



# HP-UX 11i Knowledge-on-Demand

HP technical Webcast series: software optimization



Technology for better business outcomes

# HP-UX 11i v3 Knowledge-on-Demand

- Objective: Support software development partners and customers in achieving better business outcomes with HP-UX 11i.
- What HP is providing: a series of technical on-demand training Webcasts
  - Focused on helping developers increase performance through application optimization for HP-UX 11i v3 on HP Integrity servers
  - Access to HP for follow-up questions
  - Available at [www.hp.com/go/knowledgeondemand](http://www.hp.com/go/knowledgeondemand)

# HP-UX 11i v3 Knowledge-on-Demand Webinars – planned curriculum

- Foundation Track

- Module 1: How to upgrade to HP-UX 11i v3
- Module 2: HP-UX open source resources
- Module 3: Unified file cache
- Module 4: Caliper
- Module 5: NUMA Tuning: Getting the Most Out of Your Cellular Server by using NUMA
- Module 6: The Mercury Library – Increasing Application Performance
- Module 7: Software Transition Kit's (STK's) for HP-UX 11i v3

Additional Webinars  
published going forward!

- Java Developers Track

- Module 8: Java Memory Management - Internals and Performance
- Module 9: HPjmeter – measure Java application performance on HP-UX 11i
- Module 10: Solving Java performance problems

- C/C++ Developers Track

- Module 11: pthreads enhancements in HP-UX 11i v3
- Module 12: Kernel tracing & profiling tools (internal tools)
- Module 13: Using compilers to get optimal performance
- Module 14: HP Code Advisor: A Powerful New C/C++ Analysis Tool for HP-UX
- Module 15: Montecito Hyper-Threading on HP-UX 11i v3

# Related HP-UX 11i v3 resources

- All developers' resources
  - HP-UX 11i developers' content  
[www.hp.com/go/hpuxdev](http://www.hp.com/go/hpuxdev)
  - HP-UX 11i v3 news, functionality, product download and services resources  
[www.hp.com/go/hpux11i](http://www.hp.com/go/hpux11i)
  - HP Integrity server ISV resources for DSPP members  
[www.hp.com/go/dspp\\_integrity](http://www.hp.com/go/dspp_integrity)
  - HP Integrity server product information  
[www.hp.com/go/integrity](http://www.hp.com/go/integrity)
- Software partner promotional opportunity
  - HP promotion for HP-UX 11i v3-ready software partner application  
[www.hp.com/go/v3promotion](http://www.hp.com/go/v3promotion)

# Enjoy this Knowledge-on-Demand topic!

Thank you for taking time to learn about HP-UX 11i v3 and related technologies.

Please send comments on today's topic and/or requests for future topics to:

[hpuxquestions@hp.com](mailto:hpuxquestions@hp.com)



# How to deploy HP-UX 11i v3

An HP-UX 11i Knowledge-on-Demand software optimization Webcast



Technology for better business outcomes

# Introducing today's speaker

Bruce Henderson is manager of the software deployment section in the Fort Collins UNIX Software Deployment Lab. The software deployment products include Software Distributor (SD), Ignite-UX, Update-UX, DRD, and SWA products. Enabling customer and developer migration to 11i v3 is one of the strategic focus areas of this team.



# Agenda

## HP-UX 11i v3 highlights

### Software deployment planning

- Hardware
- Software
- OS/OE migration methods

### Deploying HP-UX 11i v3

- Supported hardware
- Available software
- Supported migration paths
- Future options



# HP-UX 11i v3: what's new



**Flexible  
capability**  
Mission-critical  
virtualization



**Secured  
availability**  
Breakthrough  
availability



**Simplified  
management**  
Unified control

- **Flexibility with mission-critical virtualization**
  - Dynamic memory migration for HP virtual partitions and HP Integrity Virtual Machines
  - Dynamic nPartitions
- **Capacity for most demanding workloads**
  - 30% increase in OS performance on average
  - Simplified storage management and increased capacity with next-generation storage stack
- **Affordable data-center-class availability**
  - Increased uptime: hot-swap memory/processors
  - Online patching with DRD
  - Protect lost/stolen data-at-rest via encrypted volume and file systems
  - PCI error recovery and extended set of automatic/dynamic tunables
- **Centralized expert control**
  - Enhanced HP Systems Insight Manager for single-console manageability
  - Enhanced System Management Homepage for intuitive control

# Deploying software

An overview



# Agenda

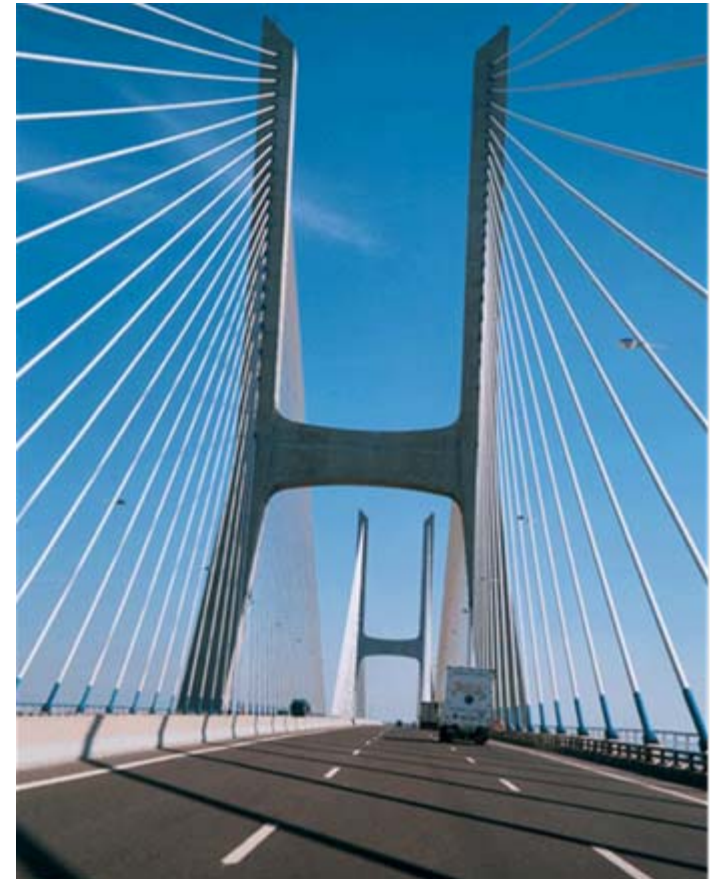
## HP-UX 11i v3 highlights

### Software deployment planning

- **Hardware**
- **Software**
- **OS/OE migration methods**

### Deploying HP-UX 11i v3

- Supported hardware
- Available software
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- Future options



# Software deployment planning—hardware

HW planning is one of two key migration focus areas.

- Planning your disk space needs
  - Develop a configuration plan
    - File system sizes
    - Swap space size
    - Dump device
    - Disk and file system parameters
    - Root volume redundancy
    - List mirrors
  - If using other applications, consider their HW requirements.



# Software deployment planning—software

**Application availability is the second key focus area.**

- Types
  - HP products
    - They are ready.
  - Third-party vendor (ISV) products
    - HP is telling customers to contact their ISVs as soon as they start planning.
  - End customer's internal software packages
- Compatibility
- Qualification
  - 11i v3 is compatible with 11i v2, so requalifying your applications shouldn't be required.

# Software deployment planning—software

- Selecting your software base
  - HP's regular release model—functionality over time
  - Are there application updates to also consider?
- Required patches
  - ISV products should be qualified on the latest applicable Quality Pack patch bundle.
  - Only a few additional patches, if any, should be needed.

# Software deployment planning—software

## Selecting the right system admin tools and commands

- HP Systems Insight Manager
  - Web-based multiple system management
  - Configure and manage not only HP-UX systems but also Linux- and Windows-based HP systems, as well as non-HP Linux and Windows systems
- HP-UX System Management Homepage (Web-based)
  - Manages one HP-UX system at a time
- HP-UX System Management Homepage (text-based)
  - Simple terminal-based screens
- HP-UX Commands
  - Provide the finest granularity of access to system configuration

# Software deployment planning— OS/OE migration methods

Which migration method should you use?

- Cold-install
  - Overwrites everything on the target disk
  - Very predictable and fast
  - Recommended when...
    - Your system configuration is not listed as a supported update path
    - Disk space needs reconfiguration

# Software deployment planning— OS/OE migration methods

## Which migration method should you use?

- Update (used 26% of the time\*)
  - Don't want to overwrite unique applications or data on your root volume group
  - Each system has a unique configuration
- With either method, start by backing up your system.
- Comparative performance between cold-install and update
  - In pre-release certification testing: 2 hours, 11 minutes to install a full MCOE from a network depot using an HP Integrity rp7410 Server
  - In pre-release certification testing: 2 hours, 47 minutes to update MCOE from 11i v2 0609 to 11i v3 using an HP Integrity rp7410 Server

\*2006 System Administration survey

# Software deployment planning— OS/OE migration methods

## Cold-install software sources

- Media
  - Cold-install or update one system at a time.
  - Cold-install or update directly from the DVDs in the HP-UX media kit:
    - HP-UX 11i v\* OE media—Boot and install a new system or update an existing system.
    - HP-UX application media—Install applications not installed with the OE or install a newer version of an OE application.

# Software deployment planning— OS/OE migration methods

## Cold-install software sources

- Software depots (or network depots)
  - Cold-install or update many systems in your enterprise.
  - Consolidate your software sources into one or more network depots.
    - Network depot—Use Software Distributor (SD) commands to create depots containing OS, OE, and other software bundles.

# Software deployment planning— OS/OE migration methods

## Cold-install software sources

- Golden images
  - Create many similar systems in your enterprise.
  - Install the same OS/OE image or applications on many systems.
  - Use an Ignite-UX server to create a faster software source than an Software Distributor (SD) depot:
    - Golden image—Create a golden image from which to cold-install; it can contain the OS and OE, other applications, and any needed patches.

# Deploying HP-UX 11i v3

What's unique



# Agenda

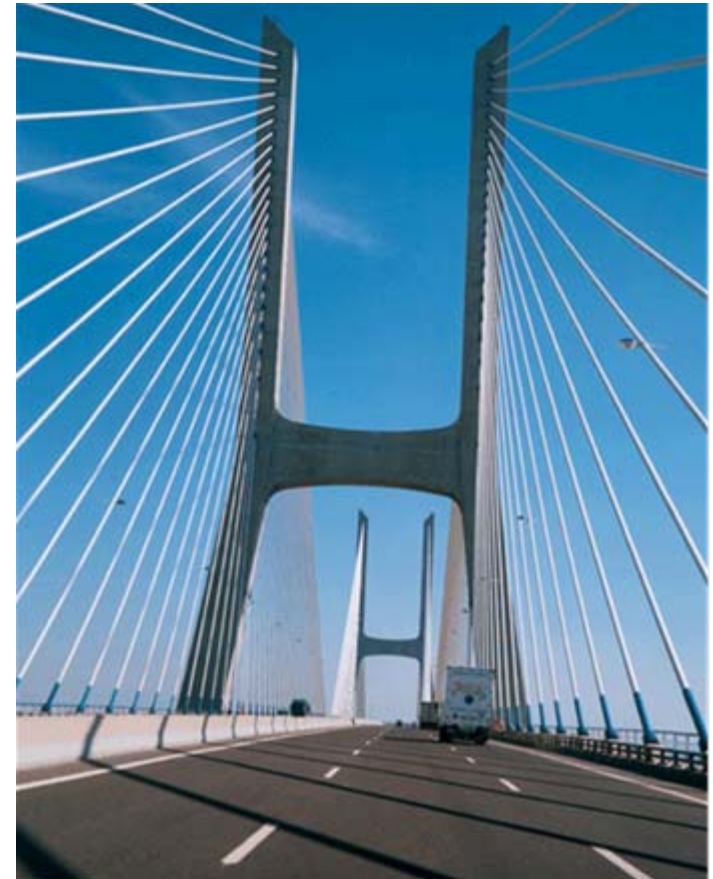
## HP-UX 11i v3 highlights

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- **Available software**
- **Supported migration paths**
- **Future options**



# Deploying HP-UX 11i v3

## Supported hardware

System	HP-UX 11i v3 minimum firmware level
Itanium®-based HP Integrity systems	
rx1600 & rx1620 Servers	04.13
rx2600 Server	02.31
rx2620 Server	04.10
rx2660 Server <sup>[1]</sup>	01.05
rx3600 & rx6600 Servers <sup>[1]</sup>	01.31
rx4640 Server	04.10
rx5670 Server	03.23
rx7620, rx8620, & rx8620 IOX	4.2
rx7640, rx8640, & rx8640 IOX	2.0
BL160p Blade Server	TMON 6.0
Superdome, sx1000 chipset	FW version rel_6.2
Superdome, sx2000 chipset	FW version Recipe 5.5d

<sup>[1]</sup> HP-UX 11i v3 does not currently support HP rx2660, rx3600, and rx6600 servers with the PCI/PCI-X/PCI-E backplane. This is expected to be supported in a subsequent release.

**HP-UX 11i v3 Training**

# Deploying HP-UX 11i v3

## Supported hardware

System	HP-UX 11i v3 minimum firmware level
HP 9000 PA-RISC servers	
rp2400/2450	Not supported
rp2430/2470	Not supported
rp34xx	PDC 45.44
rp44xx	PDC 45.44
rp5400 & rp5450	Not supported
rp5430 & rp5470	Not supported
rp7400	Not supported
rp7405 & rp7410	FW version 6.5
rp7420, rp8420, rp8420 IOX	FW version 3.2
rp8400	FW version 6.5
rp7440, rp8440, rp8440 IOX	Firmware version 6.5
HP 9000 Superdome PA-8600/PA-8700	FW version rel_5.5 (PDC FW version 36.8, Utilities 7.34)
HP 9000 Superdome PA-8800/PA-8900	FW version rel_6.2

# Deploying HP-UX 11i v3

## Supported hardware—I/O cards, storage devices

- Before installing HP-UX 11i v3, make sure that the drivers, I/O cards, and storage devices on your system are supported.
- Run the `msv2v3check` script
  - Validates whether the drivers, mass storage I/O cards, and mass storage devices installed on your system are supported on HP-UX 11i v3
  - Reports any unsupported drivers, mass storage I/O cards, and mass storage devices that are found on your system
  - Checks the minimum firmware versions required for these cards or devices on your system to run properly on HP-UX 11i v3
  - You can retrieve the `msv2v3check` script from the HP software depot at: [www.hp.com/go/softwaredepot](http://www.hp.com/go/softwaredepot)

# Deploying HP-UX 11i v3

## Available software—determining which software base to use

### Now

v2 functionality including items such as

- pSets
- LVM 16 TB volumes, enhanced striping and mirroring
- SIM 5.1, Software Assistant (SWA), System Management Homepage (SMH) including network configuration
- Secure Resource Partitions
- Serviceguard/SGeRAC 11.17
- HP Virtual Machines (HPVM) Guests
- Data Protector

### Enhancements in v3

- Performance enhancements
- Next-generation mass storage stack
- Scalability increased
- NFSv4
- PCI error recovery
- UNIX 2003 branding
- vPars dynamic memory migration
- Mixed v2 and v3 vPars in same nPar
- Support for rx2660, rx3600, and rx6600 with PCI-X

### 2H 2007

3Q CY2007

- Dynamic nPartitions
- Serviceguard/SGeRAC 11.18
- Common Criteria Certification
- Capacity Advisor, VM Manager, Virtualization Manager
- Encrypted volumes
- Internet Express
- Dynamic Root Disk rev 2 (DRD)
- Support for rx2660, rx3600, and rx6600 with PCI-E, BL860c
- Metrocluster: CAXP, CAEVA, SRDF
- Continentalclusters

# Deploying HP-UX 11i v3

## Available software—required patches

### Standard Patch Bundles

- **FEATURE11i**
- **Hardware Enablement (HWE)**
- **Quality Pack (QPK)**
- HP recommends using the Standard Patch Bundles, and only adding individual patches when needed.
- All available at the IT Resource Center (ITRC):  
<http://itrc.hp.com>

### Equivalent patches

- Defects found in v1 or v2 core are fixed in v3.
- For updates—check the ITRC at  
<http://www1.itrc.hp.com/service/patch/patchEquivPage.do>

### Custom patch bundles

- Via a support contract, or for a single system via the ITRC

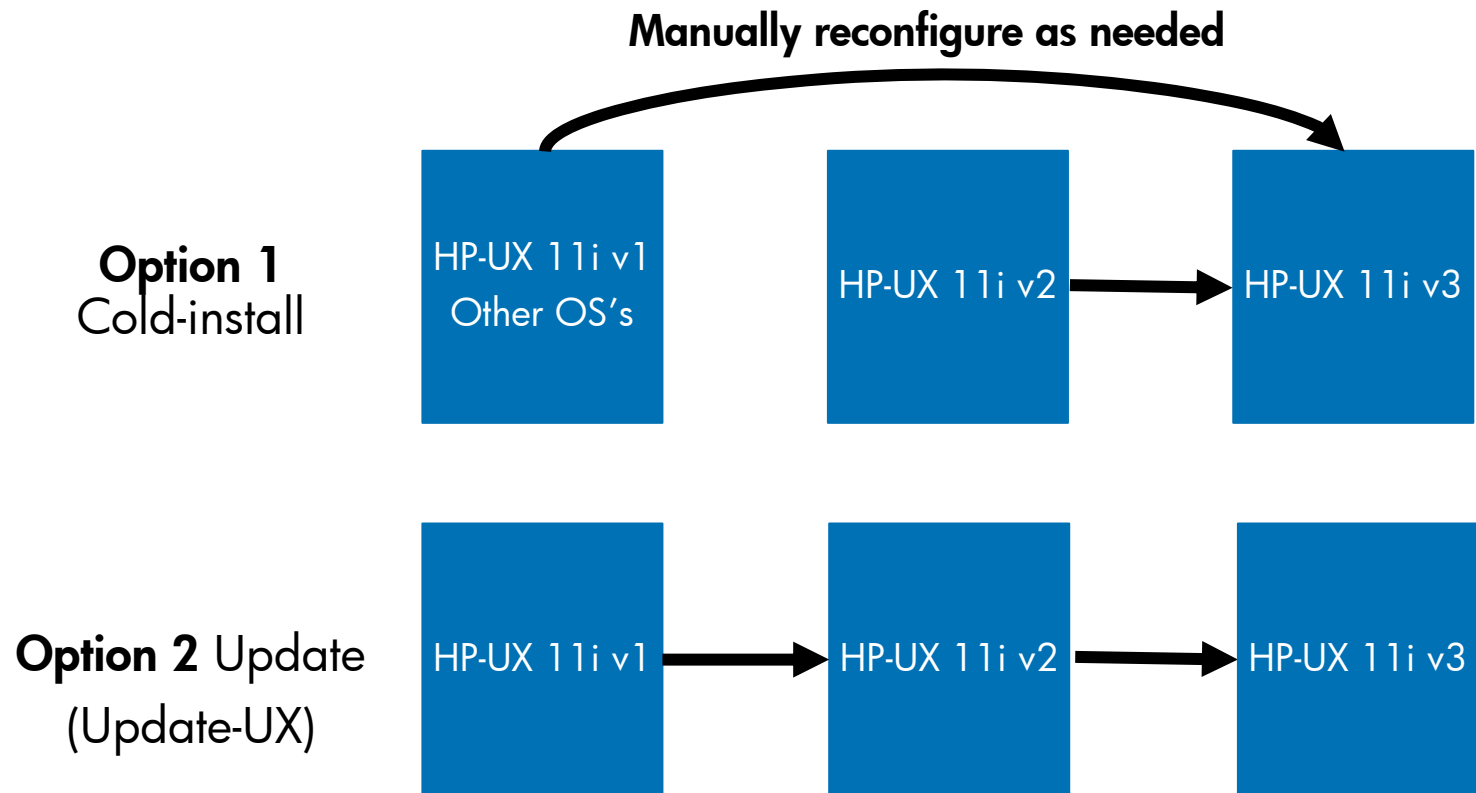
# Deploying HP-UX 11i v3

## Available software—your product support decision

- Binary compatibility assured for applications already available on a given architecture
  - HP considers v3 application compatibility problems to be defects
- HP continues to have significant resources dedicated to helping ISVs make their applications available on Integrity servers
- Options for declaring your 11i v3 support
  - Just notify HP you are supporting it
  - Verify your products are ok
    - Install your product on 11i v3
    - Ensure the product starts up
    - Should be no need to recompile
    - For additional compatibility and qualification questions, go to HP's Developer & Solution Partner Program web site: <http://h21007.www2.hp.com/portal/site/dspp>
- Some ISVs who have already declared support:
  - Oracle, SAP, BEA, Amdocs, Hyperion and ...
- HP is telling customers to contact their ISV before starting

# Deploying HP-UX 11i v3

## Supported migration paths



Migration between server architectures (i.e., PA =>IA) requires Cold-install.

# Deploying HP-UX 11i v3

## Supported migration paths

<b>Base OS</b>	<ul style="list-style-type: none"><li>• Foundation OE</li><li>• Enterprise OE</li><li>• Mission Critical OE</li><li>• Technical Computing OE</li></ul>
<b>Foundation OE</b>	<ul style="list-style-type: none"><li>• Foundation OE</li><li>• Enterprise OE</li><li>• Mission Critical OE</li></ul>
<b>Enterprise OE</b>	<ul style="list-style-type: none"><li>• Enterprise OE</li><li>• Mission Critical OE</li></ul>
<b>Mission Critical OE</b>	<ul style="list-style-type: none"><li>• Mission Critical OE</li></ul>
<b>Technical Computing OE</b>	<ul style="list-style-type: none"><li>• Technical Computing OE</li><li>• No workstation support</li></ul>

# Deploying HP-UX 11i v3

## Summary

- Determine your process to declare support for 11i v3.
- Be ready to support your customers.
- To set up your 11i v3 environment...
  - Determine if your hardware is supported.
  - Make sure everything in your application stack is ready.
  - Determine which method and source you will use.
    - Code-install
    - Update
    - Media
    - Network depot
    - Golden image
  - Determine which release software base to use—0709 (Sept. 2007) forward.
  - Identify the required patch bundles and any individual patches.
  - Before starting, back up your current system.
- For additional help
  - HP technical documentation—<http://www.docs.hp.com/>
  - Contact your HP service representative

**Be ready to  
support your  
customers!**

**Start planning  
today!**