

# DATABASE

## TRENDS AND APPLICATIONS

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## Lufthansa Systems Tests Mainframe Platform

### *Platform Solutions offers mainframe options to data centers.*

Lufthansa Systems is one of the leading IT service providers for the airline and aviation industries worldwide. As systems integrator, the wholly-owned subsidiary of the Lufthansa Group covers the entire range of IT services, including consulting, development, implementation and operation. Lufthansa Systems provides its IT infrastructure and operations services to a variety of industries.

### Finding Options

A longtime IBM mainframe customer, Lufthansa Systems had always supported a second vendor in-house. But, since the late 1990s, when the plug-compatible mainframe computer market virtually disappeared, it no longer had that option. Over time, the lack of options emerged as a problem. "As an outsourcer," said William Brest, a technologist at Lufthansa Systems, "We have various applications, some of which require granularity." Because of the design of the IBM systems, the processes to manage the small logical partitions (LPARs) were not sufficiently efficient or cost effective.

IBM's advice was to double the resources allocated to these LPARs. But that meant a higher cost. "The problems we faced escalated as uniprocessor speed grew," Brest said. "There was no real solution to cost effectively address our outsourced customers that additionally scaled to meet our growing capacity demands."

Having access to a second vendor offered other advantages, as well. "It kept everybody honest and prices competitive," Brest said. "And it kept support personnel on their toes." The competition engendered by a multi-vendor shop meant support was always top notch.

### The PSI Alternative

At a SHARE conference, Lufthansa Systems representatives discovered Platform Solutions, Inc. (PSI), the developer of a new generation of open mainframe computers compatible with the broadest set

of data center environments and operating systems, including IBM® z/OS®. Founded in 1999 by a core team of former Amdahl engineers, the new PSI mainframe computers are based on proven systems architecture acquired from Amdahl and industry-standard Intel® Itanium® 2 processor technology. This combination gives customers unequalled system and software cost advantages over proprietary mainframe computers. PSI systems are the first new generation mainframe computers that can run the z/OS® operating system along with Linux, UNIX® and Windows®, simultaneously on the same system.

### New generation of mainframes offer cost benefits.

"Their concept and philosophy fit into my need to offload certain workloads. It would keep me from needing to expand my large mainframes, saving costs. And it gave me built-in growth," Brest said. By enabling UNIX, Linux, Windows and z/OS to run on the same platform, the PSI solution allows for consolidation and further cost savings.

### Early Ship Program

Following an internal review with the relevant stakeholders, the company decided to pursue the PSI alternative. Lufthansa Systems worked with PSI and the vendor of the underlying hardware, an enterprise-level Itanium 2 OEM, to install the machine - a process which took three to four days. The hardware team then undertook standard testing procedures and within short order, the system was up.

The process of moving applications to the new platform proved to be extremely easy. Lufthansa Systems had recently migrated to z/OS 1.6 and had archived their z/OS 1.4 applications. The company used the archived applications to start simulating the production environment. Lufthansa Systems currently uses IMS Version 6, CICS

Version 2.3, and DB2 Version 7.

On the PSI platform, Lufthansa Systems is running z/OS 1.4 with peripherals connected via ESCON. The typical combined applications have table spaces of about 400 volumes and the test storage devices currently hold about two terabytes of test data. The company is testing different consolidation scenarios. In one test, it is running z/OS 1.4 on one LPAR, Symantec/Veritas NetBackup on another, and Windows applications on another. "I am looking at ways to consolidate the Windows servers on a high speed server to cut down on complexity," Brest said. "It will give me a business advantage to be able to offer competitive pricing and it is all consolidated."

"We are currently going through functional tests" Brest added. "We have found no show stoppers. We are giving the system pain and it is surviving."

### The Benefits

The benefits of moving to PSI will be significant, Brest said. Lufthansa Systems will realize cost effective solutions by consolidating multiple systems on a single platform and get additional technical support from a second company. "We will have two sets of eyes looking at different problems," he said. PSI is building a world-class support operation.

Moreover, Brest noted, the dialogue with PSI has been excellent. "We have been sharing ideas and processes," he said. "The relationship is working out very well." Indeed, Lufthansa Systems is poised to be a strong partner for PSI providing the insight needed to run a modern enterprise data center.

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