

Chapter 4

Hardware Details

4.1 Switch

Currently the cluster employs three switches to interconnect the machines:

- one Dell PowerConnect 5548 Switch, with 48 wire-speed Gigabit Ethernet ports available for campus switching.
- one IBM Fast Ethernet Desktop Switch 8275 Model 324 (as shown in Fig. 4.1), which offers 24 ports helping drive 10/100 switching. Port trunking capabilities provide aggregate bandwidth (up to 800Mbps) between the switches.
- one Intel Express 510T switch, with 24 Ethernet 10Base-T/100Base-TX ports, supporting 8K MAC addresses, and 100Mbps data transfer rate.
- one linksys SRW2024 switch, with 24 Ethernet 10Base-T/100Base-TX/1000Base-T ports, supporting 10/100/1000Mbps data transfer rate and 48Gbps backplane bandwidth.



Figure 4.1: IBM Fast Ethernet Desktop Switch.

4.2 Cluster-Reserved Nodes

Hostname	Processor	RAM	Hard Drive
core (NFS server)	Intel(R) Quad Core E5506 Xeon(R) (4M Cache, 2.13 GHz, 4.80 GT/s Intel(R) QPI)	8GB	4 TB
n0 (Entry Node)	Intel(R) Core(TM)2 Duo E6600 (4M Cache, 2.40 GHz, 1066 MHz FSB)	2GB	160GB
n129	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n130	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n131	Intel(R) Pentium(R) 4 Processor 641 (2M Cache, 3.20 GHz, 800 MHz FSB)	1GB	160GB
n132	Intel(R) Pentium(R) 4 Processor 641 (2M Cache, 3.20 GHz, 800 MHz FSB)	1GB	160GB
n133	Intel(R) Pentium(R) 4 Processor 641 (2M Cache, 3.20 GHz, 800 MHz FSB)	1GB	160GB
n134	Intel(R) Pentium(R) 4 Processor 641 (2M Cache, 3.20 GHz, 800 MHz FSB)	1GB	160GB
n135	Intel(R) Pentium(R) 4 Processor 641 (2M Cache, 3.20 GHz, 800 MHz FSB)	1GB	160GB
n136	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n137	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n138	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n139	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n140	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n141	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n142	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n143	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n144	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n145	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n146	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n147	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB

Hostname	Processor	RAM	Hard Drive
n148	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n149	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n150	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n151	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n152	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n153	Intel(R) Pentium(R) D Processor 930 (4M Cache, 3.00 GHz, 800 MHz FSB)	1GB	160GB
n200	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n201	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n202	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n203	Intel(R) Pentium(R) 4 Processor (512K Cache,2.40 GHz, 533 MHz FSB)	1GB	80GB
n204	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n205	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n206	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n207	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n208	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n209	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n210	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n211	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n212	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n213	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n214	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n215	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB

Hostname	Processor	RAM	Hard Drive
n216	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n217	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n218	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n219	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n220	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n221	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n222	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB
n223	Intel(R) Pentium(R) 4 Processor (512K Cache,2.26 GHz, 533 MHz FSB)	1GB	80GB