

{Voyage} Linux

x86 Embedded Linux Distribution

<http://linux.voyage.hk>

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Introduction

- derived from **Debian** GNU/Linux
- runs on **x86-based** platform
 - **low-end PC**
 - **PCEngines** and **Soekris** embedded boards
- requires \geq **128MB** disk storage (flash card)
- suitable for:
 - **firewall**, **WiFi** access point, **VoIP/PBX** gateway, **NAS**, etc.



Features

- Distro features

- **stripped down** Debian, using latest stable Debian
- extend through **apt** package management
- mount disk as read-only, /var/log in **ramdisk** - protect flash card wear out
- **Live CD, PXE** network install support

- Kernel features

- customized for **small size**
- **wireless** drivers
- **watchdog** & temperature sensors
- various **netfilter** patches from openwrt
- openssl **OCF** (cryptodev) patch



Release History

Dec 2004	Voyage Linux project started
Feb 2005	0.1 - pre-Sarge (2.6.8 kernel)
Jul 2005	0.1 - Sarge (2.6.8 kernel)
Apr 2006	0.2 - Sarge (2.6.15 kernel)
Apr 2007	0.3.1 - Etch, Live CD (2.6.17 kernel)
Jul 2007	0.4.1 - Etch (2.6.20 kernel)
Jun 2008	0.5.2 - Etch (2.6.23 kernel)
Jul 2009	0.6.2 - Lenny, Debian Live (2.6.26 kernel)



Installation Methods

1. Tarball distribution

- ▶ install from existing Linux system
- ▶ transfer to disk media (e.g. CF)

2. Live CD

- ▶ < 50MB ISO image
- ▶ Network install via PXE
 - use Live CD as PXE server



How people use Voyage Linux?

- Swedish WISP - Mesh Network & IP surveillance in Highway
- VoIP/Asterisk Appliance - openvox.com.cn
- Music Player Daemon
- Australia ISP - Linux-server hosting
- Bandwidth Equalizer
- GPS-time sync
- 3G + Wireless Router
- Other unknown commercial, academic and personal use



Media

“Voyage is a very stripped-down Debian Linux ... With Voyage you have the entire world of Debian available to you, so customizing your own gear is easy. It's great for firewalls and routers, and specialized servers that need a small footprint.”

-- Carla Schroder, author of Linux Networking Cookbook



Media

- Enterprise Networking Planet :
 - The Comforts of Debian. Embedded
 - Do More With Less: 802.1Q VLANs with Voyage Linux
 - Run a Business Network on Linux
- LinuxDevices :
 - Debian mini-distro suits routers, low-end devices
- Others links:
 - <http://linux.voyage.hk/?q=features>



Current Project Status

- **Project Sites**
over **10,000** pageviews / month
- **Community Support**
 - **Mailing List**
list.voyage.hk/pipermail/voyage-linux - **430** subscribers
- **Documentation**
 - **Wiki**
(wiki.voyage.hk)
- **Intel/AMD 64-bit port**
- **Download Mirror**
 - **13** country mirror sites - Asia-Pacific, Europe, North America
- **Development**
 - **SDK** - build Live CD, full distro, customization
 - **Subversion** svn.voyage.hk/repos/voyage/trunk/voyage-live



Future Development

- Current release - version 0.6.2
- Next release - version **0.7.0**
 - Support latest kernel (\geq **2.6.30**)
 - Debian r6.0 “**squeeze**” based - Q1 2010
- Planning ...
 - **Voyage One** (built-in mesh, mpd, asterisk, NAS, terminal server)



Why OSS Project?

- Inspired by Apache Foundation's projects
 - long-time subscribers to Tomcat's mailing list
- Just a desire of running an OSS Project
- Hobby interest to build a small, customizable WiFi access point
- Sharing is good things



What did you learn?

- Running an OSS Project
- How Linux distribution is built
- Kernel customization / patching
- Various Linux administration skills
 - web server / drupal
 - mailing list
 - wiki
 - source code control
 - mirror setup



Advices for people interested in OSS projects

- Join mailing list of your favourites OSS projects
 - Apache's projects
 - Debian
- Raise questions
- Submit bug reports
- Build from source code
- Modify source code
- Submit patch for fixes or features



Thank you!

