Who's Ahead in the UNIX Wars? Here's an Update...

The following report discusses general results from our 4Q'05 UNIX Vendor Preference Survey. We asked 197 enterprise UNIX customers to rate and rank the major vendors (HP, IBM, and Sun Microsystems) on a wide variety of technical and customer support criteria. The survey covered 13 separate technology-related categories, 11 vendor/customer support categories, along with several questions about market futures and specific vendor issues. The report only looks at the overall results, future GCG reports will provide much more detailed analysis of survey data and vendor standings.

Arguably the most competitive system market today is in the UNIX server segment. Only three big vendors (Sun, HP, and IBM) are competing for million dollar deals in a market that is essentially flat. These factors combine to motivate each vendor to pursue every deal as if it's their last. For customers, it's a bonanza of computational power and sophistication at a very attractive price. It might even be a little bit of fun for some customers who are looking for new systems. Putting out a UNIX Request for Proposal these days must be a little like putting three angry scorpions in a mason jar and then shaking it up. The major difference is that real scorpions don't rely on PowerPoint presentations to deliver their venom. We want to make it clear that GCG, as a semi-respectable industry analyst firm, doesn't advocate pitting vendors against each other in death matches merely for sport, so please don't torture your vendors any more than is absolutely necessary. They're human too…kind of…

We're highly interested in the UNIX battles for several reasons. The UNIX segment is a hugely important part of the overall industry; it's one of the largest market segments, maybe not in units anymore, but certainly when measured by revenue. Much of the recent innovations in system technology reach their broadest market through UNIX systems, even though many of these advances were pioneered in other systems such as mainframes and minicomputers. As UNIX system technology has improved and matured over the years, it has become the workhorse of the enterprise data center and the home for business critical processing.

So who's winning the UNIX system wars? If your yardstick is installed base, then Sun is your champion with a UNIX installed base that is probably as large as HP's and IBM's combined. If sales signify dominance to you, then IBM is narrowly in the lead, with HP a close second and Sun a close third. According to the vendors themselves, each of them believe they lead the market in every single product category and have led since the beginning of time – just ask 'em, they'll tell you that they're the #1 UNIX solution without question.

Sales figures and installed base numbers can tell us what happened in the last quarter or in the past several years. We want to figure out why the past happened and what the future may hold. With that in mind, we launched our first UNIX Vendor Preference Survey. The survey is designed to

capture the perceptions of real world enterprise UNIX customers and understand how they view the UNIX market and specific vendors. We plan to run this survey approximately every six months in order to track changes in the market and spot trends. The rest of this article will discuss results from our inaugural 4Q 2005 UNIX Vendor Preference Survey.

Sample Demographics

We surveyed a grand total of 197 UNIX customers, focusing primarily on data center personnel – data center managers, IT architects, system managers and the like. We don't have anything against CIOs, but they are generally in the dark about what is actually happening on the data center floor. The average survey respondent managed from 25 to 50 UNIX systems. 80% of respondents worked in data centers with at least two incumbent UNIX vendors with 34% of total respondents reporting that they owned systems spanning three or more UNIX flavors. Half of the survey participants told us their organization had standardized on Sun Microsystems UNIX systems, with 29% having standardized on IBM's pSeries systems, and 21% selecting HP UNIX systems as their corporate standard.

Scoring and Methodology

Given the imbalance in survey responses from the various UNIX camps, it is important to make sure that the results aren't skewed by the sheer size of a particular vendor's installed base. With this in mind, all responses were compiled and normalized. Since there are only three major UNIX vendors (Sun, HP, IBM), and Sun has by far the largest installed base, we normalize the data so that no vendor is advantaged (or disadvantaged) by the sheer size of their installed base. To do this, all respondents were asked to specify which UNIX vendor is their particular corporate standard or the dominant vendor in their organization. The total number of responses favoring 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 1000 responses, five hundred of whom have standardized on Sun, three hundred who are strong HP customers, and two hundred who have chosen IBM as their dominant UNIX vendor. When asked which UNIX vendor had the best dressed salespeople, four participants responded Sun, three picked IBM, and three said that HP salespeople were particularly natty dressers.

| Best Dressed salespeople	# of votes (raw score)	Normalized Score (VPI)
Sun (500 respondents)	400	0.80
IBM (300 respondents)	300	1.00
HP (200 respondents)	300	1.50

While the raw scores favor Sun, the normalized score (which is simply the number of "votes" divided by the number of responses) 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, a Sun customer defected and voted for HP. We are referring to this normalized number as the **Vender 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 captures the data we are looking for, in short, how customers perceive UNIX vendors and who they choose as the winners and losers.

## Overall Results – All Survey Criteria

The survey is divided into three major sections. The first section asks all respondents to pick the vendor who they believe is the leader on a number of technical and product factors. The second section asks how the vendors rate on a wide variety of business criteria. The third and last section explores customer attitudes towards their own specific UNIX vendor and attempts to gauge their loyalty to that vendor. This article outlines the overall results of the first two sections of the survey, while subsequent GCG research reports will cover the results from individual survey questions.

Overall Results: All Criteria

	IBM	HP	Sun
VPI Score	105.18	85.41	80.07
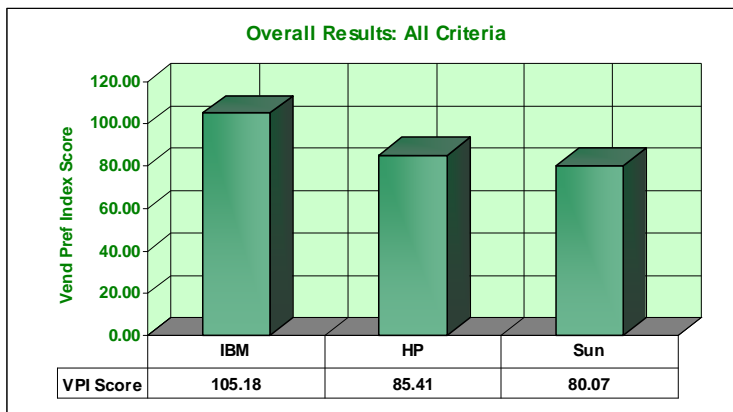
As can be seen from the chart, IBM was the big winner in this survey with a Vendor Preference Index (VPI) score of 105.18. HP is second at 85.41, and Sun trails with a VPI of 80.07. IBM's win isn't particularly surprising; IBM's pSeries has been resurgent in the UNIX market, moving from a distant third in system sales in the late 1990s to first place in 2005. The magnitude of the win (105 vs. 85 vs. 80) is bit larger than expected, given that the three companies split UNIX system sales almost equally.

However, crossover votes from respondents who have standardized on equipment from Sun and HP fueled the strong IBM showing. One result that was a bit surprising was Hewlett Packard's lead over Sun, and, moreover, Sun winding up dead last – by a significant margin. Sun, with an installed base of UNIX systems that is probably larger than the combined installed bases of HP and IBM, is synonymous with UNIX. They were the undisputed UNIX market leader from the mid 1990s through 2000 but have been struggling for growth in both revenue and market share in the wake of the tech crash of 2000. As shown by our survey results, Sun has lost considerable ground with customers and, more importantly, are perhaps losing the confidence of their installed base customers.

Vendor Face Off: Technology Criteria

Overall Results: Technology Criteria

|	IBM	HP	Sun
VPI Score	109.01	92.57	76.48
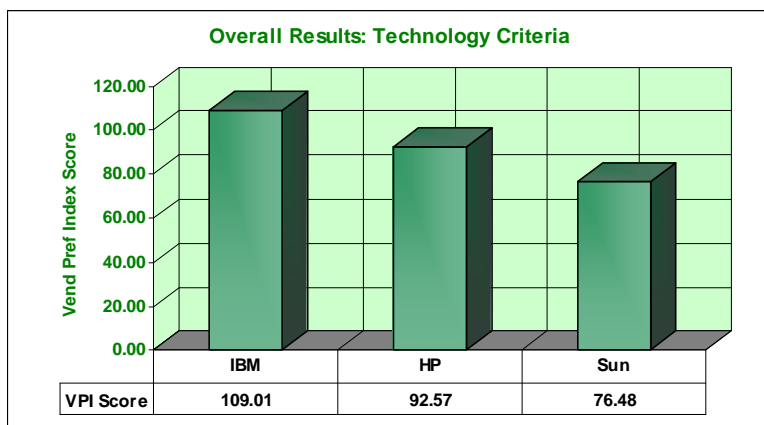
The technology section of the survey asked customers to rate the major UNIX vendors on twelve individual system and technology categories. These categories included Raw System Performance, Observed Performance (real world), System Scalability, and a host of other questions covering operating system features, o/s quality, and system availability criteria. The resulting scores were totaled and averaged to yield the chart at left. IBM's VPI score of 109 handily tops

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HP's score of 92.57. Sun is considerably off the pace with a score of 76.48 – again, a surprising result given their preponderance in UNIX data centers.

Vendor Face Off: Vendor Criteria

Overall Results: Vendor Criteria

(chart: Vend Pref Index Score)

	IBM	HP	Sun
VPI Score	100.67	76.94	84.33
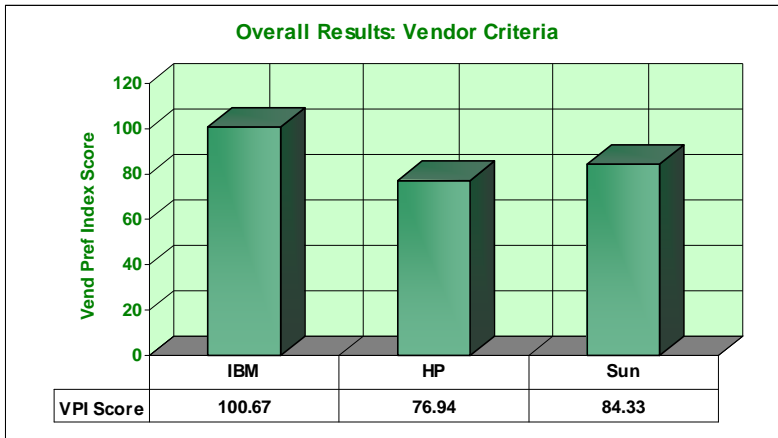
While sophisticated system features, RAS, and speeds/feeds are important, they are not the sole criterion customers rely on to make their server decisions. UNIX servers run business critical workloads and thus play an important role in most data centers. Because of this, the support vendors provide, from service to providing accurate and timely information, is vital to large and small customers alike. As the UNIX market continues to mature and technological points of differentiation between vendors become more difficult to identify and quantify, vendors will rely more and more on customer service 'outside the box' to build customer loyalty. Our survey questions asked customers to rate the major UNIX vendors based on the quality of their support, sales organizations, how well they (the vendors) keep their promises, deliver on their road maps, and several other non-system criteria.

As can be seen from the "Overall Results: Vendor Criteria" chart above, IBM leads the pack with a VPI of 100.67. This is a good score, but not a score that indicates IBM is taking mind share from competitors. Sun trails IBM with an 84.3, and HP turns in a low 76.94 VPI. It's interesting to note that while HP handily beat Sun on the technology section of the survey, Sun beats HP on vendor business-side criteria. In the individual category results, Sun built their win over HP with strong scores on their commitment to UNIX, desire to push UNIX innovation, and the customer perception that Sun does a better job of 'keeping their promises' vs. Hewlett Packard.

Vendor Face Off: The Future

Our final questions in the survey asked customers to predict the future – or at least the future as far as the major UNIX vendors are concerned...

Vendor Most Likely Leave UNIX Market

(chart: % Resp.)

|	HP	Sun	IBM
% Resp.	50.00%	30.56%	19.44%
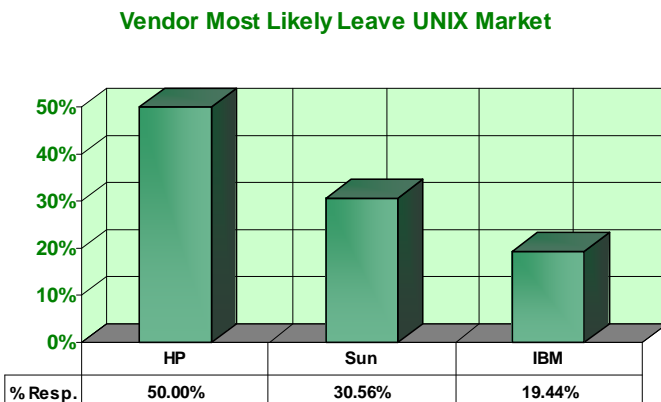
We asked survey respondents to tell us which of the three major UNIX vendors are most likely to drop out of the UNIX market. Hewlett Packard was the overwhelming choice with 50% of the total votes. Sun came in second with 30%, and IBM trailed at just under 20%. This again highlights the perception that HP is not as committed to the UNIX market as are their competitors. It is a bit surprising that customers believe Sun has a higher likelihood of leaving the market than IBM. Given that UNIX is Sun's bread and butter and
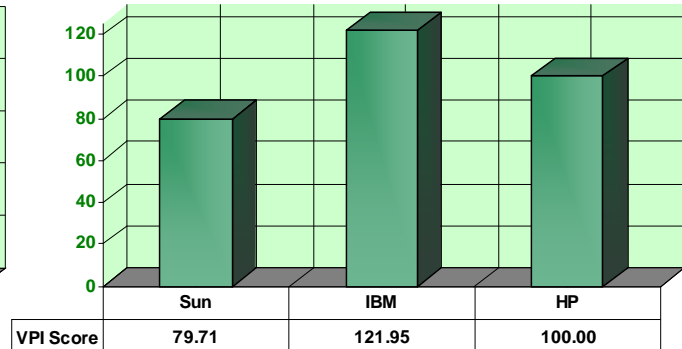
that the probability of Sun intentionally leaving UNIX is very slim, their score could be interpreted as a comment on the viability of Sun as a system vendor.

Dominant UNIX Vendor in 5 Years

	Sun	IBM	HP
%Resp.	41.04%	37.31%	21.64%
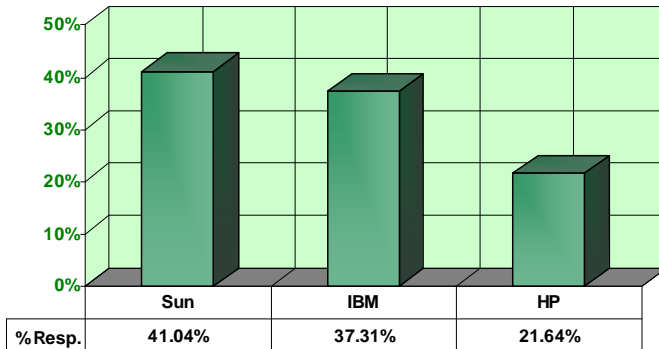
Dominant UNIX Vendor, VPI Scores

	Sun	IBM	HP
VPI Score	79.71	121.95	100.00

The final question in the vendor comparison portion of our survey asked customers which UNIX vendor would be dominant in five years' time. Sun won this category with a score of 41%, with IBM a close second with 37%. HP trailed with only 21% of the total vote. A better way to analyze these results is to look at them as VPI scores – in other words, adjust the responses to reflect the number of respondents who have standardized on a particular vendor. This shows quite a different picture. With this analysis, we see that HP's installed base is solidly behind the brand with 100% voting HP as the dominant UNIX vendor in 2010. However, Sun standardized voters are not so sanguine; over 20% of them ended up voting for IBM as the probable market leader in five years' time.

Summary

At this point in time, IBM is making considerable headway against the larger Sun and HP installed bases, attacking the market with a combination of advanced technology and strong customer service. In addition to favoring IBM's products and services, customers also express confidence in the IBM sales arm and believe that the company is committed to continuing to develop their pSeries UNIX platform.

Hewlett Packard comes in second overall and in most individual survey categories. This is somewhat surprising, as their installed base has been targeted by Sun and IBM like hungry wolverines contemplating an injured fawn. Currently, the HP installed base seems to remain, for the most part, loyal to the brand despite some of the challenges they have faced with the slow migration to Itanium and HP management changes. Still, HP has plenty to be concerned about, namely customer perceptions of HP's overall technology vs. IBM, system scalability, and their commitment to UNIX.

Sun had the worst showing in the survey. They were third in almost every category, often a distant third. These results are important as they signal that Sun's immense installed base may be vulnerable to predations from their better-funded competitors. As the smallest of the major UNIX players, Sun doesn't have room to make mistakes or take any business for granted. The results of this survey indicate that Sun may be doing exactly that by not paying adequate attention to their installed base nor making them feel comfortable with Sun's technology and future directions. Sun has generated a lot of publicity over their competitive program aimed at replacing primarily HP

servers. It is obviously Sun's perception that HP is the most vulnerable UNIX vendor. They may want to reconsider this opinion, as it looks like they are more than a little vulnerable themselves.

We hope that our survey has helped shed some light on how the major UNIX vendors are faring against each other in the war for the data center hearts and minds. We will be releasing future reports that delve into the third section of the survey, where customers are asked their perceptions about their corporate standard UNIX vendor. We will be running this survey at least annually to track changes in this important and dynamic market. If you are interested in obtaining results from the entire study – or any GCG research, our contact details are below.

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