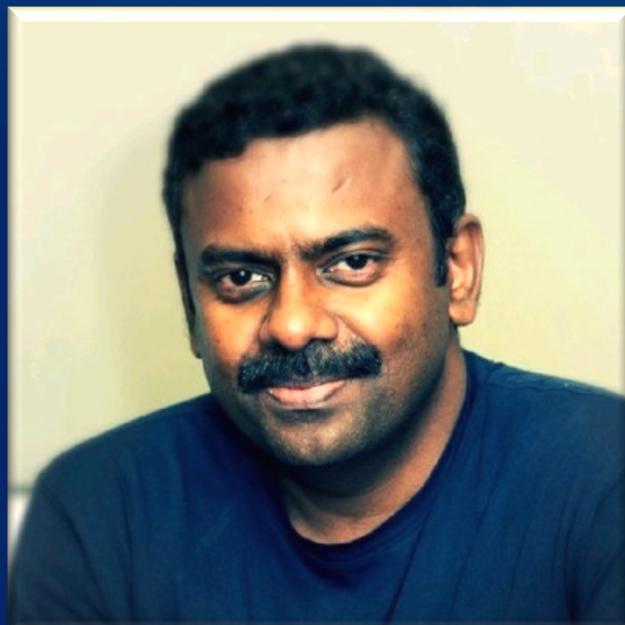


Data First Next – Cloud, AI, Security and More!



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Data First – Next ...

80%

Adopt Multicloud
Leverage Multicloud Strategy

LLM

Huge impact of Generative AI
GPT-3 and GPT-4

Vector Databases

Data Mesh

125%

Cyber
Security
Attacks
increased

\$4.35M

Average
Data
Breach
Cost

39%

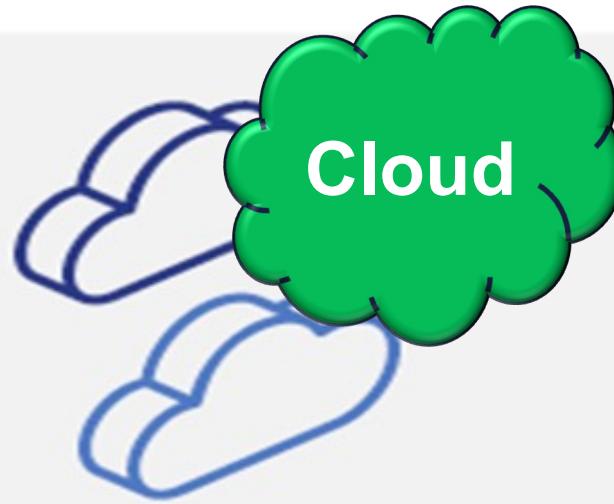
Internet
users
attacked
(avg) globally
in 2022

Top 12 trends in data and storage

In 2022, the growth in data was 3 times higher than in 2021.



56% of end users deploy open source multi-cloud management in their production environments.



43% of end users demand the freedom to leverage multiple storage vendors.



Data security is the greatest challenge facing container deployments.



Public clouds run more than 40% of end-user organization workloads.



Primary data storage, complete data protection, and disaster recovery represent the top 3 use cases for cloud storage services.



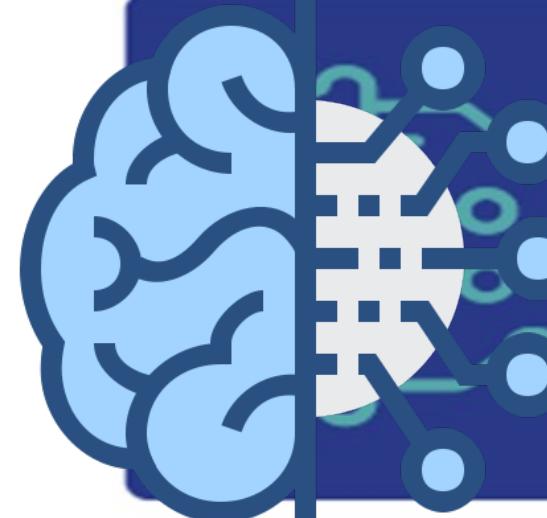
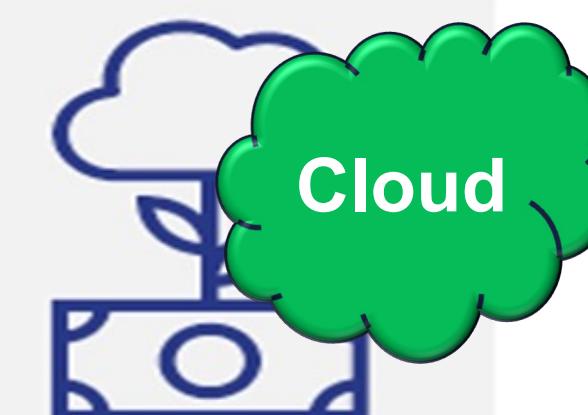
Information security and data privacy are the leading reasons to use a private cloud solution.



The biggest challenge facing multi-cloud solutions is the security and protection of data.



Cloud technologies represent the most significant area of data and storage technology investment over the next three years.



AI-driven hybrid data management is considered the most critical area for data management and analytics over the next 2-4 years.

Data quality, governance, and security are top priorities when selecting metadata management solutions.



Cloud storage monitoring is the greatest challenge facing data and storage observability.

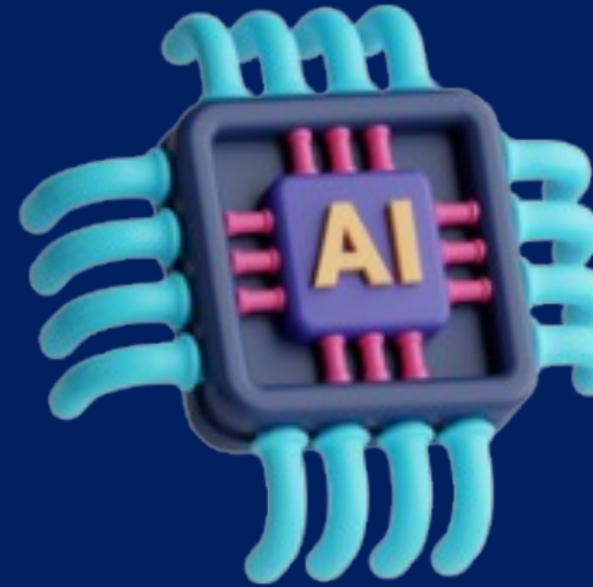


Multicloud



- Data across multiple clouds
- Hybrid Data Management
- Cost and QoS

AI



- Analytics and Inference
- Data Management
- Efficiency
- Visualization

Security



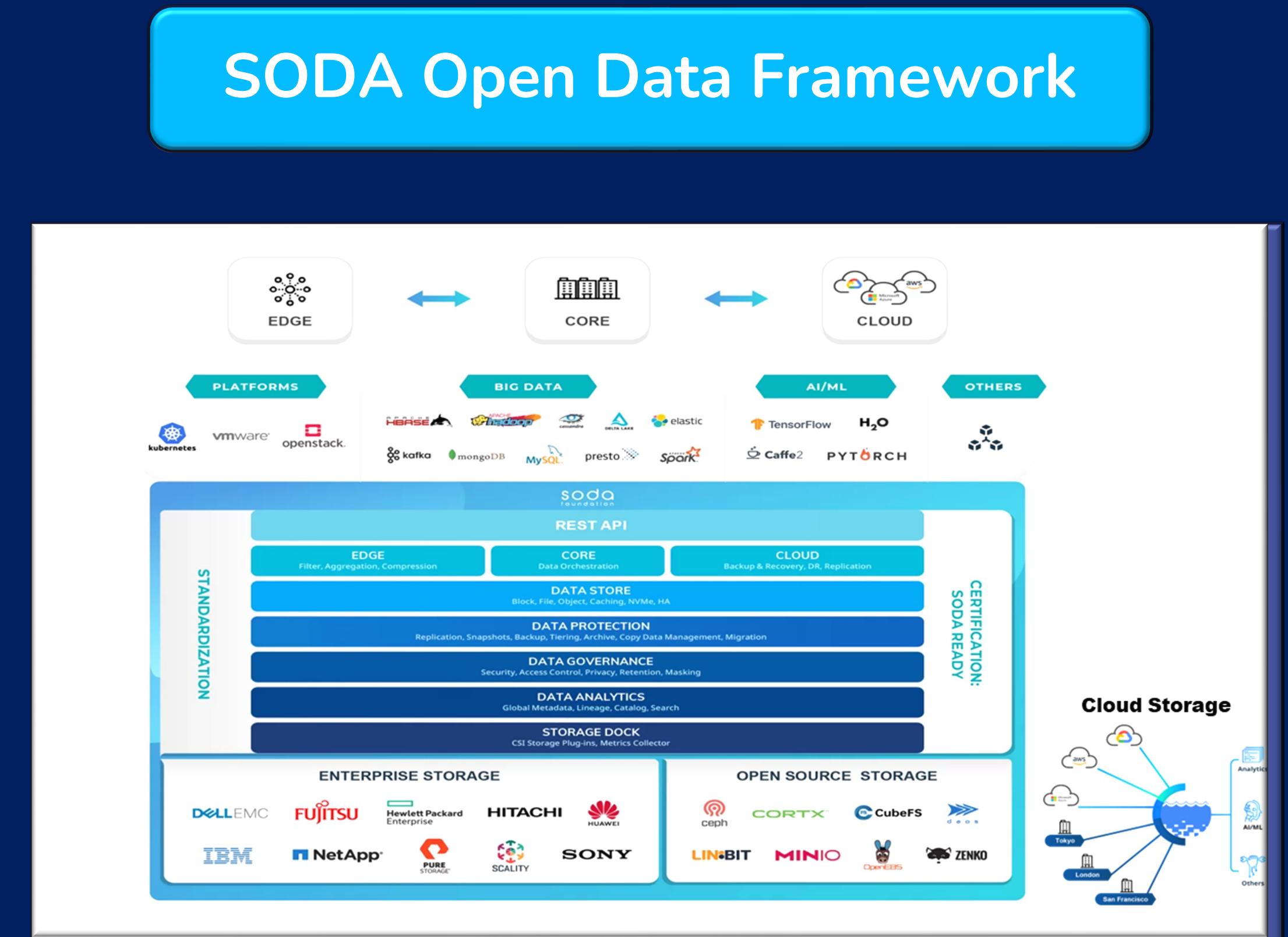
- Data Privacy
- Data Confidentiality
- Data Integrity

**Data Protection | Data Mobility | Data Observability |
Metadata Management | Inference | Visualization ...**

What we have...

SODA Framework Projects

SODA ECO Projects



SODA Framework Projects

SODA Framework projects focus on solving a common problem faced by end users

Managed and maintained by SODA Foundation directly



KAHU

Backup, recover and migrate K8s clusters data anywhere with no vendor lock-in

PROTECT



STRATO

Move data across multicloud environment with a common S3 compatible interface

MOVE



DELFIN

Observe, monitor and manage alerts for any storage anywhere

OBSERVE



CRYSTAL

Unified metadata for unstructured data across on-premise and cloud storage

DISCOVER

SODA ECO Projects

SODA ECO projects are partner open source projects join SODA project landscape to **build collaborative solutions for end to end data & storage use cases**



SODA Framework Projects

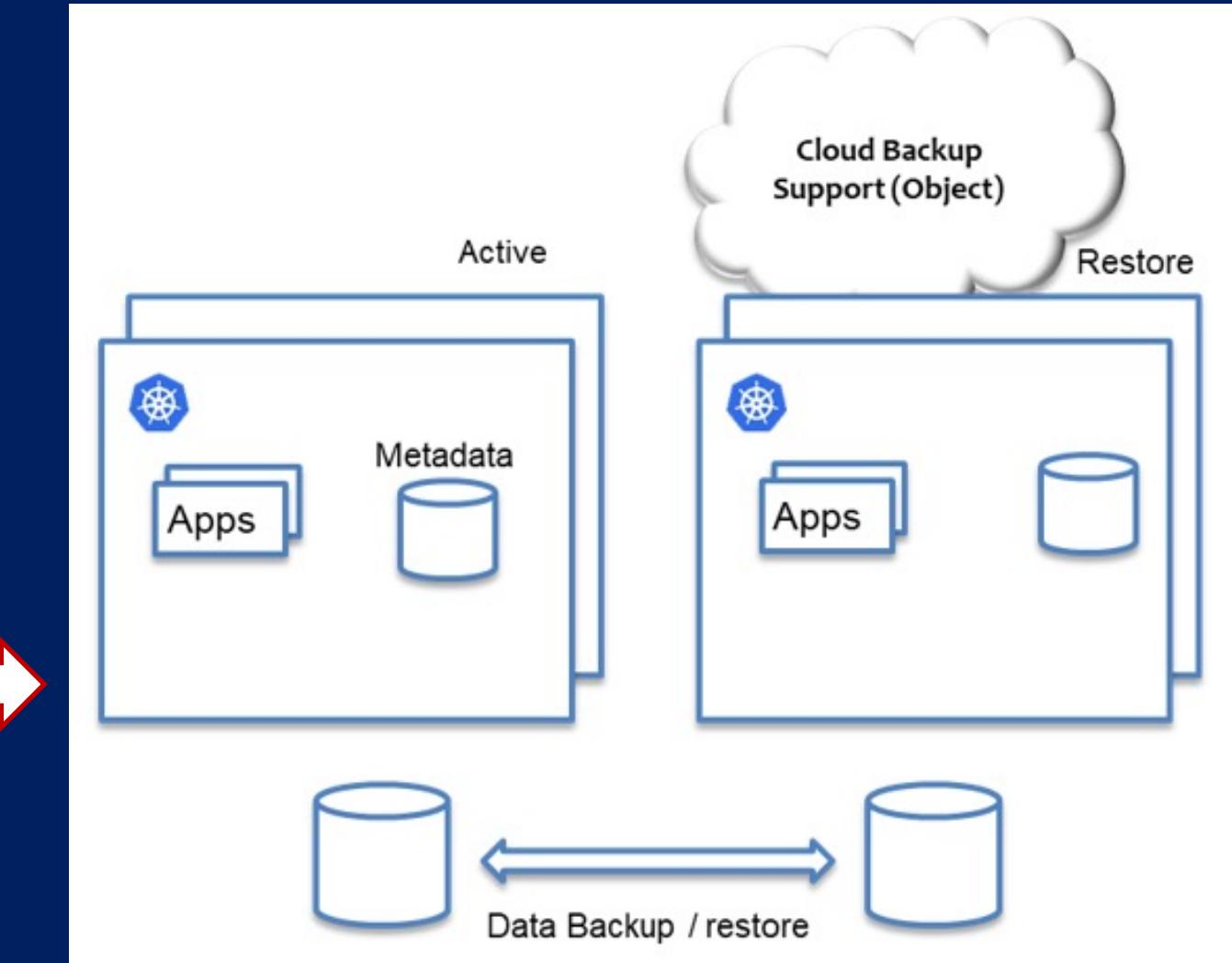
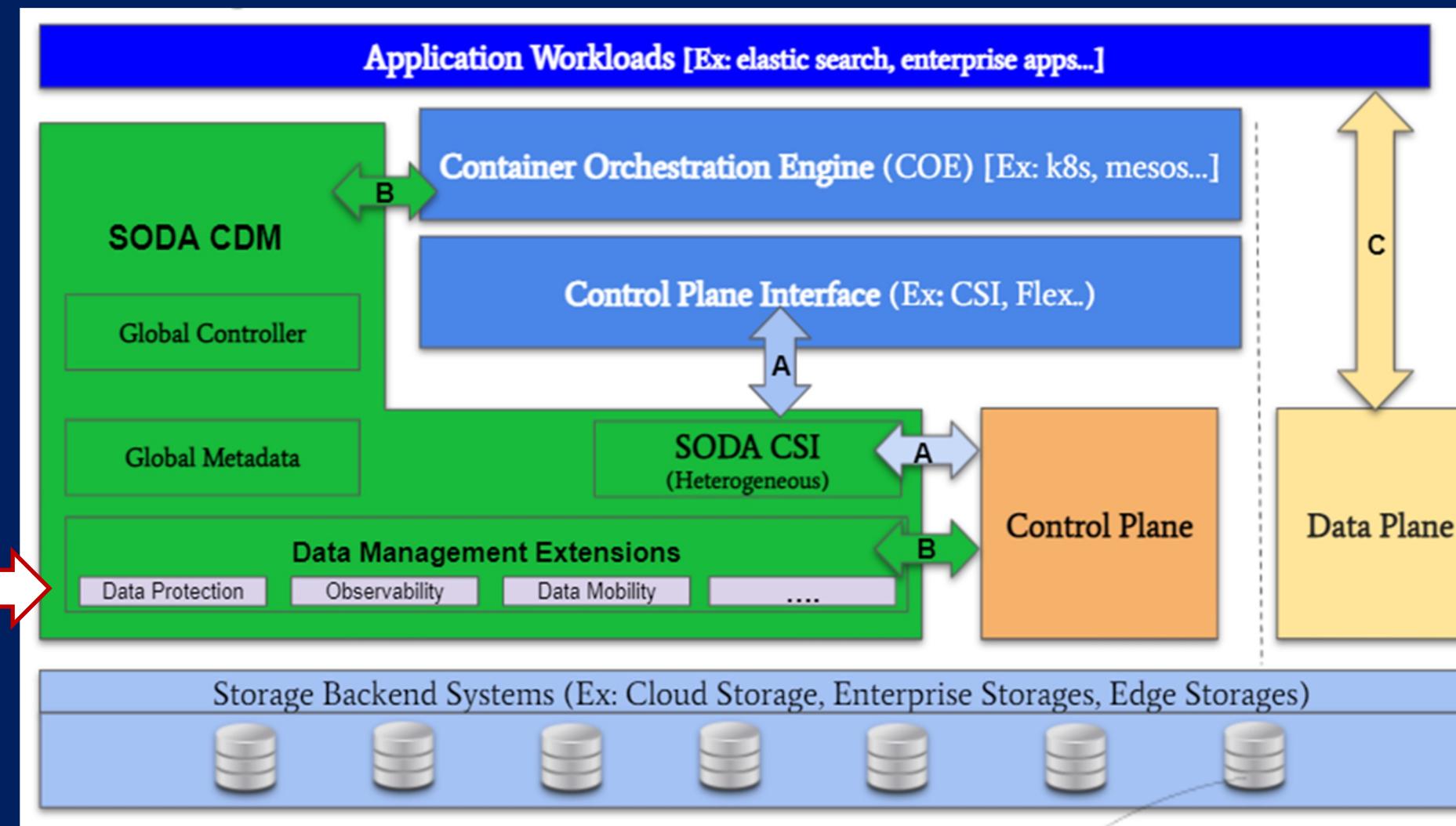


Backup, recover and
migrate K8s clusters data
anywhere with no vendor
lock-in

PROTECT

Backup and Restore

- metadata and data
- snapshot support
- prehook / post hook support
- cross cluster backup and restore
- Backup of CSI provisioned and non CSI provisioned volumes



Container Data Management → Container Data Protection → Kahu → Backup / Restore → Kahu

Storage Provider Framework

- Pluggable volume/metadata backup providers
- Runtime co-existence of multiple backup providers

Automation & Orchestration

- Scheduled backup
- Policy / Event-driven backup
- Provider-independent service plan automation

<https://github.com/soda-cdm/kahu>



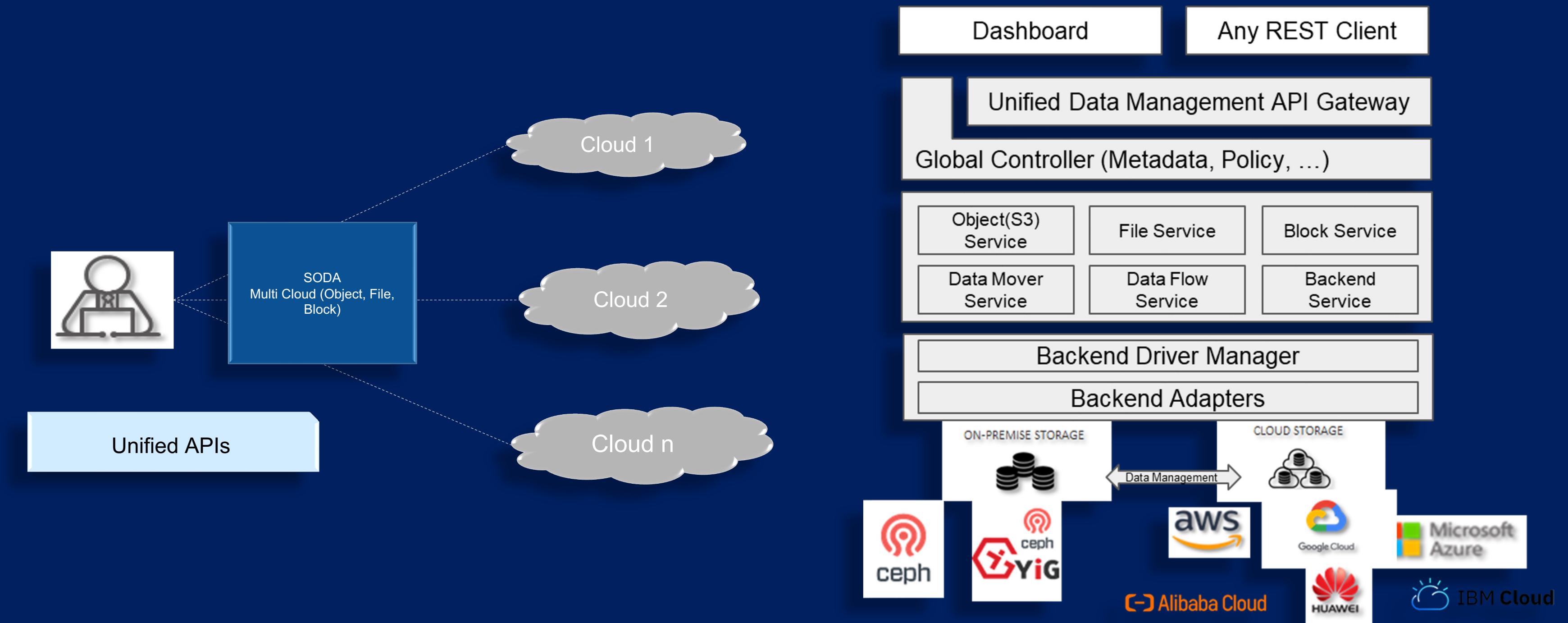
STRATO

Move data across
multicloud environment
with a common S3
compatible interface

MOVE

- Unified multicloud API
- S3 compatible
- Support all major cloud vendors
- Data migration
- Data Lifecycle management
- Hybrid data management for object storage (on-prem-cloud)
- File/Block/Object
- User Level Tiering Plan – Storage Service plan
- Smart Archival

<https://github.com/sodafoundation/strato>





DELFIN

Observe, monitor and manage alerts for any storage anywhere

OBSERVE

Resource monitoring

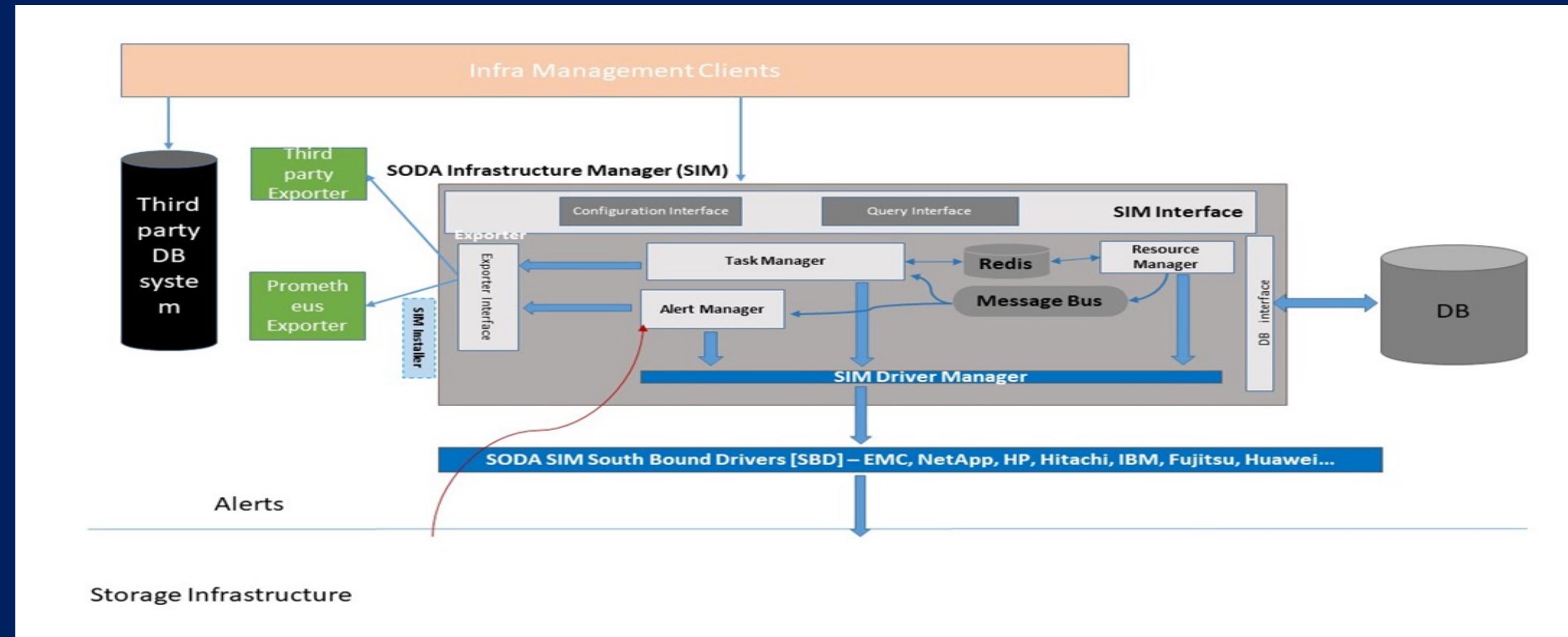
- Storage, Pool, Volume, Port, Network & Controllers
- Filesystem, Share, Quota, Qtree
- Mapping views, topology relations

Performance monitoring

- Bandwidth, Throughput, IOPS, Response time, Capacity

Alert Management

- Alert Notifications and Management

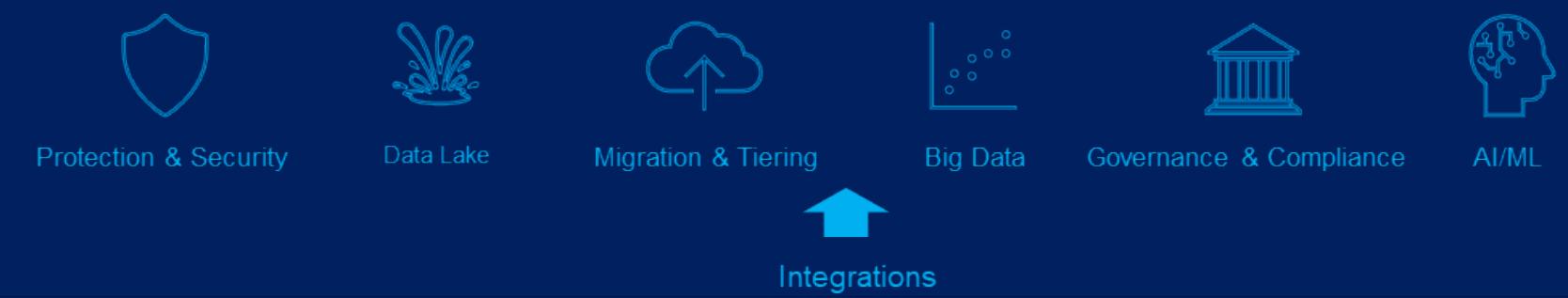


Driver Manager

- Easy support for new storage devices
- Support different vendor management platforms

Plugin Manager

- Easy support for new clients (export monitoring data to Prometheus, Grafana, Kafka or custom clients)

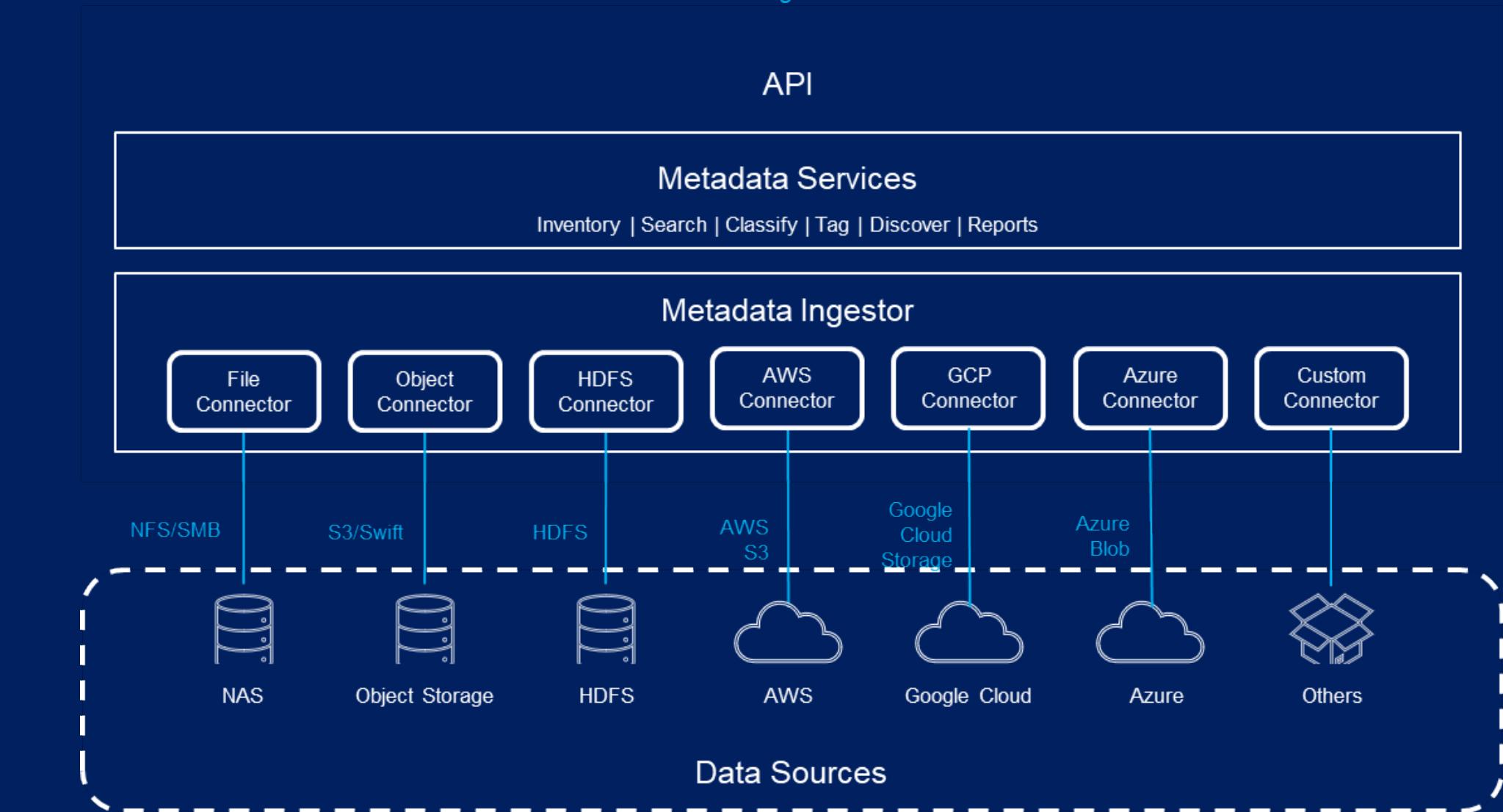
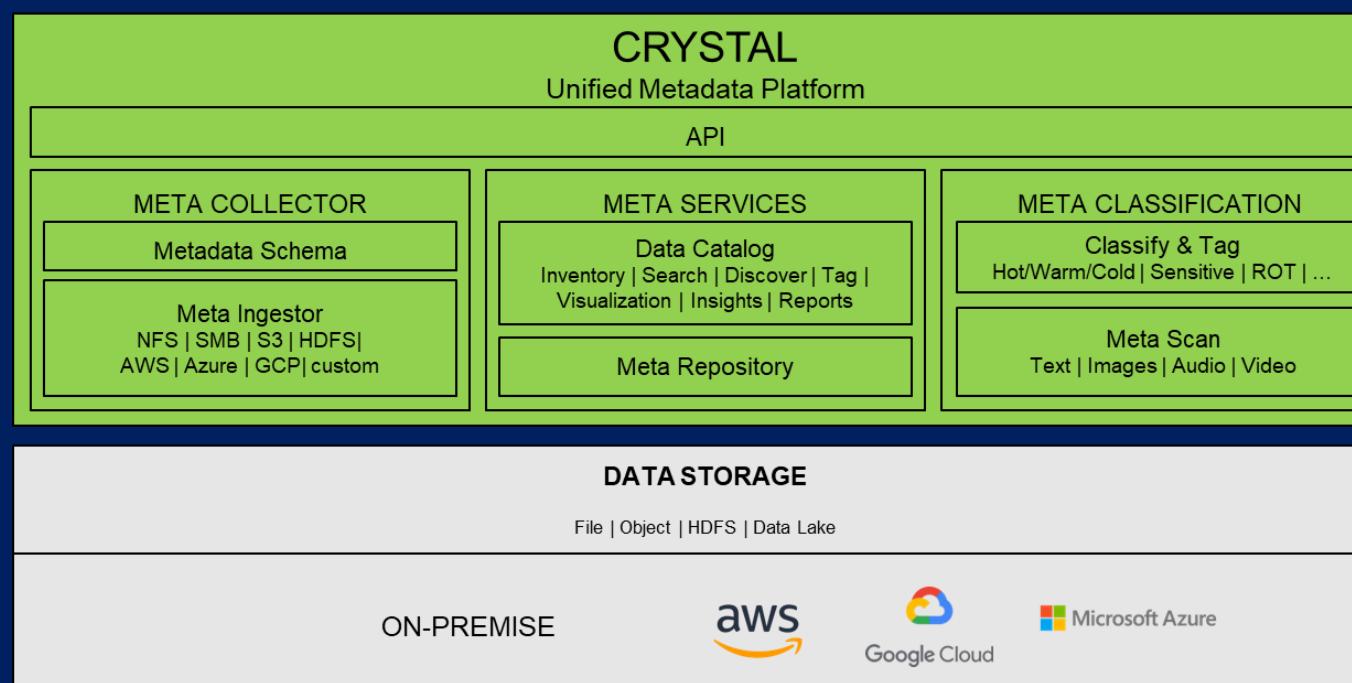


CRYSTAL

Unified metadata for
unstructured data across on-
premise and cloud storage

DISCOVER

- The project just started
- Added with some base code derived from SODA Strato (s3 metadata management)
- S3 metadata get, store and search
- Basic demo of apis



<https://github.com/sodafoundation/crystal>

What we plan...

**KAHU**

Backup, recover and migrate K8s clusters data anywhere with no vendor lock-in

PROTECT

- Replication and Failover
- Backup – Restore Performance Benchmarking

**STRATO**

Move data across multicloud environment with a common S3 compatible interface

MOVE

- Data Mover Performance Optimization
- Re-usable components and reorganization of the project inline with SODA Crystal

**DELFIN**

Observe, monitor and manage alerts for any storage anywhere

OBSERVE

- Kubernetes Storage Monitoring
- Performance benchmarking

**CRYSTAL**

Unified metadata for unstructured data across on-premise and cloud storage

DISCOVER

- Common metadata schema design
- Analysis and value positioning



soda foundation

Smart and Secure Data Management

Making Cloud Native Data Management
Smarter and Secured!

Getting Ready.....



Cloud

- Hybrid Cloud Data Orchestration & Management
- Cloud Native Observability
- Metadata management for unstructured data

AI

- AI Data exporters
- LLM-based analytics/prediction?
- LLM based assistant modules for data management
- Vector Databases
- Data Mesh

Security

- Cloud Data Security
- Cloud Native Security hardening for data
- Security assessment



<http://bit.ly/soda-starter>

<https://www.sodafoundation.io/slack/>

Let us build Next Gen Smarter Data First Solutions in Open Source!

<https://sodafoundation.io/>

THANK YOU!

You may connect me @
<https://www.linkedin.com/in/sanilkumard>