerStation

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Fixstars Solutions

451 North Railroad Avenue, Suite 102

Loveland, CO 80537

+1 (970) 278-9243 voice

+1 (707) 988-7982 fax

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Many thanks to IBM for making this incredible product possible.

Revision History

Revision	Date	Change
1.0	November 18, 2008	Initial Publication.

INTRODUCTION

Thank you for choosing Yellow Dog Linux!

Sometimes, you just have to wait a while for a good thing to come along. The wait is over. With the new YDL PowerStation by Fixstars Solutions, you will enjoy a return to the Power deskside for a rock-solid, high performance, flexible workstation, server, or compute node.

Yellow Dog Linux combines a simple to use graphical installer with leading-edge components and a foundation of industry standard code development tools for seamless code migration from host to target, workstation to embedded or HPC single board computer. In addition, everything you need for a fully functional desktop--more than 2400 packages on the single Install DVD.

And what's more, Yellow Dog Linux is 100% open-source, meaning the source code to every component is freely available so that if you desire to improve one or more applications, you may do so at your choosing. This contribution back to the open-source community leads to the improvement of Linux software worldwide.

It's a system that has worked for more than 15 years, continuing to grow in both quality and users every year. Linux is collectively one of the top operating systems in use worldwide. Fixstars is proud to be a part of this with a CentOS, RPM based Yellow Dog Linux.

This Guide to Installation

This Guide to Installation is written specifically for the YDL PowerStation product line. This Guide does not offer instructions specific to other computers (tie: Sony PS3) supported by Yellow Dog Linux. Installation instructions for other computers are available from Fixstars' website.

Refer to us.fixstars.com/support/ for updates, issues specific with unique computer configurations, and engineering notes.

Supported Systems

Your PowerStation will use 'yaboot' (yet another bootloader) to boot Yellow
Dog Linux following power-on, the 'bootloader' passing control from the firmware (BIOS for PowerPC) to the operating system (YDL). To learn more about the supported systems and any specific hardware issues, visit:

> us.fixstars.com/support/hardware/

INSTALLATION

1. Insert the Yellow Dog Linux Install DVD and reboot your computer.

2. On reboot, when you are presented with "Press 's' to enter Open Firmware.", immediately press the [s] key.

3. When you are presented with the firmware ("SLOF" BIOS) prompt, type:

    boot cdrom [ENTER]

4. When presented with the 'yaboot' prompt, type:

    install-ppc64 [ENTER]

5. Follow the on-screen instructions and this Guide for particular sections.

Language & Keyboard Selection

Select your preferred Language and Keyboard configurations.
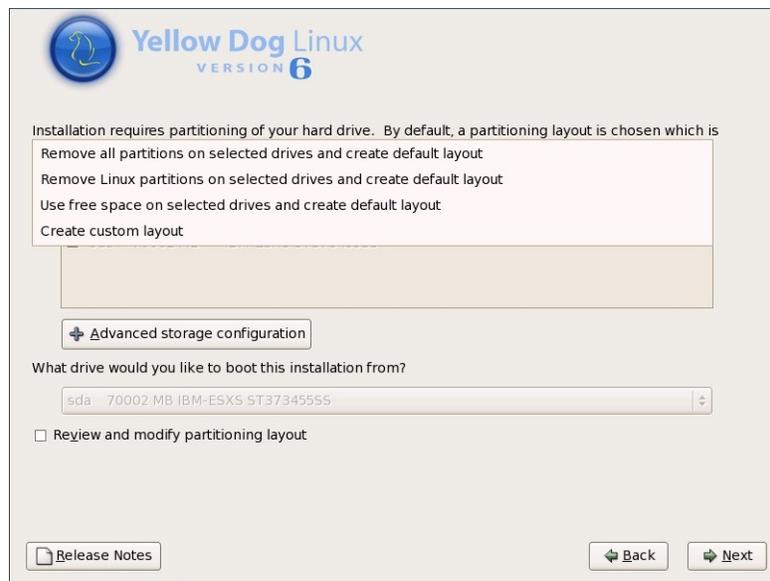
Partition Drive

Partitioning creates logical (as compared to physical) sections on your drive, each of which serves a defined purpose. While you may create additional partitions for your own needs, there are a minimum of 3 partitions that must be created.

If you are using a drive which contains existing Linux partitions, you may instruct the Installer to use these partitions. However, to do so, you must allow the Installer to reformat them which COMPLETELY DESTROYS ALL DATA.

You may either allow the Installer to create the partitions for you by selecting Automatic Partitioning, or conduct this effort manually.

If you elect to use the Automatic Partitioning feature, you may choose from one of three schemes:

● Remove all Linux partitions: this will delete and then replace only existing Linux partitions. Please note this procedure will destroy all data.

● Remove all partitions: this procedure deletes all partitions on the drive.

● Keep all partitions and use existing free space: used only if this drive has an existing, alternative operating system installed, which is to be preserved.

Network Configuration

The YDL PowerStation has 2 ethernet ports. The port labeled "Port 1" is called "eth1" by Linux. The port labeled "Port 2" is called "eth0" by Linux. The default behavior for eth0 (Port 2) is to obtain a DHCP address at boot. eth1 (Port 1) is not active by default. You may reconfigure these settings according to your needs.

Root Password

Choose a password that is at least 8 characters, both letters and numbers and is not based on a dictionary word. Lower and upper case letters are unique. Do not use your birthday, your child's name spelled backward, nor the name of your spouse followed by the year you were married. The security of your computer is only as strong as your passwords. Do not forget this password. Only login as root if you are an experienced user, as it is possible to remove files or data which are required for the proper function of your Linux OS.

Package Selection

The Yellow Dog Installer defaults to a pre-defined package set which includes a full-featured set of graphical applications for a wide variety of functions. These applications are listed on the following web page:

us.fixstars.com/products/ydl/apps.shtml

You may elect to customize the package set to be installed, which may increase or decrease the number of applications and time required. If you remain with the default set, this will require roughly one hour. Once up and running, additional packages may be installed using yum or the Add/Remove Software utility.

Dependency Check

The Installer will now check for package dependencies. This will take 1-2 minutes.

Install

Press "Next" to install Yellow Dog Linux.
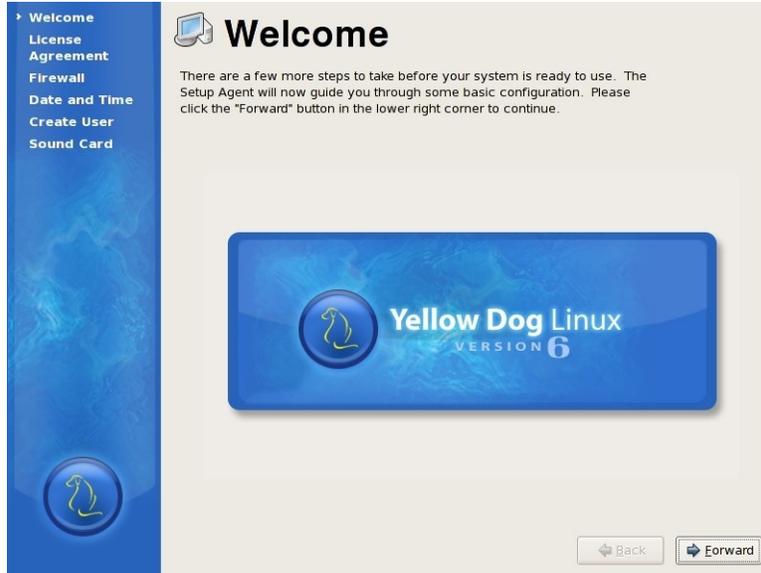
Good time for a beverage break ...

BOOTING UP!

1. Press the white power button on the front, upper-left corner of the front panel of your YDL PowerStation.

2. After approximately 60 seconds you will be presented with the "Welcome to Yellow DogLinux" white text on a black background.

3. At the "boot:" prompt, you may press the TAB key to view the various kernel options; or wait for this screen to time-out and auto-boot the default (*) typically labeled "linux". Alternative kernels (of your own design) may be booted by typing their name.

4. Four penguin icons will appear in the upper left corner of your screen followed by a list of services as they load.

5. During the first-ever boot following installation, you will be welcomed by 'firstboot' in order that you may conduct additional system tests and configuration. See the next section for details.

FIRSTBOOT

Firstboot will walk you through Acceptance of the License Agreement, Date and Time settings, Display Configuration, User Accounts, Sound settings, and then queries if there are any additional packages you desire to install.

License Agreement

Please read and accept this document.

Date and Time

Make certain the date and time are correct.

YDL.net Username and Password

If you have purchased a YDL.net enhanced account, you have the option to enable the system to download yum updates from the YDL.net repositories instead of from the public mirrors. To enable this feature, select the YDL.net checkbox and enter your YDL.net username and password.

Display

Your PowerStation by default ships with an ATI Radeon X1650 graphics card and by default uses the "radeon" driver. We suggest you do not modify this configuration unless Fixstars or a community member offers a tested alternative.

User Account

Add those users whom you desire to have immediate access to your system. Additional users may be added later. Choose a password that is at least 8 characters, both letters and numbers and is not based on a dictionary word. Do not use your birthday, your child's name spelled backward, nor the name of your favorite golf course. The security of your computer is only as strong as your passwords. Do not forget this password. Never login as root, but instead, use "sudo" at the command prompt in order to temporarily gain root access.

Sound Card

The YDL PowerStation does not by default ship with a sound card.

GUI VS COMMAND LINE LOGIN

Graphical Login

Yellow Dog Linux now defaults to a graphical login unless you chose a set of packages that do not include the X windows environment. You will be presented with a place to enter your username (do NOT login as root unless you have need to do so). Choose your preferred default window manager. Enter your password. You may also reboot or shutdown your computer.

Command Line (text) Login

If you did not install an X windows environment, you will be presented with a "login:" prompt. Enter your account name and password.

If you desire to change your GUI login to a text login, login as 'root' and then the root password. You may change the login from GUI to text as follows:

> nano /etc/inittab [ENTER]

Change the run-level from '3' to '5' (located a dozen or so lines from the top of the file). You may save this file by following the instructions presented at the bottom of the 'nano' text editor window. When you restart your computer:

> reboot [ENTER]

... YDL will now automatically boot to a text login. You may change this back to a graphical login by changing the 3 back to a 5.

If you maintain the text login but do have X windows installed, you may launch the GUI (from the command line) by typing:

> startx [ENTER]

If this fails to launch a graphical environment and you are returned to the command line prompt, enter:

> Xautoconfig [ENTER]

This will generate a base monitor setting that will at least get you into a graphical environment whereby you may select the Display configuration tool from the System Settings of the Yellow Dog Linux menu. You should then log-out and log back in again to test the new settings.

RUNNING YELLOW DOG LINUX

Login

At the graphical prompt, enter the username and password created during Firstboot's System User query. You will then enter the graphical user interface to Yellow Dog Linux, featuring the Enlightenment "E17" desktop environment.

With Linux, no one desktop environment is locked to the operating system, granting end users room for creativity, choice, and a variety of features. Other desktop environments such as KDE and Gnome are available with the YDL Install DVD or from on-line repositories. KDE offers a tightly integrated productive environment for office and education. Gnome generally caters to those who desire greater room for customization. Gnome is installed by default and may be selected at log in.

Yellow Dog Linux defaults to the Enlightenment "E17" desktop environment.

Enlightenment

Enlightenment "E17" is an alternative desktop manager to KDE and Gnome, offering a completely customizable interface, integrated functionality, access to all the traditional applications, and a lightweight, intuitive, yet robust graphical interface.

While unique in many respects, E17 offers familiar operating system features such as a start (YDL logo) menu, productivity applications, and the ability to customize the desktop environment to your liking.

To learn more about Yellow Dog Linux and the E17 desktop environment, review the included Quick Start Tutorial, presented as the home page of your FireFox web browser:

> YDL Menu ==> Applications ==> Internet ==> Firefox

The same tutorial is also available on-line:

> us.fixstars.com/support/configuration/

SUPPORT

Installation Support

Installation Support is provided through YDL.net Enhanced accounts:

us.fixstars.com/store/

HOWTOs, Lists, and Forums

A guide to free, on-line support is available at Fixstars' website:

us.fixstars.com/support/

Technical Support

To learn more about Fixstars' technical support offerings, visit:

us.fixstars.com/support/