



## Success Story

Server

# eThekwini Municipality

eThekwini Municipality opened and modernized its core systems by migrating them from z/OS to SUSE® Linux Enterprise Server for System z on the IBM z114 mainframe. The new applications offer improved functionality with the same great reliability and performance—and at significantly lower total cost of ownership. Software licenses are up to five times less costly, and the new environment also requires fewer personnel to manage than alternative platforms.



### Overview

eThekwini Municipality, in the KwaZulu-Natal province of South Africa, is home to more than three million people. The area—centered on the beachside city of Durban—is a major destination for both domestic and international tourism. The Municipality employs 21,000 people and is responsible for the provision of local services including utilities, libraries, parks and swimming pools.

### Challenge

The 50 departments within eThekwini Municipality provide a broad range of services, including electricity and water to 800,000 paying customers. The organization runs its own mainframe software to operate the large databases and transactional systems required to support this large group of customers.

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**RONEY MOODLEY**

Deputy Head, Service Delivery  
eThekwini Municipality

Aiming to modernize its user interfaces—moving from terminal applications to a web-based graphical interface—the Municipality wanted an open platform backed by enterprise-class support, and offering very high availability and performance. Choosing a truly open platform would also increase the future portability of systems.

### Solution

The Municipality’s IBM System z mainframe already had an Integrated Facility for Linux (IFL) processor, so it was an easy choice to deploy Linux. Roney Moodley, Deputy Head, Service Delivery at eThekwini Municipality, said: “We trusted the mainframe and had built up a great deal of experience and skills over the years. SUSE Linux Enterprise Server was fully supported by IBM, so that was the logical choice.”

Today, eThekwini Municipality has five IFLs running SUSE Linux Enterprise Server for System z on an IBM zEnterprise 114 server, with one further processor for z/OS. Both operating systems run as virtualized instances on the z/VM hypervisor, in four logical partitions (LPARs): one for z/OS production, one for Linux production, and two for test and development (including some 35 Linux virtual servers). The Municipality uses IBM DB2 databases and IBM WebSphere Application Server on SUSE Linux Enterprise Server for System z.



### eThekwini Municipality at a glance:

*A South African municipality with an area of more than 2,200 square kilometers, home to more than three million inhabitants and incorporating the city of Durban, a major domestic and international tourist destination.*

#### ■ Industry and Location

Government, KwaZulu-Natal, South Africa

#### ■ Products and Services

SUSE Linux Enterprise Server for System z

#### ■ Results

- + Provided a stable platform for handling 30 billion ZAR in annual payments
- + Decreased software licensing costs by a factor of up to five
- + Avoided deploying and licensing up to 60 standalone servers

## “Running SUSE Linux Enterprise Server on the mainframe means that a few skilled people can manage many servers.”

**RONNEY MOODLEY**

*Deputy Head, Service Delivery  
eThekweni Municipality*

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A dedicated 10 Gb/s fibre connection links the production z114 to a second mainframe at a disaster-recovery site 25 km away, using IBM Metro Mirror to replicate data at the disk level. Working together, Ecomm Technologies and IBM provide 24/7 unified support for both SUSE Linux Enterprise Server and the zEnterprise hardware.

The flexibility of Linux on the mainframe is a major advantage for eThekweni, which is still migrating its core systems from z/OS to Linux. “Our Cash Receiving module has been live for five years on SUSE Linux Enterprise Server for System z, handling 30 billion ZAR [3 billion USD] in annual payments,” said Moodley. “We are currently using 80 percent of our mainframe resources to handle the redevelopment of our Customer and Property modules. When the migration is complete, we will seamlessly switch the resources over to the production LPAR.”

The new versions of core systems running on SUSE Linux Enterprise Server give the Municipality’s employees a single view of the customer across all services for the first time. Equally, centralizing the city’s revenue management systems on SUSE Linux Enterprise Server for System z gives the Municipality improved financial control without any technical integration glitches.

### Results

Deploying applications on SUSE Linux Enterprise Server for System z means that the Municipality avoids significant software fees. The organization also avoids costs versus alternative hardware platforms.

“Compared to z/OS, DB2 and WebSphere licenses for SUSE Linux Enterprise Server for System z are cheaper by up to a factor of five,” said Moodley. “Equally, if we put the SUSE Linux Enterprise Server workload on Windows instead, we would need at least 30 production servers and 30 servers for Disaster Recovery, each with OS and software licenses. Instead, we need to license just five IFLs for SUSE Linux Enterprise Server for System z. Naturally, there are also significant energy savings in consolidating to our z114 rather than running a distributed Windows landscape.”

The Municipality continues to benefit from the extremely high stability, performance and scalability of the mainframe. The relatively low maintenance requirements produce further time and cost savings. “Running SUSE Linux Enterprise Server on the mainframe means that a few skilled people can manage many servers,” said Moodley. “Our cost per financial transaction is below 10 cents, which is significantly lower than for other platforms we run. Equally, we have 15 people supporting open systems, but just two or three for the mainframe, which runs much larger and more critical applications.”

The final benefit for eThekweni Municipality is greater flexibility. “When the migration to SUSE Linux Enterprise Server for System z is complete, our core systems will be extremely portable,” said Moodley. “This reduces our vendor dependence and opens up our future options.”



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