

# DELL EMC CLOUD FOR AZURE STACK

Dell EMC Cloud for Microsoft Azure Stack powered by Dell EMC hyper-converged infrastructure

## Overview

Dell EMC Cloud for Microsoft Azure Stack is a fully engineered hybrid cloud platform that is built on Dell EMC hyper-converged infrastructure powered by 14th generation PowerEdge servers. Leveraging Microsoft Windows 2016 software defined storage and networking capabilities, built with unparalleled Dell EMC hyper-converged infrastructure, and managed via the Microsoft Azure Stack interface, the Dell EMC Cloud for Azure Stack provides customers with a familiar Azure experience, whether in the cloud or on premises.

This architecture consists of common modular building blocks that scale linearly from 4 to 16 nodes in a scale unit (SU). Cloud for Microsoft Azure Stack provides a simple, cost-effective solution that delivers multiple performance and capacity options to match any use case and covers a wide variety of cloud-native applications and workloads.

Based on Microsoft Azure Stack software and incorporating Intel Xeon Gold and Platinum processors, the Dell EMC solution enables customers to start small and grow, scaling capacity and performance easily with minimal disruption. Scaling in predictable units ensures a “pay-as-you-grow” approach for future growth.

BASE SYSTEM CONFIGURATIONS FOR Dell EMC Cloud for Microsoft Azure Stack	
Components	Configuration
Compute	<u>HYBRID:</u> Compute nodes based on Dell EMC PowerEdge R740XD Servers Hardware Lifecycle Host – Dell EMC PowerEdge R640 Server
	<u>ALL FLASH:</u> Compute nodes based on Dell EMC PowerEdge R640 Servers Hardware Lifecycle Host – Dell EMC PowerEdge R640 Server
Storage	Hybrid internal storage (SSD Cache/HDD Capacity) All flash internal storage (SSD)
Networking	<u>HYBRID:</u> Integrated Top-of-Rack (ToR): 2x Dell Networking S4048-ON switch (10GbE) Integrated network management: Dell Networking S3048-ON (1GbE)
	<u>ALL FLASH:</u> Integrated Top-of-Rack (ToR): 2x Dell Networking S5048-ON switch (25GbE) Integrated network management: Dell Networking S3048-ON (1GbE)
Rack	Dell EMC Titan 40U storage rack Dimensions: Overall Rack width: 24.00+/-0.060 inches (609.6mm+/-1.52) External Rack depth: 39.37 inches (1,000.0mm) from the front filler panel or DEVICE bezel to the back surface of the rear door. 41.50 inches (1,054.0mm) from the front door (Optional) to the back surface of the rear door. (based on configuration).
Boot	RAID 1 Mirrored 480GB M.2 SATA SSD

## Configuration Options

### Standard Balanced Configuration Options

Configuration	Processor	Memory	Cache	Data storage
<b>Low</b>	Gold 5118 12 cores, 2.3 GHz	384 GB	6 x 960/800 GB SSD = approx. 5.7 TB SAS	10 x 4 TB (40 TB) SAS
<b>Mid</b>	Gold 6130 16 cores, 2.1 GHz	576 GB	6 x 1.92 TB (11.5 TB) SAS	10 x 8 TB (80 TB) SAS
<b>High</b>	Platinum 8160 24 cores, 2.1 GHz	768 GB	6 x 1.92 TB (11.5 TB) SAS	10 x 10 TB (100 TB) SAS

### Standard All-Flash Configuration Options

Configuration	Processor	Memory	SSD capacity
<b>Low</b>	2x Gold 5118 12 cores, 2.3 GHz	384 GB	10 x 1.92 TB (19.2 TB)
<b>High</b>	2x Gold 6130 16 cores, 2.1 GHz	768 GB	10 x 3.84 TB (38.4 TB)

### Flexible Configuration Options

Configuration	Processor	Memory	Data storage
<b>Flex 1</b>	Gold 5118 12 cores, 2.3 GHz	384 GB	10 x 8 TB (80 TB) SAS 10 x 10 TB (100 TB) SAS
		576 GB	10 x 4 TB (40 TB) SAS 10 x 8 TB (80 TB) SAS 10 x 10 TB (100 TB) SAS
<b>Flex 2</b>	Gold 6130 16 cores, 2.1 GHz	384 GB	10 x 4 TB (40 TB) SAS 10 x 8 TB (80 TB) SAS 10 x 10 TB (100 TB) SAS
		576 GB	10 x 4 TB (40 TB) SAS 10 x 10 TB (100 TB) SAS
		768 GB	10 x 4 TB (40 TB) SAS 10 x 8 TB (80 TB) SAS 10 x 10 TB (100 TB) SAS
<b>Flex 3</b>	Gold 6148 20 Cores, 2.4 GHz	576 GB	10 x 4 TB (40 TB) SAS 10 x 8 TB (80 TB) SAS 10 x 10 TB (100 TB) SAS
		768 GB	10 x 4 TB (40 TB) SAS 10 x 8 TB (80 TB) SAS 10 x 10 TB (100 TB) SAS
<b>Flex 4</b>	Platinum 8160 24 cores, 2.1 GHz	768 GB	10 x 4 TB (40 TB) SAS 10 x 8 TB (80 TB) SAS

# Solution-Level Power Thermal Summary

## Balanced Configuration environmental requirements

Object		4-node		8-node		12-node		16-node	
		Watts	BTU/hr	Watts	BTU/hr	Watts	BTU/hr	Watts	BTU/hr
Input power	Min	3,395	11,577	5,979	20,388	8,563	29,200	11,147	38,011
	Mid	3,691	12,586	6,571	22,407	9,451	32,228	12,331	42,049
	Max	3,927	13,391	7,043	24,017	10,159	34,642	13,275	45,268
Input current (amps)	Min	17.2		30.3		43.4		56.5	
	Mid	18.7		33.3		47.8		62.4	
	Max	19.9		35.6		51.4		67.1	
Weight (pounds)		790		1,082		1,374		1,666	

## Power Drop Requirements

Quantity of SU	Required number of drops		
	Single phase	Three-phase delta	Three-phase Y
<b>R740XD balanced</b>			
4	2	2	2
8	4	2	2
12	6	2	2
16	8	4	2
<b>R640 all flash</b>			
4	2	2	2
8	4	2	2
12	4	2	2
16	6	2	2



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