

## To Host, or Not to Host

This is a question that we often hear from our prospective customers. To help you decide what is best for your organization, and your clients, we offer you this review of the issues. Laboratories that elect to host Quasar fall into two general categories:

### **Self-hosting**

A *self-hosting* lab runs their Internet applications (eg, their web site) at their own facility.

### **Third-party hosting (“co-location”)**

Labs that use *third-party hosting* place their equipment running Internet applications at a third-party location.

Labs that self-host their Internet applications need at least the following resources:

1. Internet connection (DSL or equivalent at a minimum)
2. compatible router with bundled firewall
3. web server hardware (eg, low-end Intel-based server)
4. web server software (eg, IIS software bundled with Windows NT/2000)

The above resources are suitable for hosting a simple, basic web site which expects minimal traffic. Provided that you have the personnel in place to monitor the overall system, track and apply security updates for the operating system and server software, and monitor the Internet connection and server logs, this scenario can and will work for some labs. This scenario, however, provides minimal performance and reliability, and is subject to significant downtime from a number of factors, especially loss of Internet service, security breaches, loss of power, and equipment failure.

## **Services Required for an Internet Application**

While a certain level of “downtime” and spotty overall performance may be acceptable for a simple informational web site, most firms find that a higher level of service is required for a web-based application which they expect their employees – and clients – to use.

What do we mean by a higher level of service? It’s simple: greater CPU and storage (disk) performance to handle peak loads, greater Internet bandwidth to handle those same peak loads, and a redundant/reliable infrastructure to assure high availability. After all, what good is a useful and valuable service if it’s not available, or runs slowly?

To achieve this higher level of service, the following is generally required:

1. Redundant high-speed Internet connections
2. Backup power, with automatic switch-over
3. Professionally configured and maintained firewall and routers
4. Physical security, including monitored fire protection
5. 24x7 monitoring of application to assure availability
6. Regular backups, with off-site archival
7. Staff on-call 24x7 to respond to issues
8. Reliable high-speed mass storage (RAID array)

9. Regular database maintenance
10. Maintenance of your application and data
11. Regular application of security patches from vendors
12. Server(s) with hot-swap power supplies, hot-swap drive, redundant Ethernet interfaces, remote management, etc.

A third-party hosting facility will generally provide items 1 through 6 in the above list, plus item 7 as far as the basic infrastructure is concerned. Unless you already have a data center which provides this infrastructure, many firms find that co-locating in a third-party facility is a better solution.

## **More on Third-Party Hosting**

When you co-locate your equipment, the facility provides rack space for your hardware, power, cooling, Internet connectivity, security, backups, and basic monitoring of your hosts. The facility provides all of the infrastructure needed to achieve a high level of availability and protection against unexpected events. You typically provide your own server hardware, and are responsible for all installation and maintenance of your application and data. This means that you will generally be responsible for supporting your own application and data (item 7), as well as items 8 through 12.

## **How Third-Party Hosting can Make You Look Good**

When you self-host, your site is only as fast and available as your own Internet connection and servers. This means that if your own Internet connection has so-so speed (eg, DSL, or split T-1), or is less reliable than you wish, your web site will have the same problems. When you host elsewhere, your web site and applications will benefit from a high quality, fast Internet connection, and reliable infrastructure. If your own Internet connection or servers have problems, your customers won't be impacted, as they will continue to access the remotely-hosted web site.

## **How is Third-Party Hosting (Co-location) Different from “ASP”?**

A typical third-party *co-location* only provides the infrastructure to run your equipment. A hosted application, provided by what is often known as an Application Service Provider (ASP), is a completely managed application. The *ASP manages the application and data for you*. The use of an ASP is especially attractive to smaller to mid-side organizations that find it difficult to justify the internal staff and services required to operate, maintain, and support an application.

## **Specific Requirements for Hosting Quasar**

Quasar runs on a Microsoft platform, specifically Windows 2000 Server and SQL Server 2000. Any Intel-based machine which runs this base software can run Quasar.