



Blade Servers

Oracle and Blade Servers – The PRO's and CON's

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BLADE Servers and Oracle

Blade Server Advantages

1. The idea is to reduce the total cost of ownership by moving from a proprietary UNIX architecture to commodity architecture.
2. De facto platform for grid computing.
3. Easily scalable grid computing.
4. Server consolidation/centralization, reduction in complexity, greater control by use of blade servers and enclosures.
5. Oracle database RAC scalability.
6. Suitable for applications that do not require the symmetric multiprocessing (SMP) capabilities of large mid-range servers.
7. Perfect for OLTP Oracle RAC systems that do not require multiple CPU resources.
8. Blade servers are essentially a set of compact motherboards.
9. Easy addition/removal of blade server 'blades' or motherboards.
10. Blade servers offer 'plug and play' servers for server farms.
11. Blade servers solve the 'chaos' situation in data centres where one single wire or plug in the data centre could get enmeshed into millions of other wires.
12. Reduce the space constraints in data centres.
13. Blade servers have a common power supply and that saves on power management costs.
14. Blade servers have a common air cooling system and that saves on coolants for each individual server and makes server cooling easier to manage.
15. Blade servers save rack space, by having a lot of compact blades on the same blade server, enabling cheaper and better hosting.
16. Theoretically, blade servers offer cross vendor compatibility in a blade server farm.
17. All of the major hardware vendors offer blade server hardware, at far lower costs than traditional UNIX servers.

Blade Server Disadvantages

1. Not new technology, blade servers simply reinvent the same technology used by mainframes ages ago.
2. A blade server grid would not be appropriate for an Oracle RAC implementation that performs parallel query operations.
3. A blade server would not be appropriate for a Data Mart or Data Warehouse environment which typically requires many fast CPU's for quick parallel query performance.

4. Blade servers have a single power supply and this creates a common failure point.
5. Blade servers have a single cooling system and this could create the same cooling problem as in mainframes.
6. The original promise of having 'cross vendor' blades in a blade server environment has not been achieved yet.
7. The key component of blade server compatibility is the integration of the SAN switch vendor's products with that of the blade server vendor.
8. There are claims that the costs for a rack of blade servers, despite their limited functionality, is often as high as the cost of a fully configured rack mount server with similar specifications.
9. Limited I/O — In a blade server, the I/O paths are shared, leading to limitations in the number of peripheral I/Os that can take place, such as disk I/O or server-to-server network communication.
10. Limited flexibility — Blade servers cannot be retired and replaced in the same way regular rack mount servers can, and there is a loss of flexibility in the way servers can be interconnected.
11. Blade servers have a performance disadvantage when compared to high-end servers and mainframes, due to the fact that they often employ low-power CPUs.
12. High power CPU's in a confined environment create heat dissipation problems.
13. Blade processors typically don't deliver the performance of their juice-guzzling SMP cousins.