



Moving From Internet Service Provider to Commerce Service Provider

IBM Net.Commerce Hosting Server Opens The Door to ISP Growth



Key Topics

The Internet is a business phenomenon unlike any our world has seen

Internet service providers (ISPs) can capitalize on the e-commerce market by becoming commerce service providers (CSPs)

IBM Net.Commerce Hosting Server is an out-of-the-box solution that enables ISPs to help businesses of all sizes enter the e-commerce world

Using Net.Commerce Hosting Server, CSPs benefit from low cost, ease of operation and quick time-to-market for hosted commerce sites

CSP merchant customers enjoy low-cost, low-risk entry into e-commerce



Introduction

In this paper we will discuss trends and developments of the Internet and its evolution into a powerful e-commerce tool. In particular, we will discuss IBM's market perspective and capabilities in serving Internet service providers (ISPs) as they move from simply providing access to the Internet to being commerce service providers (CSPs), hosting the critical access component that enables companies to grow by linking online to their customers.

Background: forces of change impacting businesses

IBM's extensive experience working with leading companies worldwide reveals five major trends fueling the move to the Internet and e-commerce, forces that underlie the growth potential for ISPs as they become CSPs:

- Consumers are much more sophisticated and demanding because they have more information, options and access to those options.
- Those markets are saturated with competition and, as economies in some geographies periodically slow—particularly in Western Europe, North America and Japan—businesses look for ways to operate more efficiently and expand their business into new areas.
- Restructured and more efficient companies have put tremendous pressure on competitors.
- The shift of power in the supply chain to the consumer has caused major changes in how companies' supply chains work.
- Finally, there is a relentless pressure in today's business world for higher levels of business performance.



A report by the McKenna Group in 1998 highlighted some additional pressures companies are facing. They must manage the fragmentation of product categories while responding to new market opportunities and new and/or more efficient—often Internet-based—competition. They must combat margin erosion, while at the same time improving service to retain customers. They must more skillfully manage inventory and forecasting to better serve customers and to boost profits. And, with branding more important than ever before, they must protect and enhance their brand image with customers.

There are other business pressures as well. For example, CEOs and boards of directors expect companies to respond to new market opportunities and competitive pressures, while CFOs seek better cost controls. Companies are interested in getting the right product to the right place at the right time, and marketing and sales teams demand the ability to sell around the world, around the clock and create customer loyalty. The ability to meet these demands—whether through internal or external resources—is critical and growing more so with the passage of time.

In the midst of these changes and pressures, there is a clear and growing need for companies to stay connected with their current customer base by providing the information customers want, when they want it. The key goals: exceed customer expectations and improve customer satisfaction.

The central force driving these changes, and the efficient response to them, is no secret: rapidly changing technology. Industry is witnessing much higher applications of computing power to achieve new heights in communications capability, operating efficiency and networking. Companies who take advantage of this burgeoning use of technology have the opportunity to perform at unprecedented levels of operating, marketing and financial success. ISPs can play a critical role in making some of the benefits of advanced technology available by offering shared, centralized skills and services to their customers as those customers harness the power of the Internet.

The Internet's growing reach and impact

The Internet is one of the most visible manifestations of the application of technology, a business phenomenon unlike any we have seen in the past. According to the financial publication *The Economist*, 92 million Americans over the age of 16 are online and, according to CommerceNet/Nielsen Media Research, 58 million people worldwide regularly use the Internet, half of them in any 24-hour period. By the year 2000, International Data Corporation (IDC)/LINK estimates that 550 million people worldwide will have access to the Internet and the *Financial Times* estimates that by 2005, one billion people will be on the Internet.

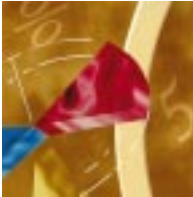


Several fundamental forces are driving the explosive growth of the Internet for e-commerce applications. There are pressures for global free trade, accompanied by the movement to market-driven economies and the elimination of price differentiation from one geography to another. In this global economy, customer segments—not national boundaries—are becoming the de facto new drivers of commerce. One result is that the traditional brick-and-mortar sales paradigm is giving way to virtualization. Even so, humanization, which may seem anomalous in a digital age, is increasingly important. While product quality and functionality are still critical, we are now seeing the ascendancy of customer service as the competitive differentiator.

The consequence of the rapid spread of e-commerce activity, according to Forrester Research in a December 1998 report, is that from 1998 to 2003, the number of households buying online will increase from under 10 million to some 40 million. Not only is a growing number of consumers shopping on the Internet, those consumers who buy online are often repeat buyers. Fully 80 percent of Internet shoppers go online intending to buy, and they use the Web to comparison shop; on average, most visit three to five sites. Companies are responding quickly to these trends. The National Retail Federation has reported that the number of online retailers increased from about 8 million in 1996 to more than 25 million in 1998, the last year for which figures are available. Industry has never seen such dynamic growth.

A variety of analysts are consistently saying that e-commerce will be a major growth area in the years immediately ahead. They differ only in how much growth they expect. For example, Forrester Research estimates that from 1997 to 2002, e-commerce revenue growth will be at a cumulative rate of 711 percent, from under \$2.5 billion to nearly \$17.4 billion. IDC estimates growth in the same period at 1,256 percent, from some \$4.3 billion to \$54 billion. PriceWaterhouseCoopers estimates the five-year cumulative growth rate at a whopping 1,880 percent, moving from \$5 billion to \$94 billion. Further, Jupiter Communications says that online shopping revenues will eclipse paper-based catalog sales within the next ten years.

All this should be good news for ISPs, yet, the world of the ISP is under attack. Providers of Internet connection service are experiencing fierce competition, with their services reduced to the level of a commodity, sold on price and subject to a high churn rate. One very positive alternative available to the ISP is to move up the food chain to become an Application Server Provider (ASP). There are multiple application services available, but the most popular is commerce—selling online—in which the ISP becomes a CSP offering hosted e-commerce, a value-added solution that ties customers to the CSP. And, as customers' e-businesses grow, so will the number of services provided by the CSP, holding the prospect of robust future growth opportunities.



Today's hosted e-commerce market

Hosted e-commerce—or facilitated e-commerce—is defined as having access to all the skills, resources, technologies and relationships necessary to offer a full-featured e-commerce solution to customers. Such a service enables the ISP to offer its customers:

- 24x7 server operations and maintenance
- Dedicated site development, hosting and management
- Transaction/payment processing.

This is a major growth opportunity for ISPs wishing to make the transition to CSP, because of the sheer number of companies that are candidates for e-commerce. Of the estimated worldwide total of 3,000,000 very small companies with fewer than 20 employees, 91 percent are not even online. According to Forrester Research, only 2 percent of the additional 650,000 small companies, with 20 to 50 employees, are engaged in e-commerce. Among the more than 91,000 medium-sized business, 70 percent are online but not doing e-commerce, and 15 percent are not online.

Altogether, estimates reveal that only 30,000 very small-, small- and medium-sized businesses are taking advantage of hosted e-commerce solutions today. That leaves a huge market that is wide open for aggressive, focused entrants who want to establish a dominant position.

For many companies, particularly small- and medium-sized ventures, there is much to gain from going online and even more to be lost by not doing so. The simple fact is, if they do not offer their goods and services online, someone else will. So becoming an e-merchant is really less a choice than a necessity. One very popular way to do that is through hosted e-commerce services offered by CSPs.

Business challenges facing merchants and ISPs

It's a competitive world out there. Most traditional merchants, particularly the small-to medium-sized, are not equipped to compete with large, well-financed online businesses. Most small- to medium-sized companies lack the resources for a 24-hour-a-day, 7-day-a-week operation. They also lack the skills and infrastructure, not to mention the financial muscle, to establish their own dedicated e-business solutions. And it is not just small- and medium-sized businesses that are interested in low-cost, low-risk solutions. Many larger firms who have the financial resources still may want to build experience and their own comfort level before making the necessary investment required for a full-function e-commerce solution.





At the same time, with competition increasing and prices falling for various levels of service, ISPs are seeking additional revenue opportunities. The move from ISP to CSP represents a major opportunity.

How IBM helps ISPs tackle the e-commerce market

IBM offers a family of Net.Commerce solution packages, all built on a common technology platform. These packages enable ISPs to successfully attack the rapidly growing hosted e-commerce market, meet the needs of their business customers and, at the same time, create value-added services that will promote their own growth. These offerings are designed to address the different levels of opportunity and functionality the ISP's customers may want, ranging from the needs of small- and medium-sized companies to those of larger companies that demand full-service e-commerce solutions.

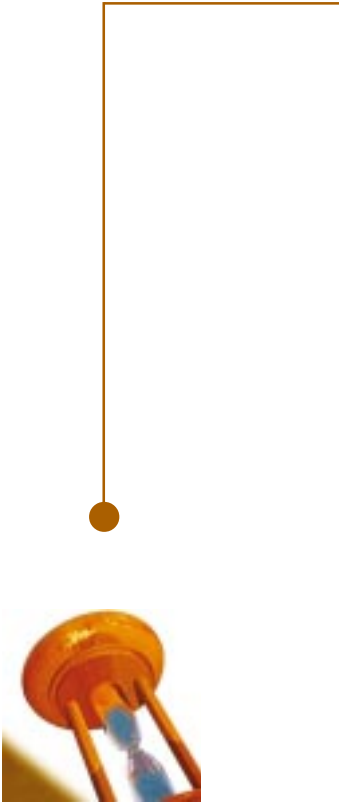
With its Net.Commerce offerings, IBM has successfully implemented e-business solutions for thousands of companies of all sizes. This is important to ISPs partnering with IBM because the experience IBM has gained is available to them at any time. From a competitive perspective, this also gives IBM a very significant time-to-market advantage in the very small-, small- and medium-sized business segments for hosted e-commerce solutions.

Four distinct e-commerce market segments and IBM products

There are four distinct segments of e-commerce activity: simple, basic, growth and advanced. Each represents a different level of challenge and opportunity for ISPs. Generally, customer size can be mapped to these segments. Yet, we also see larger businesses beginning in the simple and basic segments for proof-of-concept and exposure to shopper traffic.

For ISPs, these target market segments are generally an established part of their business focus. Some may specifically target the high end. Others may concentrate on the growth segment, on the larger number of simple and basic e-commerce applications, or on a combination of segments. Net.Commerce offerings from IBM are designed for—and have repeatedly proven themselves in—thousands of real-world applications, meeting the needs of all these segments. Let's examine them:

1. Simple. The first and simplest segment is comprised of hundreds of thousands of very small companies. Those considering becoming active in e-commerce have high expectations for outstanding service and functionality at low price points. As a result, CSPs need solutions with the performance, scalability and extensibility of an enterprise solution, all the while keeping the total cost of operations at a minimum. And, because this is a rapidly moving market, CSPs need quick time-to-market solutions to increase their competitiveness and to decrease customer churn.





Often, merchants in this market segment already have Web sites that are establishing their brand on the Internet, providing up-to-date company and product-specific information and allowing their customers multiple contact points within the business. The next step for them is to add e-commerce functionality. IBM Net.Commerce Hosting Server's "Snap-On" e-commerce feature makes it easy for the CSP to append e-commerce functionality to existing merchant Web sites. With this IBM solution, CSPs can enable merchants to quickly, easily and cost effectively add catalog, shopping cart, order processing, online customer service and virtual cash register functions to their sites.

Generally, these sites offer visitors a simple "buy button" option. Transactions may be completed online with credit cards, or offline, for example through an 800 number. There is no back-end integration with such services as delivery and inventory management. The e-commerce solutions for this market segment are basic, low-cost, powerful template-style sites that allow merchants to leverage their investments in their current Web sites.

2. Basic. In this segment, the more comprehensive but still basic demand of tens of thousands of merchants is for a full e-commerce site that is easy to customize and manage, even for the non-technical person. These merchants want to offer their customers a dynamic shopping experience. The opportunity for CSPs is to enable them to create a simple store with features such as data-driven catalogs, shopping cart technology, product information search and drill-down functionality, custom-designed HTML pages, the ability to run sales and display banner ads and credit card authorization and payment. There is limited systems integration capability, primarily for importing and exporting product inventory, price data and order data.

IBM Net.Commerce Hosting Server delivers exactly what CSPs and their merchant customers in this segment are seeking. Net.Commerce Hosting Server is an out-of-the-box package, offering a solution architecture upon which CSPs can offer their customers basic services and also build more advanced, more functional services for the Growth and Advanced segments of the market. Net.Commerce Hosting Server includes everything merchants need to buy, build and manage their e-commerce stores using the tool they already have and know how to use—their Internet browser. Unlike other products on the market, the self-provisioning IBM offering provides tremendous flexibility in site design, catalog management and report generation. Merchants can easily customize their sites, update catalog information at any time, run reports, process orders and send mass e-mails to their customers—all from their browsers. This full-featured store includes shopper search, customer service and shopper registration functions.





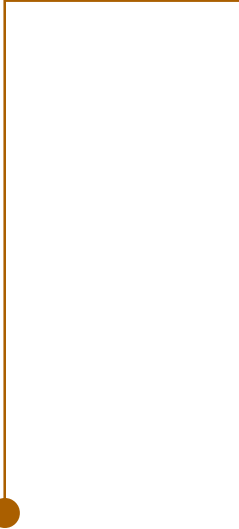
While non-technical merchants can use browser-based tools to change the look and feel of their stores to meet a wide range of requirements, some merchants want professionally designed HTML pages. In those cases, Net.Commerce Hosting Server enables them to reach an even higher level of service by supporting professionally designed HTML for a store's static pages. Merchants can either build their own static HTML pages and upload them to their site, or the CSP can offer to do so for an extra fee.

3. Growth. In the third segment of the e-commerce market, the growth segment, CSPs can target hundreds of potential customers who may make a more significant investment in e-commerce as a distribution channel. Here, tens of thousands of products can be offered. Typically, these sites are custom-designed and incorporate advanced buying and product search models through online catalogs. CSP customers may be looking for sophisticated merchandising and personalization that will take full advantage of the online medium while leveraging the substantial information in their database. In this segment, the e-commerce solution offered by CSPs will include back-end system integration with product databases and order, accounting and shipping systems.

The IBM solution designed for this customer segment is Net.Commerce START, the base platform on which IBM's family of Net.Commerce products is built. It is a very robust, scalable, extensible platform for the creation and operation of transactional e-commerce sites on the Internet. This solution effectively meets the requirements of many businesses, ranging from the small to the very large. Net.Commerce START is designed to make the creation of a basic, end-to-end e-commerce solution relatively straight-forward, using an easy-to-follow, nine-step creation model.

4. Advanced. In the fourth segment of e-commerce, the advanced group, the enterprise can be best described as engaging in e-business. The target market in this segment for any particular CSP is generally measured in the tens or dozens of companies. These companies extend their existing processes, relationships, skills and technology infrastructure to the Web. The full sales cycle is online—the order is received, sent to the supplier for fulfillment, then connected to the credit card processor for payment. These sites are fully customized and integrated with advanced cataloging, merchandising, data mining and one-to-one marketing.

IBM Net.Commerce PRO is the advanced solution in the Net.Commerce family that is tailored for this market segment. The principle difference from the START version is the out-of-the-box advanced selling capabilities. In addition to offering category and subcategory drill-down capability through a catalog, it enables merchants to model sales information in the database and construct question-and-answer sessions to guide shoppers to their products of interest. In addition, there is electronic data interchange (EDI) support and modules for back-end integration. As a result, ISPs who have positioned themselves as more generic application services providers can, with Net.Commerce PRO, package more complete, more complex commerce solutions that can be integrated with enterprise resource planning (ERP) and customer relationship management (CRM) packages. In the process, they will fully evolve into commerce solution providers.



With IBM Net.Commerce, all of the services required in the four segments of the e-commerce market can be established for client companies and performed by the CSP. These are the value-added services that enable ISPs to bypass the competitive pressures presented in a cost-driven operating environment, become CSPs and solidify their market share. In addition to providing merchants a highway to the Internet, the CSPs give Web site visitors a destination: e-commerce sites that the CSP manages.

IBM Net.Commerce Hosting Server meets market expectations

Now, let's take a closer look at IBM Net.Commerce Hosting Server, a key element in the IBM Net.Commerce family.

Net.Commerce Hosting Server is an integrated software package that enables ISPs to create and operate low-cost, low-maintenance, high-performance, highly reliable, full-service e-commerce storefront hosting and rental services for hundreds or thousands of merchants. This offering is of particular interest to very small-, small-, and medium-sized businesses—customers that generally conform to the basic and simple e-commerce model, or any merchant who requires quick time-to-market.

With Net.Commerce Hosting Server, merchants can buy, build and manage an e-commerce store using their Web browser. This makes it easy, even for a non-technical merchant, to run the online store, thus minimizing the CSP's cost of providing e-commerce hosting.

With this functionality, ISPs can become the primary source for e-commerce solutions for very small-, small-, and medium-sized businesses who do not have the expertise or resources needed to create an e-commerce site and keep it fully operational 24 hours a day, 7 days a week. Net.Commerce Hosting Server comes packaged with everything ISPs need to offer a wide range of e-commerce solutions at various price points, depending on the needs of the customer. A single platform for all e-commerce customers enables the CSP to leverage its investment in training its staff.

In addition, because Net.Commerce Hosting Server offers a full range of e-commerce products and services, CSPs can attract merchants with the assurance that they can start small and grow fast—a requirement for many businesses. Net.Commerce Hosting Server is extremely scalable, supporting hundreds of merchants on a single mid-range UNIX® server. If the number of participating merchants dictates multiple servers, Net.Commerce Hosting Server presents a single-server image to users while distributing URLs through eNetwork® Dispatcher to balance loads in times of peak demand. In a service environment, providing high availability is a key brand differentiator. Net.Commerce is architected with proven enterprise components for Web server, database and workload management. Reliability and serviceability are built into the software architecture.



When CSPs offer e-commerce solutions based on Net.Commerce Hosting Server, their customers benefit from the same robust platform used by leading retailers such as Macy's, Lands' End and L.L. Bean for their highly successful e-commerce Internet sites.

Benefits of Net.Commerce Hosting Server to CSPs

To review, the benefits Net.Commerce Hosting Server offers to CSPs are:

- Low cost and ease-of-operation, with automation of much of the operational tasks, such as reporting, order notification and customer support. This makes Net.Commerce Hosting Server a much more cost-effective platform for hosting multiple merchants, compared with other available products. All administrative functions are Web browser-based, making system administration by the CSP very easy.
- Quick time-to-market because Net.Commerce Hosting Server is specifically designed for CSPs and merchants. Rather than focusing on creating and operating an e-commerce site, IBM has delivered an e-commerce hosting service. Everything the CSP needs to launch the service is included in the product.
- Ease of merchant enablement and support because much of the design energy for the product was devoted to effectively supporting the concept of merchants coming to a CSP site and buying, building and maintaining an end-to-end e-commerce site from their Web browser. Everything merchants need to run their businesses is browser-based and built into Net.Commerce Hosting Server. Because merchants can serve themselves, the CSP's costs are low and profits are correspondingly greater.
- New revenue opportunities are realized by enabling ISPs to evolve into CSPs who, with Net.Commerce Hosting Server, can help their customers extend the platform to meet their unique and evolving needs. CSPs can also generate incremental revenues by running advertising for customers.
- Flexible options to meet the differing business models of CSPs. Some CSPs charge based on the number of products in a merchant catalog. Some charge based on total system usage, system storage or revenue-sharing agreements. Net.Commerce Hosting Server supports all those options. The system runs on multiple platforms and supports single or multi-tiered configurations.
- Increased customer loyalty to the CSP because this value-added service binds the customer to the CSP for the delivery of essential e-commerce services, which would need to be replaced if the customer chose a different CSP.

Benefits of Net.Commerce Hosting Server to CSP merchant customers

There is an equally impressive list of benefits for CSP merchant customers:

- Low cost, low risk for a full-function e-commerce solution. Before installation, the total cost to start up is known and minimized. Start-up time is almost instantaneous because there are easy-to-use, browser-based tools to create and operate the online store. Merchants can make changes to their stores, change product information, process orders and view reports whenever they want, from any browser, with no dependency on the CSP.





- Security and reliability will make the CSP's customers feel comfortable. Their online stores are built on industry-proven technology that is used to run many of the premier e-commerce sites in operation today.
- Growth path, an increasing merchant requirement, assures that they can use the CSP's resources and skills to grow to any level of e-commerce size and sophistication.
- Dynamic online presence that enables the CSP's customers to maintain permanent, dynamic brand awareness, easily changing the goods and services offered online as well as their prices. They can also easily link advertising to repeat site visitors to advertising appearing in other channels, such as flyers, brochures and print advertising.
- Business integration with back-end systems such as inventory and advanced payment services.

How Net.Commerce Hosting Server works

In a Net.Commerce Hosting Server solution, the ISP owns and maintains the hardware and software and leases the e-commerce storefronts. These storefronts may be leased either singly or within a community of businesses with common interests or who share a common entry point, or portal, to take advantage of commerce opportunities. To meet the growing demand for quick time-to-market, everything the ISP needs to run an e-commerce hosting service—from catalog and transaction processing to order management—is included in the product. The ISP manages the mall and all merchant customers through a central, browser-based interface. The ISP may select from a list of payment service providers (PSPs) or integrate with their own payment partner using the Payment Integration Tool Kit. The ISP has complete control over operations. Merchants, then, simply visit the ISP's site to register, create and operate their own sites, with no intervention by the ISP. Merchants can configure their sites to accept credit card payments for orders, and payments can be authorized and processed online. And, they can configure tax and shipping charges, defining their own unique rules for determining how much to charge for each order.

Because e-mail capability is built in, merchants can receive automatic e-mail notification of incoming orders and shoppers can receive e-mail notification of order status changes. Net.Commerce Hosting Server also provides broadcast e-mail capability that enables ISPs to send mail to merchants and merchants to send mail to their shoppers. Net.Commerce Hosting Server also features targeted e-mail, so merchants can, for example, broadcast to all shoppers who have purchased from a product category or all shoppers who have purchased a particular product.



Net.Commerce Hosting Server enables merchants to generate scheduled or on-demand reports to analyze site activity. The reports show traffic and sales across categories, products and geographies.

Net.Commerce Hosting Server is an open platform with Web server, software and database applications that run on Windows NT®, AIX® and Sun's Solaris Operating Environment™. Further, it operates in five languages: English, French, German, Spanish and Japanese.

Cost to CSP customers

CSPs can design hosting services to meet customer demands and charge based on the services provided. Net.Commerce Hosting Server tracks resource usage, catalog size and transactions, providing the necessary information for accurate billing.

Net.Commerce Hosting Server lowers the merchant's cost of doing business by providing rich shopper service functions—for example, giving shoppers the ability to find a lost password, reset passwords and check order status. In addition, any time an order status is changed by a merchant, the shopper receives an automatic e-mail notification about the change. What these services mean are fewer customer calls to the merchant and, consequently, less time spent answering calls.

IBM's on-going role

In addition to offering Net.Commerce Hosting Server, IBM offers ISPs the following services:

- Education and training, including a three-day course, to enable ISPs to build a commerce systems infrastructure. The IBM Merchant Enablement Kit gives merchants the tools they need to design their own Web sites, removing that burden from CSPs. This kit can be co-branded, allowing the CSP to build an infrastructure with IBM's technology, brand and reputation.
- On-going advertising and communications support. IBM advertises the benefits of e-business, including the IBM e-business Mark™ for growing the e-business market, businesses and the IBM brand. This raises market awareness of e-commerce and drives merchants to ISPs as their solution providers. And an IBM-supplied program enables ISPs to conduct direct mail campaigns to a targeted list of customers.
- Implementation services. IBM and a network of certified Net.Commerce Business Partners also offer services for merchants, such as Web design, and back-end support such as hosting and payment services. In addition, IBM has deliverables for financial institutions to enroll them in the e-commerce chain.

Thus, IBM acts as the CSPs' strategic partner, helping them approach merchants and enabling them to create Web sites or, for complex sites, linking them to IBM Business Partners who specialize in Web site creation. Throughout, IBM respects the relationship between the CSP and merchants and helps nurture that relationship.



Conclusion

With the IBM Net.Commerce suite of offerings, ISPs can sharpen their focus on a new world of business opportunities by growing and thriving as CSPs. ISP business opportunities range from giant companies interested in the advanced e-business functionality of IBM Net.Commerce PRO to smaller merchants and other organizations that will benefit from the e-commerce potential that can be realized with Net.Commerce Hosting Server.

Net.Commerce Hosting Server is a complete multi-language, multi-platform e-commerce solution that enables ISPs to offer high-performance e-commerce Web sites within a shared hosted environment. Most important to ISPs, Net.Commerce Hosting Server will help them transform their customer relationships from a system of fixed monthly Internet access charges to a growing e-commerce hosting revenue stream.

The features of Net.Commerce Hosting Server, as well as the accompanying tools and documentation, are a perfect fit for ISPs who want to serve the enormous market of very-small-, small-, and medium-sized companies that can prosper with e-commerce. Unlike other e-commerce platforms, Net.Commerce Hosting Server is specifically designed for running a hosted service for multiple customers, not just running a single e-commerce site. Its comprehensive functionality extends from high-end users to the simple Web page market.

Net.Commerce Hosting Server directly addresses the ISP's critical success factors, such as cost of administration, merchant self-provisioning, scalability, reliability, flexibility and extensibility. At the same time, it offers ISP customers a low-cost, low-risk e-commerce solution that is simple, secure and easy to use. With Net.Commerce Hosting Server, ISPs can provide their customers industrial-strength e-commerce Web sites that can start small and grow as their customer needs grow.

For ISPs, IBM Net.Commerce Hosting Server sidesteps the fierce competition, offers a dynamic new source of revenue and opens the door to growth.

For more information on IBM Net.Commerce offerings, please visit:

www.ibm.com/software/commerce/net.commerce/chsweb.html



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