Symantec Backup Exec Blueprints
Blueprint for Simplified Disaster Recovery

Backup Exec Technical Services

Backup & Recovery Technical Education Services

Symantec Backup Exec Blueprints
Preface/disclaimer

Notice

This Backup Exec Blueprint presentation includes example diagrams that contain objects that represent applications and platforms from other companies such as Microsoft and VMware. These diagrams may or may not match or resemble actual implementations found in end user environments. Any likeness or similarity to actual end user environments is completely by coincidence.

The goal of the diagrams included in this blueprint presentation is not to recommend specific ways in which to implement applications and platforms from other companies such as Microsoft and VMware, but rather to illustrate Backup Exec best practices only.

For guidelines and best practices on installing and configuring applications and platforms from other companies, please refer to best practice documentation and other resources provided by those companies.

Symantec Backup Exec Blueprints

How to use

- **Blueprints** Help Customers Avoid Common Challenges/Pitfalls

- Each **Blueprint** Contains:
  - **Recommended Configuration:** Best-practice implementation example
  - **Life Preservers:** Best practices and pitfalls to avoid

- Use **Blueprints** to:
  - Present the Backup Exec best practice implementation example
 - Highlight key "life preserver" guidelines to avoid problems

Introduction

Key terms and principles

- ## What Does Simplified Disaster Recovery (SDR) Technology Do?

  – Protects key system components required for full server recovery

  – Examples include boot volume, system state components, among others

- ## How Does SDR Technology Add Value?

  – Enables bare metal and dissimilar hardware recovery of Windows servers

  – Recovery is an automated process leveraging WinPE-based recovery disk

- ## How Do I Know If Backups Are Enabled With SDR?

  – Backup Exec 2014 jobs are enabled for SDR by default

  – Backup job selections screen will show green SDR "ribbon" when enabled

> Simplified Disaster Recovery: **ON**

- Provides Base Operating Environment for Server Recovery

  – Powerful operating system environment based on Microsoft WinPE

  – Full networking and Windows command prompt capabilities

  – Graphical, automated, wizard-driven recovery experience

  – Included with Backup Exec at no additional charge

- Performs Bare Metal and Dissimilar Hardware Restore Tasks

  – Enables user to connect to Backup Exec server or local storage device

  – Reconstructs server automatically according to restore selections
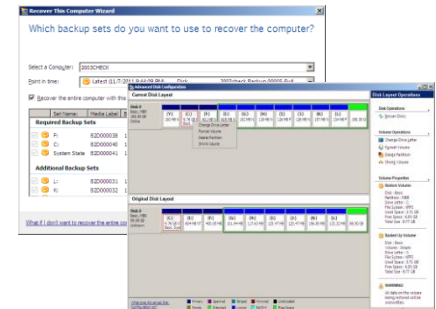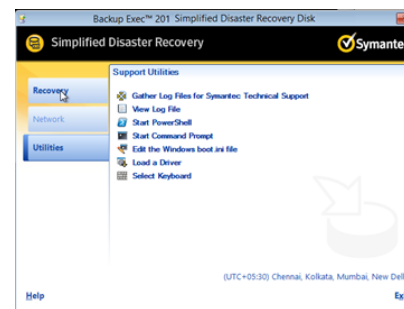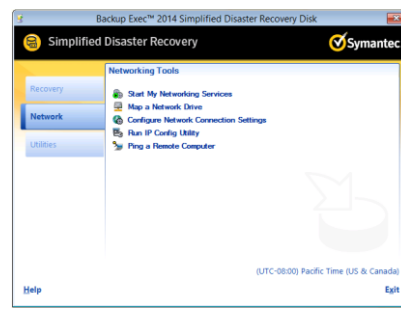
Example Diagrams and Life Preservers

Effective usage of Simplified Disaster Recovery technology

Example Diagram: Simplified Disaster Recovery

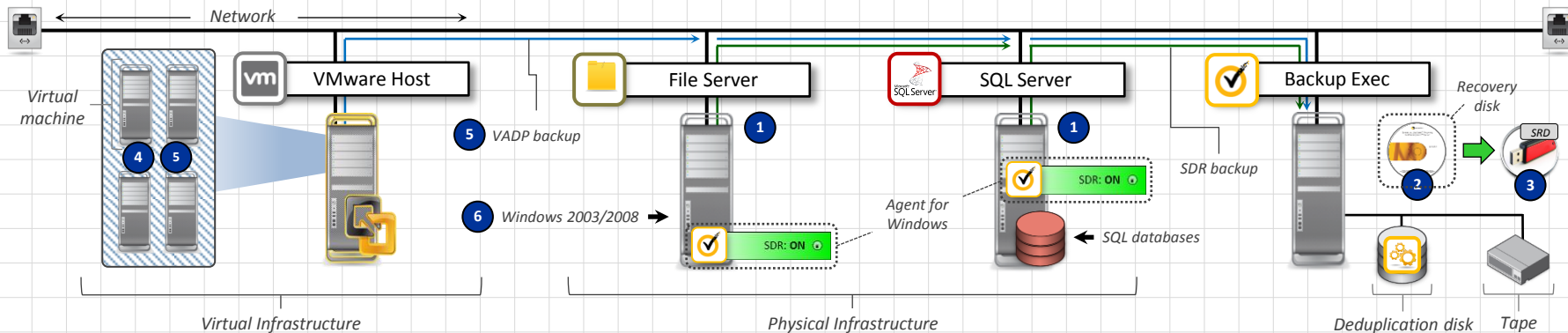*SDR-enabled protection of physical servers*

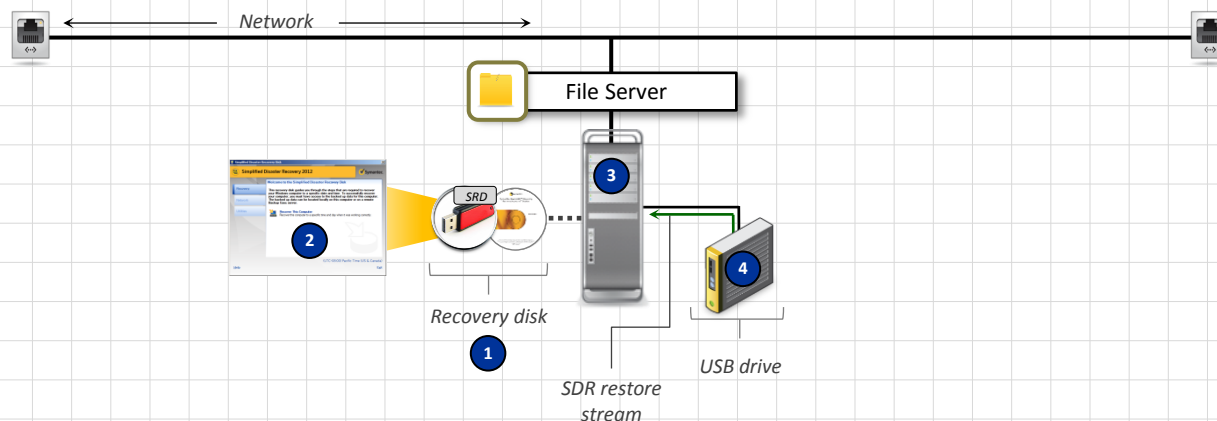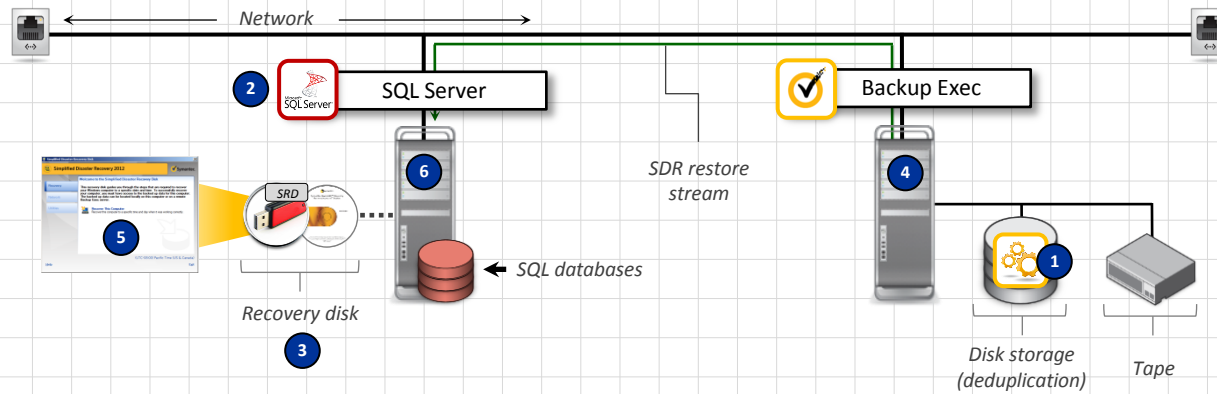**Simplified Disaster Recovery General Best Practices – Backup**

1. All physical servers, or all critical physical servers, should be protected using SDR-enabled backup jobs

2. Ensure recovery disk contains all necessary drivers required for a recovery event; customize as needed

3. Create USB versions of recovery media for optimal boot performance when in recovery mode (manual process)

4. Perform SDR recovery tests periodically to standby physical hardware or to an isolated virtual machine lab

5. Virtual machines are generally not protected via agent-driven, SDR backups; VADP backups preferred

6. SDR support (BMR, dissimilar hardware) currently limited to Windows 2003, Windows 2008/R2, Windows 7/8

Example Diagram: Simplified Disaster Recovery

File server recovery from standard backup on local device

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Network

File Server

Recovery disk

SRD restore stream

USB drive

Simplified Disaster Recovery Best Practices – Standard Server Restore from Local Media

1. Use the correct recovery disk (USB or DVD); 64-bit for 64-bit hardware, 32-bit for 32-bit hardware

2. If the recovery disk cannot detect the server's local disk array, use the "Load a Driver" function under "Utilities"

3. Dissimilar hardware configurations will be detected and supported automatically during recovery operations

4. SDR recovery from a local device is only supported for non-deduplicated backup sets

Example Diagram: Simplified Disaster Recovery
Application server recovery from deduplicated backup

Simplified Disaster Recovery Best Practices – Application Server Restore from Backup Exec Server

1. For recovery of deduplicated backup sets, restore must leverage remote Backup Exec server for "rehydration"

2. **2-step** restore process: (1) base restore using recovery disk, (2) application restore using Backup Exec

3. Use the correct recovery disk (USB or DVD); 64-bit for 64-bit hardware, 32-bit for 32-bit hardware

4. When having trouble connecting to a Backup Exec server, the IP address can be used in place of the hostname

5. If the recovery disk cannot detect the server's local disk array, use the "Load a Driver" function under "Utilities"

6. Dissimilar hardware configurations will be detected and supported automatically during recovery operations

Example Diagram: Simplified Disaster Recovery
New! SDR Disk Creation
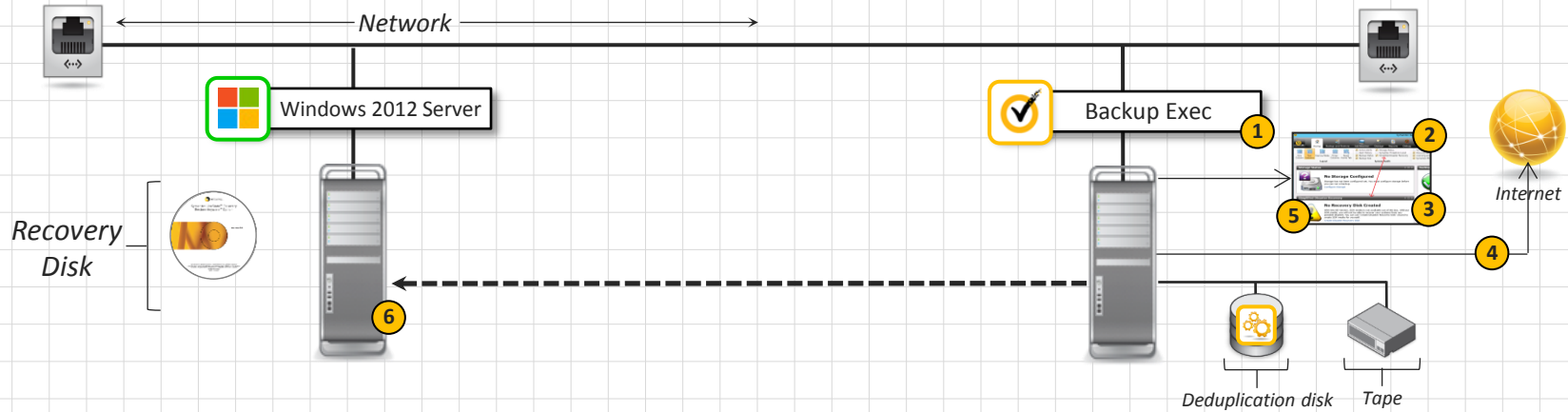
1. User installs Backup Exec

2. Gets notified by SDR full backup alert and UI Widget about the need to create SDR image

3. User invokes SDR creation Wizard

4. The Wizard downloads ADK from Microsoft site

5. The Wizard creates SDR image

6. User uses SDR for disaster recovery of Windows 2012 system

Life Preservers: Simplified Disaster Recovery
Life preservers

- ## Recovery Disk Customization

  - *Create a custom SDR disk whenever you update HBA or NIC hardware or software for a server being backed up*

  - *This practice ensures that you have the latest hardware or software drivers that may be required for restore*

- ## Periodic Test Recoveries

  - *Use SDR to perform a test recovery of a non-production computer before a disaster occurs*

  - *You can use a virtual environment such as VMware or Hyper-V for test recovery purposes*

- ## Available Hard Disk Space

  - *When performing a recovery, hard disk space must be the same size or larger than the original*

- ## UEFI Support

  - *SDR supports recovering computers that use the Unified Extensible Firmware Interface (UEFI) standard*

  - *Backups of UEFI-based computers cannot be restored to standard BIOS-based computers*

  - *For computers that support both firmware types, you must start the computer using UEFI firmware if you backed it up in that mode*

- ## OEM and Utility Partitions

  - *OEM partitions such as Dell Utility partitions are considered part of a computer's critical system components and are backed up and restored as such*

- "Single-pass" Bare Metal Recovery of Application Servers Not Supported
  - *Currently a 2-step process*

- Step 1 – SDR Recovery of Base Server
  - *Recovery of base server elements, such as volumes, operating system*
  - *Can be bare metal or dissimilar hardware restore process*

- Step 2 – Application Recovery
  - *Recovery of application components using Backup Exec*
  - *Standard Backup Exec restore after recovered server is functional*

- SDR Backups and Backup Exec Database Maintenance

  - *Ensure that Backup Exec Database maintenance runs after you configure new storage devices on your Backup Exec server but before you run an SDR-compatible backup job*

  - *You can set the schedule to run a Backup Exec Database maintenance by enabling the following option:*

    "Enable Backup Exec database maintenance" found under Backup Exec Settings > Database Maintenance

- Additional SDR Best Practices Found <u>Here</u>

Thank You!

Backup Exec Product Management