

## INSIGHT

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### Unisys Announces Linux on its ES7000 Range

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#### IDC OPINION

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Unisys has been at the forefront of the Intel mainframe market for a number of years, based on a close relationship with Microsoft and a longstanding knowledge of how to design and support large-scale computers. In particular its Cellular Multi-Processing (CMP) cross bar and Sentinel suite of systems management tools have enabled it to sustain a strong market share in what has hitherto been a small market. There are a number of considerations IDC believe are important. In particular:

- ☒ In the latter part of 2004 the packaging of the Linux 2.6 kernel by Linux distributors provides a significant advance in terms of the size and capacity of machines which can use it as an operating system. Linux can be taken more seriously as the basis of database servers when run on 64-bit CPUs as a result.
- ☒ Unisys' competitors in selling high-end Intel servers have tended to favor a "scale out" approach, addressing large company needs for Intel servers with clusters of 4-way or 8-way machines. Although a few even signed and then withdrew from deals to provide Unisys' products through OEM contracts, none have adopted its policy of designing large "scale up" machines. Unisys continues to maintain referral agreements with suppliers such as Dell.
- ☒ Although Unisys also sells Clearpath servers, which are based on its OS/2200 and MCP operating systems, it bases all of its strategy on Intel CPUs. By and large its competitors base their larger servers on other CPU types (IBM, Sun, for instance), or operating systems. Although HP's Superdome can be based on Intel's Itanium2, rather than HP's own PA CPU and Linux is now becoming available, its major thrust is behind its own HP-UX operating system.

Today's announcement is important in that it heralds a change in Unisys' operating system strategy. Its close ties to Microsoft have given it an advantage over the years and it will be interesting to see how the addition of SuSe and (later) Red Hat Linux leads to a loosening of the relationship with Microsoft. Despite the addition of new features and functions of the latest Linux kernel, IDC believes it will be some time before we see a widespread adoption of Linux for large application and database servers. Unisys' inclusion of Linux support in its Sentinel software and the introduction of Autonomous Dynamic Workload Management should help advanced users to plan for this stage of Linux adoption.

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## IN THIS INSIGHT

We look at Unisys' opportunities following its announcement of Linux support on its ES7000 Intel mainframe server. We analyze the opportunities for the use of Linux on application and database servers.

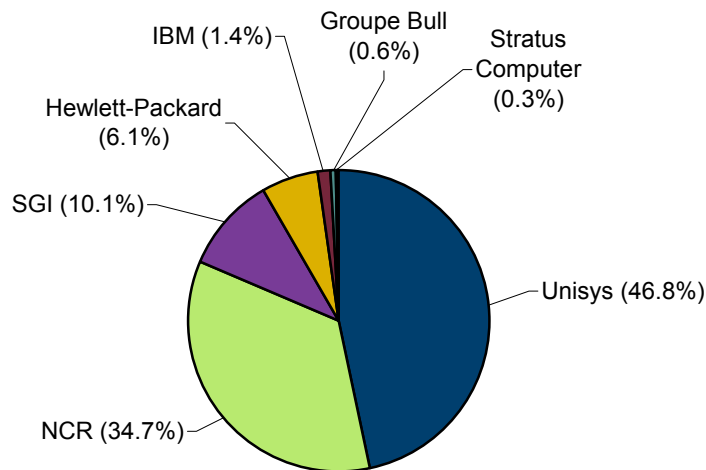
## SITUATION OVERVIEW

### Unisys Leads in the Relatively Small Market for Servers Priced Over \$100K

Unisys leads the market for high-end Intel-based servers. Its market share in EMEA in 2003 for Intel-based servers priced above \$100,000 was 46.8%. This compares with 34.7% for NCR and much smaller shares for IBM, HP, and Sun (see Figure 1).

**FIGURE 1**

Server Market in EMEA, >\$100K Systems Market Share, 2003



Source: IDC, 2004

The disappointment for Unisys is that the total market for these largest servers was only worth \$156 million in 2003. For comparison, when looking at the sale of all servers priced above \$100,000, CISC-based machines were worth \$2.3 billion and RISC ones \$4.0 billion. Microsoft Windows operating systems accounted for just 1.1% of all these larger server sales. This compares with 52.7% for Unix — a clear leader.

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## **Details of Unisys' August 2 Announcement at Linux World Expo in San Francisco**

Unisys announced the addition of the Linux operating system to its ES7000 range of servers. Initial shipments will include Novell's SuSe distribution, with Red Hat versions following between six to eight months behind.

The key differentiators of Unisys' Linux approach is described by the company as follows:

- ☒ Unisys is delivering what it calls Autonomous Dynamic Workload Management (ADWM). It is demonstrating the ability for a system to grab eight extra processors for a key application automatically at Linux World Expo. The addition of ADWM will also allow ES7000 users to run both Windows and Linux on the same machine.
  
- ☒ Unisys is addressing Linux with its Server Sentinel software. This will provide features such as continuous health monitoring, self-healing, and "call home" capabilities. It also charts the performance of memory, processors, and the file system (the inclusion of NTFS file systems in the Linux 2.6 kernel allows these to be shared between Windows and Linux). Server Sentinel also offers users a single point of remote access for Windows, Linux, MCP, and OS/2200 operating systems.

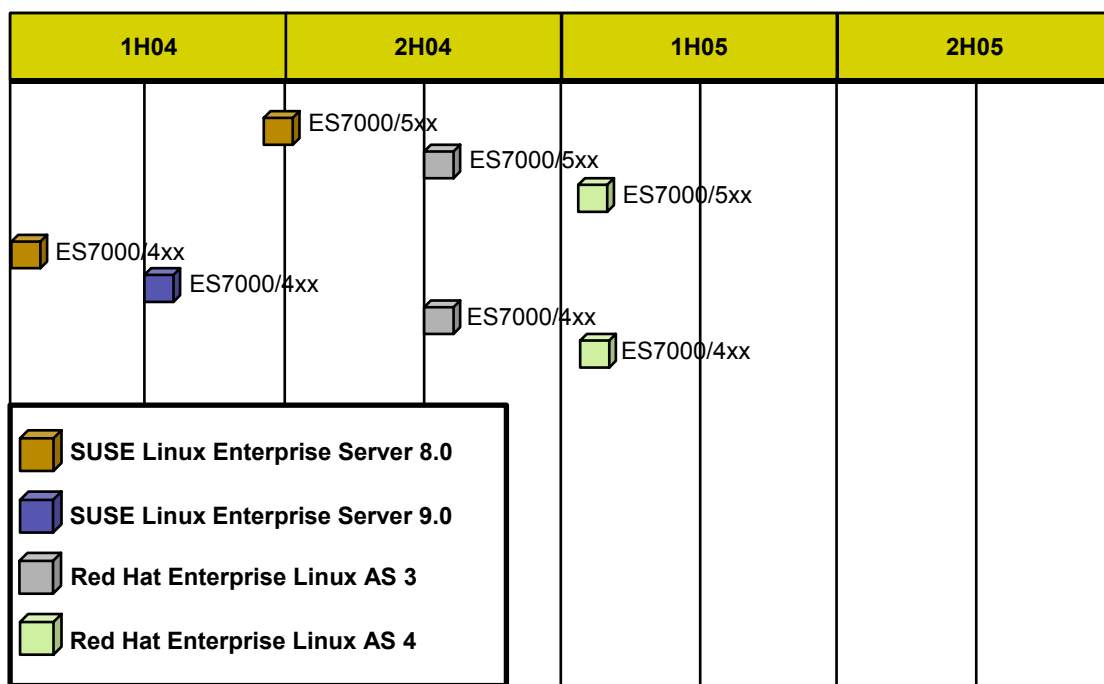
## FUTURE OUTLOOK

### Unisys Will Support SuSe and Red Hat Linux Distributions

Initially Unisys will be delivering Novell's SuSe Linux distribution on the ES7000 (for its roadmap see Figure 2).

**FIGURE 2**

The Availability of Different Linux Distributions on Unisys' ES7000 Server



Source: Unisys, 2004

In general Unisys believes that SuSe has been more advanced than Red Hat in addressing the high-end functionality of its servers; SuSe has been active in adding features such as 64-bit support early — it included it in its version 8, ahead of its general availability in Linux kernel 2.6, which forms the basis of SuSe version 9.

The introduction of each Linux distribution is dependent on the certification of the ES7000 by Novell and Red Hat.

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## **The Likely Take-Up of Large Linux Servers by Vertical Market**

Linux is growing steadily in shipments. It is particularly important for a number of industry sectors. In particular:

- ☒ Many European governments are making it a requirement for RFPs. Although IDC does not think this is analogous to the situation in the late 1980s, when governments demanded POSIX compliance, although they seldom used its features, there is a mandatory aspect here which would prevent Unisys from proposing only Microsoft-based machines.
- ☒ The financial services industry worldwide is going through restructuring, with many companies opting for the first time for lower acquisition-cost solutions. Linux use in the finance sector has been encouraged by vendors such as IBM and HP, which have set up proofs of concept and ISV partnerships.

Like many other Intel vendors Unisys is looking to provide migration from RISC-Unix platforms to Intel-Linux ones. Porting from Unix to Linux is certainly an easier proposition than Unix to Windows ones.

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## **Unisys' Partnership Approach**

Unisys has a number of relationships in place with partners to help create choices around its ES7000 platform. In particular:

- ☒ SAP has a strong Linux strategy. MySAP is already available on both Windows and Linux.
- ☒ Unisys has strengthened its partnership with Oracle in 2004. Using Oracle on Linux as a database server offers customers an interesting alternative to Microsoft's SQL Server database.
- ☒ SAS already has a strong Linux strategy.
- ☒ Both PeopleSoft and Siebel support Linux as a database server, while using Windows for application serving.
- ☒ Unisys partners with EMC for storage systems. The addition of NTFS support in Linux kernel 2.6 should make storage management more simple when adopting Linux on ES7000s.

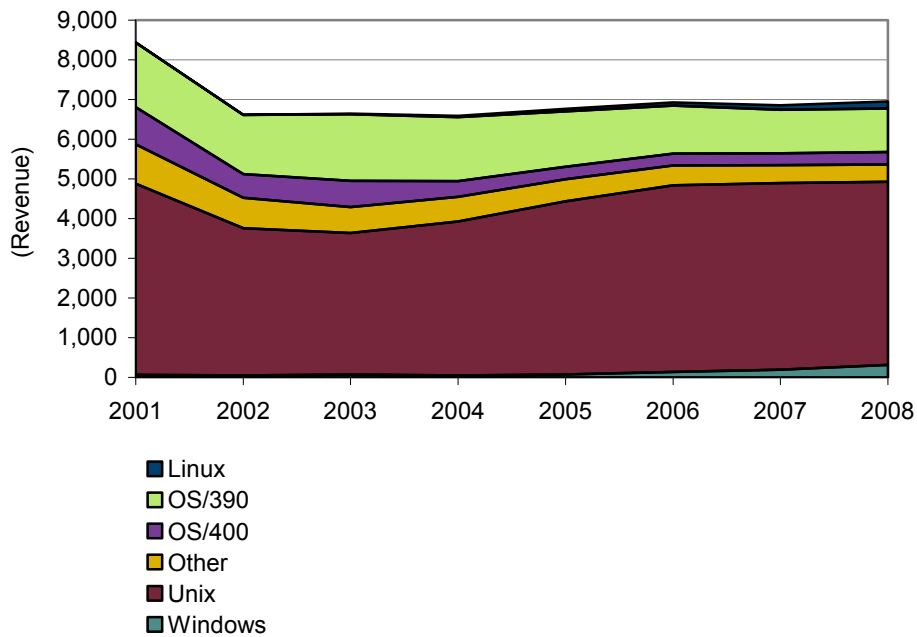
One important question is how Microsoft will react. Arguably Unisys has had a very good deal from Microsoft over the last five years. Its Windows-only approach has been a strong focus and often it has been the only Windows product in higher price bands. It will be interesting to see what the introduction of Linux versions of the ES7000 will do to the relationship.

## The Forecast for Larger Linux Servers

IDC's current forecast suggests that there will be a slow development for the sales of Linux-based servers priced at over \$100,000 in Europe (see Figure 3).

**FIGURE 3**

Western Europe Servers, >\$100K Forecast, 2001–2008, by Operating System



Source: IDC, 2004

Overall we expect the submarket to grow from \$12 million in 2003 to \$168 million in 2008. Although we expect Linux to represent only a small proportion of the market throughout the forecast period, the annual revenue opportunity will certainly be good for Unisys and other vendors that can specialize in this type of product.

## **ESSENTIAL GUIDANCE**

If you are a server vendor you will, no doubt, have your own announcements to make around the advances in Linux operating systems and your larger server ranges. As always you will need to balance them against your other offerings, both in terms of CPU type and operating system. You will need to make sure that the support of Linux will have a minimal effect on sales of your more strategic offerings. You may well want to study Unisys' approach, as it is unhampered by the need to maintain revenues and profits from RISC-based Unix machines.

If you are an ISV with a Linux strategy you may well want to consider working with Unisys more closely. Its strong Windows strategy has seen the ES700 as a strong platform for application serving. With the addition of Linux, you may well want to consider it as a platform for databases, enabling you to develop complete solutions in a single box.

If you are a large end-user server customer you may well want to look at Unisys' endorsement of Linux and assess it as a potential supplier. Although Unisys is relatively small in comparison with IBM, HP, and Sun, its focus in supplying only Intel mainframes and long experience in the mainframe market should enable it to provide appropriate services and advice for addressing large-scale workloads.

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