

# Atos Origin builds a cost-effective hosting solution on the IBM Enterprise Linux Server platform



## Overview

### ■ The Challenge

To introduce new applications for major clients in the insurance and rail transport industries, Atos Origin needed be able to support large numbers of users and high transaction volumes. The company required a high-performance infrastructure that could offer 24x7 availability.

### ■ The Solution

Atos Origin decided to implement the new applications in Linux environments running under z/VM on an IBM Enterprise Linux Server (ELS). The ELS is an IBM System z10 Business Class server which uses Integrated Facility for Linux (IFL) engines to deliver excellent price-performance.

### ■ Key Benefits

- The z10 IFLs in the ELS deliver up to 40 percent more capacity at a 50 percent lower price than the previous generation of hardware – a price-performance improvement of up to 65 percent
- Running multiple Linux environments on a single ELS can potentially reduce TCO by up to 80 percent, compared to a traditional distributed x86 environment
- IBM Capacity Backup Upgrade enables full, rapid disaster recovery while keeping operational costs low



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Technologies Manager  
Atos Origin

### Business Benefits

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### Key Components

- IBM Enterprise Linux Server
- SUSE Linux Enterprise Server

Atos Origin is a major international IT services provider, employing 50,000 professionals in 40 countries. The company offers integrated design, build and operate solutions to large multi-national clients in targeted industry sectors, and has annual revenues of around £5.8 billion. The Atos Origin business approach is based on establishing long-term partnerships that encourage success through mutual benefit.

An important part of Atos Origin's UK business is managed services – from basic server hosting through to full lifecycle management for both hardware and applications. The company has several major data centre operations, providing full 24x7 support for business-critical customer environments. For its mainframe customers, Atos Origin is taking advantage of IBM System z technology to drive improved internal efficiency and enhanced customer service.

Colin Clews, Technologies Manager, explains: “The System z platform is so reliable that we effectively don’t have to worry about day-to-day maintenance and operations – so we can focus our energies on delivering better value to our managed customers. Our customers have better performance, improved flexibility and better disaster recovery capabilities – all with the usual ultra-high System z availability.”

### An ideal platform for Linux applications

Atos Origin recently developed a new Linux-based application that would help rail transport companies deliver travel information to staff and passengers via their mobile phones, and wanted to deliver it as a shared service for several major rail companies. The company also wanted to enhance its service to customers in the insurance industry by upgrading from MQSeries Integrator (MQSI) middleware to a new IBM WebSphere Message Broker solution, which would provide support for Web Services integration for a number of core insurance applications.

Atos Origin decided to use the IBM Enterprise Linux Server (ELS) to host these systems. The ELS is an IBM System z10 Business Class server that leverages specialised IBM Integrated Facility for Linux (IFL) processors to provide a highly available environment for virtualised Linux workload. By hosting the new Linux application on the ELS platform, Atos would be able to provide its customers with a powerful infrastructure, combining the cost-efficiency and openness of Linux with the high reliability and performance of System z.

“We have been using IFL processors for several years now, and in our opinion, System z has proved itself as an ideal enterprise Linux platform,” says Colin Clews. “With a traditional distributed approach – even using the latest virtualization-enabled x86 processors – you end up with a lot of unreliable boxes to manage.

With the ELS, we can run hundreds of environments within a single physical footprint, and easily deliver the 24x7 availability that our customers demand.”

The new travel information application was initially deployed on one of Atos Origin’s smaller and older mainframes – an IBM System z890 with a single IFL for Linux workload. As more of its client’s staff and passengers began to use the service, Atos considered the best way to expand the environment, and decided to upgrade the z890 to a new IBM ELS, which is built on the IBM z10 architecture.

“With each new generation of IBM hardware, the price-performance increases. The z10 IFL engines in the new ELS not only run Linux environments approximately twice as fast as the previous generation – they also offer around 40 percent more capacity, enabling us to expand our Linux footprint without increasing our costs.”

The additional capacity of the z10 IFLs is available at a 50 percent lower price than the previous generation of System z servers. The result is a price-performance improvement of up to 65 percent. IBM studies have also shown that running virtualised Linux servers on the ELS can reduce TCO by as much as 80 percent compared to a traditional distributed x86 server environment.

Running the mobile application under Linux on the ELS proved so successful that Atos also decided to deploy the WebSphere Message Broker solution in a similar environment. The company has invested in a second IFL to handle this new workload.

“Running WebSphere Message Broker under Linux on the ELS is considerably more cost-effective than our existing MQSI and z/OS environment,” says Colin Clews. “As a result, we not only benefit from the extended functionalities that Message Broker offers – we can also deliver them at a more competitive price for our customers.”

### **Faster recovery**

To provide disaster recovery for the System z environment, the production ELS machine at the main Andover data centre is mirrored to a smaller z9 server at a secondary data centre in Birmingham. The z9 server features IBM Capacity Backup Upgrade (CBU), which enables its capacity to be dramatically increased if and when it is required to take over the production workload from the production server. With CBU, this spare capacity attracts no maintenance or software licensing costs until it is actually activated.

“CBU is a great innovation,” comments Gary Poulton. “We now replicate customer data asynchronously to the second data centre, and we can simply IPL the backup

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z9 in the event of a disaster. Using the hardware management console, we can just turn on the additional power if it is needed, growing from a single engine to as many as we need. The great advantage is that we pay only for the maintenance on standard capacity, while keeping all that extra capacity in reserve."

Prior to the introduction of CBU, Atos Origin worked with an external provider for disaster recovery. Not only was this more costly, but also the recovery times were longer – up to 48 hours. With CBU, all applications can be restarted in less than two hours from a failure in the primary data centre – reducing the potential damage to business in the event of an outage. Colin Clews says, "With CBU, we have brought our disaster recovery capabilities in-house, and significantly improved the speed and ease of restoring our customer environments. Over five years, we estimate that our disaster recovery costs will be reduced by as much as 38 per cent."

### **Open to future possibilities**

"From a support and delivery perspective, the mainframe is unbeatable in our opinion," comments Colin Clews. "With Linux on the mainframe, we anticipate bringing new workloads into the mainframe environment, which will reduce costs and increase flexibility for our customers."

"When you consider the cost of licences, maintenance and networking on a large estate of servers, the value proposition of Linux on the System z platform is very clear. Everything can run in a single physical footprint, managed by fewer people, with no external networking. And with z/VM, we can deliver a new Linux server, fully configured with a database, in less than 20 minutes. Many enterprises that currently run large server farms will know that it can take around two weeks to order, install and configure a new physical server – with Linux on the mainframe, they could respond significantly faster and at lower incremental cost to new business requirements."

### **Delivering the on demand vision**

The possibility of running Linux on the new IBM ELS platform has opened new strategic horizons for Atos Origin in the UK.

Colin Clews comments, "With the ELS, our customers now have the option of running their distributed Linux applications on a single physical server. The high-speed internal networking of the System z architecture can deliver dramatic improvements in throughput for this type of workload – making integration tighter and faster."

Linux on the mainframe is also helping Atos Origin develop an on-demand computing model for its customers, enabling them to pay for computing power on a transactional basis. "With z/VM, we can provision new Linux servers very rapidly, and measure capacity usage very precisely," says Colin Clews. "If customers need more power, we can just turn it on almost instantly, and bill them accordingly."

"We think that the on-demand flexibility offered by Linux on the IBM ELS platform will be very attractive to customers who currently run large distributed server environments, enabling them to reduce costs and increase responsiveness."



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