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ISVs Meet Customer Needs with Stable, Reliable Physical Appliances

How ISVs Can Add Physical Appliances to Their Product Lineup

Since 2006, virtual appliances have been growing as an alternative to the hardware appliance solution. Some experts believe the virtual solution is better than the physical. But not all customers would agree. ISVs can take advantage of physical appliance demands by adding hardware manufacturing to their product offerings without investing in the infrastructure.

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Physical Advantages Address Virtual Challenges

Virtual appliances have gained significant ground in IT data centers. But, some IT managers still favor physical appliances for some workloads. There are many reasons.

Virtual environments, however popular, can create more complexity in the overall configuration than dedicated hardware. Increased complexity usually means increased risk for something to go wrong and increased time and cost to solve problems. Dedicated solutions on the other hand, can be simpler to deploy and service, and offer confidence in the overall system environment.

Deployment

Setting up a virtual appliance, even if delivered in the Open Virtualization Format (OFV), requires more work than the simple plug-and-play and scripted configuration of a hardware device. While the supplier of the virtual appliance may provide an installation wizard, the installer must have knowledge about what is already present in the virtualized platform to ensure the new appliance will run as expected.

Dedicated devices often turn out to be a simpler solution for IT departments. Technicians already have a lot to manage with data center systems, mission-critical software, and supporting users. Thus, IT departments with large networks prefer the simple plug-and-play aspect of a physical appliance.

Randy Laudermilk is Product Development Manager at SAINT Corporation, a leading network security company that provides both virtual and physical appliance solutions to customers. "Our customers often want a dedicated, pre-configured hardware solution," says Laudermilk. "That's because dedicated hardware simplifies the setup typical of self-installed software. It also allows tracking total cost of ownership of their security investment and lowers overall risks associated with sharing hardware with other software. Those risks can be critical, as in the case of a vulnerability exposure that can create unintended consequences or allow a hacker access to our solution and sensitive content, or create a performance impact as a result of the host's configuration."

Resource Availability

Shared resources can affect all virtual machines (VMs), including the VM running the virtual appliance software. So, the installer needs to be aware of what resources are available and what else is running on the server to reduce the risk of software crashes and errors. Aspects to be aware of include the following:

- How much memory is available for normal run time (i.e., memory not dedicated to other VMs)?
- How much memory is still available during peak workloads, when memory is bursted on different VMs? Is there enough for the new appliance?
- Can the environment support the network and storage I/O the new appliance demands?
- Are there underlying security or other vulnerabilities in the environment?
- What other services are running in the environment and will any services conflict with the new appliance?
- Does the hypervisor provide dedicated or shared resources? In some hypervisors, virtual CPUs are dedicated and cannot be shared with other VMs, as in other environments.

With dedicated hardware, customers can specify at order time a configuration for their specific needs, such as memory, cache, storage, etc. They can ensure the system offers the resources required to do the job within the infrastructure, even if it needs to scale. "With the low cost of high-performance commercial-off-the-shelf hardware, and the ability to configure it easily, the actual cost of the hardware becomes less of an issue than it did years ago," says Laudermilk.

System and Technology Management

A large number of virtual appliance ISVs deploy their software on Linux*, since it's re-distributable with minimal or no cost to do so. Many small to medium business IT departments are dedicated to a Windows Server* environment. Thus, deploying a virtual appliance on Linux requires someone in the company to be familiar with the environment, including the OS and the hypervisor. Choosing the physical appliance over a virtual appliance becomes a simple decision to eliminate the cost and time involved in learning and supporting unfamiliar technologies in-house.

Vendor Troubleshooting

With the new virtual appliance becoming part of a community of VMs, possibly managed by different people, maintenance can become much more complicated. According to Laudermilk, "When our solutions are deployed in a virtual environment, our support staff must deal with much more than just our system when it comes to troubleshooting. Sometimes, our technicians find themselves having to troubleshoot problems in someone else's technology, in another VM that affects our virtual installation. And, that slows down time to resolution, especially when someone else must first fix their VM."

Patching, updating, and supporting a hardware appliance can be less complicated for the vendor, and thus easier to maintain, especially through remote access. Since the hardware system is a closed environment that the vendor support staff is familiar with, troubleshooting and updates become more straightforward for technicians compared to a virtual deployment. That familiarity helps accelerate the process of returning a problem device to compliance.

Intel® Servers Create Stability for Appliance Manufacturers

With these advantages of physical appliances over virtual solutions, it is not surprising that some customers prefer a physical device. For the ISV, providing physical systems can offer a new vector for revenue generation. But, as software providers, they are faced with many questions on how to execute manufacturing when they are not a manufacturer:

- How do I manufacture a solution?
- How do I select a hardware platform that is stable, cost effective, and meets my requirements?
- How do I support the hardware with my limited staff?
- How do I warehouse product and deal with inventory and repairs?

Many ISVs, like SAINT, stick to their core competencies in developing, marketing, and supporting their code. Yet, they are still able to meet their customers' needs with a physical solution by using manufacturing services, like Patriot Technologies, Inc., an Intel® Technology Provider.

Manufacturing Solution for ISVs

When SAINT planned for the launch of their next-generation security appliances, they turned to Patriot Technologies. According to Randy Laudermilk, when it came to building a hardware appliance to meet customer demands, Patriot Technologies had the reputation, expertise, and convenience of location to SAINT's offices. The quality of the business relationship and the feedback from Patriot's customers offered compelling reasons to work with them.

Patriot is a manufacturer of physical products for ISVs. "An ISV doesn't have the mechanical and manufacturing expertise in place to create hardware appliances," says Chris Bortner, Director of Sales for Patriot Technologies, Inc. "We help them create solutions to deliver physical products. We provide everything to our customers, from sourcing to logistics, manufacturing, demo units, branding, and support and repair. Customers pick and choose the level of involvement they need from us."

Intel® Servers – Stable, Reliable Appliance Foundation

Patriot recommended Intel® servers based on the Intel® Xeon® processor family because of the performance, reliability, and stability Intel builds into their systems. Greg Meythaler is an Intel Product Marketing Engineer with Intel Server Group. "Our latest generation of Intel Servers featuring the Intel Xeon processor E3 product family allows Intel's customers to provide an affordable, high-performance solution with the proven stability and reliability their customers, like SAINT, need," says Meythaler.

Bortner adds that by selecting Intel servers, Patriot could provide a stable hardware platform for SAINT's appliances, which helps reduce customers' total cost of ownership (TCO) and improves manufacturability and support. "Without a stable platform, a hardware manufacturer supplying an ISV might make changes in its product line that require the ISV to modify its software before the solution can ship. That can get costly."

According to Bortner, Intel considers their server boards and systems as building blocks in solutions created and integrated by the ecosystem. Therefore, Intel has stability, version control, and long-life built into their server design, manufacturing, and support processes. Intel works with companies like Patriot by providing road maps, so integrators can chart their customers' product evolution to the board and software they will be installed on. "It allows us to provide the stability our customers need," says Bortner.

> "Patriot is an Intel partner because of the capabilities Intel processors enable for our customers and the ability to marry those processors with the broad feature set, stability, and support capabilities offered by the Intel server product group. These capabilities allow us to deliver leading-edge solutions for all our customers."
>
> *Chris Bortner, Director of Sales, Patriot Technologies, Inc.*

Conclusion

In many cases, customers prefer physical appliances over virtual solutions for the benefits of deployment, confidence in the environment, ease of management, and efficient vendor support. ISVs needing to deliver physical solutions while focusing on their core competencies can turn to manufacturers, like Patriot Technologies, Inc., to fulfill their customers' needs. Intel Servers based on the Intel Xeon processor family provide a reliable, stable foundation for physical appliances. Intel's approach to supporting manufacturers and ISVs helps ensure long, stable product life for ISVs.

For more information about SAINT Corporation,
visit www.saintcorporation.com

For more information about Patriot Technologies, Inc.
visit www.patriot-tech.com

To find out more about Intel Servers,
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