

כנס הטכנולוגיות השנתי לניהול מידע

**Make IT Double**



יום א', 25.11.08  
Avenue, Airport City

# Managing Global Virtual File Services With EMC Rainfinity

Transparent Data Mobility for Multi-Protocol,  
Heterogeneous File Storage Environments

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EMC



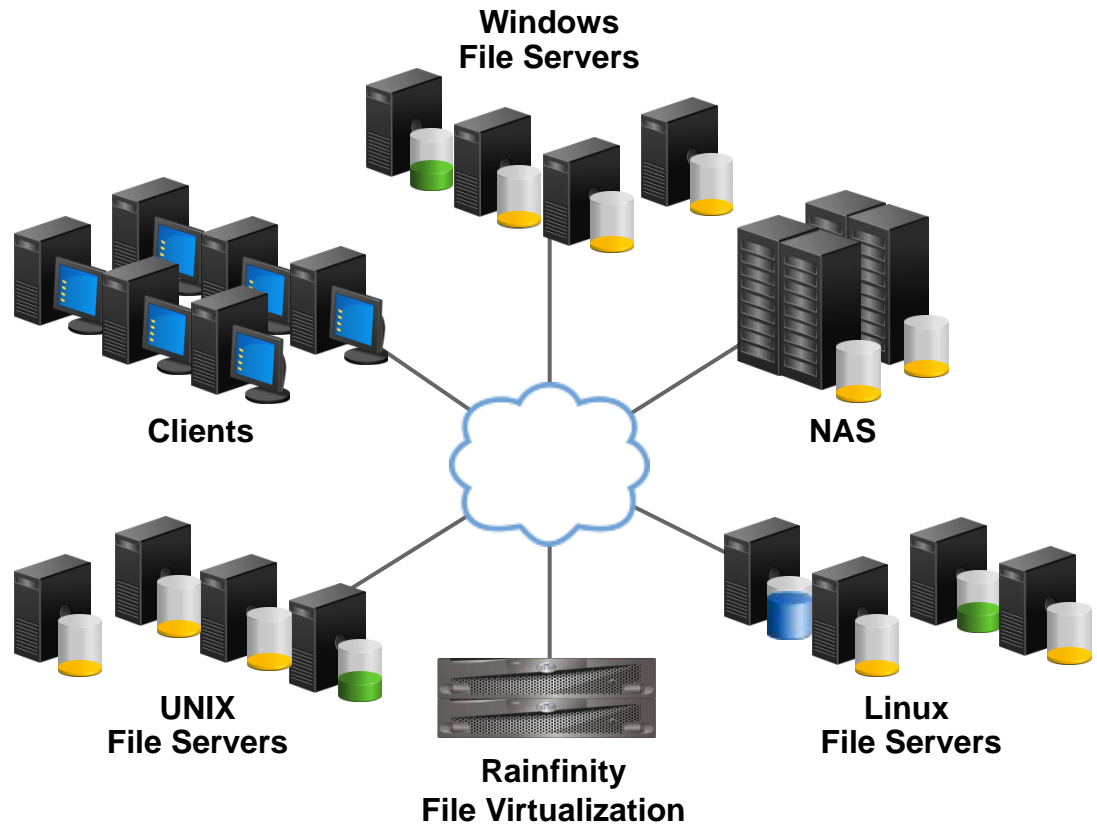
# Today's File Storage Environments

## Characteristics

- Easy to add incremental storage
- Heterogeneous and multi-protocol
- Environment can quickly become distributed

## Challenges

- Centralized storage management
- Data migration and consolidation
- Low asset utilization
- Business value versus cost of data
- Performance and scale issues





# Problems Created by Complex File Storage Environments

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Only EMC Rainfinity Addresses All of These Business Issues

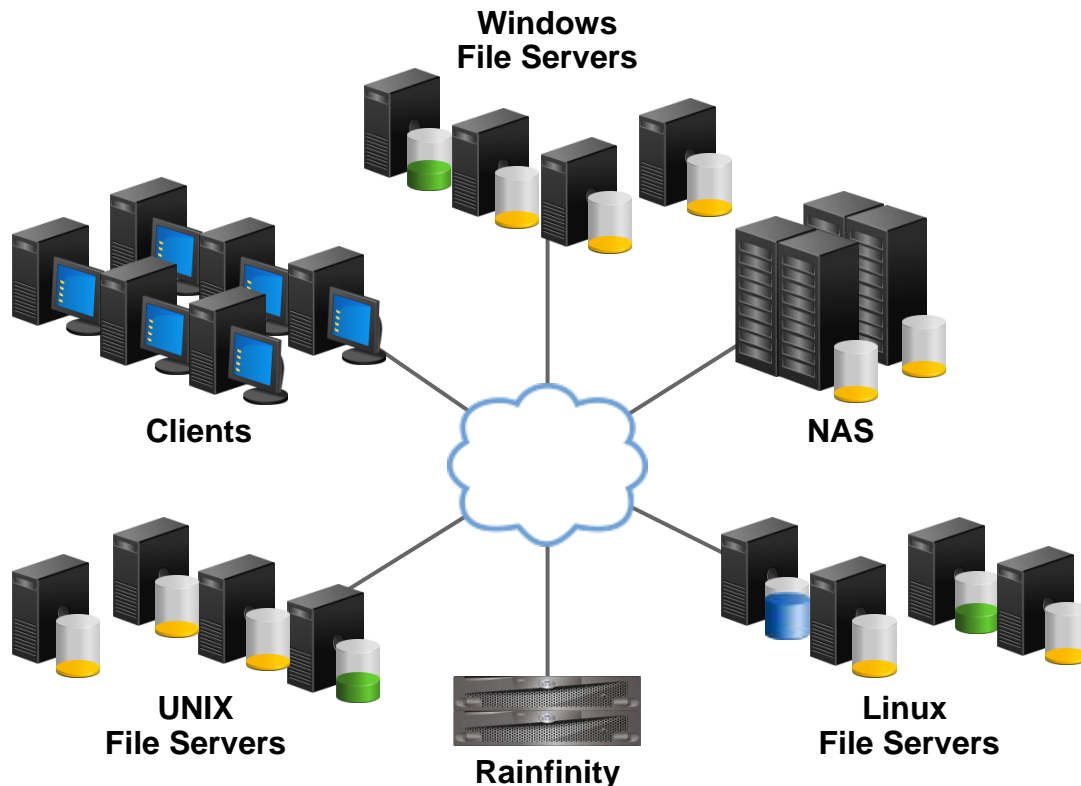
Storage management challenges

Data migration and consolidation

Low asset utilization

Business value versus cost of data

Performance and scale issues





# EMC Rainfinity Product Family

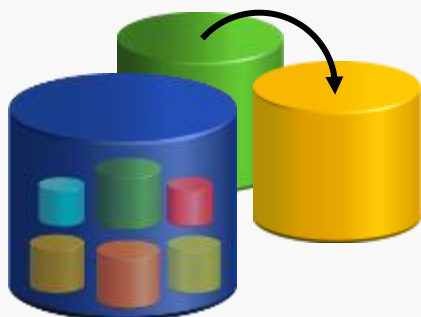


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**Dramatically Changing Networked Storage Management**

## Rainfinity File Virtualization Appliance

Data mobility and migration



**Transparent Data Movement**

## Rainfinity Global Namespace Appliance

Central point for managing global view of storage



**Single Mount Point**

## Rainfinity File Management Appliance

Policy-based tiering and archiving



**File Archiving**



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# Data Centers are Dynamic

## Common Storage Administrative Activities

- File server consolidations
- Lease rollover
- Technology refreshes
- Data center relocations/additions
- Data placement in support of information lifecycle management strategies
- Service-level performance optimization

**Challenge is moving live data without user or application disruption**





# EMC Rainfinity FVA for Transparent Data Mobility



## Move Active Data Without Disruption

### Easy to deploy

- No client or server software; no mount point changes required

### Compatible

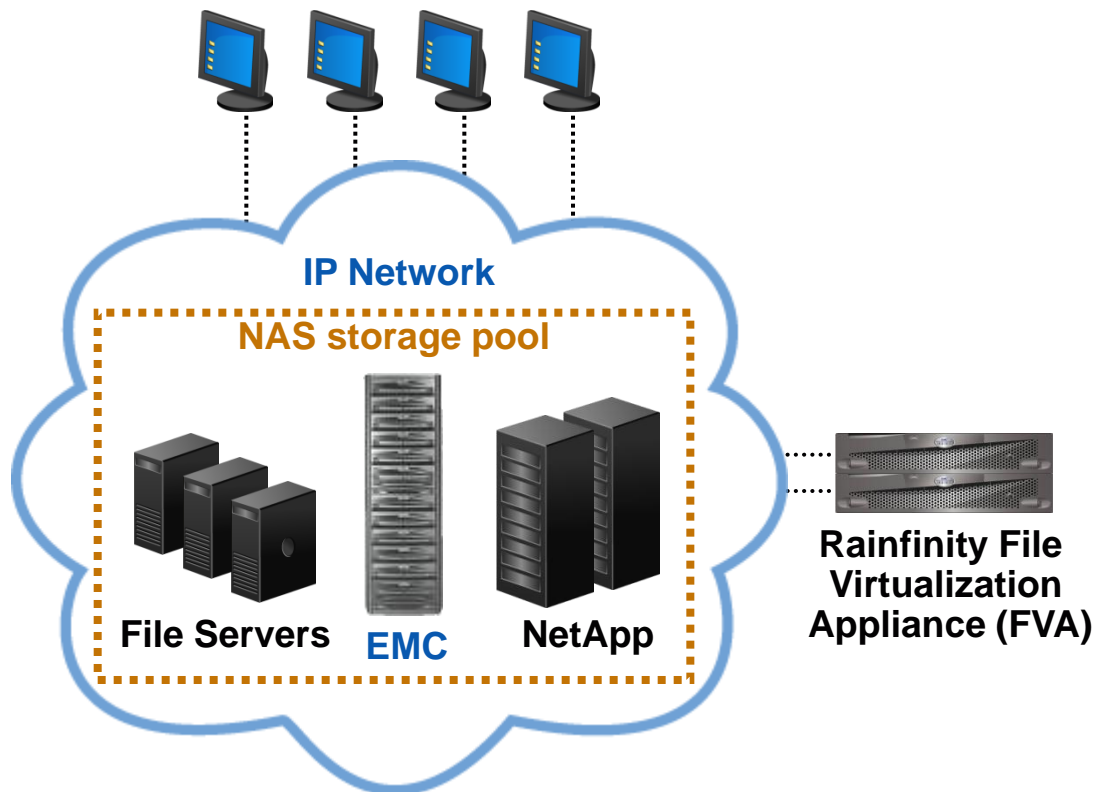
- No loss of existing snapshot, anti-virus, backup, or advanced NAS functionality

### Scalable

- Intelligent filtering at the file server, file system, file, and packet levels

### Safe

- No risk of data loss; authoritative file-system metadata continues to reside with the native file systems





# Multi-Protocol File Sharing

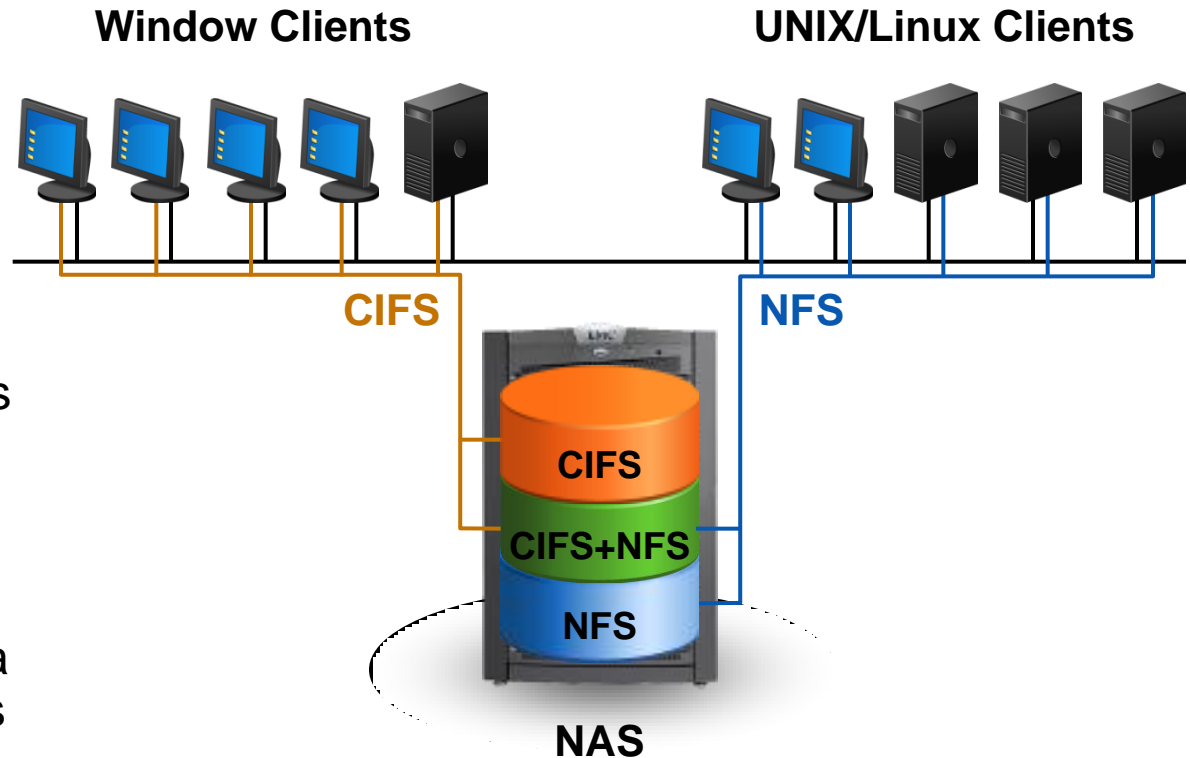
Migrates CIFS and NFS attributes

Proxies CIFS sessions and NFS connections simultaneously to the same multi-protocol file system

Synchronizes and redirects multi-protocol mixed access

Provides a unified data mobility engine

Extends multi-protocol support throughout the data migration transaction states



**Supported by Rainfinity FVA**



# Complexities of Multi-Protocol Data Migration



## Lack of tools

- Robocopy saves CIFS attributes only, and rsync saves NFS attributes only
- NDMP backup saves both sets of attributes, but recovery destination works with homogeneous volumes

## Disruptions

- Business impacts
- Planning and coordination of outage windows

## Multi-protocol differences

- File permissions
- User credentials
- File names
- Symbolic and hard links
- Protocol statefulness
- File locking

## Multi-vendor differences

- Proprietary multi-protocol file system implementations





# EMC Rainfinity FVA for Transparent Data Mobility

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Move Active Data Without Disruption

## Easy to deploy

- No client or server software; no mount point changes required

## Compatible

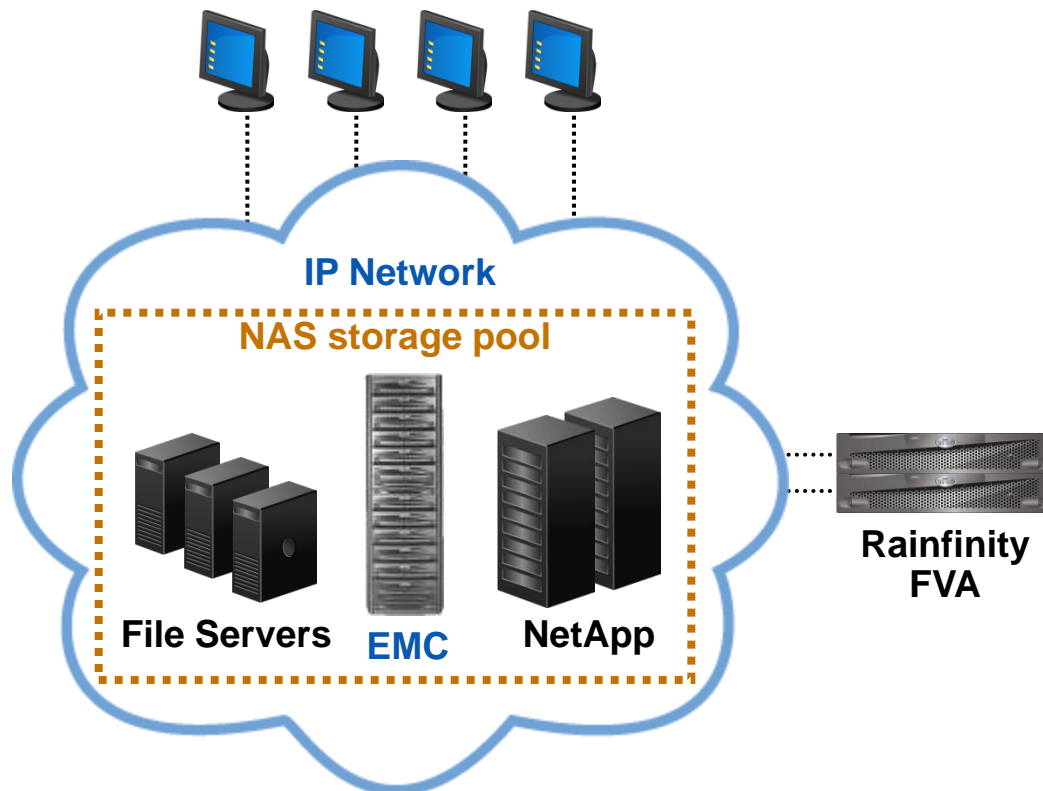
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# EMC Rainfinity FVA Simplifies Multi-Protocol Data Migration



## Transparent Movement of Active Data

### File virtualization platform

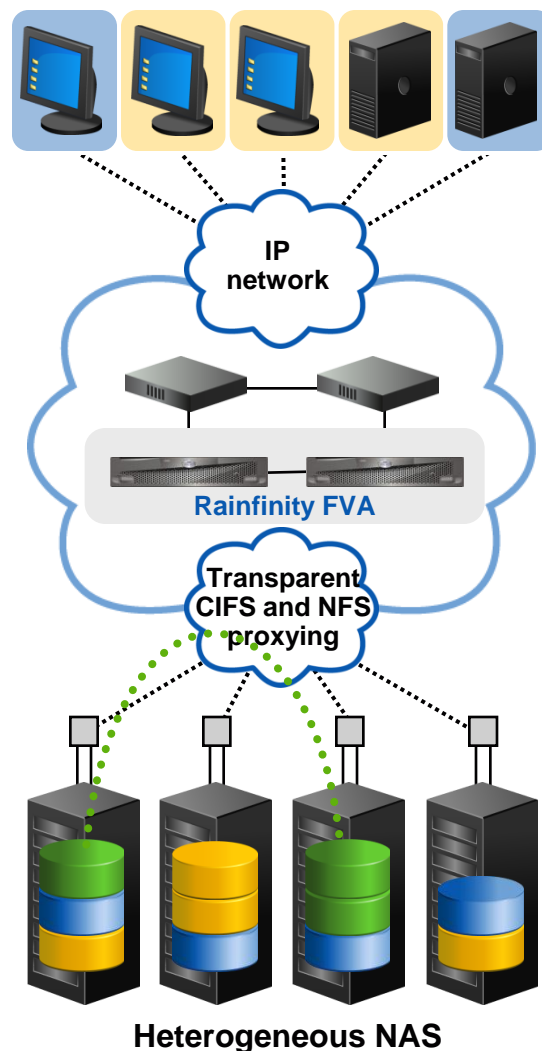
- Transient network insertion
- Transparent CIFS and NFS proxy between clients and servers
- Packet filtering and forwarding
- Guarantees data integrity

### Data mobility engine

- Replicates files and preserves multi-protocol attributes
- Maps file names and permissions, and resolves conflicts
- Synchronizes simultaneous multi-protocol read/write access
- Redirects simultaneous multi-protocol client access

### Industry-standard global namespaces

- Supports Microsoft DFS, Automount, etc.





# Baseline Copy

1. Rainfinity starts a multi-protocol baseline copy as a CIFS/NFS client

2. Rainfinity reads files from source

3. Rainfinity writes files to destination

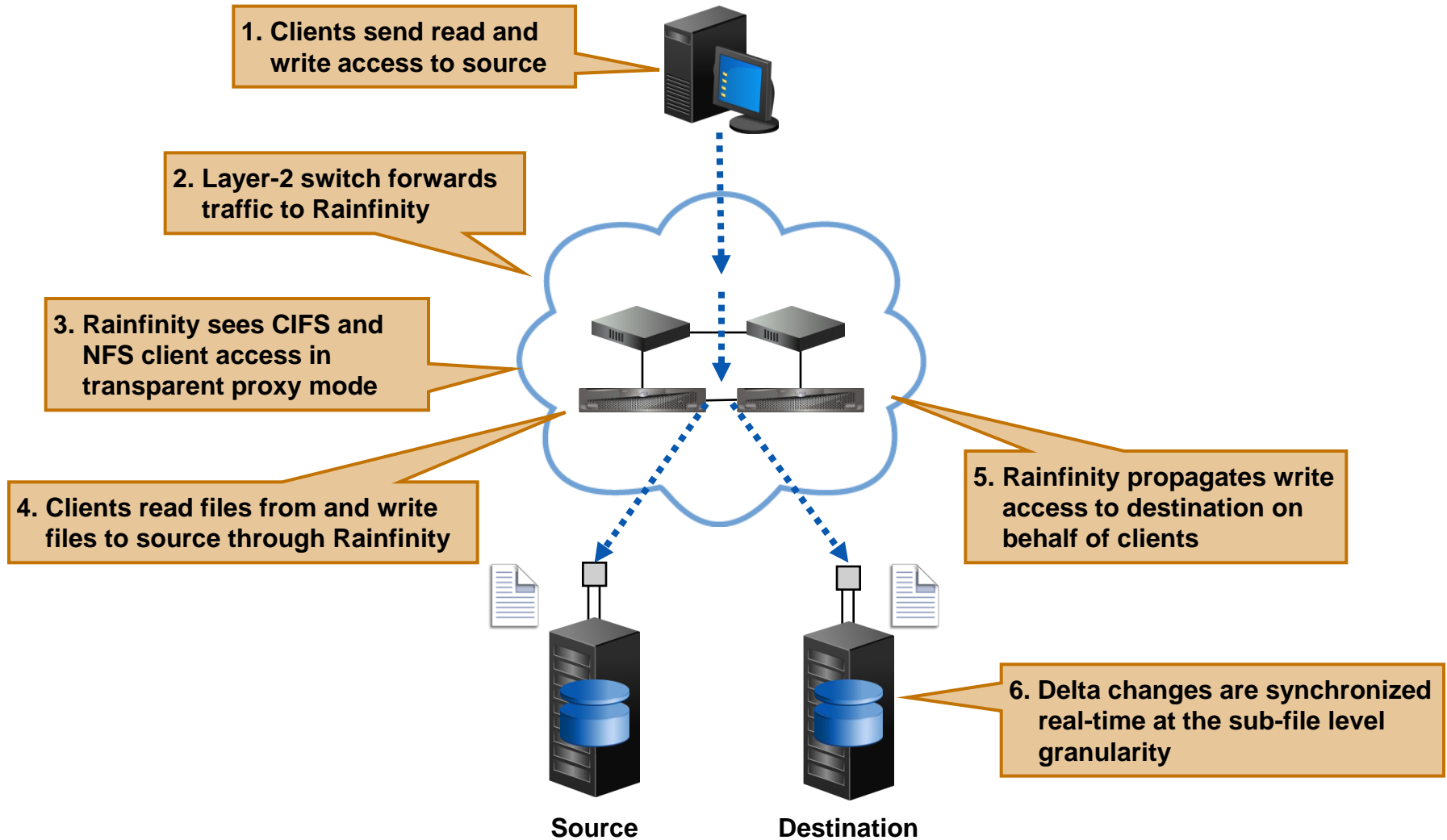
4. A baseline copy is created

Source

Destination

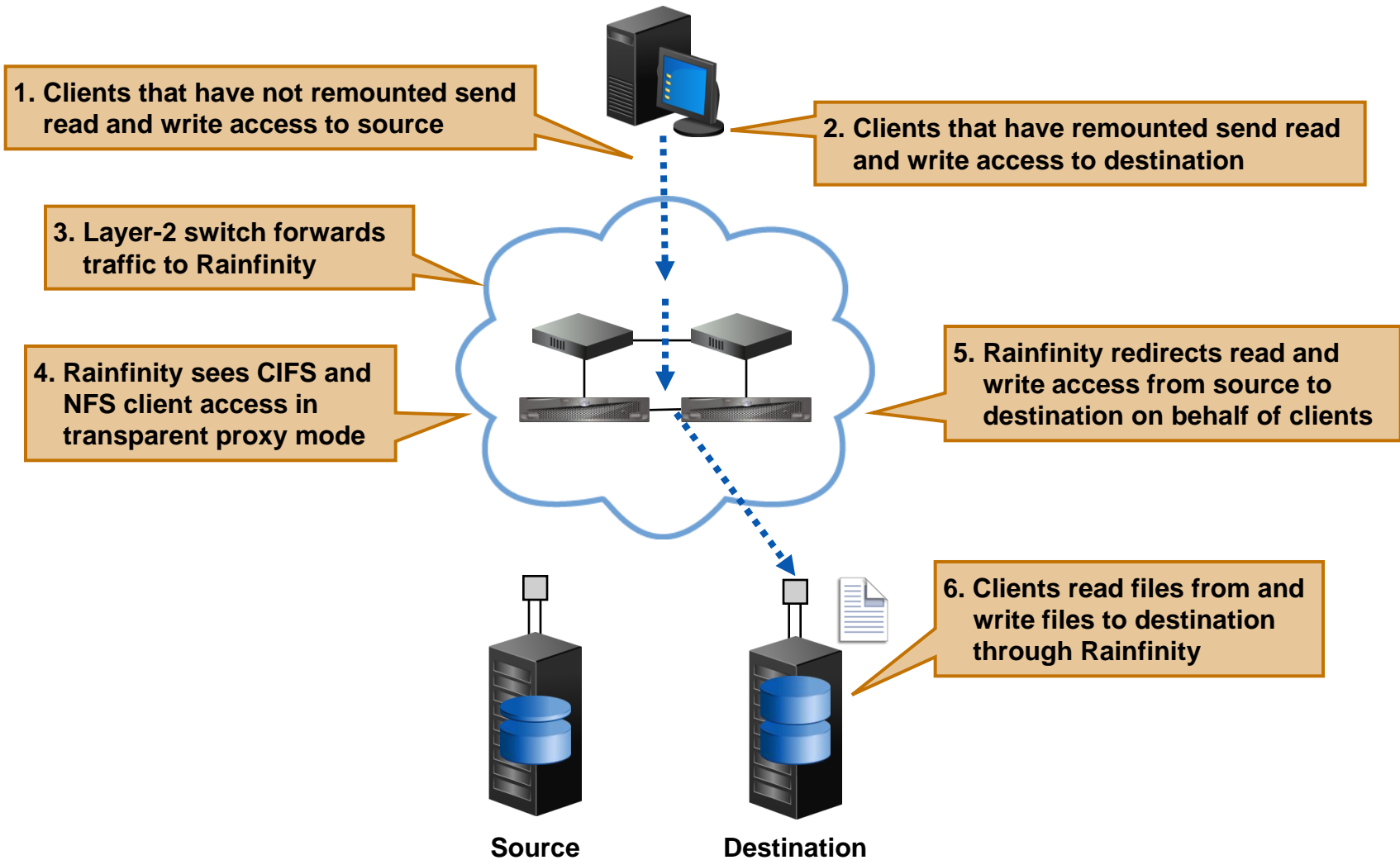


# Synchronize Live Updates





# Redirect I/O



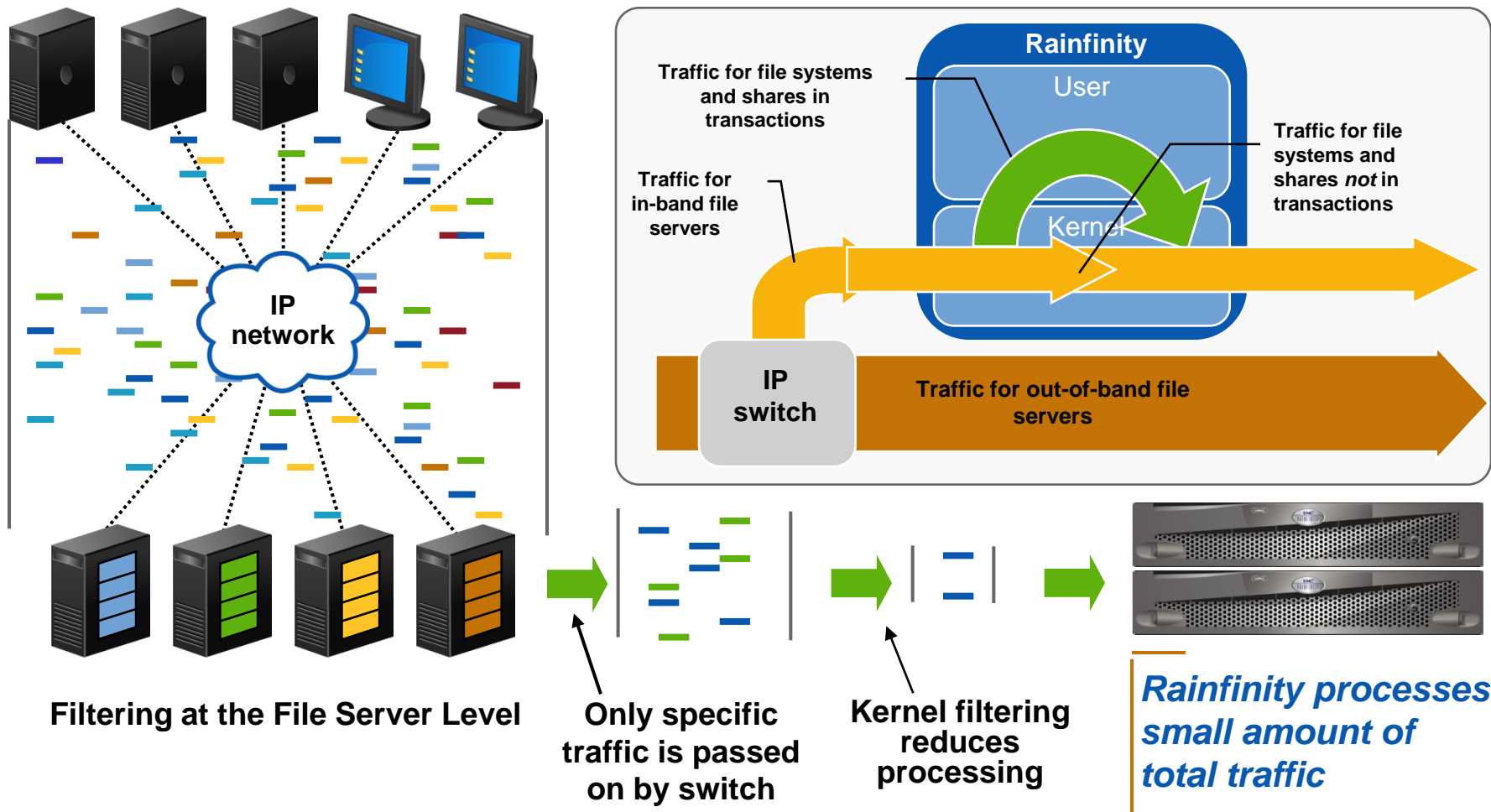


# EMC Rainfinity File Virtualization Network Filtering



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EMC Rainfinity: The Most Scalable Virtualization Solution





# Customer ROI with EMC Rainfinity

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where information lives™



## Productivity improvements

A leading Financial institution achieved more than \$500,000 in labor savings alone with the first deployment

## Business efficiency

A major Telco equipment vendor completed a 160 TB consolidation project across seven sites in 11 weeks with an estimated savings of \$20 million

## Capital expenditure savings

A major Semiconductor company reduced storage CAPEX by 50 percent by implementing tiered storage management with Rainfinity





# Why Choose EMC Rainfinity

Rainfinity is the market leader in file virtualization

Rainfinity protects your IT investments

- Improves storage utilization
- Reduces capital expenditures

Rainfinity reduces your business risk

- Transparently moves active data

Rainfinity helps you control operational costs

- Automates migration and consolidation tasks that were previously manual and time consuming





## Next Steps

Request a Rainfinity Virtualization Assessment or product demonstration to learn more about how Rainfinity File Virtualization Appliance can benefit your organization



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