

Case Study on IBM Cloud

SOUMEN HALDER
Department of computer science,

Ramakrishna Mission —
Vivekananda Centenary College



Road Map for Today's presentation

- Why IBM cloud?
 - Our clients and Market understanding
 - Services Models
 - View our Services
 - Security features
 - References
-

Why IBM Cloud?

“Leveraging IBM Cloud allows us to really focus on what we’re good at and what we need to in order to deliver a successful service.”

— Amit Modi, Chief Product and Technology Officer, Movius

- ❑ I would like to answer this question by saying “**Why Not IBM Cloud**”. As IBM cloud provides almost Every Services that you Need.
- ❑ From Communication to retail, Computer services to Finance. Almost Every think that you need.
- ❑ IBM claimed in April 2011 that 80% of Fortune 500 companies were using IBM cloud.
- ❑ IBM provides IaaS,
- ❑ IBM provides PaaS
- ❑ IBM provides SaaS

Why IBM Cloud?



Travel & Transportation

Featured Story

Featured
Story



Retail

Featured Story



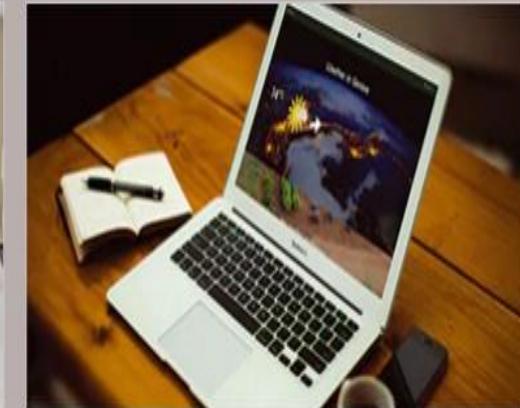
Financial Services

Featured Story



Communications

Featured Story



Computer Services

Featured Story

IBM Client and Our Services at a Glance



American Airlines

Airline evolves customer experience with IBM public cloud platform and services.

[→ Case Study and Video](#)

UBank

UBank shrinks time to market – builds a loan app virtual assistant on IBM Cloud platform.

[→ Read case study](#)

Bitly

Bitly manages 25 billion links for enterprise customers through IBM Cloud data centers.

[→ Read case study](#)

Eurobits

Eurobits helps banks give trusted third-parties access to account information.

[→ Read case study](#)

Filter by industry:

All

Education

Finance

Healthcare

Retail

Technology

More



To integrate its diverse array of order management systems, 1-800-FLOWERS.COM migrated to an IBM Commerce on Cloud platform environment. The retailer experienced seamless service delivery across brands, greater efficiency, reduced costs and enhanced scalability with the IBM Cloud solution.



Active International used the IBM Cloud to develop applications that optimize its media buying cycle and help it identify new business prospects more effectively.



To help ensure clients can access the latest pricing and execute trades rapidly and accurately, online broker ActivTrades migrated its primary trading platforms from on-premises infrastructure to IBM Cloud for VMware solutions.

IBM Client and Our Services at a Glance

Cloud Products Solutions Pricing Docs Support Explore more Contact us Log in

Read the blog →

f v in

Read the case study →

f v in

Read the blog →



Contact us

Log in



LogDNA saw a clear need to address data sprawl in the modern, cloud-native development stack. Its innovative software-as-a-service (SaaS) platform built on Kubernetes caught the attention of the IBM Cloud team, which wove it into its global framework. As an IBM Business Partner and a client, LogDNA was able to grow and strengthen its DevOps capabilities.



With IBM Cloud bare metal server infrastructure hosted worldwide and the Veeam on IBM Cloud backup and restore service, Movius provides its multiline offering to enterprises around the globe.



Panasonic teamed with IBM to build the Panasonic Digital Concierge Platform. Built on IBM Watson technology and hosted on Cloud, the solution provides the foundation on which Panasonic can develop innovative solutions that create conversational, interactive and personalized guest experiences.

Read the case study →

f v in

Read the case study →

f v in

Read the case study →



The Primerica team worked with the IBM Garage to design an innovative strategy for updating heritage applications on an open hybrid cloud environment using the IBM Cloud Private platform, containers and microservices. With a modernized system, Primerica can securely build software and release it on a shorter timeline.



RICOH migrated its Unified Communication System operations to IBM Cloud bare metal servers, taking advantage of near-limitless scalability and capacity. This allowed the company to ensure a smooth handover and vision for its rapidly expanding customer base.



UBank launched new initiatives in an IBM Cloud Platform environment, including a virtual assistant that incorporates IBM Watson technology to support the bank's online home loan application.

Read the case study →

f v in

Read the case study →

f v in

Read the case study →



An Australian banking first, Westpac Group partnered with IBM to implement a fully integrated hybrid cloud platform across its business to deliver premium services to more than 13 million customers.



Whirlpool Corporation is migrating SAP ERP powered by SAP HANA to IBM Power Systems in the IBM Cloud, with IBM Services for Managed SAP Applications, freeing up resources for innovation.



Together, IBM and Vodafone Business will help companies remove the complexity and barriers from their technology choices to ensure data and applications flow freely and securely across their organizations. Under the new venture, Vodafone Business customers will immediately have access to the full portfolio of IBM Cloud offerings, underpinned by IBM's deep industry expertise and open technologies.

Market share of IBM



CLOUD WARS

2020 Revenue Projections

Vendor	*Projected* 2020 Cloud Revenue
Microsoft	\$57.6B, up 29%
AWS	\$43.5B, up 25%
IBM	\$24B, up ~ 10%
Salesforce	\$20B, up 24%
Google Cloud	\$12B, up 35%

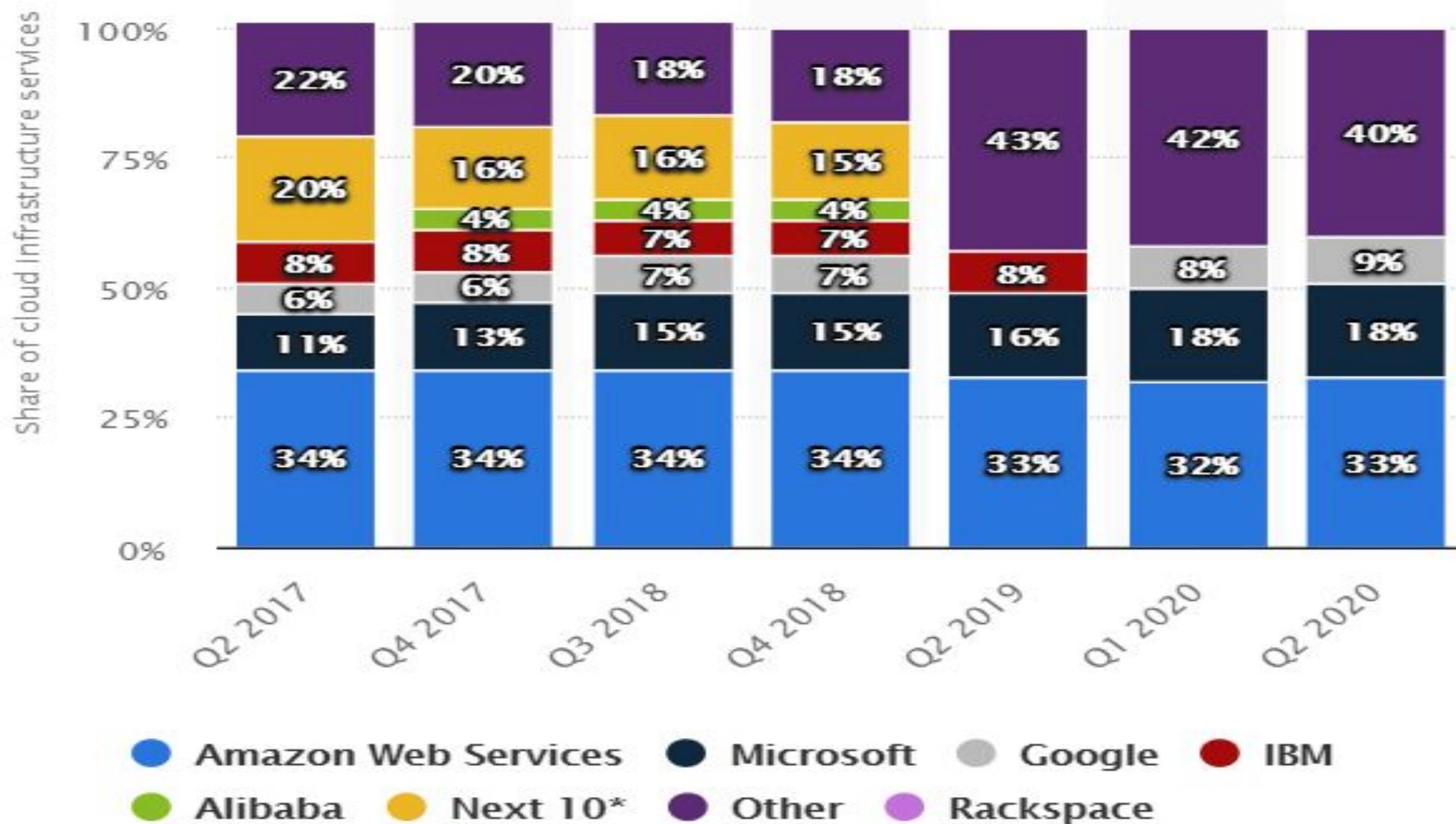
@bobevansIT



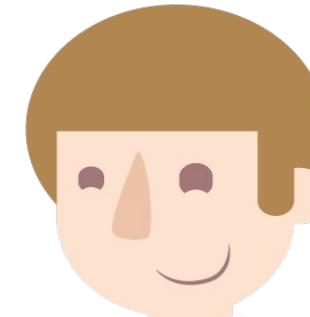
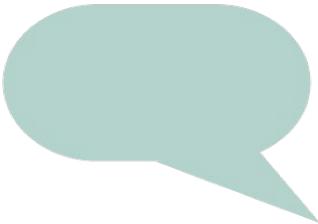
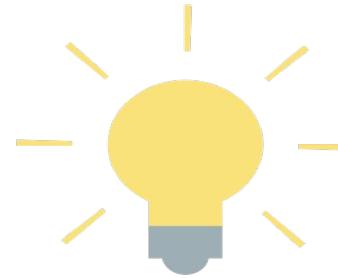
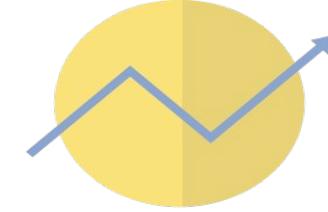
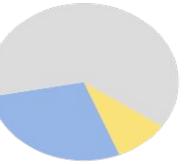
Top 10 – Market Caps

1. Microsoft	\$1.72 trillion
2. Amazon	\$1.70 trillion
3. Salesforce	\$249 billion
4. Google	\$1.11 trillion
5. SAP	\$198 billion
6. Oracle	\$176 billion
7. IBM	\$111 billion
8. Workday	\$51 billion
9. ServiceNow	\$92 billion
10. Adobe	\$245 billion

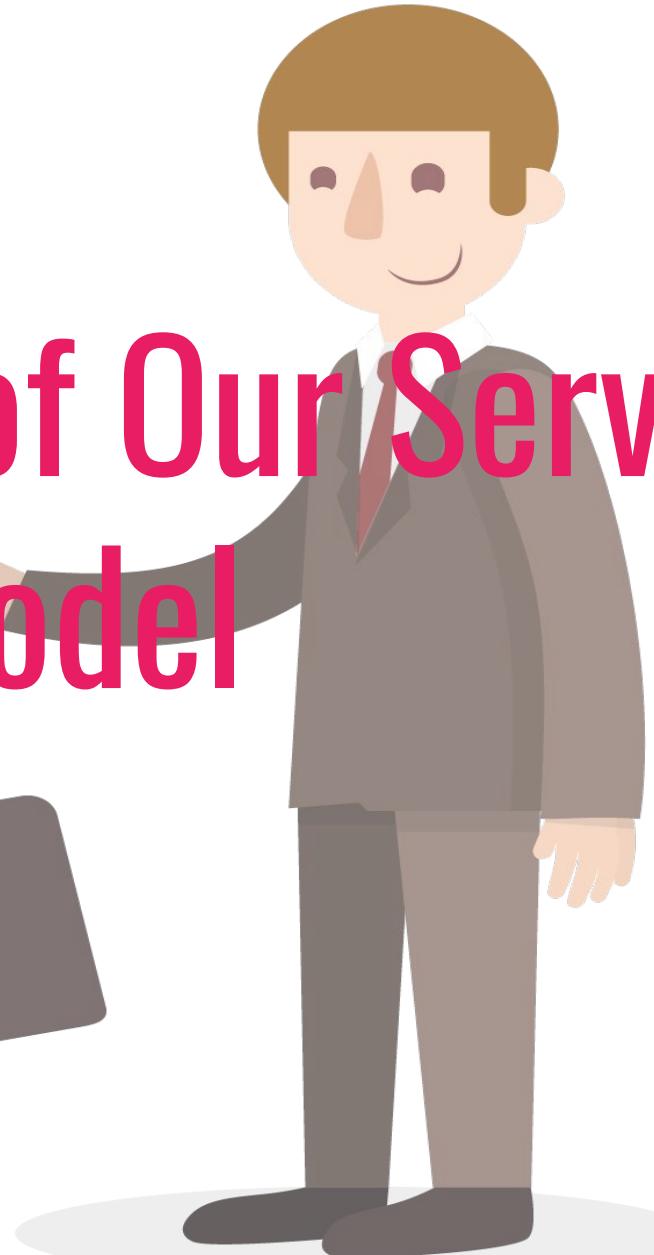
Global market share of cloud infrastructure services from 2017 to 2020, by vendor



	Amazon Web Services	Microsoft	Google	IBM	Alibaba
Q2 2020	33%	18%	9%	-	-
Q1 2020	32%	18%	8%	-	-
Q2 2019	33%	16%	-	8%	-
Q4 2018	34%	15%	7%	7%	4%
Q3 2018	34%	15%	7%	7%	4%
Q4 2017	34%	13%	6%	8%	4%
Q2 2017	34%	11%	6%	8%	-



Basic Ideas of Our Services Model



SaaS

□ What is SaaS?

- ✓ Software-as-a-Service(SaaS) applications run in the cloud. Users subscribe to SaaS applications instead of purchasing them, and they access them over the internet.

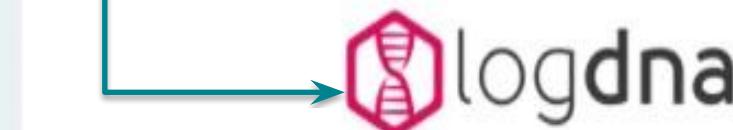


SaaS in IBM

- ❖ IBM provides SaaS it helps a lot to our clients.

- ❖ Illustrate logdna:

LogDNA saw a clear need to address data sprawl in the modern, cloud-native development stack. Its innovative software-as-a-service (SaaS) platform built on Kubernetes caught the attention of the IBM® Cloud™ team.



LogDNA saw a clear need to address data sprawl in the modern, cloud-native development stack. Its innovative software-as-a-service (SaaS) platform built on Kubernetes caught the attention of the IBM Cloud team, which wove it into its global framework. As both an IBM Business Partner and a client, LogDNA was able to grow and strengthen its DevOps capabilities.

PaaS

- What is PaaS ?
- Platform-as-a-Service (PaaS) vendors a cloud-based platform for building and running applications.



PaaS in IBM

- ❖ IBM provides Platform-as-a-Service. It uses by a big number of user.
- ❖ Illustrate IBM Watson: This is really cool services. We can run any program using this.

The screenshot shows a web browser window with three tabs: 'Blogger: Web-Based App', 'Getting started tutorial', and 'IBM Watson Assistant'. The 'IBM Watson Assistant' tab is active, displaying a page titled '#ApplicationAccess'. The page content includes a 'Description' section with the text 'Application access issue' and a yellow box containing the word 'Watson'. Below this, there's a 'Add user examples' section with a 'User examples (5)' button and a list of five examples: 'I am unable to access application', 'Login issue', 'Report rights required', 'User permission is required', and 'Who can give me access on Admin reports'. A red arrow points from the word 'Watson' in the yellow box to the 'Watson' icon in the top right corner of the browser window. The bottom of the screen shows the Windows taskbar with various pinned icons.

IaaS

❑ What is IaaS?

- ✓ Infrastructure as a services, A vendor provides clients pay-as-you-go access to storage, networking, servers and other computing resources in the cloud.





IaaS in IBM

- ❖ It help clients to builds own application.
- ❖ E.g : Movius Going global on the IBM public cloud With IBM® Cloud™ infrastructure and the Veeam on IBM Cloud backup and restore service

Solution: IBM Cloud Industry: Telecommunications

Movius

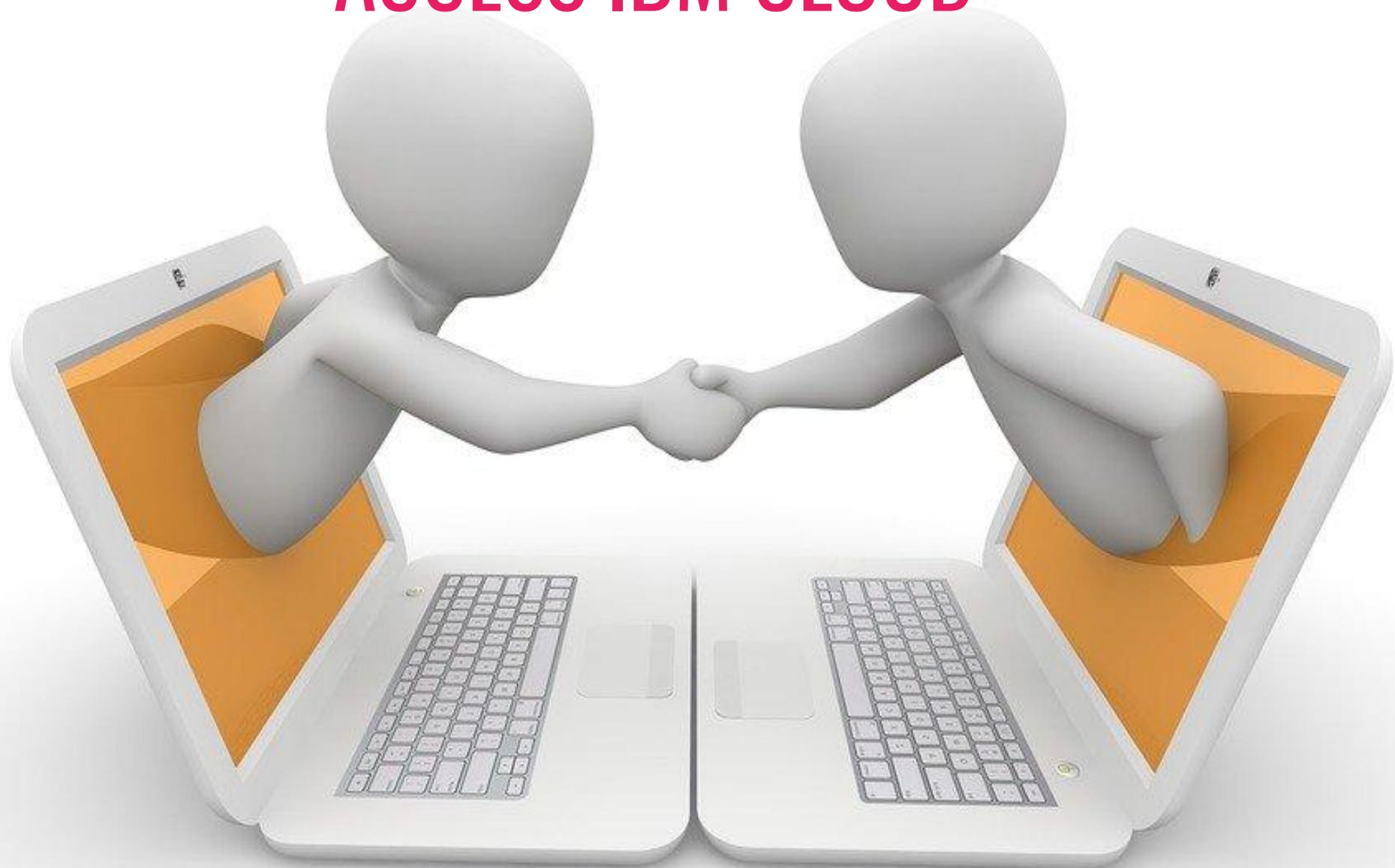
Going global on the IBM public cloud

With IBM® Cloud™ infrastructure and the Veeam on IBM Cloud backup and restore service, Movius helps global enterprises deliver better engagement for end-customers by providing a security-rich corporate number to an employee's smartphone that separates business calls and text messages from personal.

Share this

PARTNER HEROES
Navigating New Environments

ACCESS IBM CLOUD



Virtual server



- Virtual server is a great option if you looking for a complete computer resources.
- It works on principal “pay and use”
- It is fully customizable.

- 1960s with the development of the virtual machine (VM) on CP-40 and CP-67 operating systems

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IBM Cloud

Catalog Docs Cookie Preferences

Catalog

Search the catalog...

IBM Cloud catalog

Services

Software

Consulting

Category

- Compute
- Containers
- Networking
- Storage
- AI / Machine Learning
- Analytics

FEEDBACK

 **uCloud Multitenant Core**
Platform for VMware
Third party • Developer Tools
Management of public, private and hybrid cloud
Free

 **UnificationEngine**
Third party • Internet of Things
Intelligent IoT messaging for all H2M communications.
Free

 **Virtual Private Cloud**
IBM • Networking
Fully customizable, software-defined virtual network with superior isolation.
IAM-enabled

 **Virtual Private Endpoint for VPC**
IBM • Networking
Delivers private connectivity through Virtual Private Endpoint Gateways to IBM Cloud Services utilizing client assigned I...
IAM-enabled

 **Virtual Server for Classic**
IBM • Compute
Our previous generation of virtual machines on x86 available in all IBM Cloud locations worldwide.
IAM-enabled

 **Virtual Server for VPC**
IBM • Compute
Virtual Server instances for VPC deliver flexible compute capacity for your Virtual Private Cloud. Fully integrated into IBM...
IAM-enabled

Type here to search

11:03 AM 11/14/2020

4

The screenshot shows two side-by-side views of the IBM Cloud VPC-Ext Provisioning interface.

Left View (Volume Configuration):

- Boot Volume:** A table showing a single volume entry: "boot-volume" (100 GB, 3000 Max IOPS, 46.88 MiBps throughput, Provider managed encryption, Enabled auto-delete).
- Data volumes:** A section indicating "No data volumes".
- Summary:** Shows the configuration details:
 - Virtual server instance: 8 vCPUs, 32 GB RAM, 16 Gbps, CentOS.
 - Boot volume: 100 GB.
 - Virtual private cloud: provided.
 - Network interface: provided.
- Cost:** Subtotal \$317.59, Sustained usage discount \$30.76, Total estimated cost \$286.83/mo.
- Buttons:** "Create" and "Apply" buttons.

Annotations:

- A yellow arrow points from the text "You can select both memory size and cpu capacity" to the "vCPUs" field in the summary table.
- A red arrow points from the text "You can select both memory size and cpu capacity" to the "Size" column in the Boot Volume table.

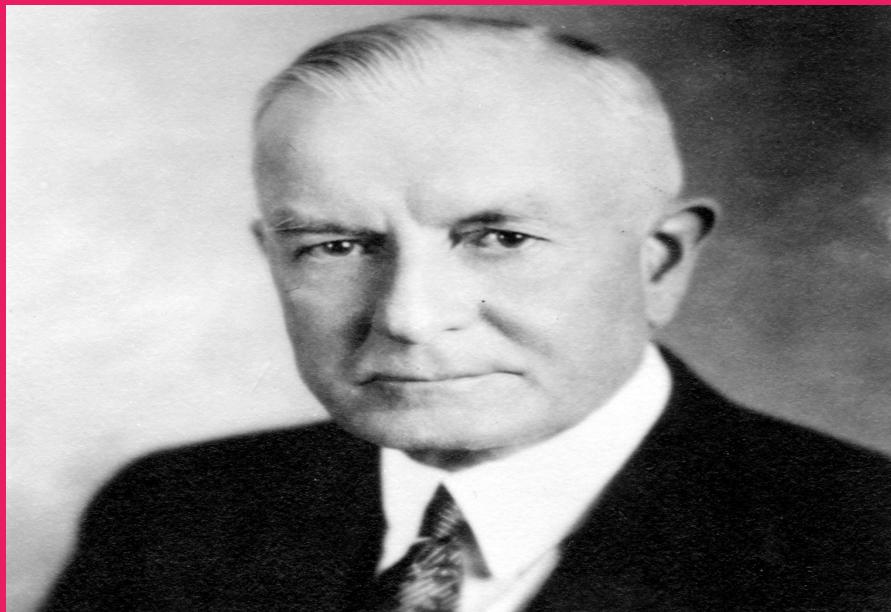
Right View (Operating System Selection):

- Region Selection:** Tokyo (Tokyo 3) and Washington DC (Washington DC 3).
- Operating System:** A section titled "Select your instance's operating system and version from an image." It lists several options:
 - CentOS 8.x - Minimal Install (selected)
 - Debian GNU/Linux 9.x Stretch/Stable
 - Red Hat Enterprise Linux 8.x - Minimal Install
 - Ubuntu Linux 20.04 LTS Focal Fos
 - Windows Server 2016 Standard Edit...
 - Custom image (Select custom image)
 - Catalog image (Select catalog image)
- Annotations:**

 - A yellow callout bubble with the text "You can Select your os" is positioned over the operating system selection area.
 - A red curly brace groups the "Custom image" and "Catalog image" options.

- Buttons:** "Upgrade account" and "Feedback" buttons.
- Footer:** "Need help?", "Contact IBM Cloud Sales", "View docs", "Terms", "Virtual Server", "Virtual Private Cloud", "Block Storage", and a "Feedback" link.

IBM Watson



- IBM Watson one of the most popular services
For coders and Machine learning applicants.
- You can do heavy weighted coding without using your inner CPU.
- You select a suitable plane for you for period of time.
- Watson was named after IBM's founder and first CEO, industrialist Thomas J. Watson.

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Watson

Amazon.in AliExpress 5.Opinion analysis 9...

IBM Cloud Catalog

IBM Cloud catalog

Featured Services Software Consulting

Category

- Compute
- Containers
- Networking
- Storage
- AI / Machine Learning

Watson Assistant

IBM • AI / Machine Learning

Watson Assistant lets you build conversational interfaces into any application, device, or channel.

Lite • Free • IAM-enabled

Watson Knowledge Catalog

IBM • AI / Machine Learning

Discover, catalog, and securely share enterprise data.

Lite • Free • IAM-enabled

Watson OpenScale

IBM • AI / Machine Learning

IBM Watson OpenScale is an enterprise-grade environment for AI infused applications that provides enterprises...

Lite • Free • IAM-enabled

Watson Studio

IBM • AI / Machine Learning

Embed AI and machine learning into your business. Create custom models using your own data.

Lite • Free • IAM-enabled

WealthEngine API

Third party • Developer Tools

Look up anyone's net worth in real-time.

Free

WebSphere Application Server

IBM • Compute

Allows you to quickly get up and running on a pre-configured WebSphere Application Server installation in a host...

IAM-enabled

Type here to search

O E e Microsoft Edge

12:04 PM 11/14/2020

Feedback

Explore More Common Services

Accern

- Accern is a news serving platform.
- Accern alerts you on actionable stories about U.S. public companies.

By monitoring over 300 million public news, blog, social media websites, and financial documents.

- it identifies low-exposed stories and uses advanced data science to determine whether the stories are reliable and impactful.



The screenshot displays the ACCERN platform's NLP Use Cases section. The left sidebar includes links for Adaptive NLP, NLP Use Cases (selected), AutoML Taxonomy, Adaptive NLP Models, Adaptive Forecasting, Data Store, Help Center, Notifications (with 12 notifications), and Settings. The top right shows a progress bar for "Monthly Units Left" at 10,000/100,000. The main area features a large blue button to "Build New Use Case Solution Category". Below it are cards for "Macro Insights" (Insurance), "Credit Risk Insights" (Banking), "Speculation Insights" (Investments), "ESG Insights" (Investments), and "M&A insights" (Insurance). A summary bar at the bottom indicates 13,761 units used this month.

ACCERN

Adaptive NLP

NLP Use Cases

AutoML Taxonomy

Adaptive NLP Models

Adaptive Forecasting

Data Store

Help Center

Notifications 12

Settings

AK Sara Ara Johndoe@accern.com

Monthly Units Left
10,000/100,000

NLP Use Cases

Select a ready-made NLP use case template to get started immediately or build a solution from scratch.

+

Build New Use Case Solution Category

Macro Insights • Insurance

Credit Risk Insights • Banking

Speculation Insights • Investments

ESG Insights • Investments

M&A insights • Insurance

13,761 Units used this month

Actifio GO

- Actifio GO is a Copy Data Management as-a-service platform in **IBM Cloud**.
- It delivers Backup, DR, Migration, and DB Cloning.
- It protects Enterprise on-premises workloads, including mission-critical databases (SAP HANA, Oracle, Db2, MS SQL Server, etc.) running on VMware, Hyper-V, and physical servers.



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Amazon.in AliExpress 5.Opinion analysis 9...

IBM Cloud

Catalog Docs **Cookie Preferences**

Summary

Actifio GO Estimate costs
Plan: Standard Monthly

FEEDBACK

Tiers Pricing

25	\$95.00 USD/Virtual Machines & File Systems
50	\$78.00 USD/Virtual Machines & File Systems
100	\$67.00 USD/Virtual Machines & File Systems
100000	\$50.00 USD/Virtual Machines & File Systems

Tiers Pricing

25	\$175.00 USD/SQL Database
50	\$150.00 USD/SQL Database
100	\$125.00 USD/SQL Database
100000	\$100.00 USD/SQL Database

Tiers Pricing

25	\$250.00 USD/Oracle, SAP, & non-SQL Databases
50	\$215.00 USD/Oracle, SAP, & non-SQL Databases
100	\$170.00 USD/Oracle, SAP, & non-SQL Databases
100000	\$125.00 USD/Oracle, SAP, & non-SQL Databases

Sign up to create

Already have an account? Log in

IBM Cloud Code Engine

- ❖ IBM Cloud Code Engine (or "Code Engine") was developed by IBM with the goal of helping you create modern, source-centric, containerized, and serverless apps and jobs that run on your Kubernetes cluster.
 - ❖ The platform is designed to address the needs of developers who just want their code to run.
 - ❖ Code Engine abstracts the operational burden of building, deploying, and managing workloads in Kubernetes so that developers can focus on what matters most to them: the source code.
-

Runs your workloads

Code Engine runs your HTTP-driven applications and your run-to-completion batch jobs.

Fully managed service

Code Engine takes care of all the cluster management, including provisioning, configuring, scaling, and managing servers so you do not need to worry about the underlying infrastructure.

Builds your code

Code Engine pulls your source code and creates the container image for you. Code Engine supports both Dockerfile and Cloud Native Buildpack.



IBM Cloud Code Engine

Run your application, job or container on a managed serverless platform. Auto-scale workloads and only pay for the resources you consume.



FEEDBACK

How to get started

Run your container image

Specify a container image to deploy as application or run as job.

Container Image

[Start creating](#)

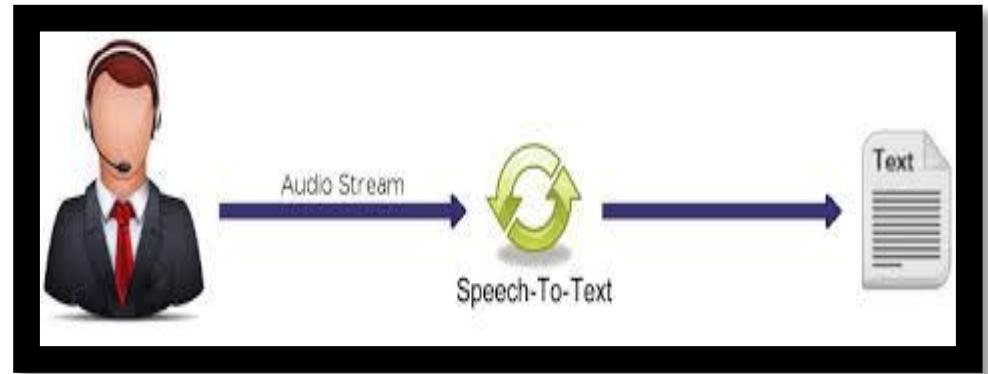
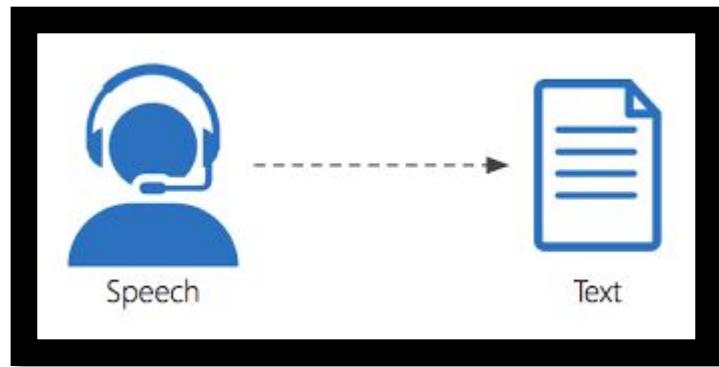
Run your source code

Specify the source code to turn into a container image and run.

Code repository

Speech to text

- Speech to text conversion is the process of converting spoken words into written texts.
- Speech recognition is an interdisciplinary subfield of computer science and computational linguistics that develops methodologies and technologies that enable the recognition and translation of spoken language into text by computers.



IBM Cloud



Bondevalue-API

Third party • Developer Tools

Real time bonds data to manage one's bond investments.

Free



Bosch IoT Rollouts

Third party • Internet of Things

Rollout software and firmware updates to devices

Free



Certificate Manager

IBM • Security

Use Certificate Manager to order and manage SSL/TLS certificates for your apps and services

Free • IAM-enabled • Service Endpoint Supported



Cloud Foundry

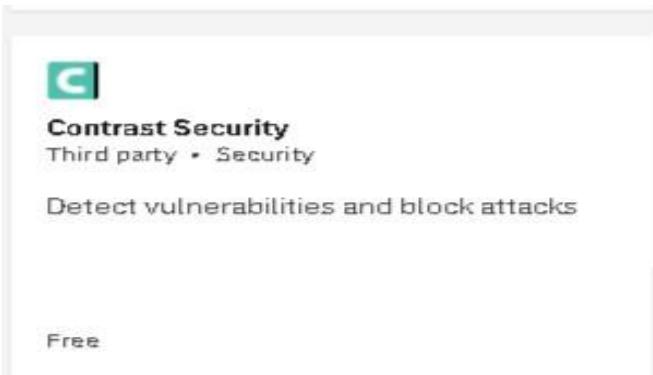
IBM • Compute

Create and deploy applications on a managed multi-tenant Cloud Foundry environment

Lite



- Contrast Security infuses software with vulnerability assessment and attack monitoring capabilities so that security flaws are automatically identified in development, and protected in production. Contrast requires no changes to the code, deployment or application software stack



Fully managed, Db2 database as a service

Leave the IT work to the experts. Our worldwide team of CloudOps engineers ensures service coverage 24x7x365.

Enterprise-class Db2

Built to take on the toughest mission critical workloads on the planet with advanced features like adaptive workload management, time travel query, query federation, in-database AI, row/column access control, auditing, and support for JSON, XML, and geospatial data sets.

Scalable & elastic

Independently scale and manage the compute and storage requirements for your deployment. Need more storage? It's a click or API call away.

Highly available

Available in 3-node high-availability configuration within a multi-zone region, delivering a 99.99% uptime committed SLA.

Highly reliable

Self-service managed backups to object storage with point-in-time recovery, allowing you to restore your database to a specified time.



Rainbow

Third party • Developer Tools

Connect people and transform the way
they work

Free



Raxak Protect

Third party • Security

Automated Comprehensive Security
Configuration Management for Servers

Lite • Free • IAM-enabled

- Allow to develop applications connected to the Alcatel-Lucent Rainbow CPaaS infrastructure, providing business communications capabilities through APIs.
- WebRTC and connection to existing premise-based PBXs to mix both worlds in various use cases.

✓ Management

An agent-less mechanism for bringing the configuration of your server resources to your desired standard, and keeping them there.

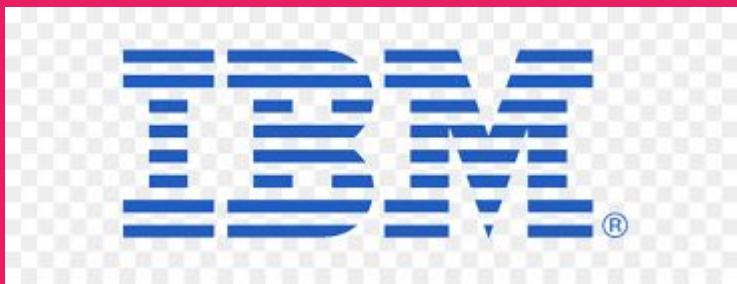
✓ Application-specific security profiles

Ability for users to tailor the security profiles, starting with industry best practice, and customized for their specific application needs.

✓ Automatic remediation

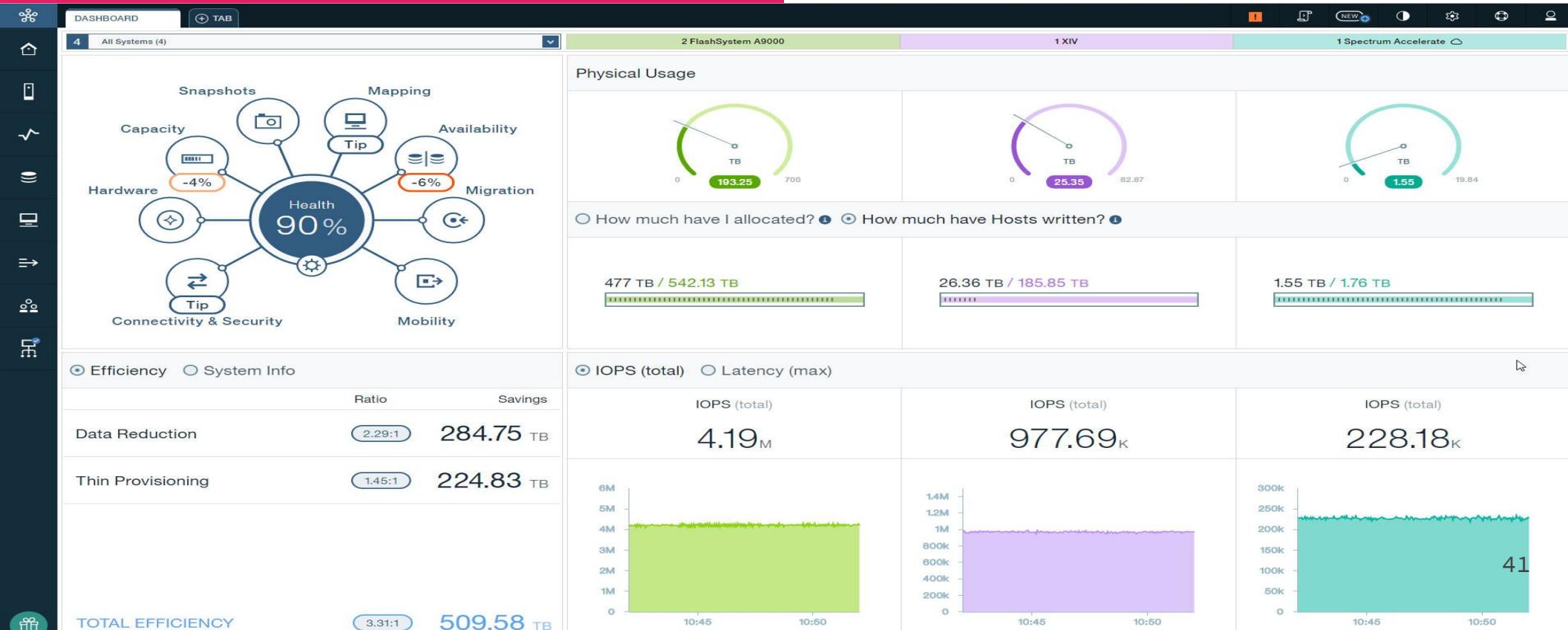
Ability to automatically bring specific controls, or entire profiles into compliance with desired security posture.

✓ On-demand scanning and remediation



Health Score

- The dacadoo Health Score is a number between 0 and 1,000 normalized by age and sex and represents the overall health of a person. It is based on numerous biometric, lifestyle and psychometric inputs, supporting a 360 degree view of human health.





Machine Learning

IBM • AI / Machine Learning

IBM Watson Machine Learning - make smarter decisions, solve tough problems, and improve user outcomes.

Lite • Free • IAM-enabled • Service Endpoint Supported



Mass Data Migration

IBM • Storage

A fast, simple, secure way to physically transfer terabytes to petabytes of data to the IBM Cloud

Free • IAM-enabled



Master Data Management

IBM • AI / Machine Learning • Analytics • Databases • Mobile

IBM Master Data Management (MDM) a fully cloud native SaaS offering, offers critical capabilities to manage your...

Lite • Free • IAM-enabled • Beta



Master Data Management on Cloud (Hosted)

IBM • Analytics

IBM® Master Data Management (MDM) on Cloud helps businesses gain a trusted view of data in a hybrid computing...



Messages for RabbitMQ

IBM • Databases

RabbitMQ is an open source multi-protocol messaging broker.

IAM-enabled • Service Endpoint Supported



Morningstar

Third party • Developer Tools

Managed investments portfolio statistics

Free



MQ

IBM • Integration

Enterprise-grade messaging hosted in the cloud

Lite • Free • IAM-enabled



Natural Language Classifier

IBM • AI / Machine Learning

Natural Language Classifier uses advanced natural language processing and machine learning techniques to create...

Free • IAM-enabled

 <p>ElephantSQL Third party • Databases</p> <p>PostgreSQL as a Service</p> <p>Lite • Free • IAM-enabled</p>	 <p>Email Delivery, powered by Sendgrid Third party • Developer Tools</p> <p>Integrate and Deliver via SMTP or API in 5 Minutes or Less Our SMTP relay setup and flexible Web and SMTP APIs provide a...</p>	 <p>Envestnet Yodlee Third party • Developer Tools</p> <p>APIs for Financial Data Aggregation</p> <p>Free</p>	 <p>Esri ArcGIS for Developers Third party • Developer Tools</p> <p>Bring the power of location to your apps with ArcGIS.</p> <p>Free</p>
 <p>Event Streams IBM • Integration</p> <p>IBM Event Streams is a high-throughput message bus built with Apache Kafka. It is optimized for event ingestion into IBM...</p> <p>Lite • Free • IAM-enabled • Service Endpoint Supported</p>	 <p>File Storage IBM • Storage</p> <p>Fast and flexible NFS-based file storage with capacity options from 20GB to 12TB.</p>	 <p>Flow Logs for VPC IBM • Networking</p> <p>Enables the capture of information about the Internet Protocol (IP) traffic going to and from networks of your Virtual Privat...</p> <p>IAM-enabled</p>	 <p>Functions IBM • Compute</p> <p>IBM Cloud Functions is a Function-as-a-Service (FaaS) platform which executes functions in response to incoming events.</p> <p>IAM-enabled</p>



Virtual Server for Classic

IBM • Compute

Our previous generation of virtual machines on x86 available in all IBM Cloud locations worldwide.



Virtual Server for VPC

IBM • Compute

Virtual Server instances for VPC deliver flexible compute capacity for your Virtual Private Cloud. Fully integrated into IBM...

IAM-enabled



Visual Recognition

IBM • AI / Machine Learning

Find meaning in visual content! Analyze images for scenes, objects, and other content. Choose a default model off the...

Lite • Free • IAM-enabled



VLAN

IBM • Networking

VLANs isolate broadcast traffic on all IBM Cloud public and private networks. If you need a more complex network topology,...



VMware Solutions

IBM • Compute

Deploy a comprehensive portfolio of automated and on-demand services for VMware workloads to the cloud, faster...

IAM-enabled



Voice Agent with Watson

IBM • AI / Machine Learning

Create a cognitive voice agent that uses Watson services to speak directly with customers using natural language over...

Lite • Free • IAM-enabled



VPC+ Cloud Migration

Third party • Migration Tools

Facilitate easy migration of IBM Cloud classic infrastructure components and applications to IBM Cloud VPC.

Lite • Free • IAM-enabled



VPN for VPC

IBM • Networking

VPN for VPC provides a simple yet powerful solution for highly scalable and robust site-to-site VPN. This VPN servic...

IAM-enabled

IBM Cloud Security



Security Policies

- IBM maintained annual certification of **ISO 27001 and SSAE SOC 2** for each Cloud Services.
- IBM store contacts of customers in there highest levels security.
- IBM will maintain and follow IT policies and practices that are integral to IBM's business and mandatory FOR ALL IBM employees ,including supplemental personnel.
- IBM maintained **NIST** guidelines for computer security.
- More details :
[https://www-03.ibm.com/software/sla/sladb.nsf/pdf/7745WW2/\\$file/Z126-7745-WW-2_05-2017_en_US.pdf](https://www-03.ibm.com/software/sla/sladb.nsf/pdf/7745WW2/$file/Z126-7745-WW-2_05-2017_en_US.pdf)

Cloud Data Center Security

- ★ Data Center Security Data are stored in outside territory of the user in a location called as data center, which is unknown to the user.
- ★ As the location of the data center is unknown to the user, it becomes a **virtual data center**.
- ★ virtual platforms are dependent on many other, often forgotten components of both the physical and virtual data centers. There are typically seven areas of concern that accompany

Virtualization Security

- **Virtualization** is technology that drives server consolidation and data center operations to a key ingredient in creating a flexible, on-demand infrastructure.
- When adopting virtualization for cloud computing, it becomes evident that the management tools used in a physical server-based deployment will not suffice in a highly dynamic virtualized one
- **A new threat:** Virtualization alters the relationship between the OS and hardware
- **Storage concerns:** Another security concern with virtualization has to do with the nature of allocating and deallocating resources such as local storage associated with VMs

Network Security

- ❖ **Application performance:** Cloud tenants should be able to specify bandwidth requirements for applications hosted in the cloud, ensuring similar performance to on premise cloud deployments. **That means our performances should not be hampered.**
- ❖ Policy enforcement complexities: Traffic isolation and access control to end users are among the multiple forwarding policies that should be enforced.
- ❖ **Topology-dependent complexity:** The network topology of data centers is usually tuned to match a predefined traffic requirement. For instance, a network topology optimized for east-west traffic (i.e., **traffic among servers in a data center**) is not the same as a topology for north-south (traffic to/from the Internet).



Key Protect

❖ Customer-managed Encryption

You can enable the security benefits of Bring Your Own Key (BYOK) by importing your own root of trust encryption keys, called Customer Root Keys (CRKs), into the service. With the Key Protect API, you can use a CRK to wrap (encrypt) and unwrap (decrypt) the keys that are associated with your data resources, so you control the security of your encrypted data in the cloud.

❖ Secure

Keys are wrapped by keys that are, in turn, protected by a cloud-based HSM. The HSMs are at FIPS-140-2 Level 3. When keys are deleted, they can never be recovered,

❖ Scalable

Whether you are a developer who requires only a few keys or a large enterprise that needs millions, Key Protect can scale to your needs.

Select a region

Select a region

Sydney

Select a pricing plan

Displayed prices do not include tax. Monthly prices shown are for country or region: United States

Plan	Features	Pricing
Graduated Tier Pricing		Click to view tiers and pricing detail 
		First 20 keys are free. Then after that it's \$0.75 per key per month for up to 1,000 more keys. Then after that it's \$0.60 per key per month for up to 9,000 more keys. Then after that it's \$0.50 per key per month for each additional key.
Tiers		Pricing
1 - 1,000		\$0.75 USD/ITEM
1,001 - 10,000		\$0.60 USD/ITEM
10,000+		\$0.50 USD/ITEM

Summary

Key Protect

Estimate costs

Region: Sydney

Plan: Graduated Tier Pricing

Service name: Key Protect-9f

Resource group: Default

-  This plan is not available with your current account type.

Upgrade to a Pay-As-You-Go account and receive a \$200 credit.

FEEDBACK

Links and References

- <https://cloudwars.co/salesforce/salesforce-sap-oracle-cloud-top-10-market-cap/>
- <https://www.statista.com/statistics/477277/cloud-infrastructure-services-market-share/>
- https://www.ibm.com/support/knowledgecenter/SSPREK_9.0.6/com.ibm.isam.doc/base_admin/concept/con_secuplcovrvw.html
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- https://en.wikipedia.org/wiki/FIPS_140#:~:text=FIPS%2014%2D2%20Level%203,critical%20security%20parameters%22%20enter%20and

Thank You