On January 27, 2010, Oracle announced that it has completed the acquisition of Sun Microsystems. For a high-level analysis of the merger, please see Oracle Acquires Sun: A First Look at the Road Map.

Oracle Gearing Up to Challenge VMware in Server Virtualization

Both companies have significant server virtualization assets that will be merged together, primarily under the Oracle VM brand. One slide Oracle showed was a comparison against VMware, indicating that Oracle has aspirations on challenging the virtualization market leader with the newly acquired assets. With the Sun assets, Oracle has several potential differentiators:

- Fully integrated systems — Oracle plans on emphasizing pre-integrated systems consisting of hardware and a full software stack (from hypervisor to OS to middleware to apps). Virtualization simply becomes a “feature” of the system, offering virtualization benefits embedded into the product. As enterprises move to a cloud architecture, such tight integration could be highly desired by customers. Few competitors have the breadth of hardware and software to offer similar packages by themselves; expect to see more alliances and partnerships form among competitors.

- The ability to cross CPU architectures and OS barriers. Here’s what is known so far:
  - Oracle VM for x86 has added Solaris as a supported guest.
  - Oracle VM for SPARC will bring Sun’s LDOM hardware partitioning technology into the portfolio.
  - Solaris will continue to support Container technology as part of the OS, and presumably Xen will continue to live on in OpenSolaris.
  - Sun Ops Center will be merged into Oracle Enterprise Manager, allowing unified management of all the various virtualization technologies across both x86 and SPARC.
  - This is very similar to the strategy Sun set out in 2007 (unified virtualization) but was never able to bring to fruition on its own.

Oracle has a very interesting opportunity to unify traditional and newly formed silos, such as ones created due to virtualization. It has the ability to offer full stack management that spans physical/virtual, OS (Unix/Windows-Linux), CPU architectures (x86/SPARC), and hardware/software. While virtualization management has tended to live in its own silo up to now, Oracle has the potential to offer a very broad and comprehensive management infrastructure that will fit very well with the cloud computing trend.

In order to mount a serious challenge to virtualization competitors such as VMware and Microsoft, Oracle must broaden the customer base. Sun's virtualization technology has primarily lived among its SPARC and Solaris customers and never broke into the mainstream x86 market. Oracle VM has been primarily used by Oracle software customers to virtualize Oracle software. In the case of Oracle VM, there was widespread perception — right or wrong — that Oracle was disinterested in supporting customers running aboard other companies’ hypervisors. Sun, of course, did not have that particular problem with xVM.
In order to challenge the likes of VMware and Microsoft for a larger slice of the pie, Oracle must broaden its virtualization reach. It needs to present its virtualization platform as a general purpose virtualization platform, rather than one that is widely seen by customers as being specifically for Oracle workloads. To do this, Oracle must garner increased support from other (competing) hardware vendors and ISVs to certify on Oracle VM.

Oracle also must recognize that other virtualization platforms are already in use by customers and that a multi-hypervisor world is coming — and that it should not dictate to customers what hypervisor they can use. This means that Oracle needs to extend application support to existing platforms instead of trying to force customers to adopt its platform. Extending the reach of Oracle VM to a broader base of hardware and applications as well as extending Oracle software support to other virtualization platforms doesn't mean that Oracle's virtualization story becomes less compelling. Oracle still can offer differentiated features for its own platform, such as special optimizations and integrations across the Oracle stack. Customers don't want niche virtualization technology; they want to apply the technology broadly across their datacenter. If Oracle can open up more, that will satisfy those customer concerns, in addition to offering unique benefits for Oracle software.

As VMware has expanded its reach beyond infrastructure with the acquisition of SpringSource (platform-as-a-service) and Zimbra (software-as-a-service), Oracle also has the potential assets to push the limits of virtualization as well. The trend has been for the virtualization layer to become more aware of and better coordinated with the layers inside the VM (OS, middleware, apps). There could be some very interesting synergies with BEA’s LiquidVM (now known as Oracle JRockit), Java, Oracle's vast software stack, and Oracle VM Templates.

While it is certainly too early to speculate on the market fate of Oracle virtualization, Oracle unquestionably has a unique set of assets to create innovative virtualization solutions. If it can successfully integrate, coordinate, and expand this technology, Oracle has the potential to capitalize on a tremendous virtualization opportunity. That is, if the company can execute quickly and deliver a competitive product with a better perception of openness and interoperability than its previous products had.

**Oracle Joins the Desktop Virtualization Space**

With the acquisition finally closed, Oracle enters into an unfamiliar market — desktop virtualization and management. By acquiring Sun, Oracle gains a desktop hypervisor, centralized virtual desktop technology (CVD, also known in the industry as virtual desktop infrastructure) and thin client technologies, and appears to be poised to focus on the now familiar desktop to datacenter strategy that several other vendors are also pursuing.

In terms of having the technology available and ready for deployment, Oracle certainly gains that advantage with this acquisition to truly be a one-stop shop for large IT shops. However, there are several questions that remain:

- With all the other new technology that Oracle has acquired (SPARC, Solaris, Java, etc.), will Oracle be able to boost Sun’s VDI technology to a best-of-breed solution that Oracle is trying to create with all of its existing and newly acquired software portfolio?
- Can Oracle integrate Sun’s CVD technology with Oracle VM and Sun storage to make the total solution a compelling TCO offering?
- Desktop virtualization is much more than just CVD — will Oracle try to expand to application virtualization and/or distributed virtual desktops?
- Will customers be willing to trust running Windows on Oracle software?
- Where does the VirtualBox hypervisor fit into the plan?

For Oracle to be successful in the desktop virtualization space and not just include it as another me-too offering, Oracle is going to have put serious R&D and marketing dollars behind this initiative while implementing a sound strategy and integration plan. I have no doubt that Oracle can be successful in large call centers and other industries where Oracle has a large install base and Windows isn’t a necessity. However, I believe it will take Oracle at least 2–3 years to move beyond this niche as it spends the majority
of its time on expanding other parts of Sun’s business. But this timeframe will only be possible if Oracle spends the necessary time and money now to be successful later.

Subscriptions Covered:
Enterprise Virtualization Software

Please contact the IDC Hotline at 800.343.4952, ext.7988 (or +1.508.988.7988) or sales@idc.com for information on applying the price of this document toward the purchase of an IDC or Industry Insights service or for information on additional copies or Web rights. Visit us on the Web at www.idc.com. To view a list of IDC offices worldwide, visit www.idc.com/offices. Copyright 2009 IDC. Reproduction is forbidden unless authorized. All rights reserved.