3 steps to running VMware Apps "as-is" on Oracle Cloud

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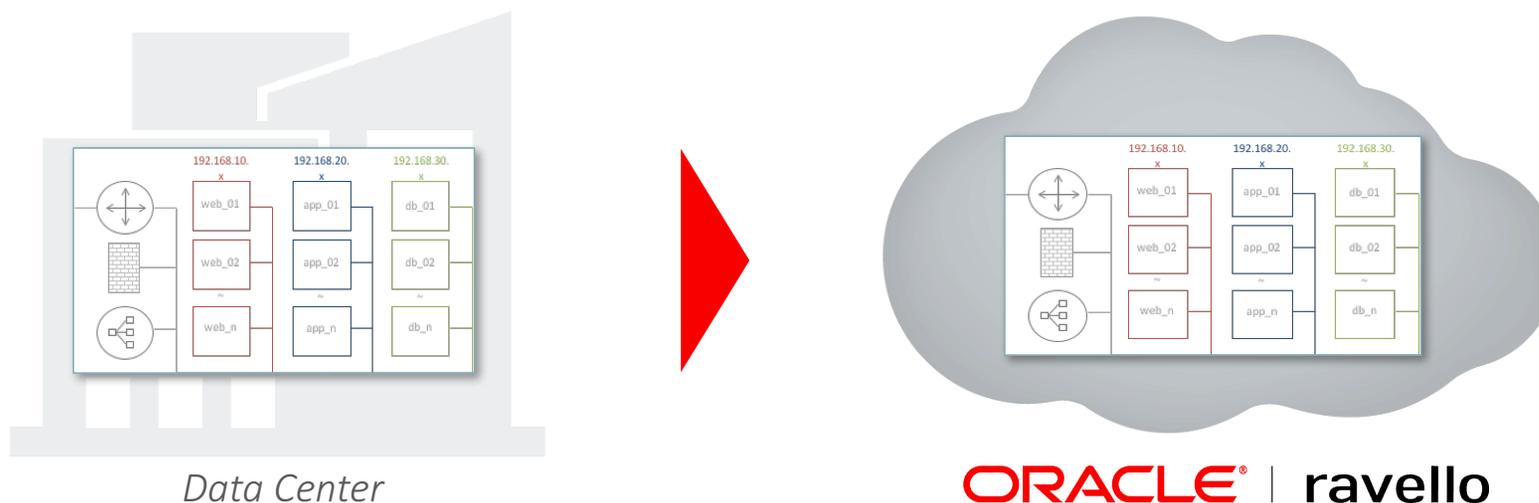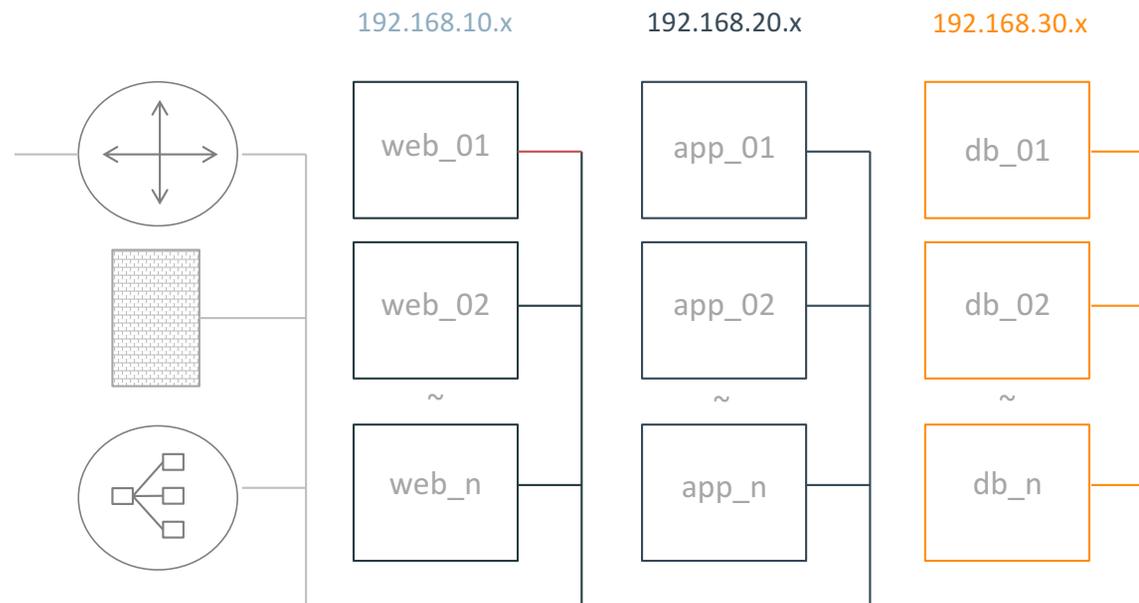Cloud Infrastructure

Ravello brings data-center capabilities to public cloud

Enables running VMware or KVM workloads on public cloud

without any changes

Same VMs, networking & storage

Data Center

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No workload changes → Data-center to cloud in **hours**, and **NOT months**

Complex application environment in data-centers

192.168.10.x   192.168.20.x   192.168.30.x

web_01	app_01	db_01
web_02	app_02	db_02
~	~	~
web_n	app_n	db_n

Always need more environments for
development, manual testing, automated testing, staging, UAT, security testing …
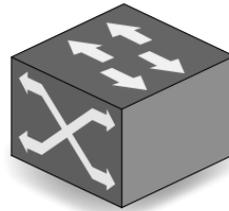*and also Production*

Challenges with the alternatives to Ravello

*Public cloud is very **different** from data-center*
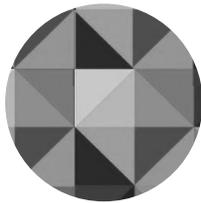
*VMware VMs **can't run** on most public cloud*

*Layer 2 networking **not** supported*
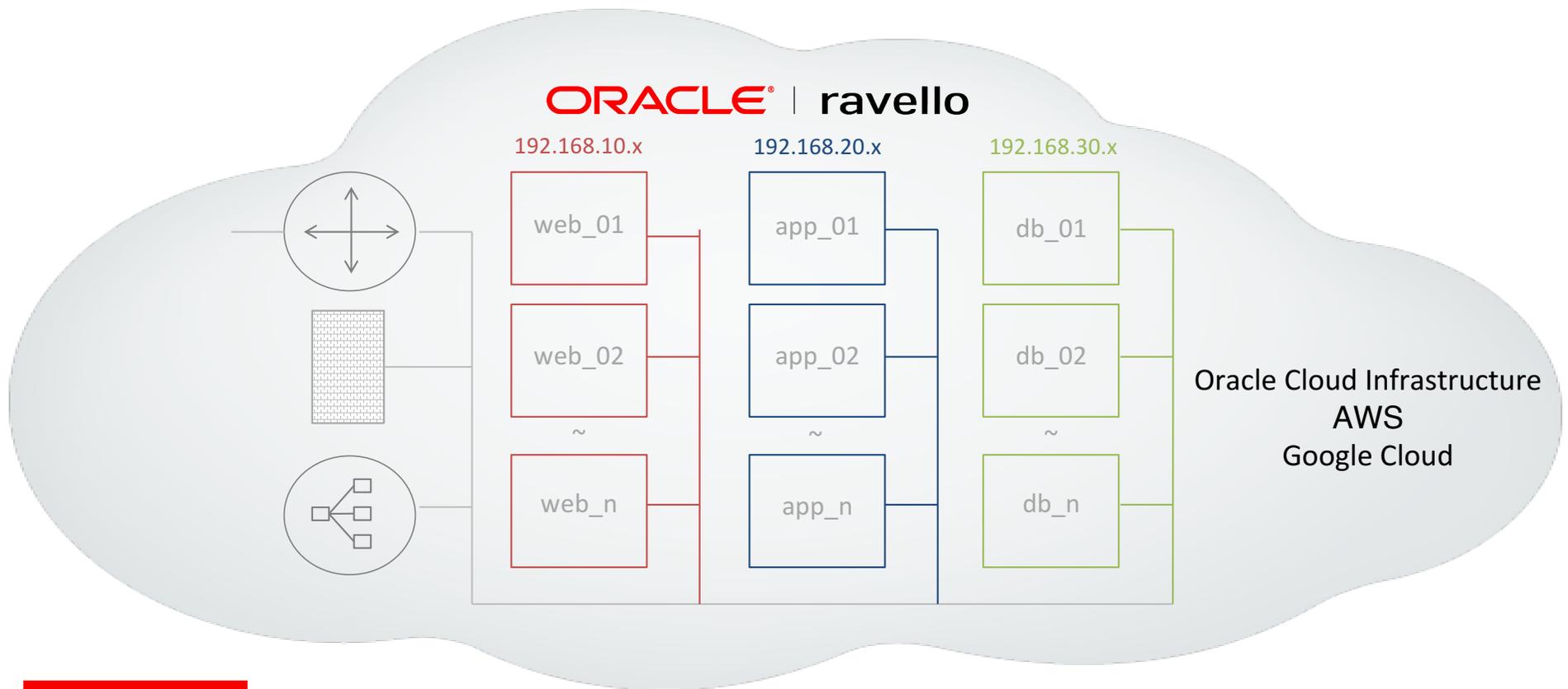
*Cloud network & security appliances **different from** data-center*

Re-platforming

Re-networking

Re-configuration

Migration requires application re-writes, re-platforming, re-networking –

expensive & **time consuming**

Change nothing – run it in the cloud

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192.168.10.x   192.168.20.x   192.168.30.x

web_01   app_01   db_01

web_02   app_02   db_02

~   ~   ~

web_n   app_n   db_n

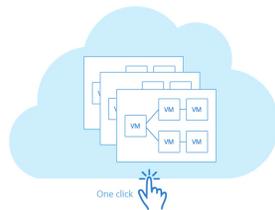Oracle Cloud Infrastructure
AWS
Google Cloud

Ravello accelerates the move to cloud

VMware app "as-is"
cloud based app a high fidelity replica of on premise

Datacenter-like Layer 2 networking
broadcast / multicast etc. works; same network configuration as on premise app

Blueprinting
no setup overhead with one click replica & move between cloud regions

Geographical reach
run workloads across 25 regions around the world

Live-demo

1. Upload your VMs (VMware or KVM)

2. Ravello auto-discovers the network {Edit if needed}
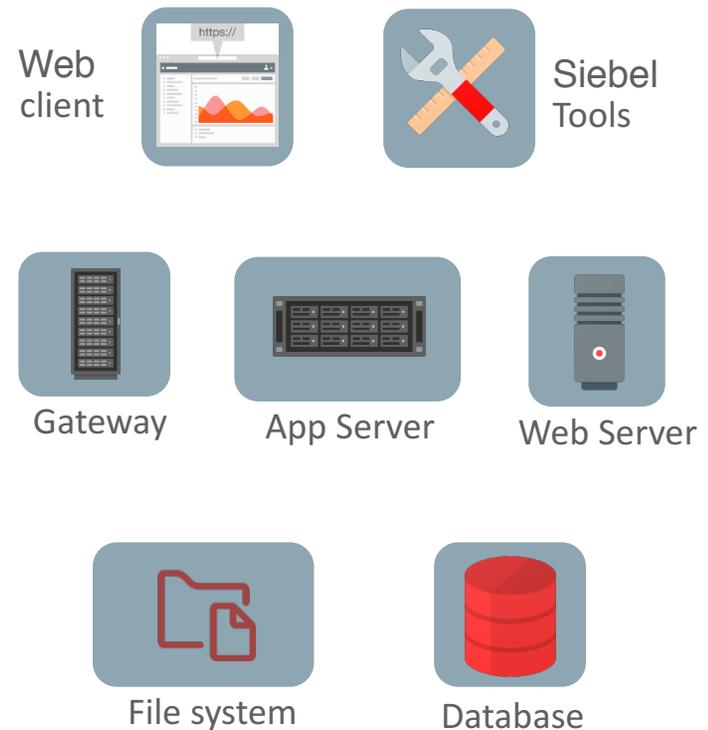
3. Deploy to public cloud

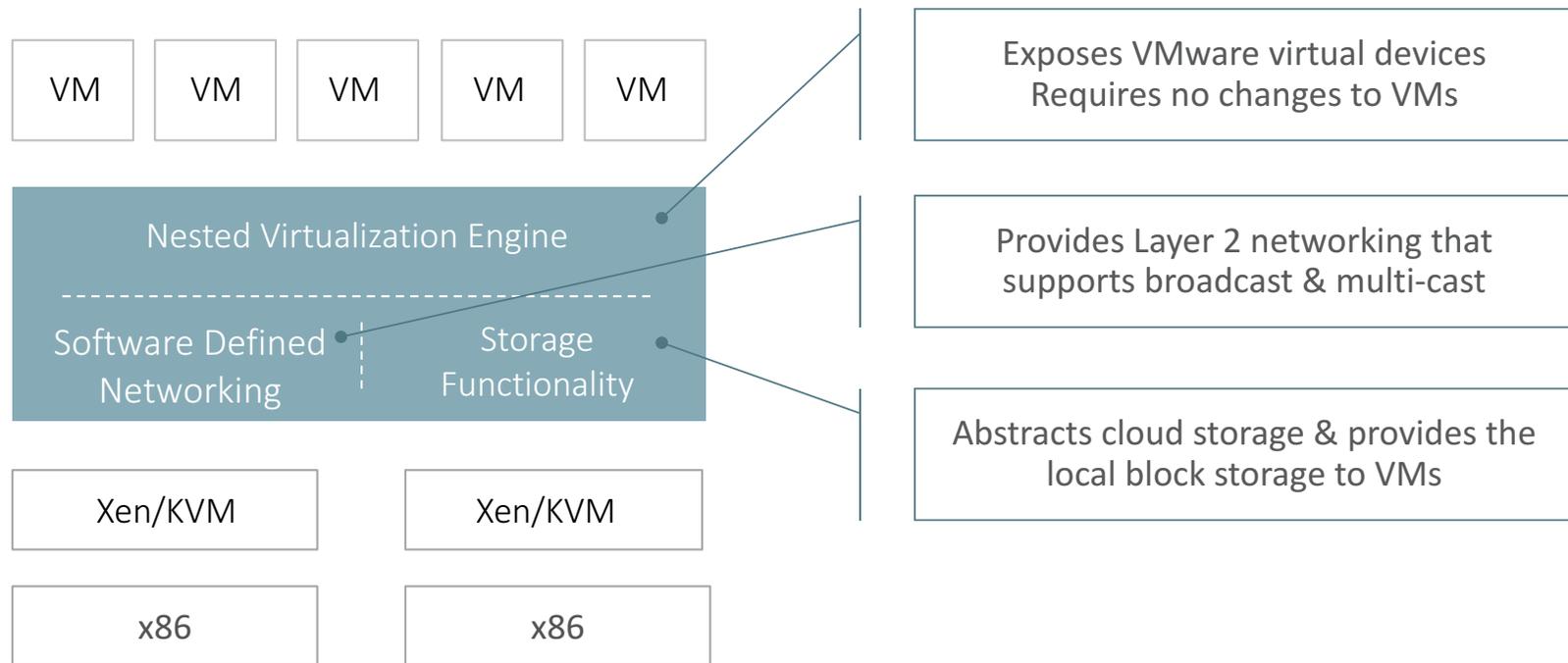   Spin up as many isolated copies as you need

Demo Environment
Siebel CRM setup on VMware ESXi

- Siebel Industry Applications 16.0
  - 7 VMs
    - Operating System: Oracle Linux 7.3
    - Database: Oracle Database 12*c*
- Main CRM Components:
  - Gateway Name Server
  - Application Server
  - Web Server
  - Web Client
  - Database

Web client

Siebel Tools

Gateway

App Server

Web Server

File system

Database

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Technology overview - HVX

| VM | VM | VM | VM | VM |

Nested Virtualization Engine

- -

| Software Defined Networking | Storage Functionality |

| Xen/KVM | Xen/KVM |

| x86 | x86 |

Exposes VMware virtual devices
Requires no changes to VMs

Provides Layer 2 networking that
supports broadcast & multi-cast

Abstracts cloud storage & provides the
local block storage to VMs

Ravello on Oracle Cloud Infrastructure

- Leverages the unique access that Ravello has on OCI together with the state-of-the-art platform to offer a far superior user experience
  - Utilize **Hardware support for nested virtualization**
  - Utilize **bare-metal instances** where applicable
  - Utilize **deep network integration** to natively peer Ravello environments with OCI's Virtual Cloud Networks (VCN)
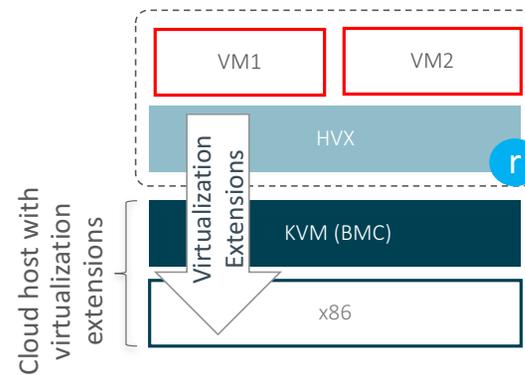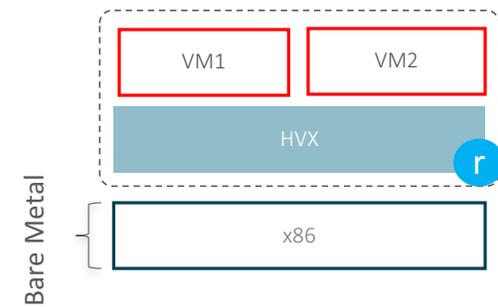
Flavors of nested virtualization

Oracle Cloud Infrastructure

**Software based
nested virtualization**
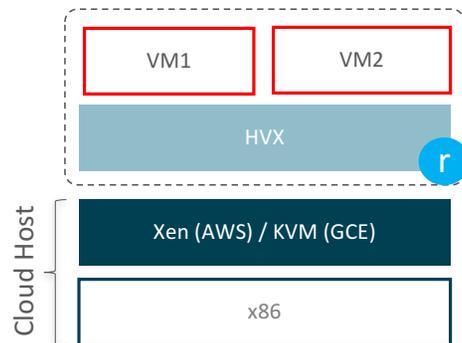
**Hardware assisted
nested virtualization**

**Running directly
on bare-metal**

Ravello on Oracle Cloud Infrastructure (OCI) NEW

Up to 14X performance boost compared to Ravello on other clouds

Enhanced Network Services VPN, FastConnect, Internal connectivity Oracle PaaS/IaaS

4X bigger VMs compared to Ravello on other clouds (up to 32vCPUs/VM)

HA

Availability Groups Host anti-affinity to spread mission critical workloads across availability domains

Live-demo

Live Performance Test

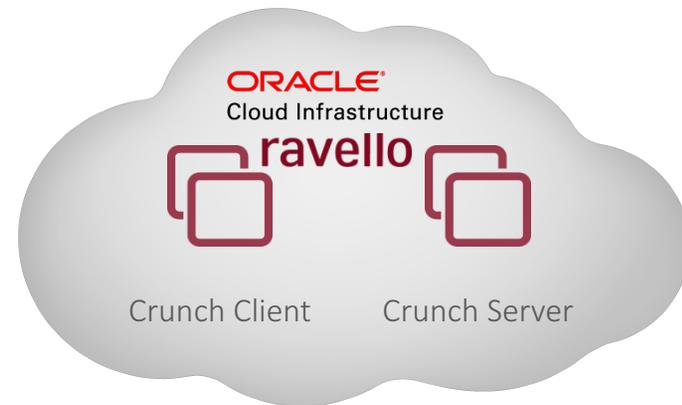Ravello on Oracle Cloud Infrastructure vs. Other Public Clouds

Performance Test Setup

Crunch Client

- Creates in parallel 8 random files (20MB each) and writes them to disk – **cpu and disk write intensive**
- Encrypts (AES256) the 8 random files and write the encrypted files to disk – **disk read - cpu - disk write intensive**
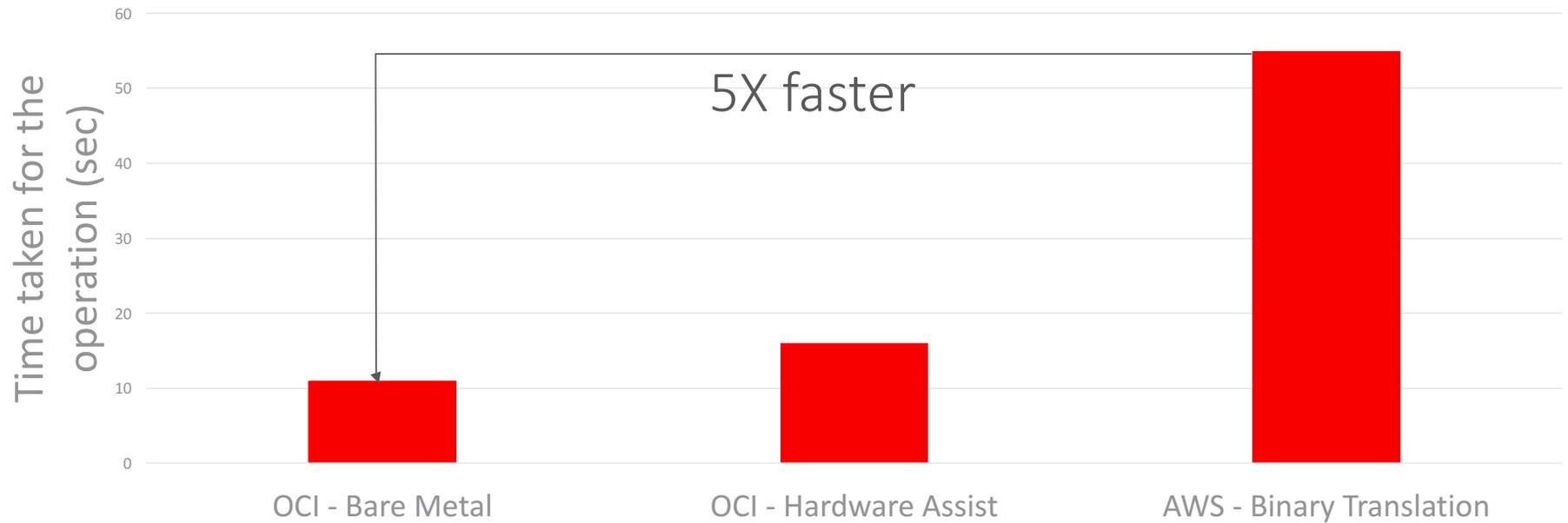- Sends all files over the network to the server – **network intensive**

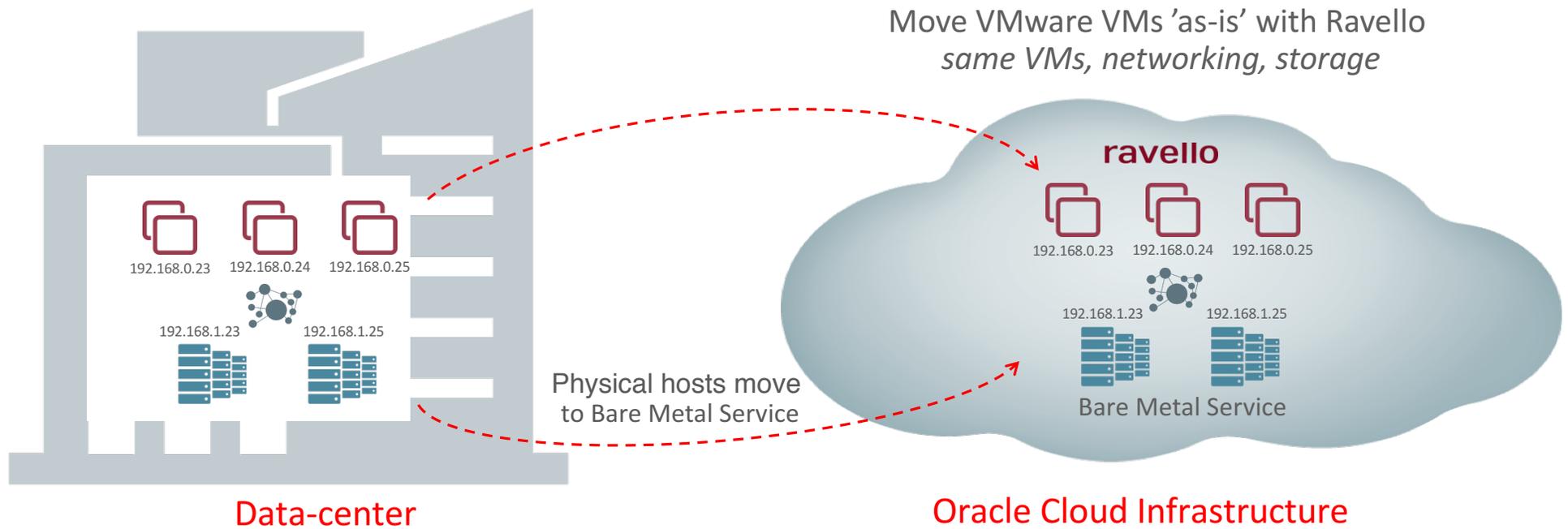## Crunch Server

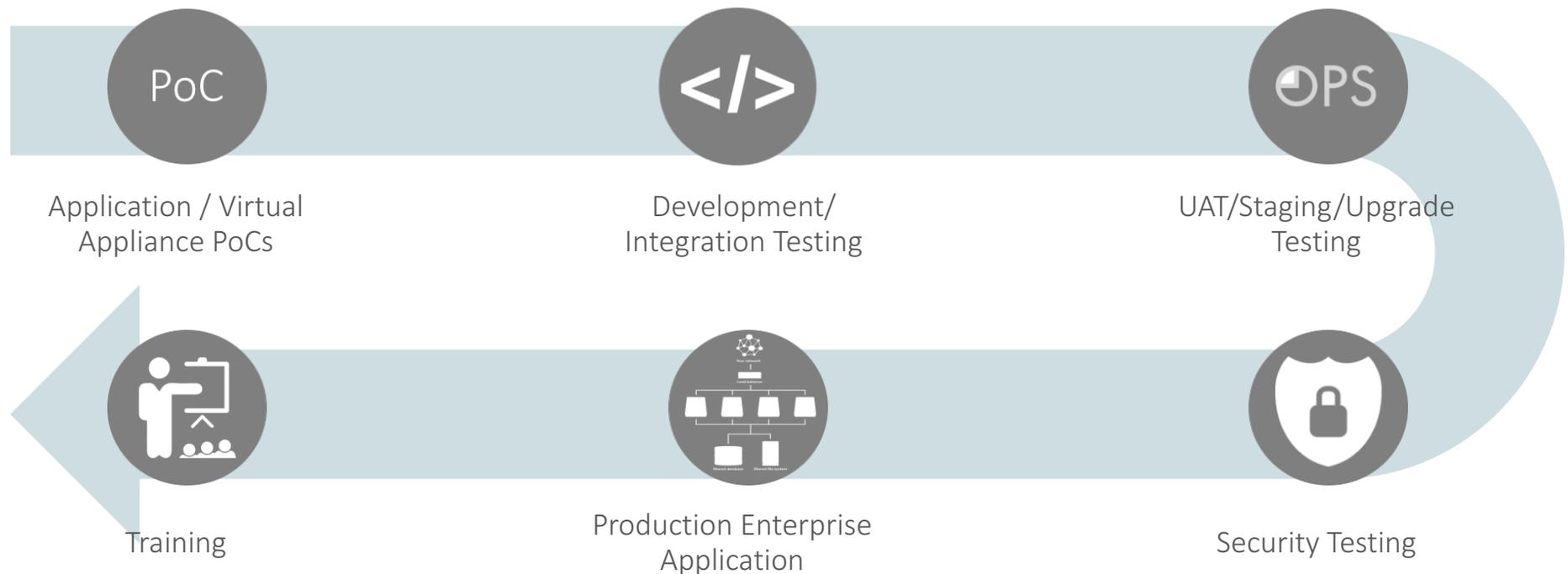- Listens to TCP traffic and stores files to disk

Performance Results

Ravello running on

5X faster

Time taken for the operation (sec)

OCI - Bare Metal   OCI - Hardware Assist   AWS - Binary Translation

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Easily move apps on VMware & physical hosts to cloud

Move VMware VMs 'as-is' with Ravello
same VMs, networking, storage

ravello

192.168.0.23   192.168.0.24   192.168.0.25

192.168.1.23   192.168.1.25

Bare Metal Service

192.168.0.23   192.168.0.24   192.168.0.25

192.168.1.23   192.168.1.25

Physical hosts move
to Bare Metal Service

Data-center

Oracle Cloud Infrastructure

Ravello enables data-center capabilities on public cloud for every stage of enterprise application lifecycle

PoC

Application / Virtual
Appliance PoCs

</>

Development/
Integration Testing

OPS

UAT/Staging/Upgrade
Testing

Training

Production Enterprise
Application

Security Testing

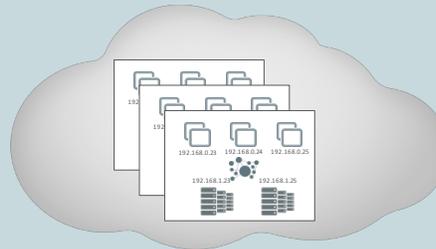# Ravello brings agility and delivers savings

No 'migration' costs

Move to cloud "as-is" saving **time** & **costs**
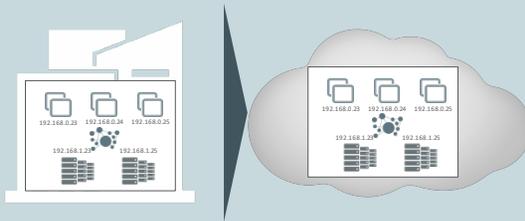
Business agility

No setup overhead
Rapid deployment through infrastructure cloning

Cost savings

40-60% savings compared to running on premise

cloud.oracle.com/Ravello

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