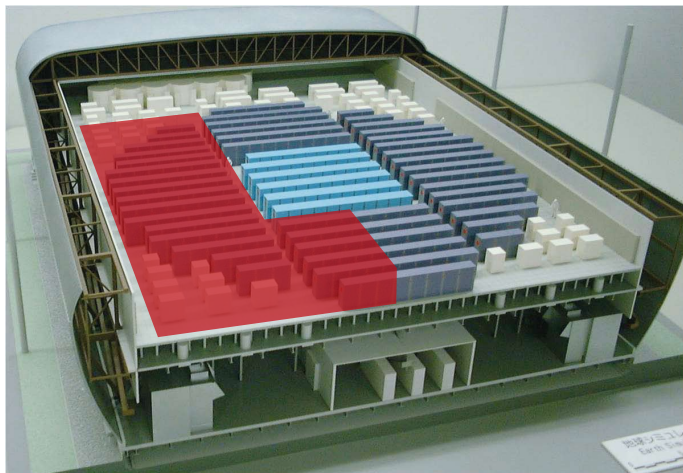
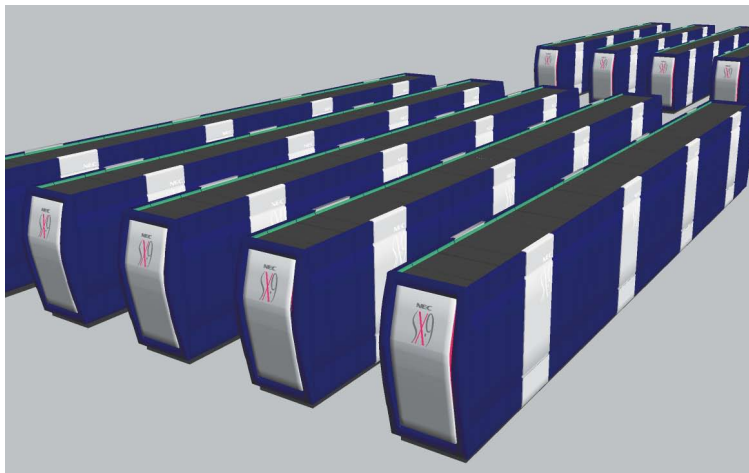


The outline of the Earth Simulator (ES2)

Super Computer System Planning and Operations Department



Establishment space of the Earth Simulator (ES2)



Establishment image of the Earth Simulator (ES2)

The Earth Simulator (ES2) system will see an upgrade of the existing Earth Simulator (ES), which has significantly contributed to the development of a simulation culture in the area of earth sciences and related technical fields, and introduce new features to deliver accurate and high-speed analysis and projections of global-scale environmental phenomena. The system will also be used to produce numerical simulations for advanced research fields that are beyond the scope of other computing systems.

Hardware specifications

		Earth Simulator	Earth Simulator (ES 2, SX-9/E)	Performance ratio
CPU	clock	1GHz	3.2GHz	3.2x
	Peak performance of each PE	8GF	102.4GF	12.8x
Node	Number of PE's for each node	8	8	1x
	Peak performance of each node	64GF	819.2GF	12.8
	Shared memory / node	16GB	128GB	8x
	Inter-node transfer speed	12.3GB/s x 2	8GB/s x 8 x 2	5.2x
System	Total number of processor nodes	640	160	1/4x
	Peak performance of system	40TF	131TF	3.2x
	Main memory	10TB	20TB	2x
	Interconnection network	Single-Stage Crossbar Network	Fat-tree Network	—

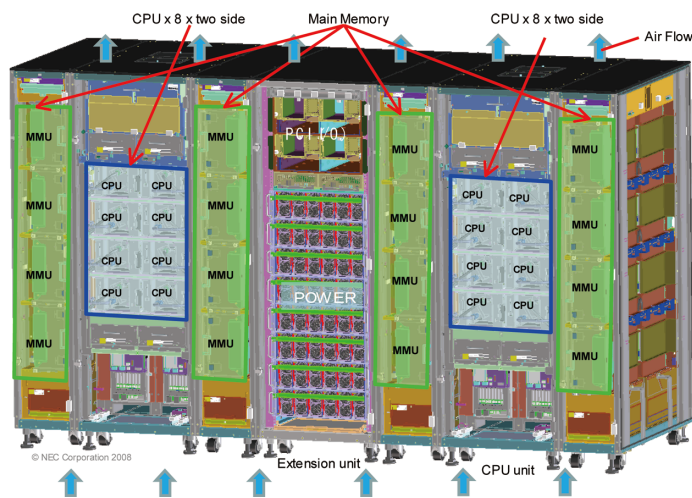


Image of the cabinet of processor node

Replace schedule

Replace Schedule	2007	F2Q08	F3Q08	F4Q08	2009
Earth Simulator	Full Node		Half Node		★STOP
Earth Simulator (ES2)	Planning		Installation		Operation



