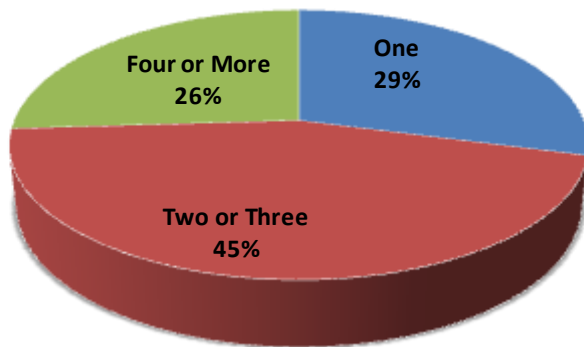


## Survey: Plenty of x86 Virtualization Diversity

Virtualization, particularly when applied to x86 systems, is the biggest data center game-changer in the last decade. In our **2010 GCG x86 Server Vendor Preference** survey ([details here](#)), we asked our respondents plenty of questions about virtualization – including how much they’ve virtualized, whether it’s paying off for them, and their future plans (if you’re curious about those results, [click here](#)).

For the first time, we also asked them which virtualization mechanisms they’re using and found some very interesting results – briefly, that x86 data centers are very diverse places when it comes to virtualization. Here’s the lowdown:

**"How many different x86 virtualization packages is your organization currently using?"**



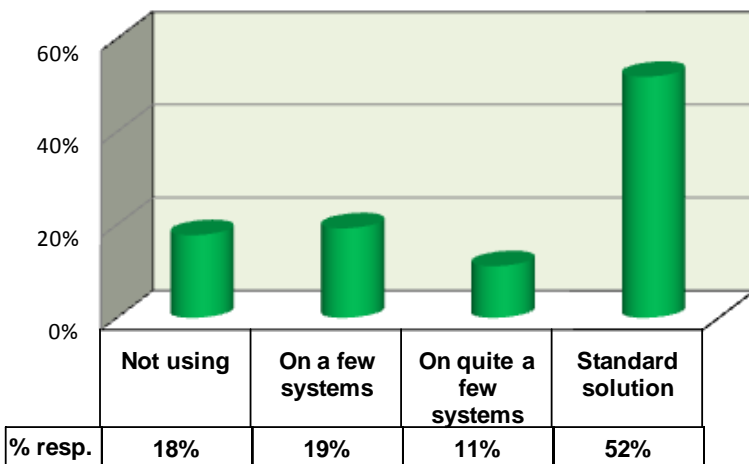
We were surprised to see so many customers using so many different virtualization mechanisms. 70% of the survey base is using more than one tool, and more than a quarter of them are using 4+ tools.

Why?

Qualitative responses give us two explanations. The first is that they’re still tire-kicking and trying out different options. The second is that they’re matching up certain virtualization tools with specific tasks and needs. Given this, we see customers continuing to run multiple tools.

So which packages are most prevalent in the x86 data centers we surveyed? Here’s the breakdown:

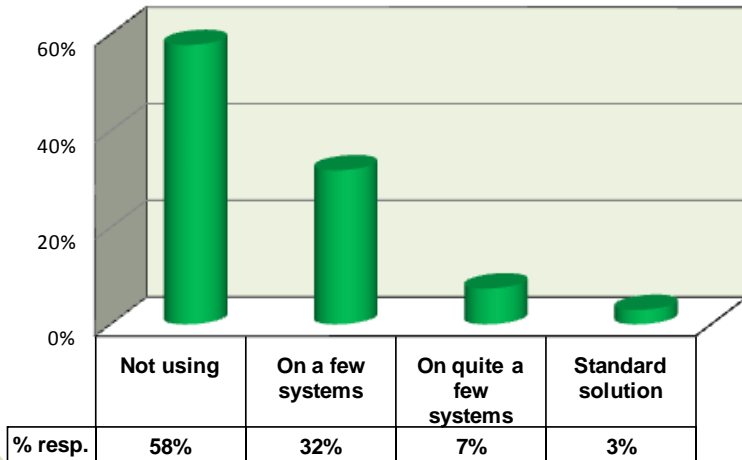
**Virtualization Vendor Preference: VMware**



If virtualization were a house, VMware would be the 800-pound gorilla dominating the living room. Fully 82% of our virtualizing respondents have at least some VMware in their organizations.

More than half see VMware as their ‘standard solution’ and, assumedly, their first virtualization option for new workloads. But VMware isn’t dominant across the board; 20% of our respondents don’t use VMware at all.

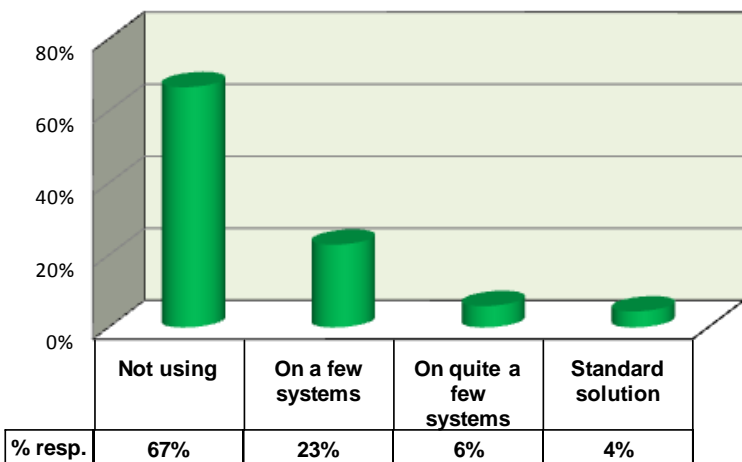
### Virtualization Vendor Preference: Hyper-V (Microsoft)



The second most prevalent virtualization tool in our survey is Microsoft's Hyper-V. Though late to the virtualization game, Hyper-V has built a following based on ease of use, a solid feature set, a very low price, and the massive Microsoft-centric user base.

While we thought we might see Hyper-V primarily in SMB data centers, survey respondents of all sizes said that they're using it on at least some systems. It still has a long way to go, given that only 3% report that it is their standard solution.

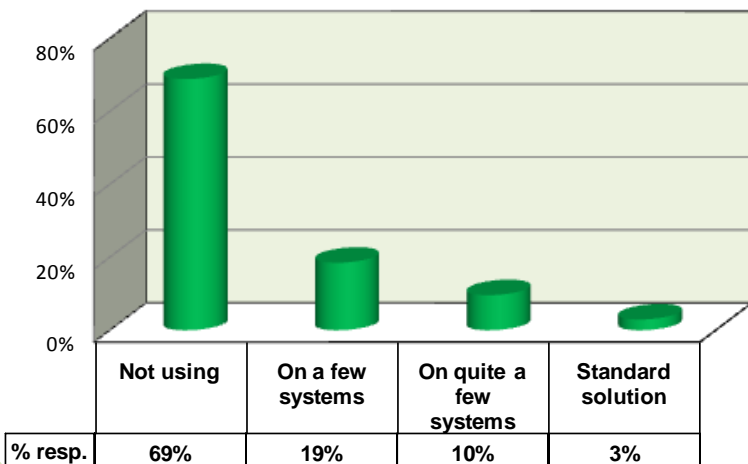
### Virtualization Vendor Preference: Xen (Citrix)



About 1/3 of our respondents are using the Citrix flavor of the open-source Xen virtualization suite. Only 10% say that they are heavy users.

In terms of branded Xen, Citrix is ahead of Oracle/Sun and other minor players. We believe that Citrix is well positioned to build a solid virtualization business, but they need to do more on the product development and marketing fronts in order to gain mindshare vs. VMware and Microsoft.

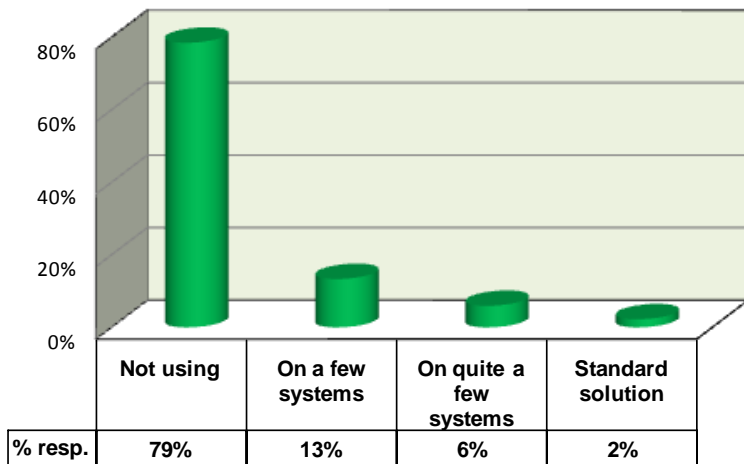
### Virtualization Vendor Preference: KVM



KVM is the next most prevalent virtualization mechanism with our enterprise customers; 31% use it in some capacity. We believe that the survey probably understates KVM usage. KVM is incorporated into RedHat and other Linux variants, so there might be a significant number of respondents who are using KVM but don't know it.

KVM is rapidly gaining mindshare due to major vendor support and their cloud capabilities. It will be interesting to check on their progress in 2011.

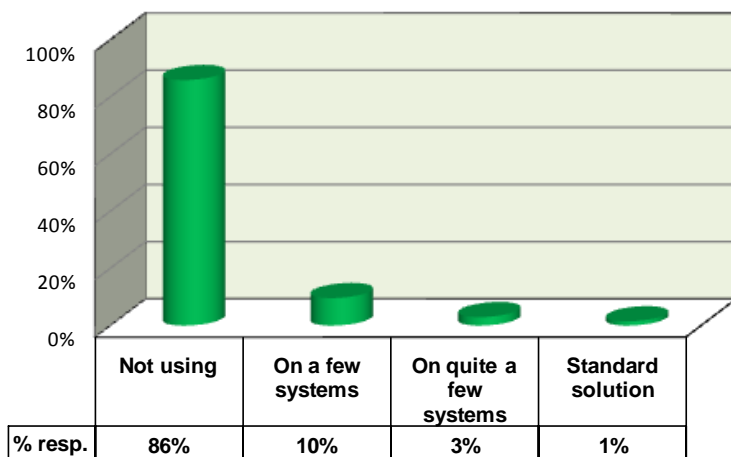
### Virtualization Vendor Preference: Xen (Sun Microsystems)



The Sun Microsystems version of Xen, dubbed VirtualBox, has been renamed Oracle VM VirtualBox; the fourth generation of the product was recently released.

While more customers are using this than the Oracle VM virtualization tool (results below), the numbers are still pretty small. Only 21% of our survey respondents have it in their data centers, and it's the standard solution for only 2% of these folks.

### Virtualization Vendor Preference: Xen (Oracle VM)



Even though Oracle databases and applications are widely used, Oracle has yet to see a lot of these customers using their Oracle VM Xen virtualization variant.

Oracle VM is a bare-metal hypervisor that supports a wide range of x86 operating systems, and it's the only virtualization mechanism that is fully supported by Oracle. The company bills their offering as highly available, and touts research showing that it's 3x faster than competing products. At this point, it doesn't look like customers are buying into the story.

Some might be surprised to see that customers are utilizing such a wide range of x86 virtualization mechanisms, but it makes sense when you consider the fact that each of these virtualization tools has unique strengths and weaknesses that make it more or less appropriate for particular purposes. We believe that this virtualization diversity will persist, although we might see some shake-out along the way.

If you're interested in finding out more about this survey (demographics, expanded/historical results, detailed GCG analysis), [click here](#).

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