HP Data Protector 6.20
Virtualization Support Matrix

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Note: The combinations of Data Protector component + operating system and/or application versions listed in this support matrix are only supported by Data Protector as long as the associated operating system and/or application versions are supported by respective vendors.

Data Protector supports the following virtualization applications:

Supported virtualization applications	
Vendor	**Supported application**
VMware[1]	• VMware Virtual Infrastructure (ESX 3.0.x, ESX 3.5, ESXi 3.5) • VMware vSphere 4 (ESX 4.0, ESX 4.1, ESXi4.0, ESXi4.1) • VMware vSphere 5[2,3,4] (ESXi 5.0x, ESXi 5.1)
Microsoft	• Microsoft Hyper-V • Microsoft Hyper-V R2 • Microsoft Virtual Server
Hewlett-Packard	• HP Integrity Virtual Machines 3.5, 4.0, 4.1, 4.2, 4.3, 6.1
Citrix	• Citrix XenServer 4.1, 5.0, 5.5, 5.6, 6.0
Sun	• Sun Solaris Zones : Solaris 10
Oracle	• Oracle VM 2.1.2, 2.1.5, 2.2.1, 3.0, 3.1.x
Red Hat	• RHEL KVM 5.5, 6.0, 6.2 • RHEV 3.0
IBM	• PowerVM 2.2.x

[1]   Includes support for Virtual Infrastructure and vSphere components like vMotion, HA, DR.
[2]   Support is available with the Data Protector patch bundle DPUXBDL_00621/DPSOLBDL_00621/DPLNXBDL_00621/DPWINBDL_00621 on top of Data Protector 6.20.
[3]   Supports only the features available with vSphere 4.
[4]   All updates are supported.

All guest operating systems supported by the respective vendors are supported with Data Protector as long as they are listed as supported on physical hosts in the *HP Data Protector 6.20 Platform and Integration Support Matrix*.

Following table lists various Data Protector components supported on the guest operating systems:

Supported components inside virtual machines	
Virtualization application	**Supported Data Protector components**
VMware[7] :	• Cell Manager/Installation Server • Manager of Managers • Disk Agent • Media Agent [1] • Graphical User Interface • Online Extension Agents[2] • HP P9000 XP, SSEA Agent[3] • HP P6000 EVA, SMI-S Agent[4]

	• VSS Agent [5]
Microsoft Virtual Server	• Disk Agent • Graphical User Interface • Online Extension Agents[2]
Microsoft Hyper-V	• Cell Manager/Installation Server • Disk Agent • Media Agent[1] • Graphical User Interface • Online Extension Agents[2] • HP P6000 EVA, SMI-S Agent[4] • VSS Agent [5]
HP Integrity Virtual Machines (IVM)	• Cell Manager/Installation Server • Disk Agent • Media Agent [6] • Manager of Managers • Graphical User Interface • Online Extension Agents[2]
Citrix XenServer	• Disk Agent • Media Agent • Graphical User Interface • Online Extension Agents[2]
Solaris Zones	• Disk Agent (Global and Local Zones) • Media Agent (Global Zone) • Oracle Online Agent (Global and Local Zones)
Oracle VM	• Disk Agent • Media Agent • Oracle Online Agent
Red Hat	• Disk Agent • Media Agent
IBM	• Disk Agent • Media Agent • Online Extension Agents[2]

[1]   Supported for HP StoreOnce Backup Systems with iSCSI and Catalyst, file devices, HP StoreOnce B6200 Backup System using Catalyst, HP Store Once Software, and file libraries only.

[2]   Valid for all applications that are listed as supported in *HP Data Protector 6.20 Platform and Integration Support Matrix* and are supported by respective vendors inside a virtual machine

[3]   Includes application integrations listed in the *HP Data Protector 6.20 Zero Downtime Backup and Instant Recovery Support Matrix for HP P9000 XP Disk Array Family*

[4]   Includes application integrations listed in the *HP Data Protector 6.20 Zero Downtime Backup and Instant Recovery Support Matrix for HP P6000 EVA Disk Array Family Using SMI-S Agent*

[5]   In case of VSS backups, the application host can be a virtual host, but the backup host for FC based arrays (EVA, XP, etc) must be a physical server. For details of the supported VSS configurations, see the *HP Data Protector 6.20 VSS Integration Support Matrix*

[6]   Support includes attached AVIO Devices

[7]   On VMware DP Agents are supported only on VMs and not on the base host, with the below exception
1.   DA on ESX 3.x and 4.x
2.   MA on ESX 4.x

The zero downtime backup and instant recovery feature in virtual environments is enabled by installing the respective array and application agents inside the virtual machines running the applications. Following is a listing of supported configurations:

Supported ZDB/IR configurations for virtual environments				
Virtualization application	Array type	Application host operating system (guest OS)	Backup host operating system	Supported components
VMware	HP P6000 *EVA Disk Array Family* [1]	Windows Server 2003 (32-bit)	Windows Server 2003 (32-bit) (Physical host only)	• Filesystem & Raw Device/volume and Application integrations listed in the *HP Data Protector 6.20 Zero Downtime Backup and Instant Recovery Support Matrix for HP P6000 EVA Disk Array Family Using SMI-S Agent*
		Windows Server 2003 (X64)	Windows Server 2003 (x64) (Physical host only)	
		Windows Server 2008 (32-bit)	Windows Server 2008 (32-bit) (Physical host only)	
		Windows Server 2008 (x64)	Windows Server 2008 (x64) (Physical host only)	
		Windows Server 2008 R2 (x64)	Windows Server 2008 R2 (x64) (Physical host only)	
		Red Hat Enterprise Linux 5.x (64-bit)(x64) [2]	Red Hat Enterprise Linux 5.x (64-bit)(x64) (Physical host only) [2]	
		SuSE Linux Enterprise Server 10 (32-bit) [2]	SuSE Linux Enterprise Server 10 (32-bit) (Physical host only) [2]	
		SuSE Linux Enterprise Server 11 (64-bit)(x64) [2]	SuSE Linux Enterprise Server 11 (64-bit)(x64) (Physical host only) [2]	
VMware	HP P9000 XP Disk Array Family[1]	Windows Server 2003 (32-bit)	Windows Server 2003 (32-bit) (VM & Physical host)	• Filesystem & Raw Device/volume • Application integrations listed in the *HP Data Protector 6.20 Zero Downtime Backup and Instant Recovery Support Matrix for HP P9000 XP Disk Array Family*
		Windows Server 2003 (X64)	Windows Server 2003 (X64) (VM & Physical host)	
		Windows Server 2008 (32-bit)	Windows Server 2008 (32-bit) (Physical host only)	
		Windows Server 2008 (x64)	Windows Server 2008 (x64) (Physical host only)	
		Windows Server 2008 R2 (x64)	Windows Server 2008 R2 (x64) (Physical host only)	
		Red Hat Enterprise Linux 5.x, 6.x[3]	Red Hat Enterprise Linux 5.x, 6.x[3] (VM & Physical host)	
Hyper-V	HP P6000 *EVA Disk Array Family*[1]	*Windows Server 2008 R2 (x64)*	Windows Server 2008 R2 (x64) (Physical host only)	• Filesystem & Raw Device/volume and • Application integrations listed in the *HP Data Protector 6.20 Zero Downtime Backup and Instant Recovery Support Matrix for HP P6000 EVA Disk Array Family Using SMI-S Agent*

[1] Only the FC Protocol and the Physical RDM configuration are supported.

[2] Support is available with the Data Protector patch bundle DPUXBDL_00621/DPSOLBDL_00621/DPLNXBDL_00621/DPWINBDL_00621 on top of Data Protector 6.20

[3] Support for RHEL 6.x is available with the SSP: SSPLNX620_016

Supported VSS configurations for virtual environments (inside virtual machines) [1]				
Virtualization application	Array type	HWP version	Application host operating system (guest OS)	Backup host operating system
VMware	HP P6000 *EVA Disk Array Family* [2]	6.0x.xx,	Windows 2008 R2 (x64)	Windows 2008 R2 (X64) (Physical host only)
VMware	HP P4000 SAN Solutions	8.1.x, 8.5.x, 9.0.x	Windows 2003 (32-bit) Windows 2003 (x64) Windows 2008 (32-bit) Windows 2008 (x64) Windows 2008 R2 (x64)	Windows 2003 (32-bit) Windows 2003 (x64) Windows 2008 (32-bit) Windows 2008 (x64) Windows 2008 R2 (x64)
VMware	HP 3PAR Storage Systems [2]	1.6.2.3	Windows 2008 R2 (x64)	Windows 2008 R2 (X64) (Physical host only)
		2.2.0.16	Windows 2008 (x64) Windows 2008 R2 (x64)	Windows 2008 (x64) Windows 2008 R2 (X64) (Physical host only)
VMware	HP P9000 XP Disk Array Family [2]	5.02.00	Windows 2003 (32-bit)	Windows 2003 (32-bit) (Physical host only)
		5.02.00	Windows 2003 (x64)	Windows 2003 (x64) (Physical host only)
		6.02.00	Windows 2008 (32-bit)	Windows 2008 (32-bit) (Physical host only)
		6.02.00	Windows 2008 (x64)	Windows 2008 (x64) (Physical host only)
		7.02.00	Windows 2008 (x64)	Windows 2008 (x64) (Physical host only)
Microsoft Hyper-V / Hyper-V R2	HP P6000 *EVA Disk Array Family* [3]	6.0x.xx	Windows Server 2008 R2 (x64)	Windows Server 2008 R2 (x64) (Physical host only)
Microsoft Hyper-V / Hyper-V R2	HP 3PAR [3] Storage Systems	1.6.2.3	Windows Server 2008 R2 (x64)	Windows Server 2008 R2 (x64) (Physical host only)
Microsoft Hyper-V / Hyper-V R2	HP P4000 SAN Solutions	9.0.x.x 9.5.x.x	Windows Server 2003 (x64) Windows 2008 (x64) Windows Server 2008 R2 (x64)	Windows Server 2003 (x64) Windows 2008 (x64) Windows Server 2008 R2 (x64)

[1] For details of supported configurations please see the *HP Data Protector 6.20 VSS Integration Support Matrix*

[2] Only the FC Protocol and the Physical RDM configuration are supported.

[3] Only the FC Protocol and the Hyper-V pass through configuration are supported.

Data Protector also supports virtualization application specific features that enable snapshots for instant recovery and disaster recovery purposes.

Virtualization application integration support		
Virtualization application	**Data Protector component**	**Supported application components**

VMware	VMware Agent	• ESX Console based snapshots
		    ○ ESX 3.0.x, 3.5, 4.0, 4.1
		• VCB (VMware Consolidated Backup)
		    ○ VCB 1.0.x, 1.1.x, 1.5.x[1]
		• VMware Virtual Center 2.0.x, 2.5.x
		• VMware vCenter Server 4.0, 4.1

VMware	Virtual Environment Agent	• VMware vCenter Server 4.0, 4.1, 5.0[3] • VMware ESX 4.0, 4.1 • VMware ESXi 4.0, 4.1, 5.0[3] • VMware Virtual RDM 4.0, 4.1, 5.0[3]
VMware	Media Agent	• ESX 3.0.x, 3.5, 4.0, 4.1
VMware	Disk Agent	• ESX 3.0.x, 3.5, 4.0[2], 4.1[2] • ESXi[4] 5.0, 5.1
VMware	VSS_BAR Agent (MS SQL Server 2008 R2 x64)	• ESXi[4] 5.0, 5.1
Citrix XenServer	Scripts based on Disk Agent	• Virtual Machine snapshots ○ XenServer 5.0, 5.5, 5.6, 6.0
Microsoft Virtual server	MS Volume Shadow Copy Integration	• VSS based snapshots of VMs
Microsoft Hyper-V / Hyper-V R2	MS Volume Shadow Copy Integration	• VSS based snapshots of VMs
Microsoft Hyper-V / Hyper-V R2	Virtual Environment Agent	• VSS based snapshots of VMs (cluster aware)

[1]   LAN based VCB image and VCB file backup is not supported. VCB framework does not support IPv6.

[2]   With Disk Agent, the mount point /vmfs will be backed up as an empty directory. Using Data Protector VMware (Legacy) integration agent or Virtual Environment integration agent is the appropriate way to backup virtual machines on ESX 4.x.

[3]   Support is available with the Data Protector patch bundle DPUXBDL_00621/DPSOLBDL_00621/DPLNXBDL_00621/DPWINBDL_00621 on top of Data Protector 6.20.

[4]   Data Protector agents are supported only on a guest OS and not on ESXi 5.0 itself.

Data Protector 6.20 VMware Agent and Virtual Environment Agent platform support[6]		
Data Protector component	**VMware component**	**Supported operating system**
VMware Agent	• ESX Console based snapshots	ESX 3.0.x, 3.5, 4.0, 4.1[1]
	• VMware Consolidated Backup 1.0.x, 1.1.x	Windows Server 2003 (32-bit)
	• VMware Consolidated Backup 1.5.x	Windows Server 2003 (32-bit) Windows Server 2003 (64-bit) (x64) Windows Server 2008 (32-bit) Windows Server 2008 (64-bit) (x64)
	• VMware Virtual Center 2.0.x, 2.5.x	Windows Server 2003 (32-bit)
	• VMware vCenter Server 4.0	Windows Server 2003 (32-bit) Windows Server 2003 (64-bit) (x64)
	• VMware vCenter Server 4.1	Windows Server 2008 (64-bit) (x64) Windows Server 2008 R2 (64-bit) (x64)
Virtual Environment Agent (vStorage API support for Data Protection)[2, 3]	• VMware vCenter Server 4.0, 4.1; VMware ESX 4.0, 4.1 and ESXi 4.0, 4.1	Windows Server 2003 (32-bit) Windows Server 2003 (64-bit) (x64) Windows Server 2008 (32-bit) Windows Server 2008 (64-bit) (x64) Windows Server 2008 R2 (64bit)(x64) Red Hat Enterprise Linux 5.x (64-bit)(x64) SuSE Linux Enterprise Server 11 (64-bit)(x64)
	• VMware vCenter Server 5.0[5]; VMware ESXi 5.0[5] and VMware vCenter Linux Virtual appliance[5]	Windows Server 2008 R2 (64bit)(x64) Red Hat Enterprise Linux 5.x (64-bit)(x64) SuSE Linux Enterprise Server 11 (64-bit)(x64)

[1]   ESX console based snapshots are not supported

[2]   Virtual Environment Agent does not support IPv6. The functionality is only available with native Windows graphical user interface.

[3] Raw Disk Mappings is supported with VADP based backups in virtual mode but not supported in physical mode.

[5] Support is available with the Data Protector patch bundle DPUXBDL_00621/DPSOLBDL_00621/DPLNXBDL_00621/DPWINBDL_00621 on top of Data Protector 6.20.

[6] Data Protector VMware Agent and Virtual Environment Agent can backup and restore any guest Operating System that is supported as guest Operating System by VMware.

Granular Recovery Extension for VMware vSphere [1]		
Data Protector component	VMware component	Supported operating system / version
Granular Recovery Extension for VMware vSphere	• VMware vCenter Server 4.0, 4.1	Windows Server 2003 (x64) Windows Server 2008 (x64) Windows Server 2008 R2 (x64)
	• VMware vCenter Server 5.0 [2]	Windows Server 2008 R2 (x64)
	• VMware Mount Proxy	Windows Server 2003 R2 (x64) Windows Server 2008 (x64) Windows Server 2008 R2 (x64)
	• VMware ESX Server	ESX 4.0, ESXi 4.0 ESX 4.1, ESXi 4.1 ESXi 5.0 [2]

[1] Supported backup types for GRE are
   - DP 6.2 based CBT full, incremental and differential backups
   - DP 6.2 based Snapshot Image full, incremental and differential backups.

   VCB Backups taken with DP version 6.11 and DP 6.20 VMware Legacy Agent cannot be used for GRE feature.
   All versions of Windows guest operating systems with VMware tools version 4.x or later installed are supported.
   Dynamic Disks are not supported on Windows Guest OS.

[2] Support is available with the Data Protector patch bundle DPUXBDL_00621/DPSOLBDL_00621/DPLNXBDL_00621/DPWINBDL_00621 on top of Data Protector 6.20.