



# hp OpenView storage data protector 5.5 EMC split-mirror backup integration

Version: 4.6

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The EMC Split-Mirror Backup Integration is supported on the following Operating Systems:

HP-UX (PA-RISC) : HP-UX 11.0, HP-UX 11.11, HP-UX 11.23 & HP-UX 11.31  
HP-UX (Itanium) : HP-UX 11.23  
Windows : Windows 2000

The operating system doesn't need to be identical on both Application and Backup Hosts. However, it must be either HP-UX (PA-RISC) on both or HP-UX (Itanium) on both or Windows on both.

The EMC Symmetrix Integrated Cached Disk Array system (ICDA) must run the Enterprise Backup Solutions Enabler from EMC. Following is the list of Supported versions:

1. HP-UX (PA-RISC) : Version 5.5 up to 6.0.
2. HP-UX (Itanium) : Version 6.0 and above.
3. Windows : Version 5.3 up to 6.0.

All versions of TimeFinder and/or SRDF and microcode supported by the above versions of the EMC software are supported. New versions of the microcode or the Enterprise Backup software will be tested and certified if needed.

Please note that EMC Symmetrix including DMX arrays are supported.

For the following matrices, only those combinations of Applications & Operating Systems are supported that are supported by the respective vendors.

supported configurations – HP-UX (PA-RISC)				
Integrations on	single host	dual host	SRDF <sup>3</sup>	SRDF/TF <sup>4</sup> (combined)
HP-UX 11.0 (DMX not supported)	TimeFinder <sup>1</sup>	TimeFinder <sup>2</sup>		
Raw disk and raw logical volume (disk image) <sup>5</sup>	Supported	Supported	Supported	Supported
VxFS, HFS file system offline <sup>6</sup>	Supported <sup>7</sup>	Supported	Supported	Supported
Oracle 8.0.x, 8.1.x RMAN offline <sup>8</sup> or online <sup>9</sup>	Not supported	Supported	Supported	Supported

SAP R/3 3.1G <sup>10</sup> + brbackup 4.0x <sup>11</sup>	Not supported	Supported	Supported	Supported
SAP R/3 4.0x + brbackup 4.0x <sup>11</sup>				
SAP R/3 4.5x + brbackup 4.5x <sup>11</sup>				
SAP R/3 4.6x + brbackup 4.6x <sup>11</sup> offline <sup>8</sup> or online <sup>9</sup>				

- 1 BCV mirror is created inside one ICDA. BCV mirror is being backed up on the application host. (There is no backup host.)
- 2 BCV mirror is created inside one ICDA. Application host is connected to the original disk. Backup host is connected to the BCV.
- 3 Two ICDA's are connected with SRDF links. Application host is connected to the primary ICDA (R1 disk). Backup host is connected to secondary ICDA (R2 disk).
- 4 Two ICDA's (R1 and R2) are connected with SRDF links. Application host is connected to the R1 disk. Backup host is connected to the BCV mirror of the R2 disk.
- 5 The appropriate disk image is backed up. It is the user's responsibility to shut down the application and unmount the file system.
- 6 Same as note 5 (disk image), except that it is more convenient to specify and Data Protector unmounts the file system on the application host before the split.
- 7 The directory needs to have a special name: \_bcv.
- 8 During the split, the database is shut down on the application host and backed up on the backup host.
- 9 During the split, the database is put into hot mode on the application host and backed up on the backup host. Archive logs are backed up in the standard way on the application host.
- 10 This includes all later sub-versions. For example, 3.1G includes 3.11.
- 11 The integration is done using the 'Backint' functionality.
- 12 Only the functionality supported in Oracle 9i is currently supported. New features released in Oracle 10g will be supported at a later date. Restore from Data Protector GUI is not yet supported.

For HP-UX 11.31 (PA-RISC), currently Oracle and SAP are not supported as the support for these has not been released by the vendors. These will be certified when the support is available.

#### supported configurations – HP-UX (PA-RISC)

Integrations on	single host TimeFinder <sup>2</sup>	dual host TimeFinder <sup>3</sup>	SRDF <sup>4</sup>	SRDF/TF <sup>5</sup> (combined)
HP-UX 11.11 & 11.23 <sup>1,11,13</sup>				
Raw disk and raw logical volume (disk image) <sup>6</sup>	Supported	Supported	Supported	Supported
VxFS file system offline <sup>7</sup>	Supported <sup>8</sup>	Supported	Supported	Supported
Oracle 10g RMAN offline <sup>9</sup> or online <sup>10,12</sup>	Not supported	Supported	Supported	Supported
SAP Brtools 6.40 offline <sup>8</sup> or online <sup>10,11</sup>	Not supported	Supported	Supported	Supported
SAP Brtools 7.0 offline <sup>8</sup> or online <sup>10,11</sup>	Not supported	Supported	Supported	Supported

- 1 To utilize this feature, following patches are needed:  
For Solaris Cell Manager: DPSOL\_00171  
For HP-UX (PA-RISC) Cell Manager: PHSS\_33634  
For HP-UX (Itanium) Cell Manager: PHSS\_33635
- 2 BCV mirror is created inside one ICDA. BCV mirror is being backed up on the application host.  
(There is no backup host.)
- 3 BCV mirror is created inside one ICDA. Application host is connected to the original disk. Backup host is connected to the BCV.
- 4 Two ICDAs are connected with SRDF links. Application host is connected to the primary ICDA (R1 disk). Backup host is connected to secondary ICDA (R2 disk).
- 5 Two ICDAs (R1 and R2) are connected with SRDF links. Application host is connected to the R1 disk. Backup host is connected to the BCV mirror of the R2 disk.
- 6 The appropriate disk image is backed up. It is the user's responsibility to shut down the application and unmount the file system.
- 7 Same as note 5 (disk image), except that it is more convenient to specify and Data Protector unmounts the file system on the application host before the split.
- 8 The directory needs to have a special name: `_bcv`.
- 9 During the split, the database is shut down on the application host and backed up on the backup host.
- 10 During the split, the database is put into hot mode on the application host and backed up on the backup host. Archive logs are backed up in the standard way on the application host.
- 11 The integration is done using the 'Backint' functionality.
- 12 Only the functionality supported in Oracle 9i is currently supported. New features released in Oracle 10g will be supported at a later date. Restore from Data Protector GUI is not yet supported.
- 13 Following soft links and kernel parameters are required:
  1. Soft link of `"ln -s /usr/lib/libsymapimt.sl /usr/lib/libsymapi.sl "` and `"ln -s /usr/lib/libsymlvmmt.sl /usr/lib/libsymlvm.sl"` created due to new shared library name has introduced in Solution Enabler 6.4.0. Without these link `./syms` won't work.
  2. A soft link of `"ln -s /usr/sbin/kctune /usr/sbin/kmtune "` done on both application host and backup host.
  3. The kernel configuration parameter 'maxvgs' value was set to 256 on both application host and backup host by using the command `"#/usr/sbin/kctune -u maxvgs=256 "`.

### supported configurations – HP-UX (Itanium)

Integrations on HP-UX 11.23 <sup>1</sup>	single host TimeFinder <sup>2</sup>	dual host TimeFinder <sup>3</sup>	SRDF <sup>4</sup>	SRDF/TF <sup>5</sup> (combined)
Raw disk and raw logical volume (disk image) <sup>6</sup>	Supported	Supported	Supported	Supported
VxFS File system offline <sup>7</sup>	Supported <sup>8</sup>	Supported	Supported	Supported
Oracle 10g RMAN offline <sup>9</sup> or online <sup>10,12</sup>	Not supported	Supported	Supported	Supported
SAP Brtools 6.40 offline <sup>9</sup> or online <sup>10, 11</sup>	Not supported	Supported	Supported	Supported

SAP Brtools 7.0 offline <sup>9</sup> or online <sup>10, 11</sup>	Not supported	Supported	Supported	Supported
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- 1 To utilize this feature, following site specific patches are needed:  
PHSS\_34977 - HP-UX 11.x (PA) Cell Manager / Installation Server  
PHSS\_34978 - HP-UX 11.23 (IPF) Cell Manager / Installation Server  
DPSOL\_00224 - Solaris 2.x Cell Manager / Installation Server
- 2 BCV mirror is created inside one ICDA. BCV mirror is being backed up on the application host. (There is no backup host.)
- 3 BCV mirror is created inside one ICDA. Application host is connected to the original disk. Backup host is connected to the BCV.
- 4 Two ICDA's are connected with SRDF links. Application host is connected to the primary ICDA (R1 disk). Backup host is connected to secondary ICDA (R2 disk).
- 5 Two ICDA's (R1 and R2) are connected with SRDF links. Application host is connected to the R1 disk. Backup host is connected to the BCV mirror of the R2 disk.
- 6 The appropriate disk image is backed up. It is the user's responsibility to shut down the application and unmount the file system.
- 7 Same as note 5 (disk image), except that it is more convenient to specify and Data Protector unmounts the file system on the application host before the split.
- 8 The directory needs to have a special name: \_bcv.
- 9 During the split, the database is shut down on the application host and backed up on the backup host.
- 10 During the split, the database is put into hot mode on the application host and backed up on the backup host. Archive logs are backed up in the standard way on the application host.
- 11 The integration is done using the 'Backint' functionality.
- 12 Only the functionality supported in Oracle 9i is currently supported. New features released in Oracle 10g will be supported at a later date. Restore from Data Protector GUI is not yet supported.

Data Protector 5.5 also supports the **EMC Geospan** product for High Availability Clustering using the Microsoft Cluster Server. EMC Geospan needs dual host TimeFinder and the supported Geospan setups are listed in the table below. Additionally the table below also represents the ZDB support for EMC Symmetrix on Windows in addition to the ones supported by Geospan:

supported configurations – Windows (32-bit)				
integrations on Windows 2000 (DMX not supported)	single host TimeFinder <sup>1</sup>	dual host TimeFinder <sup>2</sup>	SRDF <sup>3</sup>	SRDF/TF <sup>4</sup> (combined)
Raw disk and raw logical volume (disk image) <sup>5</sup>	Supported	Supported	Not Supported	Not Supported
NTFS file system offline <sup>6</sup>	Supported <sup>7</sup>	Supported	Not Supported	Not Supported
Oracle 8.1.x RMAN offline <sup>8</sup> or online <sup>9</sup>	Not supported	Supported	Not Supported	Not Supported

Oracle 9i RMAN offline <sup>8</sup> or online <sup>9</sup>	Not supported	Supported	Not Supported	Not Supported
MS SQL Server 2000	Not supported	Supported	Not Supported	Not Supported

- 1 BCV mirror is created inside one ICDA. BCV mirror is being backed up on the application host. (There is no backup host.)
- 2 BCV mirror is created inside one ICDA. Application host is connected to the original disk. Backup host is connected to the BCV.
- 3 Two ICDA's are connected with SRDF links. Application host is connected to the primary ICDA (R1 disk). Backup host is connected to secondary ICDA (R2 disk).
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- 5 The appropriate disk image is backed up. It is the user's responsibility to shut down the application and unmount the file system.
- 6 Same as note 5 (disk image), except that it is more convenient to specify and Data Protector unmounts the file system on the application host before the split.
- 7 The directory needs to have a special name: \_bcv.
- 8 During the split, the database is shut down on the application host and backed up on the backup host.
- 9 During the split, the database is put into hot mode on the application host and backed up on the backup host. Archive logs are backed up in the standard way on the application host.
- 10 The integration is done using the 'Backint' functionality.

## supported configurations – Windows

integrations on Windows 2003 (32-bit) <sup>11</sup>	single host TimeFinder <sup>1</sup>	dual host TimeFinder <sup>2</sup>	SRDF <sup>3</sup>	SRDF/TF <sup>4</sup> (combined)
Raw disk and raw logical volume (disk image) <sup>5</sup>	Supported	Supported	Not Supported	Not Supported
NTFS file system offline <sup>6</sup>	Supported <sup>7</sup>	Supported	Not Supported	Not Supported
Oracle 10g RMAN offline <sup>8</sup> or online <sup>9</sup>	Not supported	Supported	Not Supported	Not Supported
SAP Brtools 7.0 offline <sup>8</sup> or online <sup>9, 10</sup>	Not supported	Supported	Not Supported	Not Supported
MS-SQL2000	Not supported	Supported	Not Supported	Not Supported
MS-SQL2005	Not supported	Supported	Not Supported	Not Supported

- 1 BCV mirror is created inside one ICDA. BCV mirror is being backed up on the application host. (There is no backup host.)
- 2 BCV mirror is created inside one ICDA. Application host is connected to the original disk. Backup host is connected to the BCV.
- 3 Two ICDA's are connected with SRDF links. Application host is connected to the primary ICDA (R1 disk). Backup host is connected to secondary ICDA (R2 disk).
- 4 Two ICDA's (R1 and R2) are connected with SRDF links. Application host is connected to the R1 disk. Backup host is connected to the BCV mirror of the R2 disk.
- 5 The appropriate disk image is backed up. It is the user's responsibility to shut down the application and unmount the file system.
- 6 Same as note 5 (disk image), except that it is more convenient to specify and Data Protector unmounts the file system on the application host before the split.
- 7 The directory needs to have a special name: `_bcv`.
- 8 During the split, the database is shut down on the application host and backed up on the backup host.
- 9 During the split, the database is put into hot mode on the application host and backed up on the backup host. Archive logs are backed up in the standard way on the application host.
- 10 The integration is done using the 'Backint' functionality.
- 11 To utilize this feature, please install Site specific Patch : SSPNT550\_150

## supported configurations – Windows

integrations on Windows 2003 (Itanium) <sup>11</sup>	single host TimeFinder <sup>1</sup>	dual host TimeFinder <sup>2</sup>	SRDF <sup>3</sup>	SRDF/TF <sup>4</sup> (combined)
Raw disk and raw logical volume (disk image) <sup>5</sup>	Supported	Supported	Not Supported	Not Supported
NTFS file system offline <sup>6</sup>	Supported <sup>7</sup>	Supported	Not Supported	Not Supported
Oracle 10g RMAN offline <sup>8</sup> or online <sup>9</sup>	Not supported	Supported	Not Supported	Not Supported
SAP Brtools 7.0 offline <sup>8</sup> or online <sup>9, 10</sup>	Not supported	Supported	Not Supported	Not Supported
MS-SQL2000	Not supported	Supported	Not Supported	Not Supported
MS-SQL2005	Not supported	Supported	Not Supported	Not Supported

- 1 BCV mirror is created inside one ICDA. BCV mirror is being backed up on the application host. (There is no backup host.)
- 2 BCV mirror is created inside one ICDA. Application host is connected to the original disk. Backup host is connected to the BCV.
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- 9 During the split, the database is put into hot mode on the application host and backed up on the backup host. Archive logs are backed up in the standard way on the application host.
- 10 The integration is done using the 'Backint' functionality.
- 11 To utilize this feature, please install Site specific Patch : SSPNT550\_150

supported volume managers	
Operating System	Volume Manager
HP-UX	<ul style="list-style-type: none"> <li>• LVM</li> <li>• VxVM</li> </ul>
Windows	<ul style="list-style-type: none"> <li>• Disk Manager</li> </ul>