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CIO Update: Gartner's Midrange Server Magic Quadrant Shows Linux Upswing

The variety of different Linux distributions and platform options results in four separate Linux categories in Gartner's latest Midrange Server Magic Quadrant, which also depicts Unix and Windows platforms.

CIOs and many other enterprise executives are keenly interested in understanding where the technology for centralized and distributed servers is headed in the coming years. The variety of different Linux distributions and platform options results in four separate Linux categories in Gartner's latest Midrange Server Magic Quadrant, which also depicts Unix and Windows platforms.

The Updated Midrange Server Magic Quadrant

Gartner's "Midrange Server Magic Quadrant: Leadership Prospects for Unix, Linux and Windows" (see Figure 6) focuses on the suitability of vendors and their respective product offerings to address enterprise-oriented, application workloads. The Magic Quadrant primarily tracks RISC (reduced instruction set computer) and Intel platforms running Windows 2000, Linux and Unix variants. Other platforms, such as IBM's iSeries (formerly known as the AS/400), are also included.

Figure 6

Midrange Server Magic Quadrant: Leadership Prospects for Unix, Linux and Windows

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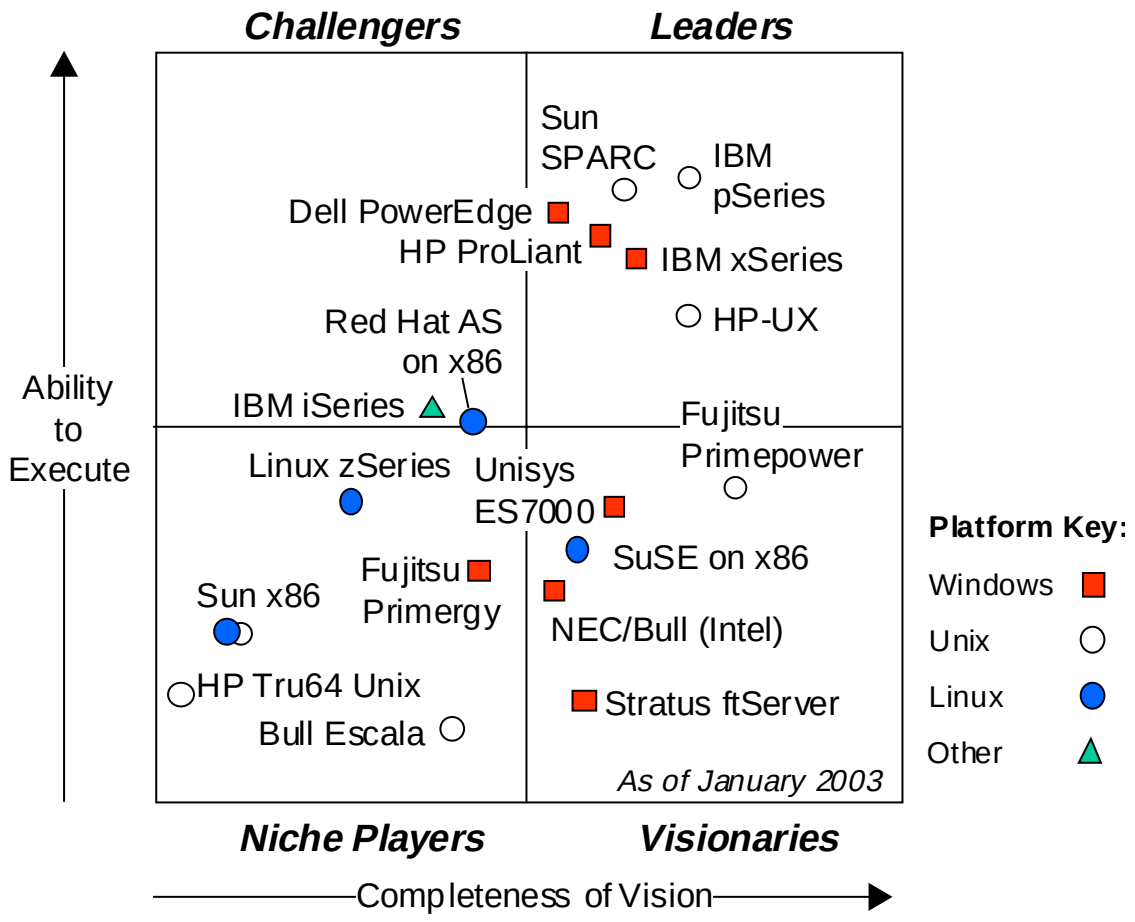

Source: Gartner Research

Gartner's goal is to focus attention on the platforms most likely to be considered for new mainstream projects, which is why numerous other midrange server technologies, such as the Hewlett-Packard (HP) OpenVMS, e3000 and NonStop servers, have been excluded from the Midrange Server Magic Quadrant since 2001. Those platforms are generally more viable for installed-base upgrade business or highly specialized vertical new business.

Linux Platforms

Gartner has featured a generic Linux platform in the Midrange Server Magic Quadrant for the past two years, assuming the use of an Intel-compatible architecture, since little variation existed between different Linux distributions that maintained the spirit of the GNU General Public License. However, in assessing the candidates for the latest Magic Quadrant update, it became increasingly clear that enterprises must choose the most appropriate Linux distribution and support for their application needs. While Gartner's general goals are to limit the number of featured platforms to ease simplicity, that has necessitated increasing the number of Linux options in the Magic Quadrant to three (four if Sun x86-based servers are included). Further changes feature small but significant movements for several platforms, including Fujitsu Siemens Computers' (FSC's) Primepower, IBM's pSeries and HP's HP-UX.

Applications

Applications that apply to the Midrange Server Magic Quadrant include the traditional midrange roles — business applications and database serving — as well as new e-commerce roles for Web serving and midtier application servers. Gartner Magic Quadrants use a consistent set of guidelines that set the relative placement of each category.

Ability to Execute

Gartner judges Ability to Execute according to a number of criteria, such as:

- The vendor's track record and ability to react quickly to market changes (agility)
- Products
- Sales and marketing
- Services
- Channels
- Business financials

Completeness of Vision

Placement on the Completeness of Vision axis is influenced by:

- Strategy
- Target market
- Technical differentiation
- Industry awareness
- Leadership
- Organizational vibrancy

Server Evaluation Model Criteria

Although Magic Quadrants are an independent deliverable to Gartner's Server Evaluation Model, many of the Server Evaluation Model criteria help to influence the overall findings. Gartner's Server Evaluation Model uses up to 27 separate criteria to determine leadership in any application class. The online transaction processing (OLTP) and data-warehousing server evaluation models have recently undergone major revisions. Examples of relevant Server Evaluation Model criteria that influence placement in the Midrange Server Magic Quadrant include:

- Processor technology
- System performance

- Clustering (for performance)
- Planned downtime
- Unplanned downtime for single systems
- Unplanned downtime for clustered systems
- Operating-system partitioning
- Manageability
- Architectural viability
- Independent software vendor (ISV) enthusiasm
- Channel enthusiasm
- Gartner client “radar” (assessment of the degree of ongoing client interest, questioning and comments that Gartner receives)
- Delivering on promises
- Ease of doing business
- Support
- Capacity on demand
- Business model and financial strength
- Negotiation opportunity
- Professional services
- Availability of skills
- Application choice

Differences From the Intel Server Magic Quadrant

This Midrange Server Magic Quadrant should not be confused with Gartner’s Intel Server Magic Quadrant, although many of the platforms overlap. The Intel Magic Quadrant is an industry-oriented Magic Quadrant that measures the broad use of IA-based servers (uniprocessor to eight-way) running commercial-class operating systems (for example, Novell’s NetWare, SCO Group’s UnixWare, Windows NT and 2000, and Linux). It is not application-centric, so it embraces a wide variety of server functions, including:

- File/print sharing

- Web serving
- Database
- Messaging
- Commercial applications (such as SAP and PeopleSoft)
- Multipurpose departmental serving and infrastructure roles (Domain Name System, Dynamic Host Configuration Protocol, routing, and primary domain controller or backup domain controller)

Many of the criteria that apply to this Midrange Server Magic Quadrant also apply to the Intel server Magic Quadrant.

In addition, Gartner considers factors such as:

- Marketing and product strategies
- Third-party software and hardware vendor market acceptance
- Packaging, branding and distribution
- Architectural flexibility
- Ability to react to market transitions
- Application scalability
- Layered software infrastructure
- Hardware commoditization
- Investment resources and commitment

Changes to the Magic Quadrant

This Midrange Server Magic Quadrant is a global assessment, and some platforms will enjoy a relatively stronger or weaker presence in local geographies. This new version replaces the Midrange Server Magic Quadrant published in October 2002. The changes from that version are discussed below.

Linux on x86

The previous Magic Quadrant placed a single Linux-on-x86 category in the very top-right of the Niche Players Quadrant. But because the software portfolio and addressable markets for one distribution vs. another can vary substantially, the Linux category has been separated.

Red Hat Linux (Advanced Server) on x86 (essentially any platform based on Intel, Advanced Micro Devices or another x86-compliant architecture) moves above the line into the Challengers Quadrant.

SuSE Linux on x86 has a smaller software portfolio than Red Hat but is part of the UnitedLinux initiative. SuSE moves into the Visionaries Quadrant, but at a lower level of execution ability. That reflects the challenges that SuSE faces during 2003 to migrate its customer base to the new UnitedLinux product. In addition, SuSE must broaden its marketing reach and enterprise penetration in the face of continuing financial pressures (lack of profitability).

Gartner has chosen not to feature a category for other Linux distributions on x86, but it is logical that other distributions (such as Conectiva) that typically address a much more finite geographic or vertical market would merit only a Niche Players Quadrant placing.

Linux on IBM zSeries

In 2002, IBM promoted its zSeries Linux strategy to installed-base clients. IBM claims that 17 percent of all new IBM mainframe MIPS (millions of instructions per second) are running Linux, and Gartner sees an interesting market for the ability of the zSeries to host what can be hundreds or even thousands of virtual Linux images.

The zSeries runs a different binary image of Linux, so the software portfolio will likely always be much more limited on zSeries than it is on x86, despite IBM's attempts to package its own solutions of WebSphere and DB2 Connect. Consequently, Linux on zSeries will address a more finite audience, and that explains its position in the upper part of the Niche Players Quadrant.

Sun Microsystems x86

Sun broke with long-standing tradition in 2002 with the launch of small Intel-based servers to run its own distribution of Linux based on the standard Red Hat product (and not the Red Hat Advanced Server, which boasts the lion's share of ISV endorsement). The positioning of Sun's whole Linux strategy has not been obvious during the first few months of product shipment, which is why Gartner had already decided to place Sun x86-based servers in a lowly Niche Players Quadrant placement.

Gartner believes Sun will announce, in the first half of 2003, several initiatives that will make its x86 intentions more clear. Most importantly, it will cease to offer its own distinct Linux distribution and will instead partner with a limited number of standard distributions. Sun is more openly acknowledging that x86-based platforms offer superior acquisition cost, compared with RISC-based platforms, in many entry and midrange applications. Consequently, Gartner expects Sun to greatly expand its low-end server and desktop offerings based on x86, with blades, four-way and even eight-way symmetric multiprocessing systems planned for launch later in 2003 or into 2004.

Sun will put more effort into its Solaris x86 strategy. Solaris x86 has existed for several years, but its commercial success has been limited by Sun's lack of x86 platforms and the relatively poor encouragement for Solaris x86 by Sun partners and field personnel. Now that Sun has its own x86-based hardware, that provides a greater incentive for Sun to promote the Solaris x86 product, but primarily at enterprises that have already been running applications on Solaris x86. Still, Sun will be challenged in avoiding confusion and conflicts in positioning Solaris x86 vs. Linux (or Solaris on SPARC as Sun's x86-based platforms scale).

Gartner believes that Sun will also offer Solaris x86 as a defensive strategy to Solaris SPARC customers who are driven toward x86-based hardware for reasons of price/performance and who would otherwise consider leaving the Sun platform. Solaris x86's software portfolio is only about 20 percent that of SPARC-based Solaris and has lagged behind the functional enhancements delivered first to Solaris on SPARC.

HP's HP-UX

HP's merger execution continues to make steady progress, and Gartner has reflected that in a stronger Ability to Execute rating. Over time, the software assets that HP has acquired from Tru64 Unix will likely improve the Completeness of Vision assessment of HP-UX. However, with such short-term focus on corporate restructuring and cost-saving measures, Gartner does not believe that is yet appropriate. Moreover, Gartner continues to monitor HP's success in migrating its PA-RISC installed base to Intel's Itanium Processor Family in a market that continues to see a very slow uptake of that technology.

FSC Primepower

FSC is improving in terms of technology and geography, but it continues to need improvement — particularly in geographic coverage. Despite having a substantial presence in Europe and in Asia/Pacific, FSC has only recently begun to have a substantial presence in the United States and other world markets. FSC's high-end Primepower systems are particularly noteworthy because of their high scalability and reliability, and their ability to run Solaris binaries.

FSC's latest high-end family, Primepower XA, was announced on 2 October 2002 and will ship in March 2003. The flagship Model 2500 supports up to 128 1.35-GHz CPUs and will no doubt be the Transaction Processing Performance Council Benchmark C (TPC-C) leader if FSC chooses to spend the resources necessary to run the benchmark.

FSC's technology leadership helps move the assessment into a more visionary placement, but upward movement will hinge on FSC's ability in 2003 to demonstrate better penetration of target markets and prove it can broadly extend its reach into the U.S. market.

IBM pSeries

IBM continues to execute its pSeries strategy well. pSeries now appears in more than 90 percent of the Unix shortlist discussions with Gartner clients, a substantial improvement over the 50 percent rate of two years ago. The pSeries remains the path of least resistance for loyal IBM customers who want to implement Unix-based server systems.

IBM has recently announced new-generation midrange pSeries servers. The p650, the first systems with the new Power 4+ chips at speeds up to 1.45 GHz, will be promoted for most four- to eight-way requirements, while the p655 is optimized for parallelized multinode implementations, such as data warehousing and technical computing. It is also shipping promised enhancements to high-end partitions and workload management. Those advances help move IBM's pSeries toward a more visionary placement that reinforces its leadership placement within the Magic Quadrant.

Bottom Line

- In 2003, technology upheaval will continue in the midrange server market.

- For instance, blades and the next-generation Itanium processor will greatly influence the marketing strategies of the top vendors.

- The Midrange Server Magic Quadrant, and its related Server Evaluation Model, provide point-in-time snapshots of the server landscape.

- IBM's pSeries has strengthened its grip as the leading platform within the Midrange Server Magic Quadrant, and Hewlett-Packard's HP-UX and Fujitsu Siemens' Primepower have also made progress.

- However, the greatest change is reserved for the growing influence of Linux on the midrange server market.

- Different business models and capabilities among the Linux distributors and platform offerings resulted in varied positions for Red Hat, SuSE and IBM's zSeries in the Midrange Server Magic Quadrant.

- Sun's entry into the Linux market has been halting, and Sun will have to demonstrate much better clarity in the positioning of its x86 platforms to make headway beyond its current limited niche position.

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Analytical sources: Andrew Butler

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For related Inside Gartner articles, see:

- "CIO Update: Gartner Survey Reveals Growing Interest in Linux as an Alternative to Windows," 29 January 2003

- "CIO Update: Gartner's Midrange Server Magic Quadrant After the HP/Compaq Merger," 30 October 2002