Arrikto

Ganeti and the Global Snapshot Delivery Network™

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About Arrikto

Founded early 2015, VC-backed

15 employees, including major Ganeti contributors

Make enterprise data available everywhere

Re-define how people collaborate on that data

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Lots of platforms, lots of storage “types”

Containers, VMs, bare metal, the Cloud

“Disks, Snapshots, Images, Volumes,
Ephemeral disks, Persistent Volumes,
Backups, Templates, ISOs”

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There is a reason why this happens

Distinct storage *needs*

- Each storage resource serves a different purpose
- Distinct qualitative characteristics
  (reliability, durability, availability, compliance)
- Distinct quantitative characteristics
  (performance: IOPS, latency, bandwidth, QoS, interference)
- Every combination:
  a different set of usage requirements

Many different requirements

The platform caters to the requirements

- So it has to split storage processing
- Distinct codebase per usage pattern

Has to rely on specific persistence technologies

- Distinct storage products to back each usage pattern
- … “Is this storage for my Images, my Volumes, or my Backups?”

The result...

Fragmented platforms

- Docker: Images vs. Volumes
- OpenStack: Nova ephemeral disks vs. Glance Images vs. Cinder volumes vs. Cinder snapshots
- AWS: Images vs. Instance Store vs. EBS
- VMware: Managing VMs, not disks.
  No way to actually manage a snapshot independently
- It's a mess.

What about Ganeti?

Very primitive state

Disks are still not first class citizens

Confusion when we start talking about:

- Snapshots, Backups, Import, Export
- Inter-cluster moves, Template conversions, Archival

Has anybody streamlined the above procedures?

The ideal workflow

- Instantly snapshot a VM on source platform A
  - Backed by storage technology 1
- Intelligently move the thin snapshot
  - On a different geographic location or installation
- Instantly clone this snapshot on platform B
  - Backed by storage technology 2
- Repeat in any direction

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Live demo!

See http://www.arrikto.com/ganeticon2016

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We are building the world's first

Global P2P Delivery Network

For Volumes / Images / Snapshots

Independent of virtualization platform

Independent of the underlying storage

Becoming global

How do we cross admin boundaries?

We need an *Indexer*

- A global meeting point

Publish a bucket to an Indexer reference

Subscribe a bucket to an Indexer reference

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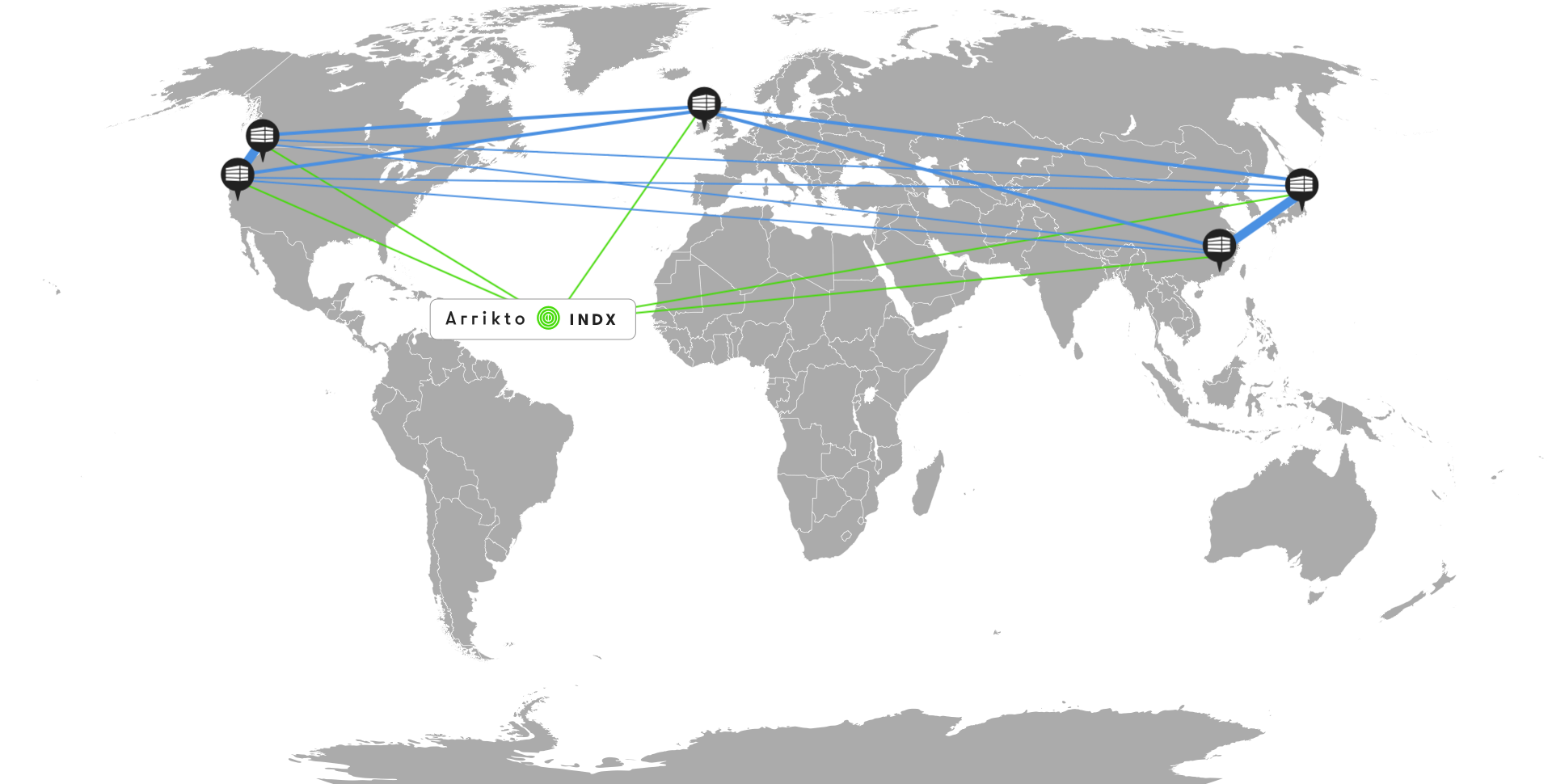

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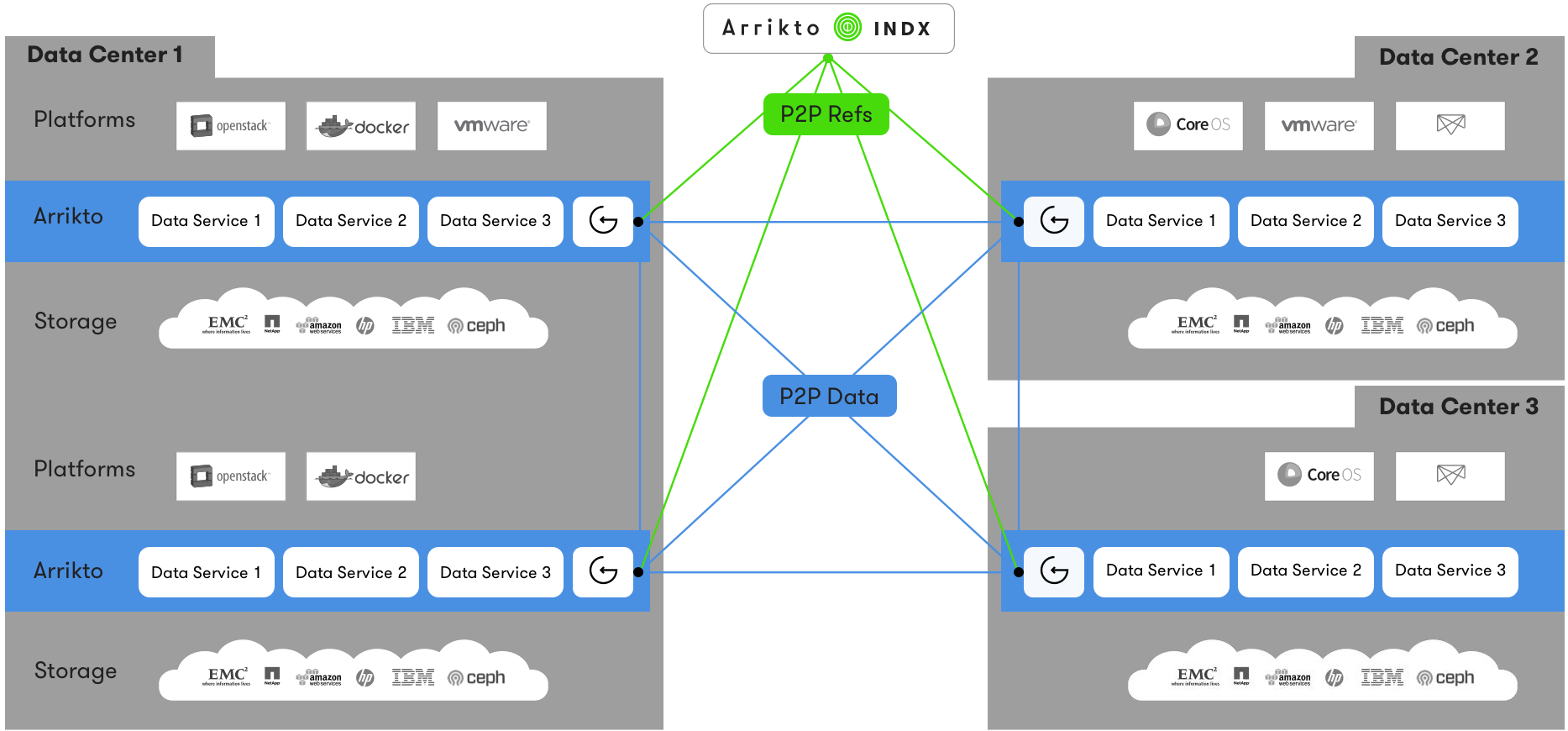

Ganeti integration

Management Path

- Via an ExtStorage provider

Data Path

- Userspace-only integration with unmodified KVM
- Kernelspace integration, if required, with unmodified kernel

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Think of the possibilities

Unparalleled mobility

- Across platforms
- Across locations and administrative domains
- Across on-prem / cloud providers
- Across different persistence technologies

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Thanks!

Questions?