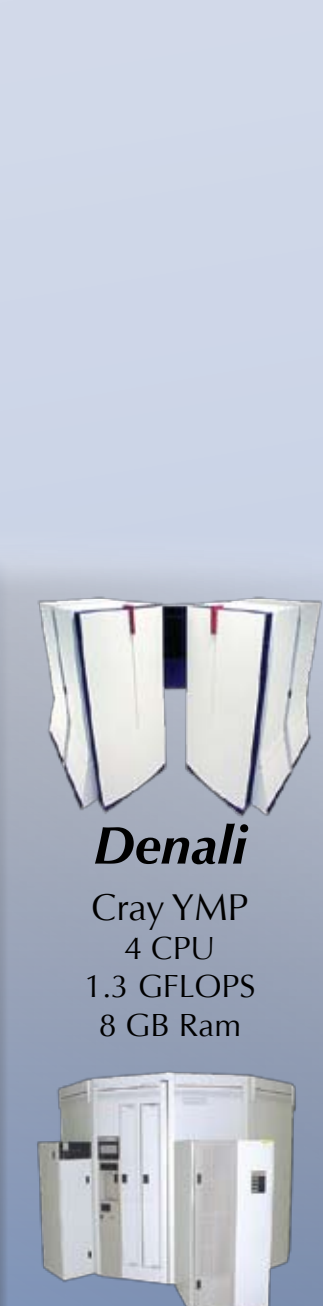


Arctic Region Supercomputing Center

EVOLUTION

a history of ARSC DSRC upgrades in power, memory and storage



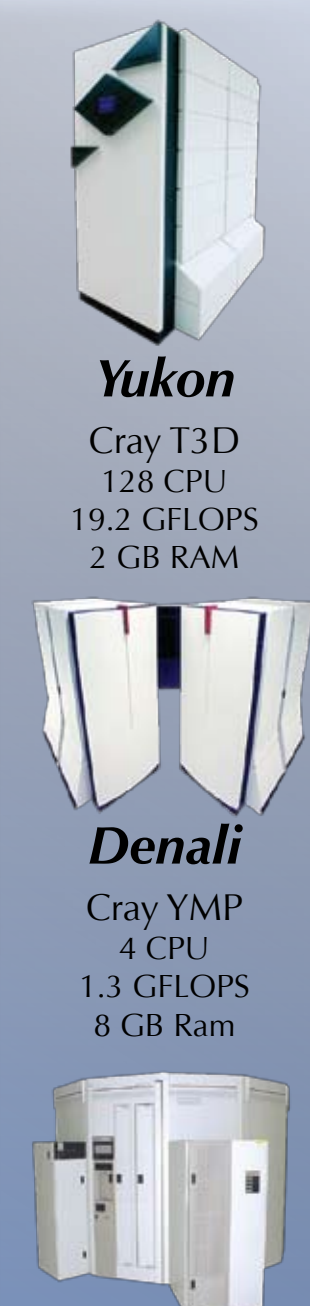
Denali
Cray YMP
4 CPU
1.3 GFLOPS
8 GB Ram

1993
1.3
total GFLOPS



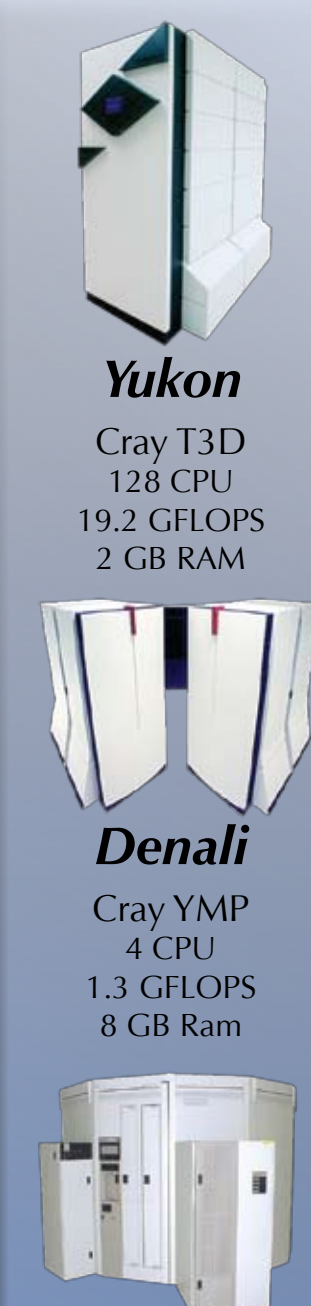
Denali
Cray YMP
4 CPU
1.3 GFLOPS
8 GB Ram

1994
20.5
total GFLOPS



Denali
Cray YMP
4 CPU
1.3 GFLOPS
8 GB Ram

1995
20.5
total GFLOPS



Denali
Cray YMP
4 CPU
1.3 GFLOPS
8 GB Ram

1996
20.5
total GFLOPS



Yukon*
Cray T3E 600
88 CPU
50 GFLOPS
13 GB RAM

1997
51.3
total GFLOPS



Yukon*
Cray T3E 900
104 CPU
88 GFLOPS
26 GB RAM

1998
90.4
total GFLOPS



Yukon
Cray T3E 900
104 CPU
88 GFLOPS
26 GB RAM

1999
90.4
total GFLOPS



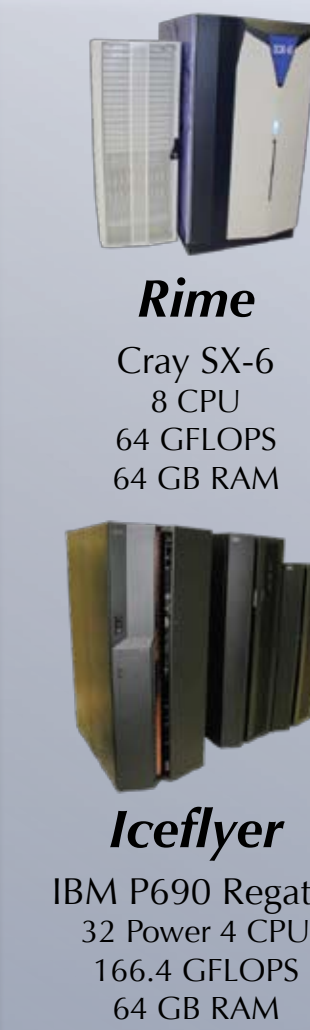
Chilkoot*
Cray SV1
32 CPU
38.4 GFLOPS
32 GB RAM

2000
268.4
total GFLOPS

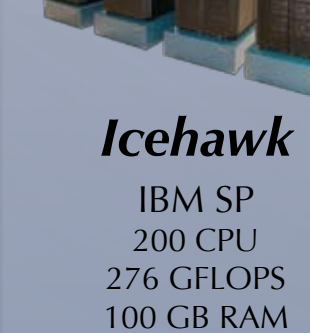


Chilkoot
Cray SV1
32 CPU
38.4 GFLOPS
32 GB RAM

2001
544.4
total GFLOPS



Iceflyer
IBM P690 Regatta
32 Power 4 CPU
166.4 GFLOPS
64 GB RAM



Icehawk
IBM SP
200 CPU
276 GFLOPS
100 GB RAM



Yukon
Cray T3E 900
272 CPU
230 GFLOPS
68 GB RAM



Chilkoot
Cray SV1
32 CPU
38.4 GFLOPS
32 GB RAM



StorageTek
2 330+ TB Silo

2002
774.8
total GFLOPS



Iceflyer
IBM P690 Regatta
32 Power 4 CPU
166.4 GFLOPS
64 GB RAM



Icehawk
IBM SP
200 CPU
276 GFLOPS
100 GB RAM



Yukon
Cray T3E 900
272 CPU
230 GFLOPS
68 GB RAM

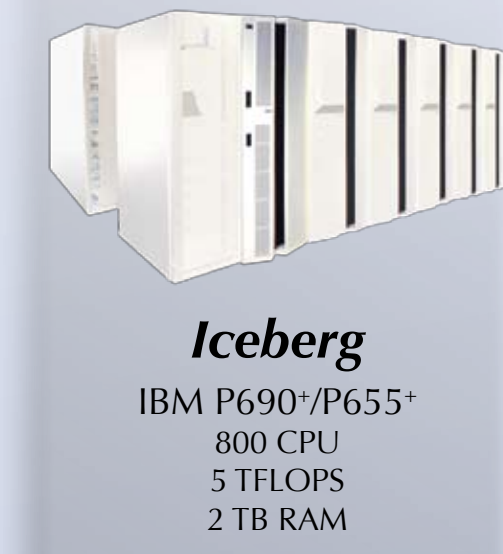


Chilkoot
Cray SV1
32 CPU
38.4 GFLOPS
32 GB RAM

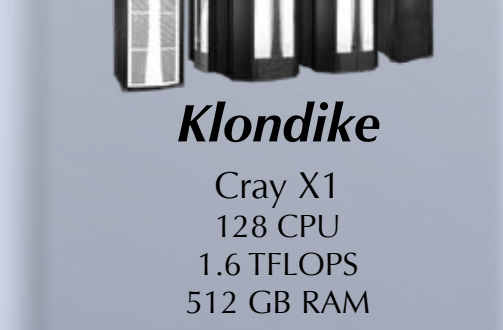


StorageTek
2 330+ TB Silo

2003
774.8
total GFLOPS



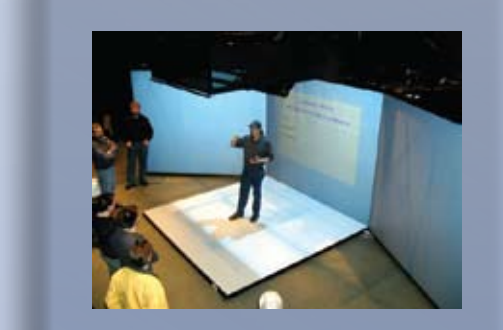
Iceberg
IBM P690/P655*
800 CPU
5 TFLOPS
2 TB RAM



Klondike
Cray X1
128 CPU
1.6 TFLOPS
512 GB RAM



Iceflyer
IBM P690 Regatta
32 Power 4 CPU
166.4 GFLOPS
64 GB RAM



Mechdyne MD Flying Flex™
Four-projector
virtual environment



Nanook and Seawolf
2 SUN Fire 6800
Storage Servers



StorageTek
2 330+ TB Silo

2004
6,771
total GFLOPS



Iceberg
IBM P690/P655*
800 CPU
5 TFLOPS
2 TB RAM



Cerebro
SunPC Rocks Cluster
6 1 U Sun PCs, each with dual
Opteron 250s
4 GB RAM



Lindogs
IBM Image Generator
7 nodes, each with
2 Xeon processors at 3.06 Ghz
4 GB RAM
145 GB local disk



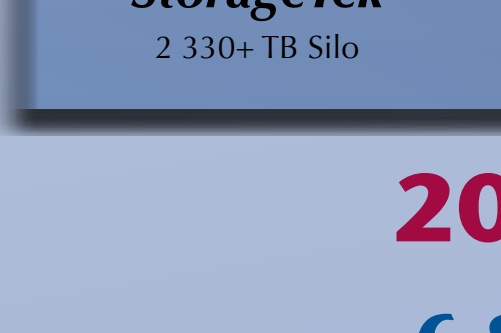
Nelchina
Cray XD1
18 nodes, each with
dual Opteron 250s
4 GB RAM



Mechdyne MD Flying Flex™
Four-projector
virtual environment



StorageTek
2 330+ TB Silo



Nanook and Seawolf
2 SUN Fire 6800
Storage Servers

2005
6,896
total GFLOPS



Klondike
Cray X1
128 CPU
1.6 TFLOPS
512 GB RAM



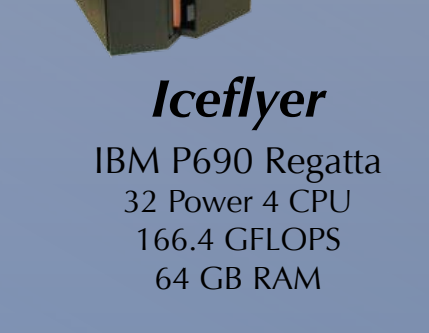
Cerebro
SunPC Rocks Cluster
6 1 U Sun PCs, each with dual
Opteron 250s
4 GB RAM



Lindogs
IBM Image Generator
7 nodes, each with
2 Xeon processors at 3.06 Ghz
4 GB RAM
145 GB local disk



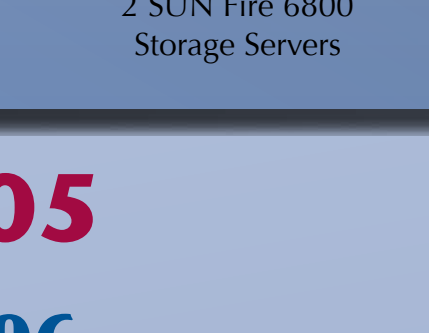
Nelchina
Cray XD1
18 nodes, each with
dual Opteron 250s
4 GB RAM



Iceflyer
IBM P690 Regatta
32 Power 4 CPU
166.4 GFLOPS
64 GB RAM

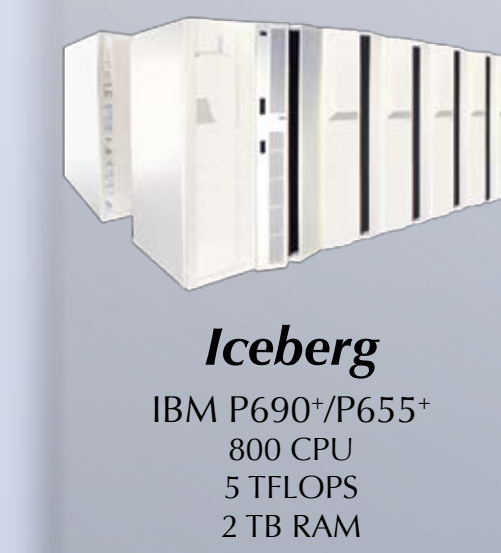


Nanook and Seawolf
2 SUN Fire 6800
Storage Servers



StorageTek
2 330+ TB Silo

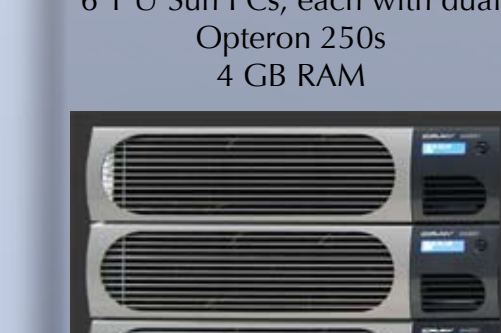
2006
5,919
total GFLOPS



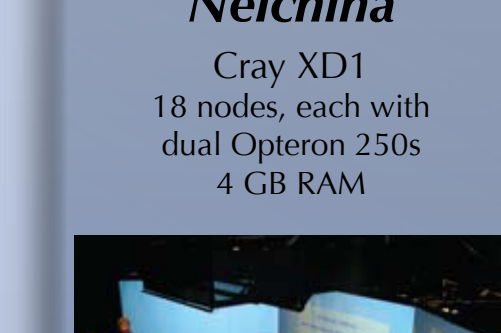
Iceberg
IBM P690/P655*
800 CPU
5 TFLOPS
2 TB RAM



Cerebro
SunPC Rocks Cluster
6 1 U Sun PCs, each with dual
Opteron 250s
4 GB RAM



Nelchina
Cray XD1
18 nodes, each with
dual Opteron 250s
4 GB RAM



Mechdyne MD Flying Flex™
Four-projector
virtual environment



StorageTek
2 330+ TB Silo



Nanook and Seawolf
2 SUN Fire 6800
Storage Servers

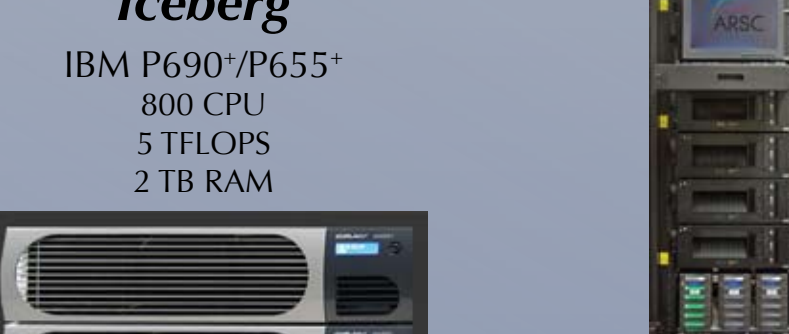
2007
17,663.4
total GFLOPS



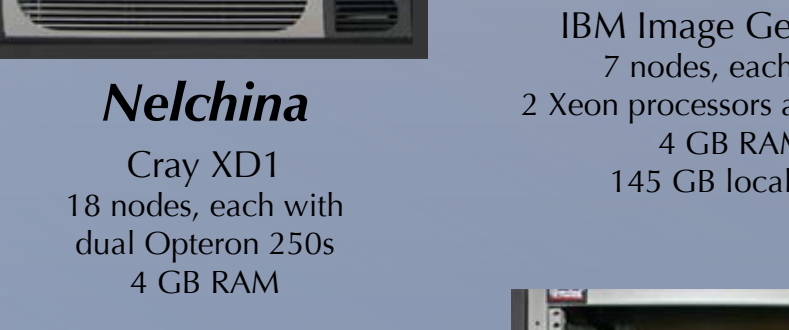
Midnight
Sun Opteron cluster
12.02 TFLOPS
2,312 compute processors
68 TB Lustre file system



Iceberg
IBM P690/P655*
800 CPU
5 TFLOPS
2 TB RAM



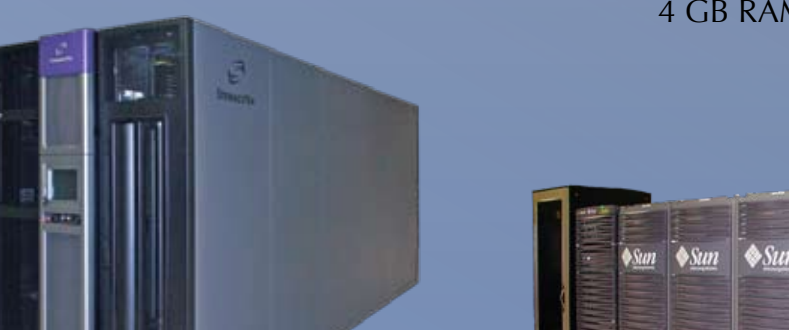
Lindogs
IBM Image Generator
7 nodes, each with
2 Xeon processors at 3.06 Ghz
4 GB RAM
145 GB local disk



Nelchina
Cray XD1
18 nodes, each with
dual Opteron 250s
4 GB RAM



Mechdyne MD Flying Flex™
Four-projector
virtual environment



StorageTek SL8500
3+ PB Robotic Tape Library

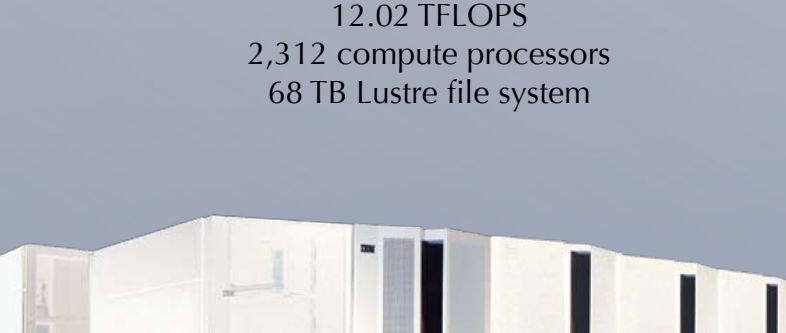


Nanook and Seawolf
2 SUN Fire 6800
Storage Servers

2008
17,000
total GFLOPS



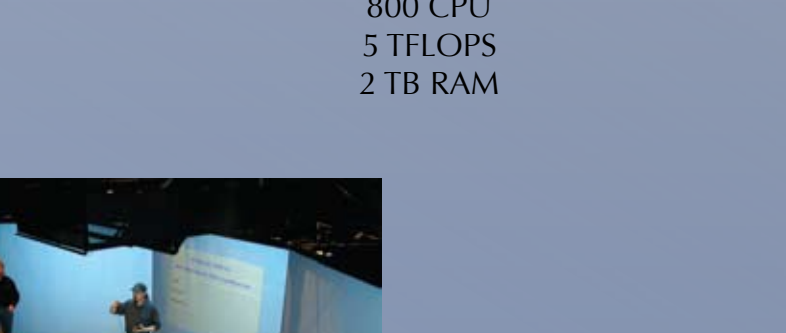
Midnight
Sun Opteron cluster
12.02 TFLOPS
2,312 compute processors
68 TB Lustre file system



Iceberg
IBM P690/P655*
800 CPU
5 TFLOPS
2 TB RAM



Lindogs
IBM Image Generator
7 nodes, each with
2 Xeon processors at 3.06 Ghz
4 GB RAM
145 GB local disk



Mechdyne MD Flying Flex™
Four-projector
virtual environment



StorageTek SL8500
3+ PB Robotic Tape Library



Nanook and Seawolf
2 SUN Fire 6800
Storage Servers

2009
43,820
total GFLOPS



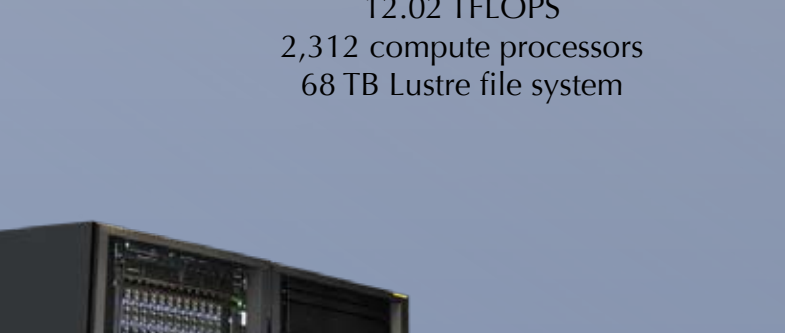
Pingo
Cray XT5
3,456 compute cores
150 TB Lustre file system



Midnight
Sun Opteron cluster
12.02 TFLOPS
2,312 compute processors
68 TB Lustre file system



Iceberg
IBM P690/P655*
800 CPU
5 TFLOPS
2 TB RAM



Quasar
BladeCenter H QS22 Cluster
5.3 TFLOPS
50 GB RAM
12 TB Lustre filesystem



Mechdyne MD Flying Flex™
Four-projector
virtual environment



Seawolf
SUN Fire 6800
Storage Server



StorageTek SL8500
6+ PB Robotic Tape Library

2009
43,820
total GFLOPS