

Linux for PlayStation® 2

Adam Bertsch

Sony Computer Entertainment,
America

Background

- SCE is responsible for PlayStation®
- SCE Research and Development
- <http://playstation2-linux.com>
- Linux background
 - ◆ CSU, Chico
 - ◆ Sprint
 - ◆ VA Linux Systems

What are SCE's goals for Linux?

- Expose developers to PlayStation®
- Investigate the uses of Linux on a game console
- Respond to consumer demand
- Allow game enthusiasts to create game content for the PlayStation® 2

Kit Contents

- Linux (for PlayStation® 2) software 1.0
- Monitor Cable Adaptor (for PlayStation® 2)(with Audio Connectors)
- Internal Hard Disk Drive (40GB)(for PlayStation® 2)
- Network Adaptor (Ethernet Only)(for PlayStation® 2) [10/100 Base-T]
- USB Keyboard (for PlayStation® 2)
- USB Mouse (for PlayStation® 2)

Additional Requirements

- PlayStation® 2 Computer Entertainment System
- Memory Card (8MB) (for PlayStation® 2)
- Sync-on-Green Monitor (recommended)

The Kernel

- 2.2.1 MIPS
- 2.2.18 USB
- Binary device driver modules
- xRhino and 2.2.19

The Distro

- Kondara (Red Hat 5)
 - ◆ Source-compatible
 - ◆ Not binary-compatible with x86 distros
- Some updates from website
 - ◆ Linux for PlayStation® 2 Community
 - ◆ CFYC
- Pressed-disc updates unlikely
- Black Rhino (Debian/GNU)

Hardware

- Emotion Engine
 - ◆ MIPS R5900
 - ◆ Vector Units
- Graphics Synthesizer
- I/O Processor*
- Sound Processing Unit*
- 32MB RAM

* Full hardware access not available.

Potential Uses

- Software Development
 - ◆ Games
 - ◆ Development tools
 - ◆ Productivity apps
- Home entertainment appliance
 - ◆ Digital music
 - ◆ Digital video
- Cluster applications
 - ◆ Scientific computing
 - ◆ Graphics processing

Licensing Issues

- DVD 1 – SCE Proprietary
 - ◆ Boot Loader
 - ◆ Runtime Environment
 - ◆ Hardware Manuals
- DVD 2 – GPL / Various
 - ◆ Linux for PlayStation® 2 software

Where can I get one?

- <http://us.playstation.com>
 - ◆ Purchase – Hardware
 - ◆ \$199

Live Demos

- X11
- Mp3 jukebox
- Video for Linux
- Vector Unit Demo Competition