

Lower Software Costs With Virtual Appliances

By Bill Spallino



The term “Virtual” permeates the technical lexicon today. You have Virtual Reality, Virtual Businesses, and even the Virtual Workplace. If ever there was a well-worn moniker, this is it. But, this month’s article is going to explore a Virtual arena that can mean big savings and operational improvement to the small enterprise – Virtual Appliances.

In a nutshell, a Virtual Appliance is a computer application that is, and pardon me for mixing metaphors, “ready-to-wear,” right out-of-the-box, so to speak. It permits users to skip a most of the most complex installation steps and delivers an application that is completely ready to use. But to fully understand Virtual Appliances, you need to have an idea of the general concept of virtualization first.

Virtualization

Virtualization, using software like *VMware*, *Xen*, and *Hyper-V*, basically allows you to create numerous installations of the operating system, like *Windows* or *Linux*, on one physical computer. Think of it like several little computers running inside one larger one. Virtualization software separates the hardware and the operating system, allowing a number of systems to occupy the same computer. Without going into too much technical detail, it basically turns one computer into many “Virtual” ones. (See Fig. 1, below).



Fig. 1

So what does all this have to do with small business?

Ok, granted, this type of discussion seems geared toward a billion dollar company with gazillions of computers or IT Managers, right? Well, not exactly. Because, along with all of the improved utilization of hardware, power, and other resources, comes a simple, yet elegant side effect. Each of these “virtual machines” now really can be thought of as data, instead of physical hardware, and completely configured “system” can be simply backed up and restored and you have a new, complete, functioning system.

This means no more feeding CD after CD and providing endless information to set it up a new computer. Further, smart people realized that you can create an installation, save it, and you can now run it anywhere in the time it takes to copy it from disk or over the network. Ever installed Windows on your home PC? What a pain. Format the hard drive, insert the install disk(s) and pray you have the latest drivers. Not with a virtual machine - just copy the latest version of the system into the correct directory and, viola, you have a running system!

Taking this idea one step further, people began installing clean, “out-of-the-box” versions of their applications onto a Virtual Machine and storing them. Software vendors and Open Source developers began to install and configure their applications as Virtual Appliances, so that they are ready to use, and offering them for download.

The Virtual Appliance

Okay, as we discussed earlier, you’ve probably experienced the pain associated with installing even simple Windows applications. When you start talking about “enterprise” software, the installation process is even more complicated, particularly when there is a heavy dose of ancillary components required, like Tomcat, Java, and databases. Use of Virtual Appliances removes these steps from the process.

With a Virtual Appliance, or “V-App,” someone else has already taken the time and trouble to implement the software on a particular version of an Operating System and ensured that all components are installed and configured properly. Once downloaded and unzipped as a Virtual Machine, simply starting up that Virtual Machine brings up a fully functioning application, ready to go.

For example, last month, we talked about the *Zoho CRM* system, which operated as a “Software as a Service” or SaaS offering. One of the major competitors to Zoho is a product called *SugarCRM*. *SugarCRM* is a true “Open Source” software application, which you may recall, means it is “Open” to the general public and, therefore, free. However, it runs on the Linux operating system, which can sometimes be painful to install for even crusty old IT veterans. In addition, *SugarCRM* itself is sometimes difficult to install as well.

To install a version of SugarCRM for comparison purposes, I searched Google for “SugarCRM Virtual Appliance,” found one, downloaded it, copied it to the Virtual Image directory, and started it. In a matter of probably 15 minutes, I had a fully functioning version of this software.

Are All Virtual Appliances Created Equally?

No, they’re not. You rely on the entity that assembled it to have done a good job, and that’s not always easy to assess. Also, if you remember from last month, we’re looking at primarily “Open Source” applications (which, among other things, means “Free”). So you probably aren’t going to find your favorite Microsoft apps deployed as Virtual Apps (although this isn’t always the case). The problem is that this model breaks down a bit with MS products because of licensing.

However, I have found that just about anything I need to do for my clients has a virtual App associated with it.

Here are some examples:

- Accounting / ERP (Enterprise Resource Planning), like *Openbravo*, *Compiere*, *Adempiere*;
- CRM such as *vTiger*, *SugarCRM*,
- CMS (Content Management Systems) – *Joomla*, *Drupal*, *Wordpress*,
- Project Management – *Redmine*, *Trac*, *ProjectPier*,

There's also a host of database, development, and Microsoft replacement systems.

A great *Microsoft* replacement is a V-App called "*Zimbra*," which replaces "*Exchange Server*." This product allows small companies to setup a distributed email and collaboration system similar *MS Exchange*, but, for small companies, is **free**. This product will allow you setup a "catch all" email address at your Web Hosting company, like *@yourdomain.com, pull all the emails into it, then distribute them around your company to specific names, like "you@yourdomain.com" or "him@yourdomain.com". It gives the appearance of a large corporation without the attendant cost and hassle of setting up *Exchange*.

It also comes at a great savings and is, as I mentioned, more robust. A 25-user implementation of *Microsoft Exchange* can run from between \$2500 and \$4500, where as a more robustly equipped *Zimbra Server* installation, if using existing hardware, is again, free.

Also, *Zimbra* is easier to maintain, phenomenally easier to extend, *really* supports internet standards, you get the source if you'd like to make your own alterations, the web interface is richer, the support is more reactive, releases come multiple times per year instead of once per multiple years, the IMAP server is richer, it runs on non-Windows servers, gets better performance with the same hardware, you can enter your own feature requests, and the company actually pays attention (try contacting *Microsoft* sometime and requesting some special modification!)

To sum it up, Virtual Appliances can provide quick, easy to understand, robust applications in almost no time at all, with all the functionality and power previously reserved for big-budget corporations.

About the Author – Bill Spallino is the President and CTO of Web Resource Solutions, a leading Web & Application Development and IT Management consultancy located in Orange County, California. Bill is a 30-plus year veteran of the Information Technology industry, and has served as a developer, network and systems administrator, project manager, and CIO for large corporations like Heinz, Transamerica, and Nissan, as well as numerous smaller concerns. His current focus is on providing strategic IT services to Small and Medium-sized businesses.

Web Resource Solutions specializes in assisting small and medium-sized businesses in establishing virtualization environments and installing, configuring, and implementing a whole host of Virtual Appliances. If you're interested in capitalizing on the power of Virtual appliances, contact us about a Free Evaluation. We can show you how you can run enterprise level applications on a small company budget.

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