



Strategies for Bare Machine Recovery



September 2003

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What Is Bare Machine Recovery?

- “The ability to recover the operating system of a machine to the identical state it was at a given point in time”.
- Assumes that the machine is the same or that the hardware is identical. If not the operating system needs to be modified to handle the hardware changes.
- Important that the operating system is identical.
- Importance of ensuring that the operating system is internally consistent as at a particular point in time.



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Cristie Bare Machine Recovery

2003 Cristie Data Products or IBM



Why BMR Is Required

- Loss of or damage to the hardware containing the operating system - failure of HDD or RAID system.
- Corruption of the operating system files (virus, human error, software malfunction).
- Disasters affecting multiple machines – fire, explosion, flood etc.).



BMR and ITSM

- **Why ITSM does not handle BMR.**
 - Need to configure disks and install an operating system.
 - Windows.
 - AIX.
 - Solaris.
- **New features in TSM 5.2.**
 - ASR.



Differing BMR Strategies

- **System reinstallation**
 - Full system reinstallation using installation CDs (Windows and ITSM client)
 - JumpStart (Solaris), Ignite (HPUX), NIM (AIX)

- **System backup and restore**
 - File by file backup – CBMR, Veritas BMR
 - Image backup –Ghost, v2i Protector or mksysb or savevg on AIX



System Reinstallation

- Suitable for standardised machines which are completely controlled centrally.
- Can be a lengthy process.
- Cannot be standardised across different operating systems.
- Will handle a restore to differing hardware.



System Backup and Recovery

- May require additional storage.
- Regular backups need to be scheduled and administered.
- Requires additional software to handle the backup and restore processes.
- Requires a basic operating system with the necessary drivers to access all required devices.
- Requires knowledge of how to configure resources - partition disks, configure network and boot details.



Examples of Different BMR Strategies in Windows

- Reinstallation from original disks.
- ASR (2003 only).
- Software packages:
 - TSM integrated.
 - CBMR.
 - Veritas BMR.
 - Other.
 - Ghost, V2I Protector, etc.



Critical Factors for BMR Software

- Speed of recovery
- Complexity of software – installation, administration and recovery
- Storage requirements
- Cost
- Consistent over multiple operating systems
- Special factors
 - Clusters, PDC, Citrix, VMWare, SANs



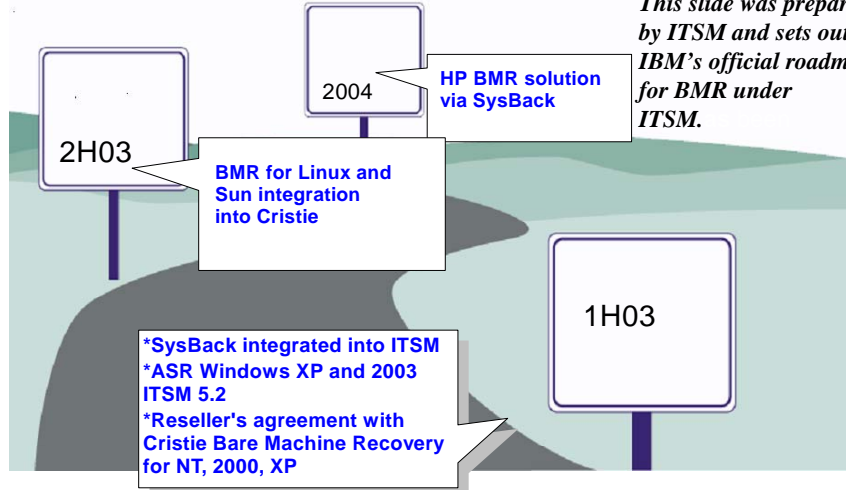
Restoring to Dissimilar Hardware

- Driver issues on boot device.
- Possible solutions:
 - Pre-installation of drivers.
 - Installation of drivers during recovery process.



Bare Metal Restore Solution Roadmap

This slide was prepared by ITSM and sets out IBM's official roadmap for BMR under ITSM.



Questions?