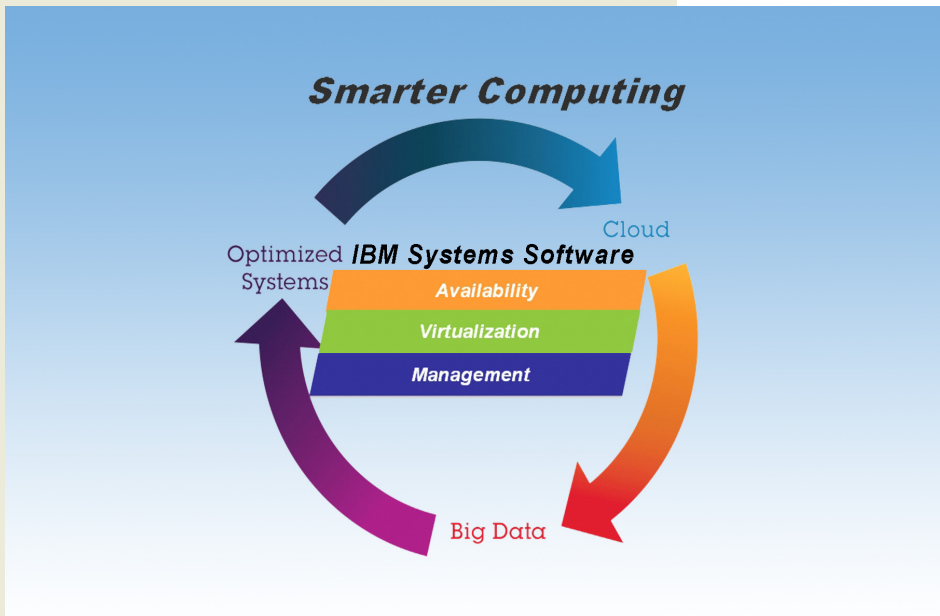


# IBM Systems Software

## Business Partner Guidebook

Your Road Map to  
Success with IBM  
Systems Software



# **IBM Systems Software Business Partner Guidebook**

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# Other Titles of Interest

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## **More IBM Titles of Interest**

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- [\*Exploring IBM SOA Technology & Practice\*](#)
- [\*Exploring IBM Accelerators for WebSphere Portal\*](#)

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- [\*3G Marketing on the Internet\*](#)
- [\*Protect Your Great Ideas for Free!\*](#)
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or email us at [info@maxpress.com](mailto:info@maxpress.com).

# IBM Systems Software Business Partner Guidebook

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First Edition

*Your Road Map to Success with IBM  
Systems Software*

Edited by Jim Hoskins

(version 1.50e)



Clear Horizon

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## Acknowledgments

Many people gave assistance in preparation of this guidebook. Some provided information concerning their product area of expertise. Others reviewed the manuscript and provided helpful comments. To all of those who assisted...THANK YOU!!

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# Your 7-Step Quick Start

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Take these seven steps to “hit the ground running” as a new IBM Business Partner.

## 1. Check for Updated Editions of This eBook

This guidebook has the ability to check for more current editions, which are released periodically. Simply click on the “More on the Web” link provided here (or the link on the cover) and this guidebook will automatically check to see if you have the most current edition. If you don’t, you will be able to download the latest edition immediately.

### MORE ON THE WEB

- [Check for updated editions of this guidebook](#)

## 2. Apply for Your IBM PartnerWorld Membership

The IBM PartnerWorld Web site is your source for information for all things related to being an IBM Business Partner (e.g., Business Partner relationships, guidelines, support, product info, etc.). You will need a user ID and a password to gain access to some areas

### MORE ON THE WEB

- [Explore PartnerWorld](#)
- [PartnerWorld contact phone numbers by country](#)
- [Get your PartnerWorld user ID](#)





of the site. If you have any questions, call PartnerWorld for help. (Follow the link in the “More on the Web” box to get the right phone number for your country.)

### 3. Plug Into IBM Product and Program Communications

Staying informed is one key to success. IBM has a special page on PartnerWorld that helps you do just that. Here you will find new product announcements, letters to Business Partners, customer success stories, educational opportunities, and more.

#### MORE ON THE WEB

- [Get plugged in to IBM product and program communications](#)

### 4. Learn How Systems Software Can Help You Grow Your Business

The IBM Systems College contains many courses on the IBM STG Systems Software offerings. Start with two core online courses that will help you understand the products and how to successfully sell IBM Systems Software offerings. You will need your IBM PartnerWorld ID to sign in (see step 2 above). Enroll in both courses by following the links in the “More on the Web” box.

#### MORE ON THE WEB

- [Systems Software overview](#)
- [Systems Software sales simulation](#)
- [STG Systems Software Business Partner Education Guide](#)



## 5. Learn to Quickly Find IBM Product Information

IBM maintains a search page that allows you to quickly find detailed product information from IBM announcement letters (one of these is re-leased for every product IBM announces), the IBM Sales Manual (a comprehensive collection of detailed info on all IBM products), and much more. Give it a try so you will know how to find what you need when you need it.

### MORE ON THE WEB

- [Find detailed IBM product information quickly](#)

## 6. Learn to Find Competitive Information

IBM consistently updates information about the competitors you will encounter and their products. Explore this valuable tool so you will be ready when you need it. You will need your user ID and password.

### MORE ON THE WEB

- [Find competitive info](#)

## 7. Learn About IBM STG Systems Software with “Know Your IBM”

IBM offers eligible Business Partners some “quick-learn training modules” under the name “Know Your IBM (KYI),” which can help you learn what you need to know about IBM offerings. You can earn points by completing these modules and then redeem the points for merchandise at participating retailers. You can earn additional points for reporting sales through KYI.



KYI is more general training that will give you a “high-level” view of

IBM offerings. The road maps provided by IBM will guide you to more-detailed training opportunities.

#### **MORE ON THE WEB**

- [“Know Your IBM” Systems Storage Virtualization Module](#)
- [“Know Your IBM” training modules](#)

# Introduction

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## About This Guidebook

This MaxFacts™ interactive guidebook brings together—all in one place—the resources you need to be successful as an IBM Systems Software Business Partner. It contains information gathered and adapted with permission from multiple IBM and non-IBM sources. Also, there are embedded links to more-detailed information and news available on the Internet, so you always have the most current information at your fingertips. We are confident you will find this a useful reference tool.

As we are always working to better help you succeed, please forward any comments on or suggested improvements to this guidebook to [info@maxpress.com](mailto:info@maxpress.com).

## How to Use This MaxFacts™ Interactive Guidebook

This guidebook has been specially designed to be read on your computer screen using the free Adobe Acrobat Reader software or a supporting Web browser. Alternately, you can print this guidebook on almost any printer and read the material anywhere.

Reading on a computer screen at your desk isn't as cozy as reading a printed page while lying on a towel at the beach. If you give it a fair chance, however, you will find that navigating the bookmarks along the left side of the screen provides





an effective way to get to the information you need—quickly. Further, the instant access to expanded information provided by the many embedded web links, along with the “search” function, also makes using this guidebook “on screen” worthwhile. We recommend that you copy this PDF file to your desktop so it will always be only “one click away.” If you still want a hard copy, you can print it out on almost any printer.

Links provided throughout this guidebook (anywhere you see a “More on the Web” box or embedded within some figures) will lead you to additional information related to the topic at hand resident on the web. In this way, this guidebook is a “three-dimensional guide” providing you with information about the topics at the level of detail you choose. To follow a link, simply click on it and a web browser window will appear on your screen with the requested information. If the link brings you to a password-protected area (e.g., on the IBM PartnerWorld or COMP Web sites), you will be prompted to enter your IBM-issued user ID and password before you are presented with information.

When you are finished exploring, just close or minimize the web browser window and you will arrive back at the guidebook. You are encouraged to explore all links that interest you to get the most out of this guidebook. You must have an active connection to the Internet to use the embedded links.

To navigate around within this guidebook, you can:

- Step forward or backward a page at a time using the standard Acrobat Reader navigation toolbar shown along the bottom of your screen



- Click on the “Bookmark” links shown on the left side of your screen to go directly to that part of the guidebook
- Click on the “Table of Contents” section and click on the links to go directly to that part of the guidebook
- Search for keywords in the document using the Acrobat Reader “Find” function (found on the toolbar).

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To see our full line of IBM titles, we invite you to visit our Web site, [maxpress.com](http://maxpress.com). From all of us at Maximum Press, thank you for your interest.

### MORE ON THE WEB

- [Maximum Press Web site](#)

# 1

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## Welcome to the Team

In this chapter, we cover some basics about working with IBM.

### Why Team with IBM?

If you are seeking to truly differentiate yourself in the marketplace by extending your market reach with more profitable end-to-end solution offerings, IBM is uniquely positioned to help you make this happen. IBM provides you with an integrated portfolio of hardware, software, services, and channel programs that can take your business wherever you want it to go. IBM is committed to helping your clients realize business innovation through industry leading technology, open standards support, and proven best practices.

IBM is a trusted vendor, committed to helping you deliver measurable value to your SMB and enterprise clients. It is this dedication to the success of our channel partners that helped IBM earn a Five-Star Partner rating for 2007 from VARBusiness Magazine as well as a Channel Champion Award for Programs and Support in the SMB/Volume Server category from Computer Reseller News Magazine.






IBM collaborates across a worldwide ecosystem of business partners to deliver industry leading and cost efficient business solutions. By providing innovative technology that delivers flexibility and high performance, easy to administer programs, and flexible financing options, IBM has an unmatched understanding and appreciation of channel importance that translates into success and prosperity for our partners.

Consider these facts about IBM:

- One of the world's top 10 most valuable brands
- A market leader in the storage and server industries
- Second largest software business in the world
- In each year for over a decade, IBM has earned more patents than any competitor, according to the U.S. Patent Office.

It is an exciting time to be involved with information technology. The worlds of business and computer systems are blending in ways that will result in productivity breakthroughs greater than the sum of their parts. Teaming with IBM will allow you to provide the insight, solutions, and innovation that matter to help your customers succeed.

**MORE ON THE WEB**



*A century of achievements*  
(13:15)



## A Smarter Planet

On today's smarter planet, intelligence is being built into the world around us. Trillions of instrumented devices, structures, and objects—homes, cars, soft drink machines, smart phones, household appliances, clothes, highways, bridges, waterways and more—are creating a literal torrent of data. Powerful computers and analytical software are enabling us to capture that raw data and transform it into insight that can help predict weather patterns, ease traffic congestion, reduce energy consumption, and improve healthcare, to name just a few. In just about every industry, in every country around the world, the idea of a smarter planet is moving from metaphor to reality.

Smarter planet success stories are practically everywhere. Consider the success of these IBM clients. One of the largest cities in the United States is using data analysis to predict crime rather than just react to it. An Italian bank is upgrading its storage infrastructure to reduce online banking response times by 10 percent. A water utility in the United Kingdom is reducing operational costs by implementing a high-performance shared-storage platform. A European confectioner is using smarter technologies to eliminate a nine-hour backup window and provide 24x7 systems availability. The opportunities are virtually limitless.

### MORE ON THE WEB

- [IBM CEO Sam Palmisano on A Smarter Planet](#)
- [A Smarter Planet info on IBM.com](#)



But the reality is that these new opportunities and this burgeoning wealth of data require organizations to adopt a new IT model if they want to take advantage of new revenue streams and create smarter business models.

## IBM Systems Software for Smarter Systems

“As our planet becomes instrumented, interconnected, and intelligent, the computing model is evolving to support it.”

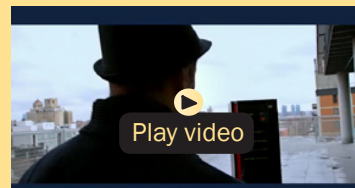
—Sam Palmisano, Chairman, President and CEO, IBM Corporation

On a smarter planet, successful companies are taking a new approach to address the IT conundrum of meeting exploding demand for services on a flat budget. Called Smarter Computing, this approach is realized through IT infrastructure that is designed for data, tuned to the task, and managed in the cloud, resulting in efficient and innovative IT for dramatically improved economics.

To achieve the goal of smarter computing, successful companies are taking a new approach to designing their IT infra-

### MORE ON THE WEB

- [Smarter computing info on PartnerWorld](#)
- [Smarter computing on IBM.com](#)



*IBM Smarter Computing:  
Everything Computes on a  
Smarter Planet (0:30)*



structures to create new opportunities. Generic computing stacks are no longer up to the job, because today there are fewer and fewer generic jobs. Leaders are looking for more than high-performance technology: They are moving to architectures optimized for specific purposes, and built around their deep knowledge—in healthcare, retail, energy, science, and other fields. This workload-specific approach integrates uniquely “tuned to the task” software and hardware.

IBM Systems Software and its suite of solutions covering platform management, virtualization, and availability, help address critical IT needs to achieve the efficiencies, increased levels of service, and improved economics of Smarter Computing. IBM Systems Software closely aligns IT management solutions with the IBM technology portfolio, allowing administrators to make more effective use of the advanced features present in IBM hardware and operating systems. The result is greater business value from IT through the creation of a more capable infrastructure—one that is better able to meet the challenges of today’s business environment to achieve Smarter Computing.

For IT managers, this concept of technology and its role represents a new world view, one that focuses on optimizing workloads and delivering IT services rather than performing low-level management tasks. IBM Systems Software is a critical enabler of this approach, providing efficient, consolidated management of physical and virtual assets across the infrastructure. IBM Systems Software solutions combine with and complement higher-level management platforms to provide comprehensive, integrated service management that covers



the full spectrum of value creation: from detailed platform management, to large-scale resource optimization and alignment of IT with business priorities across the enterprise.

By centralizing, streamlining, and automating system level management tasks such as configuration and provisioning, IBM Systems Software solutions can dramatically reduce cost and risk while improving service delivery, in a way not possible with conventional approaches to IT management. Administrators need not spend days or weeks bringing new resources online to respond to an outage or meet a new business need; with automated processes and virtualized technologies that are closely aligned and integrated with business priorities, needs can be met immediately and without disruption.

The ability to unlock the potential of technology is what IBM Systems Software offers. It represents a vital link between IT and the business—one that enables optimized business value creation, more efficiently and effectively.

# 2

---

## General Systems Software Resources

This chapter provides you with some general information and valuable resources that will help you as you sell IBM products.

### **The IBM PartnerWorld Web Site**

IBM maintains a Web site called PartnerWorld which has a great deal of information of use to all IBM Business Partners worldwide. On the site you will find the latest presentations and marketing materials (such as brochures, data sheets, and case studies) as well as competitive information, consultant reports, IBM white papers, education and events, tools, technical support, and much more.

Business Partners who invest the most in IBM receive higher-value benefits and resources. This investment is recognized through three PartnerWorld membership levels: Member, Advanced, and Premier. Qualification for these membership levels is based on the Business Partner's attainment according to a point system. Points are earned by acquiring skills, developing and selling solutions, driving IBM revenue, and achieving customer satisfaction.







In this guidebook, we have summarized and provided direct links to a great deal of PartnerWorld information of interest to IBM Systems Software Business Partners. As such, this guidebook is your personal “guide” to the PartnerWorld Web site. Just the same, we encourage you to spend some time browsing the PartnerWorld site so you can get a feel for the full scope of resources available to you.

**MORE ON THE WEB**

- [Systems Software PartnerWorld landing page](#)
- [IBM PartnerWorld home page](#)
- [IBM PartnerWorld news and newsletters](#)
- [PartnerWorld membership levels](#)
- [Help with your user ID and password](#)

You will need your IBM-assigned user ID and password to access some areas of PartnerWorld. If you don’t have your user ID and password, you can contact IBM PartnerWorld for help. (Follow the link provided in the “More on the Web” box.)

## **IBM STG Systems Software Key Assets & Resources**

If you haven’t done this already, take a moment right now to bookmark the assets listed in the “More on the Web” box below. These assets will help you sell more IBM STG Systems Software!



## MORE ON THE WEB

### Publications

- [IBM STG Systems Software Fast Facts Guide](#)
- [IBM STG Systems Software Solutions Guide](#)
- [Implementing IBM Systems Director 6.1](#)
- [IBM Systems Director Installation Cookbook](#)
- [PowerVM Virtualization on IBM System p: Introduction and Configuration Fourth Edition](#)
- [IBM PowerVM Virtualization Managing and Monitoring](#)
- [IBM Systems Director Management Console: Introduction and Overview](#)

### Web Sites

- [Systems Software PartnerWorld landing page](#)
- [IBM Systems Director Resources](#)
- [IBM Systems Software Partnerworld main landing page](#)
- [IBM Systems Software home page on ibm.com](#)
- [IBM Systems Software: Management on ibm.com](#)
- [IBM Systems Director on ibm.com](#)
- [IBM Virtualization on ibm.com](#)

### References

- [Customer Reference—Search on “Systems Director” for Systems Software References](#)

## IBM Systems Software Education

IBM's differentiator is you! Clients buy from people and firms they trust. And this depends on you . . . and your breadth AND depth of skills and expertise. As with almost any endeavor, time spent educating yourself and your team on appropriate topics such as selling techniques and Systems Software



product offerings will help you succeed. IBM has developed a set of education and reference materials designed to help you excel in your role by developing the expertise valued by our clients to help them solve specific issues and achieve their business goals.

Being an effective seller relies on a number of key factors including a superior knowledge of your products and solutions, the ability to identify the client's requirements and align the correct solution, and the ability to articulate and demonstrate the value of the specific solution based on the client's need.

#### MORE ON THE WEB

- [STG Systems Software 2011 Business Partner Education Guide](#)

## Systems Director V6.2 Self-Study

Available now from STG Lab Services is the Systems Director Hands-on Self-Paced course for Power and X. Uncover the full power of IBM Systems Director, an easy-to-use, point-and-click platform management tool.

It streamlines the way physical and virtual systems are managed across

multiple operating systems and virtualization technologies. Our new, self-paced course—an innovative mix of lecture and hands-on labs—provides the foundation of Systems Director for both IBM Power and IBM System x platforms.

#### MORE ON THE WEB

- [Course Code: ANOD0—System p focus \(self-study\)](#)
- [Course Code: XTRD0—System x focus \(self-study\)](#)



## Details at a glance

**Course Title:** IBM Systems Director 6.2—Power and System x—Planning & Installation

**Price:** \$535 USD (subject to local pricing adjustments)

- When you enroll in these courses remember to identify yourself as a Business Partner to receive a discount off the price of the course. (*Important note: The amount of discount will vary based on your geography.*)
- Eligible Business Partners may also use their PartnerReward Voucher and receive a 100 percent discount on this training. Questions regarding vouchers can be sent to [voucher@us.ibm.com](mailto:voucher@us.ibm.com).

**Audience:** IBM, IBM Business Partners and clients

**Duration:** Three days

**Course Highlights:**

- Product planning and installation through hands-on labs, installing Systems Director for IBM AIX and Windows environments.
- Labs (both platforms) cover base tasks like getting started, discovery, inventory and resource. Additional managers are introduced with labs on Active Energy Manager and VMControl.
- Base and advanced managers and specialized labs enable participants to acquire a deeper understanding of the Systems Director product and elements critical to a successful installation.

### MORE ON THE WEB

- [IBM training information](#)

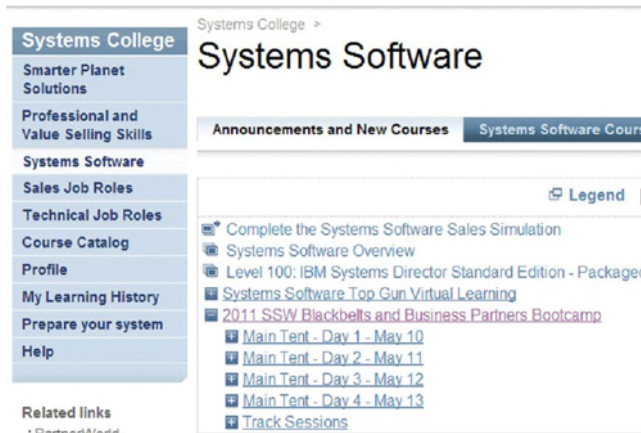


## Get the 2011 Systems Software Boot Camp Presentations

Even if you missed the 2011 Systems Software Black Belt and Business Partner Boot Camp you can still get the presentations and MP3s from the main tent session. Just click on the link in the “More on the Web” box to go to the Partnerworld Systems Software—Systems College and then select the Announcement and New Courses tab, as shown below.

**MORE ON THE WEB**

- [PartnerWorld Systems Software—Systems College](#)



## Know Your IBM (KYI) Systems Software Module

Know Your IBM is a permission-based interactive marketing and selling resource designed for you, our Business Partner sellers. It provides net, customized, online education modules focusing on strategic product and solution areas. The education helps increase your understanding and awareness of the key features and business benefits of IBM products, solu-



tions, and offerings. Incentives offered in conjunction with Know Your IBM are designed to encourage you to complete the education modules and provide you rewards for performance. Incentives are awarded at the individual rep level, not to the firm. IBM has published a Know Your IBM (KYI) Systems Software module. Representatives of Business Partner firms that participate in the KYI program are rewarded with KYI points when they complete this module. This module is part of the 2011 KYI rewards program, compliments Systems Software participation in the KYI Sell & Earn program, and helps Business Partners with:

#### MORE ON THE WEB

- [KYI Systems Software module](#)
- [Know Your IBM training modules](#)

- An overview of the IBM STG Systems Software virtualization journey, including broader positioning with IBM's Smarter Planet
- A description and benefits of key IBM Systems Software virtualization and systems management offerings
- Responses to top challenges from customers
- Target clients and client pain points across the phases of virtualization
- IBM Systems Software Virtualization & Systems Management value propositions
- Differentiators of IBM Systems Software Virtualization and Systems Management from the competition.



## IBM CSI Virtual University

IBM's Virtual University provides education for Consultant and System Integrator Business Partners on how to utilize IBM technology to create solutions that reduce IT costs and provide innovative solutions for our mutual clients.

The virtual venue covers areas such as cloud computing, data center optimization and management, business resiliency, risk, security and compliance management, IBM software application & design, information management and business analytics, building a smarter infrastructure, and IBM systems and software for SAP and Oracle.

### MORE ON THE WEB

- [CSI Virtual University](#)

## Social Media Resources for IBM Business Partners

Social media is quickly growing in importance for businesses of all sizes. Whether you are already involved in social media

### MORE ON THE WEB

- [IBM Systems Management Channel on YouTube](#)
- [IBM Systems Director on Facebook](#)
- [Systems Management on Twitter](#)
- [Follow IBMVirt \(virtualization\) on Twitter](#)
- [IBM Virtualization Portal](#)
- [Virtualization@IBM blog on Developer Works](#)
- [LinkedIn social network \(has an IBM Business Partner Group\)](#)
- [Use Twitter to Grow Your Business \(IBM Software Business Partner Blog\)](#)



or just getting interested, the “More on the Web” box provides some links that will be of interest to you.

## Success Stories, References, Case Studies

It is often helpful to make prospective customers aware of other businesses that have successfully implemented solutions based on IBM Systems Software. For this reason, IBM maintains a database of existing customer success stories, complete with company profiles, identified needs, solutions, and resulting benefits. IBM Business Partners can use these success stories with customers to advance the sell cycle. To see some examples of what is available, simply follow the links provided in the “More on the Web” box.

### MORE ON THE WEB

- [Systems Director case studies](#)

## Sources for Competitive Marketing Information

IBM maintains a Web site called “Comp” which is a world-wide portal for information that will help you win in competitive marketing situations. It includes a searchable set of reports, presentations, and quick reference cards about the marketplace, competitors, and competitive products. You will find materials developed by IBM as well as outside sources such as Gartner, IDC, DH Brown, and IDEAS International.

### MORE ON THE WEB

- [IBM “Comp” Web site](#)





## Web Content Syndication (for Your Web site)

IBM Business Partners who market and sell IBM offerings can improve their Web presence for FREE by leveraging syndicated Web content from ibm.com to their own Web sites. IBM has teamed with WebCollage, Inc., to provide the capability for Premier, Advanced, and Member level PartnerWorld participants to receive Web content dynamically delivered into their Web sites.

### MORE ON THE WEB

- [Web content syndication](#)

## Attaching Services to Your Proposal

Attaching IBM Global Technology Services to your IBM solution sales gives you a way to enhance your productivity, accelerate sales, and increase deal size today while creating ongoing revenue opportunities for the future—creating offerings that are more attractive to your clients than ever before.

CIOs, IT directors, and business leaders in client organizations of all sizes across all industries see tremendous value

in IBM Global Technology Services. Our offerings can provide powerful supplements to their internal

resources, opportunities to save money, and programs to enhance the effectiveness of their technology investments. And IBM gives you a way to complement your resources and capabilities. The result is that IBM Global Technology Services can help increase your client satisfaction because you can offer a more complete solution. IBM Global Services provides

### MORE ON THE WEB

- [Service offering info on PartnerWorld](#)



structured and standardized approaches backed by industry-leading experts who can help plan, design, install, configure, tune, test, and support solutions; speed time to value; reduce risk; and minimize disruption to IT and business operations.

## IBM Global Financing

IBM Global Financing (IGF) continues to focus on meeting customer needs by concentrating on key business areas: leasing and lending, remarketing and refurbishing, and asset management. IGF conducts business in more than 40 countries, financing IBM and non-IBM hardware, software, and services, with a full range of flexible, low-rate offerings. IGF's customers find that financing their information technology solutions offers many advantages in both robust and difficult economic climates because financing frees up their capital for other investments. Many information technology installations, including those for customer relationship management, data mining, and e-business, require a substantial investment. IGF financing enables customers to pay for their new technology in affordable monthly payments during the life of the project. Our customers run the gamut from the smallest, family-owned business purchasing a single server and software to the largest, multinational corporation, acquiring tens of thousands of PCs for offices on several continents. In addition to working directly with customers, we work with IBM Business Partners to provide financing for their clients and to help them build their own businesses.

### MORE ON THE WEB

- [IBM Global Financing](#)



## Technical Support for Business Partners

Technical sales support from IBM provides Business Partners with extensive pre-sales support through the PartnerWorld program online via the Web and by voice. Voice support can be accessed via PartnerWorld Contact Services, the single point of entry to all key support organizations. PartnerWorld Contact Services provides access to Techline for hardware and software technical sales support, as well as Competeline for win strategies and competitive information.

- Remote solution design assistance/review
- Technical marketing assistance
- Product and promotion information
- Configuration assistance
- Competitive product information
- Sales strategy information
- Solution assurance assistance.

Follow the links in the “More on the Web” box to access Technical Sales Support online (region selectable).

### **MORE ON THE WEB**

- [Contact Techline](#)
- [PartnerWorld technical resources and support](#)

# 3

## Systems Software Quick Reference

The IBM Systems Software portfolio is the underpinning of systems that are managed in the cloud, tuned to the task, and designed for data. IBM Systems Software contributes to delivering Smarter Computing and superior business outcomes with improved economics, increased service levels, and streamlined performance. The IBM Systems Software portfolio enables a holistic IT approach to the virtuous cycle of Smarter Computing: It is the Integrating Force to achieve Smarter Computing.

### MORE ON THE WEB

- [Systems Software landing page on PartnerWorld](#)
- [IBM Systems Software overview on IBM.com](#)
- [STG Systems Software Fast Facts Guide](#)
- [IBM Systems Software Solution Guide](#)

### Virtualization—the Foundation for Cloud

Virtualization encompasses a set of technologies that support a more responsive and agile business. With a clear roadmap for future change and growth, organizations are able to unlock the value from virtualization more quickly to realize the benefits of:





- Ongoing cost savings through continual reductions in capital and operating costs
- Enhanced service levels with the ability to continually address service requirements and improve service quality
- Increased business agility through rapid response to opportunities and tight alignment of IT to business
- IBM works with clients to assess, design, implement, and manage solutions tailored to business needs and budgets for proven results.

## **IBM System Storage SAN Volume Controller Entry Edition**

Mid-size businesses are turning more and more to virtualization technologies to simplify operations, improve utilization of assets, improve productivity, and to enable their IT infrastructure to be more flexible and responsive to changing business needs. Some look to storage virtualization to complement and enhance server virtualization, while others use storage virtualization to help regain control of their storage.

IBM System Storage SAN Volume Controller (SVC) Entry Edition ([Figure V.1](#)) delivers enterprise-class storage virtualization capability in a more affordable package optimized to better meet the needs of mid-sized businesses.

SAN Volume Controller Entry Edition helps simplify management of your storage infrastructure and provides a single easy-to-use point of control even as your storage needs grow. In this way, SVC Entry Edition helps improve productivity of administration staff so you can manage your storage as your business grows.



Through pooling of storage and advanced functions such as thin provisioning and snapshots, SVC Entry Edition helps improve storage utilization to improve your return on investment (ROI) and also to help control storage growth. SVC Entry Edition is an affordable way to increase the flexibility of your IT infrastructure so you can respond more quickly to business demands while knowing you are controlling your storage investments and improving efficiency.



#### Public

- [SAN Volume Controller info on IBM.com](#)
- [SAN Volume Controller competitive info on COMP](#)
- [My developerWorks—Blogs—System Storage](#)
- [Analyst Reports: IBM System Storage SAN Volume Controller](#)

#### Business Partners

- [SAN Volume Controller sales kit on PartnerWorld](#)
- [SAN Volume Controller info on PartnerWorld](#)



*SAN Volume Controller Entry Edition Intro (6:07)*

**Figure V.1.** IBM System Storage SAN Volume Controller info (and links to more detail).



SAN Volume Controller Entry Edition can grow with your business and can easily be converted to the enterprise SAN Volume Controller system for outstanding growth potential.

SVC Entry Edition supports attachment to servers using iSCSI protocols over IP networks, which can help reduce costs and simplify server configuration. iSCSI attachment avoids the cost of fibre channel host bus adapters (HBAs) in servers and reduces the need for fibre channel switch ports. This new capability may be particularly attractive for IBM BladeCenter server configurations.

Here are some quick SVC Entry Edition highlights:

- Helps improve storage utilization: Control growth and combine storage capacity into a single resource
- Designed to improve application availability: Make changes to storage and move data without taking applications down and auto-allocates more storage to applications
- Helps to reduce the cost and complexity of managing storage: Greater efficiency and productivity for storage management staff and enables multivendor strategies
- Offers network-based replication: Helps enable greater choice when buying storage
- Helps to reduce server cost with iSCSI host attachment and supports multi-operating systems

Here are some common features:

- Combines storage capacity from multiple vendors for centralized management



- Increases storage utilization by providing more flexible access to storage assets
- Improves administrator productivity by enabling management of pooled storage from a single interface
- Insulates host applications from changes to the physical storage infrastructure
- Enables a tiered storage environment to match the cost of storage to the value of data
- Applies common network-based copy services across storage systems from multiple vendors
- Supports data migration among storage systems without interruption to applications
- Supports consolidated disaster recovery site servicing more than one production location
- Enables almost instant recovery from disk backups.

#### Hardware Summary:

- Comes with identical functionality as the 2145-8G4
- 8 GB memory and 4 Gbps FC interfaces
- Single socket Intel Xeon processor
- 8 GB cache memory
- Four 4 Gbit FC HBA ports





## IBM Storwize V7000 Midrange Disk System

In storage management today, breaking the cycle of increased complexity and explosive data growth can be a big challenge. The old ways of buying and managing storage have become less effective. Due to resource constraints—both physical storage resources and human resources—IT organizations must act quickly to optimize and simplify their infrastructure. Unchecked complexity and growth will only become bigger problems over time.

Small and mid-size organizations may also suffer from a range of challenges:

- Disruptive migrations
- Difficulty deploying tiered storage
- Inability to share storage among servers
- Reduced productivity and increased cost caused by isolated server and storage management tools
- Inability to use virtualized storage, like virtual servers, as a tool for optimizing expenditures, resources, and capabilities.

To stand up to these challenges and allow businesses to respond to a rapidly changing marketplace, IBM Storwize V7000 (Figure V.2) is a virtualized storage system to complement virtualized server environments that provides unmatched performance, availability, advanced functions, and highly scalable capacity never seen before in midrange disk systems. Storwize V7000 is a powerful midrange disk system that has been designed to be easy to use and enable rapid deployment

**Specifications**

Host interface	SAN-attached 8 Gbps Fiber Channel (FC) host connectivity, 1 Gbps iSCSI and optional 10 Gbps iSCSI
User interface	Graphical user interface (GUI)
Supported drives	3.5" disk drives: <ul style="list-style-type: none"> <li>• 2 TB 3.5" 7.2k Near-Line SAS disk</li> </ul> 2.5" disk drives: <ul style="list-style-type: none"> <li>• 146 GB 2.5" 15k SAS disk</li> <li>• 300 GB, 450 GB, 600 GB 2.5" 10k SAS disk</li> <li>• 300 GB 2.5" E-MLC (enterprise-grade multilevel cell) solid state drive (SSD)</li> </ul>
RAID levels	RAID 0, 1, 5, 6, and 10
Maximum drives supported	240 per control enclosure; 480 per clustered system
Fans and power supplies	Fully redundant, hot swappable
Rack support	Standard 19 inch
Management software	Storwize V7000 software
Cache per controller/control enclosure/clustered system	8 GB/16 GB/32 GB
Advanced features included with each system	System Storage Easy Tier, FlashCopy, thin provisionin
Additional available advanced features	Remote mirroring, external virtualization, IBM FlashCopy Manager, IBM Tivoli Storage, Productivity Centre Midrange Edition, Tivoli Storage Manager, Tivoli Storage Manager FastBack, IBM Systems Director

**Public**

- [Storwize V7000 Express details on IBM.com](#)
- [IBM Storwize V7000 Information Center](#)
- [IBM Storwize V7000 financing](#)

**Business Partners**

- [Storwize V7000 Portal on PartnerWorld](#)

**Figure V.2.** IBM Storwize V7000 Midrange Disk System (and links to more detail).



without additional resources. Storwize V7000 is virtual storage that offers greater efficiency and flexibility through built-in solid state drive (SSD) optimization and thin provisioning technologies. Storwize V7000 advanced functions also enable non-disruptive migration of data from existing storage, simplifying implementation and minimizing disruption to users. Storwize V7000 also enables you to virtualize and reuse existing disk systems, supporting a greater potential return on investment (ROI).

Here are some quick V7000 highlights:

- Delivers sophisticated enterprise-class storage function for mid-size businesses
- Supports your growing business requirements while controlling costs
- Provides up to 200 percent performance improvement with automatic migration to high-performing SSDs
- Thin provisioning allows you to purchase only the disk capacity you need
- Enables near-continuous availability of applications through dynamic migration
- Supports faster and more efficient data copies for online backup, testing, or data mining
- Offers flexible server and storage management
- Easy-to-use data management designed with a graphical user interface and point-and-click system management capabilities



- Metro Mirror and Global Mirror for replicating data synchronously or asynchronously between systems for backup efficiency
- SSD for applications that demand high speed and quick access to data
- RAID 0, 1, 5, 6, and 10.

## IBM Systems Director VMControl

### *The Convergence of Physical and Virtual Management*

IBM Systems Director VMControl ([Figure V.3](#)) helps you gain more from infrastructure wide virtualization, with a deeper level of management. The combination of IBM Systems Director and VMControl allows you to reduce the total cost of ownership of your virtualized environment by decreasing management costs, increasing asset utilization, and linking infrastructure performance to business goals.

VMControl simplifies the management of virtual environments across multiple virtualization technologies and hardware platforms, freeing you from “silos of virtualization” and delivering enterprise-wide visibility and control. VMControl is a leading multi-platform virtualization management solution that is included with IBM Systems Director Editions, or available separately as a plug-in option for IBM Systems Director. This diversity of deployment options allows you to select the optimal level of VMControl functionality (Express, Standard, or Enterprise) for your virtualized infrastructure and to seamlessly scale up as it evolves.



**Express Edition** provides complete virtual server life-cycle management to decrease infrastructure costs and improve service levels. It manages virtual server resources to create, modify, delete, and relocate virtual machines.

**Standard Edition** enables the creation and management of images to use when deploying workloads, which enables faster problem solving, a higher return on investment, and rapid responses to changing business goals and strategies.

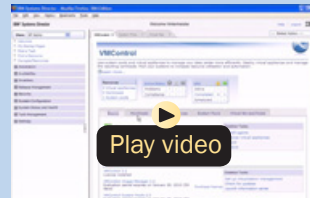
**Enterprise Edition** helps you to manage system pools as a single entity. You can create and modify system pools (grouped computing resources managed as single entity), make dynamic virtual workload adjustments, and move workloads within system pools, resulting in an optimized virtual environment with increased resilience to cope with planned or unplanned downtime.

### Public

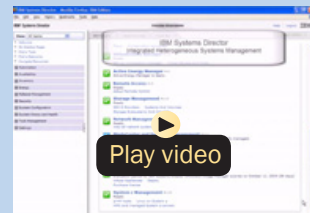
- [VMControl info on IBM.com](#)
- [VMControl Information Center](#)
- [VMControl Redbooks](#)

### Business Partners

- [VMControl resources on PartnerWorld](#)
- [VMControl competitive info on COMP](#)



*10 minute overview of VMControl (10:00)*



*One minute value summary of VMControl (1:10)*

**Figure V.3.** IBM Systems Director VMControl Editions (and links to more detail).

Here are some quick VMControl highlights:

- Brings together physical and virtual management into a single interface to reduce complexity
- Offers unmatched cross-platform and cross-operating system management, which helps improve service delivery by



eliminating isolated silos of virtualization in heterogeneous environments

- Provides faster time-to-value and greater business agility through simplified virtualization management that allows more effective utilization of virtualized resources
- Establishes repeatable accuracy and consistency through automation
- Reduces operational and infrastructure costs through increased efficiency and resource utilization.

## **IBM Systems Director Network Control**

IBM Systems Director Network Control provides integration of server, storage, and network management for virtualization across multiple platforms. Leveraging existing IBM Systems Director functionality and the integration of vendor applications, Network Control can manage, monitor, and configure vendor-based network devices.

Network Control can help protect your IT investment through its open design and support for industry standards, enabling heterogeneous physical and virtual management with support for multiple platforms and operating systems.

By utilizing network management capabilities, along with existing server and storage management capabilities, you can effectively control your computing environment with a single integrated management tool while reducing your cost of computing.



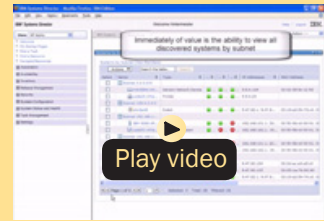
## MORE ON THE WEB

### Public

- [Systems Director Network Control info on IBM.com](#)
- [Systems Director Network Control Information Center](#)
- [Systems Director Network Control Redbooks](#)
- [60-day free trial offer](#)

### Business Partners

- [Systems Director Network Control resources on PartnerWorld](#)
- [Systems Director Network Control competitive info on COMP](#)



*Overview of System Director Network Control (8:47)*

Here are some quick Network Control highlights:

- Reduces network management costs by consolidating all management functions into a single product
- Improves productivity and service levels by simplifying and streamlining management tasks
- Increases asset utilization through more efficient management
- Provides higher bandwidth and converged fabrics eliminating server, storage, and network sprawl
- Basic life-cycle management of network switches
- Integration of vendor-based device management tools
- Converged Ethernet network device support (FCoCEE) via native support and vendor tools



- Ability to view systems according to VLAN
- Network device topology collection and visualization (virtual and physical)
- IBM Systems Director Network Control supports these and other network devices:
  - IBM BladeCenter supported switches and Blade NICs
  - Brocade Converged Ethernet network switches (FCoCEE), Ethernet switches and routers
  - QLogic converged network adapters
  - Cisco FCoCEE and Ethernet switches
  - Juniper Ethernet switches, routers, and appliances
- Virtual switch discovery and inventory for:
  - VMware ESXi and ESX4
  - PowerVM
  - RHEV-H.

The latest version of Network Control is available for download. Take advantage of the 60-day trial opportunity to see for yourself how this solution will enable you to simplify and automate network management tasks while providing a single unified view of your server, storage, and network devices. For continued use of IBM Systems Director Network Control functions beyond the 60-day trial, the offering must be purchased. Follow the link in the “More on the Web” box for more on the free trial.





## z/VM

The z/VM hypervisor is designed to help clients extend the business value of mainframe technology across the enterprise by integrating applications and data while providing exceptional levels of availability, security, and operational ease. z/VM virtualization technology is designed to allow the capability for clients to run hundreds to thousands of Linux servers on a single mainframe running with other System z operating systems, such as z/OS, or as a large-scale Linux-only enterprise server solution. z/VM V6.1 and z/VM V5.4 can also help to improve productivity by hosting non-Linux workloads such as z/OS, z/VSE, and z/TPF on the same System z server or as a large-scale enterprise-server solution.

### MORE ON THE WEB

#### Public

- [z/VM info on IBM.com](#)
- [z/VM case studies and customer references](#)
- [z/VM General Information Guide](#)
- [z/VM Redbooks](#)
- [Linux on System z with z/VM Quick Reference](#)

#### Business Partners

- [z/VM info on PartnerWorld](#)
- [z/VM competitive info on COMP](#)

## IBM PowerVM

Power is virtualization without limits. Businesses are turning to PowerVM virtualization to consolidate multiple workloads onto fewer systems, increasing server utilization and reducing cost ([Figure V.4](#)). PowerVM provides a secure and scalable



**Express Edition** is designed for users looking for an introduction to more advanced virtualization features at a highly affordable price. With PowerVM Express Edition, users can create up to three partitions on the server, leverage virtualized disk and optical devices VIOS, and even try out the Shared Processor Pool.

**Standard Edition** is for users ready to get the full value out of their server, PowerVM Standard Edition provides the most complete virtualization functionality for AIX, IBM i, and Linux operating systems in the industry. PowerVM Standard Edition is supported on Power Systems servers and includes features designed to allow businesses to increase system utilization; while helping to ensure applications continue to get the resources they need.

**Enterprise Edition** includes all the features of PowerVM Standard Edition plus two new industry-leading capabilities called Active Memory Sharing and Live Partition Mobility. Active Memory Sharing intelligently flows system memory from one partition to another as workload demands change. Live Partition Mobility allows for the movement of a running partition from one server to another with no application downtime, resulting in better system utilization, improved application availability, and energy savings. With Live Partition Mobility, planned application downtime due to regular server maintenance can be a thing of the past.

#### Public

- [PowerVM info on IBM.com](#)
- [Competitive analysis vs VMWare](#)
- [Competitive analysis vs x86 based virtualization](#)
- [PowerVM Redbooks](#)
- [PowerVM developerWorks Wiki](#)
- [Virtualization impact on UNIX and Linux infrastructures](#)

#### Business Partners

- [PowerVM resources on PartnerWorld](#)
- [PowerVM competitive info on COMP](#)

**Figure V.4.** IBM PowerVM editions (and links to more detail).



virtualization environment for AIX, i, and Linux applications built upon the advanced RAS features and leading performance of the Power Systems platform.

Here are some quick PowerVM highlights:

- Reduce IT costs by consolidating diverse workloads onto Power Systems platforms
- Optimize utilization of enterprise IT resources to improve service levels and boost ROI
- Minimize the complexity of systems administration and automate standard processes
- Rapidly scale to deliver maximum system resources to the most demanding mission-critical workloads
- Maximize availability by moving live workloads between servers to eliminate planned downtime.

Complexity can work its way into any IT infrastructure, driven by the rollout of new applications and unanticipated change. However, adding servers in response to each demand for new workloads drives the need for more data center space, power, cooling, network cabling, data storage, and administrative resources. Such complexity leads to inefficiency. The answer is virtualization, which allows organizations to consolidate multiple operating systems and software stacks on a single platform.

PowerVM provides the industrial-strength virtualization solution for IBM Power Systems servers and blades. Based on more than a decade of evolution and innovation, PowerVM



represents the state of the art in enterprise virtualization and is broadly deployed in production environments worldwide by most Power Systems owners.

The IBM Power Systems family of servers includes proven workload consolidation platforms that help clients control costs while improving overall performance, availability, and energy efficiency. With these servers and IBM PowerVM virtualization solutions, an organization can consolidate large numbers of applications and servers, fully virtualize its system resources, and provide a more flexible, dynamic IT infrastructure. In other words, IBM Power Systems with PowerVM deliver the benefits of virtualization without limits.

PowerVM provides industrial-strength virtualization for AIX, IBM i, and Linux environments on IBM POWER processor-based systems. IBM Power Systems servers integrated with PowerVM technology are designed to allow clients to build a dynamic infrastructure that will help them to reduce costs, manage risk, and improve service levels.

PowerVM also offers a secure and resilient virtualization environment, built on the advanced RAS (reliability, availability, and serviceability) features, extreme scalability, and leadership performance of the IBM Power Systems platform, based on the industry-leading POWER6 and POWER7 processors.

Operating system versions supported include:

- AIX 5.3, AIX 6.1, and AIX 7
- IBM i 6.1 and IBM i 7.1
- Red Hat Enterprise Linux 5 and Red Hat Enterprise Linux 6 (when announced by Red Hat)



- SUSE Linux Enterprise Server 10 and SUSE Linux Enterprise Server 11.

Hardware platforms supported include IBM Power Systems with POWER5, POWER6, and POWER7 processors.

## **Management—the Backbone of Optimized Systems**

To achieve the ultimate goal of increased competitiveness that smarter systems can provide, it is necessary to move beyond the detailed management of systems—servers, storage and networks—to the optimization of workloads and the delivery of high-value IT services in new ways. IT administrators need streamlined, automated systems management tools that directly address key business concerns related to IT, such as the ability to more rapidly deploy services in response to business needs, and the control of costs associated with capital expenditure and ongoing management.

## **IBM Tivoli Storage Productivity Center Suite**

The IBM Tivoli Storage Productivity Center Suite ([Figure M.1](#)) of storage infrastructure management tools can help customers improve time to value, as well as reduce the complexity of managing their storage environments by centralizing, simplifying and optimizing storage tasks associated with storage systems, storage networks, replication services, and capacity management.

IBM Tivoli Storage Productivity Center Standard Edition is a single integrated solution designed to help you improve your storage TCO and ROI by combining the assets, capacity, per-



**Basic Edition** provides basic storage resource management for SAN attached storage devices and their connected networks. Extends existing management of a single storage system and provides basic level capabilities for storage reporting, monitoring, policy-based management, and storage provisioning. It is offered preinstalled on the IBM System Storage Productivity Center (SSPC).

**TPC for Data** provides a set of policy-driven, automated tools for managing storage capacity, availability, events, performance, and assets, including DAS, NAS, and SAN technologies.

**TPC for Disk** is designed to monitor and report on performance of storage devices and provide storage device configuration and management from a single console. Capabilities include disk subsystem management, storage provisioning, performance management, integrated administration, performance analytics, capacity utilization, storage optimization, green tools, and replication features for multiple SAN environments.

**TPC for Disk Midrange** provides capabilities the same as TPC for Disk, however it's packaged specifically for IBM entry level and mid-range disk systems—IBM DS3000, DS4000, and DS5000 series storage devices as well as IBM SAN Volume Controller.

**TPC for Replication** simplifies and automates the configuration of your replication environment, allowing for more effective Metro Mirror, Global Mirror, and IBM FlashCopy management. Monitors and automates copy operations across devices to support a replication environment. Available in both Two-Site and Three-Site Business Continuity options and provides disaster recovery management through planned and unplanned failover and failback automation for the IBM ESS Model 800, IBM DS600, IBM DS8000, and the IBM System Storage SVC.

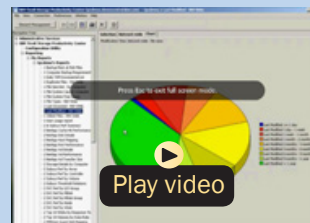
**TPC Standard Edition** combines the best of Disk, Data, and Fabric products together as one orderable product.

#### Public

- [TPC info on IBM.com](#)
- [Gartner SRM software market analysis report](#)
- [TPC details info on Infocenter](#)
- [TPC Launchpad demo](#)
- [TPC Redbooks](#)

#### Business Partners

- [TPC info on PartnerWorld](#)
- [TPC info on Comp](#)



*TPC Demo (8:29)*

**Figure M.1.** IBM Tivoli Storage Productivity Center Suite editions (and links to more detail).



formance, and operational management traditionally offered by separate Storage Resource Management, SAN Management and Device Management applications, into a single platform.

Here are some quick Tivoli Storage Productivity Center Highlights:

- Helps centralize the management of your storage infrastructure from a single interface using role-based administration and single sign-on
- Provides a single management application with modular integrated components that are easy to install and provide common services for simple/consistent configuration and consistent operations across host, fabric, and storage systems
- Manages performance and connectivity from the host file system to the physical disk, including in-depth performance monitoring and analysis on SAN fabric performance
- Manages the capacity utilization and availability of storage systems, file systems, and databases
- Monitors, manages, and controls (zone) SAN fabric components
- Automates capacity provisioning of file systems
- Monitors and tracks the performance of SAN-attached SMI-S compliant storage devices
- Manages advanced replication services (Global Mirror, Metro Mirror, and FlashCopy).



IBM Tivoli Storage Productivity Center can help you manage the capacity utilization of storage systems, file systems, and databases. It can help automate file-system capacity provisioning, perform device configuration, and manage multiple devices from a single user interface. And it can tune and proactively manage the performance of storage devices on the Storage Area Network (SAN) and manage, monitor, and control your SAN fabric.

## IBM Systems Director

Designed for innovation and transformation IBM Systems Director ([Figure M.2](#)) is the platform management foundation for achieving Smarter Systems. An integral component of the IBM Smarter Systems portfolio, IBM Systems Director enables integration with Tivoli, and third party management platforms, providing the building block for virtualization and integrated services management.

Here are some quick Systems Director highlights:

- Automates data center operations
- Unifies the management of IBM servers, storage, and network devices
- Simplifies the management of physical and virtual platform resources
- Reduces operational complexity and provides a view of the relationships and health status of IT systems
- Obtains a single view of the actual energy usage throughout your data center.





**Express Edition** provides an affordable foundation for systems management. It provides the integrated tools needed to efficiently visualize and communicate the relationships of physical and virtual systems that are discovered, monitor their health, define and receive threshold alerts, and update system firmware and operating environments. Built-in automation capabilities enable IT administrators to schedule updates and configuration changes to proactively avoid problems, and reduce the administrative burden of routine maintenance.

**Standard Edition** includes all of the capabilities of the Express Edition, and adds advanced deployment, monitoring, and management features under the same console. With Systems Director Standard Edition, you can create and deploy virtual images that encapsulate an operating environment as well as any middleware and applications, while automatically configuring the storage attached network. If you are facing energy cost or capacity concerns, get the benefit of understanding and controlling energy use across the data center. This edition also expands the discovery and health monitoring capabilities of the Express Edition to include networking systems.

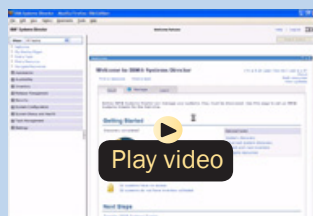
**Enterprise Edition** includes all of the capabilities of the Express and Standard editions plus adds tools for more comprehensive availability and performance management. It also provides more options for rapidly deploying and maintaining virtual server environments. With the Enterprise Edition, clients have the flexibility to deploy workloads in virtual machines as well as deployment into a pool of virtual system resources across multiple physical servers (called “system pools”). System pools can be managed with the simplicity of managing a single system. Troubleshooting is enhanced by including application status, identification of changes in the environment, and predictive analysis of capacity. A built-in data warehouse and reporting enable clients to analyze both real-time status and historical trends together.

Public

- [Systems Director info on IBM.com](#)
- [Systems Director detailed info on Infocenter](#)
- [IBM Systems Director Wiki](#)
- [Systems Director Redbooks](#)
- [Systems Director on FaceBook](#)

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- [Systems Director info on COMP](#)



*IBM Systems Director Overview (8:36)*

**Figure M.2.** IBM Systems Director editions (and links to more detail).



IBM Systems Director provides systems management personnel with a single-point-of-control, helping reduce IT management complexity and cost. With IBM Systems Director, IT personnel are able to optimize compute and network resources, quickly respond to business requirements with greater delivery flexibility, and attain higher levels of services management with streamlined management of physical, virtual, storage, and network resources.

Key IBM Systems Director capabilities include:

- Simple life cycle management of your platforms with intuitive usability and reduced complexity—IBM Systems Director eliminates layers of management duplication through a single, unified view of the total IT environment, reducing system management complexity, cost, and time to problem resolution, while improving visibility, availability, and service. IBM Systems Director can help you dramatically reduce operational complexity and costs, significantly increase agility and efficiency, and optimize for maximum resource utilization.
- Integration—with Tivoli, and third party management platforms, IBM Systems Director provides the foundation for virtualization and integrated services management. With an extensive suite of available platform management tasks and automated tools, IBM Systems Director assists systems management personnel in increasing productivity, resulting in improved responsiveness and service.

By integrating management of your IT operations with your business processes, Systems Director can help you meet your business goals and objectives.



## **IBM Systems Director Active Energy Manager**

IBM Systems Director Active Energy Manager, the cornerstone of IBM's energy-efficient technologies and services, helps organizations effectively monitor and manage power and thermal usage of their IT environment. Active Energy Manager provides IT and data center managers with a single view of actual energy usage across systems and facilities within the data center. Organizations can utilize real-time and historic data to initiate actions improving resource utilization, availability, and service; while reducing energy consumption and cost.

Active Energy Manager measures, monitors, and manages the energy and thermal components of IBM systems, enabling a cross-platform management solution, simplifying energy management of IBM servers, storage, and networking equipment. In addition, Active Energy Manager extends the scope of energy management to include non-IBM systems, facility providers, facility management applications, PDUs, and equipment supporting the IPv6 protocol. Integration with a wide range of systems and facility provider platforms, and Tivoli enterprise solutions as IBM Tivoli Monitoring, enables organizations to accurately understand the impact of the power and cooling infrastructure on servers, storage, and networking equipment. The depth and breadth of Active Energy Manager enables IT and data center managers to effectively manage server operations, while ensuring adherence with energy policies and constraints. With IBM Systems Director Active Energy Manager, organizations can take steps to reduce energy costs, optimize resource efficiency, and improve service.



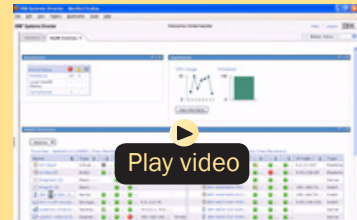
## MORE ON THE WEB

### Public

- [Active Energy Manager info on IBM.com](#)
- [Case study: Consolidated Edison Company of New York](#)
- [Case study: Wuxi](#)
- [Active Energy Manager info on Infocenter](#)
- [Active Energy Manager Installation and User's Guide](#)
- [Active Energy Manager Redbooks](#)
- [Free 60-day trial](#)

### Business Partners

- [Active Energy Manager info on PartnerWorld](#)
- [Active Energy Manager info on Comp](#)



*Active Energy Manager  
overview (3:23)*

IBM Systems Director Active Energy Manager increases energy efficiency and reduces costs by:

- Providing a single view across multiple platforms including IBM servers and storage, non-IBM systems, facility providers, facility management applications, PDUs, and equipment supporting the IPv6 protocol—reducing energy management tools and complexity
- Simplifying energy management for IBM servers and storage, providing a single, cross-platform view of energy consumption, to aid power consumption understanding, decision making, and actions



- Controlling power, and limiting power consumption, with tools providing power capping, power savings, power and thermal trending, and group capping
- Providing real-time information on energy usage, giving administrators insight needed to reduce power consumption
- Integrating with a wide range of facility provider platforms for monitoring power and cooling infrastructure, to understand impact on servers, storage, and network equipment
- Integrating seamlessly with IBM Systems Director management platform, and with higher-level management platforms such as Tivoli, to provide centralized, unified management capabilities

Here are some quick Active Energy Manager highlights:

- Monitoring functions include power trending, thermal trending, IBM and non-IBM PDU support, support for facility providers, and energy and environment thresholds
- Management functions include power capping and power savings modes
- Enhanced facility provider support to enable a more complete view of energy consumption within the data center
- Monitoring of energy and environment data from a wide variety of PDUs, meters, and sensors
- Monitoring of power and cooling via integration with a wide variety of infrastructure vendors



- Monitoring of equipment via an IPv6 connection
- Create relationships from systems to cooling and power units in data centers so power and cooling topologies can now be viewed.

The latest version of Active Energy Manager is available for download. Take advantage of the 60-day trial opportunity to see for yourself how this solution will enable you to measure, monitor, and manage the energy components built into IBM Systems enabling a cross-platform management solution. Active Energy Manager extends the scope of energy management to include facility providers to enable a more complete view of energy consumption within the data center. For continued use of IBM Systems Director Active Energy Manager management functions beyond the 60-day trial, the offering must be purchased. Follow the link in the “More on the Web” box for more on the free trial.

## **Systems Director Storage Control**

IBM Systems Director Storage Control enables the management of systems and storage with a single pane of glass. IBM Systems Director with Storage Control provides a single management console and system for managing both server and storage systems. Storage Control is an IBM systems Director plug-in based on IBM Tivoli Storage Productivity Center. It integrates tightly with the IBM Systems Director and VMControl environment providing integrated physical and virtual server and storage management through a single user interface.



Storage Control unifies the management of physical and virtual server and storage resources for integrated end-to-end life-cycle management, including: configuration, discovery, health, capacity, inventory, provisioning, topology, updates, alerts, and retirement. Storage Control is especially important for IT administration groups that have responsibility across servers and storage.

**MORE ON THE WEB**

Public

- [Systems Director Storage Control info on ibm.com](#)
- [Systems Director Storage Control Announcement Letter](#)
- [Free 60-day trial offer](#)

Business Partners

- [Systems Director Storage Control info on PartnerWorld](#)
- [Systems Director Storage Control info on Comp](#)

Here are some quick Storage Control highlights:

- Leverages integrated server and storage management to improve service level agreements and responsiveness to business needs
- Reduces complexity and risk of managing storage with the rest of IT operations
- Significantly reduces storage management cost
- Extends storage management of IBM Systems Director and VMControl to cover most IBM storage systems



- Storage device discovery and coverage in integrated physical and logical topology views
- Shows relationships between storage and server resources
- Ability to configure logical and physical configuration
- Ability to view controller and volume status and to set notification alerts
- Single management server deployment
- Integration with VMControl featuring the following additional functions:
  - Storage provisioning for image creation, deployment, and cloning
  - Ability to manage storage system pool life cycle, take group actions across pool and policy-based storage placement, provisioning, and cloning actions within the pool.

IBM Systems Director Storage Control requires IBM DB2 (restricted-use license included at no additional cost) as the IBM Systems Director database.

Storage Control is available for download. Take advantage of the 60-day trial opportunity to see for yourself how this solution will enable you to manage server and storage systems with a single management console. Storage Control extends storage management of IBM Systems Director and VMControl to cover most IBM storage systems. For continued use of IBM Systems Director Storage Control management functions





beyond the 60-day trial, a license must be purchased. Follow the “More on the Web” link for more information.

## **Availability—the Safety Net for Big Data**

IBM System Software offerings for high availability leverage our hardware and software innovations to deliver both host-based replication and storage server-based replication technologies. For example, combining the IBM System Storage DS8000 with IBM PowerHA SystemMirror Enterprise Edition yields one of the most robust enterprise-wide or multi-site HA/DR solutions available. It’s this tight, end-to-end integration with IBM systems and software that delivers greater business value, in the form of highly optimized solutions that make the most of your investment in IT.

## **IBM Scale Out Network Attached Storage (SONAS)**

The demand to manage and store massive amounts of file data continues to challenge data centers. IBM Scale Out Network Attached Storage (SONAS) is designed to embrace cloud storage in the petabyte age ([Figure A.1](#)). SONAS can meet today’s storage challenges with quick and cost-effective IT-enabled business enhancements designed to grow with unprecedented scale.

SONAS can also deliver computing services that make the supporting technology almost invisible. It enables applications and services to be uncoupled from the underlying infrastructure, enabling businesses to adjust to change quickly. As a result, SONAS can easily integrate with your organization’s strategies to develop a more dynamic enterprise.



#### Public

- [SONAS details on IBM.com](#)
- [SONAS Information Center](#)

#### Business Partners

- [SONAS details on PartnerWorld](#)
- [SONAS competitive info on COMP](#)
- [SONAS sales kits](#)

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**Figure A.1.** IBM Scale Out Network Attached Storage (and links to detail).

Here are some quick SONAS highlights:

- Leadership scalability to accommodate capacity growth for up to 14.4 petabytes
- Manage multiple petabytes of storage and billions of files in a single file system



- Achieve operational efficiency with automated, policy-driven tiered storage
- Lower TCO by up to 40 percent with automated life-cycle management and migration to tape
- Satisfy bandwidth hungry applications with scale-out performance
- Industry leading SPECsfs performance for a single file system
- Supports both random access and streaming workloads
- Enable disaster recovery and business continuity with asynchronous replication.

An IBM Scale Out Network Attached Storage (SONAS) system reached over 403K IOPS—a world record—on the industry-standard SPECsfs2008 benchmark. This result is over three times higher than IBM's nearest competitor to-date. The tested SONAS system configuration was a typical setup that might be seen in your data center. It contained 10 interface nodes and eight storage pods, leaving room for the system to grow. There are no unnecessary complexities added to the configuration such as aggregated file systems, aggregated racks, or usage of all SSD drives that are impractical and very costly in today's environment.

SONAS is the only clustered file system in the industry that can offer the performance to not only handle large files but also smaller random access file workloads, all under a single file system. SONAS systems can grow based on your needs by adding interface nodes in the front or by independently adding storage pods on the back-end, or both. This capability



lets you sustain high performance during capacity growth and allows you to handle small file, random access workloads and large file data driven by high-performance computing applications. Examples of small file random I/O workloads include home directories, large Internet mail serving, Web-based commerce, online transaction processing, securities trading, financial applications, and general-purpose file serving.

## General Parallel File System

Explosions of data, transactions, and digitally-aware devices are straining IT infrastructure and operations, while storage costs and user expectations are increasing. The IBM General Parallel File System (GPFS), high-performance enterprise file management, can help you move beyond simply adding storage to optimizing data management.

Here are some quick GPFS highlights:

- Seamless capacity expansion to handle the explosive growth of digital information and improve efficiency through enterprise wide, interdepartmental information sharing
- High reliability/availability to eliminate production outages and provide disruption-free maintenance and capacity upgrades
- Performance to satisfy the most demanding applications
- Policy-driven automation to ease information life-cycle management
- Extensible management and monitoring infrastructure to simplify file system administration



- Cost-effective disaster recovery and business continuity.

IBM General Parallel File System (GPFS) currently powers many of the world's largest scientific supercomputers and commercial applications requiring high-speed access to large volumes of data such as:

- Digital media
- Engineering design
- Business intelligence
- Financial analytics
- Seismic data processing
- Geographic information systems
- Scalable file serving.

GPFS provides online storage management, scalable access, and integrated information life-cycle management tools capable of managing petabytes of data and billions of files. Virtualizing your file stor-

### MORE ON THE WEB

#### Public

- [General Parallel File System info on IBM.com](#)
- [Analyst paper on General Parallel File System](#)
- [General Parallel File System Wiki](#)
- [General Parallel File System forum](#)
- [General Parallel File System Redbooks](#)

#### Business Partners

- [General Parallel File System info on PartnerWorld](#)
- [General Parallel File System info on COMP](#)



age space and allowing multiple systems and applications to share common pools of storage provides you the flexibility to transparently administer the infrastructure without disrupting applications, improving cost and energy efficiency, while reducing management overhead.

Massive namespace support, seamless capacity and performance scaling, along with proven reliability features and flexible architecture of GPFS helps your company foster innovation by simplifying your environment and streamlining data workflows for increased efficiency.

## ProtectTIER

IBM ProtectTIER is a family of data deduplication solutions, ranging from enterprise-class clustered storage gateways supporting up to one petabyte of storage to easy-to-deploy, preconfigured appliance solutions. All ProtectTIER solutions dramatically reduce storage requirements while protecting information and improving service levels, through the use of patented HyperFactor data deduplication technology. IBM ProtectTIER enables businesses to effectively augment tape-based backups with fast disk-based backups, without the risk of data loss or corruption.

The IBM System Storage TS7680 ProtectTIER Deduplication Gateway for System z helps improve tape application perfor-

### MORE ON THE WEB

#### Public

- [ProtectTIER info on IBM.com](#)

#### Business Partners

- [ProtectTIER details on PartnerWorld](#)
- [ProtectTIER competitive info on COMP](#)



mance in the System z environment while enabling significant infrastructure cost reductions. It offers high-performance inline data deduplication, highly available two-node clustering, and up to 1 petabyte (PB) of physical storage capacity per system. Along with IBM storage, the ProtecTIER Gateway solution provides an optimal disk-based target for tape data.

### *IBM System Storage TS7650 ProtecTIER Deduplication Appliance*

IBM System Storage TS7650 ProtecTIER Deduplication Appliance is a preconfigured solution of IBM storage, IBM server, and IBM's revolutionary ProtecTIER data deduplication software designed to improve backup and recovery operations. This integrated solution makes it easy to harness the power of deduplication without making radical changes to the existing environment. Available in four basic appliance configurations: Entry Level (7 TB), Mid-Level (18 TB), High-End (36 TB), and High-Availability Cluster configuration (36 TB).

### *IBM System Storage TS7650G ProtecTIER Deduplication Gateway Solution*

IBM System Storage TS7650G ProtecTIER Deduplication Gateway Solution meets the disk-based data protection needs of the enterprise data center while enabling significant infrastructure cost reductions. It offers high-performance inline data deduplication, optional two node clustering, and up to 1 petabyte (PB) of physical storage capacity per system. Combined with IBM storage, the ProtecTIER Gateway solution provides an optimal disk-based target for backup and archive data.

IBM System Storage TS7610 ProtecTIER Deduplication Appliance Express is an all-in-one solution of storage, server,



and ProtecTIER deduplication software that is easy to install and manage. This integrated solution makes it easy to harness the power of deduplication without making radical changes to the existing environment. Available in two capacity configurations of 4 TB and 5.4 TB, this low cost solution is great for mid-size businesses or smaller branch offices of larger enterprises.

## IBM Real-time Compression

IBM Real-time Compression Appliances ([Figure A.2](#)) can transparently compress primary NAS data, so clients can keep up to five times more data online and gain additional efficiencies throughout the data life cycle. By shrinking primary data, all subsequent copies of that data, such as backups, archives, snapshots, and replicas, are also compressed. Real-time Compression is the newest advancement in storage efficiency. IBM Real-time Compression Appliances are the only storage compression solutions that can shrink primary, online data in real time, without performance degradation. This can significantly lower storage capital and operating expenses by reducing the amount of data that is stored, powered, and cooled.

Whether storage growth challenges are with files, databases, or mixed workloads, IBM has a compression solution that can quickly and easily help improve storage efficiency.

IBM Real-time Compression includes patented technology that offers efficiency and optimization for your data storage environment. It compresses data when it is first stored so you send less physical data to storage systems, without negatively impacting performance. Transparent to your business ap-





Public

- [Real-time Compression details on IBM.com](#)

Business Partners

- [Real-time Compression details on PartnerWorld](#)

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**Figure A.2.** IBM Real-time Compression Appliances (and links to more detail).

plications and IT processes, it works with any data type that isn't already compressed—even complementing your deduplication, virtualization, and high availability solutions—to enable a new level of storage efficiency and data protection.

Here are some quick Real-time Compression highlights:

- **Real-time efficient operation:** Supports the performance and accessibility requirements of business-critical applications because data is compressed up to 80 percent in real time, without performance degradation.
- **Transparency:** 100 percent transparent to systems, storage, and applications. Provides compatibility with downstream processes such as backups, snapshots, cloning, mirroring, and archiving. And it complements deduplicated environments.



- **Non-disruptive:** Requires no changes to applications, servers, or storage systems. All IT processes remain the same.
- **Less cost, greener:** Cost reduction benefits carry throughout the storage life cycle: less storage to power, cool, and manage means less cost and a greener data center.

IBM Real-time Compression Appliances are the only storage compression solutions that can shrink primary, online data in real time, without performance degradation. IBM Real-time Compression Appliances fit between NAS (IBM N series, NetApp, EMC Celerra/VNX) systems and network switches, and can compress primary NAS files and databases up to 80 percent. This increases application throughput and user response time by helping to improve the efficiency of both application servers and the storage systems.

Using IBM's patented real-time compression techniques, the STN6500 and STN6800 provide unprecedented cost savings throughout the entire storage life cycle.

IBM Real-time Compression Appliance STN6500 is ready to deploy into 1 Gb Ethernet NAS environments. STN6500 has 16 ports, supporting eight connections between NAS systems and network switches.

IBM Real-time Compression Appliance STN6800 can be customized with multiple 10 Gb and 1 Gb Ethernet ports to support high throughput requirements.

## **IBM XIV Storage System**

IBM XIV is proven, high-end disk storage, designed for growth with unmatched ease of use. IBM XIV eliminates the



complexity of managing enterprise storage. It never compromises performance for reliability, providing consistent high performance without manual tuning for even the most demanding application workloads, while keeping TCO incredibly low. Its grid architecture delivers virtual storage that optimizes performance in virtualized environments and integrates seamlessly with cloud technologies to give you the agility you need to handle growth.

Now, a great storage system gets even better with a third-generation model designed for the most demanding performance needs. IBM XIV Gen3 harnesses the same proven XIV architecture and features state-of-the-art hardware to boost throughput by up to a factor of four, dramatically increasing performance.

IBM XIV Storage System is offered in two models, both based on the same proven XIV architecture and all-inclusive pricing approach:

- IBM XIV features powerful storage for most application needs, with excellent price-to-performance advantages. This model offers customer-acclaimed value in handling a mix of diverse workloads at low TCO.

#### MORE ON THE WEB

##### Public

- [XIV details on IBM.com](#)
- [XIV Redbooks](#)
- [XIV configuration and functionality table](#)

##### Business Partners

- [XIV details on PartnerWorld](#)
- [XIV sales kit on PartnerWorld](#)
- [XIV competitive info on COMP](#)



- IBM XIV Gen3 features state-of-the-art hardware that can do more, faster. Rely on it for your ultra-demanding performance objectives, including business intelligence, archiving, large email setups, data warehousing, and OLTP workloads, as well as ever-changing virtualized and cloud environments.

The XIV Storage System has met with rapid market success with more than 4,000 installations in diverse industries worldwide, including financial services, healthcare, energy, education, and manufacturing. IBM XIV integrates easily with virtualization, email, database, analytics, and data protection solutions from Microsoft, IBM, SAP, Oracle, SAS, VMware, Hyper-V, and Symantec. It is offered in two models: the standard model, for meeting most application needs with excellent price-to-performance benefits, and XIV Gen3, for ultra-high performance.

The XIV Gen3 model exemplifies the XIV series' evolutionary capability: each hardware component has been upgraded with the latest technologies, while the core of the architecture remains intact. The XIV Gen3 model gives applications a tremendous performance boost, helping customers meet increasing demands with fewer servers and networks.

Here are some quick XIV Storage System highlights:

- Self-tunes and delivers consistently high performance with automated balanced data placement across all key system resources, eliminating hot spots
- Provides unprecedented data protection and availability through active-active N+1 redundancy of system components and rapid self-healing (< 60 minutes for 2 TB drives)



- Enables unmatched ease of management through automated tasks and an intuitive user interface
- Promotes low total cost of ownership enabled by high-density disks and optimal utilization
- Provides seamless and easy to use integrated application solutions with the leading host platforms and business applications.

IV Gen3 brings ultra-performance capabilities to the XIV series by providing:

- Up to four times the throughput, cutting time and boosting performance for business intelligence, archiving, and other extremely demanding applications
- Up to three times speedier response time, enabling faster transaction processing and greater scalability with OLTP, databases, and email applications
- Power to serve even more applications from a single system with a prodigious hardware upgrade that includes InfiniBand inter-module connect, larger cache, faster disk controllers, increased processing power, and more FC and iSCSI connectivity
- Option for future upgradability to SSD caching for breakthrough SSD performance levels at a fraction of typical SSD storage costs, with very high density drives for even lower TCO.



## IBM PowerHA

High availability, business continuity, disaster recovery. IBM is committed to investing in—and bringing to market—solutions designed to keep your IT environments resilient. IBM engineers work continuously to optimize IBM Power Systems hardware and operating systems to keep pace with the increasing demand for 24x365 availability. IBM PowerHA helps businesses achieve this goal ([Figure A.3](#)).

**Standard Edition** is based upon Cluster Aware AIX. It features a new Director-based management interface, a new set of Smart Assists (including one for SAP), and a number of other enhancements that will make the solution more robust and self-managing. IBM intends to enhance PowerHA SystemMirror Enterprise Edition to exploit AIX cluster-aware technologies for multi-site deployments. The PowerHA SystemMirror 6.1 Enterprise Edition has been enhanced to include support for the IBM DS8000 Global Mirror function as well as Hitachi Truecopy.

**Enterprise Edition** is essential for clients who must protect themselves from site-wide failures or large-scale disasters. Business-critical data is replicated across multiple sites and the Enterprise Edition enables automated failover to these remote locations. This applies to businesses of any size with multiple sites, regional operations, or wherever decentralization of data is desired. The Enterprise Edition offers multiple technologies for achieving long distance data mirroring, failover, and resynchronization.

### Public

- [PowerHA info on IBM.com](#)
- [PowerHA Redbooks](#)
- [White paper: High Availability Cluster Multiprocessing](#)
- [PowerHA wiki](#)

### Business Partners

- [PowerHA resources on PartnerWorld](#)
- [PowerHA competitive info on COMP](#)

**Figure A.3.** IBM PowerHA editions (and links to more detail).

## About the Editor

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Jim Hoskins is the founder of Maximum Press, a premier publisher of books, ebooks, and rich media that help businesses apply technology profitably. Jim has been involved with computer technology design, implementation, and education for over 30 years. He is the author of many articles and books covering a wide range of technology and Internet business topics. Jim spent a decade with IBM designing computer systems and directly helping businesses of all sizes design and implement real-world solutions. He is the author/editor of the popular *Exploring IBM* series, which has sold over 350,000 copies in 12 languages. Jim has a degree in electrical engineering from the University of Florida and resides in Gulf Breeze, Florida, with his wife and five children. You can reach Jim via email at [jimh@maxpress.com](mailto:jimh@maxpress.com).