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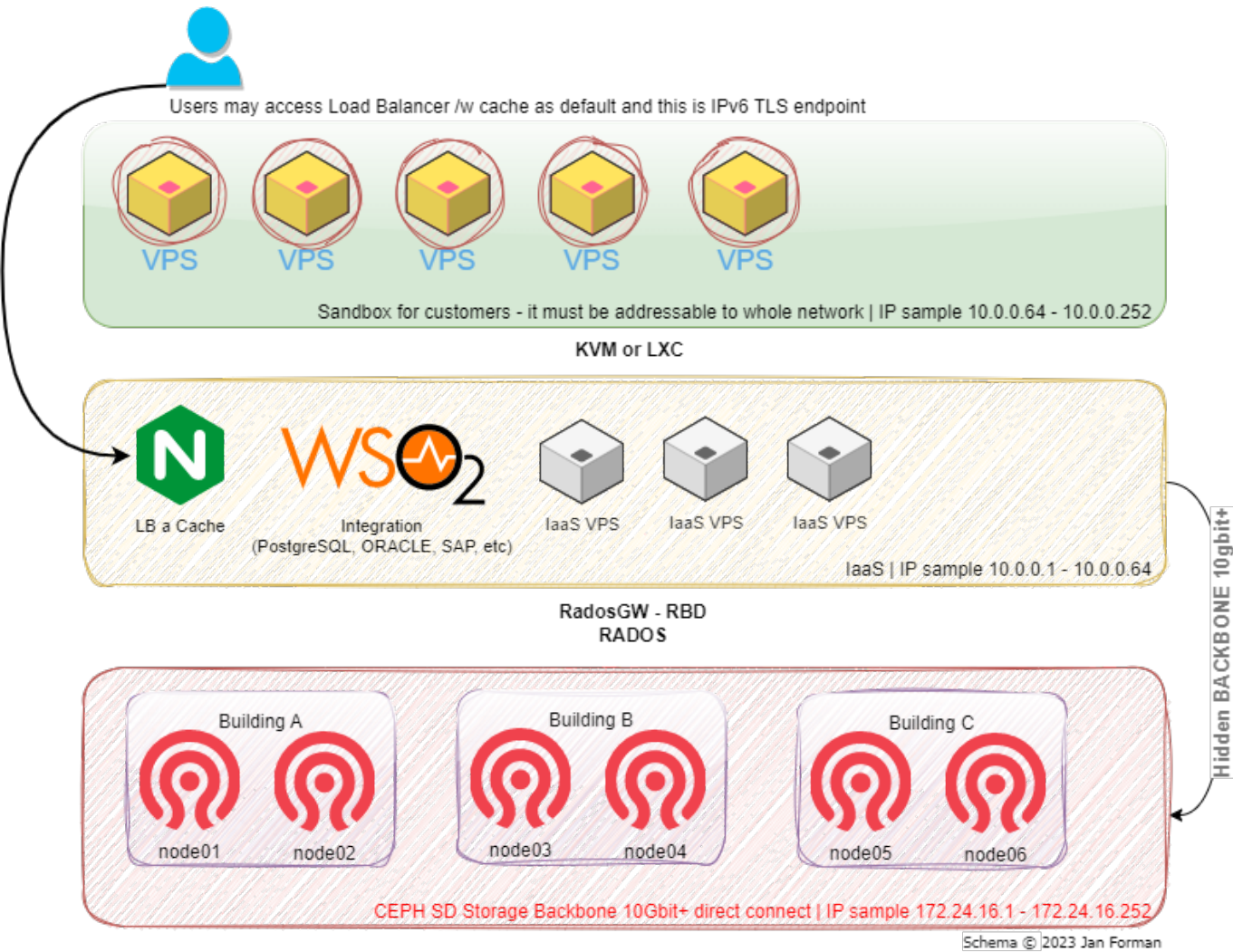
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Micro Cloud (Hybrid) Architecture DRAFT

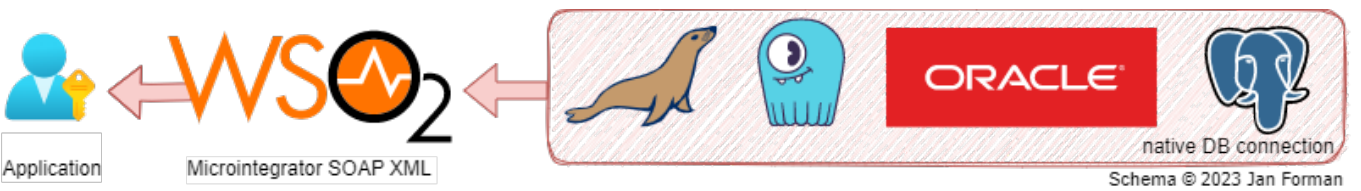
Schematics

Basic Topology



Firewalls are templates linked to VPS instance

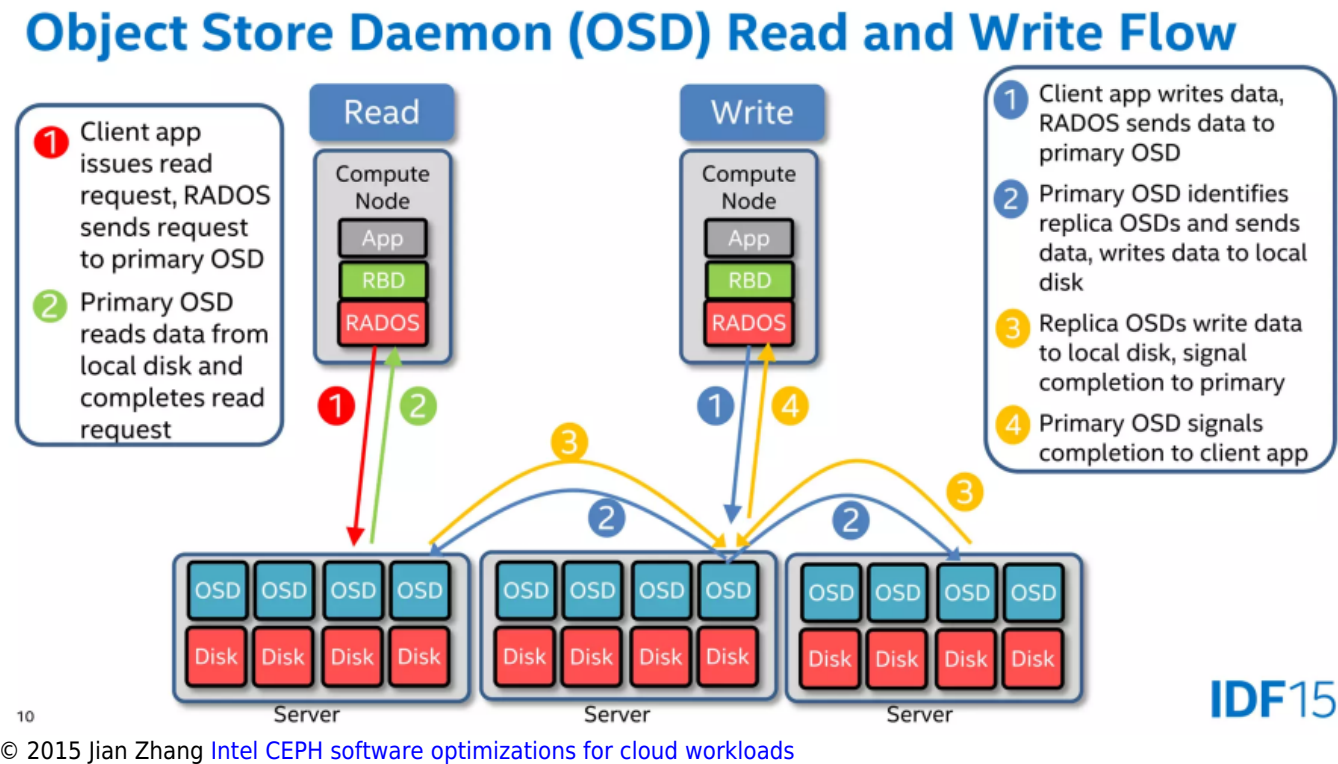
Integration Schema



Service Flow

CEPH SD Storage Schema

Exabyte storage scaleout with Geocluster and autoscaling



Software Stack

Cloud Core Infrastructure (IaaS)

Type	Cloud Service Description	CPU support
Compute Nodes and Management	AWS EC2 replacement with cloudinit support	ARM support
Openstack	Full, but as LEGO style	YES
Proxmox	Light, but EASY to implement	YES
- LXC may deploy container templates - both have native CEPH support		
SD Storage (Object, Block, File) Scaleout	AWS S3 compatible and EBS replacement	
CEPH SD Storage	Hyperconverged or PetaSAN	YES
SD Load Balancer, Cache	AWS ELB replacement	
NGINX	or AlibabaCloud clone	YES
WAF (Application Firewall)		
OWASP® ModSecurity	+nginx connector	YES
SD Firewall	AWS VPC, Security groups replacement	
pfSense	+platform integrated (VPS sandboxing)	LIMITED
Integration + Enterprise Service Bus	IBM WebSphere replacement	
WSO2 Integrator		YES
Mass webhosting		
ISP Config		YES
MQTT Platform	AWS IoT core replacement	
Mosquitto		YES
Cloud Data Synchronization		
Rclone		YES
Infrastructure Monitoring System	AWS CloudWatch replacement	
NetXMS		agent only
Kubernetes Orchestrator	AWS EKS replacement	
Mikro K8s		
Microsoft Windows	Windows Infrastructure	\$\$\$ not recommended
1x Datacenter - dedicated HW	Xx Server Standard on KVM	no/LIMITED

Type	Cloud Service Description	CPU support
Compute Nodes and Management	AWS EC2 replacement with cloudinit support	ARM support
XXX users	CAL (client access licence) per user	
		Cloudinit for Windows

Software as a Service (SaaS)

Type	Info	Service Description	Location
Services and Management	API catalog	WSO2 API Manager	KVM or LXC
DB	PostgreSQL	CitusData (Sharding Cluster)	KVM or LXC
DB	PostgreSQL	Postgresql	KVM or LXC
DB	MariaDB	MariaDB with GalleraCluster	KVM or LXC
DB	AWS DynamoDB replacement	ScyllaDB Alternator	KVM or LXC
Storage	AWS S3	Ceph version	CEPH Cluster

Product as a Service (PaaS)

Type	Name	Service Description	Location
Web Publishing	Info	Wordpress	ISPConfig
Web Storage	Network Drive	NextCloud * can use AWS S3	ISPConfig, LXC or KVM
Bug Tracking	Bug Tracking	Mantis Bug Tracker	ISPConfig
Forum	Discussion Forum	VanillaForums	ISPConfig
Knowledge Base	Wikipedia	DokuWiki	ISPConfig

Hardware suppliers

Reuse what's possible and make sense

ASRock Rack
Gigabyte Enterprise
Ingrasys
Wiwynn
Quanta Cloud Technology
Tyan
Invetec
ZT systems

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