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Architecting for a New World

Designing for Cloud Workloads

Atiq Bajwa

Chief Architect, Ampere

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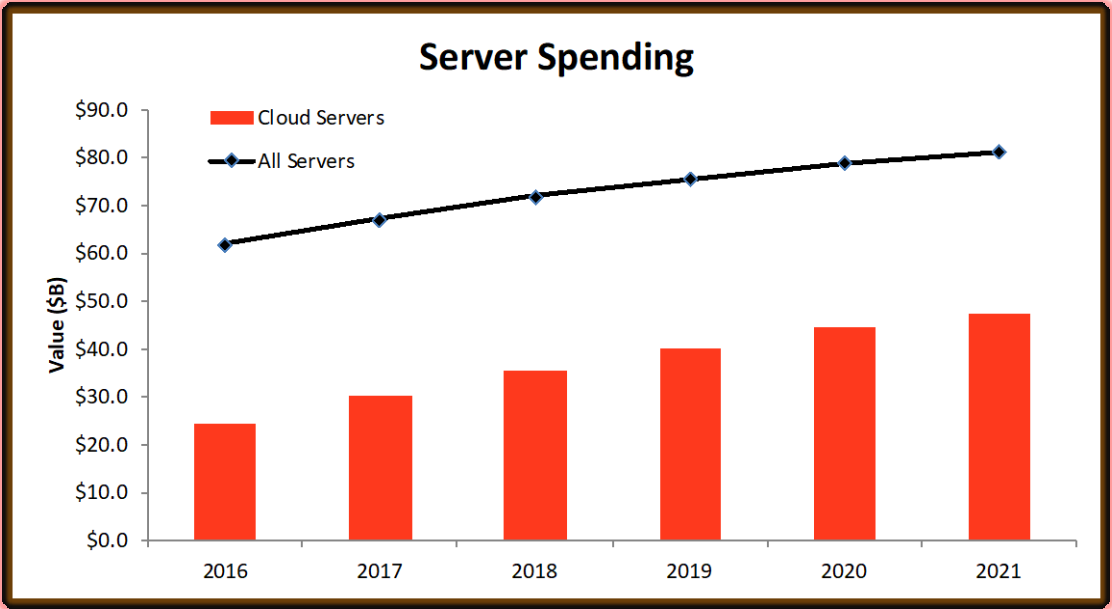
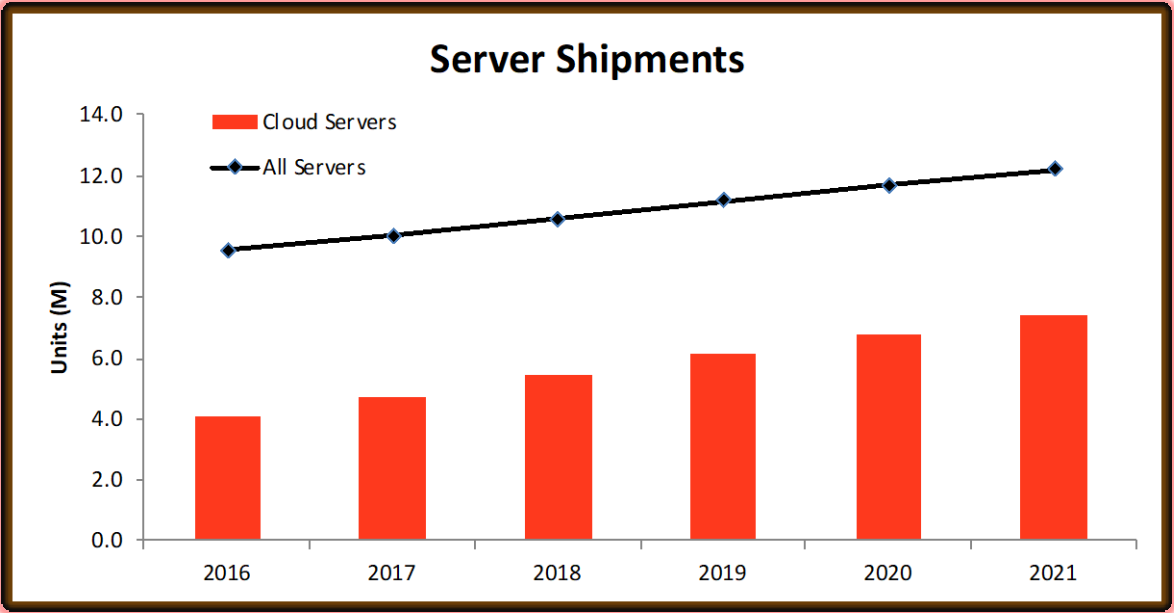
# *Architecting for a New World*

## Designing for Cloud Workloads

Atiq Bajwa  
Chief Architect

March 20, 2018

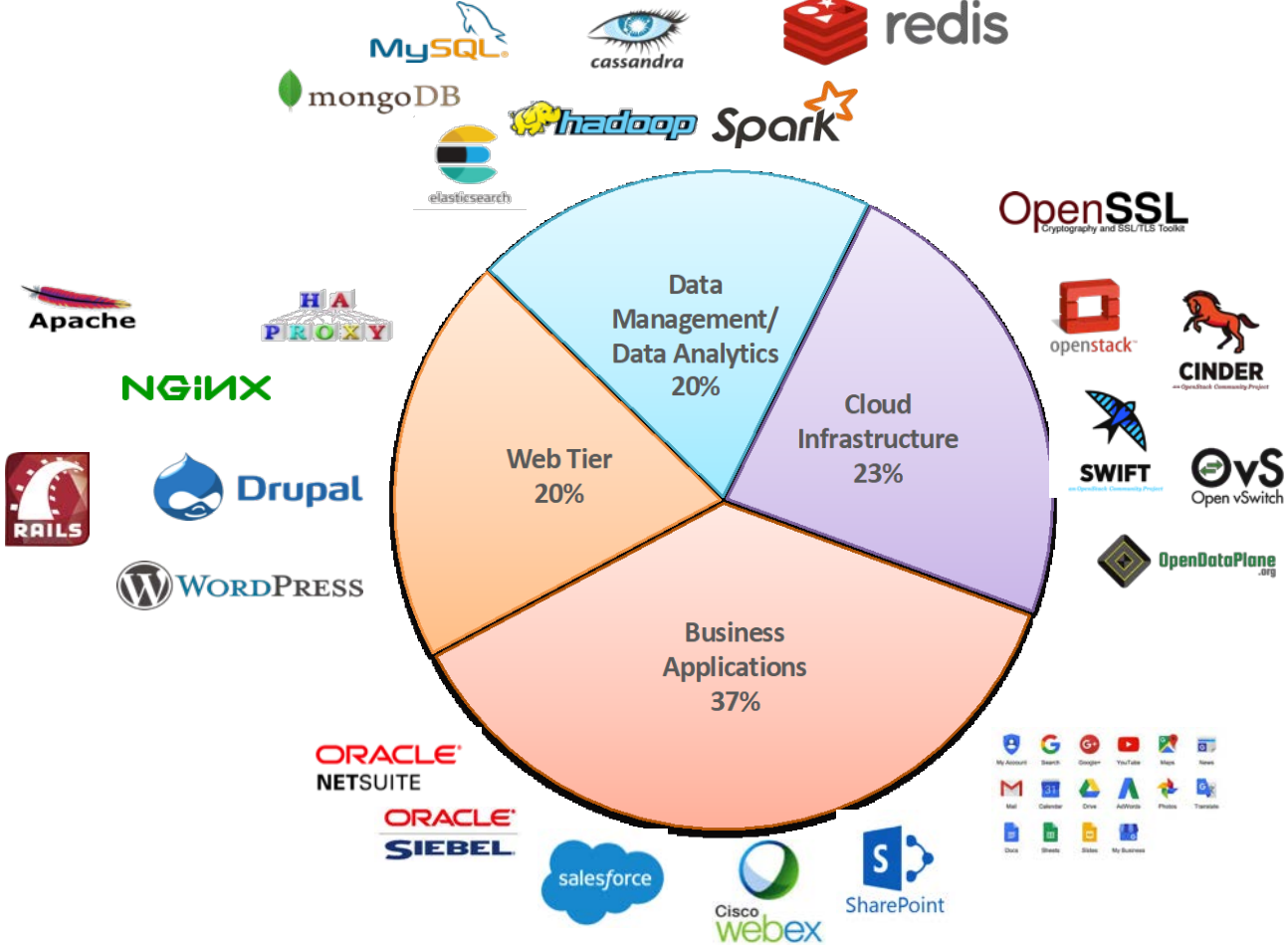
# Cloud Ascendant



Source: IDC Server Tracker 2017

**Cloud emerges as dominant compute paradigm**

# Cloud Workload Landscape



**New workloads, new software building blocks, new algorithms**

Source: Ampere Estimates

# Architecting for Cloud



**Efficiency**

**Performance**

**Security**

**Freedom**

**New Optimization Point**



# A New Architecture: Integration



**Smart Integration for Cost and Density**

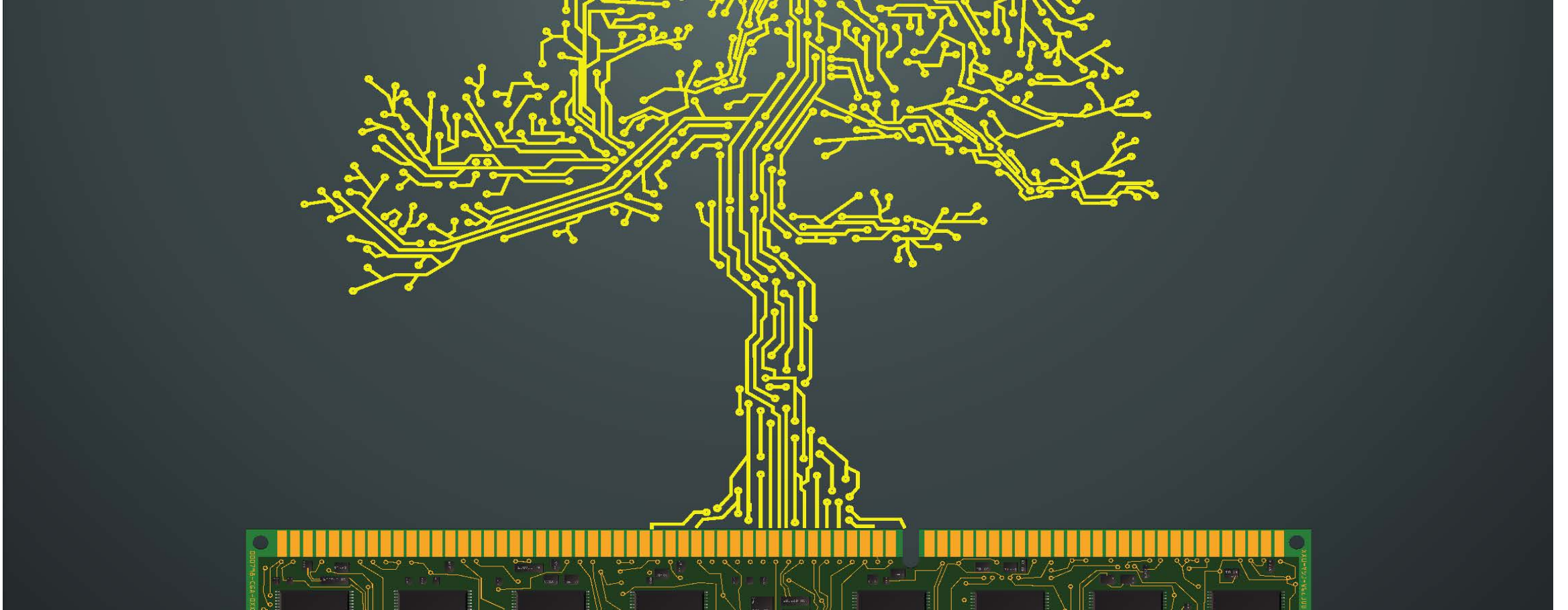
# A New Architecture: Power Efficiency



**Power Efficiency for Density ... and OpEx**

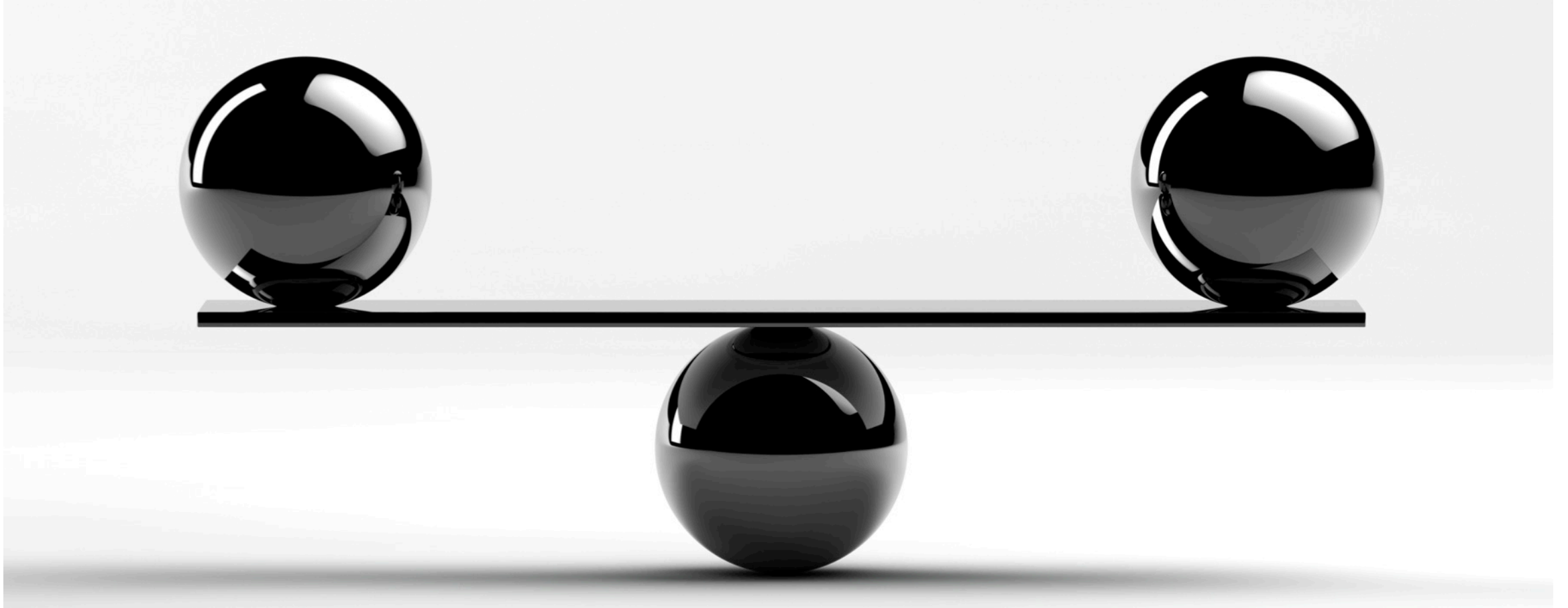


# A New Architecture: Memory



**Capacity, Bandwidth and Latency**

# A New Architecture: Compute



**Balanced Compute**

# A New Architecture: Acceleration



**Workload-specific acceleration**



# A New Architecture: Security



# A New Architecture: Open



**Extensible via Open Standards**



# A New Architecture: ~~Legacy Burdens~~



**Extensible via Open Standards**

# A New Architecture for a New World



## Efficiency

Integration  
Power Efficiency

## Performance

Memory  
Compute  
Acceleration

## Security

## Freedom

Open  
~~Legacy Burdens~~

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Thank you.



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