



**NetApp™**

Go further, faster™

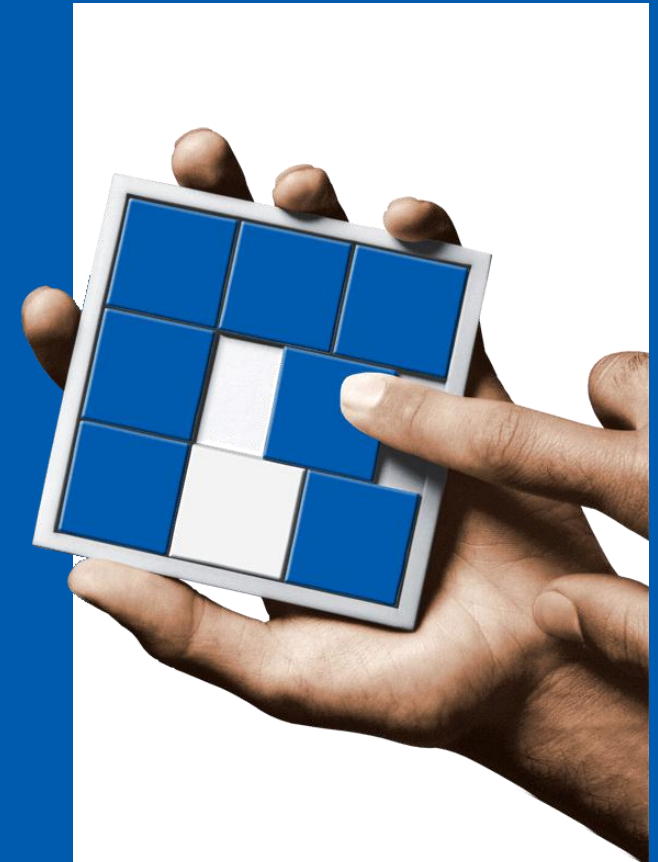
# NetApp

## Wohin mit den Daten?

Franz Lohynski

Account Manager

ArrowECS NetApp Distribution



# NetApp

## Das Unternehmen

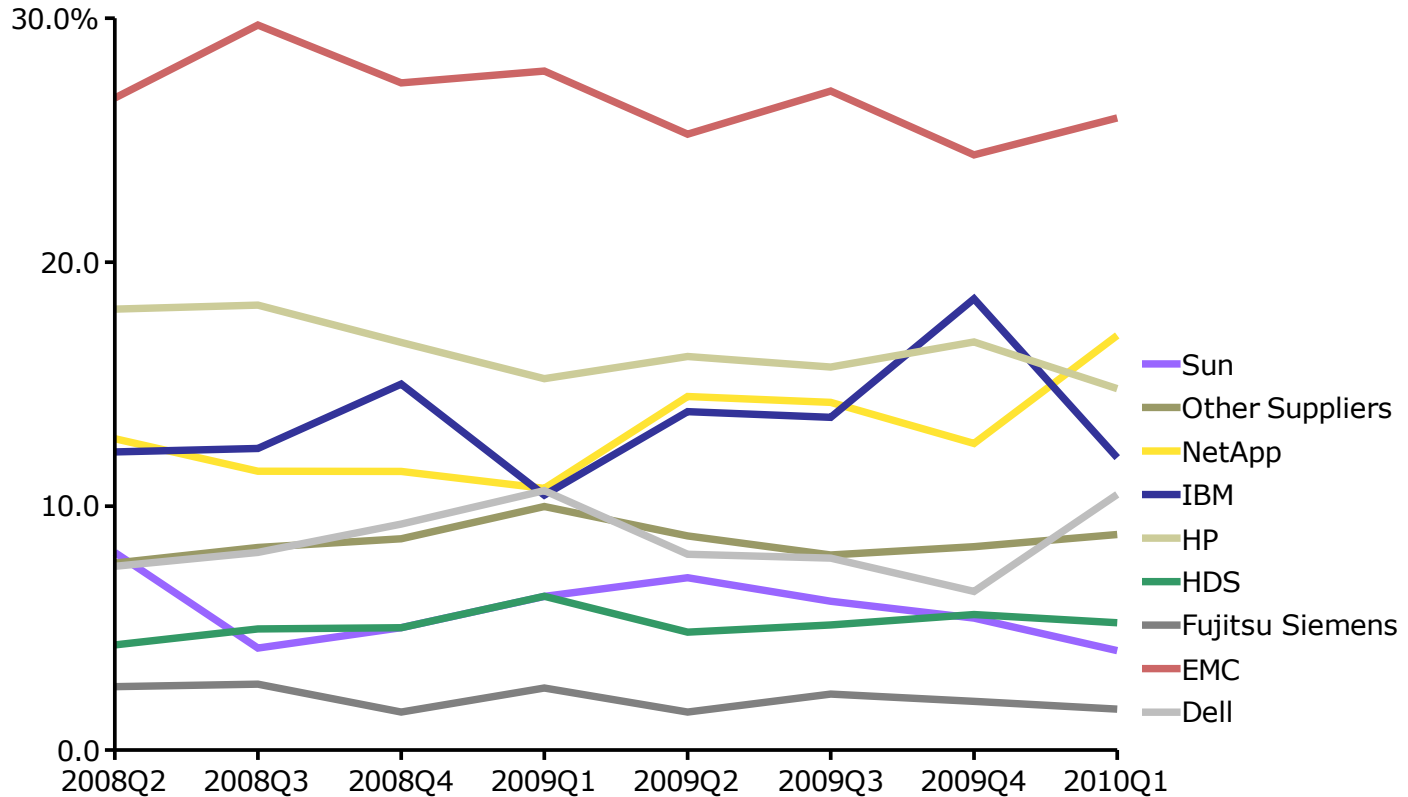




# EMEA Market Share by Vendor

– last 8 Qtrs for top 8 vendors

Market Share %

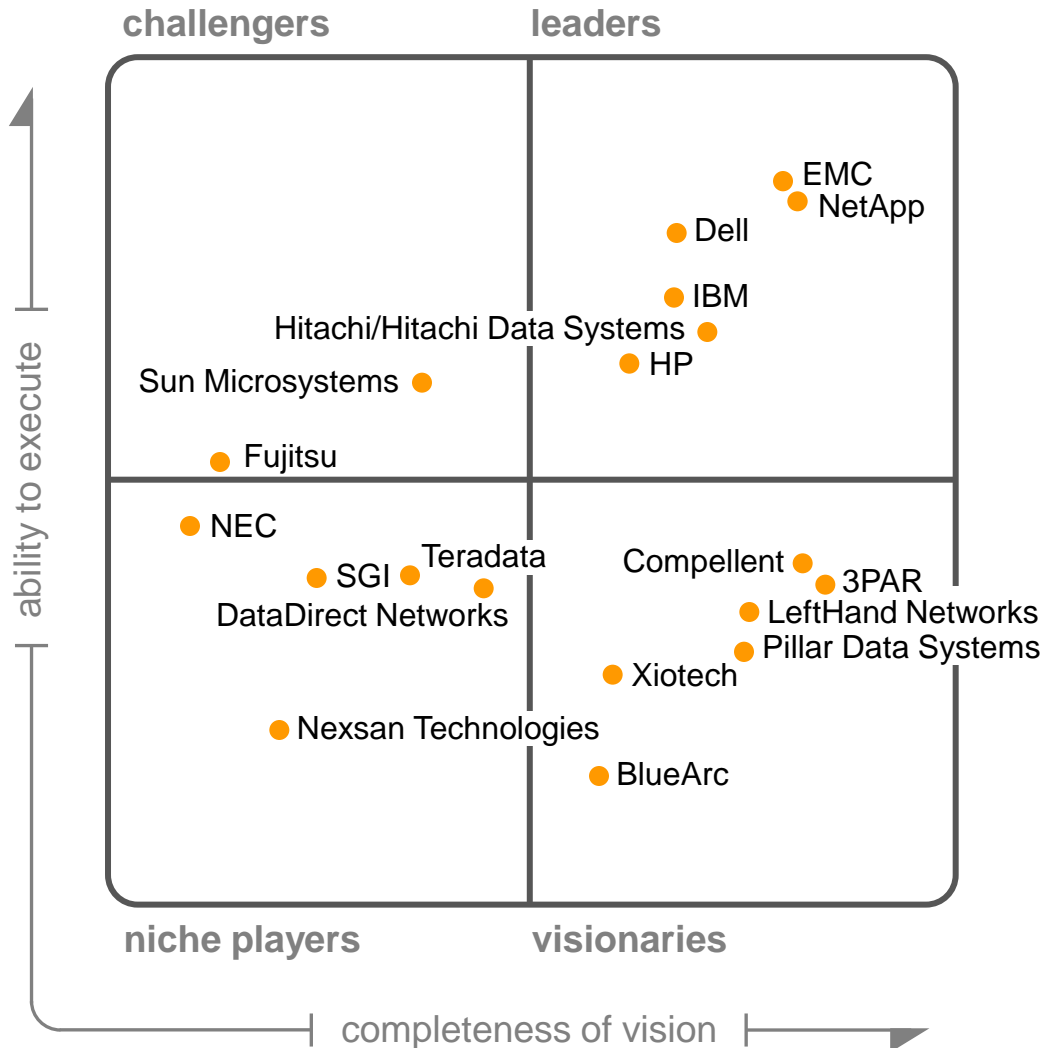


NetApp Market Share % 12.8% 11.4% 11.4% 10.7% 14.5% 14.3% 12.6% 17.0%

From IDC Tracker Q1CY10 Open Systems Hardware Networked.



# Gartner Magic Quadrant Midrange Enterprise Disk Arrays



Source: Gartner, Inc. Nov 2009  
Stanley Zaffos, Roger W. Cox,  
Pushan Rinnen

## *Magic Quadrant for Midrange Enterprise Disk Arrays*

*This Magic Quadrant was published  
as part of a larger research note and  
should be evaluated in the context of  
the entire report. The report is  
available upon request from NetApp.*

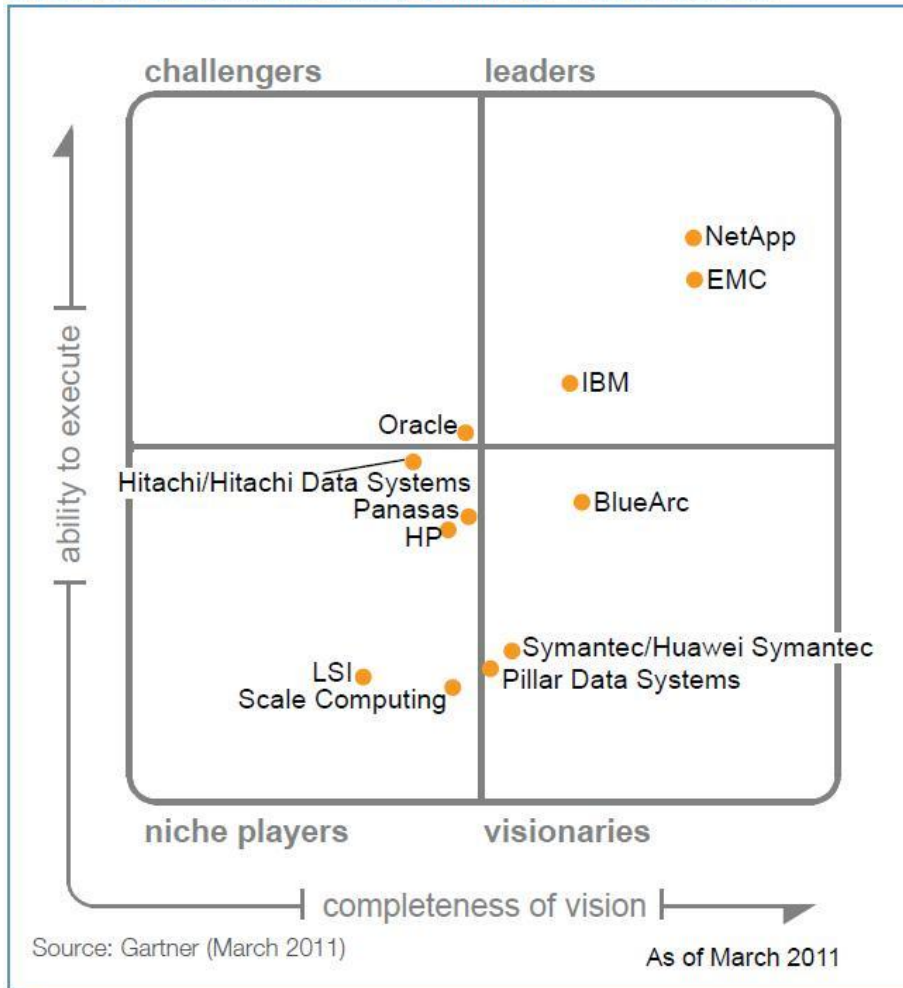
The Magic Quadrant is copyrighted Nov 12, 2009 by Gartner, Inc. and is reused with permission. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

As of November 2009



# Gartner Magic Quadrant Midrange and High-End NAS Solutions

Figure 1. Magic Quadrant for Midrange and High-End NAS Solutions



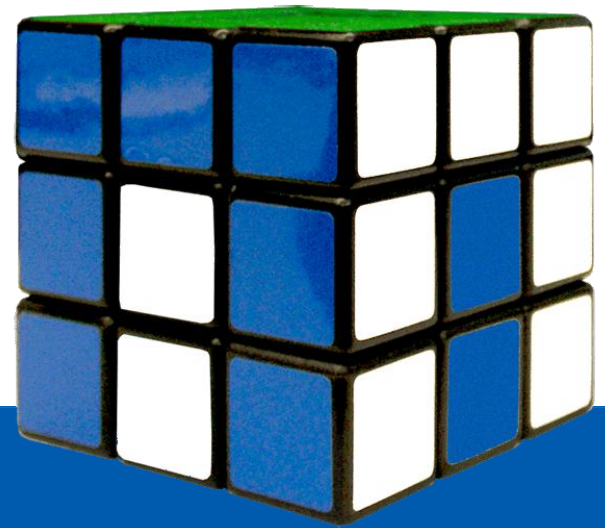
Source: Gartner, Inc. March 2011  
Pushan Rinnen, Robert E. Passmore,  
Roger W. Cox

## *Magic Quadrant for Midrange and High-End NAS Solutions*

*This Magic Quadrant was published as part of a larger research note and should be evaluated in the context of the entire report. The report is available upon request from NetApp.*

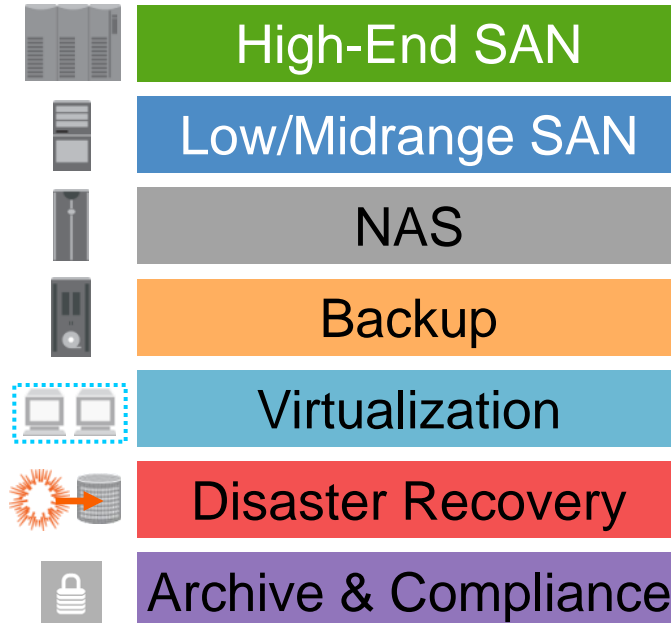
The Magic Quadrant is copyrighted March 15, 2011 by Gartner, Inc. and is reused with permission. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

# Der “NetApp - Unterschied”



# Echtes “Unified Storage”

## Andere Hersteller



Unterschiedliche Hardware  
Unterschiedliche Software  
Unterschiedliche Admins  
Unterschiedliche Prozesse

## NetApp®



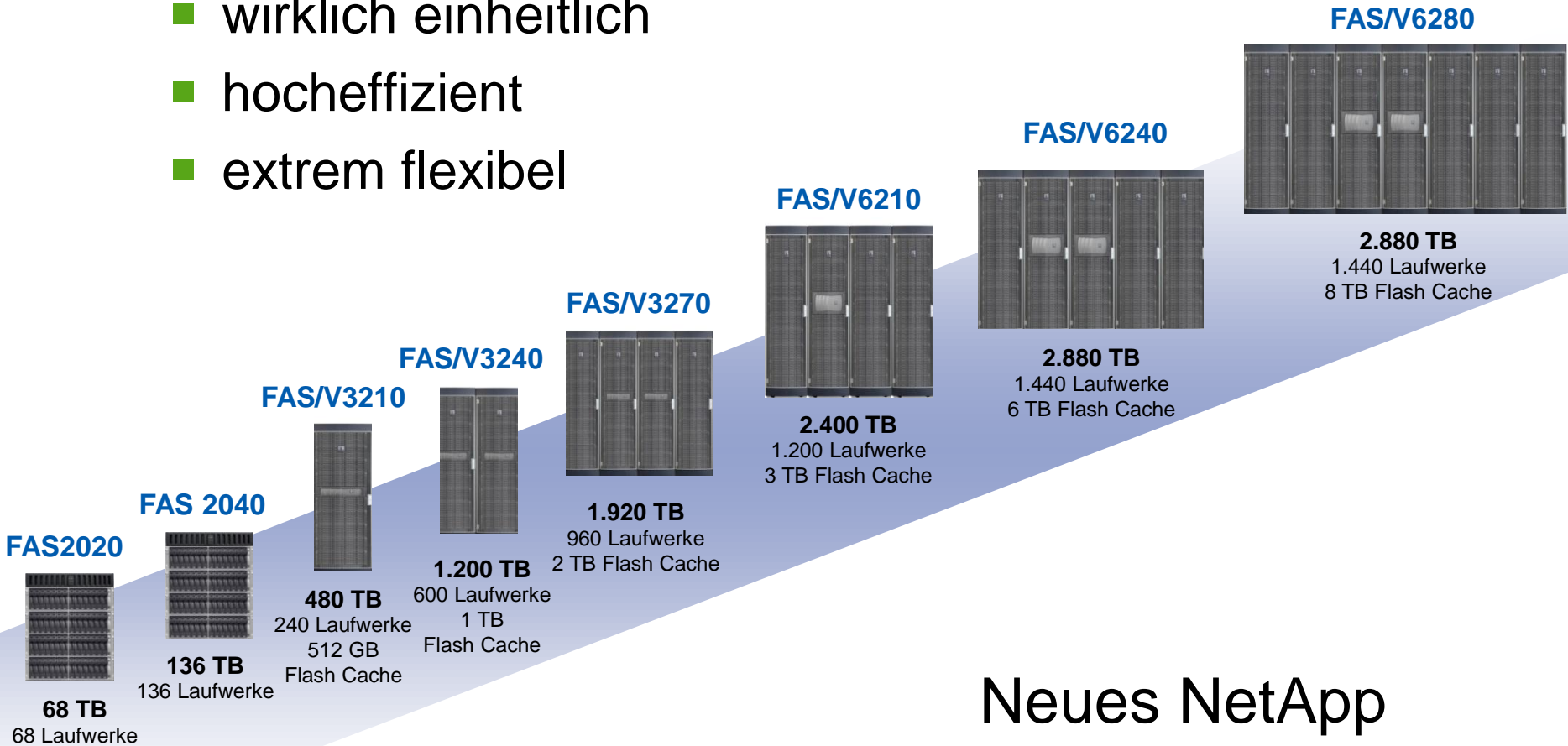
Data ONTAP®  
Storage Operating System

Flexibel  
Effizient  
Anpassungsfähig  
voller Mehrwert

Selbe Hardware  
Selbe Software  
Selbe Admins  
Selbe Prozesse

# Branchenbeste Storage-Plattform für Future-Ready IT

- wirklich einheitlich
- hocheffizient
- extrem flexibel

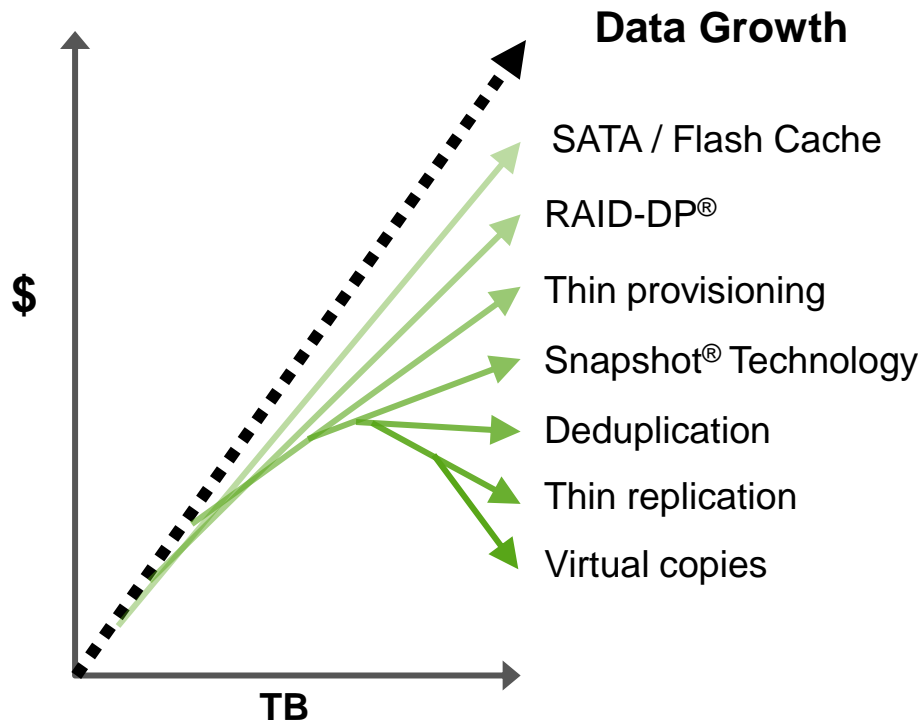


## Neues NetApp Portfolio



# Industry-Leading IT Efficiency

## Storage Efficiency



## Operational Efficiency

- Application integration
- Storage management automation
- Integrated data protection
  - Service automation

Enables you to do more with le\$\$



# NetApp SnapShot<sup>®</sup>

**Einfach und doch so effizient**

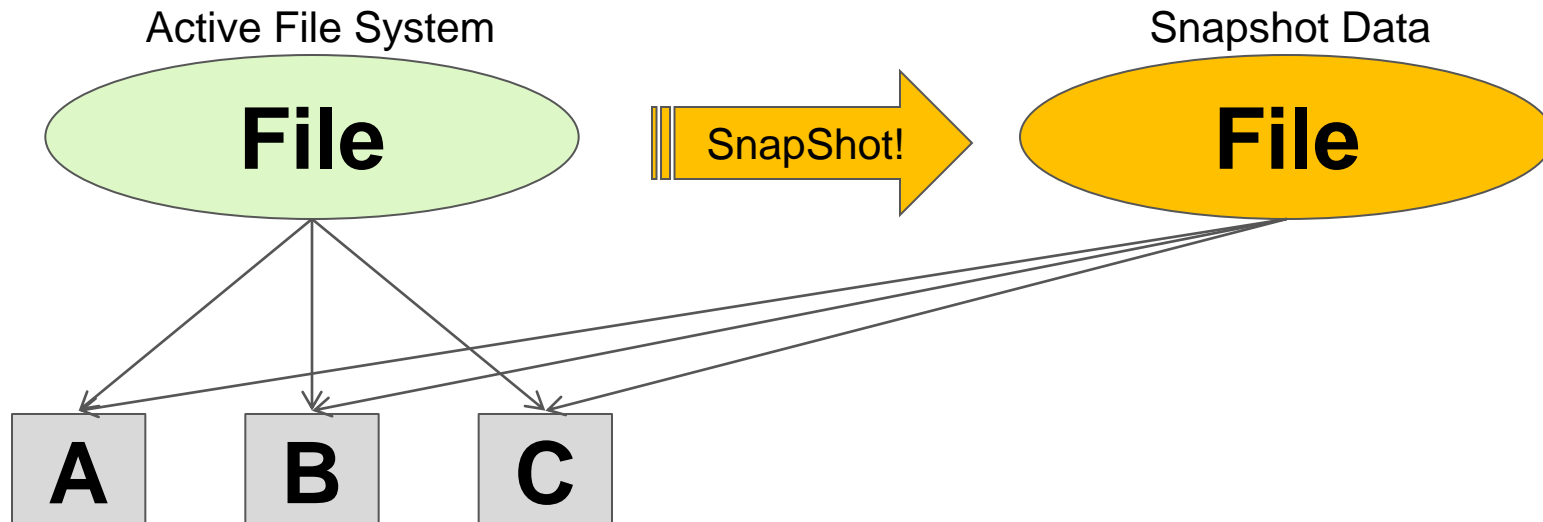




# It all Starts with SnapShots ....

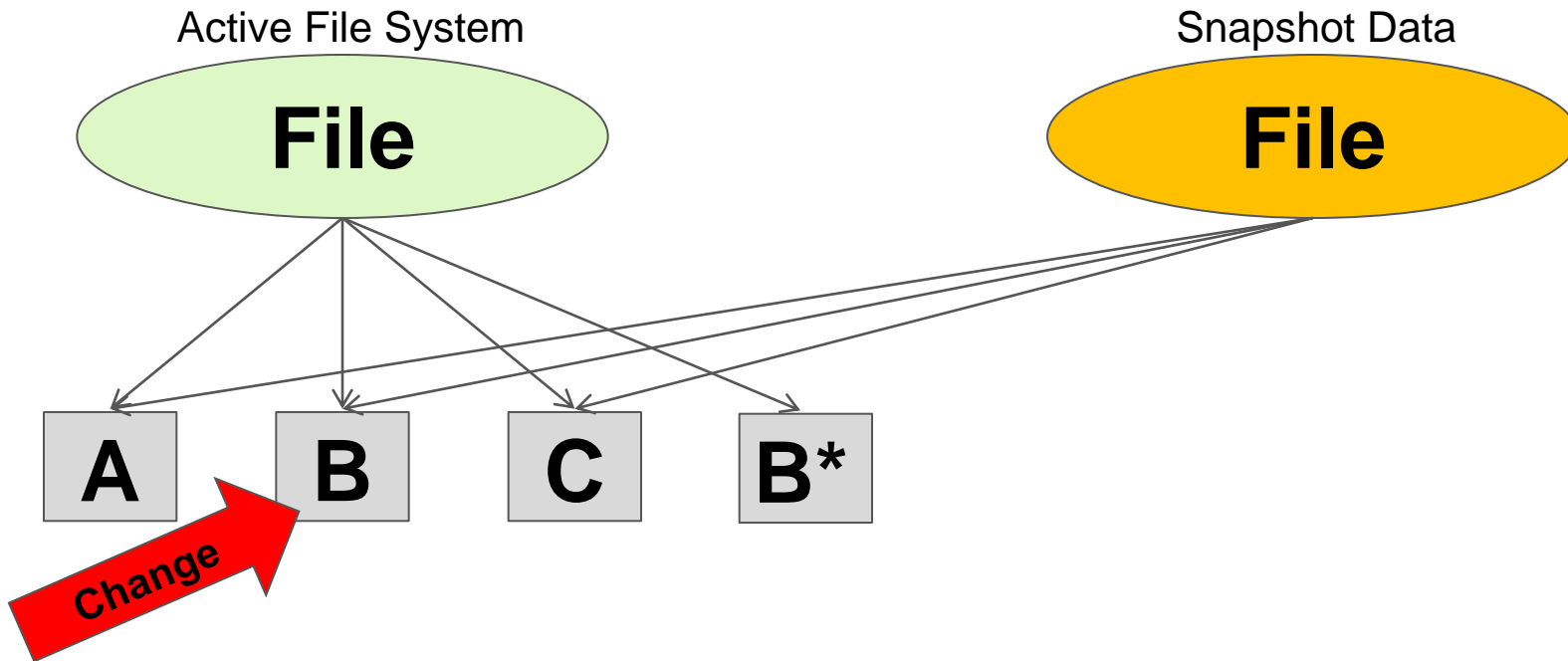
- SnapShot: Point-in-Time Kopie des Zustands des Filesystems, ohne Daten zu kopieren
- NetApp Patent seit 1993 (Technologie und Name)
- bis zu 255 Snapshots pro Volume
- kein Performanceverlust, auch bei 255 SnapShots!
- einzigartig am Markt – kein „Copy on write“
- nur geänderte (oder neue) Blöcke werden gespeichert – minimalster Platzbedarf
- integraler Bestandteil von DataONTAP+WAFL
- seit Anbeginn von DataONTAP verfügbar
- für NAS (CIFS, NFS) und für SAN (FCP, iSCSI)
- KEINE LIZENZKOSTEN!

# NetApp SnapShot<sup>®</sup> Technology



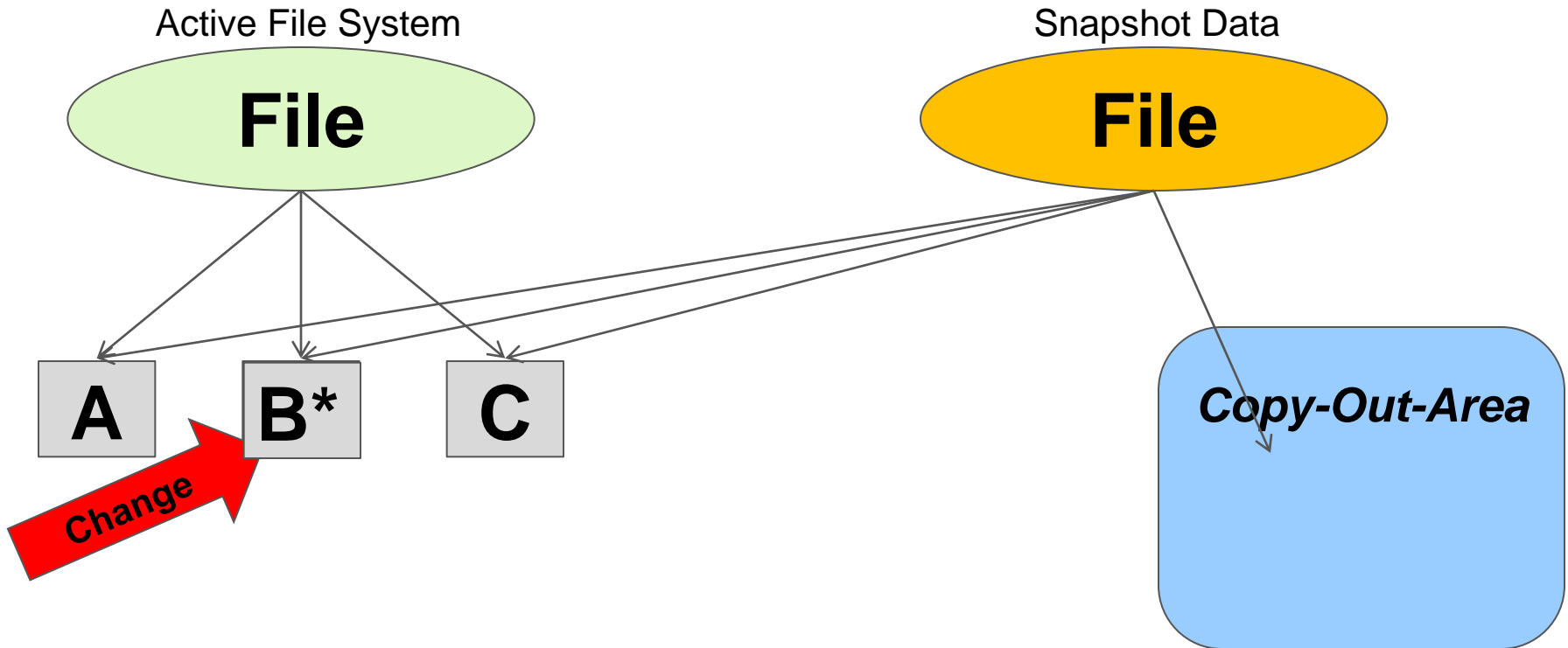
- Eine Datei „File“ besteht aus drei Datenblöcken: A, B und C
- Ein SnapShot der Datei wird erstellt wobei nur die „Pointer“ kopiert werden
- Diese „Pointer“ zeigen auf die „originalen“ Datenblöcke

# NetApp SnapShot<sup>®</sup> Technology



- Der Block „B“ im aktiven Filesystem wird verändert
- Neuer Block „B\*“ wird an das Ende des Filesystems geschrieben
- Der Pointer aus dem aktiven Filesystem wird auf den neuen Block „verbogen“

# Other's „SnapShot“ Technology



- Der Block „B“ im aktiven Filesystem wird verändert
- Block „B“ wird gelesen und in die „Copy-Out-Area“ kopiert (1xRead + 1xWrite)
- Der Pointer aus dem Snapshot wird auf den Block in der Copy-Out-Area „verbogen“
- Neuer Block „B\*“ wird über den bestehenden geschrieben

**Je Write-Operation: 1x Read plus 1x Write an OVERHEAD – und weit mehr bei >1 Snapshot!**



# Data ONTAP Features

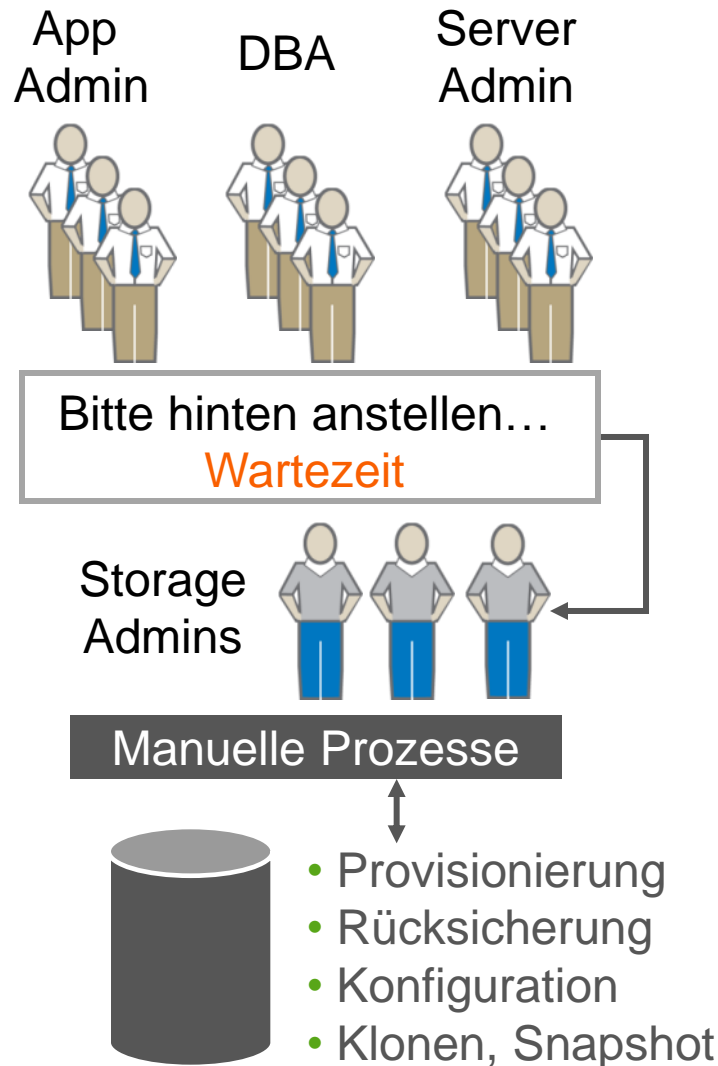
- NAS-Protokolle: CIFS (SMB), NFS, FTP und HTTP
- SAN-Protokolle: iSCSI\*, FCP, FCoE
- RAID-DP\* (NetApp High-Performance RAID-6)
- Flexible Volumes\*
- SnapShot\* und SnapRestore
- FlexClone und LUN-Clone\*
- Thin Provisioning\*
- Deduplizierung\*
- Quality-of-Service\* (FlexShare)
- NDMP\* (für Serverless Backup)
- Management\* (Web / GUI / CLI / Script / SDK / etc.)
- RLM\* (Remote „Lights-Out“ Management Board)
- AutoSupport\* (via HTTPS oder E-Mail)
- Und vieles mehr...

\* kostenfreie Features

# Management & Applikationsintegration



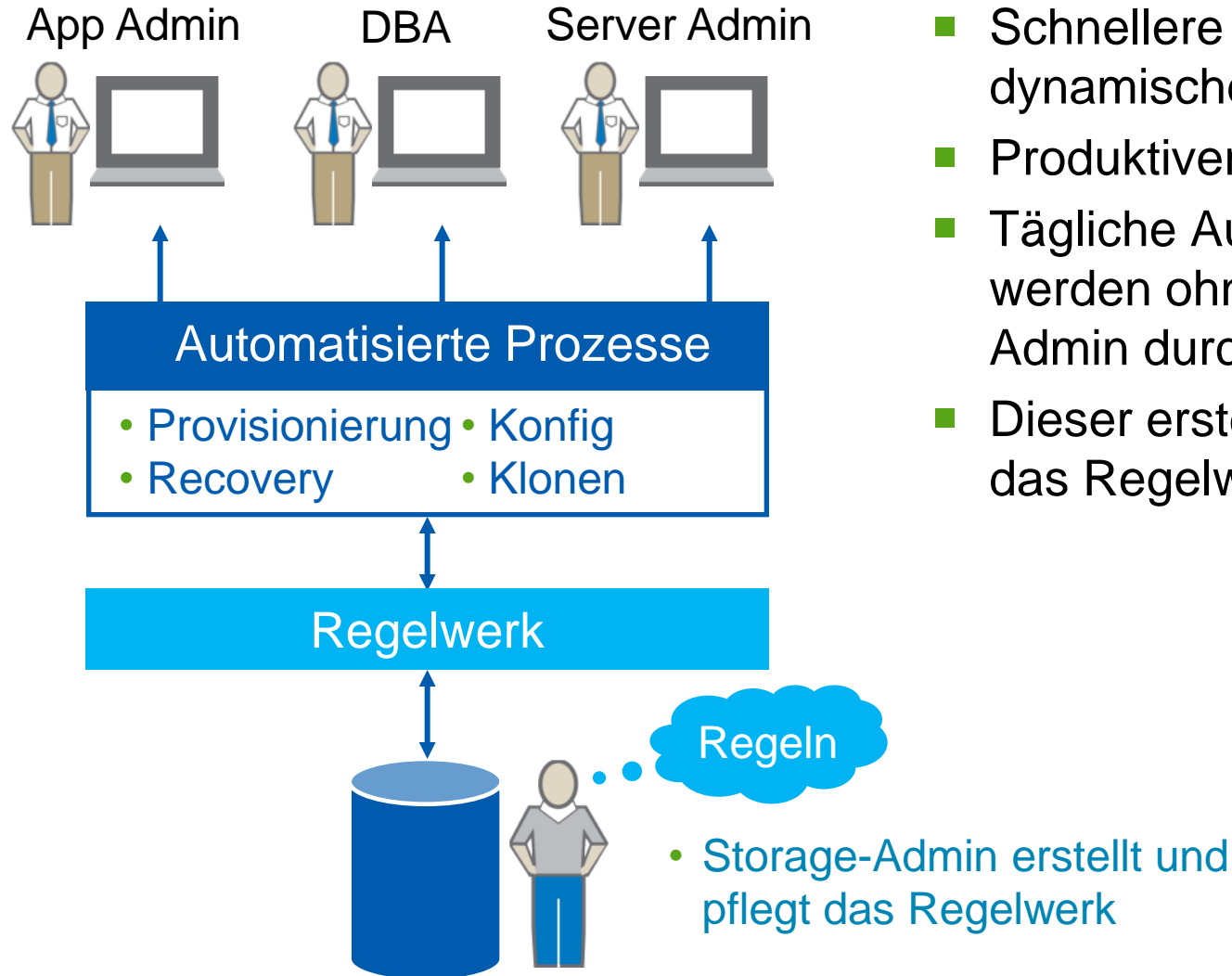
# Die Herausforderung “Data Management”



## Traditioneller Ansatz schafft Flaschenhalse

- Tägliche Aufgaben müssen vom Storage-Team erfüllt werden
- Oft manuelle Prozesse
- Lange Wartezeiten
- Unzufriedenheit auf allen Seiten

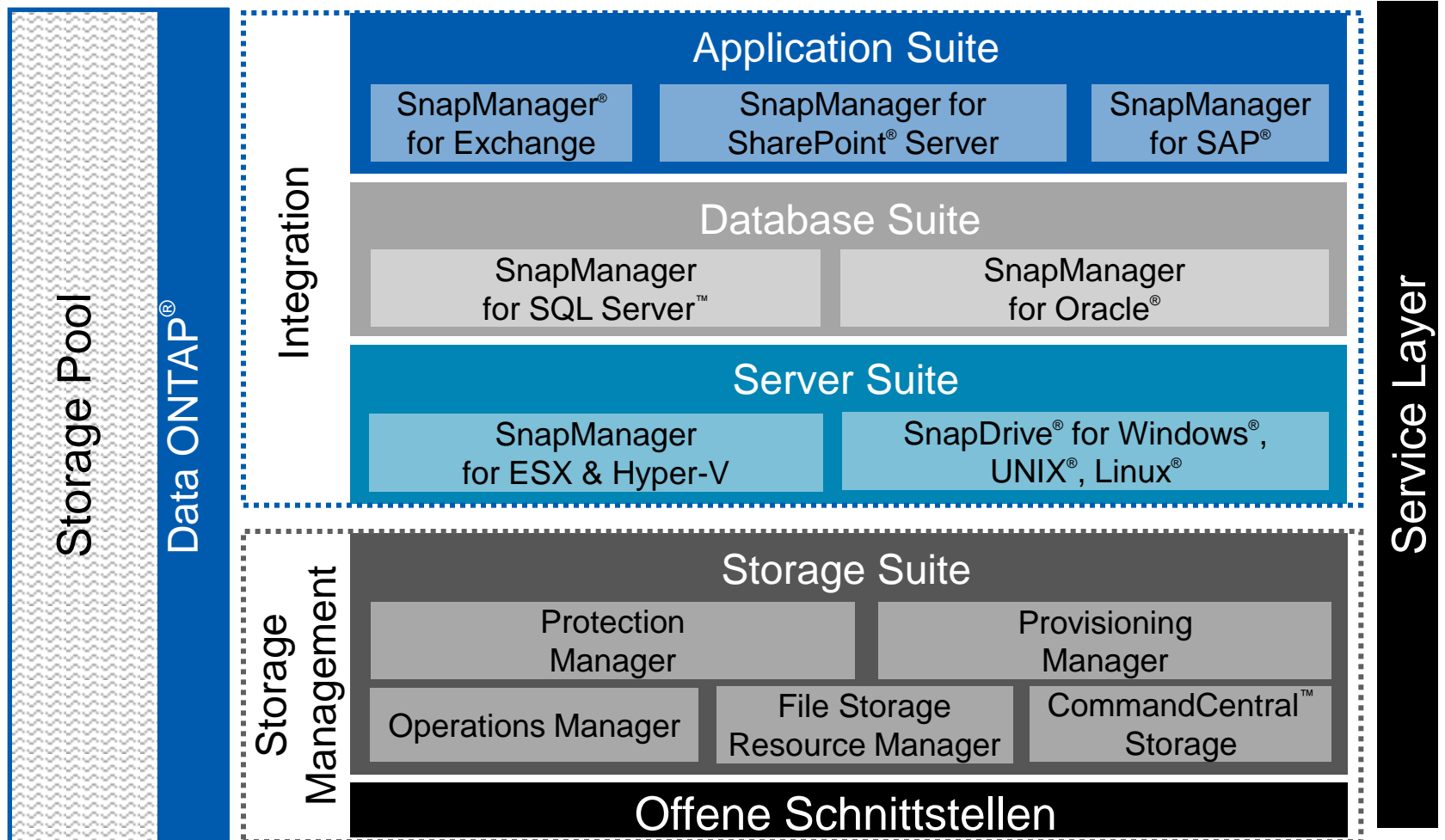
# Einfaches Data Management mit NetApp



- Schnellere Lösung für ein dynamisches Business
- Produktivere Mitarbeiter
- Tägliche Aufgaben werden ohne Storage-Admin durchgeführt
- Dieser erstellt und pflegt das Regelwerk

# NetApp Manageability Software Familie

Integriertes Datenmanagement in allen Schichten



# Snap Lock

## Worm zertifizierte Ablage

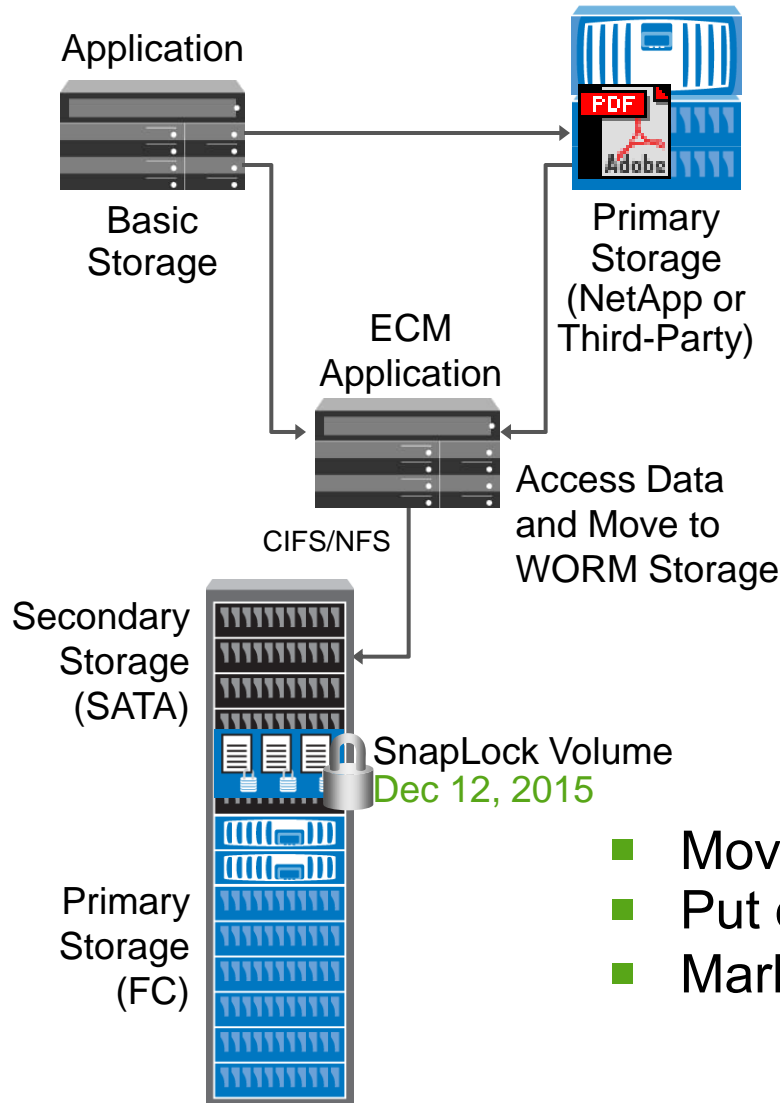




- Non-erasable, non-rewritable disk storage (WORM)
  - Protects archived data from erasure or tampering
  - Supports individual retention dates
  - Works automatically with Snapshot™, SnapMirror® and RAID-DP™
  - Uses standard file protocols to write and read data
- Available in two versions:
  - SnapLock Compliance for adherence to strict records-retention regulations such as SEC Rule 17a-4, HIPAA, or Sarbanes-Oxley
  - SnapLock Enterprise for adherence to rigorous best practices
- Benefits:
  - Add WORM capability with add-on software license
  - Leverage existing NetApp hardware and software
  - Provide perfect solution for high performance archival and retrieval



# SnapLock® Simplicity



- WORM storage
- Open protocol interfaces
- Fine-grained management
- Fastest performance
- Supports Deduplication!

- Move file to SnapLock volume
- Put expiration date in CIFS “last accessed” field
- Mark file “read only”

# Fragen?

