CSAR Service - Management Report

December 2003

This report documents the quality of the CSAR service during the month of December 2003.

A more comprehensive report is provided quarterly, which additionally covers wider aspects of the Service such as information on Training, Application Support and Value-Added services.

This and other such reports are made available through the Web to staff within EPSRC and the other Research Councils, to CfS staff and CSAR Service users. The reports are indexed in a similar way to that which other useful information and news are listed for selection.

1. Introduction

This document gives information on Service Quality and on actual usage of the CSAR Service during the reporting period of December 2003. The information, in particular, covers the availability and usage of the main CSAR Service High Performance Computing (HPC) systems:

- Cray T3E-1200E/776 (Turing)
- SGI Origin2000/128 (Fermat)
- SGI Origin3000/512 (Green)
- SGI Origin300/16 (Wren)
- SGI Altix3700/256 (Newton)

The information is provided in both textual and graphical form, so that it is easier to see trends and variances.

December has seen the workload of the three primary systems at variable levels, with the workload on the new Altix system increasing substantially this month.

The CSAR Service has been granted an 18 month extension of service contract until June 31st 2006. With this extension CfS has introduced a 256 processor Itanium-2 (Madison) based SGI Altix Newton.

The Cray T3E system Turing reached the end of its contractual lifespan at the end of December, and was subsequently removed from service at the end of the month. The newly introduced SGI Altix3700 system Newton has seen a good increase in uptake of use, and growth of usage continued throughout December.

2. Service Quality

This section covers overall Customer Performance Assessment Ratings (CPARS), HPC System availability and usage, Service Quality Tokens and other information concerning issues, progress and plans for the CSAR Service.

2.1 CPARS

Table 1 gives the measure by which the quality of the CSAR Service is judged. It identifies the metrics and performance targets, with colour coding so that different levels of achievement against targets can be readily identified. Unsatisfactory actual performance will trigger corrective action.

CSAR Service - Service Quality Report - Performance Targets

	Performance Targets					
Service Quality Measure	White	Blue	Green	Yellow	Orange	Red
HPC Services Availability						
Availability in Core Time (% of time)	> 99.9%	> 99.5%	> 99.2%	> 98.5%	> 95%	95% or less
Availability out of Core Time (% of time)	> 99.8%	> 99.5%	> 99.2%	> 98.5%	> 95%	95% or less
Number of Failures in month	0	1	2 to 3	4	5	> 5
Mean Time between failures in 52 week rolling period (hours)	>750	>500	>300	>200	>150	otherwise
Help Desk						
Non In-depth Queries - Max Time to resolve 50% of all queries	< 1/4	< 1/2	< 1	< 2	< 4	4 or more
Non In-depth Queries - Max Time to resolve 95% of all queries	< 1/2	< 1	< 2	< 3	< 5	5 or more
Administrative Queries - Max Time to resolve 95% of all queries	< 1/2	< 1	< 2	< 3	< 5	5 or more
Help Desk Telephone - % of calls answered within 2 minutes	>98%	> 95%	> 90%	> 85%	> 80%	80% or less
Others						
Normal Media Exchange Requests - average response time	< 1/2	< 1	< 2	< 3	< 5	5 or more
New User Registration Time (working days)	< 1/2	< 1	< 2	< 3	< 4	otherwise
Management Report Delivery Times (working days)	< 1	< 5	< 10	< 12	< 15	otherwise
System Maintenance - no. of sessions taken per system in the month	0	1	2	3	4	otherwise

Table 1

Table 2 gives actual performance information for the period of December 1st to 31st inclusive.
Overall, the CPARS Performance Achievement in December was satisfactory (see Table 3); i.e. Green measured against the CPARS performance targets.

CSAR Service - Service Quality Report - Actual Performance Achievement

	2003											
Service Quality Measure	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
HPC Services Availability												
Availability in Core Time (% of time)	99.46%	99.73%	100%	99.74%	97.66%	99.25%	98.83%	98.95%	96.62%	98.84%	98.95%	98.75%
Availability out of Core Time (% of time)	99.89%	100.00%	99.81%	99.81%	99.33%	99.9%	99.57%	100%	98.48%	99.28%	97.74%	98.3%
Number of Failures in month	3	1	1	1	4	1	2	2	4	4	3	5
Mean Time between failures in 52 week rolling period (hours)	487	487	515	548	461	548	487	461	417	365	337	283
Help Desk												
Non In-depth Queries - Max Time to resolve 50% of all queries	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Non In-depth Queries - Max Time to resolve 95% of all queries	<0.5	<1	<2	<3	<1	<2	<1	<0.5	<5	<2	<1	<1
Administrative Queries - Max Time to resolve 95% of all queries	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1
Help Desk Telephone - % of calls answered within 2 minutes	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Others												
Normal Media Exchange Requests - average response time	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
New User Registration Time (working days)	0	0	0	0	0	0	0	0	0	0	0	0
Management Report Delivery Times (working days)	10	10	10	10	10	10	10	10	10	10	10	10
System Maintenance - no. of sessions taken per system in the mont	2	2	2	2	2	2	2	2	2	2	2	2

Table 2

Notes:

1. HPC Services Availability has been calculated using the following formula, based on the relative NPB performance of Turing, Fermat, Green and Newton at installation:

   [Turing availability x 143/(143+40+233+343)] + [Fermat availability x 40/ (143+40+233+343)] + [Green availability x 233/(143+40+233+343)] + [Newton availability x 343/(143+40+233+343)]

2 Mean Time between failures for Service Credits is formally calculated based on a rolling 12 month period.

CSAR Service - Service Quality Report - Service Credits

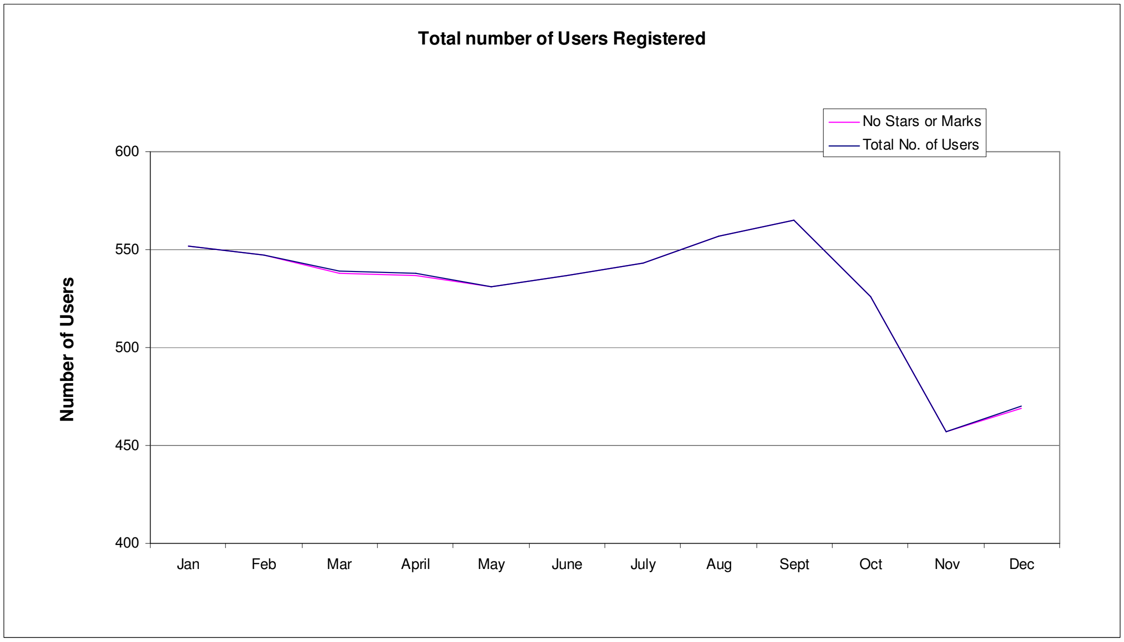
Service Quality Measure	2003 Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
HPC Services Availability												
Availability in Core Time (% of time)	0	-0.039	-0.058	-0.039	0.078	0	0.039	0.039	0.078	0.039	0.039	0.039
Availability out of Core Time (% of time)	-0.047	-0.047	-0.047	-0.047	0	-0.047	-0.039	-0.047	0.078	-0.039	0.078	0.078
Number of Failures in month	0	-0.008	-0.008	-0.008	0.008	-0.008	0	0	0.008	0.008	0	0.0004
Mean Time between failures in 52 week rolling period (hours)	0	0	-0.008	-0.008	0	-0.008	0	0	0	0	0	0.0002
Help Desk												
Non In-depth Queries - Max Time to resolve 50% of all queries	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019
Non In-depth Queries - Max Time to resolve 95% of all queries	-0.019	-0.016	0	0.016	-0.016	0	-0.016	-0.019	0.0312	0	-0.016	-0.016
Administrative Queries - Max Time to resolve 95% of all queries	-0.016	-0.019	-0.016	0	-0.019	-0.019	-0.019	-0.016	-0.01551	-0.01551	-0.016	-0.016
Help Desk Telephone - % of calls answered within 2 minutes	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004
Others												
Normal Media Exchange Requests - average response time	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
New User Registration Time (working days)	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019
Management Report Delivery Times (working days)	0	0	0	0	0	0	0	0	0	0	0	0
System Maintenance - no. of sessions taken per system in the mont	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Total & overall Service Quality Rating for each period:	-0.06	-0.09	-0.09	-0.07	0.00	-0.06	-0.04	-0.04	0.07	-0.03	0.02	0.02

Table 3 gives Service Credit values for the month of December. These will be accounted on a quarterly basis, formally from the Go-Live Date. The values are calculated according to agreed Service Credit Ratings and Weightings.

Table 3

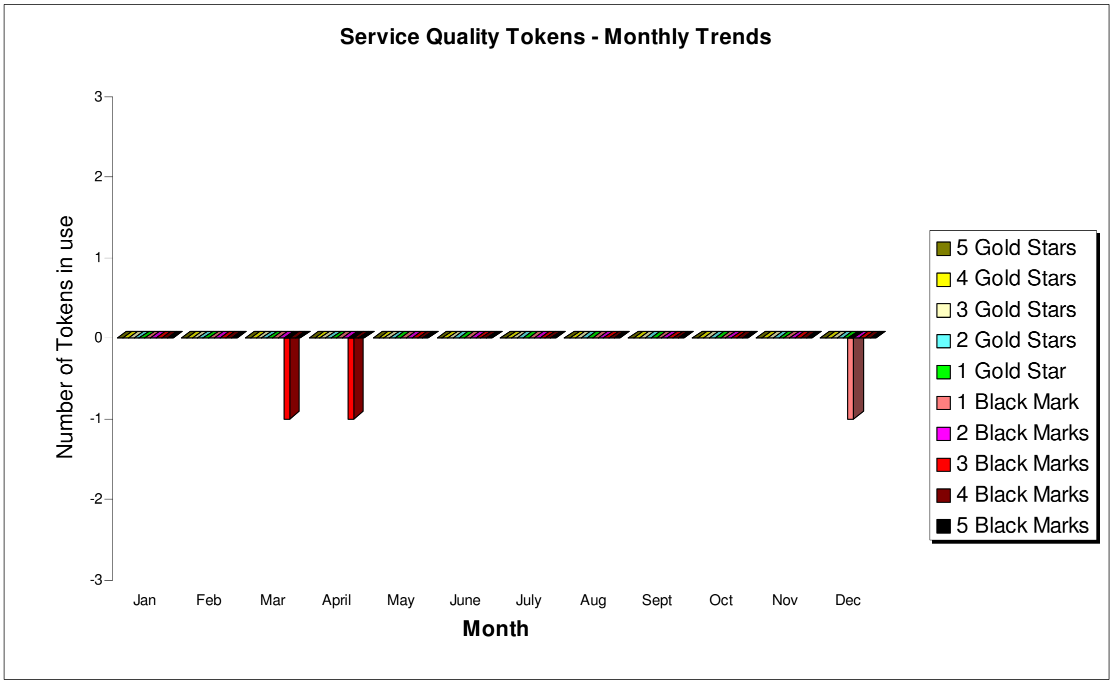
2.2 Service Quality Tokens

The position at the end of December 2003 is that none of the 470 users have awarded any tokens to the service.



The graph above shows the total number of registered users on the CSAR Service and the number of users holding a neutral view of the service. The number of users has seen a drop over the past two months due to a number of projects which have come to an end.

The graph below illustrates the monthly usage trend of quality tokens:



The current status of the Stendahl tokens is that there is one black mark allocated to the service, as detailed below. The black mark in question has been addressed, and a development queue is now in operation on Newton.

SUMMARY OF SERVICE QUALITY TOKEN USAGE

No of Stars or Marks	Consortia	Date Allocated	Reason Given
1 black mark	csn003	19/12/03	No development queue on Newton

2.3 Throughput Target against Baseline

The baseline is shown in GFLOP-Years for consistency with the other information contained within this report.

The Baseline Target for throughput was achieved this month. The actual usage figure was 270.4% of Baseline capacity.

Job Throughput Against Baseline CSAR Service Provision

Period: 1st to 31st December 2003

	Baseline Capacity for Period (GFLOP Years)	**Actual Usage in Period (GFLOP Years)**	**Actual % Utilisation c/w Baseline during Period**
1. Has CfS failed to deliver Baseline MPP Computing Capacity for EPSRC?	15.31	41.41	**270.4%**
	Baseline Capacity for Period (GFLOP Years)	**Job Time Demands in Period**	**Job Demand above 110% of Baseline during Period (Yes/No)?**
2. Have Users submitted work demanding > 110% of the Baseline during period?	15.31	39.7	Yes
		Number of Jobs at least 4 days old at end Period	**Number of Jobs at least 4 days old at end Period is not zero (Yes/No)?**
3. Are there User Jobs oustanding at the end of the period over 4 days old?		2	Yes
		Minimum Job Time Demands as % of Baseline during Period	**Minimum Job Time Demand above 90% of Baseline during Period (Yes/No)?**
4. Have Users submitted work demands above 90% of the Baseline during period?		79%	No
	Number of standard Job Queues (ignoring priorities)	**Average % of time each queue contained jobs in the Period**	**Average % of time each queue contained jobs in the Period is > 97%?**
5. Majority of Job Queues contained jobs from Users for more than 97% during period?	4	89%	No

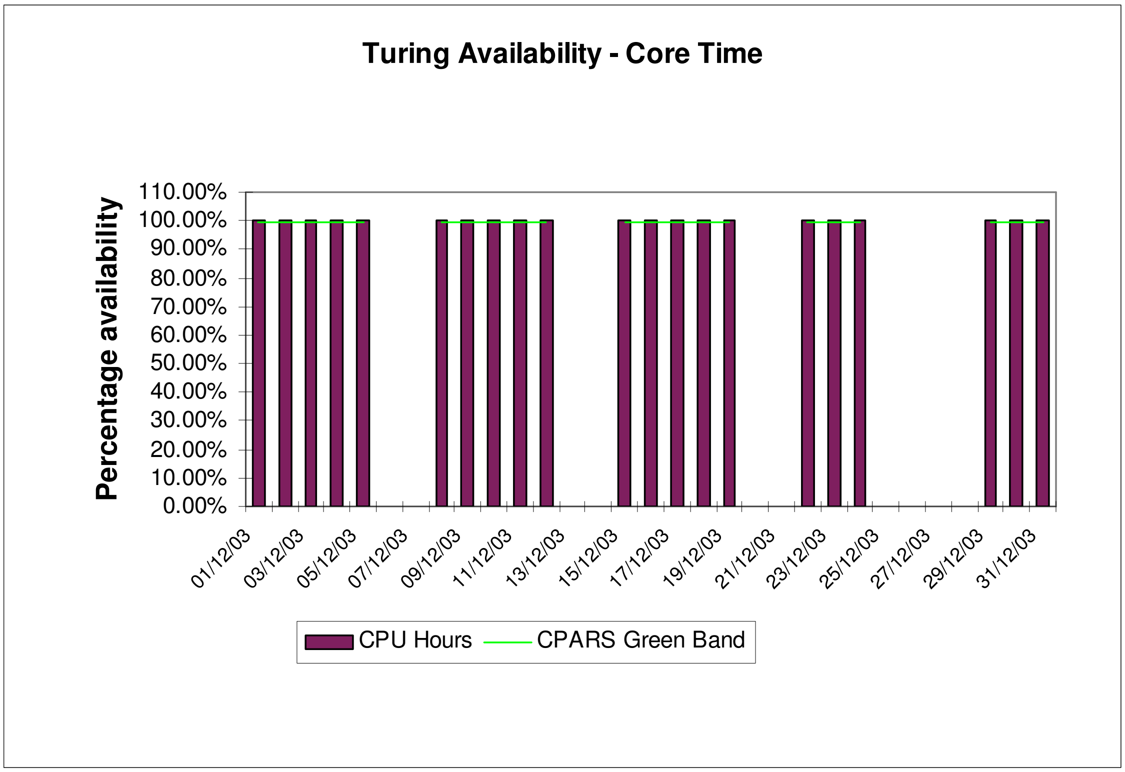
3. System Availability

Service availability each reporting period is calculated as a percentage of actual availability time over theoretical maximum time, after accounting for planned breaks in service for preventative maintenance.

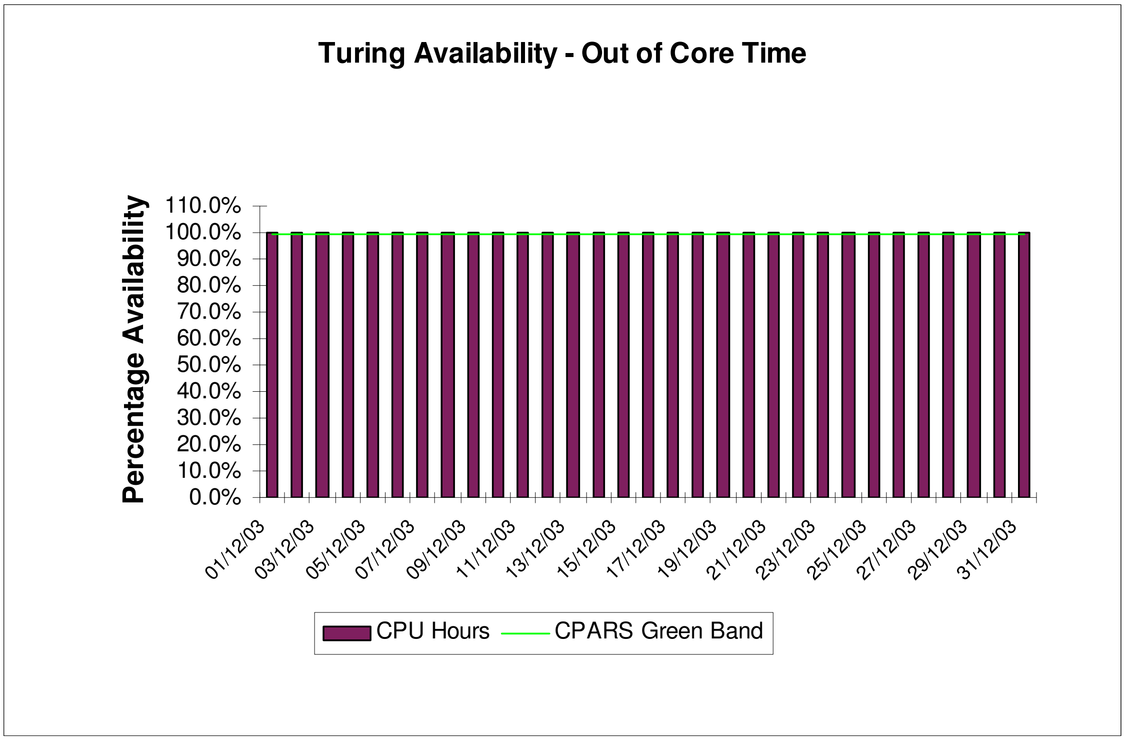
3.1 Cray T3E-1200E System (Turing)

The following graphs show the availability of Turing both in core time and out of core time respectively during the period of 1st to 31st December.

Turing availability for December:



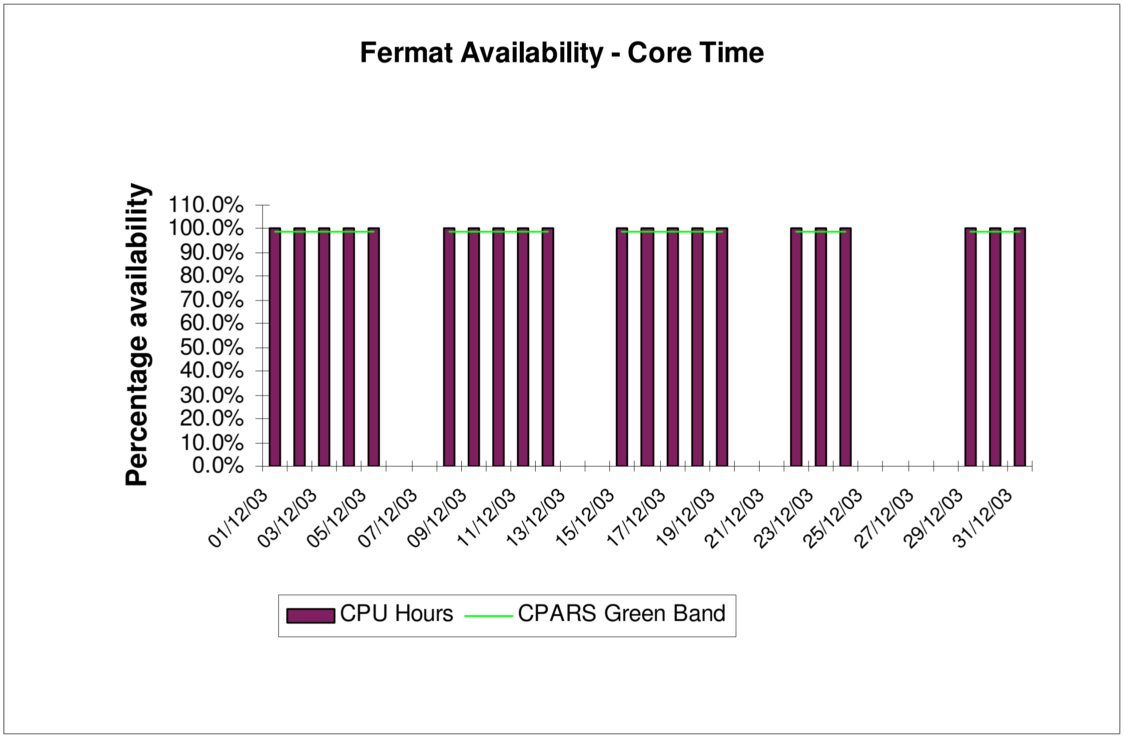
Availability of Turing in core time during December was excellent with no outages.



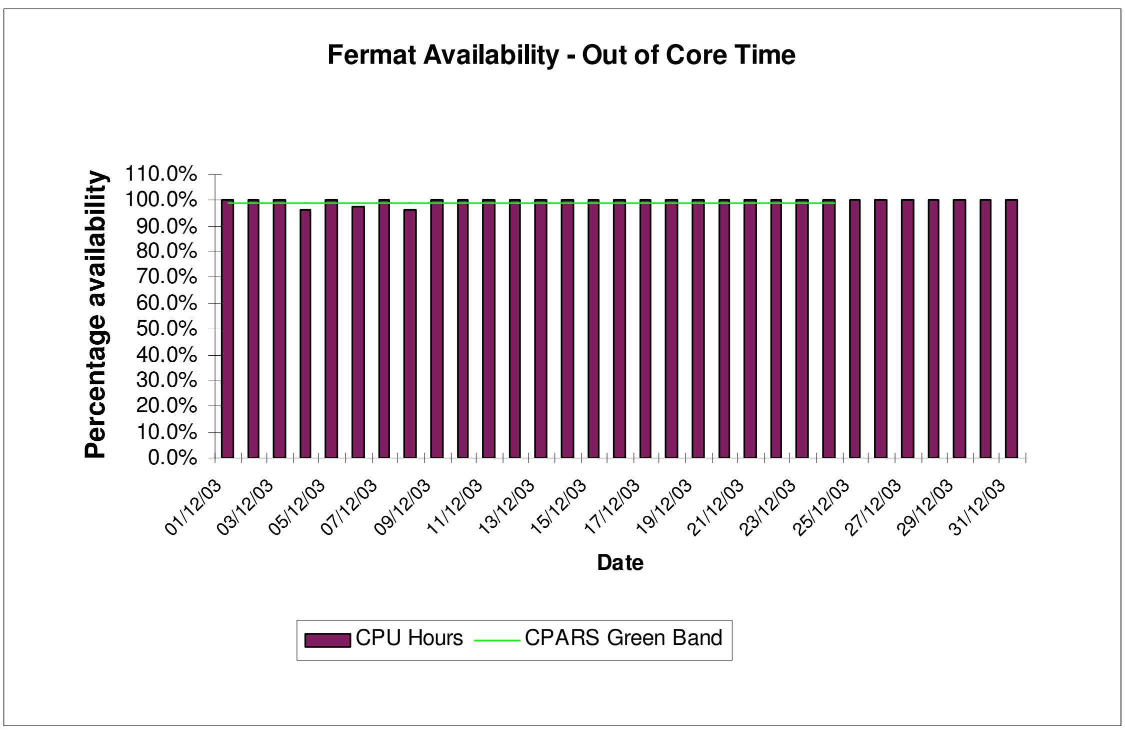
Availability of Turing out of core time during December was excellent, with no outages.

3.2 SGI Origin2000 System (Fermat)

The following graphs show the availability of Fermat both in core time and out of core time respectively.



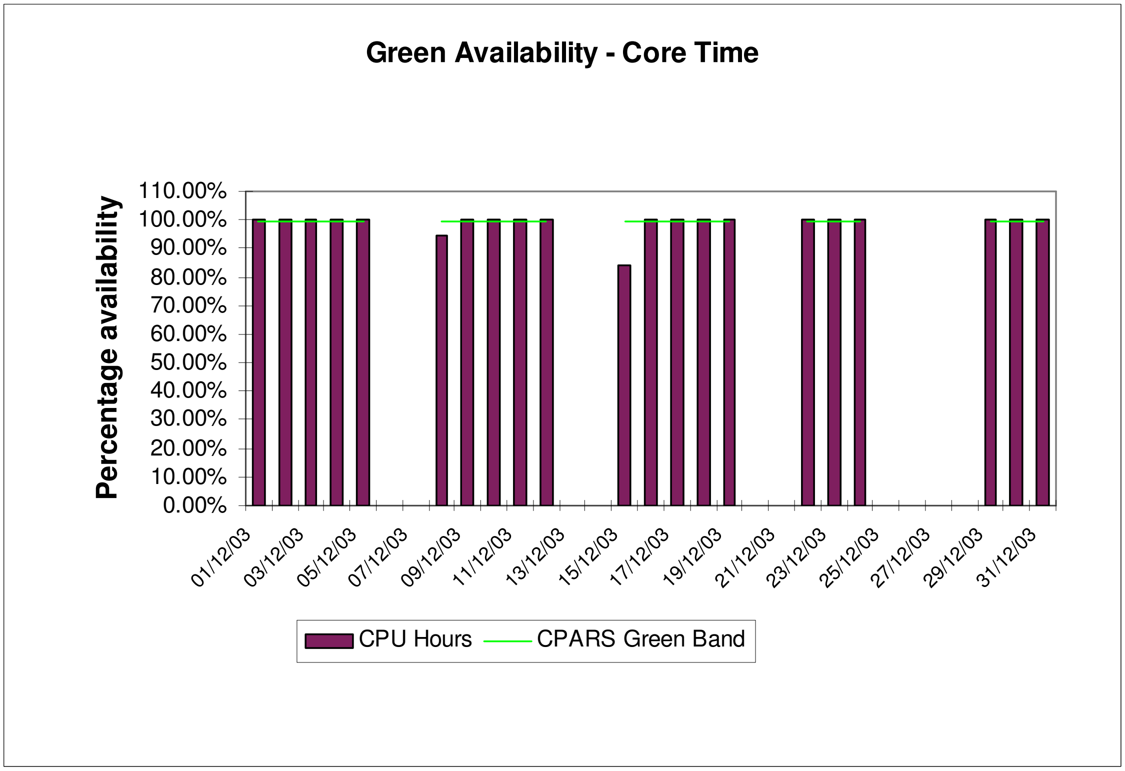
Availability of Fermat in core time during December was excellent, with no outages.



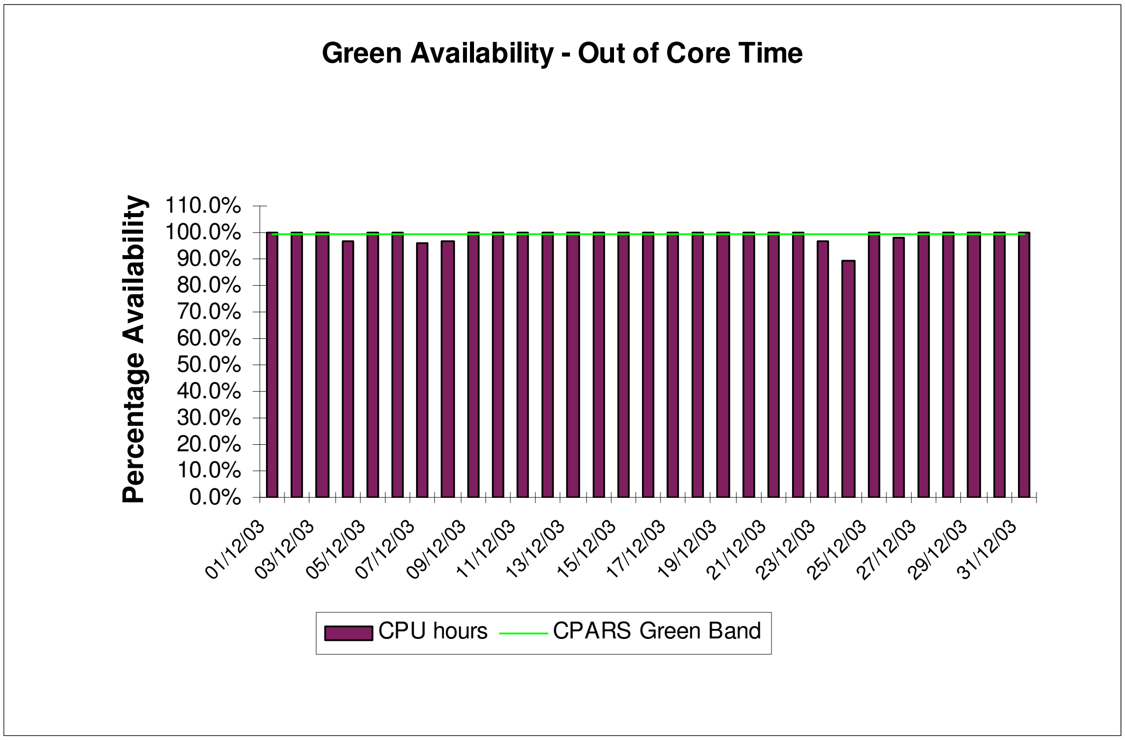
Availability of Fermat out of core time during December was acceptable, with three brief outages related to issues with the SAN.

3.3 SGI Origin3000 System (Green)

The following graphs show the availability of Green both in core time and out of core time respectively.



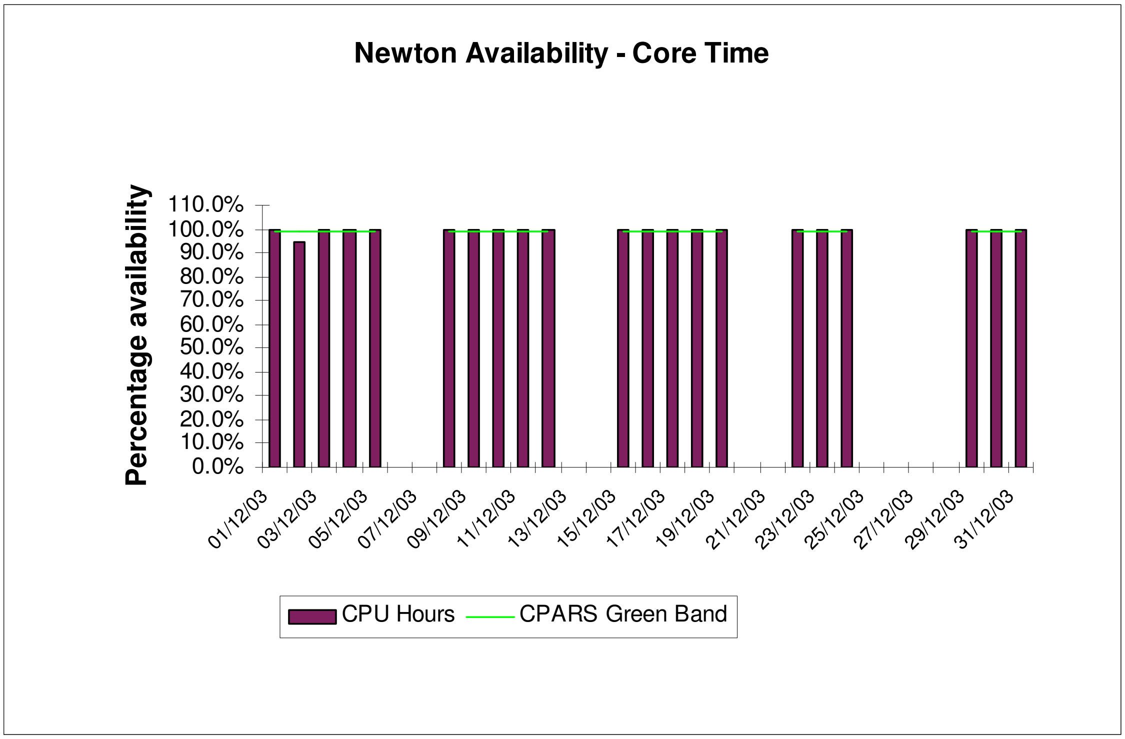
Availability of Green in core time during December was good, with two outages related to SAN issues.



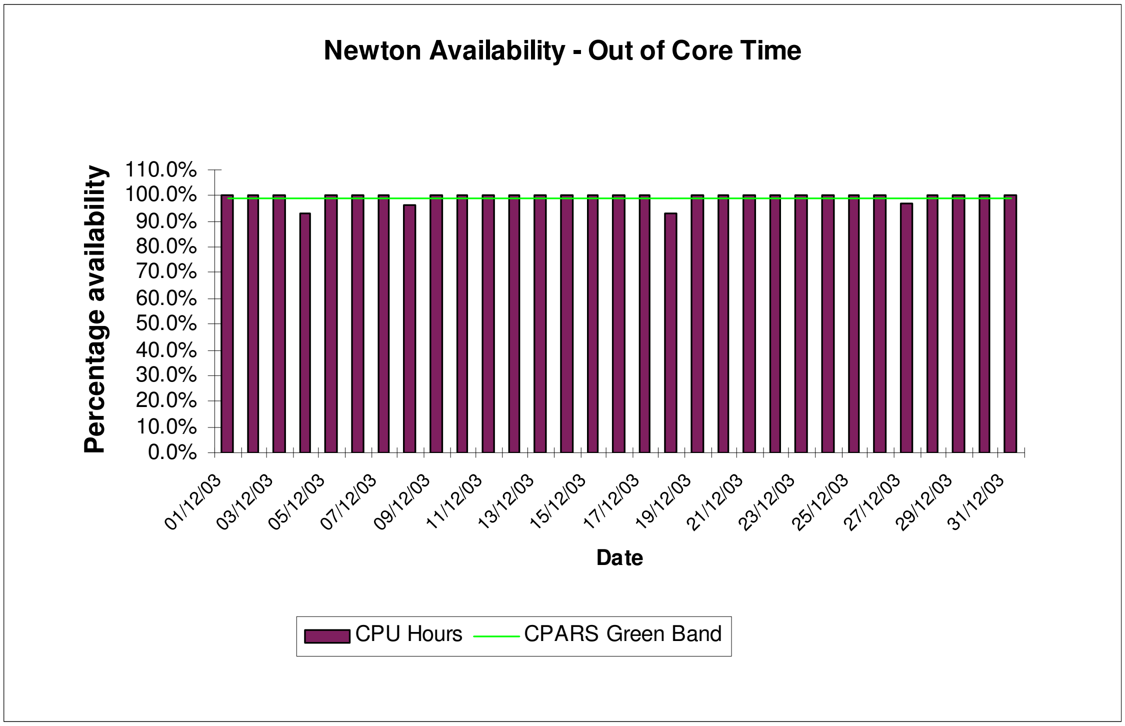
Availability of Green out of core time during December was unacceptable, due to a combination of issues related to the SAN and problems with hardware. The faulty hardware has been replaced; the issues with the SAN have been identified by the vendor and patches have been applied to the Operating Systems of all affected systems.

3.4 SGI Altix3700 System (Newton)

The following graphs show the availability of Newton both in core time and out of core time respectively.



Availability of Newton in core time during December was very good, with one outage on the 2nd related to the previously-mentioned SAN issues.



Availability of Newton out of core time during December was unacceptable, having been affected by the previously-mentioned problems with the SAN.

4. HPC Services Usage

Usage information is given in tabular form, in Appendices, and in graphical format. The system usage information for the period of December 1st to 31st is provided by Project/User Group, totalled by Research Council and overall. This covers:

• CPU usage	Turing:	444,695 PE Hours
	Fermat:	32,184.95 CPU Hours
	Wren (Batch):	2.22 CPU Hours
	Wren (Interactive):	138.63 CPU Hours
	Green:	148,604 CPU Hours
	Newton:	141,691 CPU Hours
• User Disk allocation	Turing:	62.82 GB Years
	Fermat:	111.2 GB Years
	SAN HV:	29.73 GB Years
• HSM/tape usage		4,541.89 GB Years

In addition, the following graphs are provided to illustrate usage per month, historically:

a) MPP/SMP (T3E/Origin) Usage by month, showing usage each month of CPU (GFLOP-Years as per NPB), split by Research Council and by system. The overall Capacity are shown by overlaid horizontal lines.

b) SMP (Origin) Usage by month, showing usage each month in CPU Hours, split by Research Council and giving the equivalent GFLOP-Years as per NPB. The Baseline and overall Capacity are shown by overlaid horizontal lines.

c) High Performance Disk (T3E) allocated for User Data by month, showing the allocated space each month in GBytes, split by Research Council. The Baseline Capacity (1 Terabyte) is shown by an overlaid horizontal line.

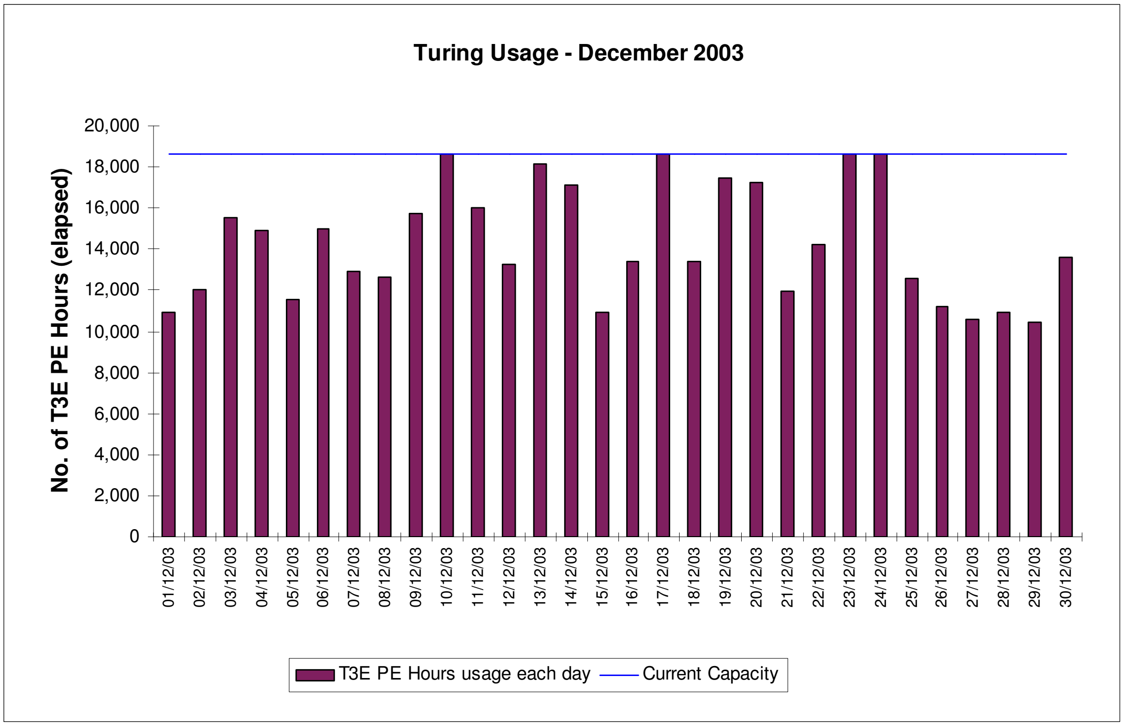
d) Medium Performance Disk (Origin) allocated for User Data by month, showing the allocated space each month in GBytes, split by Research Council. The Baseline Capacity (1.5 Terabytes) is shown by an overlaid horizontal line.

e) HSM/Tape Usage (T3E) by month, showing the volumes held each in GBytes, split by Research Council. The Baseline Capacity (16 Terabytes) available will be shown by an overlaid horizontal line.

4.1 Cray T3E-1200E System (Turing)

The following graph shows the usage of Turing during each day of December 2003. Note that there is some variance on a day-to-day basis as the accounts record job times, and thus CPU usage figures, at the time of job completion which could be the second actual day for large jobs. At present, there is a 24 hour limit on jobs so that they are check-pointed, and computational time lost due to any failure is well managed.

Turing usage for December:

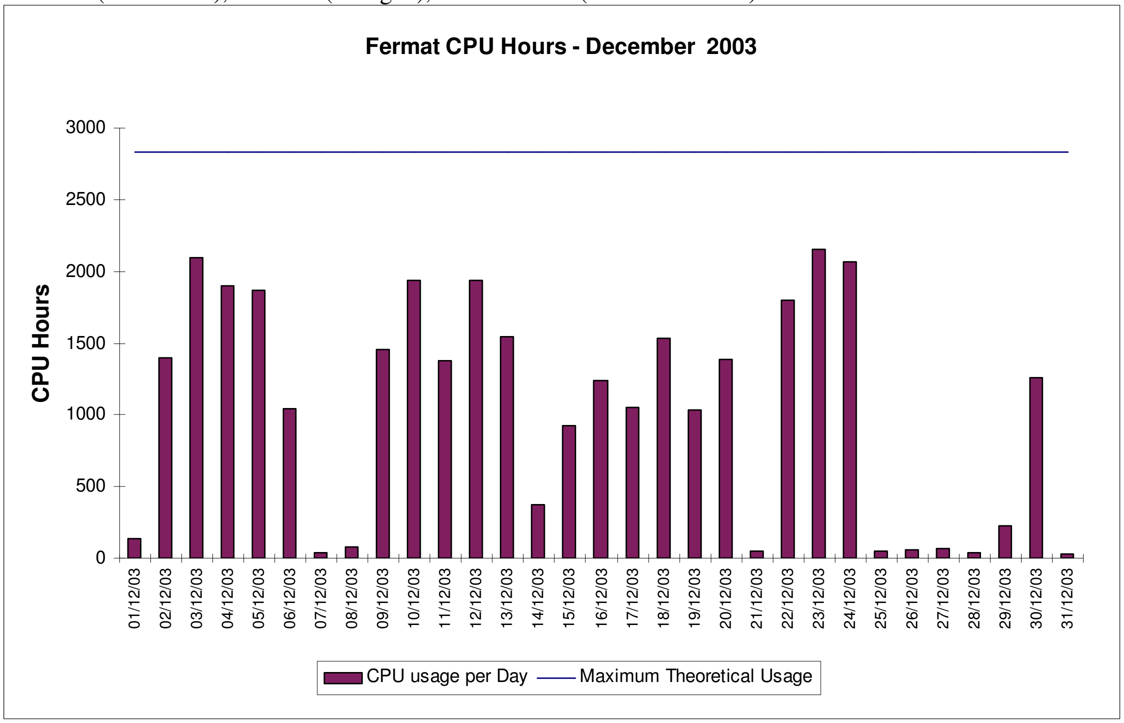


The above usage graph for the Turing system shows that Turing was reasonably utilised during December.

The Turing system is being removed from service at the end of December, due to its coming to the end of its contract lifespan.

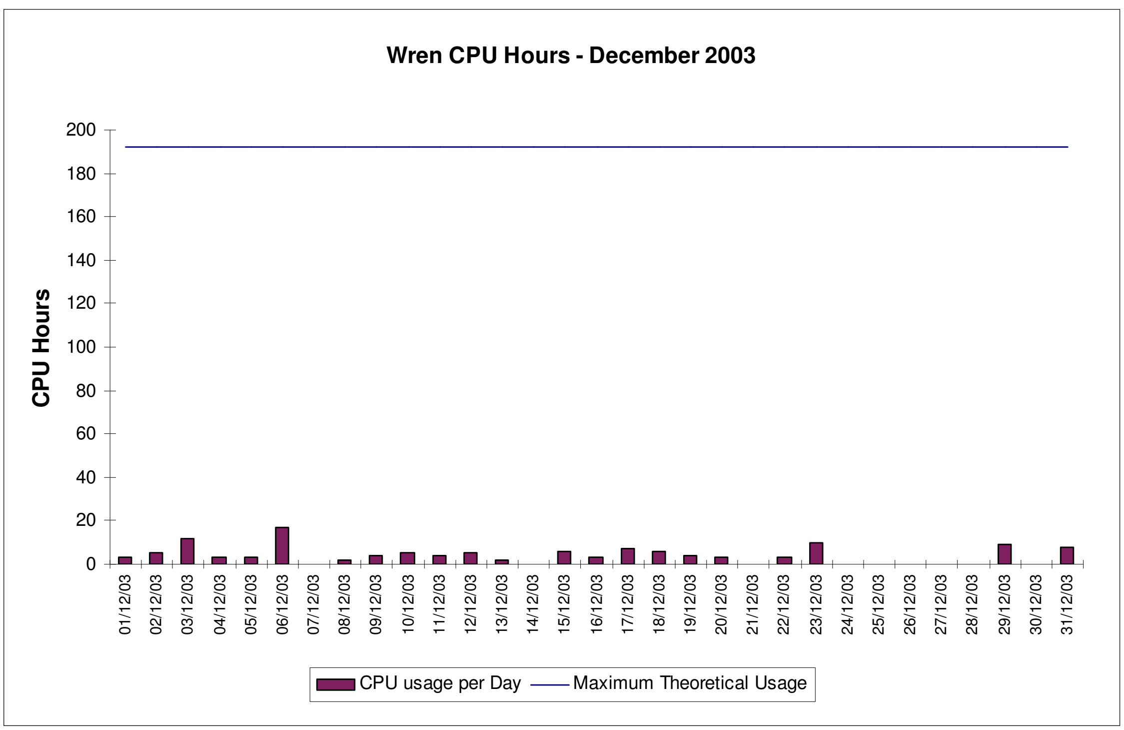
4.2 SGI Origin2000 System (Fermat)

The usage of the Origin system was higher this month. The groups most heavily using the Fermat system are CSN001 (De Cuevas), CSE061 (Imregun), and CSN003 (Steenman-Clark).



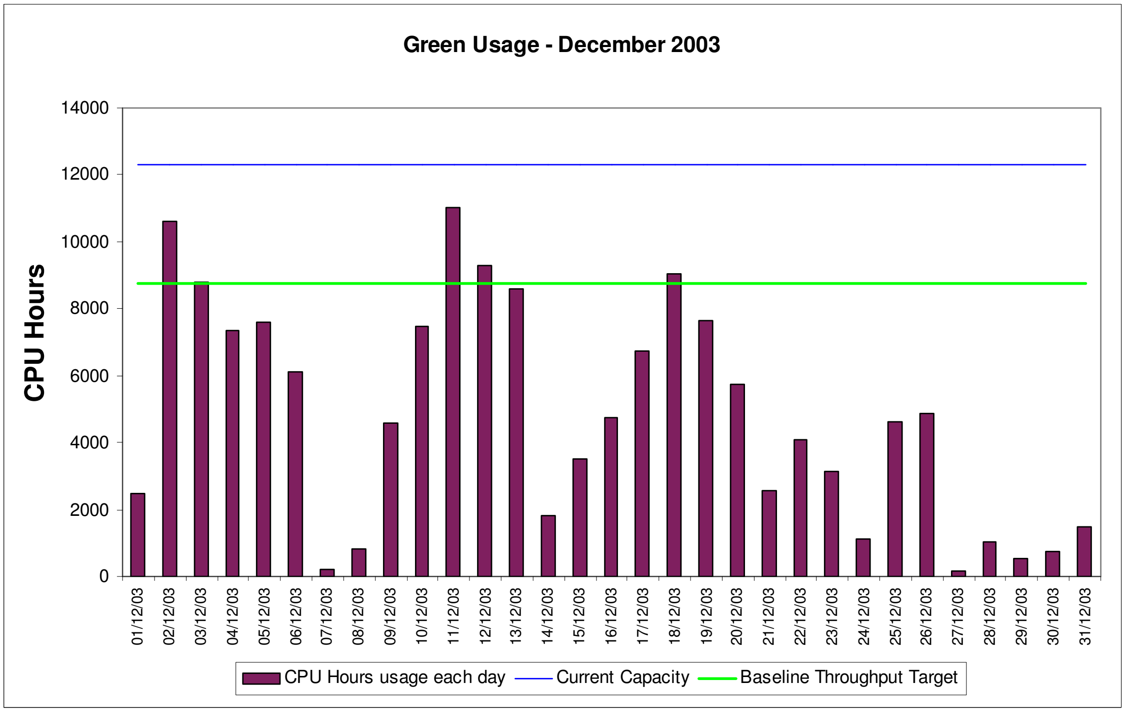
The above graph shows the variable utilisation of the Origin 128. As interactive usage was removed from Fermat at the beginning of March, Fermat is now a dedicated batch system.

4.3 SGI Origin300 System (Wren)



The above graph shows the utilisation of the interactive system Wren for the month of December.

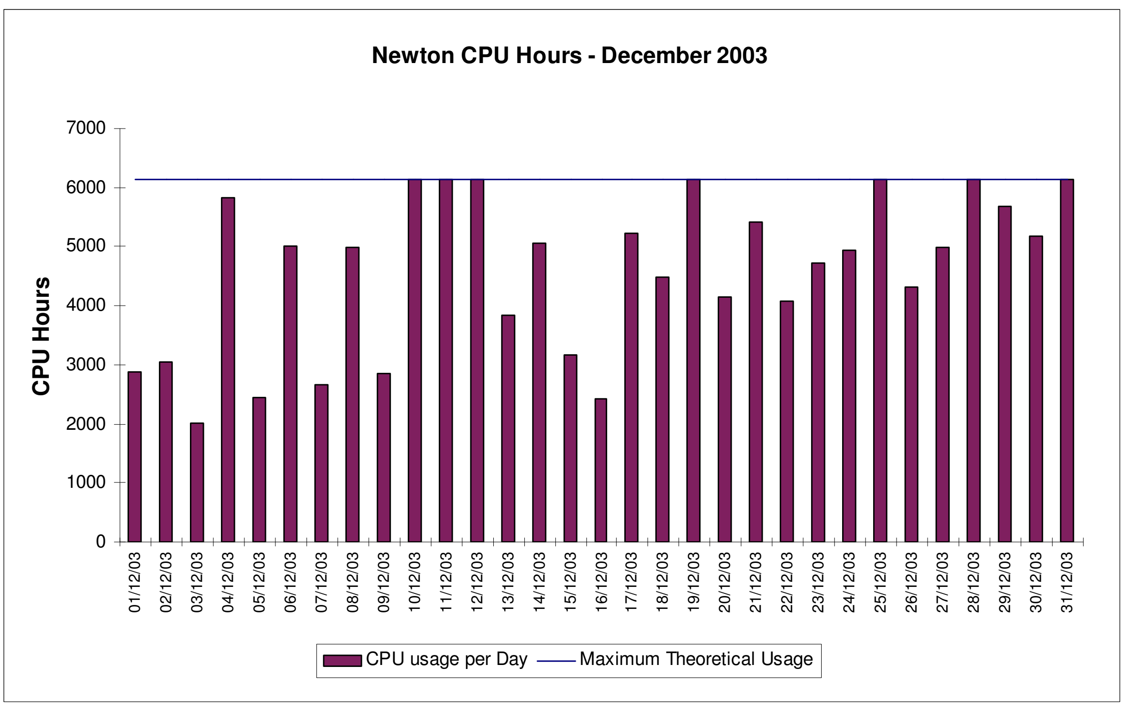
4.4 SGI Origin3000 System (Green)



The above graph shows the utilisation of Green for the month of December, which was below Baseline.

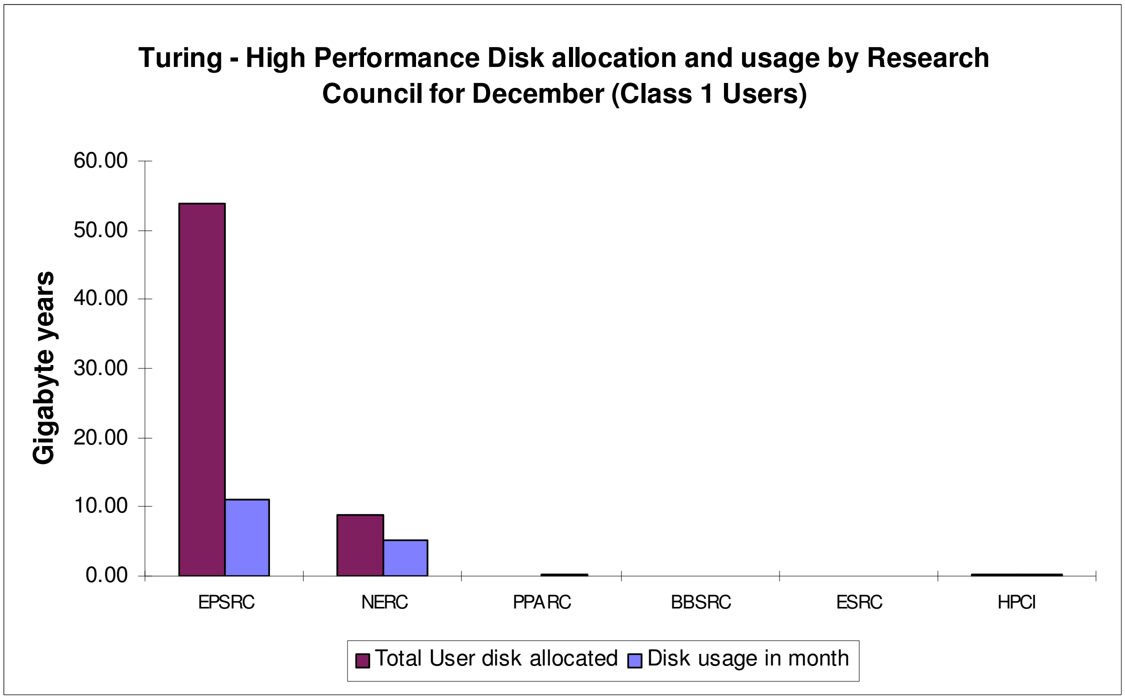
4.5 SGI Altix3700 System (Newton)

The following graph shows the daily usage during December for the newly-introduced Altix system Newton.

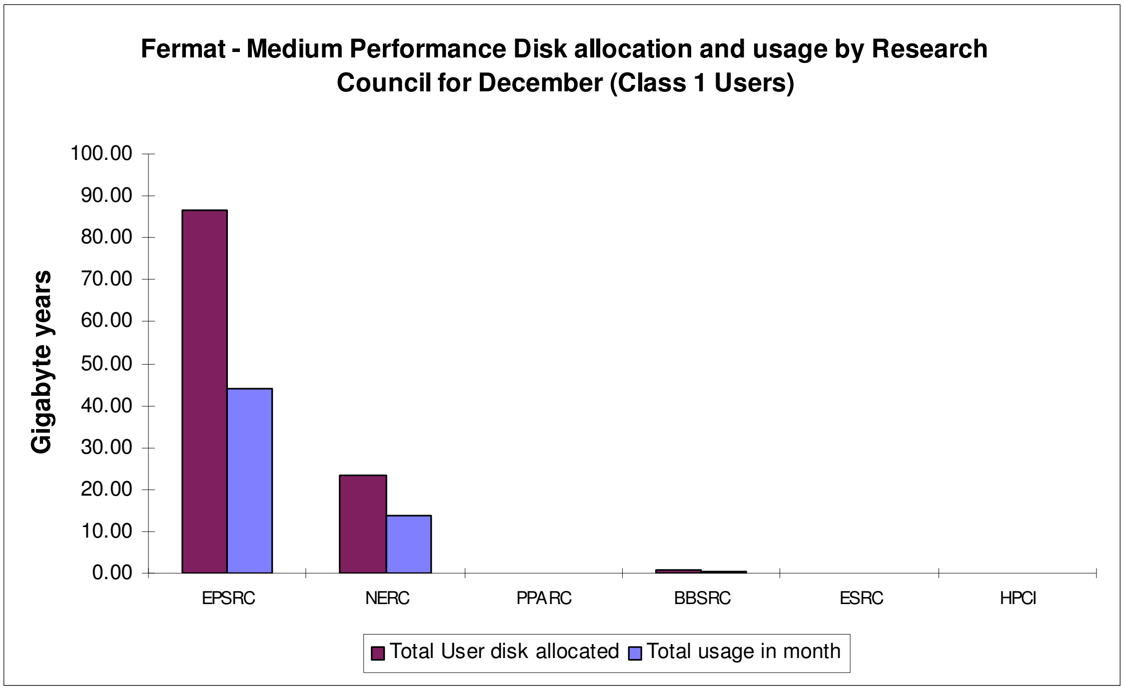


4.6 Disk/HSM Usage Chart

The graphs below show current disk and HSM allocations and usage.

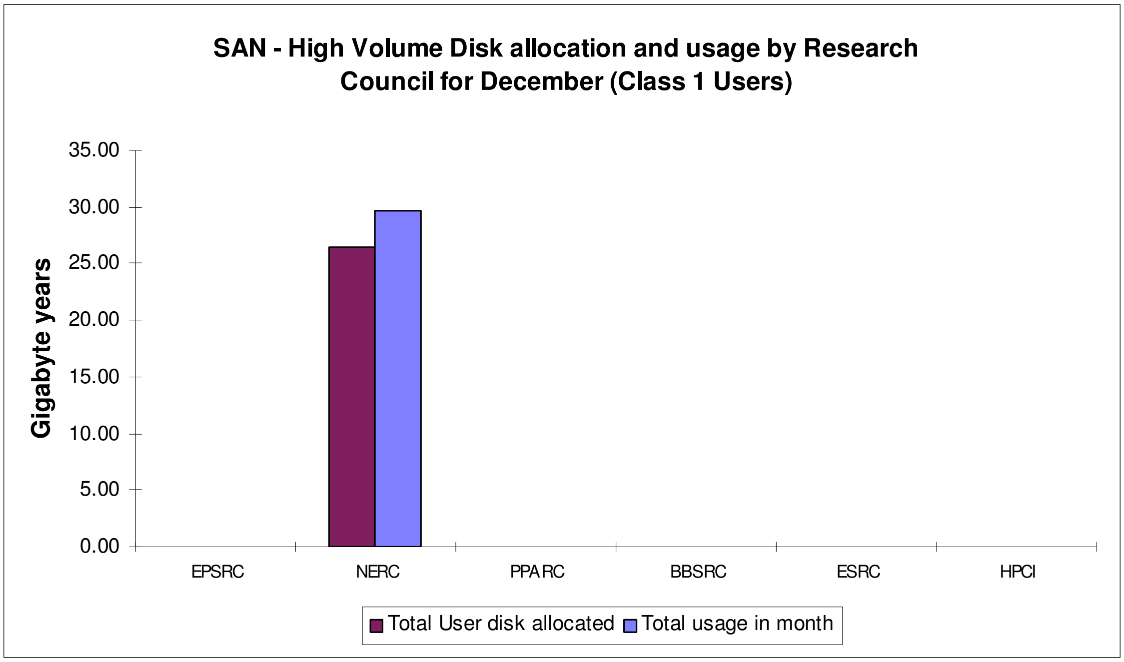


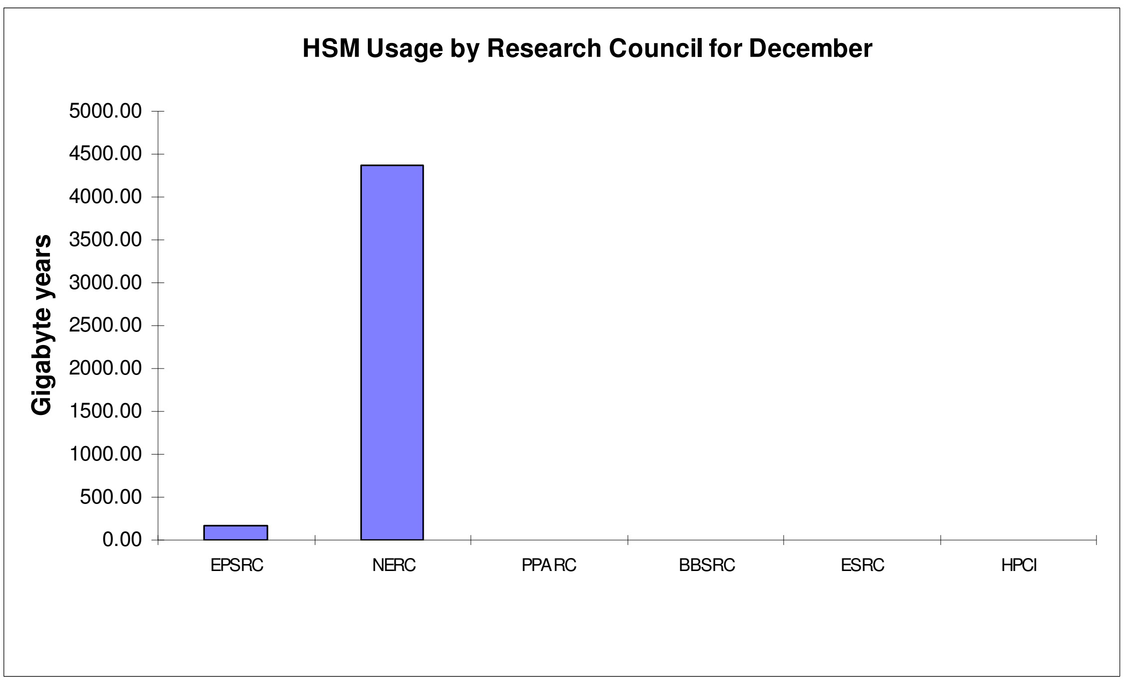
The above graph shows actual usage on average against the current allocation of disk on the Turing system.



Shown above is the disk allocation against usage on average of the disk on Fermat.

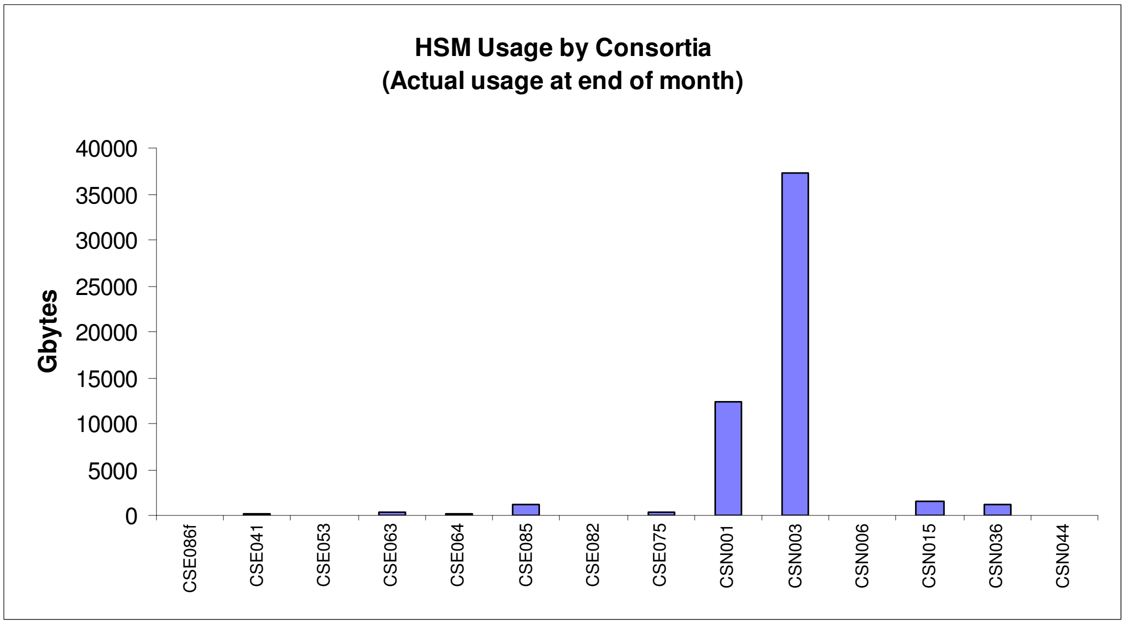
The following graph shows the disk allocation against usage on average of the new SAN High Volume (HV) disk.





The above graph shows the total usage of the HSM facility by Research Council.

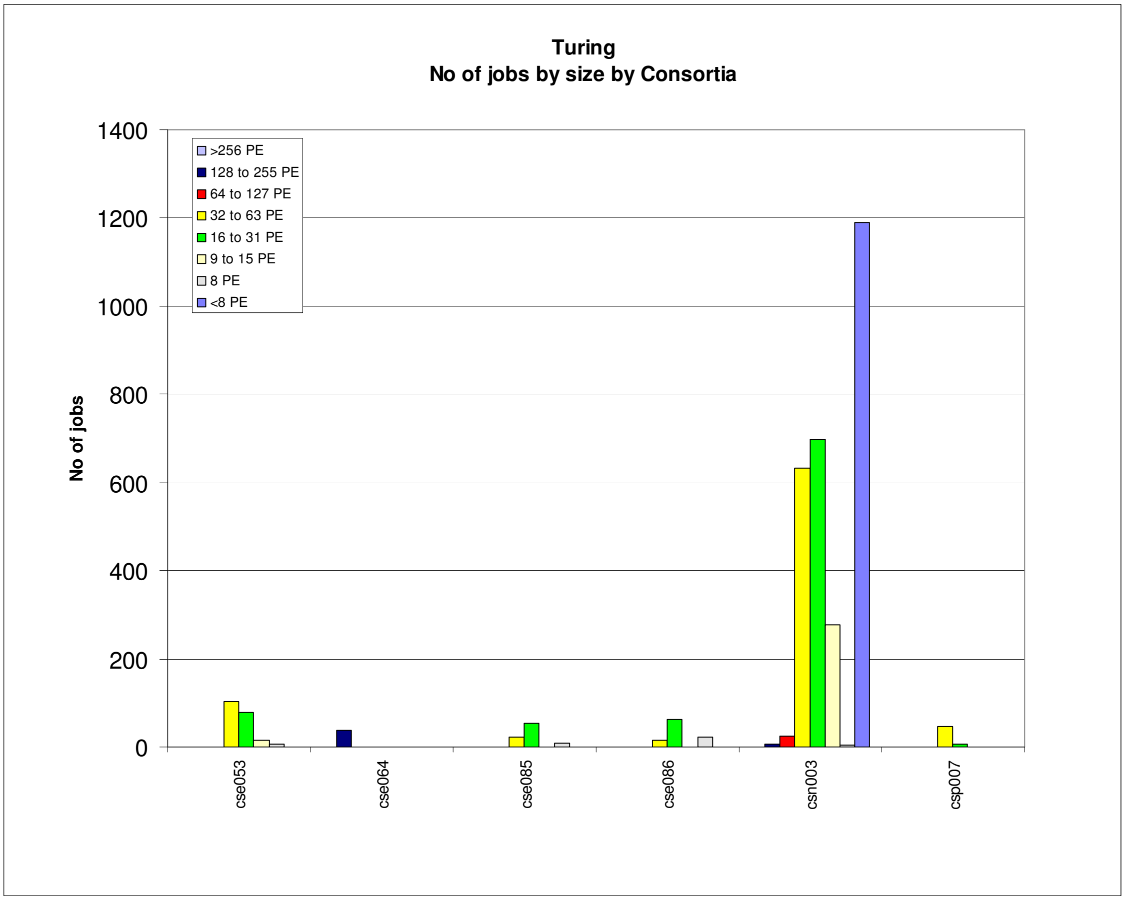
The next graph gives actual usage of HSM by Consortia.



CSE085 (Sandham), CSN001 (De Cuevas), CSN003 (Steenman-Clark), CSN015 (Proctor) & CSN036 (Woolf) were the major users of HSM resource.

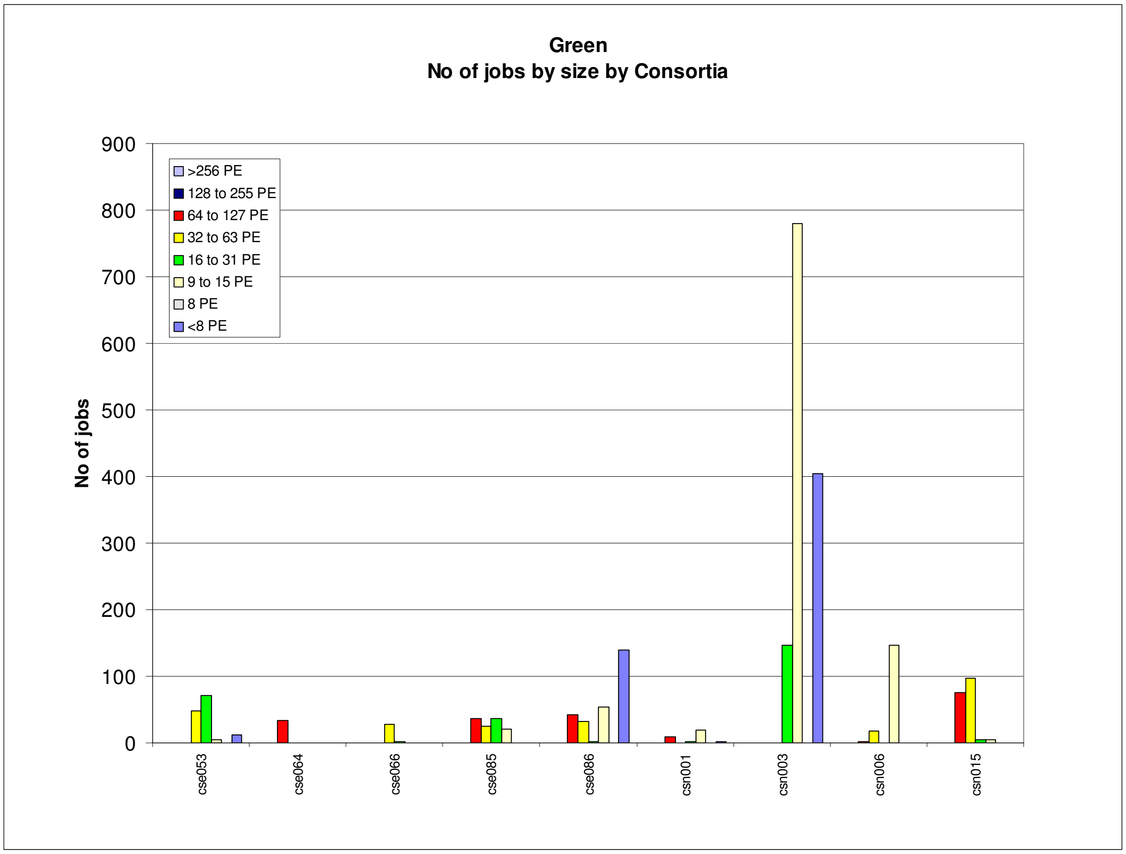
4.6 Processor Usage and Job Statistics Charts

Job statistics for Turing:



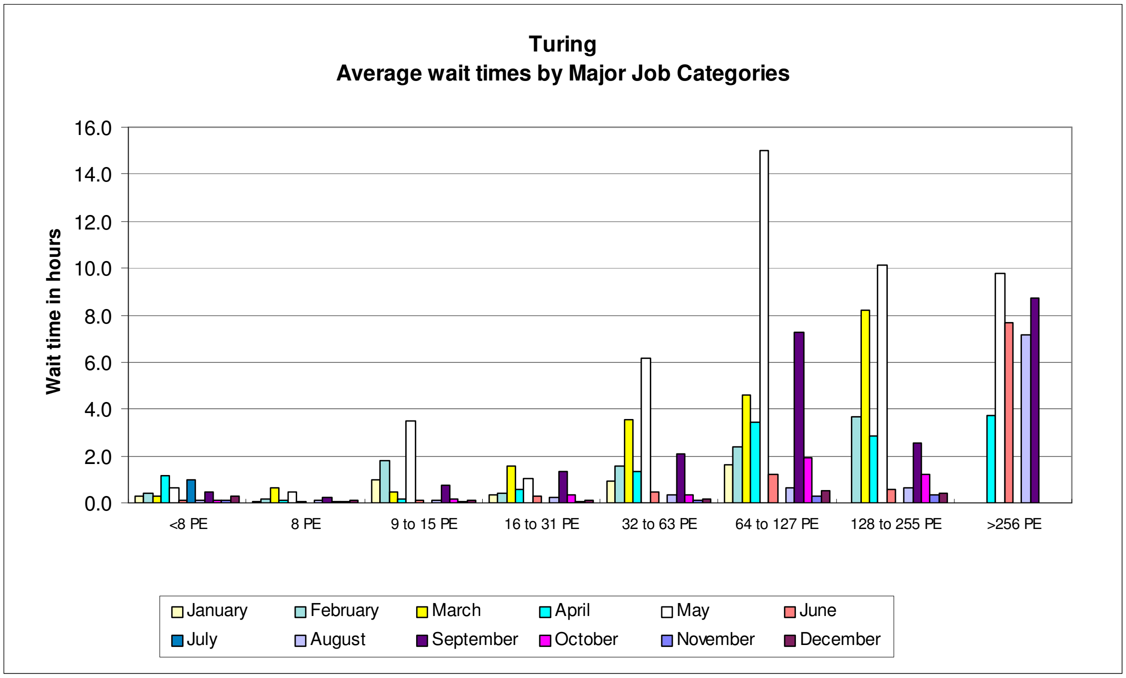
The above graph shows the number of jobs of the major sizes run in the period 1st to 31st December 2003.

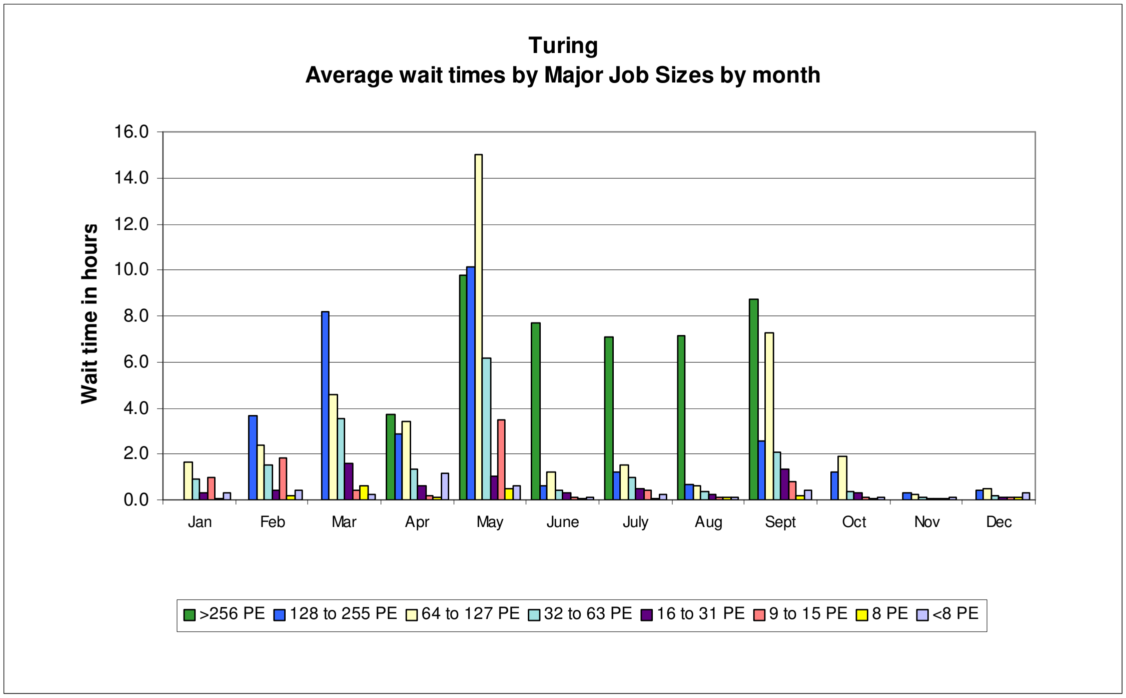
Job statistics for Green:



The above graph shows the number of jobs of the major sizes run in the period 1st to 31st December 2003.

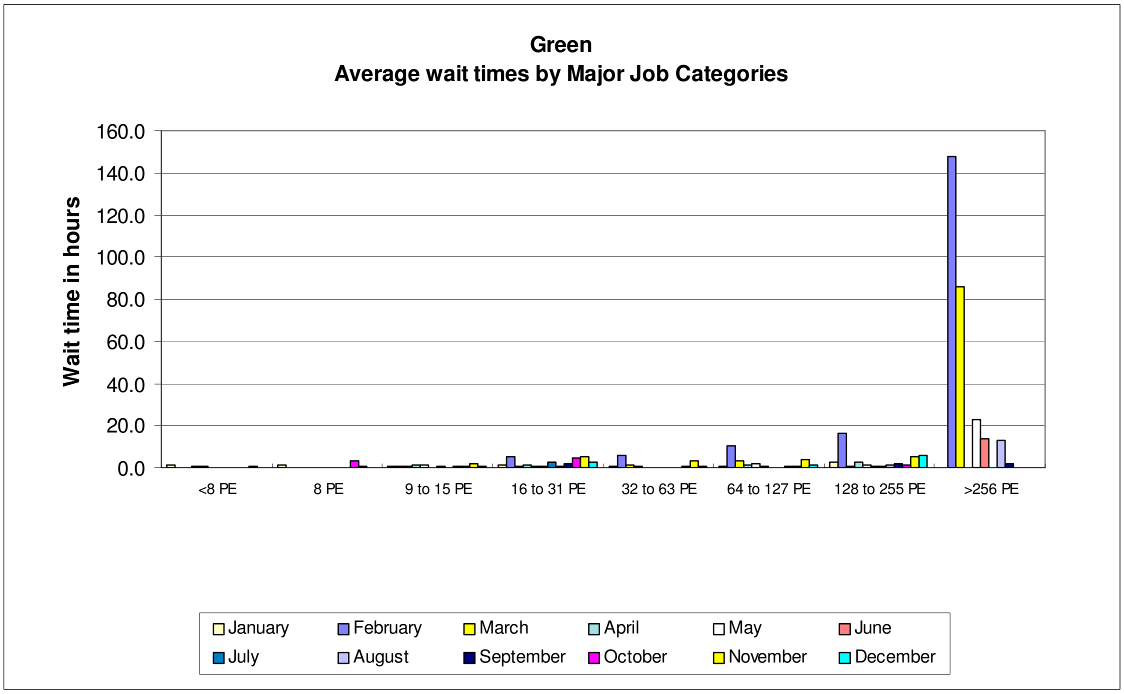
The next graph shows the wait times in hours on Turing for the major categories of jobs.

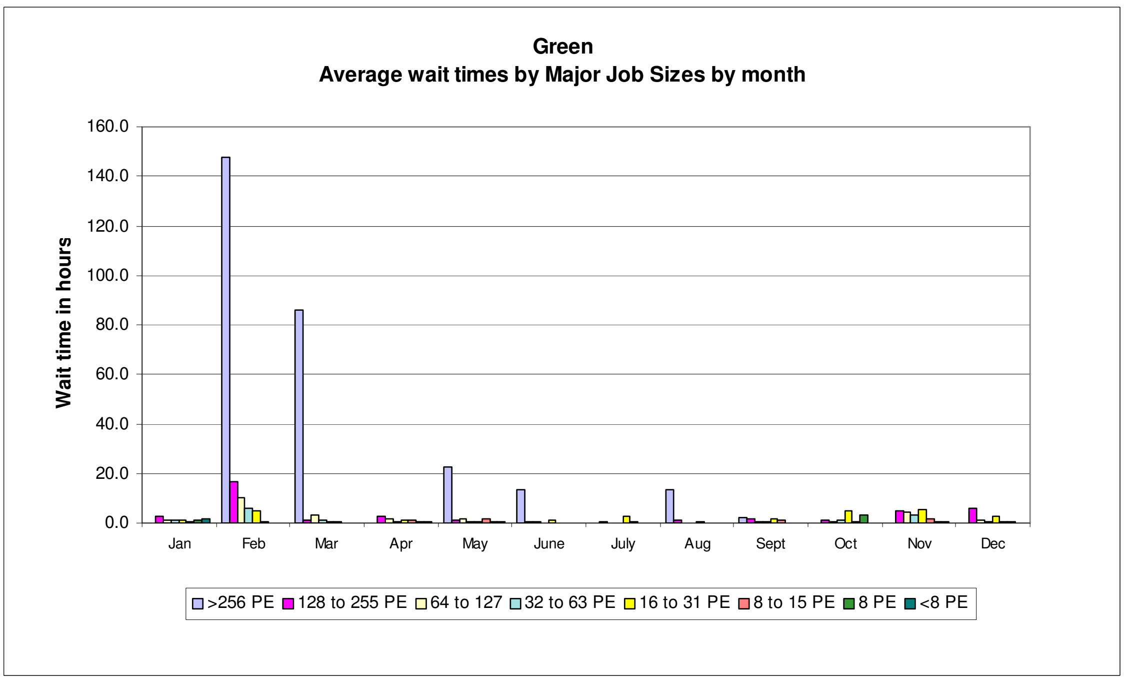




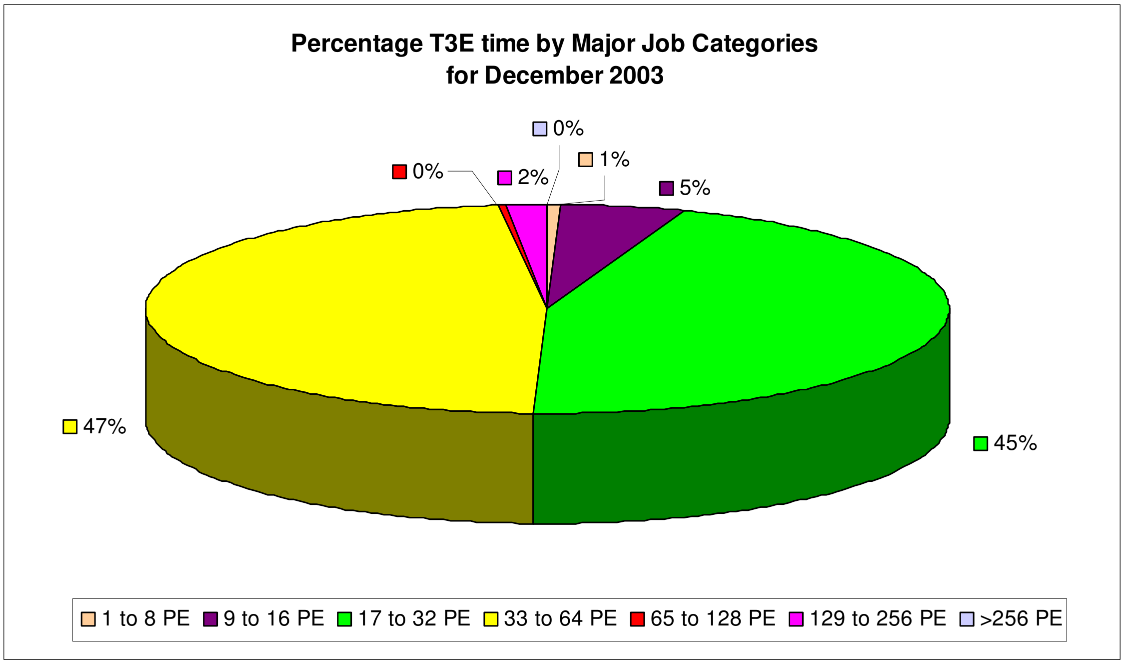
The chart above shows the average wait time trend on Turing over the last 12 months.

The next graph shows the wait times in hours on Green for the major categories of jobs:

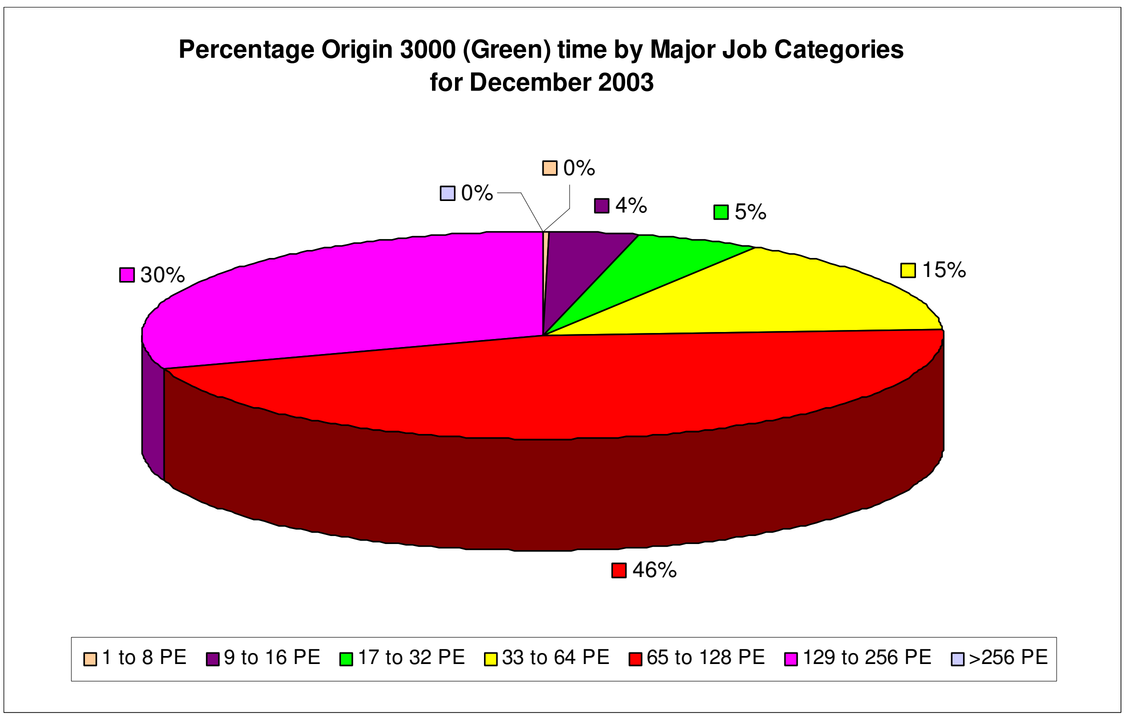




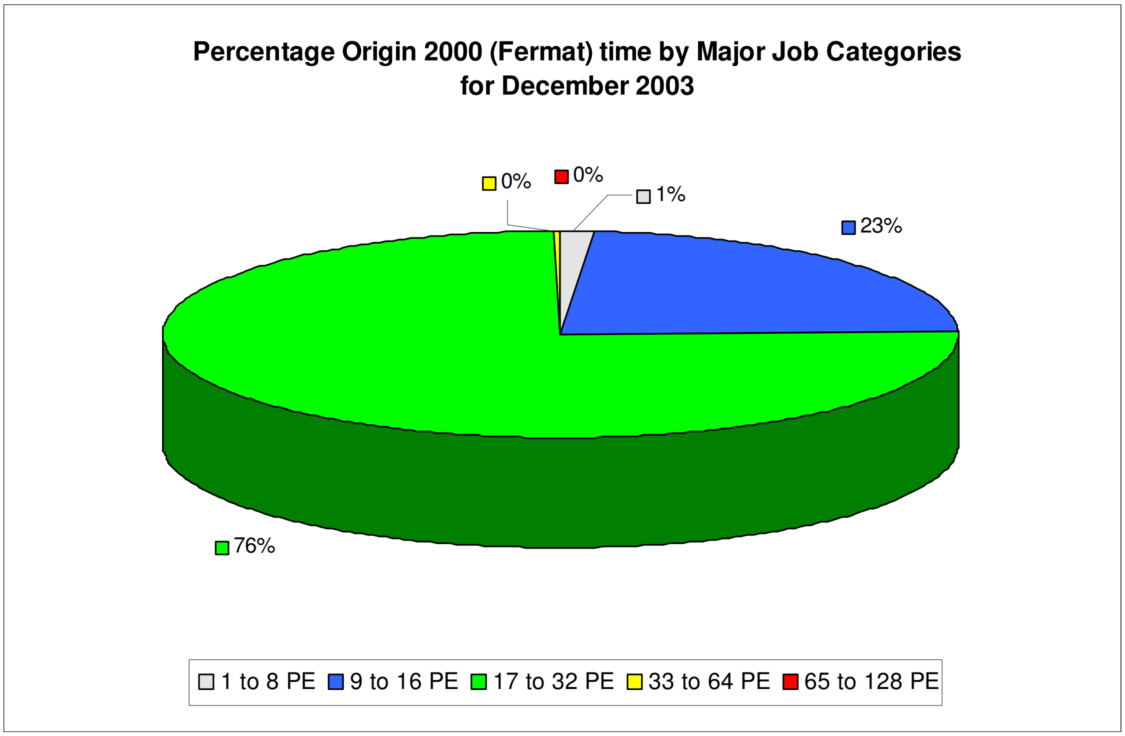
The chart above shows the average wait time trend on Green for the last 12 month period.



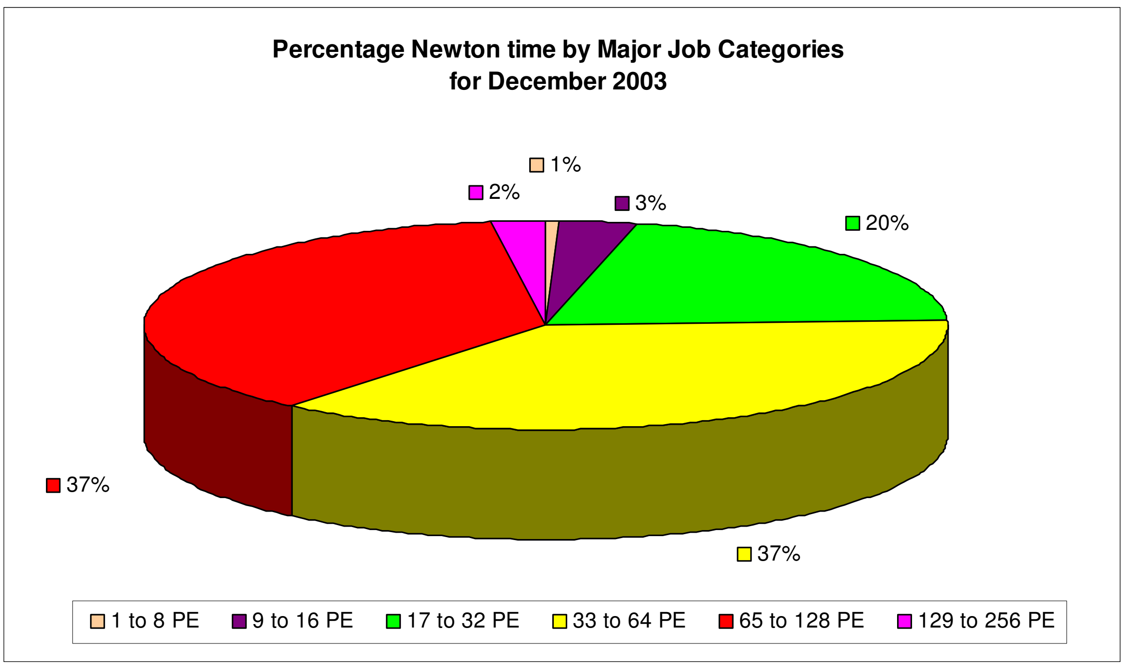
The workload on Turing for December was reasonably balanced across mid-range PE usage.



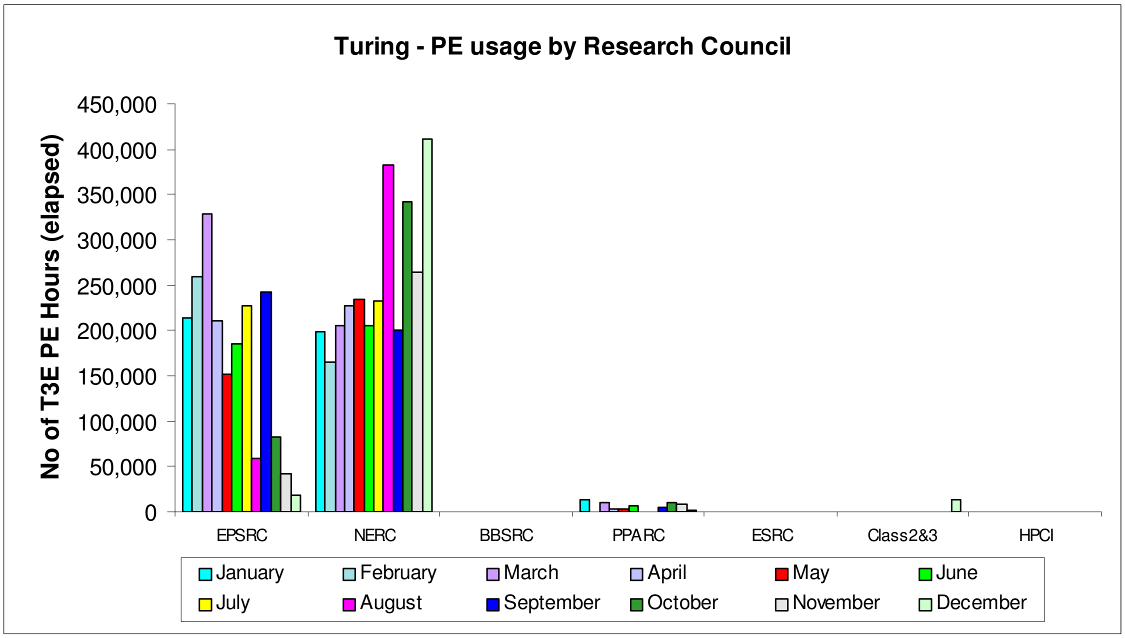
The workload on Green was reasonably spread in December, although the 65 to 128 PE range saw the greatest concentration at 46% of total usage.



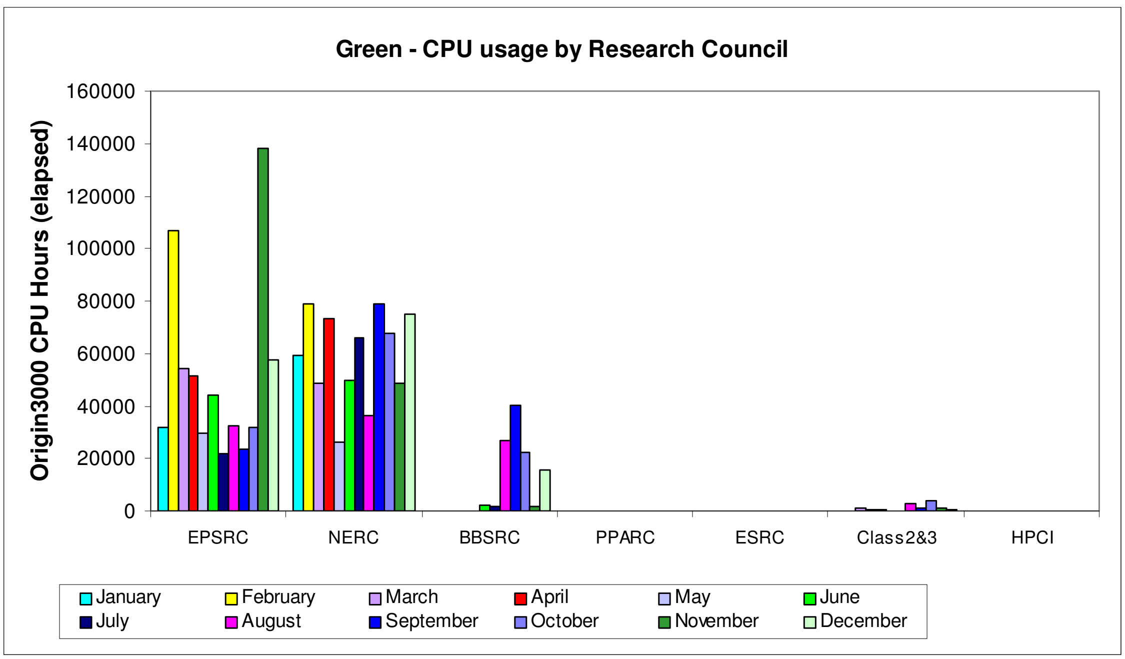
The greatest proportion of work on Fermat for December was in the 17 to 32 PE range at 76% of the total usage.



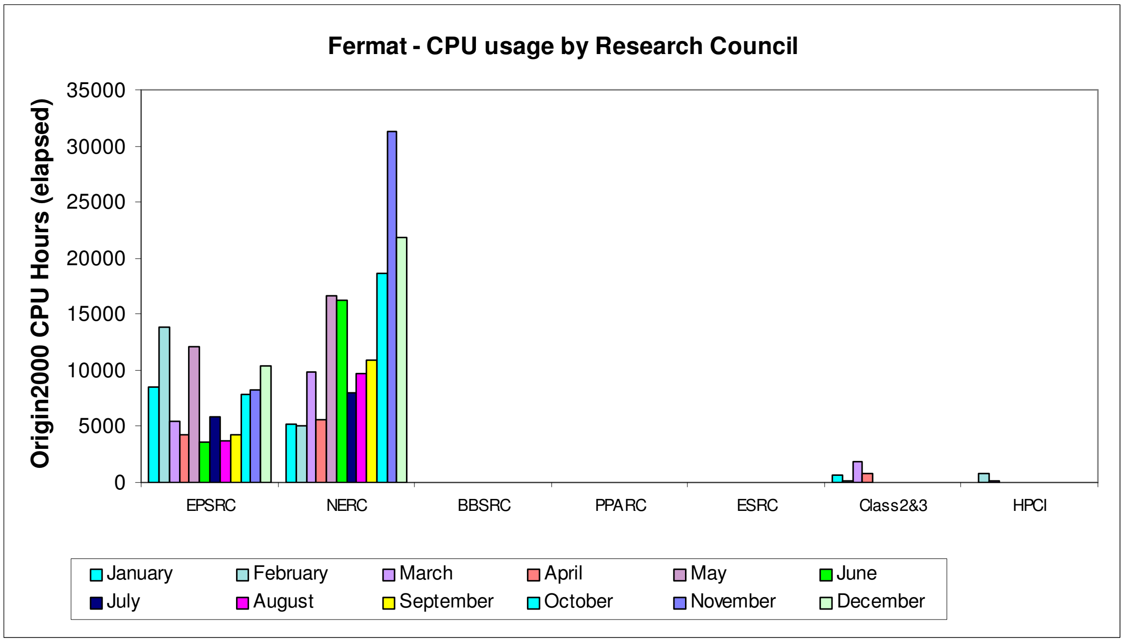
December saw a general spread of work on the new Altix system Newton across the PE ranges.



Turing PE usage is shown by Research Council during the past 12 months of service in the above chart.



The above chart shows Green CPU usage by Research Council during the past 12 months of service.

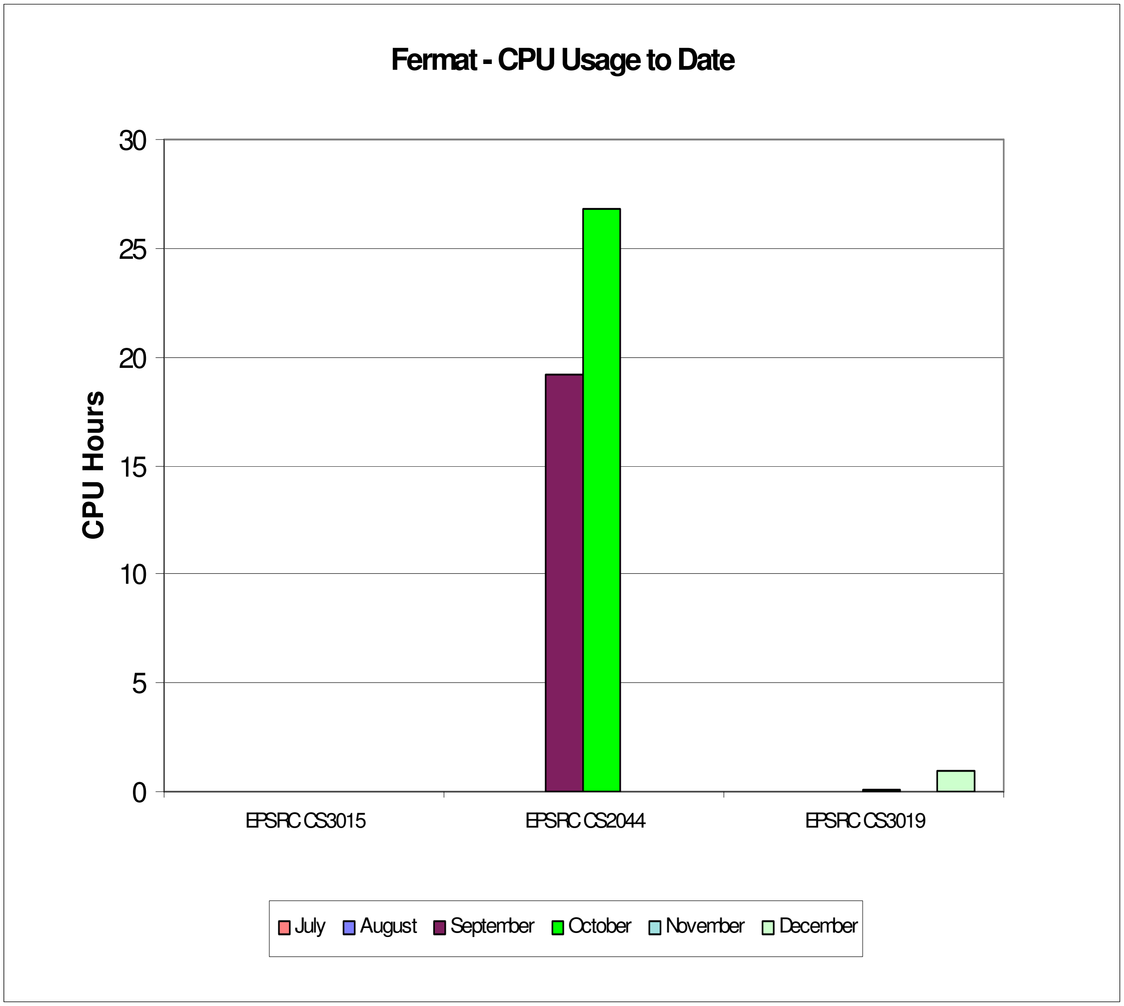


Origin 2000 CPU usage is shown by Research Council during the past 12 months of service in the above chart.

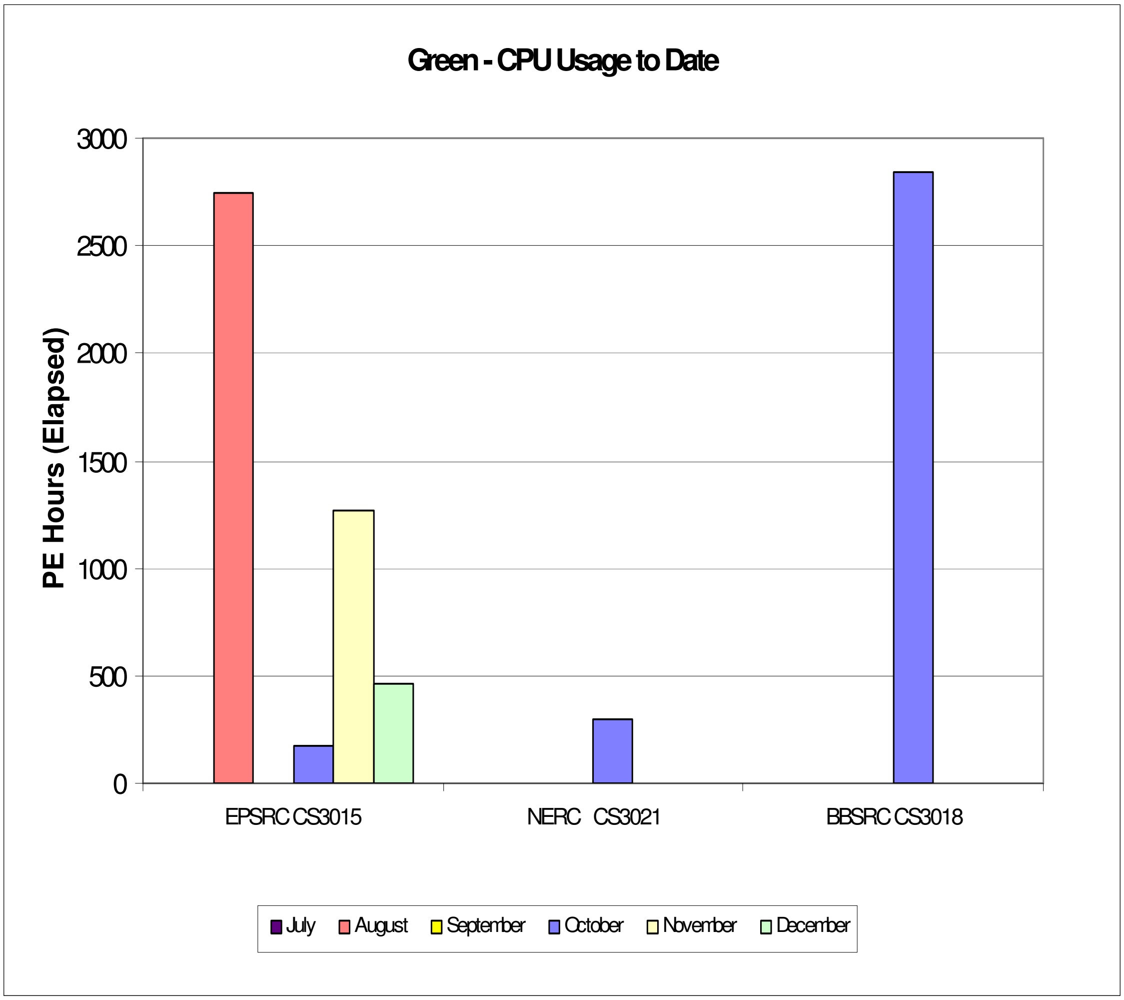
4.7 Class 2 & 3 Usage Charts

The next series of charts show the usage of the system by the class 2 & class 3 users. The usage is shown by project and identifies the Research Council of the individual projects.

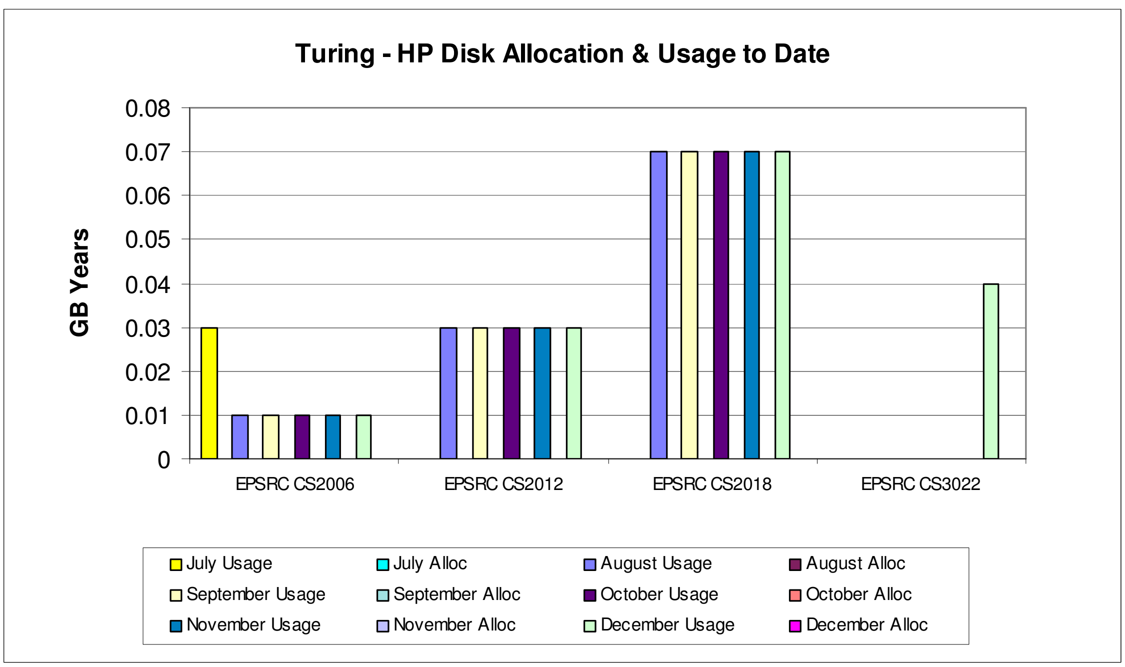
There is currently no PE usage of the Turing system by class 2 and class 3 users.



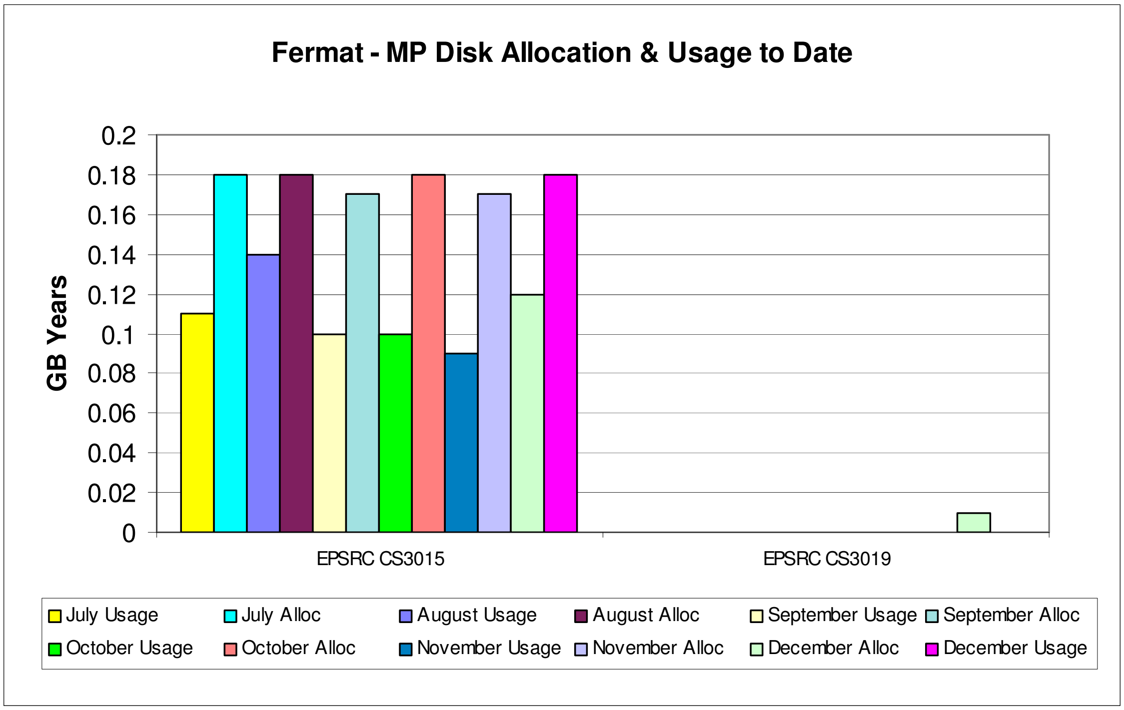
The above chart shows the CPU usage of the Fermat system by class 2 and class 3 users.



The above chart shows the CPU usage of Green by class 2 and class 3 users.



The above chart shows the most significant disk allocations on the Turing system for class 2 and class 3 users.

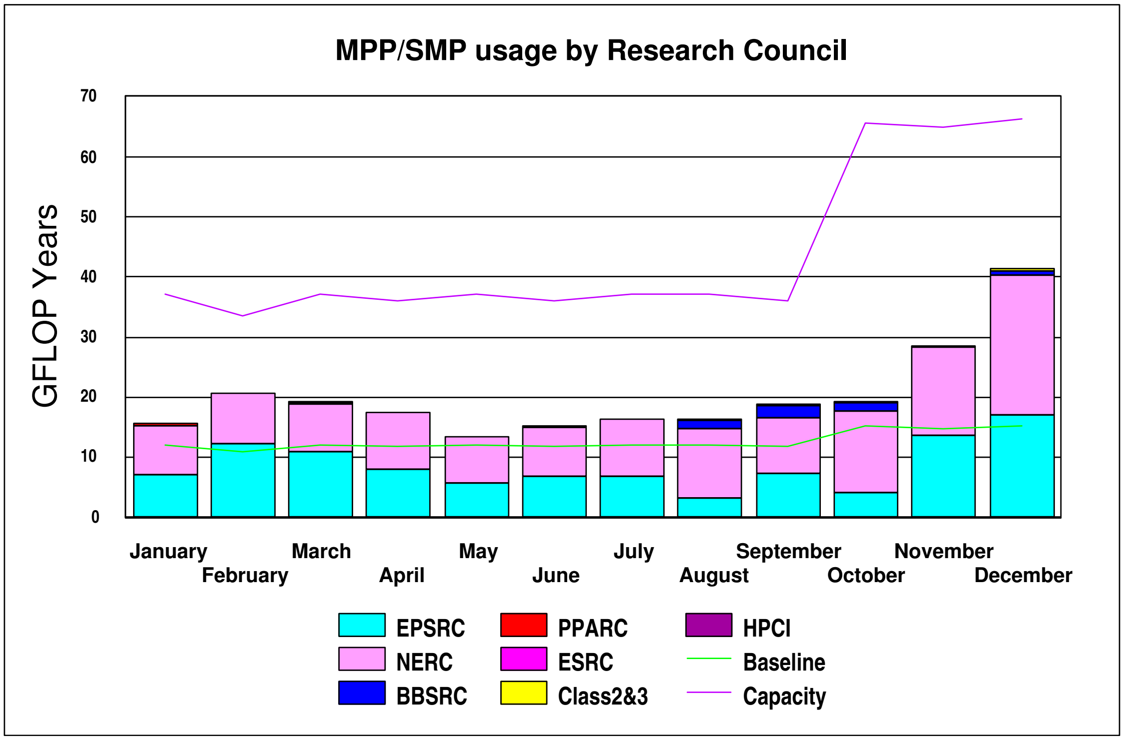


The above chart shows the most significant disk allocations on the Fermat system for class 2 and class 3 users. There is currently no HSM usage by class 2 and class 3 users.

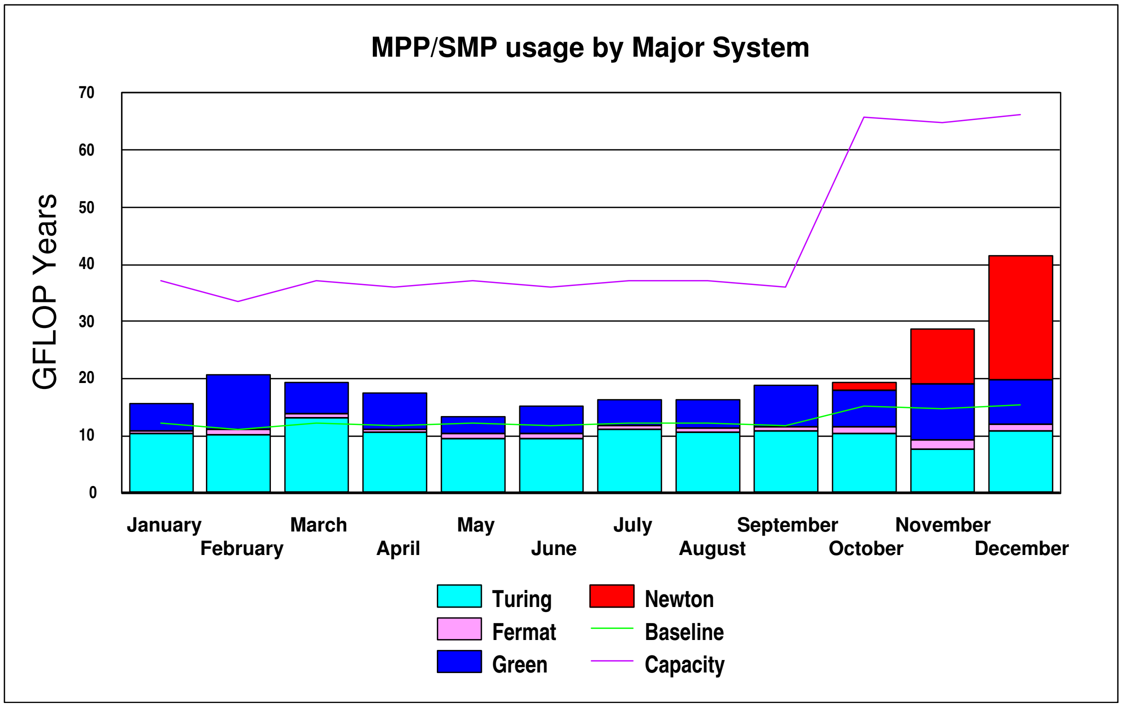
4.9 Charts of Historical Usage

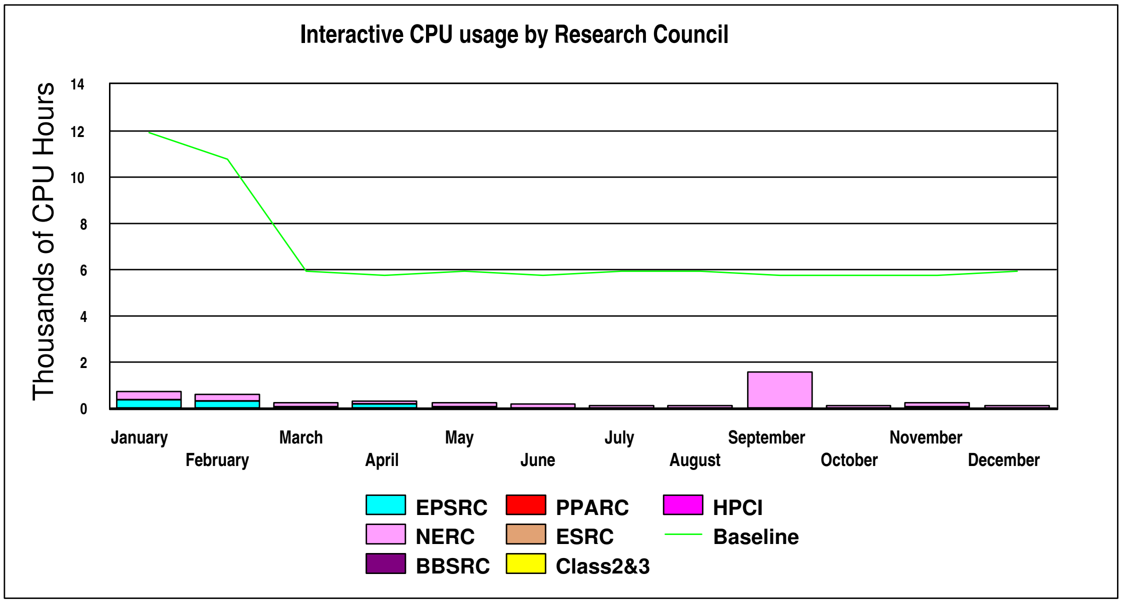
In all the Usage Charts, the baseline varies dependant on the number of days in each month, within a 365-day year.

The graph below shows the GFLOP Year utilisation by Research Council for the previous 12 months, showing the raise in baseline and capacity with the introduction of the new Altix system Newton.



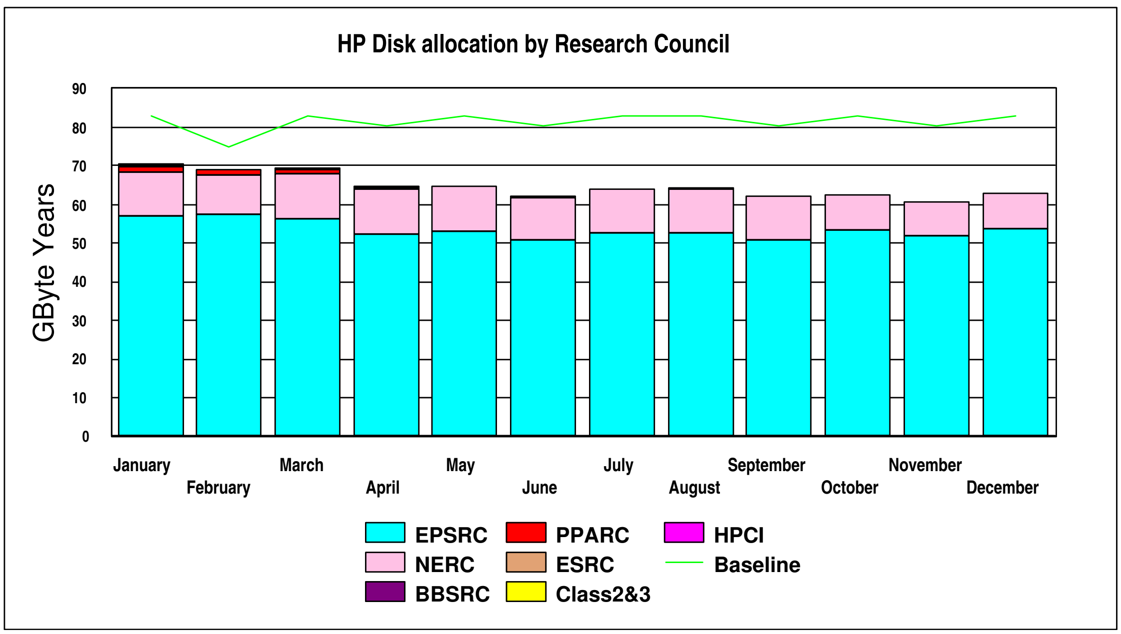
The graph below shows the historic SMP/MPP usage on the major systems.



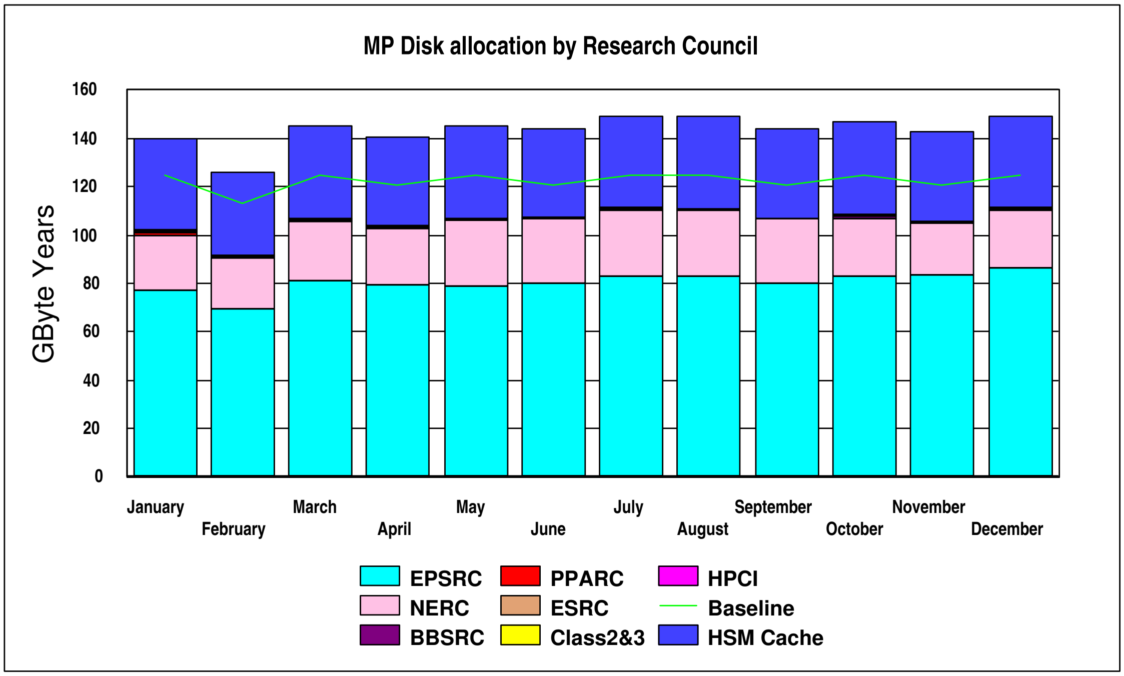


The above graph shows the historic interactive usage of the 'baseline' Fermat system (equivalent to 16@250Mhz CPUs) up to the end of February 2003, at which point the interactive usage was transferred to Wren and Fermat became a batch-only system. Eight of the higher speed 500Mhz CPUs in the Origin 300 system (Wren) deliver the baseline capacity equivalent to that which was previously available on Fermat for interactive usage.

The next series of graphs illustrates the usage of the disk and HSM resources of the system.

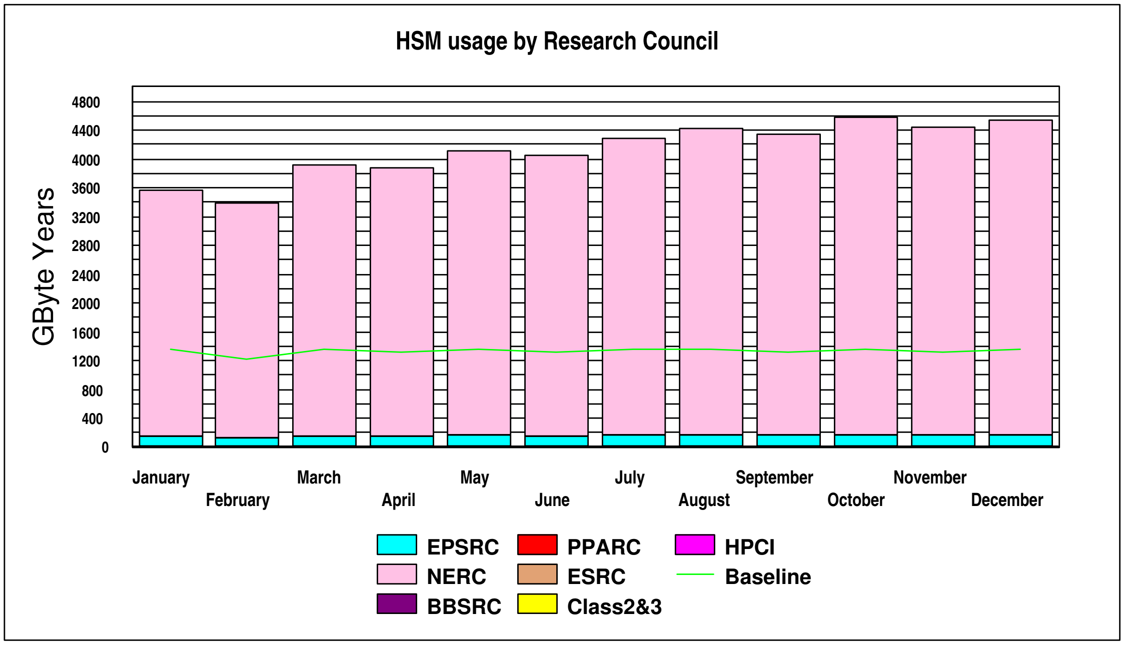


The preceding graph illustrates the historic allocation of the High Performance Disk on Turing.



The graph above illustrates the historic allocation of the Medium Performance Disk on Fermat.

The graph below shows the historic HSM usage by Research Council funded projects, now above Baseline at 48 Terabytes. The primary usage is for NERC.



4.8 Guest System Usage Charts

There is currently no Guest System usage.

5. Capability Incentives

Capability incentives were historically given on the T3E system Turing for jobs of 512 PEs and above. In July 2003 it was announced that discounts for capability jobs available on all CSAR systems had been aproved to include the SGI Origin 3000 system (Green) and the new SGI Altix 3700 system (Newton).

These capability incentives were agreed with the Research Councils to encourage capability usage of the national supercomputers for greater scientific achievement, and offer the following discounts:

System	No of Processors	Discount
newton	192+ CPUs	15% discount
newton	128+ CPUs	10% discount
green	384+ CPUs	15% discount
green	256+ CPUs	10% discount
turing	512+ CPUs	10% discount

Discounts are given in the form of refunded Service Tokens.

Changes in usage patterns will be monitored and, subject to reviews, CfS reserve the right to change the incentives at any future date.

The following table displays the capability incentive discounts granted for December.

Service Tokens Refunded: December 2003 Usage							
System	Consortia						Total
	cse085	cse075	csn003				
Turing 512+ PEs							0
Green 256+ PEs							0
Green 384+ PEs							0
Newton 128+ PEs	18.74						18.74
Newton 192+ PEs							0
Total Tokens							**18.74**

6. Service Status, Issues and Plans

6.1 Status

The service utilisation in December exceeded baseline.

During the month there was a balanced spread of work across all major systems.

6.2 Issues

Several systems in the CSAR service have suffered some outages during December due to issues with the SAN. These issues were subsequently identified by the vendor, and patches to address the problems encountered have now been applied to the Operating Systems of all affected machines. All systems continue to be closely monitored to ensure maximum stability of the CSAR service.

6.3 Plans

The T3E system Turing was retired at the end of December due to reaching the end of its contractual life. Encouraging results of codes ported over to the new SGI Altix 3700 system Newton have been seen, and work continues on porting further codes.

7. Conclusion

December 2003 saw the overall CPARS rating at Green with the baseline being exceeded by 170.4%.

Continued management attention will be given to maximise the throughput of the Service, whilst balancing as fairly as practicable the shares between Projects and jobs of the varying sizes.

Appendix 1 contains the accounts for December 2003

Appendix 2 contains the Percentage shares by Consortium for December 2003

Appendix 3 contains the Percentage shares by Research Council for December 2003

Appendix 4 contains the Training, Applications and Optimisation support figures to the end of December 2003

Appendix 5 contains a breakdown of resource usage by Consortia to the end of December 2003.

Appendix 6 contains a reference table of the Consortium name, the subject area and the PI name.

Appendix 1

The summary accounts for the month of December 2003 can be found at the URL below

http://www.csar.cfs.ac.uk/admin/accounts/summary.shtml

Appendix 2

Percentage PE time per consortia for Turing in December 2003

Consortia	% Machine Time
CSE084	0.00
CSE086	1.10
CSE053	2.27
CSE064	0.27
CSE085	0.53
CSE061	0.00
CSE009	0.00
CSE071	0.00
CSE066	0.00
CSN001	0.00
CSN003	92.29
CSN006	0.00
CSN015	0.01
CSP007	0.39
CS3019	0.00
CS3022	3.15

Percentage CPU time per consortia for Fermat in December 2003

Consortia	% Machine Time
CSE084	0.00
CSE086	3.70
CSE053	0.62
CSE064	0.00
CSE085	0.00
CSE061	27.85
CSE009	0.00
CSE071	0.02
CSE066	0.00
CSN001	28.46
CSN003	39.30
CSN006	0.00
CSN015	0.00
CSP007	0.00
CS3019	0.00
CS3022	0.00

Percentage CPU time per consortia for Green in December 2003

Consortia	% Machine Time
CSE084	0.00
CSE086	12.05
CSE098	0.01
CSE053	0.83
CSE063	1.87
CSE064	4.39
CSE085	13.81
CSE061	0.00
CSE071	0.46
CSE066	0.93
CSE075	4.50
CSE076	0.00
CSN001	2.65
CSN003	27.75
CSN006	6.57
CSN015	13.48
CSB005	10.39
CSP007	0.00
CS3015	0.31
CS3019	0.00
CS3022	0.00

Percentage CPU time per consortia for Wren in December 2003

Consortia	% Machine Time
CSE084	0.30
CSE086	23.10
CSE098	0.00
CSE053	2.66
CSE063	0.73
CSE064	0.62
CSE085	4.86
CSE061	0.42
CSE071	0.50
CSE066	0.01
CSE075	1.63
CSE076	0.06
CSN001	11.54
CSN003	42.09
CSN006	0.15
CSN015	10.67
CSB005	0.21
CSP007	0.04
CS3015	0.04
CS3019	0.48
CS3022	0.00

Percentage CPU time per consortia for Newton in December 2003

Consortia	% Machine Time
CSEdl1c	0.98
CSE064	0.01
CSE085	0.88
CSE076	56.41
CSN001	0.09
CSN003	38.80
CSN006	0.53
CSB006	0.00
CSEHPCX	0.02

Appendix 2

Percentage disc allocation by Consortia for Turing in December 2003

Consortia	%Allocation
CSE002	30.82
CSE055	0.13
CSE057	0.05
CSE084	1.62
CSE086	10.08
CSE098	0.00
CSE040	0.02
CSE041	0.06
CSE050	0.40
CSE053	0.56
CSE063	1.35
CSE064	0.03
CSE072	0.27
CSE085	20.25
CSE082	0.00
CSE061	0.27
CSE009	7.22
CSE066	2.92
CSE075	7.91
CSE076	0.14
CSE036	0.03
HPCI Daresbury	0.13
HPCI Edinburgh	0.13
CSN001	2.70
CSN003	4.18
CSN005	47.25
CSN006	6.75
CSN012	0.00
CSN015	0.40
CSN044	0.03
CSN052	0.13
CSB005	0.00
CS3015	0.00

Percentage disc allocation by Consortia for Fermat in December 2003

Consortia	%Allocation
CSE002	7.54
CSE055	0.00
CSE057	0.00
CSE084	1.53
CSE086	7.62
CSE098	0.22
CSE040	0.38
CSE041	3.97
CSE050	0.55
CSE053	0.46
CSE063	0.00
CSE064	0.07
CSE072	0.00
CSE085	8.40
CSE082	7.63
CSE061	0.15
CSE009	1.53
CSE066	0.04
CSE075	36.98
CSE076	0.42
CSE036	0.01
HPCI Daresbury	0.04
HPCI Edinburgh	0.07
CSN001	11.46
CSN003	2.92
CSN005	0.00
CSN006	2.61
CSN012	0.15
CSN015	1.75
CSN036	0.00
CSN052	2.29
CSB005	0.61
CS3015	0.16

Percentage usage of HSM by Consortium for December 2003

Consortium	% Usage
CSE086	0.03
CSE041	0.16
CSE053	0.05
CSE063	0.58
CSE064	0.20
CSE085	2.11
CSE082	0.00
CSE075	0.49
CSN001	22.08
CSN003	68.98
CSN006	0.01
CSN015	2.97
CSN036	2.32
CSN044	0.02

Percentage PE usage on Turing by Research Council for December 2003

Research Council	% Usage
EPSRC	7.31
HPCI	0.00
NERC	92.29
BBSRC	0.00
ESRC	0.00
PPARC	0.39

Percentage CPU usage on Fermat by Research Council for December 2003

Research Council	% Usage
EPSRC	32.24
HPCI	0.00
NERC	67.76
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage PE usage on Green by Research Council for December 2003

Research Council	% Usage
EPSRC	39.16
HPCI	0.00
NERC	50.45
BBSRC	10.39
ESRC	0.00
PPARC	0.00

Percentage CPU usage on Wren by Research Council for December 2003

Research Council	% Usage
EPSRC	35.24
HPCI	0.00
NERC	64.46
BBSRC	0.25
ESRC	0.00
PPARC	0.04

Percentage Disc allocated on Turing by Research Council for December 2003

Research Council	% Allocated
EPSRC	85.57
HPCI	0.27
NERC	14.18
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage Disc allocated on Fermat by Research Council for December 2003

Research Council	% Allocated
EPSRC	78.09
HPCI	0.12
NERC	21.18
BBSRC	0.62
ESRC	0.00
PPARC	0.00

Percentage Disc allocated as SAN UHP by Research Council for December 2003

EPSRC	0.00
HPCI	0.00
NERC	0.00
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage Disc allocated as SAN HV by Research Council for December 2003

EPSRC	0.00
HPCI	0.00
NERC	100.00
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage HSM usage by Research Council for December 2003

Research Council	% usage
EPSRC	3.63
HPCI	0.00
NERC	96.37
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Appendix 4

The following tables show the training and support resource usage by current consortia in person days to the current month.

Project	PI Name	Subject	Liaison Officer	Support Bought	Apps Support	Total Apps Support	Opt Support	Total Opt Support	Total Support Used	Training Bought	Training Used
csedl1	Blake, R									6	6
cse050	Bradley, D (Prof)	Flame Instabilities: their influence on turbulent combustion & incorporation in mathematical models.		20						10	
cse055	Staunton, J (Dr)	Ab-initio theory of magnetic anisotropy in transition metal ferromagnets	Andrew Jones	5						10	
cse057	Krushelnick, K (Dr)	Relativistic Particle Generation from Ultra-Intense Laser Plasma Interactions	Andrew Jones	20						10	
cse060	Robb, M (Prof)	CCP1 Renewal plus falgship project on Car-Parrinello in Chemistry	Neil Stringfellow	10						10	1
cse061	Imregun, M (Prof)	Casing treatment modelling for the investigation of stall, flutter and noise mechanisms in turbomachinery compressors.		5						5	
cse063	Sandham, N (Prof)	Computational Aerocaustics for Turbulent Plane Jets	Adrian Tate	30						10	
cse064	Leschziner, M (Prof)	Improvement of predictive performance of anisotropy-resolving turbulence models in post-reattachment recovery region of separated flow using Large Eddy Simulation	Mike Pettipher	10						8	
cse066	Coveney, P V (Prof)	New clay-polymer nanocomposites using diversity-discovery methods: synthesis, processing and testing	Neil Stringfellow	21						6	3
cse071	Iacovides (Dr)	The Practical Computation of Three-Dimensional Time-Dependent Turbulent Flows in Rotating Cavities	Mike Pettipher	5	0.5	0.5			0.5	6	2
cse072	Karlin, V (Dr)	Structure & Dynamics of Unstable Premixed Laminar Flames	Jon Gibson	18						9	7
cse074	Luo (Dr)	Consortium on Computational Combustion for Engineering Applications	Jon Gibson								
cse075	Coveney, PV (Dr)	The Reality Grid - a tool for investigating condensed matter & materials	Neil Stringfellow	14		5			5	14	

cse076	Briddon, P (Dr)	HPC facilities for the first principles simulation of covalently bonded materials	Adrian Tate	20				11	11		
cse077	Kronenburg, A (Dr)	Combustion Model Development for Large-Eddy Simulation of Non-Premixed Reactive Flows.								2	
cse082	Barakos, G (Dr)	CFD Study of Three-Dimensional Dynamic Shelf		5						1	
cse084	Needs, R (Dr)	The Consortium for Computational Quantum Many-Body Theory	Adrian Tate	19							10
cse085	Sandham, N (Prof)	UK Turbulence Consortium	Adrian Tate	15			2	2	2	8	8
cse086	Taylor, K (Prof)	Multiphoton, Electron Collisions and BEC HPC Consortium 2002-2004	Kevin Roy	35				5	5	116	
cse089	Wiercigroch, M (Dr)	Nonlinear Dynamics & Rock Contact Fracture Mechanics in Modelling of Vibration Enhanced Drilling	Keith Taylor	15						7	
cse098	De Souza M M (Dr)	Indium interactionsin silicon for ULSI technologies		5						5	
cse106	Augarde (Dr)	Parametric Studies of multiple tunnels		25						10	
cse108	Holden, AV (Prof)	Large-scale parallelisation of electro-physiological & mechanical cardiac virtual tissues		10						6	
cse110	Leach, S A (Dr)	Application of HE Computing to Develop Complex Stochastic Models to aid Public Health & National Operational Responses to Infectious Disease Threats		30						25	
cse116	John, N (Dr)	An advanced environment for enabling visual supercomputing		16						8	
cseetf	Coveney, P V (Prof)	ETF – Teragrid project									
csn001	Webb, D J (Dr)	OCCAM	Zoe Chaplin	70.5		1		58	61	20	3
csn003	O'Neill, A (Prof)	UGAMP	Zoe Chaplin	4.8				4	1	34	27
csn006	Price, D (Dr)	HPC for Mineral Physics	Zoe Chaplin								
csn015	Proctor, R (Dr)	A Testbed for Zooplankton Models of the Irish Sea	Zoe Chaplin	20		2			2	10	3
csn044	Steenman-Clark, L (Dr)	Earth Observation Project	Zoe Chaplin								
csn050	Challenor	The probability of rapid climate change									

csn052	Mackay, R (Prof)	Quantifying the scaling of physical transport in structured heterogeneous porous media.	Zoe Chaplin							5	5
csn056	Hosskins, B (Prof)	Atmospheric water vapour budget & its relevance to the thermohaline circulation.									
csn057	Guilyardi, E (Dr)	Role of salinity in ocean circulation and climate response to greenhouse gas forcing									
Csn058	Tudhope, A (Dr)	Improving ability to predict rapid changes in the el nino southern oscillation climatic phenomenon									
csb005	Haley, C	Genetic Analysis of Complex Traits		10							
csb006	Sansom, M (Prof)	DFT calculations for ion channels and transport proteins	Neil Stringfellow								
csp006	Jain, R (Dr)	Numerical Simulation of forced magnetic reconnection in the solar corona	Jon Gibson							12	
csp007	Hibbert, A (Prof)	A Programme for Atomic Physics for Astrophysics at Queen's University Belfast (2003-2007)	Kevin Roy								
HPCID	Allan, R (Dr)									1	1
HPCIE	Henty, D (Dr)										
cs2042	Smeed, DA (Dr)	A temporally continuous high-resolution record of global sea level during the Holocene	Zoe Chaplin								
cs2043	Theodoropoulos K (Dr)	Design of Microchannel structures for Microreactor applications									
cs2044	Mota-Furtado, F (Dr)	Statistical Properties of Quantum Transport									
cs3015	Hampshire, D (Dr)	High Performance Computational Solutions for the Ginzburg-Landau Equations that describe Flux Pinning in High-Field Superconductors	Kevin Roy	2						5	
cs3017	Gross, M (Mr)	Numerical Simulation of Laser Materials Processing	Andrew Jones	3							
cs3019	Bengough (Dr)	Lattice-Boltzmann simulation of water & solute transport in porous media.		2							
cs3022	Clint, M	Evaluation of Grab & Go Computational Models for Grid-based Iterative Eigensolvers									
cs3023	Bryce, Richard	Computer simulation of glycolipids as micellas and bilayers	Neil Stringfellow								
cs4001	White, P										
cs4002	Cooper, A (Miss)										

Appendix 5

The following table shows resource utilisation by Consortia to the end of December 2003.

cs2042 Smeed
Last Trade: Tue Jul 1 11:36:05 2003
Usage:
0.0 of 100.0 Hour Wren CPU (0.0 of 5.0 G.S.T), 0.0%
0.0 of 2300.0 Hour SMP CPU (0.0 of 89.4 G.S.T), 0.0%
0.0 of 1.0 GByteYear MP Disk (0.0 of 3.7 G.S.T), 0.0%
Total usage for project cs2042 0.0 of 98.0 Generic Service Tokens, 0.0%

---

cs2044 Mota-Furtado
Last Trade: Mon Sep 1 09:31:11 2003
Usage:
1.6 of 200.0 Hour Wren CPU (0.1 of 9.9 G.S.T), 0.8%
0.0 of 2.2 GByteYear MP Disk SAN (0.0 of 9.4 G.S.T), 0.0%
45.9 of 2000.0 Hour SMP CPU (1.8 of 77.7 G.S.T), 2.3%
Total usage for project cs2044 1.9 of 97.0 Generic Service Tokens, 1.9%

---

cs3015 Hampshire
Last Trade: Tue Oct 28 10:25:30 2003
Usage:
89.1 of 285.3 Hour Wren CPU (4.4 of 14.1 G.S.T), 31.2%
512.4 of 648.8 Hour SMP CPU (19.9 of 25.2 G.S.T), 79.0%
3.4 of 3.6 GByteYear MP Disk (12.1 of 12.8 G.S.T), 94.4%
10153.8 of 17037.1 Hour Green CPU (530.6 of 890.2 G.S.T), 59.6%
0.0 of 2.0 PersonDay Support (0.0 of 58.8 G.S.T), 0.0%
0.0 of 0.0 Day Training (0.0 of 0.0 G.S.T)
Total usage for project cs3015 567.0 of 1001.2 Generic Service Tokens, 56.6%

---

cs3017 Gross
Last Trade: Mon Jan 13 10:31:13 2003
Usage:
0.0 of 100.3 Hour Wren CPU (0.0 of 5.0 G.S.T), 0.0%
0.0 of 1.3 Hour SMP CPU (0.0 of 0.1 G.S.T), 0.0%
0.0 of 25.0 GByteYear MP Disk (0.0 of 89.3 G.S.T), 0.0%
0.0 of 6075.3 Hour Green CPU (0.0 of 317.4 G.S.T), 0.0%
0.0 of 3.0 PersonDay Support (0.0 of 88.2 G.S.T), 0.0%
Total usage for project cs3017 0.0 of 500.0 Generic Service Tokens, 0.0%

---

cs3019 Bengough
Last Trade: Tue Dec 17 12:55:36 2002
Usage:
0.7 of 360.1 Hour Wren CPU (0.0 of 17.8 G.S.T), 0.2%
1.5 of 10648.7 Hour SMP CPU (0.1 of 413.7 G.S.T), 0.0%
0.0 of 3.0 GByteYear MP Disk (0.0 of 10.7 G.S.T), 0.0%
0.0 of 2.0 PersonDay Support (0.0 of 58.8 G.S.T), 0.0%
Total usage for project cs3019 0.1 of 501.1 Generic Service Tokens, 0.0%

---

cs3022 Clint
Last Trade: re-enabled
Usage:
14032.4 of 13868.4 PEHour MPP PE CPU (339.3 of 335.3 G.S.T), 101.2%

0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T)
0.0 of 500.0 Hour Wren CPU (0.0 of 24.8 G.S.T), 0.0%
0.0 of 1.7 GByteYear MP Disk SAN (0.0 of 7.2 G.S.T), 0.0%
2.5 of 3574.0 Hour Green CPU (0.1 of 186.7 G.S.T), 0.1%
Total usage for project cs3022 339.4 of 554.0 Generic Service Tokens, 61.3%

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csb005 Haley
Last Trade: Tue Dec 9 13:59:13 2003
Usage:
12.4 of 250.0 Hour Wren CPU (0.6 of 12.4 G.S.T), 5.0%
2.5 of 28.5 GByteYear MP Disk (8.9 of 101.6 G.S.T), 8.8%
110181.6 of 111982.0 Hour Green CPU (5757.2 of 5851.3 G.S.T), 98.4%
0.0 of 0.0 PersonDay Support (0.0 of 0.0 G.S.T)
Total usage for project csb005 5766.8 of 5965.3 Generic Service Tokens, 96.7%

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csb006 43/B19843 Sansom
Last Trade: re-enabled
Usage:
0.0 of 0.0 PEHour MPP PE CPU (0.0 of 0.0 G.S.T)
0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T)
0.0 of 4356.6 Hour Newton CPU (0.0 of 667.0 G.S.T), 0.0%
0.1 of 2000.0 Hour Wren CPU (0.0 of 99.1 G.S.T), 0.0%
0.0 of 0.0 GByteYear HP Disk SAN - /d (0.0 of 0.0 G.S.T)
0.0 of 40.5 GByteYear MP Disk SAN (0.0 of 173.7 G.S.T), 0.0%
0.0 of 1.0 Hour SMP CPU (0.0 of 0.0 G.S.T), 0.1%
0.0 of 60000.0 Hour Green CPU (0.0 of 3135.1 G.S.T), 0.0%
Total usage for project csb006 0.0 of 4074.9 Generic Service Tokens, 0.0%

CSE001 - Admin users
Last Trade: Fri Oct 8 15:16:30 1999
Usage:
0.0 of 12.4 PEHour MPP PE CPU (0.0 of 0.3 G.S.T), 0.0%
0.1 of 0.1 GByteYear HP Disk (0.4 of 0.5 G.S.T), 72.9%
Total usage for project cse001 0.4 of 0.8 Generic Service Tokens, 46.8%

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cse040 GR/M84350 Badcock
Last Trade: re-enabled
Usage:
18.9 of 5000.0 PEHour MPP PE CPU (0.5 of 120.9 G.S.T), 0.4%
0.4 of 6.0 GByteYear HP Disk (2.5 of 35.8 G.S.T), 6.9%
8.3 of 6.8 GByteYear MP Disk (29.7 of 24.4 G.S.T), 121.8%
0.0 of 2.5 PersonDay Support (0.0 of 72.2 G.S.T), 0.0%
0.0 of 6.3 Day Training (0.0 of 68.1 G.S.T), 0.0%
Total usage for project cse040 32.7 of 321.3 Generic Service Tokens, 10.2%

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cse050 GR/N/38152 Bradley
Last Trade: re-enabled
Usage:
1097.8 of 1059.3 PEHour MPP PE CPU (26.5 of 25.6 G.S.T), 103.6%
0.4 of 0.1 GByteYear HP Disk (2.3 of 0.6 G.S.T), 369.4%
3106.2 of 16375.2 Hour Newton CPU (475.5 of 2506.9 G.S.T), 19.0%
0.0 of 78.4 Hour Wren CPU (0.0 of 3.9 G.S.T), 0.0%
0.3 of 1200.0 Hour SMP CPU (0.0 of 46.6 G.S.T), 0.0%
0.6 of 18.2 GByteYear MP Disk (2.2 of 64.8 G.S.T), 3.3%
0.0 of 4.5 GByteYear HSM/Tape (0.0 of 2.8 G.S.T), 0.0%

0.0 of 20.0 PersonDay Support (0.0 of 588.2 G.S.T), 0.0%
0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0%
Total usage for project cse050 506.6 of 3347.1 Generic Service Tokens, 15.1%

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cse053 GR/R04225 Leschziner
Last Trade: re-enabled
Usage:
153367.3 of 199557.6 PEHour MPP PE CPU (3708.2 of 4825.0 G.S.T), 76.9%
3.8 of 115.0 GByteYear HP Disk (22.8 of 684.5 G.S.T), 3.3%
2.6 of 1579.4 Hour Newton CPU (0.4 of 241.8 G.S.T), 0.2%
4.6 of 78.4 Hour Wren CPU (0.2 of 3.9 G.S.T), 5.9%
272.6 of 13900.0 Hour SMP CPU (10.6 of 540.0 G.S.T), 2.0%
5.6 of 85.0 GByteYear MP Disk (20.0 of 303.6 G.S.T), 6.6%
16.4 of 100.0 GByteYear HSM/Tape (10.3 of 62.8 G.S.T), 16.4%
27625.3 of 52751.5 Hour Green CPU (1443.5 of 2756.4 G.S.T), 52.4%
0.0 of 15.0 PersonDay Support (0.0 of 441.2 G.S.T), 0.0%
0.0 of 8.0 Day Training (0.0 of 86.0 G.S.T), 0.0%
Total usage for project cse053 5216.0 of 9945.2 Generic Service Tokens, 52.4%

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cse055 GR/N66810 Staunton
Last Trade: Wed Dec 10 10:21:59 2003
Usage:
8840.4 of 8840.4 PEHour MPP PE CPU (213.7 of 213.7 G.S.T), 100.0%
2.5 of 2.7 GByteYear HP Disk (14.8 of 15.9 G.S.T), 92.6%
0.0 of 24.4 Hour Wren CPU (0.0 of 1.2 G.S.T), 0.0%
0.0 of 0.1 GByteYear MP Disk SAN (0.0 of 0.5 G.S.T), 0.0%
0.0 of 9680.1 Hour SMP CPU (0.0 of 376.1 G.S.T), 0.0%
0.0 of 0.7 GByteYear MP Disk (0.0 of 2.4 G.S.T), 0.0%
0.0 of 5.0 PersonDay Support (0.0 of 147.1 G.S.T), 0.0%
0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0%
Total usage for project cse055 228.5 of 864.5 Generic Service Tokens, 26.4%

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cse057 GR/R23909 Krushelnick
Last Trade: Fri Sep 7 11:39:20 2001
Usage:
2310.0 of 86751.6 PEHour MPP PE CPU (55.9 of 2097.5 G.S.T), 2.7%
1.0 of 30.0 GByteYear HP Disk (5.7 of 178.6 G.S.T), 3.2%
1.7 of 62.2 Hour SMP CPU (0.1 of 2.4 G.S.T), 2.7%
0.5 of 462.7 Hour Green CPU (0.0 of 24.2 G.S.T), 0.1%
0.0 of 20.0 PersonDay Support (0.0 of 588.2 G.S.T), 0.0%
0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0%
Total usage for project cse057 61.6 of 2998.5 Generic Service Tokens, 2.1%

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cse060 GR/R17058 Robb
Last Trade: Fri Jul 11 09:24:59 2003
Usage:
113625.7 of 112507.5 PEHour MPP PE CPU (2747.3 of 2720.3 G.S.T), 101.0%
0.0 of 2.0 GByteYear HP Disk (0.0 of 11.9 G.S.T), 0.0%
0.3 of 48.8 Hour Wren CPU (0.0 of 2.4 G.S.T), 0.5%
0.0 of 2.6 GByteYear MP Disk SAN (0.0 of 11.2 G.S.T), 0.0%
14254.4 of 12856.5 Hour Green CPU (744.8 of 671.8 G.S.T), 110.9%
0.0 of 10.0 PersonDay Support (0.0 of 294.1 G.S.T), 0.0%
1.0 of 10.0 Day Training (10.8 of 107.5 G.S.T), 10.0%
Total usage for project cse060 3502.9 of 3819.2 Generic Service Tokens, 91.7%

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cse061 GR/R42672 Imregun
Last Trade: Fri Oct 17 09:11:21 2003
Usage:
1.0 of 5.0 PEHour MPP PE CPU (0.0 of 0.1 G.S.T), 19.1%
1.1 of 1.3 GByteYear HP Disk (6.7 of 7.8 G.S.T), 85.5%
4.0 of 1952.1 Hour Wren CPU (0.2 of 96.7 G.S.T), 0.2%
0.0 of 10.0 GByteYear HP Disk SAN - /d (0.0 of 59.5 G.S.T), 0.0%
23335.7 of 50950.6 Hour SMP CPU (906.6 of 1979.5 G.S.T), 45.8%
1.1 of 64.7 GByteYear MP Disk (4.0 of 231.0 G.S.T), 1.7%
0.0 of 5.0 PersonDay Support (0.0 of 147.1 G.S.T), 0.0%
0.0 of 5.0 Day Training (0.0 of 53.8 G.S.T), 0.0%
Total usage for project cse061 917.5 of 2575.5 Generic Service Tokens, 35.6%

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cse063 GR/R46151 Sandham
Last Trade: Tue Dec 16 10:10:22 2003
Usage:
187813.1 of 187821.7 PEHour MPP PE CPU (4541.1 of 4541.3 G.S.T), 100.0%
21.1 of 25.0 GByteYear HP Disk (125.7 of 148.8 G.S.T), 84.5%
16.1 of 108.4 Hour Wren CPU (0.8 of 5.4 G.S.T), 14.8%
168.0 of 62.9 Hour SMP CPU (6.5 of 2.4 G.S.T), 267.2%
0.0 of 50.0 GByteYear MP Disk (0.0 of 178.6 G.S.T), 0.0%
215.5 of 525.0 GByteYear HSM/Tape (135.4 of 329.8 G.S.T), 41.0%
72465.1 of 124633.0 Hour Green CPU (3786.4 of 6512.3 G.S.T), 58.1%
0.0 of 5.0 PersonDay Support (0.0 of 147.1 G.S.T), 0.0%
0.0 of 0.0 Day Training (0.0 of 0.0 G.S.T)
Total usage for project cse063 8595.9 of 11865.6 Generic Service Tokens, 72.4%

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cse064 GR/R43570 Leschziner
Last Trade: re-enabled
Usage:
56736.5 of 56736.5 PEHour MPP PE CPU (1371.8 of 1371.8 G.S.T), 100.0%
0.6 of 0.5 GByteYear HP Disk (3.3 of 3.2 G.S.T), 102.5%
0.8 of 490.7 Hour Newton CPU (0.1 of 75.1 G.S.T), 0.2%
35.3 of 78.4 Hour Wren CPU (1.7 of 3.9 G.S.T), 45.0%
0.0 of 14.5 GByteYear HP Disk SAN - /d (0.0 of 86.1 G.S.T), 0.0%
12193.7 of 19767.0 Hour SMP CPU (473.7 of 768.0 G.S.T), 61.7%
1.0 of 23.0 GByteYear MP Disk (3.7 of 82.1 G.S.T), 4.5%
30.8 of 250.4 GByteYear HSM/Tape (19.3 of 157.3 G.S.T), 12.3%
42827.0 of 50263.4 Hour Green CPU (2237.8 of 2626.4 G.S.T), 85.2%
0.0 of 10.0 PersonDay Support (0.0 of 294.1 G.S.T), 0.0%
2.0 of 8.0 Day Training (21.5 of 86.0 G.S.T), 25.0%
Total usage for project cse064 4133.1 of 5554.0 Generic Service Tokens, 74.4%

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cse066 GR/R30907 Coveney
Last Trade: re-enabled
Usage:
72794.8 of 87981.1 PEHour MPP PE CPU (1760.1 of 2127.3 G.S.T), 82.7%
23.0 of 90.0 GByteYear HP Disk (136.7 of 535.7 G.S.T), 25.5%
0.0 of 78.4 Hour Wren CPU (0.0 of 3.9 G.S.T), 0.1%
2389.1 of 14900.0 Hour SMP CPU (92.8 of 578.9 G.S.T), 16.0%
17.4 of 18.0 GByteYear MP Disk (62.1 of 64.5 G.S.T), 96.3%
14839.9 of 64652.8 Hour Green CPU (775.4 of 3378.2 G.S.T), 23.0%
0.0 of 21.0 PersonDay Support (0.0 of 617.6 G.S.T), 0.0%
3.0 of 6.0 Day Training (32.3 of 64.5 G.S.T), 50.0%
Total usage for project cse066 2859.4 of 7370.6 Generic Service Tokens, 38.8%

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cse071 GR/R23657 Iacovides
Last Trade: Wed Jul 23 10:08:16 2003
Usage:
1.7 of 223.3 Hour Wren CPU (0.1 of 11.1 G.S.T), 0.7%
0.3 of 16.6 GByteYear MP Disk SAN (1.3 of 71.4 G.S.T), 1.8%
5.7 of 42708.5 Hour SMP CPU (0.2 of 1659.3 G.S.T), 0.0%
1921.4 of 46991.9 Hour Green CPU (100.4 of 2455.4 G.S.T), 4.1%
0.0 of 5.0 PersonDay Support (0.0 of 147.1 G.S.T), 0.0%
2.0 of 6.0 Day Training (21.5 of 64.5 G.S.T), 33.3%
Total usage for project cse071 123.5 of 4408.8 Generic Service Tokens, 2.8%

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cse072 GR/R66692 Karlin
Last Trade: Fri Dec 12 13:42:57 2003
Usage:
41583.1 of 41583.1 PEHour MPP PE CPU (1005.4 of 1005.4 G.S.T), 100.0%
0.9 of 0.8 GByteYear HP Disk (5.2 of 4.5 G.S.T), 114.5%
0.0 of 20478.9 Hour Newton CPU (0.0 of 3135.2 G.S.T), 0.0%
0.0 of 15.7 Hour Wren CPU (0.0 of 0.8 G.S.T), 0.0%
0.0 of 48.0 Hour SMP CPU (0.0 of 1.9 G.S.T), 0.0%
0.0 of 8.0 GByteYear MP Disk (0.0 of 28.6 G.S.T), 0.0%
0.0 of 0.0 GByteYear HSM/Tape (0.0 of 0.0 G.S.T)
0.0 of 18.0 PersonDay Support (0.0 of 529.4 G.S.T), 0.0%
7.0 of 9.0 Day Training (75.3 of 96.8 G.S.T), 77.8%
Total usage for project cse072 1085.8 of 4802.5 Generic Service Tokens, 22.6%

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cse074 GR/R66197 Luo
Last Trade: Thu Dec 18 10:23:19 2003
Usage:
0.0 of 0.0 PEHour MPP PE CPU (0.0 of 0.0 G.S.T)
0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T)
0.0 of 2660.8 Hour Newton CPU (0.0 of 407.3 G.S.T), 0.0%
0.0 of 600.0 Hour SMP CPU (0.0 of 23.3 G.S.T), 0.0%
0.0 of 9.0 GByteYear MP Disk (0.0 of 32.1 G.S.T), 0.0%
Total usage for project cse074 0.0 of 462.8 Generic Service Tokens, 0.0%

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cse075 GR/R67699 Coveney
Last Trade: re-enabled
Usage:
8401.8 of 264758.5 PEHour MPP PE CPU (203.1 of 6401.5 G.S.T), 3.2%
75.5 of 217.0 GByteYear HP Disk (449.4 of 1291.5 G.S.T), 34.8%
51.4 of 263.6 Hour Wren CPU (2.5 of 13.1 G.S.T), 19.5%
25.8 of 350.5 GByteYear MP Disk SAN (110.5 of 1504.4 G.S.T), 7.3%
7411.6 of 31500.0 Hour SMP CPU (288.0 of 1223.8 G.S.T), 23.5%
579.6 of 1013.5 GByteYear MP Disk (2069.9 of 3619.6 G.S.T), 57.2%
312.5 of 1959.4 GByteYear HSM/Tape (196.3 of 1230.8 G.S.T), 15.9%
115258.4 of 398388.6 Hour Green CPU (6022.5 of 20816.6 G.S.T), 28.9%
0.0 of 34.0 PersonDay Support (0.0 of 1000.0 G.S.T), 0.0%
5.0 of 14.0 Day Training (53.8 of 150.5 G.S.T), 35.7%
Total usage for project cse075 9396.0 of 37251.9 Generic Service Tokens, 25.2%

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cse076 GR/R66975 Briddon
Last Trade: re-enabled
Usage:
9437.9 of 4161.1 PEHour MPP PE CPU (228.2 of 100.6 G.S.T), 226.8%
1.9 of 1.3 GByteYear HP Disk (11.2 of 8.0 G.S.T), 139.6%
73458.3 of 130832.3 Hour Newton CPU (11245.9 of 20029.4 G.S.T), 56.1%

101.5 of 504.6 Hour Wren CPU (5.0 of 25.0 G.S.T), 20.1%
268169.5 of 267888.9 Hour SMP CPU (10418.8 of 10407.9 G.S.T), 100.1%
10.7 of 23.2 GByteYear MP Disk (38.2 of 82.8 G.S.T), 46.1%
254717.4 of 259907.5 Hour Green CPU (13309.5 of 13580.7 G.S.T), 98.0%
11.0 of 20.0 PersonDay Support (323.5 of 588.2 G.S.T), 55.0%
0.0 of 3670.3 Day Training (0.0 of 39465.1 G.S.T), 0.0%
Total usage for project cse076 35580.4 of 84287.8 Generic Service Tokens, 42.2%

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cse077 GR/R69792 Kronenburg
Last Trade: Thu Oct 17 14:11:09 2002
Usage:
0.0 of 400000.6 PEHour MPP PE CPU (0.0 of 9671.5 G.S.T), 0.0%
0.0 of 22.5 GByteYear HP Disk (0.0 of 134.0 G.S.T), 0.0%
0.0 of 2.0 Day Training (0.0 of 21.5 G.S.T), 0.0%
Total usage for project cse077 0.0 of 9827.0 Generic Service Tokens, 0.0%

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cse082 GR/R79654 Barakos
Last Trade: re-enabled
Usage:
9.9 of 15.7 Hour Wren CPU (0.5 of 0.8 G.S.T), 63.2%
9174.1 of 9264.7 Hour SMP CPU (356.4 of 359.9 G.S.T), 99.0%
63.8 of 15.5 GByteYear MP Disk (228.0 of 55.2 G.S.T), 412.8%
0.3 of 28.7 GByteYear HSM/Tape (0.2 of 18.0 G.S.T), 1.2%
1446.5 of 1379.8 Hour Green CPU (75.6 of 72.1 G.S.T), 104.8%
0.0 of 5.0 PersonDay Support (0.0 of 147.1 G.S.T), 0.0%
0.0 of 1.0 Day Training (0.0 of 10.8 G.S.T), 0.0%
Total usage for project cse082 660.7 of 663.9 Generic Service Tokens, 99.5%

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cse084 GR/R47066 Needs
Last Trade: re-enabled
Usage:
311572.7 of 306225.8 PEHour MPP PE CPU (7533.4 of 7404.1 G.S.T), 101.7%
26.9 of 270.0 GByteYear HP Disk (160.3 of 1607.1 G.S.T), 10.0%
189.7 of 672.1 Hour Wren CPU (9.4 of 33.3 G.S.T), 28.2%
5516.5 of 14384.3 Hour SMP CPU (214.3 of 558.9 G.S.T), 38.4%
37.8 of 60.6 GByteYear MP Disk (135.2 of 216.5 G.S.T), 62.4%
80487.5 of 89153.1 Hour Green CPU (4205.6 of 4658.4 G.S.T), 90.3%
0.0 of 7.0 PersonDay Support (0.0 of 205.9 G.S.T), 0.0%
0.0 of 6.0 Day Training (0.0 of 64.5 G.S.T), 0.0%
Total usage for project cse084 12258.2 of 14748.8 Generic Service Tokens, 83.1%

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cse085 GR/R64957 Sandham
Last Trade: re-enabled
Usage:
1082577.4 of 1082710.0 PEHour MPP PE CPU (26175.3 of 26178.5 G.S.T), 100.0%
328.0 of 321.0 GByteYear HP Disk (1952.2 of 1910.7 G.S.T), 102.2%
1312.2 of 81139.1 Hour Newton CPU (200.9 of 12421.8 G.S.T), 1.6%
51.1 of 78.4 Hour Wren CPU (2.5 of 3.9 G.S.T), 65.2%
3421.8 of 3945.2 Hour SMP CPU (132.9 of 153.3 G.S.T), 86.7%
239.3 of 750.0 GByteYear MP Disk (854.6 of 2678.6 G.S.T), 31.9%
2205.4 of 3205.1 GByteYear HSM/Tape (1385.3 of 2013.2 G.S.T), 68.8%
312036.3 of 579901.3 Hour Green CPU (16304.5 of 30301.0 G.S.T), 53.8%
2.0 of 15.0 PersonDay Support (58.8 of 441.2 G.S.T), 13.3%
8.0 of 8.0 Day Training (86.0 of 86.0 G.S.T), 100.0%
Total usage for project cse085 47153.2 of 76188.3 Generic Service Tokens, 61.9%

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cse086 GR/R83118 Taylor
Last Trade: re-enabled
Usage:
883910.0 of 1021498.4 PEHour MPP PE CPU (21371.8 of 24698.5 G.S.T), 86.5%
131.7 of 162.7 GByteYear HP Disk (783.8 of 968.4 G.S.T), 80.9%
966.5 of 34131.0 Hour Newton CPU (148.0 of 5225.2 G.S.T), 2.8%
585.0 of 3262.8 Hour Wren CPU (29.0 of 161.7 G.S.T), 17.9%
0.0 of 12.9 GByteYear HP Disk SAN - /d (0.0 of 76.8 G.S.T), 0.0%
0.0 of 46.6 GbyteYear HV Disk SAN /v (0.0 of 83.4 G.S.T), 0.0%
15944.9 of 31906.3 Hour SMP CPU (619.5 of 1239.6 G.S.T), 50.0%
173.7 of 497.0 GByteYear MP Disk (620.2 of 1775.0 G.S.T), 34.9%
26.9 of 3750.0 GByteYear HSM/Tape (16.9 of 2355.5 G.S.T), 0.7%
156672.9 of 427900.0 Hour Green CPU (8186.5 of 22358.7 G.S.T), 36.6%
5.0 of 35.0 PersonDay Support (147.1 of 1029.4 G.S.T), 14.3%
0.0 of 116.0 Day Training (0.0 of 1247.3 G.S.T), 0.0%
Total usage for project cse086 31922.7 of 61219.5 Generic Service Tokens, 52.1%

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cse086a MP1
Last Trade: never
Usage:
721660.7 of 750000.0 PEHour MPP PE CPU (17448.8 of 18134.0 G.S.T), 96.2%
8.4 of 10.0 GByteYear HP Disk (50.2 of 59.5 G.S.T), 84.3%
1.2 of 200.0 Hour Wren CPU (0.1 of 9.9 G.S.T), 0.6%
0.0 of 50.0 Hour SMP CPU (0.0 of 1.9 G.S.T), 0.0%
9.9 of 20.0 GByteYear MP Disk (35.3 of 71.4 G.S.T), 49.4%
1424.8 of 10000.0 Hour Green CPU (74.4 of 522.5 G.S.T), 14.2%
Total usage for subproject cse086a 17608.8 of 18799.4 Generic Service Tokens, 93.7%

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cse086b MP2
Last Trade: never
Usage:
48449.5 of 56000.0 PEHour MPP PE CPU (1171.4 of 1354.0 G.S.T), 86.5%
37.3 of 50.0 GByteYear HP Disk (221.8 of 297.6 G.S.T), 74.5%
966.5 of 15000.0 Hour Newton CPU (148.0 of 2296.4 G.S.T), 6.4%
149.3 of 200.0 Hour Wren CPU (7.4 of 9.9 G.S.T), 74.6%
6557.9 of 15000.0 Hour SMP CPU (254.8 of 582.8 G.S.T), 43.7%
28.7 of 40.0 GByteYear MP Disk (102.5 of 142.9 G.S.T), 71.7%
122976.5 of 150000.0 Hour Green CPU (6425.8 of 7837.8 G.S.T), 82.0%
Total usage for subproject cse086b 8331.6 of 12521.4 Generic Service Tokens, 66.5%

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cse086d MP4
Last Trade: never
Usage:
0.1 of 0.1 GByteYear HP Disk (0.5 of 0.6 G.S.T), 86.7%
0.1 of 0.1 GByteYear MP Disk (0.3 of 0.4 G.S.T), 86.1%
Total usage for subproject cse086d 0.8 of 1.0 Generic Service Tokens, 86.5%

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cse086e MP5
Last Trade: never
Usage:
48.8 of 500.0 PEHour MPP PE CPU (1.2 of 12.1 G.S.T), 9.8%
1.7 of 2.0 GByteYear HP Disk (10.4 of 11.9 G.S.T), 87.4%
0.0 of 15000.0 Hour Newton CPU (0.0 of 2296.4 G.S.T), 0.0%
334.5 of 2500.0 Hour Wren CPU (16.6 of 123.9 G.S.T), 13.4%
0.0 of 5.0 GbyteYear HV Disk SAN /v (0.0 of 8.9 G.S.T), 0.0%

6132.8 of 10000.0 Hour SMP CPU (238.3 of 388.5 G.S.T), 61.3%
12.1 of 15.0 GByteYear MP Disk (43.2 of 53.6 G.S.T), 80.6%
28054.1 of 60000.0 Hour Green CPU (1465.9 of 3135.1 G.S.T), 46.8%
Total usage for subproject cse086e 1775.5 of 6030.4 Generic Service Tokens, 29.4%

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cse086f EC1
Last Trade: never
Usage:
71.1 of 5000.0 PEHour MPP PE CPU (1.7 of 120.9 G.S.T), 1.4%
3.8 of 5.0 GByteYear HP Disk (22.6 of 29.8 G.S.T), 76.0%
0.8 of 200.0 Hour Wren CPU (0.0 of 9.9 G.S.T), 0.4%
4.8 of 50.0 Hour SMP CPU (0.2 of 1.9 G.S.T), 9.6%
20.5 of 30.0 GByteYear MP Disk (73.3 of 107.1 G.S.T), 68.4%
26.9 of 40.0 GByteYear HSM/Tape (16.9 of 25.1 G.S.T), 67.2%
0.0 of 10000.0 Hour Green CPU (0.0 of 522.5 G.S.T), 0.0%
Total usage for subproject cse086f 114.7 of 817.3 Generic Service Tokens, 14.0%

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cse086g EC2
Last Trade: never
Usage:
577.1 of 5000.0 PEHour MPP PE CPU (14.0 of 120.9 G.S.T), 11.5%
43.1 of 50.0 GByteYear HP Disk (256.3 of 297.6 G.S.T), 86.1%
98.7 of 200.0 Hour Wren CPU (4.9 of 9.9 G.S.T), 49.4%
687.9 of 1000.0 Hour SMP CPU (26.7 of 38.9 G.S.T), 68.8%
71.4 of 80.0 GByteYear MP Disk (255.0 of 285.7 G.S.T), 89.3%
0.0 of 50.0 GByteYear HSM/Tape (0.0 of 31.4 G.S.T), 0.0%
2849.2 of 10000.0 Hour Green CPU (148.9 of 522.5 G.S.T), 28.5%
Total usage for subproject cse086g 705.8 of 1306.9 Generic Service Tokens, 54.0%

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cse086h EC3
Last Trade: never
Usage:
46335.1 of 50000.0 PEHour MPP PE CPU (1120.3 of 1208.9 G.S.T), 92.7%
6.9 of 10.0 GByteYear HP Disk (41.2 of 59.5 G.S.T), 69.2%
0.0 of 200.0 Hour Wren CPU (0.0 of 9.9 G.S.T), 0.0%
219.9 of 250.0 Hour SMP CPU (8.5 of 9.7 G.S.T), 87.9%
14.9 of 20.0 GByteYear MP Disk (53.2 of 71.4 G.S.T), 74.5%
0.0 of 10000.0 Hour Green CPU (0.0 of 522.5 G.S.T), 0.0%
Total usage for subproject cse086h 1223.2 of 1882.0 Generic Service Tokens, 65.0%

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cse086i EC4
Last Trade: never
Usage:
0.1 of 0.1 GByteYear HP Disk (0.5 of 0.6 G.S.T), 86.1%
0.1 of 0.1 GByteYear MP Disk (0.3 of 0.4 G.S.T), 86.1%
Total usage for subproject cse086i 0.8 of 1.0 Generic Service Tokens, 86.1%

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cse086j BEC1
Last Trade: never
Usage:
66767.8 of 70000.0 PEHour MPP PE CPU (1614.4 of 1692.5 G.S.T), 95.4%
1.6 of 3.0 GByteYear HP Disk (9.8 of 17.9 G.S.T), 54.7%
0.0 of 200.0 Hour Wren CPU (0.0 of 9.9 G.S.T), 0.0%
0.0 of 0.1 Hour SMP CPU (0.0 of 0.0 G.S.T), 0.2%
0.3 of 5.0 GByteYear MP Disk (1.2 of 17.9 G.S.T), 6.6%

0.0 of 1000.0 Hour Green CPU (0.0 of 52.3 G.S.T), 0.0%
Total usage for subproject cse086j 1625.3 of 1790.4 Generic Service Tokens, 90.8%

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cse086k BEC2
Last Trade: never
Usage:
0.1 of 0.1 GByteYear HP Disk (0.5 of 0.6 G.S.T), 86.1%
0.5 of 200.0 Hour Wren CPU (0.0 of 9.9 G.S.T), 0.2%
2341.7 of 5000.0 Hour SMP CPU (91.0 of 194.3 G.S.T), 46.8%
14.5 of 15.0 GByteYear MP Disk (51.7 of 53.6 G.S.T), 96.4%
1368.4 of 20000.0 Hour Green CPU (71.5 of 1045.0 G.S.T), 6.8%
Total usage for subproject cse086k 214.7 of 1303.4 Generic Service Tokens, 16.5%

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cse089 GR/R85556 Wiercigroch
Last Trade: Mon Nov 17 09:29:24 2003
Usage:
0.0 of 242.8 PEHour MPP PE CPU (0.0 of 5.9 G.S.T), 0.0%
0.0 of 1.1 GByteYear HP Disk (0.0 of 6.3 G.S.T), 0.0%
0.0 of 1952.1 Hour Wren CPU (0.0 of 96.7 G.S.T), 0.0%
0.0 of 44.0 GByteYear HP Disk SAN - /d (0.0 of 261.9 G.S.T), 0.0%
0.0 of 0.0 Hour SMP CPU (0.0 of 0.0 G.S.T), 86.3%
0.0 of 1850.9 Hour Green CPU (0.0 of 96.7 G.S.T), 0.0%
0.0 of 15.0 PersonDay Support (0.0 of 441.2 G.S.T), 0.0%
0.0 of 7.0 Day Training (0.0 of 75.3 G.S.T), 0.0%
Total usage for project cse089 0.0 of 984.0 Generic Service Tokens, 0.0%

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cse098 GR/S20062 De Souza
Last Trade: Fri Feb 7 10:25:19 2003
Usage:
0.0 of 333000.0 PEHour MPP PE CPU (0.0 of 8051.5 G.S.T), 0.0%
0.0 of 20.0 GByteYear HP Disk (0.0 of 119.0 G.S.T), 0.0%
0.0 of 10.0 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.4%
0.1 of 3975.4 Hour SMP CPU (0.0 of 154.5 G.S.T), 0.0%
1.7 of 10.0 GByteYear MP Disk (6.0 of 35.7 G.S.T), 16.9%
0.0 of 100.0 GByteYear HSM/Tape (0.0 of 62.8 G.S.T), 0.0%
4912.1 of 8500.0 Hour Green CPU (256.7 of 444.1 G.S.T), 57.8%
0.0 of 5.0 PersonDay Support (0.0 of 147.1 G.S.T), 0.0%
0.0 of 5.0 Day Training (0.0 of 53.8 G.S.T), 0.0%
Total usage for project cse098 262.7 of 9069.0 Generic Service Tokens, 2.9%

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cse106 GR/S42712 Augarde
Last Trade: Wed Nov 5 15:06:00 2003
Usage:
0.0 of 2500.0 Hour Wren CPU (0.0 of 123.9 G.S.T), 0.0%
0.0 of 37.4 GByteYear MP Disk SAN (0.0 of 160.7 G.S.T), 0.0%
0.0 of 50000.0 Hour Green CPU (0.0 of 2612.6 G.S.T), 0.0%
0.0 of 25.0 PersonDay Support (0.0 of 735.3 G.S.T), 0.0%
0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0%
Total usage for project cse106 0.0 of 3740.0 Generic Service Tokens, 0.0%

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cse108 GR/S43498 Holden
Last Trade: Wed Nov 5 15:55:15 2003
Usage:
0.0 of 700.0 Hour Wren CPU (0.0 of 34.7 G.S.T), 0.0%
0.0 of 832.1 GByteYear MP Disk SAN (0.0 of 3571.4 G.S.T), 0.0%

0.0 of 40000.0 Hour Green CPU (0.0 of 2090.1 G.S.T), 0.0%
0.0 of 10.0 PersonDay Support (0.0 of 294.1 G.S.T), 0.0%
0.0 of 6.0 Day Training (0.0 of 64.5 G.S.T), 0.0%
Total usage for project cse108 0.0 of 6054.8 Generic Service Tokens, 0.0%

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cse110 GR/S43214 Leach
Last Trade: Wed Nov 5 16:16:25 2003
Usage:
0.0 of 6000.0 Hour Wren CPU (0.0 of 297.3 G.S.T), 0.0%
0.0 of 67.6 GByteYear HP Disk SAN - /d (0.0 of 402.3 G.S.T), 0.0%
0.0 of 20.0 GByteYear MP Disk SAN (0.0 of 85.8 G.S.T), 0.0%
0.0 of 42000.0 Hour Green CPU (0.0 of 2194.6 G.S.T), 0.0%
0.0 of 30.0 PersonDay Support (0.0 of 882.4 G.S.T), 0.0%
0.0 of 25.0 Day Training (0.0 of 268.8 G.S.T), 0.0%
Total usage for project cse110 0.0 of 4131.1 Generic Service Tokens, 0.0%

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cse116 GR/S46567 John
Last Trade: Thu Nov 6 10:47:31 2003
Usage:
0.0 of 558.1 Hour Wren CPU (0.0 of 27.7 G.S.T), 0.0%
0.0 of 2.0 GByteYear MP Disk SAN (0.0 of 8.6 G.S.T), 0.0%
0.0 of 2.0 GByteYear HSM/Tape (0.0 of 1.3 G.S.T), 0.0%
0.0 of 5950.0 Hour Green CPU (0.0 of 310.9 G.S.T), 0.0%
0.0 of 16.0 PersonDay Support (0.0 of 470.6 G.S.T), 0.0%
0.0 of 8.0 Day Training (0.0 of 86.0 G.S.T), 0.0%
Total usage for project cse116 0.0 of 905.0 Generic Service Tokens, 0.0%

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csedl1 - Castep port to Altix
Last Trade: Wed Nov 26 17:17:36 2003
Usage:
4607.8 of 49578.0 Hour Newton CPU (705.4 of 7590.0 G.S.T), 9.3%
0.0 of 500.0 Hour Wren CPU (0.0 of 24.8 G.S.T), 0.0%
0.5 of 69.2 GByteYear MP Disk SAN (2.3 of 297.1 G.S.T), 0.8%
0.0 of 125.0 GByteYear HSM/Tape (0.0 of 78.5 G.S.T), 0.0%
0.0 of 6.0 Day Training (0.0 of 64.6 G.S.T), 0.0%
Total usage for project csedl1 707.8 of 8055.0 Generic Service Tokens, 8.8%

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csedl1a Computational Cemistry
Last Trade: never
Usage:
0.0 of 15000.0 Hour Newton CPU (0.0 of 2296.4 G.S.T), 0.0%
0.0 of 150.0 Hour Wren CPU (0.0 of 7.4 G.S.T), 0.0%
0.0 of 19.5 GByteYear MP Disk SAN (0.0 of 83.7 G.S.T), 0.0%
0.0 of 37.0 GByteYear HSM/Tape (0.0 of 23.2 G.S.T), 0.0%
Total usage for subproject csedl1a 0.0 of 2410.8 Generic Service Tokens, 0.0%

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csedl1b Molecular Simulation
Last Trade: never
Usage:
0.0 of 5000.0 Hour Newton CPU (0.0 of 765.5 G.S.T), 0.0%
0.0 of 50.0 Hour Wren CPU (0.0 of 2.5 G.S.T), 0.0%
0.0 of 7.5 GByteYear MP Disk SAN (0.0 of 32.2 G.S.T), 0.0%
0.0 of 13.0 GByteYear HSM/Tape (0.0 of 8.2 G.S.T), 0.0%
Total usage for subproject csedl1b 0.0 of 808.3 Generic Service Tokens, 0.0%

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csedl1c Materials
Last Trade: never
Usage:
4607.8 of 10000.0 Hour Newton CPU (705.4 of 1530.9 G.S.T), 46.1%
0.0 of 100.0 Hour Wren CPU (0.0 of 5.0 G.S.T), 0.0%
0.5 of 15.0 GByteYear MP Disk SAN (2.3 of 64.4 G.S.T), 3.6%
0.0 of 25.0 GByteYear HSM/Tape (0.0 of 15.7 G.S.T), 0.0%
Total usage for subproject csedl1c 707.8 of 1616.0 Generic Service Tokens, 43.8%

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csedl1d - Band Theory
Last Trade: never
Usage:
0.0 of 5000.0 Hour Newton CPU (0.0 of 765.5 G.S.T), 0.0%
0.0 of 50.0 Hour Wren CPU (0.0 of 2.5 G.S.T), 0.0%
0.0 of 7.5 GByteYear MP Disk SAN (0.0 of 32.2 G.S.T), 0.0%
0.0 of 13.0 GByteYear HSM/Tape (0.0 of 8.2 G.S.T), 0.0%
Total usage for subproject csedl1d 0.0 of 808.3 Generic Service Tokens, 0.0%

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csedl1e High End Computing
Last Trade: never
Usage:
0.0 of 15000.0 Hour Newton CPU (0.0 of 2296.4 G.S.T), 0.0%
0.0 of 150.0 Hour Wren CPU (0.0 of 7.4 G.S.T), 0.0%
0.0 of 19.5 GByteYear MP Disk SAN (0.0 of 83.7 G.S.T), 0.0%
0.0 of 37.0 GByteYear HSM/Tape (0.0 of 23.2 G.S.T), 0.0%
Total usage for subproject csedl1e 0.0 of 2410.8 Generic Service Tokens, 0.0%

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cseetf - sc2003 experiment
Last Trade: Fri Nov 21 08:39:39 2003
Usage:
22799.9 of 25000.0 Hour Newton CPU (3490.5 of 3827.3 G.S.T), 91.2%
7.5 of 19.5 Hour Wren CPU (0.4 of 1.0 G.S.T), 38.2%
59.6 of 112.9 GByteYear HP Disk SAN - /d (354.7 of 671.8 G.S.T), 52.8%
0.0 of 0.1 GByteYear MP Disk SAN (0.0 of 0.4 G.S.T), 0.0%
0.1 of 0.3 GbyteYear HV Disk SAN /v (0.2 of 0.6 G.S.T), 32.9%
0.0 of 0.6 Hour SMP CPU (0.0 of 0.0 G.S.T), 7.5%
43121.2 of 53000.0 Hour Green CPU (2253.2 of 2769.4 G.S.T), 81.4%
Total usage for project cseetf 6098.9 of 7270.4 Generic Service Tokens, 83.9%

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csehpcx - benchmarking
Last Trade: Mon Dec 22 17:17:41 2003
Usage:
11200.6 of 11200.4 PEHour MPP PE CPU (270.8 of 270.8 G.S.T), 100.0%
16.0 of 15.6 GByteYear HP Disk (95.1 of 92.8 G.S.T), 102.4%
1114.0 of 11615.0 Hour Newton CPU (170.5 of 1778.2 G.S.T), 9.6%
0.7 of 1464.1 Hour Wren CPU (0.0 of 72.5 G.S.T), 0.0%
16.9 of 1867.0 Hour SMP CPU (0.7 of 72.5 G.S.T), 0.9%
6.4 of 61.9 GByteYear MP Disk (22.9 of 220.9 G.S.T), 10.4%
22407.3 of 46273.2 Hour Green CPU (1170.8 of 2417.9 G.S.T), 48.4%
Total usage for project csehpcx 1730.8 of 4925.7 Generic Service Tokens, 35.1%

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csn001 Webb & GST/02/2846 Killworth & T/S/2001/00187 New
Last Trade: Tue Dec 23 11:14:05 2003
Usage:

403672.6 of 403672.5 PEHour MPP PE CPU (9760.3 of 9760.3 G.S.T), 100.0%
306.9 of 306.0 GByteYear HP Disk (1827.0 of 1821.4 G.S.T), 100.3%
130.9 of 3266.0 Hour Newton CPU (20.0 of 500.0 G.S.T), 4.0%
284.2 of 401.8 Hour Wren CPU (14.1 of 19.9 G.S.T), 70.7%
171947.0 of 229778.4 Hour SMP CPU (6680.4 of 8927.2 G.S.T), 74.8%
475.2 of 902.2 GByteYear MP Disk (1697.0 of 3222.0 G.S.T), 52.7%
25938.3 of 31279.4 GByteYear HSM/Tape (16292.9 of 19647.9 G.S.T), 82.9%
842619.4 of 943632.7 Hour Green CPU (44028.6 of 49306.8 G.S.T), 89.3%
61.0 of 64.5 PersonDay Support (1794.1 of 1897.1 G.S.T), 94.6%
3.0 of 15.3 Day Training (32.3 of 164.4 G.S.T), 19.6%
Total usage for project csn001 82146.7 of 95267.0 Generic Service Tokens, 86.2%

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csn003 UGAMP O'Neill
Last Trade: re-enabled
Usage:
7426829.1 of 7589275.7 PEHour MPP PE CPU (179571.2 of 183498.9 G.S.T), 97.9%
113.1 of 113.9 GByteYear HP Disk (673.0 of 677.7 G.S.T), 99.3%
86513.5 of 89897.0 Hour Newton CPU (13244.6 of 13762.6 G.S.T), 96.2%
2535.9 of 7545.2 Hour Wren CPU (125.6 of 373.8 G.S.T), 33.6%
295.6 of 740.6 GbyteYear HV Disk SAN /v (528.9 of 1324.9 G.S.T), 39.9%
76858.6 of 133313.1 Hour SMP CPU (2986.1 of 5179.4 G.S.T), 57.7%
95.3 of 373.8 GByteYear MP Disk (340.5 of 1334.9 G.S.T), 25.5%
73044.5 of 86337.7 GByteYear HSM/Tape (45882.2 of 54232.2 G.S.T), 84.6%
346547.5 of 399724.4 Hour Green CPU (18107.8 of 20886.4 G.S.T), 86.7%
4.0 of 4.8 PersonDay Support (117.6 of 141.1 G.S.T), 83.4%
23.0 of 34.0 Day Training (247.3 of 365.9 G.S.T), 67.6%
Total usage for project csn003 261824.9 of 281778.0 Generic Service Tokens, 92.9%

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csn006 GR9/3550 Price
Last Trade: Fri Dec 19 12:31:58 2003
Usage:
1618734.3 of 1618734.0 PEHour MPP PE CPU (39138.9 of 39138.9 G.S.T), 100.0%
190.4 of 192.2 GByteYear HP Disk (1133.6 of 1144.3 G.S.T), 99.1%
747.4 of 28407.2 Hour Newton CPU (114.4 of 4348.9 G.S.T), 2.6%
606.4 of 78.4 Hour Wren CPU (30.0 of 3.9 G.S.T), 773.3%
71541.1 of 72126.1 Hour SMP CPU (2779.5 of 2802.2 G.S.T), 99.2%
56.0 of 85.5 GByteYear MP Disk (199.9 of 305.4 G.S.T), 65.5%
10.1 of 20.3 GByteYear HSM/Tape (6.3 of 12.7 G.S.T), 49.8%
485306.5 of 626272.8 Hour Green CPU (25358.3 of 32724.0 G.S.T), 77.5%
Total usage for project csn006 68760.9 of 80480.3 Generic Service Tokens, 85.4%

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csn015 Proctor
Last Trade: Tue Dec 23 16:35:05 2003
Usage:
257682.2 of 257776.0 PEHour MPP PE CPU (6230.4 of 6232.7 G.S.T), 100.0%
6.8 of 6.9 GByteYear HP Disk (40.2 of 41.2 G.S.T), 97.5%
0.0 of 27418.0 Hour Newton CPU (0.0 of 4197.5 G.S.T), 0.0%
112.6 of 161.9 Hour Wren CPU (5.6 of 8.0 G.S.T), 69.5%
736.2 of 1562.0 Hour SMP CPU (28.6 of 60.7 G.S.T), 47.1%
67.5 of 99.3 GByteYear MP Disk (241.0 of 354.5 G.S.T), 68.0%
3689.1 of 5042.3 GByteYear HSM/Tape (2317.3 of 3167.3 G.S.T), 73.2%
266290.0 of 381860.8 Hour Green CPU (13914.2 of 19953.0 G.S.T), 69.7%
2.0 of 10.0 PersonDay Support (58.8 of 294.1 G.S.T), 20.0%
3.0 of 753.0 Day Training (32.3 of 8096.8 G.S.T), 0.4%
Total usage for project csn015 22868.3 of 42405.8 Generic Service Tokens, 53.9%

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csn044 Earth Observation
Last Trade: Wed Aug 28 11:09:50 2002
Usage:
9948.9 of 13857.9 PEHour MPP PE CPU (240.6 of 335.1 G.S.T), 71.8%
0.0 of 5.0 GByteYear HP Disk (0.0 of 30.0 G.S.T), 0.0%
0.0 of 28.4 Hour Wren CPU (0.0 of 1.4 G.S.T), 0.0%
0.2 of 73.9 Hour SMP CPU (0.0 of 2.9 G.S.T), 0.3%
0.0 of 5.0 GByteYear MP Disk (0.0 of 17.9 G.S.T), 0.0%
13.4 of 53.8 GByteYear HSM/Tape (8.4 of 33.8 G.S.T), 25.0%
Total usage for project csn044 249.0 of 421.0 Generic Service Tokens, 59.1%

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csn052 GST/02/2658 Mackay
Last Trade: Tue Aug 5 16:21:52 2003
Usage:
3.6 of 5.9 PEHour MPP PE CPU (0.1 of 0.1 G.S.T), 61.4%
1.6 of 2.0 GByteYear HP Disk (9.7 of 11.9 G.S.T), 81.6%
5.0 of 9.0 Hour Wren CPU (0.2 of 0.4 G.S.T), 54.9%
0.0 of 1.0 GByteYear HP Disk SAN - /d (0.0 of 6.0 G.S.T), 0.0%
0.0 of 0.0 GByteYear MP Disk SAN (0.0 of 0.0 G.S.T), 0.0%
1.3 of 1.9 Hour SMP CPU (0.1 of 0.1 G.S.T), 71.0%
19.9 of 17.3 GByteYear MP Disk (71.2 of 61.9 G.S.T), 115.0%
0.0 of 3.7 GByteYear HSM/Tape (0.0 of 2.3 G.S.T), 0.0%
13966.8 of 16544.3 Hour Green CPU (729.8 of 864.5 G.S.T), 84.4%
5.0 of 5.0 Day Training (53.8 of 53.8 G.S.T), 100.0%
Total usage for project csn052 864.9 of 1001.0 Generic Service Tokens, 86.4%

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csp006 PPA/G/S/2001/00050 Browning
Last Trade: Wed Mar 26 11:34:05 2003
Usage:
0.0 of 111.6 Hour Wren CPU (0.0 of 5.5 G.S.T), 0.0%
0.0 of 20699.4 Hour SMP CPU (0.0 of 804.2 G.S.T), 0.0%
0.0 of 20.0 GByteYear MP Disk (0.0 of 71.4 G.S.T), 0.0%
0.0 of 12.0 Day Training (0.0 of 129.0 G.S.T), 0.0%
Total usage for project csp006 0.0 of 1010.2 Generic Service Tokens, 0.0%

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csp007 PPA/G/O/2002/00004 Hibbert
Last Trade: Tue Apr 1 15:29:22 2003
Usage:
36870.0 of 49999.7 PEHour MPP PE CPU (891.5 of 1208.9 G.S.T), 73.7%
0.0 of 80.0 GByteYear HP Disk (0.0 of 476.2 G.S.T), 0.0%
22.1 of 600.0 Hour Wren CPU (1.1 of 29.7 G.S.T), 3.7%
0.0 of 60.0 GByteYear HP Disk SAN - /d (0.0 of 357.1 G.S.T), 0.0%
0.0 of 600.0 Hour SMP CPU (0.0 of 23.3 G.S.T), 0.0%
Total usage for project csp007 892.6 of 2095.3 Generic Service Tokens, 42.6%

HPCI Daresbury
Last Trade: Mon Oct 7 10:07:27 2002
Usage:
34683.7 of 34482.9 PEHour MPP PE CPU (838.6 of 833.8 G.S.T), 100.6%
5.1 of 3.8 GByteYear HP Disk (30.2 of 22.7 G.S.T), 133.1%
1.9 of 0.0 Hour Wren CPU (0.1 of 0.0 G.S.T), 485373.5%
4062.9 of 4120.4 Hour SMP CPU (157.8 of 160.1 G.S.T), 98.6%
2.5 of 1.7 GByteYear MP Disk (8.8 of 6.0 G.S.T), 146.6%
10817.5 of 10497.3 Hour Green CPU (565.2 of 548.5 G.S.T), 103.1%
1.0 of 1.0 Day Training (10.8 of 10.8 G.S.T), 99.7%
Total usage for project hpcid 1611.6 of 1581.9 Generic Service Tokens, 101.9%

HPCI Edinburgh
Last Trade: Wed Jul 11 12:09:29 2001
Usage:
1759.1 of 4070.6 PEHour MPP PE CPU (42.5 of 98.4 G.S.T), 43.2%
5.1 of 4.7 GByteYear HP Disk (30.1 of 28.1 G.S.T), 107.1%
698.4 of 770.8 Hour SMP CPU (27.1 of 29.9 G.S.T), 90.6%
4.0 of 2.8 GByteYear MP Disk (14.2 of 10.0 G.S.T), 141.4%
1728.7 of 1739.8 Hour Green CPU (90.3 of 90.9 G.S.T), 99.4%
Total usage for project hpcie 204.3 of 257.4 Generic Service Tokens, 79.4%

HPCI Southampton
Last Trade: re-enabled
Usage:
737.9 of 5825.0 PEHour MPP PE CPU (17.8 of 140.8 G.S.T), 12.7%
31.7 of 31.6 GByteYear HP Disk (188.9 of 188.2 G.S.T), 100.4%
37.8 of 1074.0 Hour SMP CPU (1.5 of 41.7 G.S.T), 3.5%
3.1 of 3.0 GByteYear MP Disk (11.2 of 10.7 G.S.T), 104.6%
Total usage for project hpcis 219.4 of 381.5 Generic Service Tokens, 57.5%

Project	PI Name	Subject	Discipline/Department
cse002	Wander, A (Dr)	Support for the UKCP	Physics
cse003	Dundas, D (Dr)	HPC Consortiums 98-2000	
cse004	Sandham, N (Prof)	UK Turbulence	
cse006	Briddon, P (Dr)	Covalently Bonded Materials	
cse007	Foulkes, M (Dr)	Quantum Many Body Theory	
Cse008	Vincent, M (Dr)	Model Chemical Reactivity	
cse009	Slater, Ben	HPC Computing Applications in Materials Chemistry	Chemistry
cse010	William, J (Dr)	Free Surface Flows	
cse011	William, J (Dr)	Open Channel Flood Plains	
cse013	Leschziner, M (Prof)	Large Eddy Simulation for Aerospace & Turbomachinery Dynamics	Mechanical Engineering
cse014	De Oliverira, C (Dr)	Problems in Nuclear Safety	
cse016	Cant, S (Dr)	Turbulent Combustion	
cse017	Luo, K (Dr)	Large Eddy Simulation & Modelling of Buoyant Plumes & Smoke Spread in Enclosures	
cse018	Jaffri, K		
cse019	Lander, J (Dr)		
cse021	Staunton, J (Dr)		
cse022	Jones, WP (Prof)		
cse023	Allen, M (Prof)		
cse024	Allan, RJ (Dr)		
cse025	Walet, NR (Dr)		
cse026	Neal, M (Dr)		
cse029	Apsley, DD (Dr)		
cse030	Desplat, JC (Dr)	High Performance Computing for complex Fluids	Physics
cse033	Breard, CC (Dr)		
cse035	Jenkins, S (Dr)	Ab Initio Simulations of Catalytic Processes at Extended Metal Surfaces	Chemistry
cse036	Duff, I (Prof)	Research & Development of Algorithms & Software for Large-Scale Linear & Non-Linear Systems	Maths
cse040	Badcock, K (Dr)	Prediction of Non-Linear Flutter Characteristics by Numerical Path Following & Model Reduction	Aerospace Engineeering
cse041	Wu, X (Dr)	Flutter & Noise Generation Mechanisms - Turbomachinery Fan Assemblies	Mechanical Engineering
cse042	Leschziner, M (Prof)		
cse043	Williams, J (Dr)	Numerical Simulation of Flow over a Rough Bed	Engineering
cse050	Bradley, D (Prof)	Flame Instabilities: their influence on turbulent combustion & incorporation in mathematical models.	Mechanical Engineering
cse052	Di Mare, F (Miss)	Heat Transfer in Turbine Combustors	Mechanical Engineering
cse053	Leschziner, M (Prof)	Coupling RANS Near-Wall Turbulence Models with Large Eddy Simulation Strategies	Aerospace Engineering
cse055	Staunton, J (Dr)	Ab-initio theory of magnetic anisotropy in transition metal ferromagnets	Physics
cse056	Zheng, Y (Dr)	Aerothermalelasticity Modelling of Air Riding Seals for Large Gas Turbines	Mechanical Engineering
cse057	Evans, R (Dr)	Relativistic Particle Generation from Ultra-Intense Laser Plasma Interactions	Physics
cse059	Cross, (Prof)		

cse060	Robb, M (Prof)	CCP1 Renewal plus falgship project on Car-Parrinello in Chemistry	Chemistry
cse061	Imregun, M (Prof)	Casing treatment modelling for the investigation of stall, flutter and noise mechanisms in turbomachinery compressors.	Mechanical Engineering
cse063	Sandham, N (Prof)	Computational Aerocaustics for Turbulent Plane Jets	Aerospace Engineering
cse064	Leschziner, M (Prof)	Improvement of predictive performance of anisotropy-resolving turbulence models in post-reattachment recovery region of separated flow using Large Eddy Simulation	Aerodynamics
cse065	Williams, J (Dr)		
cse066	Coveney, P V (Prof)	New clay-polymer nanocomposites using diversity-discovery methods: synthesis, processing and testing	IT
cse067	Williams, J (Dr)		
cse068	Bressloff		
cse069	Lou (Dr)		
cse071	Iacovides (Dr)	The Practical Computation of Three-Dimensional Time-Dependent Turbulent Flows in Rotating Cavities	Mechanical Engineering
cse072	Karlin, V (Dr)	Structure & Dynamics of Unstable Premixed Laminar Flames	Engineering
cse073	Alavi		
cse074	Luo (Dr)	Consortium on Computational Combustion for Engineering Applications	Engineering
cse075	Coveney, PV (Prof)	The Reality Grid - a tool for investigating condensed matter & materials	IT
cse076	Briddon, P (Dr)	HPC facilities for the first principles simulation of covalently bonded materials	IT
cse077	Kronenburg, A (Dr)	Combustion Model Development for Large-Eddy Simulation of Non-Premixed Reactive Flows.	Mechanical Engineering
cse078	Staunton		
cse080	Gao		
cse081	Hickey		
cse082	Barakos, G (Dr)	CFD Study of Three-dDimensional Dynamic Shelf	Aerospace Engineering
cse084	Needs, R (Dr)	The Consortium for Computational Quantum Many-Body Theory	Physics
cse085	Sandham, N (Prof)	UK Turbulence Consortium	Engineering
cse086	Taylor, K (Prof)	Multiphoton, Electron Collisions and BEC HPC Consortium 2002-2004	Physics
cse087	Williams, J (Dr)		
cse088	Coleman		
cse089	Wiercigroch, M (Dr)	Nonlinear Dynamics & Rock Contact Fracture Mechanics in Modelling of Vibration Enhanced Drilling	Engineering
cse090	Imregun, M (Prof)		
cse091	Avital		
cse092	Allen		
cse093	Williams, J (Dr)		
cse094	John		

cse095	Barford		
cse096	Lo		
Cse097	Hickey		
cse098	De Souza, M M (Dr)	Indium interaction in silicon for ULSI technologies	Physics
cse099	Williams, J (Prof)		
cse100	Gao, S (Dr)	Dev of Novel Aerodynamic Lenses for Focusing Nanoparticle Beams	Engineering
cse101	Jiang (Dr)	Direct Numerical Simulation of Fuel-Air Mixing with Passive Flow Control of Diesel Combustion.	Mechanical Engineering
cse102	Williams, J (Prof)	Numerical Modelling of Flow around Bridge Piers	Engineering
cse103	Neil, M P (Prof)	Simulation and Modelling of liquid crystalmesopases linked to the design of molecular and material properties.	Mathematics
cse104	Greaves, D M (Dr)	CFD Modelling of free surface waves driven by moving bodies using adaptively refined cut cell hierarchical grids	
cse105	Chemyshenko, S I (Prof)	Optimal database of the direct numerical simulation of turbulent channel flow	Aerodynamics & Flight Mechanics
cse106	Augarde (Dr)	Parametric Studies of multiple tunnels	Engineering
cse107	Hicks, MA (Dr)	Parallel Finite Elements for Stochastic Analysis	Engineering
cse108	Holden, AV (Prof)	Large-scale parallelisation of electro-physiological & mechanical cardiac virtual tissues.	Biomedical Sciences
cse109	Allen, M (Prof)	University of Warwick New HPC Project	Physics
cse110	Leach, SA (Dr)	Application of HE Computing to Develop Complex Stochastic Models to aid Public Health & National Operational Responses to Infectious Disease Threats.	
cse111	Avital, Eldad 9Dr)	A numerical study of three dimensional wakes generated by free surface piecing circular cylinders	Engineering
cse112	Chemyshenko, SI (Prof)	Master-mode analysis of the genesis of organized structures in turbulent flows.	Engineering - Aerodynamics
cse113	Wirth, T (Prof)	Stereoselective Halocyclisations	Chemistry
cse114	Jiang, X (Dr)	Direct numerical simulation of fuel injection & spray combustion	Engineering
cse115	De Leeuw, N (dr)	A computational study of bio-mineralisation: nucleation and growth of bone material on biological templates	
cse116	John, N (Dr)	An Advanced environment for enabling visual supercomputing	
cse117	Theodoropoulos, K (Dr)	Modelling of Microreactors: An integrated Multi-scale Approach	
cse118	Gavaghan, David (Dr)	EPSRC e-science pilot in Integrative Biology	
csn001	De Cuevas, B (Mrs)	OCCAM	Ocean/Earth Sciences
csn002	Vincent, Mark (Dr)		
csn003	Steenman-Clark, L (Dr)	UGAMP	Meteorology
csn005	Huw Davies, J (Prof)		
csn006	Brodholt, J (Dr)	HPC for Mineral Physics	Geological Sciences
csn009	Proctor, R (Dr)		
csn011	Gray, SL (Dr)		
csn012	Tennyson, J (Prof)	Calculated Absorption by water vapour at near infra-red & optical wavelengths	Physics & Astronomy
csn013	Voke, P (Prof)	Large Eddy Simulation Extended by Extreme Value Theory for the Prediction of Dispersion, Concentration Threshold Boundaries & Field Connectivity	Mechanical & Materials Engineering
csn014	Llewellyn Jones (Prof)	Data Assimilation scheme to optimize info on the surface-atmosphere interface from satellite observations of Top-of-the Atmosphere Brightness Temp.	Physics & Astronomy
csn015	Proctor, R (Dr)	A Testbed for Zooplankton Models of the Irish Sea	Coastal & Marine Sciences
csn017	Payne, A (Dr)	Stability of the Antarctic Ice Sheet	Geography
csn029	Allen, MR (Dr)		
csn030	New		
csn031	Richards		
csn032	Sutton		
csn033	Saunders		
csn035	Robinson		
csn036	Liu, C (Dr)	Assimilation of Altimeter, Radiometer & in situ data into the OCCAM model. Analysis of water properties & transports	Environmental Science
csn038	Oppenheimer		
csn039	Beven		
csn040	Slingo		
csn041	Lawrence		
csn042	Gray, SL (Dr)	Transport & Mixing in Fronts	
csn043	Haines		

csn044	Steenman-Clark, L (Dr)	Earth Observation Project	Meteorology
csn045	Slingo		
csn046	Aitken		
csn047	Gubbins		
csn048	Brodholt		
csn049	Srokosz	Climate impact changes in Atlantic Thermohaline.	
csn050	Challenor	The Probability of rapid climate change	
csn051	Proctor	Ultr-fine scale modeling of the northern North Atlantic Thermohaline.	
csn052	Xie, Z (Dr0	Quantifying the scaling of physical transport in structured heterogeneous porous media	Earth Sciences
csn053	Das, S (Dr)	Rupture History of large earthquakes from analysis of broad band seismograms, and its physical interpretation.	Earth Sciences
csn054	Thuburn, J (Dr)	An Integrated Model of Atmospheric Convection	Meteorology
csn055	Vocadlo, L (Dr0	The structure and anisotropy of Earths inner core.	Earth Sciences
csn056	Hoskins B (Prof)	Atmospheric water vapour budget & it's relevance to the thermohaline circulation	Meteorology
csn057	Guilyardi, E (Dr)	Role of salinity in ocean circulation and climate response to greenhouse gas forcing.	Atmospheric Modelling
csn058	Tudhope, A (Dr)	Improving ability to predict rapid changes in the el nino southern oscillation climatic phenomenon	Atmospheric Modelling
csn059	Watson, AJ (Prof)	Circulation, overflow & deep connection in the Nordic seas.	Environmental Sciences
csb001	Houldershaw, D (Dr)	Use of Cray T3E for multiple long trajectories of protein unfolding	Crystallography
csb002	Mulholland, A (Dr)		
csb003	Carling, J (Dr)		
csb004	Greenall		
csb005	Haley	Genetic Analysis of Complex Traits	
csb006	Sansom, M (Prof)	DFT calculations for ion channels and transport proteins	Biochemistry
csp002	Chapman, S (Dr)		
csp003	Ord, SM (Mr)		
csp004	Bell, K L (Prof)	A Programme for Atomic Physics for Astrophysics at Queen's University Belfast (2001-2005)	Astronomy
csp005	Chapman		
csp006	Jain, R (Dr)	Numerical Simulation of forced magnetic reconnection in the solar corona	Physics
csp007	Scott, P (Dr)	A Programme for Atomic Physics for Astrophysics at Queens University Belfast (2001-2005)	Astronomy
css001	Boyle, P (dr)		
css002	Crouchley, R (Dr)		
HPCID	Allan, R (Dr)		
HPCIE	Henty, D (Dr)		
HPCIS	Nicole, D (Dr)		
UKHEC	Allan, R (Dr)	UK HEC Collaboration, Core Support for High-End Computing 1999-2002	
cs2009	Pennington, V (Dr)		
cs2011	Mallinger, F (Dr)		
cs2012	Qin, N (Prof)		
cs2014	Karlin, V (Dr)		
cs2015	Tejera Cuesta, P (Mr)		
cs2016	Miles, JJ (Dr)		
cs2017	Eisenbach, M (Mr)		
cs2028	Annett (dr)		
cs2030	McKenna, K (Mr)		
cs2031	Ess		
cs2032	Jain, R (Dr)		
cs2034	Chichkine, M (Mr)	Indium interaction in silicon for future ULSI technologies	Physics
cs2035	Barakos, G (Dr)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity Flows	Aerospace Engineering
cs2036	Farid, Vakili-Tahami (Mr)	MPI Evaluation	Mechanical Aerospace & Manufacturing Engineering
cs2037	Domene, Carmen (Dr)	Ab initio molecular dynamics of ion in membrane proteins	
cs2038	Excell, P (Prof)	Computational Bioelectromagnetic Modeling of Human Cellular Processes for Mobile Phone Safety Research	Informatics
cs2039	Carlborg (Dr)	Genetic Analysis of Complex Traits	Genetics & Biometry
cs2040	Costen, F (Mrs)	Impulse radio propogation in a dense multipath & shadowed environment for ultra-wideband communication systems	Computer Science
cs2041	Filippone, A (Dr)	Numerical Study of the 3D obstructed shear-driven cavity flow.	Mechanical Aerospace & Manufacturing Engineering
cs2042	Smeed, DA (Dr)	A temporally continuous high-resolution record of global sea level during the Holocene.	Ocean/Earth Sciences
cs2043	Theodoropoulos, K (Dr)	Design of microchannel structures for microreactor applications	Process Intewgration
cs2044	Mota-Furtado, F (Dr)	Statistical Properties of Quantum Transport	Maths
cs3002	Novik, K (~Dr)		

cs3003	Chambers, E (Dr)		
cs3004	Avis, N (Prof)		
cs3005	Zarei, B (Mr)		
cs3007	Finch, E		
cs3008	Alsberg, B (Dr)		
cs3009	Flower, D (Dr)		
cs3010	Kemsley, K (Dr)		
cs3012	Austin, J (Dr)		
cs3013	Raval, R (Prof)		
cs3014	MacLaren, J (Dr)		
cs3015	Hampshire, D (Dr)	High Performance Computational Solutions for the Ginzburg-Landau Equations that describe Flux Pinning in High-Field Superconductors	Physics
cs3016	Petchey, O (Dr)	Randomisation test for the significance of functional diversity for eco-system processes	Animal & Plant Sciences
cs3017	Gross, M (Mr)	Numerical Simulation of Laser Materials Processing	Engineering
cs3018	Durrant, M (Dr)	Functional modelling of oxalate-degrading enzymes & of lipoxygenase using quantum calculations.	Biology
cs3019	Bengough (Dr)	Lattice-Boltzmann simulation of water & solute transport in porous media.	Physics
Cs3020	Gajjar	Flow past a circular cylunder at large Reynoldss numbers	
cs4001	White P		
cs4002	Cooper A (Miss)		