

THANKS FOR JOINING

THE WEBINAR WILL START
IN A BRIEF MOMENT

OpenEBS

 MayaData



OpenEBS



MayaData

Kubernetes data management is more than CSI - Do it right the OpenEBS way

Your Presenters:



Murat Karslioglu

VP of Products
MayaData Inc



Kiran Mova

Chief Architect
Co-Founder
MayaData Inc



Brian Matheson

Developer Advocate
MayaData Inc



[@muratkarslioglu](https://twitter.com/muratkarslioglu)



[@kiranmova](https://twitter.com/kiranmova)



[@brian_matheson](https://twitter.com/brian_matheson)



murat



kiranmova



Brian Matheson

OpenEBS adopted by many organizations like

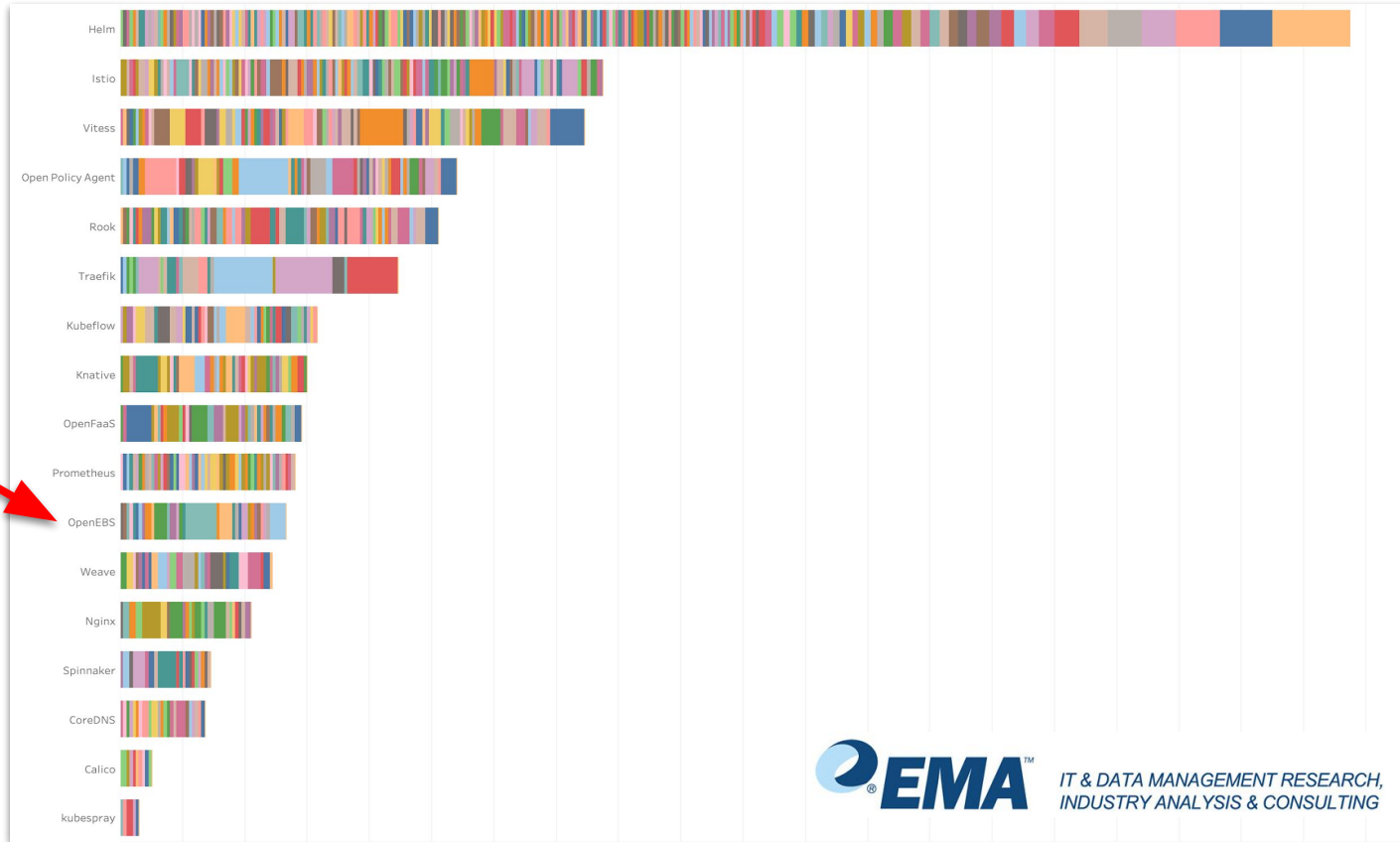


ARISTA



Who turn Kubernetes into a Dataplane

OpenEBS was popular on Twitter During KubeCon



IT & DATA MANAGEMENT RESEARCH,
INDUSTRY ANALYSIS & CONSULTING


MayaData Contributes a lot of Code to the CNCF

PRs Authors Companies Table ▾

Range Last decade ▾ Repository group All ▾

i All CNCF PRs authors companies (Repository group: All, Range: Last decade) ▾

Rank	Company	Opened PRs ▾
1	Google	65403
2	Red Hat	33443
3	VMware	9837
4	Independent	7815
5	Microsoft	6421
6	Huawei	4325
7	PingCAP	3388
8	IBM	3326
9	MayaData	3246



Agenda

- Chat with Project Founder Kiran Mova:
 - The What, Why, and How of OpenEBS
- Top Use Cases for OpenEBS
- Demo: Deploying a stateful app with OpenEBS in 30 seconds
- Product Roadmap 1.5
- Q&A
- Get started and Support

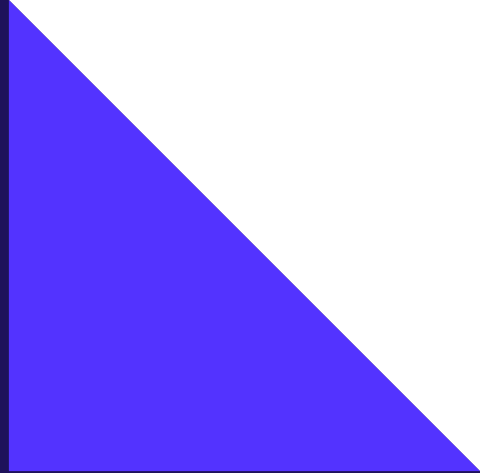
Interview with Kiran Mova



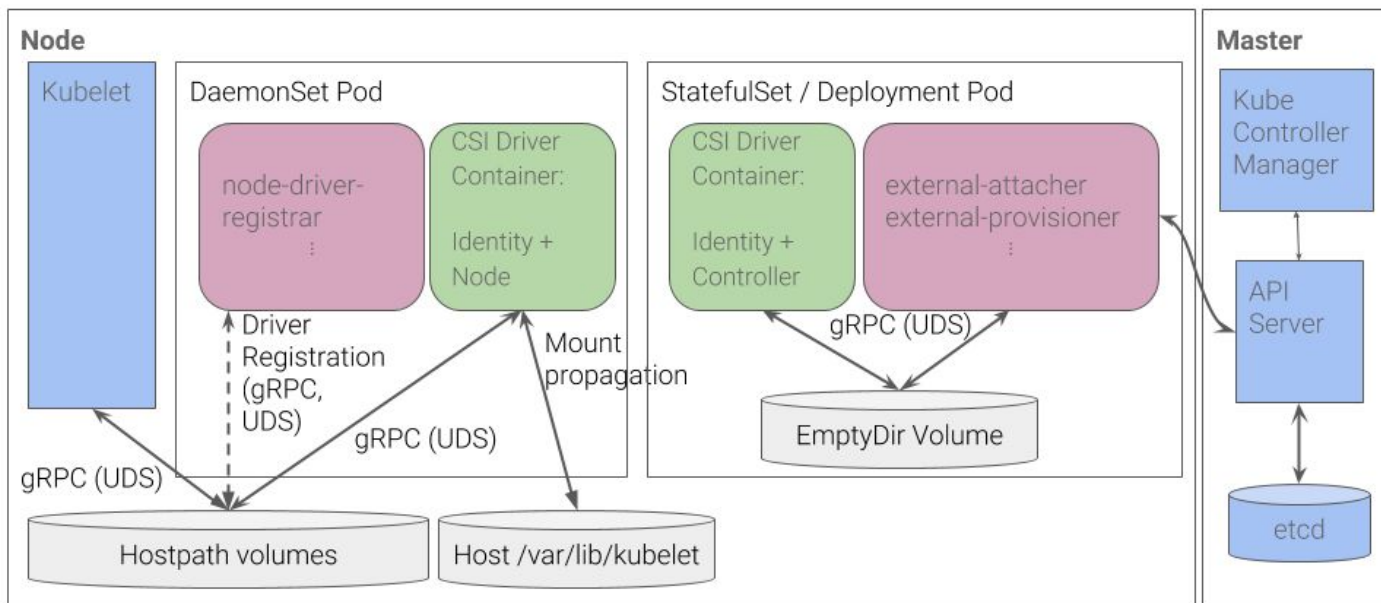


The problem with K8s stateful apps

The problem with CSI & Kubernetes

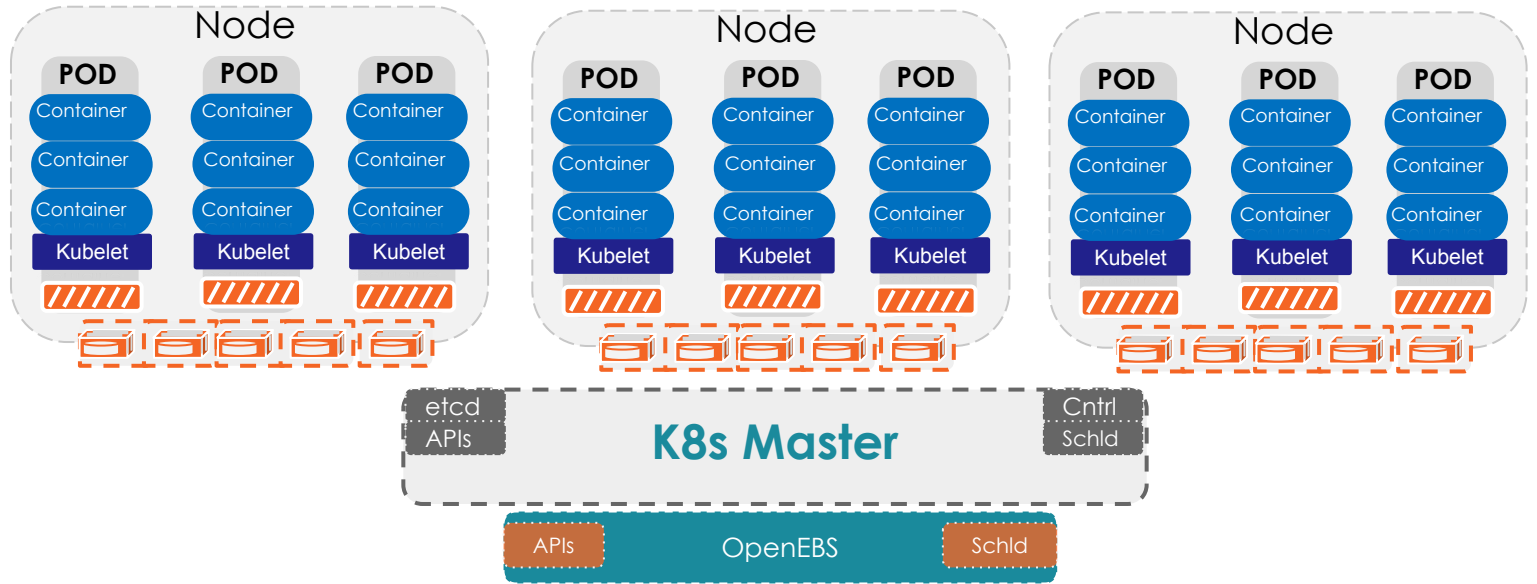


Using CSI Driver in Kubernetes isn't easy



UDS - Unix Domain Socket

What's OpenEBS and Why Write It?



Why are people so interested right now?

Jan 2017	Initial prototype circulated for feedback with folks working on Rancher, Minio and DevOps personnel
Dec 2017	Launched pre-alpha version with already some initial set of users at KubeCon Austin
June 2018	Beta release of Jiva as well as initial bits on cStor
Dec 2018	KubeCon Seattle - Traction around storage started within Kubernetes. Got coaching to push into CNCF
May 2019	KubeCon Barcelona - Part of CNCF with 0.9 release. Users were already using in production
June 2019	1.0 release
Nov 2019	KubeCon San Diego - Featured on many presentations


Why contribute OpenEBS to the CNCF?

CLOUD NATIVE COMPUTING FOUNDATION About Projects Certification People Community Newsroom JOIN NOW

Container Attached Storage: A Primer

By cncf April 19, 2018 in Blog

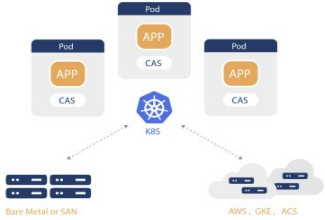
By Evan Powell, CEO of MayaData



Evan Powell is CEO of MayaData, the company behind OpenEBS, and previously founding CEO of Clarus Systems (RVBD), Nexenta Systems – an early open storage leader, and StackStorm (BRCD). Evan and his team have written more about drivers of Container Attached Storage, how OpenEBS and others are building it, more more at blog.openEBS.io. They welcome feedback and look forward to additional collaboration with the broader cloud-native ecosystem and specifically fellow CNCF members.

In this blog I seek to define briefly the emerging space of Container Attached Storage, explaining the what, the why and the this pattern.

What is Container Attached Storage?



The diagram illustrates the architecture of Container Attached Storage. It shows three Pods, each containing an application (APP) and container-attached storage (CAS). These Pods are connected to a central Kubernetes (K8S) cluster. Below the K8S cluster, two storage options are shown: 'Bare Metal or SAN' and 'AWS, GKE, ACS'.

CLOUD NATIVE COMPUTING FOUNDATION About Projects Certification People Community News

A year later – updating Container Attached Storage

By cncf May 16, 2019 in Blog


Guest post by Evan Powell, CEO at MayaData

Last year we published a blog with a good amount of coaching and feedback from the CNCF team that set out to define the Container Attached Storage (CAS) approach. As a reminder, we tend to include OpenEBS of course as well as solutions that have similar architectures such as the proprietary PortWorx and StorageOS into the CAS category.

<https://www.cncf.io/blog/2018/04/19/container-attached-storage-a-primer/>

Now that OpenEBS has been contributed to the CNCF as a Sandbox project as an open source example of the CAS approach (as of May 14th 2019), I thought it timely to update this overview of the category.

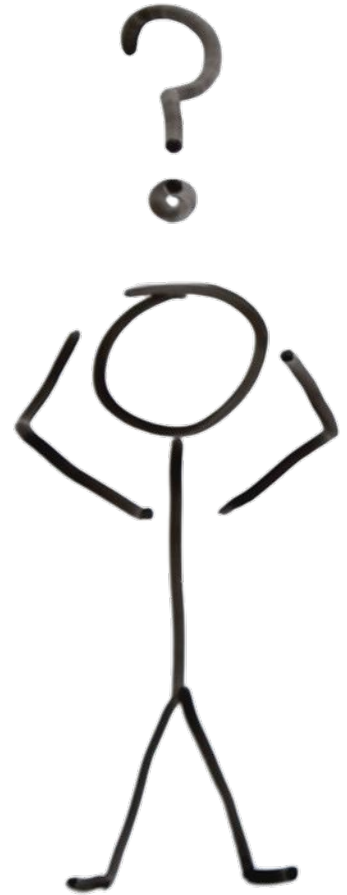
Last year's category-defining blog built on a vision of our approach that I had shared some years before at the Storage Developer Conference and which Jeffrey Molanus, MayaData's CTO has discussed in more depth at FOSDEM (Free and Open source Software Developers' European Meeting) and elsewhere including demonstrating soon to be available software breaking the million IOPS barrier:



The first chart, titled 'Protocols matter', shows IOPS for three protocols: NVMe (EBS) at approximately 800, NBD at approximately 100, and iSCSI at approximately 600. The second chart, titled 'iscsi vs nvme-tcp', shows IOPS for iSCSI at approximately 4,000 and nvme-tcp at approximately 8,000. A note indicates a ~30% increase for nvme-tcp.

https://ftp.osuosl.org/pub/fosdem/2019/H2214/openEBS_breaking_million_iops_barrier.mp4

**Applications have
changed and someone
forgot to tell storage**





CAS - Container Attached Storage

OpenEBS Solves 2 Big Problems

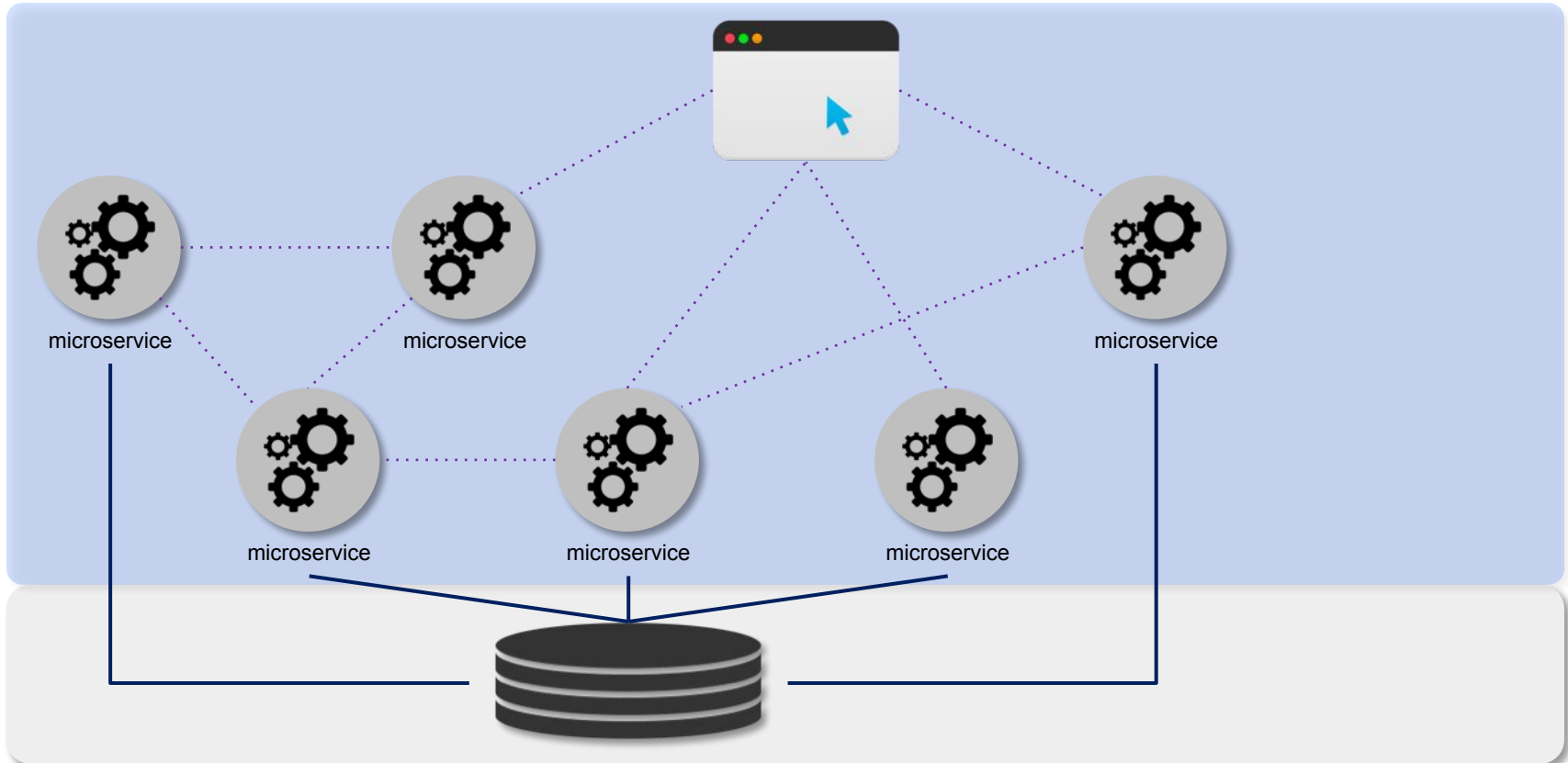


Deploying and managing stateful applications on Kubernetes is difficult

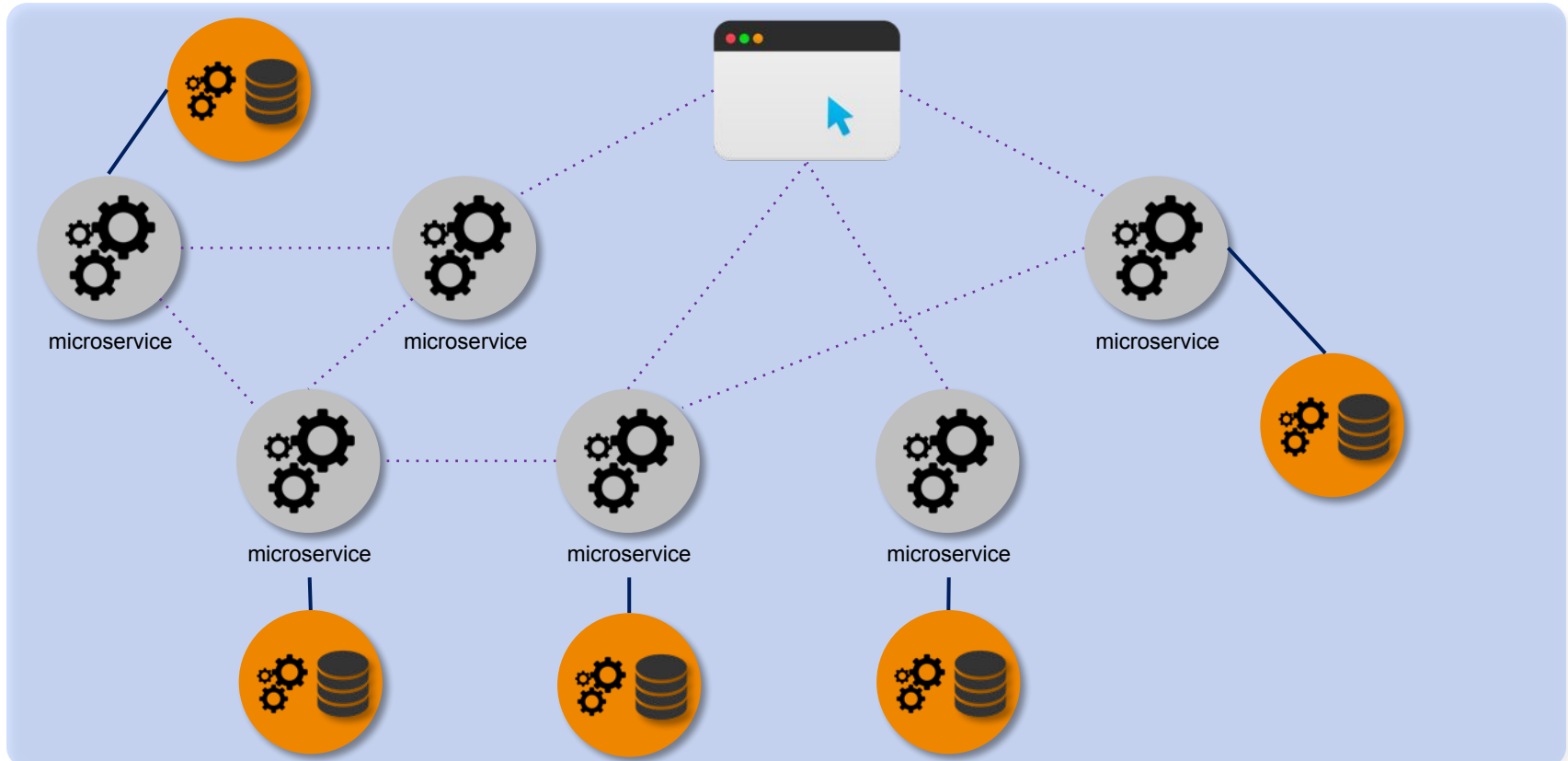


Stateful applications on Kubernetes are not agile because data has gravity

The Problem with Stateful Apps & Storage



Let's Keep it in Kubernetes



What is OpenEBS



OpenEBS is the most active Container Attached Storage project with the biggest user base and community



OpenEBS enables your DevOps teams to have their own storage policies for every workload

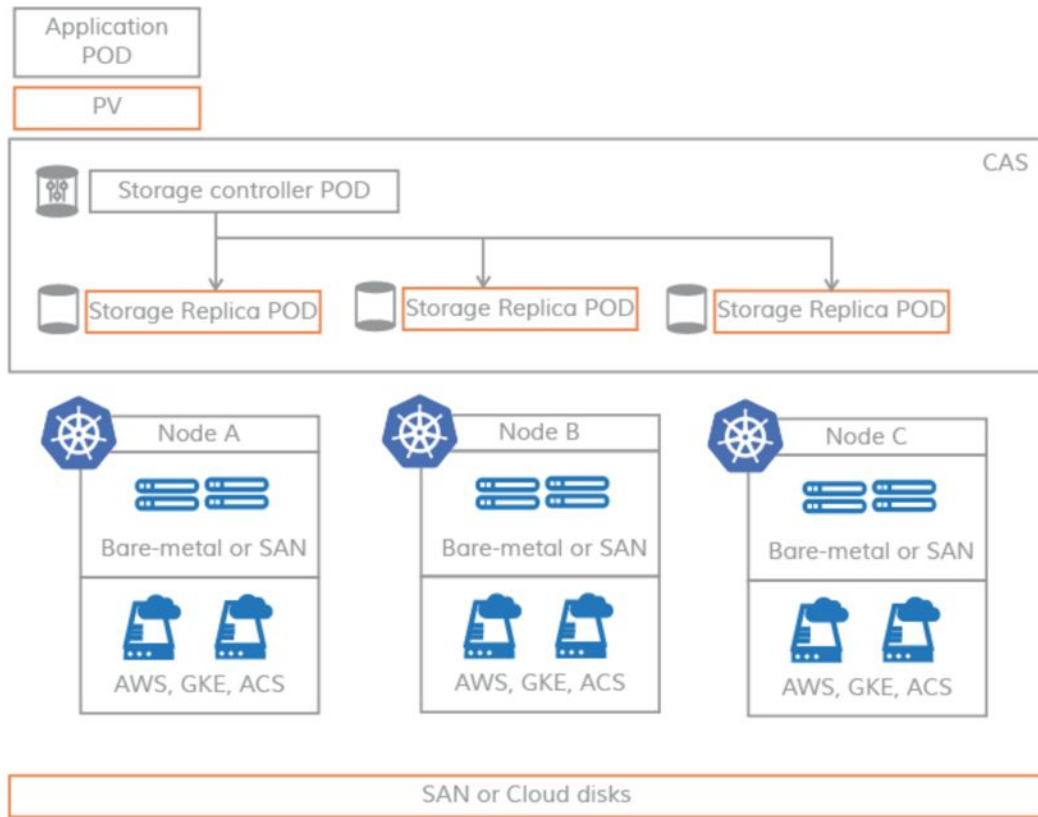


OpenEBS is not a Scale-out Storage System that requires a storage admin. If you know how to use K8s, you know how OpenEBS works



OpenEBS is truly Kubernetes native and 100% in userspace

OpenEBS cStor Architecture



- + Simple configuration
- + Teams are autonomous
- + Additive to underlying systems or cloud volumes or JBODs
- + Target Users:
 - **SRE**
 - **App Developer**
 - **Storage Admin**









OpenEBS Use Cases



Example Use cases

Check our resources page for more examples.

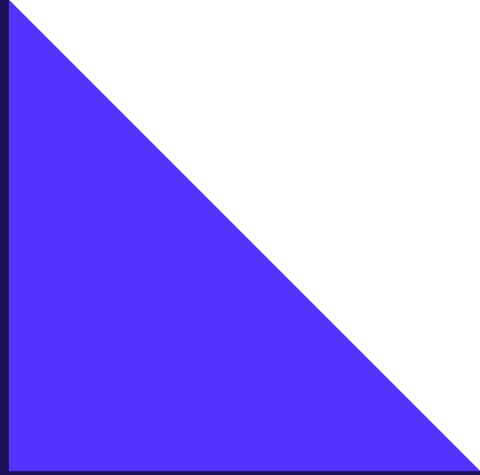
<https://openebs.io/>

 <p>Using OpenEBS for StatefulSet</p> <p>Replication by Application</p> <p>READ NOW</p>	 <p>Using OpenEBS for Deployments</p> <p>Replication by OpenEBS</p> <p>READ NOW</p>	 <p>Other Integrations</p> <p>Hybrid cloud scenarios</p> <p>READ NOW</p>	 <p>CI/CD</p> <p>Save the state of data in CI pipelines</p> <p>READ NOW</p>
 <p>Cross AZ</p> <p>Achieve high availability of storage across AZs with OpenEBS replication</p> <p>READ NOW</p>	 <p>Blue-Green</p> <p>Support for Blue Green approach to stateful application</p> <p>READ NOW</p>	 <p>Multi Cloud</p> <p>Cross Cloud Data operations visibility</p> <p>READ NOW</p>	 <p>Hyperscale</p> <p>Native Hyper Convergence support for Kubernetes</p> <p>READ NOW</p>

Demo

OpenEBS

What's Coming?

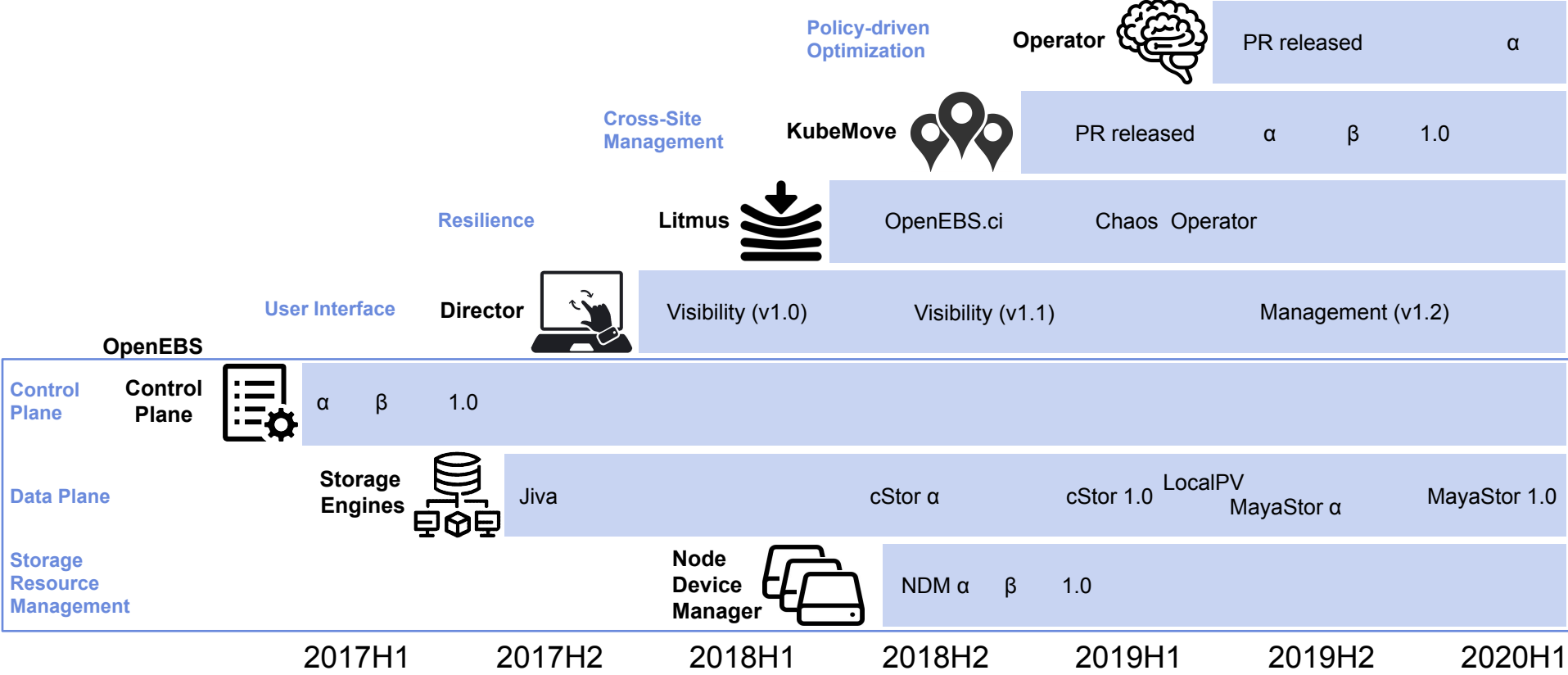


Roadmap for 1.5 and after

- + Jiva
 - CSI Driver (Alpha)
 - Gotgt fixes and upstream
 - + cStor
 - CSI Driver (Beta)
 - + LocalPV
 - Block Volume Support
 - PV Metrics
 - + MayaStor
 - Replication and rebuilds
 - + NDM
 - Device topology
 - Improve NVMe detection
 - + Operational:
 - Kudo Operator
 - Arm64 builds, adding cStor
 - Increased E2E + Litmus
 - Autoscale support for K8s
- Design

[OpenEBS Public Release Planning](#)

Roadmap for 1.5 and after



Be a part of OpenEBS

Find us on GitHub



<https://github.com/openebs/openebs>

Join our Slack group



<https://openebs.org/community>

Sign as an adopter



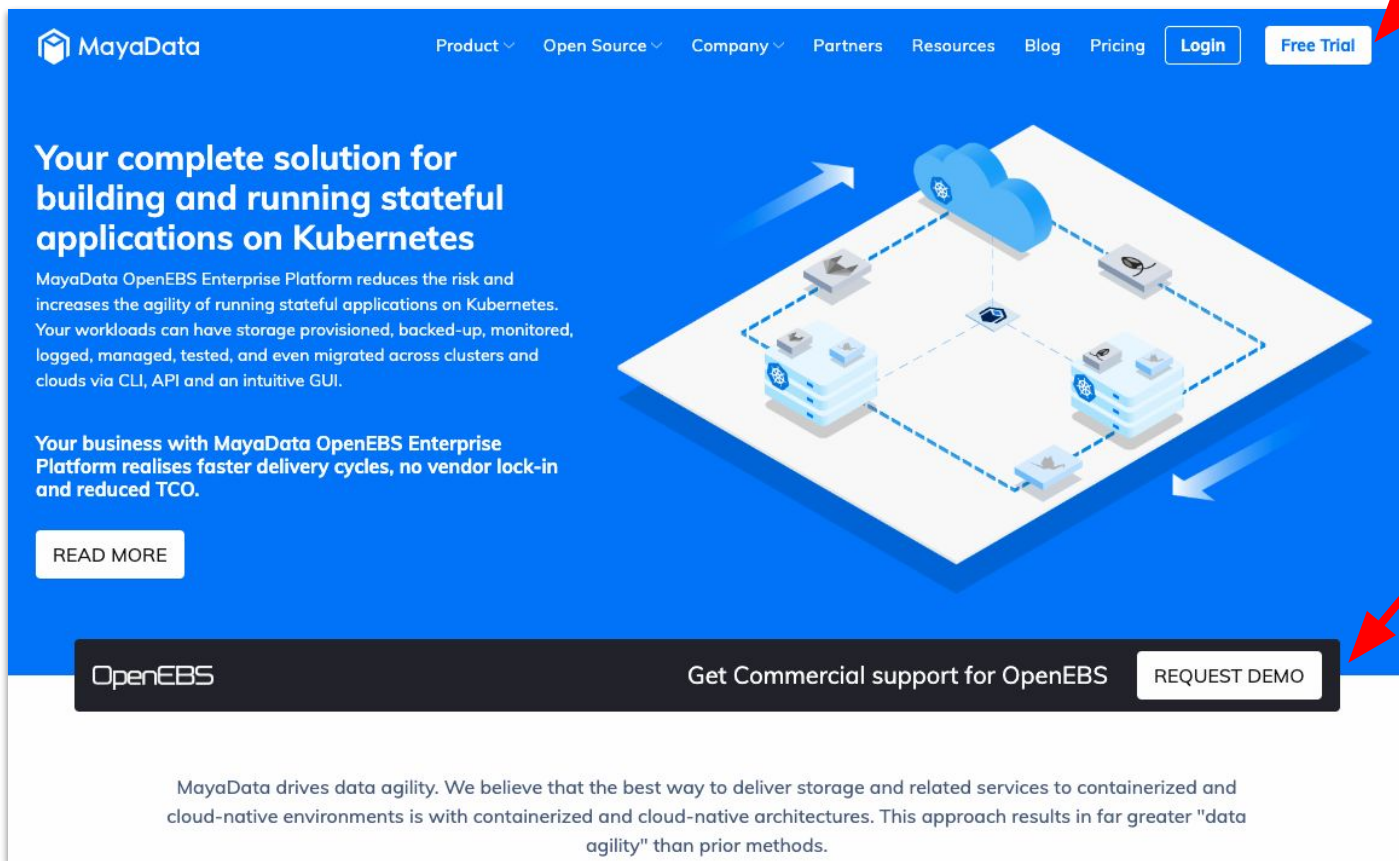
<http://bit.ly/OpenEBSAdopter>

Q & A

Need OpenEBS Enterprise Support?

[Visit Our Website to Learn More >](#)

Get Started - Go to mayadata.io



The image shows a screenshot of the MayaData website homepage. The navigation bar at the top includes links for Product, Open Source, Company, Partners, Resources, Blog, Pricing, Login, and Free Trial. The main content area features a large blue background with a central 3D diagram of a cloud and server infrastructure. To the left of the diagram, there is a headline and two paragraphs of text. Below the text is a 'READ MORE' button. At the bottom of the page, there is a dark banner with the OpenEBS logo, the text 'Get Commercial support for OpenEBS', and a 'REQUEST DEMO' button. A paragraph of text is located below the banner. Two red arrows point to the 'Free Trial' button in the top right and the 'REQUEST DEMO' button in the bottom right.

MayaData

Product ▾ Open Source ▾ Company ▾ Partners Resources Blog Pricing Login Free Trial

Your complete solution for building and running stateful applications on Kubernetes

MayaData OpenEBS Enterprise Platform reduces the risk and increases the agility of running stateful applications on Kubernetes. Your workloads can have storage provisioned, backed-up, monitored, logged, managed, tested, and even migrated across clusters and clouds via CLI, API and an intuitive GUI.

Your business with MayaData OpenEBS Enterprise Platform realises faster delivery cycles, no vendor lock-in and reduced TCO.

READ MORE

OpenEBS Get Commercial support for OpenEBS REQUEST DEMO

MayaData drives data agility. We believe that the best way to deliver storage and related services to containerized and cloud-native environments is with containerized and cloud-native architectures. This approach results in far greater "data agility" than prior methods.



Kubernetes Forums



Kubernetes
Forum *Seoul*

December 9, 2019
Seoul, Korea

[LEARN MORE](#)

Register!



Kubernetes
Forum *Sydney*

December 12 – 13, 2019
Sydney, Australia

[LEARN MORE](#)

Register!



OpenEBS



MayaData

Thank You

OpenEBS



MayaData

Thank You