Dell PowerVault DL2200 &
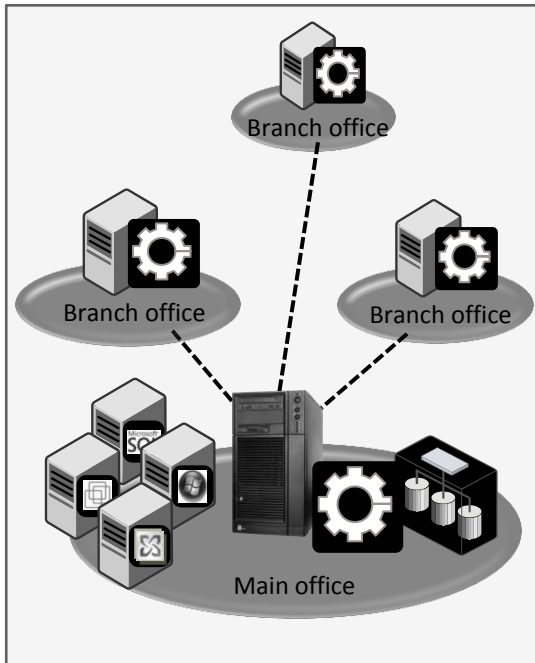
BE 2010 Power Suite

Owen Que

Channel Systems Consultant Dell

Customer Storage Challenge - Reduce Storage Costs

Branch office

Branch office
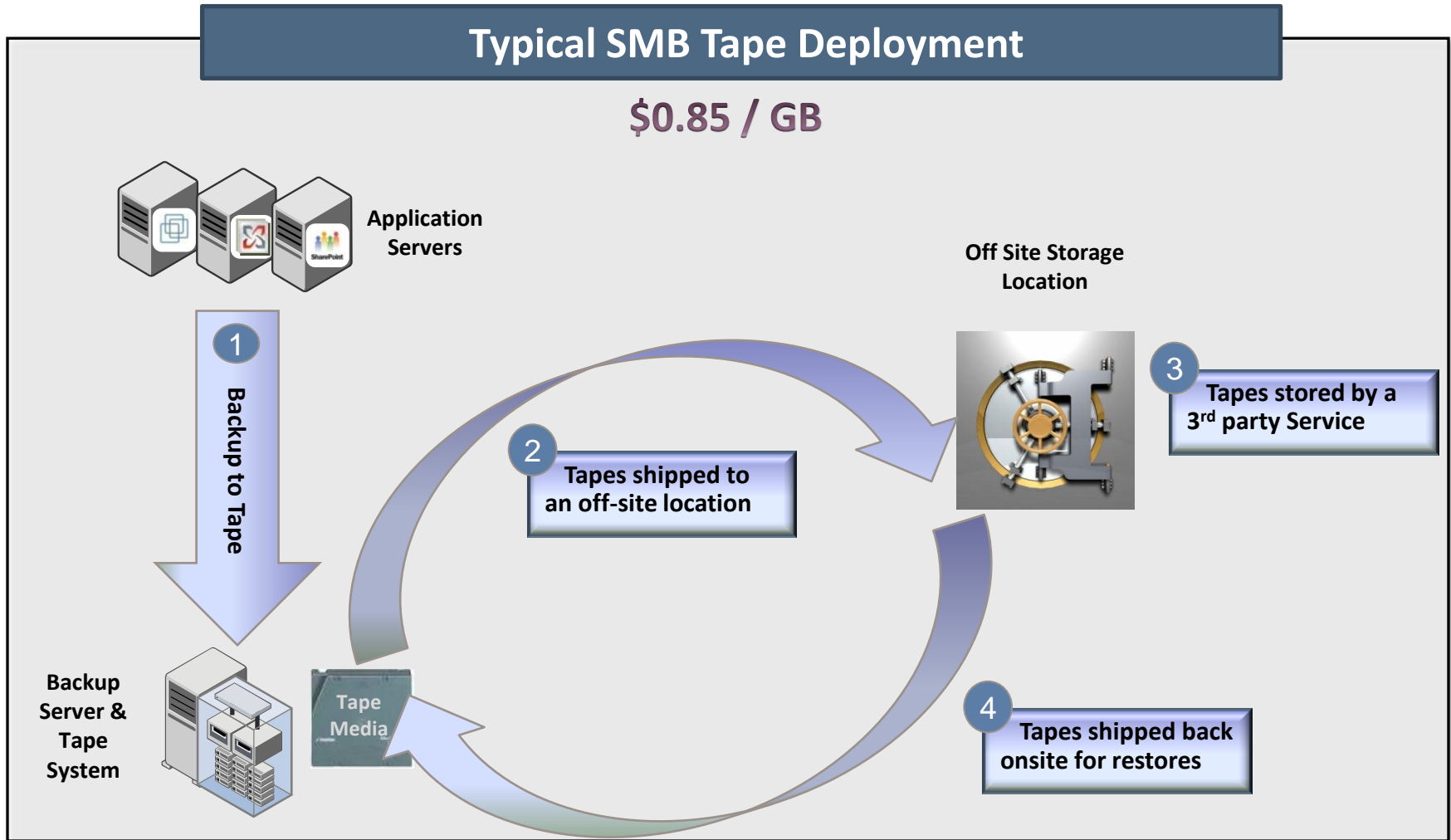
Branch office

Main office

Your Customer's Storage Challenge

- Up to 70% of data is duplicate and hasn't been accessed in more than 90 days[1]

- 57% of midsize organizations increase storage growth by 11-30% annually[2]

- Data lifecycle management is becoming more challenging

The DL2200 Opportunity:

- New Deduplication Option

- Improves Storage and Cost Savings

- Helps Reduce Backup Windows

- Adaptable To Any Customer's Environment

Customer Pain Points with Tape

Typical SMB Tape Deployment

$0.85 / GB

Application Servers

Off Site Storage Location

1 — Backup to Tape

2 — Tapes shipped to an off-site location

3 — Tapes stored by a 3rd party Service

4 — Tapes shipped back onsite for restores

Backup Server & Tape System

Tape Media

Dell Powervault DL2200

Powered by Symantec Backup Exec 2010 – integrated backup to disk solution

NEW PowerVault DL2200 powered by Symantec Backup Exec™ 2010

Replace Tape with Deduplication

50% less expensive than similar tape solutions through deduplication

Unified Archiving

Eliminate file system and exchange email data growth problem via automated policy

Protect Virtual Servers

Source deduplication ideal for virtual backups

Protect EqualLogic

#1 solution for backing up EQL

Native VSS Integration

Script-less integration

Deduplication Everywhere

Replace Tape Solution with
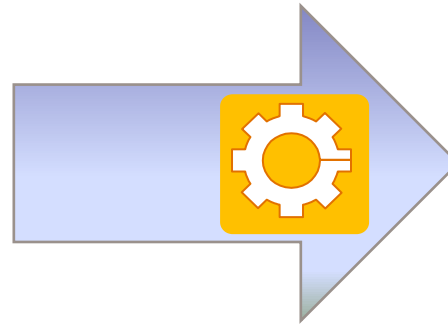
Deduplication

symantec™

Why dedupe?

- What are the benefits?

  1. Increase network bandwidth

  2. Free up valuable storage space

  3. Makes recovery easier

  4. Free up precious admin time to other more important tasks.
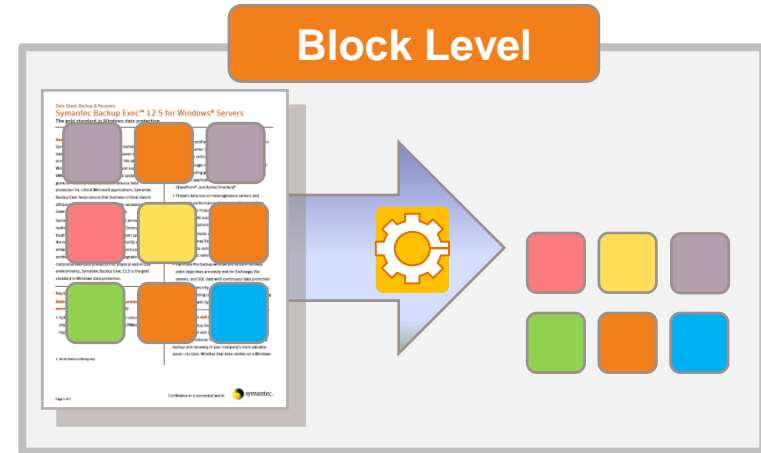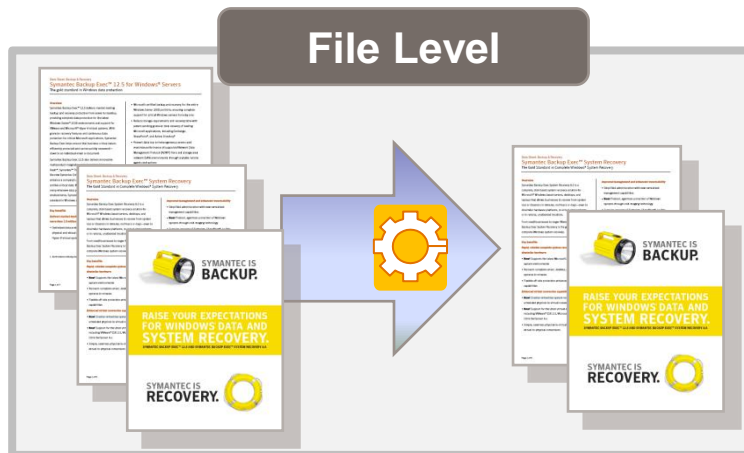
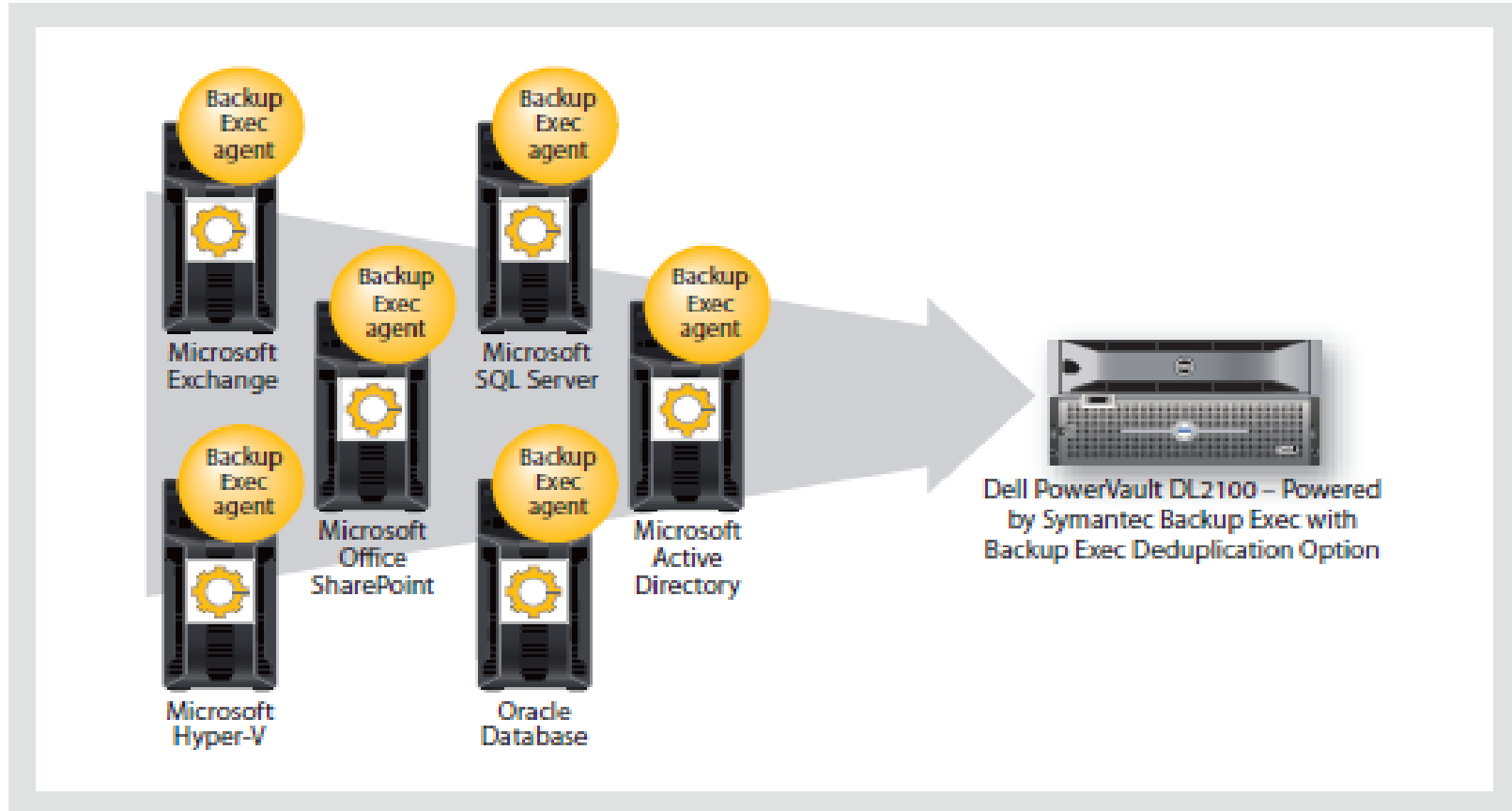- What is the difference between file and block level?

File Level

Block Level

How Does it Work?

- Deduplication?

- What is the difference between file and block level?

File Level

Block Level

NEW Deduplication Option
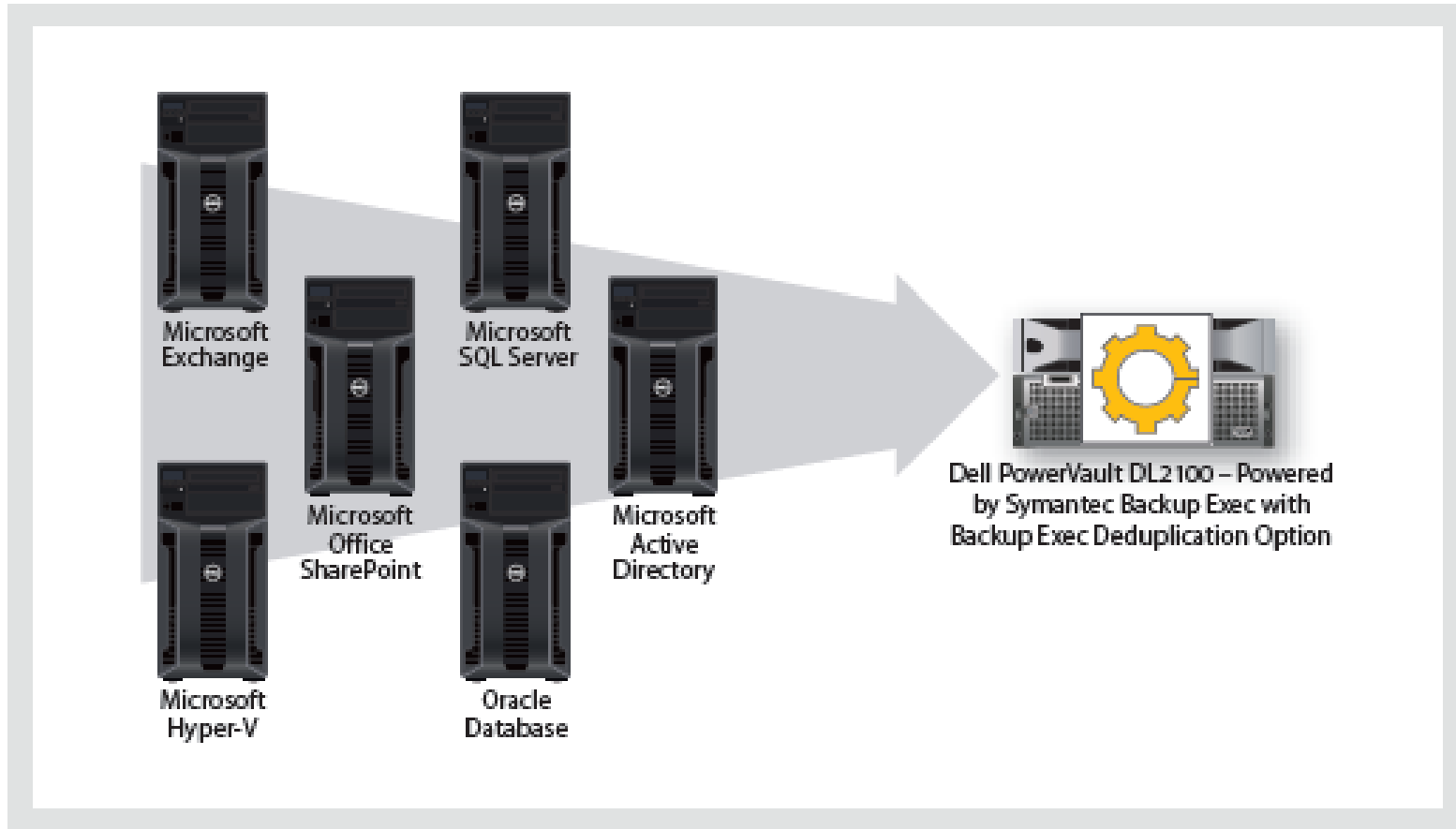## *Client Deduplication (Source Deduplication)*

Client deduplication performed on the source servers is designed to reduce the amount of data sent over the network, helping optimize both bandwidth and storage usage

Dedupe is performed

Note: Requires Deduplication Option on medias server and Remote Agent on each client/source

✶symantec.

NEW Deduplication Option
Media Server Deduplication (Target Deduplication)

Microsoft Exchange

Microsoft Office SharePoint

Microsoft SQL Server

Microsoft Active Directory

Microsoft Hyper-V

Oracle Database

Dell PowerVault DL2100 – Powered by Symantec Backup Exec with Backup Exec Deduplication Option

Media server deduplication performed on the Dell PowerVault DL2100 helps optimize storage while simplifying deployment in existing backup infrastructures

here
Dedupe is performed

Note: Requires Deduplication Option on medias server and Remote Agent on each client/source

DL2200 powered by Symantec Backup Exec™ 2010: *Data Deduplication*

symantec.

NEW Deduplication Option
Appliance Deduplication

Appliance Deduplication

File & Application Servers

Backup Exec Media Server

SYMC

Catalog Data

BE

Backup Stream
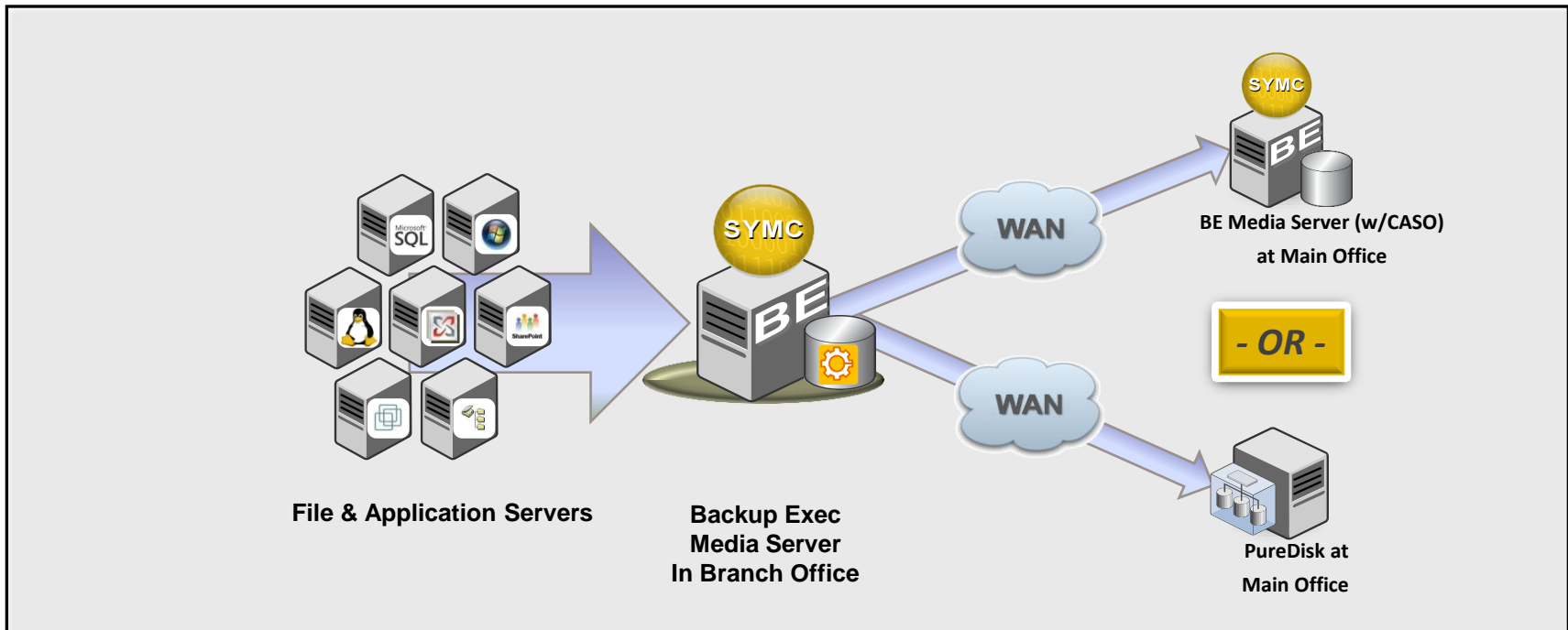
OST Powered Storage
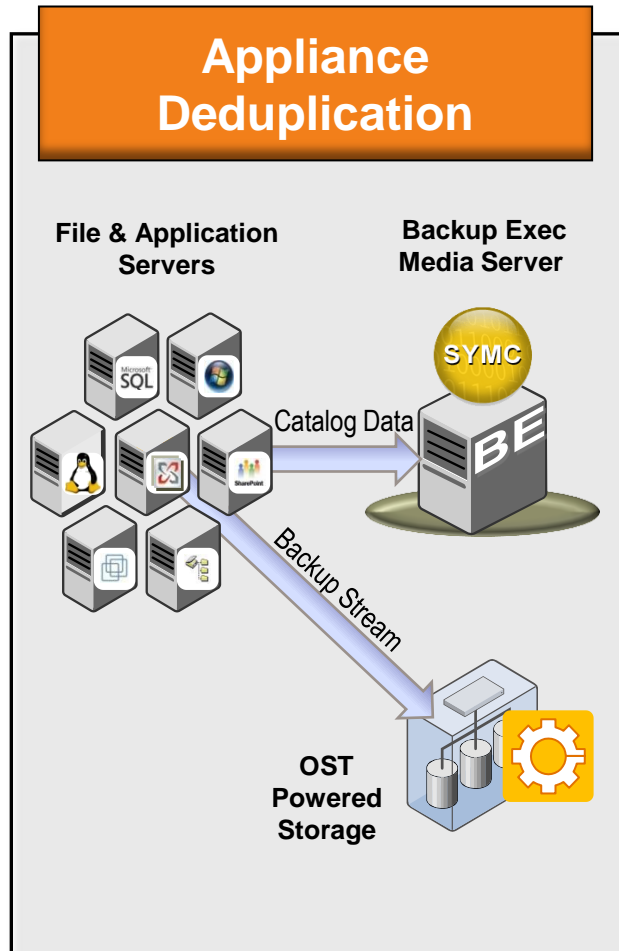
- Allows users to adopt 3rd party Open Storage (OST) deduplication disk devices

- Remotely controlling the data to be backup/restore using 3rd party Appliance Deduplication technology and report catalog data back to Backup Exec Media Server.

- Achieves faster backups to deduplication appliances via Symantec OST plug-ins enabled by Backup Exec 2010

NEW Deduplication Option
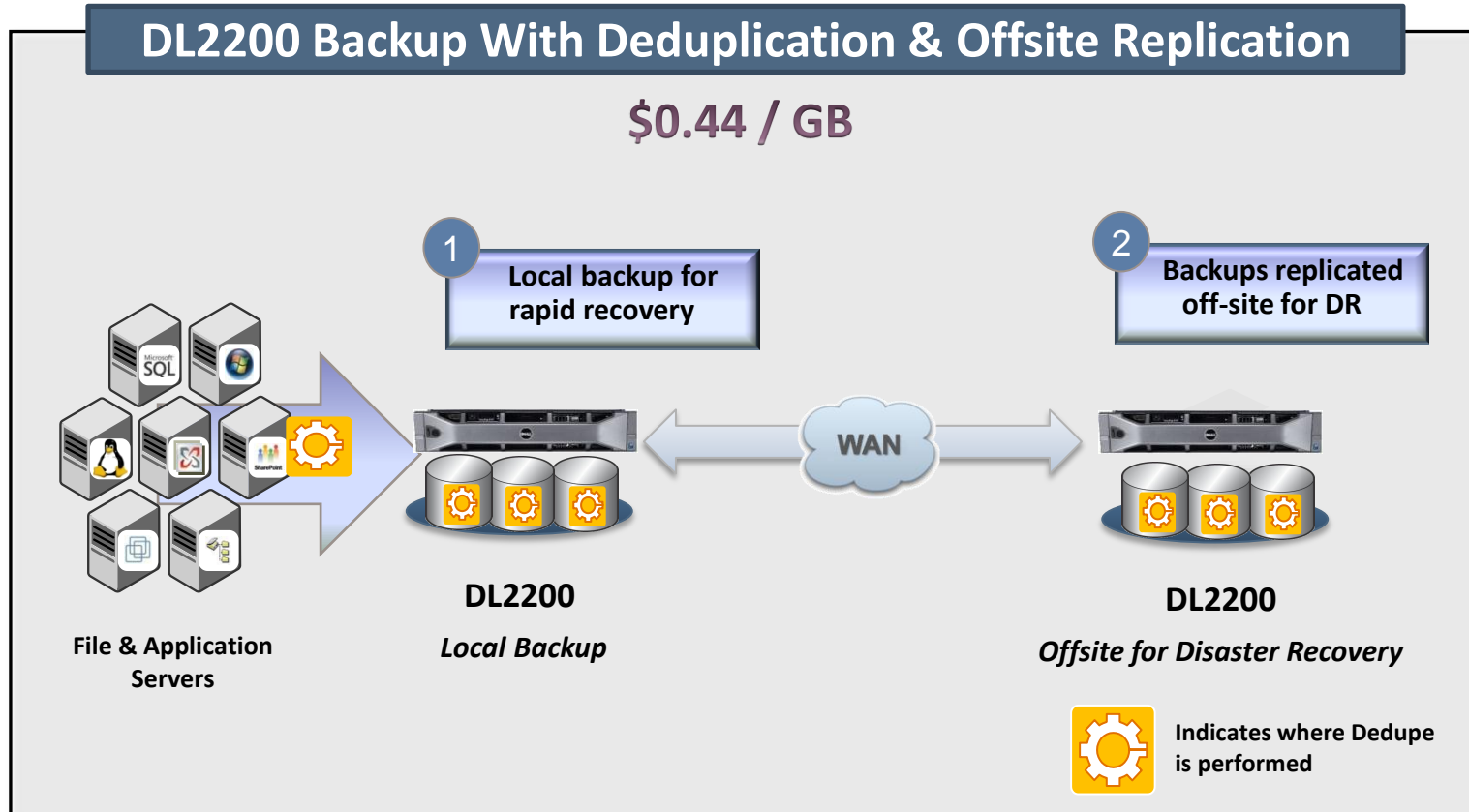## *Deduplication Backup Set Copy - DR & remote Office*

Indicates where Dedupe is performed

File & Application Servers

SYMC

Backup Exec
Media Server
In Branch Office

WAN

WAN

- OR -

SYMC

BE Media Server (w/CASO)
at Main Office

PureDisk at
Main Office

Replace Tape with DL2200

Deduplication and offsite disaster recovery

DL2200 Backup With Deduplication & Offsite Replication

$0.44 / GB

1 Local backup for rapid recovery

2 Backups replicated off-site for DR

WAN

DL2200
Local Backup

DL2200
Offsite for Disaster Recovery

Indicates where Dedupe is performed

File & Application Servers

Optimized Duplication: WAN-optimized backup (only new deduplicated blocks are transferred over the WAN to the remote site)

DL2200: Replace Tape in the SMB
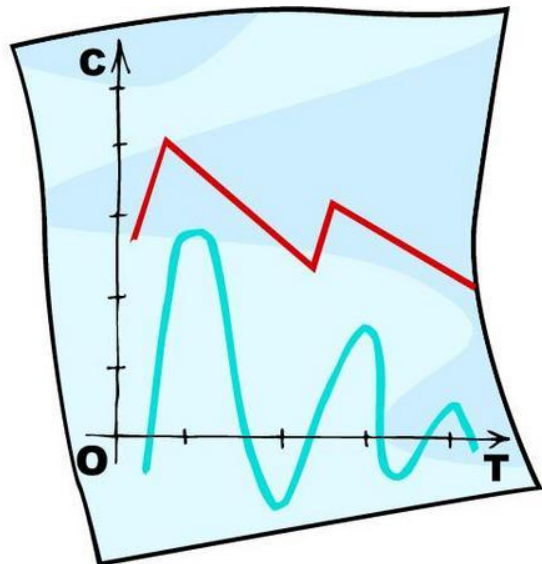
SMB Use Case	
Primary Storage Today	500 GB
Growth Rate	80%
Storage @ 2 Years	1,620 GB
Daily Change Rate	3%
Data Sets Stored	Weekly, Monthly, Yearly
Backup Storage Size	**20,837 GB**

DL2200: Replace Tape in the SMB

SMB Use Case	DL2200	LTO Tape
Solution Costs	$15,000 (2 Systems)	$12,400
Media Cost	NA	$1,800
Off-site Storage Costs	NA	$3,600
Storage[1]	33,750 GB (Deduplication)	6,400 GB (Compression)
Cost/GB	$0.44	$0.85

1001101010101000101110110101010101110000110101010101010100101010001010

1. Assumes 15:1 Deduplication Ratio and 2:1 Compression Ratio

Comparing Deduplication Solutions

	Symantec DL2200	Data Domain	EMC Avamar
Solution Costs	$7,500	$50,000	Expensive
Dedupe Methods	Source and Target	Target	Source
Cost to Scale	No Additional Costs	$9,000 / TB	Expensive

Deduplication Business Use Cases

Remote Office Data Protection	Virtual Machine Deduplication	Use Less Storage for Your Backups	No Storage Lock-In
• Save $$ on network bandwidth for backups • Send less data across the network during backups	• Resource optimized backup of VMware virtual machines • Dedupe in the VM with Agent or at the BE Server without an Agent	• Use standard servers and disk, but stores more data more efficiently • **Off-host dedupe**	• Freedom to use hardware deduplication appliances or software deduplication

ONE DEDUPLICATION PLATFORM

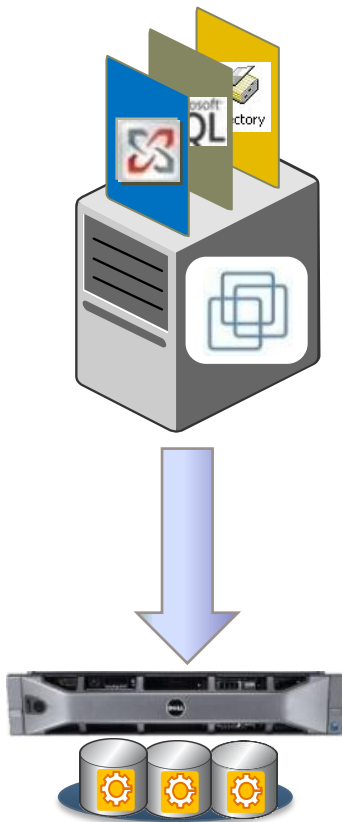| **CLIENT-SIDE DEDUPLICATION**	**CLIENT /OFF-HOST DEDUPLICATION**	**MEDIA SERVER DEDUPLICATION**	**HARDWARE OR SOFTWARE DEDUPLICATION**

Protect Virtual Servers

Virtual Machine Protection

Your Customer's Virtualization Challenges

- 46% of respondents surveyed run "Tier 1" applications on virtual machines[1]

- 65% of SMB companies do not back up virtual server environments[2]

- Virtualization introduces new backup performance issues and recovery complexities

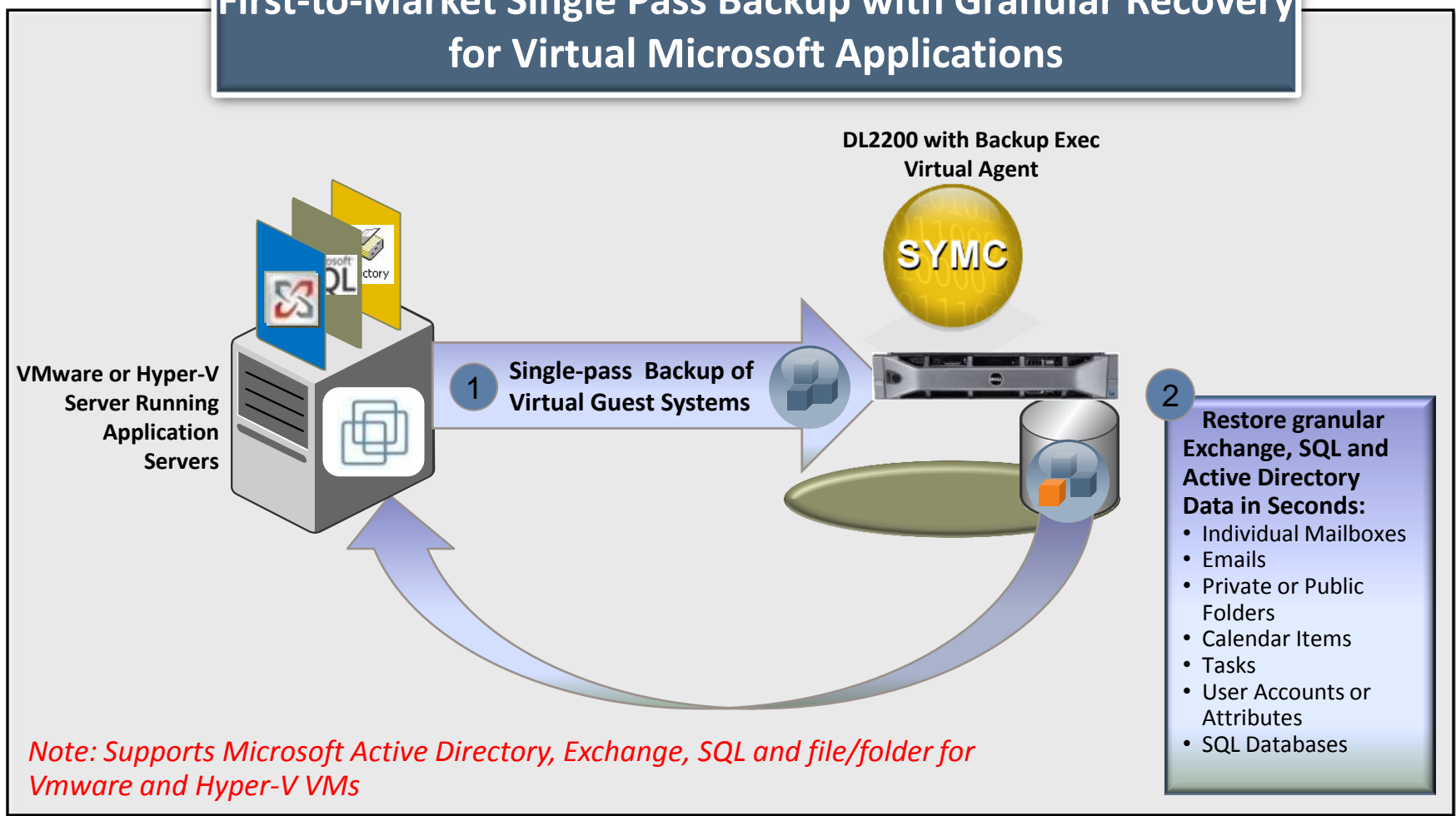- Customers redesigning backup simultaneously

The DL2200 Value Proposition:

- Save time in designing virtualization backup – DL2200 is optimized and designed for VM protection

- Reduce LAN backup traffic from 100s of VMs using DL2200 source deduplication

- Recover data better in VMs – DL2200 simplifies individual file and e-mail recovery

Virtualize with Confidence
Protect, Optimize…

First-to-Market Single Pass Backup with Granular Recovery for Virtual Microsoft Applications

DL2200 with Backup Exec Virtual Agent

SYMC

VMware or Hyper-V Server Running Application Servers

1 Single-pass Backup of Virtual Guest Systems

2 **Restore granular Exchange, SQL and Active Directory Data in Seconds:**
- Individual Mailboxes
- Emails
- Private or Public Folders
- Calendar Items
- Tasks
- User Accounts or Attributes
- SQL Databases

Note: Supports Microsoft Active Directory, Exchange, SQL and file/folder for Vmware and Hyper-V VMs

Virtualize with Confidence
... *and Deduplicate*

Optimal

VMware Media Server Deduplication

- OR -

Virtual Client/Source Deduplication

DL2200 with Backup Exec
Virtual Agent
and Deduplication Option

SYMC

DL2200 with Backup Exec
Virtual Agent
and Deduplication Option

SYMC

Virtual Guest File & Application Servers
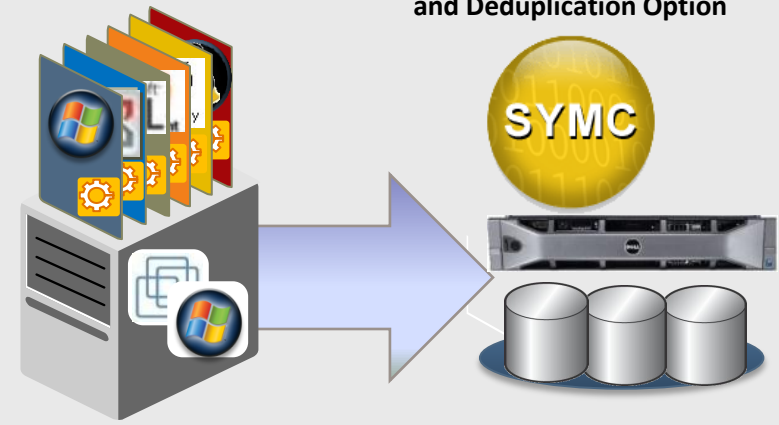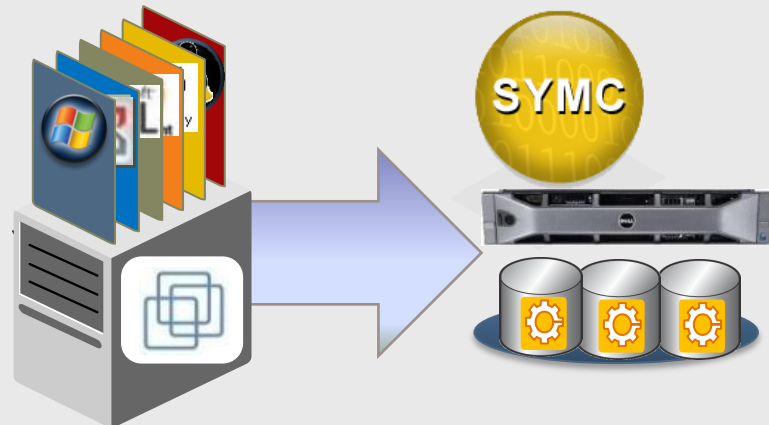
Typically would be a SAN based backup

Virtual Guest File & Application Servers with Individual Windows Agents

Typically would be a LAN based backup

NEW Virtualization Support
Physical and Virtual System Protection In One Console

Agent for VMware Virtual Infrastructure

- Support for VMware vSphere 4.0, vCenter 4.0 and vStorage

- Stage-less backup and restore (No VCB Proxy Server)

- vSphere block level Differential/Incremental backup

- Virtual Machine Template File Backups

- Application Granular Recovery (Exchange, SQL, AD) from a single-pass backup

- Dynamic inclusion of found virtual machines

- Redirected restore - Support for Folders and Resource pools

Agent for Microsoft Hyper-V

- Support for Windows Server 2008 R2 Hyper-V

- Support for Hyper-V LiveMigration/host clustering with Cluster Shared Volumes (CSV)

- Dynamic inclusion of found virtual machines

- Application Granular Recovery (Exchange, SQL, AD) from a single-pass backup

Unified Archiving – File System & Exchange

Business Case: Unified Archiving

Exchange and File Server Archiving Options

- Keep Exchange and File storage at predictable levels

- Reduce backup windows

- Provides migration of data to cheaper disk storage as it ages

- Improves recovery times

- One backup for disaster recovery and archive protection reduces I/O impact on Exchange and File servers

- Easily combine with client or media server Deduplication for added storage savings

NEW Backup Exec Archive Option for Exchange

- Full and Incremental/Differential Exchange Database Backups Are Performed Regularly
- Based Upon Archive Option criteria (age and/or size), Individual Emails Are "Harvested" from Backup and Migrated to Archive Option Vault
- Original Email Deleted From Exchange Server to Free Storage Space
- Emails in Vault Are Indexed
- Users Can Retrieve Individual Emails Using the Backup Exec Retrieve Google-like web UI

Exchange Server

Backup Exec Media Server with Archive Option

Backup Exec Exchange Agent

Archive Option Vault

Backup to Disk Target

User Retrieves Email via Backup Exec Retrieve
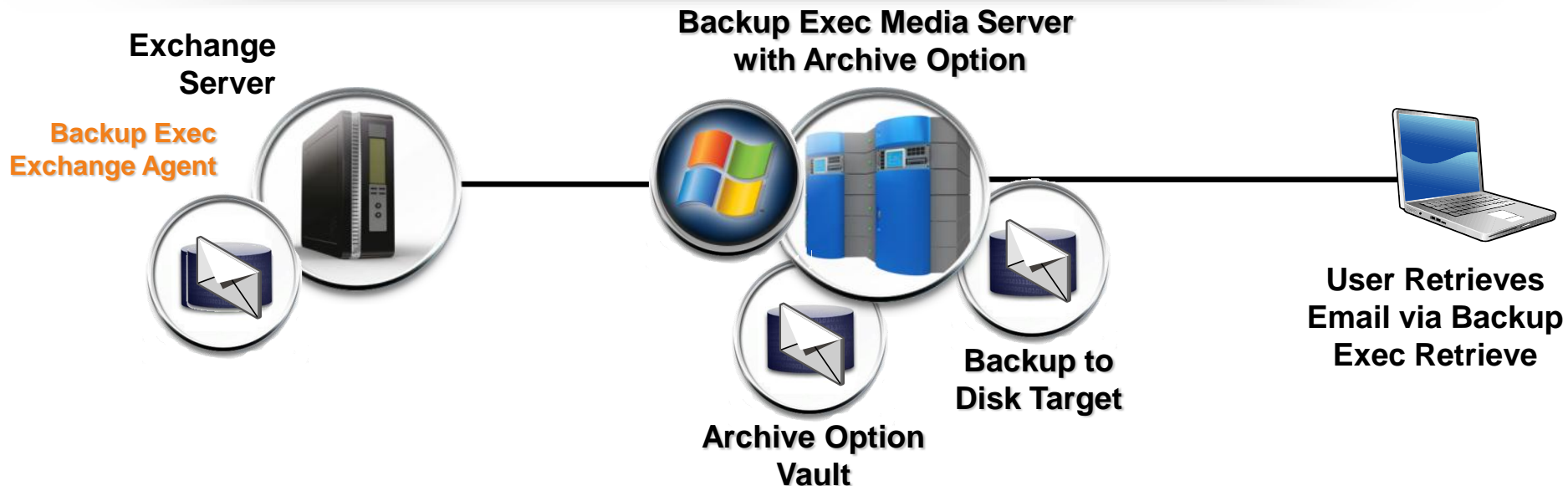
Introducing Backup Exec Retrieve

Search/Browse for archived files

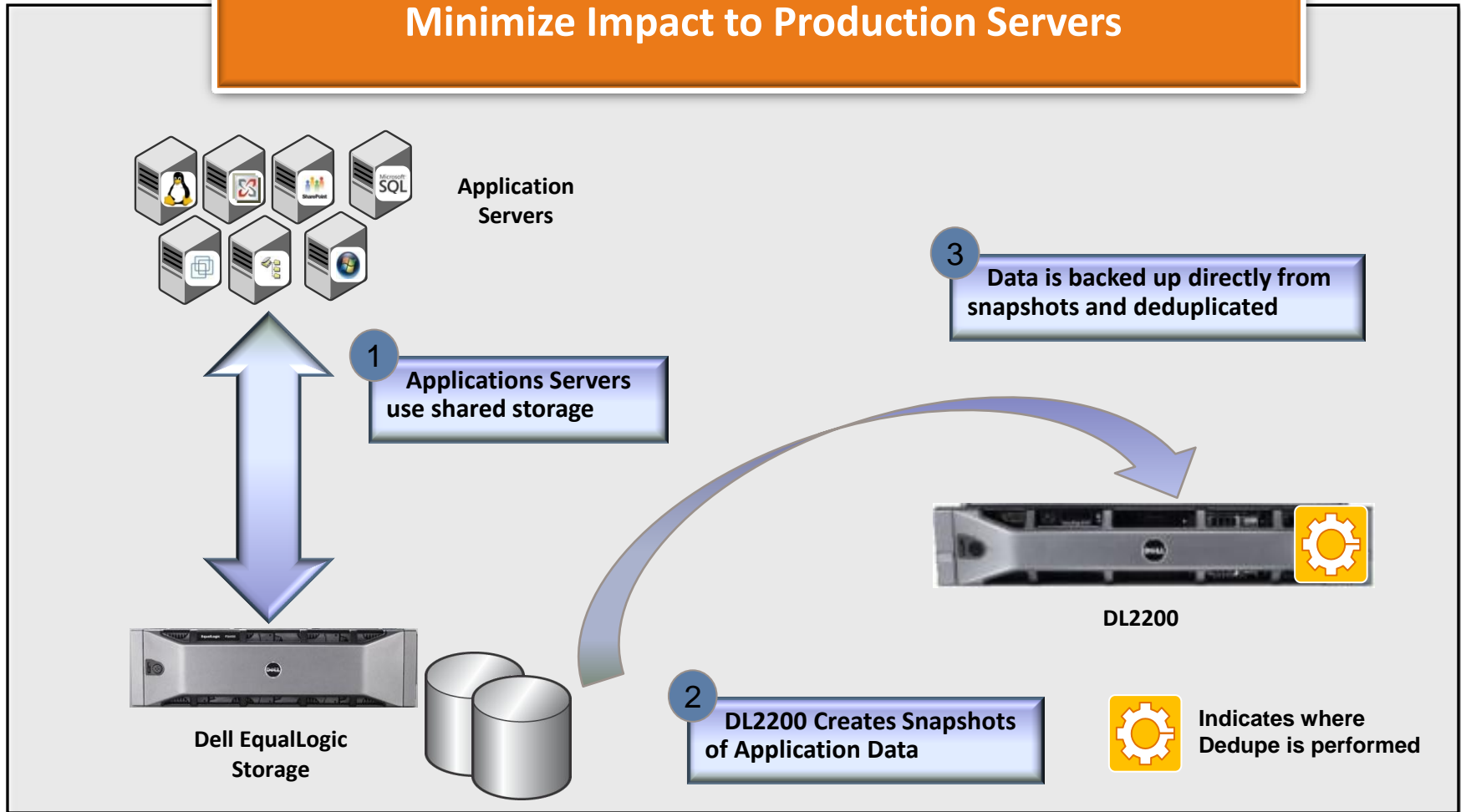View recently archived items

Search/Browse for archived E-mail

Retrieve an archived item

Protect EqualLogic using DL2200

symantec™

Simplified EqualLogic Protection

Minimize Impact to Production Servers

Application Servers

3 Data is backed up directly from snapshots and deduplicated

1 Applications Servers use shared storage

DL2200

Dell EqualLogic Storage

2 DL2200 Creates Snapshots of Application Data

Indicates where Dedupe is performed

# Business Case: EqualLogic Integration

Advanced Disk-based Backup Option

- Centralize storage using cost effect iSCSI SANs

- Integration with EqualLogic APIs – no separate scripting or education is required. Simply select as part of a backup job.

- Backup directly from EqualLogic Snapshots to minimize the impact on production servers (off-host backups)

- Combine with deduplication to reduce the amount of data stored
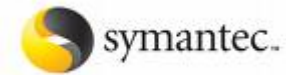
Simplify

Symantec DL2200 Editions
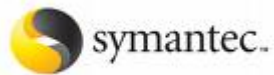
Without Deduplication

- Media Server License
- Storage Provisioning Option Basic
- 2 x Agent for Windows Systems
- 1 Yr or 3 Yr Maintenance

With Deduplication

- Media Server License
- Storage Provisioning Option Basic
- Deduplication Option
- 2 x Agent for Windows Systems
- 1 Yr or 3 Yr Maintenance

DL2200 Add-on Packs

- External Storage Upgrade

    – Adds support for provisioning external disks in an MD1000 attached to the DL2200

- Agents and Options

    – Additional Backup Exec Agents and Options are licensed from the **BE 2010 Power Suites**.

✿ symantec.

DL2200 Server Only Configuration
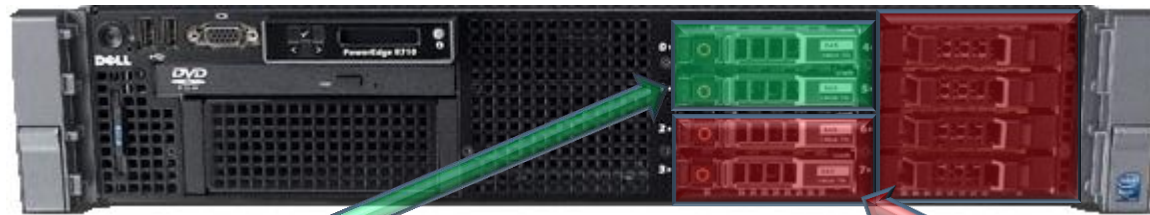
2 Drive RAID 1
Backup Exec 2010
DL Management Software

RAID 5
Internal storage used
for backups

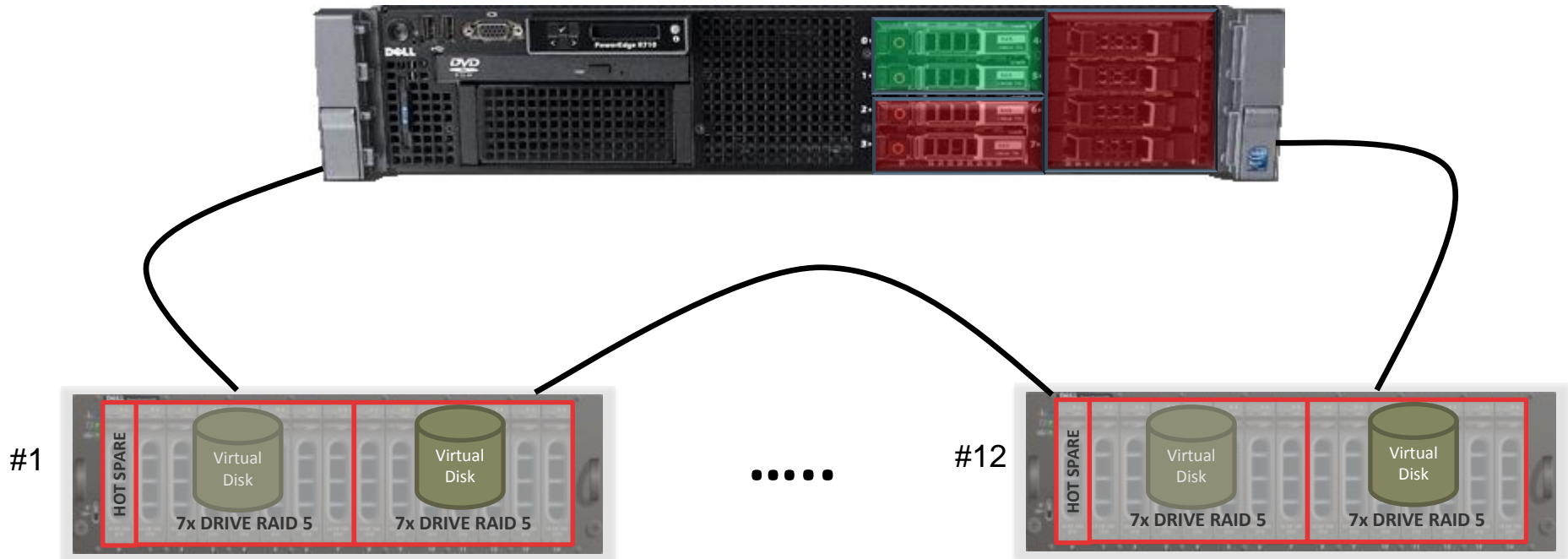Storage Provisioning Option – Basic License configures internal storage only

DL2200 Server Only Configuration

Internal Storage

- Configurable up to 6 TB at Launch
- Deduplication Storage or B2D Storage
- Protection for up to 90 TB (15:1 dedupe)

DL2200 with Expansion

#1   ..... #12

Add External Storage Upgrade SKU (Storage Provisioning Option) for MD1000 expansion

Q & A