



# IMS TODAY

- Over 15 Million GBs of Production on IMS Data
- Over 50 Billion Trans/day run through IMS
- Over 200 Million Users/day serviced by IMS
- Individual Companies have run:
  - over 250 million accounts managed by IMS
  - over 100 Million IMS Trans/day
  - nearly \$3 Trillion through IMS in a day
  - over 10 years without an IMS outage
- *Over 2.6 Million MIPS running Worldwide on IMS*

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The world depends on IMS. IMS handles over 15 million Gigabytes of data and 50 billion transactions per day.

Businesses today rely on technology to gain competitive advantage, and IMS Version 9 continues to deliver innovations that favorably impact business results making IMS the world's transaction and database workhorse for On Demand Business.



## IMS Customers


End Users
Distributed
zSeries




**Customers Wants/Needs:**

- **Increased return on existing investments**
  - improved reuse of existing assets
  - simplified access & integration with Web servers and other environments
- **Lower total cost of ownership**
  - improved AD productivity
  - easier systems management
- **Solutions which are scalable, available, reliable and secure**

Environments are growing and becoming more and more complex. Integration and manageability are critical issues. Enterprises need increasing returns on their investment and lowered costs of ownership. Solutions must be available, scalable, reliable and secure with efficient, integrated access to heterogeneous infrastructures. High availability and high performance access to key information is the cornerstone of what IMS users receive with IMS solutions.



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## The Path to Web Services / On Demand Business

IMS:  
Proven Technology

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As technology has evolved over the years, companies demand more and more from their business applications and information infrastructure. Internet technology provides more flexibility to view that information. XML usage is growing exponentially in transactions, purchase orders, invoices, and other forms. IMS XML DB allows the storage and retrieval of XML documents from existing or new IMS databases, while maintaining the security, stability and performance that only IMS and the IBM Mainframe can provide.



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## IMS Version 9: Meeting Challenges for the On Demand Operating Environment

### Rapid response across the web

- Integrated IBM Connect function
  - Connecting Customers, Partners, Suppliers, Employees
  - Accessing IMS Applications, Operations, Data
  - Providing Security and Management with better resource utilization and reduced efforts





### Universal Exchange of Information

- Store and retrieve native XML data
  - Throughout the Enterprise with Partners and Customers
  - Hierarchical – a natural fit with no overhead
  - Gaining Performance and Security of IMS for mission critical data

### Continuous access with virtually unlimited capacity

- IMS High Available Large Database Online Reorganization
  - Handling unpredictable volumes
  - Non-disruptive, zero outage
  - Administrative updates at any time




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Today's On Demand Operating Environment must provide rapid response for business transactions and inquiries from many customer, partner, supplier and employee locations.


To meet this need, the Integrated IMS Connect function provides high performance access to IMS applications, operations, and data, using TCP/IP from practically any application environment, including LINUX, across the Internet. It offers security options and provides commands to manage the network environment - resulting in better resource utilization and reduced design and coding efforts for client applications

For high speed, universal interchange of information throughout the enterprise and with partners and customers, IMS provides the ability to store and retrieve XML data natively. As both are hierarchical, there is a natural fit with no overhead required for translation or conversion. IMS also converts non-XML data to XML for interchange, and provides the flexibility to convert it back or store it natively. Without the need to store XML data on a file system or a separate database, users gain the performance and security of IMS for this mission-critical data.

For continuous access to critical business information and virtually unlimited data management capacity to handle unpredictable volumes, IMS now provides High Availability Large Database online reorganization capability. This is totally non-disruptive, with zero outage to customers for those applications that cannot go offline. DBAs love the ability to make administrative updates at any time.

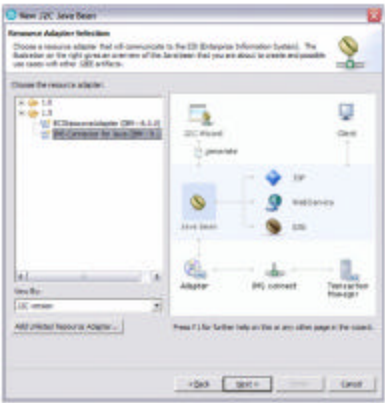


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## IMS for Your On Demand Business

### On the Web with Java applications and Web Services



**Develop new applications with Java and XML**

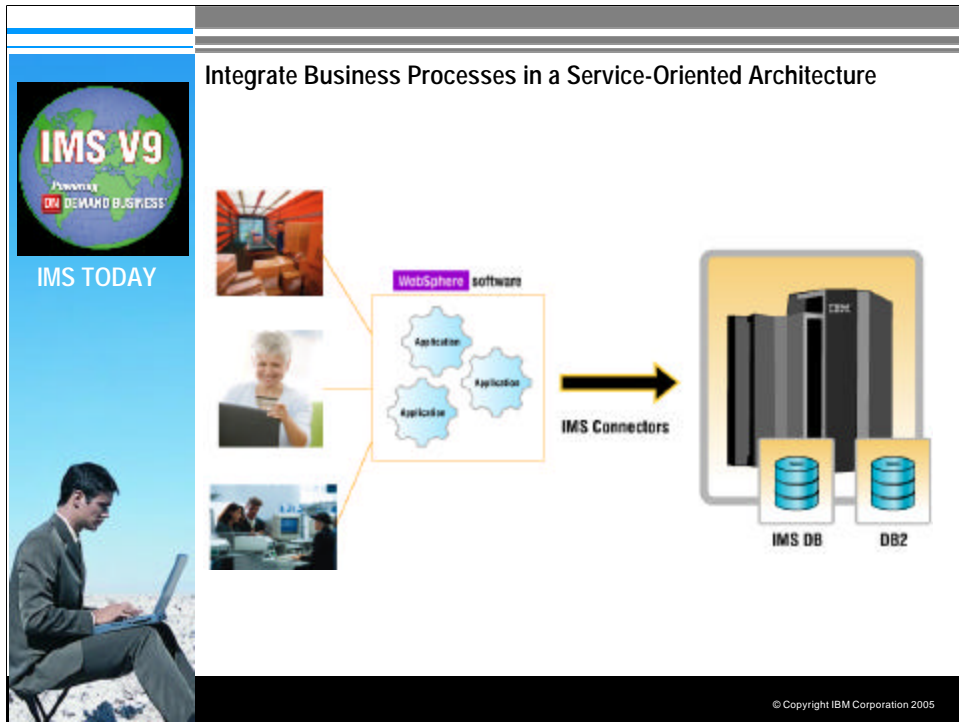
- Use State-of-the-Art Development Tools
- Integrate existing Applications and Data
- Protect Investments



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IMS uses IBM state-of-the-art development tools. Using the IMS Connectors, Rational tooling, and WebSphere Application Servers, new applications can be developed that access existing IMS applications and data -- from practically any JAVA application, anywhere on the Internet.

Additionally, IMS customers can build and deploy new IMS applications using JAVA programming and XML for universal data interchange. These new web-based applications can be developed at the lowest possible cost on a workstation, with easy integration to existing applications on the mainframe - maintaining competitive advantage while protecting long-standing investments.



A Service Oriented Architecture allows better integration of business processes end-to-end across the enterprise with customers, suppliers, partners and employees. Using these IMS connectors, Web servers, and tools, IMS applications can be published as Web services within a service-oriented architecture, assisting Business to Business application integration

**Operate and Manage Complex Environments**

- Provide new IMS Autonomic Computing Functions and Tools

IMS V9  
Powering  
ON DEMAND BUSINESS

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On Demand Transformation

Effectiveness

Efficiency

Tasks

Connect

Connectives

Interactions

Composite Applications


On Demand Transformation

Automate


Optimize

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To efficiently operate and manage increasingly complex environments, IMS offers dozens of new autonomic computing functions and tools that can improve productivity while reducing skill requirements.




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## IMS and zSeries Breaking Barriers in Scalability

Benchmarked over 22,000 IMS Transactions/Second  
with Database Update on a SINGLE SYSTEM

Approximately 2 billion transactions/day



IMS V9 continues to leverage zSeries leadership capabilities offering a broad range of scalability and increased performance

- Significantly more transaction throughput
- Faster shared queues and shared data
- Increased I/O bandwidth
- Practically limitless volumes of data

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IMS is designed, built and tuned to exploit the IBM Mainframe, leveraging the scalability, stability and technology advances on this platform. The zArchitecture will continue to provide growth and protect your enterprise computing investment well into the future.

What other platform provides the ability to demonstrate over 22,000 IMS transactions per second with database update on a single system? The latest versions of IMS and IBM System z9 hardware provide even higher levels of throughput and performance – managing even larger amounts of data and transactions





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## IMS Version 9 – Ideal to Drive Your On Demand Business

- Integration/Openness eases Application Development and Connectivity and Support Service-Oriented Architecture
- Manageability towards Autonomic Computing
- Scalability through Virtualization for Performance, Capacity, Availability, and Recovery




### Enhancements

- Integration
  - Integrated Connect Function
  - XML Database Support
  - Broadened Java/XML Tooling
  - Enhanced Security
- Manageability
  - Eased Sysplex Manageability
  - Eased Serviceability/Usability
  - Simplified Install/Definition Process
  - Enhanced Systems/Data Mgmt Tools
- Scalability
  - HALDB Online Reorganization
  - Enhanced Recovery/Control
  - Enabled System Growth

### Customer Value

- Enable Growth
- Enhance Workload Balancing
- Increase Availability; Ease Use
- Preserve Current Application Investment
- Enable New Applications

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- Do you need access to your applications and data -- on demand, continuously available, and from anywhere on the Internet?
- Do you have a need to handle unpredictably large volumes of traffic and data and are you concerned about the performance and overhead?
- Are you building your Service Oriented Architecture and want to leverage your existing investments?

If so, IMS Version 9 is for you!



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## Why Business Leaders want to migrate to IMS Version 9

### FOR APPLICATION DEVELOPMENT


<p>Java Remote Database Services, for transparent access to IMS applications from any distributed EJB</p> <p>IMS JAVA programs running in z990 and z890 zAAP servers without change</p> <p>IMS, DB2, JAVA, COBOL interoperability, allows these programs to access either database from any platform</p> <p>SQL enhancements, support the latest standard keywords</p> <p>COBOL XML support, to receive &amp; send XML documents directly</p> <p>Increased number scheduling classes, from 255 to 999</p>	<p>reduces application development lead times and improves programmer productivity</p> <p>lower total cost of ownership, simpler infrastructure for Web applications, increased system productivity</p> <p>improves programmer productivity, reduces lead times: simplifies operations</p> <p>apply standard relational database queries, from any platform, to the IMS database</p> <p>parse and transform XML documents, improving programmer productivity and preserving prior investment</p> <p>expands ability to tailor system scheduling: enhances usability and improves resources utilization</p>
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There are many more IMS Version 9 functions of special interest for CIO/CFOs, IT architects, and your Applications, Operations, Systems, and DBA staffs. These functions can offer enhanced integration/openness, management ease, and scalability



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## Why Business Leaders want to migrate to IMS Version 9

### FOR OPERATIONS

<p>IMS Enhanced Command Environment</p>	<p>The simplified IMS configuration makes it easier to operate and take advantage of type-2 commands, which are easier to understand and reduce training needed</p>
<p>Sysplex Wide Database Commands, expand operations management single point of control (SPOC) to handle Database Commands</p>	<p>Provide the ability to better manage the IMS Sysplex and provide a single system image.</p>
<p>Command Recognition Character Registration, uniquely registers a subsystem</p>	<p>An operator can enter a command from any system in a Sysplex and have it routed to the right subsystem. The operating system can detect and prevent collisions between subsystems as well as be able to inform operators and systems programmers which prefixes are currently in use, thus easing operations management</p>
<p>Command Authorization support, for both batch and online DBRC commands</p>	<p>Improves ability to secure DBRC commands.</p>
<p>A new Write-To-Operator message and new Diagnose command</p>	<p>Improve usability, serviceability and reduce outage</p>

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## Why Business Leaders want to migrate to IMS Version 9

### FOR SYSTEMS PROGRAMMING

<p>System Generation enhancements, to stage the removal of conditional link edits currently done by Sysgen.</p> <p>Online Change (OLC) Module Enhancements, remove modules from the Nucleus Link edit step</p> <p>Installation Verification Program (IVP) Enhancements, usability improvements and ability to import variables from previous releases.</p> <p>IMS Dynamic Allocation VSCR Enhancement, assures Data Set Association Blocks (DSABs) are allocated above the 32 MB line</p> <p>Selected DBRC modules moved above the 16 MB line .</p> <p>Enhancements to security interface to enable migration from SMU to RACF (or equivalent product)</p> <p>Nine OTMA enhancements, for the callable TCP/IP and APPC programming interface</p> <p>Removal of ETO Feature install checking; Dynamic Change of Type 4 SVC; Dynamic Add of Resource Cleanup module and Syntax Checker enhancements</p>	<p>Removes the restriction of requiring separate execution libraries, removes the conditional link of composite modules, eliminating a step and reducing the time and MIPS needed for the Sysgen process.</p> <p>Another step towards limiting the impact of IMS Sysgen. The value is saving some below-the-line private storage. The nucleus is loaded into below-the-line private storage.</p> <p>Shorter time required for IVP implementation and improved system programmer productivity.</p> <p>This Virtual Storage Constraint Relief provides better management of below-the-line storage, better system utilization and aids system programmer productivity</p> <p>Virtual Storage Constraint Relief (VSCR) for better management of below-the-line storage, better system utilization and system programmer productivity</p> <p>aids programmer productivity and enable full advantage of RACF level security</p> <p>improve programmer productivity; aid availability, usability and security</p> <p>Eliminate a z/OS IPL, enhance availability and serviceability, support definition and maintenance of additional IMS Proclib members and the addition of usability features, aiding programmer productivity and reducing operator error.</p>
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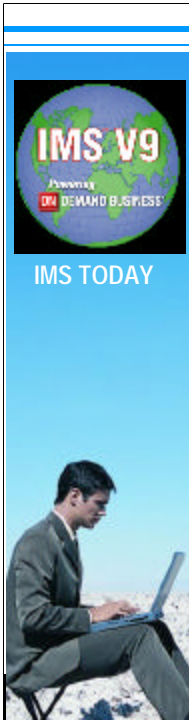
## Why Business Leaders want to migrate to IMS Version 9

### FOR DATABASE ADMINISTRATION

<p>DBRC Application Program Interface ,provides a standard for application developers</p> <p>Reuse of Database Management Block(DMB) slots, for registration to DBRC when the last DMB number has been reached</p> <p>Logger enhancements , for availability and recovery of Online Data Sets (OLDS) and Work Area Data Sets (WADS).</p> <p>Greater than 32K Tape block size support, for image copy and recovery utilities</p> <p>User Exit , for Enhanced Recoverability with DB2 and other subsystems</p> <p>HALDB enhancements in partition initialization, DBRC option, control statement processing, exit customization</p>	<p>Improves time-to-market for new function tools, improves usability and reduces the impact of migration to new versions/releases.</p> <p>Aiding productivity and eliminates a potential outage, improving availability.</p> <p>Restart can now read both primary and secondary WADS. OLDS data can be used as input for restart. the amount of time required to get up and running after an outage is reduced by up to 25 per cent.</p> <p>Additional performance advantage in the recovery process which could improve the elapsed times for the Image Copy and IMS DB Recovery Utility by approximately 10 per cent.</p> <p>Enables subsystems to resolve their in-doubt work (synch point phase 1 is complete, phase 2 is not), without waiting for IMS restart to complete. Improves subsystem availability and response time.</p> <p>Improved usability, flexibility in different environments, improved programmer and operator productivity, ease-of-use</p>
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## IMS 9: A Competitive Advantage

"IMS V9 continued in the tradition of recent IMS releases by proving to be reliable and robust from the outset."  
– Royal Bank of Canada

"IMS V9 enables Volvo to exploit Java applications in their development environment."  
– Volvo Information Technology

"Very good education and experience. Very good support. Fast migrations"  
– Sparkassen Informatik

"XML data in IMS - clearly important. A lot of what IMS has done or is doing, we are playing catch up. But nobody is doing it well. IMS is hierarchical and is a perfect match. We have a requirement to store XML documents."  
– a US Telecommunications company

"All business process run inside IMS, we need to access IMS transactions for Business Applications. IMS Connect is for all java/servlet Applications built by (our company) "  
– a French Insurance Company


"Reduce some planned outages. Simplifies many of our automated processes. Wanted this for a long time."  
– a US Aircraft Manufacturer

"Great value. Something that's long overdue. It's what we have been waiting for for several years"  
– a North American Bank


"Great idea. We have been waiting for this a very long time - thank you."  
– a German bank

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IMS V9 provides a competitive advantage for your business, unleashing the power of information services. Exploit Java applications with IMS data, keep up with the latest XML technology, provide continuous access to information – and meet high availability, capacity and performance needs for a successful, on demand operating environment.




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### Additional IMS Information at <http://www.ibm.com/IMS>

- Presentations/Papers, Newsletters, Fact Sheets, Announce Letters, additional documentation
- Redbooks/Redpieces
  - Release Guides, Sysplex Guides, Connectivity Guides, Java Guides, etc.
- Technical Support Info (search on IMS)
- Information Center enables search across DB2/IMS/Tools documentation and offers an integrated LookAT functions for quick search of messages and codes.
- Information Roadmap
  - Provides links to a wide variety of useful information resources
- Training and Certification
- WW IMS Technical Conferences/Symposiums
- Seminars/Roadshows coming to a city near you

**IMS Consulting Services for Migration, Skills Transfer, and customized offerings at [ibmdds@us.ibm.com](mailto:ibmdds@us.ibm.com)**



**"An Introduction to IMS" book now available**

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