



HP OpenVMS Technical Update and Roadmaps

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CCCSC
1G01

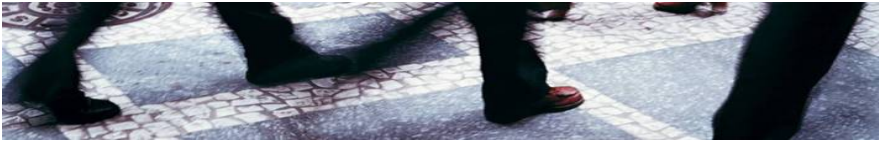


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Agenda

- OpenVMS Roadmap Highlights
- HP Support Policies
- Technical Update
- OpenVMS Technical Futures



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OpenVMS Roadmap Highlights

http://h71000.www7.hp.com/openvms/roadmap/openvms_roadmaps.htm

OpenVMS V8.2-1 for Integrity Servers



Integrity only release – Available Now!

- Replaces OpenVMS V8.2 for Integrity servers...support for V8.2 on Integrity will end about June 2006.
http://h71000.www7.hp.com/openvms/openvms_supportchart.html

- Introduce OpenVMS support for larger Integrity servers (Madison 9 only):

- rx8620: 4 cells, up to 16 CPUs
- rx7620: 2 cells, up to 8 CPUs
- Superdome: Hard partitions of up to 16p/4 cells

- Low-cost 2-node Multi-host SCSI cluster

- 96-node AlphaServer/Integrity clusters

- Performance and scaling enhancements

- Improved hardware fault handling

- Power saver feature to reduce electricity use

January 2006
Hybrid Superdome support

HP Integrity Servers: OpenVMS support

Model	Configuration	OpenVMS Support
rx1620	1u, 2P/2C	OVMS V8.2, V8.2-1, V8.3
rx2620	2u, 2P/4C	OVMS V8.2, V8.2-1, V8.3
rx4640	4u, 4P/8C	OVMS V8.2, V8.2-1, V8.3
rx7620	9u	OVMS V8.2-1, V8.3
rx8620	17u	OVMS V8.2-1, V8.3
Superdome Max 4 cell	(16p) partition	OVMS V8.2-1, V8.3

OpenVMS V8.3 will support Montecito based upgrades and new systems.

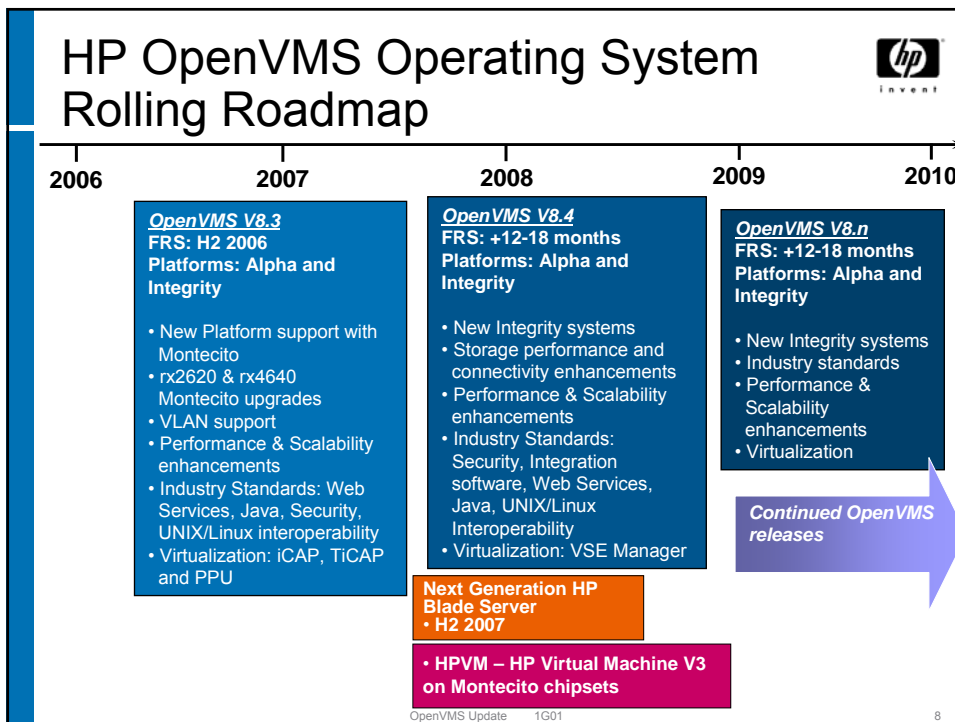
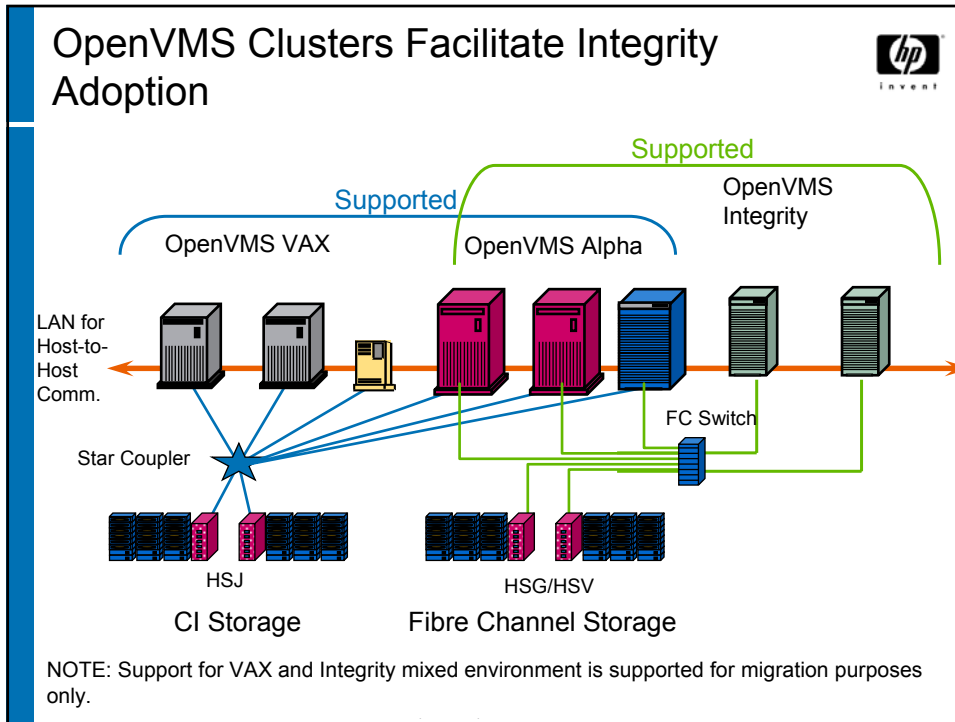
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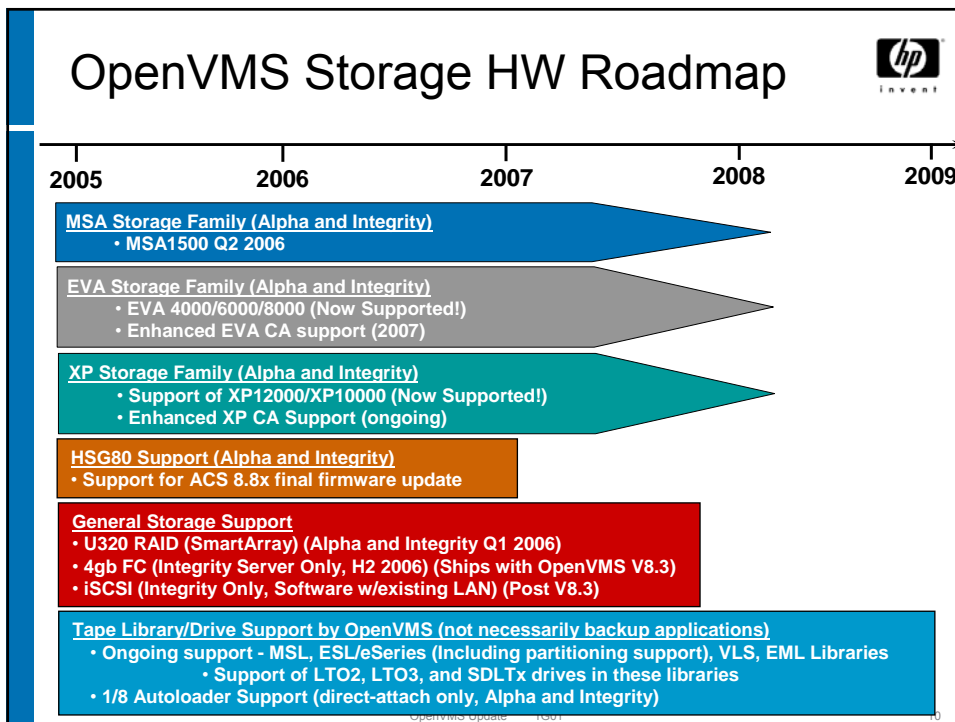
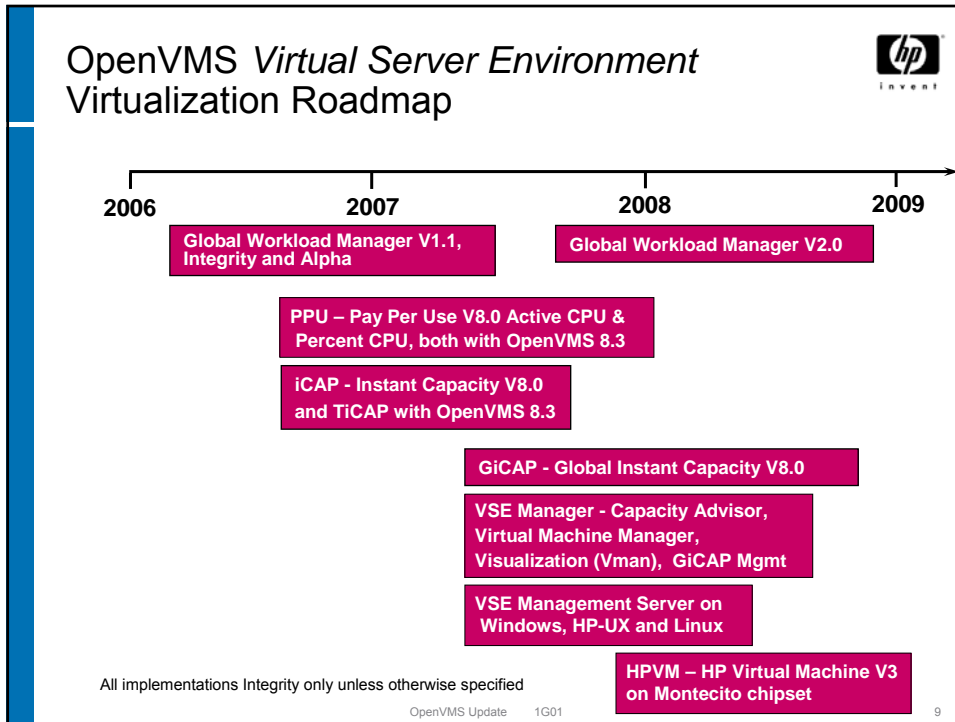
HP AlphaServer Roadmap

Product Line	2005				2006				2007							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
GS1280	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec
ES80/ES47	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec
ES45	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec
DS25	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec
DS15	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec	Jan	Mar	Apr	Jun	Jul	Sep	Oct	Dec


Support at least through 2011

Subject to change without notice
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Operating environments for OpenVMS on HP Integrity servers



OpenVMS I64 Mission Critical Operating Environment (MCOE)

OpenVMS I64 Enterprise Operating Environment (EOE)

OpenVMS I64 Foundation Operating Environment (FOE)


- OpenVMS Operating System
- OpenVMS Unlimited User Licensing
- ODSA
- DEC RPC Runtime
- DECnet-Plus for OpenVMS End System
- DECnet IV
- DECprint Supervisor (DCPS)
- DEOWindows Motif for OpenVMS
- Distributed NetBeans, including plugins for C/C++, Fortran, EDT Keypad, and GMS
- Enterprise Directory
- Java™ Platform, Standard Edition, Development Kit (JDK)
- Kerberos
- NetBeans IDE, including plugins for C/C++, Fortran, EDT keypad, and GMS
- Performance Data Collector
- Secure Web Server (SWS) (based on Apache server), including Tomcat, mod_PHP, mod_Perl, and Perl
- Secure Web Browser (SWB) (based on Mozilla)
- Simple Object Access Protocol (SOAP) Toolkit (based on Apache Axis)
- Secure Socket Layer (SSL) (based on OpenSSL)
- TCP/IP Services for OpenVMS
- Universal Description, Discovery, and Integration (UDDI) Client Toolkit (based on UDDI4J)
- (Web) Management Agents (for operation with HP Systems Insight Manager)
- Web Based Enterprise Management (WBEEM)
- XML Technology (based on Apache Xerces and Xalan)

Add to Foundation:

- * RMS Journaling
- * VolumeShadowing
- * DECram
- * OpenVMS Management Station
- * Availability Manager

Add to Enterprise:

- OpenVMS Clusters
- OpenVMS RTR Backend



Available Feb. '06

Easier to order

Easier license management

Straight forward installation of OE's from a single DVD

Simpler support contracts


➔ higher customer satisfaction

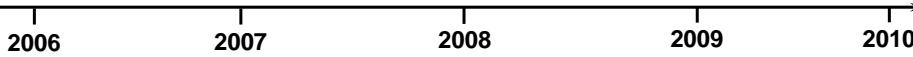
One DVD media for all 3 OE's

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OpenVMS IBM SNA Solutions





Support for HP OpenVMS SNA product set on OpenVMS Version 8.2 Alpha in February 2006

IBM SNA product port to Integrity Supporting OpenVMS V8.2-1 September CY2006


- HP SNA 3270 Terminal Emulator for OpenVMS
- HP SNA Remote Job Entry for OpenVMS
- HP SNA Application Programming Interface for OpenVMS
- HP SNA 3270 Data Stream Programming Interface for OpenVMS
- HP SNA APPC/LU6.2 Programming Interface for OpenVMS
- HP SNA Printer Emulator for OpenVMS
- HP SNA Data Transfer Facility "Client & Server" for OpenVMS

Support for HP OpenVMS SNA product set on OpenVMS V8.3 H2 2006

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Advanced Server, PATHWORKS for OpenVMS & PATHWORKS 32



Timeline from 2005 to 2009:

- 2005:** Samba V3.0 evaluation release for Integrity only (Dec CY2005)
- 2006:** Samba V4.0 Production release Alpha & Integrity H2 CY2006
- 2006:** Advanced Server V7.3a ECO4 for OpenVMS V8.2 Alpha – Available Now!
- 2006:** PATHWORKS for OpenVMS V6.1
 - Support for OpenVMS V7.3-2 release
 - No IPF Integrity support planned
- 2006:** PATHWORKS 32 – V7.4 Continued support for MS Pack releases for Win 2000, Windows XP & Win Server 2003

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FAST → PRESENT → FUTURE

CUSTOMER DEMAND

SECURITY

POWERING AN ADAPTIVE INFRASTRUCTURE

HP Support Policies



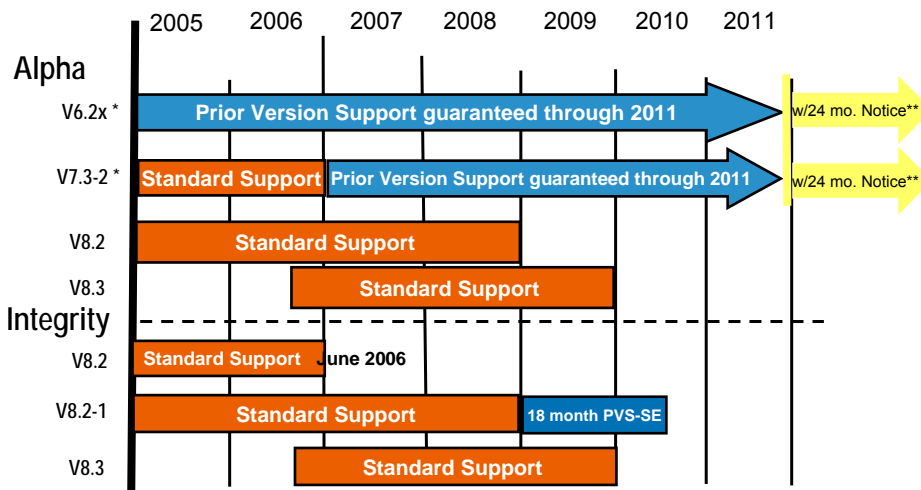
HP Support Policy

- Unless otherwise agreed to by Hewlett-Packard Company (HP), HP provides HP Support Services only for the current and immediately preceding versions of HP software, and only when the software is used with hardware that is included in HP-specified configurations. A version is defined as a release of a software product that contains new features, enhancements, and maintenance updates."
- http://h71000.www7.hp.com/openvms/openvms_supportchart.html

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Enhanced OpenVMS Service Support Roadmap



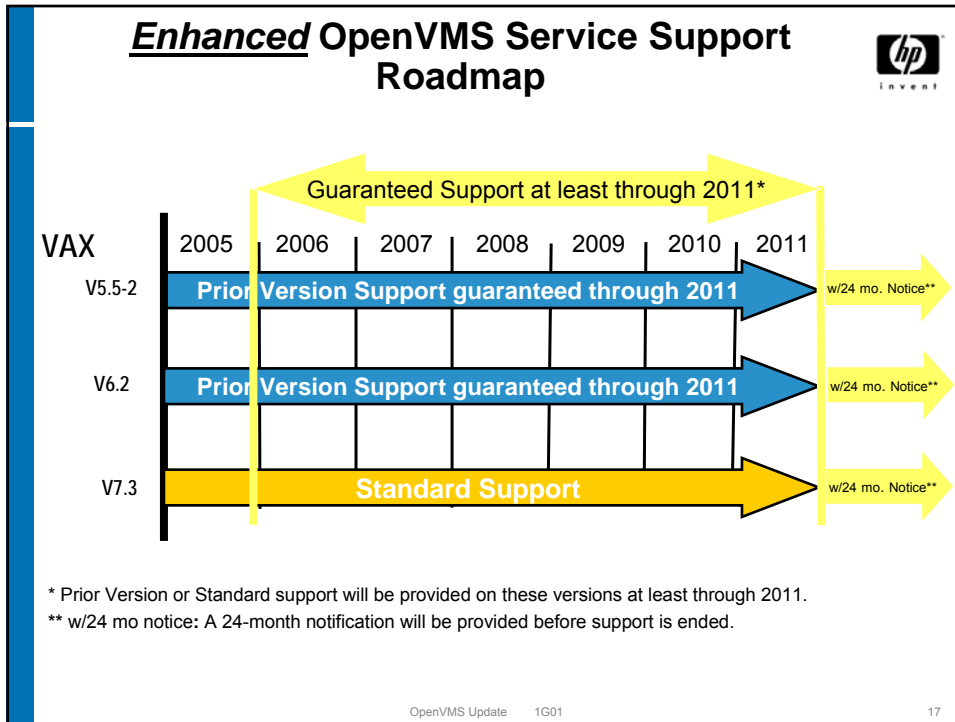
* Prior Version or Standard support will be provided on these versions at least through 2011.

** w/24 mo notice: A 24-month notification will be provided before support is ended.

Standard support ends when the 2nd subsequent release ships. HP supports the current version and one back. Future version shipment dates are estimates.

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OpenVMS V8.3



- Target shipment date = H2 2006
- Highlights:
 - New Integrity platform support
 - New Hardware option support
 - General User enhancements
 - UNIX Portability features
 - Security Enhancements
 - Virtualization: iCAP, TiCAP and PPU
 - Continued Java, web services updates
 - Performance improvements

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Hardware and Options support





- AlphaServers
 - Limit 32 CPUs
- Montecito based systems
 - Maximum 32 cores (4 cells)
- 10gb Ethernet NIC
- 4gb Fibre channel
- DVD Record: easily record locally mastered volumes/files onto optical media
- USB MUX serial terminal connections
- VLAN: Reduces the number of NICs required for connectivity

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General User Features V8.3

- LMF terminology update – Integrity only
- AES encryption support in BACKUP
- Performance improvements to BACKUP, Queue Manager & Copy
- New lexical functions
- Queue job limit increased to 65535 jobs!
- "Live view" of Process Quota consumption
- Cluster satellite boot for Integrity
- Automatic/Restartable MiniCopy





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Unix Portability (UP) V8.3

OpenVMS will be like any other "UNIX flavor" for easy application portability

- POSIX style pathname support
- Symbolic Links
- Byte range locking
- GNV update



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V8.3 Performance & Scaling Enhancements



- RMS Global Buffers in P2 Space
- File not found errors perform much faster on IA64
- Reduced alignment faults in numerous OS components
- Installed Resident Images now have code in S2 space
- Support for shared address data for installed images
- Improvements in the code to Probe access to virtual address
- Improvements for PEDRIVER Block Transfers
- Reduced the time to write an IA64 crash dump

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V8.3 Performance & Scaling Enhancements



- Complete removal of IOLOCK8 spinlock usage for Fibre Channel – for both Emulex and Qlogic drivers
- More alignment fault reduction in the OS and in DECnet Phase V
- Lock Manager improvements for computing group grant mode
- Eliminate usage of the SCHED spinlock for PFW and PFC upcalls

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Security Enhancements

- **Secure Software Delivery**
 - allows verification of authenticity of downloads and installations of OpenVMS software with cryptographic signature of kits
- **ACME Login (real external authentication!)**
 - LDAP ACME
 - Kerberos ACME
- **AES Encryption**
 - Industry standard, stronger encryption included in the base operating system
- **SSL as a SIP**
 - Automatically part of operating system installation script

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TCP/IP Version 5.6

Highlights:

- NFS Server support for Integrity
- SCP/SFTP preserves OpenVMS file attributes
- TCPIP\$CONFIG.COM enhancements (failSAFE IP)
- SSH upgrades with Kerberos support
- DNS/BIND 9 Resolver and v9.3 Server
- DNSSEC
- NTP Security Update (SSL), NTP AutoKey
- SMTP Multi-Domain Zone (Mail improvements)
- TELNET Server Device Limit
- IPv6 support for LPD and TELNETSYM
- FTP Performance Boost for VMS Plus - FTP Performance improvement
- Improved Management Utilities (ifconfig etc.)

Other Networking

- Support of DECnet and X.25 on V8.3
- SNA and Advanced Server will come later

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Integration and System Management



- Web Services Integration Toolkit (WSIT) 1.1
 - additional ease of use features and JSP support
- Java releases:
 - Java 1.4.2 update on Integrity
 - Java 5.0 release on Alpha
- Certification of BEA WebLogic Server 8.1 SP3 on Integrity
- OpenView Performance Agent

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OpenVMS Future Directions



Post V8.3 Potentials

- New Integrity Platforms
- Next Generation Integrity Blade
- >32 core support on Integrity
- PCI Express
- iSCSI support
- HP Integrity VM OpenVMS guest
- Shared Stream I/O (SSIO)
- Samba
- IP Routable clusters
- Virtualization tools – Capacity Advisor, Virtualization Manager
- Performance enhancements – signaling and condition handling improvements, ...

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