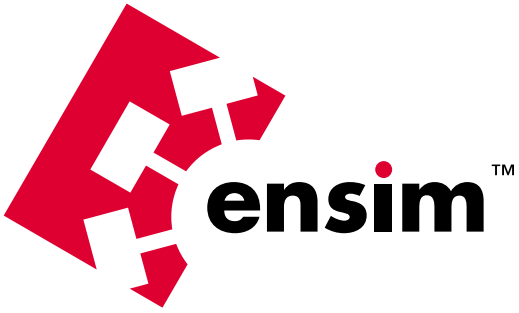
Building a Profitable Hosting Business with Ensim ServerXchange™

A White Paper

ServerXchange is the industry's first comprehensive hosting operations platform designed to enable hosting providers, including ISPs, ASPs and data center operators, to rapidly grow and efficiently operate large-scale hosting businesses.



Executive Summary

Millions of small- and medium-sized businesses are scrambling to establish a presence and do business on the Web. The vast majority of these businesses will seek a service provider that can host, manage, and grow their online presence. In order to capitalize on this huge market opportunity, service providers must be capable of rolling out hosted services for these businesses on a large scale. Ensim offers the industry's first comprehensive hosting operations platform designed to enable hosting providers, including ISPs, ASPs and data center operators, to do just that - rapidly grow and efficiently operate extremely large-scale, Web, e-commerce, and application hosting businesses.

The Web hosting market is exploding. IDC and Forrester Research forecast annual growth rates ranging from 85% to 105% between 1999 and 2003, with US revenues (including revenues from overseas branches of US-based Web hosting companies) reaching $20 billion by 2003. The majority of this growth will be generated by small- and medium-sized businesses (SMBs) moving to establish a presence and do business on the Web. In fact, only 22% of the 7.5 million SMBs in the United States have an e-commerce presence today. The rest will need a commercial presence on the Web within the next few years (and those already on the Web today will likely want to enhance their presence).

Hosting providers recognize the opportunity but are struggling to address some fundamental questions:

- Do I have the ability to quickly service a huge quantity of customers?
- How will I find enough technical professionals to manage my infrastructure?
- What will draw these SMB customers to my hosted service offerings?
- How will I provide the services they will demand?
- Can I grow my business at this rate and still make money?

In attempting to establish business operations that address these challenges, hosting providers have resorted to cobbling together hosting operations systems by purchasing and integrating hardware and software solutions not initially intended to support high-volume hosting operations. Where commercial products were completely non-existent, hosting providers were forced to invest significant resources to develop homegrown, proprietary solutions that, while often quite adequate in the beginning, will inevitably fail to support sustained growth. And growth that will enable a hosting provider to compete and win over the long run must come on two axes: subscriber base growth and growth in the scope of services offered to that customer base.

In the face of unprecedented growth and competition, hosting providers are being forced to tie up even more resources, extending and supporting an infrastructure that was not designed for massive subscriber and service offering growth, but one that emerged reactively as manual operations became automated and assembled in an ad hoc manner. As hosting market growth accelerates, hosting providers desperately need a partner who can deliver a comprehensive platform designed specifically to serve as the flexible foundation of very large scale hosting operations.

Ensim has created a new category of Internet infrastructure products and solutions precisely to address these needs. ServerXchange, Ensim's flagship product, is the industry's first comprehensive hosting operations platform designed to enable hosting providers, including ISPs, ASPs and data center operators, to rapidly grow and efficiently operate large-scale hosting businesses.

ServerXchange gives hosting providers the ability to rapidly add new and differentiated service plans while providing them with a unified view and centralized control of their hosting environment. It includes a comprehensive portfolio of automation and customer self-administration tools that reduce support costs while increasing customer satisfaction. ServerXchange is the solution that hosting providers can depend upon to further capitalize on an already huge market opportunity. And it provides a scalable, flexible foundation on which to build a profitable future.

Market Trends

The Web hosting market is exploding

Businesses of all sizes are being challenged to quickly establish a presence on the Web and to integrate Internet technology into their daily operations. But establishing an Internet presence--configuring and installing the needed hardware, software, applications, routers, switches, backup equipment and security, and maintaining these systems - on an ongoing basis - is a daunting task. And while there is universal agreement that the Internet provides substantial avenues for growth, businesses are now more than ever realizing their success depends on their ability to focus on their core competencies. Very few companies have the skills required to build and operate an efficient in-house Web or e-commerce hosting operation. For the vast majority of companies, outsourcing is a compelling choice, delivering rapid time-to-market, a knowledgeable partner to manage the growth of their infrastructure, and, almost without exception, a solution far more economical what than can be duplicated in-house.

While Internet access services are projected to be a large portion of service provider revenue between 1999 and 2003, hosting service revenues will account for the bulk of the growth and are predicted to account for more than $15 billion in annual hosting provider revenues by 2003 (Forrester Research, 2000). IDC anticipates even faster annual growth rates for Web hosting services, from 85% to 105%, between 1999 and 2003, with US revenues (including revenues from overseas branches of US-based Web hosting companies) reaching $20 billion by 2003.

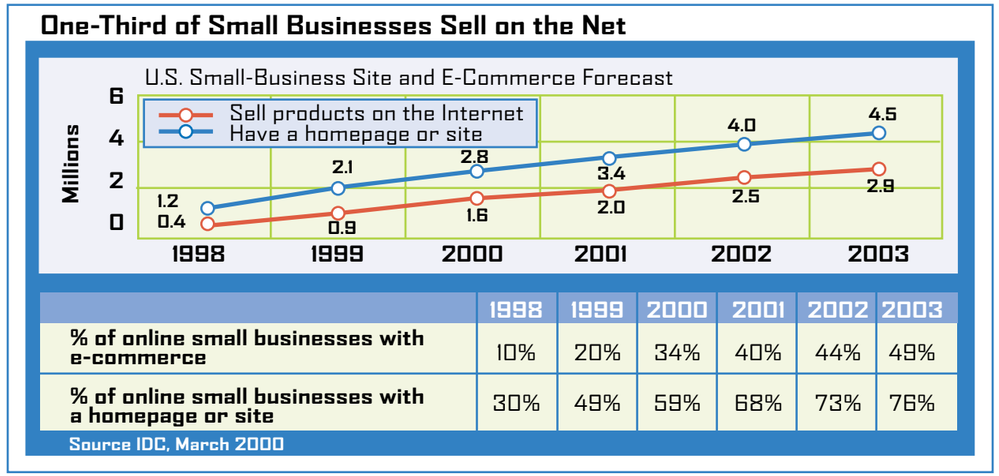
Small- and medium-sized business segment dominates growth

The majority of the hosting services revenue growth will be generated by small- and medium-sized businesses (SMBs). While both large enterprises and SMBs often lack the resources and expertise required to establish and manage a growing Web presence, SMBs in particular suffer from a dire IT skills shortage. For them, relying on a hosting provider for these services is a natural choice.

The SMB market is substantial. Ninety-five percent of all US companies have fewer than 100 employees, and together they employ about half the US workforce. Worldwide, the number of small and mid-size businesses, defined as 5-to-1000 employee companies, will grow to exceed 50 million by 2003.

While the SMB market is substantial, it is still relatively untapped. Only 30% percent of small businesses had a Web site at the end of 1998 and only 10% had e-commerce capability.

By the end of 2003 approximately 4.5 million (close to 50% of the total) small businesses will have established a Web presence and the majority of those (2.9 million) will also be doing business on the Web. This is a very significant opportunity that hosting service providers cannot ignore. (Figure 1)



	1998	1999	2000	2001	2002	2003
% of online small businesses with e-commerce	10%	20%	34%	40%	44%	49%
% of online small businesses with a homepage or site	30%	49%	59%	68%	73%	76%

Figure 1 - Web and e-commerce forecast for US SMBs 1998-2003 (IDC, 2000)

Becoming the SMB application service provider (ASP) of tomorrow

In the next three years, millions of SMBs in the US alone will seek to establish a Web and e-commerce presence by partnering with hosting providers. This trend represents an almost overwhelming opportunity for service providers today.

But many analysts predict an even brighter future for hosting providers. While today SMBs are primarily establishing and enhancing their Web presence via relationships with hosting providers, many SMBs have indicated they expect these relationships to expand in the future to include hosting of outsourced business and intranet applications.

The infrastructure, systems, and skills required to build profitable, large-scale Web hosting businesses are precisely those required to operate large-scale outsourced application hosting businesses. By building a profitable business now, based on servicing the initial needs of these SMBs, hosting providers are incidentally laying the groundwork to become the successful application service providers (ASPs) of tomorrow - an emerging multibillion-dollar market opportunity.

Hosting Provider Challenges

Recognizing the unprecedented opportunity for hosted services revenue growth, major service providers (and some surprising new entrants to the hosting services arena) have announced their intent to build new Internet data centers (IDCs), or to add capacity to existing data centers, or both, as quickly as they can. Some of these companies are listed below.

- Qwest is building two new 50,000 square-foot hosting centers in Ohio and Florida. It expects to have 14 centers online in 2000, with 24 operational by the end of 2001.
- AT&T expects to have 44 IDCs with more than 3 million square feet of hosting space by the end of 2002.
- Intel will spend $2 billion to build a network of IDCs over the next four years.
- WorldCom is investing $6 billion to gain control of Digex, primarily for their hosting services capacity and revenue base.
- NTT recently completed the acquisition of Verio for $5.1 billion.
- Savvis Communications partnered with Level 3 to lease data center space to enter the hosting services fray.

For these and other service providers, building a data center is only the first step in assembling the assets required to effectively compete in the hosting business. Hosting providers then face three major challenges as they attempt to build, operate, and grow their business.

Finding and hiring skilled IT personnel

"1.3 million skilled technology workers will be needed by 2006, and it is not clear where they will come from". - U.S. Commerce Department, 1999

Hosting providers rely on skilled personnel to handle ongoing tasks such as installing new servers, loading software and managing software upgrades across a data center full of servers, creating and implementing new service offerings, and managing customer information and billing databases. To have some hope of scaling their businesses, and with no viable commercially available solutions, hosting providers have traditionally been forced to develop custom software and expertise to automate repetitive tasks.

While often adequate in the beginning, these homegrown systems inevitably fail to support sustained growth. And growth that will enable a hosting provider to compete and win over the long run must come on two axes: subscriber base growth and growth in the scope of services offered to that customer base.

Now, in the face of unprecedented growth and competition, these service providers are being forced to tie up even more IT resources to extend and support an infrastructure that was not built for a massive subscriber base and service offering growth, but one that emerged reactively as manual operations became automated and assembled in an ad hoc manner. This situation is like the early-day telephone industry throwing more live switchboard operators at the "problem" of overwhelming telephone service subscriber base growth. That solution could not sustain, leading to the development of an automated telephone platform that lowered costs and made it possible to scale service provider operations through decades of sustained subscriber base growth today.

The growth faced by the early providers of telephone services is eclipsed by the predicted near-term subscriber base growth rates for providers of hosting service. The IT personnel required to keep up with this growth, given existing levels of service provider operational efficiency, just do not exist.

Creating and offering differentiated service offerings

The telephone industry analogy can be extended to illustrate the second major challenge faced by service providers: growing the number of revenue-generating services in their menu of offerings.

The flexibility to add and bill for new revenue-generating services was, for all practical purposes, non-existent for telephone service providers prior to the introduction of an automated platform on which telephone service offerings were built. With a platform in place, service providers quickly expanded their menu of offerings, introducing and generating incremental revenue for, toll-free numbers, call waiting, call forwarding, touch-tone dialing, calling cards, find-me/follow-me services, and in-network voicemail. These revenue streams were made possible by a platform specifically designed for "hosting" telephone services.

Service providers are quickly realizing the urgent need to expand beyond their universally available, largely undifferentiated, and price-pressured shared and dedicated Web hosting service plans. In some cases, the price of these services has been driven down to "free". The emerging strategy of service providers with substantial operational flexibility is to build a large base of subscribers attracted by these "loss leader" offerings in hopes of selling higher-value, rapidly introduced, differentiated service offerings.

Service providers unable to respond to these tactics through rapid introduction of their own differentiated service offerings will quickly find themselves in an uncomfortable competitive posture.

Profitably operating a large-scale hosting business

In addition to managing growth of their subscriber base and menu of service offerings, service providers must focus on reducing the costs of delivering these services. Leveraging a reseller channel, reducing average per-subscriber support costs, and more efficiently utilizing capital investments are three ways service providers can position themselves for future profitability.

Leveraging a reseller channel is a must for service providers who wish to take advantage of the extensive economies of scale available to large operators. Resellers of hosting service plans can multiply the efforts of a direct hosting provider sales or tele-sales force. Resellers are particularly important in the SMB market, where business owners and managers are often less technologically sophisticated than their larger enterprise IT staff counterparts. Resellers help these customers overcome technology barriers by holding their hand through the purchase and implementation process.

The cost of supporting existing customers is one of the largest ongoing operating expenses for hosting service providers. Service providers who systems in place to reduce these expenditures are at a substantial competitive advantage over traditional service providers, who primarily rely on the expertise of a growing staff of expensive technical support personnel.

A traditional measure of profitability is Return on Assets (ROA), which measures the amount of profit generated versus the investment made in tangible assets. For a service provider, servers are a very large component of the total capital investment required to enter the hosting business. Service providers carefully monitoring their operational efficiency often use the revenue they are able to derive from each installed server and from each square foot of data center space as key profitability metrics.

Ensim ServerXchange - The industry's first comprehensive hosting operations platform

ServerXchange, Ensim's flagship product, is the industry's first comprehensive hosting operations platform designed to enable hosting providers, including ISPs, ASPs and data center operators, to rapidly grow and efficiently operate large-scale hosting businesses. Delivered as a rack-mountable appliance, ServerXchange gives hosting providers a unified view into their hosting environment, a mechanism for rapidly adding new and differentiated service plans, and a comprehensive portfolio of automation and customer self-administration tools.

By directly addressing the previously highlighted challenges, ServerXchange enables providers to: providers to:

- Substantially increase the productivity of IT personnel
- Quickly add new and differentiated hosting service plan offerings
- Empower a hosting service reseller channel
- Decrease customer support costs
- Reduce customer churn
- Increase revenue generated by per square foot of rack space
- Increase revenue generated by per unit of server capacity

A detailed look at the platform will reveal how ServerXchange is able to tackle the toughest challenges faced by hosting service providers.

Offering new services via ServerXchange

Ensim ServerXchange makes the process of introducing new service offerings and the provisioning of these offerings effortless. With ServerXchange, service providers can continuously differentiate their service offerings to stay ahead of the competition, and to quickly meet evolving customer needs.

Hosting Service Plans

Customers buy, and hosting service providers offer, bundled sets of applications and hosting resources called "plans". These plans provide a coherent and complete solution that helps customers accomplish a specific set of tasks. For example, a basic Web hosting plan enables customers to create, build, and grow a Web presence. This type of plan typically includes a Web server, tools to enhance a Web site (server side development tools such as Perl™, PHP™, Java® servlets), a mail server with support for a specified number of user e-mailboxes, software to facilitate the transfer of content to the Web site, utilities to remotely manage the Web site, and tools to analyze the patterns of site traffic. Additionally, a basic Web hosting plan typically specifies the amount of disk storage capacity a customer is allocated and how much data can be transferred from their site over the course of a month.

More advanced plan offerings may address specific needs, such as the capability to create and run an e-commerce storefront or the ability to stream audio and video content from the Web site.

Other hosting plans may be unrelated to creating a Web presence, but instead, may deliver a service back to the service subscriber. Examples include Intranet collaboration service plans that give SMB customers a sophisticated Intranet collaboration solution without requiring Internet technology-savvy internal IT resources. Enterprise-class mail and messaging service plans enable SMB customers to effectively outsource the operation of complex mail servers - sophisticated packages typically only within reach of larger companies.

Differentiating these plans and providing plan add-ons (for example, additional storage, additional transfer capability, additional user mailboxes), is mandatory for continued profitability.

To attract new customers and generate new revenue streams, hosting providers must offer flexible and feature-rich plans that match the needs of their customers. And they must effectively market these plans. To retain customers, providers must be able to offer new service plans as market needs evolve. They must deliver on the promises made in each plan. To accomplish all of this profitably, providers must have a platform that automates both the deployment and ongoing maintenance of these plans.

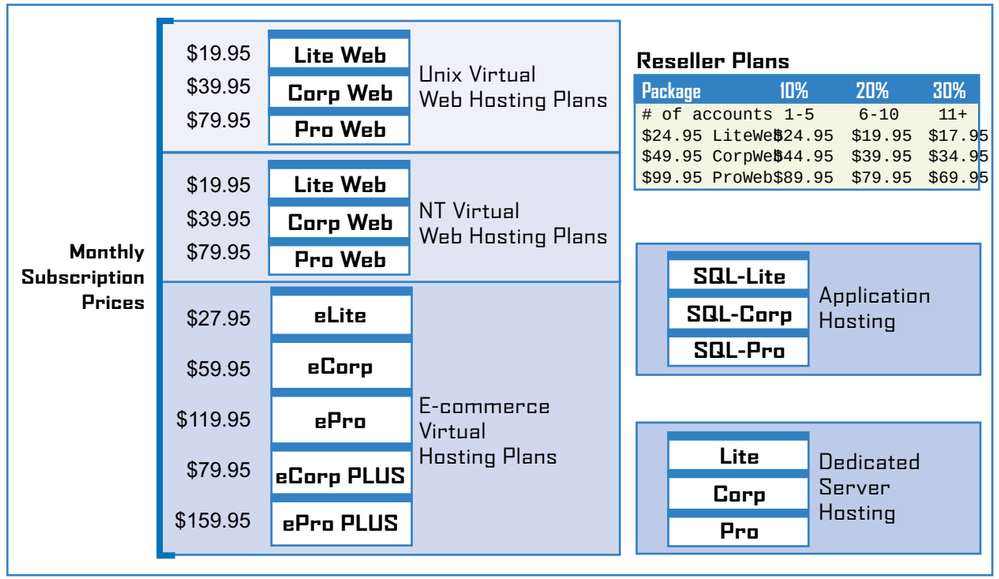


Figure 2 - Sample service provider menu of hosting service plans

Defining Plans with ServerXchange

ServerXchange is delivered with a set of high-quality hosting plan software suites, best-of-breed application software, which serve as the basis for a full menu of differentiated service plans. A hosting plan software suite is a set of selectable applications such as Apache™, Sendmail™, Bind/DNS™, FTP and HP Openmail™. ServerXchange ships with the hosting plan software suites that are required to create the most popular classes of hosting service plans, such as:

- Shared, Virtual Dedicated, and Dedicated Web Hosting Plans
- Reseller Web Hosting "Appliance" Plans
- Shared, Virtual Dedicated, and Dedicated E-Commerce Plans (featuring Miva™ Merchant™ and Impressa™)
- Enterprise Messaging Plans (featuring HP Openmail)
- Intranet Collaboration Plans (featuring Planet Intra™)

New hosting plan software suites, new applications for existing suites, and application upgrades are all instantly available via an Ensim AppXchange™ service download. More details about AppXchange are provided later in this document.

With ServerXchange, defining a new service plan is a point-and-click operation. The first step is to give a plan a name. Next, select the desired subset of suite applications and settings for a software suite-specific collection of resource variables (for example, disk space, network bandwidth, and mailboxes) are provided. For example, an "Intermediate Shared Web Hosting" plan might include all the applications in the virtual hosting plan software suite, and resource settings of 20 email accounts, 50 MB disk space, and 3 GB of monthly data transfer, for $19.95 per month. Another plan, "Advanced Hosting", might include unlimited email accounts, 200 MB disk space, and 8 GB of monthly data transfer, for $79.95 per month.

Deploying Plans with ServerXchange

Once the menu of plans has been defined, and when a customer arrives to purchase one of the advertised plans, the hosting provider uses the ServerXchange administrator console to deploy an instance of that plan. With a simple series of drag-and-drop operations, the appropriate software in the plan is sent from the ServerXchange appliance to a selected server in the data center. A ServerXchange agent on the server receives, installs, and appropriately configures the server and software based on the plan definition. Upon successful installation, a billable event is recorded, and the customer is notified their service is "on".

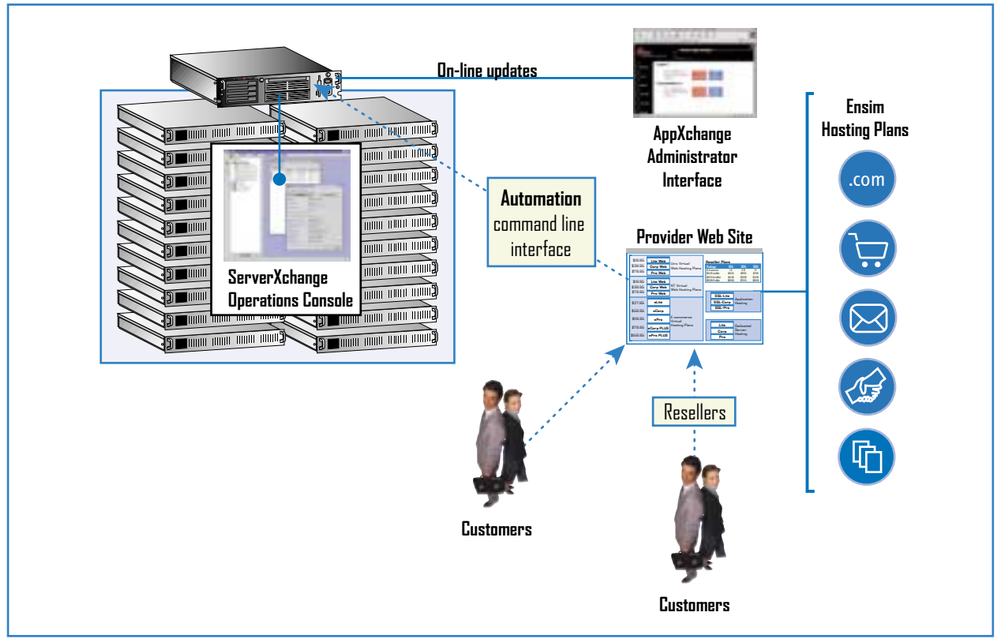


Figure 3 - Deploying plans for direct customers with ServerXchange

In addition to the user interface-driven plan provisioning process, ServerXchange provides a complete automation capability. This allows service providers, through simple scripting, to drive ServerXchange actions, including the deployment of new service plans, the adjustment of plan parameters, and the enumeration of a wide variety of server and plan state information, to support billing and monitoring. Automation enables a service provider, for example, to create a Web site from which customers can select a desired plan, enter payment information, then wait while back-end Web site scripts drive ServerXchange through the application installation and configuration process. In this scenario, the service provider has sold, installed, and configured a new service plan without involving a human, using a mechanism that works regardless of plan type.

ServerXchange also provides complete support for selling service plans through a reseller channel. Using a limited ServerXchange interface, resellers are empowered to define, sell, and manage plans for their customers without requiring day-to-day interaction with their upstream hosting provider. Servers generate more revenue without generating more support calls. And resellers are delighted with the level of control ServerXchange-deployed plans give them over their business.

The ServerXchange plan definition and deployment process cuts the time traditionally required to design, introduce, and begin selling new service plans.

Ensim AppXchange - Accelerating the introduction of new offerings

To maintain competitive differentiation and to meet the constantly evolving needs of their customer base, service providers must continuously enhance existing service plans and rapidly introduce new offerings. Add to that, the continuous flow of software security patches and bug fixes, and a service provider can quickly become overwhelmed.

To address this situation, Ensim developed AppXchange, a ServerXchange companion service offering. Through AppXchange, service providers receive notification and instant access to upgrades, updated applications, and entirely new hosting plan software suites. AppXchange combined with the streamlined ServerXchange plan definition and deployment process, dramatically reduces the complexity traditionally surrounding the introduction of new service plans into the service provider menu of offerings.

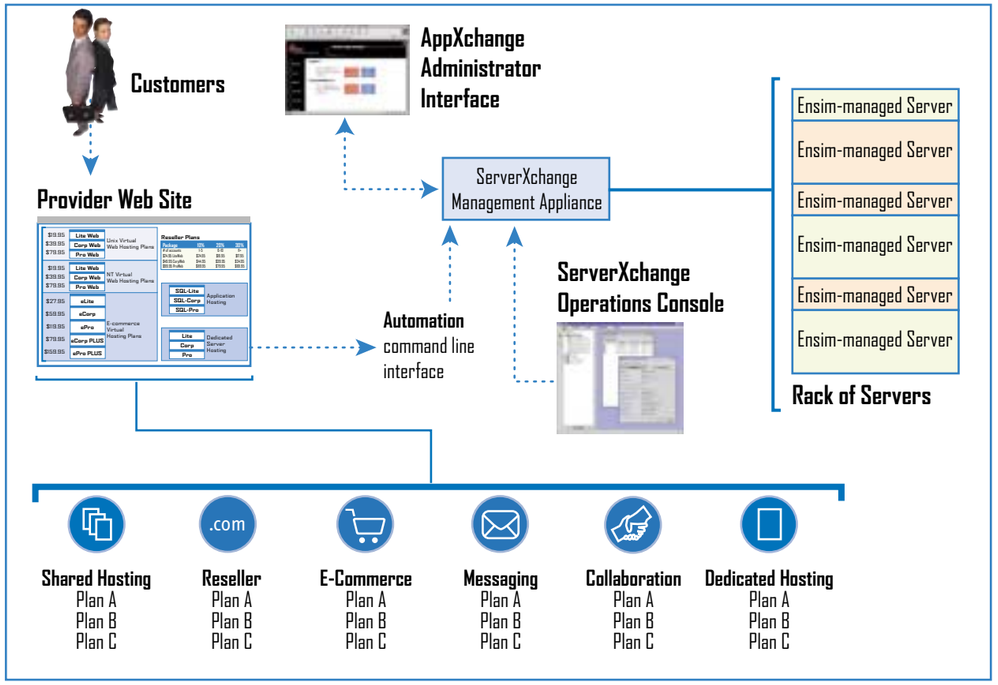


Figure 4 - Ensim AppXchange

In addition to software delivery functionality, AppXchange substantially simplifies the process of software licensing and billing. Through pre-negotiated volume purchase agreements with software vendors, Ensim can pass substantial software licensing savings to the service provider. In many cases, these agreements enable a "pay as you go" model, allowing the service provider to match software expenditures with hosting plan revenue, thereby simplifying cash flow management.

A Complete Management and Operations Platform

ServerXchange gives hosting providers a unified view into their hosting operations and a comprehensive portfolio of automation and customer self-administration tools. With ServerXchange, service providers can substantially increase the productivity of their IT professionals and reduce their customer support costs, while increasing customer satisfaction.

A unified view across the mixed hosting operation

To meet the varying needs of their customers, service providers often operate in a mixed technology environment. Offering a wide variety of service plans necessarily involves managing multiple applications, across several operating systems, installed on varying server configurations. Recognizing this, Ensim is committed to providing the broadest possible cross-platform support. Today, ServerXchange supports Linux™ and Solaris™. Windows® 2000 support is planned for early 2001.

The ServerXchange administrator console is an easy-to-use hosting operations management console. It puts the hosting provider's Network Operations Center (NOC) staff in complete control of the service-delivery server farm. From a single console, the NOC manager can bring servers under management, provision those servers plans for customers, adjust plan parameters for a customer over time, and even move a customer's service plan from one server to another with a single point, click, and drag operation.

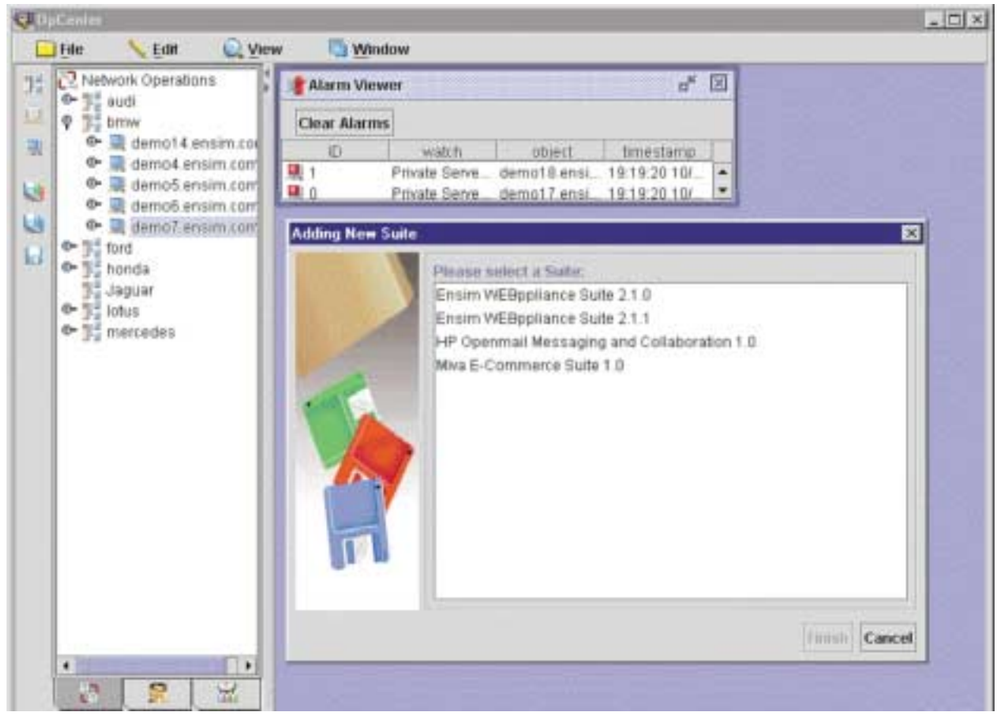


Figure 5 - The ServerXchange administrator console

Complex multi-sever software upgrades or network configuration changes are effortlessly orchestrated from the administration console. With very little technical know how, less-experienced data center staff members can manage the daily operations of a hosting business, allowing more highly-skilled technical staff

members to focus on high-value activities such as high-quality customer service, defining new plans and preparing the inevitable additional data centers.

Reseller and customer provisioning and self-administration tools

As mentioned previously, engaging a reseller channel is a must for service providers who wish to take advantage of the extensive economies of scale available to large operators.

ServerXchange uniquely allows a service provider to support an extremely large reseller channel without requiring day-to-day reseller handholding. A set of Web-accessible control panels give an authorized reseller limited control over ServerXchange, allowing the reseller to define, provision, and support their own hosting plans. Resellers, accustomed to severe limitations in their dealings with hosting providers are delighted with the new-found freedom and flexibility derived from doing business with ServerXchange-based hosting providers.

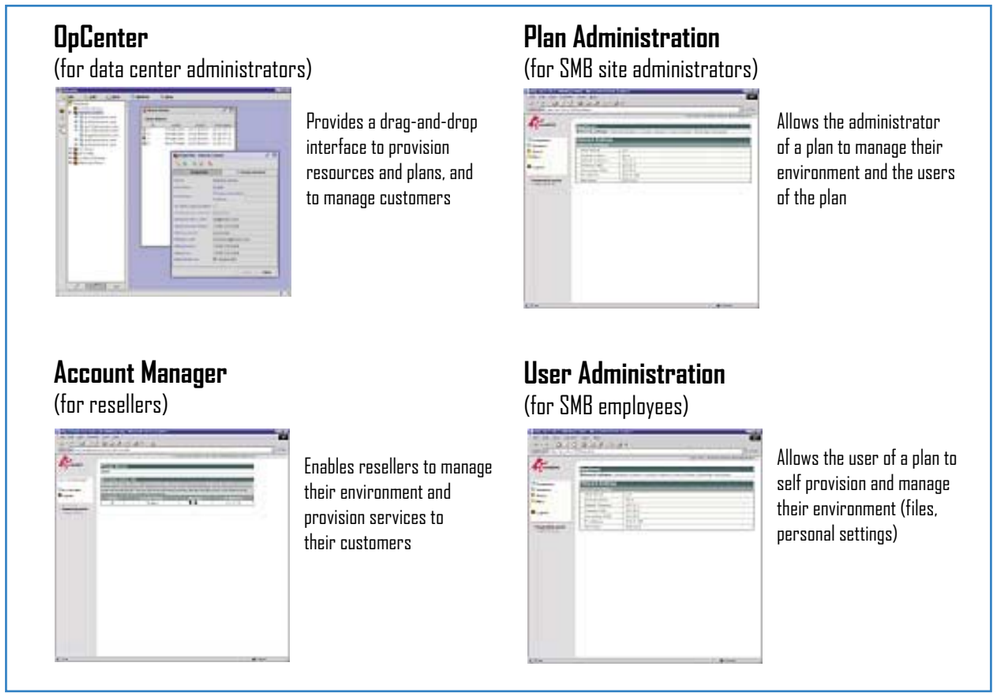


Figure 6 - Interfaces for provisioning and self-administration

In addition to the comprehensive ServerXchange administrator console (OpCenter) provided for the NOC staff, ServerXchange offers multiple levels of self-administration support for resellers, administrators, and users of ServerXchange-based hosting service plans.

Resellers: Web-based interfaces give resellers access to and control over the plans and resources provisioned for them by the data center operator. Within service provider-defined boundaries, resellers are given the freedom to manage their business and provision hosting plans for their customers.

Plan Administrator and Users: Within the context of their purchased plan, both designated plan administrators and end users have access to Web-based control panels that allow them to perform routine administrative tasks without relying on their reseller or the upstream hosting provider.

For example, a designated site administrator of a ServerXchange-based Web hosting plan can manage site content, add, delete and manage new site users, add email accounts, aliases and responders, monitor site usage, adjust site features such as anonymous FTP, and perform routine maintenance such as backing up and restoring files. Likewise, the end users of this plan can manage their own accounts, including file management, setting email vacation messages, and backing up and restoring their own files.

The benefits are obvious. Service providers improve customer and reseller satisfaction by giving them simple, and consistent cross-plan tools to take care of business without calling their provider and potentially waiting in a support call queue. The reduction in support costs directly improves the service provider's (and the reseller's) bottom line. Indirect profitability benefits derive from reduced customer churn due to enhanced customer satisfaction.

Comprehensive automation, integration, and customization support

As mentioned previously, ServerXchange allows service providers to automate many of their day-to-day operations through a well-documented command line interface (CLI). The CLI includes interfaces to manage servers, plans, and customers. Specifically, the CLI can be used to perform the following functions:

- Install, update, and remove servers
- Create, move, remove, update, start, and stop service plans
- Add and remove customer records and update customer information
- Enumerate servers, plans, and various customer properties according to selected criteria

The CLI is the perfect mechanism for automating the mass management of a large number of servers, service plans, and customers. For example, transforms the task of "upgrading all reseller plans from version 2.0 to 2.1" from a tedious, time-consuming series of careful and error-prone software updates to a simple, automated background process. The CLI supports direct input via the command line or commands can be compiled and passed in a specification file. This makes it well suited for periodically repeated operations. For example, a service provider may utilize the enumeration command line features to create daily requests such as "list all the customers currently subscribing to the 'Shared Hosting Plus' plan" or "list all the new servers and plans deployed today". The results can serve as the basis for a daily sales and marketing report. This method also enables integration with an existing service provider infrastructure such as billing and customer management systems.

ServerXchange provides "hooks" enabling service providers to modify plan behavior or to integrate with other systems in the data center. These hooks are implemented by automating the execution of service provider's custom code programming during the execution of critical ServerXchange processes. For example, when new plans are installed, a service provider may wish to update a DNS file. A documented, customer-modifiable script (which receives IP address and domain information) can perform this task. In addition to these customization "hooks," ServerXchange enables the service provider to place their logo on customer-facing user interfaces and to adjust color schemes to project their brand image.

Ensim instantServer™ Technology - Enhancing Flexibility and Profitability

With Ensim's unique instantServer™, service providers can deliver key benefits of dedicated service on a shared server. The result is a dramatic improvement in the utilization of available data center server capacity with accompanying increases in per-server and per-data center profitability.

"Bringing a server under ServerXchange management," includes the automated installation of agent software on that server. These agents enable the management and administration functionality described throughout this document. These agents also deliver Ensim instantServer technology. This technology enables a service provider to create multiple virtual "private servers" on a single server. Before Ensim instantServer technology, service providers were forced to dedicate an entire server to a customer to make absolute guarantees about service plan performance and inter-subscriber privacy and security. Dedicated servers were also mandatory to offer service plans based on application software that neither directly supported multiple simultaneous users nor supported the simultaneous execution of multiple application copies on a single server.

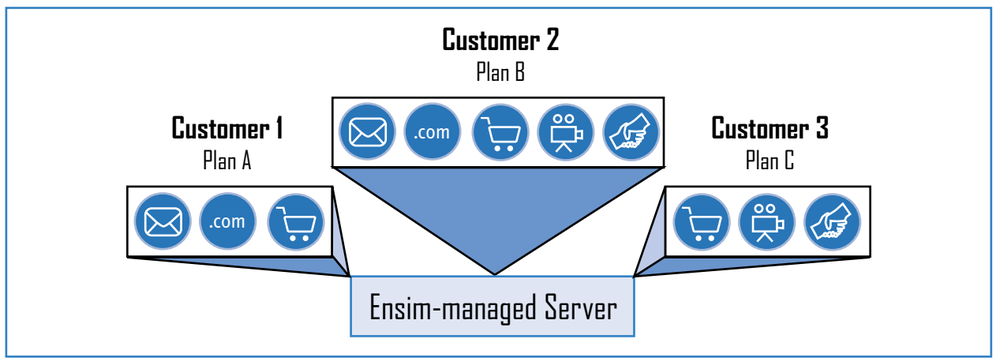


Figure 7 - Ensim instantServer technology illustrated

Ensim's instantServer provides ServerXchange-based service providers with a devastating competitive advantage over service providers not offering ServerXchange-deployed hosting service plans. This technology gives service providers the flexibility to offer secure hosting plans with guaranteed service quality, without dedicating an entire server to the subscriber-even when offering a service based on application software that traditionally required a dedicated server. The obvious reduction in service delivery cost translates to substantial increases in profitability or price points guaranteed to confuse and overwhelm the competition.

Ensim is currently in pursuit of 25 technology patents (as of November 2000) related to its pioneering work in shared hosting technology, security in shared server environments, and enforcement of service level agreements in a shared server environment.

Instant creation of flexible virtual private servers

Each service plan hosted on an Ensim Private Server is guaranteed a minimum availability of critical server resources including memory, CPU and network bandwidth, and disk space. For example, an advanced e-commerce plan might be guaranteed a minimum of 100 MIPS of CPU bandwidth, 2 Mb/s of bandwidth, 256 MB of memory, and 4 GB of disk space. A subscriber to this plan will be guaranteed, at minimum, a level of performance that would be obtained from the same software running on a dedicated server with the same available underlying resources, regardless of other activities on the server. And when excess system resources are available, they are allocated fairly across all customers. Thus, users will, on average, obtain performance substantially above what would be expected from a similarly resourced dedicated server.

While an Ensim Private Server provides, at a minimum, performance parity with a similarly configured dedicated server, it delivers far more than parity on the flexibility front. Ensim instantServer makes it easy for hosting providers to dynamically adjust the resource settings for a plan based on customer needs. For example, an existing reseller needs more processing power after enhancing a site with complex PHP or ASP-generated content? When hosted on a Private Server, the hosting provider can allocate extra bandwidth to that reseller instantly, by simply sliding a bar on the ServerXchange administrator interface. If a customer wants to move up to a dedicated server, it is accomplished using a single drag-and-drop operation. And when a customer moves to a different server, their plan automatically "travels" with them, including all their applications, data, their IP address, and other server-related configuration settings. Once the move is complete, the Private Server is restarted and their plan is brought back online. Outside of the increase in site performance, the customer will be unaware that the underlying server has changed.

Support for multiple configurations within one server

Different plans (or different instances of the same type of plan) residing on an Ensim Private Server and running on the same server can be configured independently from one another. For example, resellers hosted on the same server can maintain their own configurations for the mail and Web servers of their customers.

Fault isolation and instant recovery from server failure

A fault generated by a customer service plan (which could result in starting the virtual Private Server on which the plan is hosted) does not impact other plans or customers hosted on the same underlying server. Private Servers can be independently started, stopped, and started without having to start, stop, or restart the host server.

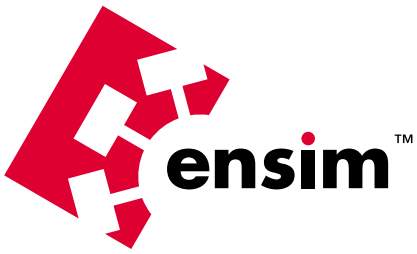
Plan configurations are maintained in a centralized database on the ServerXchange appliance. If a server were to fail, and the customer's data was stored on a network-attached storage device, the administrator would simply move the customer's plan to a healthy server (via drag-and-drop function), returning them to service in a matter of minutes.

Seize the Opportunity

Over the next three years, five million SMB customers (in the US alone) will seek to establish a Web presence in partnership with a hosting provider. Ensim ServerXchange is a potent weapon in the arsenal of any service provider gearing up to grow, innovate, and profit from this unprecedented opportunity.

About Ensim Corporation

Ensim Corporation has created a new category of Internet infrastructure products and solutions to address the rapidly changing needs of hosting providers. ServerXchange, Ensim's flagship product, is the industry's first comprehensive hosting operations platform designed to enable hosting providers, including ISPs, ASPs and data center operators, to rapidly grow and efficiently operate large-scale, Web and e-commerce hosting businesses. ServerXchange gives hosting providers a unified view into their hosting environment, a mechanism for rapidly adding new and differentiated service plans, and a comprehensive portfolio of automation and customer self-administration tools. Headquartered in Sunnyvale, California, Ensim Corporation is a pre-IPO company funded by leading Venture Capital firms such as New Enterprise Associates and Worldview. For more information about Ensim Corporation, please visit www.ensim.com or call Ensim at 1-877-693-6746.



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