

Automated data security builds
intelligent IT operations

IBM Spectrum Protect Plus for CloudPak for Multicloud Management

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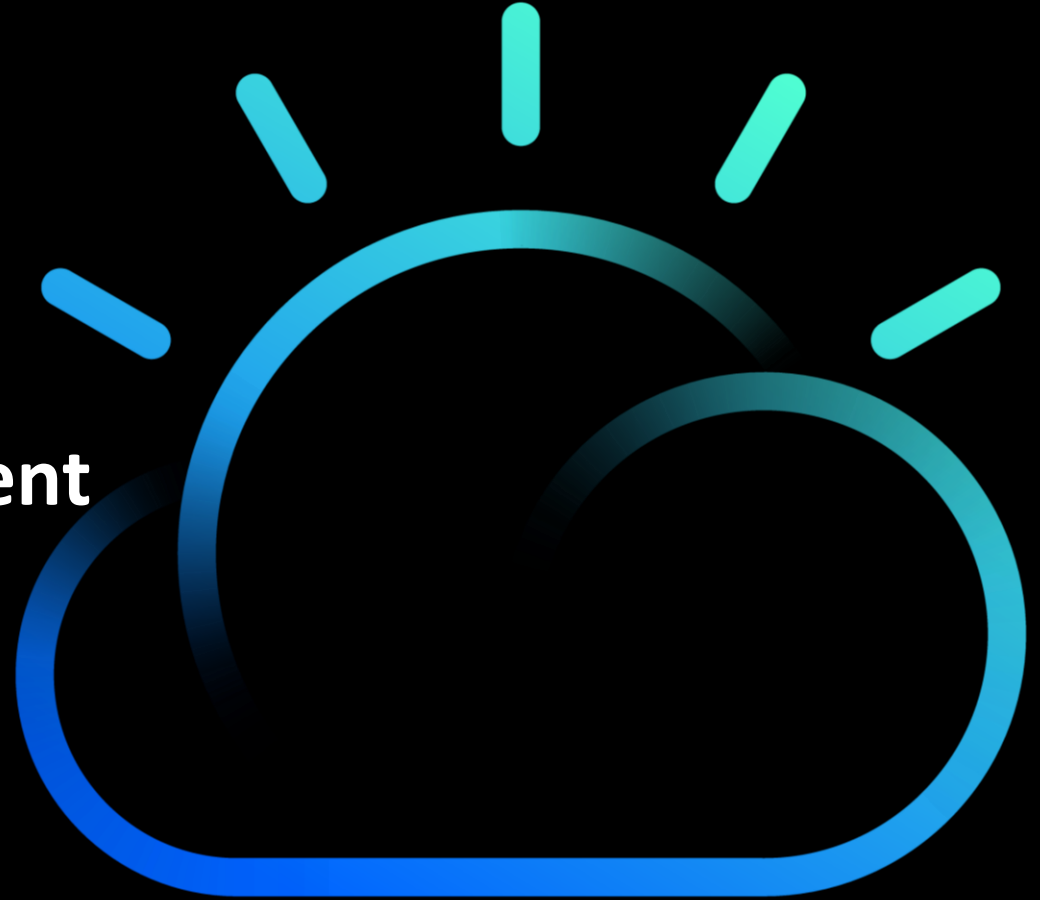
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IBM Cloud

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Agenda

- Market Overview
- Cloud Pak for MCM Overview
- Spectrum Protect Plus for Cloud Pak for Multicloud Manager
- Spectrum Protect Plus for Kubernetes and Red Hat OpenShift
- Next Steps

Market Overview

Business Needs to Meet Market Demands



“I need applications to be more agile in order to adjust and shift in response to rapidly dynamic market demands.”



“I need diverse and easy to use tools & capabilities to build anywhere, at any pace”

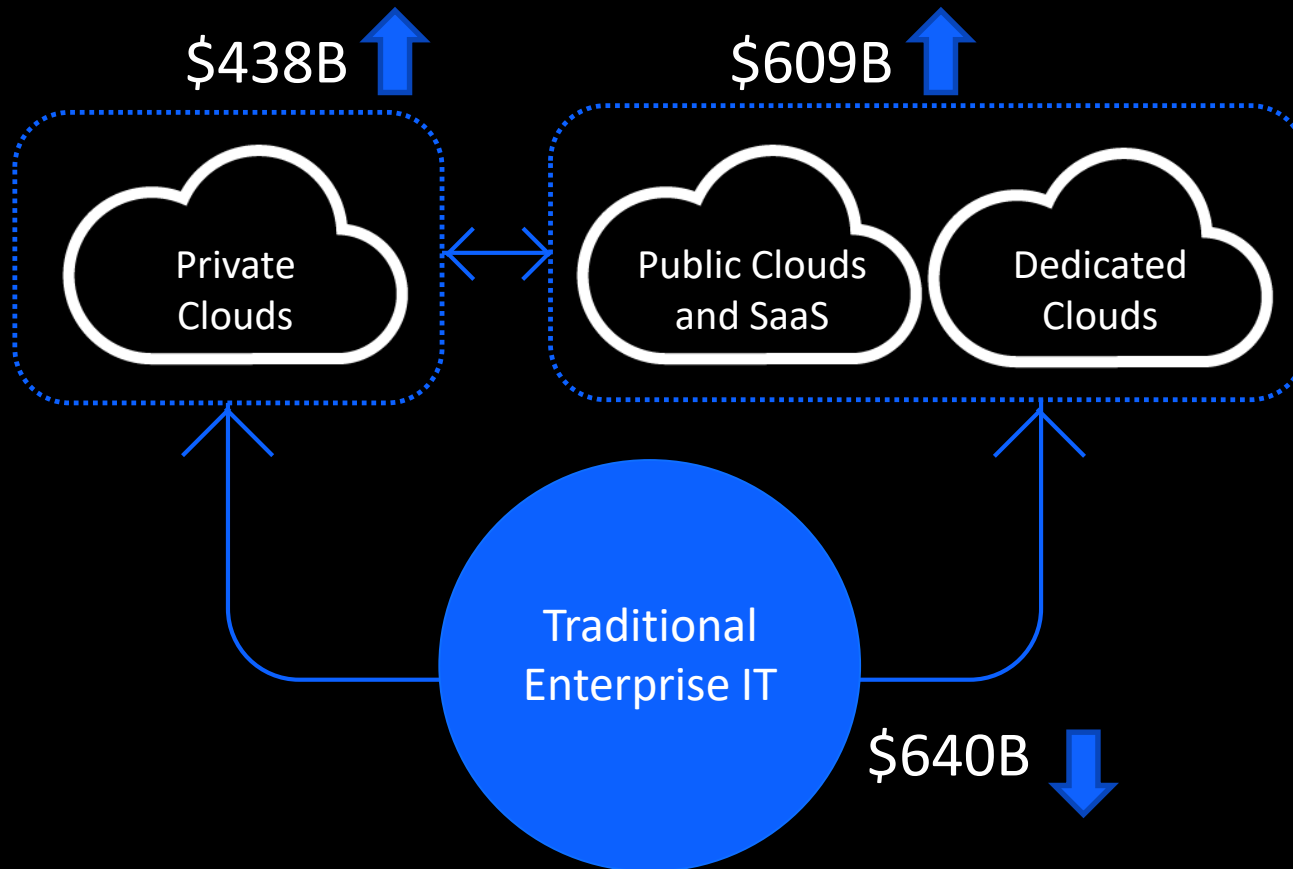


“I need my applications to scale dynamically, achieve peak performance and adhere to security requirements regardless of where they are deployed”

71% of CEOs say improved agility and faster time to market is top priority -McKinsey

Hybrid and Multicloud are the new normal

In 2020...



An optimal strategy will address key challenges:

80% Of applications have yet to move to cloud

5 Clouds in use by the average enterprise

A hybrid strategy unleashes the full potential of the cloud

2.5X
more value than a public only strategy*

* Source: Institute for Business Value, May 2020

Containers are the enabling technology



Business acceleration



Developer productivity



Infrastructure cost efficiency



Regulatory, Compliance & Security



Strategic optionality

Developers



Collaboration



IT Operations

74%
of organization use
containers today*

* Source: ESG Research Report: Data Storage Trends March 2020

Ubiquitous Adoption

Solutions



Platforms



Foundation



Infrastructure



Container adoption brings new challenges.

Top five challenges:

1. Cost of storage
2. Storage performance
3. **Hybrid, multicloud management**
4. **Data availability**
5. **Back-up/protection of container workloads**

Container Market Overview

Key considerations for a data protection solution:

1. Stateful data usage
2. Production deployments
3. Container and VM application protection

\$7B

... size of application container market in 2024

451 Research: 2019

84%

... of respondents using Kubernetes in production, up 15% from last year

CNCF Survey March 2020

35%


... of production apps will be **cloud native** — utilizing microservices, containers and dynamic orchestration by 2022

Source: IDC FutureScope: 2019

70%

... of enterprises will integrate cloud management — across their public and private clouds — by deploying unified hybrid/multicloud management technologies, tools, and processes.

Source: IDC



In order to Achieve
Business Goals on the
Journey to Cloud...

Consistent, Simple and
Integrated Management
and Data Protection is a
Must

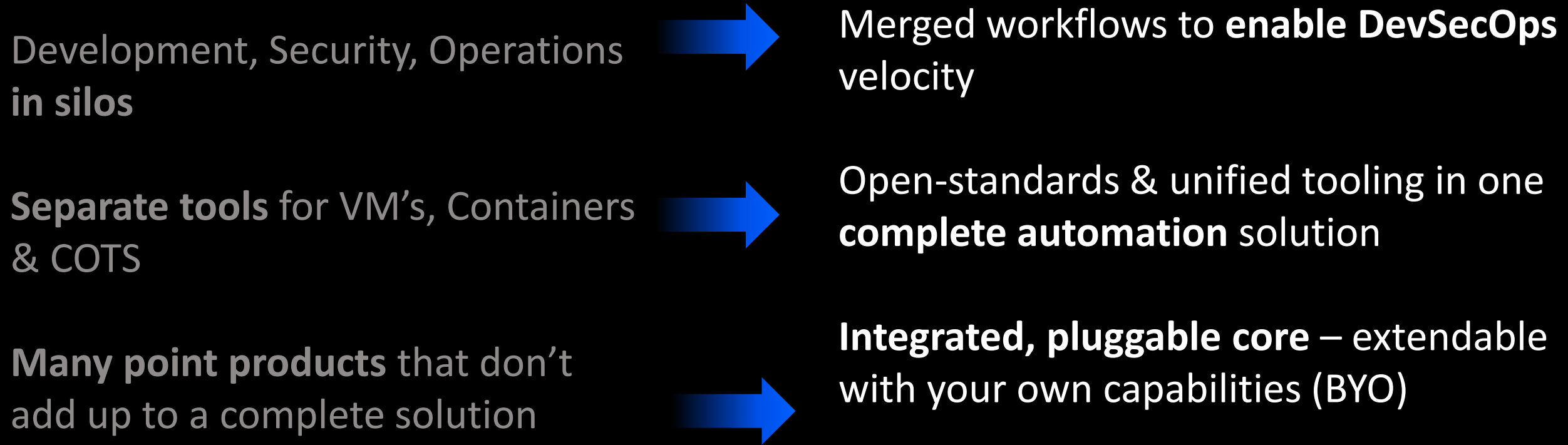
Cloud Pak for Multicloud Manager *overview*

Drive Excellence in a Fast Paced, App Centric, Landscape

Organizations can gather metrics in a single place so you can track & deliver on availability commitments (SLAs) and bring excellence to IT Ops (ex: Cloud admin, SRE) even in hybrid IT architectures

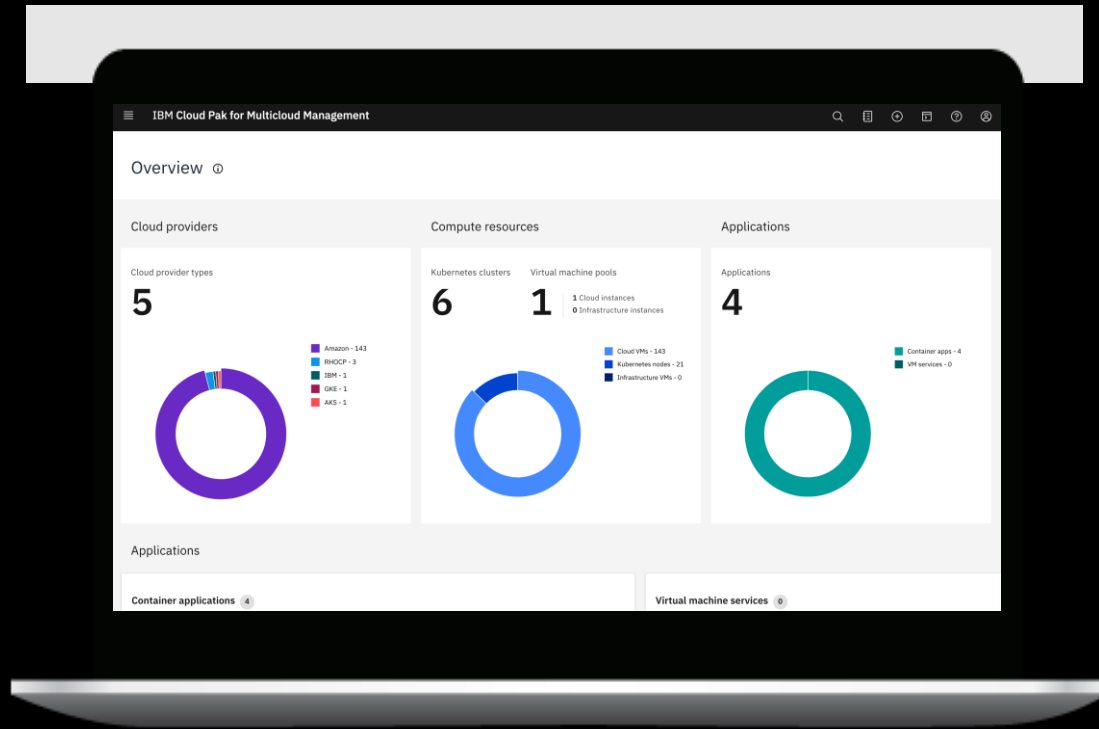
Cloud Pak for Multicloud Management
*becomes the rally point for Development,
Security and Operations*

Modern Management Accelerates Digital Transformation



75% improvement in overall IT efficiency

Cloud Pak for Multicloud Management

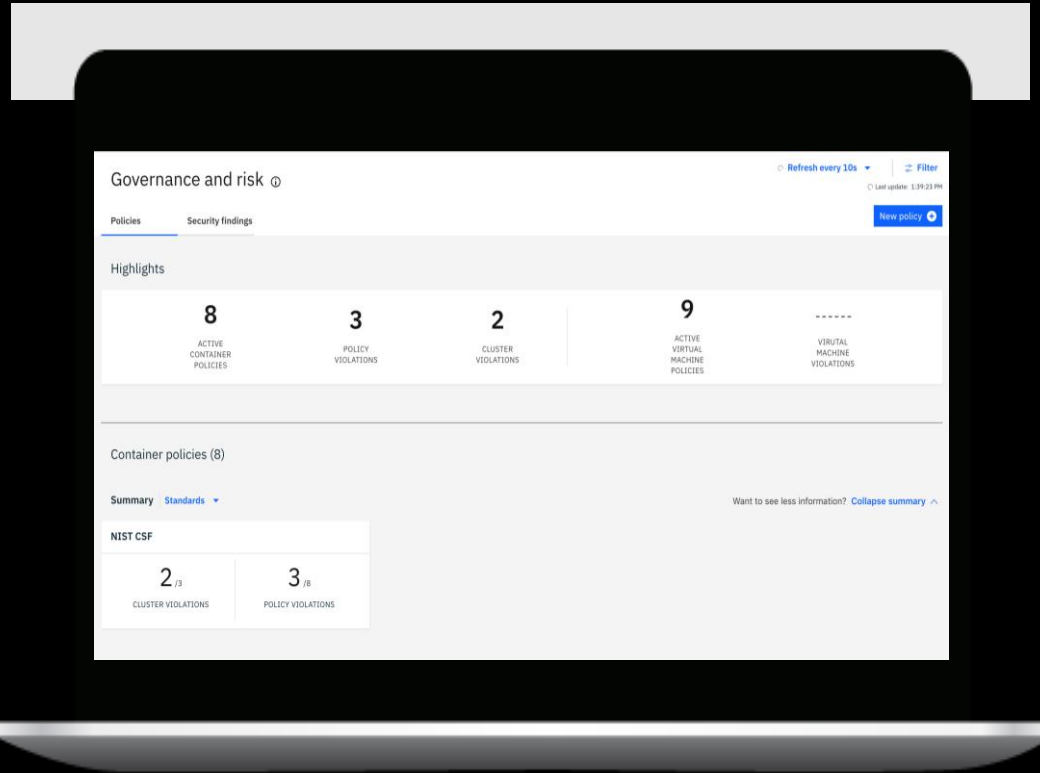


Intelligent Governance, Risk,
Compliance

Intelligent Cost and Asset
Management

Intelligent Hybrid Application
Management

Intelligent Compliance and Governance for Hybrid Cloud Management – Cloud Pak +SPP



Governance & Compliance Management

Enforces policies and ensure compliance across hybrid infrastructures and applications

Scans and monitors workloads continuously for vulnerabilities and mutations

Creates auditability of all policies, known vulnerability exposures and regulatory requirement tracking

Single console to remediate GRC vulnerabilities regardless of deployment model

Entry Points into Hybrid Cloud Management with Cloud Pak for Multicloud Management

Intelligent Governance, Risk, Compliance

- Enforces policies and ensures compliance across hybrid infrastructures and applications
- Scans and monitors workloads continuously for vulnerabilities and mutations
- Creates auditability of all policies, known vulnerability exposures and regulatory requirement tracking
- Single console to remediate GRC vulnerabilities regardless of deployment model

Intelligent Cost and Asset Management

- Enhanced visibility features to find resources & report generation for IT Cost Modeling, Showback and Chargeback
- Single console driving environmental observability and control
- Cost tracking & analysis to understand cloud resource charges
- Build governance to resource usage by generating enforceable limitations

Intelligent Hybrid Application Management

- Deploy and move hybrid applications seamlessly across cloud deployments
- Automatic incident routing, bringing together DevSecOps teams to resolve complex faults fast
- Proactively prevent application bottlenecks and performance issues with real time metrics

Spectrum Protect Plus and Cloud Pak for MCM:

Unified container and VM application management and data protection

Who are the users?

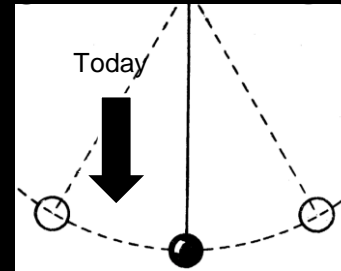
Development (App Developers)

- Self service
- K8s interface (kubectl CLI)
- Application protection

DevSecOps

Central IT Operations (Cloud / K8s Admin)

- K8s resource awareness / etcd protection
- Cluster protection
- Prometheus / Grafana integration
- Self-contained solution



Early
Adoption
Phase

Mature
Solution
Phase

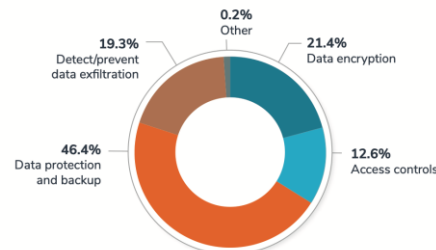
Central IT Operations (Backup / Stg Admin)

- Manage K8s and non-K8s workloads
- Consistent SLA based mgmt. of workloads
- Management server / repository typically outside K8s

Governance (CIO / CFO)

- Governance
- Cost
- Corporate retention requirements

What is your top data security concern when it comes to running stateful services in containers?



What is data protection?

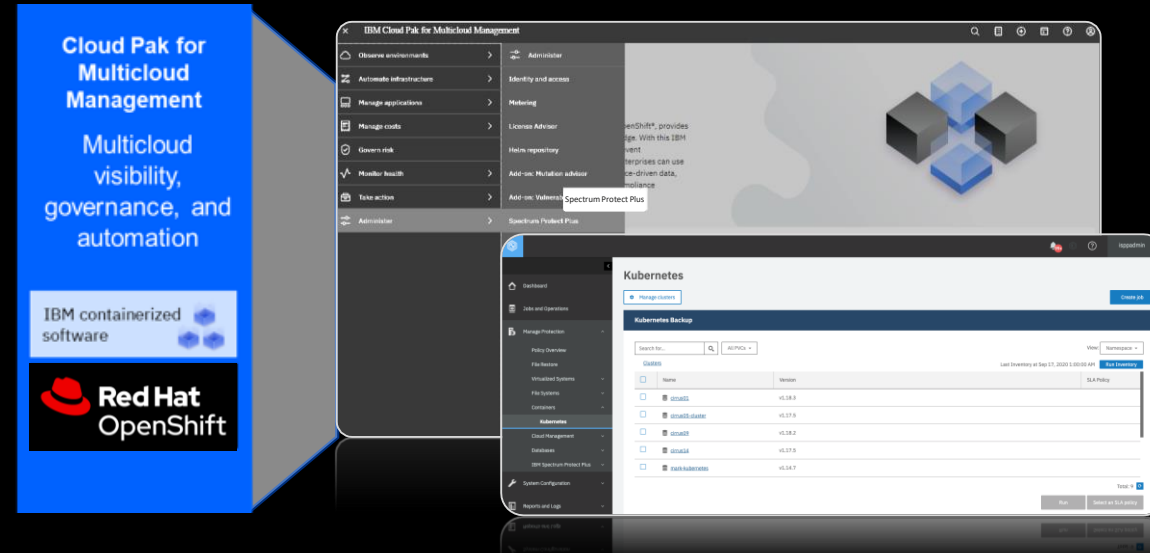


Who owns the strategy?



What is Kubernetes?

Seamless data protection and application management with IBM Cloud Pak for MCM and Spectrum Protect Plus



Integrate data protection with intelligent compliance and governance with enforcement of policies across hybrid infrastructure

Improve operational efficiency with end-to-end lifecycle management for applications across cloud deployments

Enable ITOps transformation with automatic incident routing bringing together DevSecOps teams

IBM SPP provides automated backup and recovery for VMs, databases and containers through CP4MCM's open hybrid management platform certified with Red Hat OpenShift

Spectrum Protect Plus

for Red Hat OpenShift and Kubernetes

Container Data Protection - *What's available today?*

Spectrum Protect Plus

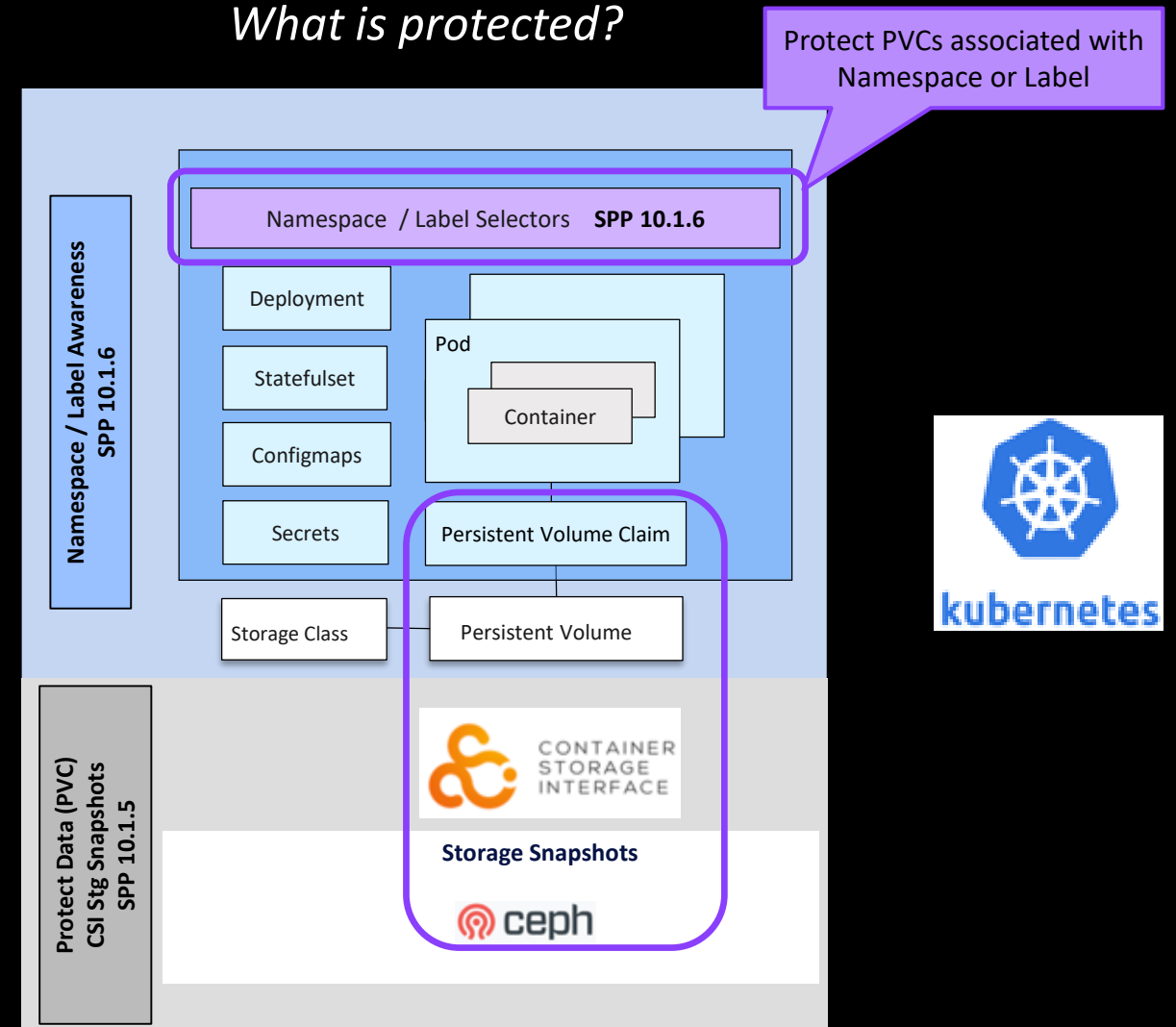
Spectrum Protect Plus Integration

- Consistent management of K8s and non-K8s workloads
- Copy PVC snapshot to vSnap
- Reporting from SPP GUI
- Discovery / K8s inventory representation / SLA management from SPP UI
- Recovery wizard

Kubernetes Support

- In place CSI snapshots for PVCs: *first mover advantage*
- Self service / kubectl integration
- Kubernetes controller / BaaSReq CR
- Namespace / label awareness
- On-prem Kubernetes

What is protected?



Container Data Protection – *What's coming next?*

Target: 4Q20

Spectrum Protect Plus Next

Cloud Pak Support: 4Q20

- Cloud Pak for Multicloud Management Add-On
- UI launch integration (CP4MCM -> SPP GUI)

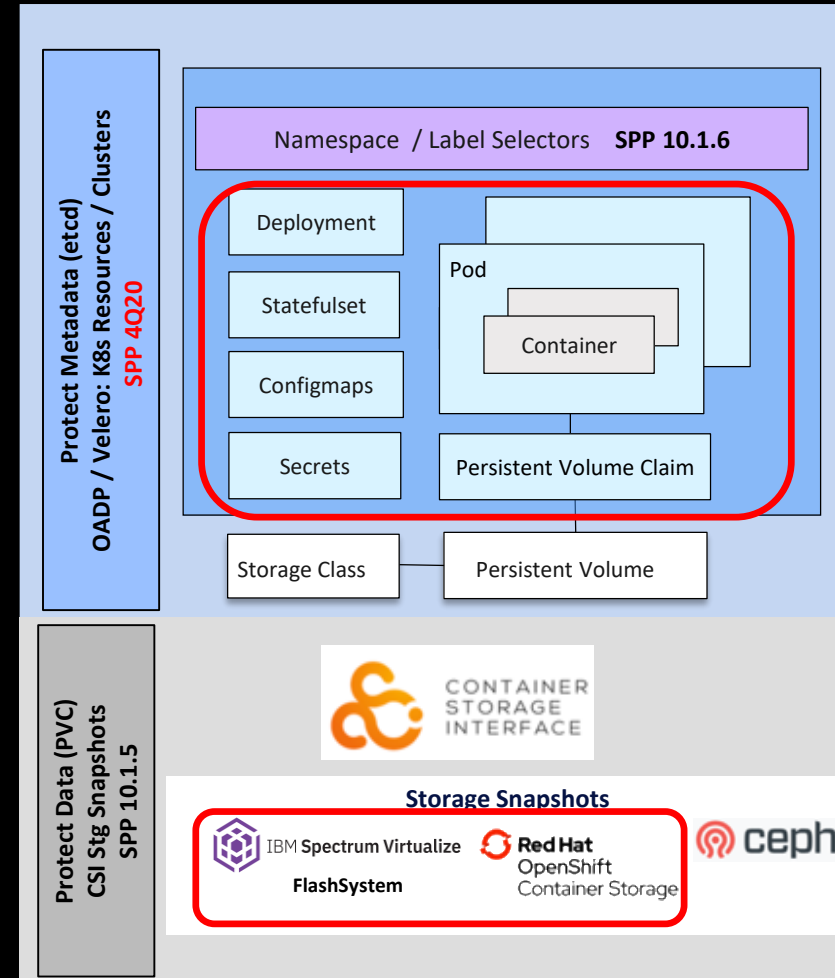
OpenShift Support: 4Q20

- Red Hat OCP with Red Hat OCS
- OpenShift specific exploitation (OADP) to capture etcd meta-data – *first mover advantage*
- Red Hat OpenShift Operator for containerized SPP Server (operatorhub.io)
- Red Hat Certifications

Kubernetes Build Out : 4Q20 (will be 3rd release)

- Velero to capture etcd meta-data
- Restore to alternate cluster
- Support for Red Hat OCS and Spectrum Virtualize / FlashSystem

What is protected?



IBM Cloud Paks

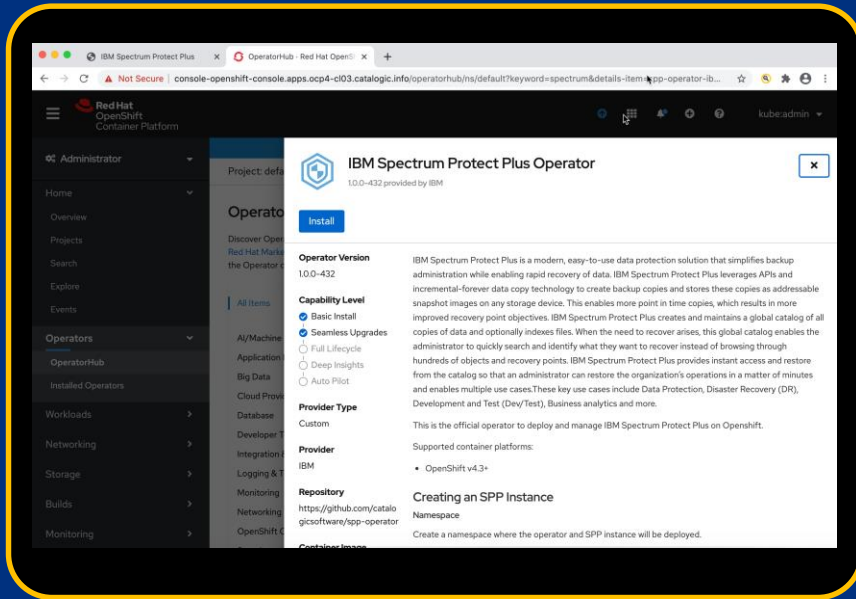
OPENSIFT



IBM Spectrum Protect Plus Server Containerization

Function

- ✓ **Containerize internal components** of SPP server
- ✓ Support backup of containerized and traditional workloads in the same deployment
- ✓ Deploy IBM Spectrum Protect Plus Server as a container **using Red Hat OpenShift operator**



Business Value

- ✓ Easy deployment of Spectrum Protect Plus management server in the same environment as the data that's being backed up. Admin doesn't have to provision a separate VM/physical environment. Management simplicity **speeds operations**

IBM intends to protect Red Hat OpenShift environments in 4Q 2020 with IBM Spectrum Protect Plus.

Industry leading Data Protection for Containers

Protecting Data (PVCs)



CSI

- PVCs
- PVC Snapshots

Protecting Meta-Data (etcd)



Red Hat
OpenShift

OpenShift APIs for Data Protection



VELERO



Broad Storage Support

Container Native Storage

Support for Red Hat OpenShift Container Storage / Ceph RBD CSI snapshots

Container Ready Storage

Support for IBM Spectrum Virtualize CSI snapshots (enables support for IBM FlashSystem and 500+ storage systems)

Ensure Complete Recovery

Ability to Protect Metadata

Via Red Hat OpenShift API for Data Protection (Velero)

Data Mobility and Recoverability

Ability to recover applications, namespaces, and clusters to a different location supports disaster recovery and data reuse for testing, analytics, etc.

Demo

Container data protection – *key takeaways*



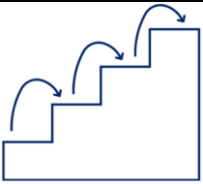
Focus: Kubernetes / OpenShift / Cloud Paks are focus areas for IBM, Systems Storage and Spectrum Protect



First mover: advantage adopting key technologies (CSI and OADP)



Targeted experiences for key personas: app developer, K8s/OpenShift admin, backup admin, storage admin, cloud admin



Product maturity: introducing 3rd release of container data protection (available for early stages of container backup adoption)



Mature data protection practices / use cases brought to K8s / OpenShift environment

Next Steps

- Contact your sales rep
- Learn more about SPP and Cloud Pak for MCM:
 - SPP: <https://www.ibm.com/it-infrastructure/storage/data-protection>
 - Cloud Pak for MCM: <https://www.ibm.com/cloud/cloud-pak-for-management>
- Download the SPP 90-day trial:
 - <https://ibm.biz/spp-trial>

Thank you!



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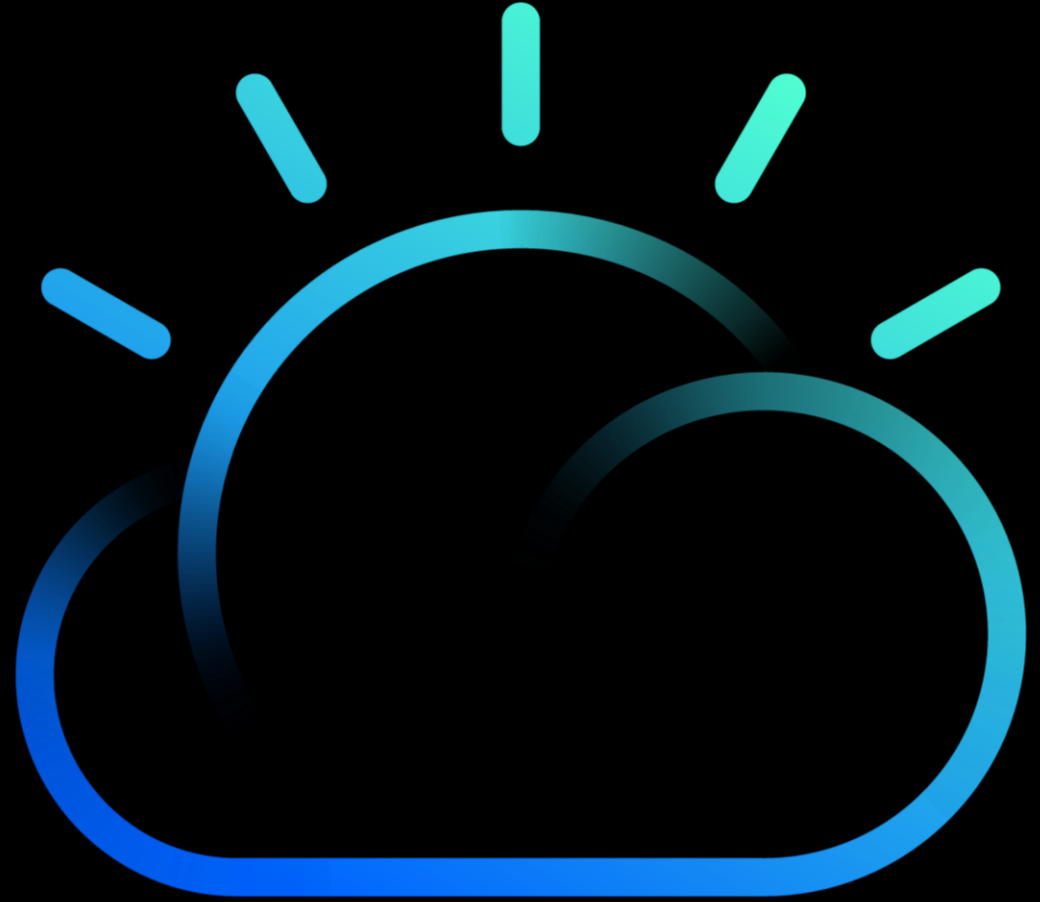
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