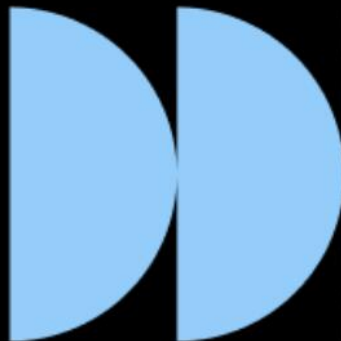


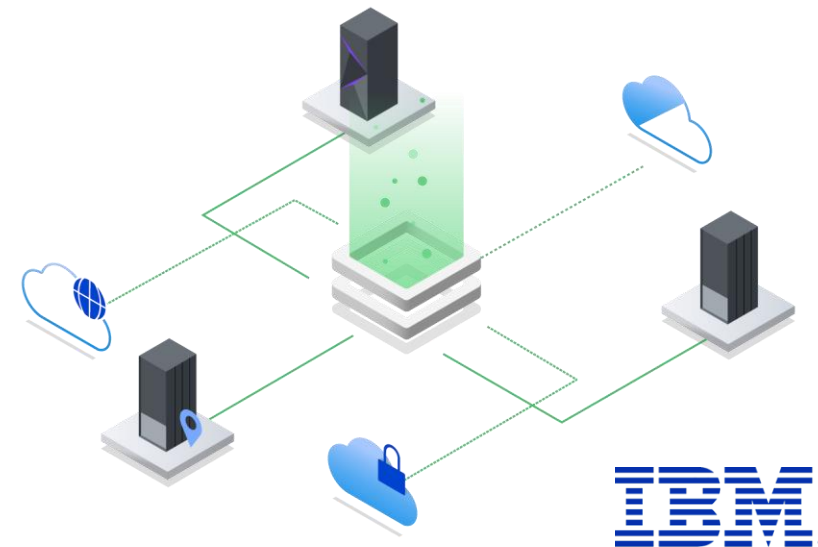
Welcome to the IBM TechXchange Community

Connect and engage to get answers, discuss best practices, and continually learn more about IBM solutions.



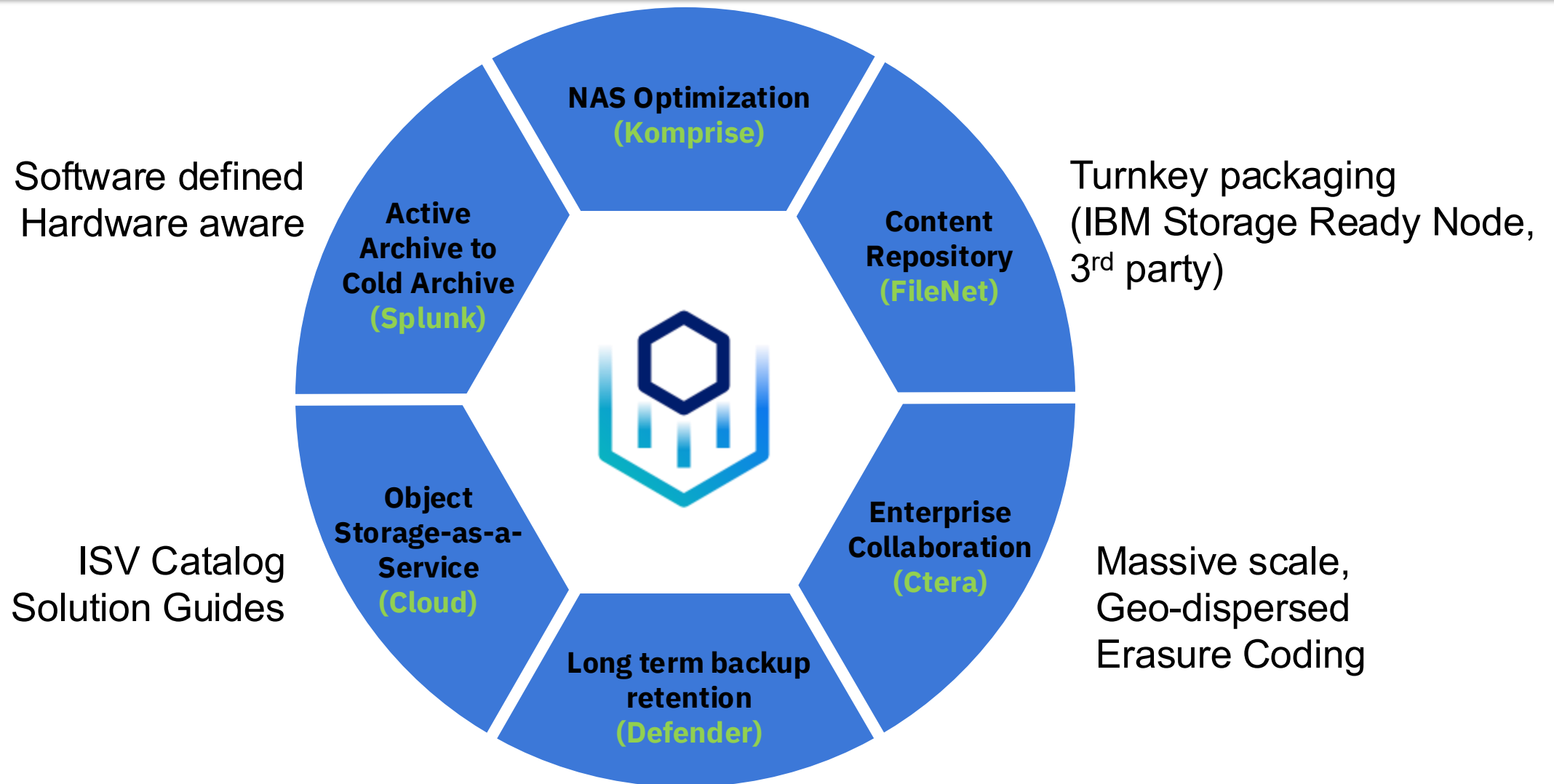
IBM Storage Ceph and IBM Cloud Object Storage Use cases and differentiators

Special Thanks to John Shubeck – ATG Senior Storage Technical Specialist



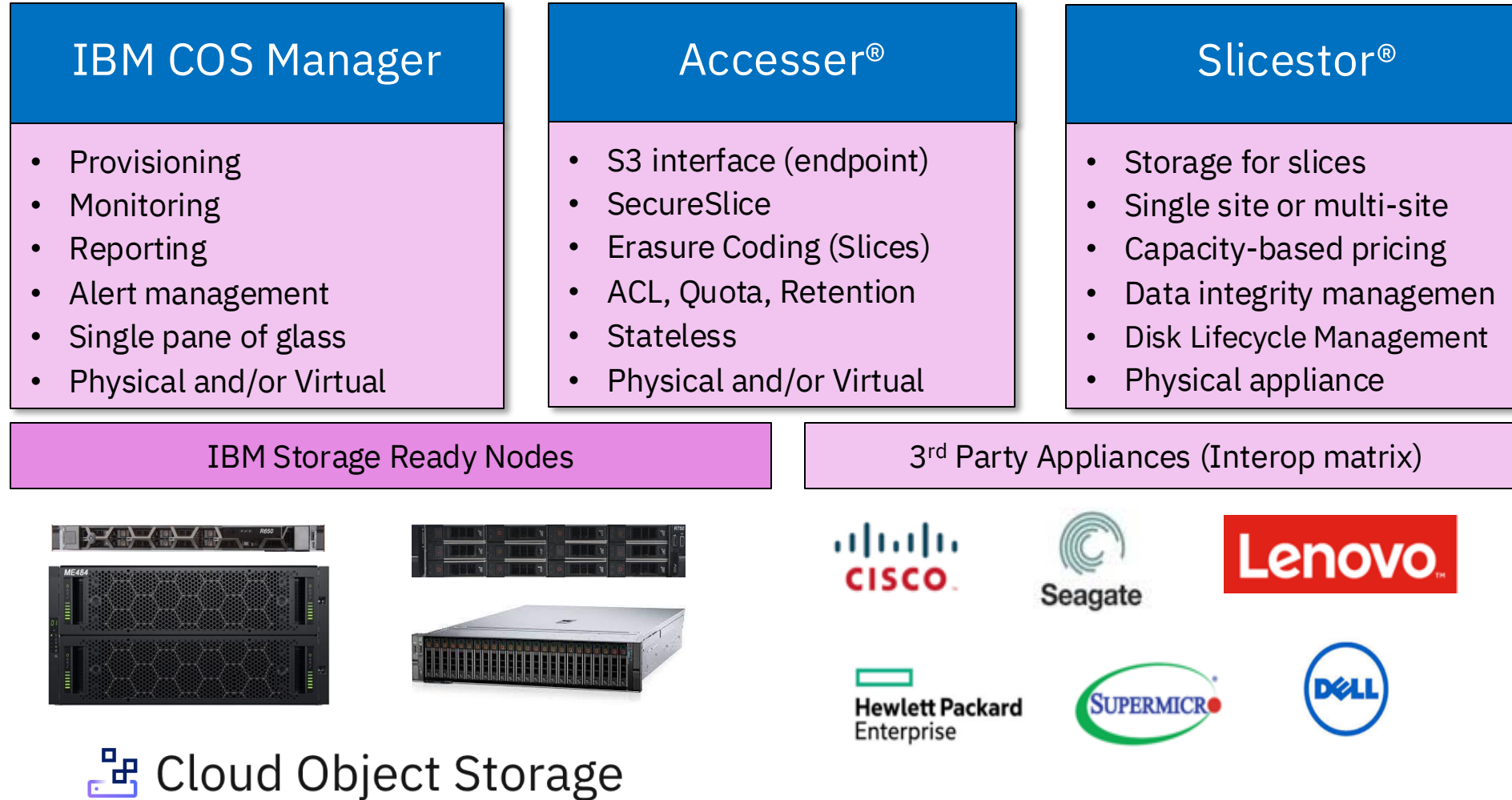
IBM Storage Scale Technology Exchange

IBM Cloud Object Storage use cases



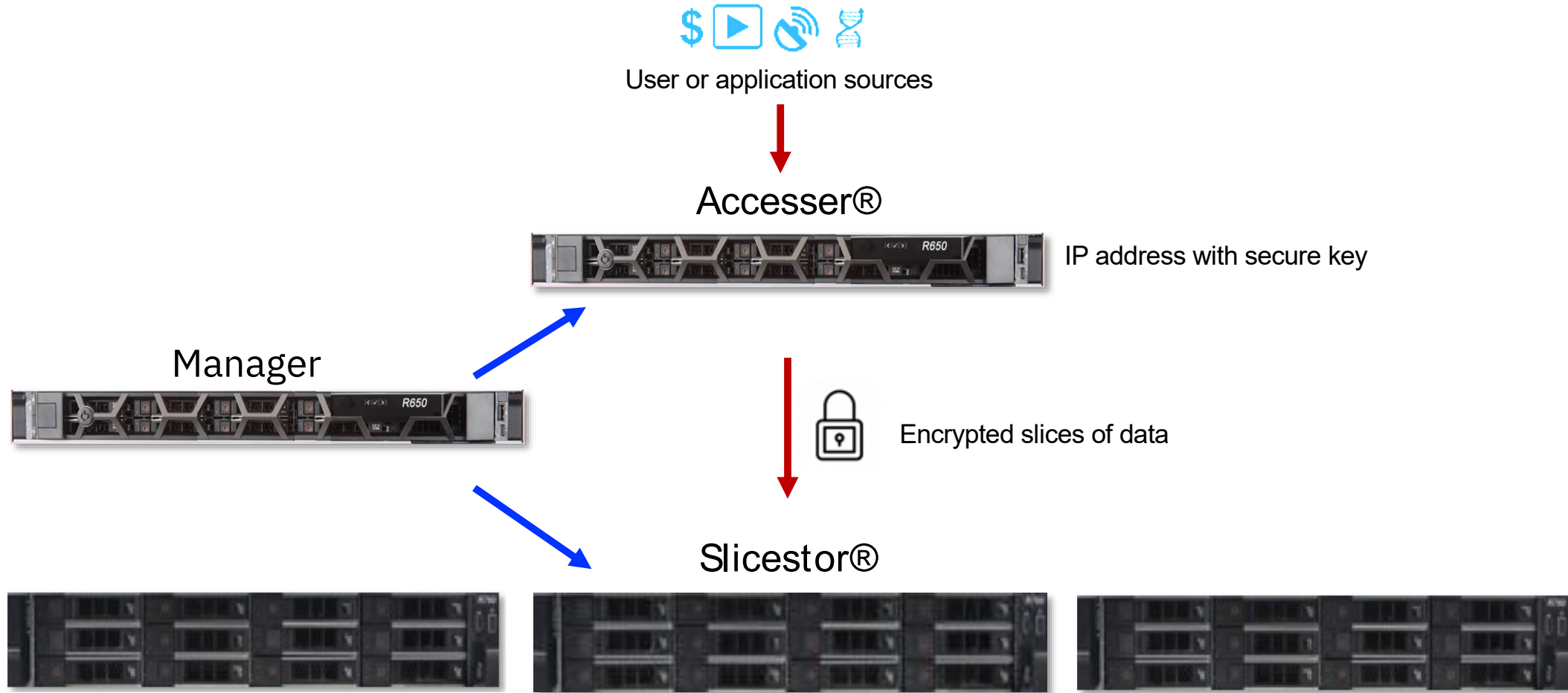
IBM Storage Scale Technology Exchange

IBM Cloud Object Storage functional overview



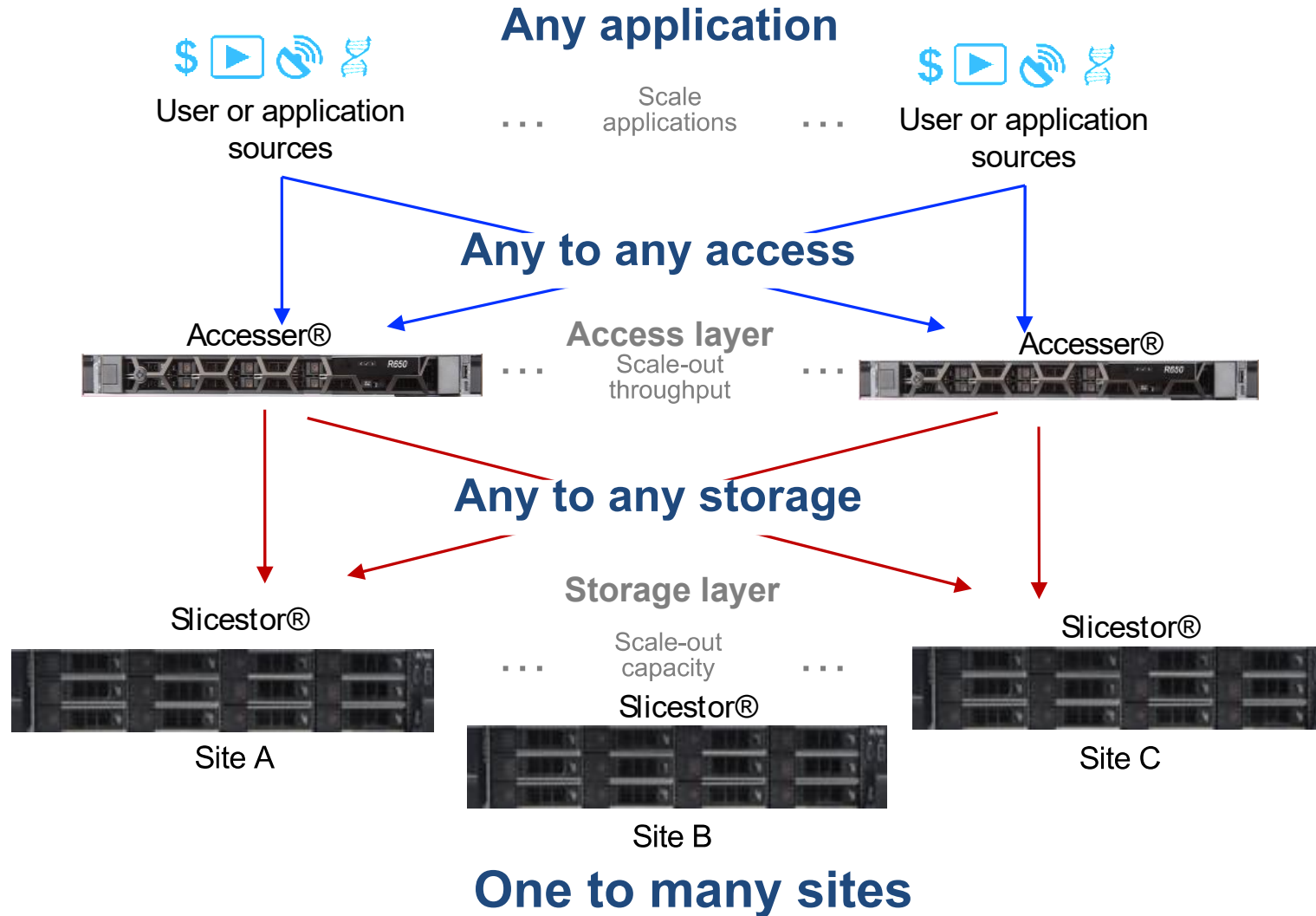
IBM Storage Scale Technology Exchange

IBM COS system components



IBM Storage Scale Technology Exchange

IBM COS system deployment



IBM Storage Scale Technology Exchange

IBM Cloud Object Storage Differentiators

EASE OF USE

Ease of deployment. Ease of understanding. Ease of software update. (Knowledge transfer and functional overview requires only two (2) hours.)

SUPPORT

IBM Cloud Object Storage Team (i.e. Pre Sales, Lab Services, Advanced Technology Group, Customer Support) remains actively engaged with all deployments.

PARTNERSHIP

Object use case adoption partnership. (i.e. Identifying new use cases, developer tools, ISV solutions, Solution assurance)

SELECTABLE DATA PROTECTION

Selectable data protection and relative storage efficiency across multiple sites. Erasure Coding is inline. Data is fully protected upon write commit.

EASE OF TECHNOLOGY UPDATES

Most customers update their own software without assistance. Many customers add their own hardware, particularly x86 commodity users.

HARDWARE LIFECYCLE MANAGEMENT

No vendor lock-in. 3rd Party hardware qualifications ongoing. Density at 1980 TB in a 4u storage enclosure. Constantly adding new hardware to the portfolio

COMMODITY HARDWARE SUPPORT

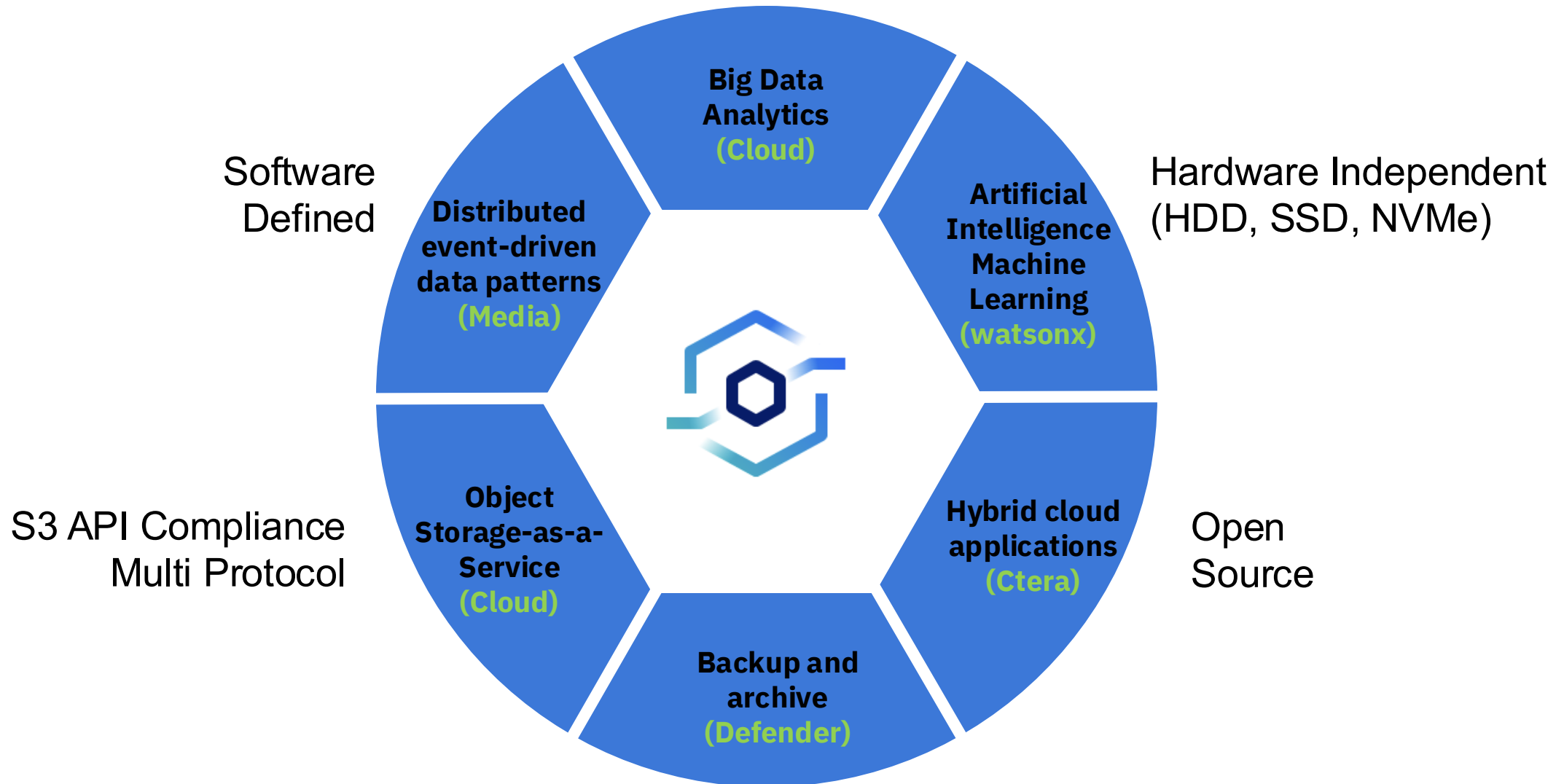
More than a dozen x86 SKUs supported for bare metal IBM COS Slicestor appliances with Disk Lifecycle Management (DLM). Plus VMware, plus Docker.

PROVEN AT MASSIVE SCALE

IBM COS System, IBM COS Service, private and public implementations of the same ClevOS software. Multiple EB customers in production. Single global object store.

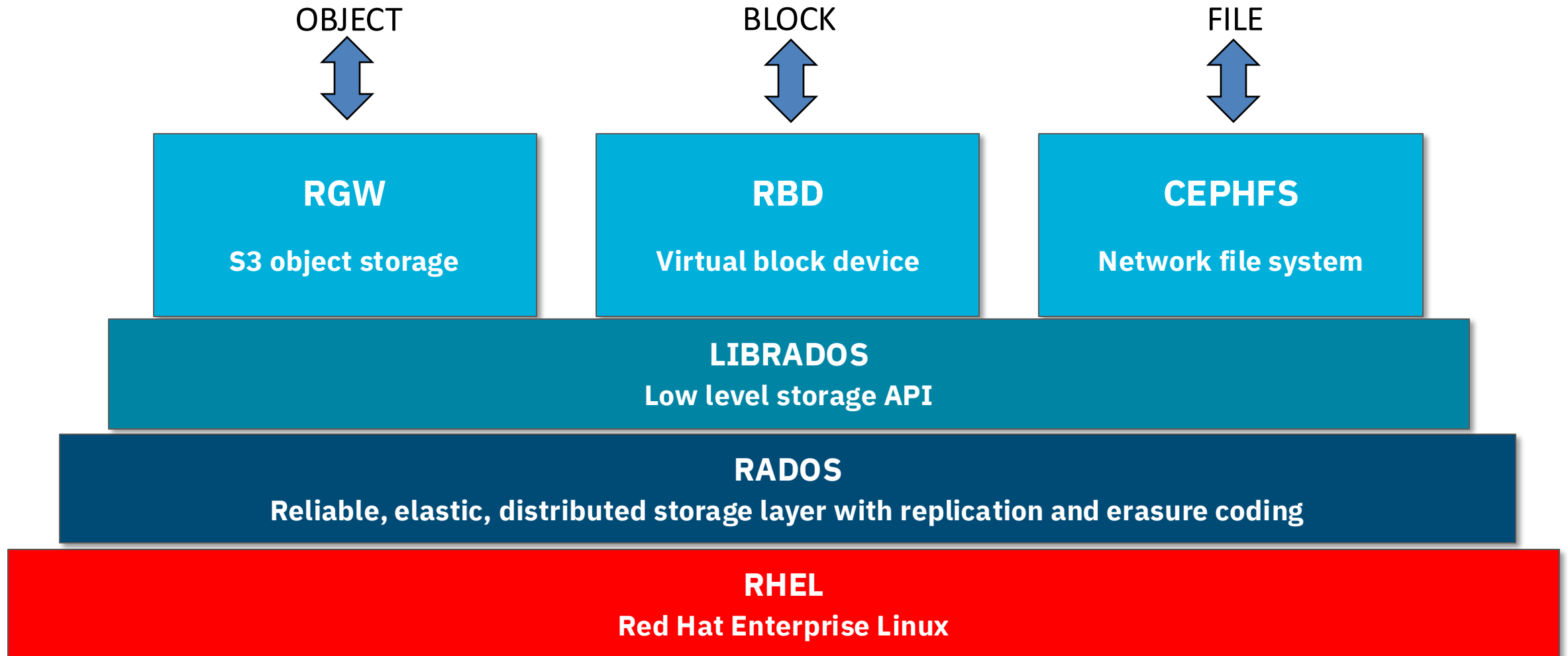
IBM Storage Scale Technology Exchange

IBM Storage Ceph use cases



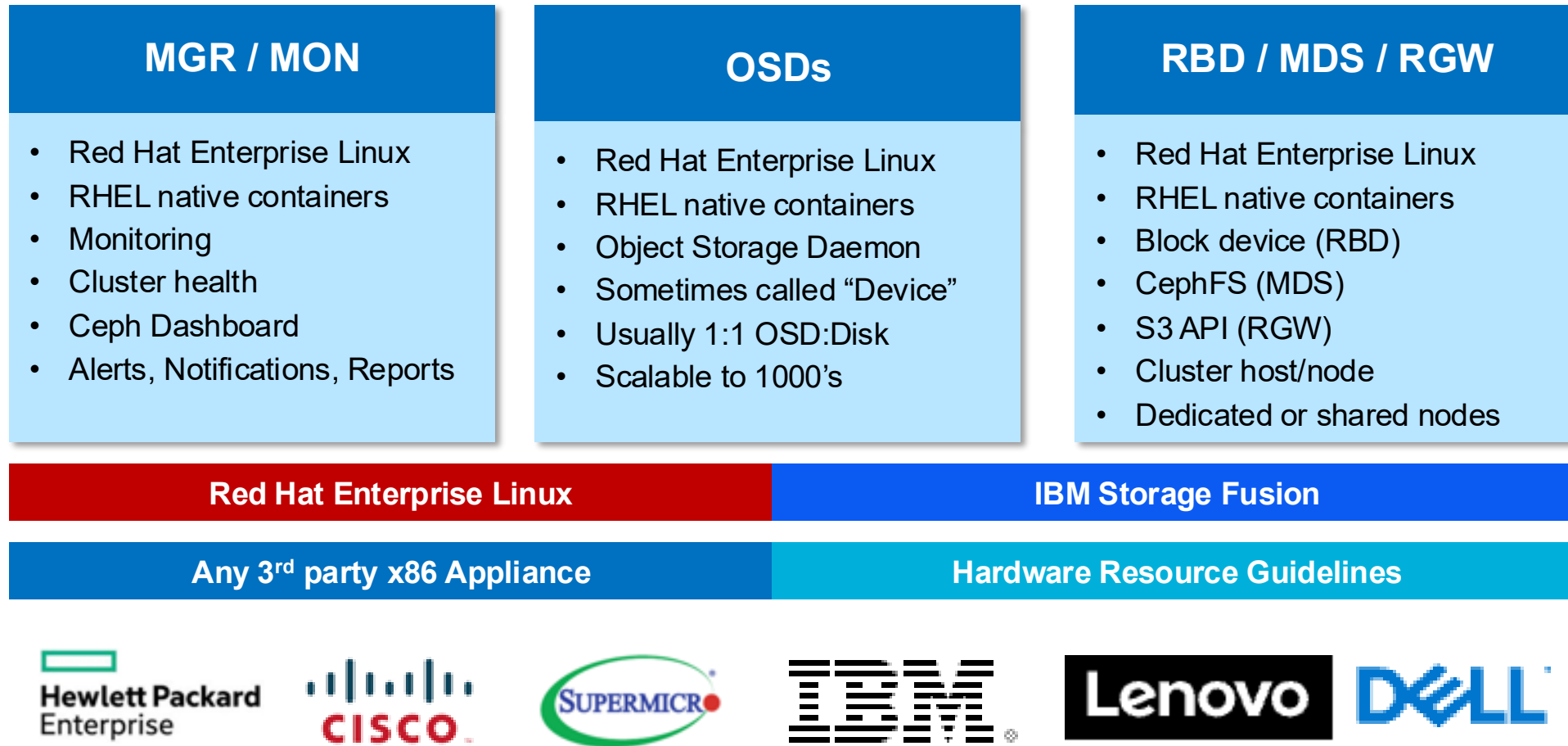
IBM Storage Scale Technology Exchange

IBM Storage Ceph components



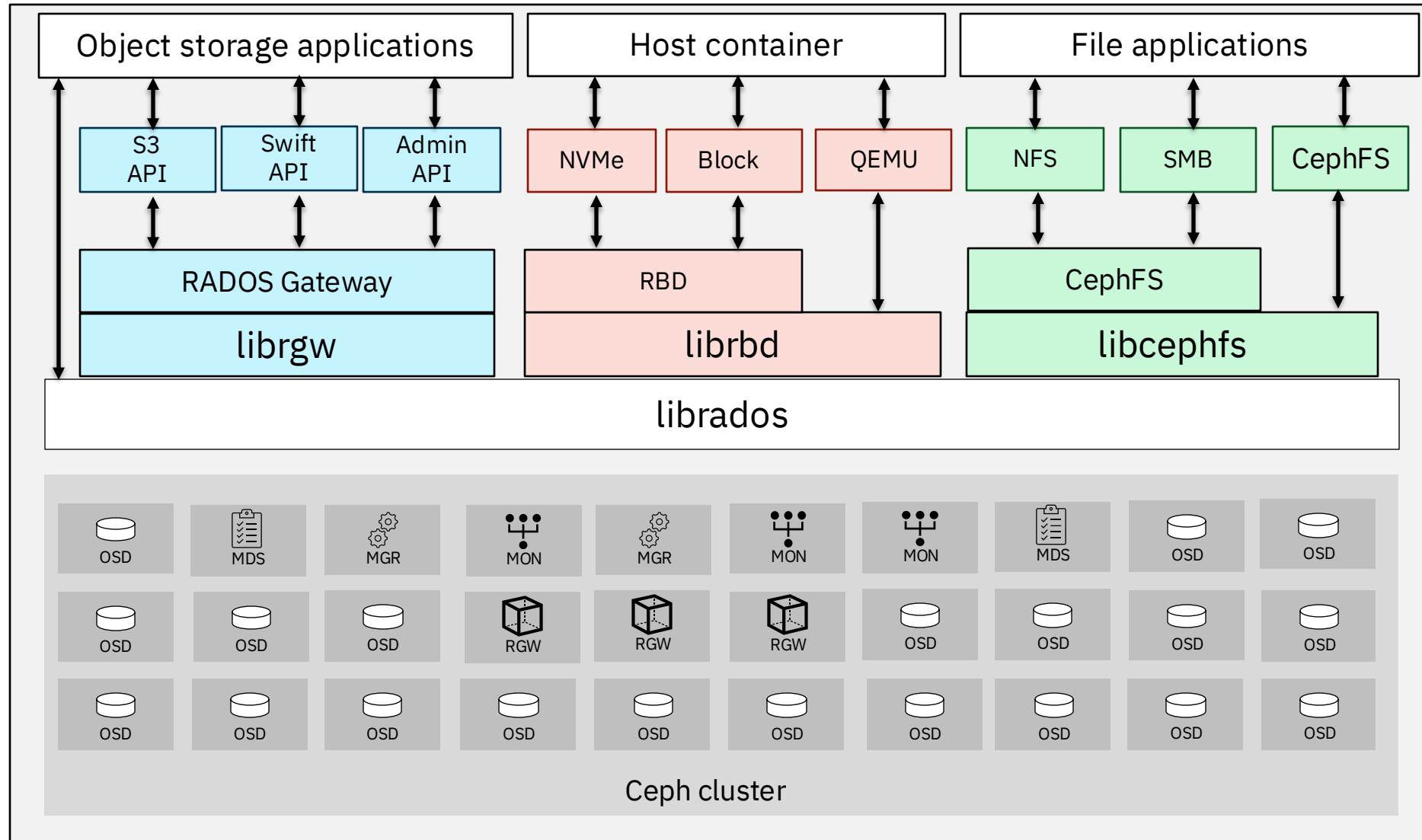
IBM Storage Scale Technology Exchange

IBM Storage Ceph services



IBM Storage Scale Technology Exchange

Building out an IBM Storage Ceph ecosystem



IBM Storage Scale Technology Exchange

IBM Storage Ceph differentiators

EASE OF USE

Ease of deployment. Ease of understanding. Ease of software update. (Knowledge transfer and functional overview requires only two (2) hours.)

SUPPORT

IBM Storage Team (i.e. Pre Sales, Lab Services, Advanced Technology Group, Customer Support) remains actively engaged with all deployments.

PARTNERSHIP

Object use case adoption partnership. Identifying new use cases, developer tools, ISV solutions, solution assurance. (e.g. Splunk, Veeam, Commvault,)

SELECTABLE DATA PROTECTION

Selectable data protection and relative storage efficiency across multiple sites. Erasure Coding is inline and in real time. Data is fully protected upon write commit.

EASE OF TECHNOLOGY UPDATES

Many customers update their own software without assistance. Many customers add their own hardware, particularly x86 commodity users.

HARDWARE LIFECYCLE MANAGEMENT

No vendor lock-in. 3rd Party hardware qualifications ongoing (i.e. Dell). Density at 576 TB in a 2u storage enclosure. Constantly adding new hardware to the portfolio.

COMMODITY HARDWARE SUPPORT

Almost limitless x86 SKUs supported for bare metal through the Red Hat Enterprise Linux HCL. Disk Lifecycle Management on the roadmap. Plus VMware.

PROVEN AT LARGE SCALE

IBM Storage Ceph, Community Ceph, private and public implementations of the same software. Multiple Ceph consumers at hundreds of PB in production. Single global object store.

IBM Storage Scale Technology Exchange

IBM storage platform portfolio for unstructured data

IBM Storage Ceph	IBM COS	IBM Storage Scale
Native Object		Native File
Open source (Upstream)	Simple to deploy and manage	High performance – POSIX parallel file system
Flexible – granular controls and customization	Proven at very high capacity -> 1 EB +	Rich feature set and enterprise functionality
Rich Amazon S3 Feature Set and Compatibility	Strongest when 3 sites available	Widely recognized leader in HPC storage
Offered as Software Defined, Appliance, or As a Service	Offered as an Appliance or in IBM Cloud	Single namespace access to all other storage platforms and vendors on prem and in the cloud

IBM Storage Scale Technology Exchange

IBM storage platform portfolio for unstructured data

IBM Storage Ceph	IBM Scale CES S3	IBM Deep Archive
Native Object	Native File	Native Tape
Open source and downstream distribution of Ceph	Highest object GB/s throughput (today)	AWS GLACIER Storage Class and S3 semantics for retrieval
Highest S3 flexibility (Bucket policy, Lifecycle, Tiering, Cloud transitions, archive to tape)	Designed and optimized for the highest performance for S3 object storage	Designed for deep archive, immutability, tape economics, and air gap
Highest fidelity S3 API command set and compatibility	Some S3 compatible commands not implemented	Limited set S3 command set - GLACIER Flexible Retrieval only
Offered as Software Defined, Appliance, or As a Service	Offered as an appliance or software defined	Offered as a lights out tape library with a “black box” S3 gateway

