

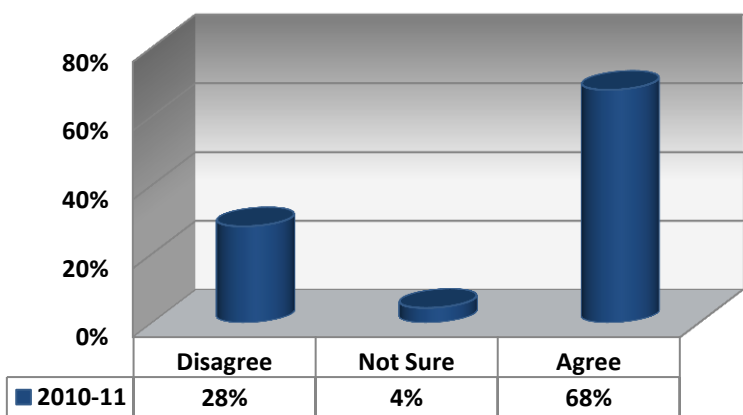
## 2010-11 Unix Survey: Is Virtualization Hitting the Wall?

One of the biggest game changers in IT has been the advent of virtualization. Back when Unix systems first hit the scene, the usage model was very much a one-application-per physical-server formula. Each new workload would add multiple physical systems: at least one box for test, one for development, and one or more for production. The ability to safely run multiple workloads on a single physical server finally came to the Unix world in the late 1990s and early 2000s.

Unix customers embraced virtualization in a big way over the past several years and agree that it's helped them get more for their money. However, we're seeing signs that the virtualization train may be slowing down as customers experience the underside of this new usage model.

Results from our **2010-11 GCG Unix Vendor Preference Survey** (methodology and demographics [here](#)) show that customers are mostly satisfied with virtualization, but progress is stalling as they find that the reality of living with highly virtualized systems might not match up to the promise.

Virtualized 50% or More of Unix Systems

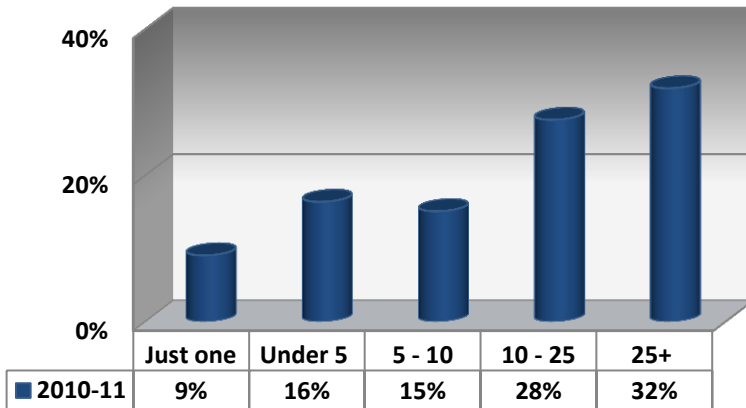


Nearly 70% of our survey respondents are running multiple workloads on at least half of their commercial Unix systems. This is an increase over our 2009 results, when 63% said they had reached the level of 50% or more.

Taking into account that these Unix systems are running mission critical enterprise applications, it's clear that customers put a great deal of trust in the virtualization mechanisms that are now deeply integrated into these systems.

We're seeing a rise in the number of virtualized Unix systems vs. non-virtualized boxes, but this doesn't tell us how heavily (or lightly) customers are loading the systems. We asked a few questions to find out...

### Workloads on Most Highly Virtualized Unix System

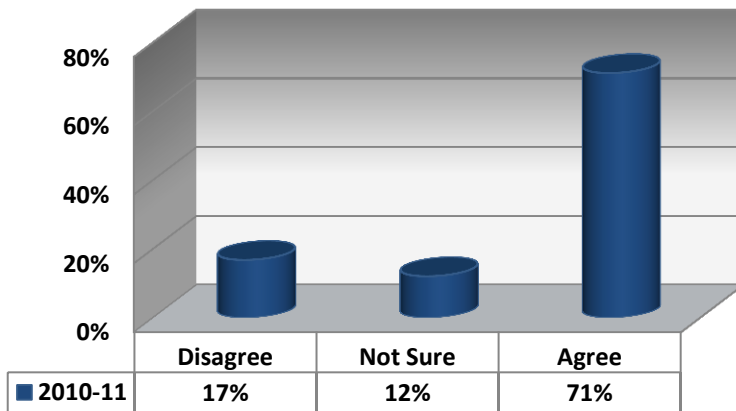


We asked about the virtualization levels for respondents' average small, mid-range, and large Unix systems. The numbers of workloads on each have been steadily climbing.

On customers' most virtualized systems, 60% run 10 or more workloads, and 32% run 25 plus. Last year just over half of our respondents ran more than 10 workloads, and 28% ran more than 25 on their most highly virtualized server.

In addition to tracking how much virtualization is occurring on Unix systems, we also wanted to gauge how much benefit customers are getting from virtualization – and their level of satisfaction with the usage model.

### Unix Virtualization Benefit: Higher Utilization Rates



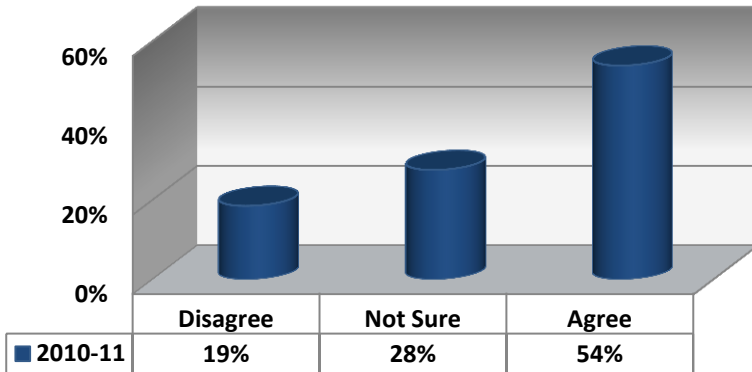
It's pretty obvious that higher hardware utilization is one of the key benefits of virtualization, according to our respondents. Higher utilization on each server results in fewer physical systems, although they may be more robustly configured.

This is the typical pattern with Unix systems: fewer, but bigger, boxes hosting a number of applications. This can yield a TCO benefit since larger systems are less expensive per MIP, but at a higher price tag.

However, we're seeing signs of trouble in Virtualization Land. We've been tracking a set of virtualization satisfaction factors with respondents who manage x86 and Unix infrastructures for several years now. As virtualization caught hold on both system architectures, we saw steadily increasing levels of satisfaction on measures like cost savings, lowering the management load, and helping IT hit service requirements.

But we've seen this trend slow in recent months on our most recent x86 survey (2010) and on this Unix survey. In fact, on some measures, we see virtualization giving up ground vs. non-virtualized systems.

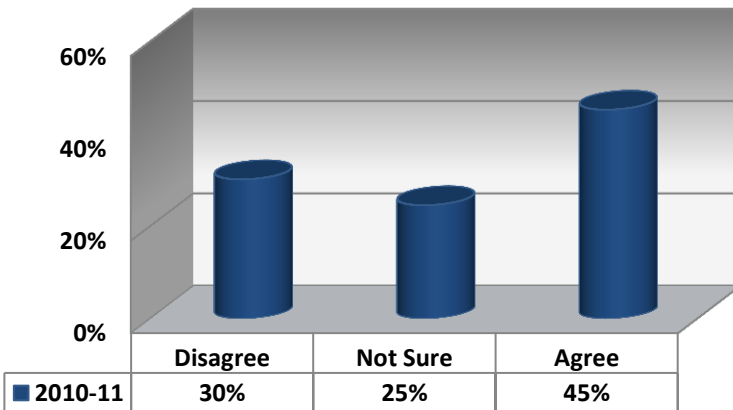
**Unix Virtualization Benefit: Easier to Meet SLAs**



Barely over half of our respondents say that virtualization makes it easier for them to meet their service level requirements. This is a slight increase over the 51% from our '08-'09 survey, but a reduction from the 57% we saw in 2007.

Integrated workload management in Unix virtualization mechanisms should significantly help customers hit SLAs, but either customers aren't using them, or there isn't enough feature/functionality to get the job done.

**Unix Virtualization Benefit: Easier to Manage**

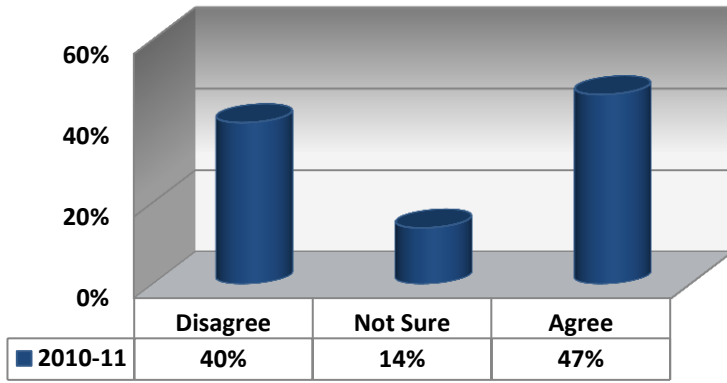


Fewer than half say that virtualization helps reduce management chores. Last year 60% agreed that virtualization aided systems management, so this year's result is a very significant drop.

The trend isn't exclusive to Unix; this score also dropped on our x86 survey. Seeing that happen on both platforms, plus the magnitude of the drop, leads us to believe that this is no aberration – it's a clear signal of customer frustration.

A majority of customers do see Unix virtualization saving them money, but not quite as many as in previous years. When we cut the data to isolate customers who are primarily using a particular Unix brand, we do see some variability in the results. This indicates that there are differentiation opportunities for the Unix vendors on virtualization – against each other and when compared to, say, VMware on x86 platforms.

**Virtualized Unix will become our standard Unix usage model**



This is also the first year when fewer than half of our respondents said that virtualized Unix would become their standard usage model. For the vast majority of respondents, it already has; they're almost all running multiple workloads on their systems.

However, it's obvious that they're not nearly as happy about it as they were in years past, and they aren't seeing the level of benefits that they expect from virtualized Unix.

The pattern in these results is pretty clear: virtualization is advancing, and there are more workloads being hosted on fewer physical boxes, yet customers see diminishing returns. As virtualization increases it's becoming more difficult to manage and monitor workload activity, thus making it more difficult to deliver business value. In other words, the bloom is off the virtualized rose.

But where there's frustration, there's opportunity. System vendors and/or IT management vendors are supposedly riding to the rescue with tools that help reduce VM sprawl, or at least manage it better. But at this point, it looks like either customers are not yet using these tools, or the tools aren't delivering as promised. We need to see some advances on the management side in order to get virtualization back on track.

In this section of the survey we also asked how our real-world Unix folks feel about cloud computing. Are they clouding up their data centers? If so, what do they expect to get out of it? You can find those results [here](#). If you're interested in finding out more about this survey (demographics, expanded results, detailed GCG analysis), click [here](#).

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