HybridCluster

Tech Talk

OpenZFS Europe - Summer 2014

ZFS is awesome for storage

Less popular in the cloud

Let’s change that

Cloud infrastructure

- Linux (Ubuntu, CentOS, RHEL)
- Devops (Chef, Puppet, Salt)
- Docker (Containerization)
- 12 factor apps

Promise of containers: application portability

Data deserves to be portable too

```
docker run
-v /outside:/inside
```

Watch the hand-wave

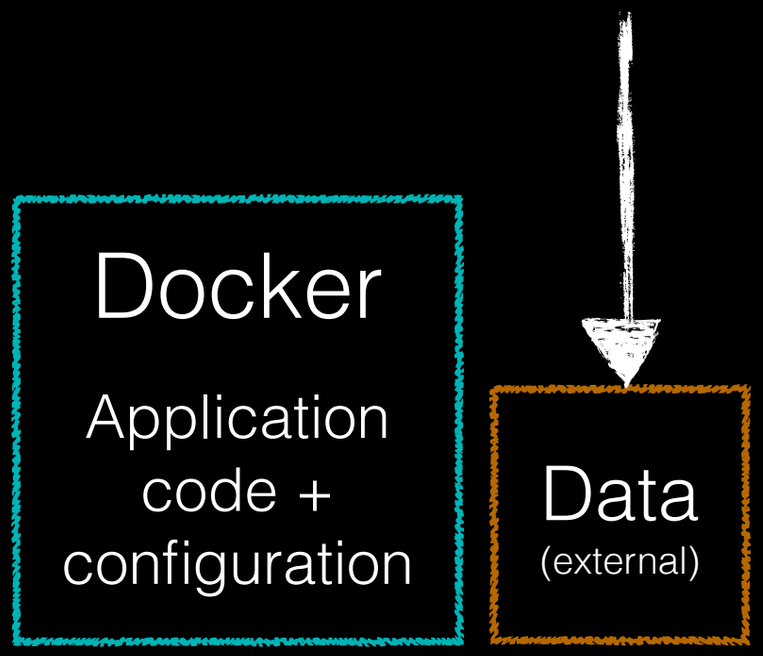
But state doesn't belong in the application tier!

Services deserve to be containerized too

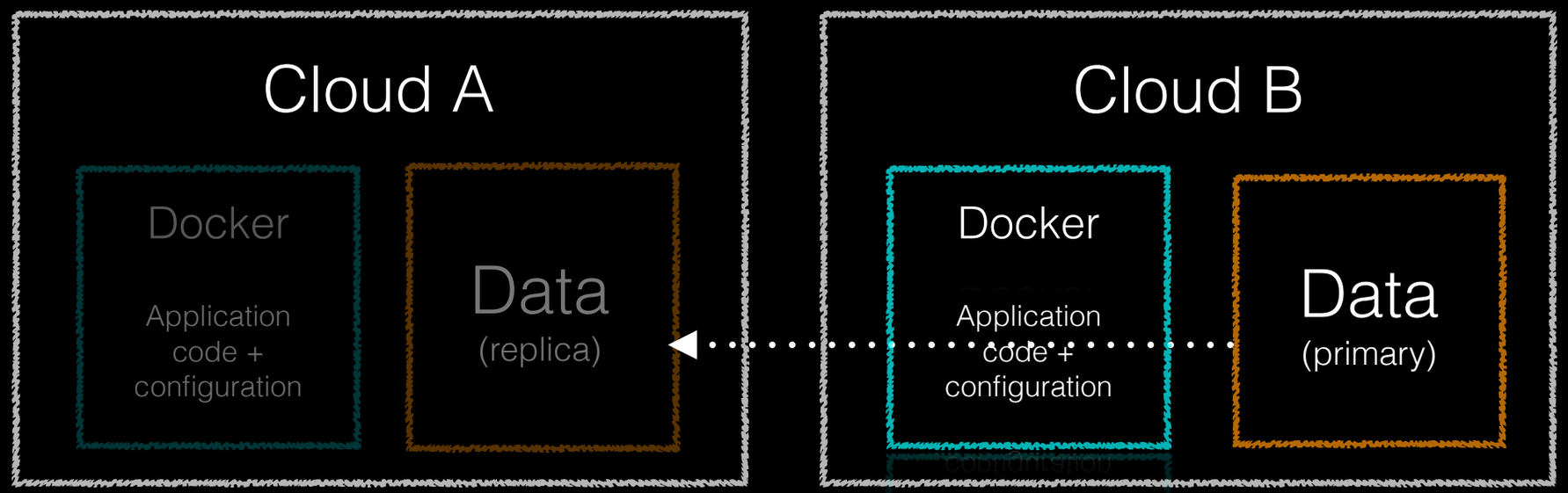
Vacuum of state management

The problem with containers

Application code + configuration is sorted, but
the **data** is somebody else's problem



Cloud A
Docker
Application code + configuration
Data
(primary)
Cloud B
Docker
Application code + configuration
Data
(replica)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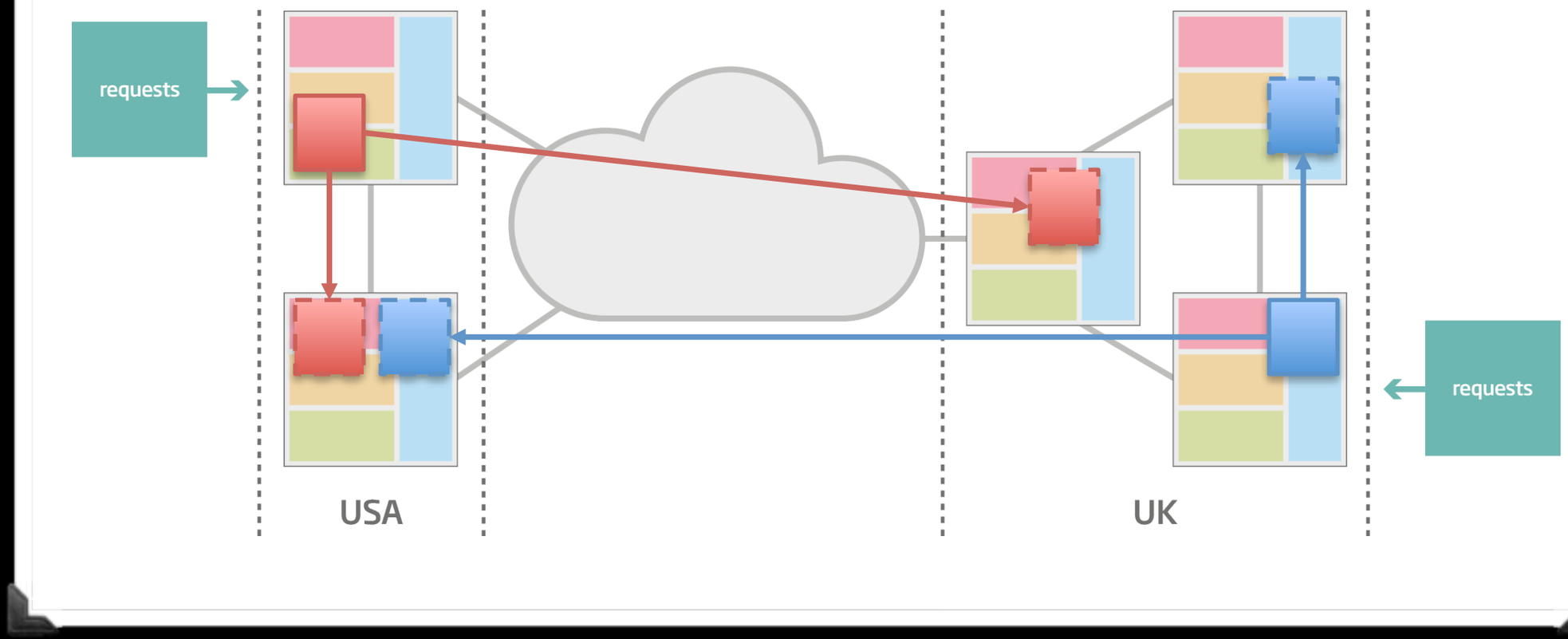
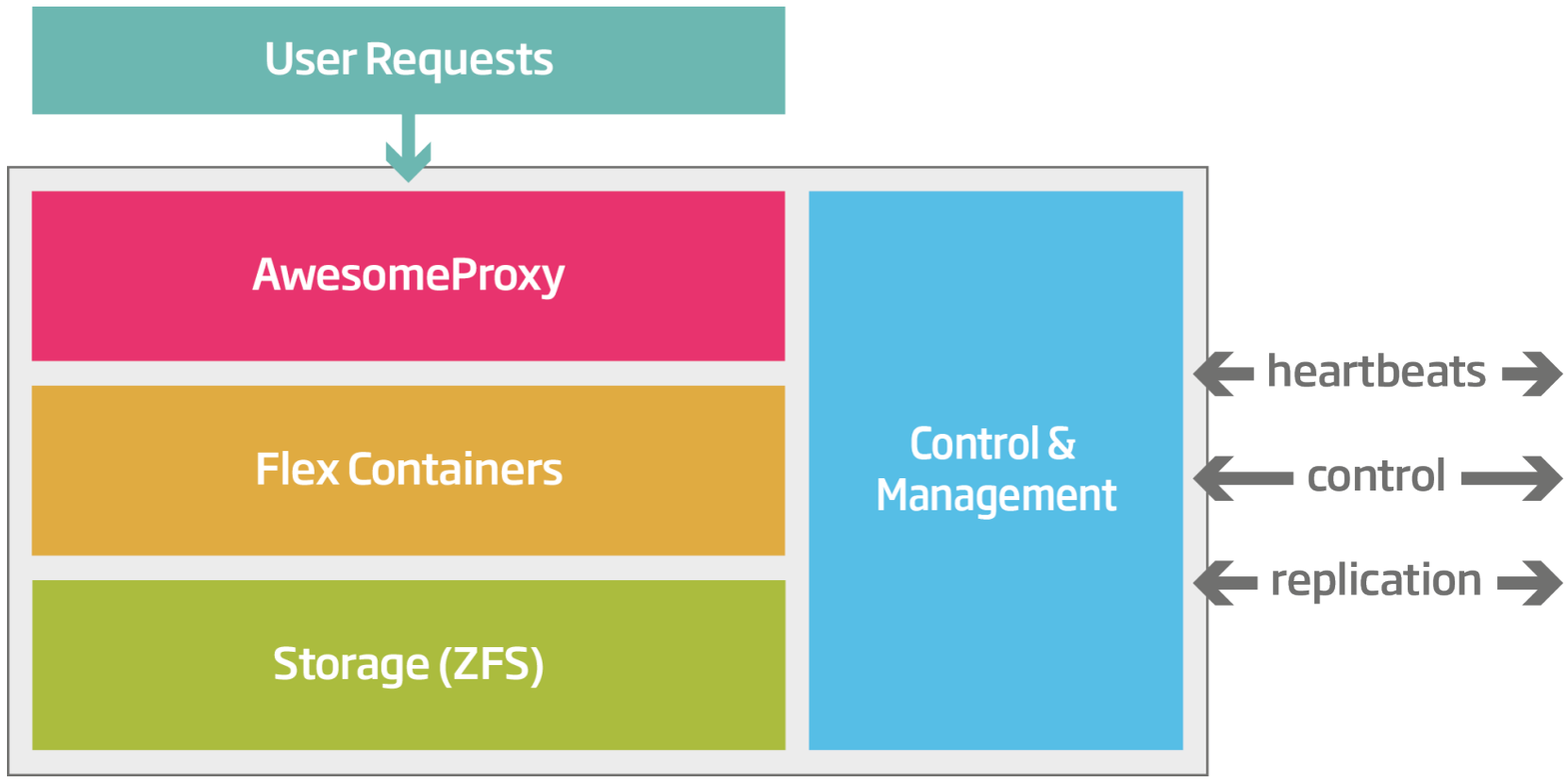
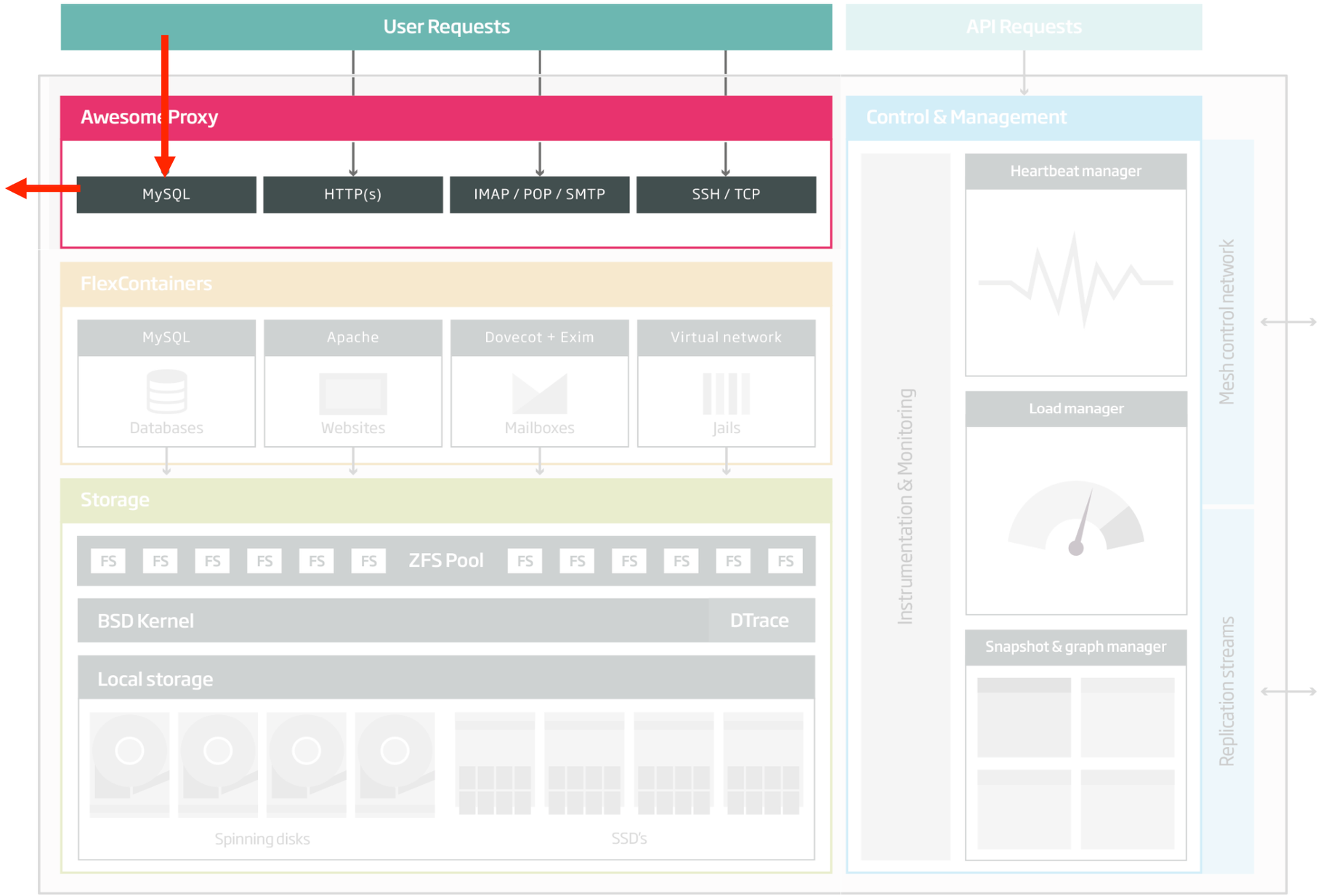
VMware on VMs		HC on Docker
VMware DRS	→	Auto juggling
VMware Live migration	→	Live migration
VMware HA	→	Replication/failover
VMware snapshots	→	Snapshot/rollback
VMware VMs	→	Docker containers

Technical capabilities


requests
USA
UK
requests


User Requests
AwesomeProxy
Flex Containers
Storage (ZFS)
Control & Management
heartbeats
control
replication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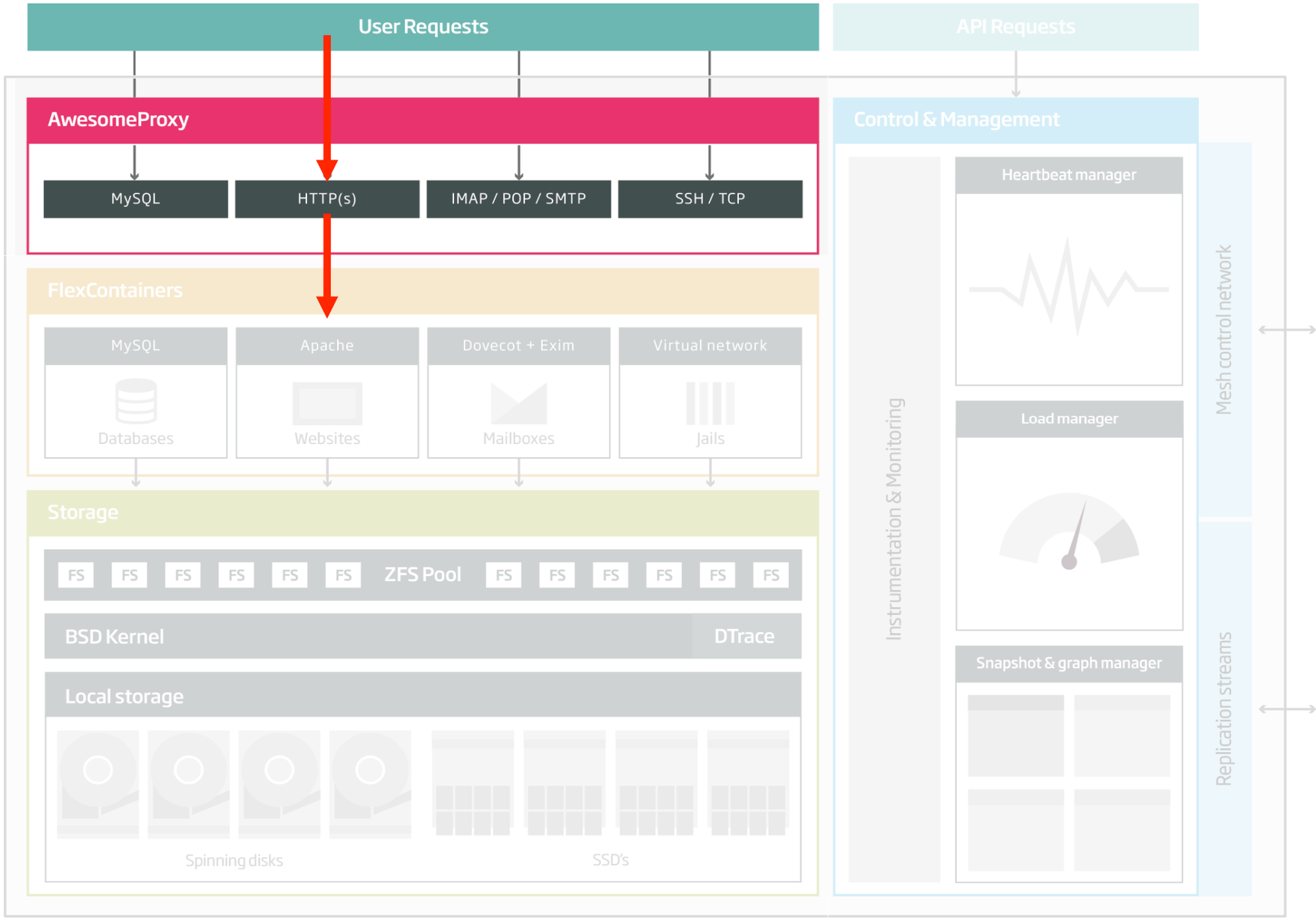
API Requests
Awesome Proxy
MySQL
HTTP(s)
IMAP / POP / SMTP
SSH / TCP
Control & Management
Heartbeat manager
Load manager
Snapshot & graph manager
Instrumentation & Monitoring
Mesh control network
Replication streams
FlexContainers
MySQL
Apache
Dovecot + Exim
Virtual network
Databases
Websites
Mailboxes
Jails
Storage
FS
ZFS Pool
BSD Kernel
DTrace
Local storage
Spinning disks
SSD's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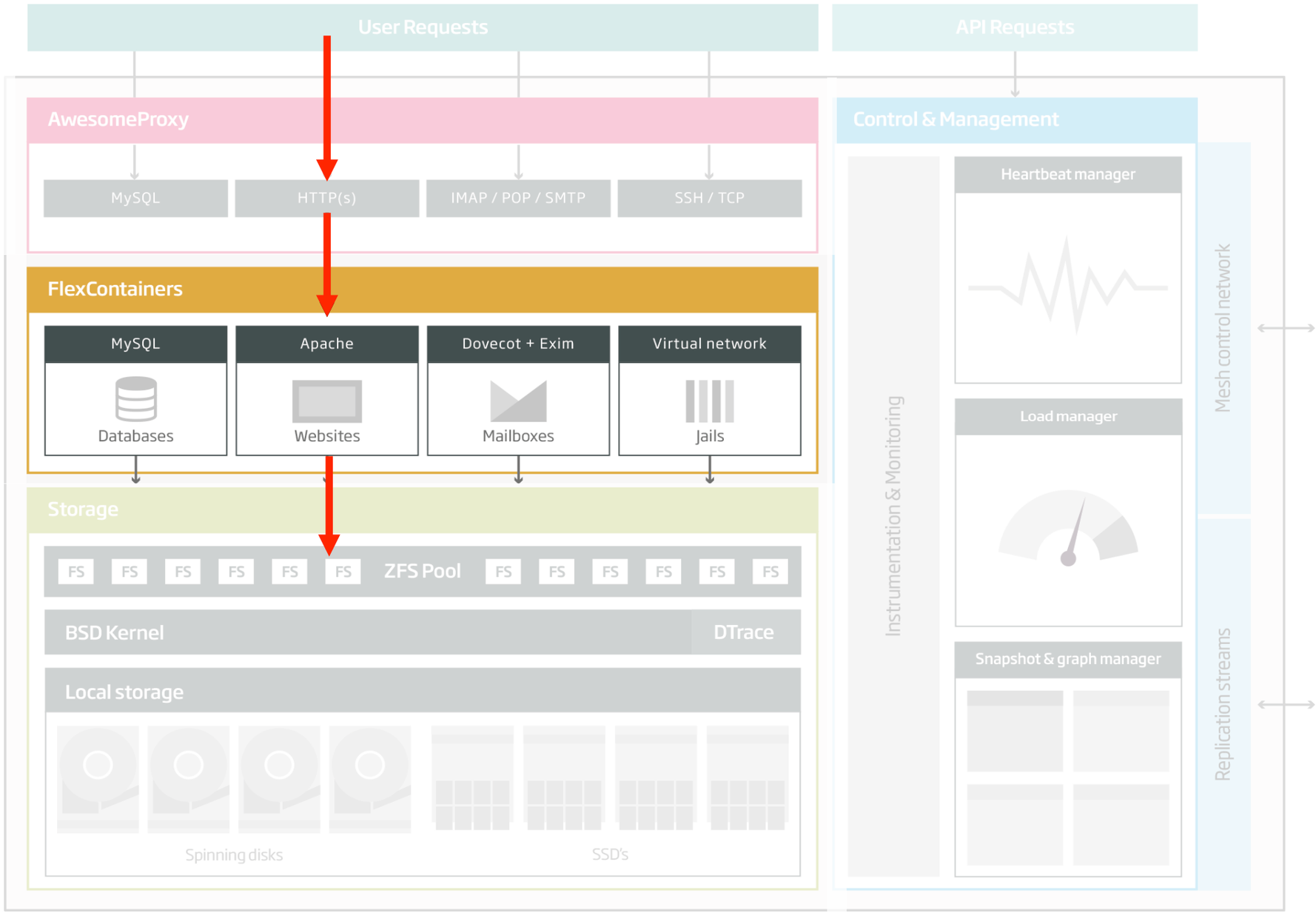
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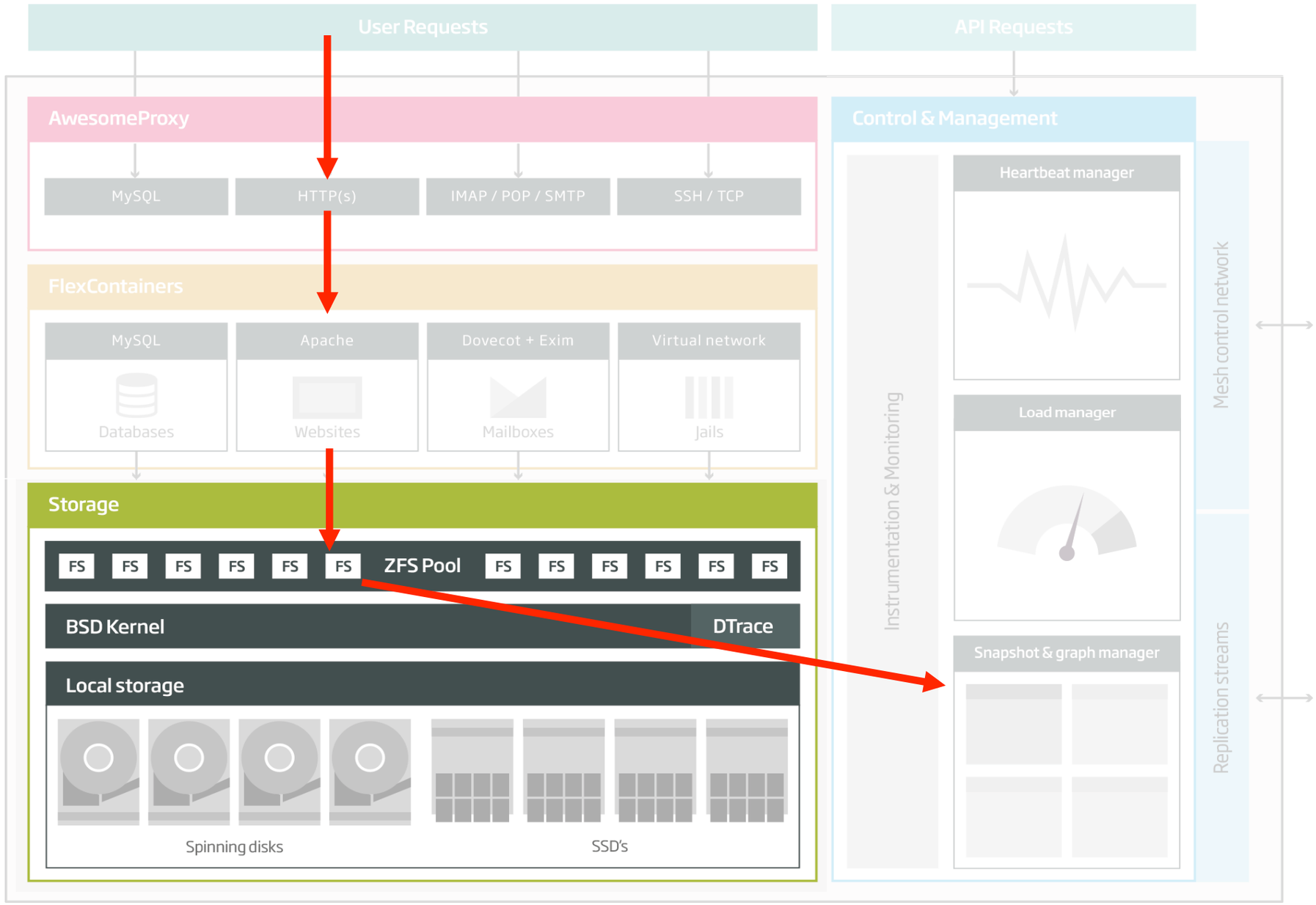
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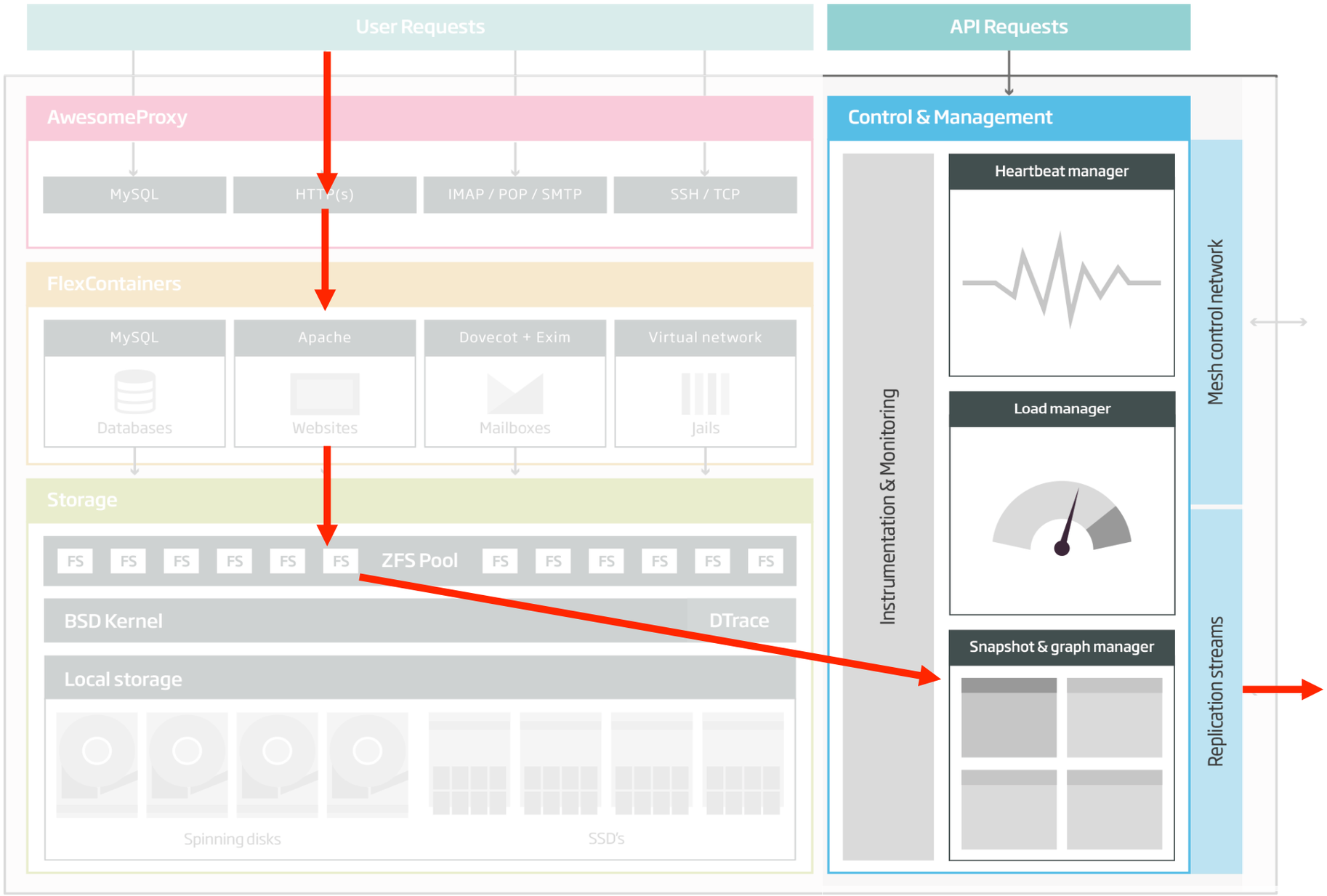
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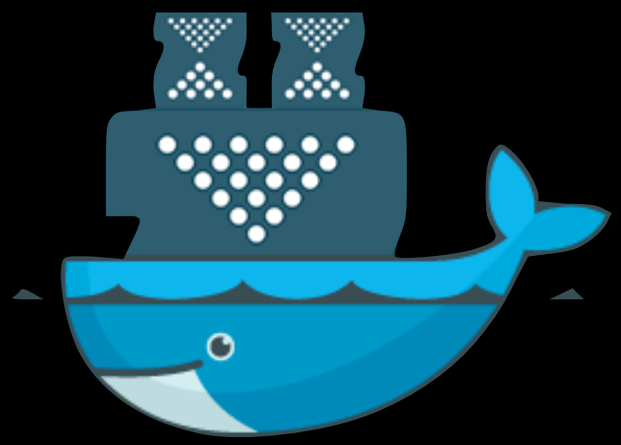
High availability

Live migration

Auto scaling

Time machine



Private beta
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Thank you!
Questions?