



# Designed for trusted digital experiences

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Insurance industry perspective

September 2017

**IBM**<sup>®</sup>



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# Why IBM Z?



**IBM Z<sup>®</sup> enables all kinds of organizations to build greater business value, reduce costs and create a competitive advantage. With the world's highest security and availability for enterprise computing, Z mainframes were made for analytics, blockchain, cloud and cognitive computing.**

Experience how IBM Z can help your business win with exceptional security, transparency, speed and agility.

[▶ Learn what's new.](#)

## For the new era of business and technology

### **Infinite learning:**

With IBM machine learning on Z and in the cloud, every digital application, product and process can understand, reason and learn.

### **Enterprise-grade Linux:**

Linux<sup>™</sup> on z Systems<sup>®</sup> offers a simplified data center, security-rich operations and cost-effective economics.

### **Hybrid cloud agility:**

Utilize a world-leading hybrid cloud platform for enterprise transactions, systems of record and application workloads.

### **Outstanding mobility:**

IBM Z scales to handle huge, unpredictable transaction rates with 100% uptime for better client experiences.

### **Security-rich:**

Enjoy enterprise-level mainframe security, pervasive encryption and isolation.

## **Harness a new kind of digital intelligence**

IBM Z helps you meet cognitive business challenges by creating outstanding customer experiences, delivering agility and efficiency via the cloud and helping to provide always-on service and data protection. It's time to transform your business.

# Meet Insurance industry challenges



The Global P&C insurance industry has reached an inflection point. Insurers are challenged to reduce costs and compete by delivering personalized, data-driven niche products. Innovation teams are exploring transformative technologies such as IoT and telematics, which are driving demand for real-time analysis and new business models. All this raises new questions about data ownership, while fraudulent claims remain a threat.

The IBM Z family, including the new z14™, is designed for agility, performance and efficiency.

Information theft and intentional disruption are among the biggest risks facing insurers.

## Build customer relationships

With machine learning technologies such as Apache Spark on IBM Z, insurers can use self-learning behavioral models to build a unified view of the customer and understand lifestyle, profitability and preferences in real time. With Z mainframes, insurers can combine data they own with other sources such as social, geospatial, image recognition and IoT to:

- Deliver a highly personalized customer experience
- Become trusted advisors to their customers during risk scenarios
- Enhance loss prediction – P&L analysis and preventative insurance accuracy

## Self-learning with IBM Machine Learning for z/OS



IBM machine learning technology enables sophisticated, highly optimized analytic processing on IBM Z with no data movement. This can rapidly identify emerging patterns of fraud to minimize losses and reduce investigation costs. In-place analysis also reduces security risk and data governance complexity.

## A scalable cloud mainframe

Hybrid cloud infrastructure is being leveraged by insurers to reduce the cost of data center operations and to digitally reinvent and modernize processes. IBM Z supports a highly flexible, security-rich hybrid cloud environment that offers:

- 50% lower cloud infrastructure costs than other alternatives<sup>1</sup>
- Unmatched speed to market and up to 32% lower TCO than other platforms<sup>2</sup>
- IBM Cloud Managed Services for scalability, security and easy adaptation to changing needs

Cloud adoption is vital for insurers who want to foster innovation or build out digital ecosystems.

## Protect data

Sophisticated attacks and evolving IT environments have made it imperative for insurers to manage security and downtime. The IBM Z family offers the world's most securable and available servers with record uptime and 99.999% availability. Securing virtually all data in transit and storage, Z mainframes:

- Integrate pervasive encryption, data protection and access management audit
- Reduce costs of compliance with Insurance Data Security Model Law and GDPR
- Simplify security management with centralized policy-based controls

The financial impact of a data breach averages \$4m per event.<sup>3</sup>

## Paradigm shift in digital security

Of the 9 billion data records lost or stolen since 2013, only 4% were encrypted.<sup>4</sup> Pervasive encryption protects virtually all of the data stored and handled by IBM Z – automatically and without the need to make application changes. The comprehensive security built into IBM Z mainframes includes:

- IBM Secure Service Container, a virtual lockbox for applications
- Linux file system and z/OS® dataset encryption
- Hardware encryption on every core
- Full disk and network encryption

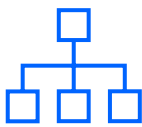
Data is protected at the core of the organization.  
The costs of compliance and security are slashed.





## Build connected services

Insurers need to respond to marketplace changes and disruption from new competitors by transforming and modernizing their IT. Customers expect services to be highly secure and available at all times. Agile systems that interact with the ever-expanding ecosystem of partners are also essential. IBM Z and z/OS Connect can help transform applications and processes without having to train developers in new Z skills. Insurers can:



**Harness new data sources to build connected services using APIs and microservices**



**Respond faster to customer needs, market requirements, technology innovations and regulations**



**Become more agile, efficient and effective**

**IBM Z can seamlessly expand for future growth and spikes in demand.**

## Collaborate with DevOps

DevOps is the choice of many insurance organizations who want more agile app and service development. IBM Z is the ideal platform. Z supports modern and open technologies such as Docker, Node.js, Swagger, MongoDB, JSON and others. And the IBM end-to-end DevOps suite offers a continuous assessment framework for transforming software delivery through planning, development, testing and operation of software across multiple platforms. Insurers can achieve innovation with greater speed and efficiency.

**IBM is offering an end-to-end suite of DevOps products and tools.**





**Blockchain has the power to enable secure and trusted new business models.**

## **Modernize with blockchain**

Improving transaction security and trust is a priority for insurers. Blockchain's distributed ledger technology is revolutionizing how the industry does business.

Blockchain commits transactions to an immutable shared ledger, providing greater provenance, security and trust. Blockchain provides this transparency automatically, enabling insurers to reap the rewards of increased trust and reduced costs.

IBM Blockchain on Z and IBM Bluemix® High Security Business Network (HSBN) are powerful and secure solutions to blockchain competitiveness, either on Z or as an IBM managed cloud service.

**With IBM Blockchain, insurers can:**

**Reimagine processes such as risk provenance, reinsurance, claims settlement, regulatory compliance and loan syndication**

**Reduce cyber-attacks by having a decentralized ledger**

**Manage assets without dependence on costly intermediaries**

**For insurers aiming to compete in today's digital marketplace, IBM and Z mainframes stand ready to provide the agility, security and efficiency required.**



# Key initiatives



For virtually every major digital challenge faced by businesses today, IBM is a leader in creating innovative and security-rich solutions on Z mainframes.

## Pervasive encryption is the new standard

Protection of client and corporate data is not optional. IBM Z is designed for trust and helps protect from internal and external threats with encryption of virtually all data.

[▶ Read more.](#)

## Automate insights with machine learning

IBM Watson Machine Learning for z/OS® and advanced analytics on Z help meet the challenge of deriving insights from vast and diverse data sources.

[▶ Read more.](#)

## Ready for the blockchain revolution

Blockchain is changing business. IBM Blockchain on Z and IBM Bluemix® High Security Business Network (HSBN) are enterprise-class, cross-industry open standards designed to provide significant protection against breaches.

[▶ Read more.](#)

## Build a data powerhouse

Copying analytics data between platforms is inefficient. IBM DB2® Analytics Accelerator for IBM z/OS is enhancing performance, cost-effectiveness, fraud protection and sales opportunities.

[▶ Read more.](#)

## Data serving on Linux on IBM z Systems

By 2020, 1.7MB of data will be created per second for every person. Linux on z Systems is a cost-effective solution for handling the data tsunami, with high workload availability and security.

[▶ Read more.](#)

## Achieve 24x7 high performance

Demand for 24x7 operations keeps rising, while allowed service windows shrink. IBM Operations Analytics for z Systems provides anomaly detection and cloud cost-saving insights.

[▶ Read more.](#)



# Master hybrid cloud



Hybrid cloud is helping businesses achieve quicker time to market and richer customer experiences. But not all cloud infrastructures are equal. Unlock the API economy and provide agility without compromise, all while maintaining mainframe security. No wonder Z is one of the world's leading cloud platforms.

## Tackle cyber security

Hybrid combines private, on-premises cloud with public, off-premises services for greater agility. That can lead to security worries – unless you're running IBM Z mainframes, which offer:

**The highest-grade security of any platform (EAL 5+)**

**Pervasive data encryption in transit and in storage with no application changes and without impacting SLAs**

**99.999% availability or less than 5 minutes' downtime per year**

## Drive performance and margins sky high

A growing company doesn't always mean a growing IT budget. IBM Z delivers high-performing cloud solutions that are more cost-efficient, to differentiate your services and keep profit margins high.

**50% lower cloud infrastructure costs than competing platforms**

**30% faster Linux and Java workloads**

**8,000 virtual servers on a single server**

**60% lower TCO than public cloud over 3 years**

## Trusted by the world's top companies

IBM Z powers hybrid cloud services at:

**92 of the world's top 100 banks**

**90% of the world's biggest airlines**

**the top 10 biggest insurance companies**

## One of the world's most open platforms

Open, connected IBM Z mainframes can help dramatically shorten development and service build time. With IBM Z your cloud is mainframe strong.

# Meet IBM Z

A new generation of mainframes built to provide the core of trusted digital experiences.

## IBM z13s

### *Entry-point enterprise computing*

The IBM z13s™ is built for hybrid cloud and the constantly evolving security landscape. Enhanced enterprise security capabilities help your business to simplify and improve security from infrastructure to end point. In a single-frame footprint, z13s can deliver enterprise-class services and performance to mid-sized organizations. Z13s helps to reduce costs, enhance security and deliver fast insights.

[▶ Watch the video](#)



### ○ Built for today and tomorrow

20 configurable processor units (max) deliver performance to support digital business and handle new and current workloads with speed, security and resiliency.

### ○ Smart alternative

With the full capabilities of an IBM Z mainframe in a smaller-capacity model, benefit from accelerated data and transaction serving, integrated analytics, access to the API economy and more.

### ○ Improved chip design

22nm 8-core processors deliver greater economies of scale, simultaneous multi-threading (SMT), single instruction multiple data (SIMD) vector processing, on-chip cryptography and bigger and faster caches.

### ○ Enterprise grade Linux

Robust and trusted for critical workloads, ready for open source applications.

### ○ Larger memory

8x as much real memory per server as the previous generation, up to 4TB.

## Drive innovation

○ IBM Z and Apache Spark Analytics deliver lightning-speed insights from structured and unstructured data. Your business is empowered to develop faster, simplify access to enterprise data, analyze in place and act faster.

[▶ Watch the video](#)   [▶ Read more](#)



## IBM z14

### *Mainframe computing*

The new IBM z14™ is designed to meet the growing data, compliance and innovation needs of organizations in every industry. With faster processors and more memory, z14 supports higher transaction volumes and greater data movement than any previous generation. And pervasive encryption on z14 protects critical assets without compromising performance.

[▶ Watch the video](#)

#### ○ Unprecedented capacity

With 170 configurable cores and 1.5x more on-chip cache than the previous generation, the new z14 is perfectly optimized for data.

#### ○ Next-generation throughput

Advanced simultaneous multi-threading on z14 improves virtualization performance and maximizes throughput of every workload.

#### ○ Huge memory

32TB maximum memory opens opportunities for in-memory data marts and analytics, with room to spare.

#### ○ High-speed connectivity

New IBM zHyperLink technology reduces I/O service times by up to 10x. The FICON® Express16S+ feature boosts I/O rates to absorb demand spikes.

#### ○ Automatic protection

The exclusive IBM Secure Service Container automatically secures data on z14, even in innovative implementations like blockchain.

## Protection for data coming in and data going out

- With pervasive encryption on IBM Z, your data is protected at the core of the enterprise.

[▶ Learn more](#)

# IBM Z software



IBM Z software combines leading-edge innovation with the unparalleled capabilities of the Z platform. So you can accelerate your most important workloads including cloud, IT and business analytics and DevOps. You can also drive new levels of performance and cost efficiency, all with the ultimate security.

## Database & data management

Enjoy real-time access to critical insights while minimizing cost and complexity. There are Z software solutions for data, data warehousing, predictive analytics and business intelligence.

## IT service management

IBM ITSM solutions help IT operations teams effectively manage complex, hybrid environments and accelerate cloud services delivery.

## Mixed language application servers

Deploy and safeguard IBM Z applications and transactions with unmatched flexibility at scale.

## Machine learning on private cloud

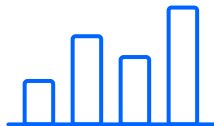
The IBM machine learning cognitive platform on Z automates the creation, training and deployment of analytic models. Data scientists across industries can explore new analytics frontiers.

[Learn more](#)

## IBM Z software solutions



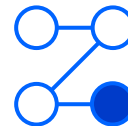
Hybrid  
Cloud



Real-time  
analytics



Enterprise  
mobility



Enterprise  
DevOps



Enterprise  
security

## Operating systems

IBM Z supports z/OS, z/VSE, z/TPF, Linux and the z/VM hypervisor.

[We're flexible. Take your pick.](#)

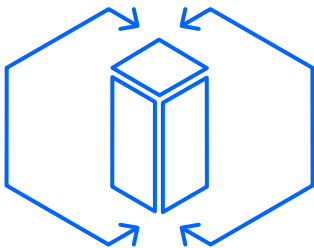
# The best storage solutions for IBM Z

Data is the world's new natural resource, driving today's digital business insights along with bigger, more capable storage requirements. IBM offers a family of mainframe storage solutions designed, developed and tested together with Z for extraordinary value.

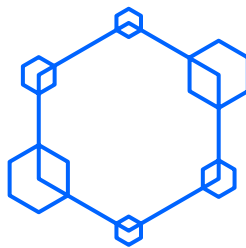
## IBM DS8800 series: Enterprise data systems made for the future, designed with inherent synergies with IBM Z

- The IBM DS8880 family of enterprise hybrid and all-flash data systems is designed to enable your data centers for systems of insight and cloud environments.
- The unparalleled synergy between DS8880 and Z delivers continuous access to data with 24x7 availability, accelerated analytics and optimized data economics for mission-critical environments.
- New enhancements drive IBM Z and DS8800 synergies with intelligence and insights, improved business efficiencies, savings in CPU utilization and secure data transactions.
- The I/O infrastructure delivered by IBM z14 strengthens the unrivalled synergy between DS8880 and Z, delivering improved, persistent performance and data integrity for mission-critical environments.

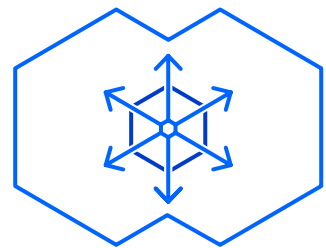
▶ Learn more



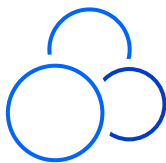
Up to 4.5x acceleration for critical applications



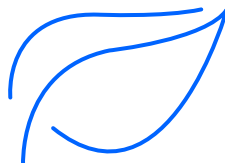
Unparalleled integration with IBM Z



99.999% availability for 24x7 continuous access to data and applications



Reduce TCO with advanced feature packages that fit your capacity needs



30% less footprint for optimized space utilization



High-performance flash enclosure for extreme performance

# Blockchain on Z



IBM Z mainframes already run the next generation of transactional applications. Make more of your investment in Z by innovating with blockchain.

## Security at every link

Security is paramount when transferring digital assets between enterprises. Blockchain provides a cryptographically secure, uniform, open ledger. But a digital ledger is only as good as the system it's built on. IBM Z:

### Protects data

in all states to reduce business risk

### Accelerates cryptography

with dedicated hardware

### Removes transaction middlemen

with a complete blockchain solution

### Builds trust

with unmatched uptime and power

## IBM Z is built for blockchain

### Greater Speed

Fast memory networking capabilities accelerate interaction between blockchain and your existing business data in CICS, IMS, TPF, DB2, VSAM or other Z processes.

### Stronger security

Digital signatures and hashing encryption are generated faster on Z, using cryptographic accelerators not found on x86 platforms common to public clouds.

### Built for scale

With the capability to support thousands of virtual machines, IBM Z can run the toughest blockchain workloads - quickly and securely.



**Blockchain has the potential to vastly reduce the cost and complexity of getting things done**

- Jerry Cuomo, IBM Vice President for Blockchain Technologies

For organizations who want to embrace the future of fast and secure transactions, blockchain on IBM Z is the premium choice.

# Financing\*



**IBM Global Financing helps you facilitate the acquisition of IBM solutions. Discover an unequalled selection of flexible options, attractive rates and state-of-the-art tools.**

Choose from a variety of IBM financing options to address your unique solution requirements and manage your cash flow and assets.

## If you want to

## IBM Global Financing can help

### Optimize cash flow

Minimize up-front payments and better align project costs with anticipated benefits.

### Maximize liquidity

Free up cash and preserve credit lines for core business needs.

### Reduce financial unpredictability

Better manage risk with predictable and known costs over a fixed term. Mid-lease upgrades increase capacity with little change in monthly payments.

### Reduce the risk of technology obsolescence

With leasing, you can keep your IT Infrastructure up-to-date with the latest technology in an affordable and cost-effective way.

### Reduce cost and improve return on investment (ROI)

Lower ongoing maintenance and support costs and improve ROI with fair market value (FMV) leasing-based refreshes. FMV leases can be lower in cost on a present-value basis than outright purchase.

## Reduce risk

IBM Global Financing has global reach, a thorough understanding of credit and technology risk and over 30 years of extensive technology financing expertise.

To learn more about how you can affordably invest in your future today, please contact your IBM Global Financing representative or visit [ibm.com/financing](https://ibm.com/financing).

\*Not all offerings are available in every country in which IBM operates.

# Share in success



Today's most compelling success stories are about disrupting markets. Large enterprises and growing businesses alike are using cognitive, analytics and the cloud to reveal insights that could not be discovered any other way. And IBM Z mainframes are at the heart of many of the biggest innovations.

[View success stories by industry](#)

[▶ Finance](#) [▶ Healthcare](#) [▶ Government](#) [▶ Insurance](#)

## The IBM Z success stories

This e-book provides success stories from many more industries, which can help you get to know IBM Z and drive better business outcomes.

[▶ Download the e-book](#)



### KEONICS

KEONICS is a government organization on a mission to bring world-class infrastructure to Karnataka, India. KEONICS has adopted Linux and IBM z/OS on Z to support a new ERP system, maximize the value of its investments and save an estimated 50% on digital learning.

[▶ Read the case study](#)



### Vodafone

Vodafone provides intelligent services to cities, helping them ensure more effective management of city resources and address some of the most pressing needs faced by cities today. In this video Vodafone executives explain the benefits of working with IBM Z.

[▶ Watch the video](#)



### CTIE

CTIE is Luxembourg's state IT services body. Facing 17% year-on-year transaction processing growth, CTIE deployed a z13s server to modernize applications and meet new demand. Interactive and batch workloads were accelerated by a 25% increase in Java performance.

[▶ Read the case study](#)



# Connect with the community



Discover and discuss the latest IBM Z updates and events.



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- ▶ Dancing Dinosaur
- ▶ Evangelizing Mainframe blog
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## Join user groups

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- ▶ The World of DB2 for z/OS



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2. Based on results from IBM internal lab measurements.
3. Ponemon Institute, “2016 Cost of Data Breach Study: Global Study”, June 2016.
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