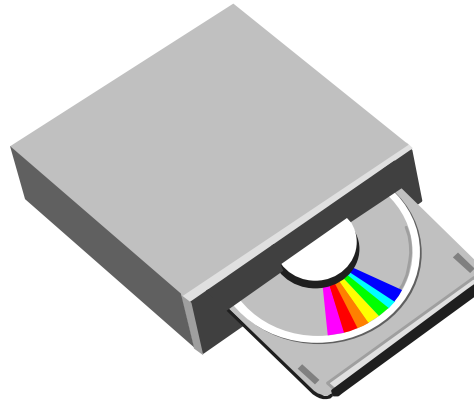


Improved
HP-UX
Install Media



Improved HP-UX Install Media

Greg Ivans

Hewlett-Packard

greg_ivans@hp.com

1-970-898-3294

Agenda for this Presentation

- History of HP-UX Install Media
 - Quick look at different HP-UX releases and hardware enablement issues.
- Media Install Issues and Alternatives
 - What are the latest issues and what were the previous options?
- 11.X Media Install Improvements
 - 11.X objectives for a solution and changes to 11.00 install process.
- Changes to Configuration Menu
 - New configuration choices match “instant ignition” on new systems.
- 11.00 Media Install Documentation
 - Handling multiple CD media with new options and software choices.
- Improved 11.00 Installation Process
 - Updated install kernels support new systems and I/O adapters.
- Status of 11.X Media-Install Plans
 - Latest changes to the 11.00 Core OS and 11i OE media kits.
- Overall 11.X Media-Install Strategy
 - Will the new media-install strategy meet future needs?
- References and More Information

History of HP-UX Install Media

HP-UX 10.10 Release (Feb. 1996)

- Separate Install, Core, and Recovery CD media.
- Limited new hardware-enablement (HWE) support with cold-install.

HP-UX 10.20 Release (Aug. 1996)

- Combined Install/Core CD with separate Recovery CD.
- New hardware functionality supported with 10.20 Hardware Extensions (required for newer servers) and 10.20 ACE Workstation CD media.
- Limited support for new I/O adapters and devices with 10.20 Core CD.

HP-UX 11.00 Release (Nov. 1997)

- Combined Install/Core/Recovery CD media.
- New hardware functionality initially supported with 11.00 Ext. Packs.
- 11.00 ACE (Nov. 1999) was last major release to add new hardware functionality with support for new HP9000 servers and workstations.

Media Install Issues and Alternatives

Issues with 11.00 ACE Core OS Media Install (Nov. 1999):

- Install/recovery doesn't support new I/O cards (FibreChannel, Gigabit).
- Can't install HP-UX to new storage devices (e.g. FC disk arrays).
- Separate install and reboot required for each CD and patch bundle.
- Complex install sequence needed to add I/O drivers and patches.
- Limited solutions for new hardware-enablement and recovery.

Previous Options for 11.00 Core Media Problems:

- Copy Core OS software, I/O driver products, and patch bundles to network depots and use Ignite-UX with latest install kernels.
- Install first to SCSI boot disk and then copy to FC boot disk.
- Don't use the latest FC cards with FC mass-storage devices.
- Just accept the 7 reboots and write a better sequence of install steps.

HP needed a better 11.X media install solution!

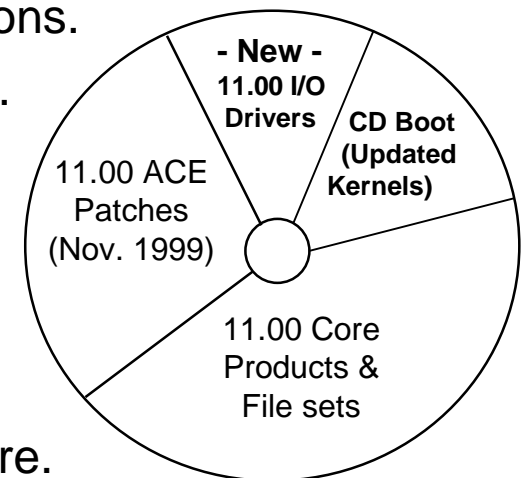
11.X Media Install Improvements

Objectives for the 11.X Install Media Solution:

- Support new Core I/O and add-on peripherals on HP-UX systems.
- Reduce complexity and install all software with only 1 manual reboot.
- Avoid Core OS change and need to re-qualify current applications.
- Provide well-tested solution for supported configurations.
- Update quarterly to deliver latest drivers and patches.

Changes to the 11.00 Install Media Process:

- Add latest install kernels and improved install utility.
- Add choice for latest Diagnostics and patch bundles.
- Handle multiple CD media with required HWE software.
- Key mass-storage and networking drivers added to Core media.
- Add basic configurations to match latest Instant Ignition configuration.



Changes to Configuration Menu

Choices from the Basic Configuration Menu:

- 11.00 Default: Core and ACE Patches (Minimum requirement)
 - Commercial Servers: Core + GR + HWCR + Diags + Predictive
 - Technical Computing: ACE + Graphics + QPK + HWCR + Diags
- (Choices 2 and 3 match Instant Ignition option for new systems.)

Information on Basic Configuration Menu Line:

- Each choice includes any requirements for additional media.
 - Description lists components, bundle names, and required media.
 - Explains need to select I/O drivers from software selection menu.
- (Use up/down keys to see information in Text-based User Interface.)

Install utility will prompt for desired CD media in correct sequence.

Basic Configuration Choices (New Choices Match Instant Ignition)

```
/-----\ /-----\ /-----\ /-----\ /-----\
| Basic || Software || System || File System || Advanced |
|      \-----\
|
| [ Configurations:... ] 11.00 Default Configuration [ Description... ]
|   Configuration Menu
| /-----\
| |                                     ^
| | 11.00 Default Configuration (Requires 11.00 Core CD) |
| | Commercial Servers (Requires Core CD and Support Plus CD) |
| | Technical Computing (Req. Core CD, Options CD, and Support |
| |                                     v
| | \<-                               ----->/
| \-----\
|
| [ Show Summary... ] [ Save As... ] [ Reset Configuration ]
|
|-----|
| [ Go! ] [ Cancel ] [ Help ]
```

New Software Choices for Bundles (Shows “Commercial Server” Selection)

```

/-----\ /-----\ /-----\ /-----\ /-----\
| Basic || Software || System || File System || Advanced |
/-----/          \-----\
|
| Category          Marked ? Product          Description
|/-----\ /-----\
|| All              ^ | No      KernDev          HPUX Kernel Developers Kit ^
|| UserLicenses    | No      LiteConfig       Small Memory (Desktop) Config
|| OrderedApps     | Yes    OnlineDiag      HPUX 11.0 Support Tools Bundle
>>|| HPUXAdditions  | No      QPK1100        Quality Pack for HP-UX 11.00
|| Uncategorized   | Yes    XSWGR1100     HP-UX General Release Patches
||                 | No      General Patches Mark to load all patches,
||                 | Yes    XSWHWCR1100   HP-UX Hardware Enablement and
|\-----/ \<                                ----->/
|
| [ Change Depot Location... ]
|\-----\
| [ Show Summary... ] [ Save As... ] [ Reset Configuration ]
|
| [ Go! ] [ Cancel ] [ Help ]

```


11.00 Media Install Documentation

- Explains required media for latest systems and peripherals.
 - 11.00 Core OS CD, Core OS Options CD, and Support Plus CD kits.
- Lists new configurations with latest patch bundles and diagnostics.
 - Default Configuration** – 11.00 Core OS, ACE patches, and selected I/O drivers.
 - Technical Computing** – Adds graphics S/W, patches, diagnostics to Default.
 - Commercial Servers** – Adds patches, diagnostics, and Predictive to Default.
- Provides table of I/O drivers with H/W and S/W product numbers.

<u>Drivers Selectable During Cold-Installation</u>	<u>Hardware</u>	<u>Software</u>
HP PCI Tachyon TL Fibre Channel	A5158A	A5158A
PCI I2O RAID (64-bit OS driver only)	A5856A	A5856A
100BT/9000 PCI for B, C, and J Class	B5509BA	B5509BA
1000Base-T PCI Gigabit Ethernet	A4929A	A4929A
HSC FDDI/9000 Driver for K and T Class	A3722A	J3701BA
PCI HyperFabric 9000/800 for V-Class	A4919A	B6257A
... Plus more I/O drivers for other I/O adapters ...		

New Software Choices (Drivers listed by Bus Type)

```

/-----\ /-----\ /-----\ /-----\ /-----\
| Basic || Software || System || File System || Advanced |
/-----/          \-----\
| Category          Marked ?  Product  Description          |
| /-----\ /-----\
|| All              ^ | |
|| OrderedApps      |
|| UserLicenses     | No      A3739B  PCI FDDI/9000 Media |
>> || PCI_Card_Apps   | No      A4919A  HyperFabric 9000/[78]00 (V, N Clas |
|| HPPB_Card_Apps   | No      A5158A  HP PCI Tachyon TL Fibre Channel |
|| GSC/HSC_Card_Apps | No      A5230A  100BT/9000 PCI |
|| HPUXAdditions     | No      A5506B  PCI 4 PORT 100BASE-T/9000 |
|| Uncategorized    | No      A5783A  PCI Token Ring |
||                  | No      A5856A  I2O RAID (PCI) |
||                  | No      J1642AA HP PCI/HSC Gigabit Ethernet Driver |
||                  v |
|| \-----/ \<   Scroll down to see more choices   ----->/

```

Improved 11.00 Installation Process

- Load updated 11.00 Core CD and boot from the CD-ROM device.
 - Updated install kernels support new systems and I/O adapters.
- Select desired configuration and other options from Basic menu.
- Select I/O products from driver categories in the Software menu.
 - Mass-storage and networking drivers for servers and workstations.
 - 64-bit drivers (e.g. PCI RAID) only appear for 64-bit capable systems.
- Select choices and options from other menus. (e.g. File System)
- Select GO! and utility installs selected software from Core CD.
- Install utility loads selected software in correct sequence.
 - Install utility prompts for required media based on selections.
 - Install utility defers reboot until all software is installed.
- Final reboot brings up core and selected I/O in functional state.
 - New process eliminates separate install sessions (up to 7 reboots).

Status of 11.X Media-Install Plans

Dec. 2000: (Started install improvements with 11.00 Core OS CD.)

- Improved install tool on 11.00 CD for quarterly update of HWE S/W.
- Added support for patch bundles and diagnostics from Support Plus.
- Changed to use 1 reboot for S/W install and 1 reboot to cleanup files.

March 2001: (Improved 11.00 Core media kit documentation.)

- Rewrote Install/Update document and made packaging improvements.
- Delivered new configure tool on 11.00 CD to setup PCI RAID adapter.
- Fixed most of the previous 11.00 cold-install problems in this release.

June 2001: (Planned improvements for 11i OE media.)

- Improve install tool on 11i media to handle updated HWE software.
- Add updated HWE bundle, I/O drivers and diagnostics to 11i OE CD.
- Start quarterly update to support new systems and peripherals on 11i.

Overall 11.X Media-Install Strategy

Enhance install media and tools for integration with future needs.

Media includes updated install kernels, HWE patches, and I/O drivers.

Allow media installation to re-create HP Instant Ignition software mix.

Install menu provides choices that match basic HP Ignition options.

Improve enablement of new Core I/O and add-on I/O cards.

Selectable I/O driver products permit pre-enablement of HW on order.

Support Plus media provides HWE patches, diagnostics, HW monitors.

Align 11.00 I/O driver products with 11i OE driver products.

Key I/O adapters supported on 11i OE match 11.00 install choices.

Some issues with EISA cards, ATM adapters, and Token Ring cards.

- EISA drivers have some restrictions, ATM has two driver stacks.

What other media-install improvements would you like to see?

References and More Information

Exploring HP-UX Releases and Media

- <http://www.software.hp.com/HPUX-RDMP/>

HP-UX 11.0 Installation and Updating Guide

- <http://docs.hp.com/hpux/onlinedocs/5971-0642/5971-0642.html>

HP-UX 11.0 Operating System Documents

- <http://docs.hp.com/hpux/os/11.0/>

HP-UX 11i Operating Environments Documents

- <http://docs.hp.com/hpux/os/11i/>

HP IT Resource Center

- <http://itrc.hp.com/>

HP Software Depot Home

- <http://software.hp.com/>

Acronyms and Terminology

ACE: Additional Core Enhancements

- A collection of enhancements to HP-UX 10.20 and 11.00 OS to support new hardware and software features without modifying the behavior of the base OS.

EP: Extension Pack (aka Ext. Pack)

- The HP-UX 11.0 Extension Pack, May 1999 delivered hardware enablement patches, software functionality, critical patches, and general-release patches without creating a new release. Replaced by 11.00 ACE, November 1999.

HWE: Hardware Enablement

- HP-UX software changes (in patches and I/O driver products) to support hardware requirements for new systems and I/O adapters.

Descriptions of HP-UX Patch Bundles

GR: General Release bundle (e.g. XSWGR1100)

- Recommended patches to bring all Core OS software to current patch level on HP9000 commercial servers.

HWCR: Hardware and Critical bundle (e.g. XSWHWCR1100)

- Includes patches to enable new hardware and provide critical fixes.

QPK: Quality Pack bundle updated every six months (e.g. QPK1100)

- Provides defect fixes needed by important third party applications and recommended by HP Support for HP9000 workstations and technical servers.

GOLDQPK11i: Quality Pack bundle is delivered on 11i Support Plus (SP) CD.

- Provides recommended defect fixes for 11i Base and 11i Applications.

HWEEnable11i: HW Enablement bundle delivered on 11i OE CD #1 and SP.

- Delivers only the HWE patches required for new systems and peripherals.