

# Outline

- Overview of CloudStack
- Problem Definition
- Feature set overview
- Network
- Storage
- MS internals
- System VMs
- System Interactions
- Roadmap
- Comparisons

# Who's building their cloud with CloudStack?



# What is CloudStack?

**cloudstack**

Build your cloud the way the  
world's most successful clouds  
are built

- Multi-tenant cloud orchestration platform
  - Turnkey
  - Hypervisor agnostic
  - Scalable
  - Secure
  - Open source, open standards
  - Deploys on premise or as a hosted solution
  - BSS, self service portal. (Not ASL)
  - Extensive networking service
- Deliver cloud services faster and cheaper

# CloudStack Supports Multiple Cloud Strategies

## Private Clouds

### On-premise Enterprise Cloud



- Dedicated resources
- Security & total control
- Internal network
- Managed by Enterprise or 3<sup>rd</sup> party

## Public Clouds

### Hosted Enterprise Cloud



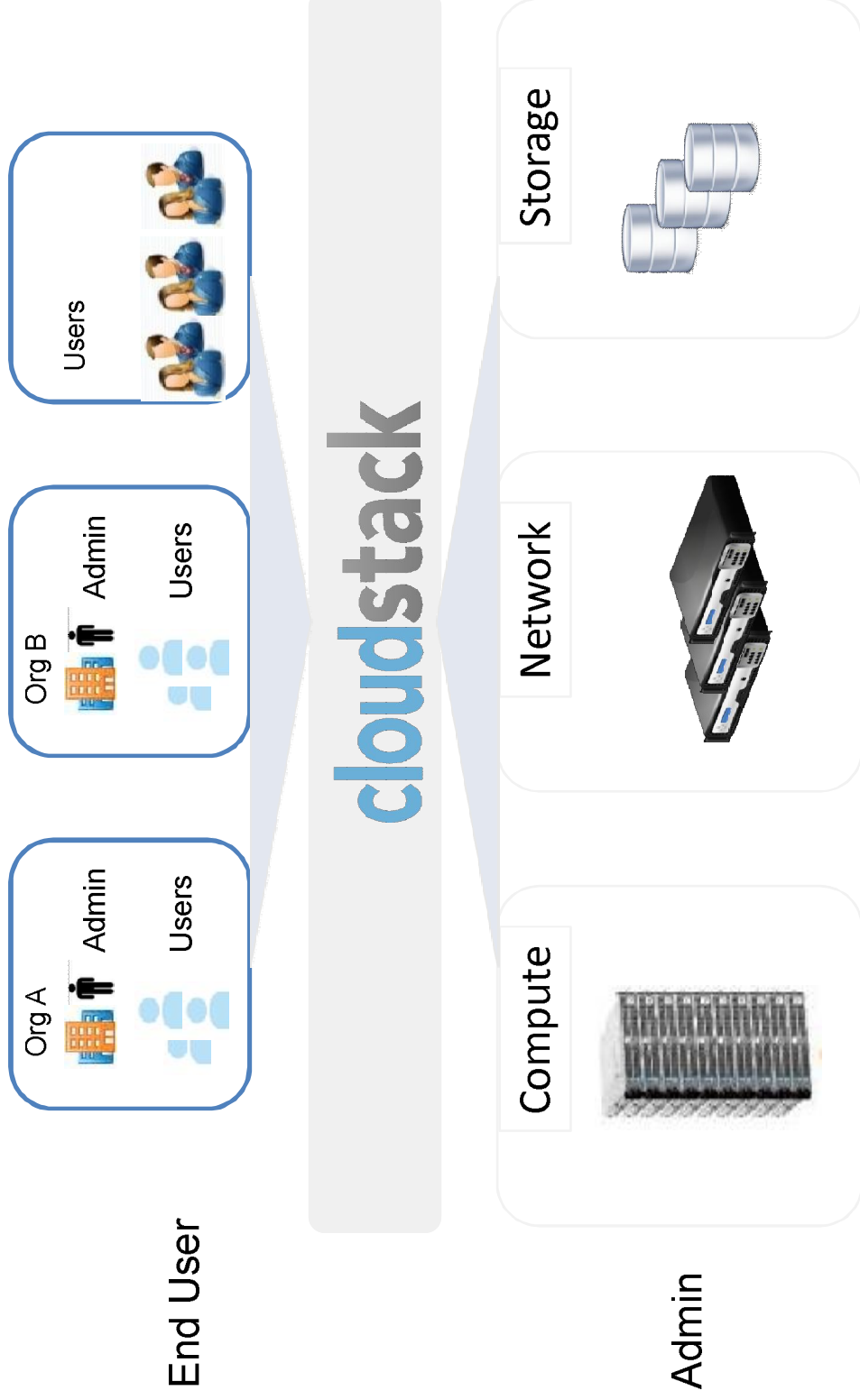
- Dedicated resources
- Security
- SLA bound
- 3<sup>rd</sup> party owned and operated

### Multi-tenant Public Cloud

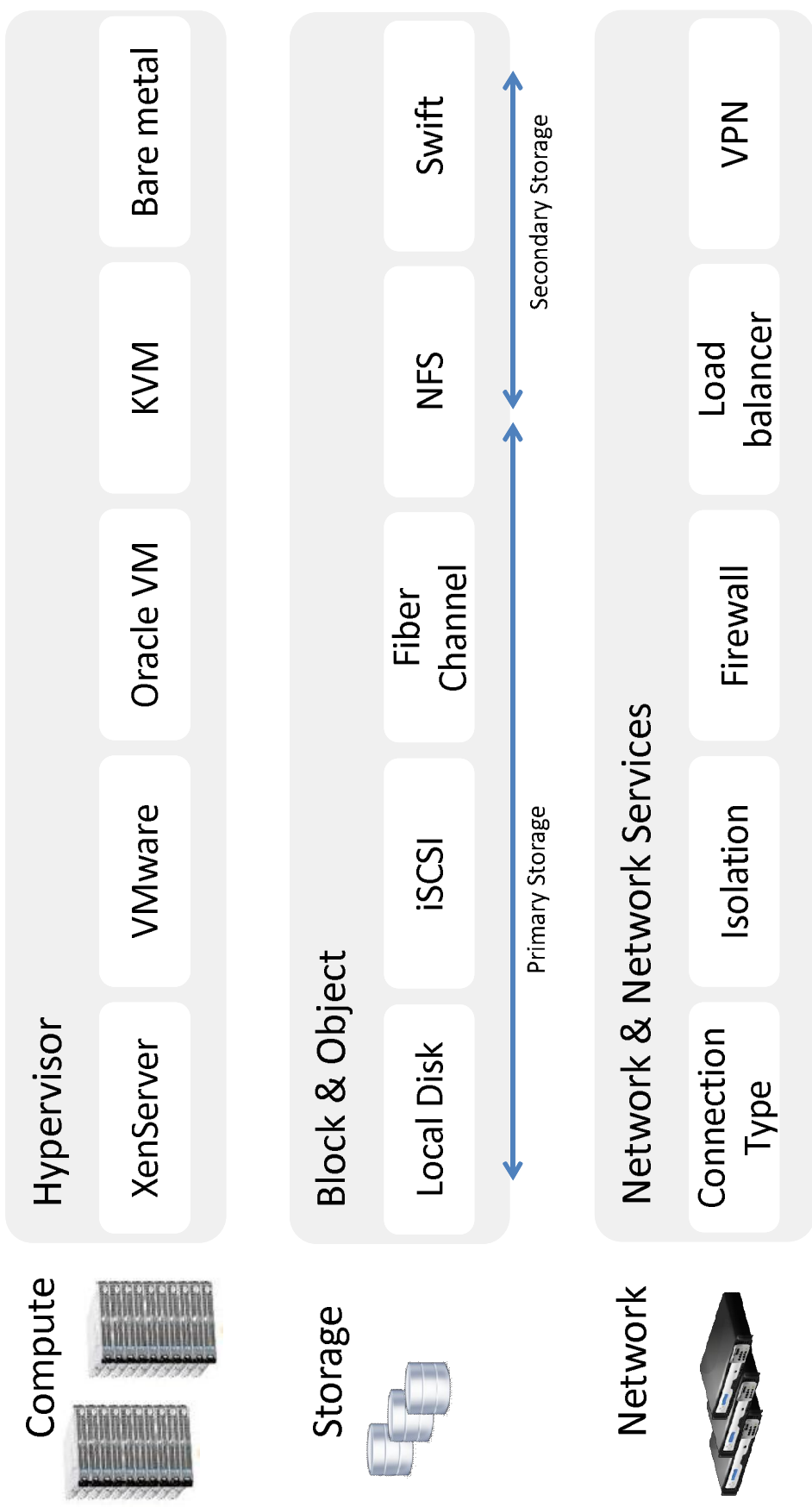


- Mix of shared and dedicated resources
- Elastic scaling
- Pay as you go
- Public internet, VPN access

# CloudStack Provides On-demand Access to Infrastructure Through a Self-Service Portal



# Open Flexible Platform



# Problem Definition

- Offer a scalable, flexible, manageable IAAS platform that follows established cloud computing paradigms
- IAAS
  - Orchestrate physical and virtual resources to offer self-service infrastructure provisioning and monitoring
- Scalable
  - 1 -> N hypervisors / VMs / virtual resources
  - 1 -> N end users
- Flexible
  - Handle new physical resource types
    - Hypervisors, storage, networking
  - Add new APIs
  - Add new services
  - Add new network models

## Problem Definition (contd)

- Manageable
  - Hide complexity of underlying resources
  - Rich functional end-user and admin UI
  - Admin API to automate operations
  - Easy install, upgrade for small -> large clouds
  - Simple scaling, automated resilience
- Established Paradigms
  - EC2 –inspired
    - Semantic variations based on cloud provider needs, hypervisor capabilities



# Feature Set Overview

