

# Enterprise Application Acceleration

What works?

# Why are applications slow on WANs?

- It's not just about bandwidth!  
(but more can help, sometimes)
- TCP is a bottleneck
- And so are some application protocols
- And sometimes data is encrypted / compressed

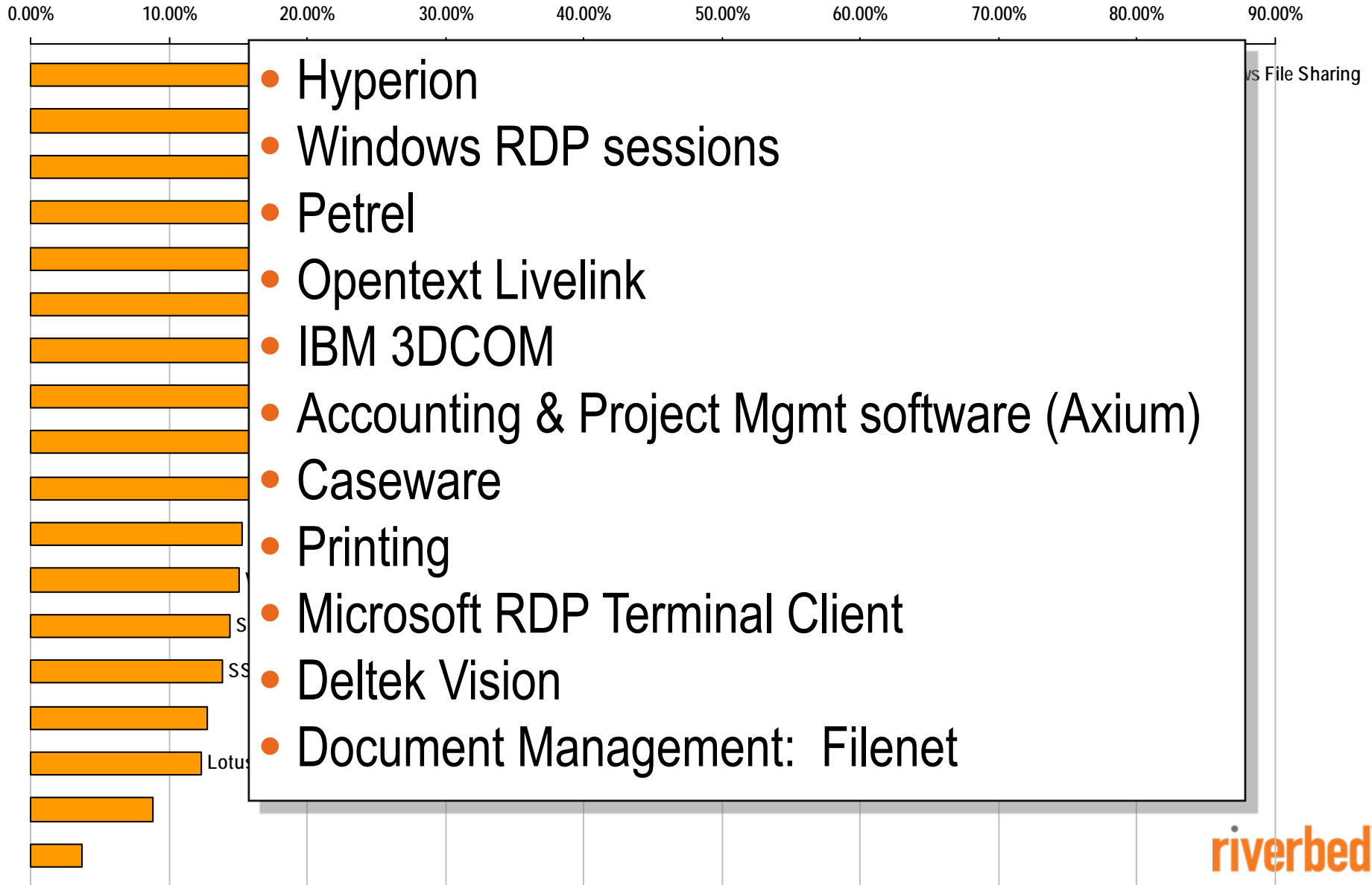
# Key motives for app acceleration

- Faster performance / less waiting (Duh!)
- Better global collaboration
- Headcount load-balancing
- Data protection / Business Continuity / DR
- Infrastructure Consolidation
- Better user adoption for new applications

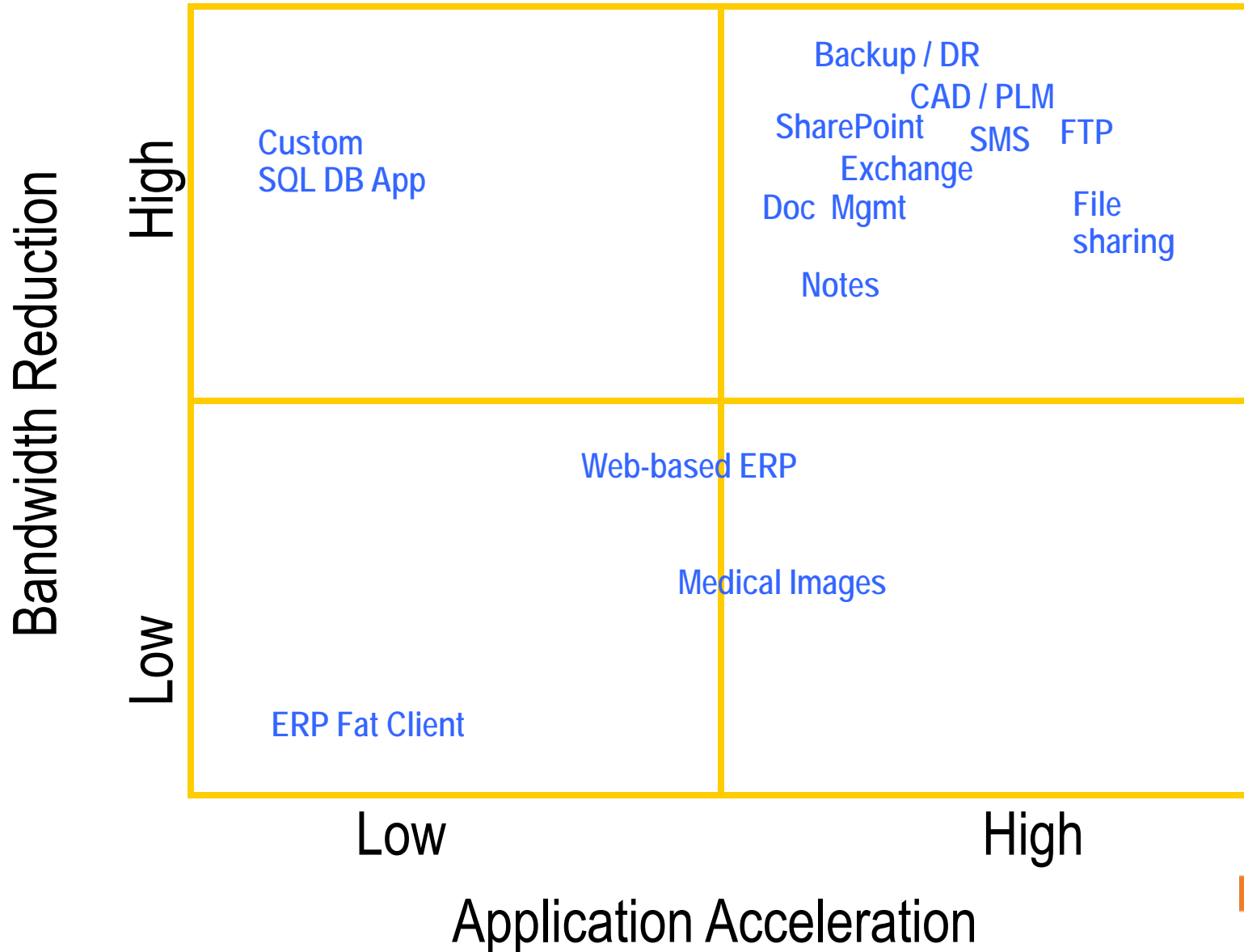
# App acceleration is mainstream technology

Financial Services	Professional Services	Manufacturing	Media Communications	Architecture, Engineering, Construction	
Energy	Healthcare/ Bio / Pharma	Government	Retail / Consumer Transportation / Logistics	Tech/Software	Service Providers

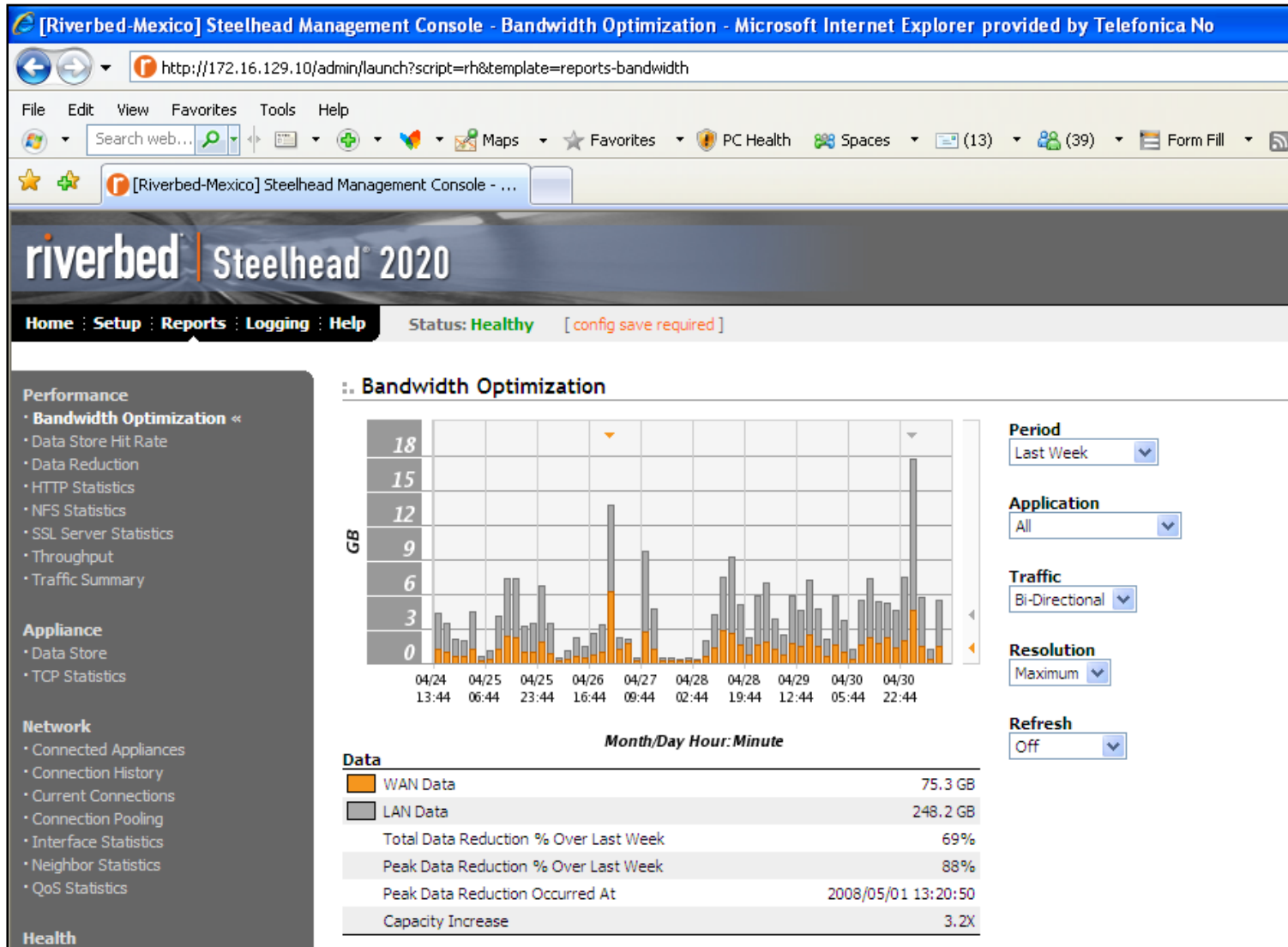
# What applications need to be accelerated?



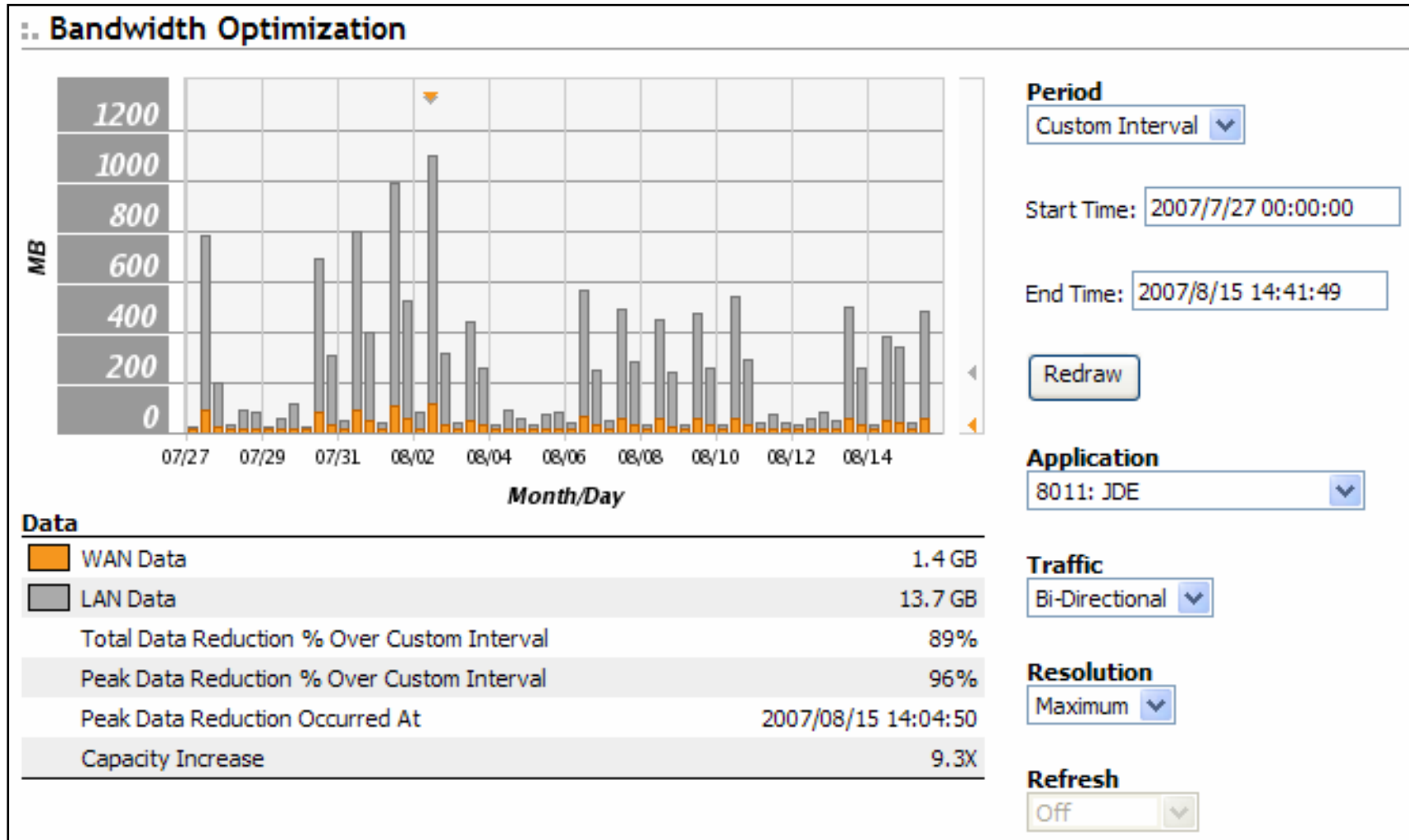
# Bandwidth Reduction $\neq$ App Acceleration



# Oracle DataGuard – Data Reduction



# JD Edwards – Data Reduction



# Example of the Business Impact of App Acceleration

- Background

- F500 Media / Broadcast Company
- 5,000 call center agents  $\times$  300,000 calls / day
- 300,000 customer calls per day

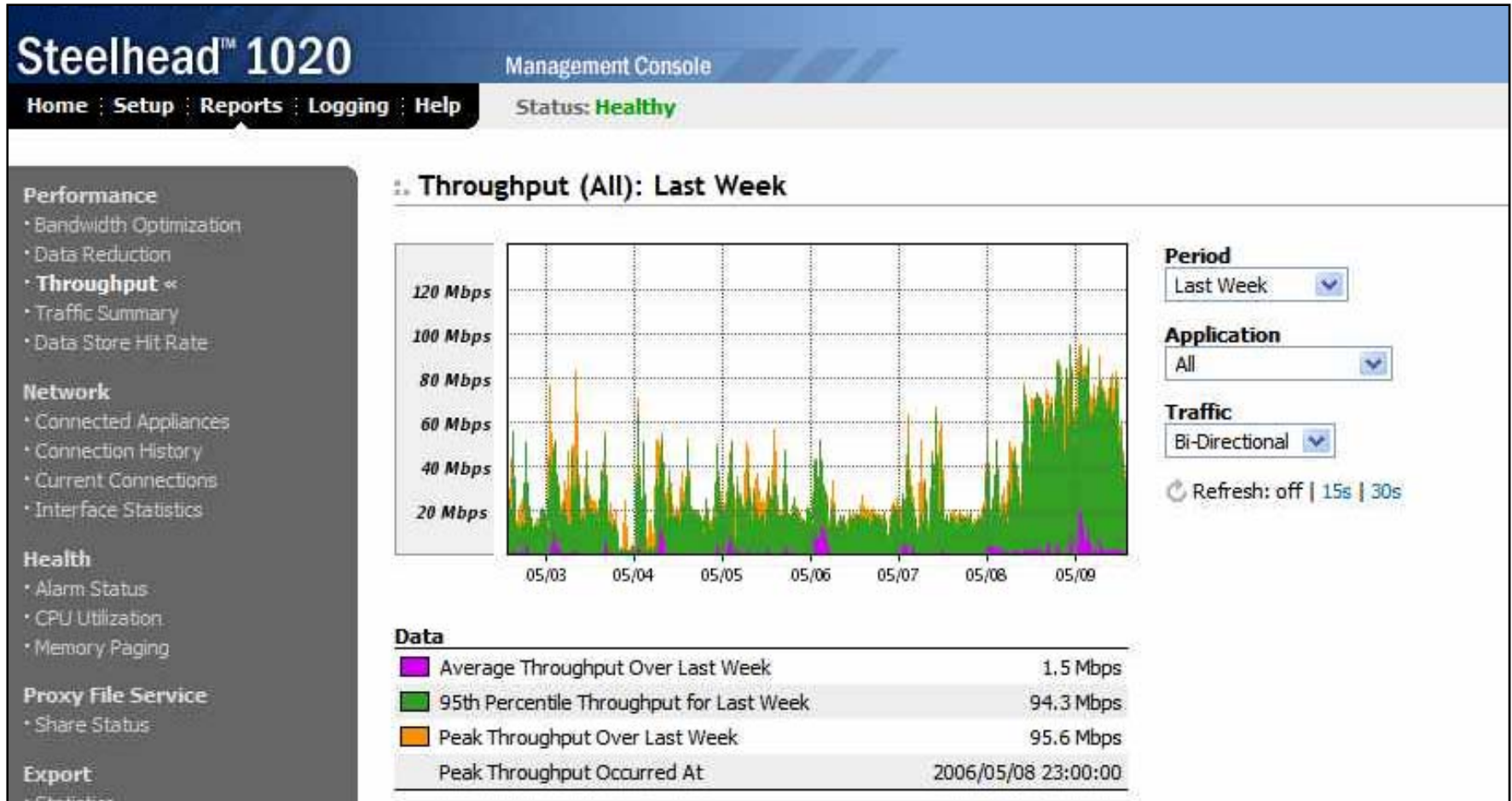
- Results

- Reduced Average Call Handling Time by 20.5 seconds
- 85% Bandwidth reduction

- Key benefits

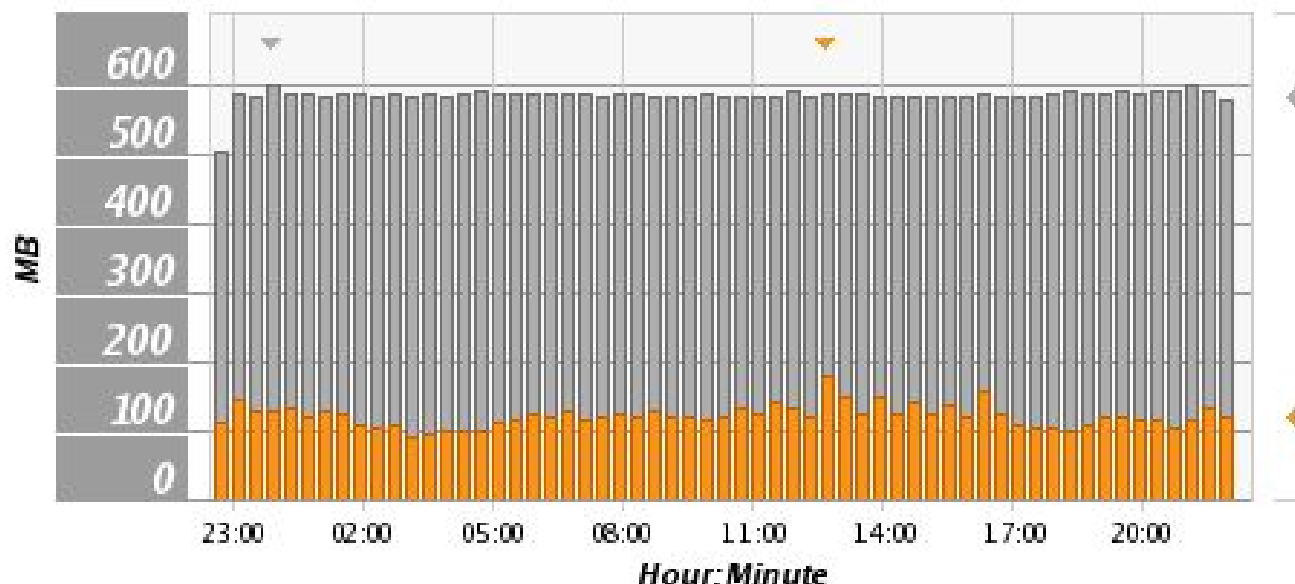
- Hard Savings: Over \$1M/month
- Better customer service and shorter wait times

# Throughput vs. Bandwidth



# EMC SRDF-A – SAN to SAN

## Bandwidth Optimization



### Period

Last Day

### Application

1748: EMC-Replication

### Traffic

LAN-to-WAN


### Resolution

Maximum

### Refresh

Off

### Data

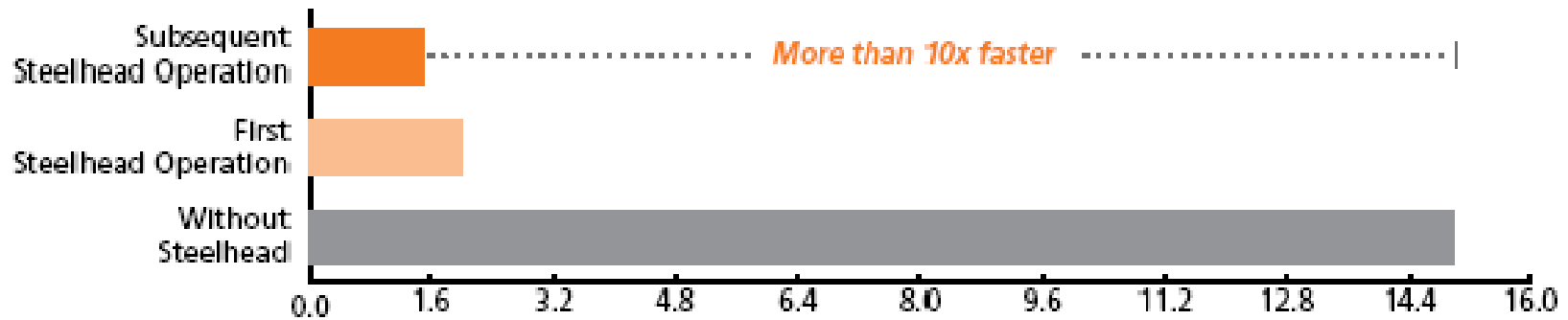
 WAN Data	6.9 GB
 LAN Data	33.5 GB
Total Data Reduction % Over Last Day	79%
Peak Data Reduction % Over Last Day	94%
Peak Data Reduction Occurred At	2008/02/12 22:27:00
Capacity Increase	4.8X

riverbed

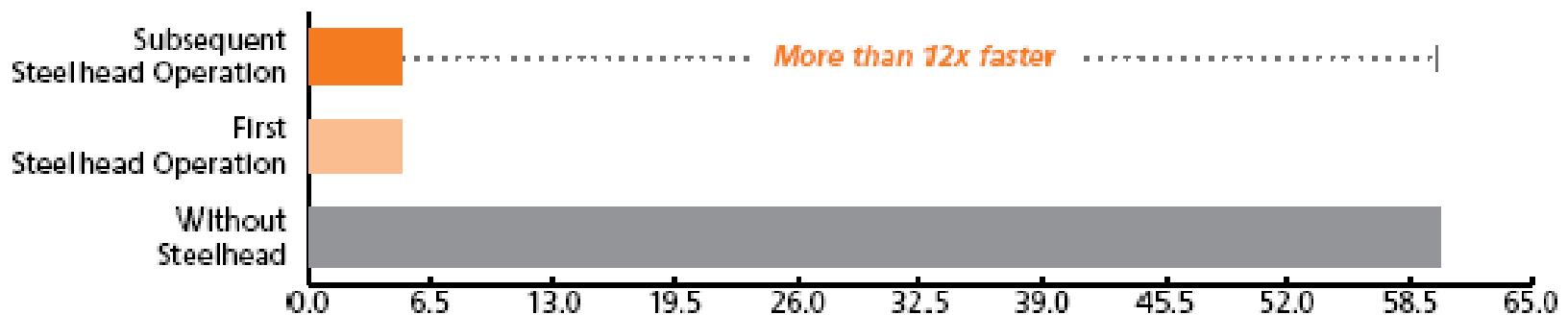
Think fast.

# SAP NetWeaver – Accelerating ERP Applications

The Data Validation Operation Improved up to 10x in Testing Over a 256kbps Link With 220ms RTT – Time To Complete (In Seconds)

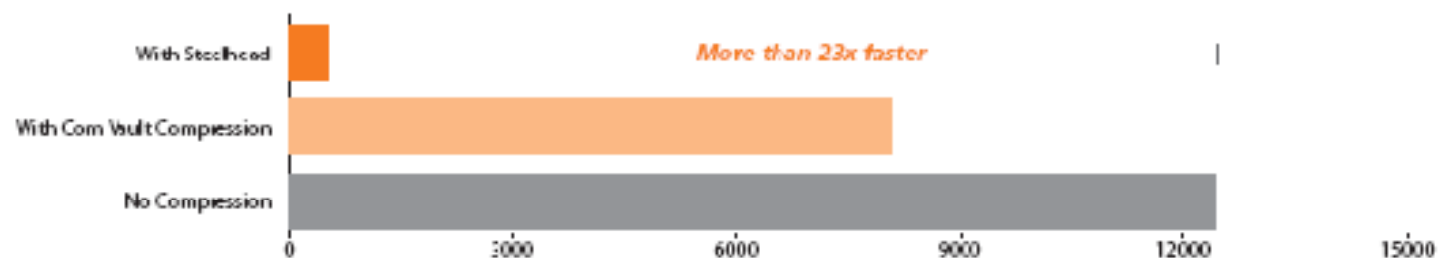


These Results Reflect the Data Validation Operation with the Web Browser Cache Cleared Over a 128kbps Link with 80ms RTT – Time to Complete (in seconds)

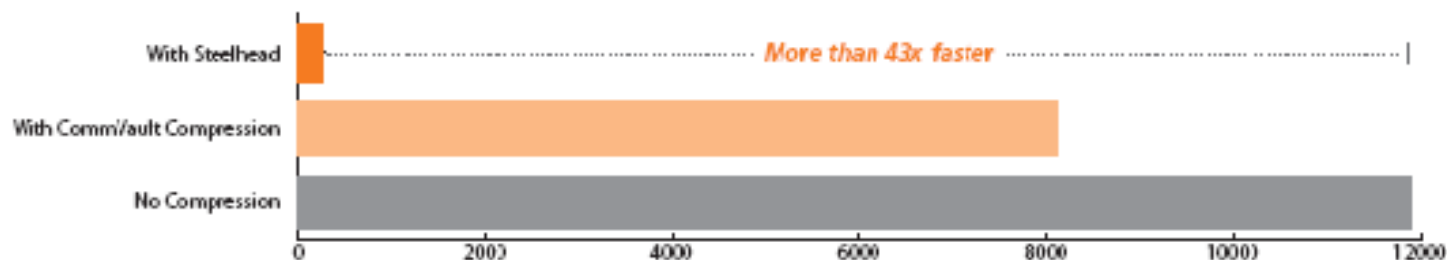


# CommVault – Galaxy (T1; 4.0 GB of File Directories)

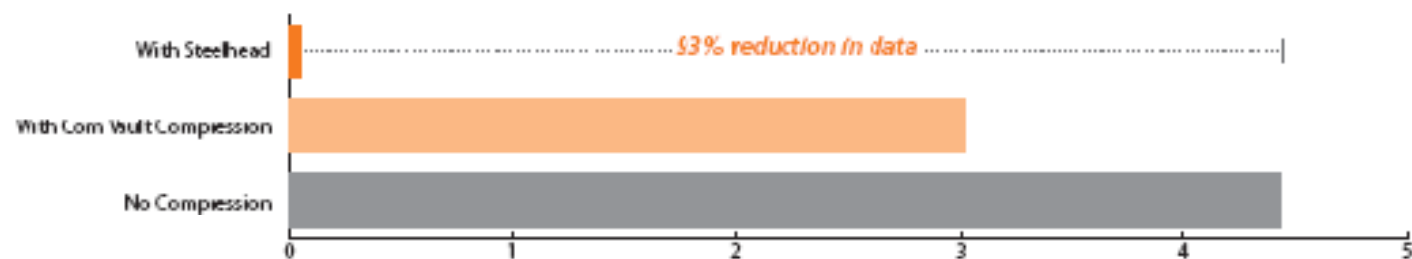
## Full Sync Incremental: Time to Complete



## Full Restore: Time to Complete (in sec)



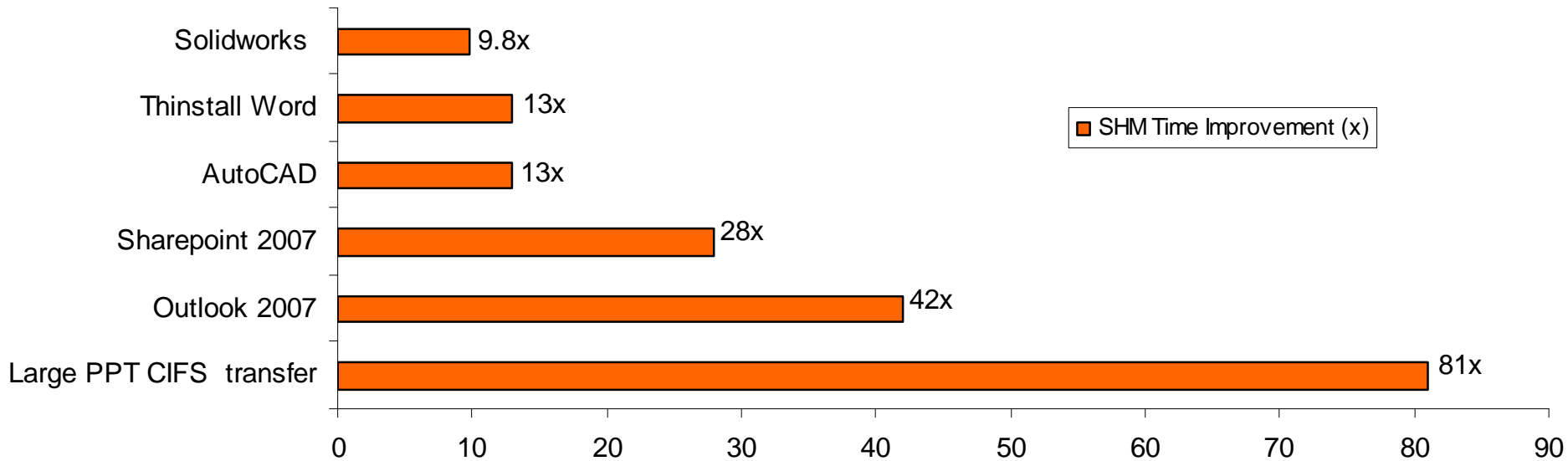
## Data Transferred: (in GB)



\*These results are based on the testing scenario presented in this paper. Your results may vary based on the conditions of your own network and the specifics of your own use cases.

# Steelhead Mobile Performance Results

*13 to 81x* faster performance  
across the applications that are most crucial for mobile workers



# Summary

- Accelerating applications can change your business
- A broad range of applications can be improved
- It's not just about bandwidth optimization
- Data centers, branch offices & mobile workers