Intent Defined Storage for Container Era

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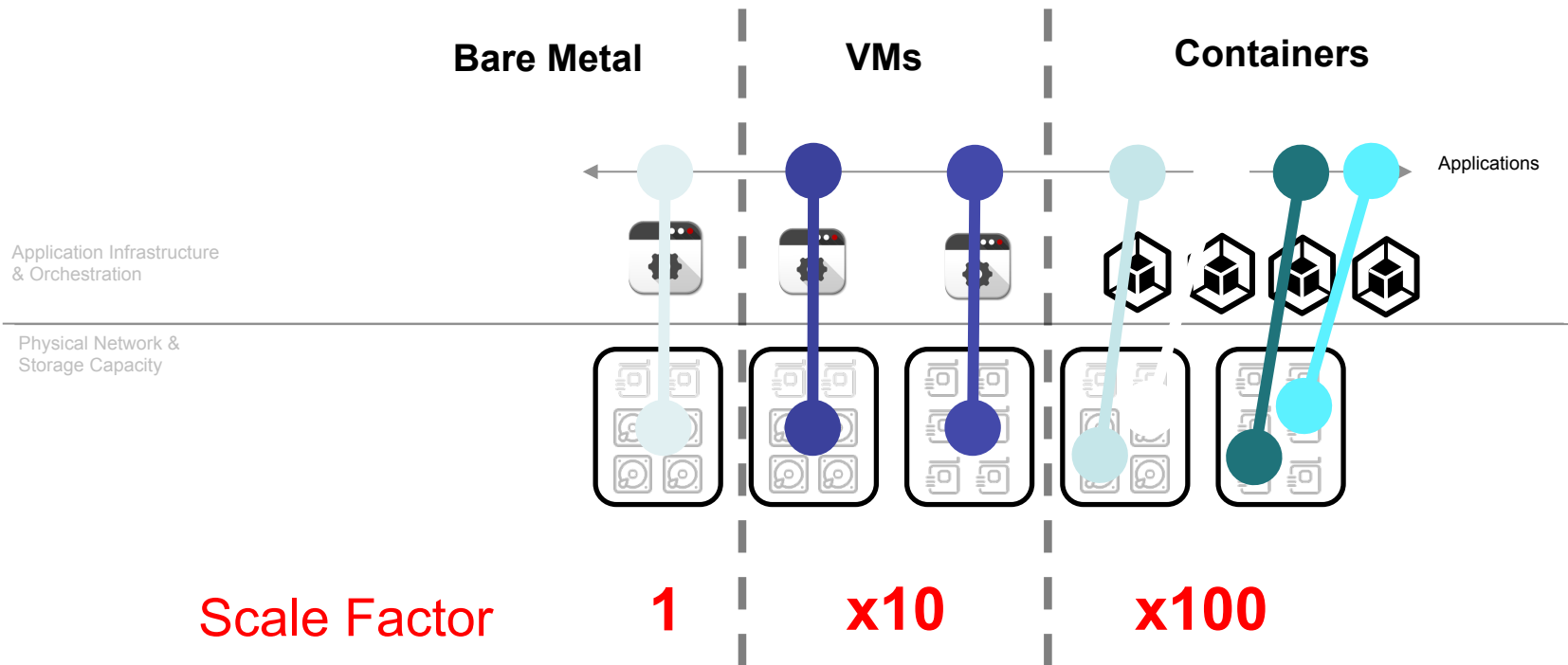Datera, Inc

Containers?

Containers are the new "virtual machines"

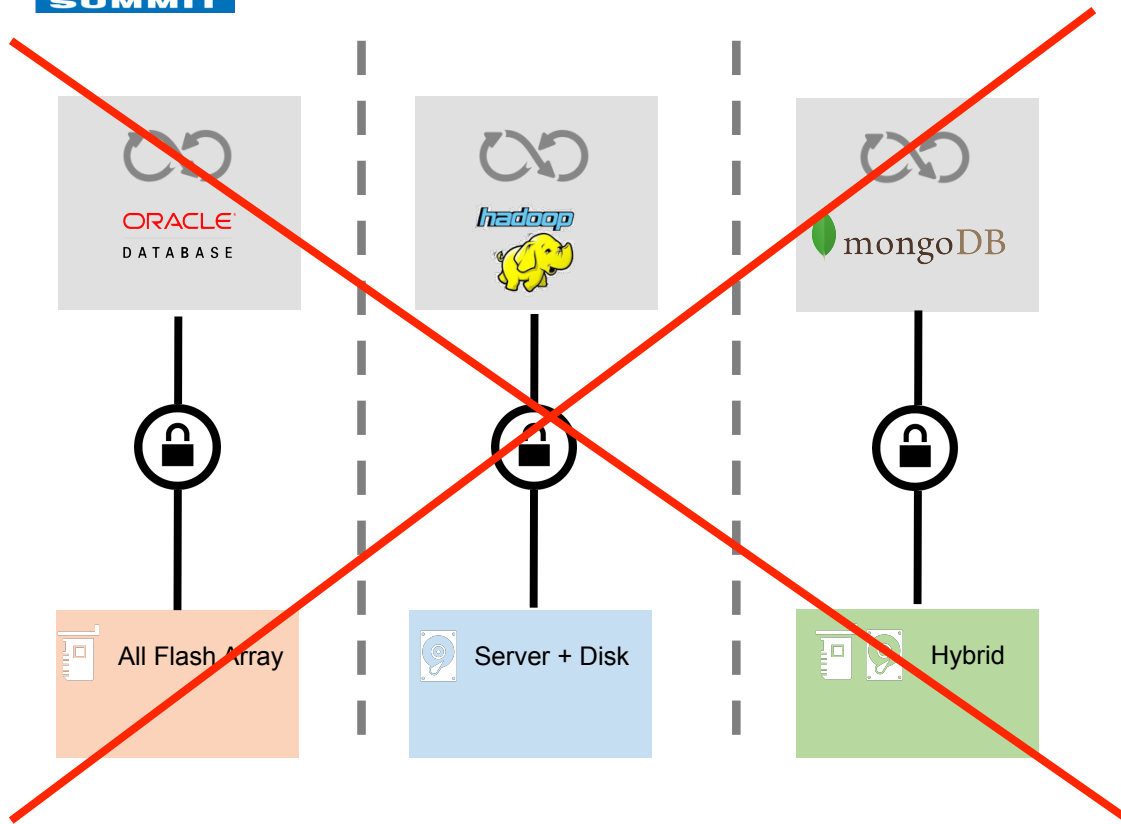Containers include the application and all of its dependencies

Shares the kernel – running as isolated processes in user space

Run on any computer, any infrastructure, and cloud

Scale Problem

Bare Metal | **VMs** | **Containers**

Applications

Application Infrastructure & Orchestration

Physical Network & Storage Capacity

Scale Factor   **1**   **x10**   **x100**

App-Infra Silos

ORACLE
DATABASE
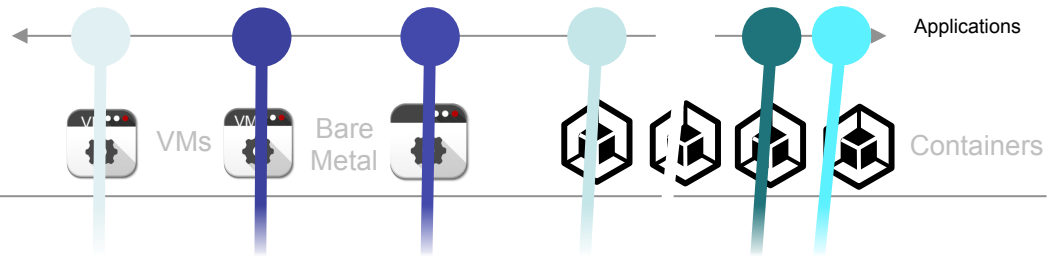
hadoop

mongoDB

All Flash Array

Server + Disk

Hybrid

Containers drive:

Workloads are decomposed to micro-services

Mix of micro-services to deliver a business application
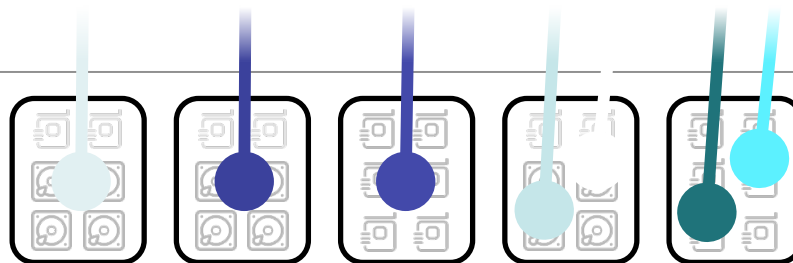
On-demand deployment, scaling and provisioning

4

"Mixed Apps + Scale" new reality

Applications

Application Infrastructure & Orchestration

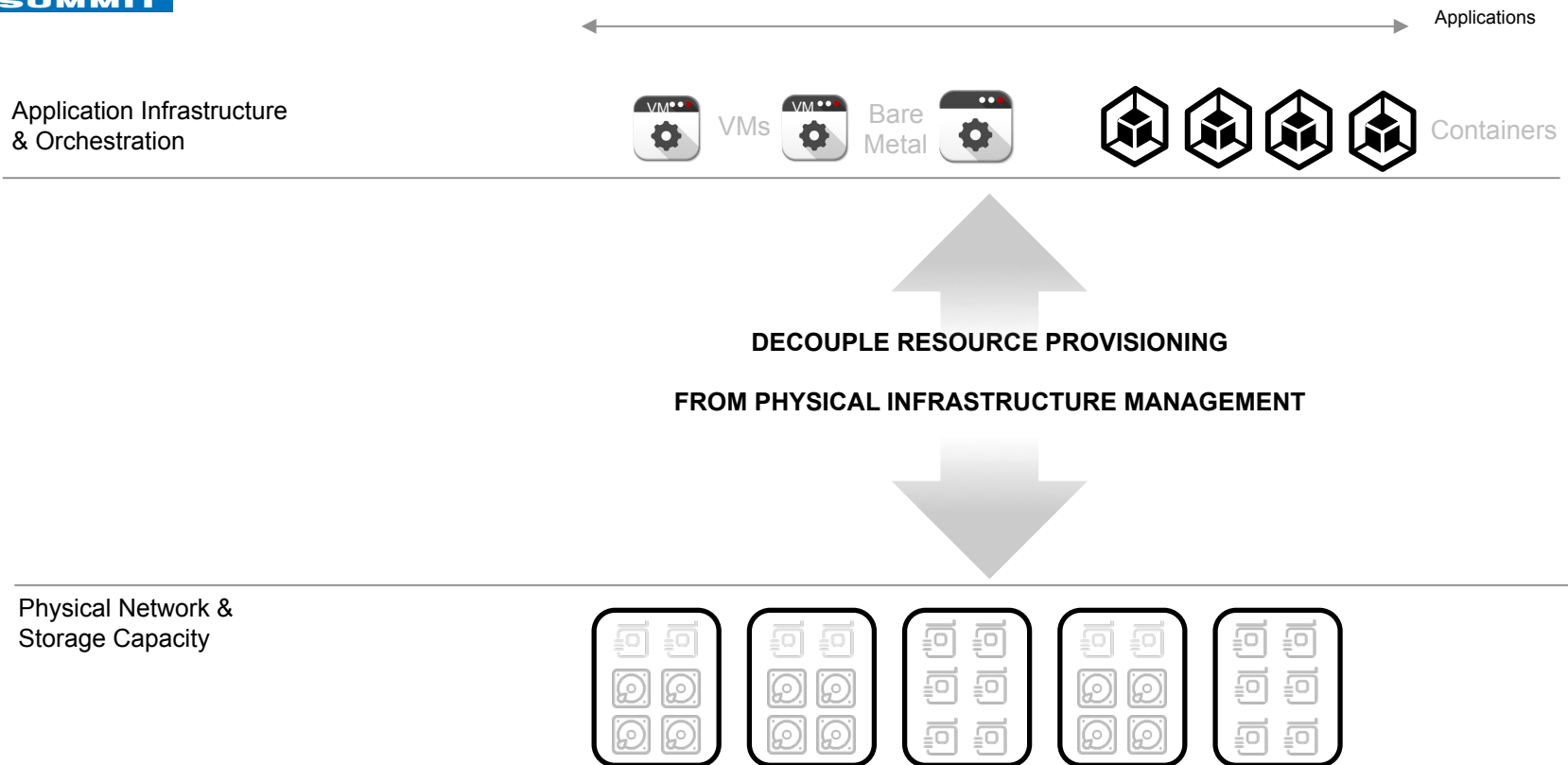VMs   Bare Metal   Containers

OPERATIONAL DISCONNECT

INFRASTRUCTURE FRAGMENTATION

LOW ASSET UTILIZATION

Physical Network & Storage Capacity

Solution: Decouple "App Intent" from infra

Applications

Application Infrastructure & Orchestration

VMs Bare Metal Containers

DECOUPLE RESOURCE PROVISIONING

FROM PHYSICAL INFRASTRUCTURE MANAGEMENT

Physical Network & Storage Capacity

Other Trends

- Hardware commoditization
- Software driven programmability
- Grow as you grow, technology refresh
- Multiple memory hierarchies – not all flash is equal
- Flat datacenter networking fabrics
- Cloud service model

Resource Pooling & Intent-Based Policy

MODE 1

Datacenter Defrag

MODE 2

Workload Set A
ORACLE DATABASE
Exchange
PERFORMANCE
All Flash Array

Workload Set B
hadoop
Spark
CAPACITY
Server + Disk

Workload Set C
mongoDB
cassandra
MIXED
Hybrid

Workload **A**
Policy Performance

Workload **B**
Policy Capacity

. . . .

Workload **C**
Policy Mixed

Elastic Data Fabric