DaaS Team POC Plan

v1.0 4/10/18

Introduction:

DaaS team is currently exploring a use-case utilizing DC/OS as the platform for their on-premises datacenters. The team is looking to improve the time-to-deploy of existing and new project resources. Initial POC will focus on the traditional database use-case, with expansion potential into distributed database systems as well as other services in future phases.

WHO - Who will be performing the DC/OS Evaluation?

Mesosphere	DaaS Team
Account Executive: Dean Zumach Solutions Engineer: Alex Ly, Corbin Pacheco Mesosphere Tech Support as Needed	Hung Ly Upender Reddy Gone Pundalika Pawar Aditya Issa Nitin Jain Vivekanandraj N

Areas of Interest:

Use Case	Description	Success Criteria	References	Weighting
Fast Failover	Platform should be resilient to failure and have self-healing capabilities in place to ensure availability in failover scenarios	Ability to recover datacenter workloads from failures such as application failure or node failure while still providing data resiliency. Demonstrate the ability of a live	DC/OS - Deploying Services and Pods	✔

		database failover scenario on the DaaS team cluster.		
LDAP/SAML Integration	Solution should integrate with existing Active Directory for simplified user and group management with centralized authentication	Display successful integration of DC/OS to existing Active Directory Ability to add local users and segregate them by group Permissions test on AD users with RBAC controls	DC/OS - Directory Based Authentication via LDAP	✔
RBAC	Solution should be able to provide User and Group Access Controls.	Non authenticated users will be denied access to the GUI, Command Line Interface and the REST APIs. Authenticated users and groups will not have permissions to view, modify and execute other groups' services and applications (via Marathon application groups). For instance, Group A can't start, stop, etc. Group B's services and vice versa.	Managing Users and Groups in DC/OS Granting Access to the GUI Permissions Reference	
Data Encryption	Solution should be able to provide data encryption at rest	Demonstrate that if data is 'stolen' it would be useless due to encryption	Run Portworx with Mesosphere DC/OS	
Storage	Solution should have the ability to Mount external persistent storage	Set up and test Portworx + DC/OS Review using the	Run Portworx with Mesosphere DC/OS External Persistent	✔

	on the DC/OS cluster to support stateful services.	NetApp docker plugin to provide external persistent storage as an alternative solution to Portworx	Storage with DC/OS	
Secrets Management	Solution should have the ability to mask, protect, and inject secrets where necessary	Walk through workflow of Secrets Management Complete exercises to familiarize with how secrets can be utilized within DC/OS	DC/OS Secrets	
Disaster Recovery / Business Continuity	Partnered with Portworx, DC/OS has the ability to manage traditional database disaster recovery solutions	Set up DC/OS + Portworx and tune to expected disaster recovery SLA	DC/OS Backup and Restore	
Performance Testing	Solution should be able to deliver performance expected to complete the project tasks	Set up and tune DC/OS + Portworx to achieve expected SLA performance	DC/OS Performance Monitoring	
Upgrade	Roling upgrade of DC/OS with no downtime	Upgrade from 1.10.3 cluster → 1.11	Upgrading DC/OS	

Other Notes to Consider:

- Initial focus is on proving out the Traditional database use-case, however in future phases we can take this deployment platform to other data services frameworks as well as Kubernetes

Number of Servers (Mesosphere recommends at least 3 masters and 5 agent nodes and 2 public agent nodes running RHEL 7, CentOS 7 or CoreOS):
Production:

- Operating System: RHEL
- # of Master Nodes: 3

- # of Public Agent Nodes: 1
- # of Private Agent Nodes: 10

Mirrored DR Sites in Reno and North Carolina

- Operating System: RHEL
- # of Master Nodes: 3
- # of Public Agent Nodes: 1
- # of Private Agent Nodes: 10

Location of Servers (data center location or public cloud vendor location):
Production deployment:

- On premises
- Locations: United States

Location of Customer Personnel:

- Sunnyvale, CA

Location of Mesosphere Personnel:

- Dean Zumach - San Francisco, CA
- Alex Ly - San Francisco, CA
- Corbin Pacheco - San Francisco, CA
- Mesosphere Tech Support Personnel - San Francisco, CA and Hamburg, Germany

WHEN - Evaluation Start and End Dates:

Planned Start Date: December 2017
Planned Finish Date: Target end in May 2018

Planned Evaluation Results Briefing Date:

- April/May - Presentation to Management

Would like to go into production by: Q3/Q4 2018

Communication Cadence:

- 30 minutes once a week - Schedule TBD in following weeks
- Open Slack channel for direct communication