HP Parallel Database Clusters for Oracle RAC overview

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Oracle RAC on HP Linux / Windows

- Oracle Real Application Clusters (RAC) provide the highest levels of availability for Oracle
- RAC enables clusters of Linux or Windows servers to achieve performance previously limited to UNIX at a compelling cost advantage
- RAC is the foundation of Oracle grid strategy that HP embraces as an adaptive enterprise enabler
- HP delivers tested and proven solutions for RAC backed by support specialists to ensure success:

HP Parallel Database Clusters

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HP & Oracle address customer needs

- Oracle RAC addresses:
  - Ever increasing demand for availability
  - Data center consolidation for efficiency and security
  - Maximum resource utilization
  - Modular scalability of resources
  - Lower total cost of ownership
- HP Parallel Database Clusters for Oracle include:
  - Fully integrated platforms for RAC
  - Validated by HP and Oracle engineering
  - Best practices and 'how-to' documentation
  - Focused services offerings and tools

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HP strategy for RAC on Linux and Windows

- HP defines and markets targeted offerings for RAC with a full spectrum of fulfillment options.
- These specifically defined *HP Parallel Database Cluster* solutions are backed by extensive testing, real world experience and HP Global Services portfolio
- For custom configuration options on other HP or third party products HP Consulting Services can verify and support implementation

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What are the HP Parallel Database Clusters for Oracle RAC?

- RAC optimized hardware and software platforms
- Stress tested and 'real-world' proven
- Integrated management options with HP ProLiant Essentials and the OpenView suite of products
- Deployment options from 'do-it-yourself' to completely 'pre-installed' and ready to run
- Detailed documentation and installation tools
- Continuous improvement roadmap
- Available on Windows and Linux

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Three simple messages

www.hp.com/solutions/highavailability/oracle

Tested and proven…

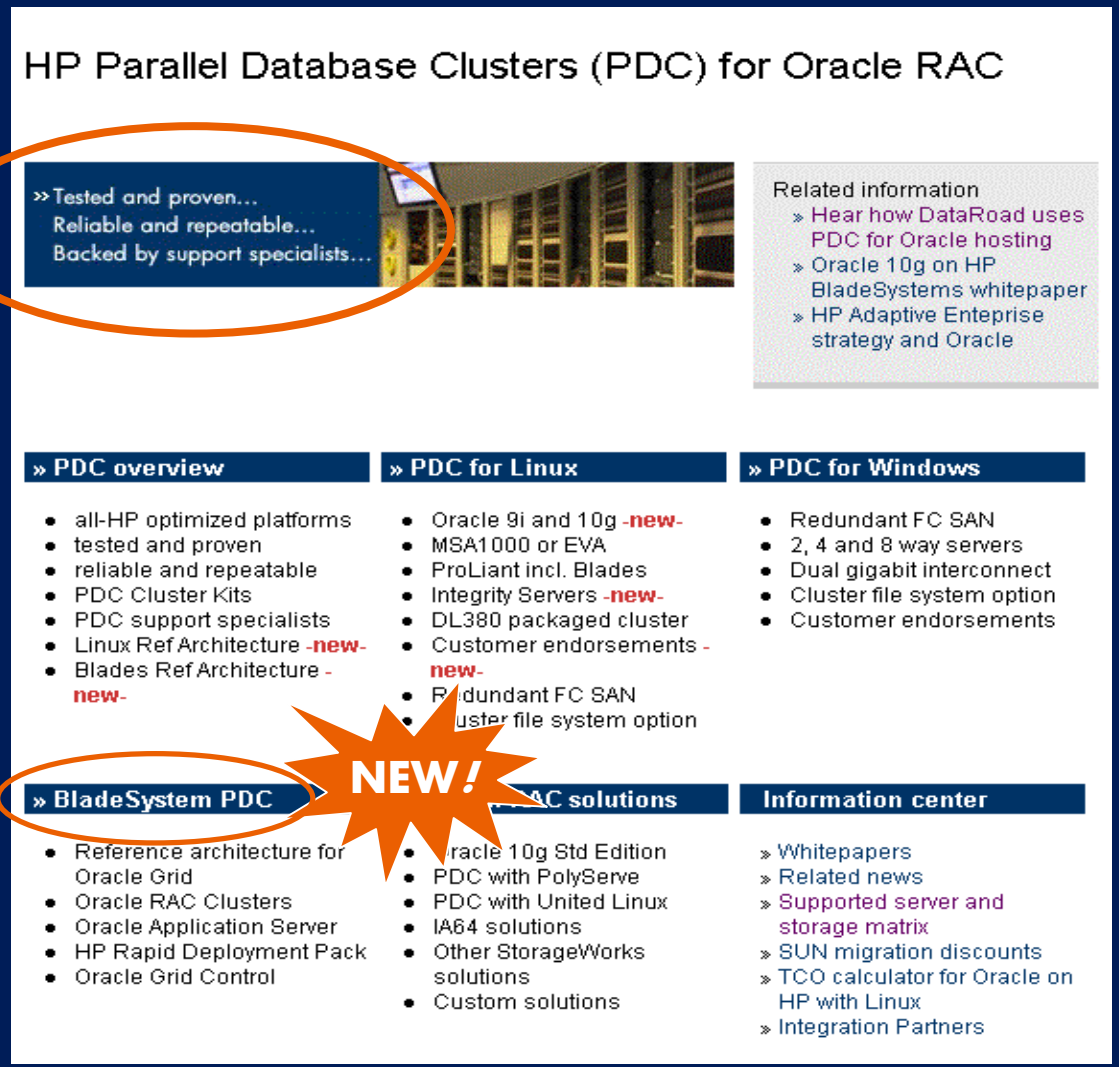
- **'You're not the first…'**

Reliable and repeatable…

- **'We show you how…'**

Backed by specialists

- **'We're here if you need us…'**



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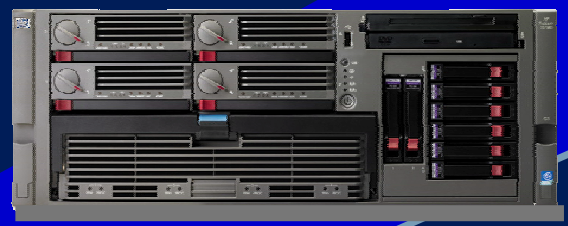
PDC server options for RAC

Intel Xeon™ or
AMD Opteron
32 or 64 bit emulation

HP Blades
20p/25p/40p
2 and 4 processor

NEW!



HP ProLiant
DL380/385
2 processor

NEW!

HP ProLiant
DL560/580/585
4 processor

Business entry **Business mid-range** **Business enterprise**

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PDC storage options for RAC

DL380 Packaged Cluster
MSA500 SCSI

- Entry level SCSI
- 2 node only
- Simplicity
- Attractively priced

DL380 Packaged Cluster
MSA1000 FC

MSA1000/1500

NEW!

- Entry level fibre channel SAN
- Simplicity
- Modularity
- Moderate scalability
- Attractively priced

EVA

- Scalable modularity
- Heterogeneous
- Ease of administration
- Lower high-end entry price points
- Price/performance

NEW!

EVA & EVA XL

- Monolithic or modular
- High connectivity
- High scalability
- High efficiency
- Lower TCO
- Highest disaster tolerance solutions
- Heterogeneous

Business entry **Business mid-range** **Business enterprise**

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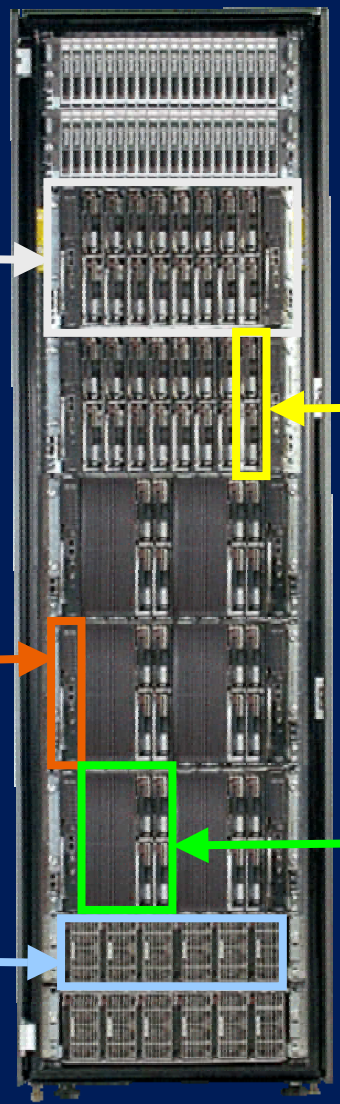
HP Parallel Database Cluster on Blades

6U server enclosure: routes power, networking, & FC thru backplane for 32 :1 cable reduction

interconnect modules: GbE2, redundant, hot-plug, NIC teaming, VLANs, FC SAN switch options

power enclosure: redundant, hot plug power supply pool eliminates cables and PDUs



HP BladeSystem Management Suite

BL p-class 2P server: max 8 per 6U enclosure (16p), Intel Xeon or AMD Opteron Max 16 GB mem 4 NICs, iLO, dual FC

BL p-class 4P server: max 2 per 6U enclosure (8p), Intel Xeon or AMD Opteron max 32GB mem., 4 NICs, iLO, dual FC

Oracle RAC on HP BladeSystem

2 or 4 process multi-node clusters

Redundant Gigabit Ethernet VLAN

Redundant Fibre Channel SAN

Integrated management for monitoring, deployment and repositioning

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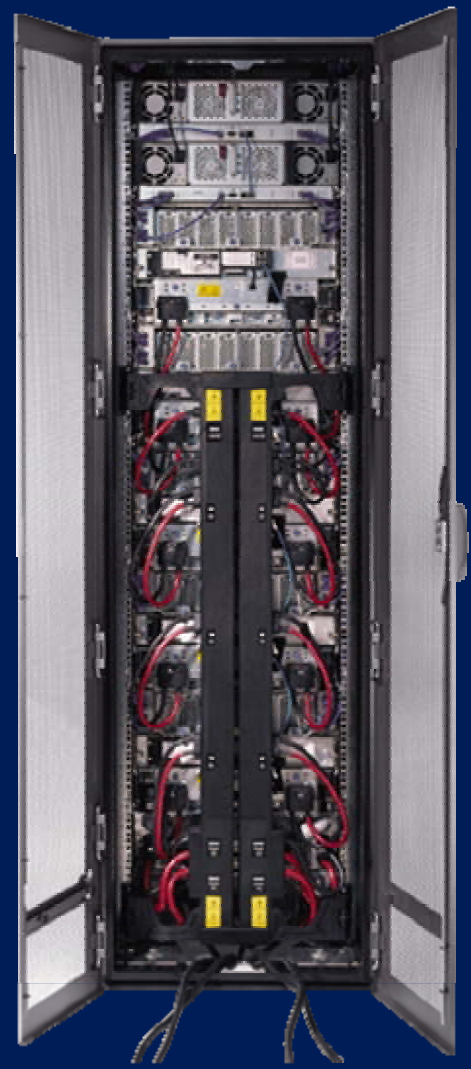
HP BladeSystem Management Suite

- Systems Insight Manager (SIM)
  - Automate discovery, inventory, and monitoring of resources individually or in logical groupings.
- Rapid Deployment Pack (RDP)
  - Fully integrated and automated deployment and provisioning
- Performance Management Pack
  - Proactive notification bottleneck conditions, and performance issues
- Vulnerability and Patch Management Pack
  - Identify and remediate security vulnerabilities efficiently, and reliably



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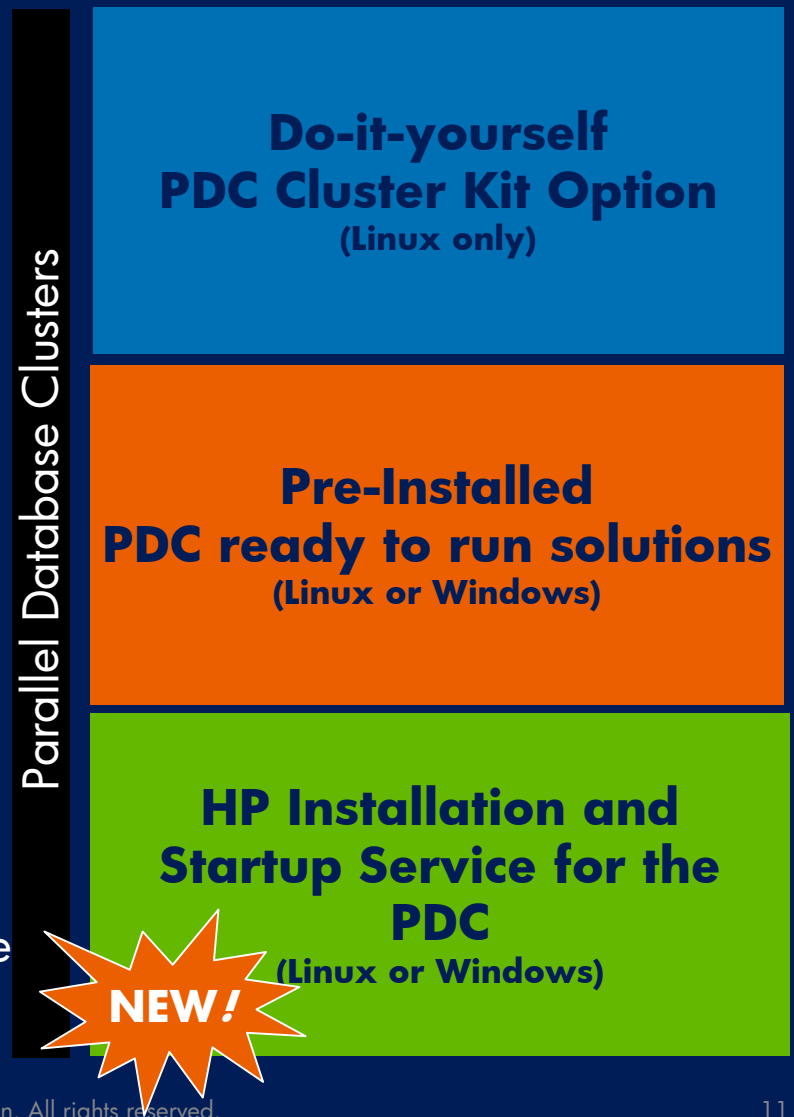
PDC implementation options

Lowest cost option
Fully documented install and admin guide
Scripted install for Linux
Cluster verification utilities
Tool Kit developed by HP RAC specialists

Quickest time to deployment option
Leverages PDC Kit
Delivered by HP integration partners
Delivered with running sample db cluster
Pre-tested and ready to run

Greatest flexibility option
On-site installation by HP field professionals
Fixed-price, fixed-scope cost effective
Installs and configures OS hardware & Oracle
Includes customer orientation training



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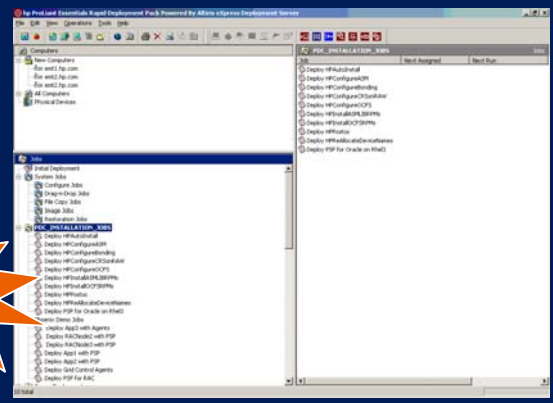
‘Do-it-yourself’ PDC cluster kit for Linux

- The PDC Documentation includes:
  - Detailed installation instructions
  - Best practices configuration options
  - Most current related links to Oracle documentation, patches etc.
- The PDC scripted installation software:
  - HP Rapid Deployment Pack jobs (optional)
  - OS installation and configuration
  - Network settings
  - Hardware configuration
  - RAC or Application Server (J2EE) ready
- Phone support from PDC Specialists
- Reduce risk, accelerate time to deployment
- E-Mail RAC_Contact@hp.com for most current version



NEW!

NEW!

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Integration partners

More…..

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PDC for RAC Installation and Start-up Service

- Fixed price, 3 day Start-up service for PDC
- Deliverables:
  - Pre-installation planning and platform verification
  - Configuration of up to a four-node cluster:
    - Operating system installation and configuration on all servers, including all applicable patches and updates
    - Storage and network configuration
    - Oracle9i with Oracle RAC option installation and configuration including patches an updates
  - Set up a sample Oracle 9iRAC database
  - Verification testing of the (delete – database) cluster
  - Customer orientation
- Part number HA533AE

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HP and Oracle Grid Accelerator Service

- Fixed-price, fixed scope service for rapid initial deployment
- Hands-on knowledge transfer
- Design and technical options review
- HP and Oracle best practices installation of Oracle Database 10g
  - Installation on up to 4 nodes in RAC cluster
  - HP OpenView and HP Systems Insight Manager agents installed
  - ASM - Storage and network connectivity and availability validation
- Management server installation
  - Oracle Grid Control management console installed and configured
  - HP Rapid Deployment Pack installed and configured
- Guidance on configuration for resource flexing or recovery
- System design documentation
- Next steps recommendation document
- www.oracle.com/technology/consulting/10gservices/hp.htm

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Why Oracle RAC on HP…

- Only partner to certify every Oracle version since ’97
- Advancing RAC with benchmarks and ISV testing
- Consistently broadest server and storage options
- Extensive documentation and custom installation tools
- Solutions packaging for ease of purchase & deployment
- Experienced field personnel and specialized services
- All-HP solutions mean tight integration & simplified support
- One call cluster support & dedicated PDC specialists
- Continuous improvement roadmap

Experience

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Any Questions

- RAC_Contact@HP.com
- www.hp.com/go/oracle
- Main PDC web site http://www.hp.com/solutions/highavailability/oracle
- Definition of the PDC Program goals and deliverables http://h18022.www1.hp.com/solutions/enterprise/highavailability/oracle/rac.html
- Key Benefits http://h18022.www1.hp.com/solutions/enterprise/highavailability/oracle9i/linux-rac/benefits.html
- HP and Oracle Grid Accelerator Service www.oracle.com/technology/consulting/10gservices/hp.htm

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