




HI-REZ  
STUDIOS

***INTERNAP®***

**Building a Scalable Infrastructure Platform for  
SMITE, Global Agenda and Tribes: Ascend  
March 19, 2014**

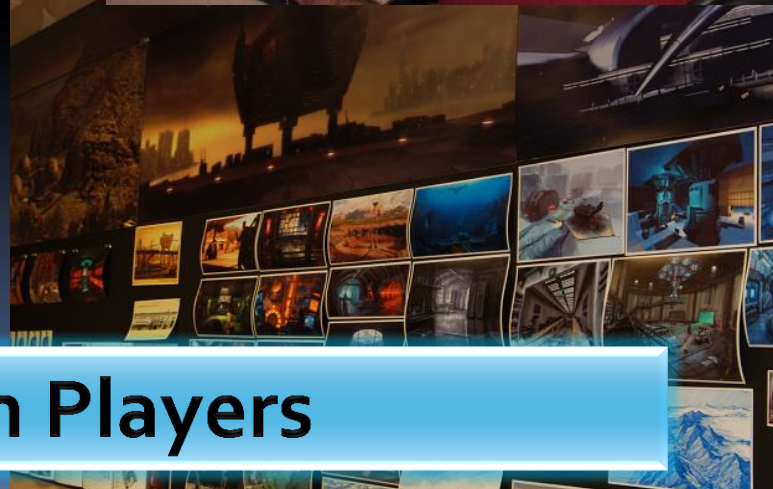


# Speakers

- Todd Harris
    - Chief Operating Officer, Hi-Rez Studios
  - Adam Weissmuller
    - Director, Cloud Services, Internap
- 

# Hi-Rez Studios

- Founded in 2005
- Based in Alpharetta, GA
- 85 employees and growing
- Focus on high-quality (AAA) downloadable online games for the PC
- Worldwide Reach



**Over 5 Million Players**



2010



# TRIBES ASCEND



# 2012







3.25.2014



# Platform for Online Multiplayer

- Installation & Patching
- Anti-Cheat
- Account Management, Micro-transactions & Payments
- Player Skill Ranking
- Match Making
- Social – Friend List, Party System, Referral, Chat
- Accolades
- **Scalable Infrastructure**



# Infrastructure Technical Challenges


- Large client download
- CPU hungry servers
- Very latency sensitive
- Large swings in User Demand
- Tight Margins





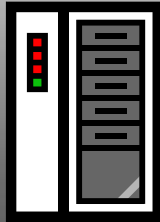


# Solution 1.0: Global Agenda

- Began work with Internap in 2008 to support Alpha and Beta for Global Agenda
  - For 2010 release, chose Internap after intensive vendor evaluation and cost analysis
    - Managed Hosting in Atlanta and London
    - CDN for downloads
    - Fairly Traditional Managed Hosting arrangement (3 year term)
- 

# Solution 1.0 Simplified

## ATLANTA

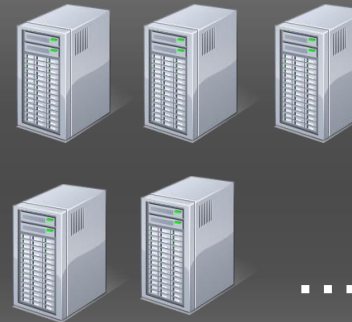


Core Application Servers  
and Databases

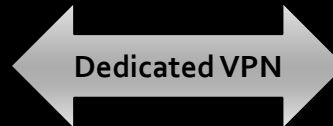


North American  
Game Servers

## LONDON



European  
Game Servers



Cloud  
Storage

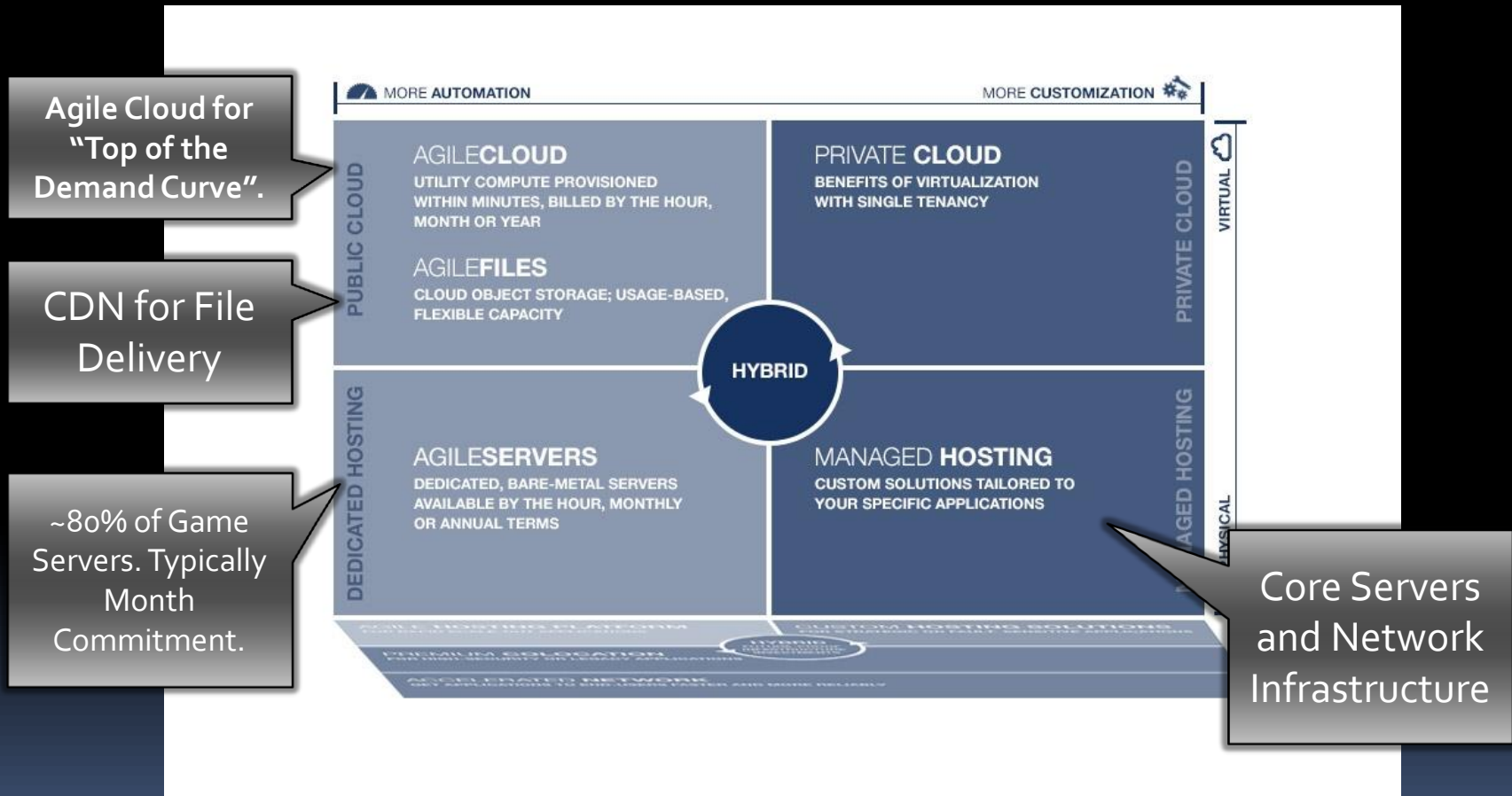


# Rating the 1.0 Solution

- Technical solution worked very well
- Internap's service consistently delivered
- Key issues:
  - Our server architecture made it expensive and inefficient to expand to additional regions
  - A traditional managed hosting solution did not enable us to scale our servers up or down efficiently based on user demand

**IN SHORT: Too much server capacity when and where we didn't need it, and too little when and where we did**

# Building the 2.0 Solution








# Why Bare Metal Servers vs Traditional Managed Hosting

- Flexibility
  - Flexibility
  - Flexibility
  - Cost
- 




# Why Bare Metal Servers vs Agile Cloud?

- Better utilization of server resources.
  - More flexibility on provisioning and setup.
  - Much cheaper for servers that are highly utilized.
- 



# When to use Agile Cloud?

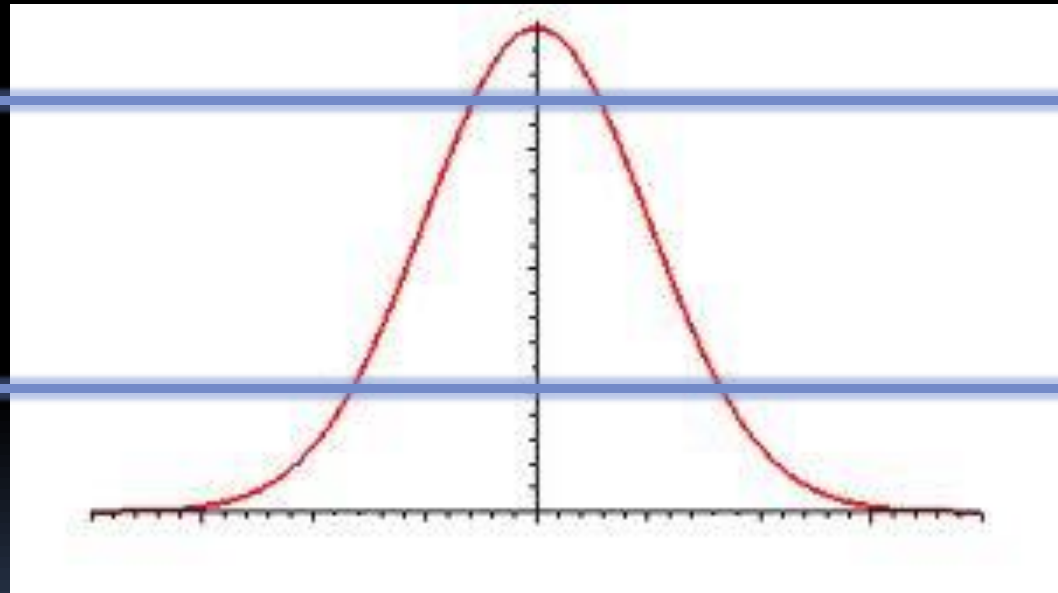
- Peak demand
  - Region availability
- 

# Server Term vs User Demand Curve

Hourly

Monthly

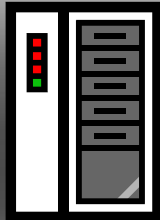
Long Term Commitment





# Solution 2.0

## ATLANTA



Core Application Servers  
and Databases

## EU Bare Metal Cloud

Amsterdam

## NA Bare Metal Cloud

Atlanta

New  
York

LA

## Agile Cloud

NA & EU  
Spillover

Brazil

Singapore

Australia



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# PROVIDING YOUR GAMES WITH THE RIGHT INFRASTRUCTURE AND BEST PERFORMANCE

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CLOUD



HOSTING



COLOCATION



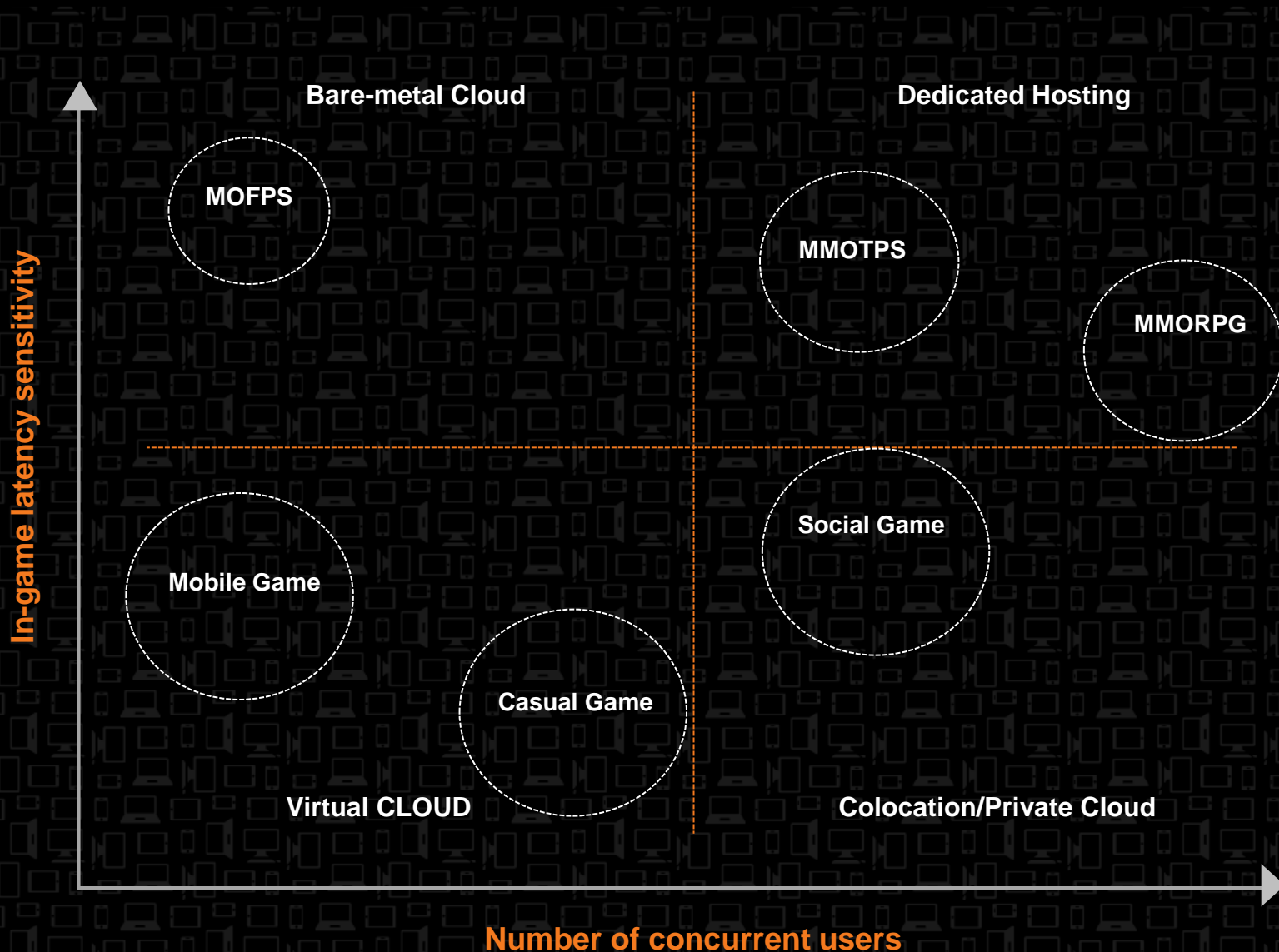
PERFORMANCE IP™



CDN

# BROAD HOSTING PLATFORM: WE SUPPORT YOUR GAME **REGARDLESS OF GENRE**

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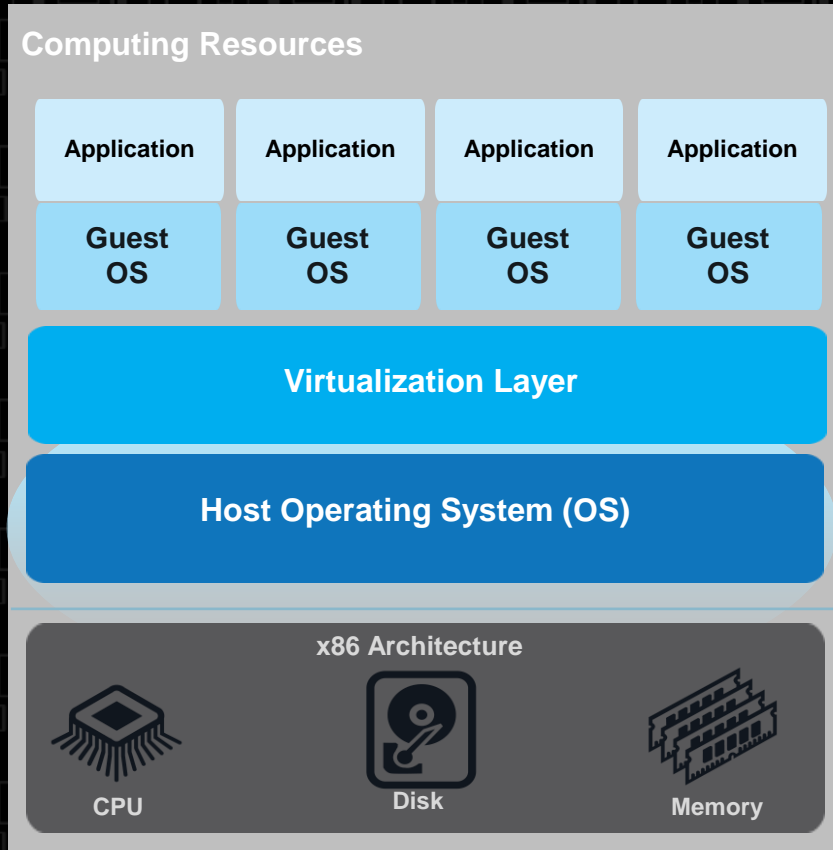


# SERVICES BUILT FOR PERFORMANCE:

## BARE METAL CLOUD

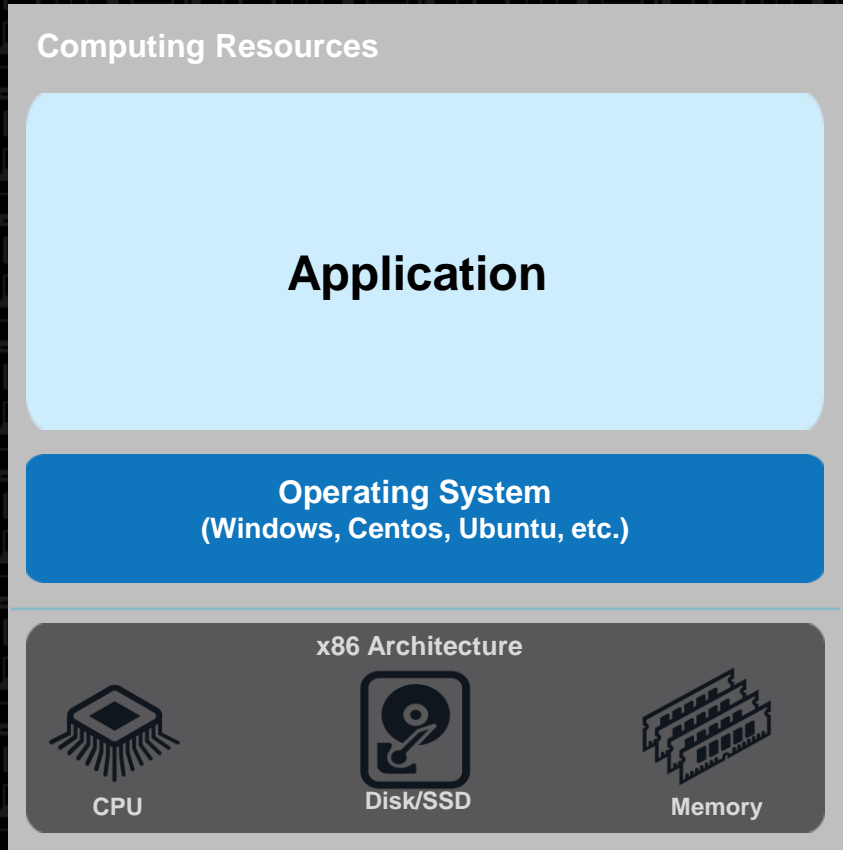
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### Virtual Cloud (by the Hour)



**Use cases:** Web servers, test and development environments, short-term web-campaigns

### Bare-Metal Cloud (by the Hour)



**Use cases:** High I/O databases, resource-intensive applications scaling high-compute, more cost effective at scale



# SERVICES BUILT FOR PERFORMANCE: BARE METAL CLOUD

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Server Performance (Score)

**INTERNAP**  
Bare-Metal Cloud

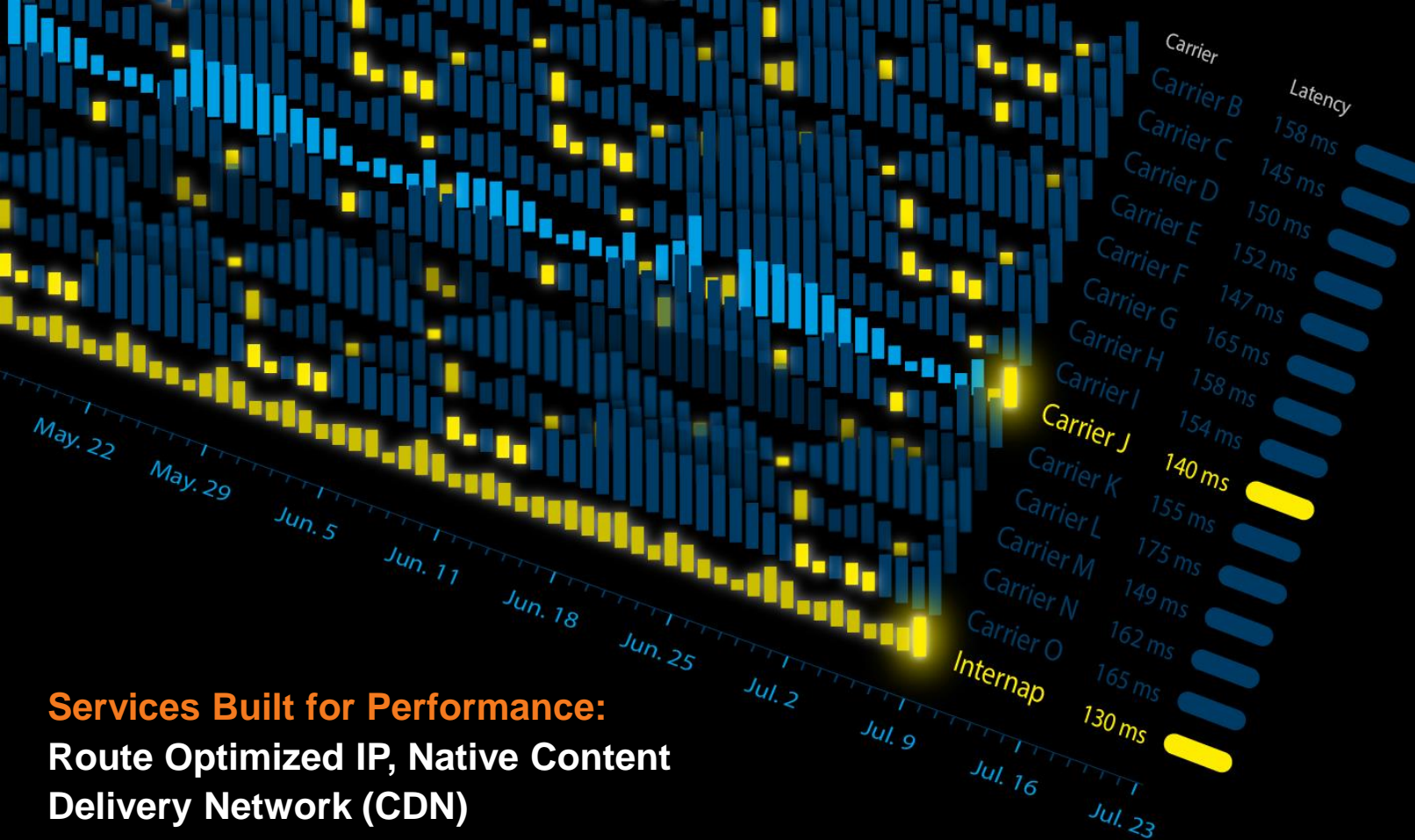
Competitor 1

Competitor 2

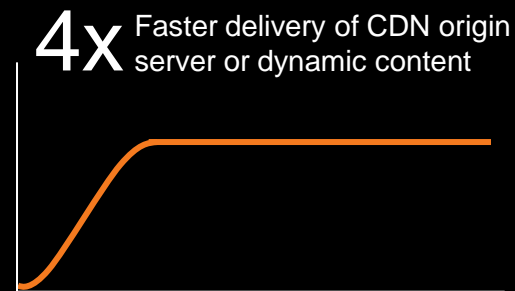
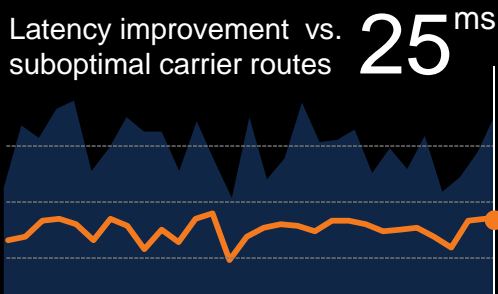
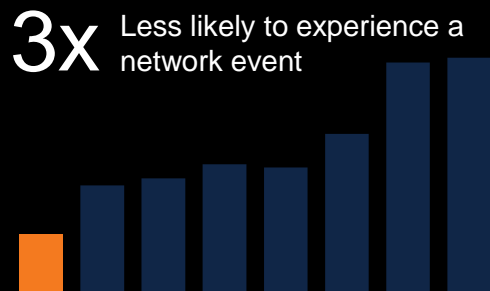
**8x BETTER**

average server performance when compared with virtualized IaaS

*Graph compares a dedicated Internap AgileSERVER (4 Core, 8GB RAM, 120GB SSD) with comparable virtual cloud instances from Amazon, and Rackspace. Benchmarks conducted by a third party from 10/10/2013 – 10/15/2013. Difference figure shown contrasts the bare metal server performance with an average of the two virtual cloud results.*



## Services Built for Performance: Route Optimized IP, Native Content Delivery Network (CDN)





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See a live demo of Internap's patented  
MIRO technology in the Expo Hall at  
**Booth #536.**

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# Questions?

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