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Linux Users Have Choices for 64-bit Linux Platforms, But is it easy to Decide?

It does not get much better than this. Any user wishing to buy 64-bit Linux platforms will soon have a lot of choices. Users like Linux because it gives them choice — choice of hardware platforms and choice of Linux distributors. Not only will users have architectural choices, five of them right now — Itanium 2, Nocona, Opteron, POWER4+, and POWER5, but they can also choose among platforms from multiple vendors built on the same architecture. This is what we have been waiting for, for a long time, right? I can now choose among five architectures based on my selection criteria, and then I can buy a server based on that architecture from two or more vendors in most cases. Say I pick Opteron. I can buy Opteron servers from HP, IBM, or Sun. Or, if I pick Itanium 2, I can buy Itanium 2 servers from Dell, HP, IBM, and Unisys. The vendors now have to have competitive pricing and service because I now have choices.

While some hardware vendors will likely be making announcements on Nocona and other Linux platforms at LinuxWorld next week in San Francisco, Sun jumped out ahead and announced its new Sun Fire V40z, a two- or four-way Opteron server that can run either Linux or Solaris. They also announced some very competitive pricing for the Sun Fire V40z and its smaller sister, the Sun Fire V20z, a one- or two-way Opteron server that also runs both Linux and Solaris. A four-way Sun Fire V40z with Model 850 (2.4GHz) Opteron processors is priced lower than a comparably configured Dell PowerEdge 6600 four-way server with 3.0 Xeon processors.

Not revealing anything under NDA, here is what I know today about 64-bit Linux platforms based on public statements by vendors:

Dell — Itanium 2 today and Nocona down the road (Dell said in February 2004 that they would have Nocona platforms when the chips became available)

HP — Itanium 2 and Opteron today and Nocona down the road (HP said in February 2004 that they would have Nocona platforms when the chips became available)

IBM — Itanium 2, Opteron, POWER4+, and POWER5 today, and Nocona (IBM said in February 2004 that they would have Nocona platforms when the chips became available)

Sun — Opteron today

Dell has to have Nocona platforms for Linux and Windows because their Itanium 2 server — the two-way PowerEdge 3250 is not price competitive. While Unisys has not made any public statements about Nocona or Linux, I would expect them to have Linux and Windows available on both Itanium 2 and Nocona one of these days because their customers will demand it. Windows currently runs on Itanium 2-based Unisys platforms.

Now that users are going to get what they have always wanted, they have to decide how to choose among the several 64-bit Linux platforms. I am making the assumption that users will think that they need 64-bit Linux even though most all Linux platforms today are 32-bit Intel. How would you choose? It is not sufficient just to look at the vendor platform(s) with the most certified ISV applications because an ISV application that runs on Red Hat Enterprise Linux on Sun's Opteron servers should run on Red Hat Enterprise Linux on HP's Opteron servers, right? At least we would hope that that is the case.

We could just pick the 64-bit Linux platform with the best price/performance story based on industry standard, independently audited benchmarks. That way we don't have to delve into the differences among the architectures and try to understand vendor differentiation and strategy. If we want to buy 64-bit Linux for high performance computing (HPC), we go to our HPC-like benchmarks and select the server with the best price/performance. If we want to buy 64-bit Linux for financial services, then we check our list of financial services-like benchmarks and pick the platform with the best price/performance story. This is pretty simple isn't it?

But, users want investment protection, flexibility, support and service, etc. So now we need some public statements from each vendor about their strategy, roadmaps for new 64-bit Linux servers, middleware included with the platform (for free hopefully), internal positioning of 64-bit Linux servers (some vendors have two, three, or four 64-bit architectures from which to choose), and so on. Users will want to know if Intel is going to fully support Itanium 2 since Nocona is rolling out. Are vendors going to support all of their 64-bit Linux platforms equally or will some vendors favor one architecture over another?

This started out to be so much fun, but there is a lot to consider. The good part is that if a user makes a mistake, it is not likely to be catastrophe. He will not be locked in like he would be if he had bought RISC/UNIX instead. He can just go out and buy another platform from another vendor or choose a platform based on a different architecture from the same vendor and run the same applications with no porting necessary (theoretically).

Or the user could hire an analyst to help him decide.

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