

IBM Cloud & Cognitive Software:

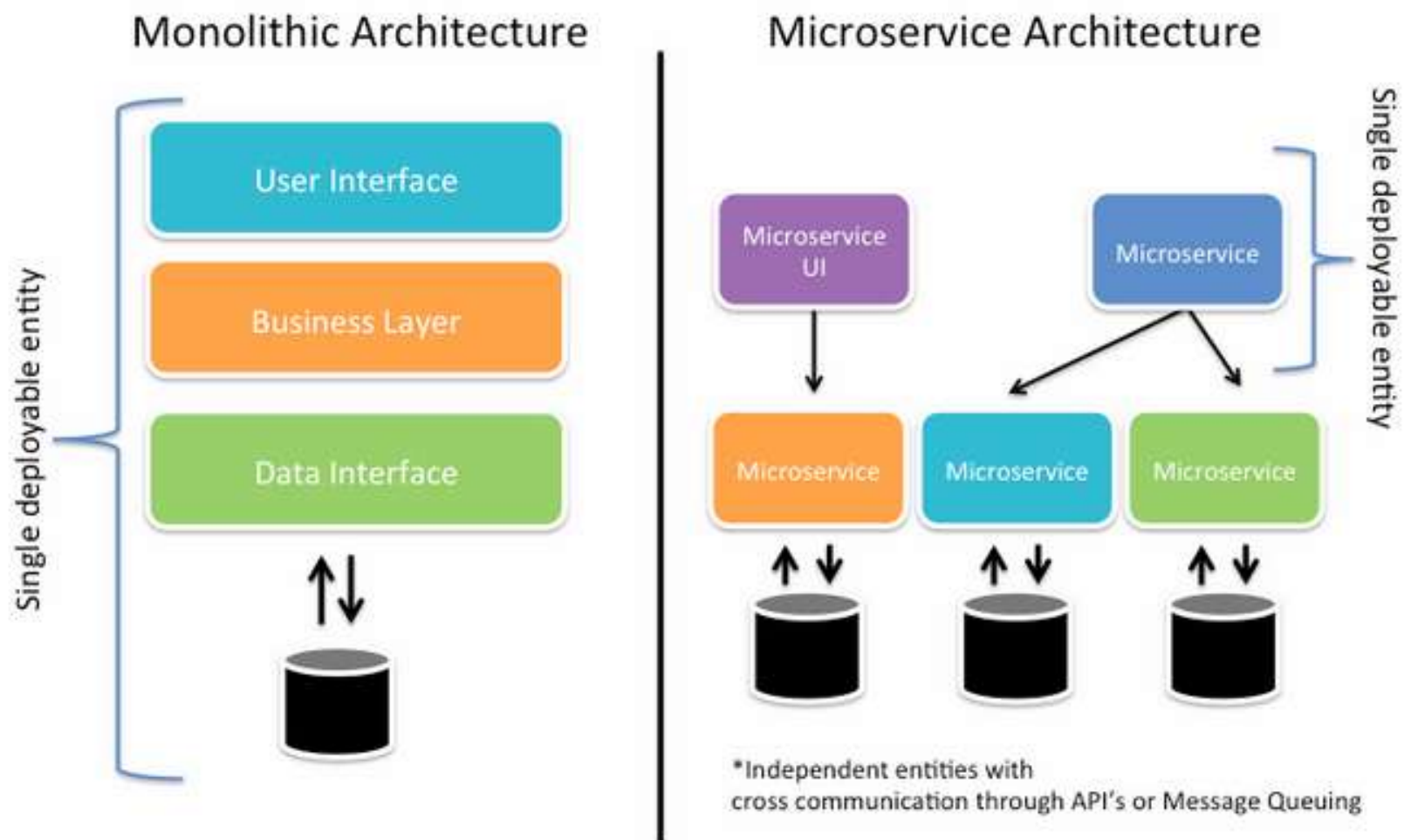
Novinky v IBM SW portfóli

Andrej Struhár

Agenda

- IBM prístup ku kontajnerizácii
- Kontajnerizácia & IBM portfólio
- Stratégia Red Hat/IBM
- Cloud Paks - konsolidované IBM riešenia
- Deployment modely pre IBM SW
- Hybrid cloud a Multicloud

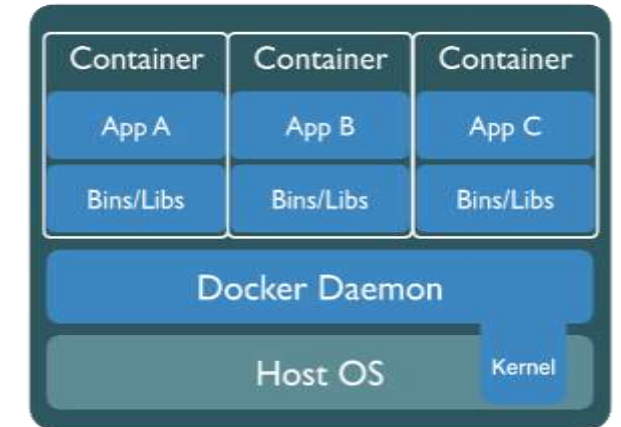
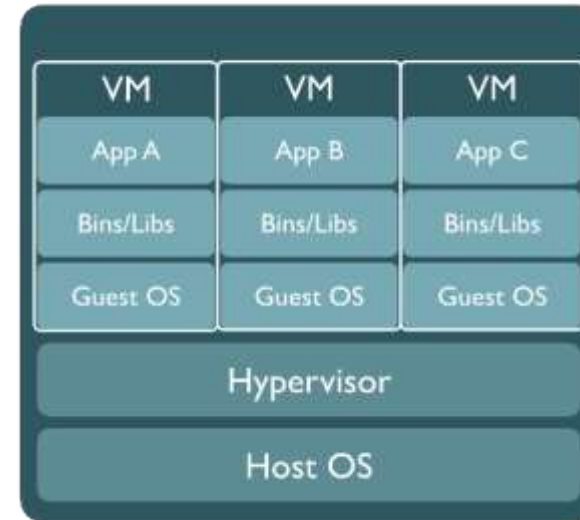
Architektúra aplikácií - Monolit vs mikroslužby



“Microservices are small, autonomous services that work together.”

IBM přístup ku kontajnerizácii




- Prečo kontajnery a IBM?



Prečo kontajner s IBM

- Najrozšírenejšia platforma na trhu (OpenShift, Kubernetes)
- Maximálna podpora OpenSource
- Výhodný licenčný model
 - Kontajnerizované aj štandardné licencie
 - Možnosť zmeny produktov
- Ochrana investícií
 - Podpora pre produkty, ktoré už zákazník má
 - Možnosť trade-up (prechod z existujúcich licencií na nové)
 - Meranie využívania licencií
- Podpora pre hybridný model (cloud vs on-premise)
- Full stack support

Samotné kontajnery nepostačujú

<p>Container models available to clients</p> <p>Capabilities & Value</p>	 <ul style="list-style-type: none"> Ad hoc client created containers <p>Client takes software binaries, Creates their own containers.</p>	 <ul style="list-style-type: none"> IBM provided containers <p>Client receives IBM Software in the form of container(s)</p>	 <ul style="list-style-type: none"> IBM Cloud Paks <p>Simplified, Enterprise grade, Fully supported</p>
IBM Software supported	Depends on product	Yes	Yes
Full stack support by IBM <small>(Base OS, software, deployment on cloud platform)</small>	No	No	Yes
Vulnerability Scanned <small>(Manages image vulnerabilities)</small>	Scan yourself	Yes	Yes
Orchestrated for Production <small>(Built for Kubernetes by product experts)</small>	None	None	Yes
Management and Operations	Roll your own	Roll your own	Built-in
License Metering Integration	Do it yourself	Do it yourself	Yes
Lifecycle Management	Manage it yourself	Manage it yourself	Yes

smart
is
open.



open
is
smart.

Cloud Paks (on-prem)



- Licenčné balíčky zaisťujúce flexibilitu / zameniteľnosť licencií medzi produktami.
- Licencovanie na VPC (virtual processor cores)
- Platformy za jednotlivé SW skupiny s lepšie preintegrovanými komponentami.
- Jednoduchšie rozširovanie, zmena a správa prostredia.
- Kontejnerizovateľné
- **SW v Paku je možné využívať štandardne ako doteraz a migráciu zvážiť neskôr.**

IBM containerized software
Packaged with Open Source components,
pre-integrated with the common operational services,
and secure by design

**Container platform
and operational services**
Logging, monitoring, security,
identity access management

**Red Hat
OpenShift**




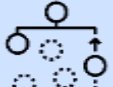

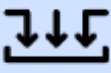





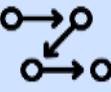












Complete yet simple
*Application, data and AI services,
fully modular and easy to consume*

IBM certified
*Full software stack support, and ongoing
security, compliance and version compatibility*

Run anywhere
*On-premises, on private and public clouds,
and in pre-integrated systems*

IBM Cloud aws Azure Google Cloud Edge Private Systems

Cloud Paks – Pre-integrated for cloud use cases

Cloud Pak for Applications	Cloud Pak for Data	Cloud Pak for Integration	Cloud Pak for Automation	Cloud Pak for Multicloud Management	Cloud Pak for Security
  <p>Developer & DevOps Tools Modernization Toolkit</p>  <p>Frameworks and Runtimes</p>	  <p>Organize Analyze</p>  <p>Collect</p>	  <p>API Lifecycle Messaging and Events</p>  <p>App and Data Integration</p>	  <p>Content Operational Intelligence</p>  <p>Workflow and Decisions</p>	  <p>Multicloud App and Infrastructure</p>  <p>Security and Compliance Management</p>	  <p>Federated Search and Investigation Incident Response</p>  <p>Security Orchestration and Automation</p>
 <p>Container platform and operational services</p>	 <p>Container platform and operational services</p>	 <p>Container platform and operational services</p>	 <p>Container platform and operational services</p>	 <p>Container platform and operational services</p>	 <p>Container platform and operational services</p>

IBM public cloud


AWS


Microsoft Azure

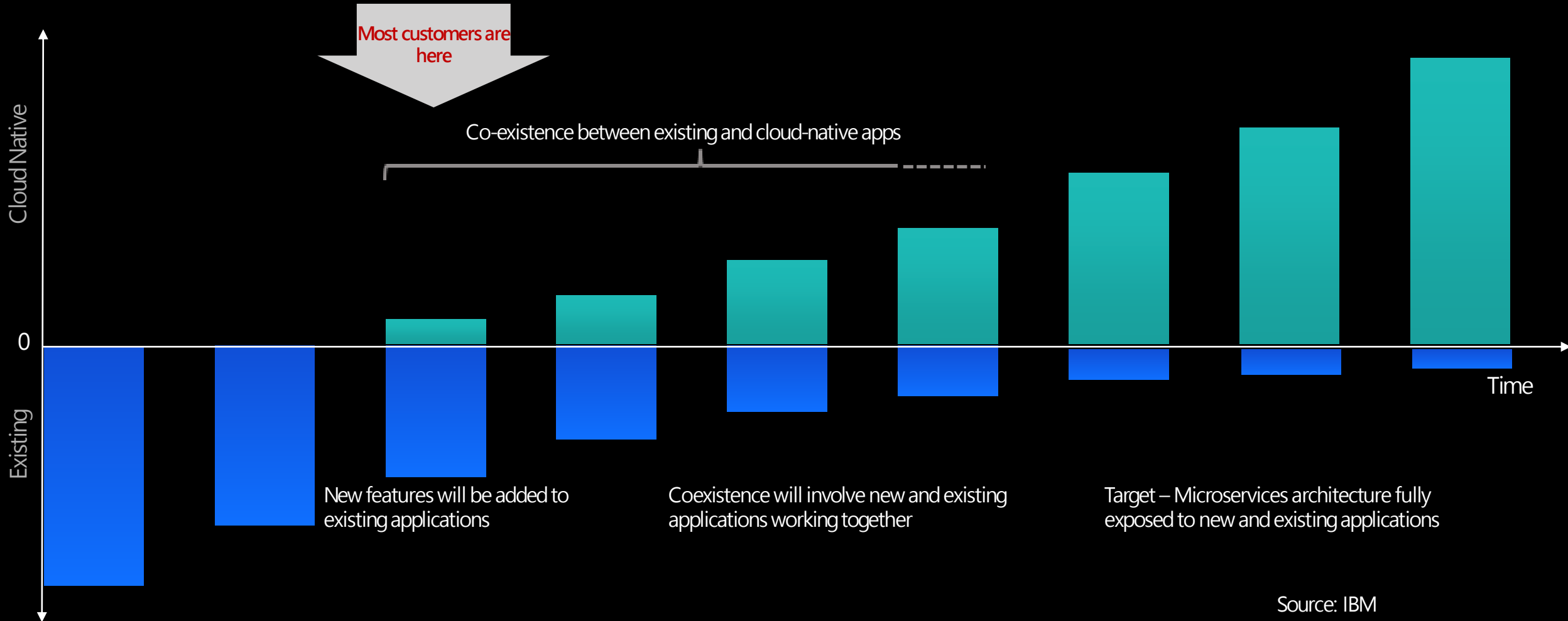

Google Cloud


Private


IBMZ
 IBM LinuxOne
 IBM Power Systems

End points


Existing Apps & Cloud Native will co-exist... *for the next 10+ years*



Cloud Pak for Applications | 3 customer needs with 1 offering

Flexibly rebalance entitlement over time: from what you need today, to what you need tomorrow



Run existing apps

Continue to run your apps, where they are.



Modernize existing apps

When apps need to move, IBM has the most experience, tools, and experts to move them



Building new apps

New apps are automatically ready for hybrid-cloud deployment, using the best of open source, fully supported

CloudPak for Applications

Run Existing Apps and Build New Apps

Continue to run your apps, where they are.

*New apps are automatically ready for hybrid-cloud deployment,
using the best of open source, fully supported.*

MODERNIZE APPS

*When apps need to move, IBM has the
right experience, tools, and experts to
move them.*



WebSphere Application Server

WebSphere ND
WebSphere Base
Liberty Core



Kabanero Enterprise

Codewind



**Red Hat
Runtimes**
• JBoss
• Vert.x
• Node.js
(etc.)

IBM Integrated Application Runtimes

Java:
• Open Liberty
• MicroProfile
• Spring
• OpenJ9
• Hotspot

Node.js:
• Loopback
• Express



Appsoody

Knative Tekton



Integrated DevOps

Digital App Builder



IBM Mobile Foundation

**Mobile
Services**

IBM Cloud Private



Red Hat OpenShift



IBM Modernization & Developer Tools

Transformation Advisor
WebSphere Migration
Toolkit
Enterprise Dev tools
extensions for local IDE's

Included with all components

**ICP full product included as
transition path to OpenShift**

**Perpetual and Term licensing options
available, w/ unrestricted OpenShift**

**No Charge, supported when used
with Cloud Pak for Applications**

Pak for Applications



Obsahuje balíček produktov:

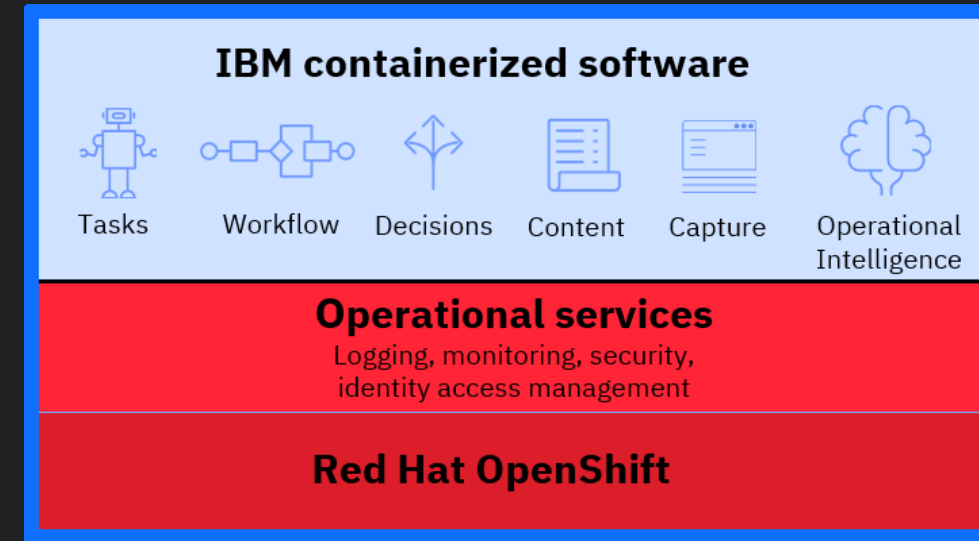
- WAS ND
- WAS Base
- WAS Liberty Core
- Openshift s Redhat runtimes
- IBM Accelerators for Teams (Kabanero)

<i>Ratio</i>	<i>Product</i>
1	WAS ND
3	IBM Cloud Private
4	WAS (base)
1	OpenShift with Kabanero Enterprise plus Red Hat Runtimes
8	WAS Liberty Core
2	Mobile Foundation

Pak for Automation



- Workflow – Integrovaný BPM + Case Manager
- Business Rules - ODM
- Dokumenty – Filenet
- Data Capture – Datacap
- Business Automation Insights
 - Nový, spoločný Business Monitoring



Cloud Pak for Data

IA

AI

Collect

Organize

Analyze

Infuse

Db2 Warehouse

Watson Knowledge Catalog
(IGC/IA/Data Refinery/InstaScan) **NEW**

Watson OpenScale

Cognos Dashboard Embedded

Db2 EventStore

Master Data Connector **NEW**

Watson Studio (includes Data Refinery)

Cognos Analytics

Data Virtualization

IBM Regulatory Accelerator

Watson Machine Learning
(includes AutoAI)

Watson Financial Crimes Insight

IBM Streams

Open Source Management

Analytics Engine for Apache Spark

Watson API Toolkit
(Speech to Text, Text to Speech, NLU, WKS)

Big SQL **NEW**

Guardium (integration only) **NEW**

Watson Machine Learning Accelerator (Power AI)

Planning Analytics **NEW**

Netezza Performance Server

Data Stage

Watson Studio Premium (SPSS Modeler, DO & Hadoop Execution Engine)

Watson Assistant

Db2 AESE

Information Server

Financial Services Workbench
knowis

Watson Discovery

mongoDB

Master Data Management **NEW**

Prōlifics

OA for ERP

Cockroach LABS

Datameer

wand
Probuilt Taxonomies and Ontologies

Senzing

Virtual Data Pipeline
actifio **NEW**

intel

(Analytics Zoo, DLRS, Python)

Base

Cartridge

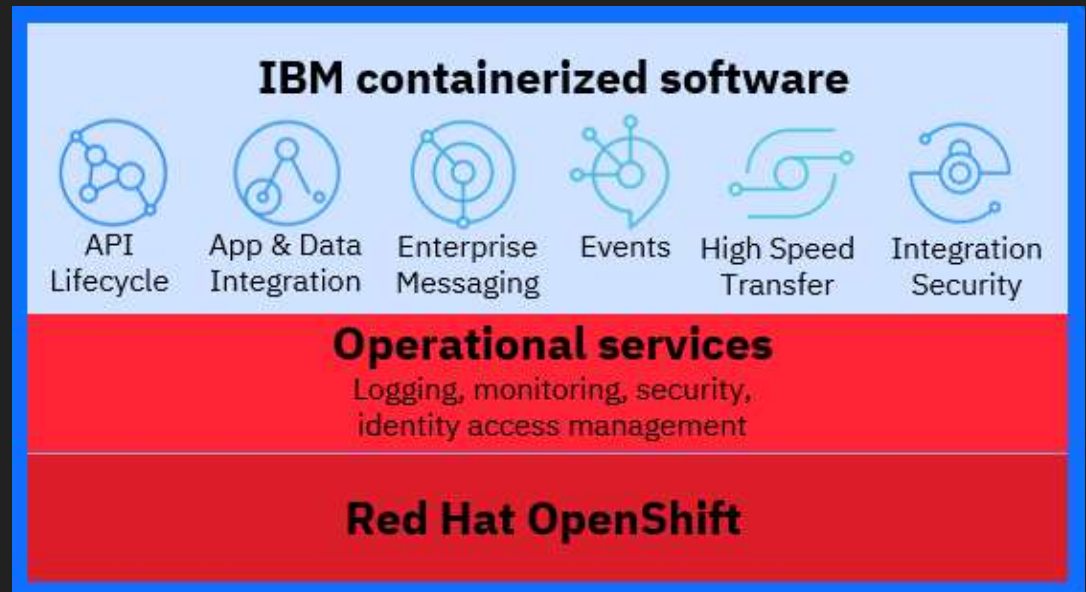
Partner

+25 3rd party add-ons. Only showing a sample.

Pak for Integration



- APP Connect Enterprise – ESB riešenie.
- MQ - bezstratový prenos správ medzi aplikáciami.
- Event Streams – nadstavba nad event mng riešením Kafka.
- Aspera – riešenie pre bezpečný a rýchly prenos dát.
- API Connect – API Management
- Datapower – security gateway.



IBM Cloud Pak for Integration Platform h

- Platform home
- Cloud Pak Foundation
- OpenShift Console
- Logging
- Monitoring
- Tracing 0 instances
- Asset repository 1 instance
- API Connect 0 instances
- App Connect 0 instances
- MQ 1 instance
- Event Streams 0 instances
- Aspera 0 instances
- DataPower 0 instances

Platform version 2.1.0

Base Platform

- Single Sign on
- ICP or OpenShift Console
- Platform services
 - Logging
 - Monitoring
 - Tracing

System overview

Time Service type Status Latency

Watchdogs
Average watchdog transaction failure
1%
Percentage of failed watchdog transactions

High latency
Transactions with high latency
11%
Percentage of high latency transactions

Service errors
Average service error rate
2%
Percentage of service errors

Watchdogs
15 Failed watchdog transactions

Service	Failed transactions
Visa transactions	3
mortgage_requests	0
investment2326	0
customer_data_req	1
rates_req	0

High latency
07 high latency transactions

Service	Transaction time (Avg.)
Finance check	3.9 ms
Microservice_232	2.3 ms
Mortgage_API	407 ms
ApplicationReq	123 ms
Savings_check	197.8 ms

Service errors
21 Service errors

Domain	Errors
Microservice_232	12
info_request27	3
investment_API	1
Stack_head	1
employeeContact	1

kibana 8 hits

kubernetes.namespace:ace AND ibm_product:"IBM App Connect Enterprise"

logstash+

Selected Fields

- t: messa...
- t: type
- ? loglevel
- ? ibm_s...

Available Fields

- @timesta...
- t: @version
- t: _id

Count

December 28th 2018, 08:24:45.729 - January 4th 2019, 08:24:45.729

@timestamp per 3 hours

Time	message	ibm_serverName
January 4th 2019, 08:23:50.221	Successfully fetched Kubernetes information	ace_dashboard

Deployment options

Traditional on-prem deployment

Traditional cloud deployment in IaaS

Generic on-prem containerized deployment – Kubernetes, RedHat OpenShift

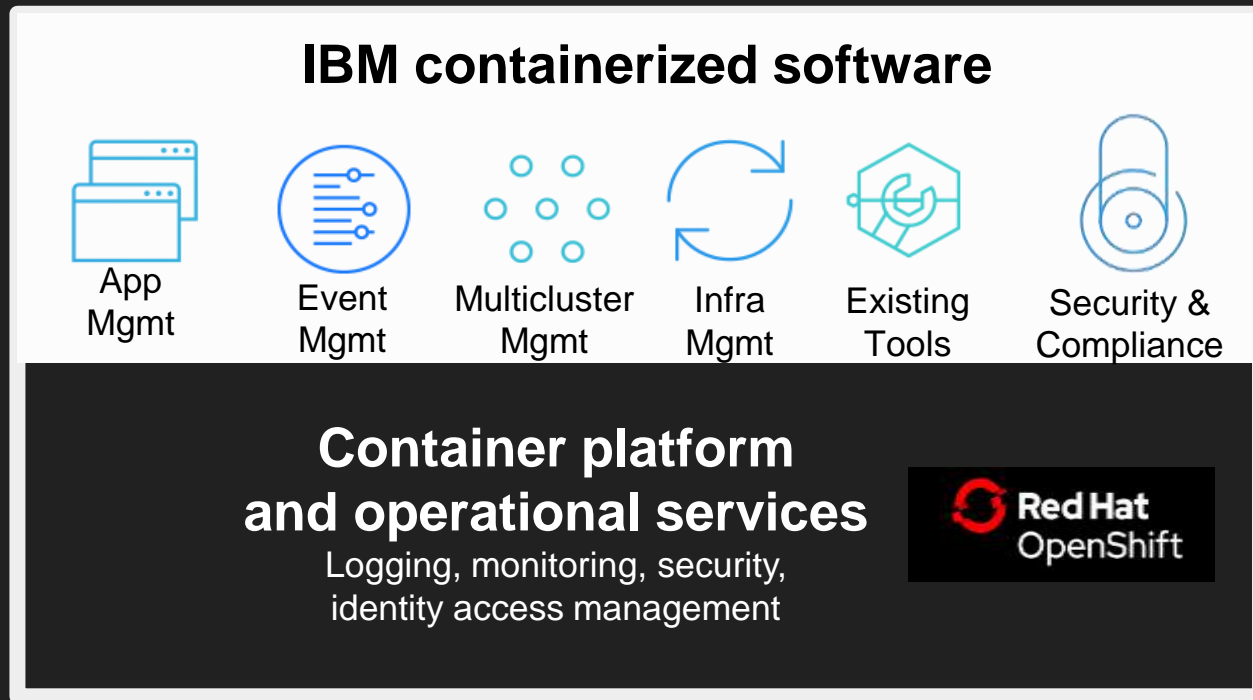
IBM CloudPak on-prem containerized deployment

IBM CloudPak on ROKS deployment – RedHat OpenShift on IBM Cloud

IBM managed cloud deployment – on IBM Cloud

Cloud Pak for Multicloud Management

A faster, more secure way to move your core business applications to any cloud through enterprise-ready containerized software solutions



Complete yet simple

IBM certified

Run anywhere

IBM
public cloud



AWS



Microsoft
Azure



Google
Cloud



Private

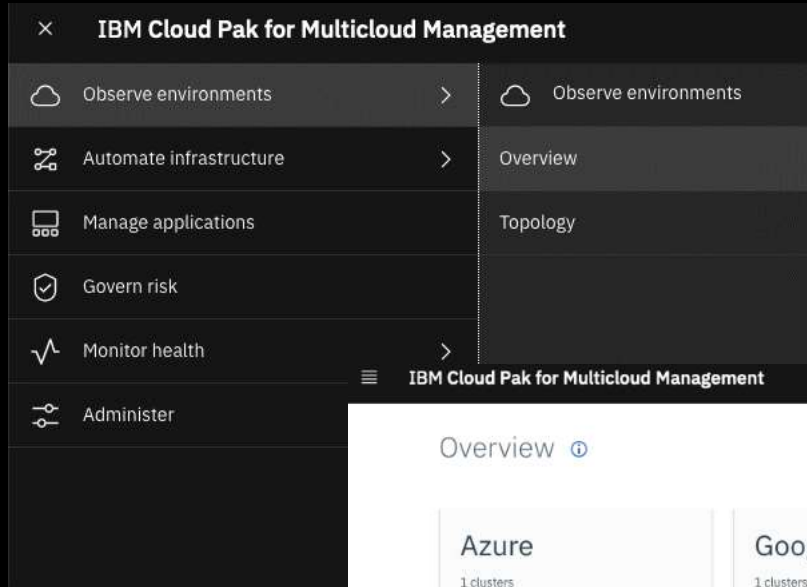


IBM Z
IBM LinuxOne
IBM Power
Systems

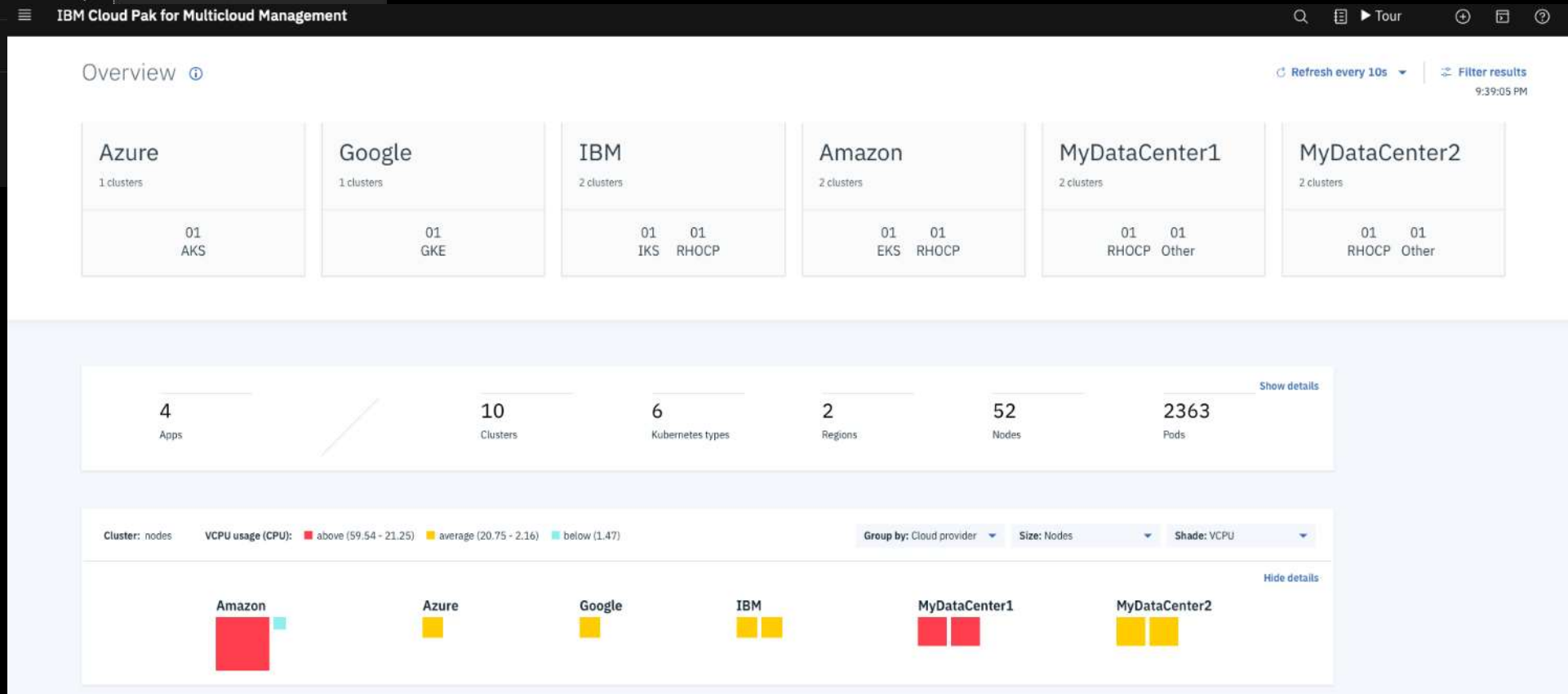
End-
points



Single Pane of Glass for all your clusters



- Multicloud Overview Dashboard
- Organize your clusters by clouds
- View compliance and health status



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- Deployment modely pre IBM SW
- Hybrid cloud a Multicloud

IBM Cloud & Cognitive Software:

Zmeny v SW portfóli Hybrid Multicloud

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