

IBM Midmarket Software Buying and Selling Guide

A guide to software that is designed, developed, and priced specifically for small and midsize businesses

One place for vital information about IBM Midmarket software

Learn about software that helps your business be more efficient, productive, and profitable





International Technical Support Organization

IBM Midmarket Software Buying and Selling Guide

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Note: Before using this information and the product it supports, read the information in “Notices” on page ix.

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Preface

The *IBM® Midmarket Software Buying and Selling Guide* is tailored specifically to help the management and IT staff of small and midsize businesses evaluate how the IBM midmarket portfolio can provide simple and cost-effective solutions to common business problems.

In addition to this midmarket customer focus, we also designed this IBM Redpaper™ publication to help IBM teams and Business Partners improve their effectiveness in serving small and midsize businesses. We illustrate how IBM software for the midmarket can help businesses use the web to reduce expenses, improve customer service, and expand into new markets. We cover the IBM software offering for the midmarket, which includes what the software does, the platforms it runs on, where to find more information, and how it can help your business become more profitable:

- ▶ IBM Business Partners often keep a printed copy of this guide in their briefcases for software references
- ▶ Customers can view this guide online and look up software-value messages and IBM product family offering comparisons
- ▶ IBM Sales Representatives can print parts of this guide as “leave-behinds” for customers, to give them extra collateral on midmarket software of interest

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The *IBM Midmarket Software Buying and Selling Guide* is funded and supported by the IBM Software Group SMB Marketing Organization.

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Summary of changes

This section describes the technical changes made in this edition of the paper. This edition might also include minor corrections and editorial changes that are not identified.

This edition represents an update of *IBM Software Express Buying and Selling Guide*, REDP-3975, which we originally published in 2005 with the name *IBM Software Express Buying and Selling Guide*, which we last updated in October 2009.

Summary of Changes
for *IBM Midmarket Software Buying and Selling Guide*
as created or updated on July 12, 2010

July 2010, Tenth Edition

This edition reflects the addition, deletion, or modification of information, as listed:

New information

- ▶ IBM WebSphere® Business Modeler
- ▶ IBM Lotus® Symphony™
- ▶ IBM Domino® Designer
- ▶ IBM Lotus Foundation Reach
- ▶ IBM Tivoli® Storage Manager FastBack for Workstations
- ▶ IBM Rational® Change Management Express®
- ▶ IBM Rational Developer for Power
- ▶ IBM Rational Team Concert™ for Power

Updated information

- ▶ IBM WebSphere Application Server - Express
- ▶ IBM WebSphere MQ
- ▶ IBM WebSphere Commerce - Express
- ▶ IBM WebSphere sMash
- ▶ IBM Lotus Foundations™ Start
- ▶ IBM LotusLive™ Engage
- ▶ IBM Lotus Domino Express
- ▶ IBM Tivoli Storage Manager FastBack

Removed information

- ▶ IBM Software Assembly Toolkit
- ▶ IBM Solution Builder Express

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Introduction to this guide

Welcome to the *IBM Midmarket Software Buying and Selling Guide*. This guide is a friendly staple for customers, Business Partners, and IBM Sales Representatives who are involved in the small and medium business market. This guide covers IBM Express Software and other software product offerings built to satisfy the needs of the midmarket customer.

In this guide, we describe the business value and capabilities of each of these software product built for the midmarket. Also we cover the appropriate operating environments, and where to find additional product information. Whenever possible we provide examples of using the products to solve business problems and give you helpful information, such as product family comparisons.

We update this popular midmarket software guide each year. You can find the most recent version of this guide at:

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1.1 Facing business challenges

Businesses understand that among their key assets are the business applications and data used to operate their business. Many questions and concerns within a business evolve around how to improve their business using their IT environment more effectively, for example:

- ▶ How can I use IT technology to make my business as profitable, efficient, and competitive?
- ▶ Are the communications inside the business and with others outside the business efficient and effective?
- ▶ Are the IT assets protected from malicious threats?
- ▶ How can we cut energy costs and become energy and resource efficient? Can the right software help in this effort?
- ▶ Do we need integrate and align our mix of servers, clients, and operating systems to improve performance and to cut expenses?
- ▶ Do we effectively use the Web's global reach and always-open-for-business capabilities to our advantage?
- ▶ Does our IT environment help manage our information and business processes effectively? Do we make the most effective use of our information about our customers and partners?
- ▶ Do we have the flexibility in our IT environment to quickly adapt to a changing market and to stay ahead of our competition?
- ▶ Do we use our IT staff as effectively as we could? Are they continually tied up with maintenance issues instead of focusing on new development?

The IBM midmarket software offerings discussed in this guide can help your business to overcome these and many other business challenges. The software discussed in this guide helps your business:

- ▶ Improve business processes to gain flexibility and improve operations, so that you make changes quickly without breaking your budget.
- ▶ Implement easy-to-use, highly-secure IT management to protect valuable data and to help increase availability using quick and affordable solutions.
- ▶ Raise employee productivity and improve your business' responsiveness by facilitating cross-company collaboration and stimulating innovation, which is a source of sustainable competitive advantage.
- ▶ Ensure that the IT solutions that you purchase grow and evolve with your business as business demands and changes occur.

1.2 A look at cloud computing

If you are seeking more dynamic, resilient, and cost-effective IT systems to run your business, seriously look at cloud computing. In fact, IBM and many IBM clients around the world are adopting cloud computing as the way to deliver more responsive, effective, and efficient IT services.

This section quickly describes the what, when, and how of cloud computing, while at the same time focusing on the why (business value) of the technology.

1.2.1 What is cloud computing?

The IBM definition of cloud computing states that *cloud computing is a new consumption and delivery model inspired by consumer Internet services*. Cloud computing is both a user experience and a business model. It is a new style of computing in which applications, data, and IT resources are provided to users as services delivered over the network. It enables self-service, economies of scale, and flexible sourcing options. In addition, cloud computing is an infrastructure management methodology, a way of managing large numbers of highly virtualized resources residing in multiple locations, so that they resemble a single large resource that can be used to deliver services.

To better understand this new architecture, consider these ways cloud computing can affect your IT service delivery:

- ▶ Your user's experience and your IT business model improves because the applications, data, and IT resources are provided as services, on demand.
- ▶ Your IT infrastructure is enhanced because cloud computing provides resources using virtualized computing resources.
- ▶ Your IT complexity and expenses are reduced because you are obtaining computing services through the network instead of from locally managed software and systems.
- ▶ Your ability to rapidly respond to a changing business environment quickens because you can use the cloud computing capabilities of availability and expandability, thus enabling you to grow your IT services by contracting for these services as needed.

What are public and private clouds?

The popularity of cloud computing and its potential to transform service delivery has led a growing number of organizations that implement cloud computing for one or more workloads, while many others are actively considering it.

Clouds are defined according to three types: public cloud, private cloud, and hybrid cloud.

- ▶ **Public cloud (also known as external cloud)**
A public cloud is owned and managed by a service provider, who delivers an agreed upon set of application, software, or infrastructure services on a *pay per use* basis. This cloud resides outside your firewall. Public clouds are popular for infrastructure workloads enabling you to deal with peak demand or an increased need for processing abilities.
- ▶ **Private cloud (also known as internal cloud)**
A private cloud is owned and managed by your business. Access to the cloud is limited to whomever you give access. This cloud resides inside your firewall. Private clouds are currently being used for database and application-oriented workloads, where you are responsible for and want to ensure the security of your business assets.
- ▶ **Hybrid cloud**
The external and internal service delivery methods are integrated. Rules and policies are established by the organization based on factors such as security needs, criticality and underlying architecture, so that activities and tasks are allocated to external, or internal clouds as appropriate.

Because workloads vary according to platform requirements, complexity, business criticality, and data sensitivity, some are ideal for a public cloud, while others are more suitable for deployment in a private cloud. For this reason, a workload-based approach to cloud computing is essential in determining which delivery model is best for that workload (either public, private, or hybrid cloud) and in understanding which workloads can realize the greatest benefits in a cloud environment.

How might you use a cloud?

As the final element in gaining a basic understanding of cloud computing, the cloud service models show how you want to use the cloud or what services you want the cloud to provide:

- Software as a Service (SaaS)

SaaS delivers the business applications and services with ease of deployment, flexibility, scalability, and predictable pricing models. Software services include services such as collaboration services (for example, email, web conferencing, and instant messaging) and application and data security, incident management, and alert services. Business applications include Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), and industry specific solutions.

- Platform as a Service (PaaS)

PaaS delivers the underlying software such as application servers, database management systems, web 2.0 application runtime environments, development tools, test environments, and Java™ runtime environments.

- Infrastructure as a Service (IaaS)

IaaS delivers the infrastructure and hardware such as servers, networks, and storage.

Businesses can design and build their own cloud computing environment, putting in place the infrastructure and software needed to operate and manage a private cloud. Or, they might decide to manage certain layers of the cloud, such as the application layer, and choose to use a public cloud or a private cloud for the infrastructure and platform layers.

1.2.2 Why should you consider cloud computing?

Organizations around the globe are drawn to cloud computing for its ability to speed service delivery and increase service and infrastructure availability while creating an elasticity that allows services to be expanded, or contracted, as demand changes. And because organizations can leverage economies of scale through a cloud environment, they can also reap a higher ROI via greater staff efficiency and optimization of IT resources. With all these benefits in place, cloud computing can also help improve the perception of IT as being both flexible and responsive.

Various leading midsized businesses are looking at cloud computing for the following reasons:

- To reduce IT costs and operating expenses:

- Pay for only those resources you use by taking advantage of the various cloud service models available.
- Reduce infrastructure costs, providing critical savings especially if you have excess IT capacity that is only used at peak times.
- Realize potential software licensing saving by using software provided in the cloud.
- Lower IT support costs by having the cloud service provider perform IT support activities.
- Free up IT floor space for other uses because the physical hardware and operating environment are provided by the cloud.
- Reduce energy costs because you do not have the physical hardware on your premises with power and cooling needs.

- ▶ To speed return on investment (ROI) and respond to change faster:
 - Scale IT resources to meet peak demand needs without the longer term burden of under utilized IT hardware and software resources.
 - Take advantage of the latest functionality:
 - Access to the latest functionality can foster new types of collaborations between your employees, customers, and business partners, and increase the your team's ability to innovate.
 - Reduce up front licensing, skill building, and deployment effort required to bring new functionality into your business.
 - Speed new application development by using a “test” cloud with the necessary hardware and software resources.
 - Retain and analyze the ever increasing information and data available by using analytics to better understand and serve your customers and business partners.
- ▶ To improve system reliability and availability by having specialists available to manage and maintain your IT environment 24X7.

In summary, an IBM insight states: One of cloud computing's core benefits is reduction of IT costs. In IBM Research, the Cloud Labs research team has shown that cloud architecture can increase the IT server or other component utilization up to 75% and reduce IT labor costs by 50% or more.¹

1.2.3 Additional information

In addition to numerous customer engagements, IBM has put cloud computing into practice in its own data centers around the world, and is able to draw on best practices to share in customer implementations.

To learn more about cloud computing at IBM, go to:

<http://www.ibm.com/ibm/cloud/>

1.3 A practical solution to mid-sized businesses needs

IBM, with its long history of helping customers to overcome IT issues, can help solve your tough business problems. IBM originally created the IBM Express Advantage® portfolio especially for the needs of small and mid-sized businesses. Express Advantage evolved from the commitment of IBM to provide world-class value to small and mid-sized businesses worldwide. This initiative offers solutions, support, and expertise that IBM designed specifically to meet the unique requirements of small and mid-sized businesses.

Express Advantage is a comprehensive line of hardware, software, services, and financing solutions that are designed, developed, and priced specifically to address the business challenges of midmarket business. These products offer ease of install, ease of use, flexibility, and functionality in an integrated package, at a competitive price.

¹ Business Strategy for Cloud Providers The case for Potential Cloud Service Providers, IBM Global Business Services® September, 2009
<ftp://ftp.software.ibm.com/common/ssi/sa/wh/n/gbw03096usen/GBW03096USEN.PDF>

These offerings meet the needs of midmarket customers. In addition, every one of these offerings is packed with features and options that help to assure usability and make it simple and economical to scale up or down as business needs dictate. Equally important, the products in the Express Advantage portfolio are easy to acquire, install, deploy, and purchase. Express Advantage provides financing options to help your business acquire these products.

IBM Express Advantage focuses on these core components:

- ▶ A comprehensive offerings portfolio:
Products, solutions, and services that have been rigorously tested and that meet a specific set of criteria to ensure that they are easy to acquire and to deploy and that are competitively priced.
- ▶ A network of IBM-certified Business Partners:
These Business Partners know your industry and understand your marketplace. This specialized expertise combines seamlessly with innovative technology from IBM to offer solutions that work for your business and your budget.
- ▶ A Concierge service:
This service makes it easier than ever to do business with IBM. One number gets you direct, guided access to the vast network of people, Business Partners, products, and services available from IBM. Simply call 1-877-IBM-ACCESS (1-877-426-2223).

To explore the entire range of Express Advantage solutions by industry and business need, or to visit with your Express Advantage Concierge, go to:

<http://www.ibm.com/businesscenter/smb/us/en/index>

For hardware, software, and IT services, most likely your company works with a local or regional vendor. Most of the products in the Express Advantage offerings are available through an extensive network of IBM Business Partners, which includes independent software vendors (ISVs), resellers, systems integrators, and consultants who have assumed a key role in helping IBM clients select and deploy products in the Express Advantage portfolio.

The IBM midmarket software offerings, a crucial element of Express Advantage, provide solutions that help connect your software components and support distributed applications that are designed and priced for small and midsized businesses. The IBM midmarket software offerings consist of products that provide core capabilities that growing businesses need. IBM midmarket software solutions also help to foster innovation by facilitating collaboration and solutions to create or expand your web presence. Included are solutions for information management, collaboration, team work, and security management, which can help build an environment that encourages and supports your business.

As illustrated in Figure 1-1, the IBM midmarket software products address the challenges and requirements of midmarket businesses, which enables them to focus on the bottom line instead of the IT infrastructure.

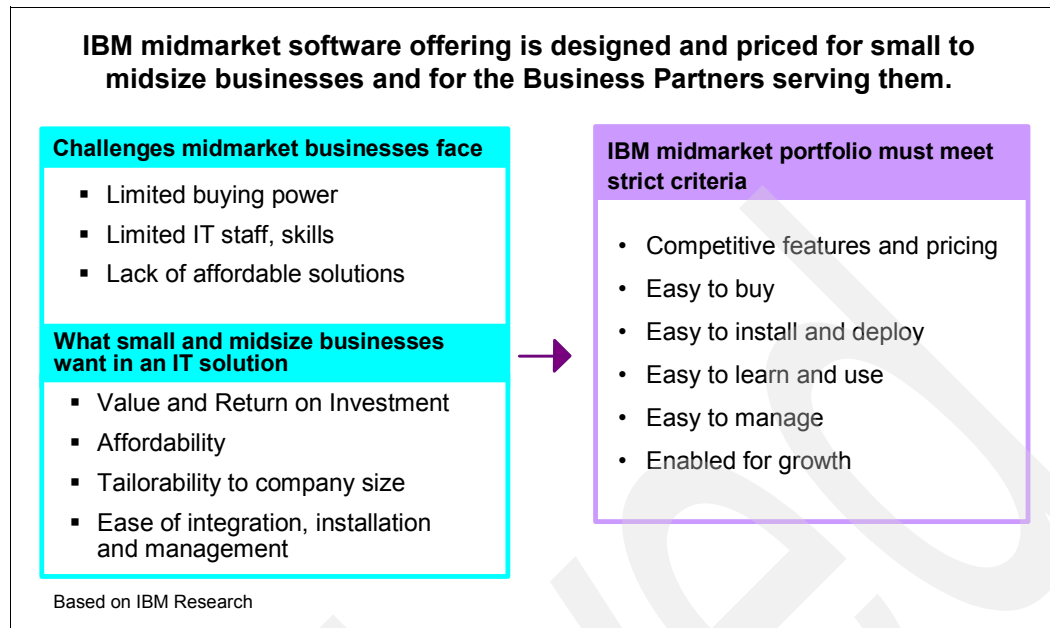


Figure 1-1 IBM midmarket software offering

1.4 IBM midmarket software: for businesses of all sizes

The IBM midmarket software portfolio offers products for businesses across multiple industries and can help you achieve the following goals:

- ▶ Improve business processes, which can create flexible and streamlined operations within your budget.
- ▶ Provide reliable, scalable, secure IT environment, using solutions in security, systems management, and data backup and recovery.
- ▶ Increase productivity, collaboration, responsiveness and innovation, enabling people and teams to be more productive and responsive to customers.
- ▶ Take advantage of information for business innovation, which makes it possible to distribute information in real time across the business, so that your team can make well-informed decisions.

The IBM midmarket software portfolio provides a vast array of products that are designed for businesses of all sizes and especially for small and midsize businesses. Easy to acquire, install, and manage, these products were developed from the ground up to deliver a rapid return on investment.

With IBM midmarket software, businesses can enjoy the benefits of a flexible, cost-effective, highly responsive, and secure IT environment that enables them to concentrate more on their core business and less on the technology environment. In addition, because cash flow is always a concern, IBM made the portfolio of products highly affordable, with a number of attractive financing options that are available from IBM Global Financing.

The IBM midmarket software portfolio consists of the IBM Express Middleware™ offerings and other key IBM products. You can find information about these products at the IBM Small and Medium Business Center website for your country. In the U.S., go to:

<http://www.ibm.com/businesscenter/smb/us/en/>

1.5 Looking forward to a smarter planet

Individuals, communities, institutions, and businesses are looking for ways to overcome the current economic uncertainty, global trends, and environmental concerns. Technology and technical solutions are envisioned as a means to surmount many of these disruptive forces. Dealing with these troubling forces is creating an opportunity to think and act in new ways economically, socially, and technically.

Three key trends (based on technology) are enabling meaningful change that is already underway:

- ▶ Our world is becoming *instrumented* and *interconnected*.
- ▶ Virtually all things, processes, and ways of working are becoming *intelligent*.

1.5.1 Becoming instrumented

Our world is becoming instrumented; in fact, transistors (the basic building block of the digital age) are used everywhere. The ever increasing number of transistors is laying the groundwork for an instrumented world, for example, today's vehicles are loaded with tiny devices that monitor car components, informing you of potential problems before the car breaks down.

Also consider the potential of 30 billion radio-frequency identifications (RFIDs) produced globally within two years. An RFID is an object that emits radio waves and is attached to an item (product, human, or animal) to identify and track that item. Various types of sensors read the data from RFIDs. These sensors are being embedded across entire ecosystems, into supply chains, healthcare networks, cities, and even natural systems, such as rivers. Such sensors can provide information that is vital to making informed decisions about our world, for example, RFID solutions help retail, consumer product, distribution, and transportation companies track the location of finished goods across the supply chain and within stores, which makes it easier to manage inventory and determine order quantities with suppliers.

Table 1-1 shows some examples of how businesses can take advantage of an instrumented world in many ways.

Table 1-1 Examples of taking advantage of an instrumented world

Becoming instrumented	Business benefits
Event capture and filtering for timely response	Being able to immediately sense events enables event-aware processes to respond to those events and react in ways to optimize those processes and business outcomes.
Sensor solutions deliver new insights for action	By receiving and processing information from sensors that are located at the edge of the network, a business can obtain new insights and make decisions that improve business agility.
Systems automatically adjust to your business	Using adaptable systems that bend to your business enables your business to adjust to this dynamic changing business environment.

1.5.2 Becoming interconnected

An interconnected world is currently being made possible by Internet technologies and technologies, such as email, instant messaging, wireless connectivity, virtual workspaces, and videoconferencing. These technologies dramatically shorten distances between people and free up the flow of intellectual capital, which improves your employees' collaborative efforts with customers, suppliers, and each other. Soon two billion people will be connected through the Internet to other people, communities, institutions, and businesses. In an instrumented world, systems, applications, and even objects can communicate with one another. Intelligent things, including cars, appliances, cameras, roadways, pipelines, and even pharmaceuticals, are becoming connected and providing important information. Imagine having your car notify you that there is an accident on the road ahead, and then provide a new route around the incident, ensuring that you make your appointment on time.

Table 1-2 contains examples of how businesses are part of the interconnected world.

Table 1-2 Examples of being part of an interconnected world

Becoming interconnected	Business benefits
Any-to-any linkage of people, processes, and systems	By linking people, business processes, and systems together, a business can accomplish their goals more quickly.
Social media and the Internet used to collaborate	Leveraging social media and the Internet technology enables customers, employees, and partners to collaborate on work within, across, and outside the enterprise.
Immediate access to business resources from various devices and locations	Using business applications and IT services from anywhere inside and outside the business enables your employees and partners to carry on business from anywhere.

1.5.3 Becoming intelligent

It seems that everything is becoming intelligent. New computing models can handle the data that is generated from multiple sources, ranging from end-user devices to sensors and actuators that connect these devices with back end systems. Combined with advanced analytics, powerful computers can turn mountains of data into intelligence that can be translated into action, which makes our systems, processes, and infrastructures more efficient, more productive, and more responsive.

Table 1-3 shows examples of how businesses can be part of the intelligent world.

Table 1-3 Example ways of being part of an intelligent world

Becoming intelligent	Business benefits
Deep discovery (and search) enabling collaboration with customers and partners	Fostering deep collaboration and enabling discovery instead of using search provides a way for businesses to engage the next generation of clients and partners.
Work automated for and changed by line of business (LOB) leaders	Letting work be automated and changed by LOB leaders enables them to react to changing business conditions as needed without waiting for limited and in demand IT resources to make the necessary changes to applications.
Best practices established to align IT to business needs	Leveraging best practices, streamlined business processes, and contemporary business models (including business architecture and industry models) to improve business results and comply with standards and regulations.

1.6 IBM midmarket software for a smarter planet

IBM midmarket software portfolio is all about helping customers build, deploy, and manage applications that integrate their processes and information specific to meet their business and industry requirements. The midmarket portfolio enables you to start with small improvements and know that your investment will adapt as business needs change.

In this section we discuss the six major solution areas, presenting opportunities for business growth, for greater efficiency, and for a smarter and more profitable business. These areas range from making better use of your information through data management and analytics to creating processes around a flexible infrastructure so you can react more quickly to changing market conditions, to improving efficiency, complying with regulations, and securing the business and its customers' information.

1.6.1 Major solution areas

The midmarket portfolio delivers value in these major solution areas:

- ▶ **Security and resiliency:** Solutions that help manage risk and find opportunities to innovate.
- ▶ **Next generation infrastructure:** Solutions that help business and IT fully align and support integrated service management (a workload optimized approach) and a choice of delivery options to help you deliver superior service with agility and speed.
- ▶ **Product and service innovation:** Solutions that help make the most of your current resources while planning for future growth. These solutions help in developing and deploying new products and services.
- ▶ **Sustainability:** Solutions to help clients manage and use energy and resources in a more cost-effective, efficient, and environmentally-sustainable way.
- ▶ **People and process productivity:** Solutions that help redefine the way people work to optimize business performance. These solutions enable people to communicate, collaborate, and share relevant information with other individuals and groups, which allows them to work together more efficiently and effectively.
- ▶ **Information and analytics:** Solutions that help you leverage information for smarter business outcomes. These end-to-end capabilities help you manage your data and content, pull together trusted information that cuts across diverse silos, and gain valuable insights into your data to optimize your business.

Figure 1-2 shows the midmarket portfolio aligned to these major solution areas.

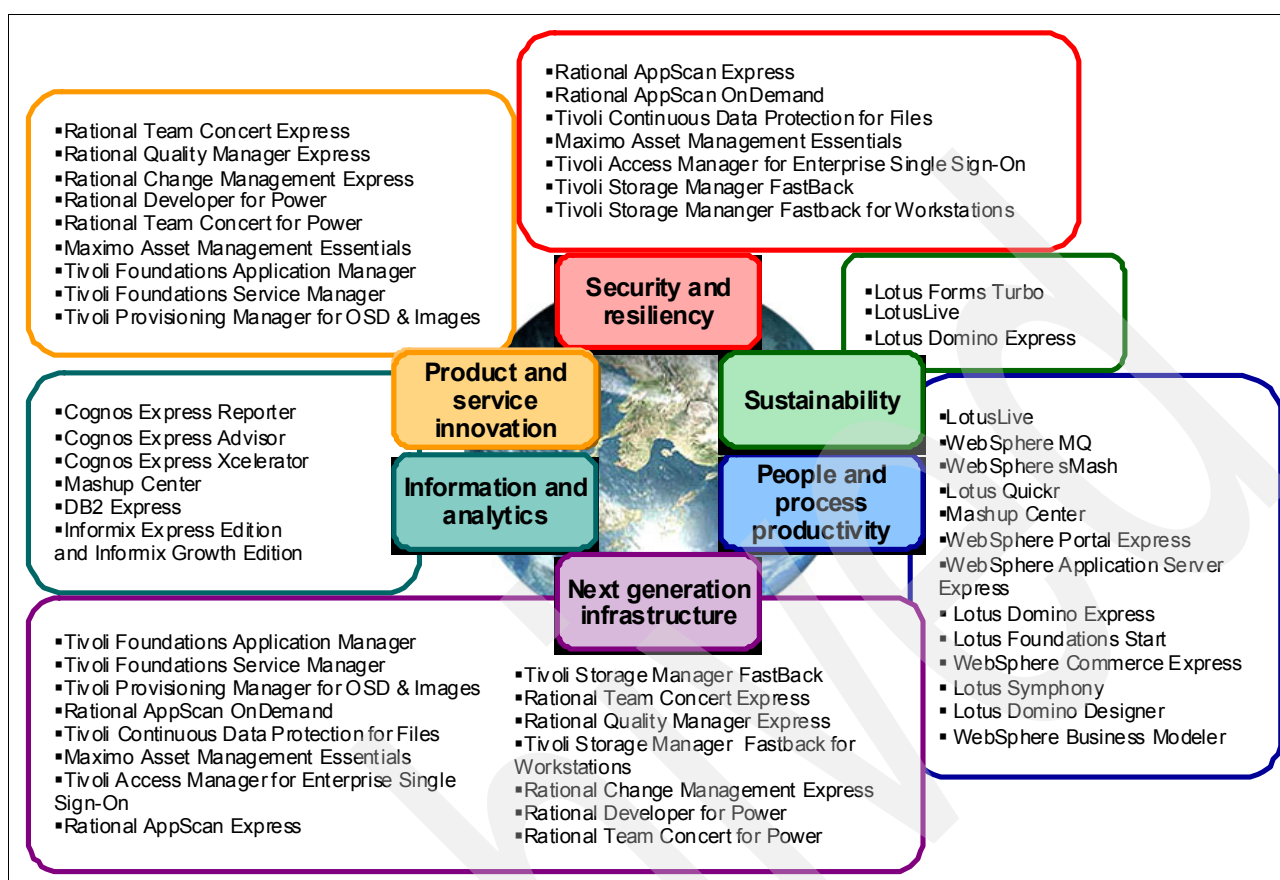


Figure 1-2 Midmarket software

The products in the midmarket portfolio support industry and open standards, enabling them to work with what you already have, both existing hardware and software investments. Using these products, you can make your information flow quickly, securely, and reliably, which helps to improve business processes and reduce costs.

1.6.2 A closer look at sustainability

With rising energy costs and the documented threat of global warming, governments and businesses are focusing on the need to improve energy efficiency and conserve resources. It is increasingly imperative that businesses embrace sustainability because increasing energy and basic materials costs are affecting their ability to contain expenses and to grow.

IBM interviewed more than 1100 IT executives (at companies that employ between 50 and 500 people) on the topic of IT energy efficiency. The interviews revealed the following top findings:

- ▶ Most small and midsize businesses say that energy is their largest cost increase over the past two years.
- ▶ More than one in three businesses believe that IT accounts for 10% to 50% of their total energy costs.
- ▶ Over 65% of businesses in most industries say that energy efficiency is key criteria when considering new IT investments.

To read the complete report on IT energy efficiency for small and mid-size businesses, go to:

<http://www.ibm.com/businesscenter/smb/us/en/energyefficiency>

IBM energy efficient solutions can help you to realize immediate, tangible return on investments through implementation of more efficient IT practices. By increasing energy efficiency within your IT environment, you can lower energy expenses, optimize existing server capabilities, and free up money in the budget for other business critical items. For more details about how IBM Express Advantage helps create a green IT, go to:

<http://www.ibm.com/businesscenter/smb/us/en/solutionsummary/xmlid/115001?ca=smbindgreenit&tactic=&me=W&met=inli&re=smbindcrossitoptpromo2>

This story does not stop with the purchase of more energy-efficient platforms and personal computers. Taking advantage of software enables people to continue doing business while taking action on green issues, such as:

- ▶ Increasing resource conservation
- ▶ Minimizing greenhouse gas emissions
- ▶ Reducing overall waste
- ▶ Conserving energy
- ▶ Reducing environmentally negative materials

IBM midmarket software products provide capabilities that can help small and midsized businesses tackle green issues. Table 1-4 shows examples of IBM midmarket software products that can help your business reduce costs while helping the environment.

Table 1-4 IBM midmarket software helping with approaches to sustainability

Example sustainability objectives	Software products helping with the objectives
<p>Reduce or eliminate use of paper, which:</p> <ul style="list-style-type: none"> ▶ Conserves trees ▶ Reduces use of resources (for example, energy and water) to produce paper ▶ Reduces impacts of printing and distributing documents and forms <p>Reduce waste (paper, toner, toner cartridges, old printers)</p>	<ul style="list-style-type: none"> ▶ Lotus Forms Express replaces paper forms with electronic forms, which consumes less paper and need for file cabinets. ▶ Lotus Quickr™ centralizes document access electronically, which reduces paper consumption and reduces the need for space-hogging file cabinets. ▶ WebSphere Portal - Express gives employees, customers, and partners access to websites that contain information and documents. ▶ Lotus Domino Express 8 sends and receives electronic mail, arranges appointments and meetings, and shares documents online. Use instant messaging to reduce possible email overload and obtain needed information quickly
<p>Reduce travel, which:</p> <ul style="list-style-type: none"> ▶ Reduces green house gas emissions ▶ Reduces vehicle maintenance impacts on the environment ▶ Reduces the demand for oil 	<ul style="list-style-type: none"> ▶ LotusLive and Lotus Domino Express offerings provide such capabilities as; web conferencing that enables teams to share presentations, information, and educational material without traveling. Increases the number of participants because of reduced expenses and availability. Discussion forums, blogs, and document databases are additional ways to share information electronically. ▶ WebSphere Commerce - Express enables clients to obtain information about products and to make purchases without leaving their premises

Example sustainability objectives	Software products helping with the objectives
Reduce environmentally negative materials by: <ul style="list-style-type: none"> ▶ Reducing the use of CDs and other media for file backup ▶ Reducing CDs and other media as a form of waste 	<ul style="list-style-type: none"> ▶ Tivoli Continuous Data Protection for Files and Tivoli Storage Manager FastBack for Workstations are alternatives to traditional approaches to backing up data at the endpoints, and focus on exploiting affordable technology as the backup repository
Reduces energy consumption: <ul style="list-style-type: none"> ▶ Reduces hardware 	<ul style="list-style-type: none"> ▶ Lotus Domino Express uses fewer servers and less disk space while serving more users and handling more data

For the latest solutions and writings on building a more sustainable future with IBM, go to:

<http://www.ibm.com/software/solutions/green/index.html>

1.7 Customer examples

In this section, we provide examples of businesses of all sizes that have reaped the benefits of products in the IBM midmarket software portfolio.

1.7.1 Typical businesses

Here we describe three businesses illustrating benefits of the IBM midmarket products.

OTP Bank

OTP Bank is the biggest bank in Hungary and a member of the OTP Bank Group, which is one of the leading financial groups in central and eastern Europe. The group operates in Hungary, Bulgaria, Croatia, Montenegro, Romania, Russia, Serbia, Slovakia, and Ukraine. Here are the details of how the IBM Midmarket offerings benefitted this company:

- ▶ **Challenge:** OTP Bank Group began to acquire financial institutions in central and eastern Europe, striving to become the leading financial provider in these regions. However, the bank's existing email system could not scale to accommodate the rapid growth, and it lacked the necessary messaging and collaboration capabilities.
- ▶ **IBM midmarket products:** Lotus Domino Messaging Express and IBM Lotus Domino Collaboration Express
- ▶ **Results:** Based on the collaboration capabilities and reliability that IBM Lotus Domino applications offered, OTP Bank Romania implemented IBM Lotus Domino Messaging Express and IBM Lotus Domino Collaboration Express software. All 500 of the client's standard users leverage the messaging functionality of the Lotus Domino Messaging Express application, and the bank's 200 executive-level leveraged the collaboration capabilities of the Lotus Domino Collaboration Express software.

To learn more about this solution and other solutions, go to:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

Manatee County

Located in the heart of Florida's west coast, the Manatee County Sheriff's Office provides law enforcement and corrections services for the county's many agricultural, commercial, industrial, and residential constituents. It prides itself on its state-of-the-art technology and highly trained staff.

Here are the details of how IBM Midmarket offerings benefitted this company:

- ▶ **Challenge:** As the county continues to grow in population, the workload of the sheriff's office grows right along with it. The sheriff's office staff was challenged to answer almost 2,500 weekly phone calls from the community regarding various public safety issues and arrest inquiries.
- ▶ **IBM midmarket products:** IBM WebSphere Portal Express
- ▶ **Results:** The sheriff's office deployed an information portal built with IBM WebSphere Portal Express V6 software, which includes IBM Lotus Web Content Management software. Staff can now use the portal to create and manage content for the sheriff's office website, even though they have no special IT or web training.

To learn more about this solution, go to:

http://www.ibm.com/software/success/cssdb.nsf/CS/LWRT-7JHKAS?OpenDocument&Site=software&cty=en_us

Terason

Terason, a division of Teratech Corporation, delivers portable ultra sound equipment that set new standards for image quality, ease of use, size, and cost. Its systems are used routinely in the fields of vascular surgery, interventional radiology, endocrinology, and nephrology. Here are the details of how IBM Midmarket offerings benefitted this company:

- ▶ **Challenge:** Ensure that critical business documents on employee laptops and desktops are backed up and easily accessible in case of accidental deletion, virus, or system failure.
- ▶ **IBM midmarket products:** Tivoli Continuous Data Protection for Files
- ▶ **Results:** In response, Broadleaf Services implemented IBM Tivoli Continuous Data Protection for Files software as part of a comprehensive data protection initiative at Terason. In just five minutes per workstation, the software was installed and in production. In total, the solution oversees about 350 gigabytes of business data and supports 60 employee workstations.

To learn more about this solution and other solutions, go to this document at:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

1.7.2 IBM midmarket case studies

The IBM midmarket case study compilation is now called: *Winning in Midmarket: 100 Software Success Stories*. This document is a compilation of client and IBM Business Partner case studies that demonstrate how midsized businesses around the world use the IBM midmarket portfolio of software solutions to improve their productivity, business processes, and ROI. These solutions are designed and priced to fit the needs and budgets of midsized businesses.

To view the document, go to:

<http://www.ibm.com/software/smb/express.html>

(Scroll down the web page, and look for IBM Software Case Studies.)

To view the document as a PDF file, go to:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

IBM WebSphere

WebSphere provides solutions for optimizing business processes and connecting people, systems, and applications with internal and external resources. WebSphere delivers a proven, secure, and reliable software portfolio that can provide an excellent return on investment (ROI).

WebSphere software enables clients to work smarter and increase their business agility. With greater business agility, they can:

- ▶ Discover insights that enable innovation with enhanced awareness across processes and ecosystems
- ▶ Maximize the value of business interactions by accessing rich information and applications in the right context
- ▶ Optimize productivity and resources by continuously improving and governing business processes

With IBM WebSphere software for the midmarket, you can integrate and link applications, processes, and people quickly, flexibly, and responsively. The WebSphere products for the midmarket that we discuss in this chapter are in the following categories:

- ▶ Application integration
Products that ensure fast and reliable access to business information
- ▶ Application servers
Products that provide a platform for interoperable applications
- ▶ Business process management
Offerings to discover, document, automate, and continuously improve business processes to increase efficiency and reduce costs
- ▶ Commerce
Products that provide basic marketing, sales, and order processing functionality in a customizable, integrated package

In this chapter, we discuss these WebSphere products for small and midsized businesses:

- ▶ WebSphere Application Server - Express
- ▶ WebSphere Business Modeler Basic (and BPM BlueWorks a no-cost Web-based offering)
- ▶ WebSphere Commerce - Express
- ▶ WebSphere MQ
- ▶ WebSphere sMash

2.1 WebSphere Application Server - Express

In this section, we discuss IBM WebSphere Application Server - Express Version 7.

2.1.1 Executive summary

Consider whether you are dealing with any of these questions:

- ▶ How do we improve application performance, making it more predictable, minimizing the impact to customer satisfaction and employee effectiveness?
- ▶ How do we improve or enhance our interactions with customers, business partners, and suppliers?
- ▶ Our applications handle data that is extremely sensitive, how do we ensure that the information is handled in a secure manner?
- ▶ How do we reduce the cost of administration and make maintaining our application infrastructure less difficult?

If any of these questions apply to your business, definitely consider an application server.

What is an applications server? An application server provides an agile, solid foundation to build, run, integrate, and manage the applications and services that run your business.

Why is an application server important? An application server is important because it ensures application and service integrity by delivering business logic and data to users on a variety of client devices, in a reliable and secure way.

Using WebSphere Application Server - Express, the application server for small and midsized companies, businesses can reuse and create applications and services that promote business agility and that anticipate and adjust to the mission-critical issues that help businesses win in the marketplace.

Designed to improve efficiency, reduce risk, and cut cost, the WebSphere Application Server family is the IBM entry strategy to service-oriented architecture (SOA) through service creation and reuse. SOA provides the means to create a business-centric IT architecture that supports integrating your business using repeatable business tasks (services) that can be linked together (as needed) to perform business processes. In essence, SOA helps you to build composite applications (applications that draw on functionality from multiple sources to support business processes).

As shown in Figure 2-1, SOA helps you create solutions that are dynamic and flexible.

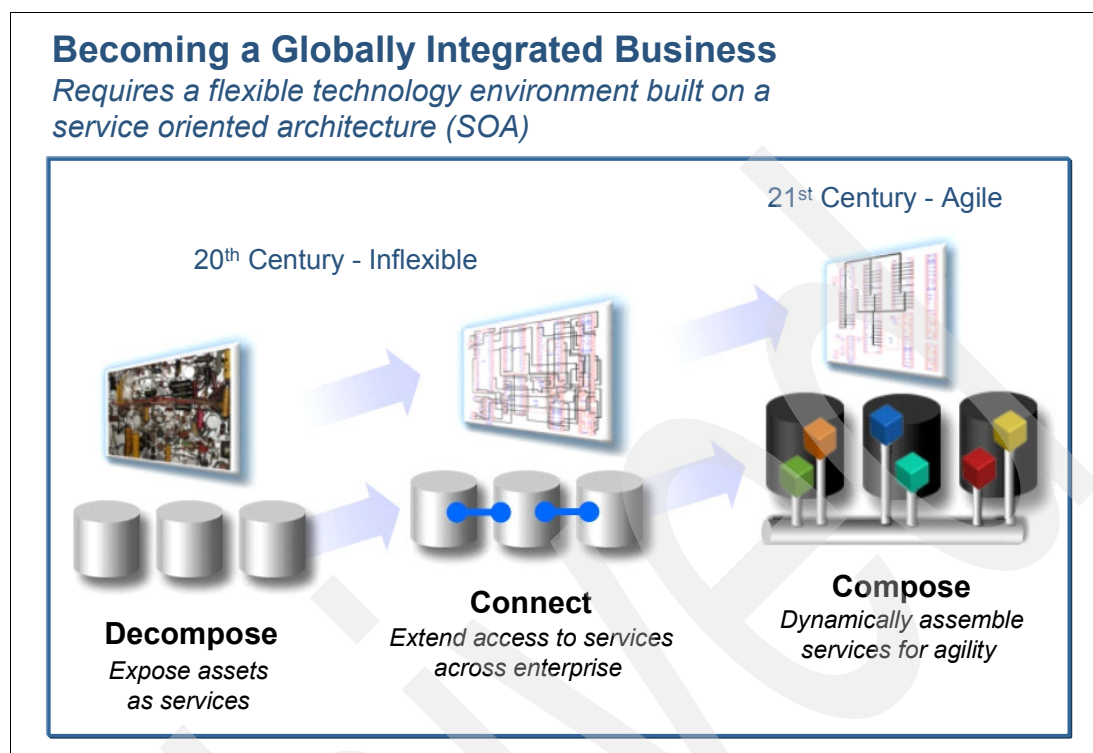


Figure 2-1 SOA expands your opportunity

2.1.2 Business value

IBM WebSphere Application Server - Express is a cost-effective starting point for SOA that enables rapid application development, deployment, and visual management of dynamic websites and applications. WebSphere Application Server - Express provides an easy-to-use solution for building Web-based business applications that can provide a remarkably fast return on investment (ROI).

WebSphere Application Server - Express provides a powerful yet intuitive environment for developing applications, one that includes many helpful templates, wizards, and sample applications to help you build web applications without requiring any programming skills. WebSphere Application Server - Express has ready-to-use business applications to help get you started.

WebSphere Application Server - Express helps you to improve the flexibility of your business and increase return on investment by making your application services more reusable and accessible to new users, in new ways:

- ▶ Development is simplified by increasing developer productivity with a proven, standards based platform.
- ▶ High performance enables you to grow your business on a reliable, available, scalable, secure foundation that promotes business agility.
- ▶ Intelligent management helps you anticipate and adjust to evolving business and technology needs with infrastructure and application intelligence.
- ▶ Investment protection provides a means to protect your investments in applications through reuse and integration.

With WebSphere Application Server - Express, you will enjoy the following benefits:

- ▶ You can reduce the number of servers required to support the application environment to achieve higher return on investment (ROI) and reduce energy consumption and costs.
- ▶ You can improve customer satisfaction by providing data to users in new ways and improving the capability to connect to partners, suppliers, and customers in a competitive marketplace.
- ▶ The ready-to-use security configurations and user registry, compliance with government standards, and stringent web services security will offer you peace of mind. New security capabilities add deeper levels of management, user governance, and auditing to decrease system vulnerabilities while maximizing developer productivity.
- ▶ Simplified infrastructure, flexible and effective application control, and runtime efficiency allow you to respond to evolving business needs.
- ▶ New runtime provisioning and OSGi technology dynamically select only the needed functions for memory and space, reducing the application server footprint.

2.1.3 Product overview

The WebSphere Application Server family of products provides developers and IT Architects a choice of innovative, performance-based foundations for building and deploying all types of SOA applications and services. These applications can range from business critical and key enterprise-wide applications to applications for midsized businesses or even departments. Choosing WebSphere Application Server - Express allows you to balance key considerations such as security, scalability, manageability, cost, and simplicity, especially in mixed environments.

WebSphere Application Server - Express is optimized for small and midsize businesses that need an easy, affordable, ready to go solution to build, run, and manage simple dynamic websites and applications. It includes:

- ▶ Single-step installation and configuration, wizards, and default configurations, and easy-to-navigate documentation that includes extensive use of sample code help ensure fast and smooth start-up
- ▶ Runtime provisioning and OSGi technology that dynamically selects only the needed functions for memory and space, which reduces the application server footprint
- ▶ Integration with IBM Rational Application Developer to assemble and deploy modules
- ▶ Java programming model:
 - Full Java EE 5 and Enterprise JavaBean (EJB) 3.0 support
 - Rapid Java development and deployment kit (JDK) 6.0, Java Platform Standard Edition 6 (Java SE 6.0) and Java SE 5.0
 - Java Persistence API (JPA) and Session Initiation Protocol (SIP) servlets that simplify development with standardized support for interactive user sessions involving real-time multimedia elements such as voice, video, instant messaging, and online games
 - JAXB 2.1, Stax 1.0, JSR 109 1.2, Portlet specification 2.0, Java Specification Requests (JSRs) 286 and SAAJ 1.3 for enhancement in support of SOA 1.2
- ▶ Web 2.0 highlights:
 - Web 2.0 to SOA connectivity
 - AJAX Messaging and AJAX Development Toolkit

- Web services support, including JAX-WS, SOAP 1.2, MTOM, XOP, WS-ReliableMessaging, WS-Trust, WS-SecureConversation, WS-Policy, and Kerberos Token Profile, simplifying interoperability in mixed environments
- ▶ Advanced security:
 - WebSphere security proxy and WebSphere security domains
 - Security auditing capabilities to ensure security compliance to ease development
 - Kerberos authentication and single sign-on
 - Common Criteria Assurance Level 4 certification
 - Security Assertion Markup Language (SAML) token support for web services security that provides for secure, interoperable web services
- ▶ Broad operating system support and database connectivity
- ▶ Administrative agent to reduce overhead of administration:
 - Improved Console Command Assistant, easier security configuration and database connectivity, and helpful wizards
 - A stand-alone thin administration client that enables efficient management of the deployment environment
- ▶ WebSphere Application Server Feature Packs that simplify the adoption of new standards such as Services Component Architecture (SCA), and improve consumability by enabling users to selectively take advantage of new standards and features while maintaining a more stable internal release cycle
 - Key updates to SCA programming model support for composite application assembly and service deployment through the WebSphere Application Server V7 Feature Pack for SCA V1.0.1 Refresh
 - Support for the XSLT 2.0, XPath 2.0, and XQuery 1.0 programming model standards to benefit XML application development scenarios through the WebSphere Application Server Feature Pack for XML
 - Support for OASIS Web Services Security SAML Token Security Profile 1.1 standard delivered in the WebSphere Application Server V7 Fix Pack 7 (7.0.0.7)

2.1.4 IBM Business Partner case study

This example IBM Business Partner case study shows the use of WebSphere Application Server - Express in a customer solution.

IBM Business Partner Pre-emptive Systems worked with Medusind Solutions to implement a flexible new business process management solution, running on IBM WebSphere Application Server Express under the IBM AIX® 5L™ operating system on the IBM System p5® 510 Express platform. To learn more about this IBM Business Partner solution and to find more IBM Business Partner case study success stories, refer to *Winning in Midmarket: 100 Software Success Stories* at:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

2.1.5 Platforms supported

IBM WebSphere Application Server - Express supports the following platforms:

- ▶ Microsoft® Windows® operating systems with 32-bit WebSphere Application Server:
 - These Microsoft operating systems are supported for application design, development, and testing; no support for production use:
 - Microsoft Vista Business SP1
 - Microsoft Vista Enterprise SP1
 - Microsoft Vista Ultimate SP1
 - Microsoft Windows XP Professional with SP2
 - Microsoft Windows 7 Professional (also see the WebSphere Application Server V7.0 Technotes for Windows 7)
 - Microsoft Windows 7 Enterprise (also see the WebSphere Application Server V7.0 Technotes for Windows 7)
 - Microsoft Windows 7 Ultimate (also see the WebSphere Application Server V7.0 Technotes for Windows 7)
 - Microsoft Windows Server 2003 operating systems:
 - Microsoft Windows Server 2003, SP2
 - Microsoft Windows Server 2003 x64 with SP2
 - Microsoft Windows Server 2003 R2
 - Microsoft Windows Server 2003 x64 R2
 - Microsoft Windows Server 2008 operating systems:
 - Microsoft Windows Server 2008, Datacenter with SP1
 - Microsoft Windows Server 2008, Datacenter x64 with SP1
 - Microsoft Windows Server 2008, Enterprise with SP1
 - Microsoft Windows Server 2008, Enterprise x64 with SP1
 - Microsoft Windows Server 2008, Standard with SP1
 - Microsoft Windows Server 2008, Standard x64 with SP1
 - For these Microsoft Windows Server 2008 R2 versions, see the WebSphere Application Server V 7.0 Technotes for Windows Server 2008 R2:
 - Microsoft Windows Server 2008 R2, Standard x64
 - Microsoft Windows Server 2008 R2, Enterprise x64
 - Microsoft Windows Server 2008 R2, Datacenter x64
- ▶ IBM i V5R4 or V6R1
- ▶ For AIX operating systems with 32-bit WebSphere Application Server:
 - AIX 6.1 with Service Pack 6100-00-04-0815 (32 and 64-bit kernel support)
 - AIX 5L 5.3 with Service Pack 5300-07-01 (32 and 64-bit kernel support)
- ▶ For HP-UX operating systems with 32-bit WebSphere Application Server:
 - HP-UX 11iv2 with Standard Patch Bundles of Dec 2007
 - HP-UX 11iv3 with Standard Patch Bundles of Sep 2007
- ▶ For Linux® operating environments with 32-bit WebSphere Application Server:
 - Red Hat Enterprise Linux, Version 4 with Update 6
 - Red Hat Enterprise Linux, Version 4 for x86_64 with Update 6
 - Red Hat Enterprise Linux, Version 5 with Update 1
 - Red Hat Enterprise Linux, Version 5 for x86_64 with Update 1
 - SUSE Linux Enterprise Server, Version 11 (See WebSphere Application Server V7.0 Technotes for SLES 11))
 - SUSE Linux Enterprise Server, Version 10 with Update 1

- SUSE Linux Enterprise Server, Version 10 for x86_64 with Update 1
- SUSE Linux Enterprise Server, Version 9 with SP4
- SUSE Linux Enterprise Server, Version 9 for x86_64 with SP4
- Asianux Server 3 SP2 (minimum WebSphere Application Server v 7.0.0.9)
- ▶ For Linux on POWER® operating environments with 32-bit WebSphere Application Server:
 - Red Hat Enterprise Linux, Version 4 with Update 6
 - Red Hat Enterprise Linux, Version 5 with Update 1
 - SUSE Linux Enterprise Server, Version 9 with SP4
 - SUSE Linux Enterprise Server, Version 10 with Update 1
 - SUSE Linux Enterprise Server, Version 11
- ▶ For Sun Solaris Operating Environment with 32-bit WebSphere Application Server:
 - Sun Solaris operating environment, Version 9 with Patch Cluster dated 1/3/08 or later (32 and 64-bit kernel support)
 - Sun Solaris operating environment, Version 10 with Patch Cluster dated 1/7/08 or later (32 and 64-bit kernel support)

2.1.6 Key resources

For more information, see the following resources:

- ▶ WebSphere Application Server - Express product page
<http://www.ibm.com/software/webservers/appserv/express/>
- ▶ WebSphere Application Server - Express V7 for IBM i specific page
<http://www.ibm.com/systems/i/software/websphere/indexb70.html>

2.2 WebSphere Commerce - Express

In this section, we provide key information about IBM WebSphere Commerce - Express.

2.2.1 Executive summary

Selling your products online is about delivering a smarter shopping experience that is seamless and integrated across the various customer touch points. It is about providing a rich, relevant, personalized experience across multiple channels of your business. But ultimately it is about doing more to leverage the power of your brand and present its value consistently to your customers.

IBM WebSphere Commerce - Express provides a powerful customer interaction platform for cross-channel commerce that can be used by small and midsized businesses, in many different industries. It provides easy-to-use tools for business users to create and manage precision marketing campaigns, promotions, catalog and merchandising across all sales channels, allowing them to centrally manage a cross-channel strategy.

IBM WebSphere Commerce - Express provides an affordable, yet fully-featured, online selling solution designed specifically for the needs of small and midsized companies that want to do business on the web.

2.2.2 Business value

IBM addresses the unique requirements of small and midsized businesses with IBM WebSphere Commerce - Express, which is designed to reflect the needs of smaller businesses that want to use the web as a strategic channel for increasing sales, reducing expenses, and improving customer relationships. WebSphere Commerce - Express gives you industry-leading business integration middleware that helps you easily and quickly create a profitable web presence.

Here are examples of how WebSphere Commerce - Express can increase your profitability:

- ▶ Delivers a personalized, user-friendly shopping experience that increases customer loyalty and maximizes your revenue
- ▶ Delivers a consistent and relevant experience to customers and partners by extending a common set of business services across every point of interaction
- ▶ Creates effective marketing campaigns that turn browsers into buyers and increase revenue
- ▶ Analyzes buying patterns to minimize stock outages and inventory and identify the most profitable customers
- ▶ Enables customers worldwide to purchase products and interact with you on a 7x24x365 basis
- ▶ Empowers your employees to better serve customers and respond to market challenges and opportunities
- ▶ Automates your business processes by using your existing investment in business applications as well as data and supply chain relationships

2.2.3 Product overview

WebSphere Commerce - Express is a complete end-to-end solution providing the core capabilities for firms of all sizes to get started or expand their business-to-business or business-to-consumer commerce-enabled website (Figure 2-2).

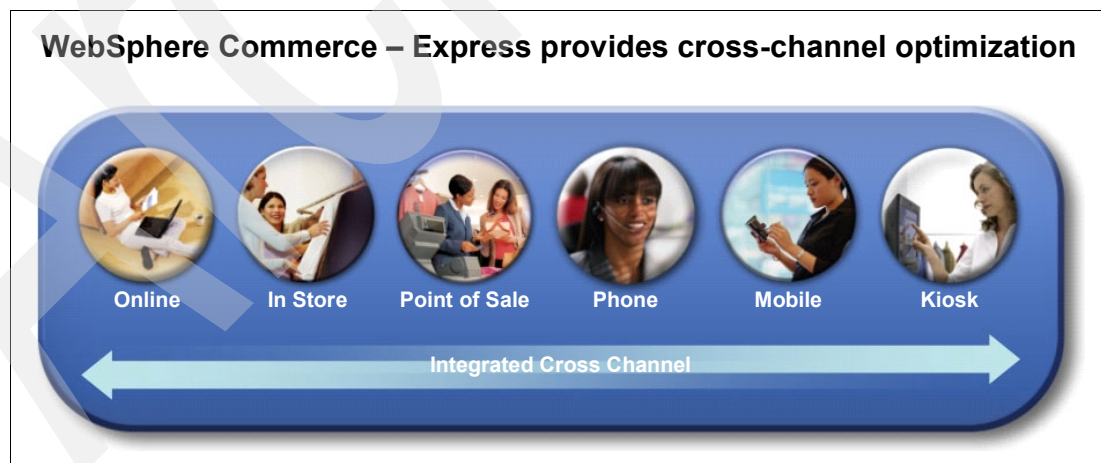


Figure 2-2 Cross-channel optimization using WebSphere Commerce - Express

WebSphere Commerce - Express includes a number of new features that are designed specifically to meet the needs of small and midsized businesses, but also shares basic as well as advanced e-commerce capabilities with the rest of the WebSphere Commerce family. WebSphere Commerce - Express is limited to companies with less than 1,000 employees only and single store deployment with up to a maximum of 200 PVUs.

WebSphere Commerce - Express includes the following features and benefits:

- ▶ Mobile device support is provided, enabling mobile as a new touch point for browsing the store, receiving marketing messages, promotions, coupon codes, and completing transactions. The mobile store model provides out-of-the-box support for smart phones, allowing retailers to quickly adopt mobile as a new touch point for doing business.
- ▶ Social commerce capabilities enable online stores to support product ratings and reviews by integration with BazaarVoice, blogs, photo galleries, and user profiles by integration with IBM Lotus Connections and Pluck Sitelife.
- ▶ Web Content Management is provided through integration with IBM Workplace Web Content Management for improved handling of structured and unstructured content (for example, how-to guides, news articles).
- ▶ Enhanced Web Analytics are included, with auto-tagging and custom reports by analytics vendors for marketing promotions, campaigns, and A/B Testing.
- ▶ SOA enhancements such as packaged web services for integration to external order management and ERP systems and the ability to model WebSphere Commerce processes in BPEL are provided.
- ▶ Streamlined Starter Stores are designed to help get your production store up quickly. The starter stores in WebSphere Commerce - Express include the core capabilities required for a complete end-to-end e-commerce site. A store designed for business-to-commerce is included and can be customized to meet your specific needs now and extended to utilize more advanced features as you need them. The latest starter stores have been re-designed to be smaller and easier to customize.
- ▶ The catalog import utility makes it quick and easy for you to import a pre-existing product catalog, stored in a spreadsheet in comma-separated values (CSV) format, into the WebSphere Commerce - Express database.
- ▶ WebSphere Commerce - Express comes with a broad collection of easy to use tools, many of which are wizard-based, for easy administration and management of your site. Most are built into an intuitive Web-based framework called IBM Management Center for WebSphere Commerce, which can help you with everything from managing the look and feel of your store, to catalog management, to creating and maintaining orders, and tracking store activities. Here are just a few of the many supported features:
 - Product Management Tools: Easily create, update, delete, and modify attributes and prices of your catalog entries with these powerful, yet intuitive Web-based tools. You can manage your catalog quickly and directly, easily finding and listing products to change, then making simple or mass edits. The simple catalog tree structure makes it easy to add or delete product categories. Sales catalogs, which have a flexible display structure that allows you to associate products to more than one category to suit the requirements of your store, are also supported. You can create one or more sales catalogs for display purposes or for seasonal or clearance merchandise.
 - Store Style Editor: This tool makes it easy to change the basic look and feel of your store, including colors and location of action buttons, without special technical skills.
 - Change Page Text Editor: Non-technical users can easily change the descriptive text that is included in the site pages and in the store flow with this editing tool
- ▶ Fast-path documentation gets you to the information you need fast from the Information Center help system that is built into WebSphere Commerce - Express. The Information Center includes advanced search and bookmark capabilities that make it easy to use. In addition, specialized documentation is provided, such as the Quick Start Guide. This document picks up right after installation and steps you through the store publishing and customization process, providing tips and techniques that will get you into production quickly.

- Open standards support, which is built on accepted, industry standards such as Java technology, JavaServer Pages, Enterprise JavaBeans (EJB) and XML, is provided. WebSphere Commerce - Express can be easily integrated into your existing, in-house developed middleware and systems, including IBM CICS®, IBM MQSeries®, IBM IMS™ products and SAP R/3.

WebSphere Commerce - Express provides a customer interaction platform as shown in Figure 2-3.

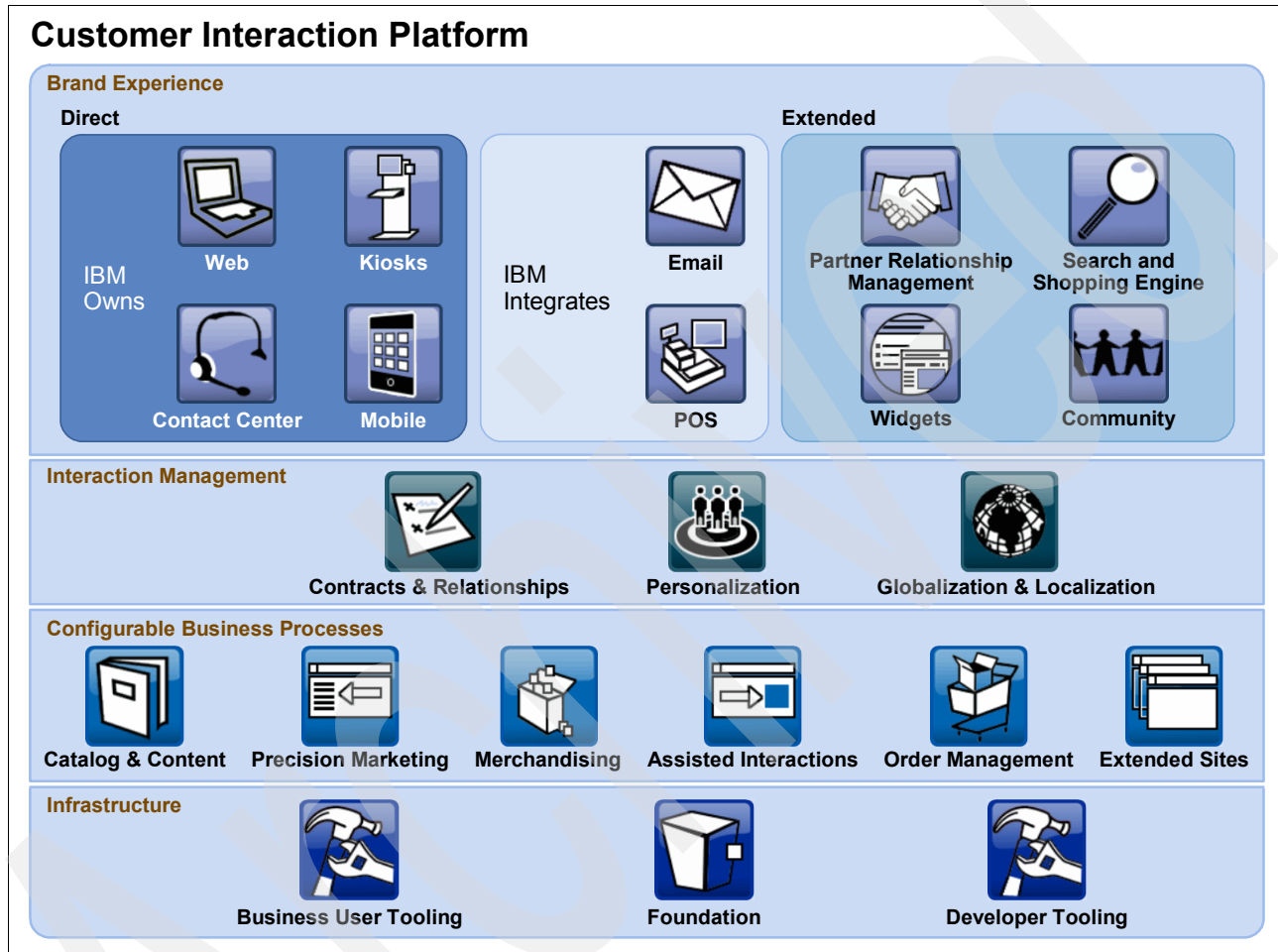


Figure 2-3 WebSphere Commerce - Express Customer Interaction Platform

2.2.4 IBM Business Partner case study

This example IBM Business Partner case study shows the use of WebSphere Commerce - Express in a customer solution.

Howard Miller worked with IBM Business Partner PreferredPartner/NetSphere Strategies to launch a new business-to-consumer (B2C) website based on IBM WebSphere Commerce Express, Version 6 software running on an affordable IBM System i5® 520 Express Configuration and featuring an IBM DB2® Express data server that stores the company's customer and transaction information. To learn more about this IBM Business Partner solution and find more IBM Business Partner case study success stories, refer to *Winning in Midmarket: 100 Software Success Stories* at:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

2.2.5 Platforms supported (server)

WebSphere Commerce - Express supports the following platforms:

- ▶ Microsoft Windows (32-bit and 64-bit):
 - Microsoft Windows Server 2008 Standard Edition
 - Microsoft Windows Server 2008 Datacenter Edition
 - Microsoft Windows Server 2008 Enterprise Edition
 - Microsoft Windows Server 2003 Standard Edition, Service Pack 2
 - Microsoft Windows Server 2003 Enterprise Edition, Service Pack 2
- ▶ Red Hat Enterprise Linux 4 and 5
- ▶ Asianux Server 3 Fix Pack 9
- ▶ SUSE Linux Enterprise Server 9, 10, or 11

2.2.6 Key resources

For more information, on WebSphere Commerce - Express go to the product page at this web page:

<http://www.ibm.com/software/genservers/commerce/express/>

2.3 WebSphere MQ

In this section, we provide information about IBM WebSphere MQ.

2.3.1 Executive summary

A mixture of computing platforms and operating systems that are interconnected across various networks can form a fragile, complicated business application operating environment. In this environment, it is all too common for IT to be focused on mere survival, maintenance, and dealing with network complexities rather than being an active player in helping improve or expand your business.

WebSphere MQ is the market-leading message-oriented middleware product that delivers a reliable, proven messaging backbone for almost 10,000 organizations of different sizes, spanning many industries around the world. WebSphere MQ delivers the universal messaging backbone with robust connectivity that enables flexible and reliable messaging for applications, web services, and Web 2.0. It also delivers market-leading publish and subscribe messaging. WebSphere MQ enables virtually any commercial IT system to be connected with a reliable, flexible transport. Implementing WebSphere MQ in your environment can help with network issues and free up vital IT resources, which allows them to focus on your business needs.

2.3.2 Business value

WebSphere MQ can help businesses get more from their IT investments by providing a reliable and flexible integration backbone for exchanging messages between applications and web services. WebSphere MQ, the core of application integration, is the reliable, proven messaging backbone for SOA connectivity, as the universal, multipurpose data transport.

WebSphere MQ connects many commercial IT systems with support for over 80 platform configurations. A messaging backbone based on WebSphere MQ can help organizations:

- ▶ Quickly and economically connect IT systems, applications, and information
- ▶ Reduce costs and process disruptions from data loss with a unifying solution for guaranteed message/transaction delivery (assured delivery)
- ▶ Become more agile so that IT can be flexible enough to meet changing business demands
- ▶ Stay flexible so that IT and organizational changes can be absorbed
- ▶ Be better prepared for regulatory compliance and industry initiatives
- ▶ Connect the new with the now, leveraging Web 2.0 and web services while connecting these with the core back-end system messaging
- ▶ Leverage existing Enterprise Service Bus (ESB) infrastructure for universal service delivery including messages, processes, files and events
- ▶ Reduce ongoing maintenance costs by decoupling connectivity and integration logic.
- ▶ Achieve fast ROI in as little as six months by leveraging existing assets and using existing skill sets
- ▶ Provide a single unifying transport that reduces cost and maintenance efforts, including support for HTTP, Representational State Transfer (REST), and Java Message Service (JMS).
- ▶ Prevent costly security breach exposures and help achieve compliance through message and transaction integrity.
- ▶ Provide end-to-end security using Secure Sockets Layer (SSL) for authentication, message integrity checking, and encryption for data that is sent across the internet.

2.3.3 Product overview

WebSphere MQ provides reliable, resilient application integration by passing messages between applications and web services. It reduces the risk of information loss and the need to reconcile communicating IT systems by using queuing and transactional facilities that help preserve the integrity of messages across the network. WebSphere MQ eliminates the need to write complex communications code and offers a choice of simple APIs, Message Queue Interface (MQI), and JMS that are consistent across the supported operating environments, provided both by IBM and Business Partners. WebSphere MQ capabilities:

- ▶ Delivers reliable application integration for applications and web services, allowing you to fully leverage your existing software and hardware investments, with the proven and trusted market leader.
- ▶ Provides a messaging backbone for deploying your enterprise service bus (ESB) as the connectivity layer of a service-orientated architecture.
- ▶ Helps you to increase business flexibility and helps with regulatory compliance obligations. Offers increased transparency, reliability, and audit ability of data movement compared to file transfer-based approaches.
- ▶ Includes Eclipse tooling that enables you to configure your WebSphere MQ network remotely, including WebSphere MQ for z/OS® V6.0 deployments.
- ▶ Feature-integrated support for web services, which helps you to swiftly bring reliability, visibility, and audit ability to SOAP interactions.
- ▶ Allows you to integrate virtually anything with support for more than 80 platform configurations, which includes native z/OS support with IBM and Business Partner offerings. Integrates CICS, IMS, DB2, .NET, and J2EE environments.

- ▶ Supports both de facto interface MQI and industry-standard JMS V1.1 interface with integrated publish-and-subscribe support.
- ▶ Supports secure Internet communication with industry-standard Secure Sockets Layer. The Extended Security Edition offers end-to-end governance. Supports IPV6 and awarded Common Criteria certification.
- ▶ Offers proven scalability, availability, and performance that grows with your needs.

WebSphere MQ revolutionizes this market-leading messaging SOA backbone; the highlights include:

- ▶ JMS support that is tightly integrated into the runtime and configuration environment
- ▶ Publish-and-subscribe capabilities that are tightly integrated into the runtime and configuration environment
- ▶ Enhanced performance for JMS and publish-and-subscribe
- ▶ New MQI verbs and behaviors
- ▶ A supported bridge for HTTP, which enables asynchronous JavaScript and XML (Ajax) applications to connect to WebSphere MQ queues and topics
- ▶ Enhancements for clients increasing resilience and throughput

New features and benefits of WebSphere MQ include these:

- ▶ Multi-instance queue managers enabling automatic failover to a standby Queue Manager instance in the event of an incident or planned outage
- ▶ Automatic client reconnect providing Client connected application with automatic detection of outages or failures and reconnects to alternative Queue Managers
- ▶ Enhanced governance emitting notification events whenever configuration changes are made or commands are run, recording cause and state before and after Service Definition wizard generates WSDL to describe MQ services
- ▶ Enhanced Secure Sockets Layer (SSL) which supports certificate checking using Online Certificate Status Protocol (OCSP) as alternative to Certificate Revocation Lists (CRL)
- ▶ Enhanced .Net support providing IBM Message Service Client for .Net developers and supports use of WebSphere MQ as customer channel within Windows Communication Foundation
- ▶ Eclipse tooling that enables you to configure your WebSphere MQ network remotely
- ▶ Integrated support for web services, helping you to swiftly bring reliability, visibility, and audit ability to SOAP interactions
- ▶ Support for more than 80 platform configurations, including native z/OS support, with IBM and Business Partner offerings; integrates CICS, IMS, DB2, .NET and J2EE environments
- ▶ Support for both de facto interface MQI and industry standard JMS V1.1 interface, with integrated publish-and-subscribe support

Figure 2-4 shows how WebSphere MQ products, including WebSphere MQ - Express, support a wide spectrum of transport requirements.

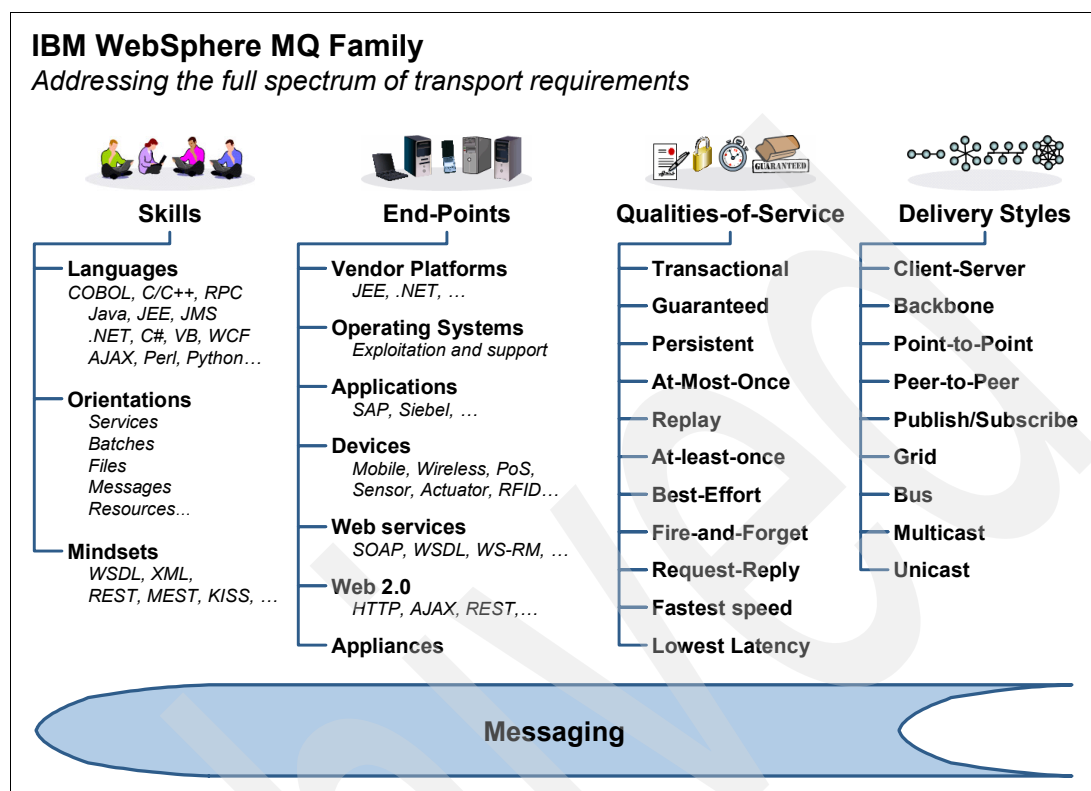


Figure 2-4 WebSphere MQ family addressing transport requirements

2.3.4 IBM Business Partner case study

This example IBM Business Partner case study shows the use of WebSphere MQ in a customer solution.

The IBM Business Partner, Prolifics, provided a solution that allows information that is gathered from the field to be updated across systems in real time. WebSphere MQ provides a robust, resilient messaging backbone that links the Southside Electric Cooperative's systems. To learn more about this IBM Business Partner solution and to find more IBM Business Partner case study success stories, refer to *Winning in Midmarket: 100 Software Success Stories* at:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

2.3.5 Platforms supported

WebSphere MQ helps integrate virtually anything, with support for more than 80 platform configurations. For the latest details about supported platforms, go to this web page:

<http://www-01.ibm.com/software/integration/wmq/requirements/>

2.3.6 Key resources

For more information, see the following resources:

- WebSphere MQ product page:

<http://www.ibm.com/software/integration/wmq/index.html>

- Product Information Center:

<http://publib.boulder.ibm.com/infocenter/wmqv7/v7r0/index.jsp?topic=/com.ibm.mq.csqzaf.doc/intexttrancl.htm>

2.4 WebSphere sMash

In this section, we provide key information about IBM WebSphere sMash.

2.4.1 Executive summary

In today's environment, immediate business needs are putting increased pressure on many IT staffs to build applications quickly. Two example situations are a need for an online application enabling customers to register for an upcoming special event, or a need to modify the flow of an online order process to support a special promotion. To meet the pressure, the IT staff needs an agile development environment that allows them to take advantage of new dynamic scripting languages while extending existing data and applications to the web with minimal changes to the existing applications.

IBM WebSphere sMash is a new development and execution environment that enables agile development of dynamic web applications. WebSphere sMash gives developers the power to rapidly create, assemble, and execute composite applications by using dynamic scripting, lightweight application assembly, and Representational State Transfer (REST)-style service invocation. WebSphere sMash provides visual assembly tools to rapidly combine services, feeds, and data sources into new applications on the fly, enabling rapid development to deployment cycles. WebSphere sMash improves developer productivity and efficiency through the support of dynamic scripting languages (for example, PHP and Groovy) that are easy to learn and allow developers to focus on business logic instead of low level functionality when they need to write code.

2.4.2 Business value

Many companies must develop and deploy cost effective applications that meet situational needs, such as rapidly creating new, dynamic web applications. WebSphere sMash provides numerous benefits to both IT and the business:

- Improves developer productivity and efficiency to deliver quality applications sooner
- Simplifies deployment of applications to meet specific situational needs
- Increases customer satisfaction and line of business productivity by streamlining end-user interaction with Web-based applications
- Jump starts development with access to a growing online development community, including the WebSphere sMash development team
- Easily ties together disparate services and creates new applications, taking advantage of server-side business logic
- Minimizes IT infrastructure needs with a lightweight development platform

2.4.3 Product overview

WebSphere sMash enables developers to quickly build and execute agile, Web 2.0-based applications that help businesses be more responsive, flexible, and cost-effective. As a fast and simple application foundation, WebSphere sMash accelerates business and IT alignment.

WebSphere sMash for developers: WebSphere sMash leverages Web 2.0 to meet situational needs of business by enabling developers to create applications quickly and efficiently:

- ▶ Unleash content as Representational State Transfer (REST) services

REST is an architectural style that allows services to be exposed and consumed over the web using only a simple URL. Using WebSphere sMash, companies can unleash their content to the world as REST services, take advantage of the huge array of REST services available on the web to build new applications, and easily reuse these assets in future projects.

- ▶ Leverage the power of scripting

Because WebSphere sMash applications are based on dynamic scripting, they can be run without any compilation. This feature eases the overhead of application development and makes modification and customization easy.

WebSphere sMash supports two dynamic scripting languages, PHP Hypertext Preprocessor (commonly known as PHP), and Groovy, a dynamic scripting language that leverages existing Java skills.

Furthermore, because WebSphere sMash only uses the modules it needs, the storage and memory footprints are exceptionally small.

- ▶ Quickly combine services and feeds with visual tools

WebSphere sMash offers visual assembly-style development for designing server-side business logic as well as visual design editors for designing rich user interfaces.

Using the visual assembly tool, developers can easily tie together disparate services and feeds into new applications and create server-side business logic (such as exchanging data with a backend system or kicking off an approval process).

WebSphere sMash for IBM Business Partners: Using WebSphere sMash, Business Partners can quickly create situational applications to meet their clients' needs:

- ▶ Quickly build and deliver situational applications that meet your clients' specific needs
- ▶ Leverage REST technology to expose and consume web services and take advantage of your clients' existing SOA investments
- ▶ Provide a cost effective solution that complies with key IT operations guidelines around manageability, scalability, and security
- ▶ Assemble server-side logic and build user interfaces for your clients using visual tooling

You can think of the application as the server; that is, you create an application and run it. There is no packaging or deploying an application to a server; rather the application *is* the server. When you run a WebSphere sMash application, a runtime environment, including an HTTP stack, is included. Applications are maintained with dependency management. Deploying an application involves installing the application from the repository. All scripts and classes are contained within your application and run within the Java process that is started. Any dependency declared in an application is included on the classpath statement. Therefore, you can zip up an application from one machine, copy it to another machine, unzip it, and after the application's dependencies are resolved, you can start it without any traditional deployment needed.

2.4.4 Supported platforms

For current details on the supported systems, go to this web address:

<http://www.ibm.com/software/webservers/smash/reqs/smash.html>

2.4.5 Key resources

For more information, see the following resources:

- ▶ WebSphere sMash product page
<http://www.ibm.com/software/webservers/smash/>
- ▶ Project Zero website
<http://www.projectzero.org/>

2.5 WebSphere Business Modeler Basic

In this section, we provide key information about IBM WebSphere Business Modeler Basic.

2.5.1 Executive summary

Global economic pressures are driving businesses to be more agile, flexible, and responsive to market demands. Regardless of how well a company runs, it needs to adapt and improve, or it will be outdone by competitors. Businesses need to deliver products and services faster, raise the quality of what they deliver, rein in costs, grow revenues, raise the bar on accountability and transparency, have the agility to take advantage of market opportunities, have information about hand to react to unforeseen events, and be able to see long term trends.

Through dynamic business processes and models, companies can work smarter, examining the sequence of steps necessary to conduct business (the business processes) with a methodical approach to optimization. By identifying and modeling each step of a business process, a business can explore ways to improve, automate, and monitor in a flexible way. Done properly, this allows a business to find and use the best resources wherever and whenever needed.

The art of business process management (BPM) increases the ability of a business to adapt to changing market conditions and new opportunities. BPM is a discipline consisting of software and expertise to improve the performance, visibility, and agility of business processes and to facilitate business innovation.

Figure 2-5 shows how modeling can be an important first step in improving business processes by helping assess, capture, and analyze core value processes, and aligning business strategy and IT execution.

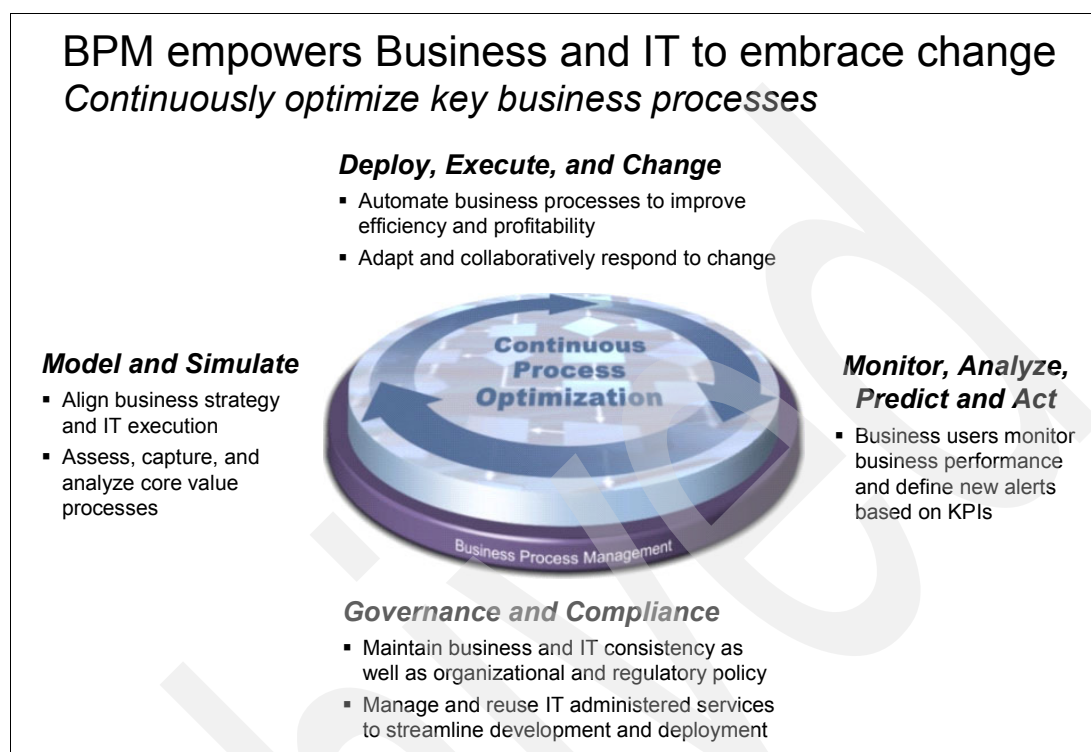


Figure 2-5 Business process management empowers business and IT

What is the downside of inflexible business models and siloed solutions? Production and service outages, backlogs and process bottlenecks, supply chain disruptions, stock outs, missed service level agreements, ineffective use of staff, poor customer satisfaction, operational reports that provide too little too late, and the list goes on.

By discovering and modeling processes as part of a BPM solution, companies start heading down the path to business agility. Business processes need to be clearly defined and documented in order to improve or restructure them. Business process modeling is a key aspect of business process management.

Business analysts and business users need tools to help model, understand, and analyze business processes. WebSphere Business Modeler Basic offers in-house process modeling capabilities for documentation, compliance, training, and reporting in a standards-based environment. These models can also be used to automate, streamline, and optimize processes for improved customer satisfaction, reduced costs, increased worker productivity, enhanced collaboration, and improved monitoring by business users. Many types of daily processes crucial to the business can be modeled with WebSphere Business Modeler Basic:

- ▶ Document-intensive processes such as claims processing and accounts payable
- ▶ Decision-intensive processes such as mortgage loan origination and sales promotions
- ▶ Processes that integrate multiple applications and systems, such as supply chain management

Companies that are just getting started with business process management can learn about and begin process modeling at zero cost with an exciting new offering. IBM BPM BlueWorks is a no-cost offering that offers business leaders and business analysts a place to discover, explore, and design business-relevant content to help them understand, experience, and accelerate business process management. IBM BPM BlueWorks provides community resources, best practices, industry maps, and cloud-based collaborative mapping tools, with a free team space, modeling tools, and industry content to get started. Companies can use BlueWorks to obtain collaborative cross-company input and stakeholder buy-in on strategy, capabilities, organization, and processes. These process maps can be exported to WebSphere Modeler Basic for in-house modeling.

2.5.2 Business value

Business modeling is not just for large businesses. Small and medium businesses have to support many of the same processes as large enterprises, getting the same job done with fewer personnel and a smaller budget. Through process mapping and modeling, businesses can streamline and improve their processes to target inefficient practices and to provide insight into areas where costs can be saved or where opportunities are being missed.

There are benefits of business modeling that all businesses can realize. Businesses have used drawings and flowcharts for years for a simple reason; a picture can express something simply and quickly that could take thousands of words in a document. For example, a flowchart can show you the big picture without bogging you down in details.

A model keeps both the visuals and accompanying text in one place, provides different views by role, and makes it easy to keep in documentation in sync when there are changes. Modeling is fundamental to helping companies understand their business and to explore when, where, and how to improve it. It is hard to change what you cannot see. By collaborating to graphically model how work gets done, companies benefit from a shared understanding of how their business operates. Through discovery, customers can unlock opportunities and uncover problems hidden inside systems and informal human work processes. Even though IBM Business Modeler can easily be sold with numerous other IBM Software offerings, many IBM clients purchase WebSphere Business Modeler first as a standalone tool to document and understand their processes. After modeling, it is easier to see if and when additional software might assist in meeting their goals.

Figure 2-6 shows how modeling helps identify problem areas and opportunities for improvement.

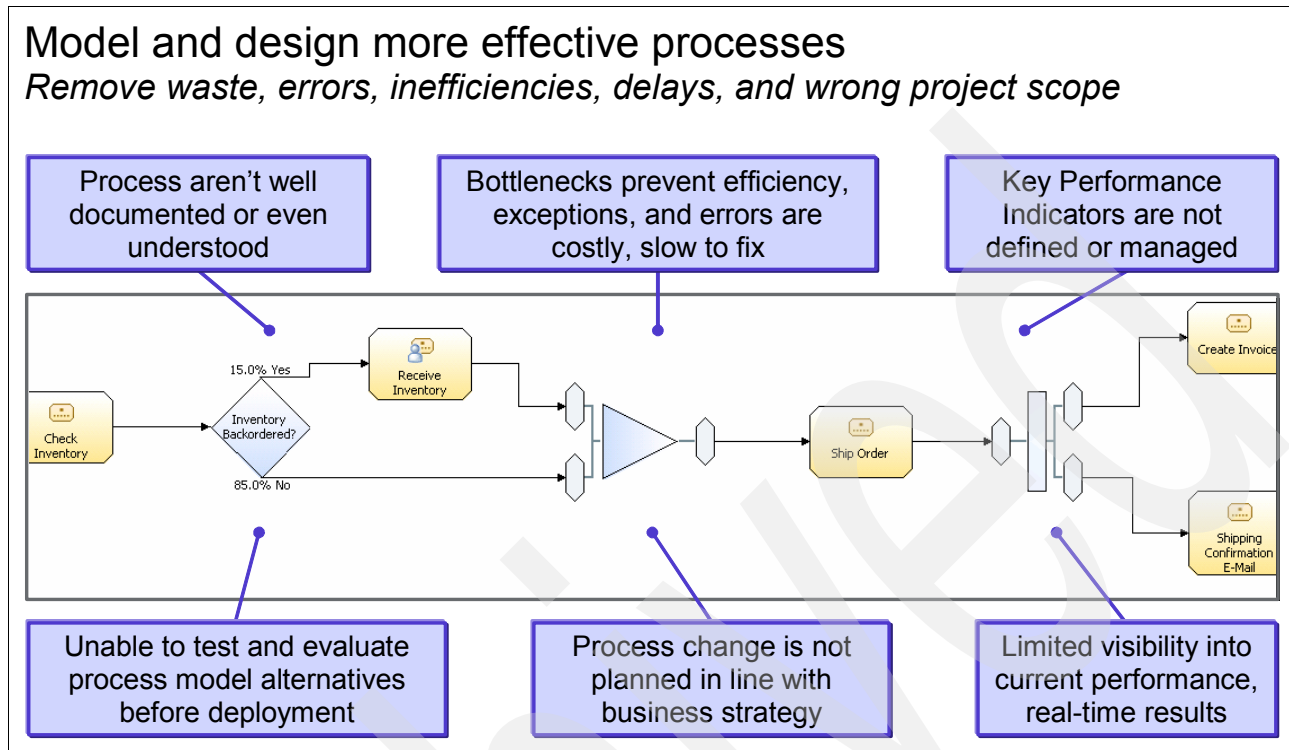


Figure 2-6 Business process models uncover performance improvements

WebSphere Business Modeler Basic is easy to use and install:

- ▶ It installs easily on desktop and does not require any other IBM product.
- ▶ WebSphere Business Modeler Basic is sold in open distribution so that any business partner can sell it.
- ▶ Free cloud-offering IBM BPM BlueWorks is a great complement, letting a company get collaborative input from their employees to leverage their WebSphere Business Modeler Basic purchase.

IBM WebSphere Business Modeler Basic is a powerful, low cost solution for all businesses who care about their bottom line and their future.

2.5.3 Product overview

WebSphere Business Modeler Basic offers basic capabilities for business users to document, visualize, and report on business process models and for continuous process improvement. It can be used to create a high-level view of a business process model.

▶ Business process modeling

WebSphere Business Modeler Basic lets you create a visual representation of a business process that contains supporting information. For example, you can model business items (data and work products) and resources. Then you can associate these models with your business process. You can also add annotations, much like electronic sticky notes, anywhere in a process diagram, structure diagram, or structure definition diagram. Business users can model processes with custom graphical images and BPMN style within a customizable modeling environment.

- ▶ Reporting and queries:

WebSphere Business Modeler Basic integrates with reporting tools such as Microsoft Word or PDF files to make it easier to provide comprehensive documentation of business processes. It generates predefined or custom reports based on a wide range of process data. By generating reports, you can summarize different aspects of your business processes. You can then export the reports to Microsoft Word or PDF files so that you can share or print your data.

- ▶ Pre-defined business measures

WebSphere Business Modeler Basic allows you, as business analyst, to define Key Performance Indicators (KPIs) as a scorecard of how your business is performing against established goals. It provides an embedded KPI library to simplify business process modeling. The library contains over 800 open-standard key performance indicators (KPIs) based on the American Productivity and Quality Center (APQC) Process Classification Frameworks (PCF).

- ▶ Import existing business process models and data from various sources including:

WebSphere Business Modeler Basic supports import of template-based Microsoft Excel XML content and file formats including Visio and delimited text, Lotus Forms, WebSphere Business Modeler Advanced, WebSphere Business Compass repository, and more.

You have the option to model your processes in either a free-form or swimlane layout and to toggle between these two types of layouts. The free-form layout gives you the maximum flexibility to arrange your process diagrams the way that you want. A swimlane layout arranges diagram elements in rows according to roles.

- ▶ Export of business process models

You can export a project so that others can view or work on it, and you can export project elements from one project and reuse them in another project. You can export process models or definitions in the following formats:

- WebSphere Business Modeler projects (MAR files) for backing up or sharing your projects or project elements
- WebSphere Business Modeler XML file sets (XML files) to import process model information into other tools
- Rational Data Architect output (XSD files)
- Delimited text (CSV and TXT data) for business items only

2.5.4 Supported platforms

WebSphere Business Modeler Basic is supported on the following platforms:

- ▶ Windows XP with Service Pack 2 or later
- ▶ Windows Vista Business (32-bit)
- ▶ Windows Vista Enterprise (32-bit)

For more details on platform requirements, go to this web address:

<http://www.ibm.com/support/docview.wss?rs=2025&context=SSBJDG&uid=swg27017629>

2.5.5 Key resources

For more information about WebSphere Business Modeler Basic, go to the product page at this web address:

<http://www.ibm.com/software/integration/wbimodeler/entry/>

To try out the IBM BPM BlueWorks no-cost tools along with the business process management community content, go to the page at this web address:

<http://www.bpmbueworks.com>

IBM Lotus

IBM Lotus provides the world's most successful collaboration and messaging software products that connect people to anyone, anywhere, any time. Lotus products provide an environment that makes it easier for people to productively perform work in an environment of rapidly changing information. These products also make it easy to add the *human touch* to your website and to your business-to-business interactions. In this chapter, we discuss the IBM Lotus midmarket products that are available today.

3.1 Why IBM Lotus

IBM Lotus provides security-rich software that enables businesses to communicate, collaborate, and increase productivity. For example, IBM Lotus Domino Express helps people in your organization communicate and share information. One popular application of Lotus Domino Express is email. Lotus Domino Express is a powerful tool that enables people to work in a *sometimes connected* mode, supporting people on the go.

Newer and evolving online collaboration capabilities are providing people with multiple ways to access the information and the people that they need as they perform their jobs. With tools, such as business instant messaging, pervasive online awareness, web conferencing, portals, and intranets, workers are better able to find the information, people, and subject-matter experts they need, when they need them.

By using IBM WebSphere Portal software along with other Lotus software, collaboration solutions can be integrated and extended even further to help you take advantage of your IT investments. All these products work well with each other, with most open standards based software, and across a variety of client and server operating systems.

For organizations that are seeking broad gains in productivity by using messaging and collaboration solutions, Lotus products can provide the answer. Lotus supports small and mid-sized companies by providing these products:

- ▶ Lotus Domino Express
- ▶ WebSphere Portal Express
- ▶ Lotus Foundations
- ▶ Lotus Forms Turbo

- ▶ LotusLive
- ▶ Lotus Quickr
- ▶ Lotus Symphony

3.1.1 Lotus Quickr

Lotus Quickr is valuable to midmarket businesses. Lotus Quickr 8.2 is Web 2.0-based team software that helps you access and interact with all of the people, information, and project materials that you need to get the job done faster and to make better, more informed decisions.

If you have teams or work groups that need to share and collaborate within and beyond your organization, you can use Lotus Quickr to provide secure access to content where it is stored. This content can be surfaced to individuals and applications wherever they are, enabling the team members to collaborate effectively. Lotus Quickr offers a shared content library, team workspaces (places), wikis, blogs, and business templates that are easy to use and can be extended to include other new social networking elements, such as bookmarking and tagging.

Lotus Quickr has three main parts:

- ▶ Content repositories: Where you store your personal and team content
- ▶ Team services: Where you organize and track any project or team
- ▶ Connectors: Make it a snap to extend team collaboration into other applications

Lotus Quickr Connectors help you to connect team collaboration with other applications, such as Lotus Sametime®, Lotus Connections, Lotus Notes®, Lotus Symphony, Microsoft Office, Microsoft Outlook, and Microsoft Windows Explorer.

Lotus Quickr features include:

- ▶ Content libraries: Quickly organize and share content
- ▶ Lotus Quickr and Enterprise Content Management (ECM): Combine the benefits of ECM and team collaboration
- ▶ Team places: Create online places for projects or teams
- ▶ Connectors: Work where you are without switching applications and an open connector architecture for developers
- ▶ Content repositories: Security-rich places on your Lotus Quickr server where Lotus Quickr libraries and team content are stored
- ▶ Templates: Use pre-built team places to get started fast
- ▶ Personal file sharing: Create your personal content library online
- ▶ RSS/ATOM feeds: Stay up-to-date and in the know
- ▶ Integration with Lotus Domino, Java Content Repository (JCR) content stores, IBM FileNet® P8, and IBM Content Manager support: Provides comprehensive, scalable end-to-end content management options

Lotus Quickr 8.2 provides these enhancements:

- ▶ End user-oriented enhancements to the Lotus Quickr services for Domino include:
 - Faster browser response time
 - Sticky user preferences in views
 - A button to add a Quickr place to connectors
 - Simplified document editing and versioning interfaces

- Integration with Lotus Connections Communities, which provides an associated team place or wiki with synchronized membership
- Integration with Lotus Connections Activities to provide publication of activity content to a Quickr place
- ▶ Enhancements for Lotus Quickr services for Domino that simplify administration and help to streamline the infrastructure include:
 - Support for Lotus Domino 8.5 Domino attachment and object service (DAOS) to enable storage of attachments in the file system
 - Increased flexibility in configuring integration between Lotus Sametime and Lotus Quickr (allowing shared Domino directory)
 - Simplified process for upgrades and installation of hot fixes
 - Security enhancements to address potential exposures that are identified by ethical hacking project
 - Support for Firefox 3.0 and additional directories (Sun SAM and Novell eDirectory)
 - Support for additional standards (FIPS/FDCC and IPv6)
- ▶ Enhancements to the Lotus Quickr connectors are available for both Lotus Quickr services for Domino and Quickr services for WebSphere Portal:
 - Domino Web Access connector (available with Domino 8.5)
 - Improved email drag-and-drop from Lotus Notes connector
 - Improved error handling when sending Quickr links using email
 - Ability for administrator to automatically populate Quickr connectors with a list of places
 - Forward proxy support
 - Enablers to customize single sign-on
 - Support for local groups (Lotus Quickr services for Domino only)

Figure 3-1 shows how you can use Lotus Quickr to solve real customer needs.

<div> Lotus Quickr solves key customer needs </div> <div> To maintain competitive position, innovate, and grow revenue, organizations require solutions to enable them to collaborate across the enterprise and beyond—to more effectively manage their information and projects </div>			
Help me	Work the way I want	Get control of my content and information	Better collaborate with partners & customers
I want to	<ul style="list-style-type: none"> • Be more productive • Work more effectively with my colleagues 	<ul style="list-style-type: none"> • Stop using my inbox to dump content • Reduce the duplication and inconsistencies of content 	<ul style="list-style-type: none"> • Quickly set up places to share content with anyone I want • Manage project securely
Lotus Quickr lets me	<ul style="list-style-type: none"> • Access and manage content naturally from within the applications I use everyday • Collaborate anywhere and anytime • Take my content and projects offline 	<ul style="list-style-type: none"> • Integrate my mail client with my shared places & libraries • Organize my files in a secured environment • Share simply and easily • Reuse and expose content across applications 	<ul style="list-style-type: none"> • Add users to my spaces myself • Use tools to track and manage my team activities

Figure 3-1 Lotus Quickr solves customer needs

Lotus Quickr Entry: IBM is providing Lotus Quickr Entry with Lotus Quickr 8.2 as a getting started subset of Lotus Quickr capabilities. Quickr Entry is available at no charge to licensed users of Lotus Notes or Domino Web Access who are on active maintenance. Each Lotus Quickr Entry user receives a single pre-designed personal workspace for storing, organizing, and sharing content. The Lotus Quickr Entry user can upgrade seamlessly from Lotus Quickr Entry to a standard Lotus Quickr license. Content is preserved, and the user can begin using the full content and team collaboration capabilities and business templates that are part of the standard Lotus Quickr product.

For more details about Lotus Quickr Entry, go to:

<http://www.ibm.com/software/lotus/products/quickr/personal.html>

For more information about Lotus Quickr, go to:

<http://www.ibm.com/software/lotus/products/quickr/>

3.1.2 IBM Lotus Symphony

Lotus Symphony is business productivity software that helps users create, edit, and share documents, spreadsheets, and presentations. It is intuitive, easy-to-use, and available at no cost to all users, our business can save potentially hundreds of dollars per user. Lotus Symphony software provides the functionality you need to perform the most common document creation and editing tasks, making it ideal for business and personal projects alike. It supports the Open Document Format (ODF), allowing organizations the ability to access, use, and maintain their documents over the long term without concern about end of life uncertainties or ongoing software licensing and royalty fees. Users can create, open, and edit documents in a wide variety of formats including ODF, Lotus SmartSuite®, and Microsoft Office. They can even export documents to the Portable Document Format (PDF).

The three core applications of IBM Lotus Symphony are as follows:

- ▶ Lotus Symphony Documents lets you create, edit, share, and save complex documents. This application includes features that help with document creation and handling:
 - Easy to create documents with predefined document templates
 - Fast formatting with predefined styles for paragraphs, characters, and headings
 - Contextual tool bars and editing menus
 - Inline spell checking and correction
 - Graphics that you can insert to create a variety of tables, charts, diagrams, and drawn items
 - Automatic creation of a table of contents, footnotes, indexes and footers and headers
- ▶ Lotus Symphony Presentations lets you create graphic presentations that can be shared with audiences by a slide show mode. You can create presentations from scratch or use the presentation templates for a variety of looks. Its capabilities include:
 - Easy to create presentations from scratch or from preconfigured presentation masters
 - Easy to manage formatting for slides, text boxes, drawing objects and graphics
 - Slide show flow and timing control
 - Support for charts, tables, drawing objects, and graphics
 - Animation for graphics and slide transition effects

- Lotus Symphony Spreadsheets lets you create a variety of spreadsheets. You can create new documents, import existing documents, or choose from a set of document templates. It includes:
 - Easy to create new spreadsheets or use built-in spreadsheet templates
 - Large library of mathematical functions that can be applied to cells
 - Robust formatting of text, cells, and spreadsheets
 - Formula evaluator to edit complex equations used in spreadsheets
 - Data table offers pivot table functionality
 - Support for tracking changes as you edit and revise spreadsheets

IBM Lotus Symphony is designed to leverage open technology and provide an easy development and deployment environment. With support for Eclipse plug-in, LotusScript® and Universal Network Objects (UNO) component model, Lotus Symphony can be extended to integrate with and enhance a wide range of applications from IBM and you.

IBM Lotus Symphony can be downloaded, installed, and used at no charge. For details, go to this web address:

<http://symphony.lotus.com>

Also available, the Lotus Symphony Savings Calculator can help you understand the potential savings your organization might see by switching all or just some of your users from Microsoft Office to Lotus Symphony (the no charge alternative from IBM).

3.2 IBM Lotus Domino Express

In this section, we provide information about IBM Lotus Domino Express software.

Attention: Certain features that we discuss in this text are only available in the latest maintenance release of Lotus Domino Express software.

3.2.1 Executive summary

Businesses are challenged to provide ways for people to easily and effectively communicate with other employees, business partners, and customers. Collectively, employees and business partners possess the knowledge capital of a company, and that valuable information must be accessible at the time of need. Also, as today's workforce becomes more geographically dispersed and virtual teams become the norm, employees need to be accessible, whether they are across the hall or across the world.

Small and midsized businesses can benefit from a version of IBM Lotus Domino software that is designed for them. Lotus Domino Express software provides a security-rich small business email and collaboration solution that includes a variety of features for a wide range business applications. Lotus Domino Express is easy to use and administer and offered at an attractive price point.


3.2.2 Business value

Lotus Domino Express software provides security-rich email, calendaring and scheduling, instant messaging, and support for a wide range of business applications at a price and ease-of-use that is designed for small and midsize businesses. By enabling people to share, manage, and organize information more efficiently, this software can help streamline business processes and enhance information sharing to help save time and money. Designed for companies with 1,000 employees or fewer, an IT staff, and an existing network. Lotus Domino Express products offer cost-effective functionality, simplified licensing, and reduced administration requirements.

Some examples of how you can use Lotus Domino Express software to help increase productivity and profitability are:


- ▶ Send and receive mail and arrange appointments and meetings. Easily see and manage related email messages as a group.
- ▶ See who is online, and engage in real-time discussions with colleagues, helping to improve responsiveness and reduce email overload.
- ▶ Use rich instant messaging, see your day at a glance, check the latest news feeds, and access optional plug-ins side-by-side with your email.
- ▶ Easily display all of your interactions.

Figure 3-2 shows how Lotus Domino Express software provides powerful tools and flexibility for running small and midsize businesses.



Lotus Domino Express software offers powerful tools and flexibility for running small businesses

- Policy documents
- Marketing materials
- Product reference
- Competitive information
- Industry news
- Tips and techniques
- Action inquiries
- Problem tracking
- Order approvals



- Discussions
- Brainstorming
- Requests for help
- Lead tracking
- Marketing plans
- Project management
- Account management
- Soliciting feedback

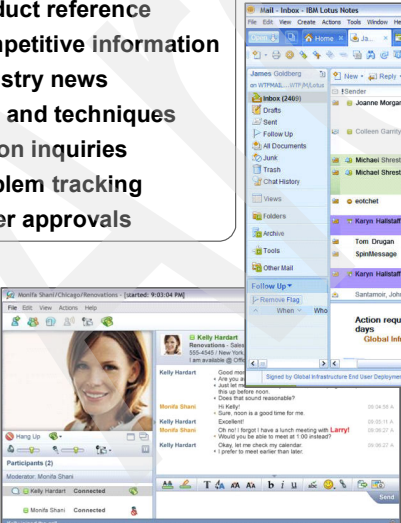
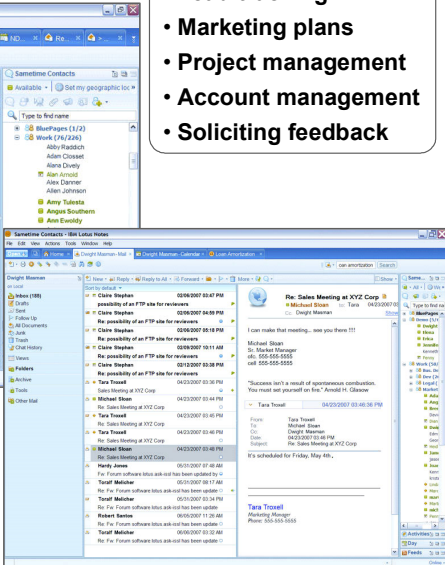



Figure 3-2 Lotus Domino Express software

3.2.3 Product overview

Lotus Domino Express software offers a scalable, highly-reliable, and feature-rich email environment with productivity functions that your business demands. Group calendaring, follow-up and to-do lists, and instant messaging are integrated right into your email inbox, eliminating the need to switch between separate, disparate, and even manual ways of performing daily tasks. Lotus Domino Express software provides easy-to-use graphical tools for administering and tuning the Lotus Domino Express software environment for optimal performance.

Lotus Domino Express software is flexible, and it supports a variety of client-software, such as the Lotus Notes rich client, the zero-footprint Lotus iNotes® web client, and many mobile devices.

Lotus Domino Designer provides an open and extensible application development environment for building collaborative business applications that support key business processes such as workflow automation, project management, customer relationship management, and more. Lotus Domino Designer software is available at no charge to anyone interested, they just register at the IBM developerWorks® website. This product is particularly interesting to developers, such as Java and web developers. Lotus Domino Designer is available to all interested parties by going to the IBM developerWorks site, at this address:

<http://www.ibm.com/developerworks/lotus>

IBM Lotus Domino Express software, an umbrella name for three offerings for the small and midsize business customer, consists of the following applications:

- ▶ IBM Lotus Domino Messaging Express

Lotus Domino Messaging Express is designed to make it faster, easier and less expensive for small and midsize companies to deploy security-rich, reliable email, calendaring and scheduling, discussion forums and team workspaces. It includes a choice of either the Lotus Notes or Lotus iNotes client software, and is accessible by mobile devices that support Lotus Notes Traveler software.

- ▶ IBM Lotus Domino Collaboration Express

Lotus Domino Collaboration Express includes all the capabilities of Lotus Domino Messaging Express plus the ability to run custom or vendor applications built on Lotus Domino software. It includes a choice of either the Lotus Notes or Lotus iNotes client software, and is accessible by mobile devices that support Lotus Notes Traveler software.

- ▶ IBM Lotus Domino Utility Server Express

Using Lotus Domino Utility Server Express provides virtually unlimited access to Lotus Domino applications (not messaging) developed using the available IBM Lotus Domino Designer software. Examples of Lotus Domino applications include: human resources, quality assurance, and customer relationship management applications; project tracking; and supply chain and customer support solutions. It provides the capability to make Lotus Domino applications available to internal or external users as needed. Client software is not included.

A license for Lotus Domino Collaboration Express or Lotus Domino Messaging Express includes a choice of either Lotus Notes or Lotus iNotes client. Lotus iNotes software (using a web browser) has a similar interface to the Lotus Notes client and many of the same new features, such as mail threading and customizable preview panes.

Lotus Domino Collaboration Express customers who are interested in building applications need to purchase a Lotus Enterprise Client Access License (CAL) for each developer they intend to have writing and publishing Lotus Domino applications. The Lotus Enterprise CAL includes the entitlement to use Lotus Domino Designer software.

Lotus Domino Express software offerings are designed to deliver the proven performance, security-rich features, and dependability of Lotus Notes and Domino to small and mid-sized businesses with simplified licensing at a competitive price. For example, two of the three offerings bundle server software and several client options, and are priced on a per-user basis. Table 3-1 provides a comparison of the capabilities in the Lotus Domino Express software offering.

Table 3-1 The Lotus Domino Express software offering capabilities

	Lotus Domino Messaging Express	Lotus Domino Collaboration Express	Lotus Domino Utility Server Express
Email, calendar, and group scheduling	Yes	Yes	
Contact management and to-do lists	Yes	Yes	
Document sharing	Yes	Yes	
Lotus Symphony office productivity tools	Yes	Yes	
Instant messaging and presence awareness	Yes	Yes	
Blogs, forms, and teamroom application templates	Yes	Yes	
Application and web development		Yes	Yes
Includes choice of the IBM Lotus Notes rich desktop client or the IBM Lotus iNotes Web-based client ^a	Yes	Yes	
Provides mobile client support for Apple iPhone, Microsoft Windows Mobile software, and Nokia Symbian devices	Yes	Yes	

a. Supports the Microsoft Internet Explorer and Mozilla Firefox browsers

Using Lotus Domino Express software's easy-to-use messaging and collaboration environment, you can easily manage the complexities of your business. As your business grows, Lotus Domino software provides a family of products that can grow with your company at a pace that is appropriate to its particular business. The value that Lotus Domino Express software brings can be realized in all types of businesses and industries.

3.2.4 IBM customer case studies

For case studies about how IBM Lotus Domino Express software can help to provide the competitive advantage and a real ROI to customers, go to:

<http://www.ibm.com/software/lotus/products/dominoexpress/casestudies.html>

3.2.5 Platforms supported

Table 3-2 lists the platforms that Lotus Domino Express software supports.

Table 3-2 Lotus Domino Express software supported platforms

Platform	Server	Client
IBM i (formerly i5/OS®)	Yes	
IBM AIX	Yes	
Sun Solaris	Yes	
Microsoft Windows	Yes	Yes
Microsoft Windows Mobile		Yes
Linux	Yes	SUSE Linux Enterprise Desktop 10, Red Hat Enterprise Linux 5.1, Ubuntu
Multiple web browsers		Yes

3.2.6 Key resources

For more information, see the following resources:

- ▶ Lotus Notes and Domino software:
<http://www.ibm.com/software/lotus/notesanddomino/>
- ▶ Lotus Domino Express home page:
<http://www.ibm.com/software/lotus/products/dominoexpress/>
- ▶ Lotus Domino product information and documentation center:
<http://www.ibm.com/developerworks/lotus/documentation/domino/>
- ▶ Lotus Notes and Domino licensing:
<http://www.ibm.com/software/sw-lotus/products/product4.nsf/wdocs/notesdominolicensing>
- ▶ Lotus iNotes:
<http://www.ibm.com/software/lotus/products/inotes/>
- ▶ Lotus Symphony:
<http://symphony.lotus.com/software/lotus/symphony/home.jspa>
- ▶ Lotus Domino Designer
<http://www.ibm.com/software/lotus/products/dominodesigner/>
- ▶ Lotus Notes Traveler:
<http://www.ibm.com/software/lotus/products/notes/traveler.html>

3.3 WebSphere Portal Express

In this section, we discuss IBM WebSphere Portal Express.

3.3.1 Executive summary

Do you want to take advantage of web technology without requiring expensive web specialists to build the solution? Are you looking for a single, easy-to-deploy solution to help with application integration, document management, and web content management? If so, IBM WebSphere Portal Express might be the product for you. It is a cost-effective, easy-to-deploy solution that:

- ▶ Offers collaboration, document management, web content management, online presence awareness, and application integration in a single, easy-to-deploy solution.
- ▶ Is designed to help you receive immediate benefit from your investment with fast installation and example intranet and extranet websites that you can easily customize and deploy.
- ▶ Helps customers, partners, and employees collaborate and share documents, deploy and maintain websites, and access the applications and content that is needed to be more efficient and effective.

WebSphere Portal Express is:

- ▶ A *portal* that provides a single entry point into your business and web applications, which gives you and your team direct access to information and applications. With WebSphere Portal Express customization capabilities, you have access to task-related applications and data in a secure environment.
- ▶ *Document management* that provides a better way for users to share, view, and organize files of all types and helps to reduce the need to email these documents to team members.
- ▶ *Web content management* that helps you build a dynamic web presence by allowing your team to organize, maintain, and manage web content without additional IT support.
- ▶ *Collaboration* that provides a means for you to share information, knowledge, and experience with customers, partners, suppliers, and coworkers on a dynamic, as needed basis. Included in the package are instant messaging and presence awareness capabilities.

By providing all of these capabilities in a single package, you and your team have access to technology that can help you solve your team communication, web and conventional application access, and web content and document management problems.

WebSphere Portlet Factory Designer is now included, and can help you achieve faster time-to-value, accelerated deployments, and greater employee productivity from your IBM WebSphere Portal implementations. WebSphere Portlet Factory's ease of use and advanced development features dramatically streamline the entire portlet and web application development process.

WebSphere Portal Express Idle Standby Server:

WebSphere Portal Express Idle Standby Server (an optional add-on to your WebSphere Portal Express implementation) offers support for clustering for failover with a cost-effective solution that helps to ensure server availability. If your primary WebSphere Portal Express server fails, a failover to a secondary server within the cluster enables your critical business to continue to operate.

3.3.2 Business value

WebSphere Portal Express provides the following benefits to small and midsized businesses (with fewer than 1000 users) as well as departments within larger organizations:

- ▶ Helps you increase productivity.

WebSphere Portal Express provides you, your customers, and your employees with timely information and access to applications, people, and other content from a single consistent user interface.

- ▶ Makes you more responsive.

Customers, employees, and partners are provided access to your business websites with information and applications that are consolidated and organized for easy access and use.

- ▶ Lets you use your existing investments.

WebSphere Portal Express provides easy access to existing mail and calendaring systems and enables easy access to and integration with your existing applications and infrastructure.

- ▶ Prepares you for growth.

WebSphere Portal Express is a solution that is based on industry standards that can grow as your organization's needs grow, without high maintenance, migration, and retraining around business solutions.

- ▶ Simplifies your IT management.

WebSphere Portal Express offers simplified deployment and administration of diverse sets of applications for different communities of users, with improved administration. Simplified installation and improved administration helps to lower deployments costs.

IBM is a partner who understands. IBM helps businesses, in a wide array of industries, to implement successful portal-based solutions that help them be more productive, run their business with greater speed and accuracy, and be more responsive to their customers.

Any technology introduced into your environment must have both a positive effect on your business and it should have a positive effect on the key players associated directly with the technology. The key players are users, developers, and administrators.

WebSphere Portal Express has benefits for your users, by providing:

- ▶ A single, unified interface where users can access all of the information, applications, and people that they need to accomplish the task at hand
- ▶ A secure environment for working on documents, either on their own or in a team
- ▶ A way to easily update content on intranet, Internet, or extranet sites without technical skills
- ▶ The ability to use the applications with which they are familiar
- ▶ Intranet and extranet example websites that can easily be tailored to your specific needs, enabling fast deployment of new sites

WebSphere Portal Express has benefits for your developers, by providing:

- ▶ A better way to develop solutions
- ▶ A set of building blocks that speeds up the development time of applications
- ▶ Development tools enabling the development of solutions customized to the organization's unique needs
- ▶ A solution based on open standards, making it easier to integrate with third-party solutions

WebSphere Portal Express has benefits for your administrators, by providing:

- ▶ Fast installation of WebSphere Portal Express, including example intranet and extranet websites that can be easily customized and deployed
- ▶ A method to easily deploy and administer a diverse set of applications for specific user groups
- ▶ A solution that works with existing infrastructure and existing applications
- ▶ A means to easily train new users by providing a single interface across the business' applications
- ▶ A way to easily delegate administrative tasks to line-of-business managers

3.3.3 Product overview

IBM WebSphere Portal Express is an easy-to-deploy solution that integrates portal, document management, web content management, and collaboration capabilities into a single package, which is targeted to meet the needs of small and midsize businesses (SMBs).

WebSphere Portal Express includes example intranet and extranet websites that you can use out-of-the box or customized to your needs, which enable you to create an easy-to-use, consolidated view of your business that anyone can use. This consolidated view can include access to your email, calendar, employees, and existing systems and information. People can work with their documents collaboratively, from within their existing applications (Lotus Notes, Microsoft Office applications, and Microsoft Windows Explorer).

WebSphere Portal Express grows with you, as your needs grow. Based on easily extensible, open standards, WebSphere Portal Express allows you to add capabilities as needed. IBM products, such as Lotus Domino Express and Lotus ActiveInsight® Team Edition, are available to expand your capabilities in areas, such as messaging and dashboards/Key Performance Indicators (KPI). WebSphere Portal Express also includes the latest tools and resources for developing custom solutions that are tailored for your business. It also supports an upgrade path to the IBM WebSphere Portal enterprise products, which are designed with scalability, availability, and functionality in mind.

The WebSphere Portal Catalog includes more than 600 IBM Business Partner solutions that you can use to extend the capabilities of your WebSphere Portal Express installation or be tailored to your specific needs.

Example intranet and extranet websites are included, enabling you to take advantage of the value of your portal purchase and receive a quick return on your investment. WebSphere Portal Express also includes integrated web content management, meaning that the people who write your intranet or extranet web page content can do so without the support of a web master or other IT resource.

WebSphere Portal Express includes WebSphere Portlet Factory, which is a speeding portlet development for WebSphere Portal. WebSphere Portlet Factory consists of tools and technology to easily create, customize, deploy, and maintain portlets.

Instant messaging and presence awareness capabilities are included, so people can communicate with each other at any time, while on the phone, in a meeting, whenever needed. Single sign-on means that your users can login to the portal one time and be provided with access to your other existing systems. WebSphere Portal Express can provide consolidated access to all applications—everything you or your organization's users need, which includes your calendar, email, employees, or other applications and information.

WebSphere Portal Express capabilities

The IBM WebSphere Portal Express capabilities include:

- ▶ *Integrated portal content management* giving business users the ability to create and manage portal content without IT intervention or support.
- ▶ *Contextual collaboration* enabling users to share information and collaborate within the context of the application they are working.
- ▶ *Roles-based access* offering advanced control over access to information, content, and applications based on users' roles and responsibilities in the organization.
- ▶ *Search* facilitating the searching, indexing, and displaying of information from multiple portal sites and document libraries.
- ▶ *Composite applications support* enabling the use of select components and logic from two or more applications to build a completely new application. Composite applications are built on a services-oriented architecture (SOA) so that they can be optimized and dynamically changed.
- ▶ *Workspace customization tools* enabling users to customize their work environments and navigate to the information they want and need.
- ▶ *Instant messaging and presence awareness* capabilities allowing your users to find and chat with support staff or colleagues without picking up the phone.
- ▶ *Development tools and capabilities* allowing customization of existing applications and the creation of new custom applications that help to address an organization's unique needs.
- ▶ *The latest version of WebSphere Portal* providing extended capabilities with support for Lotus Domino, Lotus Forms, and Lotus ActiveInsight.

WebSphere Portal Express Idle Standby Server

An affordable failover solution is available with WebSphere Portal Express. WebSphere Portal Express Idle Standby Server, which is an optional feature, helps to ensure high availability of your WebSphere Portal Express implementation. With WebSphere Portal Express Idle Standby Server, WebSphere Portal Express customers can help ensure access to mission critical information and applications through an incremental add-on that maximizes existing investments and delivers the low cost of ownership that small and midsized customers expect.

Features and benefits of WebSphere Portal Express Idle Standby Server:

- ▶ Include a cluster configuration in which one server is active at all times. The idle standby server only becomes active if that primary server fails.
- ▶ Provide support for clustered deployments, allowing for failover recovery to help ensure minimal impact on business operations during planned or unplanned server outages.
- ▶ Enable you to create a high availability plan and to optimize your investment by utilizing a low cost standby server to take over workload when the primary server fails.
- ▶ Maximize your existing IT investments and address today's mission critical business needs by helping to ensure server reliability with low cost of ownership.
- ▶ Ensure high availability of your business data with a resilient and agile portal implementation that helps ensure that employees, customers, and partners have ongoing access to the websites on which the information and applications that they need to do their job resides.

3.3.4 IBM Business Partner case study

This example IBM Business Partner case study shows the use of WebSphere Portal Express in a customer solution.

IBM Business Partner Elinar Oy provided a solution based on WebSphere Portal Express helping Satamaito Dairy develop advanced workflow, process control, and related management information resources. To learn more about this IBM Business Partner solution and to find more IBM Business Partner case study success stories, refer to *Winning in Midmarket: 100 Software Success Stories* at:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

3.3.5 Platforms supported

IBM WebSphere Portal Express supports these operating systems for servers:

- ▶ Microsoft Windows operating systems:
 - Microsoft Windows Server 2003 Standard Edition with Service Pack (SP) 1
 - Microsoft Windows Server 2003 Enterprise Edition with Service Pack 2
 - Windows Vista Enterprise (supported for developer platform only)
 - Windows XP Professional with SP 1a or SP 2 (for development and test purposes only)
- ▶ IBM System i® (operating systems - i5/OS V5R4 and i5/OS V6R1.P61)
- ▶ Linux x86-32:
 - Red Hat Enterprise Linux Advanced Server (AS) V4.0 Update 4
 - Red Hat Enterprise Linux AS V5.0
 - SUSE Linux Enterprise Server 9 (2.6 Kernel) Service Pack 3
 - SUSE Linux Enterprise Server 10

For more details about the hardware and software requirements, go to:

<http://www.ibm.com/support/docview.wss?rs=688&uid=swg27007791>

3.3.6 Key resources

For more information, see the following resources:

- ▶ WebSphere Portal Express V6.1 product page
<http://ibm.com/websphere/portalexpress/>
- ▶ WebSphere Portal Information Centers
<http://ibm.com/websphere/portal/library>

3.4 IBM Lotus Foundations

In this section, we introduce the IBM Lotus Foundations offering, which is a family of software applications that are intended for businesses with five to 500 users.

3.4.1 Executive summary

As a small or midsize business owner, you know that you must focus on keeping your customers happy, your employees productive, and the business profitable. One way to help accomplish that is through good communication! Email, creating, sharing, and centrally managing documents and files is key to good communication. You also need to ensure that all your business information is securely backed up and protected. How can these needs be met without the hassle or expense of dealing with complex IT systems?

The Lotus Foundations family of software appliances provide a complete, affordable solution for small and midsize businesses with little or no IT staff. And they contain the essential software that businesses need to focus on running the business instead of managing computer systems, software that is necessary to make people more productive, reduce IT overhead, and improve the bottom line.

The Lotus Foundations offering, currently, consists of these products:

- ▶ Lotus Foundations Start

Lotus Foundations Start provides small businesses with all of the essential software that they need to share information, keep people connected, and help ensure that data is protected. This system automates functions such as installation, configuration, and security checks, and self-manages daily IT activities.

- ▶ Lotus Foundations Reach

Lotus Foundations Reach is an optional add-on component for Lotus Foundations Start that provides a full-featured, all-in-one communications experience. Lotus Foundations Reach adds award-winning secured instant messaging, VoIP and video chat capabilities, and more. Your team can find information and connect with each other in real time, without the costs and complexities associated with traditional business communications solutions. Instant messaging (including file transfer) and VoIP technology help to reduce email storage, telephony, international long distance and roaming charges, and can lead to faster response times and improved productivity.

- ▶ Lotus Foundations Branch Office

Lotus Foundations Branch Office enables organizations with Lotus Domino skills and data at their headquarter operations to extend those capabilities to remote offices and satellite locations of up to 500 employees that lack dedicated IT personnel.

- ▶ Lotus Foundations Appliance

The Lotus Foundations Appliance is a purpose-built server offering for Lotus Foundations software providing a plug-and-play experience for the small business or branch office.

3.4.2 Business value

What is the business value of Lotus Foundations Start? Lotus Foundations Start is a small business solution that provides the essential software and infrastructure services to run a company with up to 500 employees, with the following business value:

- ▶ Run your business on a reliable and secure appliance designed especially for small businesses.
- ▶ Get essential software in one affordable package.
- ▶ Save time and costs with a unique self-managing, self-healing, and self-configuring system.
- ▶ Easily set up a secure network, connect your office network to the Internet or to other branch offices.

- ▶ Protect your business-critical and confidential electronic data without purchasing expensive third-party software.
- ▶ Perform a full system recovery if needed in the event of a disaster; the system is designed to help you through this process.
- ▶ Connect and collaborate like never before. Small businesses now get advanced collaboration capabilities without the complexities and a high price tag. Easily share and communicate information with customers, partners, and colleagues.
- ▶ Enable the mobile workforce with offline access to mail folders and Domino-based business applications.
- ▶ Provide anytime and anywhere access with WebMail that is intuitive, fast, and scalable.
- ▶ Save cost with bundled office productivity tools, and work with spreadsheets, documents, presentations, without purchasing expensive third-party office software.
- ▶ Run Lotus Domino, Microsoft Windows, and native Linux applications on a single server.
- ▶ Support technology needs for satellite offices.

Capabilities provide value: Capabilities of Lotus Foundations Start, such as self-managing and self-configuring, backup and recovery, and network-level and office environment security, have real business value:

- ▶ Self-managing and self-configuring features save time and cost by automating manual day-to-day IT management, and eliminating the need for on-site IT staff:
 - Automated installation and configuration ensures that systems are up and running quickly.
 - Detects, isolates, and corrects problems before they affect system operations.
 - Eliminates the need for operating system patch management with automated updates and installs.
- ▶ Backup and recovery protects company data with local and encrypted backups:
 - Automatically backs up data at regular intervals using its intelligent disk backup technology.
 - Executes a full system recovery by leveraging its integrated backup software in only minutes, all without the need of an IT staff. Your Business Partners can remotely recover data.
- ▶ Network-level security protects the system from external threats:
 - Stops viruses and spam at the network level with optionally available antivirus and antispyware software.
 - Auto-configures your firewall and VPN, which puts an end to unwanted network intrusions and prevents unauthorized user access.
- ▶ You can easily set up a secure office network, or connect your network to the Internet or to other branch offices:
 - Self-managing capabilities automatically map network surroundings, which allows you to quickly set up your network and auto-configure your firewall and VPN.
 - Gives you anytime, anywhere access with remote access services and Web-mail capabilities.
- ▶ An optional add-on to Lotus Foundations Start is Lotus Foundations Reach (which leverages IBM Lotus Sametime Standard technology). With it you get integrated, business-class instant messaging, computer-to-computer VoIP, and video chat capabilities with the security features required for business use. This addition helps organizations communicate more effectively, reduce travel costs and burdens, decrease response times, and improve customer service.

3.4.3 Product overview

IBM Lotus Foundations Start is an on-premise software appliance and a complete solution for businesses with five to 500 employees that have limited or no in-house IT resources. It enables you to use email, create and share documents, use business applications, centrally manage files, store and secure business data, control access to information, connect offices and employees, and protects your network and systems from unwanted disruptions and intrusions. You can launch this solution in as little as 30 minutes and leverage its self-managing and self-healing capabilities that minimize the need for human intervention.

IBM Lotus Foundations Start supports distributed deployment, which means that a Lotus Foundations Start deployment can be shared across a number of locations, such as a head office and remote office location, with users being able to share data between the two locations. Example 3-3 illustrates IBM Lotus Foundations Start, a complete software appliance solution for small businesses.

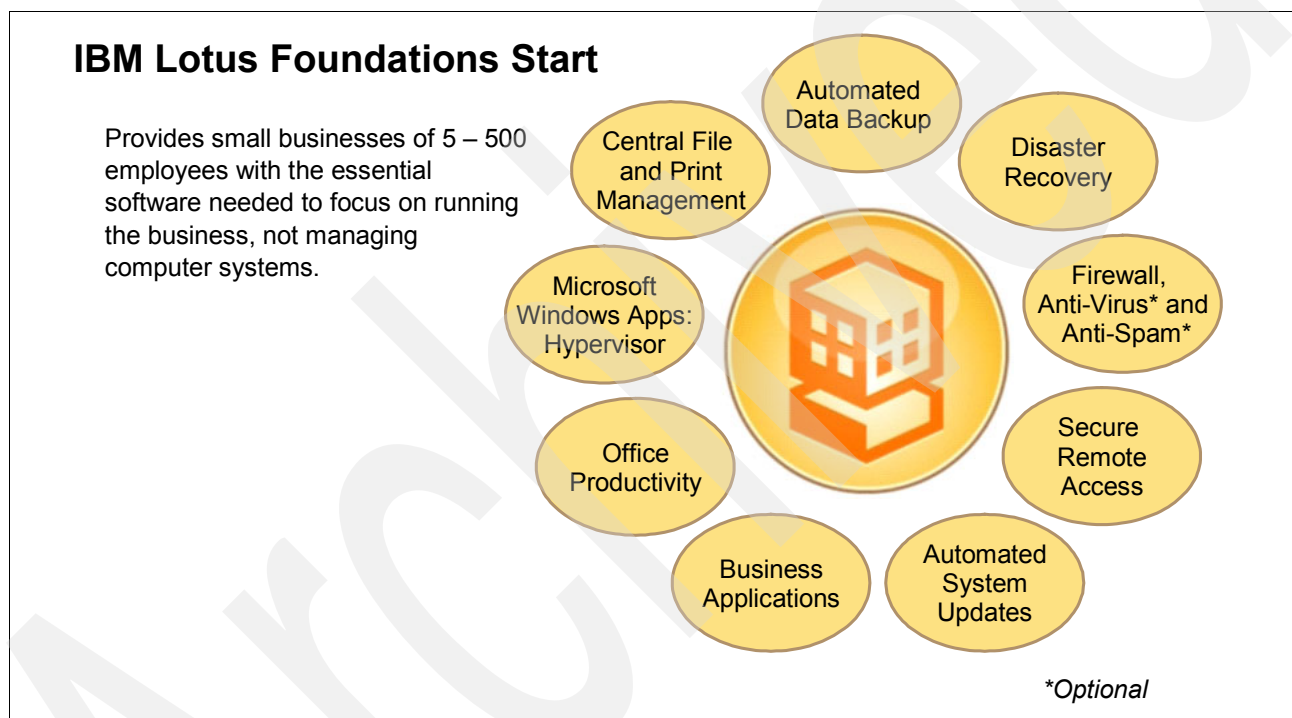


Figure 3-3 IBM Lotus Foundations Start

At its core, Lotus Foundations Start embodies simplicity and ease of use. The system is easy to understand and operate and is designed specifically for small and midsize businesses that have limited IT expertise.

Lotus Foundations Start provides frequent, automated, and prioritized disk backups of your data. The full system recovery capability ensures fast recovery in the event of a disaster. A variety of integrated features provide reliability and security; those features include firewall, VPN technology for secure remote access, and optional antivirus and antispam technology.

Lotus Foundations Start provides enterprise-quality email and collaboration, calendars, and contracts for small and midsize businesses. Also included is the Lotus Symphony office productivity suite with tools for spreadsheets, presentations, and documents, so there is no need to purchase additional office software and upgrades. With Lotus Foundations Start, you can run Microsoft Windows, Linux, and Domino applications.

You can add Lotus Foundations Reach (an optional add-on) to Lotus Foundations Start. Lotus Foundations Reach (Figure 3-4) leverages Lotus Sametime Standard software's capabilities, which include:

- ▶ Award-winning, business-class instant messaging
- ▶ Rich text, time stamps, spell check and emoticons
- ▶ Multi-way chat
- ▶ Built-in computer-to-computer VoIP and video chat
- ▶ Optional file transfer Integrated chat histories
- ▶ Location awareness
- ▶ Contact list with type-ahead and search
- ▶ Contact Business cards

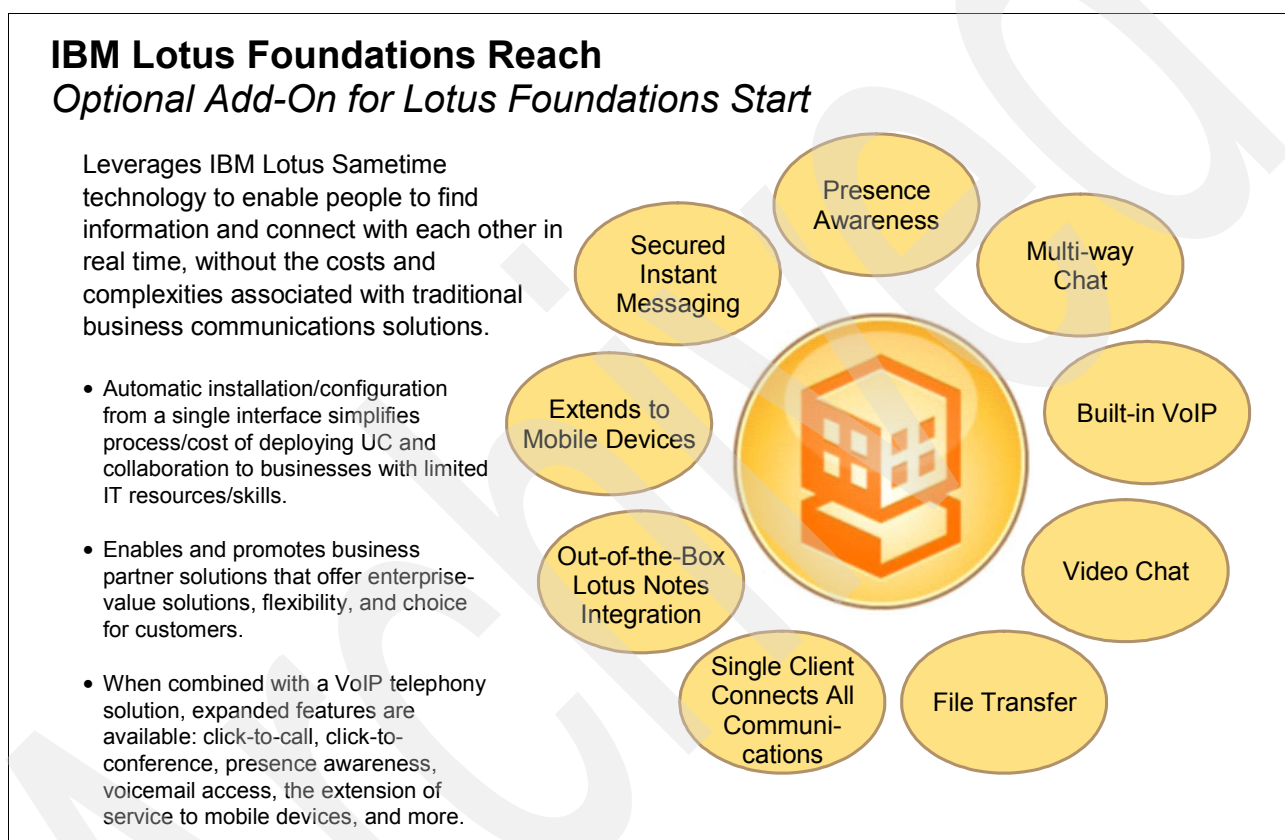


Figure 3-4 Lotus Foundations Reach

3.4.4 IBM Business Partner case study

This example IBM Business Partner case study shows the use of Lotus Foundation Start in a customer solution.

Special Needs Nursing – Corner Stone worked with IBM Business Partner Kenner Consulting, LLC., to deploy the IBM Lotus Foundations Start software appliance, which provides security features, such as a built-in firewall and robust antivirus and antispyware protection, and backup and recovery capabilities.

To learn more about this IBM Business Partner solution, go to the web address:

http://www.ibm.com/software/success/cssdb.nsf/CS/CCLE-7QFPT4?OpenDocument&Site=smbgen&cty=en_us

3.4.5 Key resources

- ▶ Lotus Foundations website
<http://www.lotusfoundations.com/>
- ▶ IBM Lotus Foundations Start information
<http://www.ibm.com/software/lotus/products/foundations/start/>
- ▶ IBM Lotus Foundations Start (launch page for partners)
<http://www.lotusfoundations.com>
- ▶ Smart Cube
<http://www.ibm.com/smartmarket/us/en/productcategory/smartcubes.html>

3.5 IBM Lotus Forms Turbo

In this section, we discuss IBM Lotus Forms Turbo 3.5.

3.5.1 Executive summary

Organizations of all sizes, in numerous industries, maintain information within forms, including paper-driven markets, such as banking, insurance, government, manufacturing, retail, and distribution. Increasingly organizations are looking for an easy way to automate their business processes by creating and distributing Web-based eForms quickly without IT involvement. Now Lotus Forms Turbo provides a solution to make it easy for line-of-business and non-technical users to automate their forms-based business processes quickly.

3.5.2 Business value

Lotus Forms Turbo is a new addition to the Lotus Forms family of products, targeted specifically for non-technical users who need to create simple eForms quickly. Lotus Forms Turbo is easy and quick to deploy. It requires no training and is designed to help you address basic form requirements, such as surveys, applications, feedback, orders, request for submission, and more without involvement from the IT department.

Lotus Forms Turbo is included in Lotus Forms 3.5 and is also available as a stand-alone product for those who might not require the advanced capabilities of the full Lotus Forms offering.

Lotus Forms Turbo helps organizations that:

- ▶ Need to automate business processes with basic eForms without IT department involvement
- ▶ Need to deploy Web-based forms quickly
- ▶ Need to minimize labor-intensive data entry operations
- ▶ Need to reduce paper handling, management, and storage costs
- ▶ Need to improve customer and citizen service by enabling instant access to information
- ▶ Incur errors and delays that result from dual data entry and inaccurate or incomplete data

3.5.3 Product overview

Lotus Forms Turbo software is:

- ▶ Quickly and easily installed to help non-technical customers to create electronic forms to share within and outside the organization within minutes.
- ▶ An out-of-the box eForms solution that enables line-of-business users to easily design, view, store, and route simple forms using email and the web without involvement of the IT department.
- ▶ Flexible and scalable. It provides the foundation that many organizations require for their basic eForm needs with the opportunity to grow into enterprise-scale Lotus Forms implementation in the future.
- ▶ Built on open standards, which frees you from proprietary platform restrictions.

Figure 3-5 shows how you can easily use Lotus Forms Turbo to create eforms.

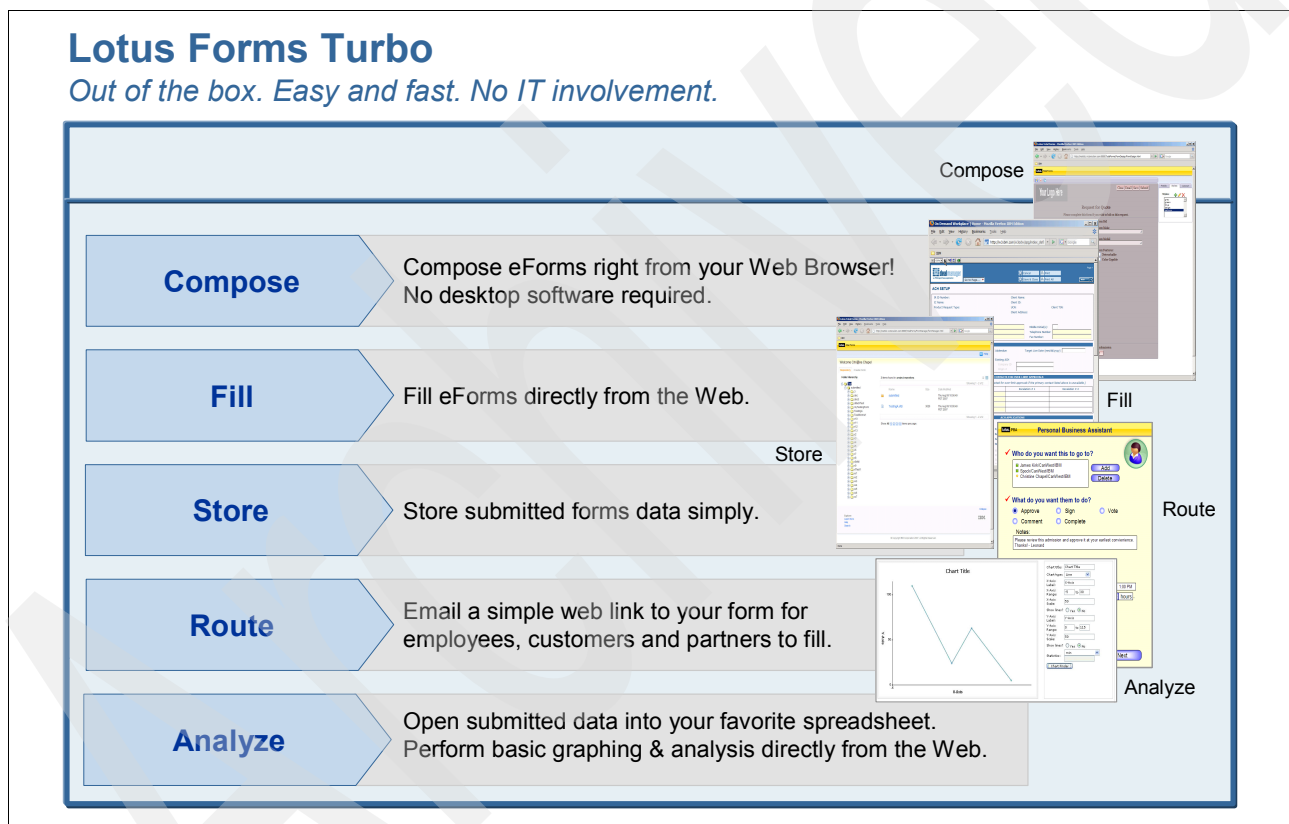


Figure 3-5 Creating eforms using Lotus Forms Turbo

Lotus Forms Turbo offers the following benefits:

- ▶ Quick to install and enables you to create eForms within minutes that can be easily routed using email and the web, without IT involvement.
- ▶ Helps streamline business-process automation and leverages existing IT systems.
- ▶ Reduces operational costs and paper consumption.
- ▶ A scalable, flexible, and affordable eForms solution that helps organizations realize immediate value while allowing room for growth.

- ▶ Based on open standards. It does not require proprietary middleware or any software other than a web browser.
- ▶ Supports online and offline-form completion.
- ▶ Offers higher ease of use and lower maintenance and administration headaches through zero footprint forms solution.
- ▶ Option for scalability and flexibility through an upgrade to Lotus Forms enterprise scale solution to allow seamless integration with more than 40 different back-end systems.
- ▶ Created by a team with 12+ years of experience in providing enterprise-scale eForms solutions to a global market.

3.5.4 Platform requirements

Lotus Forms Turbo minimum requirements are as follows:

- ▶ Supported Operating Systems include:
IBM AIX Version 5.3, 6.1, Red Hat Linux 5.1, SUSE Linux 10 Enterprise Edition, Windows Server 2003 Standard Edition, Windows XP, Vista Business, and Vista Enterprise.
- ▶ Here is the preferable server equipment for Lotus Forms Turbo:
 - Processor: 3.0 GHz, multi-core CPU.
 - RAM: 6 GB is the preferable amount. Better performance characteristics can be achieved by allocating higher levels of RAM.
 - Disk space: 100 GB is preferable.
- ▶ Get more value from your IT investment with Lotus Forms Turbo
Lotus Forms Turbo helps to increase the value of many IBM software and middleware offerings through support of the key content that most organizations maintain: forms. As a Lotus Forms Turbo customer, you can upgrade to the enterprise version of Lotus Forms as your needs grow and change. Lotus Forms Turbo reduces the development costs that are associated with automating business processes by making it easy to integrate forms data with existing systems, which include: IBM WebSphere Portal, FileNet, IBM DB2 Content Manager, IBM Lotus Notes, and Lotus Domino.

3.5.5 Key resources

For more information, see the following resources:

- ▶ Lotus Forms 3.5 and Lotus Forms Turbo data sheet
<ftp://ftp.software.ibm.com/software/lotus/lotusweb/forms/LotusForms3.5DATA-SHEET.pdf>
- ▶ IBM Lotus Forms Turbo product page
<http://www.ibm.com/software/lotus/forms/turbo/index.html>
- ▶ Try sample eForms in the Solutions Catalog
<http://www.ibm.com/software/lotus/forms/catalog/>
- ▶ Lotus Forms Turbo live on Lotus Greenhouse
<https://greenhouse.lotus.com/turbo/open/route/view/start?formName=nozQD99BXURCBM2b1222872770020>

3.6 IBM LotusLive

In this section, we introduce the IBM LotusLive offering.

3.6.1 Executive summary

Are you looking for ways to reach beyond the walls of your business to connect, engage, and share with colleagues, customers, and partners in a secure manner? Are you looking for ways to maximize your existing technology investments while having access to the newest, emerging business technologies without the cost of an IT department or support team? Are you looking for ways to innovate, grow, and build your business?

LotusLive delivers cloud-based, integrated email, web conferencing, social networking and collaboration services to simplify and improve daily business interactions with customers, partners and colleagues; all with IBM's focus on security, reliability and integration.

IBM recognizes that not all people in the organization have the same needs when it comes to messaging and collaboration. IBM developed a spectrum of offerings to provide people with the tools they need to do their job.

A successful cloud strategy most often consists of a hybrid of on-premise and hosted solutions. The smart approach is to identify the ways that the cloud can augment your current capabilities while reducing your costs. Our click-to-cloud capabilities ensure a seamless connection between your on-premise solutions and those in the cloud.

The LotusLive offering currently provides:

- ▶ Email:
 - LotusLive Notes™
IBM's flagship email, calendar, contact management and instant messaging, delivered in the cloud from IBM.
 - LotusLive iNotes
Security-rich, Web-based email service that provides essential messaging and calendaring capabilities to businesses of all sizes.
- ▶ Web conferencing services:
 - LotusLive Meeting
Full-featured web conferencing service designed for businesses of all sizes. Quickly and confidently share information and give presentations in a security-rich environment.
 - LotusLive Events
Online event management service that includes the full-featured web conferencing service of LotusLive Meetings and all the tools you need to manage registration, host your event and follow up with post event analysis.
- ▶ Collaboration:
 - LotusLive Engage
An integrated suite of collaboration tools that combine your social network with web conferencing and collaboration capabilities, like file storing and sharing, instant messaging and activity management.

- LotusLive Connections

An innovative set of Web-based collaboration services combined with social networking solutions including files, activities, instant messaging, profiles and contacts.

3.6.2 Business value

Midmarket customers need integrated collaboration solutions (such as email, social networking, and conferencing) but often lack the budget or bandwidth to deploy these solutions on their premises. To be successful in today's competitive business environment, these companies must work faster, leaner, and smarter than ever before. They need to reduce travel costs while still meeting with prospects and customers and facilitating team productivity. Companies need collaboration tools to help foster strong relationships, agility, good ideas, and resourcefulness. And they need to be able to leverage the same type of social networking and collaboration capabilities at work that they use in their non-work lives.

Whatever collaboration solution a business chooses, it needs to be security-rich to protect their data. Since many companies have invested considerable time and money in existing infrastructure and applications they need to be sure their collaboration solution will integrate with those existing solutions.

IBM LotusLive can provide midmarket customers the collaboration tools they need to work smarter beyond the boundaries of their company, in a security-rich environment, while also helping them to reduce IT costs.

LotusLive helps customers:

- ▶ Focus IT resources on their core business instead of on email implementation and administration
- ▶ Meet and share information more easily with their customers, suppliers, and business partners while securely connecting from anywhere, anytime.
- ▶ Provide a predictable cost model with immediate access to updates and innovations
- ▶ Save money by avoiding costly hardware and software upgrades

LotusLive provides these benefits:

- ▶ Easier to do business with virtually anyone, anywhere, anytime
- ▶ Connect from anywhere, anytime using a web browser and Internet connection
- ▶ Work beyond the boundaries of your company and outside of firewalls
- ▶ Affordable and accessible for companies of all sizes with minimal upfront investment
- ▶ Extremely easy to acquire
- ▶ Work-ready integrated business applications

3.6.3 Product overview

IBM LotusLive provides integrated, cloud-based email, web conferencing, instant messaging, file sharing, relationship management and project tracking that enables you to work with anyone from anywhere, all with IBM's focus on security, reliability, and enterprise integration. LotusLive is affordable and accessible for companies of all sizes with little to no up-front investment, predictable monthly costs, and minimal IT staff required for implementation.

LotusLive Engage

LotusLive Engage delivers an integrated suite of collaboration tools that combine your social network with web conferencing and collaboration capabilities, such as file storing and sharing, instant messaging, and activity management. LotusLive Engage allows you to share

information more easily with customers, suppliers, and business partners from anywhere, anytime by a web browser and internet connection.

LotusLive Engage collaborative services include:

- ▶ **Meetings**
An always ready on-demand meeting room with a single, static ID. Use it for customer presentations or collaboration sessions. Easily invite people from the My Network service or anywhere and share a file from the Store and Share service.
- ▶ **Files**
Share targeted business materials quickly with an entire community or just an individual. Upload and store your files with world-class security features. Use a web browser to access your files from anywhere. Share and collaborate with individuals and groups on any type of file. Publish the files to the Meeting service and share with any contact or everyone in your company quickly.
- ▶ **Instant Messaging**
Locate a contact in the LotusLive community and start a real-time discussion about new opportunities. Use instant messaging to chat with LotusLive users. Add anyone in LotusLive to your chat community.
- ▶ **My Network**
Add customizable, shareable contact information to expand your business network. Create groups to make organizing your collaborations easy. Keep track of information about your clients and customers and important dates and events. Leverage the social networking features to connect to others to share contact information.
- ▶ **Activities**
Focus your group or project team on a subject or task. Create, prioritize, and share presentations, documents, and To-Do lists.
- ▶ **Forms**
Create a survey and quickly visualize your survey data through different types of charts, graphs, diagrams, and maps.
- ▶ **Charts**
Upload or create datasets and let Live Charts create an instant graphical view to share with others.

LotusLive Meetings

LotusLive Meetings is a full-featured web conferencing service designed for businesses of all sizes. It allows users to quickly share information, give presentations, and conduct demonstrations in a security-rich environment. LotusLive Meetings is accessed by the Internet using a web browser, so meetings can take place almost anywhere, anytime, and with anyone. LotusLive Meetings can help users reduce travel costs, shorten sales cycles and be more productive.

LotusLive Meetings is a web conferencing service that is easy-to-use, full-featured, and does not require reservations. It also includes:

- ▶ Presentation, application, and desktop sharing
- ▶ Multiple presenters
- ▶ Polling, chat, recording, and playback
- ▶ Audiocasting and videocasting

The LotusLive Meetings application starts quickly, and has a simple sign-in process. Presentations can be planned or started on-the-fly. There is no need to reserve anything. Used with an optional audio conferencing service, LotusLive Meetings is useful for the bulk of those typical, one-to-one telephone calls. It is perfectly suited for ad hoc meetings where simplicity and flexibility are required.

Presentations can consist of anything you might want to share from a computer. IBM Lotus Symphony and Microsoft Office files can be published and reviewed. Conduct web tours, demonstrate web services, or leverage online content during presentations. Easily share desktop applications for real-time software demonstrations and application training.

LotusLive Meetings is flexible and secure, and requires only a browser and an Internet connection. All communications are encrypted with 128-bit SSL.

LotusLive Events

LotusLive Events is an online event management service that includes a full-featured web conferencing service and all the tools needed to manage registration, host an event and follow-up with post event analysis. LotusLive Events allows users to host any type of meeting, from a large online training session to promoting a new product with a webinar. It helps boost attendance with professional, ready-to-go invitations, reminder emails, and easy-to-use registration templates.

Using LotusLive Events you can focus on your event, not the technical details. Whether you are hosting a large online training session or promoting your product with a webinar, LotusLive Events can help you improve it. Boost your attendance with professional, ready-to-go invitations, reminder emails, and easy registration templates. Keep your audience engaged using our industry-leading web conferencing services. LotusLive Events makes it easy to get valuable feedback with simple surveys.

With the automated features of LotusLive Events, you simply enter your event information one time and your work is done. Registration updates are all in one place, email reminders are automatic, and you have access to guest registration information for future events. It is end-to-end online event management at its best!

LotusLive Events includes all the features of LotusLive Meetings plus:

- ▶ Invitation templates
- ▶ Automated email announcements
- ▶ Registration management
- ▶ Event rehearsal
- ▶ Event summary and history
- ▶ Ability to export registration information for future events
- ▶ SSL encryption
- ▶ Multiple browsers and platforms

LotusLive Connections

LotusLive Connections is an innovative set of Web-based collaboration services combined with social networking capabilities. It includes file sharing, business instant messaging, activity management and networking. LotusLive Connections allows users to share and edit information and manage activities easily with one person or a large community of colleagues inside and outside a company.

LotusLive Connections includes:

- ▶ Files

Share business materials quickly with an entire community or a single individual. Upload and store your files with world-class security features. Use a web browser to access your files from anywhere. Share and collaborate with individuals and groups on any type of file.

- ▶ **Chat**

Locate a contact in the LotusLive community and start a real-time discussion. Add anyone in LotusLive to your chat community.

- ▶ **My Network**

Add customizable, shareable contact information to expand your business network. Create groups to make organizing your collaborations easy. Keep track of information about your clients and customers, important dates, and events. Leverage the social networking features to connect to others to share contact information.

- ▶ **Activities**

Create, prioritize, and share information, documents, and To-Do lists. Break out of your inbox and into LotusLive Connections Activities to streamline your work with others.

- ▶ **Reader access to surveys and charts**

Respond to or view surveys and charts created by LotusLive Engage users.

LotusLive Notes

IBM LotusLive Notes is IBM's flagship email, calendar, contact management and instant messaging, delivered in the cloud from IBM. LotusLive Notes has robust security features including encryption for both network traffic and local disk storage. It is supported by a dedicated IBM team, features service level agreement and spam and virus filtering.

LotusLive Notes features include:

- ▶ Single point-of-access to email, calendars, contacts, and instant messaging.
- ▶ Automated processes and an integrated platform keep costs lower
- ▶ Support a faster implementation with an established infrastructure and a team of subject matter experts.
- ▶ One GB mailbox per user
- ▶ IBM support to help manage security in your messaging environment
- ▶ Transparent, demonstrable security and data management practices that satisfy the requirements of most businesses

LotusLive iNotes

LotusLive iNotes is a low-cost, security rich online webmail service that features essential email, calendaring, and contact capabilities, multi-level administration and branded interfaces. It is delivered for users who might not need full-fledged collaboration. LotusLive iNotes can be deployed as a stand-alone solution or in combination with Lotus Notes and Microsoft Exchange to reduce the overall cost of ownership. LotusLive iNotes is quick and simple to deploy with low start-up and predictable monthly costs.

LotusLive iNotes gives you access to the essential messaging features, such as:

- ▶ Full-featured WebMail POP3, IMAP4, and authenticated SMTP
- ▶ Calendaring with configurable event reminders and workday views
- ▶ Antispam and antivirus features
- ▶ SSL encryption, secure password recovery
- ▶ Administrative tools to manage user accounts and global settings

LotusLive iNotes also offers:

- ▶ Access email by a web browser, anywhere, anytime
- ▶ Low startup and monthly costs
- ▶ Simple email administration with minimal IT requirements
- ▶ Quick implementation to get your team working right away
- ▶ Flexible storage quotas
- ▶ Transparent, demonstrable security and data management practices that satisfy the requirements of most businesses

3.6.4 Platforms supported

LotusLive iNotes supports these technologies:

- ▶ Microsoft Internet Explorer (IE) 6.0, 7.0, and 8.0 on Windows XP
- ▶ Microsoft IE 7.0 and 8.0 in Windows Vista
- ▶ Microsoft IE 8 on Windows 7
- ▶ Mozilla Firefox 3.0, Opera 9.6 on Windows XP
- ▶ Mozilla Firefox 3.5 on Windows 7
- ▶ Firefox 3.0, Safari 3.2 in Mac OS 10.5
- ▶ Safari 3.2 in Mac OS 10.4
- ▶ Cookies and scripting enabled in the browser

LotusLive Engage and LotusLive Engage for Enterprise Deployment and LotusLive Connections support these environments:

- ▶ Microsoft Internet Explorer 6.0 (with service packs) and 7.0 on Windows XP and Windows Vista
- ▶ Mozilla Firefox 2.0, 3.0 on Windows XP and Windows Vista
- ▶ A Java Virtual Machine (JVM) versions is required either: Sun 1.5, Sun 1.6, or IBM 1.5
- ▶ Cookies and scripting enabled in the browser

For optimization: To optimize meetings, Adobe® Flash Player 9.0 is preferable.

LotusLive Meetings (web conferencing requirements):

- ▶ Internet connection with HTTP and HTTPS access to the LotusLive Meeting Services (have cookies and scripting enabled in the browser)
 - Internet connection speed of 128 Kbps or higher
- ▶ Microsoft Windows XP or Microsoft Server 2003 with Internet Explorer 6.0 SP2+, 7.0, 8.0 or Firefox 2.0, 3.0, 3.5, 3.6
- ▶ Microsoft Windows Vista with Internet Explorer 7.0, 8.0 or Firefox 2.0, 3.0, 3.5, 3.6
- ▶ Mac OS X with Firefox 2.0, 3.0, 3.5, 3.6 or Apple Safari 3.1, 3.2, 4.0
- ▶ Linux with Firefox 2.0, 3.0, 3.5, 3.6
- ▶ Browser cookies and scripting enabled

3.6.5 Key resources

For more information, see the LotusLive web page at:

<https://www.lotuslive.com/>

3.7 IBM Lotus Domino Designer

In this section, we discuss Lotus Domino Designer.

3.7.1 Executive summary

To stay ahead of competition, your organization must respond quickly to new business opportunities, economic conditions, and market demands. Often these situations require new applications or new access points to existing applications and information. In order for your IT developers to respond effectively, they need the tools to rapidly develop and deploy these new applications.

Lotus Domino Designer software provides a highly productive application development environment that benefits cost conscience IT departments by enabling the rapid development and deployment of scalable and security-rich collaborative or workflow-driven business applications. Developers can integrate assets from across IT systems and provide application access through many different types of clients and devices. This product is available at no charge to anyone, just register at the IBM developerWorks website located at this web address:

<http://www.ibm.com/developerworks/lotus>

3.7.2 Business value

With Lotus Domino Designer software, you can rapidly build applications that support a wide variety of critical business processes, for example:

- ▶ Team/community discussion forums
- ▶ Workflow management
- ▶ Document storage and collaboration
- ▶ Help desk/customer support
- ▶ Project management
- ▶ Customer Relationship Management (CRM)
- ▶ Sales Force Automation
- ▶ Product development
- ▶ Human Resources
- ▶ Billing systems
- ▶ Compliance tracking, audit and assessment
- ▶ Inventory management or supply chain tracking

Lotus Domino Designer helps your organization respond quickly to new business opportunities, economic conditions, and market demands with the necessary business applications. This software provides many benefits:

- ▶ Rapidly develop and deploy new business critical applications that meet your requirements, allowing your IT budget to go farther.
- ▶ Support a variety of client device and platform options which allow you to meet the varied end user expectations and needs for application access.

- ▶ Exploit the benefits of new technology trends such as Web 2.0 and social media networks.
- ▶ Provide users with the right information at the time they need it by quickly mashing together the user interfaces of existing assets into composite applications.
- ▶ Minimize development costs by leveraging available application templates and existing developer skills and resources.

3.7.3 Product overview

Lotus Domino Designer software integrates many features that help minimize time needed to bring new applications to market and save development costs by reusing existing assets and skills:

- ▶ IBM Lotus Domino Designer software is based on Eclipse to provide a highly productive and integrated development experience for a wide range of business applications.
- ▶ Use GUI-driven, point-and-click capabilities to quickly develop security-rich applications that end users are able to access from Lotus Notes clients, web browsers, business portals and mobile devices.
- ▶ Lotus Domino Designer software integrates XPages technology, a design element that greatly enhances application development for Lotus Domino software for web, rich client, and mobile devices. As XPages utilizes the Javascript, Cascading Style Sheets (CSS), and HTML technologies, deep programming skills are not required to build powerful, compelling applications for Lotus Domino.
- ▶ Integrate security-rich features across many different levels of an applications, right down to individual fields.
- ▶ Incorporate workflow capabilities for approval-driven processes.
- ▶ Novice developers can customize applications based on supplied templates, while advanced developers can use the more robust programming features to address special requirements.
- ▶ Add presence awareness and instant messaging capabilities to the Lotus Notes and web applications they build to make it easier for end users to interact with other team members in real time.
- ▶ Utilize web services to expose Lotus Domino applications to external systems such as Java Platform, Enterprise Edition (Java EE) and Microsoft .NET applications. And use web services from external sources within Lotus Domino applications in many different contexts.
- ▶ Choice of programming languages helps you select the most appropriate skill levels for creating a full range of productivity and collaborative applications.

3.7.4 Supported platforms

Lotus Domino Designer supports these platforms:

- ▶ Windows Vista Ultimate (32-bit, desktop deployment role, and a x86-32 hardware platform), with these additional considerations:
 - Latest Service Pack when available
 - Vista Ultimate is superset of Vista Enterprise and Vista Business
 - Aero video mode and UAC mode is supported

- ▶ Windows XP Professional Version with SP2 or higher (32-bit, desktop deployment role, and a x86-32 hardware platform)
- ▶ Windows XP Tablet PC Edition (32-bit, desktop deployment role, and a x86-32 hardware platform)

For more details on the system requirements, go to this web page:

<http://www.ibm.com/support/docview.wss?rs=463&uid=swg27007909>

3.7.5 Key resources

For more information about Lotus Domino Designer, go to this web page:

<http://www.ibm.com/software/lotus/products/dominodesigner/>

IBM Information Management

Information Management enables companies to manage and integrate their information assets and to connect those assets to users and their applications. By fully integrating, delivering, and sharing information, companies can add value to their business in numerous ways:

- ▶ Reduce customer infrastructure costs: Fully utilize their resources to maximize their investment, and ensure business continuity.
- ▶ Improve customer service: Business data is available and integrated, and service personnel and customers have direct and easy access.
- ▶ Optimize operations and productivity: Business data is integrated and flowing as needed within the business, improving business flexibility, time-to-market, and cost structure.
- ▶ Make insightful, timely decisions: Business data is used to better understand the customers and optimize the business, which leads to increased revenues and reduced costs.

Only IBM Information Management has the end-to-end capabilities to help you manage your data and content, pull together trusted information that cuts across diverse silos, and also gain valuable insights to optimize your business.

In this chapter, we discuss these Information Management products for small and midsized businesses:

- ▶ IBM DB2 Express Edition
- ▶ IBM Informix® Express Edition and Informix Growth Edition
- ▶ IBM CommonStore eMail Archiving Preload
- ▶ IBM InfoSphere™ Warehouse offering for midmarket
- ▶ IBM Mashup Center
- ▶ IBM Cognos® Express offering

4.1 DB2 Express Edition

In this section, we discuss IBM DB2 Express Edition (DB2 Express) a DB2 for Linux, UNIX®, and Windows edition.

4.1.1 Executive summary

Information is key to running your business, dealing with your customers and your partners, and overcoming your competition. Effectively using information is essential to business success and an ingredient to making innovation happen. In fact, organizations that integrate information into their decision-making and business processes are found to be five times more likely to drive value creation.

With the enormous amount of digitized information being generated and collected every day, businesses need an effective information management strategy and products that help them be responsive to customer needs and marketplace dynamics. They also need a solution that lets them focus on managing their business, not their databases.

DB2 Express Edition provides the next generation of data server technology for small and midsized businesses. The market-leading innovations that IBM built into DB2 9 editions give you the option to easily build solutions that integrate XML and relational data, maximize productivity of your system management team, and reduce IT costs while improving service levels. The pureXML® technology DB2 9 products have for storing, managing, and searching XML offers not only significant performance enhancements, but reduces development time and costs dramatically, making it practical for the first time to treat XML as data. This capability allows businesses to gain the full business benefit of this critical information asset. There is no data server in the industry better positioned to power the next generation of service-oriented architecture (SOA)-based business solutions.

4.1.2 Business value

DB2 9.7 Express Edition can benefit you by:

- ▶ Unlocking the latent potential of XML with performance and development time and cost savings from pureXML technology
- ▶ Simplifying deployment, improving performance, and minimizing SAP deployment administrations
- ▶ Maximizing data availability by reducing planned and unplanned down time
- ▶ Driving down administration and management costs while increasing performance with new functionality
- ▶ Providing audit facility enhancements with increased granularity, flexibility, and higher performance when auditing your DB2 data server

Customers who deploy DB2 9.7 Express Edition can expect to realize the following benefits:

- ▶ Lower operational costs:
 - Reduce storage costs through Deep Compression
 - Lower database administration costs
 - Optimized workload utilization

- ▶ Reduced risk:
 - Built-in features for faster, easier migrations
 - Resilience to internal and external security threats
 - High availability of database applications (an add-on component)
- ▶ Enhanced performance and greater ease of use:
 - Faster speed and higher throughput for data and applications
 - Enhanced pureXML support for improved developer productivity
 - Built-in autonomic features lessening burden on database administrators

4.1.3 Product overview

DB2 Express is the ideal entry level data server for small and midsized businesses and is suitable for transaction processing or complex query workloads on servers with up to two processors. These data servers combine proven DB2 security and reliability with ease of use and manageability to provide an information management foundation for supporting any type of business application. DB2 9.7 Express Edition provides these capabilities:

- ▶ Greater business value:
 - Greater focus on lowering your costs through less expensive development, storage, and administration:
 - Lower server and storage costs through Deep Compression
 - Lower administration costs through autonomic support
 - Lower development costs through pureXML enhancements
 - Lower risk and cost of migration from competitive databases
- ▶ Elevated performance:
 - Impressive OLTP and warehousing performance
 - Deep Compression for indexes and temporary data and large objects
 - Concurrency enhancements
 - Database and table partitioning enhancements
- ▶ XML Data Management:
 - End-to-end XML support across including extraction, transformation, and publishing of XML data to warehouse systems
 - Highly efficient database for XML transactions
- ▶ Easier administration:
 - Self Tuning Memory Manager:
 - Configures DB2 without needing a database administrator
 - Gets your system running quickly in minutes with little skills or training
 - Easy configuration by using Configuration assistant, wizards and advisors, and self-tuning memory
 - New workload management features let you react much faster to changing workloads automatically
 - Graphical interface for you to define workload thresholds, assign business priorities, and enable priority aging

- ▶ Simplified Data Warehousing:
 - Support for virtual cubes
 - Performance improvements for multi-dimensional OLAP analysis
 - Fine-grained security control in Cubing Services
 - Better scalability and workload management for building data marts

For developers who can be more productive with DB2 9.7 Express Edition:

- ▶ Easier development with pureQuery and pureXML:
 - pureQuery provides a combination of flexible dynamic SQL and high performance static SQL support
- ▶ Integrated Data Management features
- ▶ Access to the latest innovation in database administration and development
- ▶ Broad tool and language support

For database administrators can optimize database administration with DB2 9.7 Express Edition which provides:

- ▶ Automated administration of mundane tasks and re-use of existing skills
- ▶ Advanced pureXML support
- ▶ Improved system performance
- ▶ Integrated Data Management

pureXML provides industry-leading storage capabilities that dramatically lower your XML-related development, deployment, and maintenance costs. DB2 pureXML speeds your time-to-value for XML projects and provides you with the agility to quickly adapt to changing business needs. DB2 pureXML is the leading data server for XML. With DB2 pureXML, you can:

- ▶ Improve your developer productivity
- ▶ Improve your application performance
- ▶ Simplify the management of your operating environment
- ▶ Reduce your storage requirements

Also, DB2 Express can be deployed on popular operating systems in the midmarket, such as Linux, Windows, or Solaris and includes Web Services Federation, DB2 Heterogeneous Federation, Heterogeneous SQL Replication, and backup compression.

4.1.4 IBM Business Partner case study

In this example IBM Business Partner case study, we show the use of DB2 Express 9 in a customer solution.

IBM Business Partner Three Olive Solutions provided a portfolio management solution that is based on DB2 Express to DeVry University (one of the largest universities in the United States). To learn more about this IBM Business Partner solution and to find more IBM Business Partner case study success stories, refer to *Winning in Midmarket: 100 Software Success Stories* at:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

4.1.5 Platform requirements

Software requirements for DB2 9.7 for Linux, UNIX, and Windows editions (including DB2 Express Edition):

- ▶ Linux:
 - Red Hat Enterprise Linux (RHEL) 5
 - SUSE Linux Enterprise Server (SLES) 10 and 11
 - Linux for System i - SLES 10, SLES 11; 32 bit and 64 bit
 - Linux for System i - RHEL 5; 32 bit and 64 bit
 - Linux for System p® - SLES 10, SLES 11; 64 bit
 - Linux for System p - RHEL 5; 64 bit
 - Linux for System z® - SLES 10, SLES 11; 64 bit
 - Linux for System z - RHEL 5; 64 bit
- ▶ Windows:
 - 32-bit and 64-bit (x64) Windows Server 2003, Standard Server, Enterprise Server, and Datacenter Editions
 - 32-bit and 64-bit (x64) Windows Server 2008, Standard Server, Enterprise Server, and Datacenter Editions
 - 32-bit and 64-bit (x64) Windows XP Professional Edition
 - 32-bit and 64-bit (x64) Windows Vista Business, Enterprise, and Ultimate editions
- ▶ AIX:
 - AIX 5L V5.3
 - AIX V6.1
- ▶ HP-UX:
 - HP-UX 11i v2 for HP Integrity servers (Itanium®-based systems)
 - HP-UX 11i v3 for HP Integrity servers (Itanium-based systems)
- ▶ Solaris:
 - Solaris 9 for UltraSPARC or SPARC64 servers
 - Solaris 10 for UltraSPARC or SPARC64 servers
 - Solaris 10 for x64 servers

Minimum hardware requirements for DB2 9.7 for Linux, UNIX, and Windows editions (including DB2 Express Edition):

- ▶ 32-bit and 64-bit Windows and Linux
All systems based on Intel® or AMD processors that are capable of running the supported Windows or Linux operating systems (x86 and x64 systems).
- ▶ AIX and Linux for IBM System p and for IBM System i systems:
Systems with POWER4™, or later processors are required.
- ▶ Solaris: Systems with UltraSPARC processors or x64 systems are required.
- ▶ HP-UX: Itanium-based HP Integrity Series systems are required.

4.1.6 Key resources

For more information see the following resources:

- ▶ DB2 Express Edition product page
<http://www.ibm.com/software/data/db2/9/edition-express.html>
- ▶ DB2 for Linux, UNIX, and Windows
<http://www.ibm.com/software/data/db2/9/>
- ▶ DB2 9 family page
<http://www.ibm.com/software/data/db2/>

4.2 Informix Express Edition and Informix Growth Edition

In this section, we discuss IBM Informix Express Edition and IBM Informix Growth Edition.

4.2.1 Executive summary

Besides your people, your data is one of the most valuable assets that your business has. In fact, recent surveys indicate that taking advantage of your business information is key to addressing many of today's business challenges. Making information readily available helps overcome various business challenges:

- ▶ *Optimizing business processes:* Insight into the data that drives business processes and the data that is produced at various steps in the process helps to ensure that the correct decisions are made at each step and the right actions are taken.
- ▶ *Improve customer service:* A more holistic and accurate picture of your customers and their needs can help you to build a better relationship with your customers. Better understanding your customers and their needs can translate into previously unexplored sales opportunities.
- ▶ *Increase employee productivity:* It is estimated that 70% of employee time is spent searching for the information they need to do their job. Imagine the increases in productivity that could be obtained by reducing the amount of time people spend looking for answers. By improving employee access to data and information, less time is wasted searching for answers or key information, helping employees make better decisions faster.
- ▶ *Reduce risk and streamline compliance:* Rapid threat and fraud detection is critical to securing your business information. By providing greater transparency, you can identify potential threats before it is too late, dramatically reducing business risk and addressing regulatory compliance requirements.

Using information to your advantage is all about getting the right (and secure) information to the right people at the right time, so they can make better decisions, faster enabling them to optimize business processes and improve customer service.

IBM Informix Express Edition and Informix Growth Edition are designed with small and mid-sized businesses in mind. Informix Express Edition and Informix Growth Edition combine self-managing capabilities with a superior, reliable database. Each of these has a small footprint, silent install, and enhanced security through transparent data encryption and mandatory access control.

Also, Informix Innovator-C Edition (for small to midsized businesses) was designed for low cost embedded or workgroup computing. Informix Innovator-C Edition is available on a wide variety of platforms at no charge and is ideal for solutions that require a robust database with little or no administration. Comprehensive support is available as an optional purchase. For more details, go to this web address:

<http://www.ibm.com/software/data/informix/innovator-c-edition/>

4.2.2 Business value

Informix Express Edition and Informix Growth Edition deliver important benefits:

- ▶ Implements solutions that require a robust data server with little or no administration and can be tailored to meet specific needs
- ▶ High-availability features to ensure business continuity
- ▶ Includes autonomic features that eliminate system failures and improve performance
- ▶ Offers automated backup and restore functions to ensure high-level data availability and restoration, while eliminating many manual tasks
- ▶ Allows a customized deployment footprint and application control of the server through the administration API, which makes it even easier to develop and deploy integrated applications
- ▶ Delivers easier usage of location-based data in an SOA environment with the Web Feature Service API. Includes high-availability features, such as continuous log restore, point-time instance wide restore, and table-level backup and recovery
- ▶ Integrates through a full range of application program interfaces (APIs), which includes Java and Microsoft .NET
- ▶ Supports a broad range of integrated development environments

4.2.3 Product overview

Informix Express Edition was designed with midmarket businesses in mind. Informix Express Edition combines a self-managing database engine that provides the power, function, and reliability needed for on demand business with simplicity in packaging, installation and deployment at a minimal investment cost.

Informix Growth Edition is the data server of choice for deployment in a departmental workgroup or medium-size business solution. It is the leading data server for business partners with integrated solutions for medium businesses, requiring minimal or no database administration with continuous reliability and high availability. It is ideal for medium-size installations while providing the full-function industry-leading OLTP data server with data warehouse infrastructure and tools.

Informix Express Edition and Informix Growth Edition include the Informix Spatial DataBlade® module at no additional charge. The Informix Spatial DataBlade module provides an end-to-end solution that can help you to implement location-based services and data warehouse solutions supporting your business intelligence objectives. Other DataBlades are available to the Informix Growth Edition as feature options.

Key features include:

- ▶ Self-tuning, self-managing, and self-protecting capabilities that increase reliability while reducing complexity and required skills.

- ▶ Easy application integration through a full range of application program interfaces (APIs), including Java and .NET.
- ▶ Thorough integration into industry-leading integrated development environments (IDE) including: IBM Optim™ Data Studio with IBM Data Server Client, IBM Rational Application Developer (RAD), Eclipse, and Microsoft Visual Studio .NET. In addition, IDS also supports industry leading open source development such as Zend Core, LAMP stack with PHP, and Ruby on Rail.
- ▶ Low-priced, full-function object-relational database that adapts to the unique needs of your application.
- ▶ Easy installation and deployment, allowing a customized deployment footprint.
- ▶ Application control of the server through the administration API makes it even easier to develop and deploy integrated applications, enabling common administration tasks to be performed within an application.
- ▶ Delivers easier use of location-based data in an SOA environment with the Web Feature Service API.
- ▶ Includes high-availability features, such as continuous log restore, point-in-time instance wide restore, and table-level backup and recovery.
- ▶ High-availability Data Replication (HDR) is available and included in the Informix Growth Edition to provide you with redundant failover capabilities to ensure continuous business operations. Customers can configure up to two backup standby nodes over disperse geographical locations for high-availability and disaster recovery. HDR backup servers can perform real work and help you to maximize your return on investment and balance your workloads across all HDR nodes.
- ▶ Enterprise Replication (ER) is available with the Informix Growth Edition to seamlessly manage dataflow across a customer's enterprise. ER leaf nodes can exchange data on demand between a master node and the leaf node in real time, helping you deliver time-critical information to help manage and optimize your business.
- ▶ Available on a wide range of platforms.
- ▶ Designed for deployment of on demand information management solutions for midmarket businesses.
- ▶ Scalable on demand. The full-function Informix Express Edition and Informix Growth Edition allows seamless upgrades to the Informix Ultimate Edition as your business grows.
- ▶ Easily integrated, embeddable, and configurable by IBM Business Partners for transparent installation within their applications.
- ▶ Integrated warehouse infrastructure and tools are available to the Informix Growth Edition if you want end-to-end data warehouse solutions to simplify your operation complexity and utilize your operational data more quickly to optimize your business.

4.2.4 Platforms supported

For the latest information about the platforms support by these products, go to this web address:

http://www.ibm.com/support/docview.wss?rs=630&uid=swg27013343&S_CMP=rnav

4.2.5 IBM Business Partner case study

In this example IBM Business Partner case study, we show the use of Informix Dynamic Server to help build resilient, high-performance information infrastructures.

ROL Manufacturing needed to integrate the complex financial and distribution systems from four independent divisions so that they could provide real-time operational information to their staff. IBM Business Partner Gillani, Inc., a leading provider of enterprise resource planning and supply-chain management software, provided ROL with the solution. The Gillani iDistribute application was designed especially for the wholesale, retail, and manufacturing industries to help these industries streamline inventory and distribution processes and optimize operational resources. To learn more about this IBM Business Partner solution and to find more IBM Business Partner case study success stories, refer to *Winning in Midmarket: 100 Software Success Stories* at:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

4.2.6 Key resources

For more information about Informix products, go to this web address:

http://www.ibm.com/software/data/informix/?pge1=ibmhzn&cm_re=masthead-_products_-_sw-informix

4.3 IBM CommonStore eMail Archiving Preload

In this section, we discuss IBM CommonStore eMail Archiving Preload products for the midmarket:

- ▶ CommonStore for Exchange Server
- ▶ CommonStore for Lotus Domino

4.3.1 Executive summary

Businesses use email as the primary communication medium. Email has become such a common means of communication that business users take its benefits almost for granted. It is estimated that 131 billion emails are sent each day, and it is predicted to increase to 276 billion by 2009. Email has become a critical part of business:

- ▶ 75% of corporate intellectual property
- ▶ Subject to government and industry regulation
- ▶ Increasingly subpoenaed in litigation

The current and increasing numbers of emails can overburden servers, require more disk storage space, and add to the overhead of back up and recovery procedures for your email servers. Email systems were not designed to store vast amounts of email and attachments for long periods of time.

The pressures extend outside of the data center. When information that is contained in email cannot be located, productivity can suffer in many areas of your business. It is estimated as much as 30 percent of employee time in some situations is spent trying to find the right documents and information, distracting your staff from carrying out their core responsibilities.

The new Federal Rules of Civil Procedure (FRCP) that went into effect December 01, 2006, determined that producing electronic information is no longer optional and gives guidelines for legal discovery in federal cases. Every business or government entity in the United States is affected by FRCP. To be FRCP ready, you need to be prepared for electronic discovery, which includes: knowing what electronic content exists, how to produce it, and how to comply with "hold orders". Courts no longer accept technical difficulties as an excuse for not producing evidence.

The IBM CommonStore eMail Archiving Preload products can help you manage and maintain your email and help you to comply with the FRCP. These products can:

- ▶ Archive email for mailbox and storage space management, which reduces operational problems that are introduced by growing volumes of email data store.
- ▶ Manage email as a record and ensure compliance, which enables you to establish good business governance and facilitate electronic discovery when needed
- ▶ Manage email as content so that you can mine, extract, organize, and analyze knowledge and data that are contained in emails
- ▶ Manage email as part of a business process to accelerate and automate business processes where email participates in workflow or in related activities.

4.3.2 Business value

The IBM CommonStore eMail Archiving Preload products are built for small and midmarket organizations that struggle to meet email archiving requirements. It combines CommonStore and Content Manager email archiving software with high performance System x® hardware that is powered by next-generation AMD processors. The IBM CommonStore eMail Archiving Preload products:

- ▶ Reduce operational issues that are associated with the growing size of email
- ▶ Provide advanced archiving and de-duplication management that helps to minimize email storage and administration requirements
- ▶ Safeguard organizations from non-compliance risks that involve email management (financial and reputation risk mitigation)
- ▶ Automate capturing email as business records, and simplifies the message retrieval for compliance purposes and effectively eases audits
- ▶ Provide search capabilities across mailboxes to easily reply and comply with legal discovery requests
- ▶ Leverage the Enterprise Content Management (ECM) platform, which provides a single repository to address the immediate need for email archiving
- ▶ Provide the foundation to add options, such as imaging, document management, workflow, and eForms, which reduces total cost of ownership (TCO)

The IBM CommonStore for Lotus Domino, V8.4 and the CommonStore for Exchange Server, V8.4 are IBM messaging system archival and retention management products that IBM Lotus Domino and Microsoft Exchange customers can use to:

- ▶ Comply with regulations, produce email records when required, and enable good corporate governance, supervision, and monitoring for non-compliance, and facilitate electronic discovery
- ▶ Manage email as a record and ensure compliance by retaining and disposing email records based on regulatory and legal requirements using integration with IBM Records Manager
- ▶ Reduce operational issues that are introduced by the growing size of email by periodic archiving, and improve and control mail server performance by off-loading infrequently accessed email and attachments
- ▶ Improve the ability to locate, search, and archive local IBM Lotus Notes Domino mail files (.nsf) and Microsoft Exchange mail files, which are personal storage files (.pst)
- ▶ Increase operational and administrative efficiencies by reducing the backup and restore window cycle times

- ▶ Enable easier messaging system version-to-version upgrades and server consolidation
- ▶ Increase end-user productivity with extensive search and retrieval capabilities from the archive, even after years of storage, simply from the native client interfaces or from the archive repository interface
- ▶ Exploit a virtual storage management system and deploy the appropriate device depending on the life cycle value of the content
- ▶ Establish a scalable and secure back end archive management repository, which is virtually unlimited in growth
- ▶ Extract knowledge that is buried in email and other electronic messaging in order to leverage this content just like any other content type

4.3.3 Product overview

CommonStore is a middleware server between the mail server systems (Lotus Domino or Exchange Server) and the back end archive management system (shown in Figure 4-1). CommonStore eMail Archiving Preload products do not store data or document, but they define and manage what to archive, when to archive, and how to archive from a mail system to a back end archive management system.

These enterprise content management (ECM) technologies provide not only email archive management capabilities, but also offer a complete content management solution, for any content type, such as document, web content, image, fax, and rich media across diverse business processes and applications. After deployed, the same infrastructure is ready to be deployed to address multiple requirements, which translates to a lower Return On Investment.

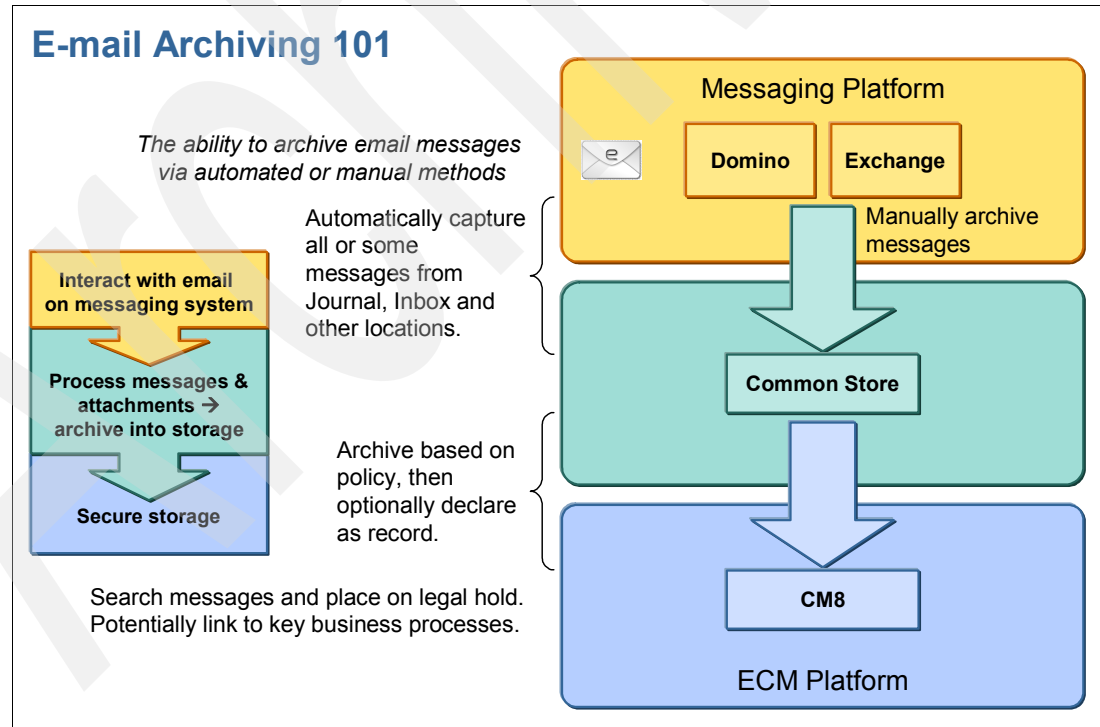


Figure 4-1 Basics of email archiving

Here we list the main features and benefits of CommonStore:

- ▶ Automatic mailbox management
Eliminates mailbox quotas and message size restrictions by fully automating email capture. Provides users with a mailbox of virtually unlimited size. Messages matching business rules are automatically indexed and archived in the IBM ECM repository.
- ▶ Ensuring compliance with Records Management Integration using Dynamic Classification
Automatically classifies and date stamps email messages so that they are easily retrievable for analysis or timely destruction, which eliminates the need for separate declaration steps or even trigger and significantly reduces opportunity for user error.
These products also have the ability to dynamically assign Records Manager classifications based on an email property value, literal value, regular expression, or calculated value.
- ▶ Increased mail server performance
Centralized management helps to reduce operational issues and ensures faster backup of Domino and Exchange servers and controlled recovery in the event of a disaster.
- ▶ Eliminating .pst and .nsf file management and control issues
Can selectively locate and process .pst files and Domino .nsf files on a network and automate the capture of content into the IBM ECM repository using profiles.
Post-processing options include the ability to delete the .pst and .nsf files from the network or email system.
- ▶ Legal discovery
Search across mailboxes to find specific emails within context that meets search criteria.
- ▶ Compliance monitoring and prevention
All email messages can be analyzed in real time to ensure compliance with corporate policies and government regulations. Emails that are sent and received can be quarantined prior to a compliance event occurring. You can audit results against corporate email policy, and compliance officers can access noncompliant emails through automated searches to trigger appropriate auditing processes, which is a capability that is added to these CommonStore products by adding a solution component from an IBM Business Partner, Orchestra.
- ▶ Duplicate emails
De-duping capabilities eliminate the capture of duplicate email messages (with or without attachments). Email is only written to the IBM ECM repository once when a rule for capturing is met, and it is determined that the email is already stored within the IBM ECM repository. These products will continue to create links or shortcuts to the already stored email, as required by the capture rule.

4.3.4 Platform requirements

Operating systems for the server:

- ▶ AIX 5.2, or AIX 5.3
- ▶ Windows Server 2003 R2
- ▶ Windows XP

Operating systems for the client:

- ▶ Windows XP
- ▶ Windows Vista

IBM Lotus Domino/Notes support:

- ▶ Lotus Domino 6.5, 7, or 8
- ▶ Including Lotus Notes 6.5, 7, or 8 clients

Microsoft Outlook / Exchange support:

- ▶ Microsoft Exchange 2003 (Server or Enterprise Server)
- ▶ Microsoft Exchange 2007 (Server or Enterprise Server)
- ▶ Microsoft Outlook XP, 2003 or 2007

4.3.5 Key resources

For more information, see the following web pages:

- ▶ IBM CommonStore web page:
<http://www.ibm.com/software/data/commonstore/>
- ▶ IBM CommonStore for Exchange Server web page:
<http://www.ibm.com/software/data/commonstore/exchange/>
- ▶ IBM CommonStore for Domino Server web page:
<http://www.ibm.com/software/data/commonstore/lotus/>

4.4 IBM InfoSphere Warehouse

In this section, we discuss the InfoSphere Warehouse products that support the midmarket:

- ▶ IBM InfoSphere Warehouse Departmental Edition
- ▶ IBM InfoSphere Warehouse Departmental Base Edition
- ▶ IBM InfoSphere Balanced Warehouse® C3000
- ▶ IBM InfoSphere Balanced Warehouse C4000

4.4.1 Executive summary

Making informed decisions in today's business environment is critical to your business success. Having accurate, reliable, and usable data is pivotal to making decisions. How to ensure the quality of the data and to unlock the value in that data is the real question.

IBM InfoSphere Warehouse products provide a means to cost effectively implement a flexible, scalable reporting and data warehouse solution. It provides ideal solutions for companies that need to consolidate data, information silos, and provide business analytics to deliver a single version of the truth to all users both, in context and in real time.

The IBM InfoSphere Balanced Warehouse C-Class offering is a comprehensive data warehousing solution that is comprised of scalable and fully-integrated system components of the InfoSphere Warehouse-based software, IBM systems, and storage technology. These products are pretested and preconfigured to support optimal performance, designed to simplify deployment and jump start smaller warehousing and departmental reporting implementations.

By leveraging this untapped power of your information, you can improve your business, your operations, your sales opportunities, and various aspects of your operational performance.

4.4.2 Business value

The IBM InfoSphere Warehouse V9.7 products for the midmarket reduce the expense of deploying and supporting warehousing and analytic solutions.

IBM InfoSphere Warehouse 9.7 offers the following value to your organization:

- ▶ Uncover opportunities: Simplified analytics that enable business users to discover revenue opportunities faster
- ▶ Maximize resources: Operational insight with end-to-end support for XML Data
- ▶ Increase availability: Increased system availability, reduced administration, and fewer unplanned outages
- ▶ Adopt easily: New technology for rapidly deploying applications, including those that are written for other database software
- ▶ Save money: Greater storage savings with enhanced Deep Compression

The IBM InfoSphere Balanced Warehouse C-Class offers midsized organizations a simplified, complete solution for integrating and maintaining multiple, scattered data resources into a scalable data warehouse:

- ▶ Simplicity:
 - Prescriptive and optimized configurations for reduced complexity
- ▶ Flexibility for growth:
 - Reliable, non-proprietary hardware for reusability
- ▶ Optimized performance:
 - Preconfigured and certified for guaranteed performance
 - Based on best practices for reduced risk
 - Accelerate your business intelligence deployment with optionally installed IBM Cognos 8 software

Single product support and included support package allow for ease of optimization, troubleshooting, and future upgrades.

4.4.3 Product overview

In this section, we provide a high-level overview of the solutions for midmarket.

InfoSphere Warehouse 9.7 offerings for midmarket

InfoSphere Warehouse 9.7 Departmental Base Edition is ideal for small and medium businesses or departments that require the ability to transform data into reliable and consistent business insights. It contains the foundation components of the enterprise editions of InfoSphere Warehouse at an affordable entry point. InfoSphere Warehouse 9.7 Departmental Base Edition supports business intelligence (BI) applications and analytic tools, and can scale from one-to-many database partitions.

InfoSphere Warehouse 9.7 Departmental Base Edition provides:

- ▶ Scalable DB2 massively parallel processing (MPP) platform
- ▶ Advanced warehouse tooling
- ▶ Speed of thought secure Online Analytical Processing (OLAP) engine
- ▶ XML enabled

InfoSphere Warehouse 9.7 Departmental Edition extends the capabilities of the Departmental Base Edition with mixed workload management capabilities and advanced analytics, such as data mining, modeling, scoring, text analytics, and Alphablox®. It is ideal for organizations and departments that moved beyond basic query and reporting and need the necessary tools to discover new business opportunities.

InfoSphere Warehouse 9.7 Departmental Edition provides:

- ▶ Advanced Analytical Capabilities:
 - Data mining
 - Text analytics
 - Embedded analytics
- ▶ Workload Management
- ▶ Scalable DB2 massively parallel processing (MPP) platform
- ▶ Advanced warehouse tooling
- ▶ Speed of thought secure OLAP engine
- ▶ XML enabled

InfoSphere Warehouse 9.7 products have these features that lower the cost of ownership:

- ▶ Deeper compression:
 - Frees storage through a broader use of compression
 - Reduce the footprint and cost of your warehouse
- ▶ Enhanced Workload Management:
 - Greater ability to identify and manage different workloads and users
- ▶ Application compatibility:
 - Maximizes the interoperability across different warehouse platforms
- ▶ Lower cost of management:
 - Administration and autonomic enhancements
- ▶ Simplified warehouse packaging:
 - Making warehousing more affordable and accessible for departments and small business

InfoSphere Warehouse 9.7 products have these features that speed time to value:

- ▶ Accelerated data mining:
 - Data Mining Wizards that enable a broader audience of users
 - Data preparation and solution templates that enable information as a service
- ▶ Enhanced OLAP:
 - New security features that provide fine grained multi dimensional security
 - Cube virtualization technology that provides greater agility in analysis
- ▶ Scalable analysis of XML data:
 - New MPP support for DB2 XML capabilities
 - Improved XML management and storage

IBM InfoSphere Warehouse 9.7 is the next step in innovating with information. It provides a unified, powerful tool set that delivers access to structured and unstructured information and delivers operational insights in real time. The capabilities from a value perspective are:

- ▶ Reduced costs:

- Storage freed through a broader use of compression
- Workload management now a standard feature of Departmental and Enterprise editions
- New Departmental Edition tailored to the needs of less complex organizational requirements
- ▶ Optimize the use of industry standard XML formatted data:
 - Directly store standard XML data into your data warehouse
 - Directly query XML data in its native format
 - Compress XML data to save on storage costs and improve performance
 - Update XML data in its native format
 - Improved performance when managing XML records
- ▶ Deeper analysis:
 - Data Mining Wizards enabling a broader audience of users
 - Data preparation and solution templates enable Information as a Service
 - Multidimensional analysis with enhanced security features enabling direct analysis of DB2 data
- ▶ Better data availability:
 - Migrate data to new tables without loss of availability
 - Improved online scalability through better node addition
 - Better resiliency to errors enabling robust operational BI
 - Easier workload management through a graphical user interface
 - Automated threshold workload management that reconfigures for peak workloads

InfoSphere Balanced Warehouse C-Class offerings

InfoSphere Balanced Warehouse C-Class offerings were specifically created to empower smaller organizations and lines of business within larger enterprises with a fast track to business intelligence. Rich in functionality and quick to deploy, these offerings are ready-to-go warehousing solutions that consist of preconfigured and pretested integration of InfoSphere Warehouse software, IBM systems and storage, and optional IBM Cognos 8 BI reporting software. The integration, testing, and configuration work was done for you. Before an InfoSphere Balanced Warehouse is shipped, the IBM laboratories configure and stress test the systems for maximum reliability and security and fine-tune them to ensure that the highest levels of performance are met, which means that your warehousing project will bring value to your organization almost immediately and will enable your users to leverage insight from your information as soon as your data is loaded.

Key features of this updated InfoSphere Balanced Warehouse C-Class offerings include:

- ▶ No copy analytics: Native and direct access to OLAP data within the database from tools, such as Excel, using standard interfaces that include ODBC, JDBC, SQL, and OLE DB for OLAP.
- ▶ Expanded OLAP access: Through support of the XMLA standard, which is natively supported by the Cognos 8 BI V8.4 tools.
- ▶ Data mining: Unlock information about customer and product associations and behaviors that your application captures.
- ▶ Text analytics: Transform unstructured data to gain previously inaccessible insights.
- ▶ Analytical capabilities: Customers can decide to have Cognos 8 BI Reporting V8.4 software installed on their C3000 or C4000 model. This flexibility further enhances the value proposition that is provided by the InfoSphere Balanced Warehouse C-Class offerings by allowing customers to plan, understand, and optimize business performance while sharing the value of their consolidated data across all of the business users.

InfoSphere Balanced Warehouse C3000

The InfoSphere Balanced Warehouse C3000 offers a simplified, complete data warehousing entry point for integrating partner business intelligence applications and analytics with up to 2 TB of raw user data.

The InfoSphere Balanced Warehouse C3000 incorporates enhanced features, such as data partitioning, range partitioning, and handling larger stores of your organization's data. These features are all delivered on IBM hardware in a pre-integrated, pretested configuration that is easy to install and maintain.

InfoSphere Balanced Warehouse C4000

InfoSphere Balanced Warehouse C4000 is the latest addition to the growing IBM Balanced Warehouse solution portfolio. At the top of the C-Class, this product expands the reach of the IBM rapid deployment warehousing solutions integrating the full functionality of InfoSphere Warehouse Intermediate Edition software.

Driven by simplicity in design and management, this product offers the best of what an enterprise data warehouse delivers, without the complexity and cost normally associated with this type of functionality. Built upon a hardware stack that enables growth of up to 4 TB of raw user data and 24 TB of total usable storage capacity, the InfoSphere Balanced Warehouse C4000 offers organizations room to grow and develop their critical business intelligence infrastructure.

4.4.4 IBM Business Partner case study

In this example IBM Business Partner case study, we show the use of InfoSphere Warehouse in a customer solution.

IBM Business Partner Project Performance Corporation (PPC) implemented a data warehouse that optimizes reporting and analysis of customer orders for Burgess Pigment Company. The solution is based on the PPC business intelligence practices and adaptive data warehousing methodology and uses the IBM InfoSphere Balanced Warehouse platform to integrate business intelligence applications and analytics with raw data up to 1.5TB of storage. To learn more about this IBM Business Partner solution, go to this web address:

http://www.ibm.com/software/success/cssdb.nsf/CS/JHAL-7UFS87?OpenDocument&Site=smbgen&cty=en_us

4.4.5 Platform requirements

InfoSphere Warehouse:

- ▶ Server operating systems:
 - Linux:
 - Red Hat Enterprise Linux (RHEL) 5 on 64-bit AMD and Intel x86-64 systems
 - SUSE Linux Enterprise Server (SLES) 10 on 64-bit AMD and Intel x86-64 systems
 - Windows:
 - Windows 2003 Standard, Enterprise, and Datacenter Editions (32 bit and 64 bit)
 - Windows 2008 Standard, Enterprise, and Datacenter Editions (32 bit and 64 bit)
 - AIX V5.3 and AIX V6.1 (64-bit only)
 - HP-UX 11i v2 or v3 for 64-bit HP Integrity servers (Itanium-based systems)

- Solaris:
 - Solaris 9 for UltraSPARC servers (64-bit only)
 - Solaris 10 for UltraSPARC servers (64-bit only)
 - Solaris 10 for x64 servers

► Web browser requirements

Ensure that you have one of the following browsers on your computer:

- Internet Explorer V7.0
- Internet Explorer V6.0 with SP 1
- Firefox V3.0
- Firefox V2.0

Each InfoSphere Balanced Warehouse C-Class appliance is based on a single hardware platform:

- InfoSphere Balanced Warehouse C3000:
 - IBM System x3500 and IBM System Storage® DS3200
- InfoSphere Balanced Warehouse C4000:
 - IBM System x3850 M2 and IBM System Storage DS3200

4.4.6 Key resources

For more information, refer to:

- IBM InfoSphere Warehouse main web page:
<http://www.ibm.com/software/data/infosphere/warehouse/>
- Warehousing for small and midsized businesses
<http://www.ibm.com/software/data/infosphere/data-warehousing/smb/>
- IBM InfoSphere Balanced Warehouse C-Class offering for midmarket:
<http://www.ibm.com/software/data/infosphere/balanced-warehouse/c-class.html>

4.5 IBM Mashup Center

In this section, we discuss the IBM Mashup Center.

4.5.1 Executive summary

Companies are looking for fast, cost effective ways to enable business users to solve specific simple problems, in a secure and sustainable way. These business users and knowledge workers are struggling to find, analyze, assemble, and share the information they need to do their jobs. At times the information that is vital to making business decisions comes from a wide variety of sources, both inside and outside of the company.

IBM Mashup Center is an easy-to-use business mashup platform, that supports quick assembly of dynamic situational applications, with the management, security, and governance capabilities IT requires.

What is a *mashup*?

A *mashup* is a lightweight web application that is created by combining information or capabilities from more than one existing source to deliver new functions and insights. Key characteristics of a mashup are:

- ▶ Rapid creation (days not months)
- ▶ Reuses existing capabilities but delivers new functions and insights
- ▶ Requires less technical skills
- ▶ Often mixes internal and external sources of information

With this light weight mashup environment, organizations can unlock and transform enterprise, web, personal, and departmental information into consumable or *mashable* assets, which includes information feeds and widgets. These assets can then be dynamically assembled, at-the-glass, into new applications that address daily business challenges. With IBM Mashup Center, organizations can reduce their application backlog and improve productivity with a new approach to application assembly provide new agile means to surface and consume information.

4.5.2 Business values

Mashups are an important new capability to further reduce costs by getting more value out of existing information and projects, which provides a manageable way for business users to assemble those assets into applications.

- ▶ Business benefits:
 - Foster innovation and increase productivity by empowering employees to rapid assembly of new applications that support immediate business needs.
 - Gain valuable insights and solve business problems more effectively by remixing enterprise and web information about the glass.
 - Respond immediately to new business challenges by creating applications that were previously unaffordable or of lower priority within the IT budget.
 - Time to value for applications is enhanced. Depending on the project scope, customers can see 100% ROI in as short as three months.
- ▶ IT benefits:
 - Reduce IT backlog with a new approach for application assembly. Average IT shop spending a majority of their budget on ongoing expenses, which leaves few dollars for new projects or custom applications.
 - Speed development and reduce the costs of creating rich, highly configurable, yet standards-based web applications.
 - Create a stronger partnership between IT and business by providing end users with a self-service approach to application development.
 - Apply the appropriate levels of governance, allowing business users to innovate, but within a secure and scalable environment.

A mashup enables:

- ▶ Line of business, *self-service* application development
- ▶ Dynamic, at the glass, application assembly, without the underlying components needing to know about each other ahead of time
- ▶ Rapid creation of situational applications that solve day-to-day problems. New applications can be created in a short time
- ▶ Easy mashing of content from different sources to generate new insights

4.5.3 Product overview

IBM Mashup Center is designed to provide an easy-to-use business mashup solution that supports quick, dynamic situational applications with the security and governance capabilities IT requires.

With this lightweight mashup environment, organizations can unlock and transform enterprise, web, personal and departmental information into consumable or mashable assets, including information feeds and widgets. These assets can then be dynamically assembled, at-the-glass, into new applications that address daily business challenges. With IBM Mashup Center, organizations can reduce their application backlog and improve productivity with a new approach to application assembly provide new agile means to surface and consume information.

IBM Mashup Center supports each step of the mashup workflow:

- Unlock information sources

Unlock a wide range of information sources within the enterprise including databases, desktop and departmental information, and internal and external websites.

Technically-savvy users simply point-and-click using a wizard-based interface to create consumable feeds. Users can enable caching for performance optimization, add technical documentation, and specify security permissions. Using the feed generation capabilities of IBM Mashup Center, existing core systems can be better utilized and shared without needing to copy or replicate data sources and without requiring changes to the underlying systems.

IBM Mashup Center provides connectors to the most common backend sources, from enterprise systems, such as SAP, to desktop data, such as Microsoft Excel. You can also create your own connectors using the IBM Mashup Center highly extensible plug-in framework.

- Create dynamic widgets

IBM Mashup Center includes Lotus Widget Factory, a powerful widget creation environment that enables developers of all skill levels to rapidly generate widgets without coding. Intuitive wizards step you through common widget creation tasks, such as building interactive user interfaces for REST-based services, enabling widgets to send and receive events, or generating dynamic widget personalization windows. Lotus Widget Factory is tightly integrated with IBM Mashup Center, supporting automatic deployment of widgets to the mashup server, helping to speed testing, and increasing developers' productivity.

IBM Mashup Center developers can also choose to extend their widget creation options by utilizing IBM WebSphere sMash. With WebSphere sMash, scripting developers can quickly pull together dynamic Web 2.0. applications, which can also be re-purposed as widgets for use in mashups.

- Transform information

IBM Mashup Center allows information feeds to be mixed and transformed into net new feeds, also known as data mashups. Using a visual, browser-based tool, information and business analysts can re-mix, merge, group, sort, annotate, filter, and transform feeds in a variety of ways, creating a single view of disparate sets of information in minutes. While a rich set of available functions and operators are provided for common manipulation tasks, advanced functions are also supported, such as regular expressions, variance, and encoding. After a new feed is created, it can be published in a number of formats that include ATOM, RSS, and XML.

- ▶ Discover and share assets

After mashups, widgets, or feeds are created, they can easily be published to a centralized catalog where other users can discover and reuse them. The catalog includes built-in Web 2.0 community features, such as ratings, tagging, and commenting. These community-enhancing features help to illuminate the most useful assets, while also increasing productivity by encouraging reuse. In addition, with the catalog, organizations can apply the appropriate levels of governance by securing which users or groups can see which assets.

- ▶ Rapid assembly of mashups

With IBM Mashup Center's browser-based assembly tool, end users can quickly and easily assemble new mashups by dragging and dropping widgets onto the page, and then wiring them together on-the-glass. This tool includes a set of business-ready widgets that jump start mashup creation and support a wide range of information visualization options, such as charts and table views. In addition, users can easily extend their mashup environment by incorporating custom developed widgets provided by IT, widgets available on the external IBM Mashup Catalog, or widgets from across the web, including any of the thousands of Google Gadgets.

After a mashup is assembled, it can be easily shared. Visual tools are provided that allow end users to define what users or groups can view or edit their various pages. Mashups can also be published to the catalog, where other users can easily reuse them.

4.5.4 Platforms supported

The hardware requirements for IBM Mashup Central are:

- ▶ Microsoft Windows Server 2003 x86-32, Enterprise with Service Pack 1 (SP1):
 - Intel Pentium® processor at 500 MHz, or faster
 - Intel EM64T or AMD Opteron processor
 - Minimum 512 MB physical memory; 1 GB preferable
 - CD-ROM drive
 - Disk space requirements: 1.8 GB

The software requirements for IBM Mashup Central are:

- ▶ Web browsers:
 - Firefox 2.0 and 3.0
 - Microsoft Internet Explorer 6 and 7 or later
 - Safari 3.1 (on Mac only)
- ▶ Operating systems:
 - Microsoft Windows Server 2003 x86-32, Enterprise with Service Pack 1
 - Red Hat Enterprise Linux (RHEL) 5.0
- ▶ Database (user customizations and preferences):
 - DB2 Enterprise Server Edition V9.5
 - Oracle:
 - Enterprise Edition 10g
 - Standard Edition 10g

4.5.5 Key resources

For additional information about IBM Mashup Center, go to these websites:

- ▶ IBM Mashup Center website
<http://www.ibm.com/software/info/mashup-center/>
- ▶ IBM Mashup Center on Lotus Greenhouse
<https://greenhouse.lotus.com/home/product.jsp?p=mashups>
- ▶ The IBM “Mix and Mash” to keep up with new developments
<http://www.mix-and-mash.com>

4.6 IBM Cognos Express

In this section, we discuss the IBM Cognos Express offering.

4.6.1 Executive summary

Are you looking for better insight into business data to improve your decision making? Are you looking for ways to provide complete, consistent access to your business information so that your business users are self sufficient and no longer rely on IT for reports and analysis? Are you looking for a way to start small with reporting, analysis or planning capabilities with the ability to expand as needed? Are you looking for integrated reporting, analysis, and planning capabilities with a turnkey operation deployed in minutes?

If any of these questions apply to your situation, IBM Cognos Express might be the solution for you. IBM Cognos Express is an offering that delivers the essential reporting, analysis, dashboard, scorecard, planning, budgeting and forecasting capabilities purpose-built and priced to meet the needs of midsize companies. Everything is included in a pre-configured, self-contained solution that makes it simple and easy to own, operate, and grow. More importantly, IBM Cognos Express provides midsize companies consistent, reliable information for better, faster decision making to manage costs, drive profitability, and increase growth.

For organizations that are just beginning to develop a Business Intelligence or planning strategy, IBM Cognos Express includes everything that you need to get started right away. It offers powerful, but easy-to-use capabilities for both novice and advanced users to encourage broad adoption throughout a company.

4.6.2 Business values

IBM Cognos Express provides business value immediately because it is easy to install, easy to use, and easy to buy:

- ▶ Easy to install: IBM Cognos Express is a pre-configured and self contained solution.

IBM Cognos Express includes everything that is required for immediate use in a preconfigured solution with no assembly required, so there are no hidden costs. A single centralized web interface controls all administrative aspects of installation, deployment, and management, using only a few simple mouse clicks.

- **Easy to use:** IBM Cognos Express enables self-service access empowering business users.

This self-service access allows business users to work independently to analyze information and create and modify reports, without having to rely on IT for help. Information is presented in a context that business users understand while ensuring data accuracy and consistency throughout the organization, allowing executives and managers in different departments to spend more time analyzing data and less time arguing over whose data is correct.

- **Easy to buy:** IBM Cognos Express is packaged and priced right.

It is packaged and priced right to let companies start small with only the components they need, realize immediate business value and expand their solution as they grow. With no hidden costs for additional software and unsurpassed ease of use, it delivers a rapid return on investment and a predictable ongoing cost of ownership. Companies can easily match their projects and needs to their budget and resource constraints.

4.6.3 Product overview

IBM Cognos Express can be purchased in its entirety or by module to meet specific buying needs. IBM Cognos Express consists of these modules:

- **IBM Cognos Express Xcelerator**

IBM Cognos Express Xcelerator transforms and enhances the common spreadsheets with a powerful in-memory analytics engine for real-time multidimensional analysis, planning, budgeting, and forecasting. It delivers Excel-based planning and business analysis that extends the familiar Excel front-end, leveraging the power and speed of a powerful in-memory analytics engine:

- Data, business hierarchies, rules, and calculations are centrally managed ensuring accuracy and consistency of information
- Excel or web interface
- Business scenarios with powerful “what if” modeling and write back
- Role-based security and clear audit trails
- Workflow management

- **IBM Cognos Express Reporter**

IBM Cognos Express Reporter empowers business users to access, modify, and create reports with comprehensive self-service reporting and ad hoc query capabilities and delivers the right information to all users to meet their unique business needs using a Web-based interface.

IBM Cognos Express Reporter provides self-service reporting and ad hoc query capabilities including:

- Simple, intuitive authoring for novice to experts
- Different reports to meet the needs of different users
- Breadth of report coverage: operational, transactional, dashboards, ad hoc
- Connect to data and in any combination: relational, OLAP, desktop files
- Flexible report delivery by web interface, PDF, Excel, email or Portal

► IBM Cognos Express Advisor

IBM Cognos Express Advisor quickly translates raw data into high-impact analysis and visualization. It offers sophisticated analysis with rich visual presentations that include easy and intuitive drill down and drill up capabilities and the flexibility to slice and dice information. It uses a fast and powerful in-memory analytics engine with write back enabling companies to link analysis to the planning process for better business outcomes and business optimization.

IBM Cognos Express Advisor provides free form analysis and visualization, including:

- Real-time multidimensional analysis leveraging speed and power of an in-memory analytic server
- Slice and dice, drill down, and change display capabilities
- High impact data visualizations
- On-the-fly business view of changes
- “What if” business scenario modeling with write-back
- Embed live content into Microsoft Office applications

4.6.4 Platforms supported

The IBM Cognos Express products are supported on the 64-bit Windows Server 2003.

4.6.5 Key resources

To learn more about IBM Cognos Express products, go to this address:

<http://www.ibm.com/software/data/cognos/cognos-express/>

IBM Tivoli

In this chapter, we explore the IBM Tivoli midmarket portfolio, which includes storage, security, and automation management solutions. Each Tivoli midmarket product is targeted to help small and midsized businesses improve the security, availability, and control of their IT assets. The Tivoli midmarket portfolio contains these products:

- ▶ IBM Tivoli Storage Manager Fastback™
- ▶ IBM Tivoli Storage Manager Fastback for Workstations
- ▶ IBM Tivoli Continuous Data Protection for Files
- ▶ IBM Tivoli Provisioning Manager for OS Deployment
- ▶ IBM Tivoli Monitoring for Microsoft Applications
- ▶ IBM Tivoli Access Manager for Enterprise Single Sign-On
- ▶ IBM Maximo® Asset Management Essentials
- ▶ IBM Tivoli Foundations Application Manager
- ▶ IBM Tivoli Foundations Service Manager

This chapter includes a short overview of IBM Tivoli Continuous Data Protection for Files and IBM Tivoli Provisioning Manager for OS Deployment products. Both products are valuable to small and midsized businesses.

We also introduce IBM Tivoli Foundations Application Manager and Tivoli Foundations Service Manager, which are both designed and priced for the growing midsized organization.

5.1 IBM Tivoli midmarket portfolio

The IBM Tivoli midmarket portfolio offers the visibility, control, and automation to deliver solutions in security, systems management, and data backup and recovery. These solutions can help to ensure a quick return on investment and help meet your business needs. The Tivoli midmarket portfolio provides solutions in these areas:

- ▶ Systems management and automation: Helps you control your systems while reducing unnecessary work and cost
- ▶ Data backup and recovery: Ensures access to your critical data when you need it most
- ▶ Asset protection and security: Prepares you to handle threats, audits, and compliance regulations

The IBM Tivoli midmarket solutions are based on market leading technologies of IBM Tivoli IT management software, but each solution is customized to help growing businesses; for example, these solutions use preconfigured installation processes, so you need fewer skills and less time to install and deploy them. When this software is installed, one person, regardless of specialty, can easily manage popular applications and systems across your environment.

The Tivoli midmarket portfolio provides IT management solutions that are:

- ▶ Simple:
 - Easy to use, install, and maintain
 - Scalable and flexible as your business grows
- ▶ Fast:
 - Affordable with fast return on investment
 - Quickly productive with dependable application performance, reliable data protection, and availability
- ▶ Secure:
 - Provides secure access to critical business applications
 - Protects your IT from crashes, viruses, hackers, and other threats

5.1.1 IBM Tivoli Continuous Data Protection for Files

IBM Tivoli Continuous Data Protection (CDP) for Files V3.1 provides continuous data protection of your most critical files including files or documents which you are actively working on. It unobtrusively runs in the background, capturing and saving changes made to files as they occur so that if something happens to the file such as corruption or accidental deletion, it can be quickly recovered from a local store. In addition, it can also save changed files to a second location such as a network file share or a USB key to create a redundant copy to protect data against common mishaps such as notebook theft, virus, dropped computer, or a misplaced cup of coffee.

By capturing the changes as they occur, small incremental updates are saved to the backup copy. These saved updates reduce or eliminate traditional backup windows and enables the delivery of effective and efficient data protection for Windows desktops and notebooks in the environment.

Tivoli Continuous Data Protection for Files is an alternative to traditional approaches to backing up endpoints, and focuses on exploiting affordable disk technology as the backup repository. The moment a file is saved, Tivoli Continuous Data Protection for Files creates copies of the file to be sent to different locations or targets for file protection. The various target areas are:

- ▶ Local cache: Local disk for protection even when not connected to a network
- ▶ Network file system: For off-machine protection on NAS storage platforms such as the IBM N series
- ▶ Web address: Internet service provider option to replicate to website
- ▶ Tivoli Storage Manager: Environments that use Tivoli Storage Manager

In Tivoli Continuous Data Protection for Files, key usability updates make it even easier to set up and manage Tivoli Continuous Data Protection. These updates include:

- ▶ Installation enhancements
- ▶ Configuration wizard
- ▶ New restore wizard
- ▶ Reporting applications enhancements
- ▶ New schedules section
- ▶ Lotus Notes integration with point-in-time client support for .nsf files
- ▶ Microsoft Vista support

Tivoli Continuous Data Protection for Files is licensed on a per-PC basis.

Tivoli Continuous Data Protection for Files is a desktop and notebook data protection product that is designed to provide transparent, continuous protection for users' critical files to help increase personal productivity and business continuity.

What is new in Tivoli Continuous Data Protection for Files:

- ▶ Enhanced graphical user interface (GUI):
 - The Tivoli Continuous Data Protection for Files GUI has been redesigned to make it more intuitive to configure and use. Upon installation, the user goes through a brief, easily understood wizard to configure the product.
 - The user can now select from a list of applications whose files should be protected.
 - The restore feature in the user interface was enhanced to allow searching for files to restore based on a filename with wild cards.
 - The user interface now allows specifying the time of day, the day of the week, or month for a scheduled backup to occur.
- ▶ Enhanced Lotus Notes client support:
 - Versioning of data level changes for email files
Tivoli Continuous Data Protection for Files tracks data level changes on email files allowing point-in-time restore for local (desktop) Lotus Notes and Microsoft Outlook client data.
 - Application aware backup of Lotus Notes local (desktop) client.
Tivoli Continuous Data Protection for Files exploits the Lotus Notes API to force flush of buffers and quiesce of data to allow consistency of backup data.
By using the Lotus Notes API, Tivoli Continuous Data Protection will back up a consistent copy of the Lotus Notes client database even if changes, such as incoming mail, are occurring in that database during the backup.
- ▶ Support of Tivoli Continuous Data Protection running on Microsoft Vista

Platform requirements

An Intel Pentium III processor with:

- ▶ 500 MHz CPU, or higher
- ▶ 384 MB RAM, or higher
- ▶ 100 MB free disk space:
 - Plus user configured amount of additional space for local file repository
- ▶ 20 MB download, 40 MB install footprint

Software requirements:

- ▶ One of the following operating systems:
 - Windows 2000 Professional, Advanced Server, SP2, or later (x86-32)
 - Windows 2003 Server, Standard, Enterprise, SP1 (x86-32)
 - Windows XP Professional, SP1, or later (x86-32)
 - Windows Vista Ultimate, Windows Vista Business (x86-32)
- ▶ One of the following browsers:
 - Internet Explorer, V6.0, or later (preferable)
 - Mozilla Firefox, V1.5.0.7, or later

Key resources

For more information about Tivoli Continuous Data Protection for Files, see the product page:

<http://www.ibm.com/software/tivoli/products/continuous-data-protection/>

5.1.2 Tivoli Foundations Appliances

Tivoli Foundations Appliances are pre-integrated service management packages that can be deployed and maintained with less IT skills. Everything is contained in a single image. It also includes items, such as VPN, backup and disaster recovery, that are done separately outside of the appliance with traditional software. The Foundations Appliances come with best practices capabilities that can enhance the user experience and reduce the time to deploy and use.

In this section, we discuss these IBM Tivoli Foundations Software Appliances:

- ▶ IBM Tivoli Foundations Application Manager
- ▶ IBM Tivoli Foundations Service Manager

IBM Tivoli Foundations Application Manager

IBM Tivoli Foundations Application Manager is a systems resource software appliance that provides the capabilities to monitor, alert, and report on the performance and availability of the server operating system, virtual servers, networks, databases, and email applications, along with built in auto discovery, agent deployment, domain knowledge, and enhanced problem determination tools.

The IBM Tivoli Foundations Application Manager runs on the Lotus Foundations Start Server, which provides the software to help run your business with reliability, security, and simplicity. It is an ideal server for businesses with limited budgets and IT resources.

IBM Tivoli Foundations Application Manager is designed to help general business IT organizations with limited funds and resources and achieve quick time to value with minimal installation and configuration time. IBM Tivoli Foundations Application Manager is built with IBM Tivoli Monitoring and selected IBM Tivoli Monitoring agents. These are the same

powerful programs that are used to manage server operating systems, virtual servers, networks, databases, and email applications in an enterprise environment. You get all of the power in an easy-to-deploy, easy-to-use appliance.

With this appliance you can visualize service performance and health across network devices, servers, middleware, application components, and improve service delivery quality:

- ▶ Intuitive Launch Pad navigation window that allows users to quickly access essential operational, administrative windows and reports.
- ▶ Built in IT environment discovery for quick deployment of monitoring agents.
- ▶ Comprehensive OS, Virtual Server, networks, database, and email resource metrics for managing the performance and availability of your IT resources.
- ▶ Customizable user interface that can bring together the right set of data and reports (called workspaces) in an easy-to-use interface.
- ▶ Built in alerting situations and expert advice to help both novices and experts to quickly identify, isolate, and resolve problems quickly.
- ▶ Data Warehousing for historical trending and reporting for any metric collected - Out of the box reports to identify potential bottlenecks and track system utilization.
- ▶ Integration with Tivoli Foundations Service Manager for complete end-to-end management of incidents and problems.
- ▶ Leverages Lotus Foundations server, which provides unique self-managing economics to help reduce IT complexity by automating many critical functions including installation, configuration, and security checks.

For more details about Tivoli Foundations Application Manager, go to this web address:

<http://www.ibm.com/software/tivoli/products/foundations-application-mgr/index.html>

Tivoli Foundations Application Manager supports a wide variety of operating systems. For specific details, go to this web address:

http://www.ibm.com/software/tivoli/products/foundations-application-mgr/requirements.html?S_CMP=rnav

IBM Tivoli Foundations Service Manager

IBM Tivoli Foundations Service Manager is a service desk software appliance that is designed for general business customers that provides help desk capabilities through IT Infrastructure Library® (ITIL®) V3.0 aligned service request, incident, and problem management processes.

IBM Tivoli Foundations Service Manager installs and configures quickly to help reduce time to value and integrates with Tivoli Foundations Application Manager appliance to provide robust support management capabilities.

Tivoli Foundations Service Manager can help you improve operational efficiency and the delivery of services by enabling a single point of management contact, which automates service requests and incident and problem management:

- ▶ Streamline your service support operations through ITIL V3 aligned service request, incident and problem process management applications
- ▶ Reduce mean time to resolution through built-in knowledge management application and remote diagnostics tooling
- ▶ Improve your operational efficiency through role-based start centers, dash boards, key performance indicators (KPI), work management, and reporting

- ▶ Accelerate time to value by leveraging out-of-the box best practice contents
- ▶ Measure end user satisfaction through a built-in survey application
- ▶ Reduce service desk ticket volume through a Web-based self help portal for your employees
- ▶ Provide end-to-end support to your IT infrastructure by integrating it with Application Manager appliance
- ▶ Eliminate the need for a separate operating system by leveraging the Lotus Foundations Start on your Tivoli Foundations server

For more details about Tivoli Foundations Service Manager, go to this web address:

<http://www.ibm.com/software/tivoli/products/foundations-service-mgr/index.html>

Tivoli Foundations Service Manager supports a wide variety of systems. For details, go to this web address:

http://www.ibm.com/software/tivoli/products/foundations-service-mgr/requirements.html?S_CMP=rnav

5.2 Tivoli Storage Manager FastBack

In this section, we provide an executive summary, business value, product overview, platforms that are supported, and key resources for IBM Tivoli Storage Manager FastBack.

5.2.1 Executive summary

Today, businesses face an expanding set of data-protection challenges and regulatory data-retention requirements. The 24 x 7 availability of important data and applications is no longer just a goal; instead, it is a business necessity. Losing important business data can be disastrous. Vital information that is lost due to human error, hardware failure, or other events can damage an entire organization's efficiency, productivity, reputation, and profitability. That is why the seemingly routine activity of backing up and restoring data is critically important.

Today IT managers in small and midsized businesses seek a backup and recovery solution to meet these critical requirements:

- ▶ Provides basic backup and recovery capabilities priced to fit the budgets of small and midsized businesses

The solution should help lower operation costs and deliver rapid time to value.

- ▶ Is easy to install, configure and implement

The solution should have a small footprint and enable you to install and configure the software, plus perform the first backup, in thirty minutes or less.

- ▶ Is an easy-to-use solution that helps improve employee productivity

The backup application should run automatically with no user involvement, and the recovery interface should be intuitive and easy to navigate.

- Meets the data protection and recovery management requirements of the business

The solution should protect critical information as often as needed to reduce the amount of current data at risk from 24 hours worth (as with traditional nightly backup to tape) to almost zero. The solution should enable the near-instant recovery of any amount of data to reduce downtime from hours to just a few minutes following almost any type of data loss, anywhere in the organization. The solution should also enable the recovery of data from any previous point-in-time to recover from data corruptions, virus attacks, and other problems that might not be noticed immediately.

IBM Tivoli Storage Manager FastBack is a continuous data protection and recovery management platform for Windows and Linux servers and applications that run on software such as Microsoft Exchange, Microsoft SQL, DB2, SAP, and Oracle. It provides a data protection and recovery solution for mission-critical applications, in the data center, remote branch offices, and for small businesses. Tivoli Storage Manager FastBack helps to eliminate the need for traditional backup windows by continuously capturing data changes at the block level with extremely low overhead on the systems that it helps to protect. Its flexible policy engine enables administrators to improve recovery service levels to help meet data protection and retention requirements on a per-application basis. Tivoli Storage Manager FastBack also provides a near instant restore capability that enables applications to be up and running within minutes following any data loss, while full data recovery is performed in the background.

IBM Tivoli Storage Manager FastBack incorporates best-in-class data reduction technologies to minimize storage and network bandwidth costs: block-level, incremental-forever backup that eliminates the need for periodic, highly-redundant full backups; data deduplication at the Tivoli Storage Manager FastBack server to remove redundant blocks from the local repository; and deduplication across the wide area network (WAN) to eliminate redundant data from across consolidated FastBack instances.

5.2.2 Business value

IBM Tivoli Storage Manager FastBack gives you the power to quickly recover any Microsoft Windows and Linux server data, anywhere in the organization, from any point-in-time:

- Helps to provide continuous data protection and recovery management for both Microsoft Windows and Linux servers, both in the data center and in remote or branch offices
- Gets applications and users back up and running within minutes following almost any data loss, while full data recovery is performed in the background
- Helps to eliminate the need for traditional backup windows by continuously capturing data changes at the block level
- Schedules automated data transfers based on flexible, policy-based settings, which helps administrators meet data protection and retention requirements on a per-application basis
- Helps reduce storage and bandwidth requirements with block level incremental backup and integrated data deduplication

5.2.3 Product overview

IBM Tivoli Storage Manager FastBack enables you to protect your organization's data from storage-related failures by copying data and storing it both locally (for fast, easy recovery of files and volumes) and in other locations (for disaster recovery, business continuity, and backup consolidation). Tivoli Storage Manager FastBack provides an enterprise-class backup and recovery solution for midsized companies that is inexpensive and easy-to-deploy and use. Table 5-1 shows Tivoli Storage Manager FastBack features and benefits.

Table 5-1 Tivoli Storage Manager FastBack features and benefits

Feature	Benefits
Block-level incremental capture	<ul style="list-style-type: none"> ▶ Very low impact on application servers and ideal for virtual machines ▶ Eliminates the need for backup windows ▶ Superior performance with both large numbers of small files and for very large files, such as databases
Target-side and WAN data deduplication	<ul style="list-style-type: none"> ▶ Reduces the amount of disk capacity required locally and in a backup consolidation environment ▶ Post process does not impact backup or application server performance
Policy-based backup engine	<ul style="list-style-type: none"> ▶ Balances application recovery requirements with processing, network, and storage resources ▶ Selects schedule of snapshots based on the needs of each application ▶ True Continuous Data Protection (available on Windows clients only) ▶ Helps reduce costs while improving recovery service levels for mission-critical applications
Storage area network (SAN) backup	<ul style="list-style-type: none"> ▶ SAN-based backup processes ▶ Does not impact local area network (LAN) bandwidth
FastBack Mount/Virtual Recovery	<ul style="list-style-type: none"> ▶ File system view into the backup repository allows click-drag-drop recovery of any file or folder ▶ Restores full access to any volume in seconds, while recovery occurs in the background (available on Windows clients only) ▶ Optional bare machine recovery component recovers from a full system failure, even to dissimilar or virtual hardware
Point-in-time recovery	<ul style="list-style-type: none"> ▶ Roll back to any previous point-in-time to recover from accidental deletions, virus attacks, rolling corruptions, and so on ▶ Maintains any number of previous generations
Remote office support	<ul style="list-style-type: none"> ▶ Helps to reduce the costs of backup system management ▶ Helps improve backup and recovery service levels ▶ Helps improve reliability and minimizes recovery failures
Integration with tape infrastructure	<ul style="list-style-type: none"> ▶ Leverages current investments ▶ Offloads the impact of tape backups from application servers
Central management	<ul style="list-style-type: none"> ▶ Centrally manages all backup and recovery operations ▶ Single Web-based interface ▶ Manages both local and remote offices ▶ Fully integrated with TSM Administration Console for Unified Recovery Management
Full automation	<ul style="list-style-type: none"> ▶ “Set it and forget it” policy engine ▶ Self-managing repository always has a set number of data iterations on hand for easy rollback and fast recovery
Application aware	<ul style="list-style-type: none"> ▶ Support for almost all Windows and Linux-based applications, including IBM DB2, Microsoft Exchange, Microsoft SQL, Oracle and mySAP ▶ Optional IBM Tivoli Storage Manager FastBack for Microsoft Exchange component recovers granular Microsoft Exchange data objects quickly

5.2.4 IBM Business Partner case study

Connected Work Place Solutions (CWPS) of Washington, D.C., the Independent Petroleum Association of America (IPAA), and KARIN Technology Holdings, LTD of Hong Kong are using data protection and recovery systems powered by the IBM Tivoli Storage Manager FastBack software. CWPS, a leading provider of information technology services for business and government, used Tivoli Storage Manager FastBack software to create Easy Data Protection for small and midsize organizations. The CWPS technology protects, restores, and secures data on-site and off-site, reducing downtime and data-loss risks.

For more details, go to this web address:

<http://www.ibm.com/press/us/en/pressrelease/28248.wss>

5.2.5 Platforms supported

IBM Tivoli Storage Manager FastBack supports the following platforms:

- ▶ Backup and disaster recovery (DR) server system requirements:
 - Microsoft Windows 2008 Enterprise Server (Service Pack (SP) 1 or later)
 - Microsoft Windows 2003 Standard or Enterprise Server (SP1 or later)
- ▶ Backup client supported platforms:
 - Microsoft Windows XP Professional (SP1 or later)
 - Microsoft Windows 2000 Standard, Advanced, or Professional (SP3)
 - Microsoft Windows 2003 Standard or Enterprise (SP 1 or later)
 - Microsoft Windows 2008 Server
 - SUSE Linux Enterprise Server 10, SP2
 - RedHat Enterprise Linux 5 Server Advanced Platform
 - Microsoft Cluster support - Microsoft Windows 2003 Cluster Server configurations
 - Microsoft Visual SourceSafe (VSS) support
 - Integrated with Microsoft VSS writers to back up Microsoft Exchange and Microsoft SQL Servers
 - Microsoft Exchange support
 - Microsoft Exchange 2003
 - Microsoft Exchange 2007
 - Microsoft Active Directory support
 - Integrated with Microsoft Active Directory for improved administration and security management
 - Java-based graphical user interface (GUI), Simple Network Management Protocol (SNMP), and command-line interface (CLI)

5.2.6 Key resources

For more information, see the following resources:

- ▶ Tivoli Storage Manager FastBack product page:
<http://www.ibm.com/software/tivoli/products/storage-mgr-fastback/>
- ▶ *Next-generation data protection for midsized companies* white paper:
<ftp://ftp.software.ibm.com/common/ssi/sa/wh/n/tiw14008usen/TIW14008USEN.PDF>
- ▶ *Addressing the complexities of remote data protection* white paper:
<ftp://ftp.software.ibm.com/common/ssi/sa/wh/n/tiw14010usen/TIW14010USEN.PDF>

5.3 Tivoli Storage Manager Fastback for Workstations

In this section, we discuss Tivoli Storage Manager Fastback for Workstations.

5.3.1 Executive summary

It is not uncommon for midsized businesses to struggle to reliably back up, manage, and recover important data on workstations and laptops. These workstations and laptops can contain key business data that is vital to your business but outside the protection of your main business system's backup and recovery process. This exposure can cost the business considerable time.

Tivoli Storage Manager FastBack for Workstations is a real-time, continuous data protection solution specifically designed for desktop and laptop computers. Instead of waiting for a scheduled interval, Tivoli Storage Manager FastBack for Workstations backs up your most important files the moment they are saved, in real time, doing it effortlessly and transparently.

5.3.2 Business value

Tivoli Storage Manager FastBack for Workstations enables central management of data protection for user desktop and laptops across the entire enterprise, including main offices, remote offices, and home/mobile offices. It provides these benefits:

- ▶ User-initiated protection and recovery for Windows data using a simple GUI.
- ▶ Continuous data protection of data that can satisfy even the most rigorous of Recovery Point Objectives.
- ▶ Reduced downtime and improved user productivity with granular and immediate user-initiated recovery of workstation data files.
- ▶ Simplified data protection for user data regardless of where it resides.
- ▶ Simplified centralized management, including installation of software updates.
- ▶ Lower costs associated with managing data in locations where skill or processes are limited or do not exist, such as in remote or mobile offices.

5.3.3 Product overview

Tivoli Storage Manager FastBack for Workstations is based on IBM Tivoli Continuous Data Protection product technology. It is a real-time, continuous data protection solution for Windows laptops and desktops with centralized management capabilities. It is designed to work well even if you are intermittently connected to a network. Tivoli Storage Manager FastBack for Workstations can back up your most important files the moment they are saved (real-time) instead of waiting for a scheduled interval. Non-critical files and email mailboxes can be backed up on a traditional interval.

Tivoli Storage Manager FastBack for Workstations is designed to back up your files to the local disk of your computer and to a remote storage device that is not on your computer. The backup copies are versioned and can be restored by date. The local storage area is available to help create backup copies and restore your data even when your computer is not connected to a network. You can restore your data from the remote backup copies in the event that your computer is lost or damaged.

These external storage environments are supported by Tivoli Storage Manager FastBack for Workstations:

- ▶ Network file system
- ▶ WebDAV server
- ▶ IBM Tivoli Storage Manager server

Key to providing a unified data protection infrastructure is the ability to centrally control and manage your data protection operations. Tivoli Storage Manager FastBack for Workstations provides a centralized management interface that helps you manage thousands of laptops and desktops. This central management interface runs in the same integrated solutions console in which the Tivoli Storage Manager Administration Center runs, helping you to manage data protection across the data center, remote office, and mobile users in a centralized way.

The centralized management capability allows you to discover Tivoli Storage Manager FastBack for Workstations clients automatically:

- ▶ View client information such as:
 - Deployment information
 - Amount of storage that a client is using
 - Client activity
 - Current client configurations for potential editing
 - Information about a client's storage target
 - Log files
 - Alerts
- ▶ Take client actions such as these:
 - Initiate an incremental backup
 - Push a client configuration
 - Lock a client configuration so it cannot be changed
 - Deploy updates
 - Configure email alerts for administrators based on your own criteria

5.3.4 Platforms supported

Tivoli Storage Manager FastBack for Workstations supports these Microsoft operating systems:

- ▶ Microsoft Windows XP Professional, SP1, SP2, SP3 (x86-32)
- ▶ Microsoft Windows XP Professional with FDCC settings, SP1, SP2, SP3 (x86-32)
- ▶ Microsoft Windows Vista Ultimate, Business (x86-32)
- ▶ Microsoft Windows Vista Ultimate (x86-64, 64-bit support), MS Windows code signing
- ▶ Microsoft Windows Vista Basic (x86-32)
- ▶ Microsoft Windows Vista Home Premium (x86-32, x86-64)
- ▶ Microsoft Windows Vista Enterprise, SP1, SP2 (x86-32)
- ▶ Microsoft Windows Vista Enterprise with FDCC settings, SP1 (x86-32)
- ▶ Microsoft Windows 7 Starter Edition (32 bit)
- ▶ Microsoft Windows 7 Home Premium (64 bit)

5.3.5 Key resources

For more information about Tivoli Storage Manager FastBack for Workstations, go to this web address:

<http://www.ibm.com/software/tivoli/products/storage-mgr-fastback-workstation/>

5.4 Tivoli Provisioning Manager for OS Deployment

In this section, we discuss Tivoli Provisioning Manager for OS Deployment and Tivoli Provisioning Manager for Images, which is an optional component.

5.4.1 Executive summary

Up-to-date server and workstation operating systems (OS) are essential to support user efficiency, technology compatibility, and security requirements. The conventional process of deploying operating systems manually is labor intensive, prone to errors, and can disrupt business operations. These challenges are especially difficult for budget-sensitive companies with limited IT resources.

IBM Tivoli Provisioning Manager for OS Deployment and the broader Tivoli Provisioning Manager for Images deliver unified physical and virtual image management as an integrated heterogeneous systems management offering.

Tivoli Provisioning Manager for OS Deployment helps organizations reduce the time and costs that are associated with desk-side support and direct interaction with target systems. Tivoli Provisioning Manager for Operating Systems Deployment, optimized to facilitate remote, automated deployments, delivers an easy-to-use, security-rich interface for remote configuration, simultaneous deployment, updates and restoration of Linux, Sun Solaris, and Microsoft Windows operating systems across thousands of devices in a variety of networks.

Tivoli Provisioning Manager for Images eases the path to virtualization for organizations that were previously concerned about transitional risk or disruption. Combined they provide automated bare metal operating system deployment, hardware-independent imaging, and virtual image management from a single easy-to-use console, enabling you to improve business continuity, simplify server consolidations, and provide workload mobility to improve resource efficiency while helping to lower IT costs.

5.4.2 Business value

Tivoli Provisioning Manager for Operating Systems Deployment (TPM for OSD) includes flexible alternatives for creating and managing operating systems' cloned or scripted image installs. Table 5-2 provides the systems management value of TPM for OSD.

Table 5-2 Systems management value

Today's issues	TPM for OSD value
Infrastructure complexity: <ul style="list-style-type: none">▶ Heterogeneous operating systems▶ Virtualization▶ Globally distributed servers and devices	Easily handles infrastructure complexity: <ul style="list-style-type: none">▶ Provides extensive platform support and virtual driver injections▶ Manages dissimilar hardware migrations and vendor configurations▶ Part of centrally administered IBM Service Management solution
Increasing labor costs: <ul style="list-style-type: none">▶ Manual, inconsistent OS deployment▶ Application deployments and configuration▶ Slow upgrades and migrations	Reduces labor costs: <ul style="list-style-type: none">▶ Reliable, simplified, automated deployments save time and resources▶ Provide role-based software module deployment, which makes customization easy▶ Make rapid deployments, increase time to value, and improve ROI

Today's issues	TPM for OSD value
Need business resilience and continuity: <ul style="list-style-type: none"> ▶ Disaster recovery ▶ RAID, redundant networking ▶ Replication and synchronization 	Ensure business resiliency and continuity: <ul style="list-style-type: none"> ▶ Provides flexible, efficient operational restore ▶ Supports RAID, BIOS, multiple NIC configurations ▶ Can (optionally) handle a multiple server hierarchy with several replication options
Increasing capitol costs: <ul style="list-style-type: none"> ▶ Shared, limited resources ▶ Low utilization rates ▶ Disposal risks 	Control capitol costs: <ul style="list-style-type: none"> ▶ Automate desired configuration state ▶ Deploy physical images to VMware VM (P2V) ▶ Secure disk disposal, Compatible with Microsoft BitLocker
Need to take advantage of emerging hardware/technology: <ul style="list-style-type: none"> ▶ Firmware, driver updates ▶ Management modules ▶ Agility, density, and fabric/blades 	Simplifies maintenance and integration of emerging hardware and technology: <ul style="list-style-type: none"> ▶ Handles hardware configurations and software module updates (optionally inject on the fly) ▶ Supports Cell Blade deployments, UEFI standard

You can start with Tivoli Provisioning Manager for OS Deployment and move to other Tivoli provisioning solutions for more comprehensive coverage as your needs change.

5.4.3 Product overview

IBM Tivoli Provisioning Manager for OS Deployment V7.1.1 includes a comprehensive Web-based console that allows you to configure the provisioning server. It provides visual access to the target client computers in their different groups, management of the objects to prepare, supervise, and use during deployments (OS images, application packages, OS configuration properties), and creates recovery CD-ROM and DVD-ROMs. The console is used to organize and execute the provisioning tasks on a virtually unlimited number of computers simultaneously. The Tivoli Provisioning Manager for OS Deployment server runs in the background as a service to provide Preboot eXecution Environment (PXE) remote-boot capability and multicast file access to the remote-boot targets.

Tivoli Provisioning Manager for OS Deployment enables a target computer, client, or server to go from bare metal to a fully functional target computer without any intervention at the target computer's desk. Tivoli Provisioning Manager for OS Deployment offers a full set of foundational operating system provisioning features that are designed to address a wide array of user-specific needs:

- ▶ **Imaging engine**

Tivoli Provisioning Manager for OS Deployment can create file-based images of operating systems. The file-based image is more granular and flexible than typical sector-based images and helps to reduce the number of images that you need across your environment. Each file only needs to be stored one time rather than each full image, which can mean significantly reducing the resources required to store captured images. In addition, the process of capturing a differential image can be much faster, which reduces the administrator time that is spent creating images that might only have a few differences from each other.

- ▶ **Hardware inventory**

Prior to an operating system being installed, Tivoli Provisioning Manager for OS Deployment can collect key information about the hardware to better target the

appropriate OS and configuration set. Some of the discovered attributes include the installed hardware devices, serial number, and model name.

- ▶ Universal image and driver injection

A key feature of the Tivoli Provisioning Manager for OS Deployment imaging engine is the ability to create a universal image. By separating the device-specific drivers from the operating system image and injecting them at installation time, you can handle many different hardware types with a single image. This flexibility can mean less confusion about what operating system to install, fewer problems with missing drivers, and a better overall approach to managing images across the environment.

- ▶ Disk read-write access

Tivoli Provisioning Manager for OS Deployment can create, read, and modify file systems, such as NTFS, EXT-2, or EXT-3 and LVM. This is a critical need in the provisioning process to fully automate the tasks.

- ▶ Network distribution

The product can leverage its network access to download and upload files in the network. In addition, for situations where broad distributions are required, Tivoli Provisioning Manager for OS Deployment supports using multicast, which enables images to be deployed over the network to many endpoints simultaneously, which helps to minimize the impact in the network.

- ▶ Network database access

Tivoli Provisioning Manager for OS Deployment leverages a network database to store and retrieve provisioning data and to communicate with the web console.

- ▶ OS configuration

Proper configuration of the operating system is critical to ensure that a system is stable and secure. Tivoli Provisioning Manager for OS Deployment can read and write registry entries in Windows, configuration files in Linux, and configuration files in AIX, to support a variety of operating system configurations. It can also modify settings for multiple Network Interface Cards (NICs) and Windows Internet Name Service (WINS). The ability to centrally manage the configuration files and reuse them helps efforts to ensure that OS deployments are consistent and in compliance with corporate standards.

- ▶ Easy-to-use GUI

The Web-based GUI is streamlined to help reduce training needs, simplify tasks, and reduce the time to value. Email notifications about activity success or failure can be easily configured.

- ▶ Offline access to disk images

Often the image captured requires modification to be applicable to another machine. Rather than create a new reference system and capture another image, Tivoli Provisioning Manager for OS Deployment can modify the image on the managed server without re-imaging, which can save IT administrators significant time when trying to make simple or minor image alterations.

- ▶ CD-ROM, DVD, and USB-based provisioning

Although Tivoli Provisioning Manager for OS Deployment offers touch-free network deployment capabilities, there are often times when you want to boot a system from a CD-ROM, DVD media, or USB device. With Tivoli Provisioning Manager for OS Deployment, you can save an image to these media and manually insert it into the target drive for installation.

- ▶ Secure disk disposal

Permanently erasing the content of a hard disk can prove necessary for confidentiality reasons. When a computer changes hands or purpose, it can be important for users to ensure that the new user cannot recover data previously stored on the hard disk. To do so, the hard disk can be completely overwritten with meaningless data, permanently erasing all previously stored data. Compatibility with Microsoft Bit Locker Drive Encryption is provided to help render the content of a hard disk unreadable if stolen.

- ▶ Golden master

A master image can be retained in a separate partition on the local hard disk, enabling a restore to a desired configuration state or to undo unauthorized changes.

- ▶ Test or preproduction environments can be automatically populated from an existing production server, replicating all of the data without interference. To simplify multiple server environments, a summary of servers that require synchronization is generated.

- ▶ Virtualization support

VMware drivers can be automatically injected into a cloned image on a physical machine during deployment to a virtual machine (P2V) to enable business continuity.

IBM Tivoli Provisioning Manager for Images, an optional component, provides the following additional functionality capabilities:

- ▶ Support multiple Microsoft Windows, Linux virtual formats
- ▶ Capture VM image snapshot, query/restore images
- ▶ Customize image online or offline: Compress, disk defrag, file system defrag
- ▶ Discover imported hypervisor images
- ▶ Repository image import, export, including external repositories
- ▶ Copy, convert, or migrate an image-to-image manipulation (P2V, V2V)
- ▶ Deploy an image to a new hypervisor

5.4.4 Platforms supported

IBM Tivoli Provisioning Manager for OS Deployment supports the following platforms:

- ▶ Server operating systems:

- Windows 2008 Server (x86-32 and x86-64)
- Windows 2003 Server (x86-32 and x86-64)
- SUSE Linux Enterprise Server (SLES 10) (x86-32 and x86-64, IBM Power PC 64 System i and System p)
- SUSE Linux Enterprise Server (SLES) 9 on IBM System z
- Red Hat Enterprise (x86-32 and x86-64)
- Linux Server (RHEL) 5 on IBM Power PC 64 System i and System p
- IBM AIX V6.1 on IBM Power PC 64 System i and System p
- Solaris 10 SPARC 64-bits

- ▶ Client operating systems:

- Windows 2008 Server (x86-32 and x86-64)
- Windows Vista (x86-32 and x86-64)
- Windows 2003 Server (x86-32 and x86-64)

- Windows XP Professional (x86-32 and x86-64)
- Windows 2000 Server SP4 (x86-32)
- SUSE Linux Enterprise Server (SLES) 10 (x86-32 and x86-64, IBM Power PC and System p)
- SUSE Linux Enterprise Server (SLES) 9 GA only (x86-32 and x86-64)
- SUSE Linux Enterprise Server (SLES) 9 IBM PowerPC® 64 System p
- Red Hat Enterprise Linux Server (RHEL) 5 GA only (x86-32 and x86-64)
- Red Hat Enterprise Linux Server (RHEL) 5 IBM PowerPC 64 Cell Blade and System p
- Red Hat Desktop (x86-32 and x86-64)
- Red Hat Enterprise Linux Server (RHEL) 4 Update 5 only (x86-32 and x86-64)
- Red Hat Desktop 4 (x86-32 and x86-64)
- IBM AIX 5L V5.3 IBM PowerPC 64, System p
- IBM AIX V6.1.1 IBM PowerPC 64, System p Setup only, no cloning
- Sun Solaris 9, 10 SPARC 64 bits
- ▶ Databases and server operating systems:
 - Microsoft SQL Server 2005
 - Microsoft Access Driver
 - IBM DB2 V9.1 FP3 (Windows and UNIX)
 - Apache Derby 10.2.2 and 10.3.1.4 (UNIX)
 - MySQL 4.1 (UNIX)
 - Oracle 9.2, 10g, 11g (Windows and UNIX)

5.4.5 Key resources

For more information about Tivoli Provisioning Manager for Operating Systems Deployment, go to:

<http://www.ibm.com/software/tivoli/products/prov-mgr-os-deploy/>

For more information about Microsoft Windows Vista - Tivoli Provisioning Manager for Operating Systems Deployment, go to:

<http://www.ibm.com/software/tivoli/features/vista/>

5.5 Tivoli Monitoring for Microsoft Applications

In this section, we provide an executive summary, business value, product overview, and platforms that are supported, and key resources for IBM Tivoli Monitoring for Microsoft Applications.

5.5.1 Executive summary

Access to your business applications, your business data and information is vital to running your business. Any disruption in the availability of these applications or the ability to access your data can cost you in revenue, time and even customers, especially in this new *always on* world. The pressure to continuously monitor your applications and systems availability is ever present. You might be asking yourself these questions:

- ▶ How much is downtime of our mission critical Microsoft applications costing our business?
- ▶ How much revenue are we losing when the Microsoft systems that our business applications run on are not available?
- ▶ How can we improve the productivity of our IT staff? How can we get the IT staff away from managing the systems and applications and on to other critical activities?

IBM Tivoli Monitoring for Microsoft Applications can help you manage, automate, improve your time-to-recovery, or even prevent outages. Tivoli Monitoring for Microsoft Applications provides a complete Microsoft Solution for small to midsized businesses or departments within large organizations.

5.5.2 Business value

Table 5-3 shows the features, advantages, and benefits of Tivoli Monitoring for Microsoft Applications.

Table 5-3 Tivoli Monitoring for Microsoft Applications features, advantages, and benefits

Feature	Advantage	Benefit
Monitors Microsoft systems, applications, and transactions	Detects and provides context to help isolate problems	Helps reduce mean-time-to-recovery and improve uptime of critical applications
Links to Microsoft knowledge base with detailed explanations and preferences	Helps operators take the most appropriate action	Helps make solutions more repeatable and speeds problem resolution
Workflow automation and “take action” capability	Automates common tasks and recurring problem solutions	Frees up operator time for more critical tasks
Cross-platform support	Manages systems and applications from other vendors	<ul style="list-style-type: none">▶ Reduces training and swivel chair management in heterogeneous environments▶ Supports future business requirements
Greater scalability and performance	Manages more resources per server and larger deployments	<ul style="list-style-type: none">▶ Supports future business requirements▶ Reduces deployment costs and complexity

5.5.3 Product overview

IBM Tivoli Monitoring for Microsoft Applications helps to automatically correlate events to speed problem determination. It monitors systems, operating systems, applications, and transactions throughout your Microsoft environment. This robust monitoring software includes

IBM Tivoli Enterprise Portal, which is the desktop or browser client that makes it easy for customers to manage their environment end-to-end using a single common user interface. The automation capabilities of Tivoli Monitoring for Microsoft Applications help you to resolve common and recurring problems, which frees up valuable operator time, and with the real-time visibility and robust automation that Tivoli Monitoring for Microsoft Applications delivers, you can dramatically reduce mean time to resolution (MTTR) and improve the efficiency of resource use.

The software also provides a complete and customizable set of workspaces to automatically correlate data from various sources, allowing you to:

- ▶ Analyze application and system resource information.
- ▶ Set intelligent traps and alerts to detect potentially troublesome situations.
- ▶ Analyze application performance.

IBM Tivoli Monitoring for Microsoft Applications provides IT Operations with comprehensive monitoring of:

- ▶ Microsoft Windows operating systems
- ▶ Microsoft Active Directory
- ▶ Microsoft SQL Server
- ▶ Microsoft Exchange Server
- ▶ Microsoft .NET
- ▶ Microsoft BizTalk Server
- ▶ Microsoft SharePoint Server
- ▶ Microsoft Internet Information Service (IIS)
- ▶ Microsoft Cluster
- ▶ Microsoft Virtual Server
- ▶ Microsoft Hyper-V
- ▶ VMWare
- ▶ Citrix

Information from IBM Tivoli Monitoring for Windows Applications on performance, availability, and problem identification can be used with several other IBM Tivoli products to help deliver even greater value, products such as:

- ▶ IBM Tivoli Service Level Advisor can use response time information to help identify service level problems and trends.
- ▶ IBM Tivoli Business Systems Manager can leverage resource information to help identify the impact to overall business systems.
- ▶ IBM Tivoli Provisioning Manager can use application and system resource information to take provisioning actions to help prevent service level agreement breaches.
- ▶ IBM Tivoli Monitoring can be used to determine if resource information of other non-Microsoft applications like SAP to determine the cause of environment failures or bottlenecks.
- ▶ IBM Tivoli Composite Application Manager for Response Time can use response time information to help identify if component bottlenecks in the Microsoft environment are effecting the end-user experience.

5.5.4 Platforms supported (server)

The IBM Tivoli Monitoring for Microsoft Applications platforms that are supported include:

- ▶ Windows Server 2003 Datacenter Edition
- ▶ Windows Server 2003 Standard Edition
- ▶ Windows Server 2003 Extended Edition

- ▶ Windows Server 2003 Enterprise Itanium Edition
- ▶ Windows Server 2003 R2 Enterprise Edition
- ▶ Windows Server 2003 R2 Standard Edition
- ▶ Windows Server 2003 R2 Data Center Edition
- ▶ Windows Server 2008 Datacenter Edition
- ▶ Windows Server 2008 Standard Edition
- ▶ Windows Server 2008 Extended Edition
- ▶ Windows Server 2008 Enterprise Itanium Edition

5.5.5 Key resources

For more information, see the Tivoli Monitoring for Microsoft Applications product page at the web address:

<http://www.ibm.com/software/tivoli/products/monitoring-microsoft-applications/index.html>

5.6 Tivoli Access Manager for Enterprise Single Sign-On

In this section, we provide an executive summary, business challenges, solution, business value, product overview, platforms that are supported, and key resources for IBM Tivoli Access Manager for Enterprise Single Sign-On.

5.6.1 Executive summary

Secure access to your applications and data is critical in today's business environment. Business leaders know they must protect their business and customer information. There are issues that can arise when you try to create a secure environment:

- ▶ Increased help desk costs
- ▶ Weak security at the desktop
- ▶ Lower user satisfaction and productivity due to lockouts and password issues
- ▶ Requirements for strong authentication for critical applications
- ▶ Incomplete enterprise compliance solutions

Tivoli Access Manager for Enterprise Single Sign-On can help you to create a secure environment for your users and provide:

- ▶ Simplified user experience and improved time-to-information by eliminating the need to remember multiple user names and passwords
- ▶ Improved compliance by tracking and collating user access
- ▶ Enhanced security by eliminating poor user password behavior and seamlessly integrating strong authentication form factors
- ▶ Reduced Help Desk costs by lowering the number of password reset calls

Tivoli Access Manager for Enterprise Single Sign-On should be the choice to help improve your regulatory compliance with regulations, such as Sarbanes Oxley, Health Insurance Portability and Accountability Act (HIPAA), California Information Practice Act (SB 1386), Gramm Leach Bliley Act (GLBA), and Basel II by:

- ▶ Providing broad integration with a large number of strong authentication form factors
- ▶ Tracking and collating all login events, which allows your company to audit application access

- ▶ Extending single sign-on (SSO) with session management, which includes support for personal, shared (kiosk), private (kiosk with multiple sessions), and roaming desktops
- ▶ Providing SSO across all major access points, such as Windows desktops, kiosks, Citrix, Terminal Services, and web portals
- ▶ Providing browser-based SSO so that no heavy-client software is required on endpoint
- ▶ Enabling rapid true session switching where the entire desktop is changed rather than just application sharing

5.6.2 Business value

With Tivoli Access Manager for Enterprise Single Sign-On, employees authenticate once and the software then detects and automates all password-related events for the employee, including:

- ▶ Logon
- ▶ Password selection
- ▶ Password change
- ▶ Password reset
- ▶ Logoff

Tivoli Access Manager for Enterprise Single Sign-On provides:

- ▶ Improved productivity of employees by providing single sign-on and sign-off to any application either located on the web, desktop, or a heritage application
- ▶ Fast access to corporate information with improvements of up to 90% by automating workflows on shared and personal workstations
- ▶ Automated access workflows, such as application launch, single sign-on, user switching, drive mapping, and single sign-off
- ▶ Automated walk-off security policies, such as configurable window locks, application logout policies, and graceful unlock
- ▶ Decreased IT help desk costs by up to 40% because of a dramatic reduction in password-related calls and integrated password self-service
- ▶ Secure information access by integrating with the widest choice of two-factor authentication devices and supporting flexible desktop protection policies for unattended workstations
- ▶ A consistent experience for users through a comprehensive coverage of access points, which includes personal and shared Windows workstations, Citrix, Terminal Services, web or portals, and thin clients
- ▶ Efficient and centralized management of security and password policies and implementation at a user, group, or application level
- ▶ Comprehensive support for HIPAA, Sarbanes-Oxley, GLBA, SB 1386, and Basel II with user-centric access tracking of all single sign-on events for audit reports
- ▶ Easy integration and fast deployment without any modifications to existing IT infrastructure or training requirements

5.6.3 Product overview

Tivoli Access Manager for Enterprise Single Sign-On lets you use a single password to log on to any password-protected application on your desktop, your network, and the Internet. It works out-of-the-box without programming or additional network infrastructure and with

virtually all applications, which includes Windows, web, proprietary, and host-to-mainframe applications.

Tivoli Access Manager for Enterprise Single Sign-On is intelligent-agent software. It remembers your credentials (your user name or ID, password, and other information) for each application or website and automatically responds to an application's logon requests.

Tivoli Access Manager for Enterprise Single Sign-On helps you support your users by:

- ▶ Providing strong authentication, access automation, and compliance reporting for applications across enterprise end-points.
- ▶ Simplifying, strengthening and tracking access to all Microsoft Windows, web, Java, mainframe, and teletype applications, across all major network access points, which includes Windows desktops, laptops, shared kiosks, Citrix servers, Microsoft Terminal Servers, and web portals.
- ▶ Helping to simplify the user experience by eliminating the need to remember and manage user names and passwords and by automating sign-on and access.
- ▶ Enhancing security by reducing poor user password behavior.
- ▶ Helping to reduce password-related help desk costs by lowering the number of password reset calls.
- ▶ Enabling comprehensive session management of kiosk machines to improve security and user productivity.
- ▶ Enhancing security through a wide choice of strong authentication factors.
- ▶ Leveraging centralized audit and reporting capabilities to facilitate compliance with privacy and security regulations.
- ▶ Extending IBM Tivoli Access Manager for e-business' fine-grained authorization and entitlements for web applications by fully addressing single sign-on across all network access points.
- ▶ Enabling end-to-end identity and access management by integrating the centralized identity management functions of IBM Tivoli Identity Manager with enterprise single sign-on and access automation.

Tivoli Access Manager for Enterprise Single Sign-On offers these features:

- ▶ Single sign-on

You use just one password to log on to applications, networks, and websites.

- ▶ Auto Prompt

Tivoli Access Manager for Enterprise Single Sign-On learns your credentials as you work. When it detects a new logon request, the agent prompts you to provide your user name or ID, password, and other sign-on data. The next time this application asks for your logon, Tivoli Access Manager for Enterprise Single Sign-On recognizes it and logs you on automatically.

- ▶ Automatic backup and restore

Tivoli Access Manager for Enterprise Single Sign-On automatically backs up your credentials to a portable storage device, a remote file, or a directory server, and automatically restores your credentials, if necessary.

- ▶ Custom logon configuration

In addition to logons that your administrator defines, you can add your own logons to other applications and websites.

- Mobility support

If you work at multiple workstations, Tivoli Access Manager for Enterprise Single Sign-On makes it easy for your administrator to store your credentials on a remote server, which lets you use it to manage your identity and passwords with complete security, on any computer on your network.

5.6.4 IBM case study

Having grown largely through acquisition, Rohm and Haas found that accurate, timely business reporting was increasingly difficult to achieve. Rohm and Haas chose to standardize on SAP applications running on IBM Power Systems™ servers. Rohm and Haas also deployed Tivoli Access Manager for Enterprise Single Sign-On for 13,000 users, which allows all users to sign in to the relevant applications, as defined by their role, with a single log-in process.

To learn more about this solution, go to this web address:

http://www.ibm.com/software/success/cssdb.nsf/CS/STRD-7QRK99?OpenDocument&Site=smbgen&cty=en_us

5.6.5 Supported platforms

The hardware requirements are:

- Tivoli Access Manager for Enterprise Single Sign-On - client agent requirements:
 - 600 MHz Intel Pentium-based processor and 128 MB RAM
 - Disk space: At least 100 MB free hard disk space
- Tivoli Access Manager for Enterprise Single Sign-On - Administrative console and server requirements:
 - 1.2 GHz Pentium-compatible processor and 256 MB RAM
 - Disk space: At least 300 MB free hard disk space

Software requirements:

- Tivoli Access Manager for Enterprise Single Sign-On - client agent requirements:
 - Windows 2000 SP3, XP SP2, 2003 Server
 - Microsoft Internet Explorer 5.0, or later with 128-bit encryption
 - Installation by Microsoft Installer package requires Microsoft Windows Installer
- Tivoli Access Manager for Enterprise Single Sign-On - Administrative console and server requirements:
 - IMS Server requires Windows 2003 Server
 - AccessAdmin requires Microsoft Internet Explorer 5.0, or later with 128-bit encryption

The following software is supported:

- Directory:
 - IBM Tivoli Directory Server V6.1, or later
 - Novell eDirectory Version 8.6, or later
 - Sun Java System Directory Server 5.2, or later
 - SunONE Directory Server 5.1, or later
- DB2 Enterprise Server Edition V9.5 is included with the program package for use restricted to Tivoli Access Manager for Enterprise Single Sign-On V8.0. (It is separately packaged, and, if using DB2, install it before you install the IMS Installer.)

- ▶ Microsoft SQL Server 2005 Express Edition. (It is embedded in Tivoli Enterprise Single Sign-On, and not separately packaged).
- ▶ Oracle Database 9i is also supported.

5.6.6 Key resources

- ▶ Tivoli Access Manager for Enterprise Single Sign-On product page:
<http://www.ibm.com/software/tivoli/products/access-mgr-esso/>
- ▶ Tivoli Access Manager for Enterprise Single Sign-On data sheet:
<ftp://ftp.software.ibm.com/common/ssi/pm/sp/n/tid10298usen/TID10298USEN.PDF>

5.7 Maximo Asset Management Essentials

In this section, we provide an executive summary, business value, product overview, platforms that are supported, and key resources for IBM Maximo Asset Management Essentials.

5.7.1 Executive summary

In these trying economic times, it is important to manage costs and work efficiently. Managing your critical assets is vital to your business. Many small and midsize organizations perform asset management using tedious and error prone manual processes or niche solutions that offer limited opportunities for flexibility and growth. Do any of these questions apply to your situation:

- ▶ Could your business benefit from better work optimization and resource management?
- ▶ Would you like to manage spare parts inventory and procurement more efficiently?
- ▶ Would you like to know what your asset utilization level is to identify under utilized assets?
- ▶ Would you like to reduce asset downtime?
- ▶ Are equipment breakdowns impacting your product quality and profit margins?
- ▶ Are you required to provide better reporting and enforcement of regulatory compliance?
- ▶ Is the efficiency of your business assets critical to improving your overall business performance?

If any of these questions resonate with you, IBM Maximo Asset Management Essential might be the solution for you. Maximo Asset Management Essential gives small and midsize businesses or departments within larger companies the tools that are necessary to organize, track, and manage their assets and work management processes. Maximo Asset Management Essentials enables you to implement a maintenance regimen based on industry-leading technology and best practices. Maximo Asset Management Essentials can help you:

- ▶ Gain insight across all of your assets, their conditions, and the work processes around them for better planning and control.
- ▶ Provide a comprehensive maintenance work management solution for planned and unplanned activities, including long-term and short-term planning, preventive, reactive, and proactive maintenance, schedule management, resource optimization, and key performance indicators.

- Plan inventory to meet maintenance demand, making the right parts available at the right location when needed.
- Manage your vendor contracts with comprehensive contract management support for purchase, lease, rental, warranty, rate, master, blanket, and user-defined contracts.

Maximo Asset Management Essentials, built on standards-based technology, is an integrated solution for all assets, helping to eliminate paper-based and spreadsheet-based processes and custom applications by standardizing on the Maximo unified platform. Maximo Asset Management Essentials can grow with your company so that you can continue to manage all asset classes and work tasks from a single, unified Web-architected platform.

5.7.2 Business value

Maximo Asset Management Essentials helps you gain insight across your assets, the condition of your assets, and the work processes around your assets, for better planning and control. Maximo Asset Management Essentials helps you:

- Maximize asset return on investment by proactively managing assets to extend their life
- Manage critical assets using a single platform to leverage common business practices and a single repository for asset data
- Proven asset and work management solution and technology to meet SMB needs
- Eliminate paper-based processes, standalone applications, and spreadsheet-based processes, by standardizing on the Maximo platform. With these solutions you can achieve greater efficiencies through system consolidation
- Increase asset longevity through effective, proactive maintenance
- Reduce asset downtime and boost reliability to increase profits and service quality
- Improve cash flow by streamlining spare part inventory and procurement management
- Achieve a more efficient workforce with work optimization and resource management

Maximo Asset Management Essentials makes the proven Maximo Asset Management platform available to small and midsize organizations. Table 5-4 identifies more benefits and advantages.

Table 5-4 Benefits and advantages of Maximo Asset Management Essentials

Feature	Advantage	Benefit
An entry-level member of the IBM Maximo Asset Management product family	Ideal for smaller organizations that require a subset of the extensive range of features in the IBM Maximo Asset Management product.	Smaller organizations can take advantage of proven Maximo Asset Management technology, at a competitive cost.
Proven asset and work management solution and technology to meet your needs	A flexible solution for your growth and long-term needs.	<i>Future-proof</i> your investment by leveraging the industry-leading Maximo architecture
Manage critical assets using a single platform to leverage common business practices and a single repository for asset data.	Maximize asset return on investment by proactively managing assets to extend their life	Reduce asset downtime and boost reliability to increase profits and service quality

5.7.3 Product overview

Maximo Asset Management Essentials is an integrated productivity tool and database that helps you manage all of your asset types on a single software platform. It delivers a comprehensive view of all asset types, their conditions and locations, and the work processes that support them, providing you with optimal planning, control, audit, and compliance capability.

The Maximo database provides critical information about asset resources, including key attributes, their configuration, and their physical and logical relationships to other resources.

By using the Maximo Asset Management Essentials user interface, you can establish key performance indicators (KPIs) to monitor asset conditions and trigger automated action based on changes. You can create, assign, monitor, notify, and report on key process components, such as work orders, service desk tickets, and purchase orders, including status, from start to finish. You can also include attachments, such as maps, pictures, and URLs to each record or task to enhance communication and productivity further.

Maximo Asset Management Essentials enables smaller organizations to organize, track, and manage asset and work management processes with industry-leading technology. Maximo Asset Management Essentials is an integrated solution for all assets, and the key functionality includes:

- ▶ **Asset management**

Asset management capabilities can help you to achieve the control that you need to more efficiently track and manage asset and location data through out the asset life.

- ▶ **Work management**

The work management capabilities can help you to manage both planned and unplanned maintenance activities, from initial work request and work order generation through completion and recording.

- ▶ **Inventory management**

Inventory management capabilities can enable new levels of visibility into your asset-related inventory, providing details about parts and materials, service items, and tools. Real time inventory tracking and reporting can help streamline inventory management processes, eliminate excess or obsolete inventory, and help inventory managers optimize inventory planning.

- ▶ **Procurement management**

Procurement management capabilities support each phase of the procurement process. Procurement managers can leverage comprehensive requisition, quotation, vendor, purchase order, and contract capabilities to help improve purchasing efficiency.

- ▶ **Contract management**

Contract management capabilities can provide organizations with enhanced control over vendor contracts. This integrated contract management system provides comprehensive support for purchase, lease, rental, warranty, labor rate and master contracts. Using the terms and conditions capability you can more consistently apply standardized policies across the organization.

- ▶ **Service management**

Service management capabilities can enable organizations to implement consistent service management processes, allowing end users to submit new service requests and to track and update open service requests.

5.7.4 Supported platforms

You can run Maximo Asset Management Essentials on a single physical server or across multiple servers depending on the number of concurrent users and the hardware. This product requires workstations and servers in each tier of a Maximo system configuration:

- ▶ Client workstation requirements:
 - Hardware:
 - Intel based processor
 - 1 GB RAM
 - SVGA 1024x768 resolution
 - Software:
 - Microsoft Windows 2000, XP or Windows Vista
 - Microsoft Internet Explorer 6 or 7 browser
 - Adobe Acrobat Reader 6.0 or 7.0
- ▶ Administrative workstation:
 - Hardware:
 - Intel based processor
 - 1 GB RAM
 - SVGA 1024x768 resolution
 - Software:
 - Microsoft Windows XP or Windows Vista
 - Microsoft Internet Explorer 6 or 7 browser
 - Adobe Acrobat Reader 6.0 or 7.0
- ▶ Application Server:
 - Microsoft Windows Server 2003 (32-bit and 64-bit) with 2-4 dedicated processors
 - IBM AIX 5.3 (32-bit and 64-bit) with 2 GB RAM per processor
 - Red Hat Enterprise Linux 4 (32-bit and 64-bit) with 1.5 GB (or greater) disk space for the Maximo product and the Java/web server components
 - Sun Solaris 9 or Sun Solaris 10 (SPARC processor-based systems)
- ▶ Database Server (must see vendor documentation for hardware specifications):
 - IBM DB2 Universal Database™ 8.2.0.8 or 9.1.5:
 - Workgroup or Enterprise Edition
 - Configured with TCP/IP support
 - Oracle 9.2.0.8, 10.1.0.5, or 10.2.0.3 (Standard or Enterprise Edition)
 - Microsoft SQL Server 2005 SP2 (Standard or Enterprise Edition)

For the latest details about Maximo Asset Management Essentials system requirements, go to the IBM website:

http://www.ibm.com/software/tivoli/products/maximo-asset-mgmt/requirements.html?S_CMP=rnav&S_CMP=rnav

5.7.5 IBM Business partner case studies

Using IBM Maximo Asset Management, the San Francisco Public Utilities Commission gained greater visibility into maintenance operations and physical infrastructure to improve operating and planning decisions. Along with IBM Maximo software, they are using Arches geographic information software from IBM Business Partner ESRI to locate and measure assets spatially.

To learn more about this solution, go to this web address:

http://www.ibm.com/software/success/cssdb.nsf/CS/LWIS-7SERGS?OpenDocument&Site=corp&cty=en_us

5.7.6 Key resources

- ▶ Maximo Asset Management Essentials product page:
<http://www.ibm.com/software/tivoli/products/maximo-asset-mgmt-essentials/>
- ▶ Maximo Asset Management Essentials data sheet:
<ftp://ftp.software.ibm.com/common/ssi/pm/sp/n/tid14025usen/TID14025USEN.PDF>

Archived

IBM Rational

IBM Rational helps organizations deliver greater value from investments in software. To stay competitive, organizations must unleash the creativity and productivity of their teams like never before. Whether delivering compelling and differentiated products and services, or transforming organizations to become more flexible and efficient, successful businesses will leverage software as the central nervous system driving innovation, and change. IBM Rational provides the industry's leading platform for turning software investments into desirable business outcomes

IBM Rational helps you use software to drive innovation as a business imperative that is planned, implemented, and managed, thereby implementing an innovation agenda. Rational solutions align your software development activities with your overall business objectives and enable you to bring people together on a cohesive platform for optimized productivity and results. IBM Rational helps you to:

- ▶ Build a smarter planet with smart products: Drive innovation by employing an integrated software platform to design and deliver Smarter Products that are intelligent, instrumented, and interconnected.
- ▶ Optimize desired business outcomes: Continuously improve the ability to achieve desired business outcomes with reduced cost and risk by improving the productivity of software delivery with measures and controls.
- ▶ Grow your business by offering solutions that are targeted combinations of products, services, and best practices based on the open, modular, and proven IBM Rational Software Delivery Platform. IBM Rational can help you to optimize software and systems delivery processes, maximize project budgets, improve quality, and strengthen stakeholder collaboration through:
 - Rational software platform for systems
 - Enterprise modernization
 - SOA life cycle management and SOA governance
 - Governance and risk management
 - Regulatory compliance
 - Industry solutions for automotive, aerospace and defense, electronics, financial services, communication service providers and suppliers
 - Flexible and proven software development and delivery solutions for midmarket business

In this chapter, we introduce the IBM Rational strategy for small and midsize business and introduce the following products tailored for the midmarket:

- ▶ IBM Rational Team Concert Express
- ▶ IBM Rational Team Concert for Power Systems Software™ Express Edition
- ▶ IBM Rational AppScan® Express Edition and IBM Rational AppScan OnDemand (SaaS)
- ▶ IBM Rational Quality Manager Express
- ▶ IBM Rational Change Management Express
- ▶ IBM Rational Developer for Power Systems Software

6.1 Rational strategy for midmarket business

IBM Rational is a software brand for governing the delivery of software and applications. IBM Rational specializes in:

- ▶ Architecture management: Model, design, and rapidly build resilient architectures in service oriented architecture (SOA), solutions, and applications.
- ▶ Change and release management: Improves software delivery and life cycle traceability from requirements through deployment and maintenance.
- ▶ Process and portfolio management: Aligns business goals, best practices, and projects for improved productivity and predictability
- ▶ Quality management: Ensures software functionality, reliability, and performance in development and production.

Figure 6-1 shows how you can govern software delivery in the context of your-sized business with IBM Rational solutions.

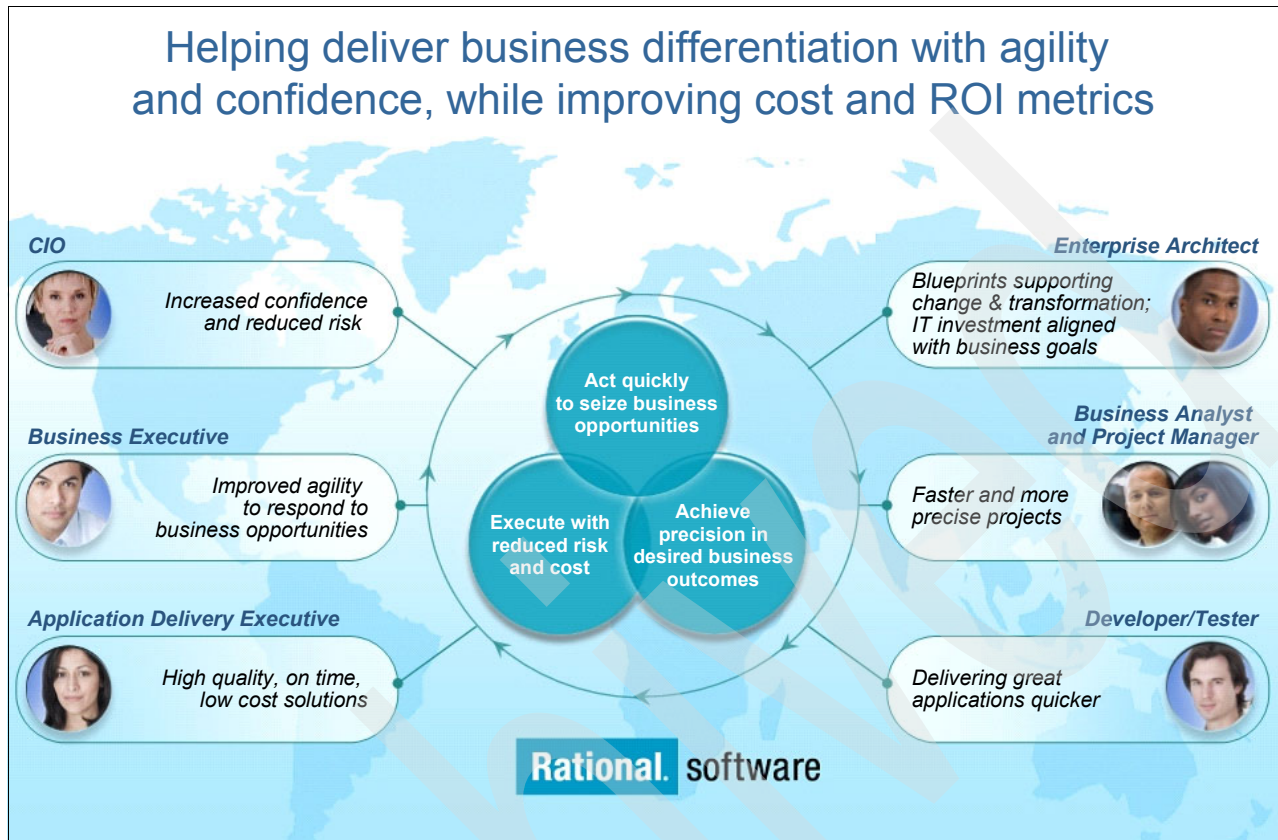


Figure 6-1 Rational solutions

IBM Rational is focused on the small and midsized business (SMB) market, with a dedicated website tailored to improve the portfolio from IBM for this important market.

Watch for announcement information and learn more about IBM Rational offerings for SMB at:

<http://www.ibm.com/software/rational/smb>

6.2 IBM Rational Team Concert Express

In this section, we discuss IBM Rational Team Concert Express. Rational Team Concert Express provides a complete collaborative development environment for departmental and team for midsized businesses.

6.2.1 Executive summary

Organizations today face growing pressures to quickly deliver high-quality software that is aligned with business objectives. These pressures include:

- ▶ Delivering more with same or even fewer resources
- ▶ Working in teams that are geographically distributed
- ▶ Adhering to organizational standards without having the processes defined or documented

Rational Team Concert Express drives software innovation through collaboration and transforming how people, especially those who have project-distributed teams, work together to develop and deliver software in an increasingly agile manner. Rational Team Concert Express connects dispersed development teams to increase individual and team productivity, compress development cycles, and deliver high-quality software fast.

6.2.2 Business value

Rational Team Concert Express Edition integrates source control, work item, and build capabilities to improve software quality and to accelerate software delivery.

The business value of Rational Team Concert Express are:

- ▶ Simple and easy installation allows for quick adoption
- ▶ Project initiation in days rather than weeks
- ▶ Improved cycle times through automated and reusable patterns, services and architectures
- ▶ Earlier detection and accelerated resolution of defects
- ▶ Improved predictability of project outcomes
- ▶ Improves collaboration with real time, contextual collaboration for distributed project teams
- ▶ Helps improve software quality by promoting consistent processes
- ▶ Improves project visibility with real time health information and status transparency
- ▶ Boosts flexibility with an open-standards-based platform
- ▶ Enhances productivity with essential software version control, workspace management, and parallel development support

6.2.3 Product overview

Rational Team Concert, based on the Jazz™ platform, is a collaborative software development environment that is optimized for distributed teams. It combines a Web 2.0 approach to team collaboration with integrated work item management, build management, and source control. Out-of-the-box, customizable process models and individual and team dashboards streamline development and reduce reporting overhead. The result is a powerful, yet lightweight application life cycle management solution that is optimized for the agile business. Table 6-1 provides the key features and benefits of Rational Team Concert Express.

Table 6-1 Rational Team Concert key features and benefits

Key feature	Key benefit
Ease of use	Pre-defined process templates provide out-of-the-box best practices.
Ease of deployment	Combines three Application Lifecycle Management functions into one integrated solution.
Easy to manage	Integrates teams with up to 50 members on a single server based on common middleware.
Integrated work item management	Automatically creates and tracks progress of individual work items in accordance with team process and project rules. Additionally, captures and maintains work item relationships to other artifacts, such as code change sets and builds.

Key feature	Key benefit
Integrated source control	Provides essential software version control, workspace management, and parallel development support to individuals and teams. Additionally, is fully aware and integrated into work items (why a code change was made) and build management (when did this code change make it to a build).
Integrated build management	Schedules and executes software build processes. Leverages multiple servers for rapid, cross-platform build processing. Integrates with Work Items and Source Control to provide the ability to create detailed bill-of-materials to guarantee build reproducibility.
ClearCase® & Subversion bridge	Integrates your investment for SCM while maintaining the integration with work Item management and build management.
ClearQuest® bridge	Integrates your investment in Change Management while maintaining integration with source control, work items, and build management.
Process awareness and automation	A variety of customizable out-of-the box process templates, including SCRUM, guides team workflow and automates process steps and checkpoints at varying degrees of rigor.
Team awareness and collaboration	Provides project-integrated presence and messaging.
Visual Studio Support	Provides access to Team Concert source control, work item, and build support natively to Visual Studio developers further unifying development teams.
Document Collaboration	Integrates software and document collaboration through integration with Microsoft Sharepoint or Lotus Quickr (licensed separately).

Rational Team Concert Express-C: Rational Team Concert Express-C is an entry level version of Rational Team Concert Express that is available at no charge. It has the capabilities of Rational Team Concert Express with these restrictions:

- ▶ Available for 10 developers
- ▶ Supports Linux and Windows operating systems

6.2.4 Supported platforms

Rational Team Concert Express supports one of the following operating systems:

- ▶ Desktop:
 - Red Hat Enterprise Linux Desktop 5.0 x86-32, Update 1, 2 and 3
 - SUSE Linux Enterprise Desktop (SLED) 10.0 x86-32, Service Pack (SP) 1
 - Ubuntu Linux Client 8.0.4 x86-32
 - Windows Vista Business x86-32, SP1 and SP2
 - Windows Vista Enterprise x86-32, SP1 and SP2
 - Windows Vista Ultimate x86-32, SP1 and SP2
 - Windows XP Professional Service Pack x86-32, SP2, SP3
- ▶ Server:
 - Red Hat Enterprise Linux 5.0 x86-64, Update 1, 2, and 3
 - SUSE Linux Enterprise Server (SLES) 10.0 x86-32, SP2

- SUSE Linux Enterprise Server (SLES) 10.0 x86-64, SP2
- Windows Server 2003 Enterprise Edition x86-32, SP2
- Windows Server 2003 Standard Edition x86-32, SP 2
- Windows Server 2003 Standard and Enterprise Editions x86-64, SP2
- Windows Server 2008 Standard and Enterprise Editions x86-32, Base and SP2 (no SP1)
- Windows Server 2008 Enterprise Edition x86-64 Base and SP2 (no SP1)
- AIX Server Support 5.3 TL7 i/p (Supported for p-series only)

6.2.5 Key resources

For more information, see the Rational Team Concert Express product page:

<http://www.ibm.com/software/awdtools/rtc/express/>

6.3 IBM Rational Team Concert for Power System Software Express Edition

In this section, we discuss Rational Team Concert for Power System Software Express Edition.

6.3.1 Executive summary

Businesses that rely on IBM Power Systems want developer tools built for their IT environment. These tools should enable quick delivery of high-quality software that takes advantage of their IT system infrastructure and architecture. The issues facing businesses when it comes to application development and maintenance include:

- ▶ Addressing regulatory compliance issues and adopting better IT Governance approaches
- ▶ Streamlining the development and maintenance processes:
 - Reduce the costs of maintaining existing IT environment
 - Quickly train unskilled personnel in new technologies
 - Develop a unified process across different platforms and teams
 - Establish best practice processes
- ▶ Ensuring that cross platform and composite application support:
 - Bridge the process islands across platforms and technologies
 - Effectively develop and deploy cross platform applications
- ▶ Minimizing diverse disconnected tools, applications and IT systems:
 - Exploit modernization strategies including new languages, tools, and paradigms
 - Work within a single Eclipse-based integrated development environment (IDE)
 - Manage globally distributed operations and systems
 - Integration with third party systems
- ▶ Responding quickly to new requirements and new technologies:
 - Handle demands for rapid response to business requirements
 - Incorporate new technologies such as Web 2.0

With Rational Team Concert for Power System Software Express Edition, businesses can ensure that they are dealing with these issues and using a development environment that supports their business now and in the future.

6.3.2 Business value

IBM Rational Team Concert for Power Systems Software Express Edition provides a complete collaborative development environment for departmental and small to mid-sized teams:

- ▶ Helps companies build better software with a complete collaborative development environment that provides support for geographically distributed teams on a common platform.
- ▶ Provides an integrated planning, source code management, work item management, build management, and project health to ensure on time delivery of solutions
- ▶ Encourages IT to build better software by enabling and accelerating full *agile practice coverage* from work inception through planning, development, and build of business applications.
 - Agile practice coverage provides tools to create release plans for a whole project, create iteration plans for teams, create individual plans for developers, and to track the progress during a release and its iterations and to balance the work load of developers.
 - And all this is integrated with defect tracking, source control management, and build management.
- ▶ Includes support for geographically distributed teams with features such as communication in context, event feeds, integrated chat, and automated traceability, all beyond simple email. These capabilities allow distributed teams to work effectively while minimizing travel.
- ▶ Helps lower total cost of ownership (TCO) for all development by exploiting a common scalable infrastructure that provides common processes, common security, with open integrations and services.

6.3.3 Product overview

Rational Team Concert for Power Systems Software Express Edition is a collaborative software delivery environment that allows teams to simplify, automate, and govern application development on IBM Power. It provides the following capabilities:

- ▶ An integrated set of collaborative software delivery tools for IBM Power development both AIX and IBM i, including source control, change management, build, process management, and governance
- ▶ Integration with IBM Rational Developer for Power to enable team capabilities for native IBM Power applications
- ▶ Specialized support for source control, change management, and builds of traditional language artifacts such as RPG and COBOL on IBM i and C/C++ on AIX
- ▶ Support for multi-tier software development and application modernization efforts using RPG, Java, EGL, C/C++ and COBOL
- ▶ Support for IBM i native Library file system and integrated file system (IFS)
 - IBM i artifact builds including RPG, COBOL, CL, and Java
 - Build agent that runs natively on the IBM i and on AIX
 - Native hosting of the Jazz Team Server on IBM Power

Figure 6-2 shows how Rational Team Concert for Power Systems Software Express Edition builds on Jazz and Rational Team Concert capabilities.

The Jazz platform is a new technology platform for collaborative software delivery. Jazz is designed to transform how people work together to build software, making software delivery more collaborative, productive, and transparent. You can think of Jazz as an extensible framework that dynamically integrates and synchronizes people, processes, and assets associated with software development projects.

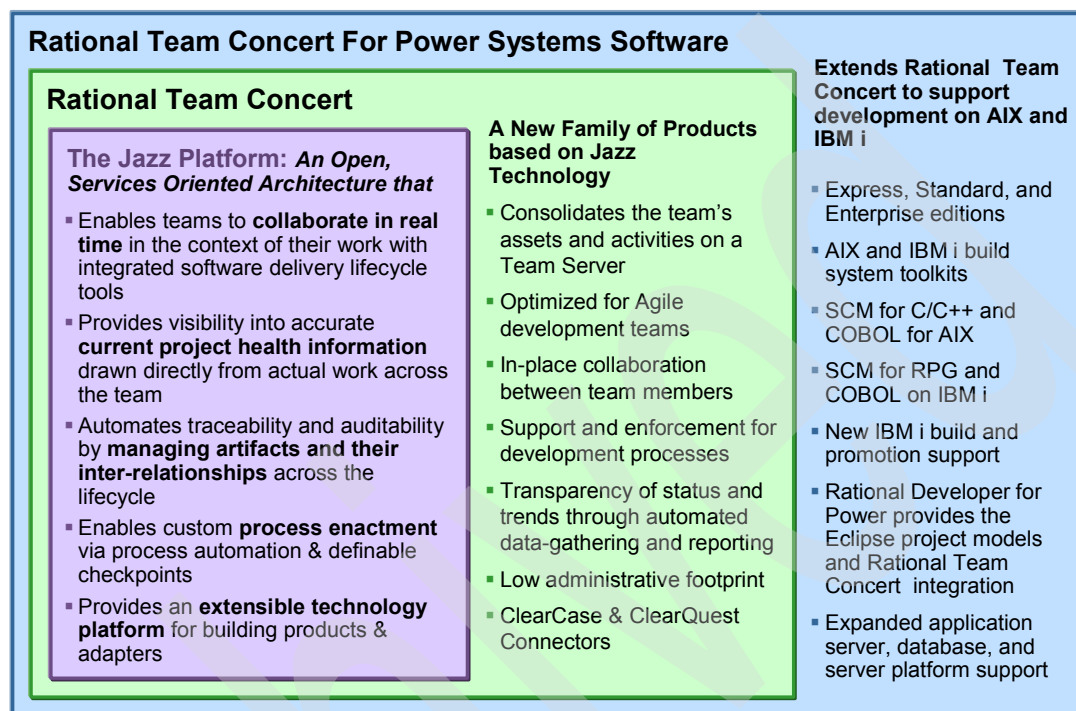


Figure 6-2 Rational Team Concert for Power Systems

6.3.4 Supported platforms

Rational Team Concert for Power Systems Software Express Edition supports these platforms:

- ▶ Processor: Intel Pentium 4, Intel Dual Core Hyper threading Processor (preferable) with these Microsoft operating systems
 - Microsoft Windows Vista Business x86-32, SP2 or later
 - Windows Vista Enterprise x86-32, SP2 or later
 - Windows Vista Ultimate x86-32, SP2 or later
 - Windows Vista Professional x86-32, SP3 or later
 - Windows XP Professional
- ▶ IBM i 5.4
- ▶ IBM i 6.1
- ▶ AIX V5.3 TL 7 or later AIX 6.1
- ▶ Processor: Pentium Xeon 32-bit; Dual core Xeon 64-bit (preferable) with these Microsoft operating systems:
 - Windows Server 2003 Standard and Enterprise Editions x86-32 and SP2
 - Windows Server 2003 Standard and Enterprise Editions x86-64 and SP2
 - Windows Server 2008 Standard and Enterprise Editions x86-32, Base, and SP2 (no SP1)
 - Windows Server 2008 Enterprise Edition x86

6.3.5 Key resources

For more information about Rational Team Concert for Power Systems Software Express Edition, refer to this IBM website:

<http://www.ibm.com/software/rational/products/rtcp/express/>

6.4 IBM Rational AppScan Express Edition

In this section, we discuss IBM Rational AppScan Express Edition.

6.4.1 Executive summary

There are many challenges that are related to application security that businesses must address, especially when you open up access to your applications to access over the web. These challenges are:

- ▶ Complying with standards, such as Payment Card Industry Data Security Standard (PCI DSS), and not complying with these standards can mean large fines
- ▶ Protecting customer data from inappropriate access
- ▶ Containing the escalating cost of manual security testing or penetration testing
- ▶ Recovering from damage to your company name/brand and loss of business after a breach occurs
- ▶ Dealing with limited application security expertise or resources

IBM Rational AppScan Express Edition is a web application security testing tool that automates vulnerability assessments and delivers uncompromising levels of web application security for midsize businesses:

- ▶ Enables comprehensive and automated testing of web applications for vulnerabilities
- ▶ Dramatically reduces the need for manual testing, which can produce significant cost savings
- ▶ Automatically scans complex web applications using Web 2.0 technologies, such as Adobe Flash, JavaScript, and AJAX
- ▶ Assists in meeting key compliance standards, such as PCI DSS

6.4.2 Business value

IBM Rational AppScan Express Edition makes comprehensive web vulnerability testing a reality for midsize organizations. Rational AppScan Express Edition significantly reduces the time and associated costs that are related to manual vulnerability testing, which enables you to focus on other IT and security-related needs within your organization. Rational AppScan Express Edition can dramatically reduce the time that is needed to perform a thorough vulnerability assessment of your applications. The software can yield much higher levels of security, and at the same time, help to dramatically reduce costs by allowing you to evaluate your web security posture on an ongoing basis, as opposed to quarterly or yearly audits.

IBM Rational AppScan Express Edition is a web application security testing tool that automates vulnerability assessments and delivers uncompromising levels of web application security for midsize businesses:

- ▶ Enables comprehensive and automated testing of web applications for vulnerabilities

- ▶ Dramatically reduces the need for manual testing, which can produce significant cost savings
- ▶ Helps non-security experts to perform security scans and fix vulnerabilities at their source
- ▶ Automatically scans complex web applications using Web 2.0 technologies, such as Adobe Flash, JavaScript, and AJAX
- ▶ Assists in meeting key compliance standards, such as Payment Card Industry Data Security Standard (PCI DSS)
- ▶ Simplified scan results with the Results Expert wizard provide advanced remediation actions that are necessary to fix issues uncovered during the scan

Figure 6-3 shows how Rational AppScan Express Edition secures your applications.

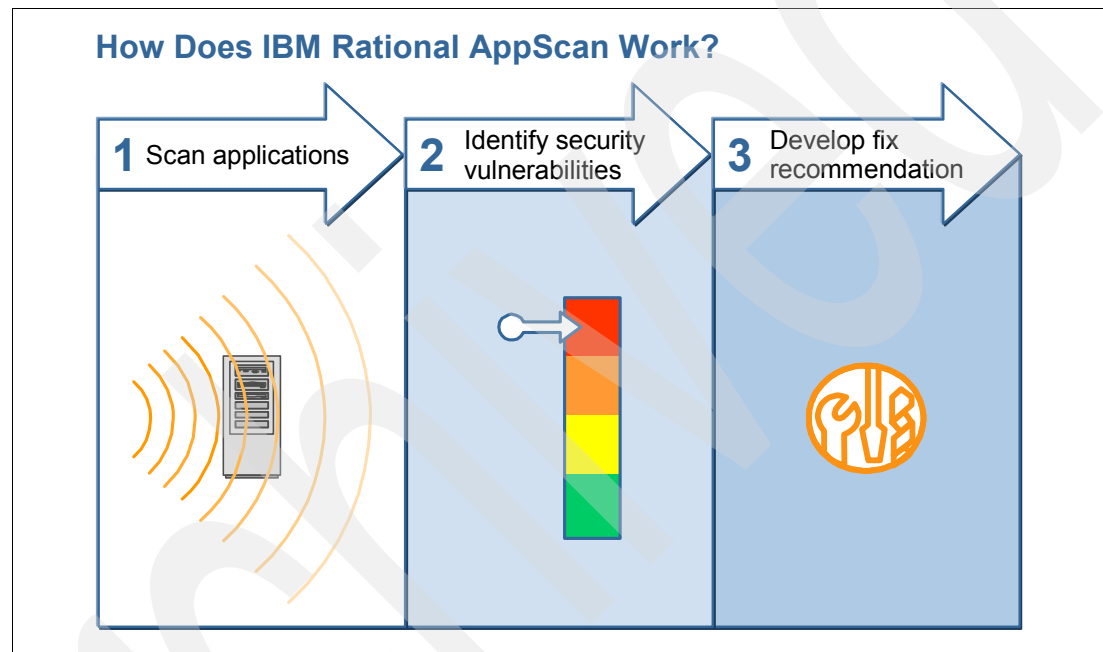


Figure 6-3 Rational AppScan in action

6.4.3 Product overview

IBM Rational web application security software helps IT and security professionals to protect against the threat of attacks and data breaches. If you use your web applications to collect or exchange sensitive or personal data, your job as a security professional is harder now than ever before. Involving Quality Assurance and development in the security testing process results in higher-quality and more secure applications at a reasonable cost.

IBM Rational AppScan Express Edition is an industry-leading web application security testing tool that scans and tests for all common web application vulnerabilities, which includes those that are identified in the Web Application Security Counsel (WASC) threat classification, such as SQL-Injection, Cross-site Scripting, and Buffer Overflow.

The IBM Rational web application security software:

- ▶ Provides broad application coverage, which includes Web 2.0 and Ajax applications
- ▶ Generates advanced remediation capabilities including a comprehensive task list to ease vulnerability remediation

- ▶ Simplifies security testing for non-security professionals by building scanning intelligence directly into the application
- ▶ Features over 40 out-of-the-box compliance reports, which includes PCI Data Security Standards, ISO 17799, ISO 27001, Basel II, SB 1386, and Payment Application Best Practices (PABP).

Figure 6-4 shows how easy it is to understand Rational AppScan results.

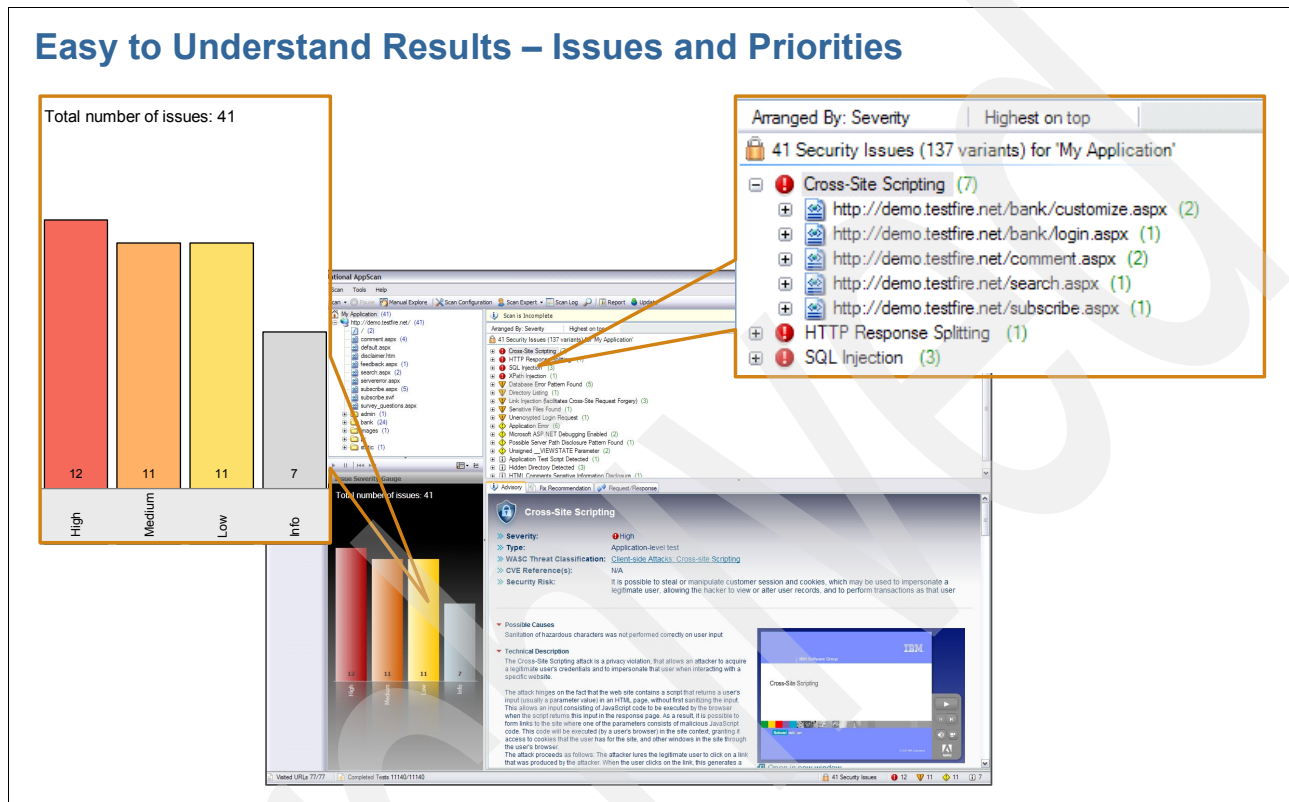


Figure 6-4 Rational AppScan results

6.4.4 Case study

This example shows the use of Rational AppScan offering in a customer solution.

Agentrics serves as the trusted agent for the retail and consumer goods industry by helping retailers, manufacturers, and their trading partners optimize shared business processes. Its customers rely on Agentrics' product offerings, unique practical forums, and deep domain expertise to drive real business results. The challenge was that Agentrics needed to incorporate the latest security technology to protect its Web-based technology and services. The solution was for Agentrics to leverage IBM Rational AppScan software to automate its web application security testing. Also, the Rational AppScan solution has become part of Agentrics' overall security and development strategy, resulting in increased confidence and safer applications for the company's high profile retail clients.

To learn more about this solution and to find more IBM and IBM Business Partner case study success stories, refer to *Winning in Midmarket: 100 Software Success Stories* at:

<ftp://ftp.software.ibm.com/software/smb/casestudies/midmarketcasestudy.pdf>

6.4.5 Supported platforms

In this section, we provide the Rational AppScan Express Edition hardware and software requirements.

The Rational AppScan Express Edition hardware requirements are:

- ▶ Processor: Intel Pentium P4, 1.5 GHz (2.4 GHz preferable)
- ▶ Memory: 1 GB RAM minimum (2 GB preferable)
- ▶ Disk space: 1 GB (10 GB or more might be needed for scanning large sites with Build Edition)
- ▶ Network: 1 NIC 10 Mbps for network communication with configured TCP/IP (100 Mbps preferable)

The Rational AppScan Express Edition software requirements are:

- ▶ Java Development Kit (IBM or Sun Microsystems) Version 1.5 or higher
- ▶ Microsoft .NET Framework 3.0 with Service Pack 1 or a more recent Service Pack
- ▶ Operating systems: Microsoft Windows XP Professional (SP2 and higher), Windows 2003 Enterprise Edition (SP1 and higher), and Windows Vista
- ▶ Browser: Microsoft Internet Explorer Version 6.0 SP1 or higher

6.4.6 Key resources

For more information about Rational AppScan Express Edition, go to the product page located at this web address:

<http://www.ibm.com/software/awdtools/appscan/express/>

6.5 IBM Rational AppScan OnDemand

In this section, we discuss IBM Rational AppScan OnDemand.

6.5.1 Executive summary

Websites provide convenient access to information but they are also vulnerable, potentially exposing critical corporate information and consumer data or otherwise compromising enterprise IT. Online security breaches lead to a number of damaging consequences. Many federal and state laws require companies to disclose when their customer information is compromised, and industry groups prefer or require periodic assessment of web application risks. Hackers can compromise vital corporate data, or they can use corporate websites as a way to take over the computers of website visitors. Vulnerabilities can lead to bad press, resulting in negative impressions, eroded brands, and lost business, and in the most extreme cases, a website can be shut down for good. Executives must understand these risks and put processes and technology in place to assess, prioritize, and rectify these online issues.

However, there are many challenges that are related to improving web application security that businesses must address, especially as organizations increasingly provide access to their applications over the web. These challenges include:

- ▶ Protecting customer data from inappropriate access
- ▶ Complying with standards, such as Payment Card Industry Data Security Standard (PCI DSS), and not complying with these standards can mean large fines

- ▶ Containing the escalating cost of manual security testing or penetration testing
- ▶ Dealing with limited in-house application security expertise or resources
- ▶ Recovering from damage to your Company name/brand and loss of business after a breach occurs

Left unchecked, these issues expose organizations to risk from data breaches because of vulnerable web applications.

In a typical web application security landscape, the user interacts through the web with a company's server environment. The data that is exchanged between the user and company (server environment) might be encrypted or it might not be as it moves across various systems (firewalls, intrusion detection systems, intrusion prevention systems, routers, and switches to the web servers) on the other side. While the data received from the user (using the web access) is not to be trusted, the web application (the user is using) is implicitly trusted by your company's environment. The web application is often permitted to communicate with everything from your company's database to an LDAP authentication system or to your company's core system environment. Frequently, the web application is where the problem lies, and it is estimated that:

- ▶ Most attacks on an enterprise are directed at the web application layer
- ▶ The majority of web applications are vulnerable to hacker attack

The risk is high. According to the Web Incidents Hacking Database 2008 Annual Report, the top motivators for hacking a website include monetary gain and stealing sensitive information, planting malware, and website defacement. Security breaches are expensive. The average cost of a security breach is \$6.6M and has been as high as \$256M in one case. Organizations are typically required to notify clients of a breach and that cost is currently \$202 per affected customer. Fines are another consideration and have been as high as \$15M in the past. Lawsuits and disruption to business operations only add to the consequences.¹

There are also qualitative losses, such as the lost client trust, damaged corporate reputation, and brand damage that can result. Negative publicity and press coverage can follow in publicized cases. In a recent example, over 130 million credit card numbers were stolen by a ring targeting online retailers and credit card processors.

IBM Rational AppScan OnDemand provides a highly effective, outsourced, turnkey solution for managing web application security. A Rational AppScan OnDemand subscription consists of market-leading Rational AppScan software that is hosted and run by an experienced team of security and compliance product experts. Rational AppScan OnDemand offers a timesaving solution for enterprise-wide, outsourced, web application security testing.

6.5.2 Business value

IBM Rational AppScan OnDemand is ideal for midsize organizations who might not have in-house security expertise or experience. It combines industry-leading Rational AppScan software with secure hosting and the professional services expertise that is needed to configure and run scans, prioritize findings, present and interpret results for clients, and guide customers in the steps that are necessary to remediate vulnerabilities. Rational AppScan OnDemand provides centralized application security scanning, data consolidation and reporting, remediation capabilities, executive dashboards, and compliance reporting for pre-production web applications in the QA and security test phases of the software development life cycle.

¹ "The Web Hacking Incidents Database 2008 Annual Report", Breach Security, Inc., February, 2009, http://www.breach.com/resources/whitepapers/downloads/WP_WebHackingIncidents_2008.pdf

Rational AppScan OnDemand provides a highly effective, outsourced, turnkey solution for managing web application security. A Rational AppScan OnDemand subscription consists of market-leading Rational AppScan software that is hosted and run by an experienced team of security and compliance product experts. Rational AppScan OnDemand offers a timesaving solution for enterprise-wide, outsourced, web application security testing.

There are many benefits to outsourcing Web Application Security and Compliance testing in a Software As A Service (SaaS) model, including:

- ▶ Lower startup costs: No training or hardware acquisition and set-up expenses
- ▶ Faster time-to-value: Enables immediate identification of online risk and provides instant access to industry best practices and security and compliance expertise without the time and investment for in-house training and resources
- ▶ Highly scalable and secure
- ▶ Lower ongoing Total Cost of Ownership (TCO): No infrastructure costs or software maintenance expenses
- ▶ Enables the client to focus on what matters: Fixing issues

6.5.3 Product overview

IBM Rational AppScan OnDemand is a Software as a SaaS offering that reduces the cost and risk of conducting business online. The OnDemand offerings enable organizations to outsource web application security and compliance testing to a team of experienced security and compliance product experts to achieve fast, predictable, and accurate results. AppScan OnDemand automates and centralizes web application security and compliance testing to identify, prioritize, and help remediate application vulnerabilities and compliance risks.

AppScan OnDemand is an outsourced web application vulnerability scanning solution. An AppScan OnDemand subscription consists of industry-leading AppScan software that is hosted, managed, and run by an experienced team of security and compliance product experts. Results are prioritized and reviewed with clients on a regular basis and remediation suggestions are offered.

AppScan OnDemand offers lower upfront costs and lower ongoing Total Cost of Ownership (TCO) in comparison to an on-premises licensed solution. Outsourcing hardware acquisition, setup, and maintenance costs yields faster implementation times and the ability to scale without infrastructure costs. Security and compliance product experts, or Solution Managers, speed adoption and reduce the learning curve while implementing industry best practices that are learned over a period of years and through repeated interaction with a variety of industry verticals. Solution Managers are available to customize scans, prioritize issues, and provide guidance on issue remediation through regularly scheduled meetings and reviews. This level of professional guidance and advice is the best path to actionable data regarding online risk exposure:

- ▶ Web-based multi-user platform for web application vulnerability scanning and reporting
- ▶ Facilitates distribution of security testing and report consumption across the organization
- ▶ Enables multiple simultaneous scans of pre-production websites, which is generally performed on a monthly basis
- ▶ Multiple, unlimited applications, up to a page count threshold

6.5.4 Supported platforms

Rational AppScan Express supports these browsers:

- ▶ Browser-based access for users who are report consumers only:
 - Any OS is supported
 - Browser support includes production versions of IE 6 and above, and Firefox
 - No particular hardware requirements are needed beyond browser use
- ▶ Browser-based access for users who are more than report consumers:
 - Windows 2000, XP, and Vista are supported
 - Browser support includes production versions of Internet Explorer 6 and above and Firefox (permissions to install Firefox plug-ins/ActiveX Controls)

6.5.5 Key resources

For more information about Rational AppScan OnDemand, go to the product page at this address:

<http://www.ibm.com/software/awdtools/appscan/express/>

6.6 IBM Rational Quality Manager Express Edition

In this section, we discuss Rational Quality Manager Express Edition.

6.6.1 Executive summary

To achieve quality-driven software delivery, your development team needs to work together, use automation to accelerate project delivery, share information, and collect metrics to better govern projects. You need to think of quality-driven software delivery beyond the boundaries of traditional testing to include the key aspects of software delivery from requirements definition and management to defect management. Issues that can effect small and mid-sized businesses during software development projects are:

- ▶ Quality failure can mean brand damage, loss of business, and even legal consequences
- ▶ Must address requirements from many stakeholders
- ▶ Must track many perspectives of quality to proactively address risk
- ▶ Effective communication is central to success
- ▶ Continuously challenged to improve efficiencies

Often software development projects suffer from:

- ▶ Lack of visibility: Need ways to report on key quality metrics to ensure that the business goals and objectives of each software release are met.
- ▶ Lack of agility and control: Need up-to-the-minute status on who is doing what and what is or is not working.
- ▶ Increasing volume: Difficulty keeping up with all of the testing plans, cases, requirements and defects, for example, one small change can trigger many hours of test time.
- ▶ No efficiency: Need to keep track of data from different sources, stored in different locations, in incompatible formats, for example, bringing all of this diverse data together, while reducing complexity and maximizing available test time.

IBM Rational Quality Manager Express Edition is a Web-based centralized test management environment that:

- ▶ Provides visibility and traceability to project requirements
- ▶ Delivers constant and transparent access to quality metrics
- ▶ Minimizes manual documentation and facilitates collaboration
- ▶ Is an integrated launch platform for manual, functional, and performance tests

Table 6-2 shows how the quality paradigm is changing.

Table 6-2 Software development: quality changes

Test: Functional silo within software development	Quality: A strategic business competency
Testing that Quality Assurance addresses before deployment	Quality considerations addressed throughout each phase
Test as gatekeeper on final release decisions	Agile iterations involve multiple business and technical stakeholders
Distributed, single project orientation	Consolidation with internal center of excellence or outsourcing
Scope - fit to use, reduction of application-level defects	Scope - customer satisfaction and improved business performance

Rational improves quality management. Figure 6-5 shows how IBM Rational Quality Manager Express Edition helps to increase the quality of your development projects.

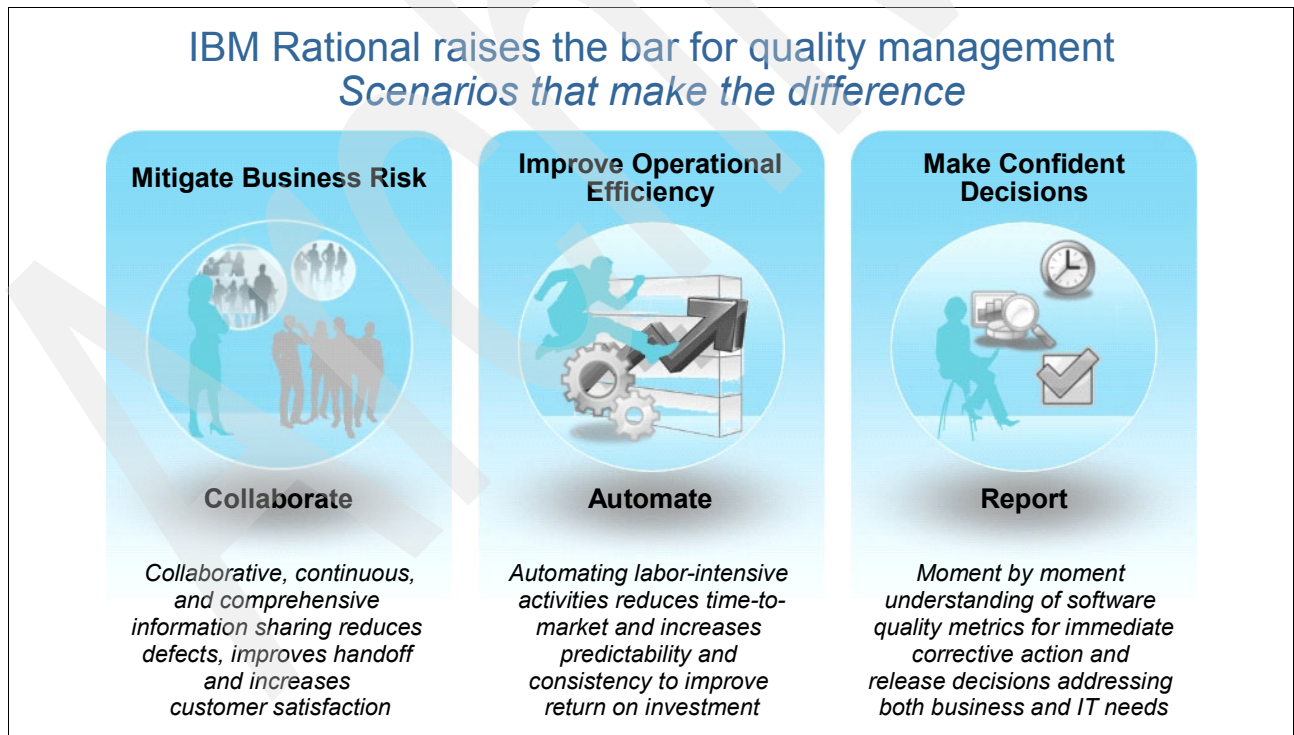


Figure 6-5 Rational improves quality management

6.6.2 Business value

IBM Rational Quality Manager Express Edition is designed to help small-to-medium teams collaborate by allowing them to seamlessly share information to use automation to accelerate project schedules and to report on project metrics for informed release decisions:

- ▶ Provides a life cycle test plan, which defines the roles, processes, and deliverable ownership, automates the flow of work and assets
- ▶ Tailors content and presents information through customizable dashboards
- ▶ Enables collaboration distributed teams through a Web 2.0 interface
- ▶ Gives shared access to and traceability of assets throughout the life cycle
- ▶ Supports Risk Based Testing and assessment through risk ranking and analysis
- ▶ Provides a flexible process framework to adopt leading practices over time
- ▶ Offers manual test authoring using rich text, inline images, and assisted data entry and validation for precise test definition and execution
- ▶ Helps users achieve optimized environment coverage through test execution schedules
- ▶ Provides core test lab management capabilities to help users track and schedule lab assets
- ▶ Gives central repository stores versioned history of test assets and templates for reuse
- ▶ Supports small-to-medium teams of up to five members
- ▶ Offers automated data collection with extensive filtered reporting

Figure 6-6 shows the business value of Rational Quality Manager Express Edition.



Figure 6-6 Business-driven software quality

6.6.3 Product overview

IBM Rational Quality Manager Express Edition is a Web-based centralized test management hub for business-driven software quality. It is an environment for software decision makers and test professionals who seek a collaborative and customizable solution for test planning, workflow control, tracking, and metrics reporting that can quantify how project decisions and deliverables impact and align with business objectives. IBM Rational Quality Manager Express Edition delivers the ability to:

- ▶ Collaborate throughout the life cycle:
 - Defined, customized roles and processes guide project activities
 - Web 2.0-style interface keeps team in sync
 - 360 degree view of team interaction, shared assets, deliverables, and progress
- ▶ Automate labor-intensive test creation and execution tasks:
 - Dynamic, living, and comprehensive test plan evolves with the project
 - Optimize test coverage for given resource constraints
 - Build and configure test lab environment and optimize utilization
- ▶ Govern with constant access to quality metrics:
 - Metrics collection and trending on asset reuse guides future project
 - Prioritize assignments to complete most vital quality issues first
 - Asset versioning and traceability maintained for each and across all projects
- ▶ Protect investments with an open, extensible platform:
 - Use test tools of your choice
 - Tagging enables ready reuse of your test assets

Table 6-3 shows the features and benefits of IBM Rational Quality Manager Express Edition.

Table 6-3 Features and benefits of IBM Rational Quality Manager Express

Feature	Benefits
User-customized content and layout	IBM Rational Quality Manager provides contextual information that is tailored to the individual. Each user can customize the layout and content on his or her Rational Quality Manager dashboard, and because the dashboard is continually updated, each user can view the most current information that pertains to his or her work.
Dynamic Test Plan	With IBM Rational Quality Manager, a test plan is a dynamic, living document that evolves with the project. It is a quality contract that clearly describes project goals and entry and exit criteria, while also tracking prioritized items for validation. Static data, such as business objectives, and dynamic data, such as requirements and test cases, are captured in the plan.
Work item tracking	IBM Rational Quality Manager can create and track prioritized work items for all team members, which enables teams to track work that must be done to complete a quality assurance project. This feature establishes clear, prioritized ownership for project deliverables, which ensures that nothing falls through the cracks.
Distributed access for teams of any size	IBM Rational Quality Manager is built on a Java and Web 2.0 technology-based architecture, so team collaboration does not have to be any more complicated than opening a browser. No heavy installation or proprietary limiting Microsoft ActiveX technologies are required.

Feature	Benefits
Risk Based Testing and Analysis	IBM Rational Quality Manager provides the ability to prioritize testing efforts and drive risk based decisions to meet quality objectives amidst limited resources. Using Calculated Risk Assessments that are derived from documented risk profiles and Collaborative Risk Assessments that are based on individual team members experience, IBM Rational Quality Manager rank and report prioritized test scenarios to meet business needs.
Constantly updated team status	IBM Rational Quality Manager offers two views on the individual user's dashboard: A work-item list that shows a tester what work is assigned to them and a team event log that updates automatically as activities occur and progress. Together these views help to ensure that everyone is on the same page.
Manual test authoring	IBM Rational Quality Manager integrates rich-manual test. Testers are provided with a rich text editor that can capture textual test steps alongside embedded images. Using this editor, a tester can record the test steps that must be executed to validate a given function of their application.
Manual test-assisted data entry and validate	Using IBM Rational Quality Manager, you can embed test data as a property of a given test step. During test execution, manual testers populate the Windows' clipboard with this text, so that the user can paste the text into the application. This eliminates transcription errors for testers. For validating data, users can copy data from the application to the clipboard. Rational Quality Manager can then compare this to baseline data that is stored as part of the test, highlighting any discrepancies in the test log.
Test re-use across manual and automated tests	To enable test reuse, IBM Rational Quality Manager uses keywords, which allow testers to share common steps between tests. These can be manual steps or automated test scripts that are powered, for example, by IBM Rational Functional Tester. Creating hybrid manual tests with automated keywords is often a very simple way for manually focused test teams to leverage the power of test automation, without making a full commitment to latest automation framework.
Test coverage optimization	IBM Rational Quality Manager includes technology that is designed to automatically identify and select the minimum number of tests that are required for a given level of environment coverage, which enables testers to ensure that they optimize configuration coverage within their time or resource constraints.
Test lab management	Using IBM Rational Quality Manager Express edition, testers can register their lab assets and schedule execution according to asset configurations. This helps to remove administrative burdens and to ensure optimal utilization of test lab resources.
Life cycle traceability	IBM Rational Quality Manager enables full life cycle versioning and traceability from requirements and tests to defects and remediation. Users can create requirements directly in IBM Rational Quality Manager, or requirements can be tracked through a dynamic link to requirements management tools, such as IBM Rational DOORS® and IBM Rational RequisitePro® software. Test cases can then be linked to requirements, which provides project managers with a way to track requirements' coverage. Should any issues be found during test execution, defects can be entered and tracked to help ensure proper feature development.

Figure 6-7 shows how Rational Quality Manager Express Edition provides a centralized test management hub.



Figure 6-7 Centralized test management hub

6.6.4 Supported platforms

Rational Quality Manager Express Edition supports these platforms:

- ▶ Web environments: Firefox 3.0 and Microsoft Internet Explorer 7.0
- ▶ Supported operating systems for application server:
 - Red Hat Enterprise Linux Desktop 5.0 x86–32, Update 1
 - SUSE Linux Enterprise Server (SLES) 10.0 x86–32, Service Pack 1
 - Windows Server 2003 SP2 Enterprise Edition x86–32
 - Windows Server 2003 SP2 Standard Edition x86–32

Note: Although the server works on Windows XP and Windows Vista, these operating systems are not supported production environments. Windows XP and Windows Vista operate well enough to allow an individual or small team to explore the product and many of the features.

- ▶ Supported operating system for administration client:
 - Red Hat Enterprise Linux Desktop 5.0 x86–32, Update 1
 - SUSE Linux Enterprise Desktop (SLED) 10.0 x86–32, Service Pack 1
 - Windows Vista Business X86–32, Service Pack 1
 - Windows Vista Enterprise X86–32, Service Pack 1
 - Windows Vista Ultimate x86–32, Service Pack 1
 - Windows XP Professional x86–32 Service Pack 2

- ▶ Supported application servers:
 - Apache Tomcat 5.5.23 (included with Rational Quality Manager)
 - WebSphere Application Server 6.1.0.15
- ▶ Supported relational databases:
 - IBM Derby SDK 10.3.2.2 (included with Rational Quality Manager)
 - DB2 Express Edition 9.5
 - DB2 for Linux, UNIX, and Windows 9.5 fixpack 1
 - DB2 for Linux, UNIX, and Windows 9.1 fixpack 1
 - Oracle 10g Enterprise Edition Release 2 10.2.0.1
- ▶ Supported identity management systems:
 - IBM Tivoli Directory Server 6.0
 - Microsoft Windows Server 2003 Active Directory

6.6.5 Key resources

For more information, see the following resources:

- ▶ Rational Quality Manager Express Edition product page:
<http://www.ibm.com/software/awdtools/rqm/express/>
- ▶ Rational Quality Manager Express Edition Product Library:
http://www.ibm.com/software/rational/offerings/quality/library.html?S_CMP=rnav

6.7 IBM Rational Change Management Express

In this section, we discuss Rational Change Management Express.

6.7.1 Executive summary

Organizations face growing pressures to quickly deliver high-quality software that is aligned with business objectives. Some of the pressures include:

- ▶ Delivering more solutions with the same or even fewer resources
- ▶ Working with development teams that are geographically distributed
- ▶ Difficulty determining project status and how change requests are affecting development
- ▶ Adhering to organizational standards

IBM Rational Change Management Express drives software innovation through collaboration. It transforms how people (especially those who have project-distributed teams) work together to manage changes, defects, or any other work items. IBM Rational Change Management Express connects dispersed development teams to increase individual and team productivity, compress development cycles, and deliver high-quality software fast.

6.7.2 Business value

IBM Rational Change Management Express helps you gain the cross-organizational visibility and collaboration that you need to succeed:

- ▶ Improves the productivity of your teams and the quality of the work they produce
- ▶ Improves collaboration by integrating work items, chat and process guidance and reporting

- ▶ Simplifies access to team-related information and performing team-related operations
- ▶ Improves productivity of IT stakeholders and improve IT process integrity with automated traceability across development tasks
- ▶ Helps management and team leaders to easily monitor projects and address problems and bottlenecks before they endanger delivery schedules
- ▶ Lowers implementation costs by promoting adoption with existing tools and infrastructure. Improves IT efficiencies by enabling broader application lifecycle management.
- ▶ Lowers TOC and improves developer collaboration
- ▶ Automates project governance with tools to assess project status and trends in real-time

6.7.3 Product overview

With IBM Rational Change Management Express, IBM is delivering key change management capabilities of the Jazz environment and IBM Rational Team Concert in an easy to buy, easy to implement, and easy to use solution that addresses change management. Key capabilities include:

- ▶ Work item tracking

Work items are a fundamental mechanism to track and coordinate development tasks and workflows, all governed by your team's associated process. In addition work items are the hub for linkage between many artifacts (for example, work items and change sets), and provide support for integration with other products. Work Item customization can be used to create new work item types or modify existing types in order to support the process that your team follows.

- ▶ Process awareness and customizability

IBM Rational Change Management Express allows each team to teach the tool its best practices. IBM Rational Team Concert uses this knowledge to automatically detect violations of your teams' process the moment they happen.

- ▶ Team awareness

IBM Rational Change Management Express knows your project teams, their internal organization, and the artifacts they are working on. To mention only one example, in order to subscribe to a feed with all events specific to a team, just select the team in the user interface and select "Subscribe to Team Events" from the context menu.

- ▶ Transparency/project health

The Team Reports and Web Dashboards components help you keep tabs on the health of your project. Dashboard provides an at-a-glance view of work item queries, event feeds, reports, and other items that are critical to understanding your progress. Reports provide both real-time views and historical trends of builds, streams, work items, and other artifacts that your team works with.

- ▶ Broad client support

The Eclipse client provides stakeholders with rich, integrated environments for managing projects. The Web 2.0 based interface allows users to access project areas, create and update tasks, or read about recent events.

6.7.4 Supported platforms

Rational Change Manager Express supports these platforms:

- ▶ Desktop:
 - Red Hat Enterprise Linux Desktop 5.0 x86-32, Update 1, 2, or 3
 - SUSE Linux Enterprise Desktop (SLED) 10.0 x86-32, Service Pack (SP) 1
 - Ubuntu Linux Client 8.0.4
 - Windows Vista Business x86-32, SP1 or SP2
 - Windows Vista Enterprise x86-32, SP1 or SP2
 - Windows Vista Ultimate x86-32, SP1 or SP2
 - Windows XP Professional x86-32 Service Pack 2 or 3
 - Windows 7 Business, Enterprise, Ultimate
- ▶ Server:
 - Red Hat Enterprise Linux 5.0 x86-32
 - SUSE Linux Enterprise Server (SLES) 10.0 x86-32
 - Red Hat Enterprise Linux 5.0 x86-64
 - SUSE Linux Enterprise Server (SLES) 10.0 x86-64
 - Windows Server 2003 SP2 Enterprise Edition x86-32
 - Windows Server 2003 SP2 Standard Edition x86-32
 - Windows Server 2008 x86-32 SP2
 - Windows Server 2008 x86-64 SP2

6.7.5 Key resources

For more information about Rational Change Manager Express, see the product page:

<http://www.ibm.com/software/rational/products/rcm/>

6.8 IBM Rational Developer for Power System Software

In this section, we discuss Rational Developer for Power System Software.

6.8.1 Executive summary

Cost of developing and maintaining business applications continues to rise, you might be experiencing these problems:

- ▶ Disconnected islands of development cause critical lack of visibility and traceability issues and solutions
- ▶ Increasing cost of supporting multiple sets of disparate tools for each island of developers
- ▶ Existing applications are core to the business however challenges with development time and application portability exist

Rational Developer for Power System Software helps solve these problems and provides tools to drive business changes faster and easier with smaller development teams.

6.8.2 Business value

Rational Developer for Power System Software provides a common IDE that benefits application development and maintenance:

- ▶ Modern development interface (Eclipse-based) and desktop environment removes key inhibitors to attracting new programming language skills
 - Provides modern, highly competitive graphical IDE
 - Attracts new developers to the platform
- ▶ Integrated debugger improves programmer productivity by at least 20%
- ▶ Lowers IT operational costs by using a single standard developer desktop:
 - All developers are using a common development interface, improving cross training and skills transfer
 - Minimizes expense of buying and maintaining various tools/development environments

6.8.3 Product overview

Rational Developer for Power System Software provides modern, Eclipse-based, development tools for IBM Power Systems, including visual editors, outline views, content assist, and integrated language help. It provides tools and capabilities targeted for the AIX and IBM i environments, such as:

- ▶ Integrated file management, search, edit, compile/build, and debug capabilities
- ▶ Analysis tools (application diagram, call hierarchies, type hierarchies)
- ▶ Integration with Rational Team Concert
- ▶ Common development environment across multiple hardware platforms and languages

Rational Developer for Power Systems Software supports these key development languages and environments:

- ▶ C/C++ development tools for AIX:
 - Remote access to files, processes, and shells
 - Rich editor support (content assist, outline view, color tokenizing and so on)
 - Integrated build support with error feedback
 - Remote debug
 - Debug core files for postmortem analysis
 - Call and type hierarchy views (for C/C++)
 - Language aware searching (for C/C++)
 - Integration with Rational Team Concert for Power Systems Software
- ▶ COBOL development tools for AIX:
 - Eclipse-based edit, compile, and debug capabilities
 - Remote or local projects
 - Rich edit support
 - Integrated build support
 - Exploit IBM i and System z knowledge and skills

- ▶ RPG and COBOL development tools for IBM i:
 - Lightweight, modern, development tools for RPG, COBOL, CL, and DDS
 - Integrated file access, search, edit, compile, and debug
 - Rich editing features such as outline view, content assist, formatting, color tokenizing
 - Visualize program structure with Application Diagram
 - Easily debug batch, interactive, and web applications and web services with a common visual debugger
 - Visual DDS design tools such as: Screen and Report Designer
 - User defined smart build capabilities
 - Integration with Rational Team Concert for Power

For more information about features of Rational Developer for Power Systems Software, go to this web page:

http://www.ibm.com/software/rational/products/rdp/features/?S_CMP=rnav

6.8.4 Supported platforms

Rational Developer for Power System Software supports these platforms:

- ▶ Server operating systems: i5/OS V5R4 or IBM i 6.1
- ▶ Client operating systems (in 32-bit mode):
 - Microsoft Windows XP Professional with SP 2 or later
 - Microsoft Windows Server 2003 Standard Edition with SP 1 or later
 - Microsoft Windows Server 2003 Enterprise Edition with SP 1 or later
 - Microsoft Windows Vista Business, Windows Vista Enterprise, and Windows Vista Ultimate with SP1 or later
 - Microsoft Windows Server 2008 Standard Edition
 - Microsoft Windows Server 2008 Enterprise Edition

6.8.5 Key resources

For more information about Rational Developer for Power System Software, see the following web page:

<http://www.ibm.com/software/rational/products/rdp/>

Archived

Additional product information

In this appendix, we provide additional information about the latest version of IBM midmarket portfolio products:

- ▶ How to buy
- ▶ Where to find additional product information
- ▶ Functional comparisons between IBM midmarket products and other product editions

How to buy

To purchase IBM midmarket software products, contact your IBM Business Partner or Sales Representative, or order online at the following websites:

- ▶ IBM software online catalog: This catalog is an easy way to shop for IBM software products that include license, support, and one-year renewable software maintenance. With links to product information and product pricing specific to your country, the IBM software online catalog is an invaluable resource. The IBM software online catalog is available at:

<http://www.ibm.com/software/info/ecatalog/>

- ▶ Passport Advantage®: If you are an existing IBM software customer, you can make your purchase on your personalized Passport Advantage website. For more information, see the following web address for further information:

<http://www.ibm.com/software/howtobuy/passportadvantage/>

Midmarket product pricing

Midmarket products are licensed using various price metrics to measure software value. In selecting a price metric for a product, IBM considers the characteristics of the software and the needs of the customer, among other factors. This information is intended to provide a basic level of understanding. For specific terms and conditions, consult your product License Agreement and License Information. Some of the more commonly used price metrics are:

- ▶ *Per user (named user, authorized user)*: Refers to the number of people who are authorized to use the software. IBM sells user licenses in *user packs*, for example 20, and can have a maximum limits.
- ▶ *Concurrent user (or floating user)*: The number of licenses required is based on the maximum number of users who access the software at a point-in-time. This price metric is often used when large numbers of users access the software infrequently.
- ▶ *Per developer*: Is a license for development and designated *not* for production use.
- ▶ *Per server/client*: Requires one license for your server plus one for each client.
- ▶ *Per server/user*: Requires one license for your server plus one for each user.
- ▶ *Per server with user*: You must obtain both a license for the server and additional licenses for the number of users who access the software on the server. The initial server license acquisition can include license rights for a small number of users to access the software (for example three users).
- ▶ *Per server managed*: Charges are based on the number of servers in the computing environment that are affiliated with the software program rather than on the server where the software programs are run.
- ▶ *Process Value Unit (PVU)*: A defined number of PVU licenses must be obtained for each active processor core on the server available to the software product. The number of PVU licenses required per core is defined by the type of processor, and a table of PVUs per core by processor type is published by IBM.

For some products, charges are based on the active processor cores on the servers in the computing environment that is affiliated with the software program rather than on the server where the software program is run.

For PVU based products, licensing to less than the total number of activated cores on the server requires agreement to virtualization capacity (sub-capacity) licensing terms.

- ▶ *Per feature pack*: Supports an add-on software option.
- ▶ *Per connection*: Licenses must be obtained for each connection between the software product and another application or device (for example, a connection to an external partner gateway).

Processor Value Units details

A PVU is a unit-of-measure that differentiates licensing of middleware on distributed processors and, over time, will evolve to differentiate processor families that are based on their relative performance, among other factors. The Processor Value Unit structure consists of five broad tiers or levels, and all supported processor families are assigned to one of those tiers. For each product, customers need to acquire the appropriate number of Processor Value Units for the level or tier of all processor cores that are activated and ready for use on which the software is deployed.

Figure A-1 on page 148 contains lists current generally available processors (as of this guide's publish date). PVU requirements for future processor technologies can differ. For PVU requirements for any processor technologies that are not included in the table, consult the Guide to identifying your processor family web page; otherwise, contact IBM:

http://www-01.ibm.com/software/lotus/passportadvantage/guide_to_identifying_processor_family.html

IBM Software defines "Processor" as a Core.

Processor families		Processor Type						PVUs per Processor core
Vendor	Brand	One-core	Dual-core	Quad-core	Hexa-core	Oct-core	IFL engine	
IBM	Power6 (1)		•					120
IBM	System z10						• (2)	
IBM	POWER5		•					100
IBM	System z9,z990, S/390 (3)						• (2)	
Fujitsu	SPARC64 VL,VII		•	•				
HP	PA-RISC		•					
Intel	Itanium		•					
Sun	UltraSPARC IV		•					
Any	Any single core	•						
IBM	POWER6 (1)		•					80
IBM	PowerPC 970		•					50
IBM	POWER5 QCM			•				
AMD	Opteron		•	•				
Intel	Xeon		•	•				
Sun	UltraSPARC T2			•	•	•		
IBM	PowerXCell 8i	• (4)						30
IBM	Cell Broadband Engine	• (4)						
Sun	UltraSPARC T1			•	•	•		

Legend for PVU per core table:

1. IBM Power Systems™ (formerly System i and p) 520 and JS12 models and IBM BladeCenter JS12 and JS22 models require 80 PVUs per core. All other POWER6™ processor-based server models require 120 PVUs per core.

2. Each IFL or CP engine is equivalent to 1 processor core.

3. Refers to System z9®, eServer™, zSeries®, or S/390® servers.

4. Entitlements required for PEE cores only.

Figure A-1 PVU per core table

For more information about PVU pricing see:

http://www.ibm.com/software/lotus/passportadvantage/pvu_licensing_for_customers.html

For the Guide to identifying your processor family, go to:

http://www.ibm.com/software/lotus/passportadvantage/guide_to_identifying_processor_family.html

Key benefits

With PVU, IBM continues the practice of licensing to the processor core. This practice provides the licensing granularity that customers require, while offering them the flexibility to configure their systems to best support their business objectives.

PVUs enable sub-capacity licensing at the processor core and provide:

- ▶ A licensing structure that avoids fractional licensing or processor factors for multi-core chips
- ▶ Flexibility and granularity, which enables customers to run a product on as few or as many processor cores as they require
- ▶ The capability to deliver software price performance improvements as new processor families are introduced and sustainable licensing foundation for the future

Licenses are transferable across distributed systems.

Announcement letters

IBM announcement letters provide information about specific products, including technical features, ordering and pricing information, and licensing terms and conditions. The tables in the following sections list the currently marketed IBM Express software products and their respective location-specific IBM announcement letter numbers. You can access the announcement letters by selecting the appropriate country or region and the “IBM Announcements” information search topic at the following website:

<http://www.ibm.com/common/ssi/0IAccess.wss>

Passport Advantage product part numbers

You can locate the Passport Advantage product part number in three ways:

- ▶ IBM software online catalog:
<http://www.ibm.com/software/info/ecatalog/>
- ▶ Passport Advantage:
<http://www.ibm.com/software/howtobuy/passportadvantage/>
- ▶ Announcement letters (enter the announce letter number or search by keywords):
<http://www.ibm.com/common/ssi/index.wss>

The part numbers are associated with specific customer needs:

- ▶ Annual software subscription and support renewal (for 12 months)
- ▶ License plus software subscription and support (for 12 months)
- ▶ Software subscription and support reinstatement (for 12 months)

Functional comparisons: IBM midmarket and other product editions

In this section, we provide an overview of the similarities and differences between the IBM midmarket software and other editions of each product. The midmarket version of each product can be upgraded to one or more of the other editions.

Comparing editions: See the product websites and announcement letters for more detailed information about comparing and contrasting the editions and upgrade options.

WebSphere Application Server

Table A-1 lists the similarities and differences between IBM WebSphere Application Server - Express V7 and other product editions.

Table A-1 WebSphere Application Server

	WebSphere Application Server Community Edition	WebSphere Application Server Express	WebSphere Application Server	WebSphere Application Server Network Deployment	WebSphere Application Server for z/OS
Target market	Developers and businesses needing quick access to open source technology to accelerate deployment of low-complexity projects with low transaction volumes	Small and midsize businesses needing an easy, affordable, ready-to-go solution to build, run, and manage simple, dynamic websites and applications	Medium to large businesses needing to build, run, and manage a scalable, single-server deployment	Large enterprises needing advanced management, automated performance optimization, and near-continuous availability for their mission-critical applications	Large enterprises that can leverage z/OS qualities of service to achieve optimized performance and continuous availability for their mission-critical applications
Runtime provisioning	Partial support	Yes	Yes	Yes	Yes
Production-use database	Yes				
Broad operating system support and database connectivity	Partial support	Yes	Yes	Yes	Partial support - z/OS only
Integration with IBM Rational Application Developer assembly and deploy modules for WebSphere, built on Eclipse	Partial support	Yes	Yes	Yes	Yes
WebSphere Application Server Feature Packs	Partial support	Yes	Yes	Yes	Yes
Large-scale transaction support				Yes	Yes
Dynamic caching				Yes	Yes
Simple failover	Yes	Yes	Yes	Yes	Yes
Administrative agent to reduce overhead of administration		Yes	Yes	Yes	Yes
Job manager, to enable scalable remote administration				Yes	Yes
Advanced clustering	Partial support			Yes	Yes
Workload management within a server: integrated with z/OS Workload Manager					Yes

	WebSphere Application Server Community Edition	WebSphere Application Server Express	WebSphere Application Server	WebSphere Application Server Network Deployment	WebSphere Application Server for z/OS
Reporting and chargeback: granular reporting on resource consumption					Yes
Java programming model	<ul style="list-style-type: none"> ▶ Java EE Version 5.0 support and EJB 3.0 ▶ Java SE Version 5 and partial support for Java SE Version 6 ▶ Java Persistence API (JPA) ▶ JAX-WS 2.0 ▶ JAXB 2.0s ▶ StAX 1.0 ▶ JSR 109 1.2 ▶ SAAJ 1.3 	<ul style="list-style-type: none"> ▶ Java EE Version 5.0 support and EJB 3.0 ▶ Java SE Version 5 and Version 6 ▶ Java Persistence API ▶ Session initiation Protocol (SIP) ▶ JAX-WS 2.1 ▶ JAXB 2.1 ▶ StAX 1.0 ▶ JSR 109 1.2 ▶ SAAJ 1.3 ▶ Portlet specification 2.0 ▶ Java Specification Requests (JSRs) 286 	<ul style="list-style-type: none"> ▶ Java EE Version 5.0 support and EJB 3.0 ▶ Java SE Version 5 and Version 6 ▶ Java Persistence API ▶ Session initiation Protocol (SIP) ▶ JAX-WS 2.1 ▶ JAXB 2.1 ▶ StAX 1.0 ▶ JSR 109 1.2 ▶ SAAJ 1.3 ▶ Portlet specification 2.0 ▶ Java Specification Requests (JSRs) 286 	<ul style="list-style-type: none"> ▶ Java EE Version 5.0 support and EJB 3.0 ▶ Java SE Version 5 and Version 6 ▶ Java Persistence API ▶ Session initiation Protocol (SIP) ▶ JAX-WS 2.1 ▶ JAXB 2.1 ▶ StAX 1.0 ▶ JSR 109 1.2 ▶ SAAJ 1.3 ▶ Portlet specification 2.0 ▶ Java Specification Requests (JSRs) 286 	<ul style="list-style-type: none"> ▶ Java EE Version 5.0 support and EJB 3.0 ▶ Java SE Version 5 and Version 6 ▶ Java Persistence API ▶ Session initiation Protocol (SIP) ▶ JAX-WS 2.1 ▶ JAXB 2.1 ▶ StAX 1.0 ▶ JSR 109 1.2 ▶ SAAJ 1.3 ▶ Portlet specification 2.0 ▶ Java Specification Requests (JSRs) 286
Web services support highlights		<ul style="list-style-type: none"> ▶ OASIS WS-Reliable Messaging ▶ OASIS WS-Secure Conversation ▶ OASIS WS-Trust ▶ OASIS WS-Transaction ▶ OASIS WS-Security Policy ▶ OASIS Kerberos Token Profile ▶ W3C WS-Policy ▶ W3C WS-Addressing Metadata ▶ W3C SOAP 1.2 ▶ W3C MTOM and XOP ▶ WS-Metadata Exchange ▶ Interoperability with vendors such as Microsoft 	Same as WebSphere Application Server - Express	Same as WebSphere Application Server - Express	Same as WebSphere Application Server - Express
Web 2.0 highlights		<ul style="list-style-type: none"> ▶ Web 2.0 to SOA connectivity ▶ AJAX Messaging ▶ AJAX Development Toolkit 	Same as WebSphere Application Server - Express	Same as WebSphere Application Server - Express	Same as WebSphere Application Server - Express except AJAX Development Toolkit can be used to product applications - it does not run on z/OS

	WebSphere Application Server Community Edition	WebSphere Application Server Express	WebSphere Application Server	WebSphere Application Server Network Deployment	WebSphere Application Server for z/OS
Application development and management	<ul style="list-style-type: none"> Partial support for Rational Application Developer for WebSphere Partial support for Rational Application Developer integrated with Rational Software Architect for WebSphere 	<ul style="list-style-type: none"> Rational Application Developer for WebSphere Rational Application Developer integrated with Rational Software Architect for WebSphere Rational Application Developer assembly and deploy function WebSphere business-level applications, expanding the notion of "application" beyond Java EE 5 	<ul style="list-style-type: none"> Rational Application Developer for WebSphere Rational Application Developer integrated with Rational Software Architect for WebSphere Rational Application Developer assembly and deploy function WebSphere business-level applications, expanding the notion of "application" beyond Java EE 5 	<ul style="list-style-type: none"> Rational Application Developer for WebSphere Rational Application Developer integrated with Rational Software Architect for WebSphere Rational Application Developer assembly and deploy function WebSphere business-level applications, expanding the notion of "application" beyond Java EE 5 	<ul style="list-style-type: none"> Rational Application Developer for WebSphere Rational Application Developer integrated with Rational Software Architect for WebSphere Rational Application Developer assembly and deploy function WebSphere business-level applications, expanding the notion of "application" beyond Java EE 5
Advanced security		<ul style="list-style-type: none"> WebSphere security domains New security audits Kerberos authentication and single sign-on Common Criteria Assurance Level 4 certification 	<ul style="list-style-type: none"> WebSphere security domains New security audits Kerberos authentication and single sign-on Common Criteria Assurance Level 4 certification 	<ul style="list-style-type: none"> WebSphere security domains New security audits Kerberos authentication and single sign-on Common Criteria Assurance Level 4 certification WebSphere secure proxy 	<ul style="list-style-type: none"> WebSphere security domains New security audits Kerberos authentication and single sign-on Common Criteria Assurance Level 4 certification WebSphere secure proxy Leverage the z/OS security environment without affecting the application interface
Administration and workload management	Partial support for new runtime provisioning services	<ul style="list-style-type: none"> Flexible Management New runtime provisioning services 	<ul style="list-style-type: none"> Flexible Management New runtime provisioning services 	<ul style="list-style-type: none"> Flexible Management New runtime provisioning services 	<ul style="list-style-type: none"> Flexible Management New runtime provisioning services
Platforms	<ul style="list-style-type: none"> Windows, Linux, IBM AIX and Sun Solaris Linux on IBM System z Partial support for 64-bit addressing 	<ul style="list-style-type: none"> Windows, Linux, IBM AIX and Sun Solaris HP-UNIX IBM i 	<ul style="list-style-type: none"> Windows, Linux, IBM AIX and Sun Solaris HP-UNIX IBM i Linux on IBM System z 64-bit addressing 	<ul style="list-style-type: none"> Windows, Linux, IBM AIX and Sun Solaris HP-UNIX IBM i Linux on IBM System z 64-bit addressing 	<ul style="list-style-type: none"> z/OS and z/OS sysplex 64-bit addressing
Open source support	<ul style="list-style-type: none"> IBM HTTP Server for WebSphere Built on Apache Geronimo kernel 	<ul style="list-style-type: none"> IBM HTTP Server for WebSphere 	<ul style="list-style-type: none"> IBM HTTP Server for WebSphere 	<ul style="list-style-type: none"> IBM HTTP Server for WebSphere 	<ul style="list-style-type: none"> IBM HTTP Server for WebSphere
Performance support				<ul style="list-style-type: none"> Enhanced performance features, including edge-of-network service 	<ul style="list-style-type: none"> Enhanced performance features, including edge-of-network service

	WebSphere Application Server Community Edition	WebSphere Application Server Express	WebSphere Application Server	WebSphere Application Server Network Deployment	WebSphere Application Server for z/OS
Administration and workload management	Partial support for runtime provisioning service	<ul style="list-style-type: none"> Flexible management Runtime provisioning service 	<ul style="list-style-type: none"> Flexible management Runtime provisioning service 	<ul style="list-style-type: none"> Flexible management Runtime provisioning service 	<ul style="list-style-type: none"> Flexible management Runtime provisioning service
Migration support	<ul style="list-style-type: none"> Migration documentation Partial support for migration tools and assistance 	<ul style="list-style-type: none"> Migration documentation Migration tools and assistance 	<ul style="list-style-type: none"> Migration documentation Migration tools and assistance 	<ul style="list-style-type: none"> Migration documentation Migration tools and assistance 	<ul style="list-style-type: none"> Migration documentation Migration tools and assistance
Upgrade path: Any WebSphere Application Server configuration based on J2EE compatibility	Yes	Yes	Yes	Yes	Yes

WebSphere Portal

Table A-2 lists the similarities and differences between IBM WebSphere Portal Express and other product editions.

Table A-2 WebSphere Portal

	WebSphere Portal Express	WebSphere Portal Server	WebSphere Portal Enable	WebSphere Portal Extend
Target market	Small and midsize business (SMB)	Enterprise customers needing a portal	Enterprise customers needing a portal with content management	Enterprise customers needing collaboration infrastructure
Functions	<ul style="list-style-type: none"> Business portal; consolidated access to applications and information Web content management Document management Instant messaging and presence awareness Single sign-on Tools and resources for developing custom solutions Sample intranet and extranet websites Easy deployment Single server WebSphere Portal Factory for development 	<ul style="list-style-type: none"> Enterprise Portal Core portal services aggregates applications & content Role-based application for your employees, partners and customers Security Services Search Application templating Multiple servers High performance Start small and scale as needed 	<ul style="list-style-type: none"> Capabilities included in WebSphere Portal Server Multiple servers High performance and scalability Workflow Content Management Document Management 	<ul style="list-style-type: none"> Capabilities included in WebSphere Portal Enable Multiple servers High performance and scalability Enhanced workflow creation Collaboration: instant messaging and presence awareness Quickr Document Management Forms

	WebSphere Portal Express	WebSphere Portal Server	WebSphere Portal Enable	WebSphere Portal Extend
Customizability	Fully customizable	Fully customizable	Fully customizable	Fully customizable
Scalability	<ul style="list-style-type: none"> ► Limited to 1000 users or four processors per server ► Warm fail-over allowed but license restricts clustering or cloning of multiple servers 	No licensing limits	No licensing limits	No licensing limits
Server platform support	Windows, Linux, i5/OS	Windows, Linux, i5/OS, AIX 5L, HP-UX, Sun Solaris	Windows, Linux, i5/OS, AIX 5L, HP-UX, Solaris	Windows, Linux, i5/OS, AIX 5L, HP-UX, Solaris
Upgrade path	Portal Server or Portal Enable	Portal Enable	Portal Extend	Not applicable

WebSphere Commerce

Table A-3 lists the similarities and differences between IBM WebSphere Commerce - Express and other product editions.

Table A-3 WebSphere Commerce

	WebSphere Commerce - Express, Version 6.0	WebSphere Commerce Professional, Version 6.0	WebSphere Commerce Enterprise, Version 6.0
Target market	Small and midsize businesses, up to large small and midsize businesses	Larger small and midsize businesses and large enterprises.	Large enterprises.
Key functions	<p>All core e-commerce capabilities, such as:</p> <ul style="list-style-type: none"> ▶ Product/category preferences ▶ Dynamic up-sell and cross-sell ▶ Promotions and promotion advertisement ▶ Email campaigns and Template Editor ▶ Campaign Activity Organizer ▶ Web activities, Web ads ▶ Segmentation ▶ Wish lists ▶ Globalization infrastructure ▶ Operational reports ▶ Starter store ▶ Shopping cart ▶ Member groups ▶ Search Engine Optimization ▶ Guided selling ▶ Site preview ▶ Attachments ▶ Content spots 	<p>Includes all capabilities in WebSphere Commerce - Express plus:</p> <ul style="list-style-type: none"> ▶ Collaborative Workspaces ▶ Marketing Experimentation ▶ Likeminds Collaborative Filtering ▶ WebSphere Application Server Edge and WebSphere Application Server Network Deployment (ND) ▶ Ability to purchase and use WebSphere Commerce Sales Center and Gift Center modules 	<p>Includes all capabilities in WebSphere Commerce - Professional plus:</p> <ul style="list-style-type: none"> ▶ Extended sites (for hosting and advanced distributor/reseller support) ▶ Organizations ▶ Accounts ▶ Advanced Roles/Relationships ▶ Contract and policy management ▶ Multi-round RFQ ▶ Requisition Lists ▶ Purchase Orders ▶ Credit Lines ▶ Contracts ▶ Order Approvals ▶ Punch Out ▶ Advanced Business-to-Business Starter Stores
Customizability	No limits on ability to customize	No limits on ability to customize	No limits on ability to customize
Scalability	100 VU maximum	No limits	No limits
Platforms	Windows, OS/400®, i5/OS, Linux (Intel)	Windows, OS/400, i5/OS, Linux (Intel/PPC), AIX 5L, z/OS	Windows, OS/400, i5/OS, Linux (Intel/PPC), AIX 5L, z/OS)
Upgrade path	WebSphere Commerce Professional (with trade-up part number)	WebSphere Commerce Enterprise (with trade-up part number)	N/A

WebSphere Business Modeler Basic

Table A-4 lists the similarities and differences between IBM WebSphere Business Modeler Basic and other product editions.

Table A-4 WebSphere Business Modeler

	WebSphere Business Modeler Basic	WebSphere Business Modeler
Description	Provides basic functionality for business process modeling, process documentation, and process understanding	Provides robust functionality for business process modeling, analysis, and process execution
Reporting and queries	Yes	Yes
WebSphere Registry and Repository	Yes	Yes
Asset repository support (using Rational Asset Manager server V7.1.0.1 or higher (V7.2 preferable))	Yes	Yes
Team support (versioning using CVS and Rational ClearCase)	Yes	Yes
Dynamic business process analysis	No	Yes
Printing process model diagrams and reports	Yes	Yes
Static business process analysis	No	Yes
Business process modeling	Yes	Yes
Simulation	No	Yes
Ability to step through a running process in a test environment	No	Yes
Publishing support (using WebSphere Business Compass)	Yes	Yes
Verify process design deployment using WebSphere Process Server and WebSphere Monitor Server test environments	No	Yes
Basic and Advanced modeling modes	Yes	Yes
Export to WebSphere Integration Developer with project interchange file (including BPEL, WSDL, XSD, Monitor Model), WebSphere MQ Workflow Buildtime (FDL) FileNet Business Process Manager (XPDL)	No	Yes
Import of Microsoft Visio, Microsoft Excel delimited text, Microsoft Excel xlsx/xlsm, Lotus Forms, XML, Rational Data Architect, WebSphere Business Modeler project, WebSphere Business Integration Workbench V4.2.4 organization files, WebSphere Compass Repository, WebSphere Business Services Fabric Repository	Yes	Yes

	WebSphere Business Modeler Basic	WebSphere Business Modeler
Swimlane editor	Yes	Yes
Business measures definition	No	Yes
Export of delimited text, XML, Rational Data Architect data, and WebSphere Business Modeler project files	Yes	Yes
Import of WSDL, XSD, FDL, WebSphere Service Registry and Repository classification system, and WebSphere Business Monitor monitoring results (XML) files	No	Yes
WebSphere Registry and Repository	Yes	Yes
WebSphere MQ, WebSphere Process Server, FileNet Business Process Manager, and WebSphere Business Services Fabric modeling modes	No	Yes

Lotus Domino

Table A-5 lists the similarities and differences between IBM Lotus Domino Utility Server Express and other product editions.

Table A-5 Lotus Domino Utility Server

	Lotus Domino Utility Server Express	Lotus Domino Utility Server
Target market	Midsized companies	Large enterprise (1000+ employees)
Functions	<ul style="list-style-type: none"> ▶ Access to non-mail collaborative applications ▶ Discussion databases ▶ Reference databases with basic workflow for document review ▶ Blog template for access by Lotus Notes and web browser users ▶ RSS feed generation template ▶ TeamRoom application ▶ Entitlement to run Lotus Domino collaborative applications ▶ Integrated administration and systems management tools 	<ul style="list-style-type: none"> ▶ Access to non-mail collaborative applications ▶ Discussion databases ▶ Reference databases with basic workflow for document review ▶ Blog template for access by Lotus Notes and web browser users ▶ RSS feed generation template ▶ TeamRoom application ▶ Entitlement to run Lotus Domino collaborative applications ▶ Integrated administration and systems management tools ▶ Lotus Domino partitioning (the capability to run more than one instance of Lotus Domino on the same machine using one copy of the Lotus Domino code) ▶ Lotus Domino clustering for high availability (failover and load balancing)
Customizability	Supports custom development and third-party/ISV application	Supports custom development, third-party, or ISV applications
Scalability	400 VU maximum	No maximum
Platforms	<ul style="list-style-type: none"> ▶ Microsoft Windows 2003 Server Standard Edition, Enterprise Edition, and x64 Edition ▶ IBM AIX 5.3 (64-bit kernel) and 6.1 (64-bit kernel) ▶ Novell SUSE Linux Enterprise Server (SLES) 10 x86 (32-bit) and x86_64 (64-bit) ▶ RedHat Enterprise Linux (RHEL) 5.1 (32-bit and 64-bit) ▶ Sun Solaris 10 (64-bit kernel) ▶ IBM i5/OS V6R1 and V5R4 ▶ IBM z/OS Version 1, Release 7 or later ▶ IBM z/OS.e Version 1, Release 7 or later ▶ Novell SUSE Linux Enterprise Server (SLES) 10 on System z (64-bit) ▶ Red Hat Enterprise Linux (RHEL) 5 on System z (64-bit) 	Same
Upgrade path	Lotus Domino Utility Server	N/A

Table A-6 lists the similarities and differences between IBM Lotus Domino Messaging Express and other product editions.

Table A-6 Lotus Domino Messaging

	Lotus Domino Messaging Express	Lotus Domino Messaging Server + Lotus Notes for Messaging or Domino Web Access for Messaging
Target market	Midsized companies	All organizations, but most appropriate for midsized companies/enterprise
Key functions	<ul style="list-style-type: none"> ▶ Email, calendaring, and personal information management (choice of either IBM Lotus Notes or Lotus iNotes included) ▶ Reference databases with basic workflow for document review ▶ Integrated administration and systems management tools ▶ Mobile access to email, calendars, and contacts 	<ul style="list-style-type: none"> ▶ email, calendaring, and personal information management (client sold separately) ▶ Reference databases with basic workflow for document review ▶ Lotus Domino partitioning (the capability to run more than one instance of Lotus Domino on the same machine using one copy of the Lotus Domino code) ▶ Integrated administration and systems management tools
Customizability	<ul style="list-style-type: none"> ▶ Customizable out-of-box messaging ▶ Group scheduling 	<ul style="list-style-type: none"> ▶ Customizable out-of-box messaging ▶ Group scheduling
Scalability	1000 named users maximum; only named users can touch the server	Any licensed client can touch any licensed server (except Express or CEO servers, which support only named users)
Platforms	<ul style="list-style-type: none"> ▶ Microsoft Windows 2003 Server Standard Edition, Enterprise Edition, and x64 Edition ▶ IBM AIX 5.3 (64-bit kernel) and 6.1 (64-bit kernel) ▶ Novell SUSE Linux Enterprise Server (SLES) 10 x86 (32-bit) and x86_64 (64-bit) ▶ RedHat Enterprise Linux (RHEL) 5.1 (32-bit and 64-bit) ▶ Sun Solaris 10 (64-bit kernel) ▶ IBM i5/OS V6R1 and V5R4 ▶ IBM z/OS Version 1, Release 7 or later ▶ IBM z/OS.e Version 1, Release 7 or later ▶ Novell SUSE Linux Enterprise Server (SLES) 10 on System z (64-bit) ▶ Red Hat Enterprise Linux (RHEL) 5 on System z (64-bit) 	Same
Upgrade Path	Lotus Domino Collaboration Express or Lotus Notes (for Messaging or Collaboration) or Lotus iNotes (for Messaging or Collaboration), plus Lotus Domino (Messaging or Enterprise Server) or IBM Lotus Communications Complete Enterprise Option Clustering can be added to a Lotus Domino Messaging Express installation by (a special bid) addition of the Messaging for Messaging Express Domino Server	IBM Lotus Communications Complete Enterprise Option

Table A-7 lists the similarities and differences between IBM Lotus Domino Collaboration Express and other product editions.

Table A-7 Lotus Domino Collaboration

	Lotus Domino Collaboration Express	Lotus Domino Enterprise Server + Lotus Notes for Collaboration or Domino Web Access for Collaboration
Target market	Midsized customers	All organizations, but most appropriate for midsized companies/enterprise
Key functions	<ul style="list-style-type: none"> ▶ Email, calendaring, and personal information management (choice of either IBM Lotus Notes or Lotus iNotes included) ▶ Access to non-mail collaborative applications ▶ Discussion databases ▶ Reference databases with basic workflow for document review ▶ Blog template for access by Lotus Notes and web browser users ▶ RSS feed generation template ▶ TeamRoom application ▶ Entitlement to run Lotus Domino collaborative applications ▶ Integrated administration and systems management tools ▶ Mobile access to email, calendars, and contacts 	<ul style="list-style-type: none"> ▶ Email, calendaring, and personal information management (client sold separately) ▶ Access to non-mail collaborative applications ▶ Discussion databases ▶ Reference databases with basic workflow for document review ▶ Blog template for access by Lotus Notes and web browser users ▶ RSS feed generation template ▶ TeamRoom application ▶ Entitlement to run Lotus Domino collaborative applications ▶ Integrated administration and systems management tools ▶ Lotus Domino partitioning (the capability to run more than one instance of Lotus Domino on the same machine using one copy of the Lotus Domino code) ▶ Lotus Domino clustering for high availability (failover and load balancing)
Customizability	<ul style="list-style-type: none"> ▶ Customizable out-of-box messaging and group scheduling ▶ Complete custom application platform 	<ul style="list-style-type: none"> ▶ Customizable out-of-box messaging and group scheduling ▶ Complete custom application platform
Scalability	1,000 named users maximum; only named users can touch server	Any licensed client can touch any licensed server (except Express or CEO servers, which support only named users)
Platforms	<ul style="list-style-type: none"> ▶ Microsoft Windows 2003 Server Standard Edition, Enterprise Edition, and x64 Edition ▶ IBM AIX 5.3 (64-bit kernel) and 6.1 (64-bit kernel) ▶ Novell SUSE Linux Enterprise Server (SLES) 10 x86 (32-bit) and x86_64 (64-bit) ▶ RedHat Enterprise Linux (RHEL) 5.1 (32-bit and 64-bit) ▶ Sun Solaris 10 (64-bit kernel) ▶ IBM i5/OS V6R1 and V5R4 ▶ IBM z/OS Version 1, Release 7 or later ▶ IBM z/OS.e Version 1, Release 7 or later ▶ Novell SUSE Linux Enterprise Server (SLES) 10 on System z (64-bit) ▶ Red Hat Enterprise Linux (RHEL) 5 on System z (64-bit) 	Same

	Lotus Domino Collaboration Express	Lotus Domino Enterprise Server + Lotus Notes for Collaboration or Domino Web Access for Collaboration
Upgrade Path	Lotus Notes for Collaboration or Lotus iNotes for Collaboration and Lotus Domino Enterprise Server or IBM Lotus Communications Complete Enterprise Option Clustering can be added to a Lotus Domino Collaboration Express installation by (a special bid) addition of the Enterprise for Collaboration Express Domino Server.	IBM Lotus Communications Complete Enterprise Option

Lotus Forms

Table A-8 lists the similarities and differences between IBM Lotus Forms Turbo and other product editions.

Table A-8 Lotus Forms editions

	Lotus Forms Turbo	Lotus Forms
Target market	Department and Midsized companies (500 - 1000 employees)	Large enterprises (1000+ employees)
Function	<p>Out-of-the-box forms solution for automating simple processes. Provides the following functionality:</p> <ul style="list-style-type: none"> ► Compose form: Compose forms from a browser without any desktop software installation ► Send link: Publish or email a simple web link to the form for employees, customers, and partners to fill ► Fill: Respondents file Forms directly from the Web ► Store: Submitted forms data is stored ► Analyze: Open submitted data into favorite spreadsheet. Perform basic graphing and analysis directly from the Web 	<p><i>IBM Lotus Forms Server:</i> Delivers a true zero-footprint solution, providing e-forms to external users quickly and efficiently within a browser without requiring additional downloads or plug-ins. Enables high-value e-business through dynamic, secure, digitally signed transactions. Includes Forms Services Platform for easier integration with back end systems</p> <p><i>IBM Lotus Forms Designer:</i> An easy-to-use, what-you-see-is-what-you-get (WYSIWYG), e-form design environment that is based on the Eclipse open source framework, which promotes team development of form-based applications and enables reuse of business components across forms</p> <p><i>IBM Lotus Forms Viewer:</i> A rich-client viewer that automates multi-person workflows by providing role-based signing authority and access to specific form sections</p>
Customizability	<ul style="list-style-type: none"> ► Browser-based composer and viewer for forms that require no IT skills ► APIs for third-party integration will be provided in future releases 	<ul style="list-style-type: none"> ► JavaScript API enables cross portlet data exchange or integration and improved mashup support ► C and Java APIs to help develop applications that can interact with XFDL forms. ► Access and manipulate forms as structured data types
Scalability	<ul style="list-style-type: none"> ► Single box solution in first release (clustering to be added later) ► Simple one-page forms in this release 	No maximum

	Lotus Forms Turbo	Lotus Forms
Platforms	Microsoft Windows, Vista, Red Hat Linux, SUSE Linux, and IBM AIX	Microsoft Windows, Vista, Red Hat Linux, Sun Solaris, SUSE Linux, IBM AIX, and i5/OS
Upgrade path	► Lotus Forms Turbo trade-up to Lotus Forms Server	

DB2 9 Editions

Table A-9 lists the similarities and differences between IBM DB2 Express 9 and other DB2 product editions.

Table A-9 DB2 9 editions

	DB2 Express-C	DB2 Express	DB2 Workgroup	DB2 Enterprise
Target audience	Those considering or using open source databases	Small and midsize companies and the partners who serve them	Departments within large Enterprises	Enterprises of all sizes
Customizability	Simplified install sets common defaults	Simplified install sets common defaults	Install offers greater flexibility	Install offers greater flexibility
Scalability	Free version: 2 cores maximum, 2 GB maximum addressable memory limit Supported version: 4 cores maximum, 4 GB maximum addressable memory limit	200 VU maximum, 4 GB maximum addressable memory limit	480 VU maximum, 16 GB maximum addressable memory limit	No limits
Platforms	Windows, Linux (Intel, AMD, Power)	Windows, Solaris x86 (coming) Linux (Intel, AMD, Power)	Windows, Linux (Intel, AMD, Power), AIX, Solaris, HP-UX	Windows, Linux (Intel, AMD, Power), AIX, Solaris, HP-UX
Upgrade path	Buy Support or other higher priced DB2 edition and options	DB2 Workgroup Unlimited Edition (with trade-up part number)	License key change only; DB2 ESE	NA

InfoSphere Warehouse editions

Table A-10 lists the basic features of the IBM InfoSphere Warehouse editions.

Table A-10 InfoSphere Warehouse Editions

	InfoSphere Warehouse 9.7 Departmental Base	InfoSphere Warehouse 9.7 Departmental Edition	InfoSphere Warehouse 9.7 Enterprise Base	InfoSphere Warehouse 9.7 Enterprise
Target market	Small and medium businesses or departments wanting to transform data into reliable and consistent business insights	For organizations and departments beyond basic query and reporting, needing the tools to discover new business opportunities	For medium to large organizations with a scalable infrastructure for large data marts and enterprise-scale data warehouses	For enterprise-scale data warehouses in medium to large organizations requiring scalability and manageability and a complete range of analytic capabilities

	InfoSphere Warehouse 9.7 Departmental Base	InfoSphere Warehouse 9.7 Departmental Edition	InfoSphere Warehouse 9.7 Enterprise Base	InfoSphere Warehouse 9.7 Enterprise
Features included in all versions	<ul style="list-style-type: none"> ▶ DB2 Enterprise Server Edition ▶ DB2 Database Partitioning ▶ Unlimited Database size ▶ Design Studio ▶ SQL Warehousing tool ▶ Admin Console ▶ Cubing Services ▶ InfoSphere Federation Server Relational Wrappers 	Same as InfoSphere Warehouse 9.7 Departmental Base	Same as InfoSphere Warehouse 9.7 Departmental Base	Same as InfoSphere Warehouse 9.7 Departmental Base
Intelligent Miner® Modeling, Scoring, and MiningBlox	Not included	Included	Not included	Included
Text Analytics	Not included	Included	Not included	Included
DB2 Alphablox including BloxBUILDER	Not included	Included	Not included	Included
DB2 Alphablox Connectors	Not included	Not included	Not included	Included
DB2 Workload Management	Not included	Included	DB2 Performance Optimization Feature	Included
DB2 Query Patroller	Not included	Not included	DB2 Performance Optimization Feature	Included
DB2 Performance Expert	Not included	Not included	DB2 Performance Optimization Feature	Included
Deep Compression	Not included	Not included	DB2 Storage Optimization Feature	Included
Hardware capability	4 sockets 32 GB	4 sockets 32 GB	Unrestricted	Unrestricted

Rational Team Concert

Table A-11 on page 164 lists the similarities and differences between IBM Rational Team Concert Express and other product editions.

Table A-11 Rational Team Concert

	Rational Team Concert Express-C	Rational Team Concert Express	Rational Team Concert Standard	Rational Team Concert Enterprise
Description	Designed to get small teams started. No charge for first three users.	Designed for departmental and mid-sized teams	Designed for larger, corporate teams	Designed for enterprise teams
Key features				
Agile planning	X	X	X	X
Work item tracking	X	X	X	X
Source code management	X	X	X	X
Build management	X	X	X	X
Customizable processes	X	X	X	X
Customizable work item attributes and workflow			X	X
Standard HTTP proxy server support			X	X
Reports			X	X
Dashboard - one per project	X	X		
Dashboards - unlimited project team, user			X	X
Server-level permission	X	X	X	X
LDAP Authentication	X	X	X	X
Role-based process permissions	X	X	X	X
Support for authorized user	X	X	X	X
Support for floating licenses			X	X
Subversion integration	X	X	X	X
ClearCase connector			X	X
ClearQuest connector			X	X
LDAP import			X	X
High availability				X
Upgrade path	Keep user license, purchase Express server	Upgrade user licenses and purchase Standard server	Not applicable	None

Rational Team Concert for Power System Software

Table A-12 lists the similarities and differences between IBM Rational Team Concert for Power System Software Express and other product editions.

Table A-12 Rational Team Concert for Power System Software

	Rational Team Concert for Power System Software Express	Rational Team Concert for Power System Software Standard	Rational Team Concert for Power System Software Enterprise
Company and development team	Small/midsized (50 unrestricted)	Corporate (250 unrestricted)	Enterprise (Unrestricted)
Common features: <ul style="list-style-type: none"> ► Project dashboards ► Collaborative application lifecycle management ► Commercial middleware 	Yes	Yes	Yes
Customizable workflow		Yes	Yes
Advance reporting		Yes	Yes
Departmental scaling		Yes	
High availability			Yes
Unrestricted scaling based on hardware			Yes
Source control <ul style="list-style-type: none"> ► Builds ► Project milestone tracking & status ► Cross repository dashboard 	Yes	Yes	Yes
Customizable dashboards	1 per project	Unlimited	Unlimited
Advanced reports and customization		Yes	Yes
Customizable work item workflow		Yes	Yes
Floating Licenses Available		Yes	Yes
High availability ^a			Yes

a. Entities installation of a second copy of the server in an idle standby application server failover configuration. Requires WebSphere Application Server and optional high availability database configuration (DB2, Oracle, SQL Server).

Rational AppScan

Table A-13 lists the similarities and differences between IBM Rational AppScan Express Edition and other product editions.

Table A-13 Rational AppScan

	Rational AppScan Tester Edition	Rational AppScan Build Edition	Rational AppScan Source Edition	Rational AppScan Express Edition	Rational AppScan Standard Edition	Rational AppScan Enterprise Edition	Rational AppScan OnDemand
Description	Integrated web application security testing in the QA process	Embeds web application security testing into the build management workflow	Provides static analysis of source code for both developers and auditors	Provides affordable web application security for smaller organizations	Desktop solution to automate web application security testing	Web-based, multi-user solution that provides centralized application security scanning and reporting	Software as a Service (SaaS) offering that combines AppScan secure hosting and professional services for outsourced web applications security testing
Key features							
Multiple simultaneous scans					Yes	Yes	Yes
State inducer		Yes		Yes	Yes	Yes	Yes
Out-of-box compliance reports	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pre-defined scan templates	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pattern search rules	Yes	Yes		Yes	Yes	Yes	Yes
Rapid scan configuration wizard	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Automated scans	Yes	Yes		Yes	Yes	Yes	Yes
Issue management		Yes		Yes	Yes	Yes	Yes
String analysis testing		Yes	Yes				
Adaptive test process	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Integration with third-party tools and technologies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Real time results view	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Permission control	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Web console for user access and administration	Yes					Yes	Yes
Dynamic analysis testing	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Runtime Analysis testing		Yes	Yes				

	Rational AppScan Tester Edition	Rational AppScan Build Edition	Rational AppScan Source Edition	Rational AppScan Express Edition	Rational AppScan Standard Edition	Rational AppScan Enterprise Edition	Rational AppScan OnDemand
Central repository for data aggregation			Can export to AppScan Enterprise			Yes	Yes
Static code analysis testing		Yes	Yes				
Integration with other IBM Rational products	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Validation highlighting and reasoning	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Complex authentication support	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Privilege escalation testing		Yes		Yes	Yes		
Composite analysis testing		Yes	Yes				
Embedded Web-based training	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Web-based reporting						Yes	Yes
Securely hosted AppScan software with remote login access							Yes
Dedicated Professional Service time to configure and run scans, prioritize findings, present results to client and guide them in remediating vulnerabilities							Yes

Rational AppScan Reporting Console provides centralized reporting of web application vulnerability data for Rational AppScan editions other than Rational AppScan Enterprise. It provides:

- ▶ Out-of-the-box compliance reports
- ▶ Issue management
- ▶ Integration with third-party tools and technologies
- ▶ Real-time results
- ▶ Permission control
- ▶ Web console for user access and administration
- ▶ Dynamic analysis testing
- ▶ Central repository for data aggregation
- ▶ Integration with other IBM Rational products
- ▶ Embedded computer-based training
- ▶ Web-based reporting console

Rational Quality Manager

Table A-14 lists the similarities and differences between IBM Rational Quality Manager Express Edition and other product editions.

Table A-14 *Rational Quality Manager*

	Rational Quality Manager Express Edition	Rational Quality Manager Standard Edition
Target market	Small and midsize businesses and small teams	Large enterprises or large teams
Function	<ul style="list-style-type: none"> ▶ Distributed team support using Web 2.0 interface ▶ Comprehensive project reporting ▶ Individual dashboard with customized layout and content ▶ Integrated defect tracking ▶ Risk-based assessment and testing ▶ Dynamic, customizable test plan ▶ Integrated manual test authoring and execution ▶ Integrated test lab management ▶ Integrated requirements management ▶ Work item tracking ▶ 24x7 product support 	<ul style="list-style-type: none"> ▶ Distributed team support using Web 2.0 interface ▶ Comprehensive project reporting ▶ Individual dashboard with customized layout and content ▶ Integrated defect tracking ▶ Risk-based assessment and testing ▶ Dynamic, customizable test plan ▶ Integrated manual test authoring and execution ▶ Integrated test lab management ▶ Integrated requirements management ▶ Work item tracking ▶ 24x7 product support ▶ Interoperability with Rational Test Lab Manager
Scalability	For teams of up to five users	For teams of up to 250 users
Operating systems	Windows, Linux	Windows, Linux
Upgrade path	Rational Quality Manager Standard Edition	Not applicable



Technical and sales resources

In this appendix, we provide links and explanations of the many technical and sales resources that are available to our customers, partners, and sales representatives.

Technical resources

In this section, we discuss many technical resources that can help you design, develop, and deploy IBM midmarket software solutions. Most of the resources that we highlight in this section are available on the web at no charge.

IBM developerWorks

The IBM developerWorks website is the IBM technical resource for developers. It offers a wide range of tools, code, and education to help you take full advantage of the IBM Software Development Platform. Whether you are just getting started with IBM software products or are an experienced application developer, developerWorks provides timely, highly-relevant technical information written by industry experts.

The developerWorks website presents valuable development tips for building and deploying applications across heterogeneous systems. This website includes specific content for IBM systems and operating systems, and the software brands such as WebSphere, DB2, Lotus, Rational, and Tivoli. It also provides a wealth of information about open standards technology, including Java, Linux, XML, web services, wireless, emerging technologies, and more. You can visit the developerWorks website at:

<http://www.ibm.com/developerworks>

IBM Redbooks publications

IBM Redbooks publications are highly valued and free of charge to you to read either online or to download to your machine for later viewing. Also, Redbooks publications are available in hardcopy and on the Redbooks publications CD-ROM collections. The IBM International Technical Support Organization (ITSO), the producers of IBM Redbooks publications, develops and delivers materials that help build skills, technical know-how, and a better understanding of IBM products. Redbooks publications are for IBM technical, sales, and marketing professionals, Business Partners, customers, and the general IT marketplace. The Redbooks publications are full of up-to-date technical content on IBM products, solutions, and services.

One of the most visited pages on the IBM websites, the Redbooks publications website provides learning resources to help you solve problems, maximize your investments, and download timely technical information.

Strong, well established, and over 40 years old, the ITSO started as a way to connect United States-based development labs with IBM international sales locations. To address difficulties in gaining easy access to key information, the IBM ITSO created a series of technical documents, which soon became one of the most popular and complete sources of knowledge and experience, now known as IBM Redbooks publications.

Since then, the ITSO has expanded its offerings to include Redpapers™ publications, Technotes, and workshops. The ITSO also produces marketing and sales enablement content, such as brochures, case studies, executive briefs, white papers, and client references. Additionally, the ITSO manages the IBM Press commercial publishing program.

Redbooks publications typically provide:

- ▶ Technical marketing information to help you understand products from a business perspective
- ▶ Positioning and value guidance

- Installation and implementation expertise
- Typical solution scenarios and case studies
- Step-by-step how-to guidelines
- Sample code

Over 4,800 Redbooks publications have been produced and over 1600 people, from around the world, have worked with the ITSO to produce these Redbooks publications. The number of downloads of Redbooks publications is in the tens of millions.

Look to Redbooks publications to improve your IBM offering knowledge whether buying, selling, or supporting IBM products. You can search by title, publication number, or subject on the IBM Redbooks publications website at:

<http://www.redbooks.ibm.com/>

IBM education offerings

IBM provides a wide array of education offerings in different formats, including traditional classroom and self-paced online classes. These offerings help provide appropriate skills in IBM software products for your developers and system administrators.

IBM Education Pack: online account

The IBM Education Pack: online account is an electronic debit system that you fund and use to pay for designated IBM Training offerings. It is ideal for companies that need to train multiple employees on limited budgets.

The IBM Education Pack is a prepaid discount program that gives your employees access to the top-notch classroom training, technical conferences, and e-learning offerings that IBM is renowned for, at a very competitive price. It is ideal for companies that need to train multiple employees on limited budgets.

You can find further information about IBM training, prices, and payment choices at:

<http://www.ibm.com/services/learning/>

Note: Certain courses might not be scheduled in a specific country or region. Course codes vary by country and region, so consult the local course catalog.

IBM e-learning

E-learning is the perfect complement to your classroom training. IBM offers a variety of formats to help you learn in new ways. The IBM portfolio of e-learning courses is delivered through the IBM Learner Portal. Choose from courses that are: instructor-led online, self-paced virtual, online direct, and tele-presence/videoconferencing. For more information about IBM e-learning, go to:

<http://www.ibm.com/services/learning/us/elearning>

Lotus software training and certification

Lotus Education is pleased to introduce role-specific training for each member of your team that is matched to every stage of your IT deployment. Navigate the site to the “More information” section to view online or to download the Training Guide today:

<http://www.ibm.com/software/lotus/training/n8deducationofferings.html>

Read about The Lotus Method for Education in the new Corporate Training Guide:

ftp://ftp.software.ibm.com/software/lotus/lotusweb/education/Lotus_Corporate_Training_Guide_Final.pdf

WebSphere education

WebSphere curriculum includes a deep set of courses across the WebSphere products, which is available at:

<http://www.ibm.com/software/websphere/education/curriculum/bpm/index.html>

Information Management software training and certification

Trust IBM training and build or enhance your skills today. Then, lay the groundwork for your personal journey to become a world-class resource to your customers, colleagues, and company. Validate your skills with IBM Professional Certification.

<http://www.ibm.com/software/data/education/>

Rational training and certification

Whether you are building a skills plan or simply looking for technical enablement resources, we can help you define a software skills program that is right for you.

<http://www.ibm.com/software/rational/education/>

Tivoli software training and certification

Tivoli also provides software training and certification classes, enabling you to learn even more about the various Tivoli products. Comprehensive education for IBM Tivoli products is offered through Worldwide Tivoli Education Delivery Services. A wide range of training options are available, including classes led by instructors, learning on demand, on-site training, and blended learning solutions. For more information about Tivoli training, go to:

<http://www.ibm.com/software/tivoli/education/>

Resources for Business Partners and software vendors

This section provides information about the IBM Virtual Innovation Center™ and IBM PartnerWorld®.

IBM Virtual Innovation Center

The Virtual Innovation Center is your source for technical and sales resources for IBM products and services.

Easy access to technical development, technical training, and sales support from IBM.

- ▶ 24/7 portal to the IBM technical enablement portfolio
- ▶ One-on-one guidance for development projects during all stages
- ▶ Interactive online courses
- ▶ Virtual and classroom-based workshops
- ▶ Live support and virtual mentoring through online chat and email
- ▶ Architecture consultations in over eight languages

Use the IBM Virtual Innovation Center to connect to the right resource at the right level at the right time.

Build technical and sales skills with a powerful, interactive learning model

Online education at the Virtual Innovation Center offers flexibility to focus your learning on your specific needs, and a powerful, interactive model to keep your learning on track.

You will find:

- ▶ Defined skills path, including courses and desirable goals
- ▶ Search/navigation capabilities for easy access to specific content
- ▶ Interactive games and reinforcement to keep you engaged
- ▶ Skill level and competency assessment to track progress
- ▶ Simulations and case studies for “real-world” training
- ▶ Job aids to support hands-on learning

Use live, expert assistance for technical projects at any stage

To help you complete technical projects, IBM experts offer various levels of mentoring to help you plan, guide you from project start to finish and access the right resources. For prescriptive guidance, log on to the Virtual Innovation Center and fill out a project profile. From here, you will be connected to a dedicated project resource manager who will customize an enablement path for you and guide you from project start to finish. Or simply, select the product you are interested in to find the latest IBM resources, get educated, port, migrate and test your solution. Use email or live chat for guidance along the way.

For deeper assistance with complex projects and collaborative skills training, the Virtual Innovation Center connects you with IT architects, product experts and the physical IBM Innovation Centers located worldwide. Deep support includes:

- ▶ Virtual learning labs and classroom based education
- ▶ Architect and design consulting across industries
- ▶ Cross-platform test environments
- ▶ Remote and on-site porting, testing and migration services in secure porting labs
- ▶ Proofs-of-concept
- ▶ Scalability, integration and implementation assistance and more

Get personalized help from the start

New Business Partners to the IBM Virtual Innovation Center are given a *site introduction* and receive an introduction to the comprehensive IBM enablement portfolio.

All IBM Business Partners have access to *virtual mentoring* through live chat and email 24 hours a day, five days a week. Access these resources for technical support and get answers to your questions fast.

To access your resources and the IBM Virtual Innovation Center, use your PartnerWorld ID and password and go to the following web address:

<http://www.ibm.com/partnerworld/vic>

IBM PartnerWorld

Team with IBM and put the power and support of one of the world's most respected technology brands behind your business. The IBM PartnerWorld Program offers sales and marketing tools, skill-building courses, technical support, and tools to help create new revenue and market opportunities to grow your business and drive increased profit. The program provides a consistent set of offerings and benefits for consultants, system integrators, hardware and software resellers, and ISVs.

These are some of the basic benefits of being a PartnerWorld member:

- ▶ Marketing: Access trend data, build plans, and generate demand.
- ▶ Selling: Create proposals, improve closing rates, publicize your success.
- ▶ Technical: Access tools for product development and support.
- ▶ Training: Access Webcasts, workshops, tutorials, and discounts.
- ▶ Collaboration: Use forums, network with other BPs and IBM.

You can visit the IBM PartnerWorld website at the following address:

<http://www.ibm.com/partnerworld>

Evaluation and implementation services

This section provides additional information about various implementation services available.

IBM Systems Workload Estimator

The IBM Systems Workload Estimator (also known as the Estimator or WLE) is a Web-based sizing tool for IBM Power Systems, System i, System p, and System x. You can use this tool to size a new system, to size an upgrade to an existing system, or to size a consolidation of several systems. The Estimator allows measurement input to best reflect your current workload and provides a variety of built-in workloads to reflect your emerging application requirements. Virtualization can be reflected in the sizing to yield a more robust solution by using various types of partitioning and virtual I/O. The Estimator provides current and growth preferences for processor, memory, and disk that satisfy the overall customer performance requirements.

The Estimator supports sizings that deal with multiple systems, multiple partitions, multiple operating systems, and multiple time intervals. The Estimator also provides the ability to easily do multiple sizings. These features can be coordinated by using the functions on the Workload Selection windows.

For additional details and to download IBM Systems Workload Estimator go to:

<http://www-912.ibm.com/estimator/index.html>

Power Systems for IBM i Benchmarking and Proof-of-Concept Centers

The Power Systems for IBM i benchmarking centers provide world class benchmarking related skills and facilities to the worldwide and i Operating System community. The i Operating System benchmarking facilities are located in Montpellier, France and Rochester, MN. Our facilities are staffed with IBM i experts with more than 75 years of collective experience in IBM i Performance and Testing methodology. We can provide any Power System configured to your exact specification so that you can stress, tune, and test your application, measure performance, and determine workload capacity. The result of your benchmarking experience will provide you with the information that is needed to make sound business and computing decisions.

At these facilities you have access to the latest Power Systems (i) technologies, including:

- ▶ All IBM Power Systems for IBM i Models – POWER6® and POWER7™ (previous models are also available upon request)
- ▶ Gigabit Ethernet
- ▶ Solid® State Drives
- ▶ High availability configurations and technology
- ▶ Linux
- ▶ Logical Partitioning

- ▶ Lotus Notes (Domino)
- ▶ Operations Navigator / Management Central
- ▶ Storage Area Networks
- ▶ WebSphere Application Server

For more information, visit the Power Systems (i) benchmarking centers website at:

<http://www.ibm.com/systems/i/support/benchmarkcenters/>

Sales resources

IBM Small and Medium Business Center can help you solve your tough business problems with affordable offerings, dedicated Concierge service, and a network of IBM Business Partners who understand your marketplace. To visit the Small and Medium Business Center, go to this website:

<http://www.ibm.com/businesscenter/smb/us/en>

Express Advantage is the fundamental way in which IBM supports medium businesses and helps them grow. Express Advantage is designed to address your unique business and technology challenges and to optimize your resource and budget capabilities.

IBM Express Advantage addresses the key IT areas of concern for mid-market customers. With offerings that build on the IBM comprehensive set of solutions with highly skilled local representatives who bring together industry leading IBM technology, applications, and services that are all designed to address your unique business needs.

You can find the IBM Express Advantage home page at the following address:

<http://www.ibm.com/businesscenter/smb/us/en/expressbridge>

Understanding Passport Advantage

Passport Advantage and Passport Advantage Express are simple, comprehensive IBM offerings that cover license acquisition, which includes Fixed Term Licenses and Software Subscription and Support (also referred to as Software Maintenance) product upgrades and technical support under a single, common set of agreements, processes, and tools. Both Passport Advantage offerings let you:

- ▶ Acquire new IBM software licences
- ▶ Renew Software Subscription and Support and Fixed Term Licenses
- ▶ Buy and renew technical support for Selected Open Source and other non-warranted applications

For more about Passport Advantage and Passport Advantage Express, go to:

<http://www.ibm.com/software/lotus/passportadvantage/>

IBM Software catalogs

The IBM Software online catalog is an easy way to shop for IBM Software products that include license, support, and one-year renewable software maintenance. With links to product information and product pricing specific to your country, the online IBM Software Catalog is an invaluable resource. You can find this on the web at the following address:

<http://www.ibm.com/software/info/app/ecatalog/index.html>

Using the IBM software online catalog you can:

- ▶ Find suggested retail prices for many software products and support services
- ▶ Access a knowledgeable software representative to help you with your order selection
- ▶ Make your initial purchase with a credit card, which is ideal for individuals and small and medium businesses
- ▶ Download your software through the IBM Electronic Software Delivery

You can find the catalog on the web at:

<http://www.ibm.com/software/info/getcatalog/>

Case studies and references

IBM provides a wealth of references and case studies about how companies, large and small, all over the world, have improved their business operations and customer service with IBM products. You can search for success stories in specific industries, for example, manufacturing, retail, and healthcare. You can search for success stories by solution categories such as business-to-business, supply chain management, and data mining. You can also search for success stories by software products such as, WebSphere Application Server - Express, WebSphere Commerce - Express, and so on. You can view these case studies and references on the web at:

<http://www.ibm.com/software/success/cssdb.nsf/topstoriesFM?OpenForm&Site=software>

IBM software downloads

You can download no-charge trials and demos to help you evaluate IBM software, search no-charge products, tools, and toolkits, or browse Support Updates, drivers, and fixes from the following website:

<http://www14.software.ibm.com/webapp/download/home.jsp>

Financing

IBM provides easy-to-understand, easy-to-obtain, competitively priced offerings that are especially tailored to help small and midsize businesses acquire products and solutions from the IBM midmarket portfolio. To learn more about these offerings, visit the IBM Small and Medium Business services website at:

<http://www.ibm.com/businesscenter/smb/us/en/financing>

Related publications

We consider the publications that we list in this section particularly suitable for a more detailed discussion of the topics that we cover in this paper.

IBM Redbooks publications

For information about ordering these publications, see “How to get IBM Redbooks publications” on page 182. Some of the documents referenced here might be available in softcopy only:

- ▶ WebSphere Application Server:
 - *WebSphere Application Server V7: Accessing Databases from WebSphere*, REDP-4577
 - *WebSphere Application Server V7 Administration and Configuration Guide*, SG24-7615
 - *Getting Started with WebSphere Application Server Feature Pack for Service Component Architecture*, REDP-4633
 - *Getting Started with the WebSphere Application Server Feature Pack for Communications Enabled Applications V1.0*, REDP-4613
 - *WebSphere Application Server for z/OS V6.1 and V7 Tuning Tips*, REDP-4628
 - *WebSphere Application Server V7: Working with Profiles on Distributed Systems*, REDP-4570
 - *WebSphere Application Server V7: Concepts, Planning and Design*, SG24-7708
 - *WebSphere Application Server V7.0: Technical Overview*, REDP-4482
 - *WebSphere Application Server V7: Deploying Applications*, REDP-4583
 - *WebSphere Application Server V7: Packaging Applications for Deployment*, REDP-4582
 - *WebSphere Application Server V7: Understanding Class Loaders*, REDP-4581
 - *WebSphere Application Server V7: Session Management*, REDP-4580
 - *WebSphere Application Server V7: Monitoring the Runtime*, REDP-4579
 - *WebSphere Application Server V7: Accessing EIS Applications from WebSphere*, REDP-4578
 - *WebSphere Application Server V7: Administration with Scripting*, REDP-4576
 - *WebSphere Application Server for z/OS V7 Administration*, REDP-4575
 - *WebSphere Application Server V7: Administration of WebSphere Processes*, REDP-4574
 - *WebSphere Application Server V7: Administration Consoles and Commands*, REDP-4573
 - *Experience Java EE! Using WebSphere Application Server Community Edition 2.1*, SG24-7639

- *Running IBM WebSphere Application Server on System p and AIX: Optimization and Best Practices*, SG24-7347
- ▶ WebSphere Commerce:
 - *WebSphere Commerce Best Practices in Web 2.0 Store*, SG24-7647
 - *WebSphere Commerce Line-Of-Business Tooling Customization*, SG24-7619
 - *Case Study: SOA Retail Business Pattern*, REDP-4459
 - *WebSphere Commerce High Availability and Performance Solutions*, SG24-7512
 - *Planning and Managing the Deployment of WebSphere Commerce*, SG24-7588
- ▶ WebSphere MQ:
 - *High Availability in WebSphere Messaging Solutions*, SG24-7839
 - *A Conceptual Model for Event Processing Systems*, REDP-4642
 - *Service Lifecycle Governance with IBM WebSphere Service Registry and Repository*, SG24-7793
 - *B2B Appliances: Creating Customer Value Through Exceptional B2B Messaging Performance and Security*, REDP-4524
 - *WebSphere MQ V7.0 Features and Enhancements*, SG24-7583
 - *IBM Connectivity Reviewer's Guide*, REDP-4434
 - *Cataloging WebSphere MQ Applications in WSDL for Reuse in SOA*, REDP-4350
- ▶ WebSphere Portal:
 - *High Availability in WebSphere Messaging Solutions*, SG24-7839
 - *Precision Marketing in WebSphere Commerce*, SG24-7790
 - *Proven practices for enhancing performance: A Q&A for IBM WebSphere ILOG JRules 7.0.x.*, REDP-4632
 - *Enabling Collaboration in WebSphere Portal Express V6 on i5/OS*, REDP-4310
 - *IBM WebSphere Portal V6 Self Help Guide*, REDP-4339
 - *Case Study: Interaction and Collaboration Services SOA Scenario*, REDP-4375
 - *WebSphere Portal Express - Customizing Portal Express for Small to Medium Business*, REDP-4316
 - *Installing and Configuring WebSphere Portal Express V6 on i5/OS*, REDP-4303
 - *WebSphere Portal Version 6 Enterprise Scale Deployment Best Practices*, SG24-7387
 - *WebSphere Portal Best Practices*, REDP-4100
 - *IBM WebSphere Portal V6: Best Practices for Migrating from V5.1*, REDP-4227
 - *WebSphere Portal Server for Linux on zSeries and z9*, REDP-4175
- ▶ WebSphere Business Modeler
 - *WebSphere Business Process Management and WebSphere Enterprise Service Bus V7 Performance Tuning*, REDP-4664
 - *Leading Practices for WebSphere Dynamic Process Edition V6.2*, SG24-7776
- ▶ Lotus Forms:
 - *WebSphere Business Process Management V6.2 Production Topologies*, SG24-7732
 - *IBM Software Supporting ACORD Insurance Standards*, SG24-7649

- ▶ Lotus Domino:
 - *IBM Lotus Wiki: Lotus Domino Web Application Development Best Practices Wiki*, TIPS0676
 - *IBM Lotus Notes and Domino 8 Reviewer's Guide*, REDP-4359
 - *IBM Lotus Notes and Domino 8 Deployment Guide*, SG24-7506
- ▶ Lotus Domino Designer
 - *Lotus Domino 7 Application Development*, REDP-4102
 - *Domino Designer 6: A Developer's Handbook*, SG24-6854
- ▶ DB2:
 - *Best Practices for DB2 on AIX 6.1 for POWER Systems*, SG24-7821
 - *DB2 9 for z/OS: Using the Utilities Suite*, SG24-6289
 - *Getting Started with DB2 Web Query for i*, SG24-7214
 - *z/VSE Using DB2 on Linux for System z*, SG24-7690
 - *DB2 9 for z/OS: Resource Serialization and Concurrency Control*, SG24-4725
 - *DB2 9 for z/OS: Configuring SSL for Secure Client-Server Communications*, REDP-4630
 - *MySQL to DB2 Conversion Guide*, SG24-7093
 - *Using Integrated Data Management To Meet Service Level Objectives*, SG24-7769
 - *Oracle to DB2 Conversion Guide: Compatibility Made Easy*, SG24-7736
 - *DB2 9 for z/OS: Buffer Pool Monitoring and Tuning*, REDP-4604
 - *DB2 Virtualization*, SG24-7805
 - *DB2 Optimization Techniques for SAP Database Migration And Unicode Conversion*, SG24-7774
 - *DB2 9 for z/OS: Distributed Functions*, SG24-6952
 - *Securing and Auditing Data on DB2 for z/OS*, SG24-7720
 - *Ready to Access DB2 for z/OS Data on Solid-State Drives*, REDP-4537
 - *IBM Data Studio V2.1: Getting Started with Web Services on DB2 for z/OS*, REDP-4510
 - *Using IBM DB2 for i as a Storage Engine of MySQL*, SG24-7705
 - *High Availability and Disaster Recovery Options for DB2 on Linux, UNIX, and Windows*, SG24-7363
 - *DB2 9 for z/OS: Deploying SOA Solutions*, SG24-7663
 - *DB2 Deployment Guide*, SG24-7653
- ▶ InfoSphere Warehouse:
 - *Multidimensional Analytics: Delivered with InfoSphere Warehouse Cubing Services*, SG24-7679
 - *Master Data Management: Rapid Deployment Package for MDM*, SG24-7704
 - *Enabling Robust Business Analytics with InfoSphere Warehouse Cubing Services*, REDP-4514
 - *Case Study: SOA Banking Business Pattern*, REDP-4467
 - *InfoSphere Warehouse: Cubing Services and Client Access Interfaces*, SG24-7582

- *Case Study: SOA Retail Business Pattern*, REDP-4459
- ▶ Informix Dynamic Server:
 - *Embedding Informix Dynamic Server: An Introduction*, SG24-7666
 - *Informix Dynamic Server 11: Extending Availability and Replication*, SG24-7488
 - *Customizing the Informix Dynamic Server for Your Environment*, SG24-7522
 - *Security and Compliance Solutions for IBM Informix Dynamic Server*, SG24-7556
 - *Informix Dynamic Server 11: Advanced Functionality for Modern Business*, SG24-7465
- ▶ IBM Tivoli Storage Manager Fastback:
 - *IBM Storage Infrastructure for Business Continuity*, REDP-4605
 - *Deployment Guide Series: IBM Tivoli Storage Manager FastBack*, SG24-7685
- ▶ IBM Tivoli Key Lifecycle Manager
 - *Tivoli Key Lifecycle Manager for z/OS: Migration Guide for the IBM Encryption Key Manager*, REDP-4646
 - *IBM System Storage Data Encryption*, SG24-7797
 - *Using IBM Tivoli Key Lifecycle Manager: Business Benefits and Architecture Overview*, REDP-4529
- ▶ IBM Tivoli Identity Manager:
 - *Identity Management Design Guide with IBM Tivoli Identity Manager*, SG24-6996
 - *Certification Study Guide: IBM Tivoli Identity Manager Version 5.0*, SG24-7118
 - *Deployment Guide Series: IBM Tivoli Identity Manager 5.0*, SG24-6477
- ▶ IBM Tivoli Access Manager for Enterprise Single Sign-On:
 - *IBM Tivoli Access Manager for Enterprise Single Sign-On v8.0 Migration Guide for Entenuate 3.4 and 3.5*, REDP-4615
 - *Certification Study Guide Series: IBM Tivoli Access Manager for Enterprise Single Sign-On 8.0*, SG24-7784
 - *Introducing the IBM Security Framework and IBM Security Blueprint to Realize Business-Driven Security*, REDP-4528
 - *Deployment Guide Series: IBM Tivoli Access Manager for Enterprise Single Sign-On 8.0*, SG24-7350
- ▶ IBM Tivoli Provisioning Manager for OS Deployment:
 - *Implementing an Image Management System with Tivoli Provisioning Manager for OS Deployment: Case Studies and Business Benefits*, REDP-4513
 - *Tivoli Provisioning Manager for OS Deployment in a Retail Environment*, REDP-4372
 - *Deploying Linux Systems with Tivoli Provisioning Manager for OS Deployment*, REDP-4323
- ▶ Maximo Asset Management Essentials:
 - *Certification Study Guide Series: IBM Maximo Asset Management V7.1*, SG24-7761
 - *IBM Maximo Asset Management Essentials: Rapid Engagement Guide*, REDP-4486
 - *Maximo Asset Management Essentials V7.1 Implementer's Guide*, SG24-7645
 - *Deployment Guide Series: Maximo Asset Management V7.1*, SG24-7640

- ▶ Rational AppScan:
 - *Improving Your Web Application Software Development Life Cycle's Security Posture with IBM Rational AppScan*, REDP-4530
 - *Collaborative Application Lifecycle Management with IBM Rational Products*, SG24-7622

Online resources

These websites and URLs are also relevant as further information sources:

- ▶ IBM Software:
 - <http://www.ibm.com/software/>
- ▶ IBM - Software for midsize businesses:
 - <http://www.ibm.com/software/info/middleware/express.jsp>
- ▶ WebSphere Application Server - Express:
 - <http://www.ibm.com/software/webservers/appserv/express/>
- ▶ WebSphere Portal Express:
 - <http://www.ibm.com/software/genservers/portalexpress/>
- ▶ WebSphere MQ Express:
 - <http://www.ibm.com/software/integration/wmq/express/>
- ▶ WebSphere Commerce - Express:
 - <http://www.ibm.com/software/genservers/commerce/express/>
- ▶ Lotus Domino Express:
 - <http://www.ibm.com/software/sw-lotus/products/product4.nsf/wdocs/dominoexpress>
- ▶ Lotus Forms:
 - <http://www.ibm.com/software/lotus/forms/>
- ▶ DB2 Express:
 - <http://www.ibm.com/software/data/db2/9/edition-express.html>
- ▶ Informix Express:
 - <http://www.ibm.com/software/data/informix/ids-express/>
- ▶ InfoSphere Warehouse:
 - <http://www.ibm.com/software/data/infosphere/warehouse/>
- ▶ Tivoli Continuous Data Protection for Files:
 - <http://www.ibm.com/software/tivoli/products/continuous-data-protection/>
- ▶ Rational Build Forge:
 - <http://www.ibm.com/software/awdtools/buildforge/index.html>
- ▶ Rational Team Concert:
 - <http://www.ibm.com/software/awdtools/rtc/index.html>
- ▶ Rational AppScan:
 - <http://www.ibm.com/software/awdtools/appscan/>

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ibm.com/services



Redpaper™

IBM Midmarket Software Buying and Selling Guide

A guide to software that is designed, developed, and priced specifically for small and midsized businesses

One place for vital information about IBM Midmarket software

Learn about software that helps your business be more efficient, productive, and profitable

The *IBM Midmarket Software Buying and Selling Guide* is tailored specifically to help the management and IT staff of small and midsized businesses evaluate how the IBM midmarket portfolio can provide simple and cost-effective solutions to common business problems.

Along with a midmarket customer focus, this IBM Redpaper publication is designed to help IBM teams and Business Partners be more effective in serving small and midsized businesses. We illustrate how IBM software for the midmarket can help businesses use the Web to reduce expenses, improve customer service, and expand into new markets. We cover the IBM software offering for the midmarket, including what the software does, the platforms it runs on, where to find more information, and how it can help your business become more profitable:

- ▶ IBM Business Partners often keep a printed copy of this guide in their briefcases for software references
- ▶ Customers can view this guide online and see software-value messages and IBM product family offering comparisons
- ▶ IBM Sales Representatives can print parts of this guide as “leave-behinds” for customers, to give them extra collateral on midmarket software of interest

To make sure that you have the latest version of this guide, download it from this web address:

<http://www.redbooks.ibm.com/abstracts/redp3975.html?Open>

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