

GEMKO Information Group, Inc.
Information Systems Specialists



- ERP
- CRM
- Supply Chain
- e-business



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**IBM @server i5 servers
for medium to large enterprises**

iSeries. mySeries.
IBM @server



Highlights

- *Integrated management of multiple operating systems and application environments can help simplify complex IT infrastructures and provide versatility to run the best mix of applications for the business*
- *Advanced resource virtualization and flexible scalability features help boost productivity and lower management costs*
- *Upgrade paths from earlier iSeries models provide outstanding investment enhancement and facilitate growth*

Under most circumstances, only the strong survive—and in the highly competitive world of on demand business, only companies that embrace change can succeed. By anticipating market trends, businesses can react instantly to customers' needs as they fluctuate. Today, however, medium and large corporations must meet rising customer expectations with fewer resources and tighter budgets than ever before. How? Through an on demand operating environment designed to adapt quickly to support variable business models.

A flexible infrastructure can allow companies to lower cost, simplify systems management and respond quickly to industry pressures. Creating an On Demand Business means using servers that provide responsiveness, resilience and variable cost structures to help maximize business benefit. By building on the IBM **@server**® iSeries™ tradition of integration, performance, reliability and manageability, IBM **@server** i5 servers—the next generation of iSeries

servers—can help businesses gain a competitive advantage in the constantly changing business world.

Designed for the challenging requirements of medium to large enterprises, IBM **@server** i5 servers can help businesses simplify their IT infrastructures and effectively manage IT service level commitments by supporting multiple operating systems on a single server. Innovative IBM POWER5™ processors use a highly upgradeable, industry-standard architecture to provide outstanding performance and investment enhancement, while advanced virtualization capabilities help support highly cost-efficient resource utilization. Self-managing features can enhance resilience to help companies deliver critical applications without disruption. Built-in e-business tools and middleware can enable companies to build e-business applications and evolve legacy applications for the Web, and available Capacity on Demand features can offer extensive flexibility and scalability for growth.

Run virtually any application

Traditionally, organizations running different applications in multiple business units used separate servers for each type of application. However, as their server farms grew, these companies discovered that the one server/one application approach could result in complex, difficult-to-manage IT infrastructures—causing decreased productivity, increased cost and, too frequently, underutilized servers.

The IBM @server i5 servers are designed to simplify IT infrastructures and enhance flexibility by running multiple operating systems and applications concurrently—including IBM i5/OS™, Linux®, IBM AIX 5L™, Microsoft® Windows® (via an IXA or IXS), 5250 online transaction processing (OLTP), Java™, IBM WebSphere® and Lotus® Domino®. This unique capability can facilitate server consolidation, which

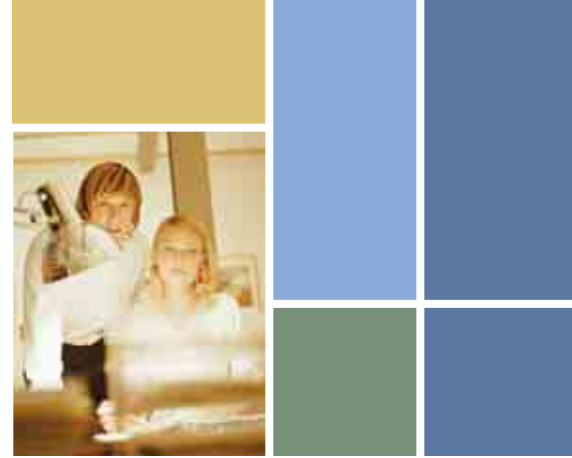
can help decrease complexity, enhance manageability and promote low total cost of ownership (TCO).

Many large enterprises run Intel® processor-based applications, either as infrastructure programs (such as file-and-print servers) or to present data from core business applications. To help companies simplify their IT infrastructures, enable resource virtualization and enhance manageability, iSeries servers offer two options for consolidating Intel processor-based servers: attaching external IBM @server xSeries® servers to the IBM @server i5 server using Integrated xSeries Adapters or installing the Integrated xSeries Server directly inside the IBM @server i5 server. With these options, clients can have both the reliability of iSeries servers and the flexibility to run Windows operating system-based applications on the same system.

In addition, IBM @server i5 servers incorporate IBM Virtualization Engine™ systems technology, which is designed to pool resources and optimize their use across multiple application environments and operating systems. Through advanced dynamic logical partitioning (LPAR) capabilities, IBM @server i5 servers can dynamically allocate system resources to help support easy administration and rapid adjustment 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 servers.

Build upon critical IT investments

IBM POWER™ microprocessors have set the industry pace with a long history of system experience. Known for high performance, flexibility and unmatched reliability, POWER is leading the way into an on demand operating environment.





As the industry's first product line based on 64-bit IBM POWER5 processors, IBM @server i5 servers enable businesses to seamlessly upgrade their processing power while continuing to use their investments in storage and networking infrastructure. Clients can run 32-bit and 64-bit applications simultaneously on the same system without experiencing artificial performance limits. The proven, open and flexible design of POWER processors builds on the iSeries tradition of integration, virtualization and outstanding systems management technologies to enable companies to upgrade their systems while continuing to build on investments in storage and networking infrastructure.

With improved cache performance, faster memory access and higher density compared to IBM POWER4™ processors, the POWER5 processor is IBM's most powerful 64-bit micro-processor offering. In addition, new simultaneous multi-threading (SMT)

capabilities can further lower the cost of computing by providing greater processing efficiencies compared to the POWER4.

Enhance productivity with resource virtualization

The iSeries family is equipped with a range of workload management and Capacity on Demand features designed to enable businesses to adjust workloads and performance dynamically—even automatically—to meet constantly shifting business priorities. The workload management tools incorporated into i5/OS give companies the option to run multiple subsystems, allowing administrators to enhance productivity by balancing the processing priorities for different applications running within the same operating system (OS) image. Through an intuitive, Web-based management console, administrators can efficiently manage a full range of systems management capabilities.

In addition, the virtualization capabilities of IBM @server i5 servers can help businesses that experience short-term

spikes in processor utilization. Retail and travel firms, for example, often see surges in transaction volume during the holidays. Dynamic logical partitioning enables IBM @server i5 servers to adjust pooled processor and storage resources automatically across operating systems by borrowing processing power or storage space from idle partitions to help handle high transaction volumes in other partitions. Instead of buying and maintaining excess capacity that goes unused most of the year, these companies can use On/Off Capacity on Demand to match processing needs to peak transaction loads.



The virtualization capabilities of IBM @server i5 servers also allow sharing of disks, tapes and DVDs with Windows operating system-based servers. Advanced IBM @server i5 storage architecture can provide more flexibility than conventional Windows-based server implementations, in which dedicated disk drives are typically attached to every server and a network administrator must manage each server's capacity separately. In IBM @server i5 servers, 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 utilization rates.

Support highly resilient operation with self-managing features

IBM @server i5 systems are designed to help businesses deliver critical computing capabilities without disruption.

Autonomic technology built into these servers can help automate monitoring to promote high resiliency and prevent downtime. For example, the server can proactively alert IBM to problems—often without requiring human intervention. In some cases, IBM may even be able to correct errors before an administrator spots them, greatly reducing troubleshooting time, lowering staffing costs and limiting service interruptions.

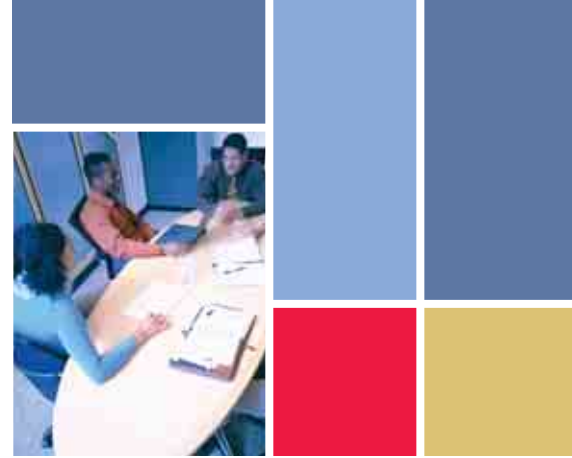
Simplify the on demand world with critical e-business tools

On demand computing requires the tools to build e-business applications and evolve legacy applications for the Web. Staying competitive means embracing change as it occurs—which is why IBM @server i5 servers include a complete suite of tools to support e-business on demand. Integrated database, storage and application development tools can help lower acquisition costs, speed deployment and further enhance manageability.

For example, IBM DB2 Universal Database™ (UDB) software supports multiple, independently-named database images within a single i5/OS partition, allowing companies to consolidate multiple databases across several lines of business while maintaining operational and accounting independence.

Get capacity—exactly when you need it

The IBM @server i5 product line is equipped with a range of flexible scalability features designed to help businesses meet constantly shifting business priorities. Organizations in a variety of industries experience short-term spikes in processor utilization. By using “building block” capabilities designed to facilitate cost-effective growth on these servers, clients can pay for only the processing capacity required at time of system purchase, and then add single-processor “blocks” of processing capacity when transaction loads peak.





Dynamic LPAR enables processor and storage resources to be moved from idle partitions to partitions experiencing high transaction volumes. In addition, with Capacity on Demand (CoD) features, clients can quickly respond to changing application workload demand by activating dormant processors to match the processing needs of peak transaction loads.

Several types of CoD, all supported through POWER Hypervisor™ features, are available on IBM @server i5 servers:

- **Capacity Upgrade on Demand (CUoD)** allows companies to pay for additional permanent capacity only when the transaction load requires it. This feature, available for processors and memory, helps support rapid deployment of new applications and staged performance upgrades during server consolidation.

- **On/Off Capacity on Demand (On/Off CoD)** helps businesses cope with both predictable and unpredictable surges in transaction volume with the aid of temporary increases in processor capacity. Activate and deactivate quickly and efficiently as the demands on an organization dictate—pay for what is needed, when needed, and the server will keep track of usage. On/Off CoD provides a highly cost-effective strategy for handling seasonal or period-end fluctuations in activity and can enable pilot applications to be deployed without investing in new hardware.
- **Trial Capacity on Demand** offers a trial to allow clients to explore the uses of inactive capacity on their IBM @server i5 servers. Trial CoD allows temporary activation of 100% of inactive processors for a period of 14 elapsed days. With this feature, companies can gauge the amount of additional capacity they might need in the future.

- **Capacity BackUp** The iSeries for Capacity BackUp and @server i5 for Capacity BackUp offerings are intended for companies requiring an off-site, disaster recovery machine at an extremely affordable price. Using the On/Off Capacity on Demand capabilities, the Capacity BackUp offerings have a minimum set of inactive processors that can be used for any workload and a large number of inactive processors that can be used at no-charge in the event of a disaster. Inactive processors cannot be permanently activated. In addition to their no-charge disaster usage, inactive processors can be used on a chargeable basis for production role swapping during an unscheduled outage, tape backup, failover testing, and role swapping during upgrades or PTF installations. The Capacity BackUp offerings are not intended or priced as a backup server for 24x7 high availability solutions that require day-to-day full operation of the backup server.

Select from two highly versatile editions

To help maximize business value, IBM **@server** i5 servers come in flexible packages: the most commonly chosen are the Standard Edition and the Enterprise Edition. Each edition incorporates a set of software licensing and hardware features designed to help meet the particular e-business demands of medium to large enterprises.

The Standard Edition offers a base configuration that includes i5/OS for startup processors, supports Web-based applications (including modernized 5250 OLTP applications) and is designed to run multiple operating systems and LPARs. With the option to add features as requirements shift, this edition can

provide outstanding versatility for companies looking to start small and grow as their needs change.

The Enterprise Edition extends the capabilities of the Standard Edition with a range of additional software and hardware features, including:

- Licensing for popular data center management and e-business tools such as IBM WebSphere Portal Express Plus; Backup, Recovery and Media Services (BRMS); and Tivoli® Storage Manager
- DB2® UDB and DB2 Symmetrical Multiprocessing (SMP)
- IBM Learning Vouchers and IBM Service Vouchers
- Additional processor activation for expansion (OS license sold separately)
- Integrated xSeries Server

Choose from thousands of available applications

With support for multiple operating systems and application environments on IBM **@server** i5 servers, clients can choose from a vast array of industry-leading software solutions tailored for large enterprises. A global network of independent software vendors (ISVs) offers an outstanding portfolio of enterprise resource planning (ERP), e-business, customer relationship management (CRM), supply chain management (SCM), business intelligence (BI) and human resource management applications—plus industry-specific solutions such as core banking applications. These applications can simplify deployment and help lower TCO by providing proven solutions tested to run on iSeries servers.





Rely on a tradition of total support

IBM delivers outstanding support—even before the initial installation of an IBM **@server** i5 server—with Technical Support Advantage: comprehensive technical service and support that helps clients learn about, choose and implement the right IT solutions based on specific business requirements. IBM experts can help with business and IT consulting, business transformation and total systems management services, as well as customized solutions.

IBM stands behind its commitment to provide the highest possible customer satisfaction for every system sold. A worldwide team of more than 100,000 dedicated technical support experts is

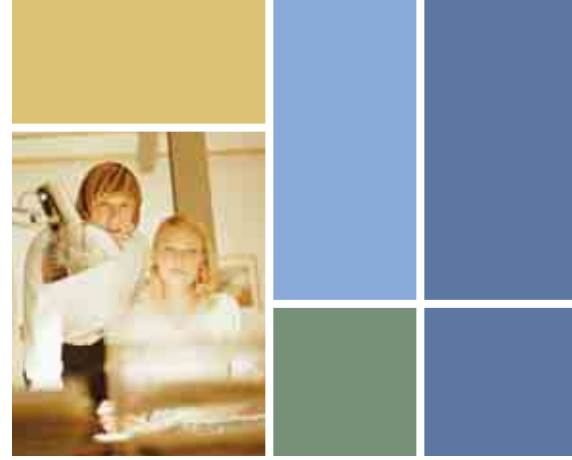
available 24 hours a day to supply its knowledge and experience to IBM **@server** i5 clients. Advanced maintenance and diagnostic capabilities built into every IBM **@server** i5 server allow remote service, enabling enhanced availability and reducing management overhead. Quick access to technical information and tools also are available through the Web.

In addition, IBM goes a step beyond technical support by offering consulting services designed to assist organizations in maximizing the resources of their IBM **@server** i5 server. IBM Global Services can facilitate integration, provide optimization advice and assist in application development, thereby helping businesses harness the uncompromising power and reliability of the IBM **@server** i5 product line.

Take advantage of flexible financing options

IBM Global Financing provides single-source financing for complete, multivendor IT solutions that can include hardware, software and services. By consolidating IT acquisitions into a single financing contract and single, periodic invoice, clients can budget more effectively, manage costs more efficiently and simplify infrastructure planning.

Financing from IBM Global Financing can make acquiring complete, multivendor IT solutions less expensive through competitive rates, fair-market-value leases, innovative offerings and special financing promotions. On demand financing offerings can allow a company to structure payment schedules to accommodate cash flow, while enabling capacity adjustments to handle



changes in demand. In addition, low-rate financing helps make a wide range of IBM products and services more affordable, with flexible payment plans and rates that are frequently below market.

A single server for e-business, today and tomorrow

With the ability to support a wide spectrum of operating systems and application environments and an impressive

suite of integrated e-business tools, IBM @server i5 servers can deliver outstanding versatility and ease-of-use. Self-managing capabilities help reduce administration time and expense, while an innovative design and industry-leading POWER5 processor technology help maintain high reliability and availability for critical applications. For these reasons, IBM @server i5 servers can help businesses simplify complex IT

infrastructures, integrate business processes with external customers and suppliers and deliver business value without disruption—key requirements for becoming an On Demand Business.



Description						
Model	IBM @server i5 550	IBM @server i5 570	IBM @server i5 570	IBM @server i5 570	IBM @server i5 570	IBM @server i5 570
Processor	1- to 4-way POWER5	1/2-way POWER5	2/4-way POWER5	5/8-way POWER5	9/12-way POWER5	13/16-way POWER5
Edition	Standard, Enterprise, Domino or Solution	Standard or Enterprise	Standard or Enterprise	Standard or Enterprise	Standard or Enterprise	Standard or Enterprise
Processor Commercial Processing Workload (CPW)	3300/12000	3300 - 6000	6350 - 12000	15200 - 23500	25500 - 33400	36300 - 44700
5250 OLTP CPW¹	0 - 12000	0 - 6000	0 - 12000	0 - 23500	0 - 33400	0 - 44700
Memory (max)	64GB	64GB	128GB	256GB	384GB	512GB
Disk Capacity (max)	38TB	19TB	38TB	58TB	77TB	96TB
Disk Drives (max)	548	276	546	822	1098	1374
Quantity i5/OS Licenses Included	1	1	1	4	4	4
Software Tier	P20	P30	P30	P40	P40	P40
Windows Server, Linux, AIX 5L Capable	Yes	Yes	Yes	Yes	Yes	Yes
Rack-Optimized Design	Both	Yes	Yes	Yes	Yes	Yes
Integrated xSeries® Servers (max)	36	18	36	48	48	48
Integrated xSeries Adapters (max)¹	16	8	16	32	48	57
LPARs (max i5/OS, AIX 5L, Linux)	40	20	40	80	120	160
High Speed Link (RIO/HSL) Loops	2	1	2	4	6	8
I/O Towers/Drawers (max)²	12	6	12	18	24	30
PCI Cards Slots (max)	173	90	173	269	359	443
LAN Ports (max)	96	71	96	128	128	128

¹ Standard Edition comes with Zero (0) 5250 OLTP CPW. Enterprise Edition offers 5250 OLTP CPW up to the processor maximum based on the number of activated processors, i5/OS licenses and Enterprise Enablement features.

² The installed combination of I/O Towers and Drawers plus Integrated xSeries Adapters cannot exceed 9 per HSL loop.

Description			
Model	IBM @server i5 595	IBM @server i5 595	IBM @server i5 595
Processor	8/16-way POWER5	16/32-way POWER5	32/64-way POWER5
Edition	Standard or Enterprise	Standard or Enterprise	Standard or Enterprise
Processor Commercial Processing Workload (CPW)	24500 - 45500	46000 - 85000	86000 - 165000
5250 OLTP CPW¹	0 - 45500	0 - 85000	0 - 165000
Memory (max)	512GB	1TB	2TB
Disk Capacity (max)	114TB	190TB	190TB
Disk Drives (max)	1620	2700	2700
Quantity i5/OS Licenses Included	4	4	4
Software Tier	P50	P50	P60
Windows Server, Linux, AIX 5L Capable	Yes	Yes	Yes
Integrated xSeries® Servers (max)	60	60	60
Integrated xSeries Adapters (max)	48	57	57
LPARS (max i5/OS, AIX 5L, Linux)	160	254	254
High Speed Link (RIO/HSL) Loops	6	12	24
I/O Towers/Drawers (max)²	36	60	60
PCI Cards Slots (max)	396	660	660
LAN Ports (max)	160	160	160

¹ Standard Edition comes with Zero (0) 5250 OLTP CPW. Enterprise Edition offers 5250 OLTP CPW up to the processor maximum based on the number of activated processors, i5/OS licenses and Enterprise Enablement features.

² The installed combination of I/O Towers and Drawers plus Integrated xSeries Adapters cannot exceed 9 per HSL loop.

For more information

To learn more about IBM @server i5 servers for medium to large enterprises, please contact your IBM representative or visit:

ibm.com/eserver/iseriess



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