Hewlett Packard Enterprise

Brochure

HPE 3PAR flash-integrated data protection

HPE Recovery Manager Central (RMC)

Protecting your business-critical applications without impacting performance is proving ever more challenging in the face of all-flash data centers, unrelenting data growth, stringent recovery service level agreements (SLAs) and increasingly virtualized Hybrid IT environments. Traditional approaches to data protection are unable to cost-effectively deliver the end-to-end protection that your applications and hypervisors demand. A faster, easier, more efficient, and reliable way to protect data is needed.

Evolving data protection architectures for business-critical applications

The pros and cons of backups and snapshots

Traditional backup	
Reliable recovery and cost-effective retention	✓
Unable to meet RPO/RTOs without application disruption	✗
Snapshots	
Fast, non-disruptive backup and recovery	✓
Retention limitations	✗
Snapshots lost if storage system fails	✗

Server-centric backup processes can impact application performance with data typically flowing through the application and backup server. Backup server infrastructures introduce escalating cost and complexity with the need to disruptively acquire and manage additional servers, software licenses, and networking equipment as application data grows.

Array-based snapshots and replication provide fast, non-disruptive point-in-time copies of your data. But snapshots alone cannot deliver comprehensive backup as they have retention limitations, and a dependence on the underlying storage system. Simply put, your snapshots will be lost if the storage system fails.

A better approach is to combine the near instant, non-intrusive availability of local and remote snapshots and replication with the reliable recovery and cost-effective retention of backups. This innovative modernized architecture is delivered with application-aware, flash-integrated data protection.

Welcome to flash-integrated data protection

Integrating primary and backup storage

Combine the best of snapshots and backups for fast, efficient, and reliable protection ✓

HPE Recovery Manager Central (RMC) software integrates **HPE 3PAR StoreServ** All Flash Arrays with **HPE StoreOnce Systems** to provide a flash-integrated snapshot, replication and backup service that augments traditional backup approaches.

Combining the performance of snapshots and replication with the protection of backups, Recovery Manager Central enables fast, efficient, reliable, and simple protection for your business-critical applications.

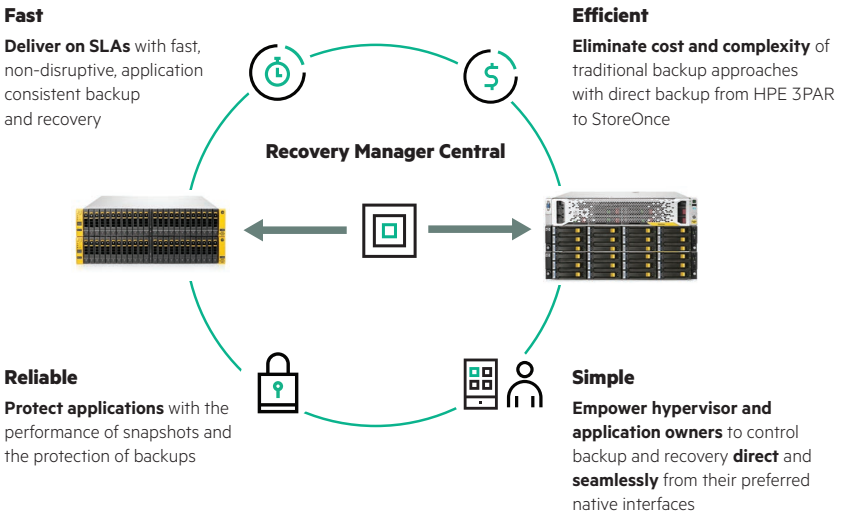

Figure 1. HPE Recovery Manager Central—Key business value

Eliminate backup windows and enable fast recovery

Do you need to deliver on stringent recovery SLAs with no performance impact on your applications? Recovery Manager Central lets you eradicate the backup window and enable rapid recovery with fast, non-disruptive, application consistent local and remote snapshots.

RMC removes the application server and backup server from the data path, thus eliminating any performance impact on the application. Scalable, non-duplicative snapshots allow administrators a greater number of backups for a frequent extended history of recovery points, offering flexibility when committing to tight recovery point objective (RPO) SLAs.

RMC leverages SnapDiff technology in HPE 3PAR StoreServ, ensuring that only changed blocks are sent to the StoreOnce Backup system. This reduces both network traffic and storage usage for lower costs. Every backup completes at the speed of an incremental but is stored as a synthetic full backup, which makes application recovery faster and more efficient.

RMC backup delivers up to 23X faster backups and up to 15X faster restores than traditional backup methods with 9X lower CPU consumption.[1]

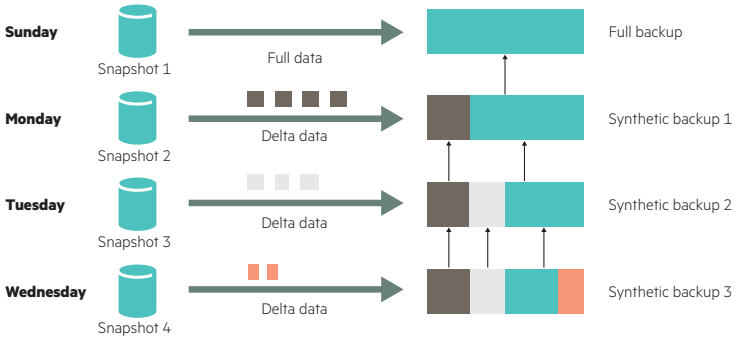

Figure 2. Incremental and synthetic full backups

Reduce cost and complexity

Are you looking to improve efficiency by reducing the cost and complexity of your backup infrastructure? The RMC Express Protect feature allows you to backup snapshots directly from HPE 3PAR StoreServ to StoreOnce.

RMC streamlines and simplifies your backup architecture by eliminating extraneous infrastructure. It requires fewer server, storage, and network resources and reduces the number of systems you need to purchase and maintain for data protection.

RMC reduces the number of snapshots required for protection. All backups are deduplicated using StoreOnce technology, thus reducing backup storage requirements by up to 20 times. This deduplicated data can be economically stored on StoreOnce for extended periods.

Figure 3. HPE StoreOnce Backup system

Reduce risk exposure

Do you want to reduce your risk exposure by ensuring the recovery of your backup data?

Recovery Manager Central offers reliable and cost-effective retention and recovery of deduplicated backups with HPE StoreOnce, a fast, scalable, and highly available backup system.

Snapshots backed up on **StoreOnce** are self-contained, fully independent volumes that can be restored back to the original or different **HPE 3PAR StoreServ** system in the event of a disaster or physical problems with the production storage environment. Backups can be copied from one StoreOnce appliance to another for disaster recovery purposes. This level of data protection cannot be achieved with snapshots alone.

[1] Based on HP (now Hewlett Packard Enterprise) testing of backup performance comparison between HPE Recovery Manager Central and traditional backup environments

Application integrated data protection

RMC reduces cost and complexity by enabling application integrated protection for VMware, Microsoft SQL, Microsoft Exchange, Oracle, SAP HANA, 3PAR File Persona and any Microsoft VSS-enabled application running as a virtual machine. VM, Oracle, SAP HANA, Exchange and SQL database admins can manage application consistent snapshots, backup, and recovery seamlessly and directly from within their preferred native interfaces.

RMC also enables crash consistent backups and snapshots to be performed on any application running on 3PAR.

An API is also provided for plug-in scripting purposes. This enables developers to integrate the snapshot management and backup benefits of 3PAR RMC with their own business applications such as SAP HANA.

Simplified data protection management is further enabled by RMC integration with 3PAR SSMC. This provides 3PAR storage admins with the ability to set up protection policies at the time of volume provisioning, enabling end-to-end cloud-ready data protection managed through one simple console.

Cloud-ready data protection for Hybrid IT

RMC support for HPE Cloud Bank Storage lets you leverage the economics, agility, and flexibility of the cloud for modernized data protection.

You can seamlessly, securely, and cost-effectively move backup data to the public, private, hybrid cloud or on-premises object storage—enabling long-term retention, archive and reliable disaster recovery that is simple and efficient.

The solution sends, stores, and retrieves only unique data for lower TCO and is highly scalable— enabling the protection and retention of more than 100 PB of backup data starting at one tenth of a cent per month.

Table 1. Supported environments

Primary storage	HPE 3PAR StoreServ 7x00 series, 8x00 series, 9x00 series, 10x00 series, 20x00 series with HPE 3PAR Operating System 3.2.1, 3.2.2 and 3.3.1
Backup system	All physical StoreOnce appliances and StoreOnce VSA with StoreOnce software version 3.13.3 & above, 3.15.1 and above, 3.16.0
Application Consistent Protection	VMware (5.5, 6.0, 6.5) and any virtualized VSS capable applications (including virtualized SQL databases)
	Non-Virtualized SQL databases (SQL 2008, 2012, 2014, and 2016) and Oracle databases (running Red Hat® Enterprise Linux® or Oracle Enterprise Linux) and SAP HANA databases (SPS 10, 11 on SUSE Linux 11 SP3 and SPS 12 on SUSE Linux 12 SP1). Microsoft Exchange 2010, 2013, 2016.
Crash Consistent Protection	Any application with any OS supported by 3PAR

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