

2Q'07 x86 Server Vendor Preference Survey Summary

This report is the first public release of results from our 2Q'07 x86 Server Vendor Preference Survey. The survey asked 297 enterprise x86 customers to rate and rank the major vendors on a wide range of technical and customer support criteria, and to give us their take on trends impacting x86 data centers. In this paper, we focus primarily on results from the Vendor Face-Off section of the survey. Upcoming reports will do deep dives into specific vendor (Dell, HP, IBM, and Sun) market positions, along with findings on other IT issues.

Four major vendors – IBM, HP, Dell, and Sun – are engaged in oftentimes brutal head-to-head competition in the x86 server market. As vendors race for the biggest piece of the pie, customers are faced with conflicting claims and constantly changing technology. We believe the best way to track technology advances, figure out which new technologies are actually beneficial, and assess shifting customer perceptions about the major vendors is to go directly to the data center for answers via our ongoing Server Vendor Preference Surveys.

GCG began surveying x86 customers in 1Q'06. From the end of 1Q'07 through 2Q'07, we surveyed more respondents than ever – 297 total – on the widest range of topics and questions to date. (See appendix of this paper for demographics.) These are real-world enterprise customers who work with the systems – IT managers, architects, and administrators. They're intimately familiar with what's happening on the data center floor and can tell how they're dealing with current problems and what they plan to do in the future. As you'll see in the demographics data, 83% of our survey participants have servers from three or more x86 vendors, and almost a third run systems from five or more x86 vendors. This makes them supremely qualified to rank, compare, praise, condemn, and generally nitpick Sun, Dell, HP, and IBM.

You'll notice that we use something called a VPI (Vendor Preference Index) score in the charts. The VPI compares the number of 'votes' a vendor gets to the number of respondents who said they have standardized on that vendor. It sounds a bit complicated, but it's actually a very simple calculation designed to level the playing field between vendors and remove respondent bias in the survey. A score of 100 on any given question is 'par', meaning that the same number of customers who have standardized on a particular system also 'voted' for that vendor on that question. A score significantly under 100 is not so good, because it means customers who have standardized on systems from one vendor voted for another vendor. A score significantly over 100 is, of course, great. This method allows us to understand how participants rate server brands against each other, not just measure how prevalent each vendor is in their data centers. A full explanation of our scoring and methodology can be found in the appendix of this report.

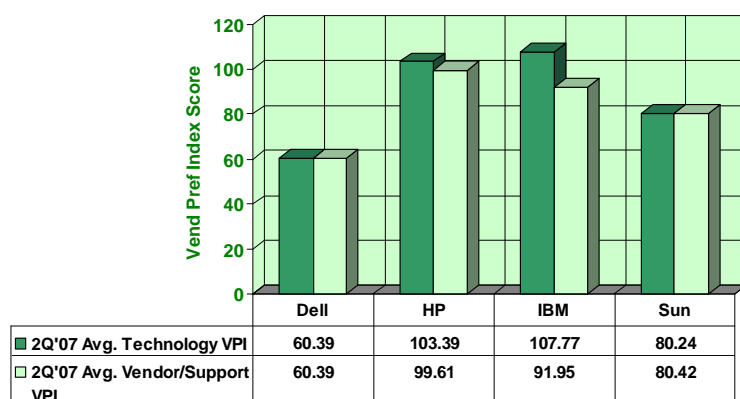


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Our overall Server Vendor Preference survey is broken into several sections. Some cover IT trends and usage patterns, and others examine customers' perceptions of differences between vendors. A deep dive section tests customers' loyalty to their favorite brand.

This report focuses mainly on results from the Vendor Face-Off section of the survey. Subsequent reports will explore x86 customers' future purchasing plans, their approaches to the current virtualization trend, their assessments of power and facilities challenges, and even how they view the battle between Intel and AMD.

2Q'07 Vendor Face-Off Results



The Vendor Face-Off section of the survey is designed to give customers a chance to rate the vendors head-to-head. The chart at left shows the overall Vendor Face-Off results from 2nd quarter 2007.

It's clear that customers see HP and IBM as the market leaders. The race between IBM and HP has become even tighter this year, with a slight lead for IBM overall on the strength of their performance in the technical categories. HP has the edge in the customer support categories, as

we'll see in more detailed results below. Both companies have significant leads over Sun and particularly Dell in the overall results.

Sun turns in a respectable third place finish, with scores in most categories about the same as last year. We continue to be impressed by just how many customers have Sun x86 gear in their data centers; we weren't sure that we'd see enough Sun responses to be able to include them in the survey. Even more surprising is how consistently Sun is ranked ahead of Dell on almost every survey criteria. This is pretty good progress for a vendor who has only been in the x86 server market for a few years and still offers a limited product line.

Dell is still mired in fourth place, receiving low scores from our enterprise customers on most criteria with little change from last year. Some of this may be explained by the fact that this survey was in the field in 2Q'07, during a protracted period of bad Dell publicity concerning both financial and customer satisfaction problems. While much of this doesn't directly impact enterprise product or customers, it can influence how survey respondents view a particular vendor or issue at a given point in time. Since the completion of this survey, Dell has rededicated itself to customer service and product excellence. If they sustain this focus, we may see higher scores in subsequent surveys.

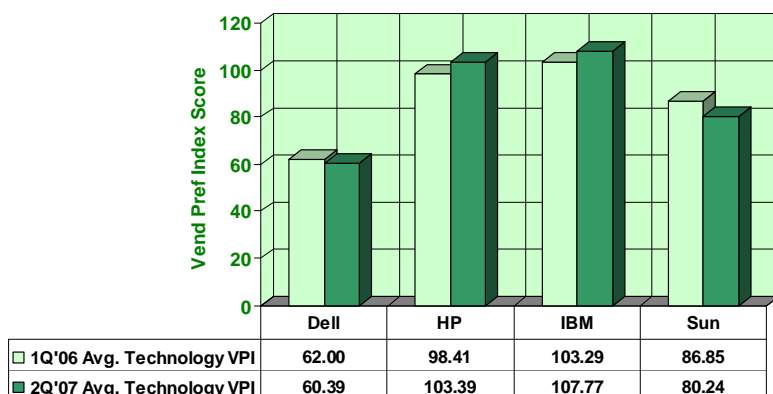
Vendor Face-Off: Technology Ratings

The chart on the next page summarizes the scores from the technology-related questions on our survey, comparing results between 1Q'06 and 2Q'07. Our complete battery of questions in this section covered 14 different technology criteria; what you see here is the average result for the category as a whole.

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IBM has always had a strong showing in the technology ratings, and this year was not an exception; they managed to increase their VPI score from 103 to 108. HP also received a solid vote of confidence, moving from 98 to 103. Sun lost some ground, moving from 87 to 80, but they did show improvement on a few key criteria and even won a couple of them outright. Dell results were essentially flat in the technology section of the survey.

2Q'07 vs. 1Q'06 Technology Ratings



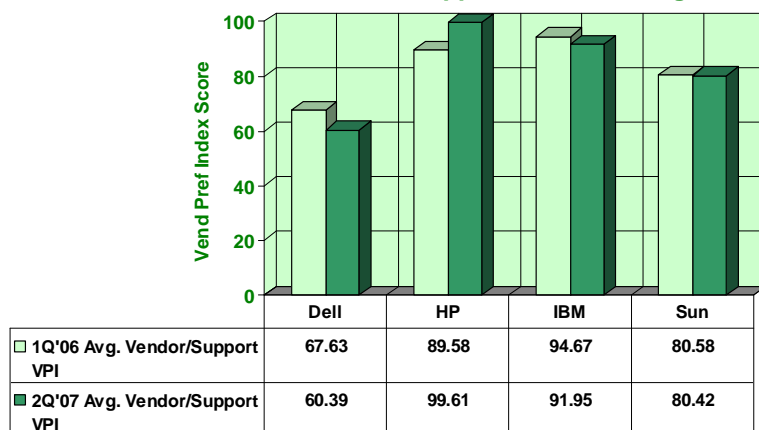
Drilling down into specific questions, IBM's strength in technology was apparent with their VPI score of 132 on the "Best Overall x86 Server Technology" questions, compared to HP with an 85, Sun at 77, and Dell at 63. IBM also won the "Highest Raw Performance" category with a score of 112, although Sun managed to almost tie with their score of 110. IBM took the "Observed Performance" crown with a narrow (112 vs. 108) win over HP. The song remains the

same in the system management categories, with IBM topping all competitors by a significant margin.

HP notched wins in the hardware quality categories, beating everyone on the "Hardware Build Consistency", "Best Initial Quality", and "Easiest to Set Up and Use" questions. HP also took the lead on several of the questions dealing with reliability and availability, narrowly beating IBM on the "Best Availability & Reliability Features" question with a score of 115 vs. 112. Sun and Dell trailed with scores of 67 and 64 respectively on this question. HP also gets high marks for system serviceability features, beating IBM 115-109 and maintaining much wider margins over Sun and Dell.

Vendor Face-Off: Customer Support/Services Ratings

2Q'07 vs. 1Q'06 Customer Support/Vendor Ratings



This chart shows the average results on the 20 separate questions that make up the Customer Support and Vendor Business criteria.

HP sees a big improvement in this section of the survey, raising their average score from 90 to 100. IBM slips slightly, Sun remains flat, and Dell takes a bit of a nosedive in this category.

HP was the only vendor to get high marks for following through on their roadmaps and delivering products on time. Their score of 100 on this question soundly trounced IBM, Sun, and Dell – all of whom were clustered in the 70-80 point range. HP also

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dominated the pack in their ability to engineer and implement Windows solutions, posting a VPI of 125; IBM and Dell scored in the 70s, and Sun trailed the pack at 57. This may change in the future, as Sun establishes ties with Microsoft. Of course, turnabout is fair play; Sun beats the field in Linux capability with a score of 107 vs. 94 for IBM, 83 for HP, and 52 for Dell.

Customers also viewed HP as the vendor who does the best job of helping them both increase their IT efficiency and reduce their costs. As a large share of x86 servers are sold and installed by channel partners, these scores may be at least partially attributed to the quality of HP's business partner organization and how they interface with customers.

HP and IBM tied on how well they are helping customers to virtualize and consolidate their x86 infrastructures, but a significant portion of respondents (24%) said there wasn't much difference between the vendors, or that they weren't sure who did the best job. HP scored highest on their desire to fuel x86 server innovation, while HP and IBM tied in terms of their x86 R&D prowess. This may be an interesting space to watch in subsequent surveys – Sun is making noise with their recent introduction of the first 4-socket, quad-core, x86 server, and Dell just may pull off a transformation that makes enterprise users take notice.

Conclusions?

Enterprise x86 isn't getting any less competitive, and the stakes are rising as these systems become more sophisticated and tackle increasingly critical enterprise computing chores. The largest vendors (in terms of experience and range of products), IBM and HP, still receive the highest scores from enterprise customers – even customers who have standardized on another brand.

This report is only a brief summary of data from the Vendor Face-Off section of the survey. We will be presenting much more detailed reports on individual vendor results along with data on how enterprise x86 customers view power/cooling/facilities, Intel vs. AMD, future purchasing plans, virtualization, and other timely topics. We will be posting subsequent reports on our website, www.gabrielconsultinggroup.com

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APPENDIX

Scoring & Methodology

All responses, unless noted, are compiled and normalized so that vendor scores are not skewed by the sheer size of a particular vendor's installed base. To level the playing field and determine customer *preferences*, not customer purchases, all survey respondents are asked to specify which x86 server vendor is their particular corporate standard, or the dominant vendor in their organization. The total number of respondents who have standardized on a particular brand is then compared to the number of "votes" for that vendor on a particular factor and scored. For example...

Assume the survey had 1200 responses, five hundred of whom have standardized on Dell, two hundred who are strong HP customers, three hundred who have chosen IBM as their dominant vendor, and two hundred who have standardized on Sun. When asked which vendor had the best dressed salespeople, four hundred participants responded Sun, three hundred picked IBM, and three hundred said that HP salespeople were particularly natty dressers.

Best Dressed Salespeople	# of votes (raw score)	Normalized Score (VPI)
Dell (500 standardizers)	400	0.80
IBM (300 standardizers)	300	1.00
HP (200 standardizers)	300	1.50
Sun (200 standardizers)	200	1.00

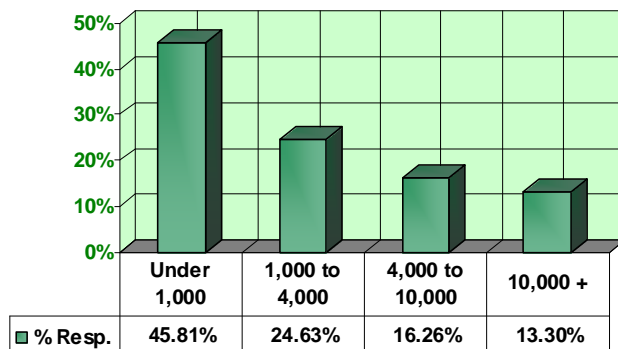
While the raw scores favor Dell, the normalized score (which is simply the number of "votes" divided by the number of respondents who have standardized on that brand) shows that HP is the winner of this beauty contest. HP wins because they captured a larger number of first place votes than the number of HP respondents.

In this simple example, IBM and Sun scored at par – they were voted #1 in this category by the same number as those who selected those brands as their corporate standard. Dell underperformed with their 'voters' defecting to HP. We are referring to this normalized number as the **Vendor Preference Index (VPI)**. The VPI computation yields an easy-to-understand score for each vendor and a gauge of installed base loyalty. For quick reference, a VPI score greater than 100 means that the vendor in question was selected by a number of respondents greater than the number of respondents who have standardized on that particular brand of server. VPI scores greater than 100 are very good. A VPI score of exactly 100 means that the vendor was chosen as a leader by exactly the same number of respondents as those who have standardized on that vendor. VPIs of less than 100 are, of course, bad, and mean that the vendor in question has suffered defections (at least in terms of survey voting) from their own self-selected installed base. While there are certainly more complicated ways to compute the results of a survey such as this, we believe that this method best captures the data we are looking for, in short, how customers perceive x86 server vendors.

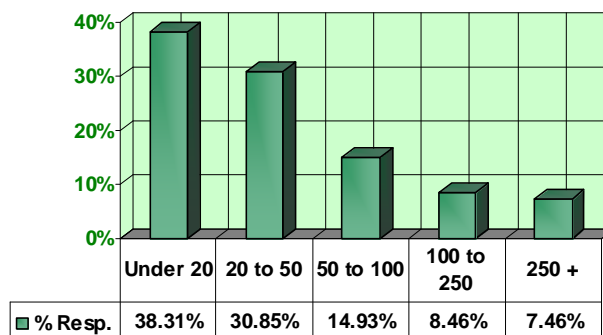
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2Q'07 x86 Server Vendor Preference Survey Demographics

Organization Size (employees)

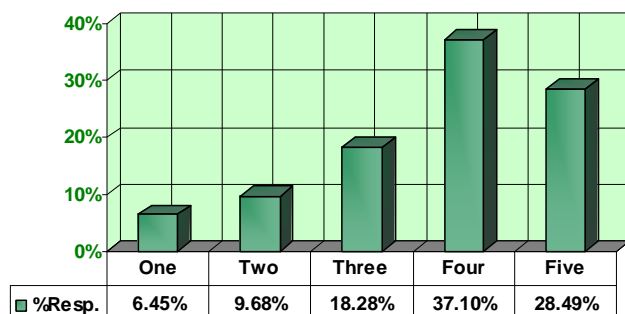


Servers Managed by Respondent

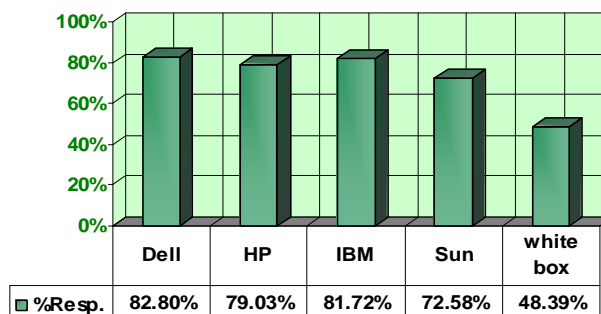


There were a total of 297 enterprise x86 respondents to this survey. SMBs (Small and Mid-sized Businesses) were well represented in the survey, making up 46% of total participants. This survey also had a reasonable number of very large enterprise participants, at a little over 13%. The “Servers Managed by Respondent” chart refers to the number of servers that the individual participant is responsible for, or has detailed knowledge about. An interesting data tidbit from this survey is that some of the SMBs with relatively few employees had fairly large server counts, in some cases a hundred or more x86 servers. Given this, it isn’t hard to understand why the server vendors are rushing to produce SMB-friendly offerings.

Number of x86 Vendors in Data Center



"We have at least some x86 systems from...."



Over 83% of our respondents own x86 servers from three or more vendors. Almost a third have systems from five or more vendors, including white box or ‘built it ourselves’ systems. Only a very small portion – 6% - has managed to completely standardize on a single x86 vendor. Drilling down a little deeper, we find that the major vendors are present in pretty much every account. This isn’t too surprising, given the fact that such a large proportion of customers have servers from three or more vendors.