

IBM @server i5 Solutions for Linux, AIX 5L, and Windows



Success can be simple

Today's on demand businesses rely on a variety of infrastructure technologies, from messaging systems to firewalls to file servers to Web application servers. The total picture can be very complex. But it doesn't need to be.

Simplifying this infrastructure with IBM @server i5 servers offers an uncomplicated approach to helping cut costs, allowing you to focus on business – not technology. The @server i5 server allows you to support a variety of operating systems within a single server infrastructure, so you can increase business responsiveness, help reduce costs, and improve productivity by running the best applications for your business.

The @server i5 servers are based on from one to sixteen IBM POWER5 processors supporting advanced dynamic partitioning, virtualization, and management innovations. These IBM Virtualization Engine system technologies enable IBM @server i5

Highlights

- *Success can be simple with flexible @server i5 server offerings*
- *Simplify management of IT resources with storage and Ethernet virtualization*
- *Help reduce complexity and costs by managing multiple environments on a single server*
- *Offerings for the on demand business*

servers to run multiple operating systems and application environments simultaneously – including IBM i5/OS (the next generation of IBM Operating System/400), Linux®, IBM AIX 5L, Microsoft® Windows® Server 2003, Java®, WebSphere and Lotus Domino software. It's true enterprise-level functionality in a business computer for small to large businesses.

Reduce complexity and costs

The IBM @server i5 servers are designed to pool resources and optimise their use across multiple application environments and operating systems. Through advanced dynamic logical partitioning (LPAR) capabilities, IBM @server i5 servers can help support easy administration and rapid adjustment of i5/OS, Linux and AIX 5L workloads to changing business priorities – giving companies the freedom to run a wide variety of business applications without the costs and complexity often associated with managing multiple physical servers.

A single partition acts as a completely separate i5/OS, Linux, or AIX 5L server. With the capacity to support up to ten dynamic LPARs per processor, IBM @server i5 servers can help simplify IT infrastructures by allowing companies to deploy new applications and consolidate operations on a single, highly flexible, resilient server. LPAR enables IBM @server i5 servers to adjust pooled processor resources automatically across operating systems by borrowing processing power from idle partitions to help handle high transaction volumes in other partitions.

With LPAR on the @server i5, companies have both the power and flexibility to address multiple system requirements in a single machine. LPAR lets you run up to 254 independent servers – each with its own processors and memory resources within a single physical @server i5 server. Consolidating your systems with LPAR can help cut operational costs, improve availability management and service levels, quickly deploy applications, increase your ability to rationalise and modernise networks, and centralise international operations.

In addition, the @server i5 server offers powerful, flexible and highly cost-effective solutions to manage Intel® servers. These options include the IBM Integrated xSeries Server (IXS) and xSeries attached via an IBM Integrated xSeries Adapter (IXA). Both products deliver tightly integrated, easily managed Intel server solutions that help provide a cost-effective and efficient alternative to running multiple standalone servers. These Intel processor-based solutions can be used to manage both Windows and Linux workloads.

Simplify management of IT resources

@server i5 servers deliver an advanced storage architecture that provides more flexibility than conventional UNIX®, Windows and Linux server implementations. Typical server farm implementations have dedicated disk drives attached to every server and a network administrator must manage each server's capacity separately. With the IBM @server i5 server, all disks can be managed as a single pool of RAID-5 or mirrored,

protected storage – helping to simplify data administration and improve productivity by boosting storage utilisation rates. One pool of disk drives can be managed by i5/OS and space can be allocated to each of the multiple operating environments. One consolidated backup can greatly reduce the costs and effort to protect enterprise data stored in applications on a variety of servers. Through storage virtualization, the @server i5 can deliver excellent performance to multiple workloads, maximise the utilisation of the storage resources, and reduce the storage management costs typically associated with server farms.

Logical partitions and Integrated xSeries Solutions can also take advantage of Virtual Ethernet technology on the @server i5 server. Over 4,000 individual virtual networks can be defined to provide fast (up to 1Gbit/second), very secure connections among these multiple operating environments, for effective application-to-application communications.

Additional i5/OS I/O resources such as tape, CD-ROM and DVD drives can be used by logical partitions and Integrated xSeries Solutions. By enabling partitions and xSeries to share virtual devices, the @server i5 server can help minimise the hardware requirements to deploy AIX 5L, Linux, and Windows applications, and maximise the utilisation of these resources. In addition to sharing physical I/O resources, the @server i5 enables you to extend your i5/OS management skills and best practices into these additional operating environments.

Offerings for the on demand business

@server i5 servers can enable business growth by simplifying the IT infrastructure needed to support today's mix of applications. In addition to running i5/OS, @server i5 supports POWER Linux, AIX 5L, and Integrated xSeries Solutions.

POWER Linux

One of the most important developments in business computing in recent years is the arrival of Linux. Linux, an open-source implementation of UNIX, is rapidly becoming the de facto standard for fundamental

infrastructure applications like Web servers, firewalls, file servers and e-mail servers. Now, thanks to the powerful combination of the scalability, reliability and manageability of @server i5 servers and the flexibility of Linux, businesses can take advantage of a new way to simplify their IT infrastructure and expand their application environment – with the potential to greatly reduce cost.

Taking advantage of advanced LPAR technologies, customers can consolidate multiple standalone infrastructure servers on up to 254 Linux partitions on a single @server i5 server – automatically moving processor and dynamically adding storage resources between individual partitions to support changing business demands.

Linux supports an array of open source solutions to run your infrastructure. In addition, IBM is working with leading Linux solution providers to expand the set of business applications and solutions available for @server i5. IBM works with the open source community and Red Hat, Inc. and Novell, Inc. to

deliver Linux distributions for IBM's POWER-based servers including the @server i5 and @server p5.

AIX 5L

There are a number of UNIX operating systems available, but only one takes advantage of IBM experience in building the solutions that run businesses worldwide. And only one UNIX operating system leads the industry in vision and delivery of advanced support for 64-bit platforms with an affinity for Linux. That operating system is AIX 5L.

AIX 5L is rapidly emerging in the market as the preferred platform for UNIX users and independent software vendors (ISVs). AIX 5L operates across the range of IBM @server p5, IBM @server pSeries and IBM @server i5 families of servers, as well as IBM RS/6000 workstations, servers and massively parallel supercomputers.

And now, IBM AIX 5L for POWER Version 5.3 offers new levels of innovative and self-management technologies. AIX 5L V5.3 continues to

exploit the current 64-bit system and software architecture to support advanced virtualization, as well as simultaneous multi-threaded POWER5 processors for improved performance and system utilisation. With innovative micro-partitioning support, dynamic partitioning, and resource virtualization, AIX 5L V5.3 helps you make no compromises and accept no limitations in an on demand world.

Integrated xSeries Solutions

Integrated xSeries Solutions for @server i5 improve management and administration of a combined iSeries and Intel server infrastructure. The Integrated xSeries Server for iSeries is an Intel server that plugs into your iSeries and runs Windows or Linux. The Integrated xSeries Adapter lets you directly attach powerful n-way IBM xSeries servers to iSeries servers via a High-Speed Link (RIO-HSL). This allows you to exploit the xSeries servers' industry-leading reliability and scalability to support Windows or Linux applications on Intel servers, while leveraging the storage and systems management features of @server i5 and integrating with i5/OS applications and data.

Consolidating and integrating multiple Intel servers with Integrated xSeries Solutions for @server i5 allows you to manage all your applications together in a single system environment and delivers flexible storage management and device sharing. Utilising Virtual Ethernet networking between Windows servers can reduce the cost and complexity of maintaining performance and security in a network of multiple Intel servers. Integrated xSeries Solutions are the answer for businesses that want to run Microsoft Exchange, personal productivity applications or other Windows applications that extend core business applications on i5/OS.

All together now

The @server i5 models include the 520 and 570. The 520 is a 1/2-way server that supports Value, Express, Standard and Enterprise Edition offerings. The 570 is a 1/16-way server that supports Standard and Enterprise Edition offerings. Both of these @server i5 models support i5/OS, AIX 5L, Linux, and Windows environments.

For more information

To learn more about the
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Partner or visit the following Web site:

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