Integrated Development and Operations (DevOps) application development environments based on Container technology applicable to both IT (application) and Digital Transformation

**Container usage expected to increase by 89%**

According to a survey\(^1\) of 400 Red Hat customers around the world, container usage is expected to increase by 89% in the next two years. In addition, 57% of those surveyed saying they are using containers today and 75% expect to use containers within two years.

Companies are moving towards DevOps and container technologies to accelerate Cloud Native application construction and help with their digital transformation. Container technology simplifies, speeds up, and orchestrates application development and deployment.

Dell EMC and Red Hat help to take the guesswork and risk out of Red Hat OpenShift Container Platform deployment with a complete, infrastructure design. This enterprise-grade container environment streamlines application development, deployment, and management, allowing you to release new applications and services quickly, efficiently and at scale.

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**Dell EMC Ready Architecture for Red Hat® OpenShift® Container Platform release 3.11**

Customers who are planning to deploy Red Hat’s OpenShift Container Platform® (OCP) to implement their transition to a ‘DevOps’ (Development and Operations) model for building cloud native application that are constructed as ‘Containers’ and managed with the industry leading Kubernetes technology will want to review The Dell EMC Ready Architecture for Red Hat OCP. Dell EMC delivers tested, validated and documented design and deployment guidance to help customers rapidly implement Red Hat OCP on Dell EMC infrastructure and minimizes ‘Time to Production’.

The architecture validates two commonly used design points, both a single physical node Proof of Concept and a much larger configuration aimed at a Highly Available, high performance production environment.

By providing this design guidance and validation, the Ready Architecture helps customers minimize adoption time.

Dell EMC and Red Hat offer a proven architecture design that delivers:

- A complete OCP DevOps environment, including server platforms, storage and networking hardware and software configuration detail.
- Separation of application (workload) and infrastructure storage in preparation for future integration of Dell EMC storage technologies as the medium for application storage.
- High availability operations, persistent storage, automated processes, and scalability across compute, storage, networking and control plane axis.
- Non-virtualized, on-premise infrastructure for highly available production use.
- Accelerated delivery of both stateless and stateful, cloud-native applications.
- Enterprise-grade Kubernetes container orchestration

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1. Red Hat Global Customer Tech Outlook 2019, December 2018
Flexible Architecture
The Dell EMC Ready Architecture for Red Hat OCP provides two flexible container deployment guidance options.

1. **Proof of Concept (POC)** – This is intended as an entry point to minimize customer outlay and is a full software deployment of OpenShift on a single physical node. This implements a minimal, but still useful, hardware configuration for an end user’s POC with the option to re-use the physical hardware in the larger configuration later if the POC is successful.

2. **Full Production** – This is an enterprise grade, full High Availability (HA) production deployment using Dell EMC R640’s as the compute and infrastructure platforms and the combination of PowerEdge R740xd as storage servers and Red Hat Container Storage® as the software defined storage layer.

Full support is provided for Red Hat and other Open Source lifecycle management, logging and monitoring tools, ensuring that there is no ‘lock in’. In addition, persistent storage required by enterprise applications will be supported in the future on a growing choice of Dell EMC storage technologies.

Figure 1: Dell EMC Ready Architecture for Red Hat OCP helps you deploy an on-premise container-based DevOps application environment faster.

**Why Choose Dell EMC Ready Architecture for Red Hat OpenShift?**

The Dell EMC Ready Architecture for Red Hat OpenShift offers several benefits:

- **World-class infrastructure** – The architecture provides industry-leading hardware to enhance the ready architecture for Red Hat OCP.
- **Confidence** – Dell EMC ensures a correct deployment provided by the inclusion of a full Open Source validation suite in the Ready Architecture.
- **Fast Time to Service** – The architecture provides the capability to rapidly deploy and transition between POC and production deployment options to enter production faster.
- **Customizable solution** – The architecture is prescriptive, but it can be customized to address each customer’s unique container deployment requirements.

**Conclusion**

Container technologies can help your organization support modern digital business requirements. Together, Dell EMC and Red Hat offer a validated infrastructure design solution that speeds implementation of an enterprise-grade DevOps container environment that lets you focus on developing innovative applications to deliver business value.

Find more information at [dell.emc.com/openshift](http://dell.emc.com/openshift).