SDC
STORAGE DEVELOPER CONFERENCE
SNIA ■ SANTA CLARA, 2016

Time to Say Good Bye to Storage Management with *Unified Namespace, Write Once and Reuse Everywhere* Paradigm

Anjaneya "Reddy" Chagam
Principal Engineer,
Intel Corporation

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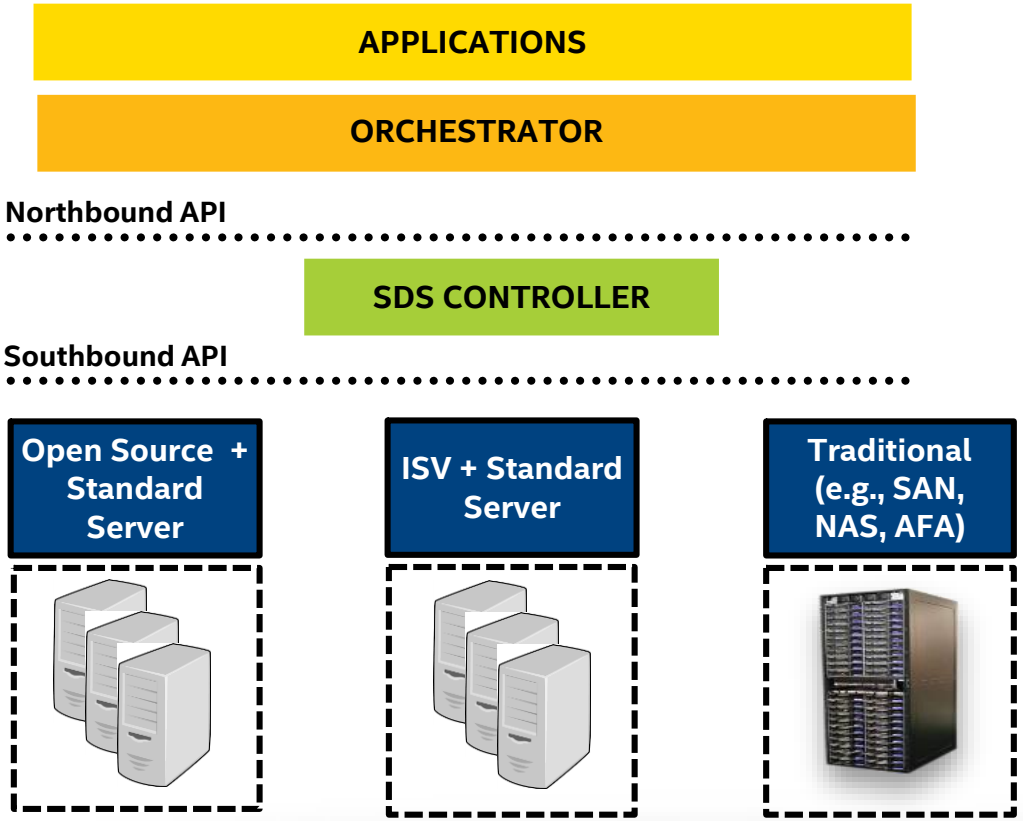
Agenda

- Software Defined Storage (SDS) overview
- Current state of Storage Management and gaps
- “Open SDS Controller” proposal
- Next Steps and Help Needed

Software Defined Storage (SDS) Architecture

Software Defined Storage (SDS) brings "cloud" benefits to storage, including auto-provisioning, self service, and single pane of glass for management.

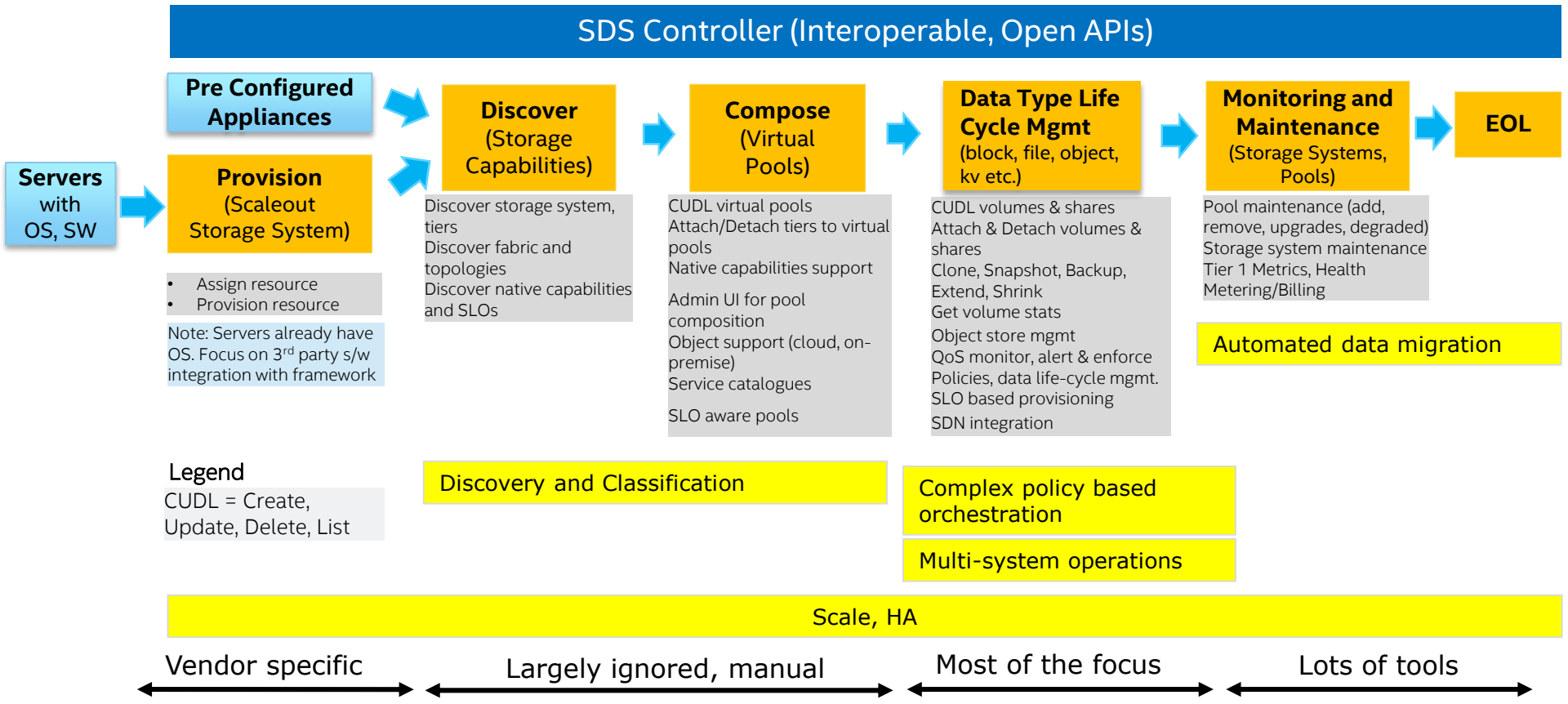
*A key enabler of the new SDS architecture is an **SDS controller** for single pane of management*



SDS CONTROLLER

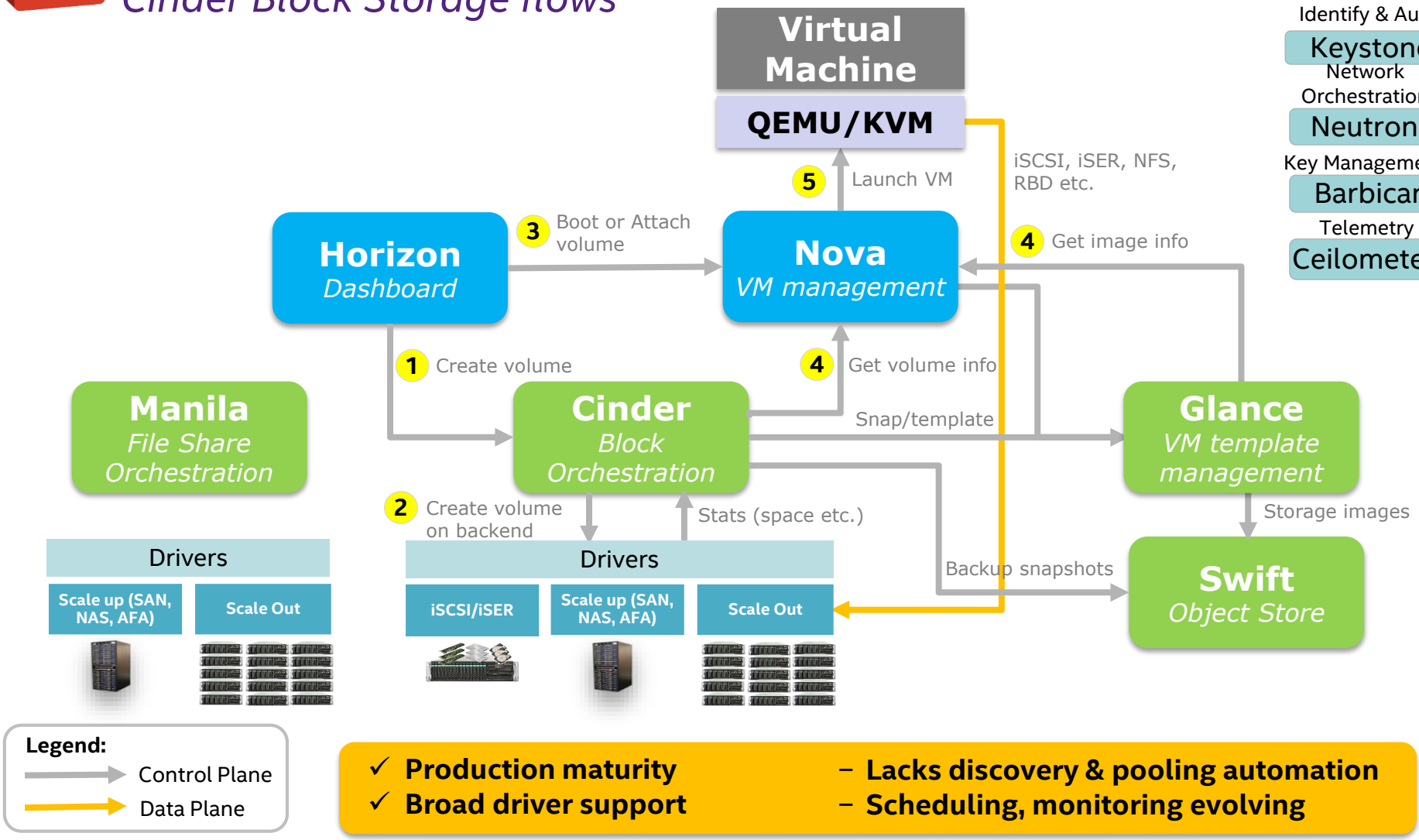
- Visibility and control of ALL storage resources
- Communication between apps, orchestrator, and storage systems
- Allocates storage resources to meet SLAs

SDS Controller Workflow



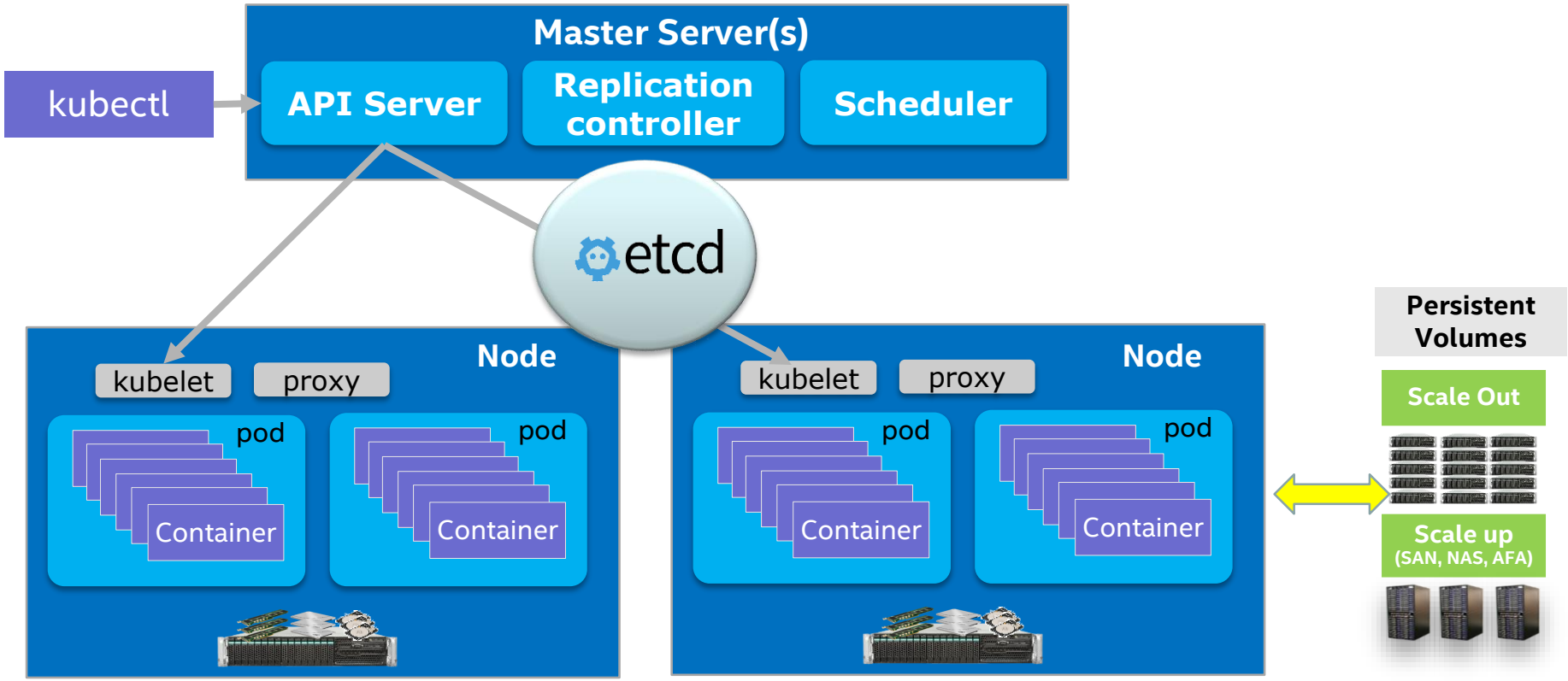
OpenStack – Cloud Orchestration

Cinder Block Storage flows



- ✓ **Production maturity**
- ✓ **Broad driver support**
- – **Lacks discovery & pooling automation**
- – **Scheduling, monitoring evolving**

Kubernetes – Container Orchestration

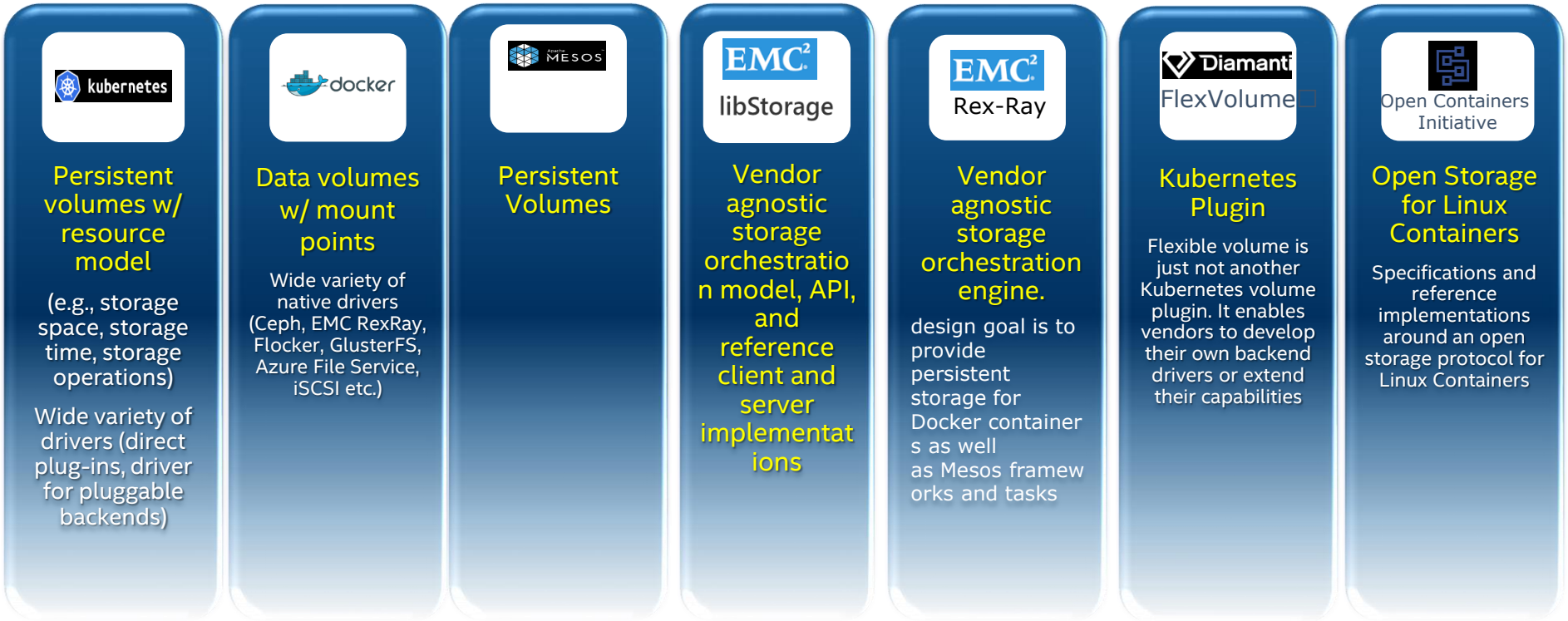


- ✓ Growing community
- ✓ Linux container support
- – Storage interfaces evolving
- – Storage mgmt. mostly out of scope

Several Open Source Options

- **Apache Mesos** - API's for resource management and scheduling across entire datacenter and cloud environments
- **Docker Swarm –** native clustering for docker
- **CoprHD** - open source software defined storage controller and API platform
- **Apache CloudStack™** - Infrastructure as a Service (IaaS) cloud computing platform
- **HPE Helion Eucalyptus –** open solution for building private clouds that are compatible with Amazon Web Services (AWS)
- Many more - Joyent, OpenNebula etc.

Storage Integration in Cloud Native Computing



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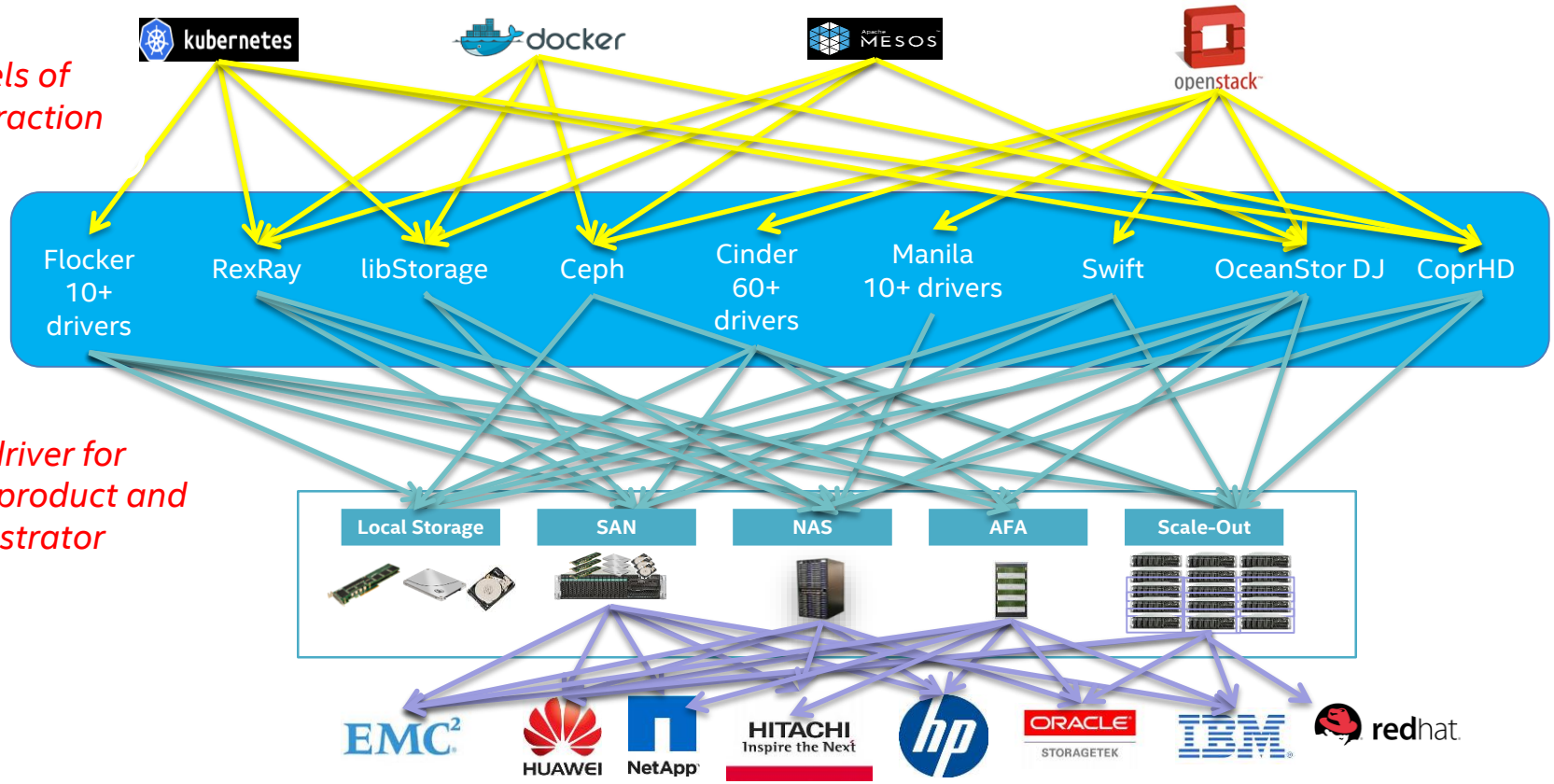
Every one is trying to address storage integration but in a different way

State of Storage Management

Different levels of storage abstraction and maturity

Direct or Multi-driver integration

One driver for each product and orchestrator



Need unified abstraction, driver integration

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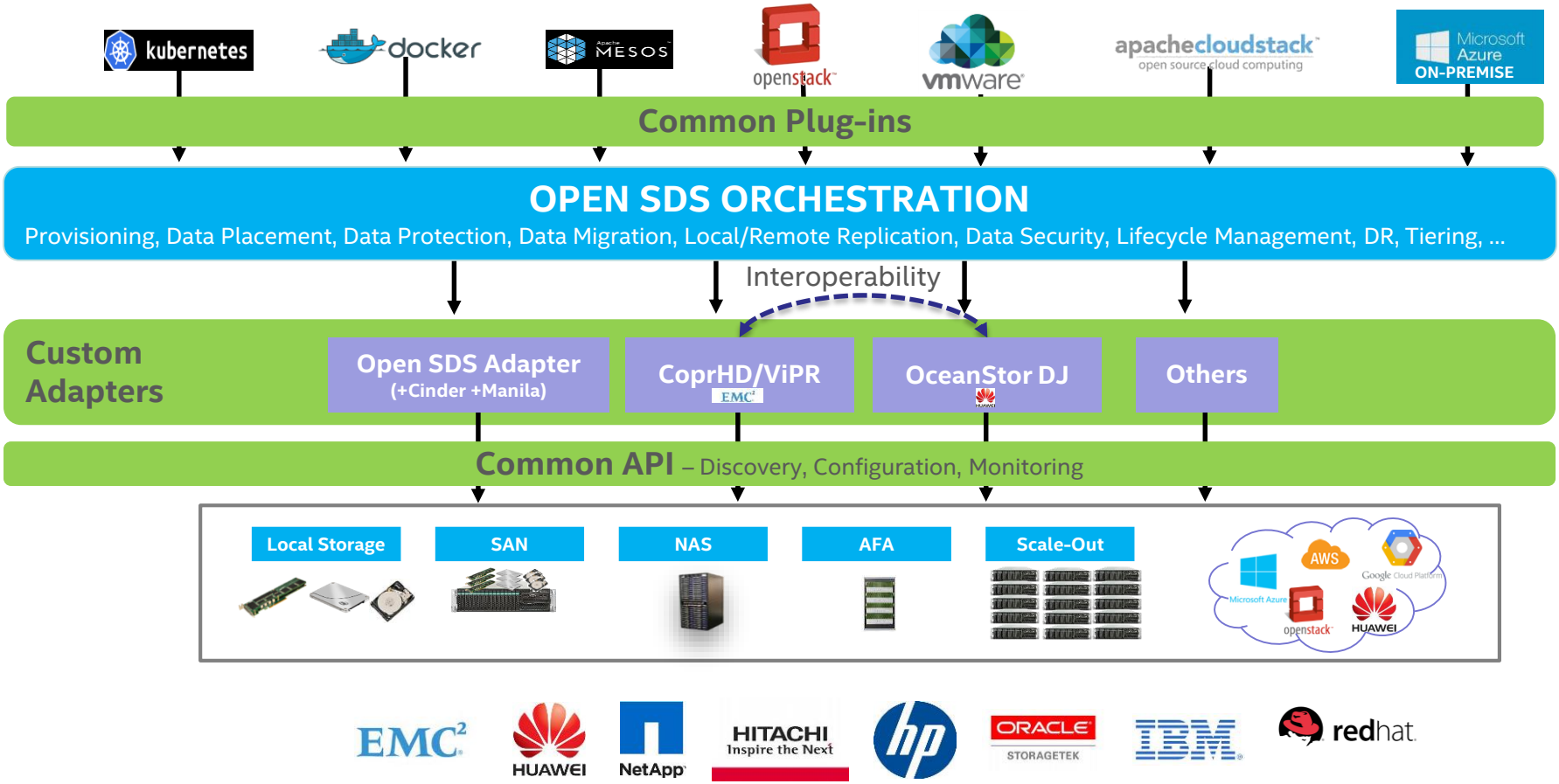
An Open SDS Controller Future



Simplify integration and re-use open source building blocks

NOTE: Orchestration stacks and vendors is a small subset for illustrating the concept

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Value Proposition

- Solve **real-world storage management problem**s for our collective customers
- **Focus on seamless integration** for Kubernetes, Docker, Mesos, OpenStack and others
- **Reuse** open source storage building blocks and driver investments (e.g., Cinder & Manila)
- **Collaborate** among storage vendors, standards bodies, end users in an open source community with momentum and broad developer support

Next Steps and Help Needed

- Discussions in progress with storage vendors, end customers and open source communities
- Tune in for an announcement this year
- Join us in enabling "Open SDS Controller" industry wide effort

THANK YOU