



Going (and saving) **green** with virtualization

THERE HAS BEEN a lot of hype about “green IT” over the past year. And while most people support the idea of reducing the impact of computing on the environment, we all know there is another kind of green that is always front and center for every IT organization: its bottom line.

The good news is that you don’t have to choose between the two. It turns out that a lot of environmentally friendly initiatives—such as reducing power consumption, and consolidating and virtualizing existing resources—are also budget-friendly.

Reducing Power and Heat

The easiest way to reduce the impact of any device on the bottom line is to reduce the amount of power it requires. Modern devices are often able to draw variable amounts of power, which helps reduce operating costs but makes it hard to estimate expenses and budget appropriately.

Another issue is how many BTUs a device generates. Fewer BTUs means less heat, so less cooling is required. Since cooling is a major expense in the data center, cutting back on BTUs can have a big impact on operating expenses.

Of course, once you purchase a

device, you must deal with its power consumption and BTU generation characteristics. These are simply the costs of doing business.

So, how can IT get a handle on these expenses? The opportunity lies not only

in purchasing decisions, but also in architecture. Consolidation and virtualization are the keys.

Capacity Meets Consolidation

All the talk about consolidation of data centers generally revolves around reducing the number of servers needed to support mission-critical applications. Clearly, minimizing the number of servers decreases power consumption and heat generation.

Yet capacity needs must be balanced with consolidation efforts. As the volume of users and application usage grows, the number of servers—and devices such as Application Delivery Controllers—required to scale mission-

	Layer 7 CPS	Watts	CPS Per Watt	BTUs
LEGACY CHASSIS	58,000	4,620	12	15,763
NEW CHASSIS MODEL	1,260,000	1,463	862	4,991

Figure 1: Comparison of performance per watt for legacy and new chassis model Application Delivery Controllers. (CPS = connections per second.)

critical applications grows as well.

What is needed is a solution that provides the ability to scale without adding more power-hungry and heat-generating devices: a single, chassis-based Application Delivery Controller that scales using a virtualized, bladed architecture. This solution increases capacity without adversely impacting IT's bottom line—or the environment.

Visualize Virtualization

The new breed of chassis-based Application Delivery Controllers virtualizes not only at the server level, but at the chassis and blade levels. This creates a single, powerful processing matrix that can scale almost linearly. Every last drop of processing power is used, providing a much higher capacity than solutions using multiple appliances or legacy chassis models.

This highly efficient use of processing power increases the performance per power unit. Each transaction processed costs a fraction in power consumption, which is good for the environment as well as the budget.

The higher performance capacity of the new chassis model also means you need fewer devices to meet growing traffic management and application delivery needs, for a lower cost of operation.

In addition, simplified management reduces the costs associated with managing the device. With a virtualized architecture, the device—and the IT manager—manage the system as a single entity, rather than as individual blades.

This is especially true as capacity is added. It would take multiple legacy chassis-based devices to match the processing power of a single virtualized chassis-based system. Each additional device adds management time, power consumption, and BTUs generated, making it much more expensive to scale.

It's rare that a movement such as green IT results in reducing costs, especially in its early stages. Yet the new breed of chassis-based Application Delivery Controllers shows it is possible to both go green and save green. ✱

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DevCentral updates

Unveiling VIPRION

What happens when the DevCentral team gets our hands on a new VIPRION Application Delivery Controller? Well, we load up the video camera and take you along for a tour of this all new, chassis-based monster. We also steal a few minutes from one of the key VIPRION architects as part of our weekly podcast and talk about physical characteristics, blade management, performance details, how it was tested, iRule and persistence optimizations, and more.

To watch the “VIPRION Unboxed” video and listen to the DevCentral Podcast interview, please visit: www.f5world.com and follow the links.

Blog Zone

The DevCentral Blogs provide an excellent way to keep up with the latest thoughts, news, and ideas from the DevCentral team.

Here are just a few entertaining posts:

SOA Governance: Process not Product

“Did you ever notice that ‘governance’ and ‘compliance’ have the same nearly ominous tone to them? It's as if they should be preceded by some dark music normally associated with a Vincent Price movie. The two are also similar in that they both focus on process, not product.”

iRules: Ask and Ye Shall Receive

“What it sounds like is that Erik [Erik Daforn, The ClickZ Network] is really asking for tools that make it easier to configure web sites and, more specifically, how

web servers respond to requests. What's interesting about his list is that most of his wish list can easily be answered with the implementation of a simple iRule on BIG-IP Local Traffic Manager.”

There's a New Search Kid in Town

“We've had search implemented in one form or another on DevCentral since its inception, but we've struggled with the accuracy and coverage of results. So with no further ado, I'd like to introduce you to the new integrated search on DevCentral. One of the added features is that we can easily include external content such as, for instance, the tcl documentation. Oh, and we now support searching protected content in the wiki and forums...”

Delivered in either full-fidelity browser-view or simply RSS, please visit www.f5world.com for info on how to get your regular dose and to see more of the above entries.

Community Contributions

Every week, our incredible community of experts contributes something new to share with DevCentral members around the world. Do you have a cool sample to share? Post it in the DevCentral CodeShare.

Here are a couple of recent highlights:

Tech Tip: Monitoring: Building Cacti to Graph your F5 BIG-IP LTM Traffic

Member “citizen_elah” contributed an excellent tech tip on how you can utilize Cacti to monitor BIG-IP LTM global traffic, virtual server traffic, interface traffic, memory, and CPU utilization.

iRule Sample: Make BIG-IP Request a Client Cert and Pass to Application Code

Contributed by “alankila,” this iRule differs from other examples used for dynamically requesting a client cert by actually passing the x509 cert to the server for custom HTTP header processing.

To post your own tip, or to learn more about the two above, please visit: www.f5World.com and follow the links.

