Overview

HPE Recovery Manager Central Software

HPE Recovery Manager Central (RMC) software facilitates policy-driven, converged data protection and copy data management for your business critical applications at speeds required for all-flash storage.

RMC integrates HPE 3PAR, HPE Primera and HPE Nimble all-flash arrays with HPE StoreOnce Systems, leveraging snapshot performance with storage-integrated backups to deliver flash speed application protection and copy data management with less cost and complexity than legacy solutions. RMC is also built for cloud, allowing you to leverage public cloud for cost-effective long term retention of your backups.

What's new in RMC 6.3.0?
Support for 'Cloud Volumes Backup' which enables users to backup from on-premises Primera/3PAR/Nimble arrays to the HPE Cloud Volumes Backup Stores and restore back to same or alternative Primera/3PAR/Nimble arrays.

Key Features
- Centralized policy engine to automate copy data management and data protection, aligned with SLA requirements and business objectives.
- Create and automate application-consistent snapshots as primary line of defense against data loss or corruption risks. Supports multiple applications including VMware vSphere, Microsoft SQL Server, Oracle and SAP HANA databases. Integration with any other application can be scripted using RMC REST APIs.
- Fast and simple, application-integrated, snapshot-based backups from primary storage to protection storage for additional 'air-gapped' protection against threats such as Ransomware.
- RMC Express Protect Backups are up to 23x faster than traditional ISV-based backups. Data is moved directly from primary storage to protection storage without any intermediate server bottlenecks.
- Express Restore ensures only minimum changed blocks are read back from protection storage to deliver up to 15x faster restores than traditional ISV-based backups.
- Rapid recovery from any of the point-in-time copies: application-consistent snapshots, backups or copies on public cloud.
- Create space-efficient virtual clones from any of the point-in-time copies to be used for secondary use cases such as test/dev, analytics, reporting.
- Detailed reporting, audit logging, and e-mail notifications.
- Simple and intuitive GUI designed for storage generalists and database administrators without requiring storage specialist expertise.

Models

Description	SKU
HPE StoreOnce Recovery Manager Central Media	D4U76A
HPE Recovery Manager Central Software LTU	D4U75A
HPE Recovery Manager Central Software E-LTU	D4U75AAE
HPE Recovery Manager Central Software Suite for 3PAR StoreServ 72xx	L9Q82A
HPE Recovery Manager Central Software Suite for 3PAR StoreServ 72xx	L9Q82AAE
HPE Recovery Manager Central Software Suite for 3PAR StoreServ 74xx	L9Q83A
HPE Recovery Manager Central Software Suite for 3PAR StoreServ 74xx	L9Q83AAE
HPE Recovery Manager Central Software Suite for 3PAR StoreServ 10xxx	L9Q84A
HPE Recovery Manager Central Software Suite for 3PAR StoreServ 10xxx	L9Q84AAE

Hewlett Packard Enterprise

Standard Features

Under the Hood

RMC allows you create, schedule, recover from, and manage the following types of copies:

- **Snapshots**
  - RMC integrates with various applications to take application-consistent snapshots at any given point-in-time. RMC can take application-consistent snapshots of VMware vSphere VMs, Microsoft SQL Server, Oracle and SAP HANA databases residing on 3PAR volumes. Only Microsoft SQL Server is supported with HPE Nimble Storage at present. RMC can also take crash-consistent snapshots for any application or filesystem data on both 3PAR and Nimble Storage. Additionally, RMC REST APIs-based scripts to create crash-consistent snapshots can be combined with application quiescing scripts to ensure application-consistent snapshots for any application not mentioned above, across both 3PAR and Nimble Storage.

- **'Express Protect' Backups**
  - RMC also supports fast, efficient backups directly from 3PAR or Nimble Storage to HPE StoreOnce Backup systems using Express Protect technology. "Express Protect" Backups to StoreOnce using RMC and StoreOnce Catalyst technology are fast and efficient compared to traditional methods because RMC intelligently detects changed blocks between successive snapshots and only those blocks are moved over the wire. With average deduplication ratios of 20:1, StoreOnce ensures efficient use of backup storage space. Recovery is also fast and reliable, because all backups stored on StoreOnce are "synthetic fulls" or self-contained volumes and available for recovery instantly – back to the original or different storage array, even if the original base volume is lost.

- **RMC with Express Protect**
  Combines the simplicity and performance of array-based snapshots with the reliability and cost-effective retention of deduplicated backups to deliver a true, integrated data protection solution that goes beyond the storage array itself. Keeping your backups on a separate "air-gapped" platform such as StoreOnce ensures fault isolation from data loss risks such as ransomware attacks that array-based replication technologies are susceptible to.

- **Catalyst Copy**
  - For additional disaster recovery needs, RMC also supports automating and scheduling 'StoreOnce Catalyst Copy' which copies Express Protect Backups to one or more remote StoreOnce appliances on a second DR site.

- **Cloud Copy**
  - RMC also integrates with StoreOnce CloudBank Storage technology which allows you to automate and schedule creating a copy on a public cloud tier such as Amazon S3 or Microsoft Azure or on an on-premises object storage such as Scality. Reads and writes to and from the object storage repository are designed with efficiency to ensure you incur less charges from the cloud service provider by moving only as less data as is required without having to rehydrate the deduplicated data. RMC also integrates with Cloud Volume Backups allowing for direct backups being created from On premises Primera/Nimble/3PAR arrays to Cloud Volume Backup Store and restore back to same or alternative Primera/3PAR/Nimble arrays.

- **Clones**
  - RMC enables you to create a 3PAR R/W snapshot or a Nimble Zero Copy Clone, which facilitates creating copies of your VM or database for test/dev or other secondary data use cases without occupying any additional storage space or affecting the performance of your production copy.

Standard Features

Centralized Copy Policy Engine for Policy-Driven Automation of Copy Management

RMC facilitates automation of the lifecycle of each copy of your VM or database, by allowing you to define the frequency and retention requirement of each copy on each tier of storage (primary, secondary, cloud/DR) through centralized copy policies. This allows you to define a copy policy based on the organization's SLA requirements and business objectives that can be enforced as per each protected object's SLA needs.

For example, you could create a Gold policy that deems it necessary to retain 3 copies of your data across primary, 'air-gapped' secondary, and cloud storage tiers, each with different retention requirements. As an illustration, hourly snapshots retained for no longer than a day; daily backups retained for up to 1 week; daily copies to public cloud retained for up to 1 year. A Bronze policy might just specify taking snapshots every 24 hours, retained for a week. A critical finance database on Oracle might be mandated to be protected under the Gold policy, while a less critical HR database on SQL with lower change rates might be protected with the Bronze policy.

Management Plane

VMware administrators can access all of this functionality from within the familiar VMware vCenter management console. Oracle, SAP HANA, and MS SQL Server administrators can access all of this functionality from the user-friendly RMC GUI, which can also be launched directly from a link within the MS SQL Studio management interface.

Installation

RMC is very easy to deploy and set up using just a few simple clicks. The RMC installer can be installed on a Microsoft Windows server with a connection to a VMware ESXi host, supported primary storage arrays and StoreOnce systems. This one-time installer wizard guides the user to go through a set of pre-flight checks to evaluate environmental readiness and helps the user deploy RMC as a VMware Virtual Appliance. RMC can also be installed on a Hyper-V VM (connected over iSCSI or vFC*). In case the user does not have a StoreOnce appliance at the time of installation, the RMC installer also offers the option to install a free 1TB StoreOnce VSA for evaluation purposes to experience the benefits of Express Protect, first-hand. This trial VSA can then be upgraded to a fully working version by purchasing permanent licenses, if desired. For licensing and download instructions, please see relevant sections elsewhere in this document.

Notes:* For RMC deployment on Hyper-V VMs, the Windows Hyper-V host server must have the following security updates - KB4015217 for Windows Server 2016 and KB4015550 for Windows Server 2012 R2 - or later roll-ups installed.

Standard Features

Key features and benefits of Recovery Manager Central Software

Centralized policy-driven copy data management

Create centralized copy policies quickly and easily to govern the frequency and retention of all copies of your databases or VMs across primary, secondary and cloud storage tiers.

Drive adherence to SLA requirements and business objectives by mandating specified levels of copy policies (Eg: Gold, Silver, Bronze) to be used for certain VMs or databases.

Copy policies can be set for all supported applications across all supported storage platforms to encompass application-consistent snapshots on the primary array, backups to StoreOnce backup systems, copies on a second StoreOnce system or copies on StoreOnce CloudBank storage for DR purposes.

Drive timely expiration of the copies as much as creating them – to avoid copy sprawl.

Space-efficient storage with fast and efficient data movement across storage tiers

Snapshots on 3PAR or Nimble arrays are space-efficient, thinly provisioned, pointer-based virtual copies, occupying very little space.
Backups to StoreOnce are deduplicated inline and offer up to 20:1 deduplication ratios on average.

Backups on StoreOnce are always 'Synthetic Fulls' or self-contained volumes available for recovery instantly – back to the original or different storage array even if the original base volume is lost.

Snapshot-based backups with multi-streamed parallel ingest facilitates faster and efficient backups compared to traditional backup technologies. RMC's "Express Protect" Backups are up to 23X faster than traditional methods. Meet your backup windows more easily even for your largest data sets.

Copy backups efficiently to StoreOnce CloudBank Storage on a public cloud tier or on-premises object storage for long-term backup retention by moving only changed blocks as required thereby reducing network bandwidth requirements.

Fast and efficient recovery ("Express Restore" – up to 15X faster than traditional methods) by moving only changed blocks as necessary – ensures you recover from data loss quickly and don't end up paying heavily for data egress charges from public cloud tiers.

Protect against ransomware and unlock secondary data use cases without affecting production

RMC Backups to StoreOnce are always written using the StoreOnce Catalyst protocol which make it immutable and therefore when it comes to ransomware protection, make it safer than replication technologies, which easily mirror the security threat or corruption on the remote array.

Storage-integrated data protection ensures there is no impact to production applications due to the backup workload. Data is moved directly from primary storage to protection storage without having to be read and written by a separate backup server.
Spin up mock environments of your application for test/dev use cases by creating space-efficient clones of your database or VM. Virtual clones based on 3PAR R/W snapshots or Nimble Zero copy clones do not consume any additional space. Physical clones are deduplicated and stored efficiently.

Create one-off clone copies from any available point-in-time copy across primary, secondary, and cloud storage tiers.
Derive more value out of your secondary copies for use cases such as reporting, analytics, etc., or carry out granular recovery without affecting your production environment by 'mounting' the backup copy as if it were a snapshot on primary storage ("Element Recovery Technology - ERT").

Standard Features

Deployment simplicity and ease of use
Get set up and running in a matter of minutes without requiring professional services. The RMC installer wizard is provided with pre-flight checks to reduce the probability of non-product issues in your storage environment unnecessarily delaying your installation.
The new, simplified RMC GUI and dashboard is built to ensure even storage generalists and database administrators can intuitively carry out all functions and monitor progress. Storage specialists are not required to operate RMC.

VMware administrators can continue using the familiar vCenter Management console for carrying out all RMC operations including snapshot management, backup and recovery or cloning, without requiring to depend on storage or backup administrators.

API-driven architecture
All RMC operations can be orchestrated and automated via REST APIs.
Customize data protection and copy data management for any application - not just the ones officially supported by RMC - by combining application-specific scripts (to quiesce the application I/O) with RMC REST APIs
http://www.hpe.com/storage/rmc-sdk to automate management of snapshots, backups, and copies.

Reduce Total Cost of Ownership (TCO)
Using RMC allows you to create as less copies as is required, keep as less copies as required, make sure that the copies consume as less space as required and consume as less bandwidth as required while moving the copies around primary, secondary or cloud tiers – overall enabling you to lower your total cost of ownership and derive more value out of your secondary storage investments.

Service and Support

Deploy and Integrate
Implement HPE Recovery Manager Central Software correctly-right from the start-so you can count on reduced risk and accelerated deployment, while implementing a best-practice configuration from day one. Then move on to proactively leverage products, tools, and technology to avoid problems and optimize performance. In this way, you get the most out of your HPE Recovery Manager Central Software investment, as you keep your staff certified through project-based or residency services.

Service and Support

Services to accelerate time to results
HPE Pointnext brings you a rich portfolio of Advisory, Professional services and Operational support services designed to add value to our core storage products and solutions. We have the know-how and experience to put storage technology to work for you. We work closely with you as your strategic partner, leveraging our full services portfolio to make sure that everything works to optimize your enterprise.
Choose from services aligned to our storage product offerings and lifecycle. From mission-critical onsite services to innovative web-based remote support, you choose the precise level of attention and support your business demands.

Operate and support

Choose the right support to maximize uptime, free up your resources, and achieve improved value-as you get the most out of the existing IT assets while accelerating time-to-revenue.

HPE Foundation Care
System-level IT hardware and software support delivers flexible coverage window and response time, for more choice and simplicity. **http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-8876ENW.pdf**

HPE Proactive Care
Combined reactive and proactive services provide easy-to-purchase, cost-efficient system-level support coupled with personalized expert advice and products connected to Hewlett Packard Enterprise to help prevent problems and reduce downtime.
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf

HPE Proactive Care Advanced
Builds and incorporates on Proactive Care and also gives customers personalized technical and operational advice from an Assigned, local Account Support Manager for personalized technical collaboration, flexible access to specialist skills to help optimize business critical IT, and Enhanced Critical Incident Management to help so the business is not affected if there is a system or device outage.
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA5-3259ENW.pdf

HPE Datacenter Care
Get the support you need to deploy, operate, and evolve your data center environment to be hybrid-cloud ready with single-point-of-accountability for Hewlett Packard Enterprise and others' product.
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-0459ENW.pdf

HPE Education Services
Comprehensive training for new, as well as experienced, storage administrators designed to expand your skills and keep you up to speed with the latest storage and virtualization technology from HPE Storage.
https://www.hpe.com/us/en/services/it-education-training

Service and Support

Get connected and get back to business
HPE Storage Technology Services provide the path to get your HPE Storage solutions and your business connected to Hewlett Packard Enterprise. Once connected, our experts are able to scan your system and run health checks, then use that data to create personalized reports and recommendations for actions to take to prevent problems and downtime.

HPE Storage Services
https://www.hpe.com/us/en/services/it-support.html
To learn more on HPE Storage Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner

For more information
HPE Pointnext Support Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:
- Services for customers purchasing from Hewlett Packard Enterprise or an enterprise reseller are quoted using Hewlett Packard Enterprise order configuration tools.
- Customers purchasing from a commercial reseller can find HPE Pointnext operational services at:
  https://findapartner.hpe.com/

Parts and Materials
Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

Configuration Information

Description	SKU
HPE StoreOnce Recovery Manager Central Media	D4U76A

DVD containing RMC software
Includes:

- DVD containing RMC software

HPE StoreOnce Recovery Manager Central LTU	D4U75A

This LTU allows crash-consistent snapshots (or application-consistent snapshots if scripted separately and used alongside the RMC APIs) of any application data on HPE 3PAR StoreServ 7000/10000 models.
Includes:

- HPE Recovery Manager Central Software LTU
- Paper delivery of license key entitlement

HPE StoreOnce Recovery Manager Central E-LTU	D4U75AAE

This E-LTU allows crash-consistent snapshots (or application-consistent snapshots if scripted separately and used alongside the RMC APIs) of any application data on HPE 3PAR StoreServ 7000/10000 models.
Includes:

- HPE Recovery Manager Central Software E-LTU
- Electronic (email) delivery of license key entitlement

HPE Recovery Manager Central Application Suite for 3PAR StoreServ 72/82xx LTU	L9Q82A

This LTU is an array-specific, application-specific license for taking application-consistent snapshots of all supported applications on HPE 3PAR StoreServ 7200
Includes:

- HPE Recovery Manager Central Software Suite for 3PAR StoreServ 72xx LTU
- Paper delivery of license key entitlement

HPE Recovery Manager Central Application Suite for 3PAR StoreServ 72/82xx E-LTU	L9Q82AAE

This E-LTU is an array-specific, application-specific license for taking application-consistent snapshots of all supported applications on HPE 3PAR StoreServ 7200
Includes:

- HPE Recovery Manager Central Software Suite for 3PAR StoreServ 72xx E-LTU
- Link to download from Software Depot
- Electronic (email) delivery of license key entitlement.

HPE Recovery Manager Central Application Suite for 3PAR StoreServ 74/84xx LTU	L9Q83A

This LTU is an array-specific, application-specific license for taking application-consistent snapshots of all supported applications on HPE 3PAR StoreServ 7400
Includes:

- HPE Recovery Manager Central Software Suite for 3PAR StoreServ 74xx LTU
- Paper delivery of license key entitlement

HPE Recovery Manager Central Application Suite for 3PAR StoreServ 74/84xx E-LTU	L9Q83AAE

This E-LTU is an array-specific, application-specific license for taking application-consistent snapshots of all supported applications on HPE 3PAR StoreServ 7400
Includes:

- HPE Recovery Manager Central Software Suite for 3PAR StoreServ 74xx E-LTU
- Link to download from Software Depot
- Electronic (email) delivery of license key entitlement.

HPE Recovery Manager Central Application Suite for 3PAR StoreServ 10/20xxx LTU	L9Q84A

This LTU is an array-specific, application-specific license for taking application-consistent snapshots of all supported applications on HPE 3PAR StoreServ 10000
Includes:

- HPE Recovery Manager Central Software Suite for 3PAR StoreServ 10xxx LTU
- Paper delivery of license key entitlement

Configuration Information

Description	SKU
HPE Recovery Manager Central Application Suite for 3PAR StoreServ 10/20xxx E-LTU	L9Q84AAE

This E-LTU is an array-specific, application-specific license for taking application-consistent snapshots of all supported applications on HPE 3PAR StoreServ 10000

Includes:
- HPE Recovery Manager Central Software Suite for 3PAR StoreServ 10xxx E-LTU
- Link to download from Software Depot
- Electronic (email) delivery of license key entitlement

Notes: None of the license SKUs include RMC media which is available as a separate SKU. (D4U76A: HPE Recovery Manager Central Software Media)

Licensing*

Snapshot Management on HPE 3PAR StoreServ Storage arrays
- All requisite RMC licenses are included by default as part of the 3PAR, Primera and Nimble Storage arrays.
- In other words, the RMC-based snapshot management functionality is available to all 3PAR, Primera and Nimble customers for no additional cost to, without any additional licensing requirements.
- For more information please refer to www.hpe.com/storage/rmc-license

Notes: *A HPE 3PAR Virtual Lock license is not mandatory, but can be used optionally for enforcing data retention. During the user-specified retention period, volumes and copies can be read but are protected against deletion, even by an administrator with the highest level user privileges.
- Existing customers of HPE 3PAR Recovery Manager for VMware (RM-V) do not need any additional license to upgrade to RMC. The same RM- V license will continue to work with RMC-V and any pending tenure of support services will automatically transition over to the upgraded software.
- Existing customers of HPE 3PAR Recovery Manager for SQL (RM-S) software do not need any additional license to upgrade to RMC. The same RM-S license will continue to work with RMC-S and any pending tenure of support services will automatically transition over to the upgraded software.
- Existing customers of HPE 3PAR Recovery Manager for Oracle (RM-O) software do not need any additional license to upgrade to RMC. The same RM-O license will continue to work with RMC-O and any pending tenure of Support services will automatically transition over to the upgraded software.

Backup Management on HPE StoreOnce Systems (Express Protect)
- To unlock the Express Protect feature to carry out direct backups from supported storage arrays to HPE StoreOnce Backup systems using RMC, the only license required is a HPE StoreOnce Catalyst license.
- The StoreOnce Catalyst license is included by default with the latest Gen4 StoreOnce appliances.
- For earlier models: This license needs to be installed on the HPE StoreOnce Backup system. One instance of this license is required per HPE StoreOnce appliance.

Please refer to the **HPE StoreOnce QuickSpecs** for obtaining a StoreOnce Catalyst license

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Obtaining RMC software for Evaluation Purposes
- If your primary storage system is not already licensed for RMC, please contact a HPE representative and request a Not-for-Resale (NFR) license for a RMC Suite license.
- The NFR process provides you a temporary RMC license (valid for 180 days) as well as access to the RMC software.

Configuration Information

Instructions for Electronic Download

- Check for compatibility of the RMC software with your current environment from SPOCK (Single Point of Connectivity Knowledge for HPE Storage Products) at **https://www.hpe.com/Storage/Spock/**
- Go to **http://www.hpe.com/downloads/software** and login with your HPE Passport User ID and Password.
- A valid HPE software support contract is required in order to access the RMC software from this location.
- If you already have an appropriate Service Agreement ID (SAID), please enter it in the box "Directly enter an SAID" and click on "View available products."
- In the next page, navigate as follows to access the RMC software for download: HPE Storage → Storage Software → RMC.
- SAIDs associated with purchase of the following SKUs are considered valid for downloading RMC:
  - HPE 3PAR StoreServ 8000/20000 base SKUs purchased on or after 13 Feb 2017 (with RMC licenses included as part of 3PAR all-inclusive single-system licensing)
  - Any RMC SKUs purchased at any time
  - SKUs purchased for:
    - o 3PAR Application Suite for VMware (3PAR Recovery Manager for VMware)
    - o 3PAR Application Suite for MS SQL (3PAR Recovery Manager for MS SQL)
    - o 3PAR Application Suite for Oracle (3PAR Recovery Manager for Oracle)
- If you have a valid SAID, but you are still unable to access the RMC software, make sure you have linked the SAID to your HPE Passport profile.
- If you do not have a valid SAID, you will be unable to access the RMC software unless you purchase a new support contract with HPE.

HPE Recovery Manager Central Software (RMC) Software Installation and Startup Service

Provides deployment of HPE RMC software with features designed to help enable proper installation in the customer's storage environment and increase the benefit from the storage investment.
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4aa5-6254ENW.pdf

Description	SKU
HPE RMC Startup SVC	HA124A1#5WD

- **U7PE6E** HPE Recovery MHPE Recovery Manager Central Installation and Startup ServicenHPE Recovery Manager Central Installation and Startup Serviceger CentrHPE Recovery Manager Central Installation and Startup Servicel InstHPE Recovery Manager Central Installation and Startup ServicellHPE Recovery Manager Central Installation and Startup Servicetion HPE Recovery Manager Central Installation and Startup Servicend StHPE Recovery Manager Central Installation and Startup Servicertup Service.

HPE RMC-VMware Startup SVC	HA124A1#5WE

- **U7PE7E** HPE Recovery MHPE Recovery Manager Central VMware for 3PAR Installation and Startup ServicenHPE Recovery Manager Central VMware for 3PAR Installation and Startup Serviceger CentrHPE Recovery Manager Central VMware for 3PAR Installation and Startup Servicel VMwHPE Recovery Manager Central VMware for 3PAR Installation and Startup Servicere for 3PAR InstHPE Recovery Manager Central VMware for 3PAR Installation and Startup ServicellHPE Recovery Manager Central VMware for 3PAR Installation and Startup Servicetion HPE Recovery Manager Central VMware for 3PAR Installation and Startup Servicend StHPE Recovery Manager Central VMware for 3PAR Installation and Startup Servicertup Service.

HPE RMC-SQL for Nimble and 3PAR Startup SVC	HA124A1#5ZB

- **U7VG3E** HPE Recovery MHPE Recovery Manager Central SQL Startup ServicenHPE Recovery Manager Central SQL Startup Serviceger CentrHPE Recovery Manager Central SQL Startup Servicel SQL StHPE Recovery Manager Central SQL Startup Servicertup Service.

Configuration Information

Description	SKU
HPE RMC-Oracle for 3PAR Startup SVC	HA124A1#5ZG

- **U7VG6E** HPE Recovery MHPE Recovery Manager Central Oracle for 3PAR Installation and Startup ServicenHPE Recovery Manager Central Oracle for 3PAR Installation and Startup Serviceger CentrHPE Recovery Manager Central Oracle for 3PAR Installation and Startup Servicel OrHPE Recovery Manager Central Oracle for 3PAR Installation and Startup Servicecle for 3PAR InstHPE Recovery Manager Central Oracle for 3PAR Installation and Startup ServicellHPE Recovery Manager Central Oracle for 3PAR Installation and Startup Servicetion HPE Recovery Manager Central Oracle for 3PAR Installation and Startup Servicend StHPE Recovery Manager Central Oracle for 3PAR Installation and Startup Servicertup Service.

HPE RMC-SAPHANA singleN for 3PAR Startup SVC	HA124A1#5F0

- **H2UT0E** HPE Recovery MHPE Recovery Manager Central SAP HANA single node for 3PAR Startup ServicenHPE Recovery Manager Central SAP HANA single node for 3PAR Startup Serviceger CentrHPE Recovery Manager Central SAP HANA single node for 3PAR Startup Servicel SAP HANA single node for 3PAR StHPE Recovery Manager Central SAP HANA single node for 3PAR Startup Servicertup Service.

HPE RMC-SAPHANA multiN for 3PAR Startup SVC	HA124A1#5FN

- **H6KY5E** HPE Recovery MHPE Recovery Manager Central SAP HANA multi node for 3PAR Startup ServicenHPE Recovery Manager Central SAP HANA multi node for 3PAR Startup Serviceger CentrHPE Recovery Manager Central SAP HANA multi node for 3PAR Startup Servicel SAP HANA multi node for 3PAR StHPE Recovery Manager Central SAP HANA multi node for 3PAR Startup Servicertup Service

HPE-RMC-Exchange for 3PAR Startup SVC	HA124A1#5SD

- **U7VG2E** HPE Recovery MHPE Recovery Manager Central Exchange for 3PAR Startup ServicenHPE Recovery Manager Central Exchange for 3PAR Startup Serviceger CentrHPE Recovery Manager Central Exchange for 3PAR Startup Servicel ExchHPE Recovery Manager Central Exchange for 3PAR Startup Servicenge for 3PAR StHPE Recovery Manager Central Exchange for 3PAR Startup Servicertup Service

HPE Recovery Manager Central Software (RMC) Solution for SAP HANA on 3PAR Service
Is designed to assist in achieving a higher speed and lower cost backup in comparison to traditional backup applications. **https://www.hpe.com/h20195/v2/getpdf.aspx/a00016443enw.pdf**

HPE RMC Soltn/SAP HANA on 3PAR Lvl1 SVC	H5UR7A1
HPE RMC Soltn/SAP HANA on 3PAR Lvl2 SVC	H7RF6A1
HPE RMC Soltn/SAP HANA on 3PAR Lvl3 SVC	H7RF7A1
HPE RMC Soltn/SAP HANA/3PAR Cust Sow SVC	H1WV1A1

Technical Specifications

RMC 6.3.0

RMC appliance limits with RMC as the data mover				
3PAR/Nimble support	2 vCPU/8GB vRAM (Default)	4 vCPU/ 16 GB vRAM	8 vCPU/ 32 GB vRAM	16 vCPU/ 64 GB vRAM
Max 3PAR StoreServ or Nimble Storage arrays	2	4	8	16
Snapshots support				
Max. number of crash-consistent snapshots per minute	96	160	160	160
Max. No. of Volumes per Volume Set	32	32	32	32
Express Protect Backup Support				
Max No. Volumes Backed Up In Parallel	N/A	16	32	64
Max Streams Per Volume	N/A	32	32	32
Backup / Restore Performance				
Max synthetic full speed (TB/hour) *	N/A	20	40	80
Max restore speed (TB/hour)	N/A	4	5	5
Max Concurrent Streams	N/A	64	128	256
Element Recovery Technology (ERT)				
Max No of Volumes that can be attached at a time for ERT	N/A	16	24	32
Notes: *Parallel backups targeting multiple StoreOnce may be required to achieve these max numbers. For example, 4 or more StoreOnce appliances with 20TB/hour write performance are required to achieve 80TB/hour backup performance.				

RMC appliance limits with SO as the data mover		
3PAR/Nimble support	2 vCPU/8GB vRAM (Default)	4 vCPU/ 16 GB vRAM and above configurations
Max 3PAR StoreServ or Nimble Storage arrays	2	16
Snapshots support		
Max. number of crash-consistent snapshots per minute	96	160
Max. No. of Volumes per Recovery Set	32	32
Express Protect Backup Support		
Max Volumes Backed Up In Parallel per SO	16	16
Max Streams Per Volume	32	32
Backup / Restore Performance *		
Element Recovery Technology (ERT)		
Max No of Volumes that can be attached at a time for ERT per SO	20	20
Notes:.*With HPE StoreOnce as the data mover, backup and restore performance depends on the StoreOnce configuration and not on the RMC geometry.		

Summary of Changes

Date	Version History	Action	Description of Change
17-Aug-2020	Version 24	Changed	QuickSpecs layout was updated and Branding Refresh was applied.
02-Mar-2020	Version 23	Changed	Overview and Technical Specifications sections were updated.
07-Oct-2019	Version 22	Changed	Overview and Configuration Information sections were updated.
03-Jun-2019	Version 21	Changed	Overview and Technical Specifications sections were updated.
04-Mar-2019	Version 20	Changed	Technical Specifications section was updated.
04-Feb-2019	Version 19	Changed	Overview, Configuration Information, Technical Specifications, Service and Support sections were updated.
01-Oct-2018	Version 18	Changed	Changes made to the Overview Section.
05-Feb-2018	Version 17	Changed	Overview, Features and Benefits, and Service and Support were revised.
23-Oct-2017	Version 16	Changed	Care Pack naming and Service and Support- Parts and Materials updated.
25-Sep-2017	version 15	Changed	Changes made to the Standard Features Section
11-Jul-2017	Version 14	Changed	Changes were made throughout the QuickSpecs
05-Jun-2017	Version 13	Changed	Changes were made throughout the QuickSpecs
27-Mar-2017	Version 12	Changed	Changes were made throughout the QuickSpecs
15-Aug-2016	Version 11	Changed	Changes made to reflect new features and SKUs in RMC 3.0
01-Dec-2015	Version 10	Changed	Changes made to reflect new features in RMC 2.0 and an updated service and support section
18-Sep-2015	Version 9	Changed	Changed made to the Purchasing Information, Technical Specifications and What´s New Sections.
21-Aug-2015	Version 8	Changed	Changes made to the Technical Specifications Sections.
10-Jul-2015	Version 7	Changed	Changes made to the Overview, Features and Benefits, Technical Specifications and Purchasing Information's Sections.
16-Apr-2015	Version 6	Changed	3 new SKUs added
20-Mar-2015	Version 5	Changed	Changes made to the Purchasing Information section.
30-Jan-2015	Version 4	Changed	Changes on the Technical Specifications and Features and benefits Sections
12-Dec-2014	Version 3	Changed	Changes were made throughout the QuickSpecs
05-Dec-2014	Version 2	Changed	Changed all references to StoreOnce Express Backup for StoreOnce Express Protect.
01-Dec-2014	Version 1	New	New QuickSpecs

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