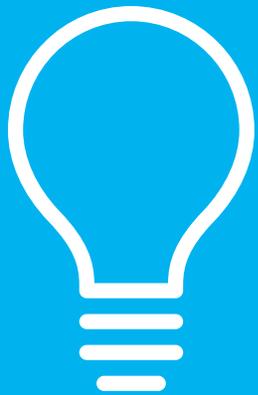




Consume
mainframe
workloads with
the agility of
cloud



Cloud is topping the IT agenda



By 2020, a corporate “no-cloud” policy will be as rare as a “no-Internet” policy is today.¹



In a 2015 Gartner survey, **88 percent** of more than **1,000** respondents declared they had cloud-first strategies.²



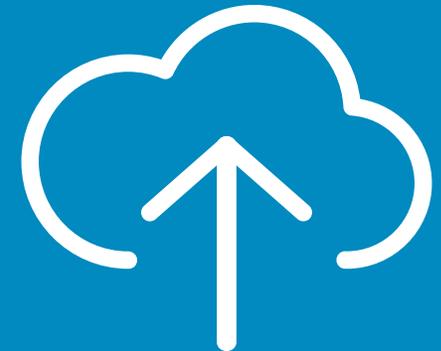
58 percent of organizations are using cloud services, with an additional **19 percent** planning to use them during the next **24** months and beyond.³



By 2019, more than **30 percent** of the **100 largest vendors'** new software investments will have shifted from cloud-first to cloud only.⁴



By 2020, more compute power will have been sold by infrastructure-as-a-service (IaaS) and platform-as-a-service (PaaS) cloud providers than sold and deployed into enterprise data centers.⁵

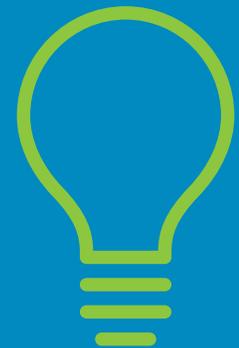


Rethink your on-premises mainframe strategy

You need cloud to:

- Dynamically respond to changing market conditions
- Enable innovation and outpace disruptive competitors
- Streamline costs by converting capital expenditure (capex) to operational expenditure (opex)
- Realize enterprise-wide digital transformation

For over five decades, the availability, performance, scale and security of the mainframe has made it the engine that powers much of world's data. However, a gap may exist between your organization's mainframe backbone and your transformation goals. The path you take to bridge this gap will make all the difference to your success.



The rigidity barrier in banking

Only **21 percent** of global banking executives believe their organizations possess above-average agility compared to their peers.⁶

The challenges of on-premises mainframe approach

Mainframe challenges



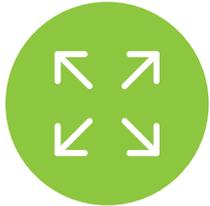
and their consequences



Costly to acquire and maintain



Decreased speed in launching applications, products and services



Difficult to scale without additional capex



Higher total cost of ownership (TCO) for your data center—decreasing your ability to invest in innovation



Tough to manage, due to a gap in mainframe skills



Inability to meet the agility demands of existing and new workloads



Become an agile enterprise with a cloud-based infrastructure

Your organization still relies on the extraordinary compute capacity and performance that your mainframe provides for your critical workloads. However, to stay competitive and outperform your competition, you need an agile infrastructure, capable of operating at the speed of business, supporting innovative technologies and expanding with your mounting data.

Imagine if you could *deliver both agility and innovation* for your enterprise by extending the compute power of your existing mainframe and enhancing it with cloud capabilities to...

Enable new products, services and innovation initiatives with cloud, analytics, mobile, social, cognitive, Internet of Things, and security technologies

Speed time to market by provisioning infrastructure rapidly

Scale capacity up or down on demand, as needed, to meet business requirements

Convert capex to opex

Contain costs by paying only for what you use

Lower your data center TCO

Enhance the security and high-availability features of your mainframe



Bridge the customer experience gap in banking via the cloud

62 percent of surveyed retail banking executives believe they can deliver an excellent customer experience.⁷



35 percent of their customers agree.⁸



Support your growth initiatives with an agile mainframe

Your ability to respond rapidly to change can mean the difference between winning or losing in the changing marketplace. Cloud capabilities offer unprecedented opportunities for innovation and business agility.

IBM® Cloud Managed Services® on z Systems® (zCloud) uses a cloud-delivery model to provide a multi-tenant, scalable infrastructure hosted in IBM purpose-built data centers across the globe.

Support current and new workloads for growth initiatives with an on-demand Mainframe as a Service (MaaS) environment featuring some of the latest hardware and software and the ability to scale as needed

Support high-availability and security requirements through a carefully designed solution that has built-in security and availability features at virtually all levels

Help reduce capex and opex with infrastructure savings of up to 30 percent⁹ via a multi-tenant infrastructure, hosted globally in IBM data centers and managed by over 6,500 highly skilled mainframe specialists

Adopt a cloud-first strategy by enhancing your mainframe environment with cloud technology



Tap into an environment as flexible as your requirements

The zCloud environment is configurable, enabling you to access the latest hardware and software and scale your compute, storage and networking as needed. It offers:

- Your choice of mainframe operating systems such as IBM z/OS® and IBM z/VSE®
- Linux only LinuxONE environment with operating system choices from SUSE, Red Hat and Canonical
- Flexible and standardized software stacks including vendors such as CA Technologies, BMC and Compuware
- Scalable central processing unit (CPU), disk and tape capacity
- Your choice of server, storage and tape availability options of up to 99.99 percent

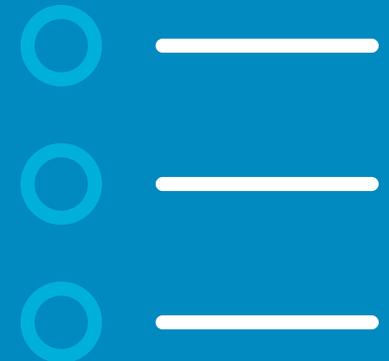


Leverage zCloud to deliver...

A hybrid — Run workloads on both your on-premises mainframe and zCloud



Dedicated MaaS in the cloud — Migrate all your workloads to zCloud

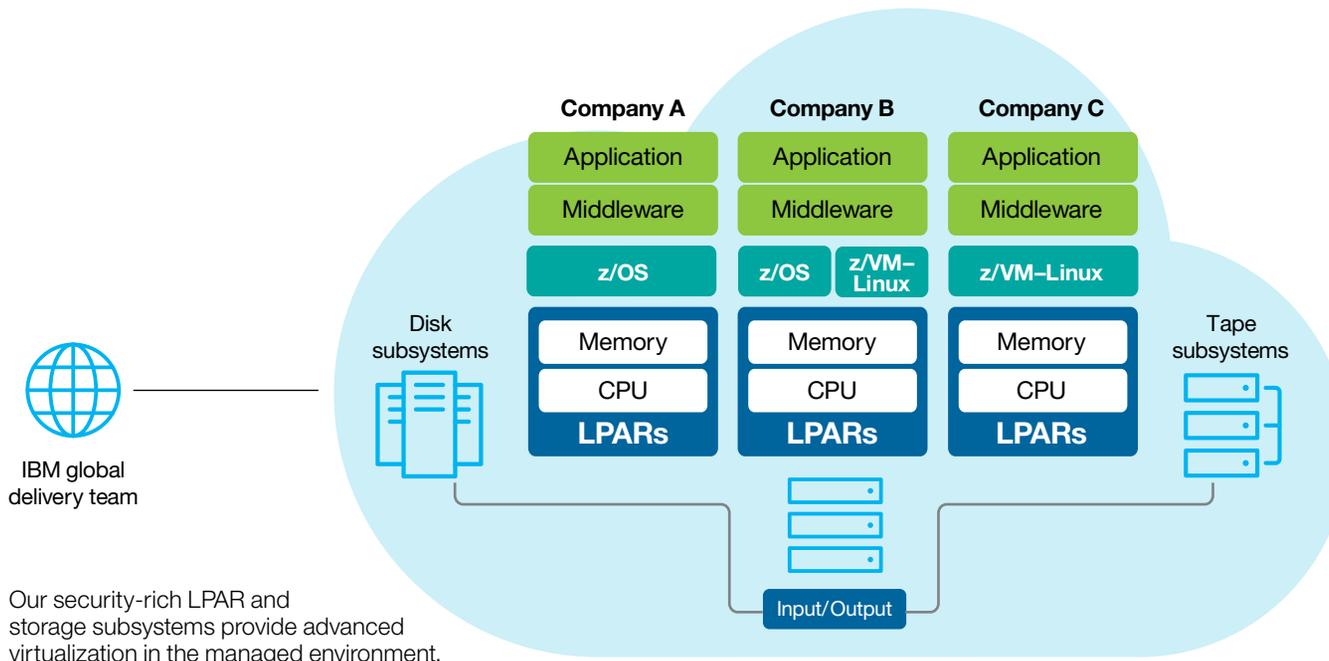


Use our MaaS platform, without compromising security or availability

When using multi-tenant infrastructure, you want to ensure airtight security — especially given the mission-critical workloads you're running. IBM z Systems servers are housed in purpose-built global data centers. zCloud takes advantage of Logical Partition (LPAR) technology that's certified to EAL 5 and FIPS 140 accreditations to ensure workload and data isolation.

Additional security capabilities include the following:

- **Support** for leading security management products such as IBM Resource Access Control Facility (RACF), CA Top Secret and CA Access Control Facility (ACF2)
- **Data encryption** for both tape and mainframe attached storage and for in-flight data across the network
- **Customized designs** to help manage specific compliance management requirements, such as Payment Card Industry (PCI), Health Insurance Portability and Accountability Act (HIPAA) and Federal Financial Institutions Examination Council (FFIEC)
- **Configurable options** for high availability and disaster recovery with service-level agreements (SLAs) up to 99.99 percent



Realize infrastructure savings

zCloud can help you:

- **Realize up to 30 percent reduced costs for your z Systems computing infrastructure.**¹⁰

IBM uses larger z Systems servers to help you reduce software costs per unit of compute while capitalizing on the cost efficiencies of software stack optimization.

Moreover, by using the MaaS environment, you can save significantly in capex—and in facilities expenses like floor space, power and cooling. These are savings you can invest back in your business to drive topline growth. Plus, by using a consumption-based model, you can better control costs. And by leveraging the expertise of our 6,500+ mainframe specialists for end-to-end management of the platform, you can avoid the cost of downtime.

Compare zCloud to these alternatives that can be costly and risky



Adopting mainframe managed services



Migrating your mainframe applications to another platform



Replacing your mainframe applications with applications running on alternative platforms

- Tedious migration and configuration
- New capex, without realizing return on investment on your existing mainframes



Why IBM?

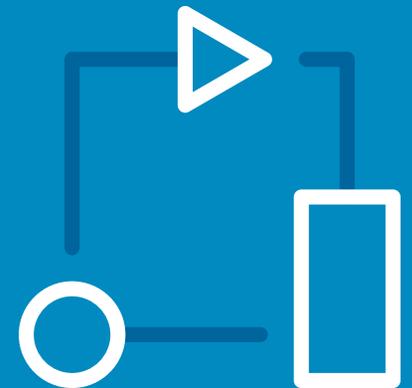
Leadership

IBM is a Leader in the July 2016 Gartner Magic Quadrant for Data Center Outsourcing and Infrastructure Utility Services, North America¹¹



Learn more ▶

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Why IBM?

Leadership

Industry analyst TBR noted the following key findings in its [Cloud Business Quarterly report](#).¹²

Cloud Professional Services vendor adoption

IBM leads in customer adoption rates and ranks third in cloud professional services revenue.

Segment vendor adoption

IBM leads adoption across cloud professional services segments: consulting, systems integration, application development and maintenance, and managed service.

IBM customer feedback

IBM's cloud professional services customers place an emphasis on IBM's knowledge of their specific industries as an important factor when choosing to work with the company.

[Learn more](#) ▶

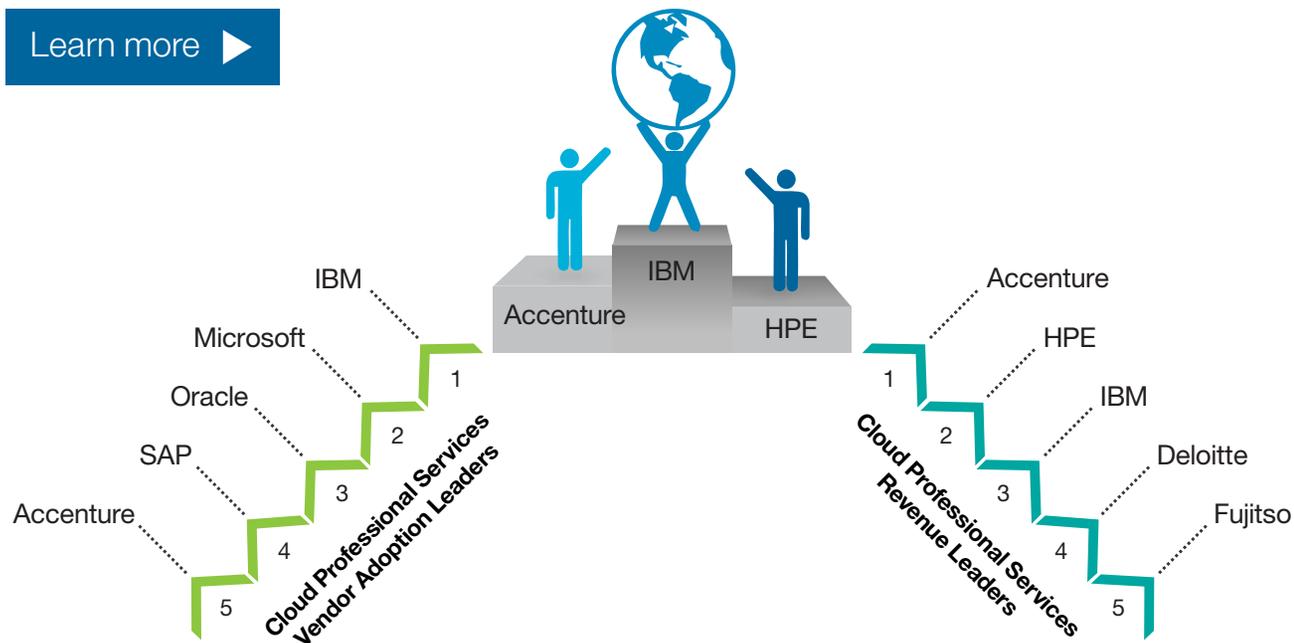
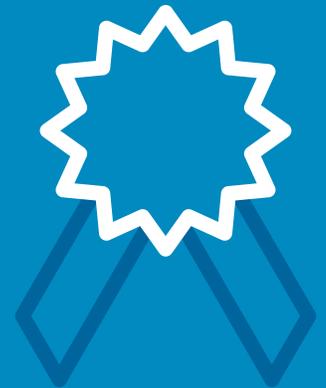


Image Source: TBR, "1H16 Cloud Professional Services Customer Research," June 2, 2016.



zCloud success story

US-based mortgage company increases flexibility, facilitates business growth plans and streamlines compliance management with help from IBM

The need

- With an aggressive 18-month growth plan and new Federal Financial Institution Examination Council (FFIEC) regulations to manage, the mortgage provider wanted to take advantage of newer technology infrastructure and reduce out-of-pocket costs

The solution

- Used the zCloud offering for the company's 450 MIPS environment
- Implemented an encrypted storage array and tape with IBM stack software
- Added soft caps to provide MIPS flexibility, regulate MIPS usage and keep costs down

The benefits

- Transitioned to the zCloud solution with virtually no business disruptions or downtime
- Gained a robust and scalable mainframe environment that will more easily accommodate its aggressive 18-month growth plan where and when needed, adding flexibility in MIPS usage and dynamic pricing
- Streamlined extra capabilities, including encryption, are helping the company manage regulatory requirements



IBM: Expertise you can trust



More than 6,500 mainframe specialists supporting hundreds of mainframe clients¹³



35 years managing enterprise data centers



Virtually **unparalleled expertise** in z Systems

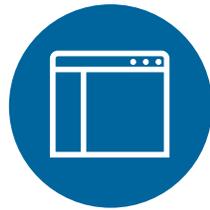
Take the next step

Are you at a tipping point for mainframe transformation due to:

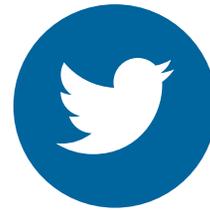
- **Adopting a cloud-first strategy?**
- **Data center lease terminations?**
- **Upcoming hardware or software technology refreshes?**
- **Downsizing or removing your mainframe?**



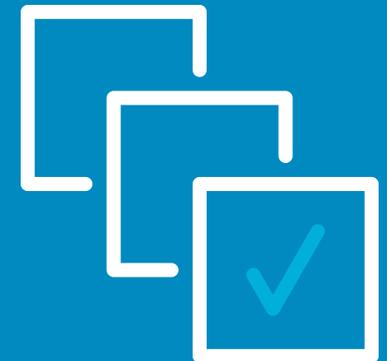
Talk to a specialist to learn how you can avoid the cost and complexity of migrating mainframe applications.



For more information, visit our website:
ibm.biz/zcloud_offering



Spread the word about zCloud.
[Share a link to this ebook on Twitter](#)





¹Gartner, "Market Insight: Cloud Computing's Drive to Digital Business Creates Opportunities for Providers," May 24, 2016, G00307508.

²Gartner, "Applying a 'Cloud-First' Checklist to Ensure Successful Sourcing and Business-IT Alignment," April 2016, G00296404.

³Ibid.

⁴Gartner, "Market Insight: Cloud Computing's Drive to Digital Business Creates Opportunities for Providers," May 24, 2016, G00307508.

⁵Ibid.

⁶IBM Institute for Business Value: Banking redefined: Disruption, transformation and the next-generation. October 2015.

⁷Ibid.

⁸Ibid.

^{9,10}Based on client engagements. Actual results may vary by client.

¹¹Gartner, Magic Quadrant for Data Center Outsourcing and Infrastructure Utility Services, July 7, 2016, ID: 300309913.

¹²TBR, "1H16 Cloud Professional Services Customer Research," June 2, 2016: <http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?htmlfid=SSL12348USEN>.

¹³Current as of September 2016.