What’s New in VMware vCenter™ Site Recovery Manager™ 5.8
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Introduction

VMware vCenter™ Site Recovery Manager™ is the premier tool to empower users to build, manage, and execute reliable disaster recovery plans for their virtual environment. Taking full advantage of the encapsulation and isolation of virtual machines, vCenter Site Recovery Manager enables simplified automation of disaster recovery, to help meet recovery time objectives (RTOs), reduce costs traditionally associated with business continuity plans, and achieve low-risk and predictable results for many different scenarios for recovery of a virtual environment.

vCenter Site Recovery Manager provides unique capabilities to create, maintain, and nondisruptively test disaster recovery (DR) plans without the need for manual runbooks. The ability to automate the DR planning, maintenance, and testing process enables significant operational efficiencies.

VMware has expanded the capabilities of vCenter Site Recovery Manager with the new version 5.8 release, which delivers unprecedented levels of protection and ease of use. The following are the three main areas of improvement in vCenter Site Recovery Manager 5.8:

• Disaster recovery for the software defined data center (SDDC): self-service, policy-based provisioning through integration with VMware vCloud® Automation Center™ via a new VMware vCenter Orchestrator™ plug-in
• Greatly enhanced scalability, including recovery plans scalable up to 5,000 protected virtual machines and concurrent recovery of 2,000 virtual machines
• Simplified operations, including
  – Enhanced workflows and integration with VMware vSphere® Web Client that streamline and simplify vCenter Site Recovery Manager administration
  – Subnet-level IP address mapping that dramatically reduces the time required to define and create a recovery plan
  – Faster installation and configuration through the optional use of an embedded and fully integrated database

This paper will provide an overview of all the new capabilities of vCenter Site Recovery Manager 5.8 and how they will help reduce exposure to risk and improve operational efficiencies.
Self-Service Policy-Based Provisioning

vCenter Site Recovery Manager now integrates with vCloud Automation Center via a new vCenter Orchestrator plug-in and with Virtual SAN through VMware vSphere Replication™. The combined solution delivers a self-service, policy-based approach to DR that completes the SDDC vision from an IT resiliency perspective.

The new vCenter Orchestrator plug-in enables simpler, tenant-driven provisioning of predefined DR protection tiers to new virtual machines, independently or via blueprints in vCloud Automation Center.

This makes it possible to automate the provisioning steps in vCloud Automation Center to include DR configuration. If the portal user selects, for example, a priority group, vCloud Automation Center in combination with vCenter Site Recovery Manager 5.8 and the vCenter Orchestrator plug-in will place the provisioned virtual machine on replicated storage and add it to the relevant protection group placed within the appropriate recovery plan. This reduces administrative overhead and provides a faster, more seamless experience to customers using vCloud Automation Center as their provisioning portal.
These capabilities are not limited to vCloud Automation Center. The vCenter Orchestrator plug-in enables the execution of any one or a combination of the following workflows:

- Add a folder mapping
- Add a network mapping
- Add a resource mapping
- Get data center mappings
- Get network mappings
- Get resource mappings
- Create a protection group for array-based replication (ABR)
- Create a protection group for VMware vSphere Replication™
- Get an unassigned replicated datastore
- List protection groups
- Protect all unprotected virtual machines associated with a protection group
- Protect a virtual machine
- Make virtual machine recovery settings
- Add a protection group to the recovery plan
- Get the recovery plan state
- List recovery plans

This greatly expands on the existing workflow capabilities of vCenter Orchestrator and enables administrators to more accurately and efficiently manage and maintain the recoverability of virtual machines and applications.

### Scalability and Performance

The performance and scale of vCenter Site Recovery Manager 5.8 have been significantly improved, resulting in reduced exposure to risk as well as support for even larger environments.

The two most critical changes to performance pertain to how storage APIs and storage replication adapter (SRA) commands are batched and executed. These changes result in more than a 50 percent decrease in recovery times, which greatly reduces recovery plan duration and business risk.

vCenter Site Recovery Manager 5.8 also introduced changes to the scalability limits of previous versions, offering a larger ceiling of protected systems per instance and simultaneously recoverable systems, as is detailed in Table 1. Many of these limits are not enforced, but they should be adhered to because support cannot be guaranteed if they are exceeded.

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>MAXIMUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of allowed protected virtual machines</td>
<td>5,000</td>
</tr>
<tr>
<td>Total number of virtual machines in simultaneously running recovery plans</td>
<td>2,000</td>
</tr>
<tr>
<td>Number of allowed virtual machines in a single protection group</td>
<td>500</td>
</tr>
<tr>
<td>Protection groups</td>
<td>250</td>
</tr>
<tr>
<td>Simultaneously running recovery plans</td>
<td>30</td>
</tr>
<tr>
<td>vSphere Replication protected virtual machines</td>
<td>500</td>
</tr>
</tbody>
</table>

Table 1. vCenter Site Recovery Manager 5.8 Scalability Limits
Simplified Operations

Full Integration with vSphere Web Client

Prior to vCenter Site Recovery Manager 5.8, the user interface required use of the VMware vSphere Client™. With version 5.8, VMware has completely redesigned and fully integrated the user interface with vSphere Web Client as a plug-in. This integration delivers a streamlined and more efficient administration and includes significant improvements in the ease of use and capabilities of several workflows.

Workflow improvements include the following:

- The process for mapping arrays can now be accomplished from one site rather than requiring configuration at both.
- Mapping of resource pools, folders, and networks can now be configured bidirectionally from a single site.
These changes simplify administration and reduce the time required for configuration and maintenance.

**Figure 4.** Network Mapping with reverse mapping
IP Subnet Mapping

vCenter Site Recovery Manager 5.8 provides the ability to map IP subnets using IP customization rules in addition to the existing customization of individual IP addresses. This provides the ability to map subnets—for example, 10.10.10.x to 192.168.1.x—and have vCenter Site Recovery Manager 5.8 manage the change of the network portion of the address while maintaining the host portion. It is configured as part of the network mapping process so when new virtual machines are added to an existing map, subnet mapping is applied automatically.

This greatly simplifies the configuration, administration, and ongoing maintenance of virtual machines that require IP address customization.

Embedded Database Option

To ease installation and ongoing maintenance, vCenter Site Recovery Manager 5.8 includes VMware vFabric® Postgres as an optional embedded database. The vFabric Postgres database can be installed and configured as part of the initial setup. This provides the option of eliminating external databases, which can reduce licensing costs and complexity. The vFabric Postgres database fully supports the complete range and scale of vCenter Site Recovery Manager environments.
Conclusion

VMware vCenter Site Recovery Manager 5.8 has introduced a new set of enhancements and features, ranging from a dramatic change in user interface to greatly increased scale and performance, enabling new levels of control and protection.

The following are some of the significant improvements in vCenter Site Recovery Manager 5.8:

• Complete VMware vSphere Web Client integration
• Increased scale
• Enhanced performance
• VMware vCenter Orchestrator plug-in and VMware vCloud Automation Center interoperability
• IP subnet mapping
• Embedded VMware vFabric Postgres database

These new features establish vCenter Site Recovery Manager 5.8 as the preeminent technology for protection and recovery of a virtual environment and the software defined data center (SDDC). Use of vCenter Site Recovery Manager 5.8 enables aggressive recovery time objectives through easy testing and rapid automation of recovery plans, helping users eliminate the complexity of managing disaster recovery. vCenter Site Recovery Manager removes the risk and worry from disaster recovery.

About the Author

GS Khalsa is a senior technical marketing manager in the Storage and Availability Technical Marketing group at VMware. GS’s focus is on VMware vSphere High Availability, VMware vSphere Fault Tolerance, and VMware vCenter Site Recovery Manager.

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