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# Executive Overview M7 and SuperCluster M7 Part 1

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<https://blogs.oracle.com/Solaris11Life>  
Nov, 2015

# 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.

# Software Lifecycle Engineering

## Where we're coming from...

- Part of Global Engineering
- Improve our Customers' Lifecycle Experience in any way we can
  - Internal processes and tools, QA / auditing, eliminating classes of issues at source
  - Critical issue investigation, feedback loop to Engineering, product improvement
  - Conclusion: How well a system is initially installed and configured is the key factor determining the quality of the customer's lifecycle experience
  - Asked to implement the SuperCluster install & configuration utilities and manage the maintenance lifecycle
    - Best practice, robust, secure and maintainable installations

# Engineered Systems



**Engineered Systems** vastly reduce risk as Engineered Together, Tested Together:

- Best practice install and configuration
- Enables rapid deployment
- Increased test effectiveness
- Much faster RCA and bug fix delivery
- Proactive roll-out, safety-in-numbers effect
- Quarterly Full Stack Download Patches (QFSDP)
- Dedicated Support



# Oracle SuperCluster: Explosive Growth, Worldwide Adoption

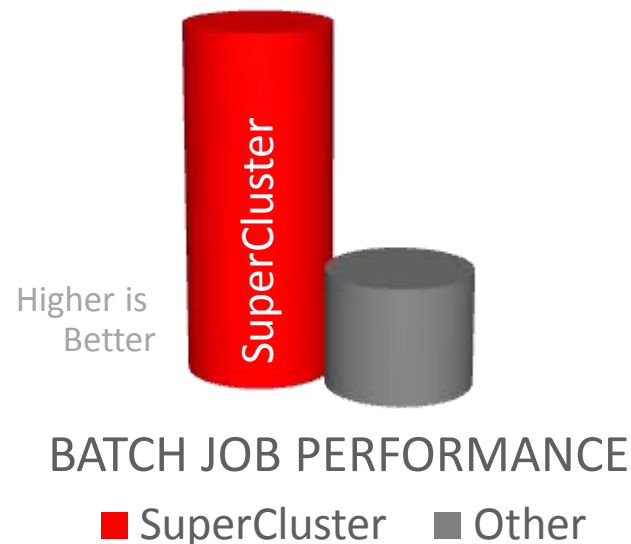


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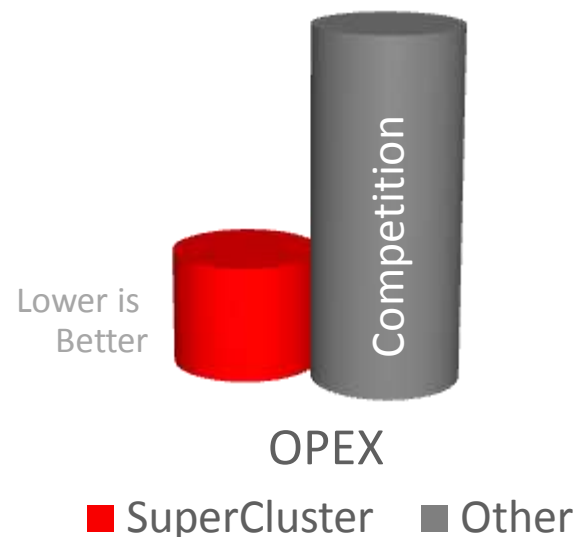
# SuperCluster: Lower OPEX, Superior Agility



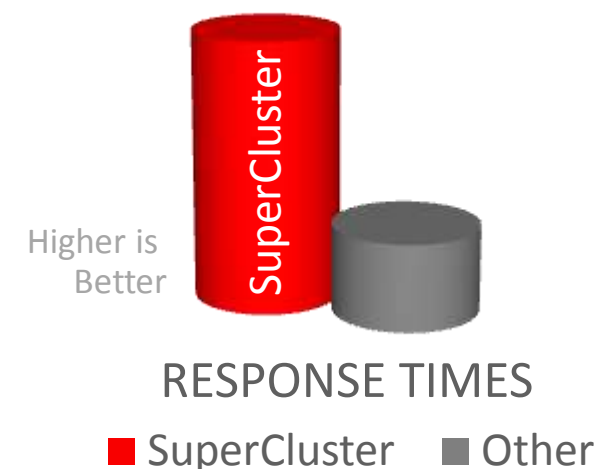
**3X Faster**  
Financial Reports



**87%** less space  
**67%** Lower OPEX



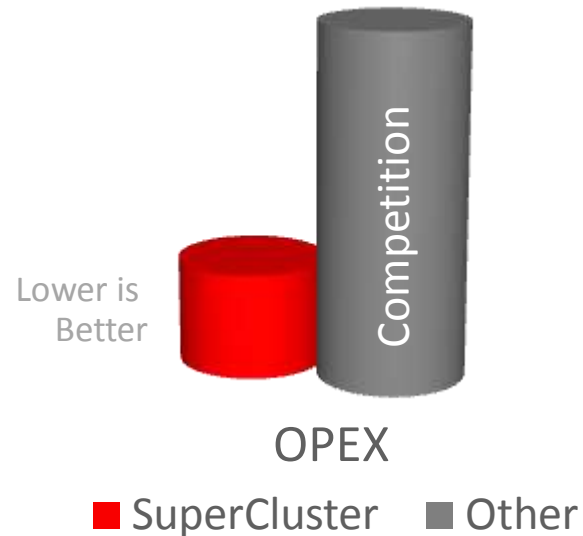
**3.1X Faster**  
Response Times



# Oracle Engineered Systems: Proven, Real-World Results

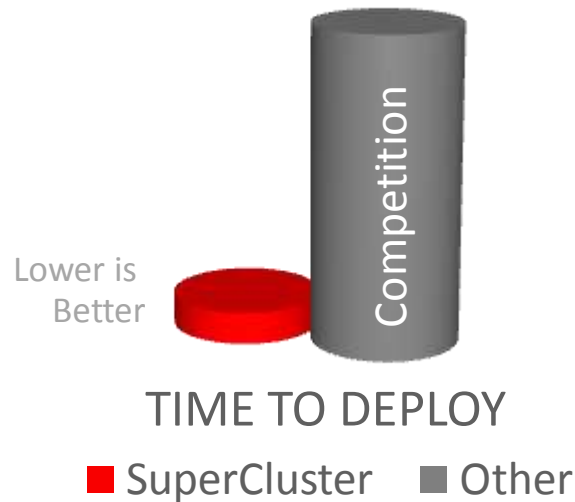
dimension  
data 

**70%** OPEX  
Reduction



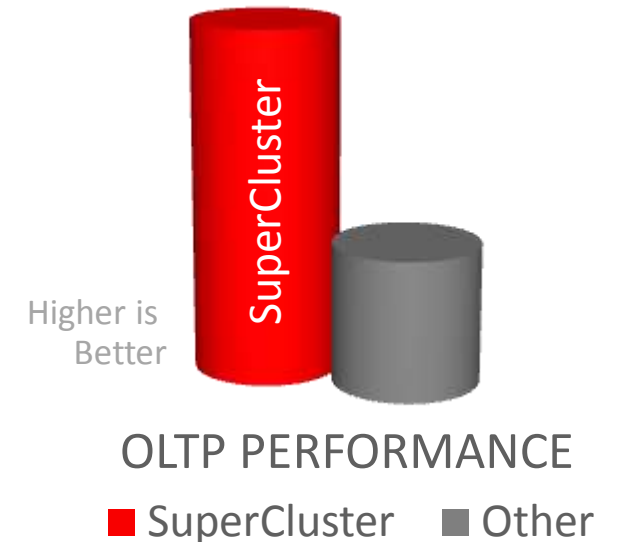
***SPECIALIZED*** 

**9 weeks** to  
Production



 **HDFC securities**

**60% Faster**  
OLTP







**Ron Polard**  
CIO  
Specialized



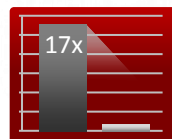
## 17x Performance Gains, Rapid Deployment, 24x7 Oracle Monitoring and Support with Oracle SuperCluster

“Specialized Bicycles is a brand that innovates. That is why we work with Oracle. It is about speed, increasing efficiencies, knowing and managing net inventory.

Our proof of concept showed performance gains up to 17x. An account reconciliation report **took 20 hour report ran in 20 minutes** on Oracle SuperCluster, that’s huge.

We were always IO bound managing 60TB of data. With the full integration ZFS, it was a huge upgrade for us on top of the flash memory side of the database.

From the time we made out decision, did the POC, **we were up tremendously fast with Oracle SuperCluster in 65 days.** Oracle keeps the system up and running 24/7 with out us worrying.”



17x Performance Gains



65 days to deployment



**Aseem Dhru**  
CEO, HDFC Securities  
**Vivek Joshi**

Vice President IT, HDFC Securities

## Financial Trading and Equities Processing Increased Peak Trades Capacity 4x, 30:1 Consolidation Ratio



“HDFC provides customer with a gateway into the investment world. It is absolutely important that our IT infrastructure is geared toward high availability at all points in time. We have consistently been able to **achieve 99.99% uptime with Oracle SuperCluster.**

Having implemented Oracle SuperCluster we have been able to **eliminate 30 servers** with less point of failures. In **batch processing**, there were significantly high gains, running **300%-500% faster.**

We have tested SuperCluster at break points to easily scale up to **500,000 trades per day.** In the next 3 years, we are not worried for the for the volumes to come in.”



Increased Peak Trades 4x



30:1 Consolidation Ratio

# Oracle Support for Engineered Systems

Helping customers more fully realize the benefits of their Engineered Systems



## Complete. Proactive.

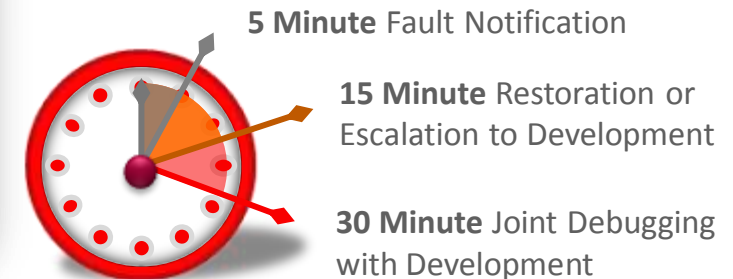
- **Specialized Engineered Systems support team for single point of ownership**
- Customer Incident Managers for support introduction, critical SR monitoring
- Escalation prevention and special handling
- Automated SR creation (ASR), Oracle Configuration Management
- Proactive support via:
  - MyOracle Support publications / alerts
  - **Healthchecks**
  - **Patch bundles / product enhancements**



## ORACLE PLATINUM SERVICES

## Integrated. **No Additional Cost.**

- Special entitlement for qualifying Exadata, Exalogic and SuperCluster configurations
- **Oracle engineers perform remote patch planning and deployment up to 4x/year**
- 24/7 remote fault monitoring, Software ASR
- Accelerated response and restoration

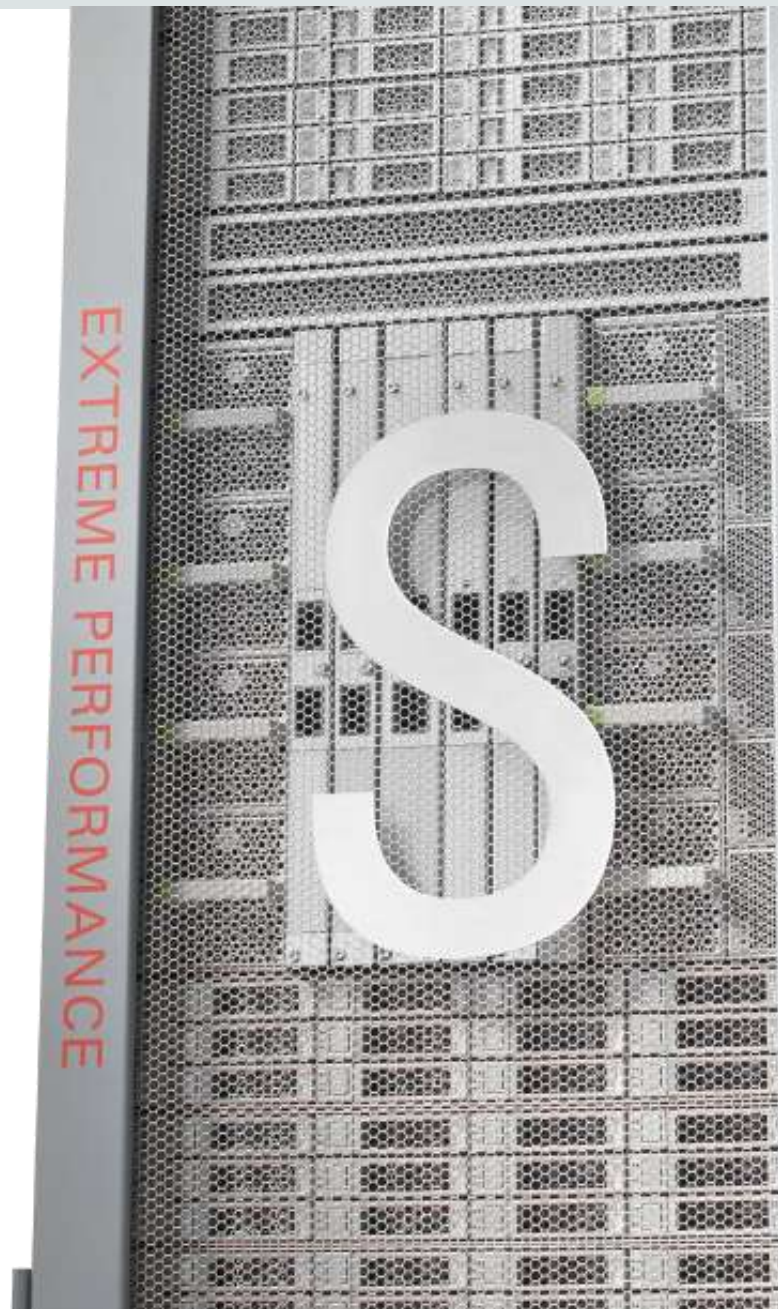


# Oracle SuperCluster:

## Platinum Services vs. Standard Premier Support

- **75% fewer** sev1 Service Requests
- **70% fewer** escalations
- **37% fewer** bugs encountered
- **27% shorter** avg. SR resolution time
- **86%** of SRs are opened by Oracle\*

\*Requires an *Auto Service Request* connection  
All data from 2015 Oracle Internal analyses of customer support data





# Platinum Services Objectives and Results

More than 1,000 customers have adopted Platinum Services

## Maximize Availability & Performance

- Proactive, integrated approach to sustaining system health
- Best practice configs and patching
- Critical issue prevention
- **37% fewer bugs encountered**
- **75% fewer Sev 1 service requests**
- **27% faster issue resolution time**

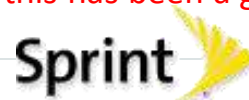
Reduces operational risk with around the clock fault monitoring and ensures continued availability for our core banking processes running on Oracle Exadata



## Reduce Support Complexity

- Single-vendor access to engineering expertise for complete Oracle stack
- Service Requests (SRs) opened automatically through monitoring
- Oracle performs patching when it's best for your business
- **86% of SRs opened by Oracle**

"It (Exadata) is being monitored 24/7 by Oracle, and we are notified before we've actually realized that we are having a problem. That type of support model allows me to sleep at night – this has been a godsend."



## Decrease IT Resource Requirements

- Oracle experts perform support and maintenance services on your behalf at no extra cost
- **70% fewer escalations**
- **Fewer IT support resources required**

thetrainline.com leveraged Oracle Platinum Services to reduce IT resource workload by 30%



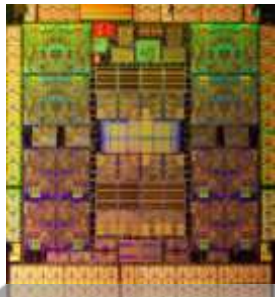


# Oracle's Microprocessors

6 Processors in 5 Years

Including  
Software in Silicon }

- Silicon Secured Memory
- Encryption Acceleration
- Query Acceleration
- More...



2010

## SPARC T3

16 x 2<sup>nd</sup> Gen cores  
4 MB L3 Cache  
1.65 GHz



2011

## SPARC T4

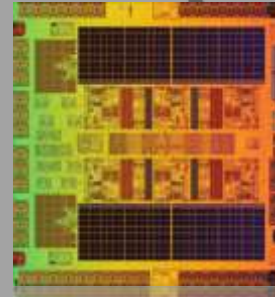
8 x 3<sup>rd</sup> Gen Cores  
4 MB L3 Cache  
3.0 GHz



2013

## SPARC T5

16 x 3<sup>rd</sup> Gen Cores  
8 MB L3 Cache  
3.6 GHz



2013

## SPARC M5

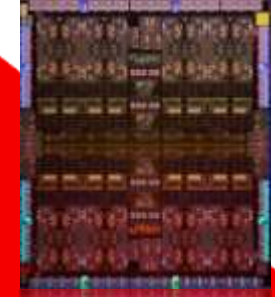
6 x 3<sup>rd</sup> Gen Cores  
48 MB L3 Cache  
3.6 GHz



2013

## SPARC M6

12 x 3<sup>rd</sup> Gen Cores  
48 MB L3 Cache  
3.6 GHz



2015

## SPARC M7

32 x 4<sup>th</sup> Gen Cores  
64 MB L3 Cache  
4.13 GHz

Today

# What's New in Oracle SuperCluster M7:



Secure multi-tenancy  
with IaaS & DBaaS



Lower Entry Price &  
Elastic Configurations

World's Fastest  
Processor

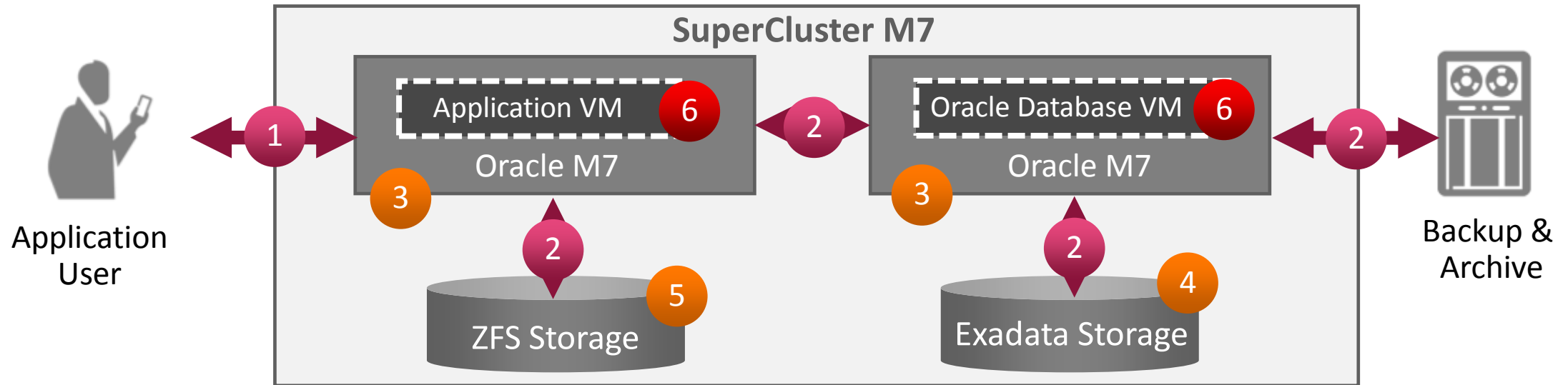
**2.2x** Better  
Price/Performance

**12<sup>c</sup>**

Engineered for Oracle  
Database In-memory

# SuperCluster M7: Most Advanced Security

End-to-end Run-time Protection and Encryption With No Performance Loss



1

2

Encrypted access network (SSH)

InfiniBand Partitions with data encryption

3

4

5

Oracle M7 memory intrusion protection

Oracle Database Transparent Data Encryption (TDE)

Encrypted application storage

6

- Read-only Virtual Machines
- Reduced Attack Surface OS Build
- Signed and Verified Boot & Firmware
- Encrypted Virtual Machine Images
- Anti-malware Protection

# SuperCluster M7:

Secure Cloud Infrastructure for Database and Applications

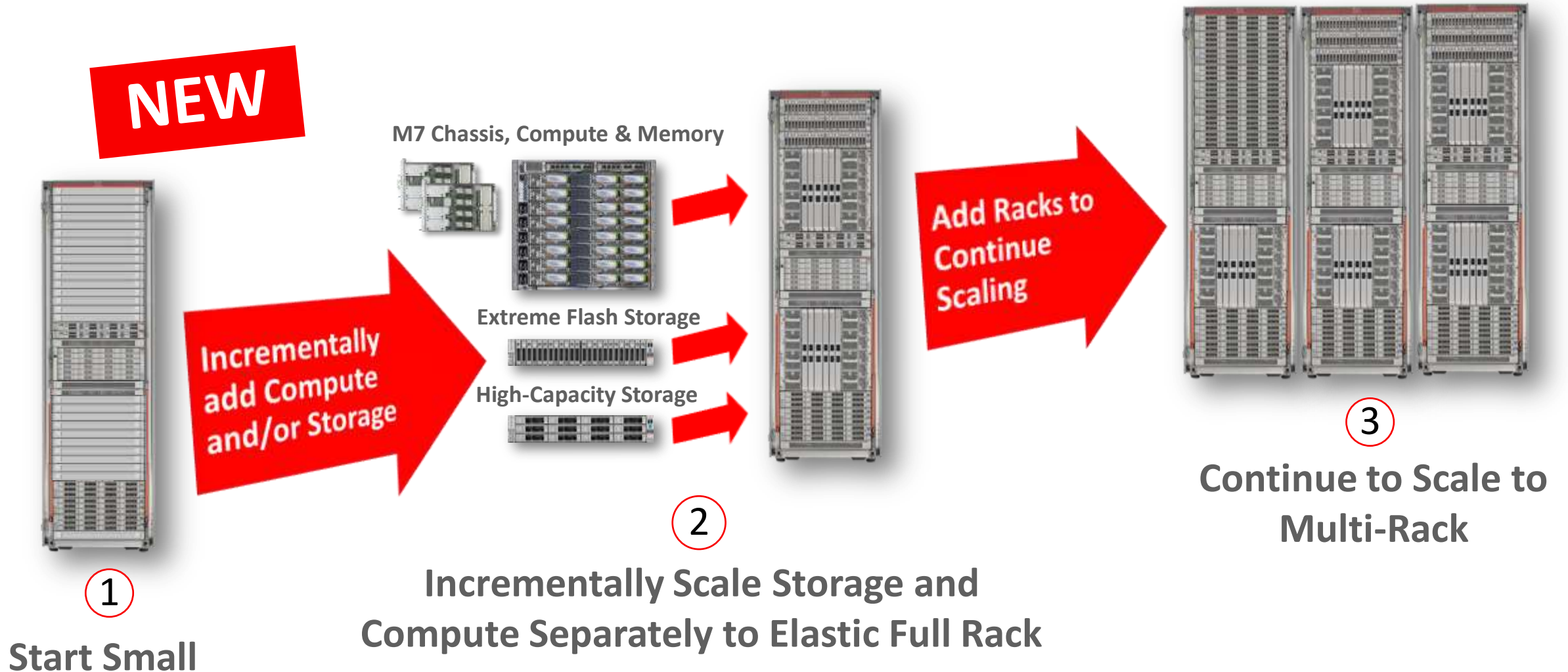
- Secure Private Cloud
- Optimized for Oracle Database and Applications
- Integrated Compute, Storage, Networking, Virtualization, OS & Management





# SuperCluster M7:

Start Small and Grow, Flexibly and Easily





# SuperCluster M7:

## Extreme Performance Innovations

**NEW**



### Eliminate Performance Bottlenecks

Instantly Improve Response Times  
Enjoy Massive Database Storage I/O  
Stop Wasting Memory  
Get Virtualization as Good as Bare Metal  
Scale When and How You Need To  
Find Relief from Support Pain



**Oracle M7 with SQL in Silicon**

**Exadata Storage Technology**

**Large Memory & Bandwidth**

**Near-zero-overhead Virtualization**

**Linear Scale-up and Scale-out**

**Full-stack Tuning & Patching**

# Breakthrough Processor and Systems Design

## Technology That Delivers

### Security in Silicon



Silicon secured memory and wide key encryption – Designed for Security

### SQL in Silicon



Hardware SQL acceleration and decompression - Breakthrough Oracle Integration & Efficiency

### World's Fastest Microprocessor



More cores, more threads, more memory & IO Bandwidth, lower latency - Extreme Performance for Apps and Cloud

