



**NetApp™**

Go further, faster

## How is this possible?

5 VM's with 10G Disk need only  
9G total space

HROUG

Rovinj, Oct. 2008

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# Agenda

- NetApp Data Deduplication
  - How it works
  - Demo [dedup](#) VMware [Guest-OS-Images](#)
  
- SnapManager for Virtual Infrastructure
  - “Fast [Backup](#) is fine – Fast [Restore](#) is finer”
  
- Live Demo
  
- Q&A



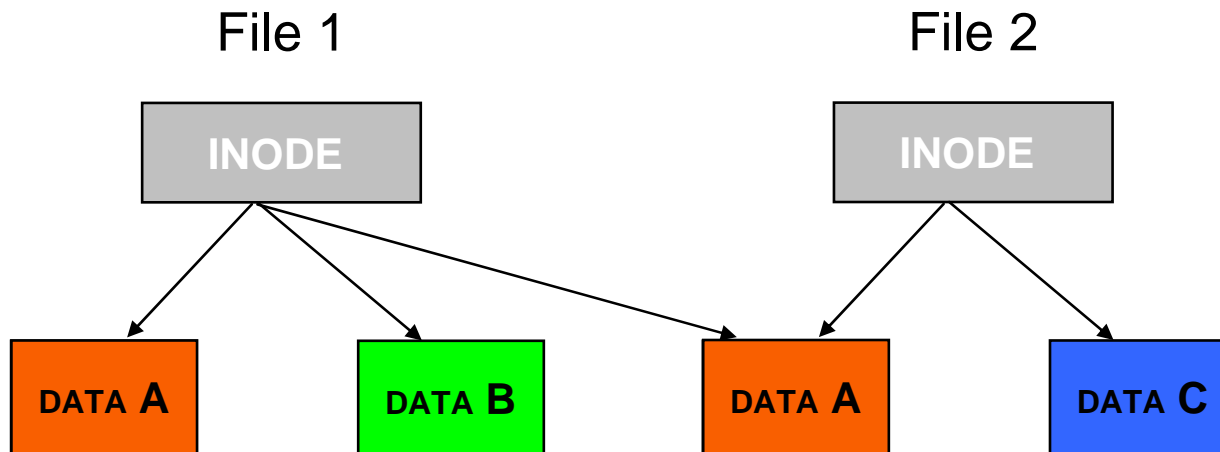
# Deduplication

- Deduplicates ANY Data
- Fully transparent for Applications
- Operates at Block Level
- Based on „WAFL“ Technology of DataOntap

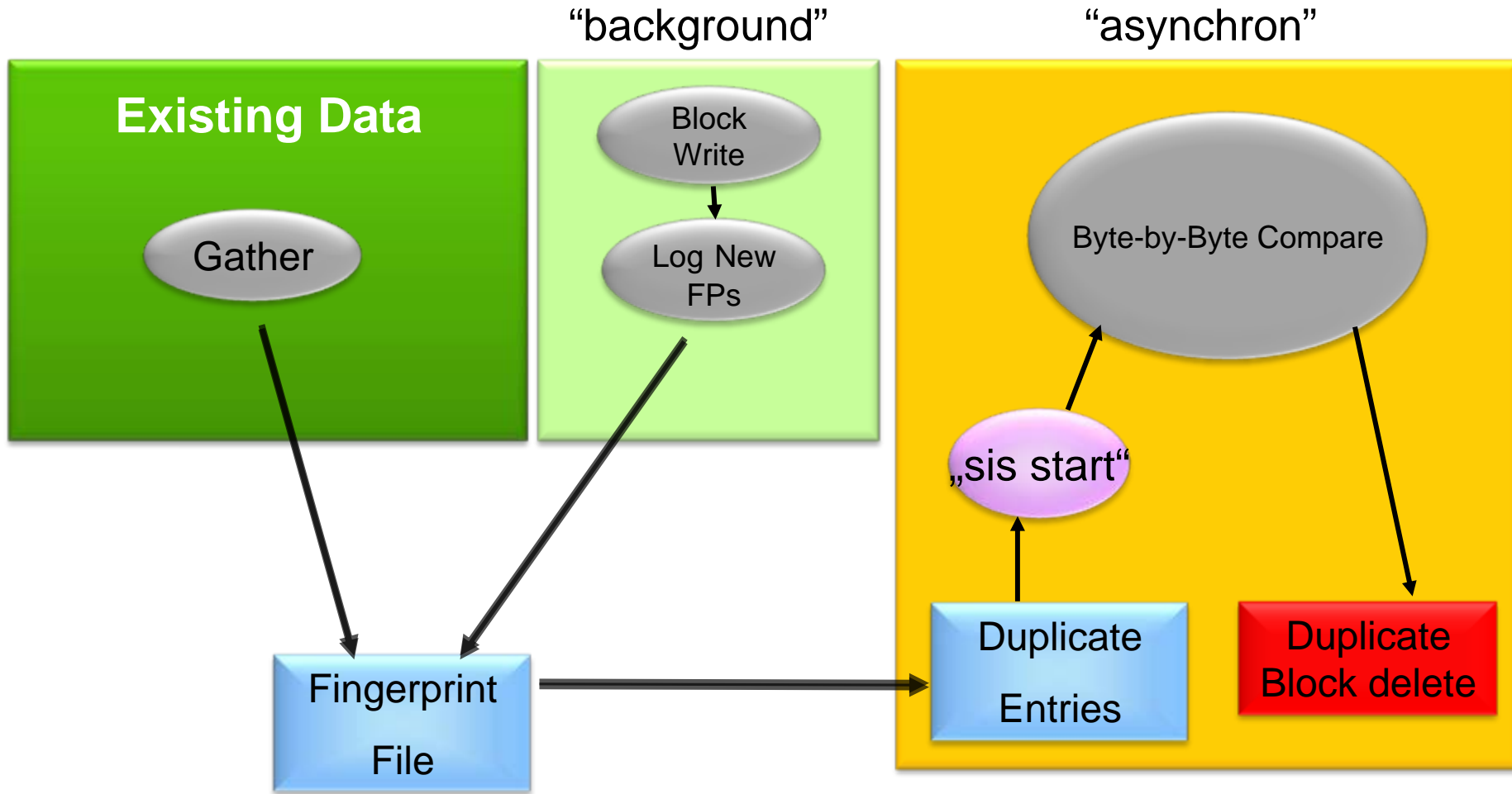
# Deduplication – Principal Functionality

- “WAFL” – the Storage internal Filesystem
  - access to data with pointers

After Deduplication

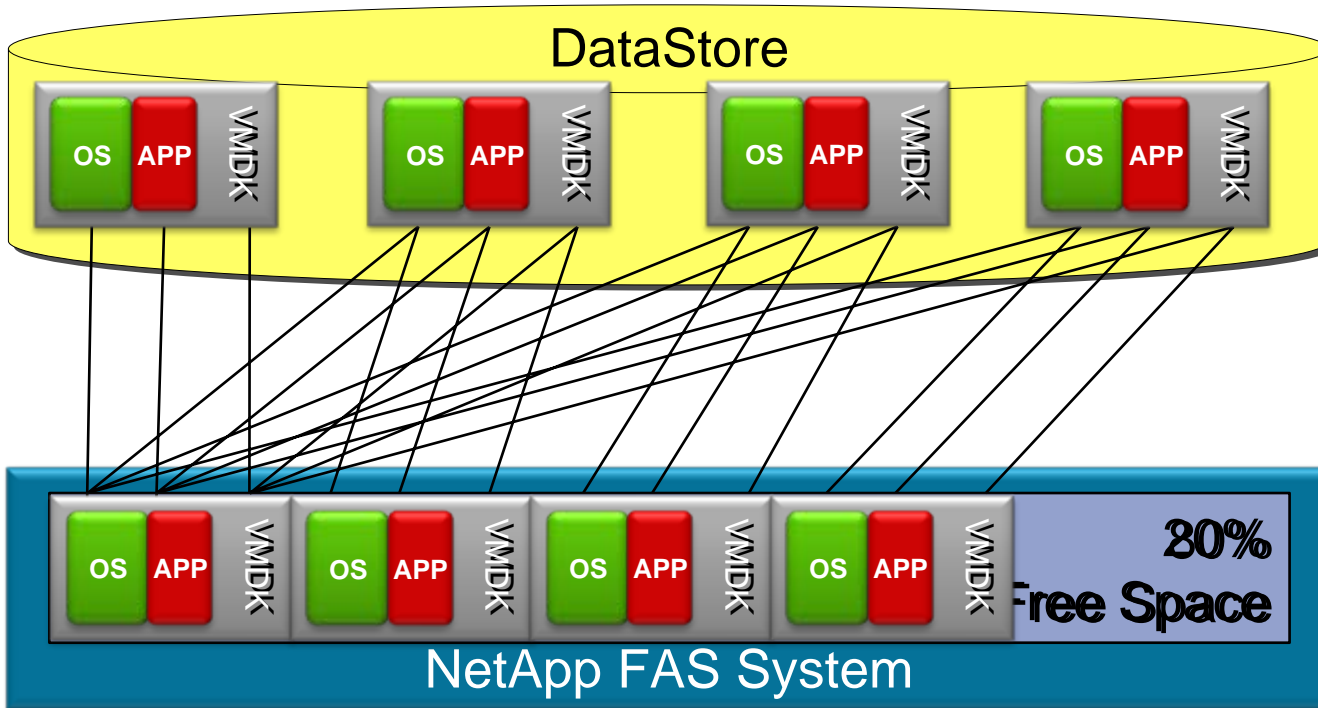


# Deduplication “in-depth”



# Deduplication and Servervirtualization

By default every VM has its own OS Image stored on disk



Actual trend:  
VDI Environments

Enourmous Space savings!

Netapp allows Resourcesharing also for Storagecapacity

→ Take Your Virtualization to the next level!

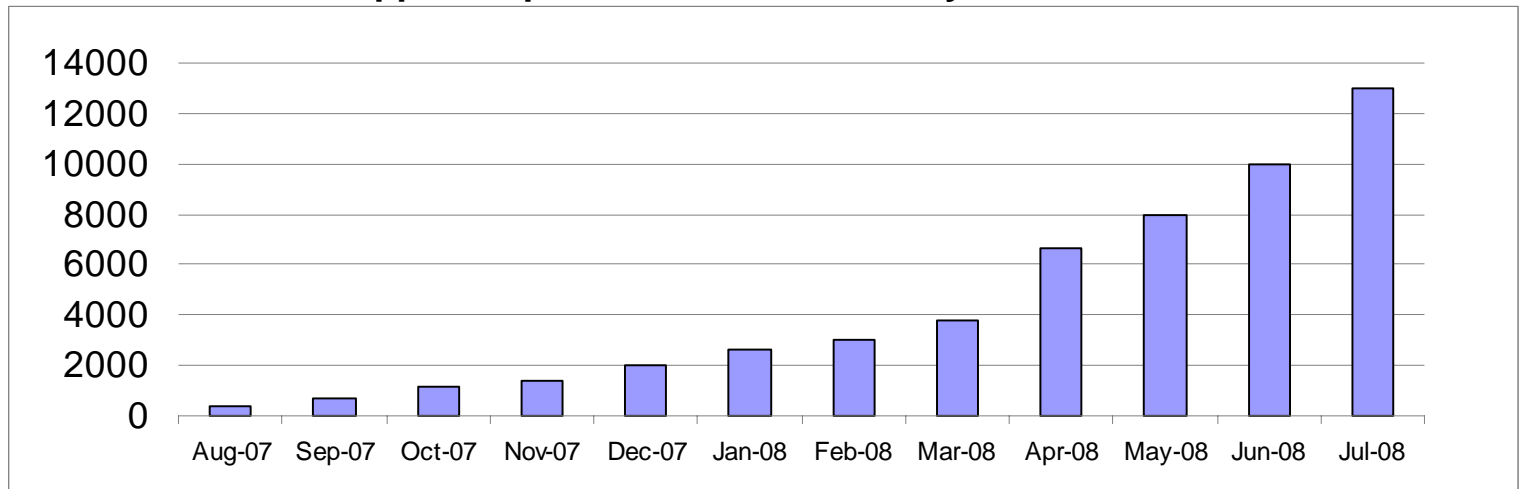


# NetApp Dedupe Worldwide Leadership



Over 13,000 Systems  
Over 3,000 Customers  
Over 150PB Usable Capacity

NetApp Deduplication - Cumulative System Licenses

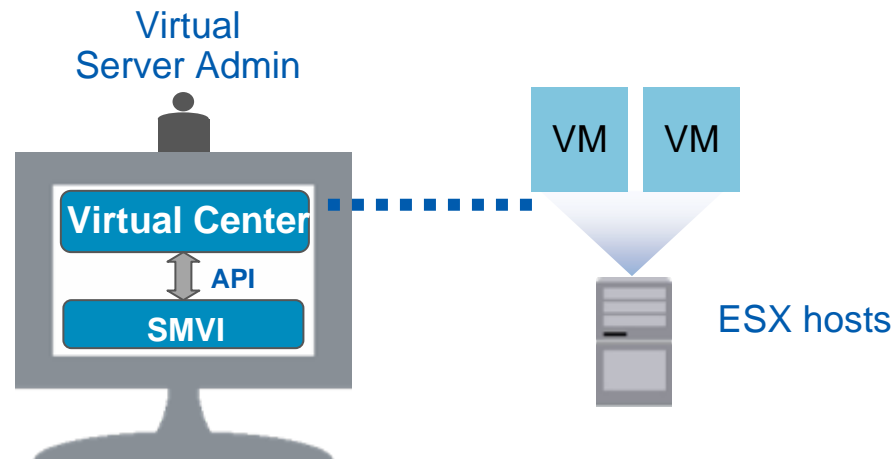


*“Russell said that on the deduplication front...[NetApp’s] deduplication license, which allows its customers to turn on dedupe for free in their primary storage systems, has overtaken Data Domain’s deduplication products in number of systems shipped, number of customers and number of usable petabytes shipped.”*

- Dave Russell, Gartner Research VP - Quoted August 14, 2008

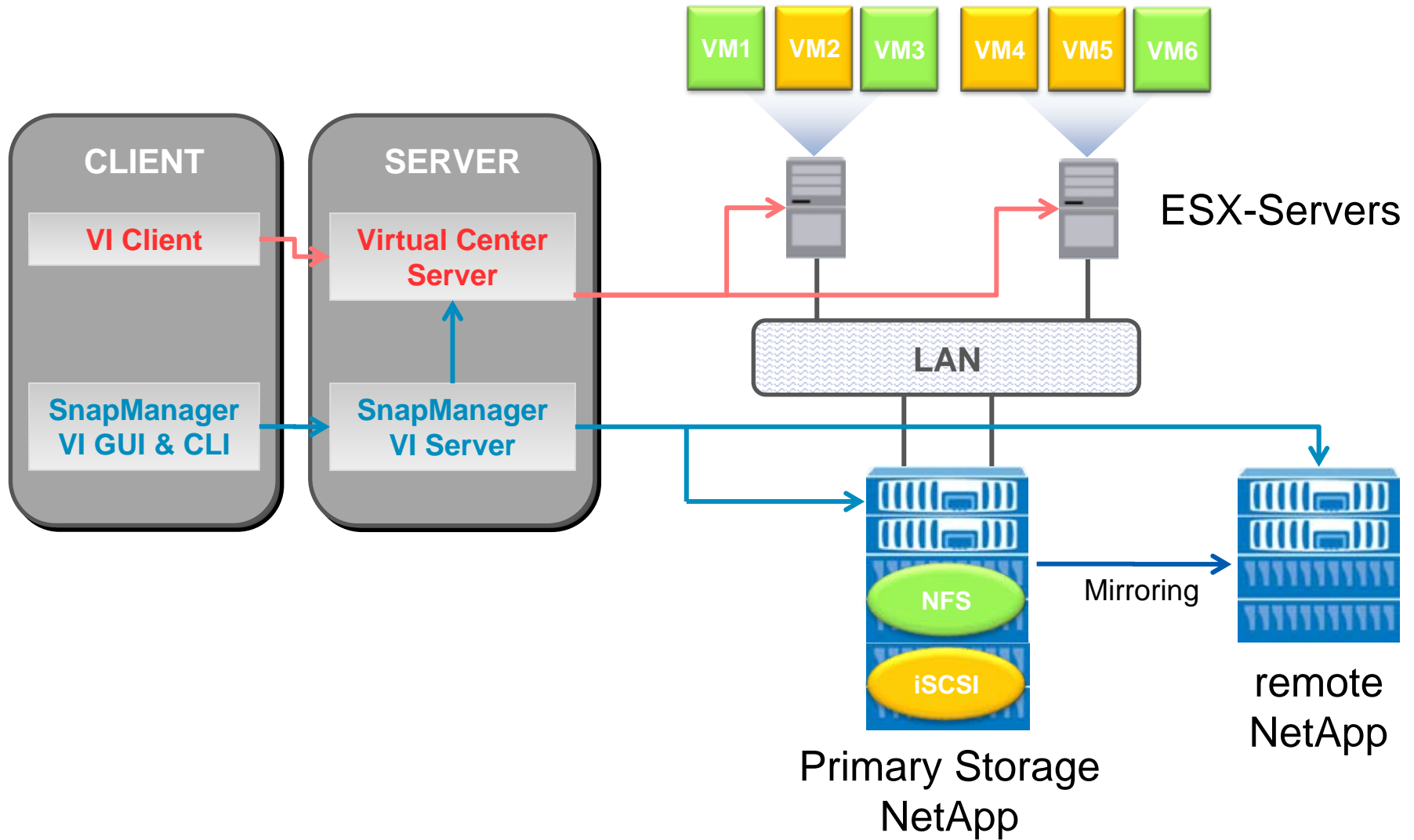
# SnapManager for Virtual Infrastructure (SMVI)

- Backup and Restore VM-Images in Minutes
- Consistent replicate VM Images to remote Site
- Works with Virtual Center Server





# Live Demo - Setup





**Thank You!**

[www.netapp.com](http://www.netapp.com)