ubuntu

Foundation Cloud Build Hardware Requirements

Foundation Cloud Build can be delivered in two distinct architectures: Converged and Hyperconverged. Each has differing hardware requirements.

Hyperconverged

In Foundation Cloud Hyperconverged, OpenStack services are isolated in containers and spread across physical servers such that compute services can reside on a server alongside storage and control plane services such as API servers or components such as MySQL. Infrastructure servers are required to run Canonical's automated tooling that manages the operations of the cloud.

The advantages to using a Hyperconverged architecture is that higher levels of redundancy and availability can be achieved in a cloud with fewer servers making it more efficient from a cost/performance perspective.

The requirements for a Hyperconverged Cloud Build are:

	Infrastructure		Cloud	
	Recommended	Minimum	Recommended	Minimum
# Servers	3	3	9	9
CPUs (per server)	2x Intel® Xeon® Gold 6130 Processor (2.2/3.6 GHz, 16-core) or greater	14 cores	2x Intel® Xeon® Gold 6130 Processor (2.2/3.6 GHz, 16-core) or greater	14 cores
Memory	256Gb	128Gb	512Gb	384Gb
Spinning Disks	2x 6TB LFF 7.2K 6G SATA	2x 4TB LFF 7.2K 6G SATA	8x 6TB LFF 7.2K 6G SATA	6x 4TB LFF 7.2K 6G SATA
SSD	1x 1.2TB NVMe SSD	1x 400GB PCIe SSD	1x 1.6TB NVMe SSD	1x 800GB PCIe SSD
Networking	2x 10G 2x 1G 1 x BMC	2x 10G 2x 1G 1 x BMC	4x 10G 2x 1G 1 x BMC	4x 10G 2x 1G 1x BMC

Converged

In a Converged architecture the groups of services are run on separate servers so that control plane services are not mixed with cloud services or infrastructure. The advantage to this approach is that organisations who divide operations based on service type are more easily able to divide clear responsibility for service functions.

Converged architecture also allows storage and compute services to be scaled independently although the trade off is that more hardware is required to provide the same levels of availability versus a Hyperconverged architecture.

The requirements for a Converged Cloud Build are:

	Infrastructure		Control		Compute/Storage	
	Recommended	Minimum	Recommended	Minimum	Recommended	Minimum
# Servers	3	3	6	6	6	6
CPUs (per server)	2x Intel® Xeon® Gold 6130 Processor (2.2/3.6 GHz, 16-core) or greater	14 cores	2x Intel® Xeon® Gold 6130 Processor (2.2/3.6 GHz, 16-core) or greater	14 cores	2x Intel® Xeon® Gold 6130 Processor (2.2/3.6 GHz, 16-core) or greater	14 cores
Memory	256Gb	128Gb	256Gb	128Gb	512Gb	384Gb
Spinning Disks	2x 6TB LFF 7.2K 6G SATA	2x 4TB LFF 7.2K 6G SATA	2x 6TB LFF 7.2K 6G SATA	2x 4TB LFF 7.2K 6G SATA	8x 6TB LFF 7.2K 6G SATA	6x 4TB LFF 7.2K 6G SATA
SSD	1x 1.2TB NVMe SSD	1x 400GB PCIe SSD	1x 1.2TB NVMe SSD	1x 400GB PCIe SSD	1x 1.6TB NVMe SSD	1x 800GB PCIe SSD
Networking	2x 10G 2x 1G 1 x BMC	2x 10G 2x 1G 1 x BMC	4x 10G 2x 1G 1 x BMC	4x 10G 2x 1G 1x BMC	4x 10G 2x 1G 1 x BMC	4x 10G 2x 1G 1x BMC

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