



Solution sizing

FlexPod

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Solution sizing

Storage sizing

This section describes the number of studies and the corresponding infrastructure requirements.

The storage requirements that are listed in the following table assume that existing data is 1 year's worth plus projected growth for 1 year of study in the primary system (tier 1, 2). Additional storage needs for projected growth for 3 years beyond the first 2 years are listed separately.

	Small	Medium	Large
Annual studies	<250K studies	250K–500K studies	500K–1 million studies
Tier 1 Storage			
IOPS (average)	1.5K–5K	5K–15K	15K–40K
IOPS (peak)	5K	20K	65K
Throughput	50–100MBps	50–150MBps	100–300MBps
Capacity data center 1 (1 year of old data and 1 year of new study)	70TB	140TB	260TB
Capacity data center 1 (additional need for 4 years for new study)	25TB	45TB	80TB
Capacity data center 2 (1 year of old data and 1 year of new study)	45TB	110TB	165TB
Capacity data center 2 (additional need for 4 years for new study)	25TB	45TB	80TB
Tier 2 Storage			
IOPS (average)	1K	2K	3K
Capacity data center 1	320TB	800TB	2000TB

Compute sizing

The table below lists the compute requirements for small, medium, and large medical imaging systems.

	Small	Medium	Large
Annual studies	<250K studies	250K–500K studies	500K–1 million studies
Data Center 1			
Number of VMs	21	27	35

	Small	Medium	Large
Total virtual CPU (vCPU) count	56	124	220
Total memory requirement	225GB	450GB	900GB
Physical server (blades) specs (assume 1 vCPU = 1 core)	4 x servers with 20 cores and 192GB RAM each	8 x servers with 20 cores and 128GB RAM each	14 x servers with 20 cores and 128GB RAM each
Data Center 2			
Number of VMs	15	17	22
Total vCPU count	42	72	140
Total memory requirement	179GB	243GB	513GB
Physical server (blades) specs (assume 1 vCPU = 1 core)	3 x servers with 20 cores and 168GB RAM each	6 x servers with 20 cores and 128GB RAM each	8 x servers with 24 cores and 128GB RAM each

Networking and Cisco UCS infrastructure sizing

The table below lists the networking and Cisco UCS infrastructure requirements for small, medium, and large medical imaging systems.

	Small	Medium	Large
Data Center 1			
Number of storage node ports	2 converged network adapters (CNAs); 2 FCs	2 CNAs; 2 FCs	2 CNAs; 2 FCs
IP network switch ports (Cisco Nexus 9000)	48-port switch	48-port switch	48-port switch
FC switch (Cisco MDS)	32-port switch	32-port switch	48-port switch
Cisco UCS chassis count	1 x 5108	1 x 5108	2 x 5108
Cisco UCS Fabric Interconnect	2 x 6332	2 x 6332	2 x 6332
Data Center 2			
Cisco UCS chassis count	1 x 5108	1 x 5108	1 x 5108
Cisco UCS Fabric Interconnect	2 x 6332	2 x 6332	2 x 6332
Number of storage node ports	2 CNAs; 2 FCs	2 CNAs; 2 FCs	2 CNAs; 2 FCs
IP network switch ports (Cisco Nexus 9000)	48-port switch	48-port switch	48-port switch
FC switch (Cisco MDS)	32-port switch	32-port switch	48-port switch

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