Taking Linux to a new level

Clients tell how they simplify, innovate and compete
with the enterprise-grade platform for Linux

IBM

A new generation of applications and services running on one of the industry's most efficient and high-performant systems

INFORMATION

The surprising economics of IBM® z™ technology

Hear experts discuss just how crucial your computing platform decision is in this insightful video. ▸

In 2015, there are more than

7 billion

mobile cellular subscriptions worldwide.[1]

One integrated platform makes it possible

Leading companies are seizing the opportunity to build, integrate and support the next generation of applications. They're using mobile, cloud and big data analytics in new, more effective ways to drive better business outcomes and competitive differentiation. And, to support these strategic efforts, they need the highest levels of reliability and performance from a flexible and cost-efficient IT architecture.

Although many organizations have already made large investments in IT systems to meet this demand, they can't afford to continually add new servers and software licenses to keep pace with growth. Right now, C-level IT leaders, infrastructure and operations executives, enterprise and solution architects, developers, and more are exploring better ways to strike the right balance between controlling cost, complexity and risk while ensuring they have the agility to proactively deliver innovative applications and services that drive competitive advantage and marketplace leadership.

Satisfying escalating business demand with enterprise-grade qualities of service

Many of the world's most innovative organizations are using Linux and open source technology solutions to deliver customer-facing, revenue-driving applications that serve millions of customers, clients and citizens.

However, as Linux and open source deployments move from niche projects to being more pervasive in the data center to support the business, it is imperative that these applications be fully supported by enterprise-grade capabilities such as nondisruptive scalability, unparalleled availability and continuous data protection. This is especially important for business-critical applications—essentially the solutions that support your entire organization and require 24x7 availability.

For your business, any outage of a business-critical application or server infrastructure can be costly in terms of lost revenue, missed opportunity and reduced employee productivity. To your customers, when applications become unavailable, that loss of services can have a negative effect on loyalty, potentially leading to customer attrition.

Meeting service-level agreements (SLAs) hinges on server reliability, uptime and manageability. IBM LinuxONE™ and IBM z solutions provide you with a flexible yet powerful infrastructure that helps ensure that your business receives the performance, reliability and processing power it needs to address increasingly sophisticated and demanding application requirements.

For more than 15 years, IBM clients have depended on the enterprise-grade platform for Linux technology as a trustful, reliable and highly secure system to confidently deploy business-essential applications, optimize operating costs and achieve seamless infrastructure growth.

The IT leaders driving these innovations—many of them featured in this ebook—are revolutionizing industries and pushing their competitors to do better and to do more. Explore the following sections to learn how leading organizations are using Linux without limits to simplify, innovate and compete in the new application economy.

The best of both worlds

Combining one of the industry's most advanced, trusted and high-performance enterprise systems for business-critical applications with Linux technology offers you a solution that's:

Open: Choose the tools and applications you love

Flexible: Meet demand with virtually limitless scale

Simple: Fewer servers, less complexity lower cost

Efficient: Get unparalleled utilization and speed

Trusted: Embedded security and services that never stop

1: Simplify ➤

2: Innovate ➤

3: Compete ➤

1: Simplify

> "The best way for IT executives to satisfy the business requirements is through business process improvements and cutting operations expenditures through data center transformation. In simpler terms, this means less complexity, more agility, greater productivity and higher utilization of resources—all driving down IT operational costs." [2]

—The Robert Frances Group

Linux without limits: Fewer servers. Less complexity. Reduced costs.

Putting each customer at the heart of every transaction is one of the most powerful ways to drive loyalty in any sector. For smaller organizations, this agility comes almost naturally, but as the business grows, how can organizations stay true to the grassroots customer service that helped launch them to success? For many organizations, the cost and complexity of the infrastructure grows on par with business demand, while the budget to support new technology solutions evaporates. This complexity is costly, places more burden on resources and can slow time to market.

The enterprise-grade platform for Linux can help ease the challenges you face by reducing costs, saving you time and streamlining processes. In addition to enabling exponentially easier management, the platform also helps ensure lightning fast response times and virtually unlimited scale that gives your applications the premium Linux experience your customers deserve.

Virtualization and consolidation enables cost savings and flexibility

Cutting IT costs is a constant struggle, but virtualizing and consolidating applications and servers are powerful ways to achieve this goal without sacrificing performance. They allow you to optimize systems, reduce power and cooling, simplify management, and scale physical space requirements. The enterprise-grade platform for Linux stands apart in its ability to host thousands of distributed servers on a single physical server, enabling you to better leverage resources while positioning you to capitalize on operational efficiency gains.

Running software on fewer cores can result in big savings: fewer licenses and support costs, fewer physical servers and networking hardware, less floor space required, less electricity usage. For example, at scale, LinuxONE and IBM z clouds can cost half as much as x86 or public cloud alternatives.[3]*

Provisioning new virtual servers in minutes

The enterprise-grade platform for Linux is designed so that a new test or development environment can be provisioned in just minutes—without new hardware procurement. Plus, the LinuxONE and IBM z platforms have enormous capacity tailored to allow boundless growth that won't break the bank and doesn't require more data center space. Quicker provisioning and almost limitless capacity for growth can help minimize lead time for new projects while improving business agility and responsiveness.

*All performance information was determined in a controlled environment. Results may vary.

Scalability to run thousands of Linux applications in parallel on one server

IBM LinuxONE and IBM z technologies virtualize physical resources as part of their native operation, so you can scale out a massive 8,000 virtual servers or thousands of containers on a single system. You can also scale up to support tens of thousands of concurrent users—enabling you to run test, development and production on a single system. This impressive vertical and horizontal scalability means you get a simpler IT environment that needs less

time spent on infrastructure management. Plus, the ability to share resources and development environments can lead to greater productivity.

IBM LinuxONE and IBM z offerings come with up to 10 TB of memory, 141 configurable processors and 85 logical partitions (LPARs), enabling you to run thousands of Linux workloads in parallel on one server, reducing your need for additional footprints.

SCALE OUT: 8,000 VIRTUAL SERVERS OR THOUSANDS OF CONTAINERS IN A SINGLE SYSTEM.

SCALE UP: SUPPORTS TENS OF THOUSANDS OF CONCURRENT USERS; RUN TEST, DEVELOPMENT AND PRODUCTION IN A SINGLE SYSTEM. SHARED RESOURCES AND SHARED DEVELOPMENT ENVIRONMENTS MEAN GREATER PRODUCTIVITY.

Discover how the following organizations are using the enterprise-grade platform for Linux to simplify their IT environments to gain cost-saving efficiencies, speed and flexibility.

SUCCESS STORIES

➜ SinfoniaRx

➜ EVERTEC

➜ The Met Office

➜ Sparda-Datenverarbeitung eG

+ To learn more about the technology, solutions and services associated with the IBM enterprise-grade platform for Linux technology, please visit **ibm.com**/systems/z/os/linux

To learn more about the IBM LinuxONE portfolio, please visit **ibm.com**/linuxone

SinfoniaRx

Managing big data growth for faster updates to patient medical profiles

Read the full story ▶

NEEDS: *A highly available, scalable and reliable solution to support growing data volumes*

ORGANIZATION: *SinfoniaRx*

INDUSTRY: *Healthcare*

REGION: *United States*

The IBM z cloud solution helped SinfoniaRx save patients and health plans more than USD 65 million in medical costs, **reduce data load times by 33 percent** and process medical claims **60 percent faster**.

Providing a full suite of personalized medication therapy management (MTM) services requires that the company's RxCompanion solution gather a vast amount of information from various sources, including call center interactions during which patients and pharmacists discuss suggestions regarding adding, stopping or changing medications. With **member growth expected to increase from 5.5 million to more than 10 million** in the next few years, SinfoniaRx implemented an IBM z and Linux cloud solution to achieve scalability to help it remain ahead of the growth curve while constantly and rapidly increasing process sophistication.

SinfoniaRx relies on the enterprise-grade platform for Linux to provide:

– A sustainable solution to manage big data growth

– A 94 percent improvement in batch processing

– A 33 percent reduction in data load times

– The ability to process medical claims 60 percent faster

– Medical cost savings for members of more than USD 65 million

> " As we're talking to patients on the phone, we enter and reanalyze data in real time. We need to provide subsecond responsiveness. Cloud on z is the only solution I encountered that lets us do that. "
>
> —Kevin Barber, CIO, SinfoniaRx

→ **SinfoniaRx**   → EVERTEC   → The Met Office   → Sparda-Datenverarbeitung eG

EVERTEC

Leaner, faster processing for billions of transactions

Read the full story ▶

NEEDS: *Fast, highly secure, effective system responsiveness and availability around the clock*

ORGANIZATION: *EVERTEC*

INDUSTRY: *Transaction processing*

REGION: *Puerto Rico*

Every day, millions of people across Latin America and the Caribbean expect their financial transactions to be processed immediately and securely. As one of the region's industry leaders, EVERTEC has relied on IBM for **more than 25 years** to help quickly process more than **2.1 billion transactions annually**, manage an extensive electronic payment network and host environments for customer systems.

Provisioning new virtual servers now takes just **an hour or two—versus days** for a physical server.

❝ IBM [z Systems] is now our strategic platform for all Oracle workloads; it is our first choice when bringing up new databases and moving existing workloads over from the distributed environment. ❞

—Eduardo Camargo, executive VP and CIO, EVERTEC

EVERTEC relies on the enterprise-grade platform for Linux to provide:

– 24x7 responsiveness and a reliable foundation to support multiple clients' systems

– Lightning-fast provisioning and room for growth that improves responsiveness

– Cost savings, improved resource utilization and productivity through virtualization

➔ SinfoniaRx   ➔ **EVERTEC**   ➔ The Met Office   ➔ Sparda-Datenverarbeitung eG

The Met Office

Modern forecasting that helps businesses save billions—and saves lives

Watch the success video, read the full story and view the infographic ▶

NEEDS: *Consolidation for less complexity and unprecedented weather prediction accuracy*

ORGANIZATION: *The Met Office*

INDUSTRY: *National weather service*

REGION: *United Kingdom*

We rely on timely, accurate, well-communicated weather intelligence to inform our actions and reduce environmental impact. With millions of forecasts driven by 10 million weather observations each day, the Met Office is one of the world's most influential agencies. And it relies on an IBM z environment to reduce complexity, increase lead time and drive accuracy in its forecasting and reports.

By consolidating from distributed cores, the Met Office has **reduced licensing costs by 75 percent**.

❝ By consolidating distributed commodity servers, you can save a great deal of money. When we looked at all of the parameters, it just made sense to move the workload to the mainframe. ❞

—Martyn Catlow,
large systems portfolio manager, the Met Office

The Met Office relies on the enterprise-grade platform for Linux to provide:

– Quick, industry-specific weather reports that advise and empower

– 24x7 support and automation to support critical businesses functions

– Cost savings through consolidating commodity servers

Sparda-Datenverarbeitung eG

Consolidated enterprise computing for 24x7 customer service

NEEDS: *Reliability, cost efficiency and minimum downtime for a better customer banking experience*

ORGANIZATION: *Sparda-Datenverarbeitung eG (SDV)*

INDUSTRY: *Banking IT service and development*

REGION: *Germany*

Today's customers expect fast, seamless access to banking accounts on desktop and mobile. As the lead IT innovators for Sparda-Bank Group—which serves **3.5 million customers and 23 million accounts**—SDV looked to IBM to help increase system capacity and performance while reducing its mission-critical applications' total cost of ownership to stay competitive.

Linux and IBM z technology have **reduced total cost of ownership by 50 percent**.

> ❝ Today, we deploy new systems quickly and scale systems as required—optimized virtual machine sizing helped us reduce our data center costs. ❞
>
> —Bernd Bohne, department head, central systems technology, Sparda-Datenverarbeitung eG

Sparda-Datenverarbeitung eG relies on the enterprise-grade platform for Linux to:

– Consolidate databases, simplify administration and enable a team of three to manage 120 servers

– Enable automated failover within seconds for 24x7 availability

– Provide integrated networking, eliminating connectivity delays

➔ SinfoniaRx   ➔ EVERTEC   ➔ The Met Office   ➔ **Sparda-Datenverarbeitung eG**

2: Innovate

> **"**[Our customers] like the rigor, the control and the security that we provide them, but scalability is probably the most important to actually grow as their business grows.**"**

—Jacques Loubser, general manager, Business Connexion

Combining Linux technology, IBM z hybrid cloud and IBM Cloud Manager with OpenStack allows organizations to enhance the benefits of each tool for a more powerful and reliable solution.

Watch the demo ▸

Linux your way: Cloud computing. Optimized environment. Open innovation.

By 2018, global cloud IP traffic will account for more than three-fourths (76 percent) of total data center traffic,[4] and spending for public IT cloud services is expected to reach more than USD 127 billion.[5] This explosive demand for applications and services has become a driving force for IT transformation.

For many organizations, running the Linux OS in an IBM z environment provides a flexible, reliable solution that enables them to consolidate applications, reduce costs and streamline processes. As a result, these organizations are able to free up valuable resources, shift their focus from operations and administration, and enable IT staff to concentrate on higher value projects that can lead to business innovation. IBM LinuxONE and IBM z solutions are making a difference by:

- Providing an open platform that supports more than 3,500 independent software vendors
- Offering a choice of superior management tools that enable flexibility to automatically adjust resources in real time
- Achieving 50 percent lower cloud infrastructure costs over other alternatives[6]
- Providing 60 percent lower total cost of ownership over three years than a public cloud[7]

The Linux you know and love with more openness, flexibility and agility

The enterprise-grade platform for Linux technology gives you the Linux environment you want. More choices means you can choose the solutions that are right for your business, with the tools and technology you already know and love deployed on a platform that supports the exceptional levels of service and performance you require. Create an environment that offers you the ability and capacity to address the types of demands that are coming at you—whether it's for cloud, mobile, data and analytics, or DevOps—with Linux without limits.

Virtualization is inherent to the enterprise-grade platform for Linux technology—not just an added feature. This powerful virtualization enables consolidation on a massive scale. To put it in perspective, the typical utilization rate for an Intel server is less than 10 percent, even when virtualized utilization is less than 40 percent.[8]

Flexibility

Support Linux virtual machines and Java™ applications. Arrange them into virtual clusters, providing an environment to enable Apache Hadoop and NoSQL technologies to run without modification, depending on the application. That means you no longer need to split across multiple systems. And you can support tens of thousands of concurrent users and run test, development and production in a single system, with shared resources and a shared development environment for greater productivity.

Efficiency and automation

Move your data to a virtualized, cloud-based environment to accelerate application time to market through increased efficiency and automation. This can help reduce your organization's operational costs—putting time back in your pocket for open innovation.

– Built for speed and designed to deliver subsecond user response time to thousands of concurrent users

– Resourcing on demand that lets you spin up containers and virtual severs in minutes

– Automated resource provisioning and reallocation that allows you to add physical resources automatically in seconds, temporarily or permanently, even when you are running at 100 percent utilization

THE ENTERPRISE-GRADE PLATFORM FOR LINUX TECHNOLOGY IS CAPABLE OF SUPPORTING NEARLY 100 PERCENT UTILIZATION, MAKING IT IDEAL FOR A SHARED CLOUD ENVIRONMENT.

Discover how the following organizations are using the enterprise-grade platform for Linux technology to fuel forward-thinking change, flexibility and cost savings.

SUCCESS STORIES

➜ State of New York

➜ Citi

➜ Mizuho Bank

➜ Sicoob

+ To learn more about the technology, solutions and services associated with the IBM enterprise-grade platform for Linux technology, please visit **ibm.com**/systems/z/os/linux

To learn more about the IBM LinuxONE portfolio, please visit **ibm.com**/linuxone

State of New York

Connecting cities via the cloud for growth and prosperity

Watch the success video, read the full story and view the infographic ▶

NEEDS: *Smarter government spending, greater transparency and improved efficiency*

ORGANIZATION: *State of New York*

INDUSTRY: *Government*

REGION: *New York*

Inefficiencies and budget restrictions can bog down nearly every public sector system—and New York's **1,600 local governments** are no exception. IBM Research and Software Consulting Associates (SCA) teamed up with the state to develop the **New York Municipal Shared Services Cloud**, an innovative, mainframe-based cloud environment that improves infrastructure by attracting new growth, streamlining applications and providing transparency.

This cloud model could **decrease IT budgets by 25 percent**, saving some municipalities up to **USD 2 billion**.

> **"** Change starts by asking the difficult questions and finding innovative solutions. Cloud isn't just for IT anymore; it's for the business. Our cities cannot sustain and succeed without a real partnership within our state government. **"**
>
> —Wil LaBossier, president, SCA

State of New York relies on the enterprise-grade platform for Linux to:

– Host the New York Municipal Shared Services Cloud

– Enable safe information sharing and collaboration among governments

– Achieve its goal to reduce spending on goods and services by USD 600 million over the next five years

State of New York   Mizuho Bank   Citi   Sicoob

Mizuho Bank

Redefining online and mobile banking for the ultimate customer experience

Watch the video ►

NEEDS: *Flexibility, stability and innovation to support overseas expansion*

ORGANIZATION: *Mizuho Bank*

INDUSTRY: *Banking*

REGION: *Japan*

With Internet access skyrocketing year over year and corporate Internet and telephone banking initiatives on the rise, today's banks need immediate access to increased capacity whenever usage spikes occur. Serving more than **10 million customers**, Tokyo-based Mizuho Bank used the Linux on z Systems solution to update online and mobile applications while gaining scalability and reducing overall costs.

With IBM, Mizuho can run a scalable, stable environment at **half the cost** while ensuring business continuity.

❝ We can now deliver innovative financial services and avoid, or at least instantly recover from, system failures, which promotes business continuity and increased customer satisfaction. ❞

—Masahiko Kato,
division head of IT and system
general division 1, Mizuho Bank

Mizuho Bank relies on the enterprise-grade platform for Linux to:

– Improve usability and centralize maintenance while reducing IT expenses

– Ensure continuity and scalability for reliable overseas expansion

– Collect and analyze customer operating information to use in developing new products and services, helping accelerate delivery to customers

Citi

Pioneering progress for the healthcare payment industry

Watch the success video ▸

NEEDS: *Robust mainframe technology capable of keeping customers ahead of the curve*

ORGANIZATION: *Citi*

INDUSTRY: *Financial services*

REGION: *United States*

Today's financial industry leaders know that information about money is almost as important as the money itself. When global bank Citi sought to revolutionize the healthcare payment industry, IBM provided the technology necessary to create one centralized, highly secure digital space for consumers to track and pay: **Money² for Health**. IBM helped Citi bring this world-class innovation to life.

With the mainframe, Citi can process **150,000 transactions per second**.

" [Our] mission around the world is really to try to improve every country in which we have the honor to serve. The mainframe provides Citi the opportunity to bring world-class innovation to life. "

—Don Callahan, head of operations and technology, Citi

Citi relies on the enterprise-grade platform for Linux to provide:

– Near-real-time insight into the business

– A security-rich, pleasurable customer experience— with near-24x7 availability

– Its customers more information and insight at the point of impact

➜ State of New York   ➜ Mizuho Bank   ➜ **Citi**   ➜ Sicoob

Sicoob

Self-service and virtualization for rapid business growth

NEEDS: *Infrastructure flexibility, security and scalability for 24x7 service and mobile access*

ORGANIZATION: *Sicoob*

INDUSTRY: *Banking and credit services*

REGION: *Brazil*

In recent years, Brazil has grown into a global economic player—in turn, sending many financial institutions scurrying to keep pace. As one of the country's largest credit cooperatives, serving more than 2.5 million people, Sicoob sought a smarter infrastructure from IBM that not only saves money and delivers critical insights but also **grew mobile banking by 600 percent and Internet banking by 200 percent**.

Sicoob **avoids USD 1.5 million in annual energy** costs by migrating to the mainframe.

> " We used to run everything on Intel servers, and we had many different vendors to coordinate with. This made that environment very difficult to manage. On top of that, we were also experiencing data center space constraints. We were simply running out of room and having trouble adding additional servers to enable us to grow. "
>
> —Paulo Nassar,
> IT processing and storage
> infrastructure manager, Sicoob

Sicoob relies on the enterprise-grade platform for Linux to provide:

– Virtualization, flexibility and quick provisioning that supports extreme growth

– A consolidated solution that reduces complexity and software maintenance costs

– Intelligent insights and data that drive smarter decision making

➡ State of New York   ➡ Mizuho Bank   ➡ Citi   ➡ **Sicoob**

3: Compete

> "The more we know about risk, the better we can manage it, the better we can help our clients manage their risk, the better we can help them avoid risk where it can be avoided economically. And the better we can help them to design systems that can withstand the forces of nature."

—Andreas Schraft, managing director, natural hazards, Swiss Re

Watch the video ▶

Linux without risk: Exceptional availability. More reliable mobile applications. Faster data processing and insight. Baked-in security.

IBM LinuxONE and z technology is designed to protect your data and services and make sure they are available when and where your clients need them with one of the industry's most secure and resilient enterprise-grade platforms for Linux technology.

Reliable platform, security-rich transactions, superior service

In a world of standards, it's not easy to set yourself apart from the competition. To deliver greater value to customers, you need to be constantly looking to enhance your portfolio with new services and build a better customer experience. But as your business grows, your existing IT infrastructure has to keep pace with the increasing demand for new and improved services—and your costs cannot spiral out of control. The flexibility of the Linux OS combined with the exceptional reliability and efficiency of the IBM LinuxONE and IBM z portfolio makes the platform ideal for achieving sustainable growth without limits.

Unplanned application and server downtime can cost billions of dollars

According to IDC, for the Fortune 1000, the average total cost of unplanned application downtime per year is USD 1.25 billion to USD 2.5 billion.[9] Downtime is expensive because it affects user experiences— internally and externally. When calculating expenses, hardware, software, system management and facilities costs are what are often tracked. But the hidden expense associated with unplanned application downtime can be enormous.

Average cost per record for a data breach varies by industry

According to a Ponemon study, the average global cost of data breach per lost or stolen record is USD 154. However, if a healthcare organization has a breach, the average cost could be as high as USD 363, and in education, the average cost could be as high as USD 300. The retail industry's average cost increased dramatically, from USD 105 last year to USD 165 in this year's study.[10]

Downtime and security breach impact can be calculated as follows:

– **Missed business opportunity.** Estimate the number of transactions not run during the period of the outage and the average revenue generated by each transaction.

– **Loss of productivity.** What is the hourly cost of all the employees affected who can no longer do their jobs? What is the hourly cost of the data center?

– **Loss of brand image and customers.** If the system is often unavailable or experiencing poor performance, how many customers will permanently move to your competition?

– **Other factors.** This includes financial penalties, overtime payments and wasted goods.

Enhanced security, integrated cryptography, security isolation

Being entrusted with customer data and information is not a right; it's a privilege. As IT leaders, it is your responsibility to ensure that your organization's IT infrastructure is fortified to withstand the barrage of potential incursions to which your organization could potentially be exposed. You need to ensure that data transactions are executed securely while preventing potential loss of data through catastrophic events.

With LinuxONE and IBM z solutions, you can mitigate the risks associated with business continuity disruption, catastrophic system loss, data loss, security breaches and potential damage to your brand reputation by using one of the world's most trusted and security-rich platforms to protect sensitive data with high-speed encryption, disaster recovery and continuous availability of services you can count on. Running the enterprise-grade platform for Linux technology improves availability and security with reduced business continuity risk through:

– High cryptographic performance with next-generation cryptographic capabilities, helping ensure that you have protection for and integrity of data across business environments

– Up to 85 LPARs that improve the flexibility in hosting Linux tenants with secured isolation

– IBM zAware for Linux technology, which provides a solution to help quickly identify problems on Linux systems, offering faster resolution along with improved availability and security

– IBM Geographically Dispersed Parallel Sysplex™ (GDPS®) Virtual Appliance, which is new for IBM z on Linux clients that do not also run the IBM z/OS® operating system and provides continuous availability and disaster recovery to your critical applications as an appliance-based solution, allowing for comprehensive mirroring capabilities between machines in different locations

Analytics

Businesses today need to make faster, better decisions based on realities rather than assumptions—and that means harnessing enormous volumes of data. With Linux analytics environments such as Apache Hadoop, IBM Cognos® and IBM SPSS® software, you can maximize the value of your data to yield quick business insights that help you take advantage of marketplace shifts early, improve revenue, and reduce costs and lower risk. IBM clients are reaping the rewards of analytics. One state university achieved an annual return on investment of 55 percent.[11]

Here's how IBM LinuxONE and IBM z technologies are different:

– Built for 100 percent integration of analytics across transactions

– Have 3.4 times faster analytic performance versus competing platforms[12]

– Provide near-real-time analytics to inform actions and offers

▸ Watch a demonstration of how the IBM LinuxONE platform takes on scalable financial trading with multiple data loads—from structured and unstructured data, in real time.

" As we move to this digital bank space, we're getting better information; people are becoming more informed and making better decisions and running better businesses. That's creating the cycle of growth, and I think data is at the center of that. "

—Tinashe Ruzane, head of business development and special projects, Awethu project, First National Bank of South Africa[13]

Discover how the following organizations are delivering a differentiated customer experience using the enterprise-grade platform for Linux technology to gain the processing power, performance, and near-flawless reliability and security necessary for the most demanding applications.

SUCCESS STORIES

➜ Radixx International

➜ Renfe Operadora

➜ ABK-Systeme GmbH

➜ Banca Carige

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To learn more about the IBM LinuxONE portfolio, please visit **ibm.com**/linuxone

Radixx International

Next-generation technology for streamlined IT

Watch the video ▶

NEEDS:	*Streamlining, simplification and security to support availability requests*
ORGANIZATION:	*Radixx International*
INDUSTRY:	*Digital airline reservations*
REGION:	*Florida*

Radixx International realized the full value of IBM's innovative advances in big data and analytics, opting to replace its server farm with a scalable mainframe that **can process up to 2.5 billion transactions per day**. As a result, Radixx eliminated maintenance windows and gained a robust disaster recovery system, embedded analytics and real-time transaction insights.

IBM z technology is expected to result in **40 percent lower total cost of ownership** over the next three years.

" We are able to adjust resources where they are needed and support people on iPads, PCs and Macs with a very rich front end while achieving massive wide area bandwidth. We now have the ability to expand and grow without undergoing technology upgrades and changes. The technology positions us extremely well for the future. "

—Ron Peri,
CEO, Radixx International[14]

Radixx International relies on the enterprise-grade platform for Linux to provide:

– Reliable support for high volumes of mobile transactions across various computing and payment platforms

– Real-time fraud detection on transactions

– Superior system resiliency and uptime

→ **Radixx International**   → Renfe Operadora   → ABK-Systeme GmbH   → Banca Carige

Renfe Operadora

Enhanced capacity for always-on digital ticketing

NEEDS: *Fast, 24x7 online access for customers in the wake of transportation liberalization*

ORGANIZATION: *Renfe Operadora*

INDUSTRY: *Travel and transportation*

REGION: *Spain*

The keys to staying top of mind in a burgeoning online travel marketplace are speed and uptime. When Spain liberalized its rail network, the booking competition surged. Renfe looked to IBM—**its strategic technology ally of 30 years**—to upgrade its current solution to a powerful platform that guarantees a smooth user experience for the influx of customers who are turning to online and mobile ticketing.

Renfe can now easily support rising transaction volumes with a **33 percent capacity increase**.

> " The IBM solution gives us peace of mind that customers will always be able to access our services and travel information, whether they log in from a computer or mobile device, at any time of day. We now have the confidence to overcome possible threats and seize new opportunities as the rail industry continues to evolve. "
>
> —Javier González-Marcos,
> CIO, Renfe

Renfe relies on the enterprise-grade platform for Linux to provide:

– 24x7 system availability for reduced downtime

– Greater capacity for high performance

– Real-time pricing and promotions, which has helped boost ticket sales by 11 percent

➜ Radixx International　➜ **Renfe Operadora**　➜ ABK-Systeme GmbH　➜ Banca Carige

ABK-Systeme GmbH

Developing mobile productivity apps for the financial services industry

NEEDS: *Optimum security and flexibility for of-the-moment mobile opportunities*

ORGANIZATION: *ABK-Systeme GmbH*

INDUSTRY: *Electronic payments*

REGION: *Germany*

The rapidly growing electronic payment logistics specialist ABK-Systeme GmbH **saw an opportunity to capitalize on financial mobile apps**: giving users innovative solutions that streamline payments and increase productivity while on the move. IBM helped ABK-Systeme GmbH move quickly and in a highly secure manner in creating a development environment—giving the company a head start against the competition with the ability to bring mobile apps to customers *faster*.

With streamlined mobile application development processes, ABK-Systeme GmbH can now **reuse code across multiple platforms**.

" We see big potential for mobile applications for our business-to-business offerings and did not want to lose ground in a competitive marketplace by moving too slowly. The challenge lay in creating applications that could offer the same level of exceptional security and performance as our advanced payment platform—no small feat. "

—Ulrich Buch,
CTO, ABK-Systeme GmbH

ABK-Systeme relies on the enterprise-grade platform for Linux to provide:

– An efficient environment for mobile application development

– The ability to collect, store and analyze mobile app usage data

– A quick, security-rich web services plug-in for mobile apps that maximizes productivity

Banca Carige

Data-driven insights for competition-stomping growth

Read the full story ▸

NEEDS: *Tools to gain a deeper understanding of customer needs and desires*

ORGANIZATION: *Banca Carige Group*

INDUSTRY: *Banking*

REGION: *Italy*

New products, services and strategies are best when informed by keen customer insights. Corporate growth objectives led Banca Carige to begin a big data project—a quest to find a provider with the best analytics platform in terms of development, deployment and response times. Banca Carige eventually selected IBM for its ability to maximize functionality, time and cost—accelerating business growth.

Banca Carige can now offer high-speed analytics on real-time data to more than **1 million banking customers simultaneously**.

❝ The key value for our business is that the most important services can be managed together on a consistent, stable and highly secure platform that offers enormous scalability and performance. ❞

—Daniele Cericola,
IT governance director, Banca Carige

Banca Carige relies on the enterprise-grade platform for Linux to provide:

– A scalable, high-performance analytics platform

– Reduced cost and risk during implementation and migration

– Rock-solid reliability and exceptional security for sensitive data

→ Radixx International   → Renfe Operadora   → ABK-Systeme GmbH   → **Banca Carige**

For more information

To learn more about the technology, solutions and services associated with the IBM enterprise-grade platform for Linux technology, please visit:

➔ **ibm.com**/systems/z/os/linux

To learn more about the IBM LinuxONE portfolio, please visit:

➔ **ibm.com**/linuxone

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