

DELL EMC CLOUD FOR AZURE STACK

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

Overview

The Cloud for Microsoft Azure Stack solution is a fully engineered hybrid cloud platform that is built on the VxRack AS hyper-converged architecture. Powered by Microsoft Windows 2016 software defined storage and networking capabilities, unparalleled Dell EMC hyper-converged infrastructure, and managed via the Microsoft Azure Stack interface, the Dell EMC Cloud for Azure Stack provides Azure customers an experience with which they are already familiar.

This architecture consists of common modular building blocks that scale linearly from 4 to 12 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 built with Intel Xeon Gold and Platinum processors, the VxRack AS architecture 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

Balanced Configuration Options

Configuration	Processor	Memory	Cache	Data storage
Low	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
Mid	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
High	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

All-Flash Configuration Options

Configuration	Processor	Memory	SSD capacity
Low	Gold 5118 12 cores, 2.3 GHz	384 GB	10 x 1.92 TB (192 TB)
High	Gold 6130 16 cores, 2.1 GHz	768 GB	10 x 3.4 TB (340 TB)

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	

All-flash 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	2,620	8,800	4,360	14,600	6,090	20,400	7,930	26,200
	Max	3,410	11,500	5,930	20,000	8,460	28,500	10,980	37,100
Input current (amps)	Min	13.1		21.8		30.5		39.7	
	Max	17.05		29.7		42.3		54.9	
Weight (pounds)		703		899		1,096		1,292	

Power Drop Requirements

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

* Note: 16 Node expected to be supported by Microsoft in 2018



[Learn more](#) about Dell EMC Cloud for Microsoft Azure Stack



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