Oracle Systems Strategy

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Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Oracle Systems Strategy

Superior Runtime Capability and Business Results

Best in Class Building Blocks	IP Differentiated Value	Interoperability and Integration
Develop product lines that each independently have market-leading price/performance and security	Deliver IP-based differentiation that provides breakthrough value especially when used with Oracle applications	Engineer products to integrate together to provide differentiated value for public and private cloud

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Oracle Offers The Most Complete And Integrated Infrastructure For All Application Deployment Models

Oracle Cloud

Cloud at Customer

Private Cloud & Enterprise Systems
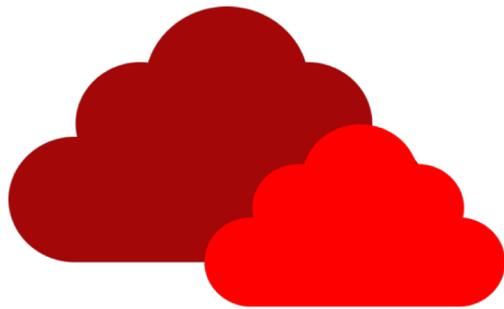
- **IaaS, PaaS, SaaS**
- **Runs in Oracle Cloud**
- **Managed by Oracle**

- **Subscription-based Systems**
- **Behind Your Firewall**
- **Managed by Oracle**

- **License Software**
- **In Your Datacenter**
- **Managed by You**

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Oracle Offers The Most Complete And Integrated Infrastructure For All Application Deployment Models
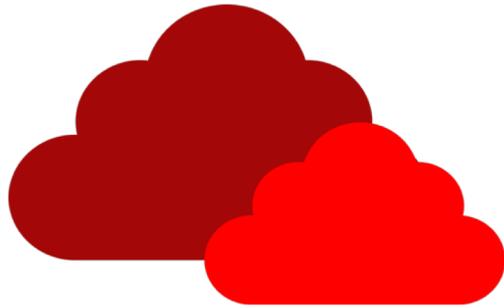
Oracle Cloud

Cloud at Customer

Private Cloud & Enterprise Systems

Application and Data Portability Across Infrastructure

Oracle Systems Technologies Power All Of Our Infrastructure

Same Technology, Same Architecture, Same Skill Sets

Oracle Cloud
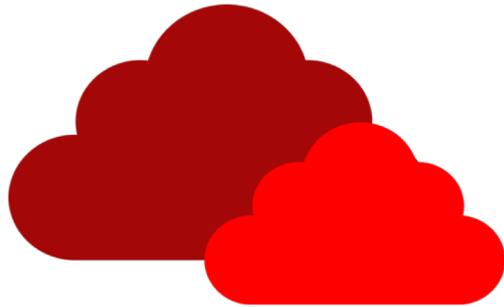
Cloud at Customer

Private Cloud & Enterprise Systems

Servers – Storage – Networking – Virtualization – Operating Systems
Development Tools – Management Tools

How Do We Do it?
# Hardware And Software Engineered To Work Together

Legacy Implementation
### High Cost and Complexity

Engineered Systems
### Best Runtime and Business Results

- Performance
- Efficiency
- Security
- Reliability
- Scalability
- and more…

Oracle Uses The Same Engineered Approach For Cloud

Engineered Systems
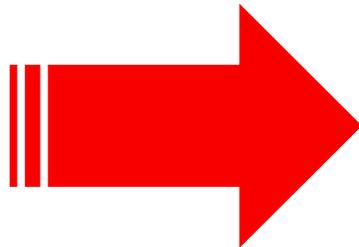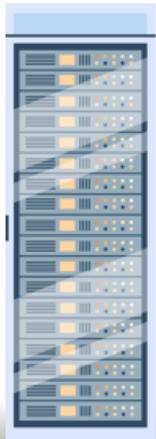
Engineered Services

Oracle
Cloud

- Performance
- Efficiency
- Security
- Reliability
- Scalability
- and more...

AWS Adds Risk And Complexity

Migrate, Integrate and Test Your Existing Apps – OR – Rewrite Everything

On-Premises
Applications
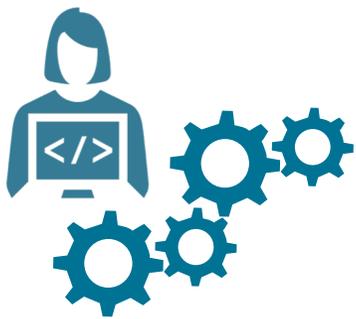
Amazon

One Way

- **You Port, Integrate, Test and Manage Your App**
- **No Real Cost Savings**

IaaS

- **Rewrite Everything Using AWS Services**
- **No Going Back**

AWS PaaS

IaaS

Oracle Infrastructure Maximizes Choice

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Application and data portability across:

- Oracle Cloud
- Cloud at Customer
- Private Cloud
- Enterprise Systems


AMAZON

Manage Yourself – *OR* – Rewrite

| AWS PaaS |
|:--------:|

IaaS		IaaS

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Oracle's Complete Systems Portfolio

Cloud Services

Iaas
Paas
Saas

Engineered Systems

x86 X7
SPARC S7/M8

Best in Class Products
Core Technologies

Deeply Co-Engineered
Hardware and Software

Servers

x86 X7
SPARC
S7/M7/M8

Virtualization & OS

Oracle VM
Oracle Linux
Oracle Solaris

Storage

ZFS
Archive
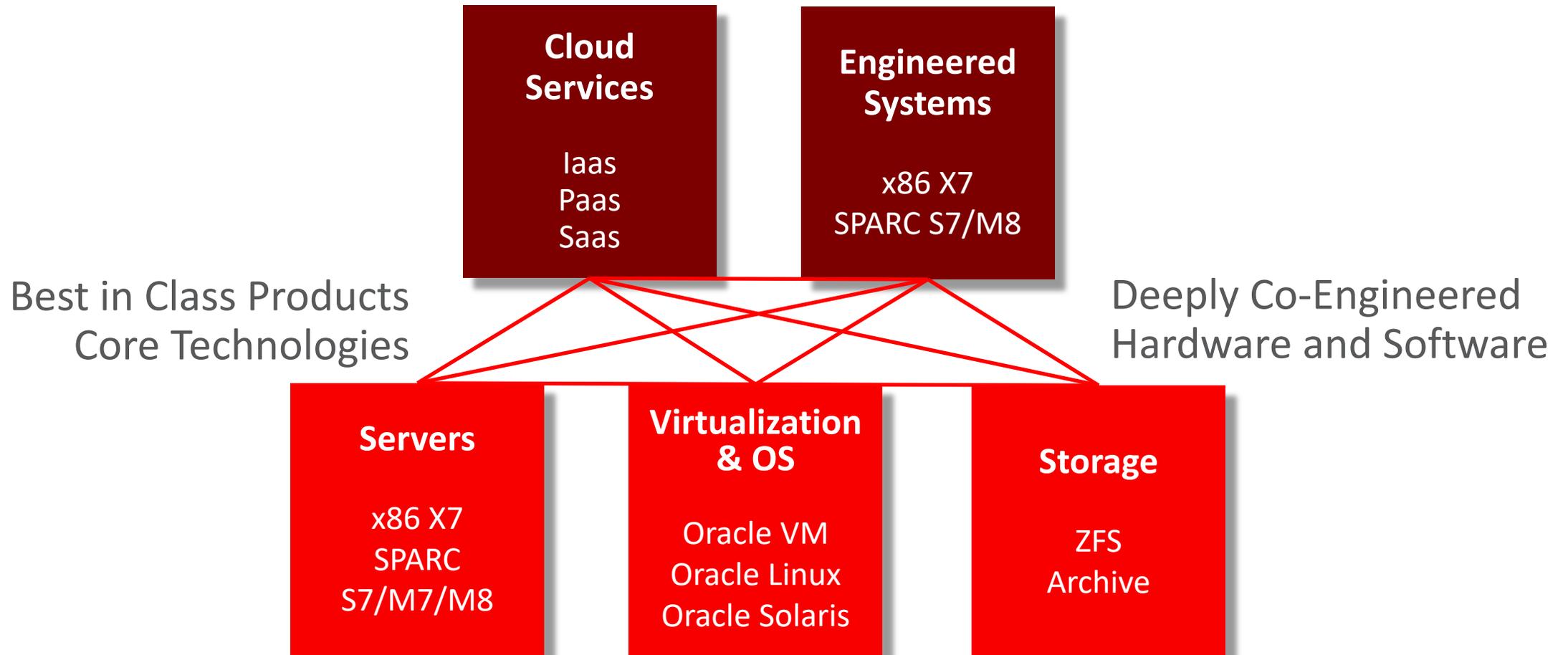
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Oracle Systems Strategy Hardware

Oracle Exadata Strategy

Dramatically Better Platform for All Database Workloads
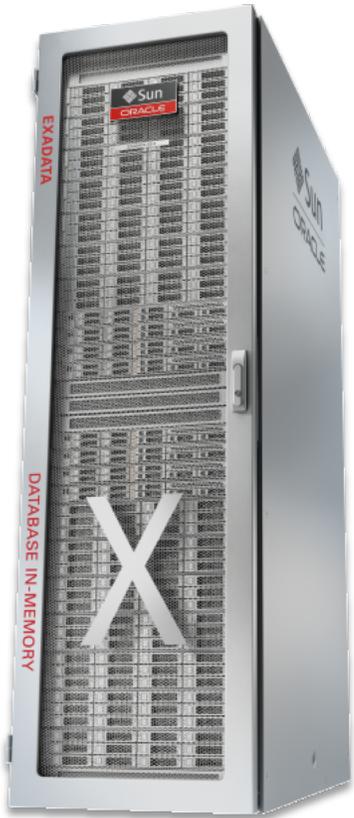
- **Ideal Database Hardware** – Scale-out, database optimized compute, networking, and storage for fastest performance and lowest costs

- **Smart System Software** – Specialized algorithms vastly improve all aspects of database processing: OLTP, Analytics, Consolidation

- **Full-Stack Automation** – Automation and optimization of: configuration, updates, performance, resource management

Identical On-Premises and in Cloud

Oracle Exalogic Strategy

Extreme Performance for Middleware and Applications
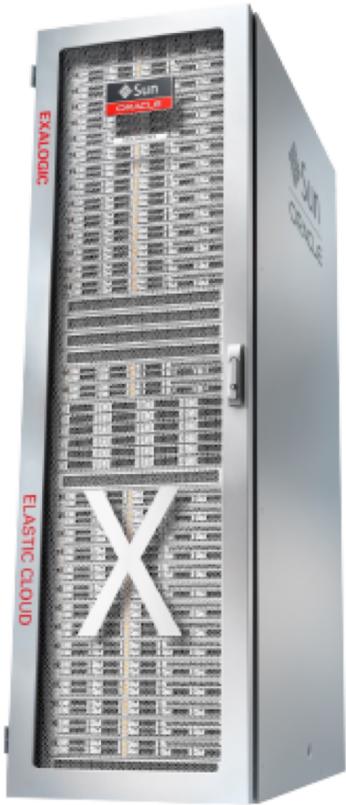
- **Ideal Mid-Tier Hardware** – Scale-out, middleware and application optimized compute, networking, and storage for fastest performance and lowest costs

- **Exalogic Elastic Cloud Software** – Integrated firmware, hypervisor, OS, and tools for performance and rapid provisioning

- **Full-Stack Automation** – Automation and optimization of: configuration, updates, performance, resource management

Performance Optimized for MW and Apps

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Oracle SuperCluster Strategy

**The World's Most Powerful Database and Application Machine**
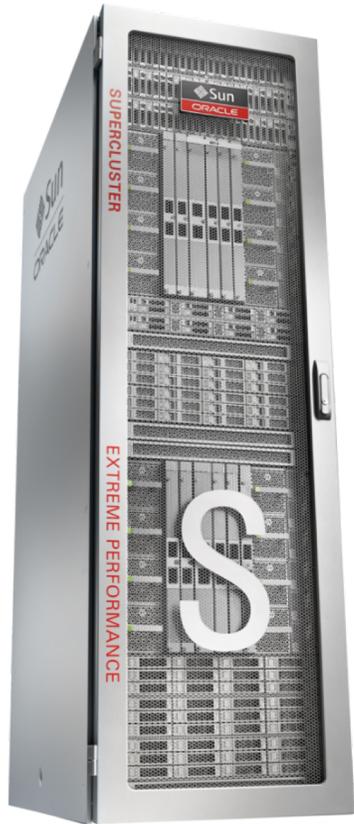
- **High Performance Database/Java** – SPARC-powered Database and application servers complimented by Exadata storage servers and software

- **Secure by Default** – Deeply integrated security and compliance to minimize attack surface area

- **Turn-key Mission Critical Private Cloud** – Multi-tenant performance and reliability for mission critical databases and applications

Complete Mission Critical Infrastructure

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Oracle MiniCluster Strategy

High End Enterprise Capability in a Mid-Range System
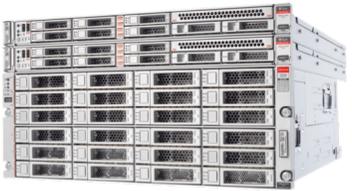
- Simplicity & Savings – Simple hardware architecture with automated basic administration, dramatically reducing operational effort, training

- One-Click Security & Compliance – Automation of security and compliance steps to reduce security expertise requirements

- High End Capability at Low Entry Point – Lower hardware cost, no Exadata storage server software to license, and lower OPEX

Reduced Operational Skills Requirements

Oracle Database Appliance Strategy

Engineered Systems Within Reach for De-Centralized and Remote Office

- **Simplify Operations** – Standardized, proven appliance configurations requiring no special skills to manage

- **Optimize for Oracle Database** – Tight integration of all Oracle hardware, firmware, OS, database, and applications

- **Affordable Entry Point** – Low cost entry models reduce operational and acquisition costs

Purpose-Built Appliance For Oracle Database

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Oracle Zero Data Loss Recovery Appliance Strategy

World's Best Database Protection

- **Eliminate Data Loss** – Zero to sub 1sec Recovery Point Objective

- **Shrink Backup Windows** – Efficient incremental backups forever, all backup and tape processing offloaded

- **Recovery Readiness** – Continuous restore validation, end to end recovery status

- **Cloud-scale Protection** – Easily protect all databases in the data center

Innovative Value Beyond Traditional BU&R

Oracle Private Cloud Appliance Strategy

Breakthrough Efficiency for Private Cloud IaaS
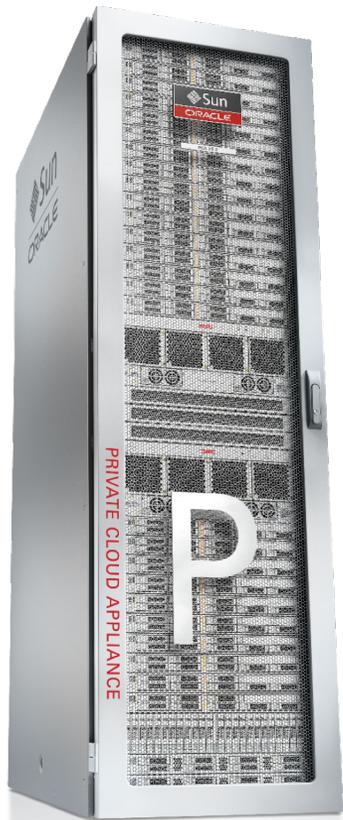
- **Private Cloud in Minutes** – Rapidly provision applications and databases for fastest time to market

- **Software Licensing Reduction** – Lower virtualization and Oracle software licensing costs

- **Heterogeneous Workloads** – Oracle and 3rd party applications on Linux, Solaris, and Windows

Pre-built and Ready to Use

Oracle Big Data Appliance Strategy

Open Infrastructure to Store, Analyze, and Manage Big Data

- Operational Simplicity – Elastic cluster growth and node migration to expand as data and requirements grow

- Open Analytics Platform – Oracle and 3rd party analytics, any FOSS or commercially available toolkit

- Simplify Access to All Data – Oracle Big Data SQL for data access using Oracle SQL or any other API (node.js, REST, etc.)

Hadoop Optimized, Oracle Database Integration

Oracle x86 Server Strategy

Most Secure Platform for Cloud and Enterprise IT

- **Cloud First** – Security, performance, efficiency, and scalability designed in for the demanding requirements of the superscale Oracle Cloud environment

- **Enterprise-Class, Secure Building Blocks** – Oracle Cloud, Engineered Systems, servers, and storage

- **Optimized for Oracle** – Co-engineered with Oracle Linux and Oracle Database to run best in every deployment model

Engineered for Cloud

Oracle SPARC Server Strategy

Most Advanced Platform for Mission Critical Computing

- **Fastest Microprocessor** – SPARC processors optimized to run database and Java faster and more efficiently

- **Software In Silicon** – Co-engineer processor with OS, Database, and Java for best runtime performance, availability, and security

- **Scalable and Predictable** – Low latency, high bandwidth systems to provide massive scaleability predictable performance

Mission Critical Infrastructure

Oracle ZFS Storage Strategy

NAS and Data Protection For Oracle Database

- **Oracle Database Optimized** – Specific protocols and tools designed to run Oracle Database more effectively

- **Performance and Efficiency** – All flash and HSP architecture with data reduction technologies to reduce storage footprint

- **Easy Administration** – Automated administration, tuning, and resource management with an intuitive system interface

Intelligent Autonomous Storage System

Oracle Archive Storage Strategy

Built with Oracle Software for the Enterprise

- **Highest Reliability** – Active-active architecture designed for 24x7 uptime and greater reliability than disk

- **Space and Cost Effectiveness** – Lower cost and scalability than disk-based solutions for data protection and archive

- **Oracle Cloud Integration** – Deliver archive cloud service with centralized policy-based management across Cloud and on-premises environments

Most Reliable Archive Storage

Oracle Systems Strategy Software

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Oracle Virtualization Strategy

An Open Foundation for Cloud

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VM

- Open – Xen-based, hardware vendor neutrality, and no lock-in

- Global Standard Virtualization – Same software and customer experience across x86 and SPARC platforms with guest OS support for Linux, Windows, and Solaris

- Cloud and On-Premises – Performance at scale and under heavy load, management integration with Enterprise Manager and OpenStack

Engineered For Cloud

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Oracle Linux Strategy

A Better Linux for Enterprise and Cloud

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Linux

- **Business Critical Cloud** – Business critical workload platform enhanced by Unbreakable Enterprise Kernel, ksplice, DTrace

- **Global Standard OS** – Same software and customer experience across Oracle Cloud, Engineered Systems, and servers

- **Cloud and On-Premises Portability** – Container and VM deployments using Oracle Container Registry for fast and simple installations and migrations

Engineered For Cloud

Oracle Solaris Strategy

Best UNIX For Mission Critical Workloads

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Solaris

- Continuous Delivery Model – Innovation and critical fixes through dot releases, Quarterly Critical Patch Updates, and monthly Support Repository Updates

- Secure and Stable – Integrated security and availability features to simplify deployments and operations

- Oracle Database Integration – Data/systems management, networking, and performance features to enable optimal Oracle Database results on SPARC/Solaris

Mission Critical Operating System

Oracle Enterprise Manager / Ops Center Strategy

Unified Strategy for Oracle Systems Management

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Enterprise Manager
Ops Center

- Administrative Productivity – Increase hardware asset utilization, deploy software faster, single interface point for hardware and software management

- Hybrid Cloud Management – Same operational practices for on-premises and cloud

- Lifecycle Management – Inventory, configuration, monitoring, patching, compliance, self-service provisioning, chargeback

Single Management Tool for On-Premises and Public Cloud

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On-Site General Purpose Enterprise Private Cloud HA

The Engineered Data Center

General Purpose Apps & Shared Storage
App Consolidation
Apps as Service

Databases
DBaaS
OLTP, Warehouse
DB Consolidation

Database Protection
Database Back Up
Database Recovery

Big Data Analytics
Hadoop
NoSQL
Unstructured Data

F P   X X   R   B

PCA   ZFS   Exadata   ZDLRA   BDA

Small Enterprise, Remote Office / Branch Office HA

Mission Critical UNIX Capabilities For the Mid-Range

**Applications &
Shared Storage**
App Consolidation
Apps as Service

Databases
DBaaS
OLTP, Warehouse
DB Consolidation

MiniCluster

Database Protection
Database Back Up
Database Recovery

ZFS

Archive
Long-Term Retention

Archive
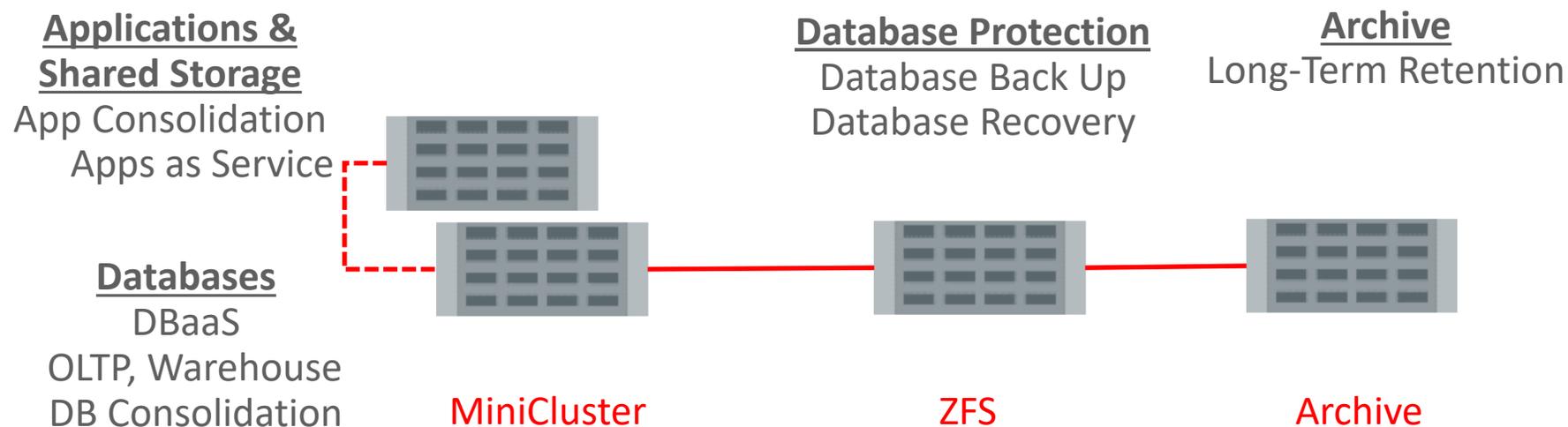
Integrated Cloud
Applications & Platform Services

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