



Go further, faster®



# NetApp Agile Data Infrastructure

The next step in Storage,

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Greece Cyprus Malta  
[kokkonis@netapp.com](mailto:kokkonis@netapp.com)

- Netapp in the Storage market
- NetApp Technology
- The next step in Storage
- Clouds
- Start Right! Keep it Simple! Grow Smart!

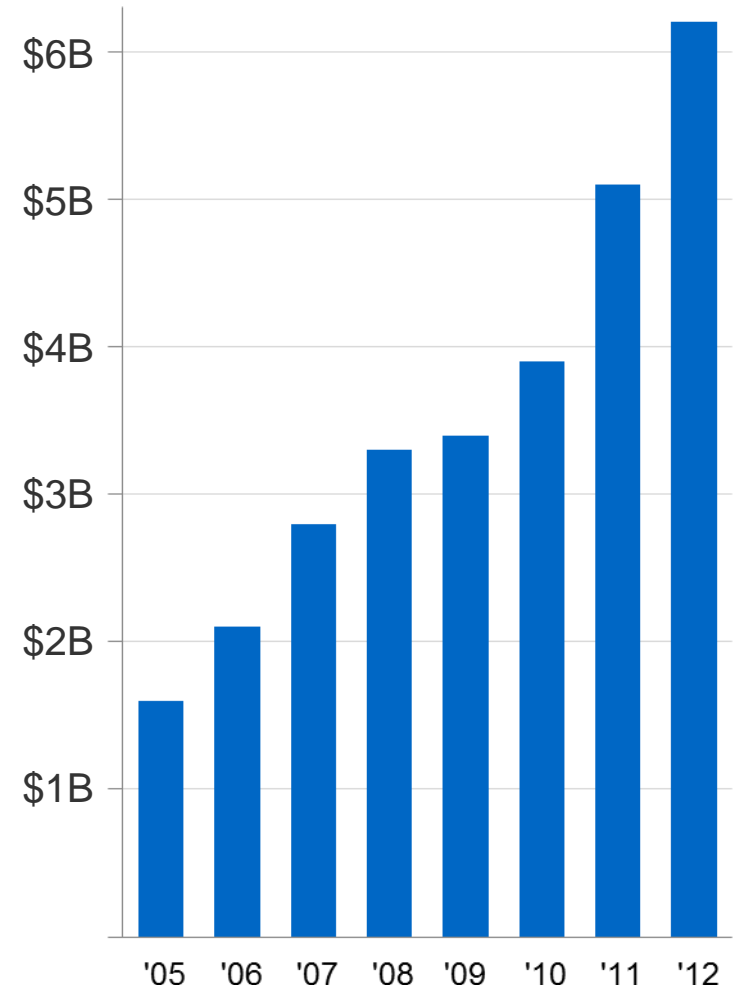




# Customer and Partner Success Fuels Our Growth

- Recognized as a FORTUNE 500® Company, 2012<sup>1</sup>
  - 77% are NetApp customers<sup>2</sup>
- Creator of Data ONTAP: the industry's #1 storage OS<sup>3</sup>
- #3 World's Best Multinational Workplaces 2012<sup>4</sup>
- #6 FORTUNE's 2013 100 BEST COMPANIES TO WORK FOR<sup>1</sup>
- #51 Forbes World's Most Innovative Companies<sup>5</sup> 2012
- FORTUNE's 100 FASTEST-GROWING COMPANIES 2012<sup>1</sup>

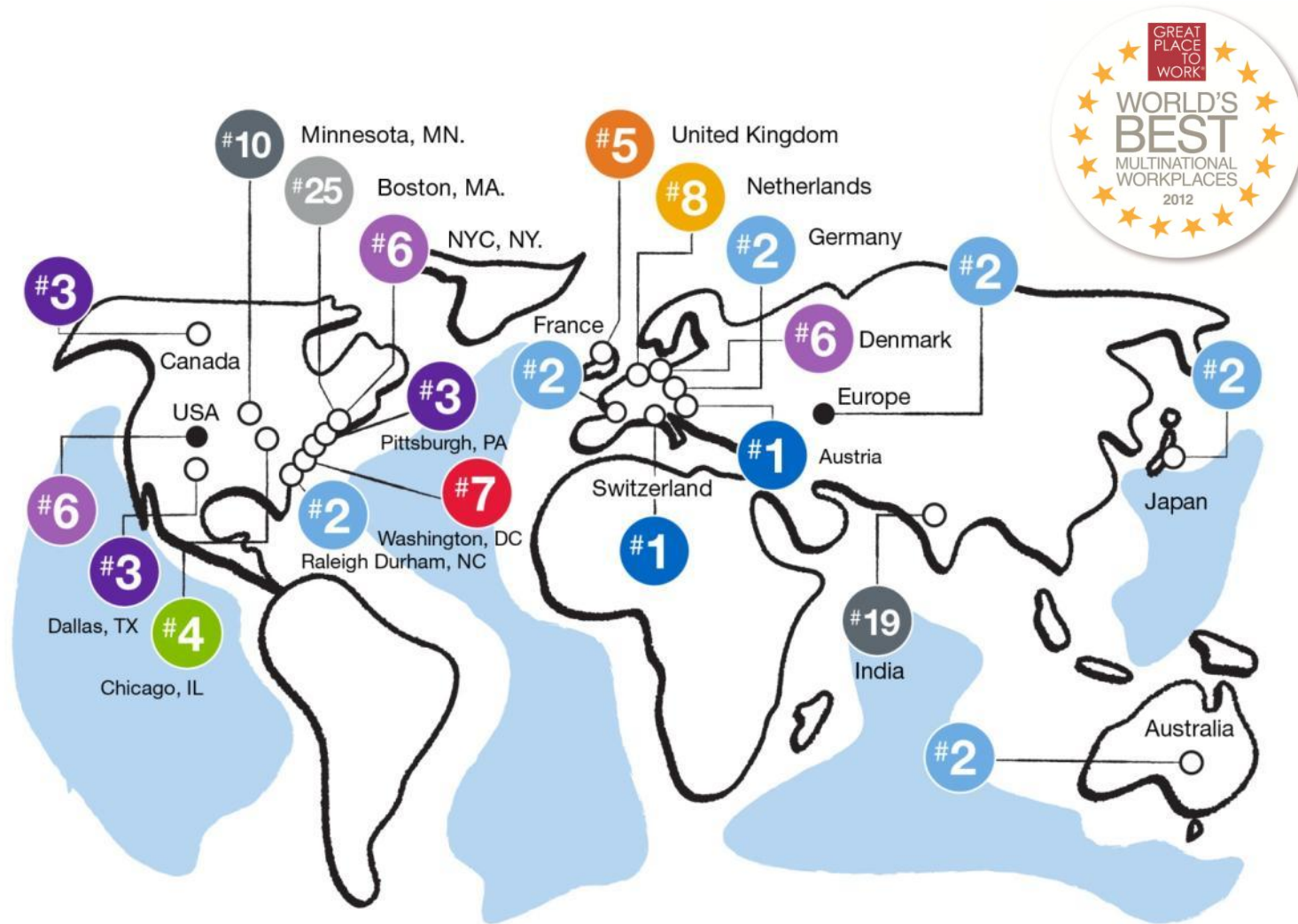
FY'12: \$6.2B



1. From FORTUNE® Magazine, Feb. 4, 2013; Sept. 24, 2012 and May 21, 2012 © Time Inc. FORTUNE, FORTUNE 100 Best Companies to Work For, and FORTUNE 500 are registered trademarks of Time Inc. and are used under License. FORTUNE and Time Inc. are not affiliated with, and do not endorse products or services of, NetApp.  
2. Based on NetApp customer bookings and NetApp AutoSupport users in FY 2011 and FY 2012.  
3. Source: NetApp internal estimates in terms of revenue and storage capacity in the worldwide open-networked storage market as of June 2012: VNX, VNXe, and Celerra NS can run any Flare or Dart operating system. The contribution of these products to the OS share has been estimated based on the proportion of NAS and SAN installations in these products (NAS—Dart; SAN—Flare).  
4. Copyright © 2013 GREAT PLACE TO WORK® INSTITUTE, INC.  
5. From Forbes, September 24, 2012 © 2013 Forbes. All rights reserved. Used by permission and protected by the Copyright Laws of the United States. The printing, copying, redistribution, or retransmission of this Content without express written permission is prohibited. <http://www.forbes.com/special-features/innovative-companies.html>



# A Great Place to Work around the Globe





NetApp®

# Innovations That Transform Business

## Performance

1992-2002

- First network-attached storage appliance
- First multiprotocol storage appliance
- NearStore® storage appliance
- Unified SAN and NAS storage appliance

## Efficiency

2002-2010

- RAID-DP® disk resiliency
- Thin provisioning and virtual data copies
- MetroCluster™ array-based clustering and synchronous mirroring
- Unified dedupe for primary and secondary storage
- First flash-based cache in an enterprise controller
- First FCoE network connectivity in a storage controller
- First file-level FlexClone® volumes

## Scale

2010-2012

- First nondisruptive data migration of tenants
- First isolated, end-to-end, multi-tenant solution
- Inline data compression across all storage tiers
- First converged 10Gb Ethernet network
- First to support industry-standard for shared high-performance parallel I/O
- First clustering across unified SAN and NAS

1992

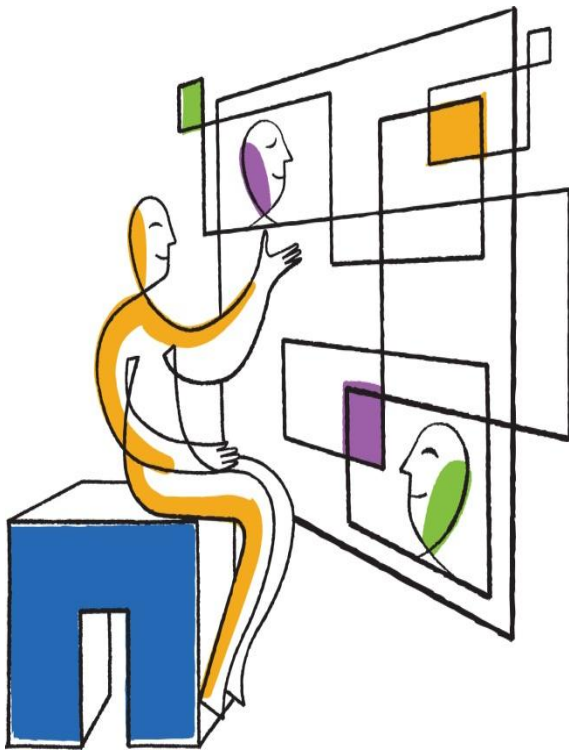
2002

2012



# 20-year Growth Driver: Data ONTAP

The industry's #1 storage operating system

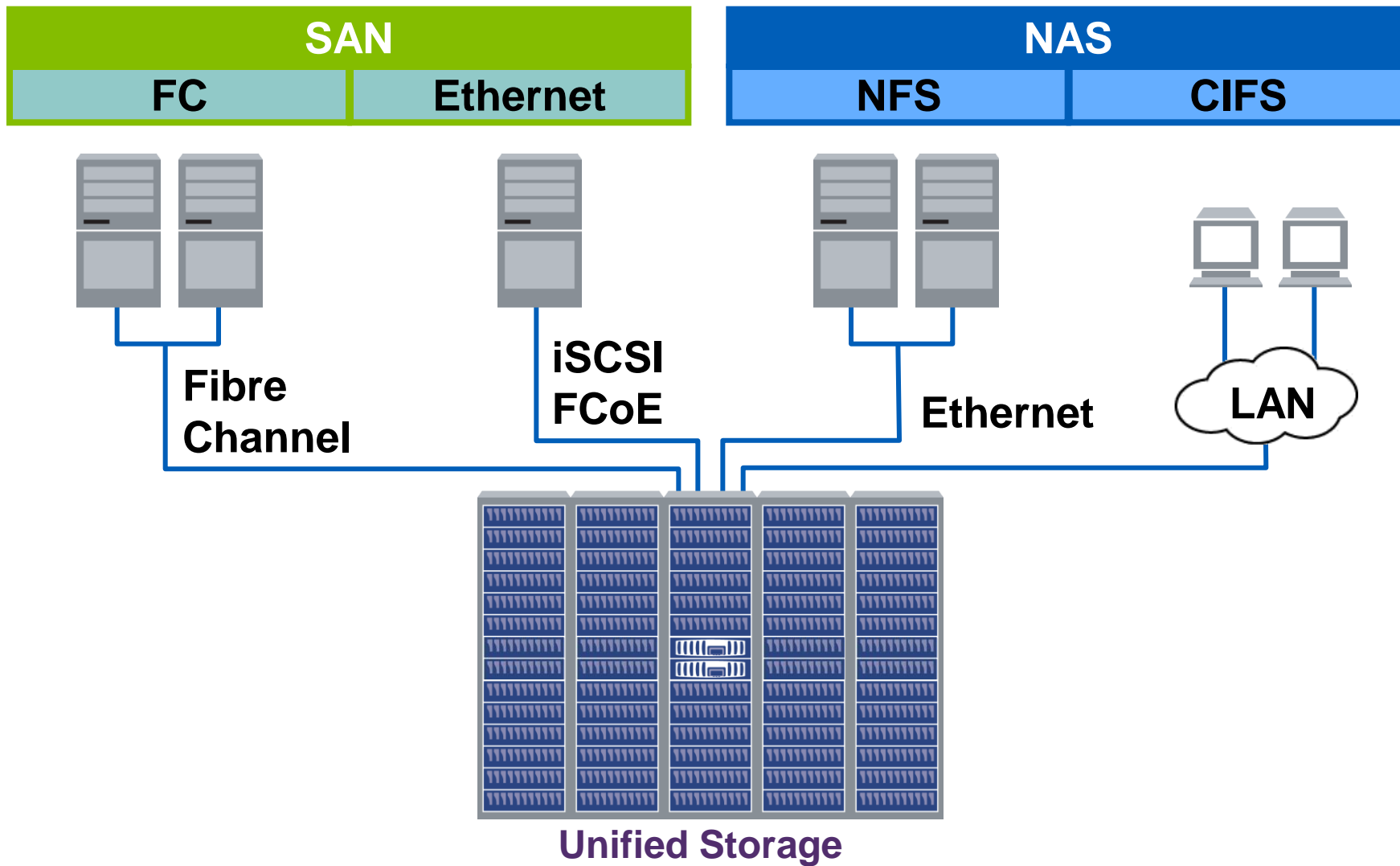


- Started with price/performance for UNIX
- Added Unified (NAS/SAN)
  - Investment protection
  - Easy of use
- Added Integrated Data Protection
  - Replacing backup
- Added Storage Efficiency
- Added Flash Acceleration

*and we're just getting started...*

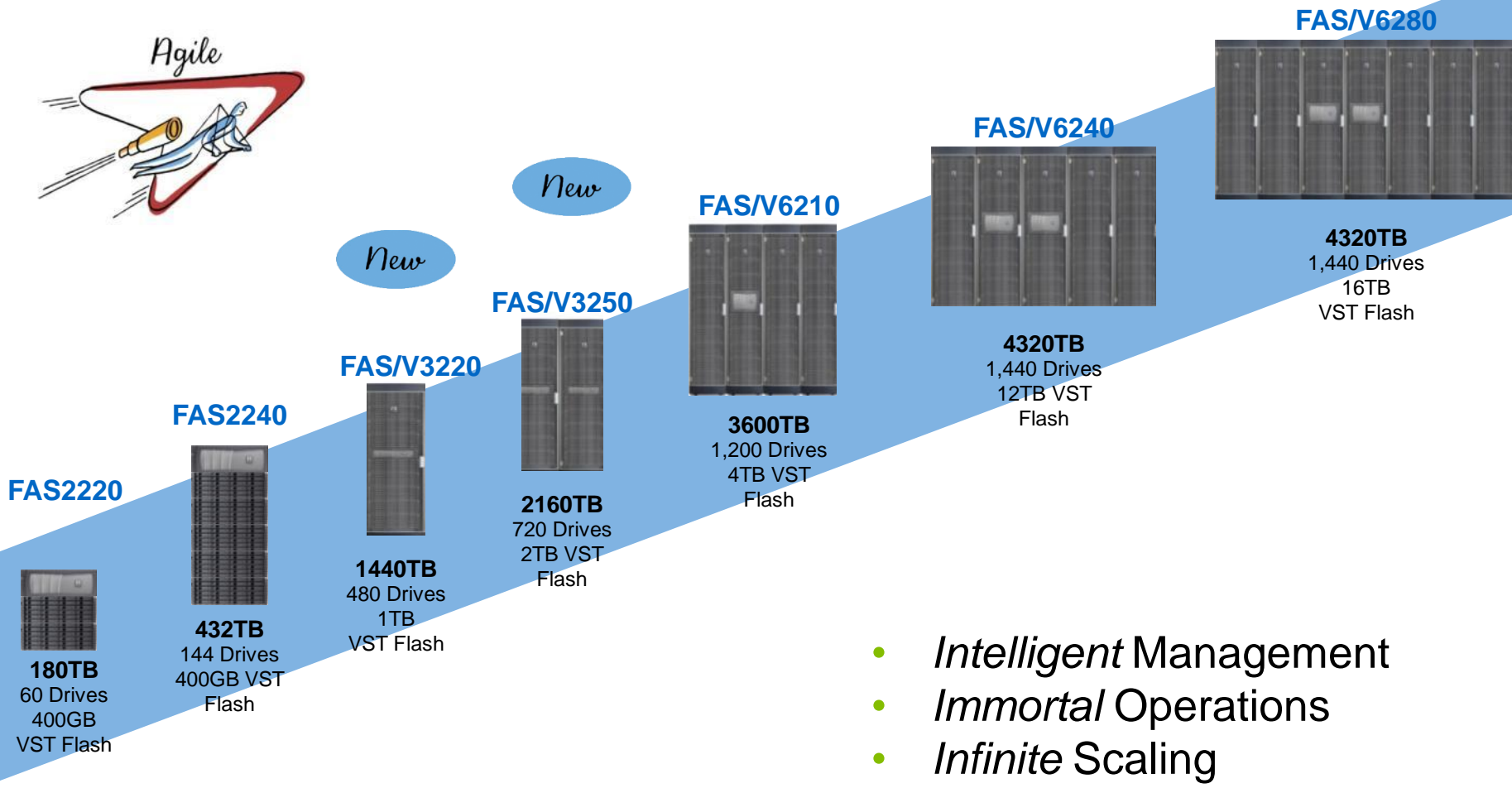
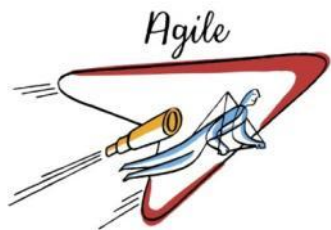


NetApp®





# Industry's Best Storage Platform for an Agile Data Infrastructure



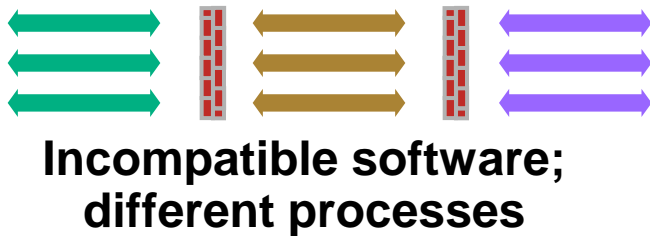
- *Intelligent Management*
- *Immortal Operations*
- *Infinite Scaling*



# Value and Efficiency: Unified Architecture

## Competitors

## NetApp



Platforms

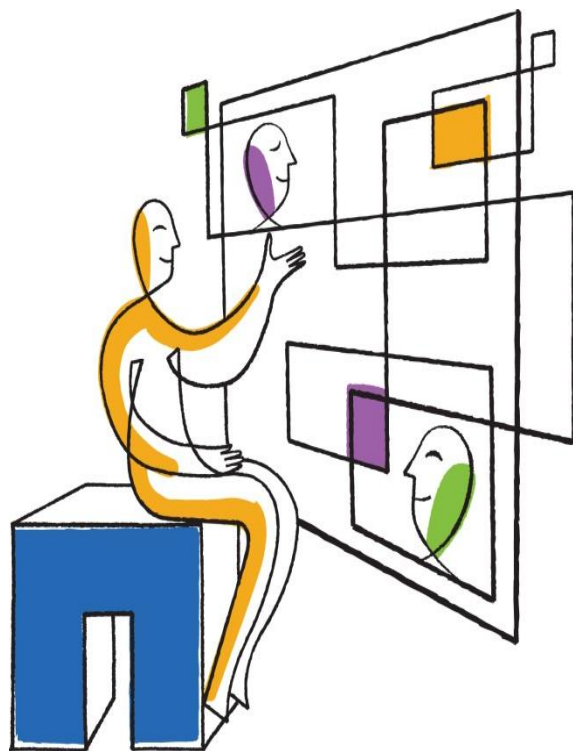
Software &  
Processes

Experts &  
Integration  
Services



# 20-year Growth Driver: Data ONTAP

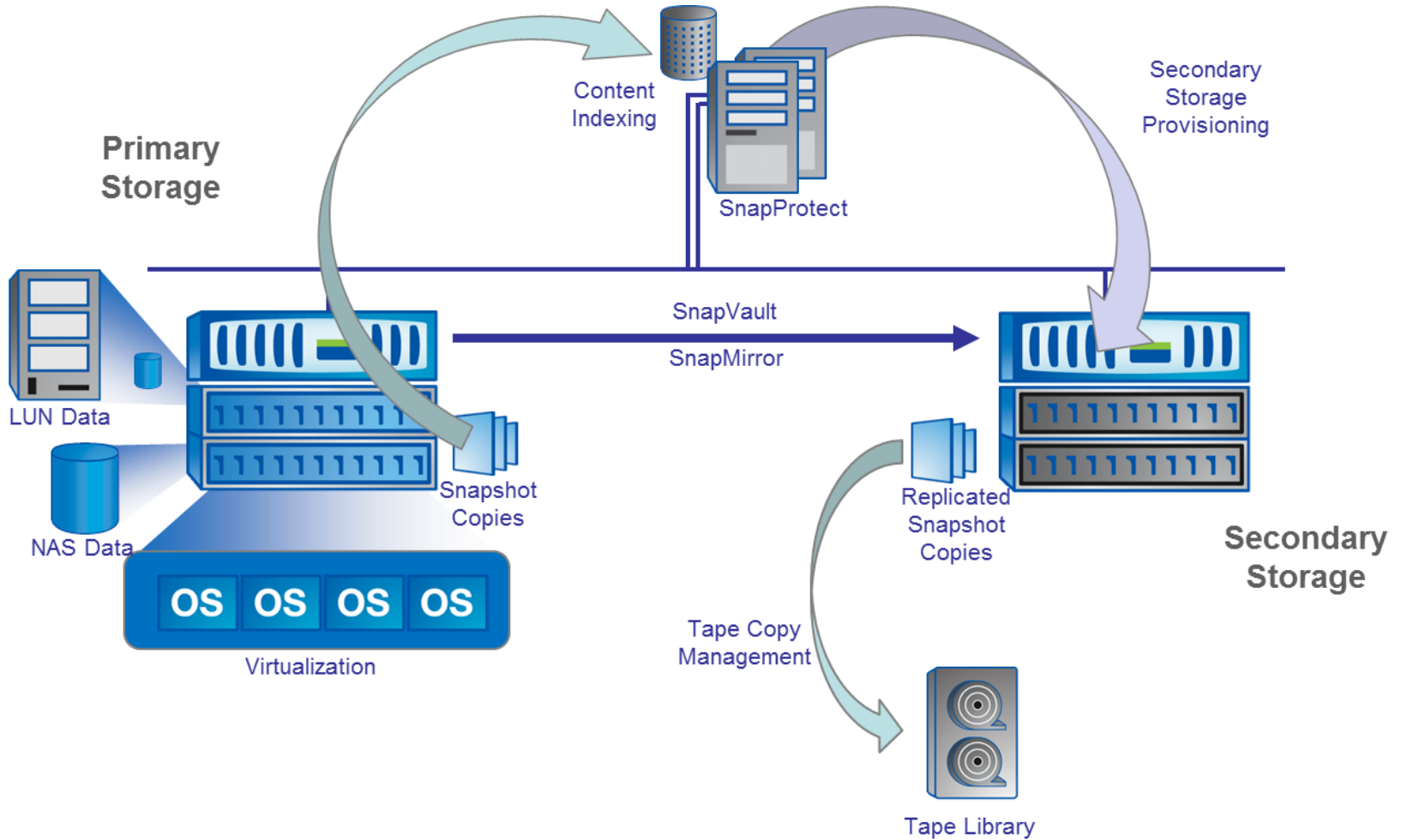
The industry's #1 storage operating system



- Started with price/performance for UNIX
- Added Unified (NAS/SAN)
  - Investment protection
  - Easy of use
- **Added Integrated Data Protection**
  - Replacing backup
- Added Storage Efficiency
- Added Flash Acceleration

*and we're just getting started...*

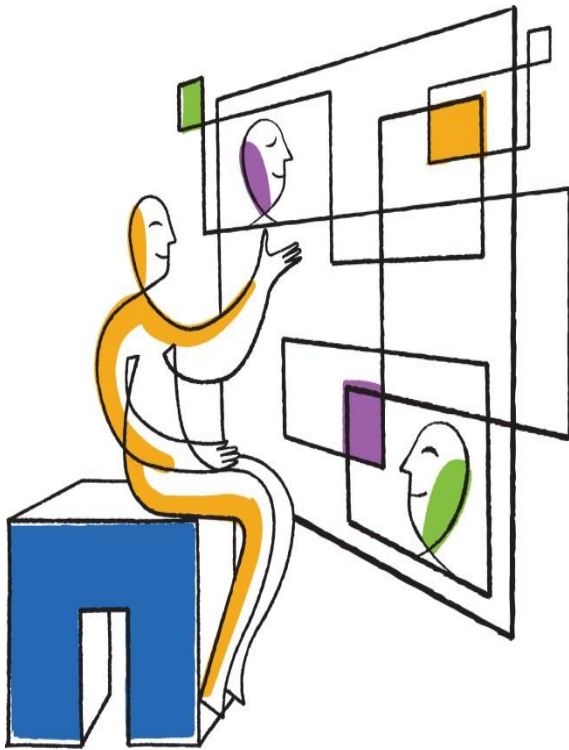
# Integrated Data Protection





# 20-year Growth Driver: Data ONTAP

The industry's #1 storage operating system

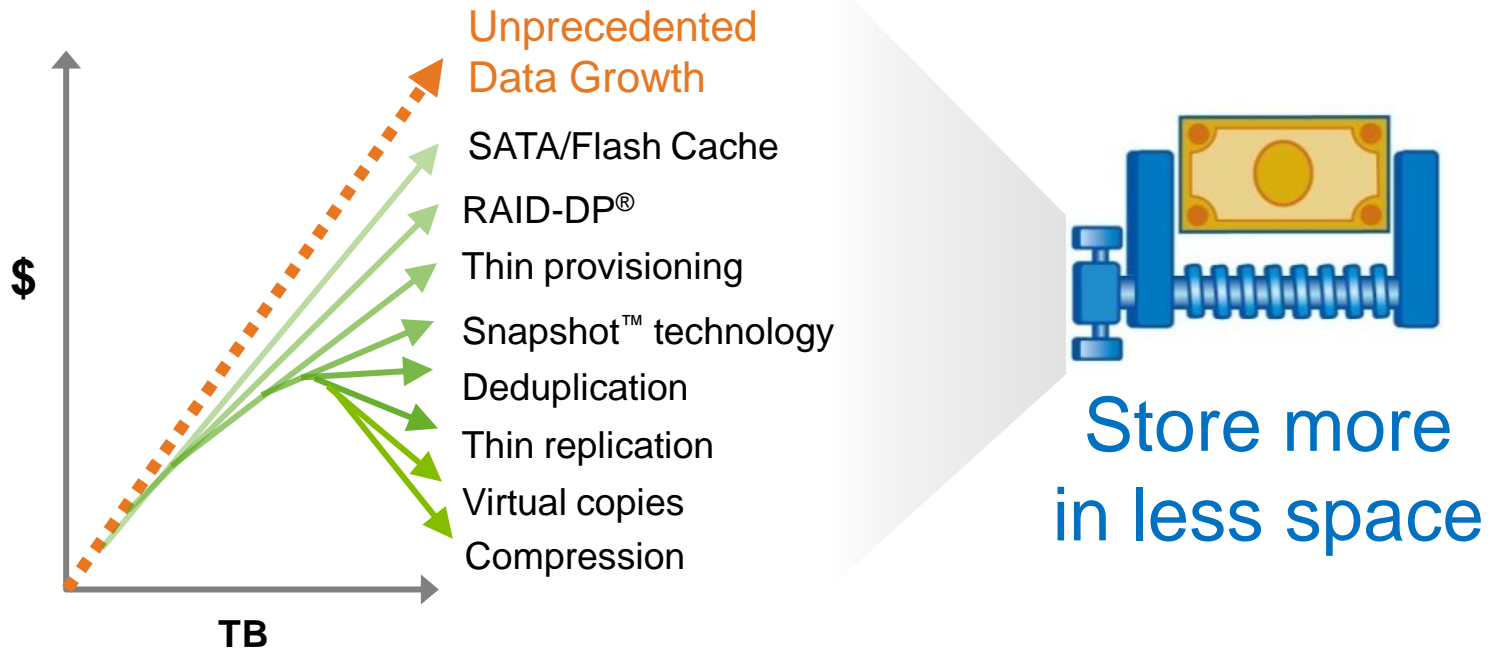


- Started with price/performance for UNIX
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# Storage Efficiency

## Efficiency Technologies



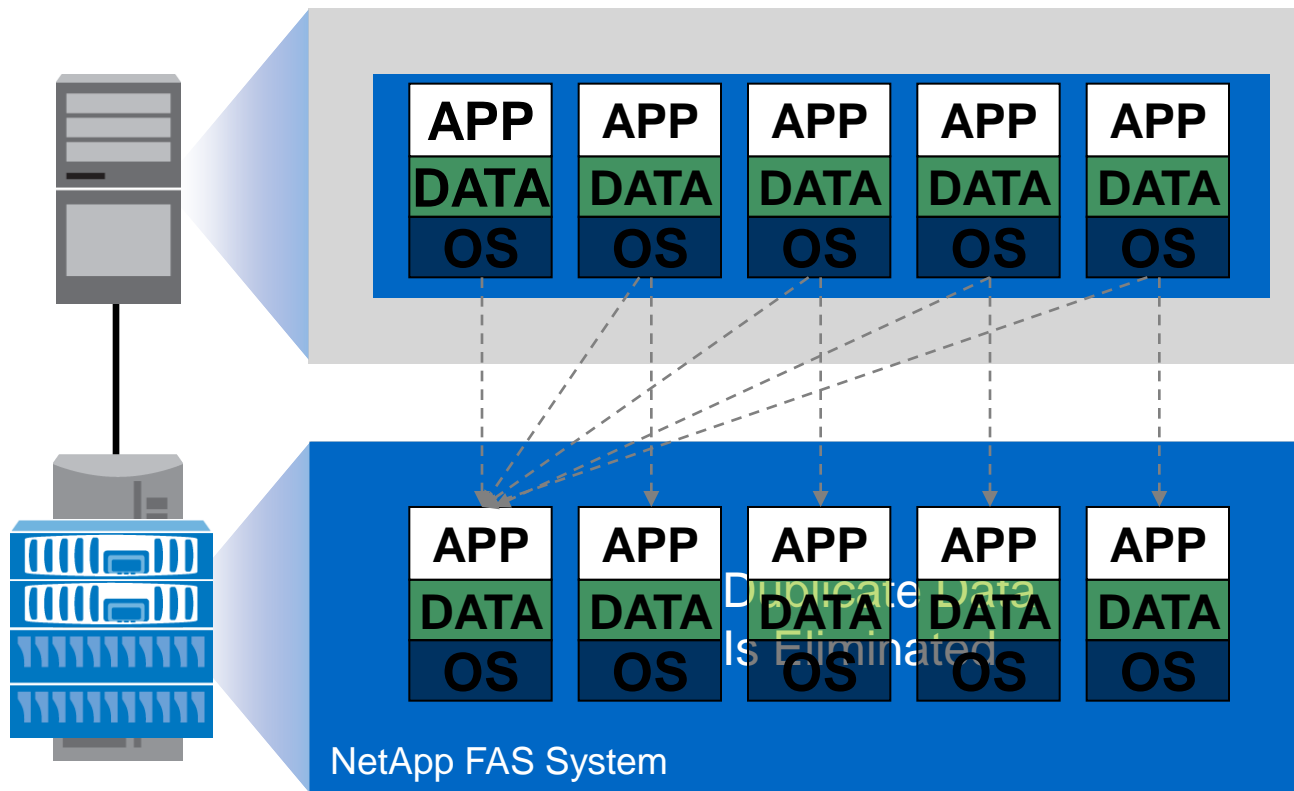
Save at least 50% of your capacity for virtualized workloads with NetApp.\* Guaranteed.



NetApp®

# An Opportunity for NetApp Deduplication

- VM images consume storage equal to size of template
- VM images are 100% identical
  - OS software, patches, software drivers, application data
- Save 50% on primary storage requirements after deduplicating





# Use 50% Less Storage. Guaranteed\*.



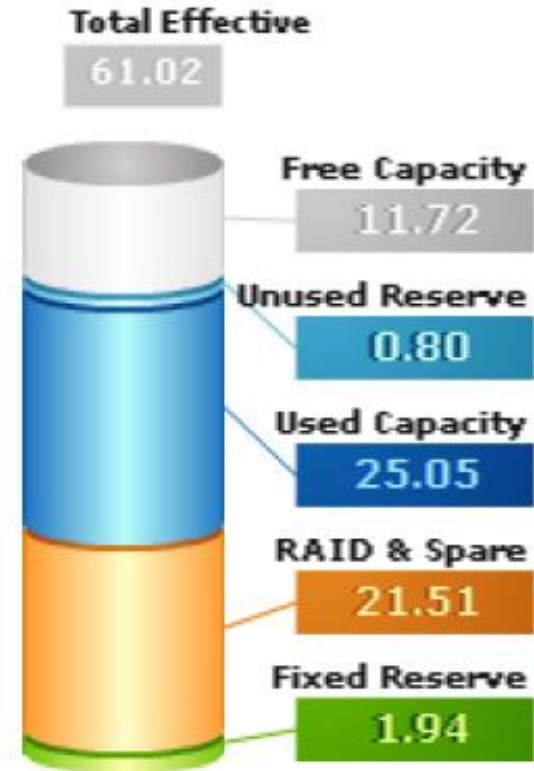
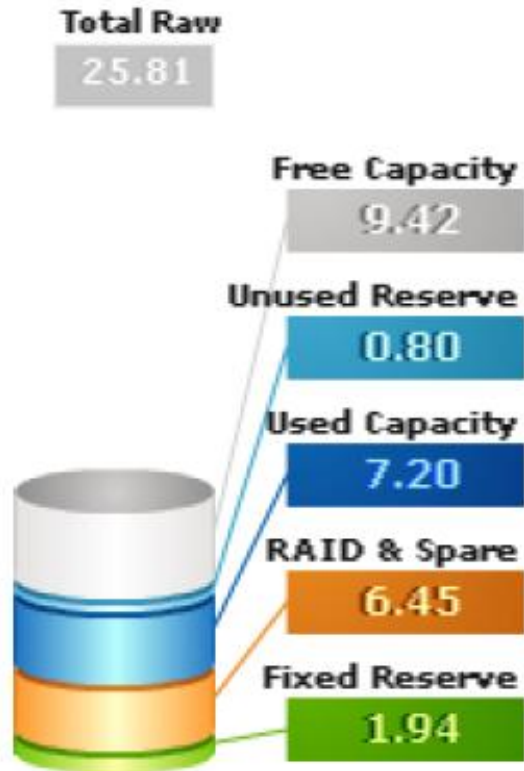
Use NetApp for your virtual environments, and we guarantee\* you will use 50% less storage

“During the research phase of your next storage purchasing cycle, ask each vendor if it offers a capacity saving on our VMware® system.”

Gartner Inc. Nov 2008 April Adams Capacity Savings and Storage Utilization Guarantees: What's Included, and Are They Worth Considering?  
Jonathan Davis, Duke Institute for Genome Sciences and Policy

- ▶ Implement our standard best practices
- ▶ Use our industry-leading features
  - Thin provisioning
  - Deduplication
  - RAID-DP®
  - NetApp Snapshot™ copies
- ▶ Have us help you install
- ▶ If you don't use 50% less storage, get the required capacity at no additional charge

\*For terms and conditions, go to [netapp.com/guarantee](http://netapp.com/guarantee)



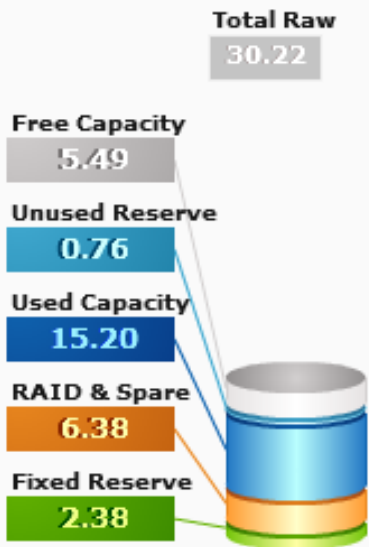




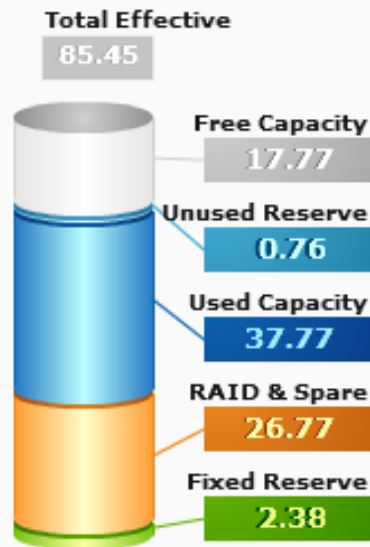
NetApp™

Storage Efficiency

Physical (TB)

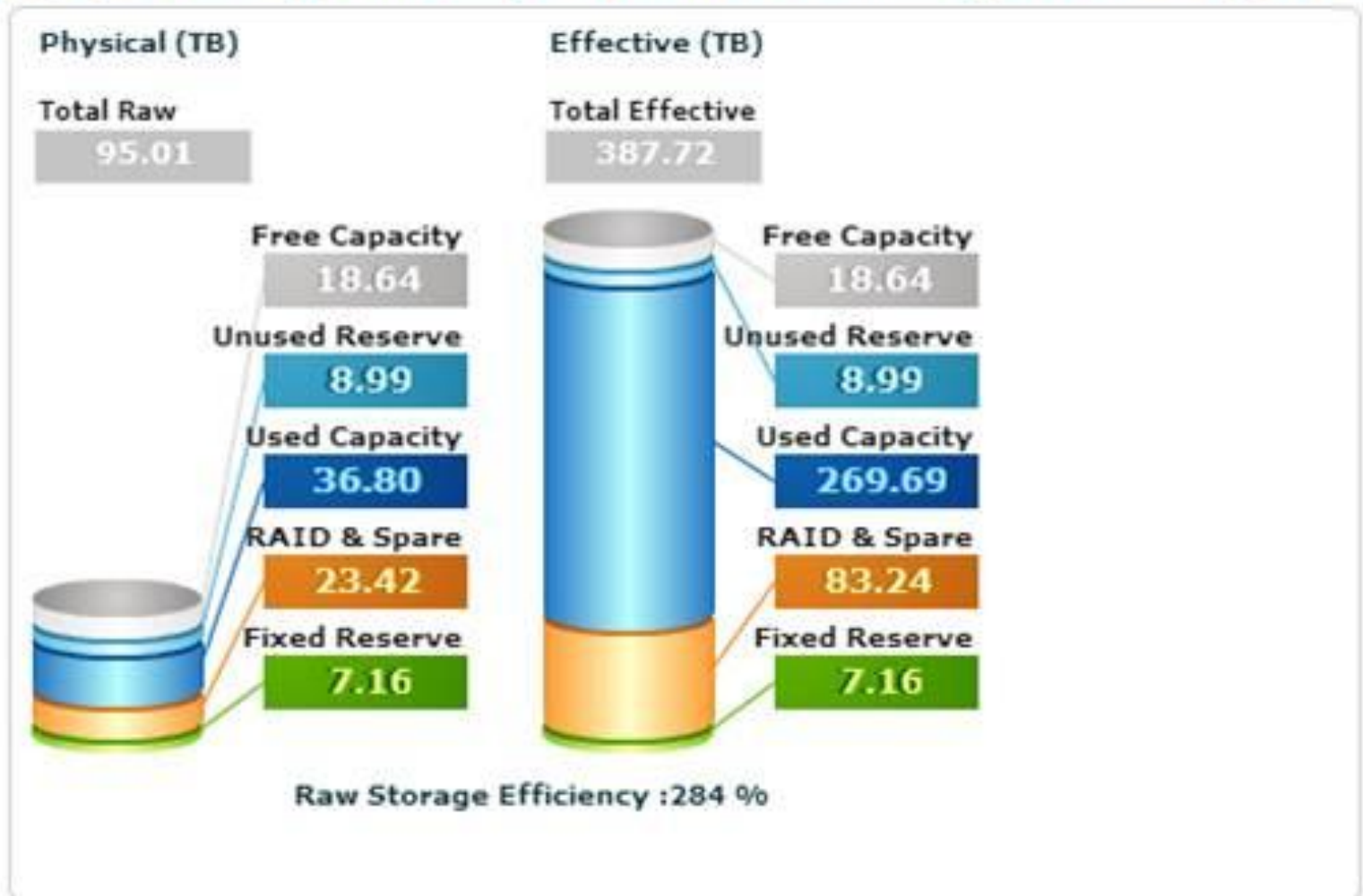


Effective (TB)



Raw Storage Efficiency : 125% [see more details...](#)

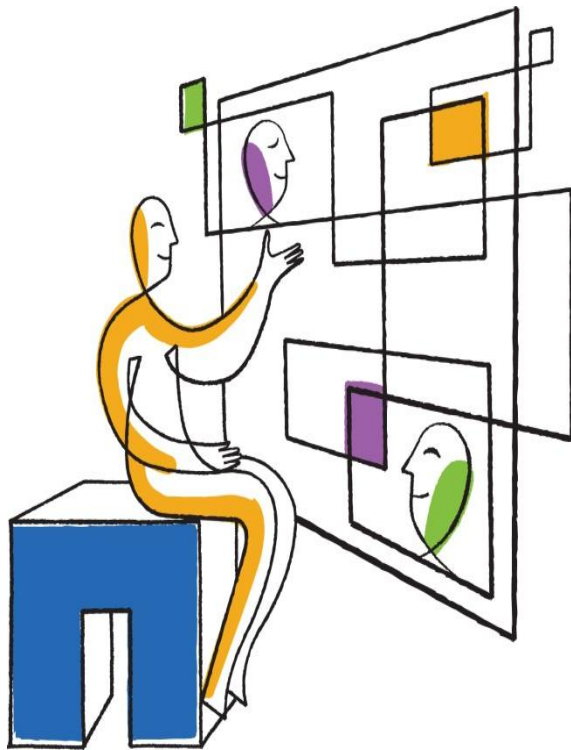
## Aggregated Storage Efficiency Dashboard for 3 AutoSupport enabled systems :



**284% storage efficiency**

# 20-year Growth Driver: Data ONTAP

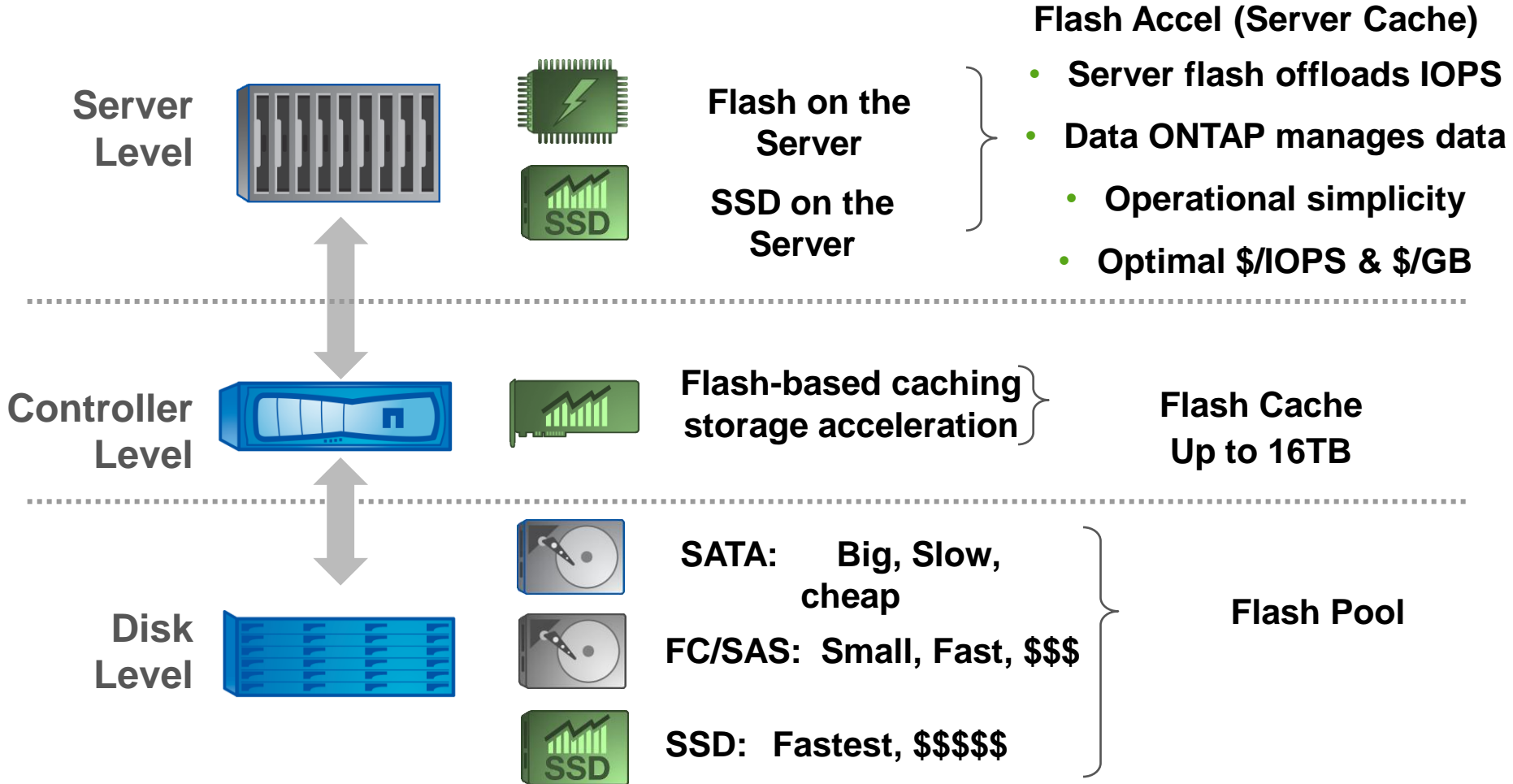
The industry's #1 storage operating system



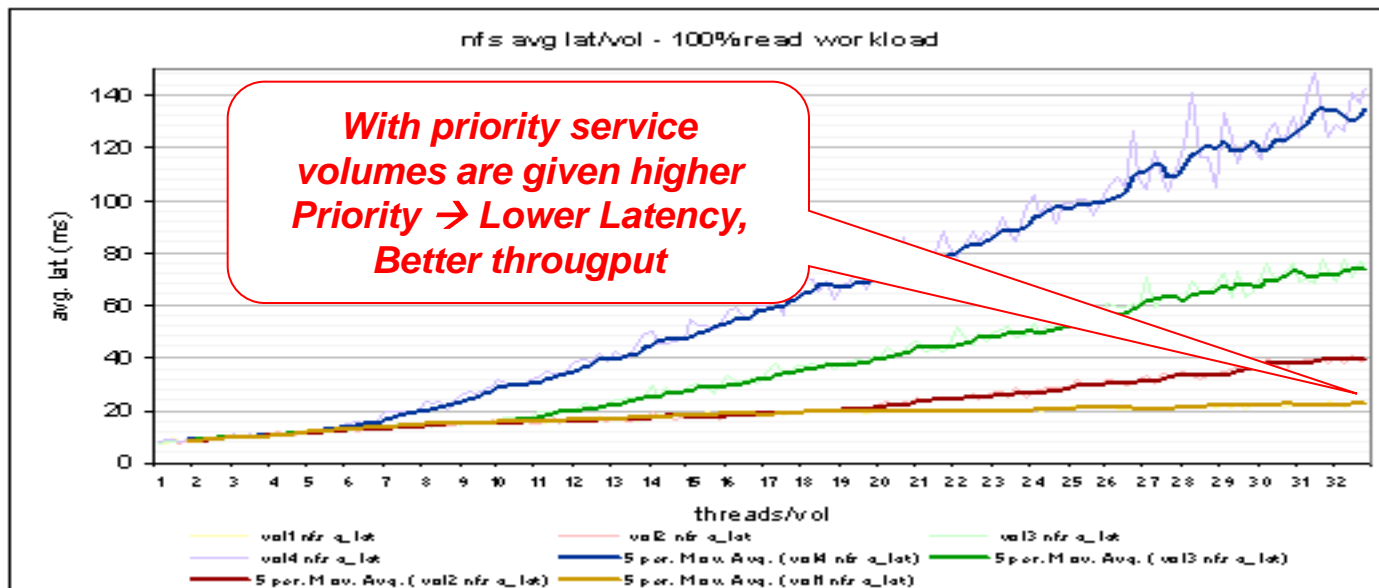
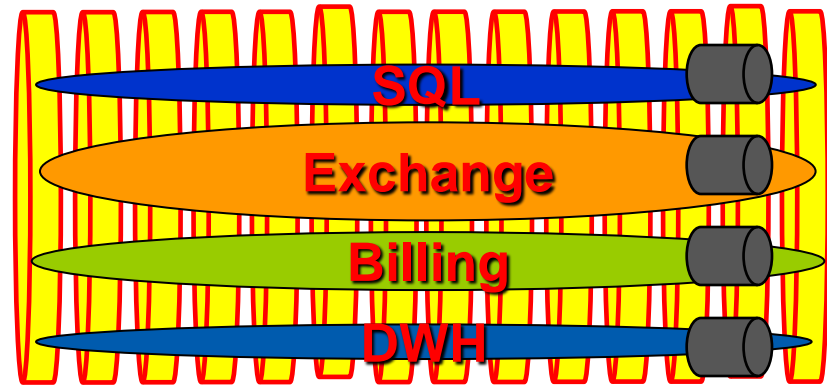
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*and we're just getting started...*

# Virtual Storage Tiering



# Quality Of Service





# NetApp EF540 Flash Array

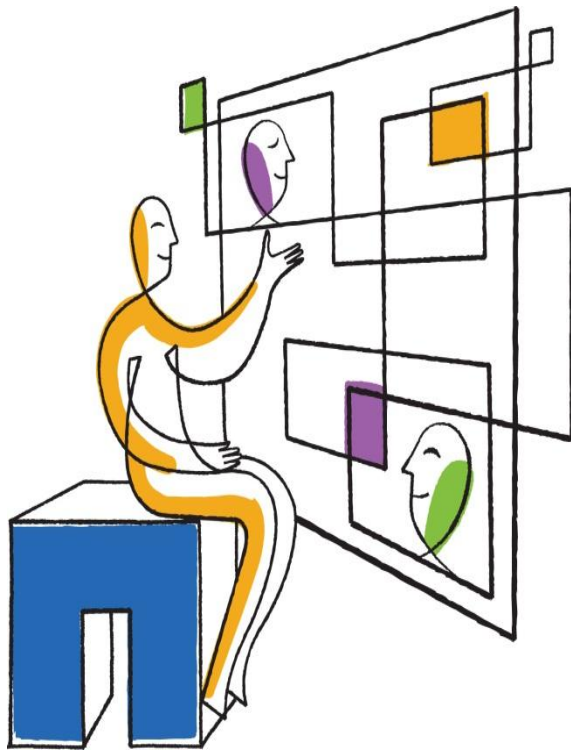
Designed for performance-driven applications with submillisecond latency requirements



- Extreme performance
  - More than 300,000 IOPS at submillisecond latency
  - Up to 6GB/s of bandwidth
- 2U/24 system with 800GB SSDs
  - 12 drives (9.6TB raw) or 24 drives (19.2TB raw)
- SANtricity<sup>®</sup> storage management software
  - Performance optimized; enterprise proven
  - Optional Snapshot<sup>™</sup> and Remote Mirroring

# 20-year Growth Driver: Data ONTAP

The industry's #1 storage operating system



- Started with price/performance for UNIX
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*and we're just getting started...*



# Agile Data Infrastructure

## The Promise of Storage as Infrastructure



*Intelligent*

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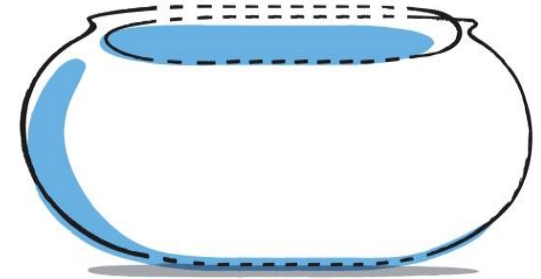
Deliver Impact  
Faster



*Immortal*

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Nondisruptive  
Operations



*Infinite*

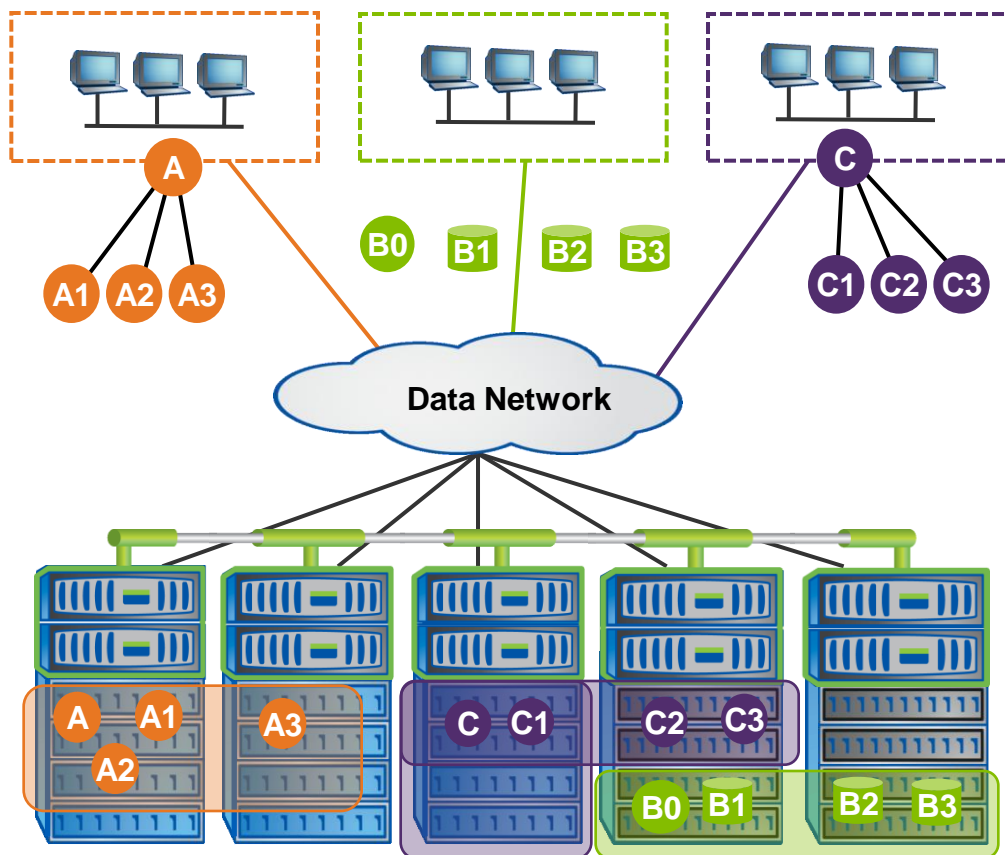
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Grow Business  
Without Limits



# On-Demand Flexibility

## Dynamically Adjust to Changes



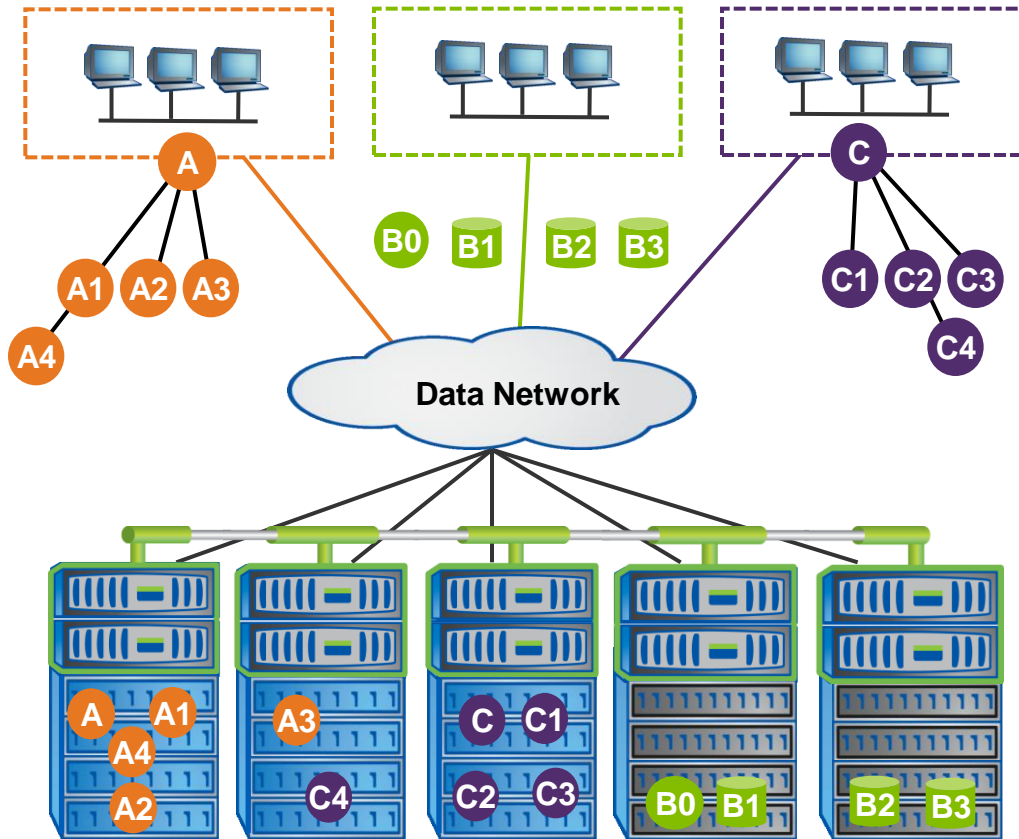
- Start small
- Expand cluster as business grows
- Keep secure isolation among tenants
- Rebalance performance or capacity for critical workloads
- Use SAN and NAS

\*The maximum cluster size for SAN is six nodes.

Transparent to all clients and applications

# Always On

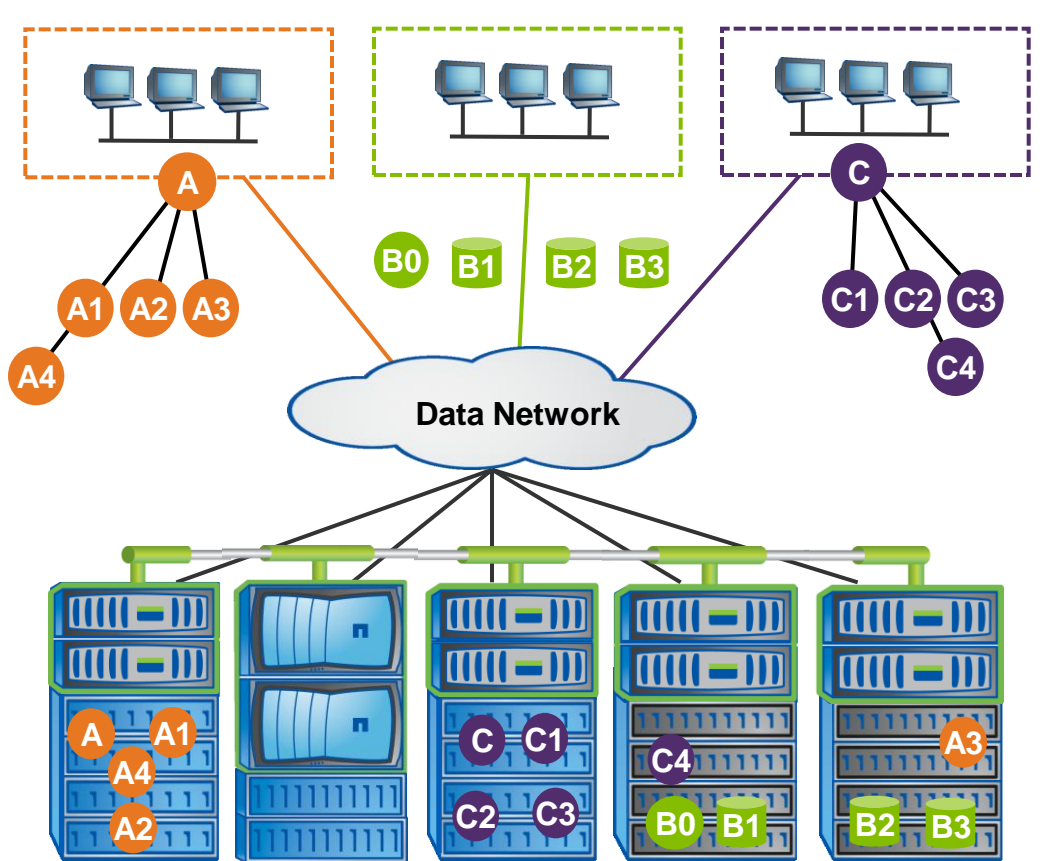
## Nondisruptive Operations: Refresh



- Move data to available nodes
- Retire existing hardware

# Always On

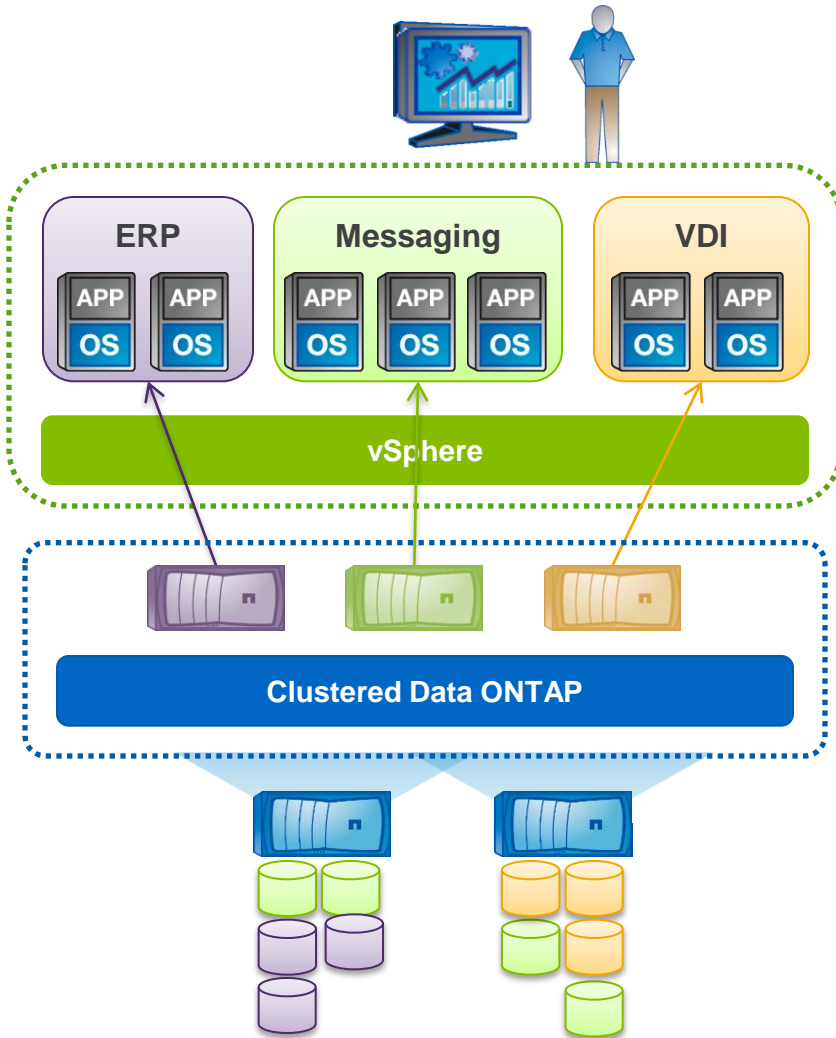
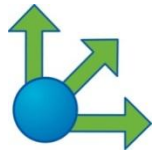
## Nondisruptive Operations: Refresh



- Move data to available nodes
- Retire existing hardware
- Upgrade storage
- Rebalance the load

Transparent to all clients and applications

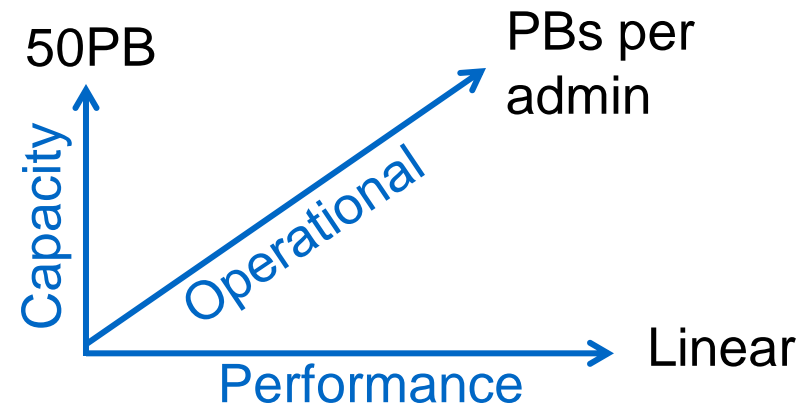
# Seamless Scaling



## Address data growth

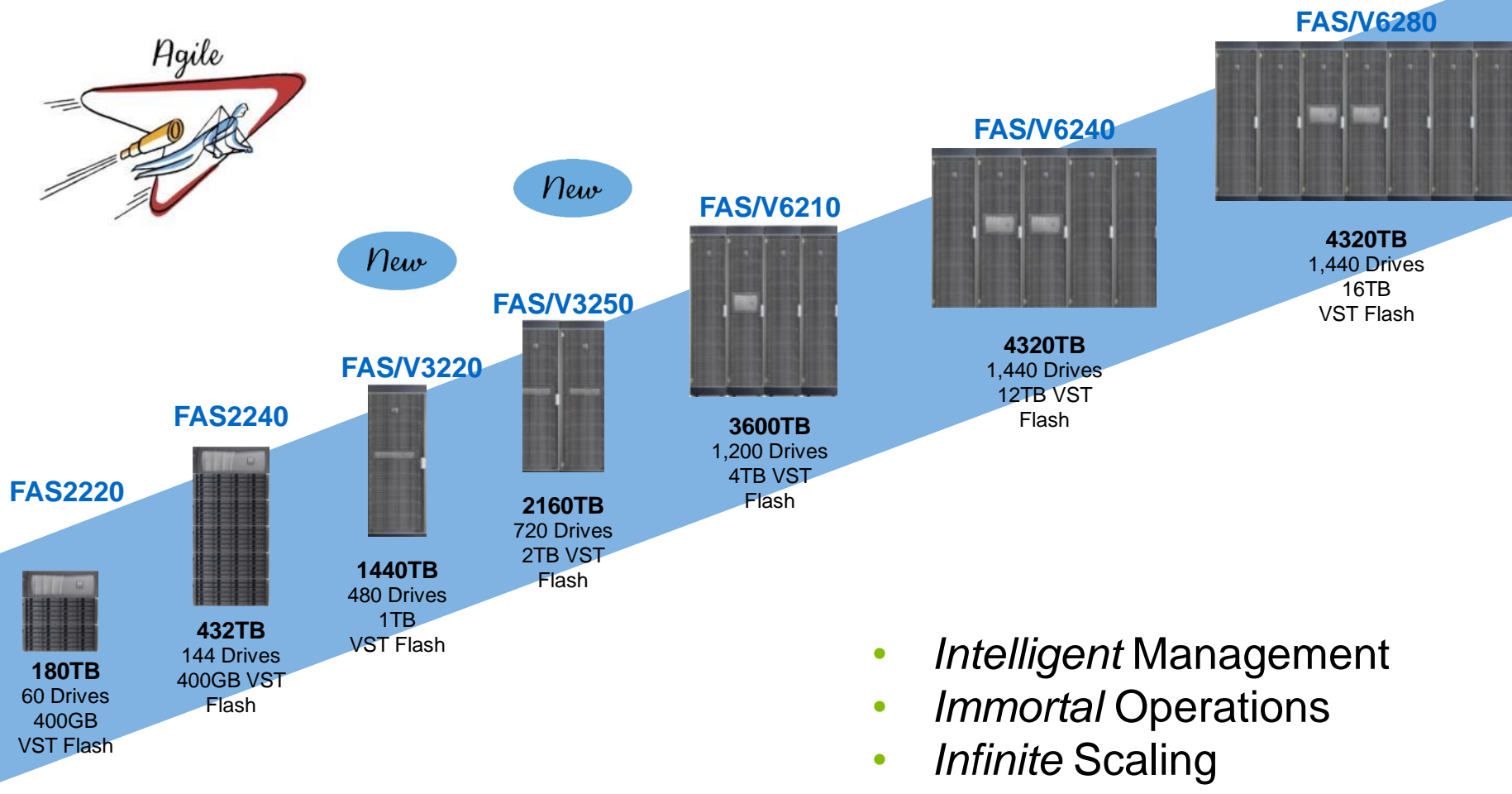
- Grow from small to large
- Respond immediately
- Simple, consistent management

## Scale in 3 dimensions





# Industry's Best Storage Platform for an Agile Data Infrastructure



- *Intelligent Management*
- *Immortal Operations*
- *Infinite Scaling*

**Social Marketing Management**  
shputlet, SYNCAPE, vitrue, involver, hootsuite, Flowtown, Spredfast, awareness, tweet, tapif, Socialware, hear say, MUTUALMIND, SPROUT SOCIAL, offerpop, Social Amp, Seismic, Strutta, votigo, SocialAppsHQ, extole, Fanzila, NORTH SOCIAL, Zuberance, BzzAgent, CaumSea

**URL Shorteners**  
bitly, tiny arrows, TinyURL.com

**Stream Platforms**  
UberMedia, TweetDeck, twirl, Aol Lifestream...

**Twitter Apps**  
twitpic, tweetmeme, StockTwits, Cadmus, wefollow, fixup!, Listorious, twitvid

**Analytics**  
awe.sm, bluefin, kontagent, Campalyst, mixpanel, OMNITURE, Caremetrics, webtrends

**Content Curation**  
hunchi, memlane, BuzzFeed, summify, Flipboard, SkyGrid, Storify

**Facebook Apps**  
LIKESTER, BranchOut, SNAP, badoo, smule, causes, booshaka

**Social Advertising Platforms**  
TBG, Lexity, spruceMEDIA, Adcpty, GRAPH EFFECT, twelfold media, BLINQ MEDIA, epic social, SOCIALTYZE, SAM, nanigans, Taykey, Ybrant DIGITAL, KENSHOO, Marin, EfficientFrontier

**Social Brand Engagement**  
socialvibe, mylikes, adly, local response, appsavevy, DYNAMIC SIGNAL, sharethrough

**Social Commerce Platforms**  
Payment, Moontoast, SHOP TAB, live gamer, dotbox, muncom, Molko, trial pay, Storenvy, shop igniter, FLUID, VendorShop, ecwid, milyoni

**Facebook Gaming**  
playfish, zynga, MetroGames, Playdom, KASAM, CrowdStar, ZIPZAPPLAY, socialpoint, DIGITAL CHOCOLATE, EA, UBISOFT, WILDNEEDLEGAMES, PopCap

**Social Ad Networks**  
OneRiot, rockyou, across, LIFESTREET, radium, XGRAPH, media6degrees, Gnip, Social Data, DATASIFT, RapLeaf, Topsy, wink, Aardvark, StumbleUpon, greplin, spokeo, WHOS TALKIN

**Social Intelligence**  
PostRank, Trendrr, ATTENTIVY, VISIBLE, BuzzLabs, actionly, bottlenose, viralheat, colligent, synthesio, sysomos, brandprotect, trackur, scoutlabs, M, backtype, radiant, ALTERIAN, conversion, NETBASE

**Social Scoring**  
KLOUT, empireavenue, PeerIndex

**Social TV**  
PHILO, plus, miso, GetGlue, clipsync, SnappyTV, INTO\_NOW, tunerfish

**Social Networks - Other**  
LinkedIn, TAGGED, my, friendster, gaia, plaxo, Path, CLUB PREMIUM, Merchant, HABBO, orkut, Google+, #hashable, renren, friend.ly

**Social/Mobile Apps & Games**  
foursquare, waze, iWox, loopT, Foodspotting, glu, h5, pelago, playdams, tooYAK

**Social Shopping**  
Giantnerd, Zaarly, zappli, Swipely, LOCKERZ, SVPPLY, giftki, kobocode!

**Content Sharing (Reviews/Q&A/Docs)**  
yelp, Angie's list, Quora, Scribd, topix, foto, fopedia, slideshare, DocShare

**Social Business Software**  
pasenger, lithium, jive, telligent, External (Customer) Facing: Satisfaction, LeverageSoftware, Pluck, TickApps, mZinga, Assistfy, Internal (Employee) Facing: huddle, cubetree, acquia, igloo, TWiki, moxie, Watchitoo, yammer, chatier, Socialtext, nmbie, SOCIALCAST

**Blogging Platforms**  
tumblr, posterous, Blogger, WordPress, Squarespace, Joomla!, JUX

**Social Referral**  
ShopSocially, socialfeet, 500friends, TurnTo, curebit

**Photo Sharing**  
SmugMug, Pixable, klip, flickr, photobucket, ZangZing, Picasa, Instagram

**Community Platforms**  
yaku, GROU.PS, BuddyPress, mixxt, Groupsite, Ning

**Plug-ins/Widgets**  
tynt, Bazaarvoice, giga, Badgeville, ShareThis, spinback, janrain, conduit, clearspring, echo, PowerReviews, Mass Relevance, meeb, Cover It Live, widgetbox, factory

**Traditional Publishers**  
DAILY CANDY, CNN, The New York Times, Glam Media, THE WALL STREET JOURNAL, HEARST corporation, Aol, CONDÉ NAST



# Cloud Services Built on NetApp

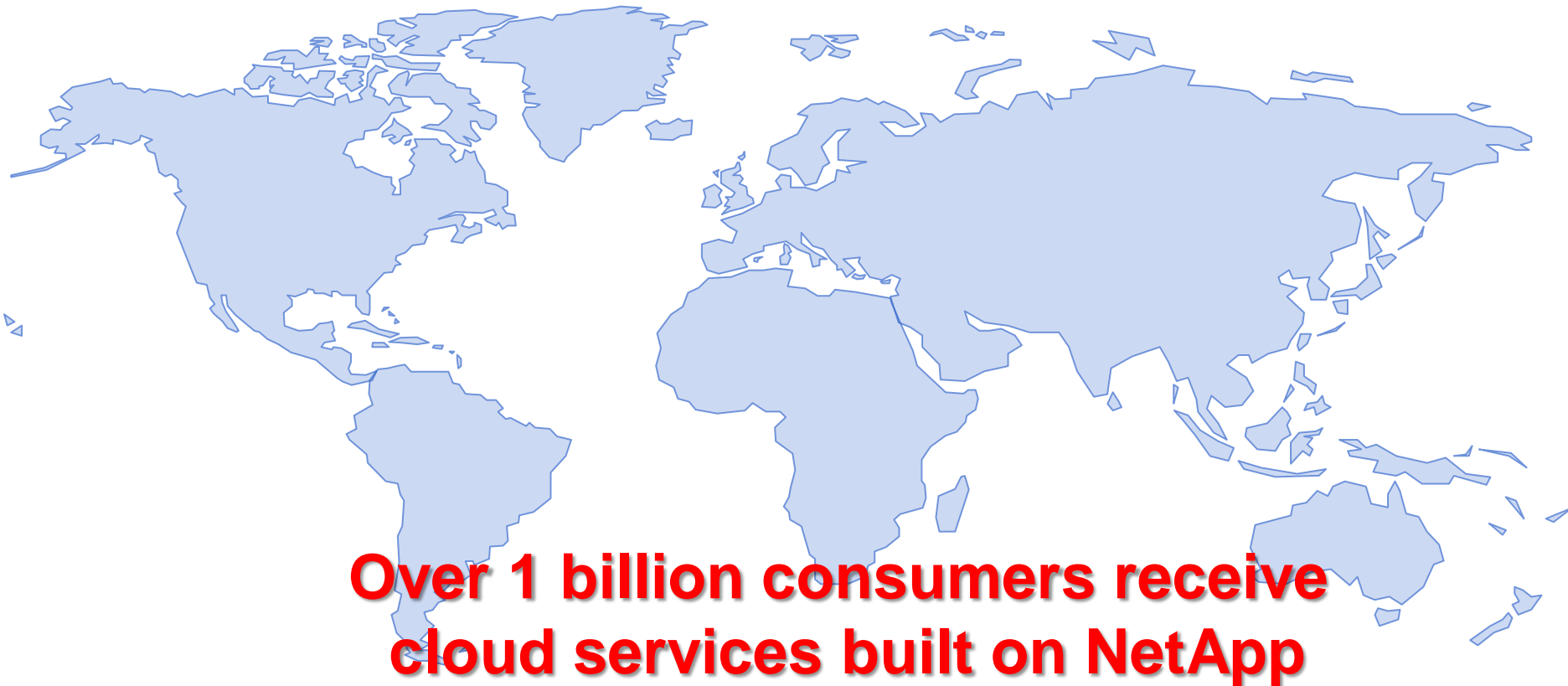
Infrastructure  
as a Service

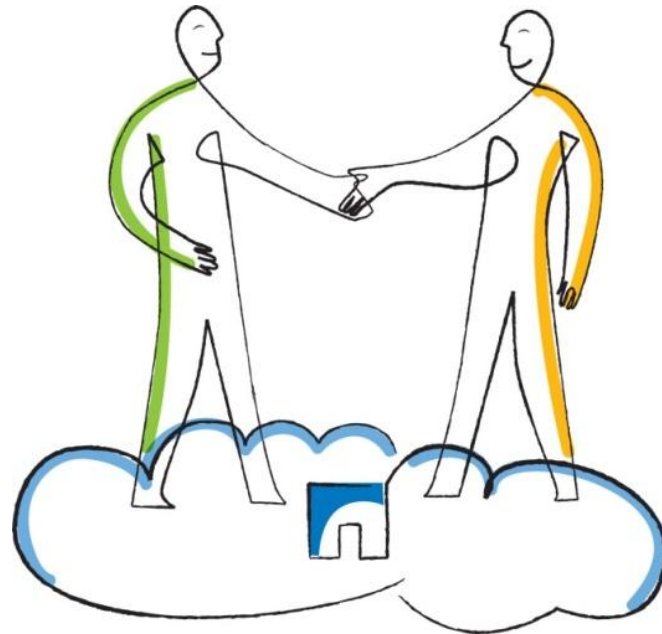
Data Protection  
as a Service

Messaging &  
Collaboration  
as a Service

Desktop  
as a Service

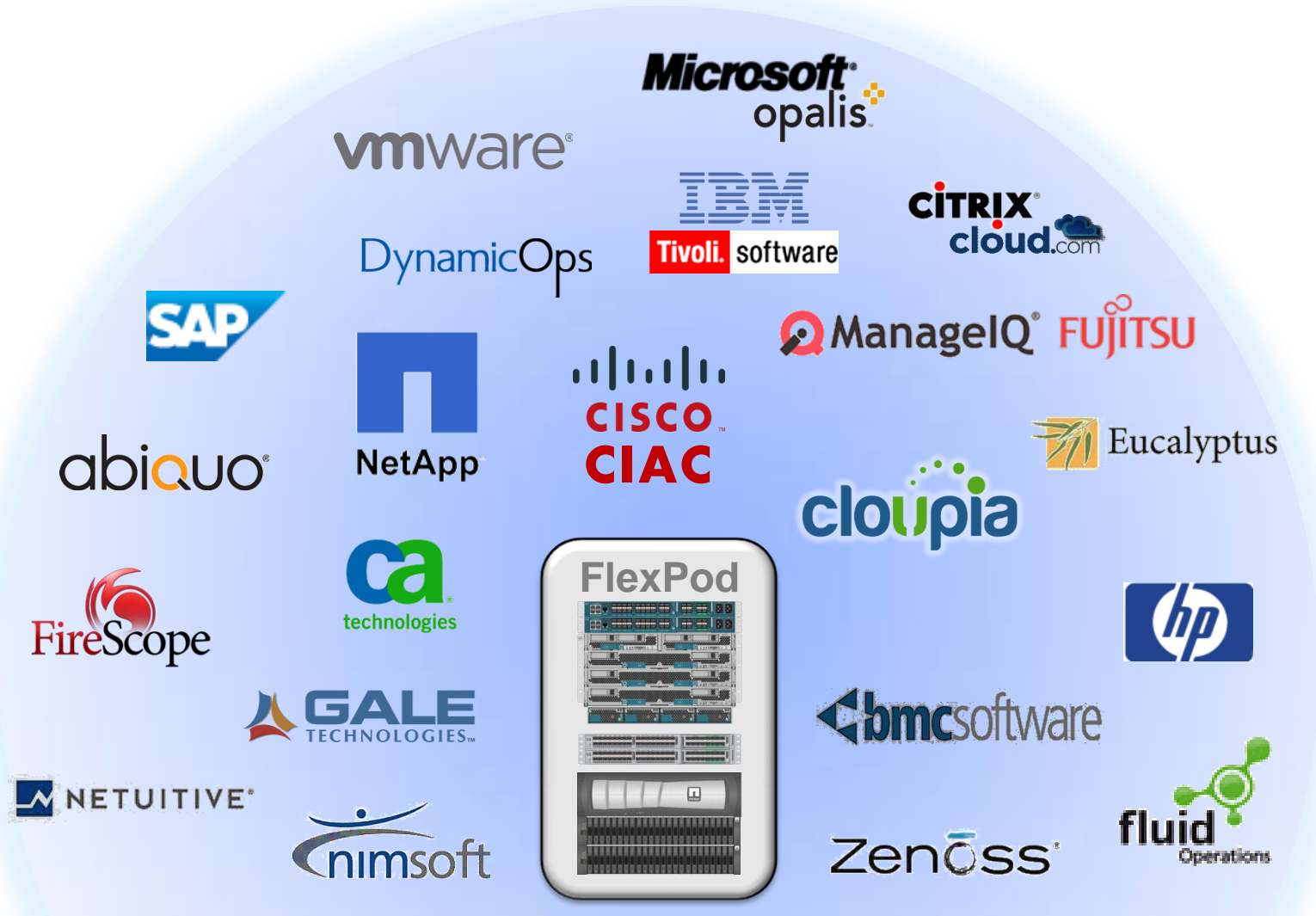
Other  
as a Service







# NetApp Cisco FlexPod



The central image is a NetApp FlexPod server rack, showing multiple server units stacked vertically. The rack is labeled "FlexPod" at the top. Surrounding the rack are logos for various partners and technologies:

- Microsoft opalis
- vmware
- IBM
- CITRIX cloud.com
- DynamicOps
- Tivoli software
- SAP
- abiquo
- NetApp
- CISCO CIAC
- ManagelQ
- FUJITSU
- Eucalyptus
- clou pia
- FireScope
- ca technologies
- hp
- GALE TECHNOLOGIES
- bmc software
- NETUITIVE
- nimsoft
- Zenoss
- fluid Operations



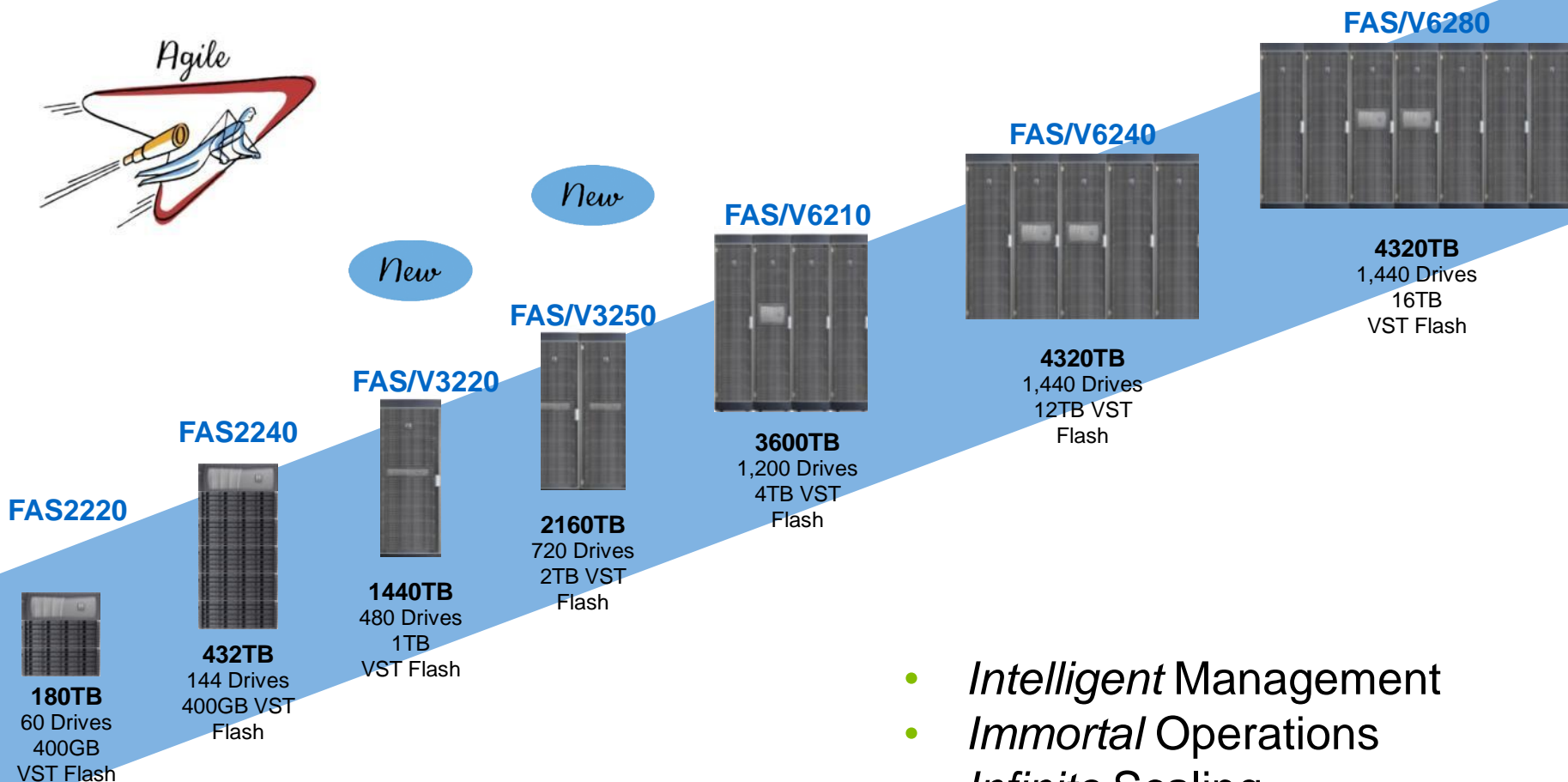
# Start Right! Keep it Simple! Grow Smart!

- Performance
- All protocols
  - NAS (CIFS, NFS)
  - SAN (FC, iSCSI, FCoE)
- Backup to disk (255 snapshots) instant restore
- Disaster Recovery ready
- Double Disk failure protection
- Efficiency
- Automation
- Non Disruptive operation





# Industry's Best Storage Platform for an Agile Data Infrastructure



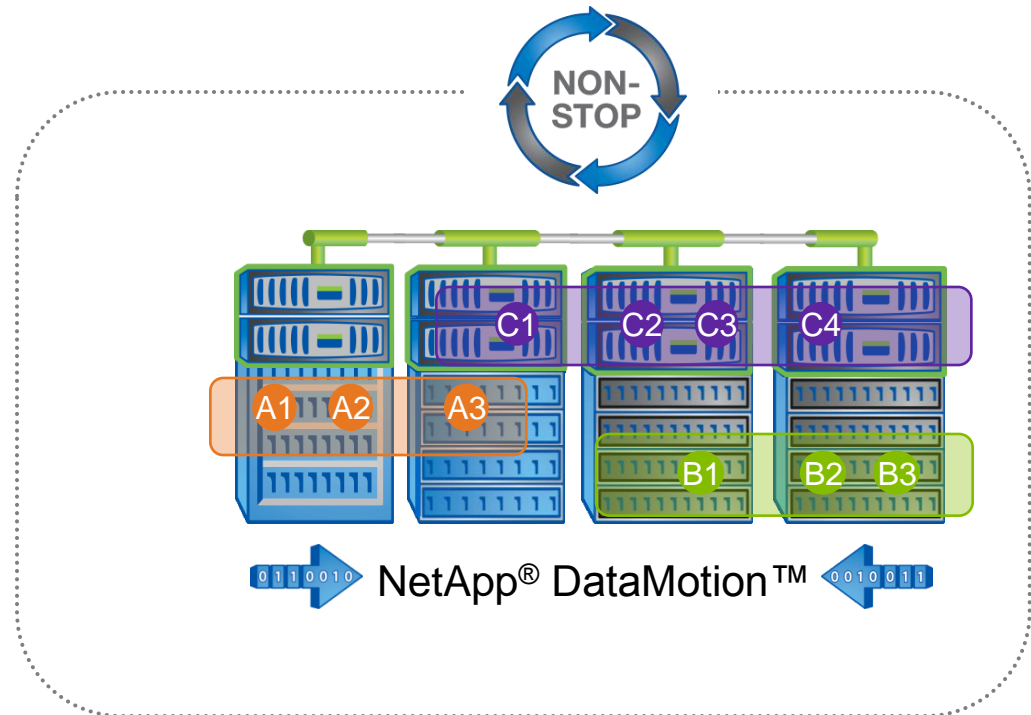
- *Intelligent Management*
- *Immortal Operations*
- *Infinite Scaling*

# NetApp Agile Data Infrastructure

- Expand
- Rebalance
- Refresh



**No data  
downtime**



**First and only vendor to provide fully transparent migration of block and file (unified) data**

*Thank you*

