DELL EMC READY ARCHITECTURE FOR RED HAT CEPH STORAGE

THE SOFTWARE-DEFINED STORAGE MARKET

The worldwide software-defined storage (SDS) market will reach:

$21.26B by 2022

The worldwide SDS market will see a compound annual growth rate of 14.7% over the 2017-2022 forecast period, with revenues of $21.26 billion by 2022\(^1\).

As service providers and enterprises move to digital transformation initiatives, the key benefits that SDS provide — agility, ease of management, and lower cost — are becoming increasingly important unlike legacy storage infrastructure.

As service providers and high-end enterprises struggle with how to manage petabytes of ever-growing digital information, the adoption of cloud-like storage models is becoming more common in modern data centers.

To help adopt cloud-like storage, Dell EMC and Red Hat worked together to provide a proven reference architecture for deploying an SDS solution. The Dell EMC Ready Architecture for Red Hat Ceph Storage provides detailed technical guidance on using the best-in-class Dell EMC servers and using the best-in-class open, software-defined storage with Red Hat Ceph Storage.

Dell EMC Ready Architecture for Red Hat Ceph Storage Overview

The Dell EMC Ready Architecture for Red Hat Ceph Storage is a reference architecture design that helps service providers and high-end enterprises accelerate their software-defined storage deployment. With this reference architecture, Dell EMC delivers tested design guidance to help customers deploy Red Hat® Ceph Storage on Dell EMC infrastructure while minimizing engineering time to develop the solution by themselves.

The Dell EMC Ready Architecture for Red Hat Ceph Storage validates open standards-based Dell EMC cloud infrastructure hardware (compute, networking) and Red Hat Ceph Storage. The architecture also includes support for Dell EMC 14th generation PowerEdge servers based on Intel® Xeon® Scalable Processors.

The reference architecture is pre-validated with Red Hat Ceph Storage software. By doing this validation, the solution helps customers minimize their adoption time and reduces time to service on deploying a software-defined storage solution from Dell EMC and Red Hat.

In addition, Dell EMC Service Provider Consulting Services and Professional Services are available to help customers deploy and customize Red Hat Ceph Storage on Dell EMC infrastructure.

Key Components of the Ready Architecture

The key components tested for design guidance in the Dell EMC Ready Architecture for Red Hat Ceph Storage include:

- Dell EMC PowerEdge R640 and R740xd Servers
- Dell EMC S5248F-ON Switch
- Dell EMC S3048-ON Switch
- Red Hat Ceph Storage 3.2
- Intel 4TB, NVMe, Mixed Use Express Flash P4600
- Intel XXV710 25GbE NIC
- SSD S4600 SATA 480GB Read Intensive 6Gbps

\(^1\) IDC Worldwide Software-Defined Storage Forecast, 2018–2022, December 2018
Figure 1: Key takeaways of deploying Red Hat Ceph Storage on Dell EMC PowerEdge R740xd servers

Why Choose Dell EMC Ready Architecture for Red Hat Ceph Storage?
The Dell EMC Ready Architecture for Red Hat Ceph Storage offers several benefits to help service providers and high-end enterprises rapidly implement Dell EMC hardware and Red Hat Ceph Storage software jointly:

- **Ready-to-use solution**: The reference architecture has been fully validated, tested and documented by Dell EMC. This decreases your investment and deployment risk, and it enables faster deployment time.

- **Long lifecycle deployment**: Dell EMC PowerEdge Servers include long-life Intel® Xeon® processors which reduces your investment risk and protects your investment in the solution for the long-term.

- **World-class professional services**: The reference architecture includes Dell EMC professional services that spans consulting, deployment, and design support to guide your deployment needs.

- **Customizable solution**: The architecture is prescriptive, but it can be customized to address each customer’s unique software-defined storage requirements.

What’s new in Dell EMC Ready Architecture for Red Hat Ceph Storage?
With an ever-increasing demand for storage and a parallel need for scalability, we have designed three different architectures that deliver a price/performance ratio while assuring the best utilization of hardware. Refer to each of the individual Reference Architecture Guides for more details.

- Cost Optimized Block Storage Architecture Guide
- Performance Optimized Block Storage Architecture Guide
- Capacity Optimized Object Storage Architecture Guide

Conclusion
The Dell EMC Ready Architecture for Red Hat Ceph Storage is a proven reference architecture for software-defined storage. Pre-validated with Dell EMC infrastructure hardware and Red Hat Ceph Storage, service providers and high-end enterprises can accelerate software-defined storage deployments and reduce their deployment risk.

Dell EMC Ready Solutions for Service Providers
The Dell EMC Ready Solutions for Service Providers offer a simple and reliable path to identify and acquire tested and validated solutions aligned to service provider workloads so that you can accelerate innovation, reduce risk and lower the total cost of ownership. The Dell EMC Ready Solutions for Service Providers delivers hassle-free, confidence-inducing, packaging of best-of-breed disaggregated components to help service providers get up and running quickly.

From fully systems delivered with full lifecycle support, to reference architectures with pre-constructed templates, tools and documentation that serve as starting points for your own custom-built solutions, you can count on Dell EMC to help you deliver better outcomes. Services and support from Dell EMC and channel partners complement your resources, while agile options from Dell Financial Services remove traditional capital budget bottlenecks.