Enterprise Web Hosting Alternatives

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Preview

One of the toughest decisions an enterprise will make is where to host its Web site(s). Because of the difficulties involved with transferring to a new Web host, it is vital to select the best hosting vendor and the best hosting solution the first time. Enterprise hosting alternatives come in several varieties, each with its own share of advantages and disadvantages.

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Executive Summary

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Deciding how to host an enterprise Web site or sites and what approach to take can be a daunting task. There are two main approaches available, each with different advantages and disadvantages. This report will cover those options.

Description

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Enterprise Web hosting is the business of providing Web services, server space, and file maintenance for Web sites controlled by organizations that do not have their own Web servers. It is also the business of providing the storage, connectivity, and services necessary to serve files for those Web site(s).

There are a myriad of enterprise Web hosting vendors in the market place today, all of which offer multiple Web hosting plans. At a basic level, Web hosting vendors run data centers to host and maintain the equipment and networks for enterprise related Web sites. Many of those same vendors also offer other services, such as maintaining databases and application services. But, before an enterprise makes a decision about a Web hosting solution, it is a good idea for it to thoroughly evaluate the actual hosting services available as well as the vendors that offer those services. How does an enterprise do this before signing on the dotted line? Once an enterprise finds a few vendors, which it feels offers services that fit its business needs it should contact the vendor's current customers and ask how pleased or displeased they are with the vendor's service. The enterprise also should find out how often the server is down and ask about help desk responsiveness. Also, the enterprise should ask the vendor's customers how their Web sites are updated and ask if they can upload changes directly to their site or do they have to wait for someone at the hosting company to do it. If it is the latter, ask the current customers about their experience with this process.

Considerations

In order to make an informed decision about the various enterprise Web hosting options, it is important for the enterprise to look at its unique business needs and then make sure that those needs match exactly to what the vendor is providing. In addition, it is important to note that besides the technical aspects and the cost that will be taken into consideration prior to selecting a Web hosting solution, customer service and responsiveness is vital. Therefore, it is imperative that the enterprise do its homework and then consider the following:

- Is the enterprise up-to-date on the latest Web hosting technologies?
- Is the enterprise planning to incorporate Real Media Streaming into its Web site? If so, keep in mind that incorporating Real Media streaming into a Web site requires more resources from processing power to bandwidth.
- Does the enterprise need MySQL for its Web site?
- Does it need Secure Server (SSL) for an e-commerce site?
- How much disk space and bandwidth does the enterprise need? What are the upload and download speeds offered by the Web hosting company?
- What type of security services does the Web hosting vendor offer? In other words, what type, if any, virus blocker software does the Web hosting company deploy? What sort of spam filtering and phishing software does the Web hosting company have in place? What other security options are available?
- What is the level of customer service offered by the Web hosting company?
- What are the upgrade and downgrade policies of the Web hosting vendor?
- Does the Web hosting vendor offer a money back guarantee?
- What type of scalability does the Web hosting company offer? The answer to this question will determine if the Web hosting company will be able to upgrade a system or be able to put up another system or two to use at a moments notice in case of a significant traffic increase.
- Is the Web hosting company's network always up and running so users/clients can get to the Web site? Is setup time automatic, hours, days, or unknown?
- What are the payment terms? Monthly? Quarterly? Yearly?
- Because the server or servers are important to a business, is the hosts' network well connected

with multiple routes to it?
- What type of backup power supplies does the Web hosting company offer? What other types of fail safes do they offer?
- Will the Web hosting company assign a dedicated account person to the account? Will the enterprise also be assigned a dedicated technical person to contact if there is a problem?
- Is there a dedicated network and security team working 24 hours a day, 365 days a year?
- How many different Internet connections to the backbone does the Web hosting company have at the data center where the enterprise Web site will be hosted? If it's a co-location Web hosting provider, does it own its own network backbone? If not, who are their providers?
- What type of web site is the enterprise running? Sites uses ranging from e-commerce, gaming, and blogging, to ASP, ISP, and disaster recovery all have their own set of hardware and performance requirements. Determine what the main purpose of the site is, and match it with the best hosting solution.
- What is the enterprise's budget? Managed hosting generally costs more than Unmanaged because of the managed services and technical support an enterprise receives. With Unmanaged, enterprises are fully responsible for administering the server. Co-location prices vary depending on the geographical location of the data center where the company wants to house its server. Data center space is becoming increasingly scarce, and prices depend heavily on local availability, as well local power costs, labor, and real estate.

Because most enterprises usually have mixed needs when it comes to Web hosting (enterprise class sites and smaller sites) they should look for a Web hosting solution that can accommodate both needs. This solution must also offer utility pricing for Web sites with variable and unpredictable traffic needs. Because there are various Web hosting alternatives available, deciding which one is best for the enterprise will take some research. The following discusses those alternatives.

Types of Enterprise Hosting

There are two primary enterprise Web hosting solutions to choose from: Managed Hosting (which includes Self Managed, Shared Hosting, and Dedicated Hosting) and Co-location Hosting.

Managed Hosting. Vendors that offer managed hosting monitor and maintain all of the infrastructure issues that are integral in hosting a site or application on the Internet. A managed host procures, configures, installs, and maintains the necessary servers, firewalls, and other devices that an enterprise's architecture requires, including the operating system, and any backend database and server support required to make the site functional.

Managed Hosting is for enterprises that prefer to have their Web host provider maintain and monitor their dedicated servers, operating system, and all of the supported applications. Enterprises that do not have the required system administration resources on-staff commonly choose this option to augment their dedicated hosting service. For the most part, managed hosting includes a dedicated server that is managed, monitored, and maintained by the managed Web hosting company. In short, the Web hosting company takes care of the server and the enterprise takes care of its' Web site(s). With a managed Web hosting solution, the enterprise is free from: installing and upgrading server software, managing vendor patches, log auditing and rotation, security scanning, ongoing configuration and maintenance, as well as 24/7 availability monitoring. Choices range from a basic server to a high performance, premium server depending on an enterprise's online needs. Companies can also choose their preferred operating system, Windows or Linux, as well as optional managed services such as security patching, upgrades, backups, and firewalls. Basic system administration is usually included with Managed Hosting.

Self-managed or Unmanaged Hosting. This is a form of web hosting where a company can choose to lease an entire server housed in an off-site data center that is dedicated to their usage only, and not shared with anyone else as in a shared hosting environment. In contrast to Managed Hosting, it is imperative that the company using self managed or un-managed hosting services has technical know-how, and can adequately perform all system administration and management activities on the server from their remote desktop. This setup allows companies to choose a server with more powerful hardware for much less cost. As with Managed Hosting, companies have complete control over the server and can choose their preferred operating system, Windows or Linux.

Shared Hosting. Shared hosting is very common, and quite cost effective, because the enterprise is 'sharing' the actual cost with other enterprises. Shared hosting means placing an enterprise Web site on a server with several hundred other sites, which is good for an organization from a cost perspective but not so good from a reliability perspective as if there is a problem with one Web site, it could bring down all of the other sites sharing the server. In most cases, shared solutions offer software solutions such as email and databases, various editing options, and the technical support is often good. However, there is an increased security risk because there are so many sites residing on one server. There are also traffic volume restrictions, and there is always restricted database and software support. Shared hosting also brings with it some restrictions regarding what exactly can be done to the various Web sites.

Dedicated Hosting. With dedicated hosting an enterprise Web site is 'hosted' on a dedicated server. In other words, dedicated hosting is the provision of a dedicated server that is strictly 'dedicated' to the traffic to a specific enterprise's Web site. But, keep in mind that only very busy Web sites require dedicated hosting. Dedicated hosting is the most expensive form of hosting and is best suited for large Web sites with high traffic, and Web sites that use special software. Dedicated hosting is powerful, secure, and has unlimited software solutions such as email and databases. Web sites that use dedicated hosting usually do not have any restrictions, except for those designed to maintain the integrity of the Web host's network (i.e., banning sites with adult content due to the increase risk of attack by hackers and grey legal issues for the ISP). Unless a separate plan is purchased from the host, the user is also generally on his own. This can be an expensive proposition, as the purchase of the dedicated server itself is generally far more expensive compared to shared hosting.

Co-location Hosting. For enterprises, co-location hosting is a hosting solution, which allows them to place (or locate) their own Web server on the premises (locations) of a co-location Web hosting service provider. Co-location is pretty much the same as the enterprise running its own servers in its own office, only that the servers are located at a place better designed for housing computer equipment. In most cases, co-location providers have dedicated resources such as high-security against fire and vandalism, regulated backup power, dedicated Internet connections, etc.

Most co-location centers offer different types of services to enterprises ranging from dedicated suites/rooms or cages to smaller racks or partial racks. Some co-location centers also offer some degree of service level agreements to support a wide range of computer and network related services, for example, server reboots, hardware replacements and software updates. The pros of co-location include: high bandwidth, up time and security; and unlimited software support. The cons include cost (co-location can be quite expensive), configuration and debugging is more difficult, and higher skills are required at the enterprise level. However, the key differences between a dedicated server and co-location servers is that dedicated servers tend to be owned and rented out, while a co-location server is one that the enterprise owns.

One of the main advantages of using co-location hosting is the opportunity to have an enterprise server kept in a premiere co-location facility dedicated specifically to the needs of the co-location server. Such features as a fire-proof facility, video surveillance, and high bandwidth make this an extremely viable option. Keep in mind, however, that co-location hosting does offer the enterprise the ability to administer the co-location program. If an organization does not possess the resources to administer the Web server, maintain the Web server or have the ability to upgrade the Web server, then co-location should not be its choice as some of the disadvantages include: purchasing' maintaining, and updating enterprise-owned equipment, capital investment is initially high, Web server administration is the responsibility of the enterprise, hardware may become outdated quickly, and if the enterprise has insufficient knowledge of hardware components, performance, and scalability, this can inhibit the organization's growth potential.

Security Is Job One

Whichever option an enterprise chooses, the number one issue associated with Web hosting is security as every consumer fears becoming a victim of identity theft, and every organization with a Web site fears that it may happen on their Web site. The use of the Web to launch attacks, and the variety of methods used to launch such attacks has increased in recent years. Perimeter defenses, such as firewalls, are designed to prevent Web security threats from the outside, but perimeter defenses can be bypassed. Endpoint defenses, such as anti-virus software, are designed to prevent threats from the inside, but anti-virus software can only protect against threats when the threat is already known. Therefore, to ensure the needed protection, organizations need to make sure that the Web hosting provider is up on the latest security strategies and that those strategies are being deployed and updated on a regular basis.

Current View

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Because an enterprises' Web hosting vendor can literally make or break its business, it is important to find a vendor with a hosting solution that is scalable, secure, resilient, highly available, fully managed, and can accommodate the organization's specific business requirements at a fair price. A good managed hosting solution will help streamline the efforts of an enterprise's existing IT departments by eliminating the wasting of resources on maintaining network and server uptime while providing security for both. It will alleviate or entirely prevent service and business disruptions. Therefore, enterprises must choose a Web hosting vendor, which can not only accommodate its current needs, but also its future needs. Some of the major enterprise managed Web hosting providers include the following:

- **Rackspace**--Rackspace, a San Antonio, Texas - based company, provides enterprise-level Web infrastructure and managed services to businesses of all sizes. Founded in 1998 with low end hosting to SMBs, the company has since become a force to reckon with in the enterprise hosting arena. Rackspace is managed hosting, and nothing else, and has two approaches: Managed and Intensive. The Managed approach is hosting from the perspective of customers desiring the flexibility to customize a hosting environment that reflects their business' specific needs while retaining control over their Web applications. Intensive is designed to relieve a customers' IT department by further elevating customer service to a consultative level, where both Rackspace's technology and people assume greater responsibility and accountability. In 2007,

Rackspace invested $100 million to transform a vacant San Antonio shopping mall into its new headquarters, and plans to add 4,000 new employees over the next five years.

- **Savvis**--Offers a broad range of hosting services with a focus on flexibly-priced utility offerings. It combines a high level of managed hosting service with the cost savings and scalability of its Utility Compute and Storage Platforms and it has 25 data centers in the US, Europe, and Asia. It also offers "Intelligent Hosting" solutions that include dedicated server hardware, software, network services such as load balancing and SSL-acceleration, managed SAN and NAS services, managed high-speed backup, off-site vaulting and data recovery services, high-speed redundant Internet service, integrated private network options, systems management, and security services. The company's revenue expectations for the 2008 include total revenue in a range of $910-925 million, including: approximately $590-610 million of revenue from hosting services, including approximately $310-320 million of co-location revenue, approximately $280-290 million of managed hosting revenue, approximately $315 million of revenue from network services; and an adjusted EBITDA in a range of $200-210 million. In 2007, Savvis spent $45 million upgrading its network and data center architecture with leading-edge Cisco platforms. Now the St. Louis-based service provider is rolling out new managed application and security offerings that take advantage of its Cisco-powered MPLS network.
- **Data Return**--A small, independent Web hosting company with extensive knowledge in running complex transaction-intensive, business-critical applications. In addition, because the company has a close relationship with Microsoft, it has a lot of experience in Microsoft technologies, but is also quite knowledgeable in other technologies as well. In 2007, Terremark Worldwide, Inc., a leading global operator of carrier-neutral integrated Internet Exchanges and provider of managed IT infrastructure solutions, announced that it has completed the acquisition of Data Return, LLC. Terremark will maintain Data Return's offices and Network Operations Center in Dallas, Texas, complementing and providing additional redundancy to current Terremark's operations in Florida, Virginia, and California.

Other hosting companies, which are either carriers or carrier-owned companies, include AT&T and Verizon Business. In the business outsourcing arena, both IBM and CSC offer hosting services. VeriCenter, SunGard, NTT Verio, NaviSite, and Quest Communications also offer Web hosting services but are (for the most part) specialized in a single area and therefore should be thoroughly investigated to ensure that their areas of expertise fit into an organization's unique business model.

The Web hosting enterprise market is split between managed hosting solutions and co-location hosting solutions. While some providers still offer both options, it is recommended that these two services be evaluated separately as providers vary in the quality of their facilities and services. In other words, it is important that the enterprise considers the location, structure, capacity, security, monitoring and staffing of the co-location center prior to making a decision. The following is a list of some of the major co-location vendors:

- **Equinix**--The leading global provider of network-neutral data centers and Internet exchange services for enterprises, content companies, and network services providers. With a global footprint of more than 2.5 million square feet in 10 strategic markets across the United States and the Asia Pacific region, Equinix's Internet data centers serve as core hubs for critical IP networks and Internet operations worldwide. In 2007, UK-based co-location provider IXEurope agreed to be acquired by Equinix for £240.9 million ($482 million U.S. IXEurope operates 14 data centers throughout Europe, including centers in London, Zurich, Frankfurt, Munich, Paris, Dusseldorf and Geneva.
- **Cogent Communications**--Owns and operates over 34 data centers in North America and

Europe. The customer's equipment is located in one of Cogent's secure, state-of-the-art data centers that connect directly to its' Tier 1, IP network. From extensive power back up systems to complete fire detection and suppression plans, each facility is constructed to ensure the safety and security of the equipment. In 2007 Cogent Communications Group, Inc. announced net service revenue of $47.0 million for the three months ended September 30, 2007, an increase of 23.8% over $38.0 million for the three months ended September 30, 2006. On-net revenue was $37.6 million for the three months ended September 30, 2007, an increase of 37.1% over $27.5 million.

- **Internap**--Delivers a suite of network optimization solutions, combined with progressive and proactive technical support, which enables companies to confidently migrate business-critical applications - such as e-commerce, streaming audio/video, Voice over Internet Protocol (VoIP), video conferencing, virtual private networks and supply chain management - to the Internet. Its data centers (located in key metropolitan markets) offer a fully redundant and reliable infrastructure for business-critical applications and access to its network-based optimization solutions. The company has 40 data centers in across North America, Europe, Asia, and Australia. On January 10, 2008, Internap announced the completion of its previously-announced plans to expand the company's global content delivery network (CDN) to Hong Kong and Tokyo by adding two new CDN Points of Presence (PoPs). In Q2, 2007, Internap unveiled plans to expand its network infrastructure in Asia, Europe and the UK. The company established a London CDN PoP in Q3, 2007 by expanding its existing facilities in London and Amsterdam. Today's announcement complements the current Asia data center and IP offerings and is fully integrated with Internap's global data center and network infrastructure, allowing Internap to be the first company to provide bundled service offerings in Asia and as part of a global solution. The new CDN PoPs improve the speed and delivery of customer traffic, optimizing performance for rich-media applications and enabling the company to better service its clients from more locations worldwide.

Other co-location Web hosting providers include AT&T, Switch & Data, Verizon Business, Qwest, and NTT/Verio – of which some also offer managed hosting solutions.

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At the present time the Web hosting market has been basically whittled down to managed Web hosting and co-location Web hosting solutions. Although over the years the number of vendors who offered these solutions has decreased, the remaining vendors in both of these categories have enjoyed steady growth. While some vendors provide both of these services, enterprises should plan on evaluating these services separately. Both markets are experiencing growth and both are mature.

According to a 2008 report by Tier 1 Research, a New York-based independent research firm, the managed hosting sector has experienced tremendous growth in the last 12 months (in excess of 30 percent) and will continue to show similar growth rates moving forward. The report stated that several trends account for this strong growth, including increased managed hosting adoption by SMBs and mid-tier enterprises and hosting for software-as-a-service (SaaS) providers. The report also stated that moving forward into 2009 and 2010 an array of new utility storage and hosting services will continue to fuel strong growth.

Recommendations

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Not every organization is comfortable putting its business in the hands of a Web hosting company especially if sensitive data is a part of its Web presence. While all Web hosting companies promise to protect the security and privacy of an enterprise's data, it is very difficult for them to guarantee that no employee will ever violate that trust or that nothing will ever go awry. Of course, an enterprise's own facility may not be 100 percent safe either, but there is some comfort in feeling it is under the company's control.

The most common reason why enterprises choose Web hosting alternatives is to avoid the cost of adding people and equipment for special projects or spurts in traffic, or when a department wants a service that does not fit into the operational schedule. Therefore, an enterprise's first step is to define what it wants in a Web presence. This can be done by determining the size (in megabytes) of its Web site(s) and then determining how much traffic to those sites is expected. This is very important because most Web hosting companies set their fees based on how many megabytes of data they will have to store for an enterprise's Web site(s) and how much traffic is expected on those sites.

Because there are different types of Web hosting companies in the marketplace (managed and co-location), it is important that an enterprise keeps in mind that each caters to different needs. Although finding the right solution for an enterprise's unique business requirements may be a daunting task, if the enterprise does its homework and asks the right questions up front, its task will not be as daunting. Therefore it is important for an enterprise to find out who runs the Web hosting company. How big is the Web hosting company? How long has the company been in business? What is its pricing structure? Can the company communicate effectively with the enterprise? Is it prepared to meet the enterprise's requirements? If the enterprise is satisfied with the answers to those questions, it most likely has located the right hosting company for its unique business needs.

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