

# Atea & IBM Cloud

Markkinoiden avoimin, joustavin ja  
tietoturvallisin julkipilvi

# Monipilviympäristön joustava hallinta ja tietoturva

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ATEA

# Pilvistrategia – miksi pelkkä ”cloud first”strategia ei riitä



# Edellytykset joustavalle ja turvalliselle pilviratkaisulle

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- Tietopohjainen lähestyminen
  - [Laki julkisen hallinnon tiedonhallinnasta 906/2019](#)
  - Suojattavat kohteet => vaadittavat tietoturvatasot ja -ratkaisut
- Virastoilla tulisi olla omat pilvistrategiat, vaikka palvelut tuotettaisiinkin keskitetyisti
  - [Katakri 2020 ja Pitukri 2020](#)
  - [Julkisen hallinnon pilvipalvelulinjaukset - Valtioneuvosto](#)
  - [Tuottavuutta pilvipalveluilla. Ohje julkisen hallinnon pilvipalvelujen hyödyntämiseen](#)

Digitaalinen turvallisuusympäristön avainkysymykset:

1. Mitkä ovat käytettäväät **tietoturva- ja salausratkaisut** ja kenen hallinnassa se ovat?
2. Miten **monipilviympäristö hallinta** on toteutettu? Onko hallinta ja valvonta mahdollista toteuttaa suomessa ja olla virastolla itsellään?
3. Miten riskienhallinnan edellyttämä **läpinäkyvyys ja avoimuus** on toteutettu?
4. Miten **jatkuvuus on huomioitu arkkitehtuurissa**, jotka edellyttävät korkeaa varautumista? Mm. mitä kahdentaminen on toteutettu?

# Five key principles define IBM's cloud approach

**1**

Hybrid

Enable enterprises across Public, Private, and traditional environments

**2**

Multicloud

Manage other vendors' Clouds, acknowledging the reality that client environments are heterogeneous

**3**

Open

Build capabilities that are open by design, enabling client flexibility and reducing vendor "lock in"

**4**

Secure

Provide reliability and continuous security for the client's environment

**5**

Management

Consistent service level, support, logging, management and delivery across complete cloud environment

# Key Considerations for Public Cloud

## You Have

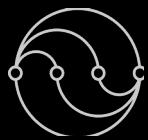
- Demanding business stakeholders
- A heterogeneous IT landscape
- A need to accommodate
  - Cloud native
  - VMware, SAP
  - x86, Solaris, Power, AIX, IBM i

## You Need

- Full control over your data
- Portability. No vendor lock in
- Security across a complex, hybrid environment
- Overcome skills shortage through automated management
- Better control over cost, especially for data & storage intensive workloads
- Industry Expertise, to help with the journey

## Why should you think about another cloud?

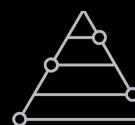
### We Evolved



Open Innovation



Security Leadership

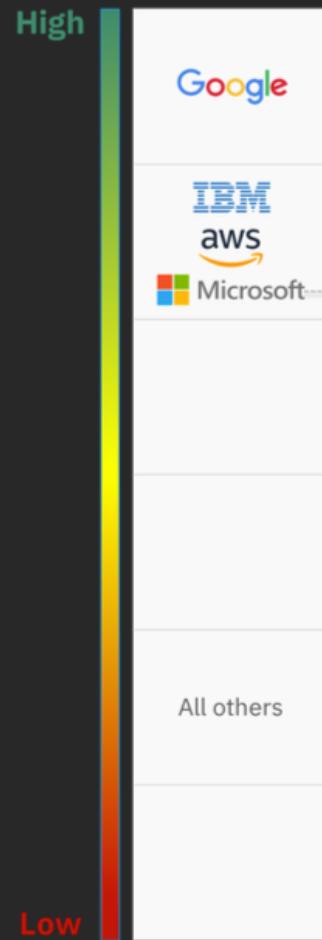


Enterprise Grade

# External NPS benchmarks are positive for IBM public cloud

## Competitive NPS - Cloud Platform

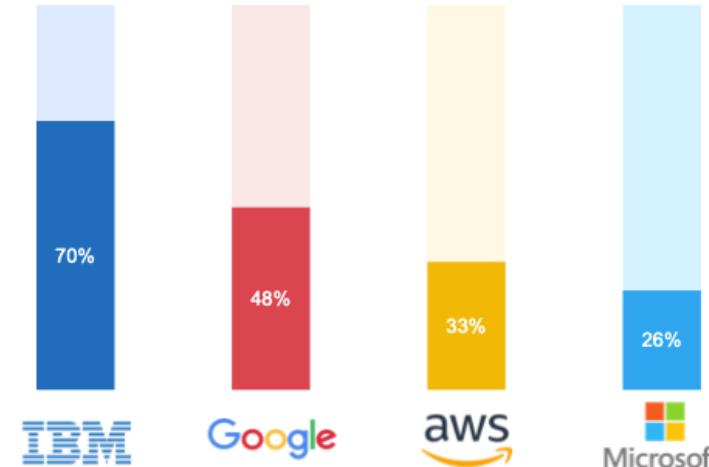
Surveys in 1H & 2H 2019



Statistically significant change since previous wave

## IBM Cloud is used for more complex tasks

% of complex tasks (more than half of tasks are considered advanced)



IBM and competitors are serving users doing very different “jobs” or tasks.

IBM serves significantly more clients focused on complex tasks.

This is an advantage for IBM as 47% of customers rate their public & private cloud environments as ‘very complex’ per IDC.

## Competitor cracks are emerging

Microsoft and AWS ratings **were low** in:

- ease of setup
- ease of use
- help easily accessible
- support and docs helpful

*“Sometimes, the offerings are tough to find, can be buried since there are so many...”*

*“Unfortunately there are so many options to configure, it is difficult at times to understand.”*

# IBM Public Cloud user experience



Good Design  
Award for VPC



Stratus Award  
for User Experience



Customer Choice  
Award for Cloud  
IaaS



Up to 80 Gbps hyperscale ready  
VSI's



Industry leading  
FIPS 140-2 Level 4  
security with KYOK



Multiplatform support including  
x86, Power and Z for virtual  
servers and bare metal



Best cloud for VMware workloads

# IBM Cloud for VMware Solutions

IBM Cloud has hosted VMware services for more than 6 years

IBM Cloud was first to market delivering and Operating VMware workloads in the Public Cloud

IBM is

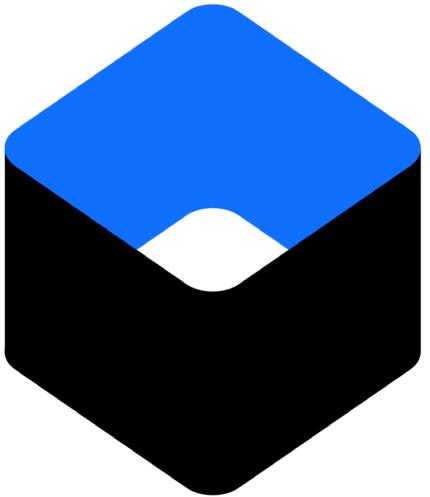
- #1 operator of VMware workloads in world
- #1 VMware SISO partner
- #1 VMware NSX customer and business partner
- #2 VMware vSAN customer and business partner

[IBM Cloud Wins VMware 2017 Partner of Year award](#)



- Sold and Supported by IBM & VMware
- Lowest TCO
- Co-architected with IBM & VMware
- **Shared or Dedicated Environments – Hypervisor level access**
- Cloud Business Model or BYOL
- Bi-directional workload migration
- No Vendor Lock-in, No New Tools

# IBM Cloud Kubernetes Service



A **certified, managed Kubernetes service** providing an intuitive user experience with on-going cluster management. Built-in **security and isolation** to enable rapid delivery of apps, while leveraging IBM Cloud Services

## Key features and characteristics

- API driven cluster management
- Secure
- Automated lifecycle management
- Isolated
- High availability design
- Fully integrated with IBM Cloud
- Pre-defined worker types
- *Expert Experience*



# Red Hat OpenShift On IBM Cloud

Leverage OpenShift in public and hybrid environments for unmatched velocity, market responsiveness, scalability, and reliability.

## Fully Managed

Automated provisioning, installation, configuration, upgrades, patch management, scaling, performance tuning & 24/7 global SRE support

## Resilient & Secure

Automatic multizone deployments with self-healing, HA masters, dedicated compute, bare metal, encryption in-flight/at-rest, bring your own key, security hardening & automated compliance

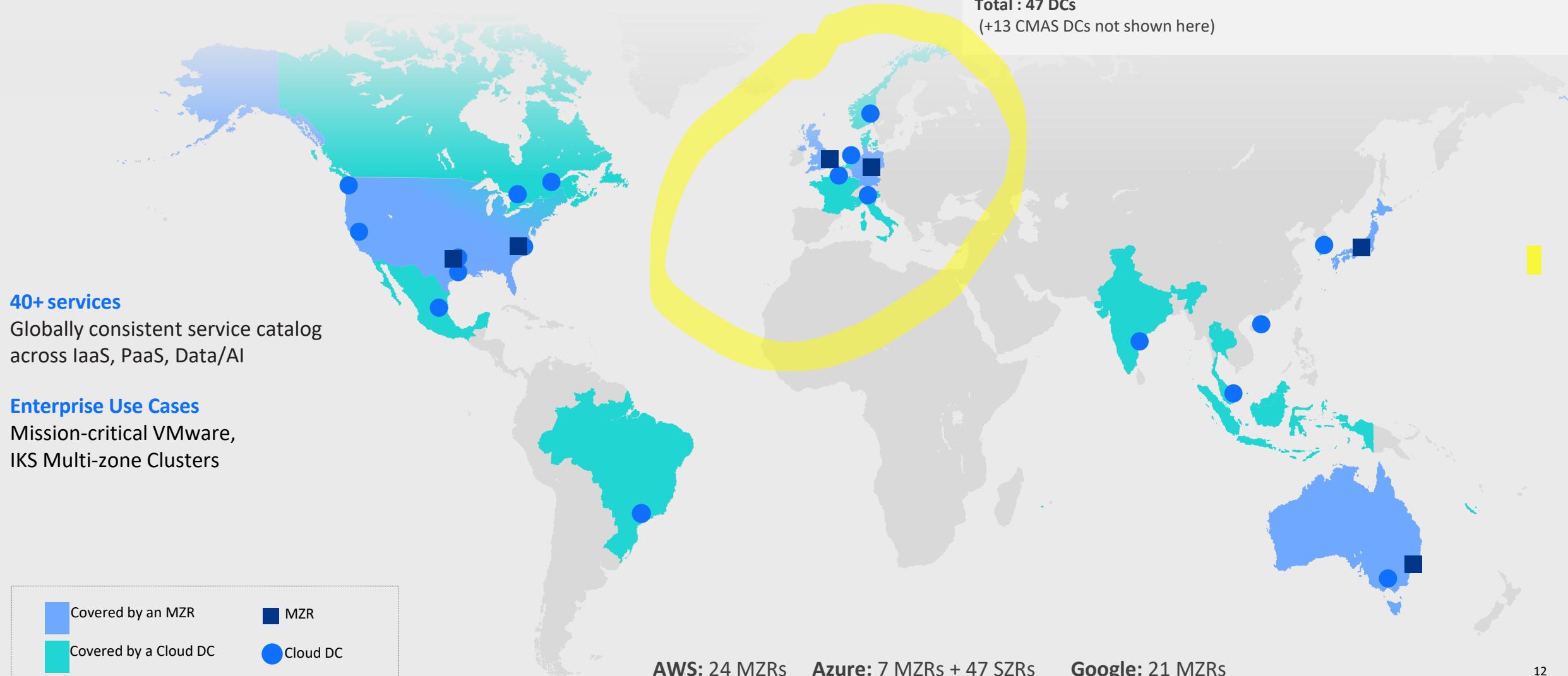
## Complete Platform

Built in monitoring, logging, load balancing, storage (COS, file, block), plus Key Protect, IAM, Activity Tracker, Security Advisor, Service Catalog, Container Registry & Vulnerability Advisor

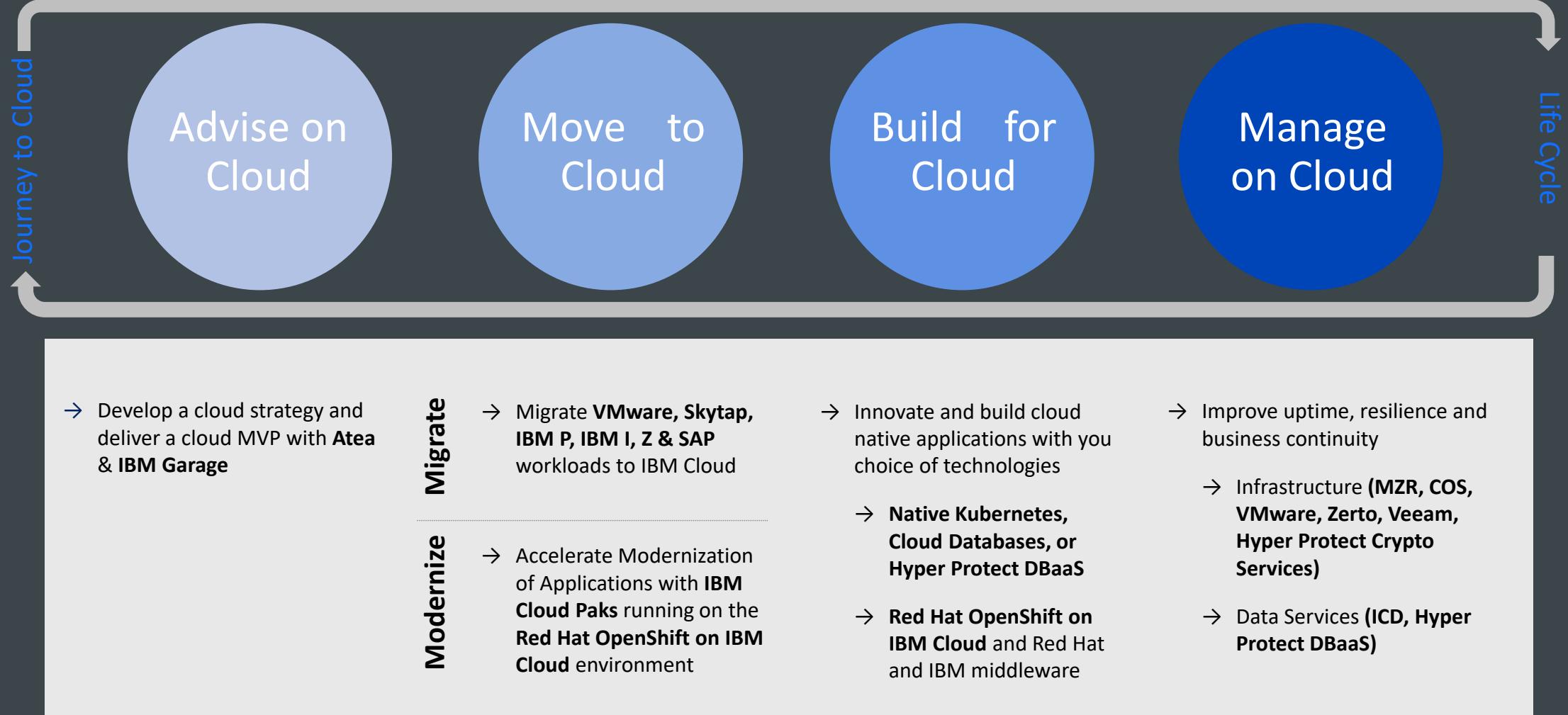
- Directly integrated into the same Kubernetes service that manages 14,000+ production clusters service-wide. It also maintains 13BN API requests daily at The Weather Company.
- Push-button integrations with high-value IBM and Red Hat middleware and cloud services
- Continuous availability with multizone clusters and highly available masters across 6 regions around the world
- **Out-of-box industry compliance including PCI, HIPAA, GDPR, SOC1, SOC2**
- Start fast and small with push-button provisioning and monthly billing

# 6 IBM Cloud Multi-Zone Regions currently cover 72% of the global XaaS opportunity

90+% coverage including countries with our additional 29 Data Centers



# Atea and IBM are your Journey to the Cloud partners



# IBM Cloud Differentiators

Move to Cloud

Build for Cloud

## Bare Metal

**On-Demand**  
Provision servers in hours

**Control & Security**  
Dedicated single tenant

**No Noisy Neighbors**  
Utilize the entire network w/o sacrificing performance

**Powerful & Customizable**  
Choose your hardware to meet performance needs



HPC & Gaming



Dedicated Hosting

## VMware

**#1**  
VMware  
SISO  
partner

**#1**  
VMware  
NSX  
business  
partner

**#1**  
VMware  
workloads  
operator

**~1,800 clients**  
Largest VMware cloud footprint

**Solutions**  
Available in 60+ data centers



HCX



vCenter



NSX



vSphere

## IBM Power

**AIX and IBMi**  
VM's as a service in IBM Cloud Enterprise storage, variable partition sizes

**Data**  
>1.8 X memory & I/O Bandwidth and Capacity for data-centric workloads

**Key Solutions**  
Enterprise Applications (e.g. SAP)

## Workloads



Database

## Hyper Protect Services

– Powered by Z

**Hyper Protect Crypto** KYOK for cloud data encryption in a dedicated cloud HSM (FIPS 140-2 level 4)

**Hyper Protect Containers**  
Build and deploy micro services within a hyper secure environment

**Hyper Protect DBaaS**  
Provision & manage highly secure databases

## Kubernetes Everywhere

**Open Standards** to enable workload portability at scale

**Cloud Native** with ROKS/IKS and **Modernize** with Cloud Paks

**Modernize or build scalable cloud native applications**

**Enterprise grade isolation, security, performance & compliance!**

**Red Hat OpenShift** on **Kubernetes, Managed Istio & Managed Knative**



Kubernetes



Istio



Knative



CLOUD FOUNDRY



Blockchain



Functions

# Atea & IBM - Markkinoiden avoimin, turvallisin ja joustavin julkipilvi

**1**

## Tietoturva

Parhaat salausmetodit  
(KYOK) ja korkeimman  
standardit täyttävät  
suojausmenetelmät  
(FIPS 140-2 L4)

**2**

## Avoimuus

Paras tuki avoimen  
lähdekoodin  
sovelluksille

Et lukitse  
sovelluksiasi  
yhteen tiettyyn  
julkipilveen

Rakenna kerran –  
aja missä haluat

**3**

## Joustavuus ja hallinta

Yhtenäinen monipilven hallinta  
eri pilvien välillä  
toimitusmallista riippumatta

Parhaat ajoalustat eri  
työkuormille nativisti ilman  
sovellusmigraatiota