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# Server Platforms and Operating Systems

## Virtualisation more important than platform?

By Tony Lock, May 2009

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### In a nutshell:

What's happening today in the server infrastructures deployed by organisations, large and small? Collated in partnership with The Register, the Barometer survey results give some idea of how the server infrastructure is developing in organisations.

### Key points:

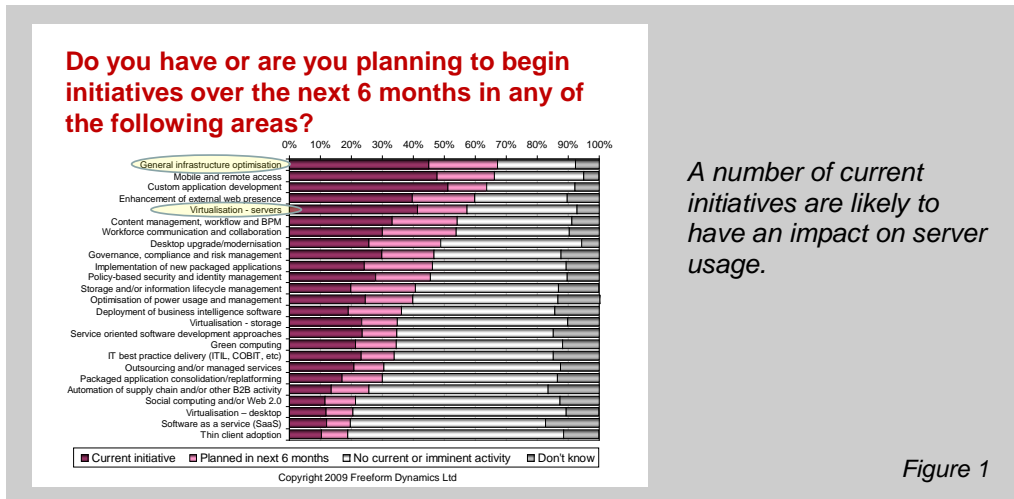
- While servers are still being acquired, server virtualisation projects are today a major focus of attention for organisations across the board.
- General infrastructure optimisation is still a major initiative for over half of enterprises.
- Desktop virtualisation is creeping onto the radar with between 10 and 20 percent of companies investigating this model. This implies new server workloads to be hosted.
- Windows and Linux have a positive perception across the respondent sample.
- VMS, i5OS and 'traditional' UNIX face challenges to re-invent themselves as platforms for tomorrow rather than being yesterday's offerings.

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*This is one of a series of articles which draws on research conducted in partnership with The Register in October 2008. Some 1,125 people, from organisations large and small based in the UK, United States and a wide range of other countries took the time to let us know how IT systems are being used in their businesses. This paper gives a brief summary of developments associated with server systems, their associated operating systems and the continuing adoption of server virtualisation solutions*

## Are Servers still being acquired?

The chart below highlights that (as of October 2008) the use and deployment of server platforms account for significant project initiatives in a large number of organisations. The figure specifically identifies “general infrastructure optimisation” to be an area where effort continues to be expended with “server virtualisation” following closely behind both of these areas have a physical server impact.



*A number of current initiatives are likely to have an impact on server usage.*

Figure 1

It is also worthwhile noting that “Virtualisation – Desktop” is creeping into the picture with somewhere north of ten percent of organisations reporting that they had initiatives underway as of last October, whilst over one in 5 expect to have something happening by the end of April this year. Whilst a first glance might not directly associate such work with any server impact, a closer study clearly reveals that virtualisation of desktop workloads, irrespective of the solution set deployed, requires new services to be hosted in the back end server infrastructure.

It should be recognised that whilst there are differences in absolute numbers for large enterprises, mid-sized organisations and small businesses, the scales are not that dissimilar. In essence there is a lot of work being undertaken on server systems in every size of business and in all sectors.

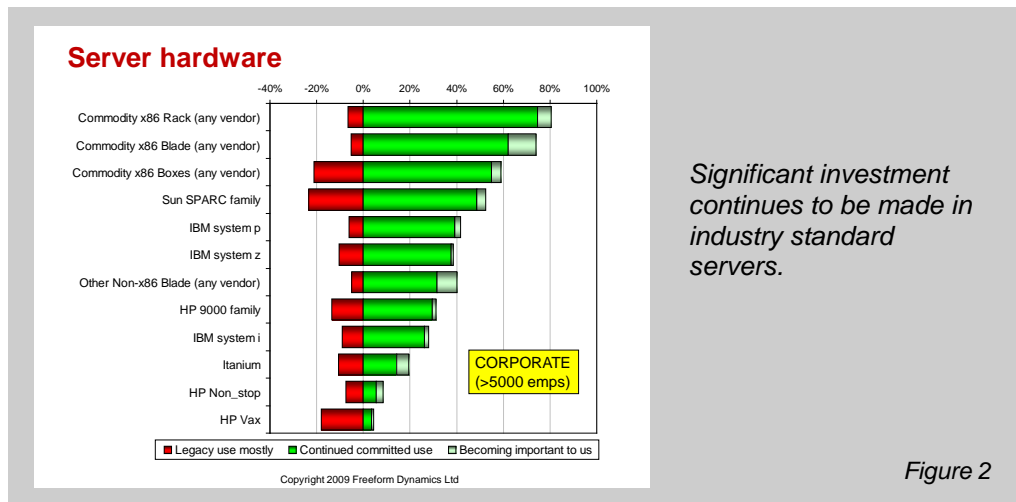
## Server Platforms

So, who are the server winners and losers? First, we look at the position of Industry standard servers as perceived in businesses today.

### Industry Standard Servers

The slides below really speak from themselves at a high level – abundantly clear in the area of platform selection is that so called “Industry Standard Servers”, i.e. those based around x86 chipsets from Intel and AMD – these enjoy the highest levels of commitment according to respondents. In addition, a little digging makes for some interesting discussion as we consider differences of scale and which platforms are beginning to be perceived more as “legacy”.

In particular it is noticeable that the Blade and Rack versions of x86 servers are considered by nearly four out of five survey respondents as either being platforms for committed use or ones that are becoming important with very few seeing them as legacy systems. Indeed it is only “commodity” x86 systems that have more than 20 percent recognition amongst large enterprise respondents as being legacy x86 platforms, but even there are large numbers that utilise them as committed engines going forward. Looking across organisations of different sizes there are very few differences of perception for the x86 platform from large enterprise down to SMBs.



It is equally clear that Industry standard x86 servers are well established as a major platform for server workloads going forward, a situation that is only likely to be strengthened by the growing adoption of “virtualisation” solutions to delivery better server resource utilisation, and hence cost benefits, in mainstream IT service delivery.

We shall now take a look at UNIX servers, the traditional workhorses of enterprise application delivery.

### Traditional UNIX Platforms

A quick glance at the survey results makes for interesting reading when we consider the platforms that have traditionally accounted for a significant proportion of the UNIX market. The Sun Sparc servers, IBM System p and HP 9000 family of machines all, at first sight, appear to be well regarded as platforms suitable for continued committed use. However it should be noted that amongst respondents from large corporate businesses both the Sun series and HP 9000 offerings have significant numbers of respondents who see them as mostly “legacy use” systems.

When looking at the results from mid-market sized organisations the proportion of those perceiving Sun Sparc systems and HP 9000s as legacy platforms becomes even higher, in the case of Sun almost reaching a level of one to one. This perhaps highlights that UNIX servers today face a challenge to define just how they fit into the grand scheme of enterprise Server utilisation and architectures. However looking at the relative standings of the operating systems deployed on server systems does not quite back this idea up as, overall, UNIX is still regarded by a majority of those responding an OS with a future.

This is not quite the case in SMBs where the traditional UNIX platforms are seen to be more of a legacy platform. It should be mentioned that across organisations of all sizes Linux, an OS that can often run on the traditional UNIX server hardware, enjoys a much rosier outlook with few people yet regarding it as “legacy”.

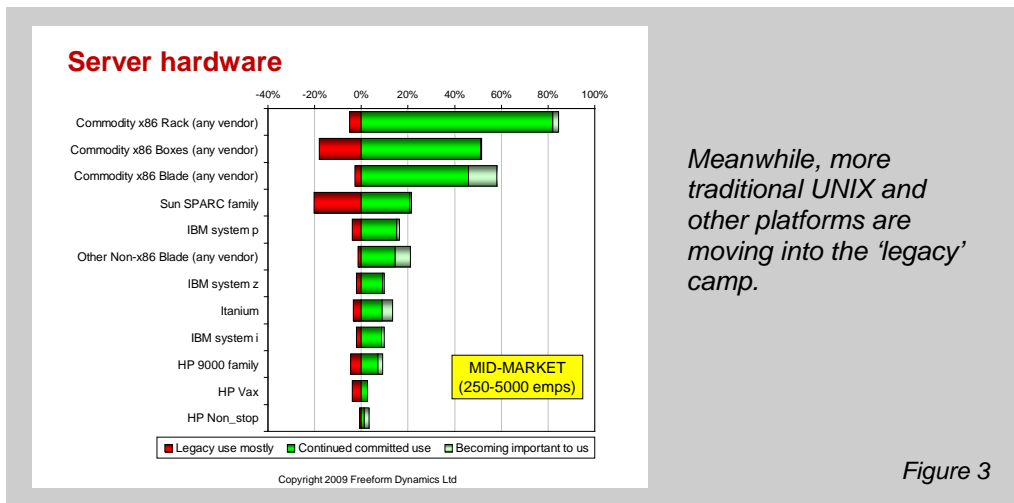
The survey results indicate that in some organisations traditional Unix platforms are today faced with a challenge to identify the role they hold going forward. It will be interesting to see how the usage of Linux based systems will modify this going forward, as other research shows that Linux has yet to be widely deployed in a majority of organisations.

Beyond x86 Servers and the traditional UNIX platforms there are a number of other mid-range servers that enjoy fairly widespread deployment in modern enterprises.

### Other Platforms

There are some interesting results to be found when looking at the HP Vax and Non-stop systems and the IBM System i and System z platforms. In respondents from large organisations the HP Vax is clearly perceived to be a legacy platform. Amongst mid-market and SMB respondents the perception is not so heavily weighted towards legacy but it is, on balance, there to be seen. The

perception of HP Non-stop in large enterprise is only slightly more positive, whilst the platform appears to have little recognition in small and mid-size organisations.



*Meanwhile, more traditional UNIX and other platforms are moving into the 'legacy' camp.*

Figure 3

When it comes to the IBM system i, perhaps still better known by its former name AS400, in large enterprise the server still possesses more of a perception as being a platform of committed use rather than a legacy platform. The most concern comes from the relatively small number of respondents who see the System i as becoming important to them now. This reflects poorly on IBM's attempts to reach new users. A more troubling note might be interpreted from the fact that despite its reputation as being a system very suitable for use in small and mid-size organisations the size of the respondent base is low.

Amongst large enterprises the System z, still known (despite significant marketing efforts over the years) as the Mainframe, still enjoys a positive balance as a platform for committed continued use versus being seen as a legacy server. Interestingly it also enjoys a solid positive perception in the mid-tier, albeit at a lower level of recognition.

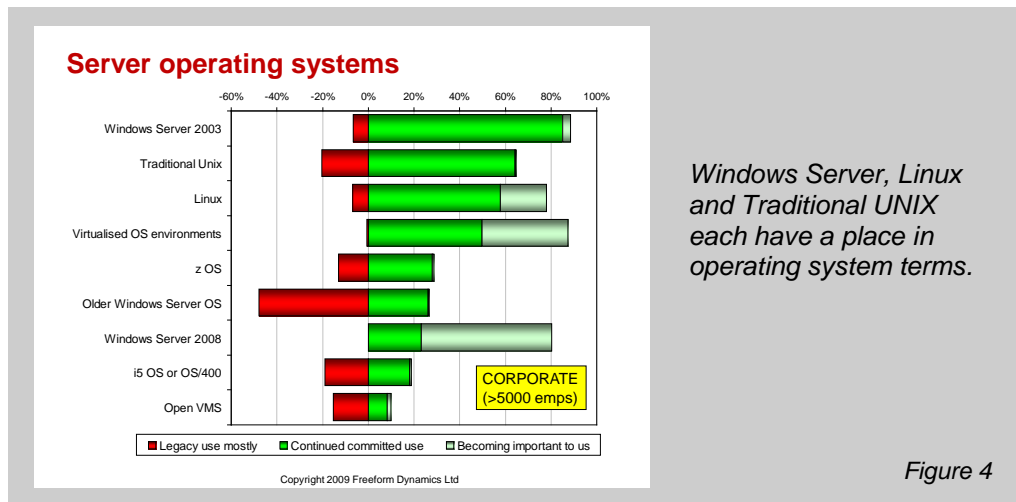
Finally we will take a look at the situation regarding server operating systems and their perceived position in the server infrastructure.

### Server Operating Systems

We now take a look at the situation regarding server operating systems and their perceived position in the server infrastructure.

This only leaves consideration of the Windows range of server operating systems and the Linux platforms to complete the rundown of server attitudes. I suspect that Microsoft's server executives will be feeling quite happy that the returns that indicate that server operating systems that predate Windows Server 2003 are now pretty much consigned to the dustbin of history with Server 2003 being seen as the work horse going forward.

To buff the rosy scenario even more, it is also clear that the latest release of the company's server OS, Windows Server 2008, is already making headway in the market's perceptions of its viability as a platform going forward, results that are reflected across all sizes of organisation.



*Windows Server, Linux and Traditional UNIX each have a place in operating system terms.*

Figure 4

Despite its relatively low penetration in most organisations the results here show that Linux is widely perceived to be a platform of importance going forward. Other research we have carried out shows that outside of large enterprises the possession of Linux skills is not widespread. The relatively strong perception that Linux is either a major platform going forward or is now becoming important may, at least to some degree, reflect the skills and interests amongst the survey base although there overall figures do show that Linux is now certainly a mainstream server offering, a fact further strengthened by the fact that perceptions vary little by size of organisation.

As for traditional Unix, the results shown below for corporate customers is the “best case” scenario, as the returns from respondents in mid-size and small companies place the platform firmly in a fifty-fifty split between ‘continued committed use’ and the ‘legacy’ camps. The perception of IBM’s i5OS and HP’s VMS fare even less well in the minds of IT professionals as the results clearly demonstrate that these operating systems are seen by many as yesterday’s platforms. It is clear that these vendors will have a job to communicate the value of such ‘specialist’ operating systems going forward.

## Conclusion

The results of the survey must be interpreted with some care as the figures relate to how server platforms and operating systems are perceived, rather than perhaps how such platforms are actually being deployed in anger.

What is clear however, is that Linux, modern Windows server operating systems and, most especially, server virtualisation are all seen to be involved in platforms for the future. Against this background the traditional Unix platforms are facing challenges to ensure that their potential usefulness going forward are well understood by the wider IT community.

## Note on research sample.

The findings here are based on an online research study conducted via [The Register science and technology website](#) in October 2008, which garnered 1125 responses. As a result of the online nature of this study, the respondents will have been self-selecting, and drawn from a technology-literate group. We are also conscious that the current financial climate may cause some variability in responses that might be influenced by ongoing economics. As the study covered a broad range of areas and did not particularly dwell on financial aspects we do not believe there will have been any significant skew towards one technology area or another; nor do we believe there will have been too much variability due to economic criteria in this case.

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