



# A Virtual Sigh of Relief

In the current economic climate, saving money and increasing benefits is simply smart business. by David Nevala

**M**any of our firms have started to stem the proliferation of hardware in our server racks and have turned to virtualization for both organizational and financial relief. With good virtualization planning we may be able to condense four or more servers into one local hard server; but, even though virtualization has provided a path to reduce the number of these servers, current enterprise virtualization products still have steep labor, hardware and software costs associated with them.

## The Advantages of VPS Hosting

There is a confusing array of virtualization products and technologies on the market today, each with benefits and drawbacks. Local virtualization products like VMWare, Microsoft's Hypervisor, and Citrix's XenServer, are costly and still require real hardware. Cloud computing and SaaS (software as a service) technologies can carry unknown costs because their pricing is based on usage. Between these two competing virtualization concepts is yet another option called virtual private server (VPS).

## Outsourced Hardware

A VPS is simply a virtual server that is hosted off-site. A hosting company will install racks of hard servers, standardize on a virtualization technology platform like XenServer, create and configure virtual servers, and "rent" them for a flat fee on a

monthly basis. A VPS provides much of the same ultimate flexibility as a collocated hard server, but offers the convenience normally associated with remotely hosted websites. There are numerous VPS hosting providers, such as VPSLAND or Rackspace, that offer a virtual private server on the Internet at surprisingly low prices.

Software applications such as a website or e-mail gateway do not necessarily need to be hosted locally and are perfectly suited to be outsourced. There is benefit to keeping incoming public traffic off Internet connections for performance and security reasons, but contracting with software application service providers can reduce configuration flexibility and control of the application. A VPS allows firms to retain complete control of the application and server, but outsource the hardware.

## Purchasing a VPS

The process for provisioning a VPS server is simple. Visit the website of the VPS provider of your choice; choose a server with the appropriate operating system, memory configuration, disk space and bandwidth; and then choose the length of the contract. Pay with a credit card, and within just a short time, you can begin using your private server hosted on the Internet. A simple server with minimal RAM and disk space can cost as low as \$10 per month and, depending on other management type features and capacity, can run as much as \$150 a month. Compared to the price of a real server and its associated costs — rack space, provisioning, operating system, upgrades, cooling, electricity and disaster recovery system — a VPS can be a real bargain.

The VPS is controlled using a Web page console that has reset and power buttons, for monitoring and maintaining, turn-key applications, statistics and logging, security, hardware configuration, and other functions. Depending on the providers and plans, there are usually areas for helpdesk functions, disaster recovery and restorations, accounting and other features.

## A Case for VPS

About a year ago, we identified three services at Lukins & Annis that we thought were well-suited to run at a remote location on a single basic VPS server. Each of these services was non-interactive (hint: could run on a slow server and no one would notice), did not require extraordinary access to the firm LAN, and would provide additional benefit or advantage because of the remote location of the server. These applications included the e-mail gateway, server monitoring solution, and a remote assistance broker. Today these services all run on one Linux-based server for about \$15 a month. Remotely locating these services enabled us to achieve specific goals for each.

## E-Mail Security Gateway

**Goal:** To preserve our Internet bandwidth and increase security with the ability to scan and block unnecessary traffic and sessions from reaching the firm Internet connection.

We purchased a basic Linux VPS plan with 192M memory and a 6GB hard disk, and installed the MailScanner package on the CentOS distribution VPS server. MailScanner integrates the SMTP e-mail gateway, a virus scanner and spam scanner into a single reliable security package. The system was configured to ensure e-mail security by accepting and scanning all inbound e-mail messages for viruses and spam, and to then prevent undesirable e-mail messages from reaching our local Internet connection or internal e-mail server. The cutover was accomplished by changing our primary DNS mail exchange (MX) record to point to the new VPS mail server.

This configuration has worked well over the last year, and we have recognized a substantial decrease in data usage over our relatively small T1 Internet connection. The system requires minimal maintenance and provides many of the same features and benefits as other commercial outsourced e-mail gateways.

## Server Monitoring Service

**Goal:** To be able to easily monitor our Internet connection and public-facing services such as the firm website.

For the past five years our firm has run an internal Nagios monitoring service, but we lacked the ability to monitor critical public-facing services from the Internet. With the availability of the new external VPS, we were able to install the simple open source Hobbit monitoring package on the server along with Hobbit clients on the systems we wanted to monitor. Each Hobbit client behind the firm's firewall makes outbound

connections to the VPS Hobbit server via an SSL/HTTP connection and, as such, does not require any special firewall rules for the purpose of monitoring internal services and servers. The Hobbit server manages the clients based on the configured rule sets and generates SMS alerts in the event that a critical service goes down.

This configuration has saved us the expense of contracting with a third-party monitoring service. The Hobbit server provides a simple Web-based interface for status and updating alerts.

## Remote Control Broker for Helpdesk

**Goal:** To extend remote control to mobile users via a remote control session broker.

For many years we used VNC for remote control and internal assistance on the LAN, but it was difficult to extend this capability securely to mobile users outside the firewall. To address this, we purchased a branded version of the ShowMyPC software, which was compiled by the vendor to use as a session broker on the VPS. This only required a no-login SSH account to be created on the VPS for the purposes of building and connecting the remote control sessions. Users can launch a "help request" application from the firm website which creates a secure channel for the help desk to remotely control their computers.

We have avoided the considerable monthly expenses typical for commercial remote control session brokers by using the branded ShowMyPC applications. This has worked very well for us.

## Future Applications for VPS

There are many other applications which are well-suited for a VPS like the firm public website, a "drop-box" (used for sending large files not supported by SMTP), a honey pot system, disaster recovery and backups. At Lukins & Annis, as hard servers are retired, or new ones contemplated, we are evaluating each application and service for its adaptability to a VPS or cloud. In the current economic climate, saving money and increasing benefits is simply smart business. [ILTA](#)

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