Open Standards, Open Source, Open Futures

How Openness is shaking up the Cloud Computing landscape

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redhat.

Why Open Source and Cloud Computing

User-Driven context from solving real problems

Lower Barrier to participation

Larger user base, users helping users

Rapid release cycles stay current with the state-of-the-art

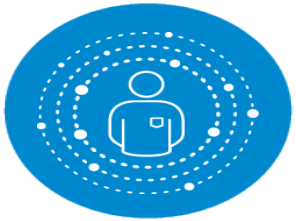
Open Source innovating faster than commercial

Open Data, Open Standards, Open APIs

These New Demands Are Forcing a Shift in Application Design

Application demands are becoming more complex

IMMEDIATE



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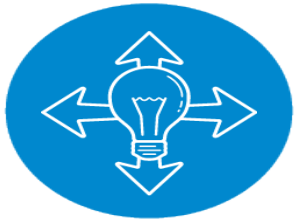
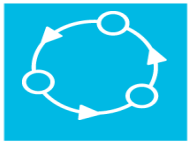


AWARE

Application requirements are becoming more diverse

CLOUD

MOBILE



INTERNET OF THINGS

BIG DATA

AUTOMATION

ABSTRACTION

Why are standards so important?

Open standards avoid fragmentation, accelerate innovation and increase interoperability in customer environments.

At Red Hat, we drive standards through the technology development in the relevant open source projects.

The container space has been growing so quickly, that the need for standards for interoperability across platforms and clouds became apparent.

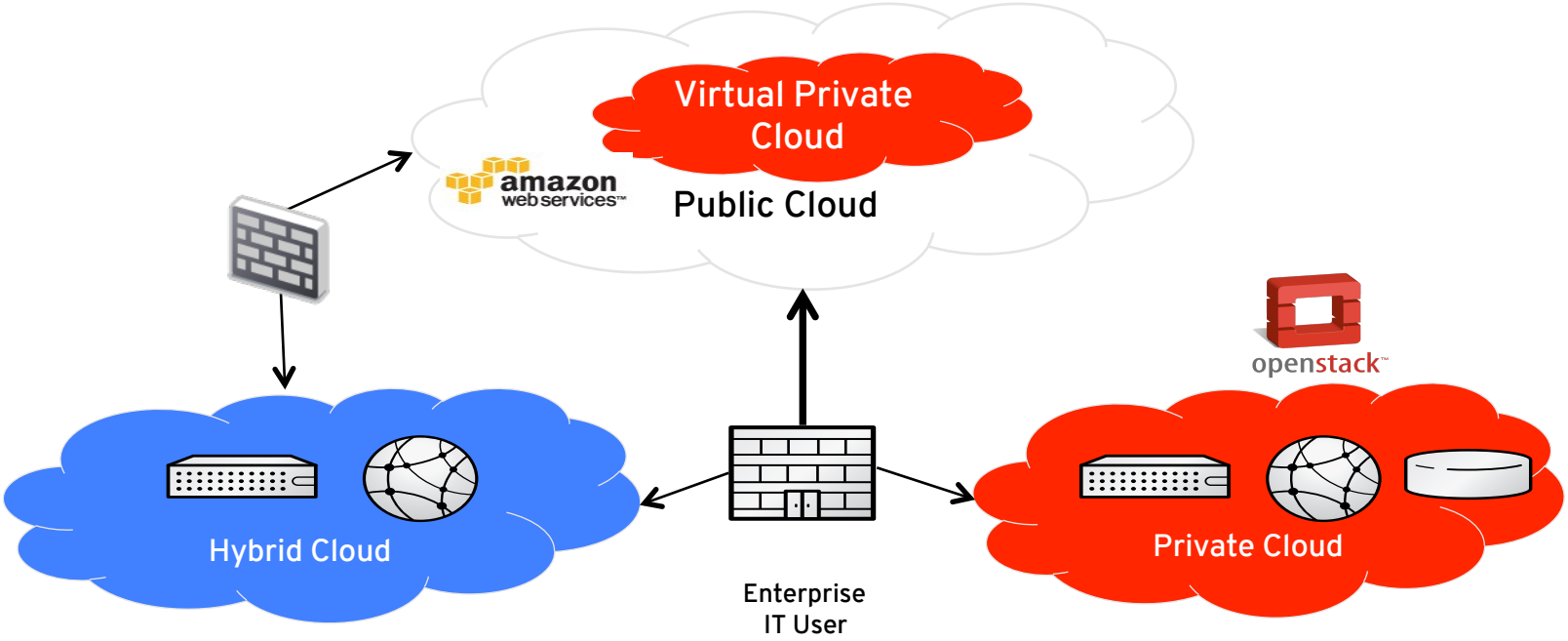
Characteristics of Cloud

1. On-Demand self service
2. Broad Network Access
3. Resource Pooling
4. Rapid Elasticity
5. Measured Service

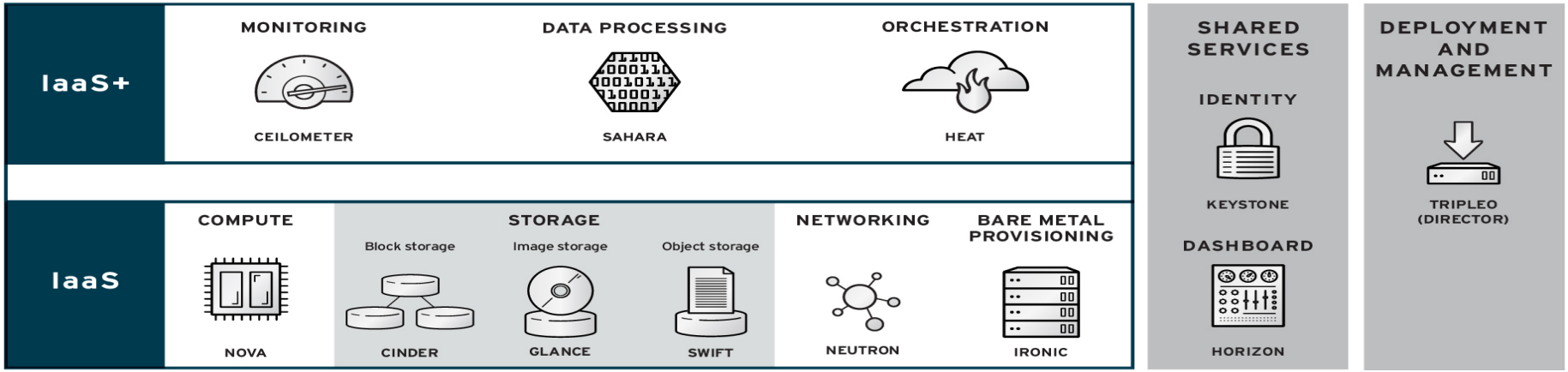
… Making it Open

1. Architectural Control
2. Freedom to Move
3. Application & License Portability
4. Access to Management Interfaces
5. No Lock in

Deployment Models: Public, Private & Hybrid



OpenStack: Framework for the Cloud



- Modular architecture
- Designed to easily scale out
- Based on (growing) set of core services

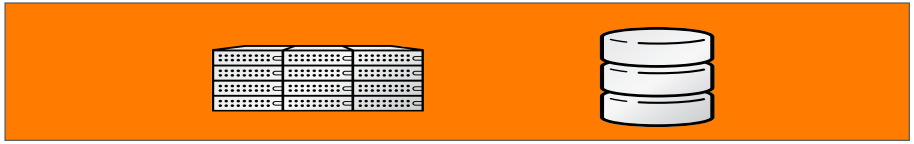
Cloud Architecture

Service Models

Virtualised Resources

Operating System, Hypervisor

Physical Resources



Open Data / API's / Protocols

Management

- Capacity Planning
- Billing/Chargeback
- SLA Management
- Patching/Provisioning
- Configuration
- Monitoring
- Security
- Accounting

Open Standards are Essential for the Cloud

Open Virtualization Format (OVF)

Standard packaging format for software solutions based on virtual systems A open standard for packaging and distributing virtual appliances or more generally software to be run in virtual machines

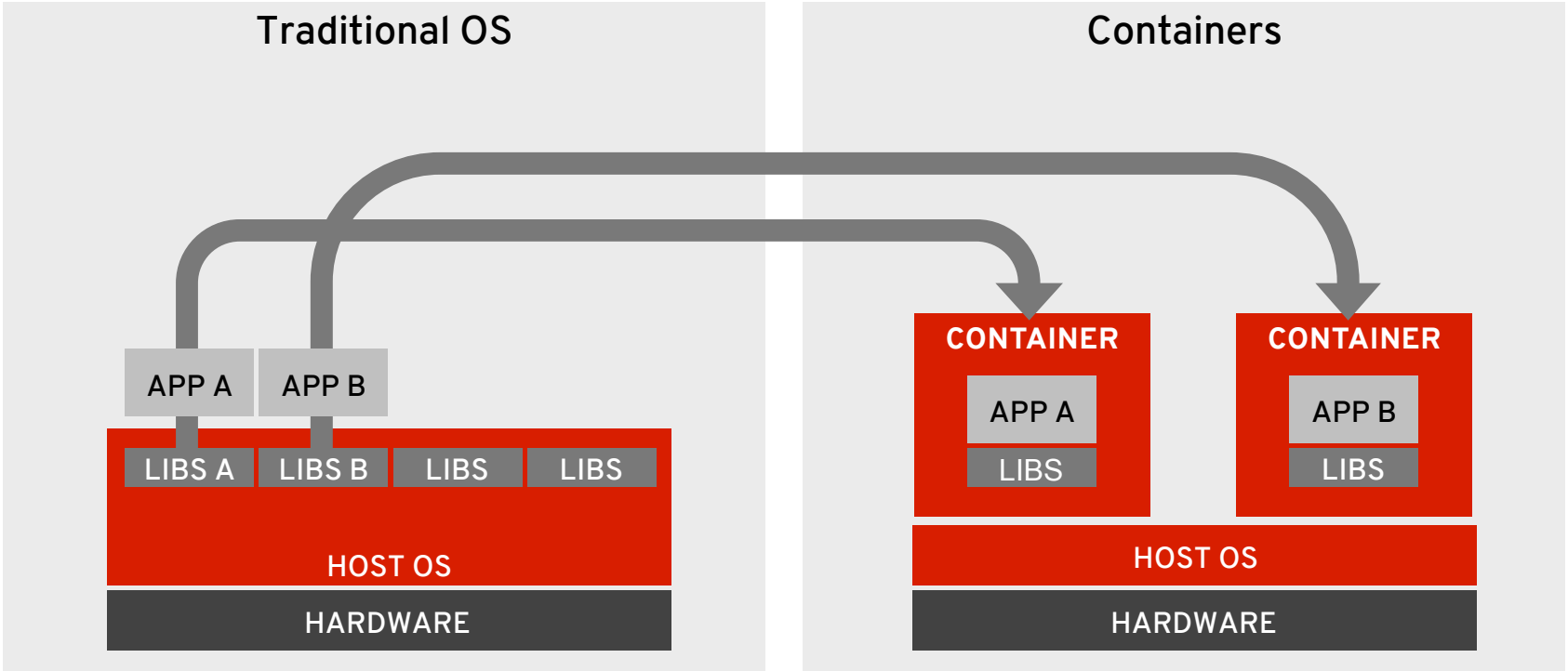
Why do we need one ? – VMWare, KVM, Xen & HyperV all have their own.

Open Container Initiative (OCI)

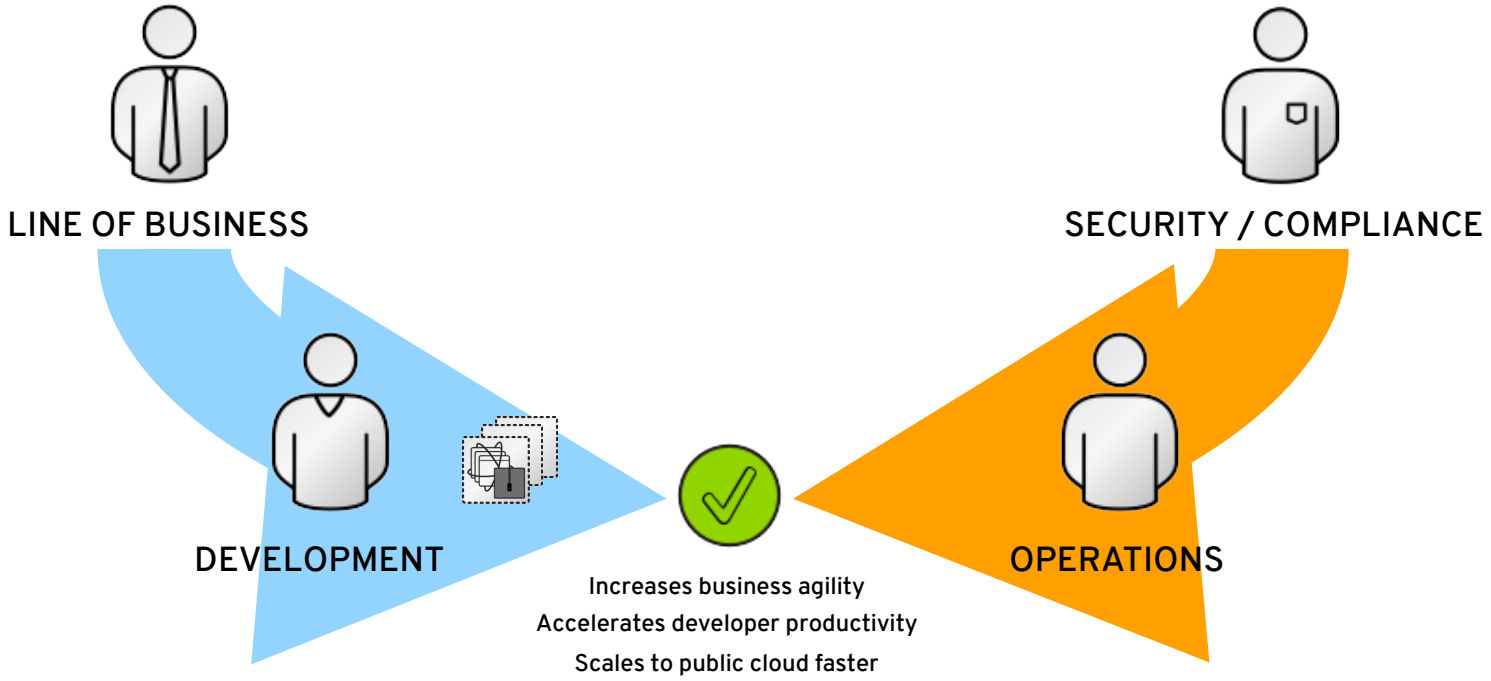
A Common, minimal, Open Standard and specification for Container Technology, Support Containers being portable and composable for applications, Standardise how containers are orchestrated and where registries are placed

Why do we need one ? – A standard allowing allowing containers to be deployed across all major operating systems and platforms without technical limitations

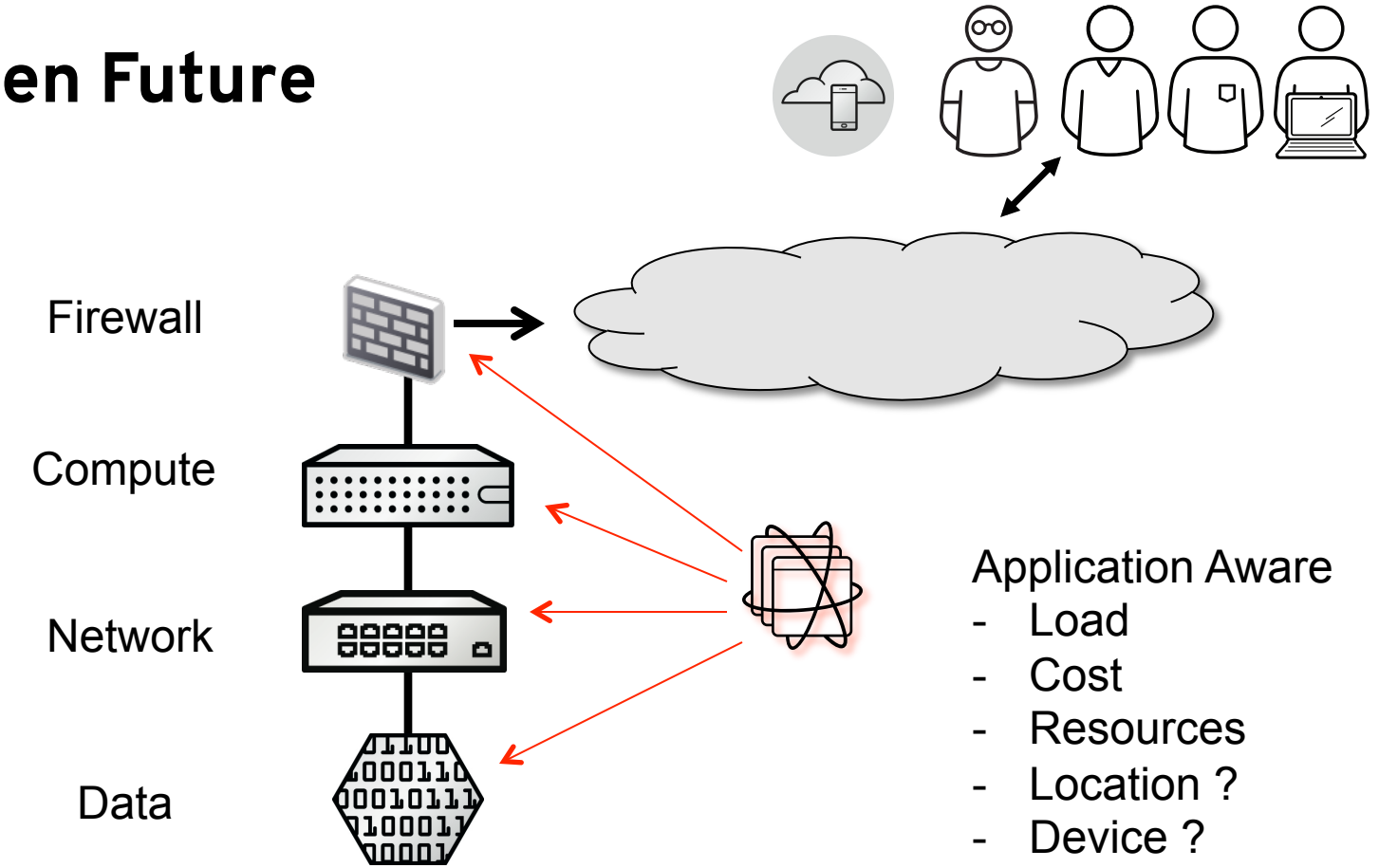
TRADITIONAL OS VS. CONTAINERS



APPLICATION DELIVERY VIA CONTAINERS



Open Future

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Open Standards
Open Futures
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THANK YOU