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Software Defined Data Center (SDDC) Definition

A White Paper from the OSDDC Incubator

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Foreword

This white paper was prepared by the Open Software Defined Data Center (OSDDC) Incubator.

The goal of the OSDDC Incubator is to develop SDDC use cases, reference architectures and requirements based on real world customer requirements. Based on these inputs the Incubator will develop a set of whitepapers and set of recommendations for industry standardization for the SDDC.

The work coming out of this incubator will result in:

1. A clear definition and scope of the SDDC concept.
2. New work items to existing chartered working groups.
3. Expanded scope to existing chartered groups
4. Creation of new working groups if needed.

DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems management and interoperability. For information about the DMTF, see http://www.dmtf.org.

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Software Defined Data Center Definition

1 Executive summary

1.1 Summary

The Software Defined Data Center (SDDC) is an emerging area of technology that could revolutionize IT infrastructure over the next several years. New technologies such as Software Defined Networks and Storage have begun appearing on the market. While there are many management standards for physical, virtual and cloud-based systems there are currently no standard architectures or standard definitions to describe SDDC.

According to Forrester:

“At the core of the software-defined datacenter is an abstracted and pooled set of shared resources. But the secret sauce is in the automation that slices up and allocates those shared resources on-demand, without manual tinkering.”

Customers benefit most when unconstrained and open approaches to APIs and formats enable market choice and product interoperability. Customers should be allowed to choose the technologies that work best, in terms of value-add, efficiency, and robustness. To achieve this in the next generation of IT, it is important that we work together today to develop a common understand of this breeding ground of new architectural models and look for ways to provide customer interoperability goals through best practices and standards. The SDDC will meet these future requirements.

1.2 SDDC definition

Software Defined Data Center (SDDC): a pool of compute, network, storage and other resources that can be dynamically discovered, provisioned and configured based on workloads.

SDDC provides a programmatic abstraction that enables policy-driven orchestration of workloads as well as measurement and management of resources consumed.

SDDC is comprised of a set of features that include:

a. A pool of compute, network, storage and other resources
b. Discovery of resource capabilities
c. Automated provisioning of logical resources based on workload requirements
d. Measurement and management and of resources consumed
e. Policy-driven orchestration of resources to meet SLOs of the workloads

Bibliography

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