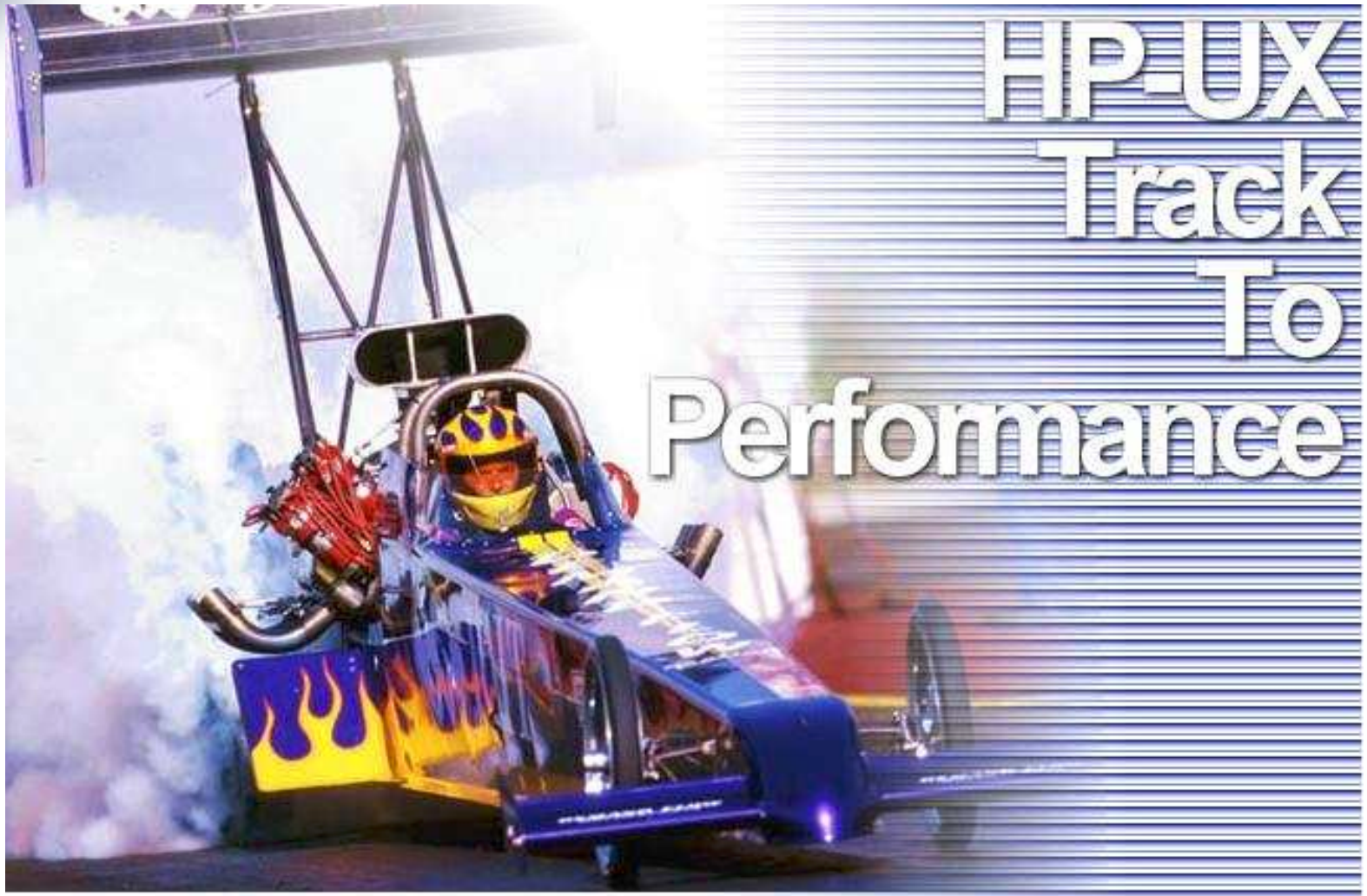




Technical
Computing



Technical Computing HP-UX Roadmap





Technical
Computing



HP-UX 11.00 ACE 9911



- **Support for new HP VISUALIZE Workstations**
 - B1000, C3000, J5000, J7000
 - Universal Serial Bus keyboard and mouse
 - New audio subsystem
 - ATAPI CD-ROM drives
- **3GB Process Data Space for 32-bit applications**
- **Supports 3D Graphics Libraries**
- **Java 2.0 and Java 3D**
- **Supercedes previous Extension Pack releases**
- **Free and available on the Web**



HP-UX 11.11

The Next Enterprise Release



- Improved performance and quality
- 3.75GB Process Data Space for 32-bit applications
- CIFS Server and Client
- Hot Swap I/O for some servers
- New Licensing
 - Move from user based to processor based
- Operating Environments
- Supercedes HP-UX 11.00



Operating Environments

Mission Critical

HP-UX

- MC/Service Guard
- Service Guard NFS
- Workload Manager
- Intrusion Detection

Enterprise

HP-UX

- OnLine JFS
- Glance Plus
- Mirror Disk/UX
- Process Resource Manager

Internet

HP-UX

- Web QoS
- Zeus-Lite Web server
- CIFS/9000
- LDAP

Technical Computing

HP-UX

- 3D Graphics Libraries
- MPower Web
- MPI, MLIB, Cxperf
- CIFS/9000
- Java JDK
- Netscape Communicator
- Zeus-Lite Web Server



HP-UX 11

What is HP-UX 11

- Performance
- Largeness
- Road to IA-64
- Future enhancements and new features

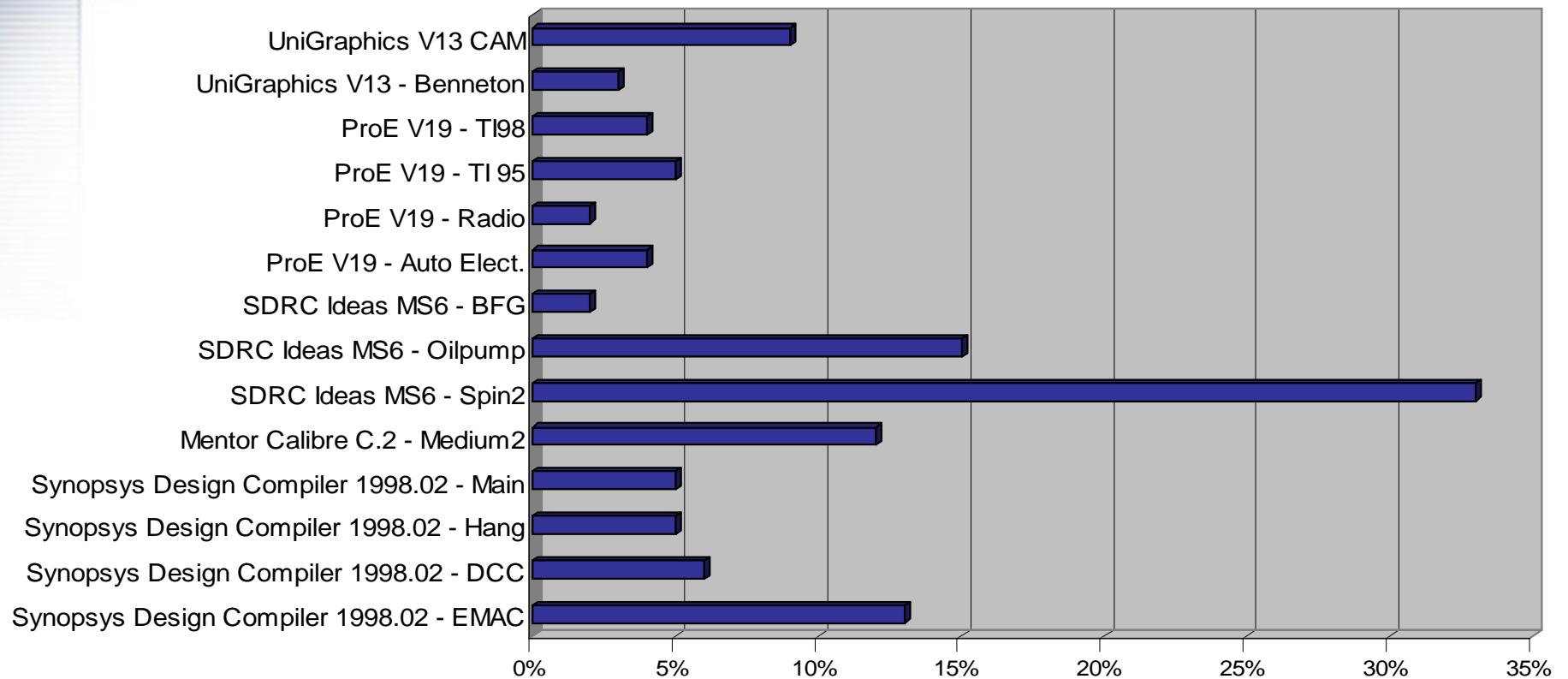


HP-UX 11 Performance

- Impossible to summarize the performance benefits of HP-UX 11 into a single number
- New features as well as tuning of subsystems improves the performance of most applications on HP-UX 11 compared to HP-UX 10.20
 - Performance Optimized Page Sizing (POPS)
 - POSIX Kernel Threads
 - File system tuning
 - NFS tuning
 - Compiler enhancements



Performance Comparison HP-UX 10.20 and 11.00



Improvement Factor X (HP-UX 10.20 = 1)



HP-UX 11 Largeness

- HP-UX 11 is a full 64-bit operating system
 - 1TB file size
 - 1TB file system size
 - 4TB physical memory size
 - 4TB process data space size
 - 8TB shared memory size



HP-UX 11

64-bit Vs. 32-bit applications

Dispel the myth

- 64-bit is not faster than 32-bit, unless you can not run your data set in 32-bits, then it is infinitely faster

Use 64-bit if your data set is larger than 4GB

- Typical sets include, ASIC designs, Virtual models, and analysis data
- 64-bit is more resource intensive, requiring more RAM, DISK, and even network bandwidth

Use 32-bit for all other systems

- It is faster, and requires less resources



Large 32-bit Process Data Space

- 10.20 and 11.0 32-bit applications
 - Normal binary gets 0.9GB data space
 - Linker flag (-N) combined text and data quadrants to provide 1.9GB (EXEC_MAGIC)
- 11.00 ACE 9911 32-bit applications
 - `chatr` binary to make 3rd quadrant private
 - Normal binary gets 2.0GB data space
 - EXEC_MAGIC binary gets 3.0GB data space
- Command
 - `chatr +q3p enable <filename>`

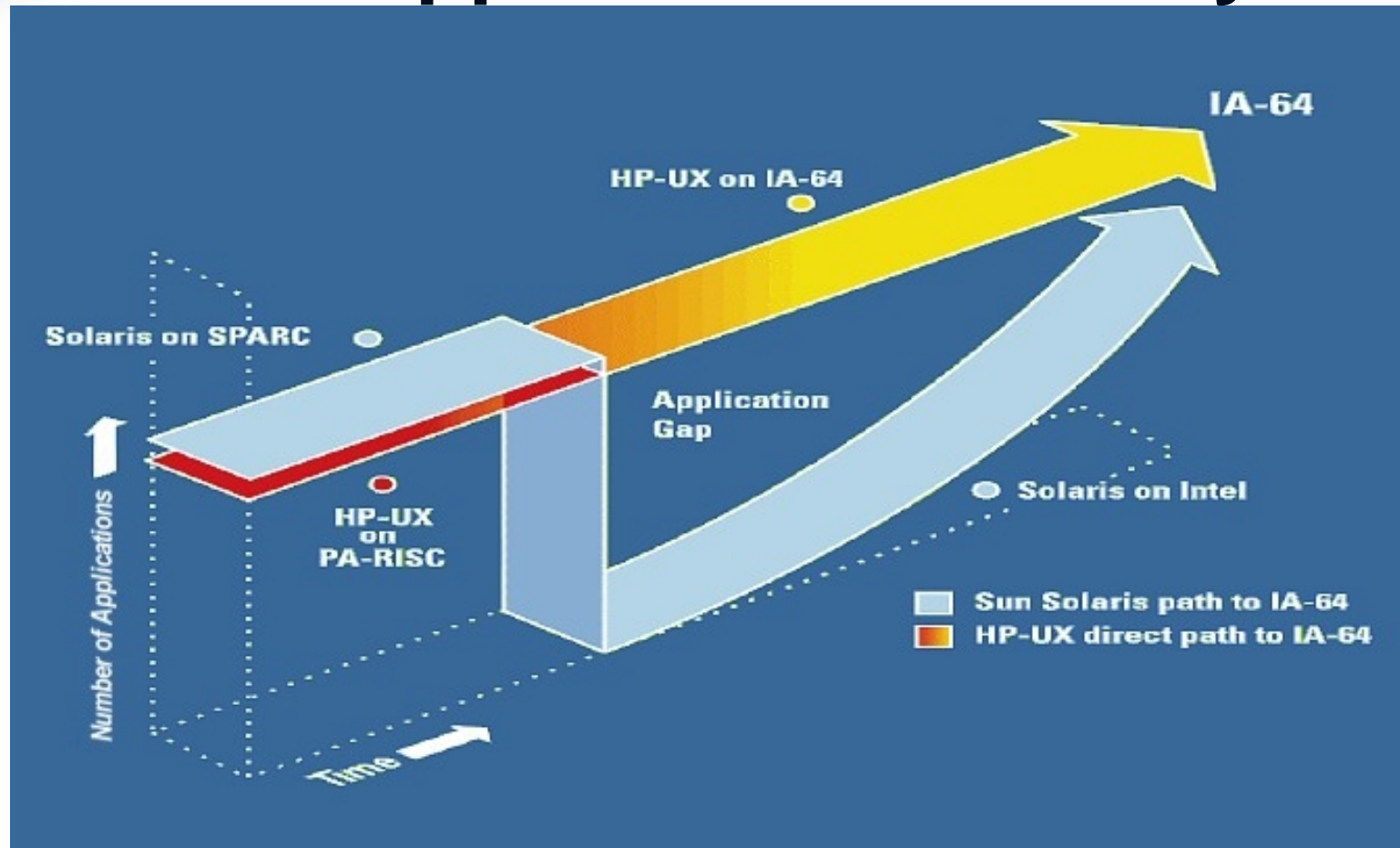


HP-UX11 Road to IA-64

- The HP-UX 11 family is the OS base that will support IA-64 systems.
- When IA-64 systems are available, there will be a single version of HP-UX 11 that will run on PA-RISC and IA-64.
- Migrating your environment to HP-UX 11 prepares you for IA-64 deployment.
- Application binary compatibility for HP-UX 11 PA-RISC binaries running on IA-64



HP-UX 11 IA-64 Applications Instantly





HP-UX 11 Futures

Other New Features

Currently in HP-UX 11

- ONC+
- 64-bit X Windows and OpenGL
- Kernel threads
- DLKM
- DPS
- Java 2.0 and Java 3D

Planned Future Enhancements

- JFS 3.3
- JACLs
- VxVM
- BIND 8
- NFS over TCP/IP



Migration Topics

- Aversion to change
- Complete solution availability
- Ease of Migration
- Physical limitations
- Availability of tools and consulting

<http://www.software.hp.com/STK>

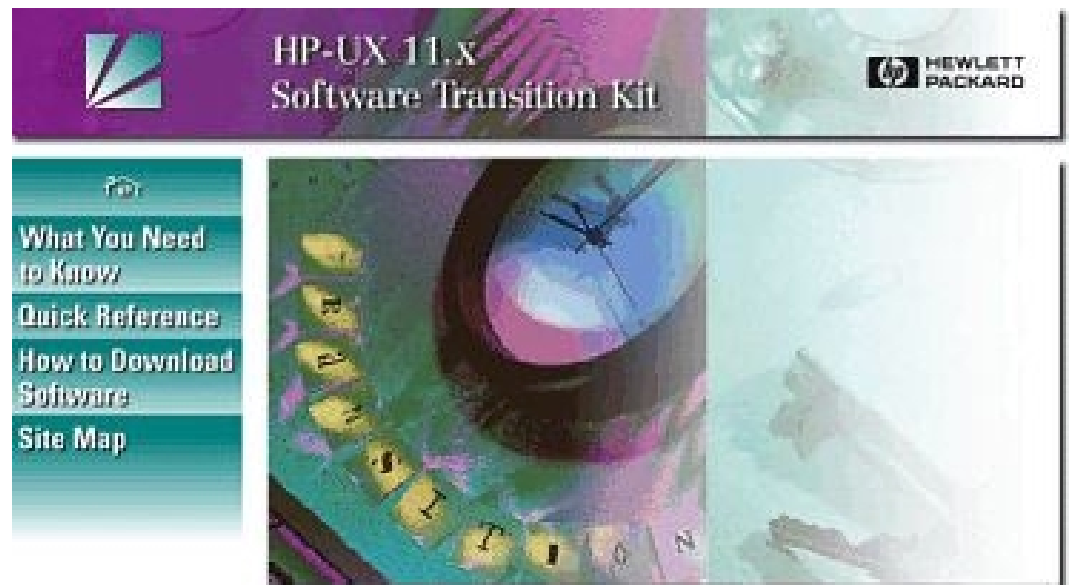
IA-64

Customer Migration



HP-UX 11.x Software Transition Kit

- Frequently Asked Questions
- Developers Guides
- Release Notes
- White Papers
- Compatibility information and code scanning tools



<http://www.software.hp.com/STK>



HP-UX 11 Futures

3D Graphics Library Support

- HP-UX 11.00 ACE 9911 is the first release in the 11 family to support 3D Graphics.
 - OpenGL (including 64-bit OpenGL)
 - Starbase
 - PEX
 - PHIGS
- Only OpenGL will be supported with HP-UX 11.y
- Starbase, PEX, and PHIGS
 - Functionally stable in 2000
 - End of support life 2002



HP-UX 11.00 and 11.11 PA-RISC Workstation Support

Supported

- 712, 715/64, 715/80, 715/100, 715/100XC, 725/100
- All B-Class
- All C-Class
- All J-Class

Not Supported

- 705, 710
- 715/33, 715/50, 715/75
- 720, 730
- 725/50, 725/75
- 735
- 750, 755



HP-UX 11.y PA-RISC Workstation Support

Supported

- ONLY 64-bit capable machines
- B1000, B2000
- C160, C180, C200, C240, C360, C3000, C3600
- J280, J282, J2240, J5000, J5600, J7000

Not Supported

- 705, 710, 712
- 715/33, 715/50, 715/75, 715/64, 715/80, 715/100, 715/100XC
- 720, 730, 735, 750, 755
- 725/50, 725/75, 725/100
- 742, 743i/64, 743i/100
- 745, 747, 748i/64, 748i/100
- B132L, B132L+, B160L, B180L, C100, C110, C160L, J200, J210, J210XC



HP-UX 11.00 and HP-UX 11.11 Graphics Support

Supported

- VISUALIZE-*fxe*, *fx² Pro*, *fx⁴ Pro*, *fx⁶ Pro*
- VISUALIZE-EG, -8, -24, -48, -48XP
- Artist (built-in on 712/715, 2D only)

Not Supported

- All CRX graphics
- All HCRX graphics



HP-UX 11.y Graphics Support

Supported

- VISUALIZE-*fxe*, *fx² Pro*, *fx⁴ Pro*, *fx⁶ Pro*
- VISUALIZE-EG, -8, -24, -48, -48XP (2D only)

Not Supported

- All CRX graphics
- All HCRX graphics