

DS 221 Assignment: Exploration of Top Supercomputers

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1. Supercomputer with highest number of cores

In all the latest 5 editions of top500.org the below supercomputer has the highest number of cores.

System Name : Sunway TaihuLight

Location : National Supercomputing Center in Wuxi, China

Number of Cores : 10,649,600

2. Network Topology of Top 20 Supercomputers

2.1. Edition: June 2022

Rank	System Name	Network Topology
1	Frontier	Dragon Fly
2	Fugaku	6D mesh/torus
3	LUMI	Dragon Fly
4	Summit	Fat Tree
5	Sierra	Fat Tree
6	Sunway TaihuLight	Fat Tree
7	Perlmutter	Dragon Fly
8	Selene	Fat Tree
9	Tianhe-2A	Fat Tree
10	Adastra	Dragon Fly
11	JUWELS Booster Module	Dragon Fly
12	HPC5	Fat Tree
13	Voyager-EUS2	Fat Tree
14	Polaris	Dragon Fly
15	SSC-21	Switched Fabric
16	Frontera	Fat Tree
17	CEA-HF	Fat Tree
18	Dammam-7	Dragon Fly
19	ABCI 2.0	Fat Tree
20	Wisteria/BDEC-01 (Odyssey)	6D mesh/torus

2.2. Edition: November 2021

Rank	System Name	Network Topology
1	Fugaku	6D mesh/torus
2	Summit	Fat Tree
3	Sierra	Fat Tree
4	Sunway TaihuLight	Fat Tree
5	Perlmutter	Dragon Fly
6	Selene	Fat Tree
7	Tianhe-2A	Fat Tree
8	JUWELS Booster Module	Dragon Fly
9	HPC5	Fat Tree
10	Voyager-EUS2	Fat Tree
11	SSC-21	Switched Fabric
12	Polaris	Dragon Fly
13	Frontera	Fat Tree
14	CEA-HF	Fat Tree
15	Dammam-7	Dragon Fly
16	ABCI 2.0	Fat Tree
17	Wisteria/BDEC-01 (Odyssey)	6D mesh/torus
18	Marconi-100	Dragon Fly
19	Chervonenkis	Switched Fabric
20	Piz Daint	Dragon Fly

2.3. Edition: June 2021

Rank	System Name	Network Topology
1	Fugaku	6D mesh/torus
2	Summit	Fat Tree
3	Sierra	Fat Tree
4	Sunway TaihuLight	Fat Tree
5	Perlmutter	Dragon Fly
6	Selene	Fat Tree
7	Tianhe-2A	Fat Tree
8	JUWELS Booster Module	Dragon Fly
9	HPC5	Fat Tree
10	Frontera	Fat Tree
11	Dammam-7	Dragon Fly
12	ABCI 2.0	Fat Tree
13	Wisteria/BDEC-01 (Odyssey)	6D mesh/torus
14	Marconi-100	Dragon Fly
15	Piz Daint	Dragon Fly
16	Trinity	Dragon Fly
17	SuperMUC-NG	Fat Tree
18	Hawk	9D-Hypercube
19	Ghawar-1	Dragon Fly
20	Lassen	Fat Tree

2.4. Edition: November 2020

Rank	System Name	Network Topology
1	Fugaku	6D mesh/torus
2	Summit	Fat Tree
3	Sierra	Fat Tree
4	Sunway TaihuLight	Fat Tree
5	Selene	Fat Tree
6	Tianhe-2A	Fat Tree
7	JUWELS Booster Module	Dragon Fly
8	HPC5	Fat Tree
9	Frontera	Fat Tree
10	Dammam-7	Dragon Fly
11	Marconi-100	Dragon Fly
12	Piz Daint	Dragon Fly
13	Trinity	Dragon Fly
14	AI Bridging Cloud Infrastructure (ABCI)	Fat Tree
15	SuperMUC-NG	Fat Tree
16	Hawk	9D-Hypercube
17	Lassen	Fat Tree
18	PANGEA III	Fat Tree
19	TOKI-SORA	Torus
20	Cori	Dragon Fly

2.5. Edition: June 2020

Rank	System Name	Network Topology
1	Fugaku	6D mesh/torus
2	Summit	Fat Tree
3	Sierra	Fat Tree
4	Sunway TaihuLight	Fat Tree
5	Tianhe-2A	Fat Tree
6	HPC5	Fat Tree
7	Selene	Fat Tree
8	Frontera	Fat Tree
9	Marconi-100	Dragon Fly
10	Piz Daint	Dragon Fly
11	Trinity	Dragon Fly
12	AI Bridging Cloud Infrastructure (ABCI)	Fat Tree
13	SuperMUC-NG	Fat Tree
14	Lassen	Fat Tree
15	PANGEA III	Fat Tree
16	Cori	Dragon Fly
17	Nurion	Fat Tree
18	Oakforest-PACS	Fat Tree
19	HPC4	Fat Tree
20	Tera-1000-2	Fat Tree