CSAR Service - Management Report

April 2004

This report documents the quality of the CSAR service during the month of April 2004.

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 April 2004. The information, in particular, covers the availability and usage of the main CSAR Service High Performance Computing (HPC) systems:

- SGI Altix3700/256 (Newton)
- SGI Origin3000/512 (Green)
- SGI Origin2000/128 (Fermat)
- SGI Origin300/16 (Wren)

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

April has seen the workload of the three primary systems at variable levels, with the workload on the new Altix system increasing substantially this month in terms of the number of users.

Issues were encountered during April with the reliability of all CSAR systems, and corrective action is being undertaken to resolve these issues.

The CSAR Service has been granted an 18 month extension of service contract until June 30th 2006. With this extension CfS has introduced a 256 processor Itanium-2 (Madison) based SGI Altix Newton.

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

Service Quality Measure	Performance Targets					
	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 April 1st to 30th inclusive.
Overall, the CPARS Performance Achievement in April was not satisfactory (see Table 3); i.e. Yellow measured against the CPARS performance targets.

CSAR Service - Service Quality Report - Actual Performance Achievement

Service Quality Measure	2003/4											
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April
HPC Services Availability												
Availability in Core Time (% of time)	97.66%	99.25%	98.83%	98.95%	96.62%	98.84%	98.95%	98.75%	97.49%	98.16%	98.51%	89.39%
Availability out of Core Time (% of time)	99.33%	99.9%	99.57%	100%	98.48%	99.28%	97.74%	98.3%	98.88%	97.9%	99.48%	91.90%
Number of Failures in month	4	1	2	2	4	4	3	5	5	4	3	5
Mean Time between failures in 52 week rolling period (hours)	461	548	487	461	417	365	337	283	265	243	244	214
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	<1	<2	<1	<0.5	<5	<2	<1	<1	<2	<2	<2	<2
Administrative Queries - Max Time to resolve 95% of all queries	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5
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 Fermat, Green and Newton at installation:

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

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

Table 3 gives Service Credit values for the month of April. 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.

CSAR Service - Service Quality Report - Service Credits

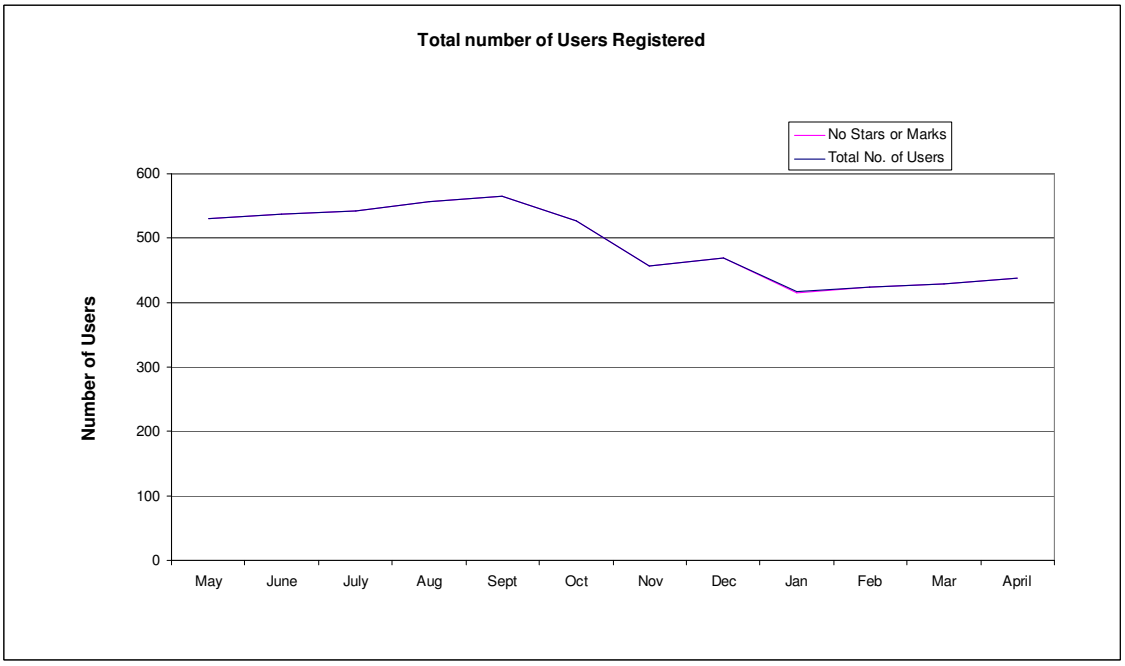
Service Quality Measure	2003/4											
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April
HPC Services Availability												
Availability in Core Time (% of time)	0.078	0	0.039	0.039	0.078	0.039	0.039	0.039	0.078	0.078	0.039	0.195
Availability out of Core Time (% of time)	0	-0.047	-0.039	-0.047	0.078	-0.039	0.078	0.078	0	0.078	0	0.039
Number of Failures in month	0.008	-0.008	0	0	0.008	0.008	0	0.0004	0.0004	0.008	0	0.0004
Mean Time between failures in 52 week rolling period (hours)	0	-0.008	0	0	0	0	0	0.0002	0.0002	0.0002	0.0002	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	-0.016	0	-0.016	-0.019	0.0312	0	-0.016	-0.016	0	0	0	0
Administrative Queries - Max Time to resolve 95% of all queries	-0.019	-0.019	-0.019	-0.016	-0.015514	-0.01551	-0.016	-0.016	-0.019	-0.019	-0.019	0
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:	0.00	-0.06	-0.04	-0.04	0.07	-0.03	0.02	0.02	0.01	0.05	-0.01	0.09

Table 3

The Service Availability issues are receiving close management attention, to determine the root causes and the most appropriate solutions to overcome the problems at least risk to the overall service

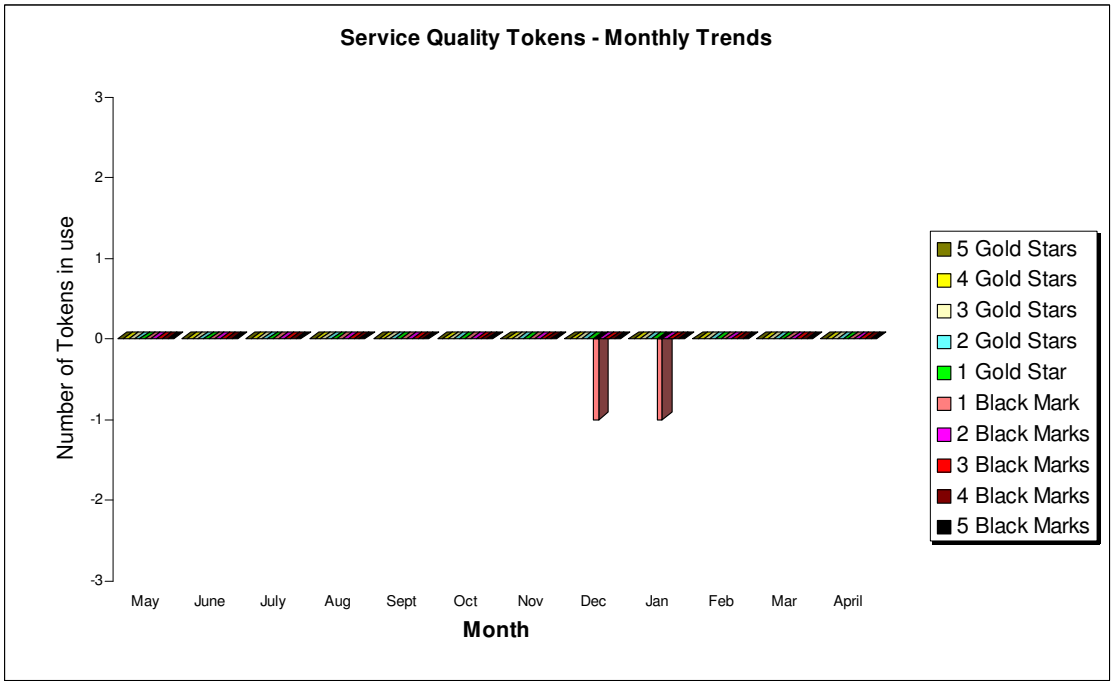
2.2 Service Quality Tokens

The position at the end of April 2004 is that none of the 438 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 graph below illustrates the monthly usage trend of quality tokens:



The current status of the Stendahl tokens is that there are no black marks or gold stars allocated to the service.

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 206.5% of Baseline capacity.

Job Throughput Against Baseline CSAR Service Provision

Period: 1st to 30th April 2004

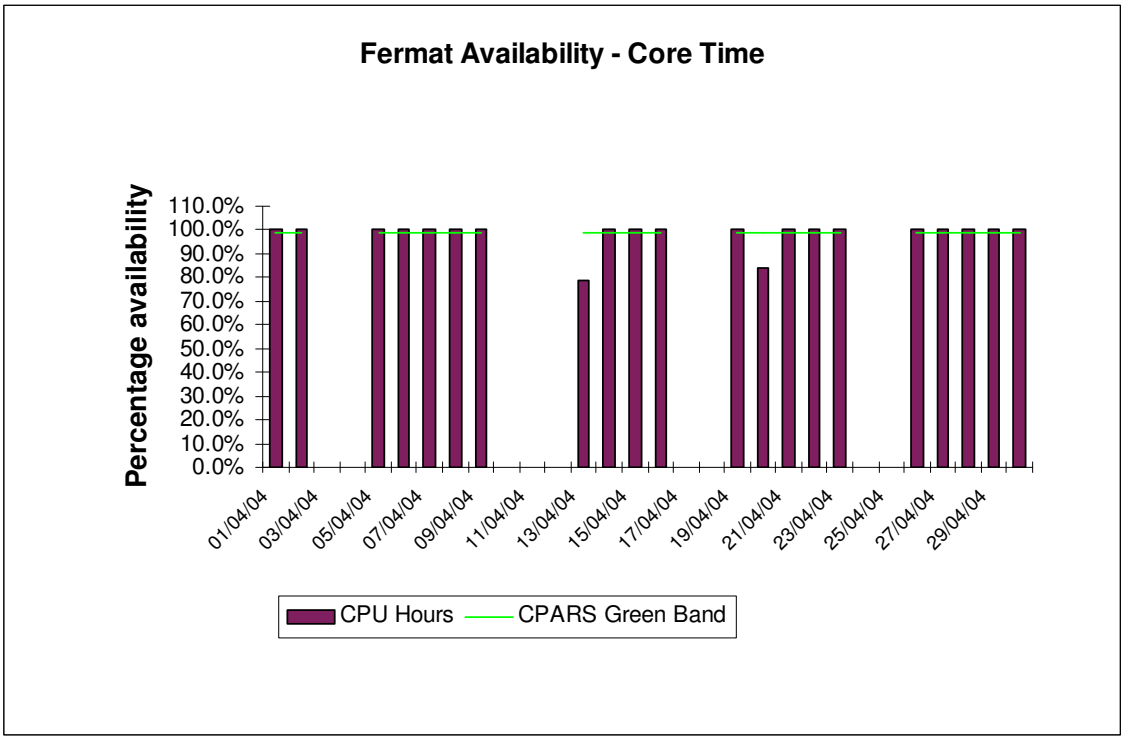
	Baseline Capacity for Period (GFLOP Years)	**Actual Usage in Period (GFLOP Years)**	**Actual % Utilisation c/w Baseline during Period**
1. Has CfS failed to deliver Baseline MPP Computing Capacity for EPSRC?	14.88	30.71	**206.5%**
	Baseline Capacity for Period (GFLOP Years)	**Job Time Demands in Period**	**Job Demand above 110% of Baseline during Period (Yes/No)?**
2. Have Users submitted work demanding > 110% of the Baseline during period?	14.88	31.3	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?		4	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?		84%	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	86%	No

3. System Availability

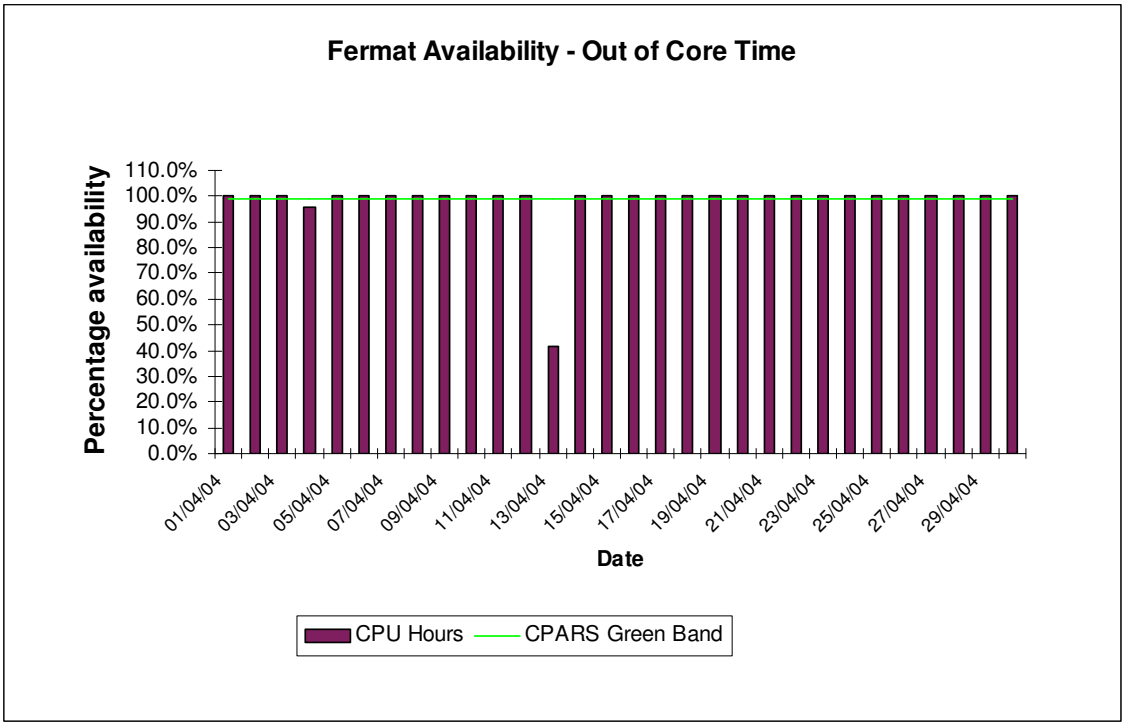
Service availability each reporting period is calculated as a percentage of actual availability time over theoretical maximum time, after accounting for planned breaks in service for preventative maintenance.

3.1 SGI Origin2000 System (Fermat)

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



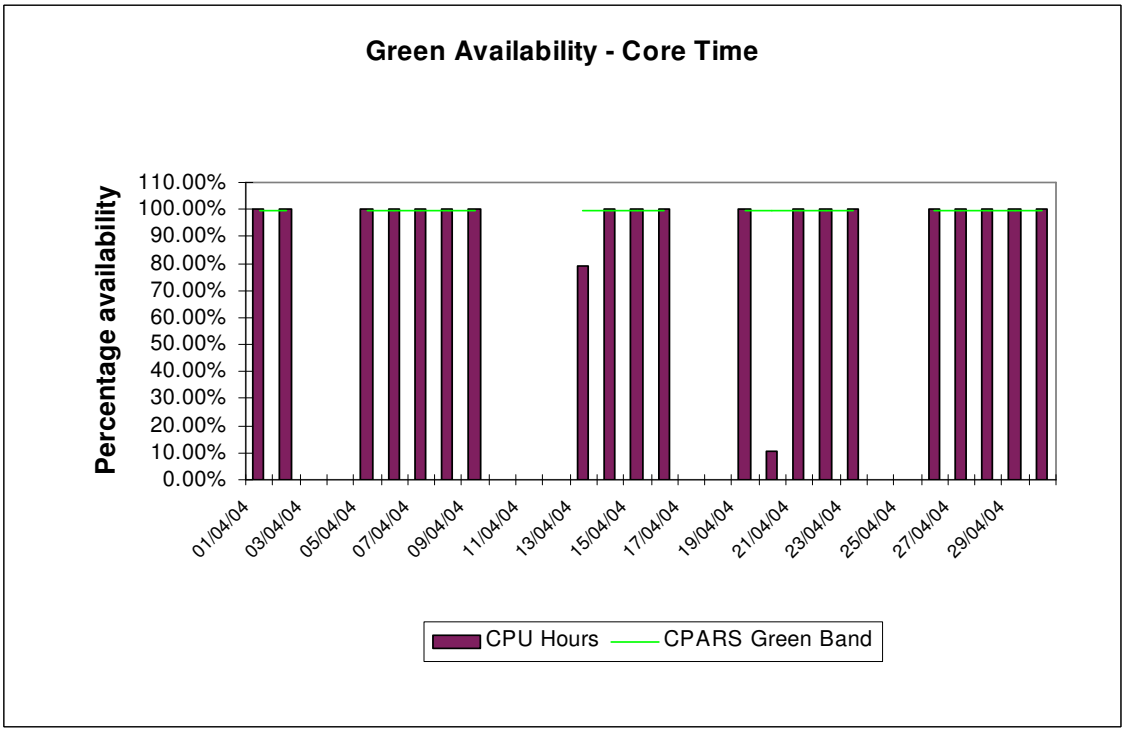
Availability of Fermat in core time during April was acceptable, with two outages. See item 6.2 'Issues' for information pertaining to these outages.



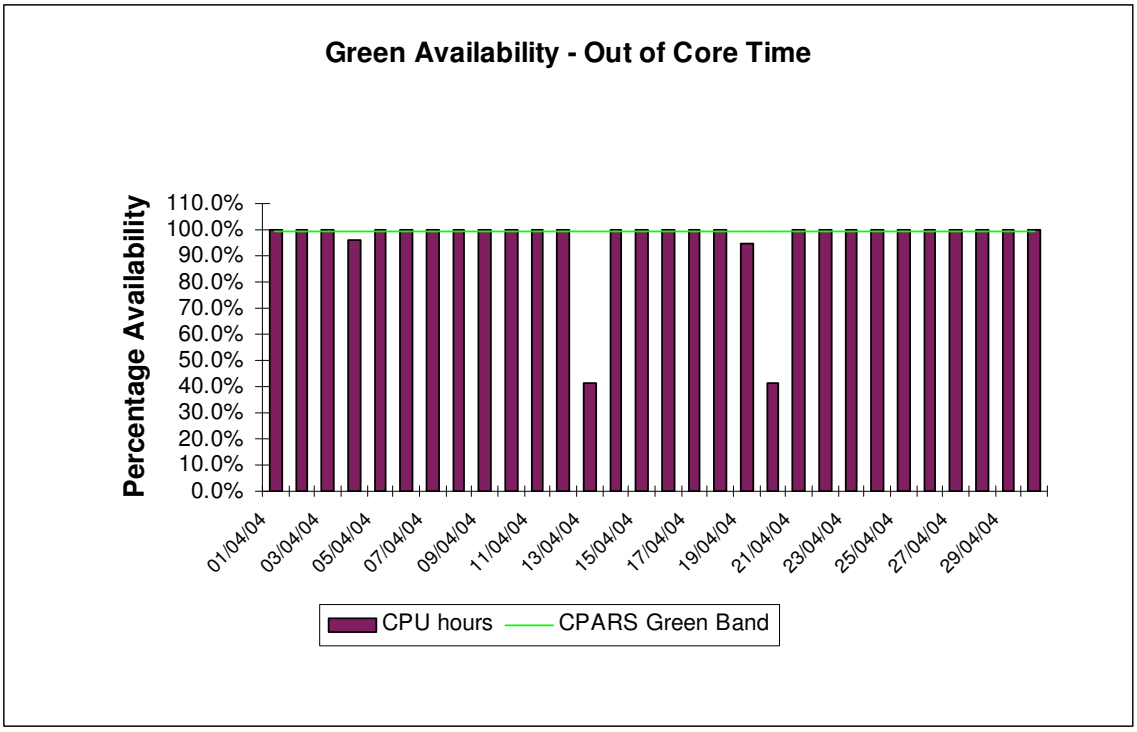
Availability of Fermat out of core time during April was acceptable, with two outages. See item 6.2 'Issues' for information pertaining to these outages.

3.2 SGI Origin3000 System (Green)

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



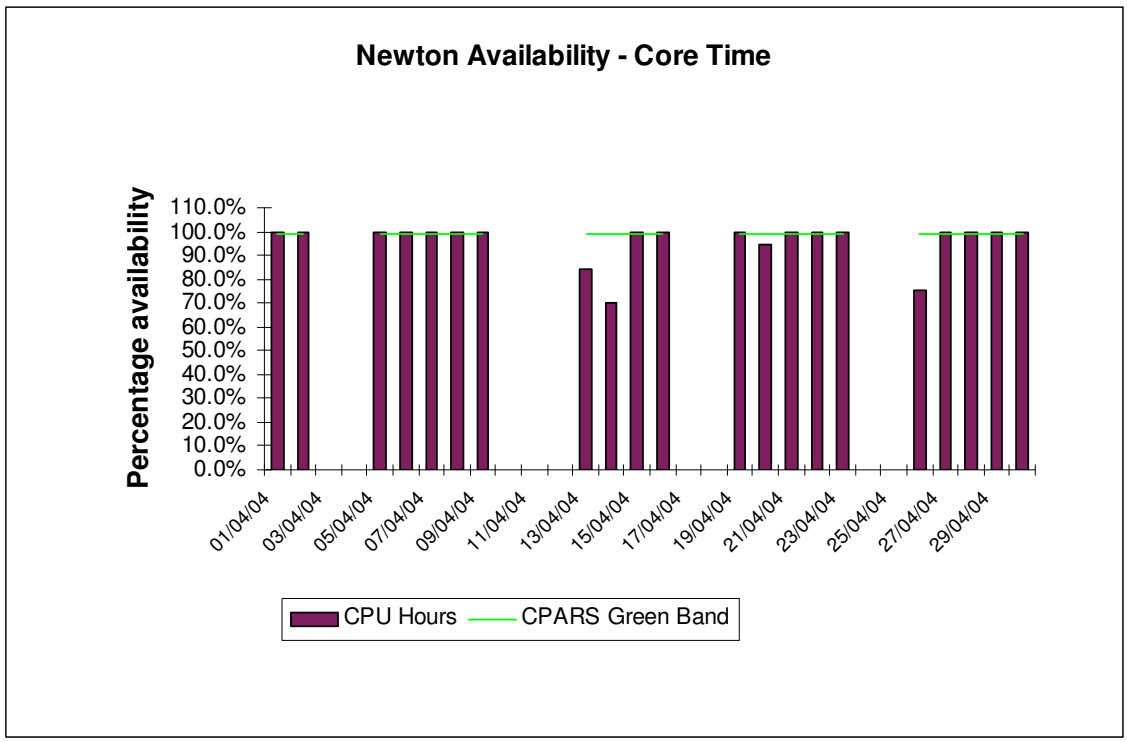
Availability of Green in core time during April was not acceptable, with two outages. See item 6.2 'Issues' for information pertaining to these outages.



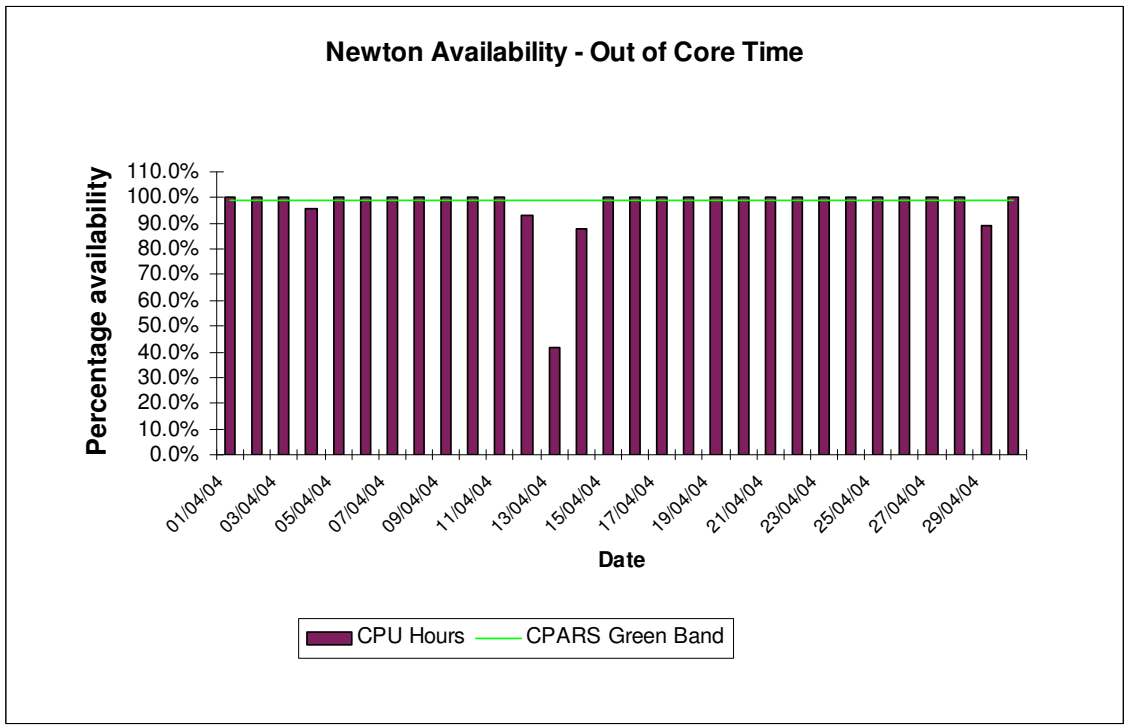
Availability of Green out of core time during April was not acceptable. See item 6.2 'Issues' for information pertaining to these outages.

3.3 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 April was not acceptable. See item 6.2 'Issues' for information pertaining to these outages.



Availability of Newton out of core time during April was not acceptable. See item 6.2 'Issues' for information pertaining to these outages.

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 April 1st to 30th is provided by Project/User Group, totalled by Research Council and overall. This covers:

• CPU usage	Newton:	107,910 CPU Hours
	Green:	246,320 CPU Hours
	Fermat:	35,619.30 CPU Hours
	Wren (Batch):	7.48 CPU Hours
	Wren (Interactive):	313.08 CPU Hours
• User Disk allocation	Medium Performance:	108.68 GB Years
	SAN HV:	28.77 GB Years
• HSM/tape usage		4,355.41 GB Years

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

a) SMP (Altix/Origin) Usage by month, showing usage each month of CPU (GFLOP-Years as per NPB), split by Research Council and by system. Overlaid horizontal lines show the overall Capacities.

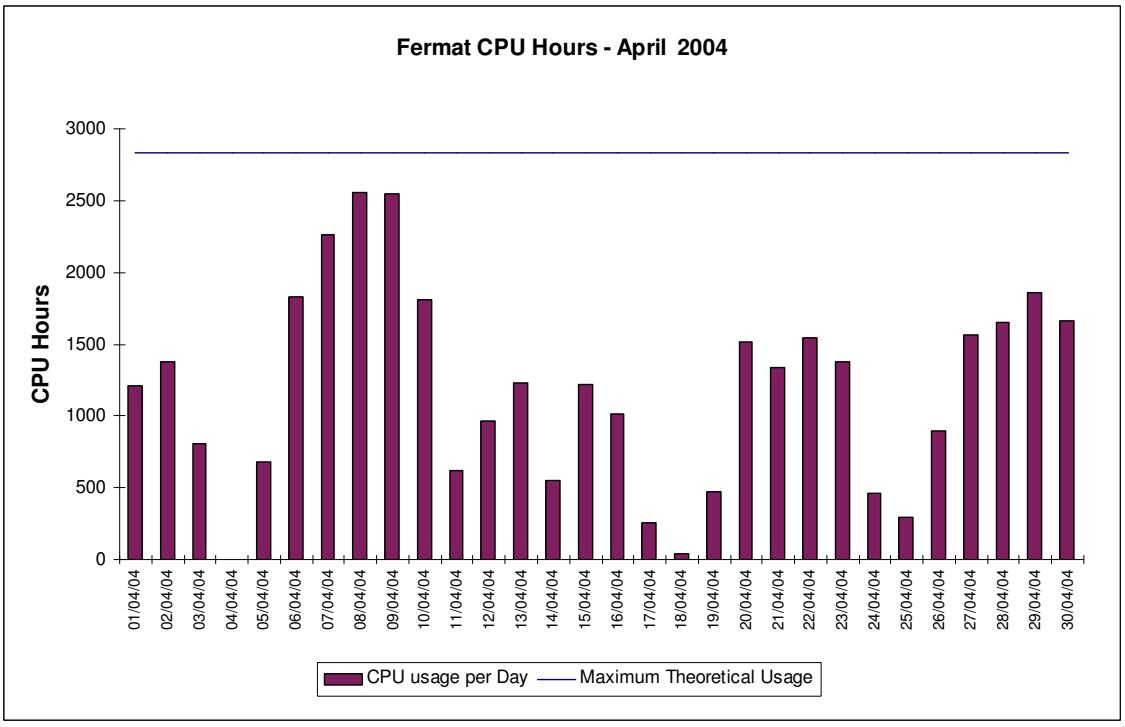
b) SMP (Origin) Usage by month, showing usage each month in CPU Hours, split by Research Council and giving the equivalent GFLOP-Years as per NPB. Overlaid horizontal lines show the Baseline and overall Capacity.

c) Medium Performance Disk, combined Origin and SAN, 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.

d) HSM/Tape Usage 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.

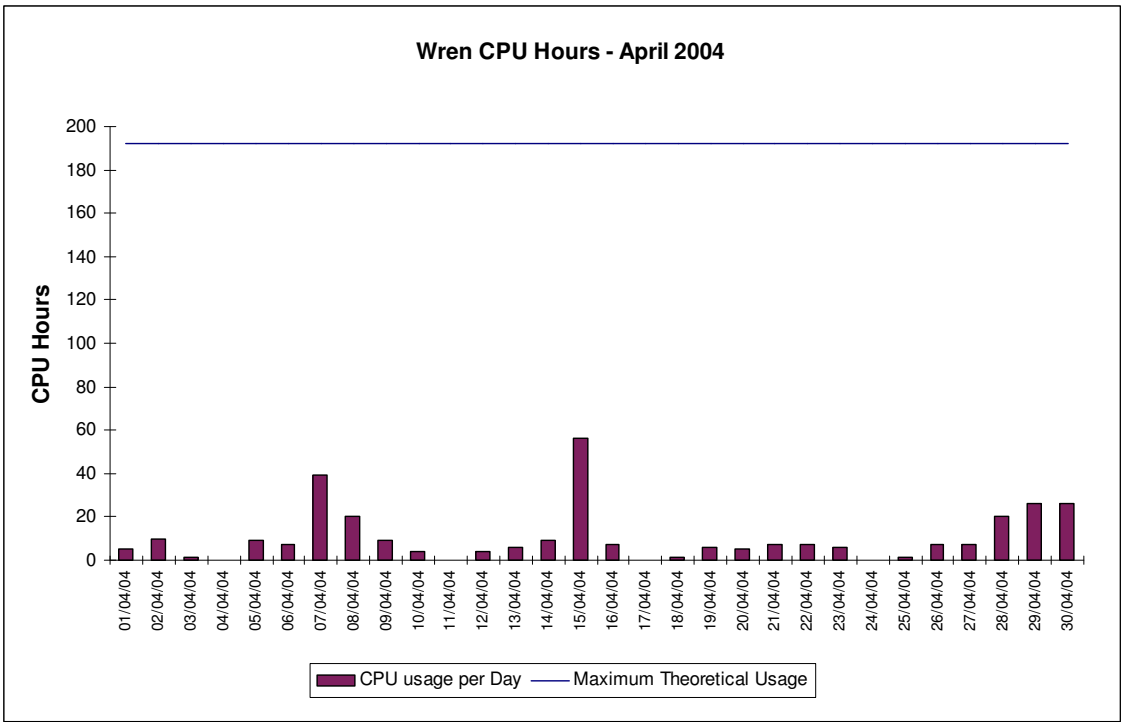
4.1 SGI Origin2000 System (Fermat)

The usage of the Origin system was higher this month. The groups most heavily using the Fermat system are CSN001 (De Cuevas), CSN003 (Steenman-Clark) and CSN006 (Price).



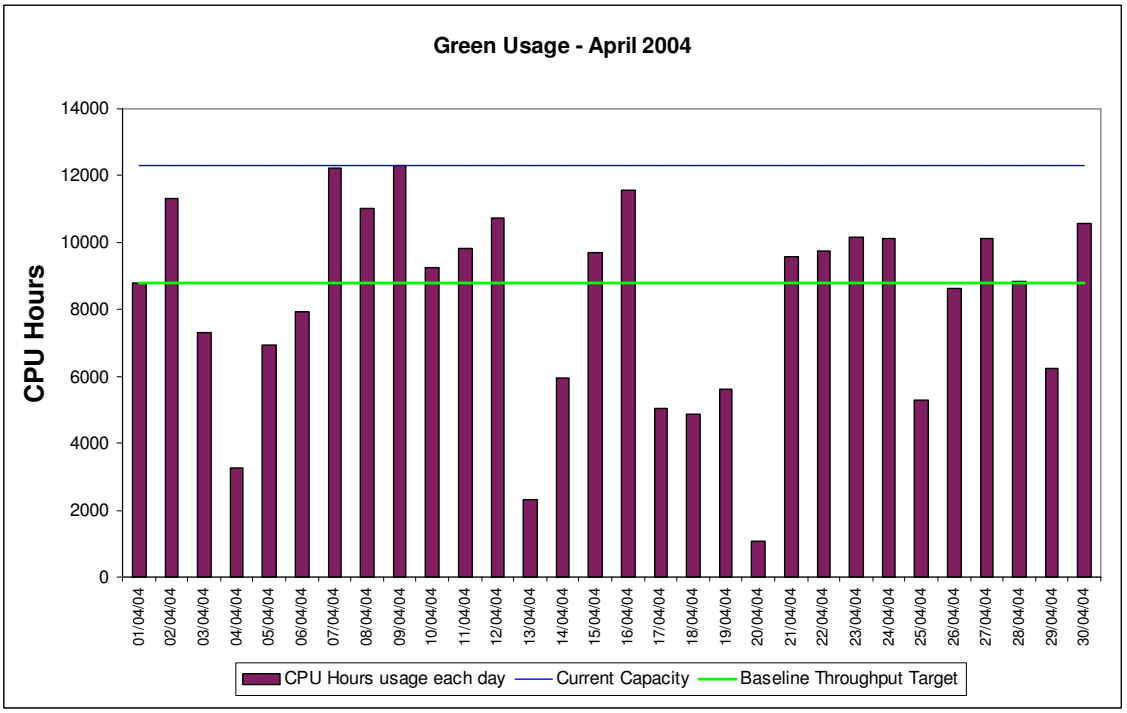
The above graph shows the variable utilisation of the Origin 128, a dedicated batch system.

4.2 SGI Origin300 System (Wren)



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

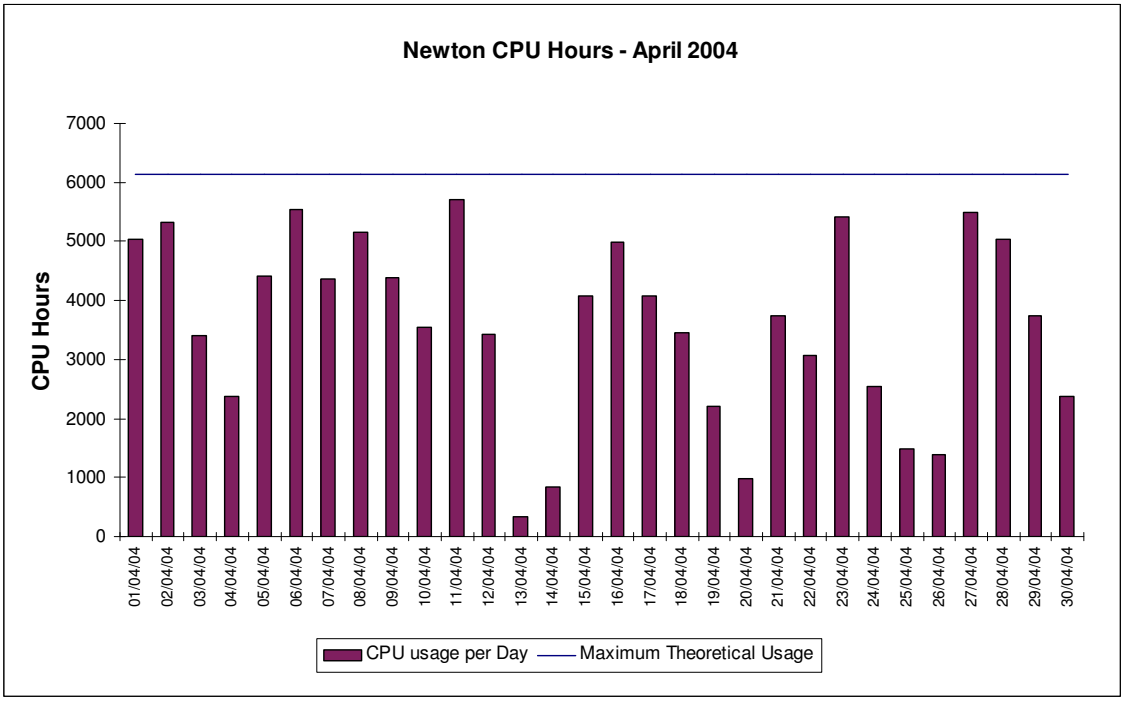
4.3 SGI Origin3000 System (Green)



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

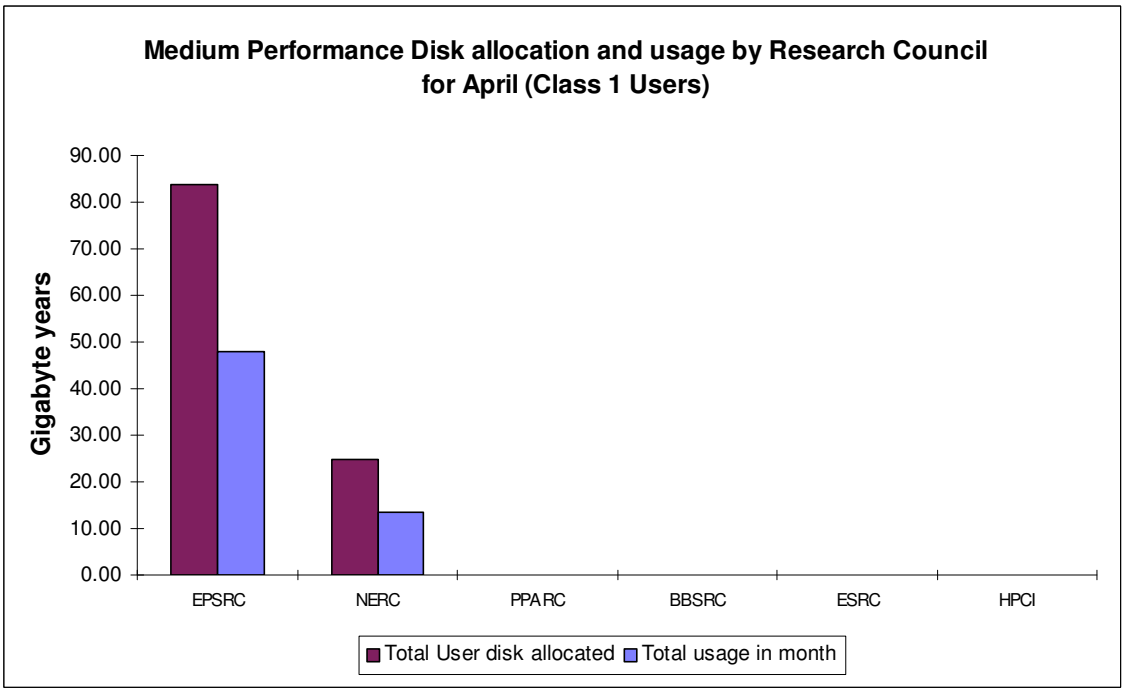
4.4 SGI Altix3700 System (Newton)

The following graph shows the daily usage during April for the Altix system Newton.



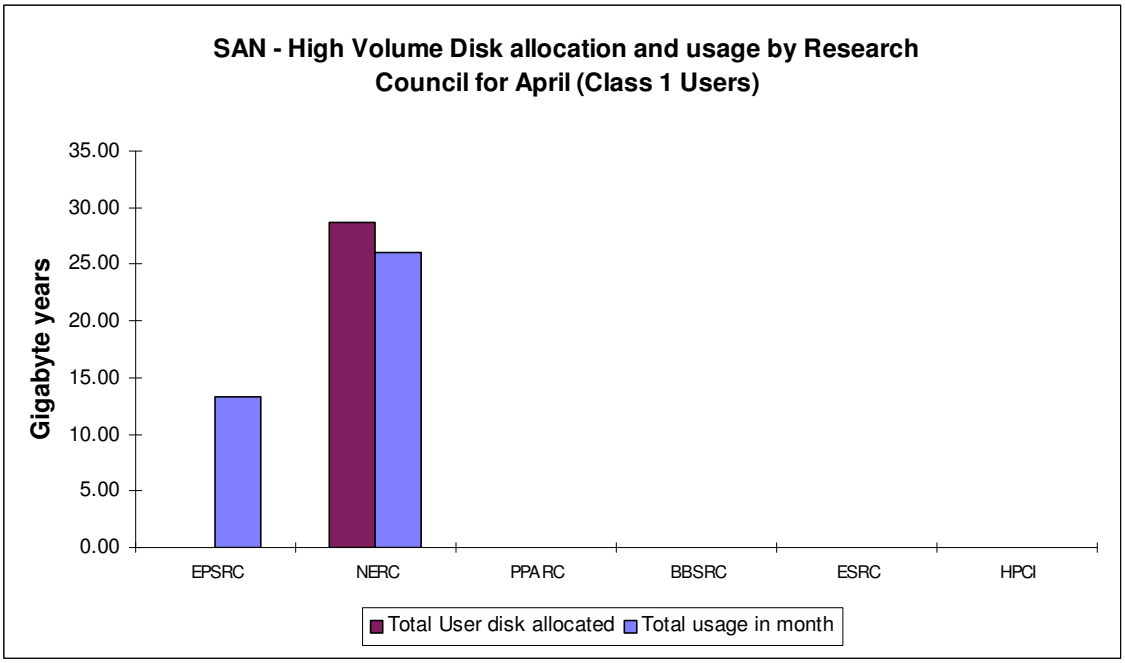
4.5 Disk/HSM Usage Chart

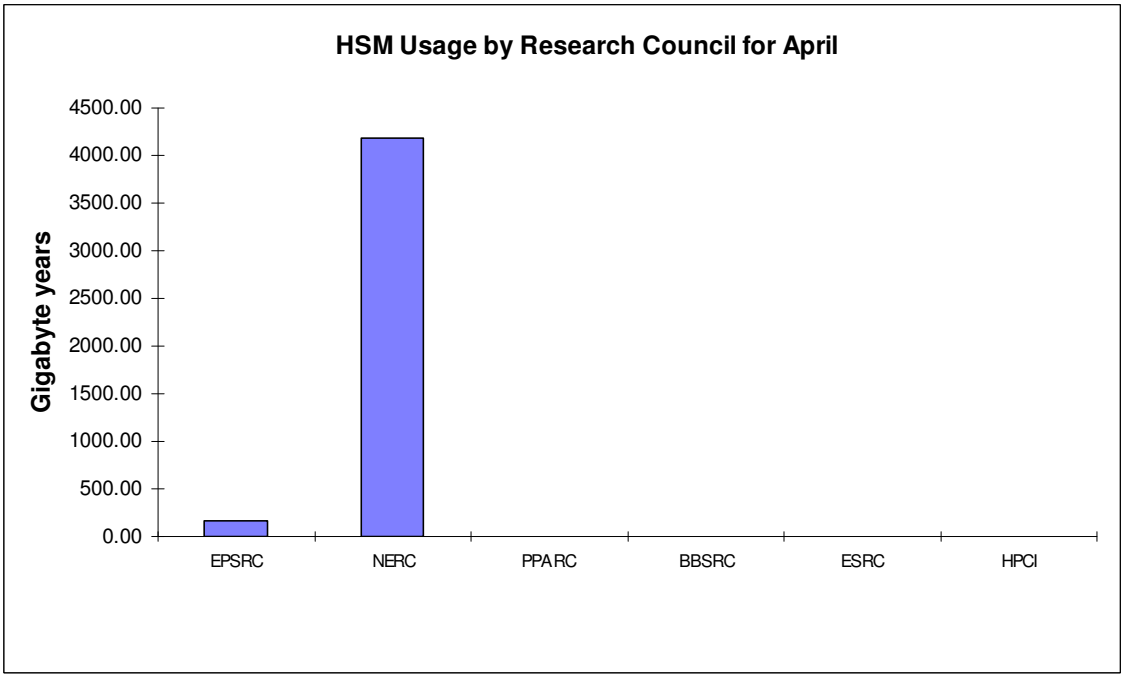
The graphs below show current disk and HSM allocations and usage.



Shown above is the disk allocation against usage on average of the Medium Performance (MP) disk.

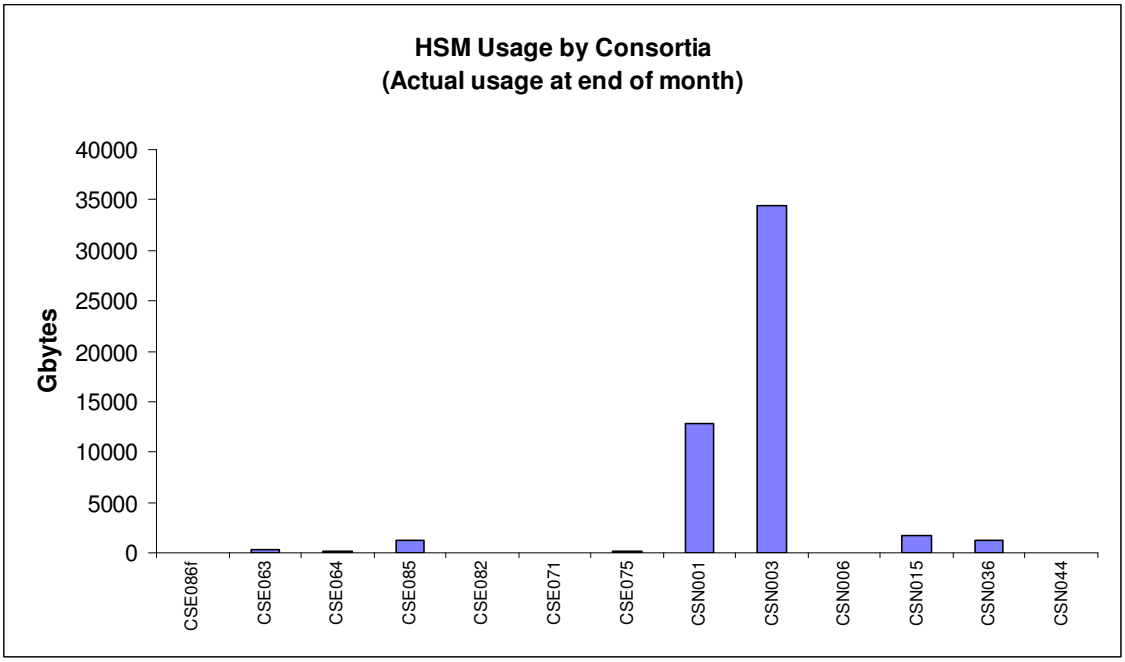
The following graph shows the disk allocation against usage on average of the SAN High Volume (HV) disk.





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

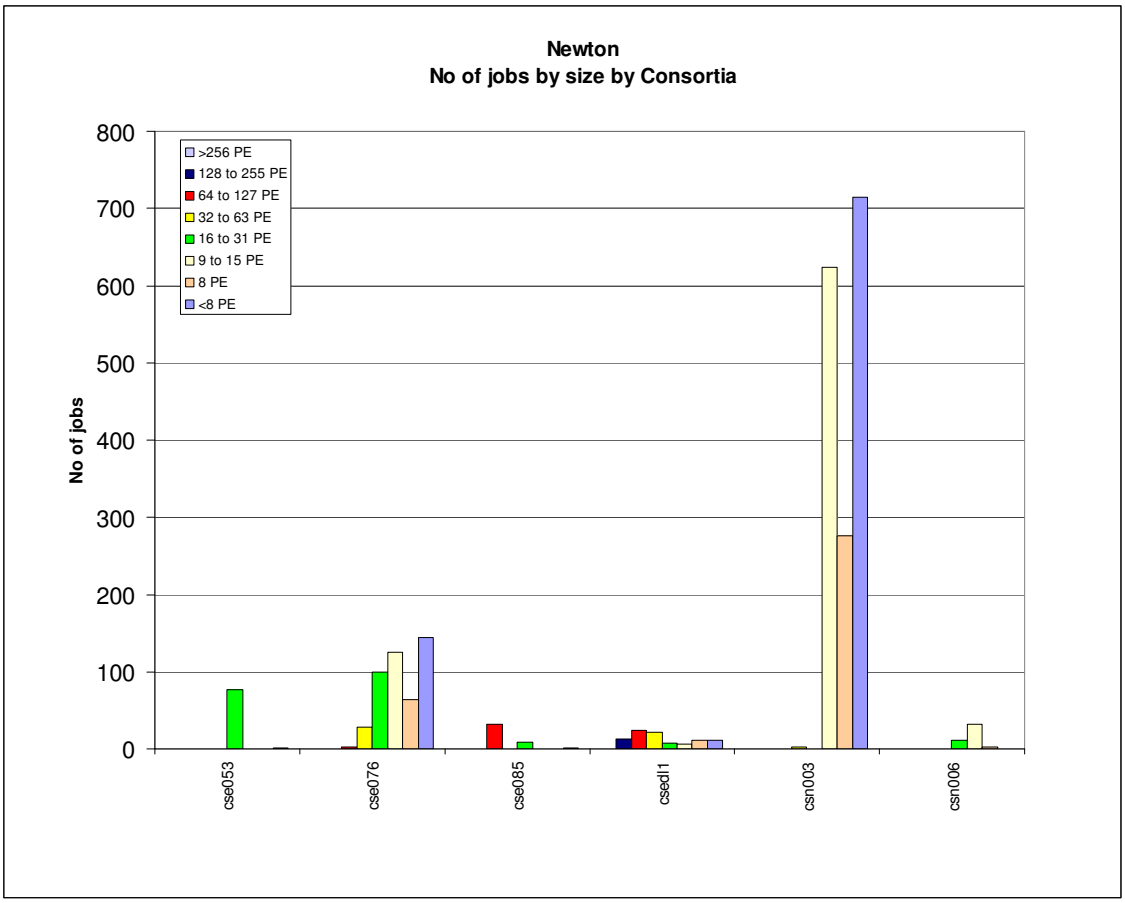
The next graph gives actual usage of HSM by Consortia.



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

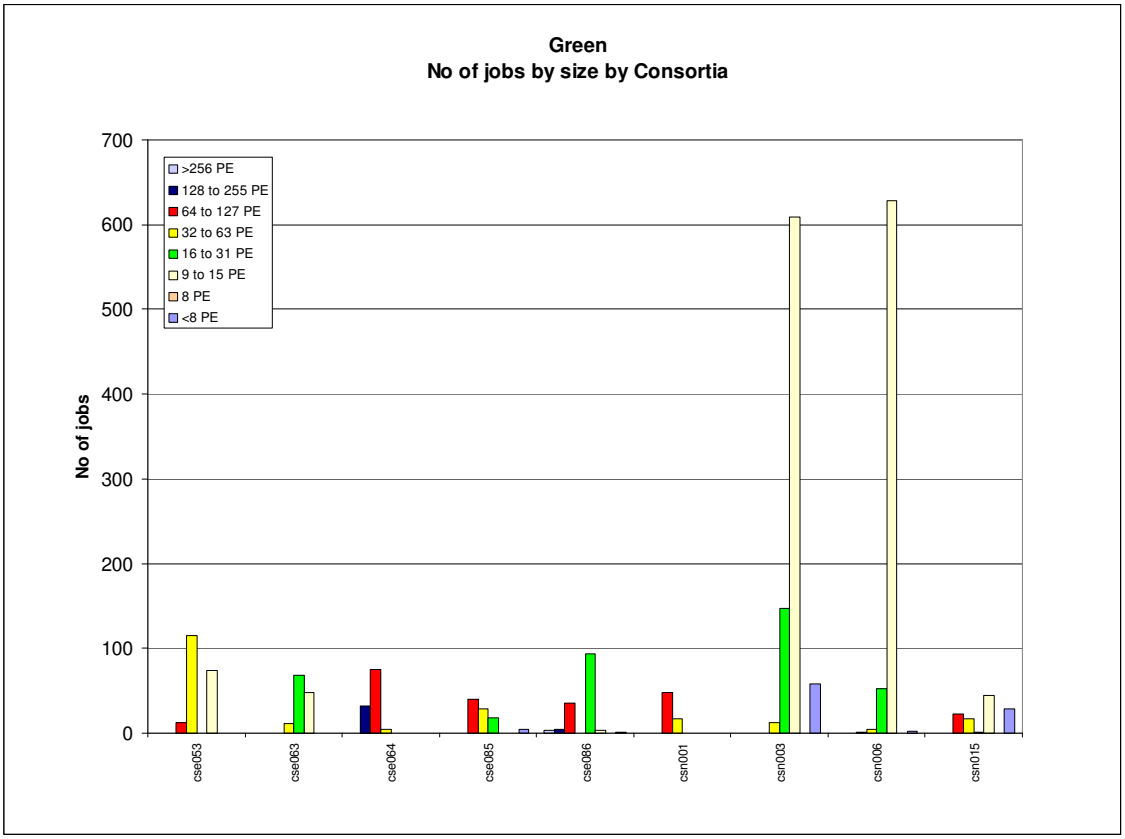
4.6 Processor Usage and Job Statistics Charts

Job statistics for Newton:



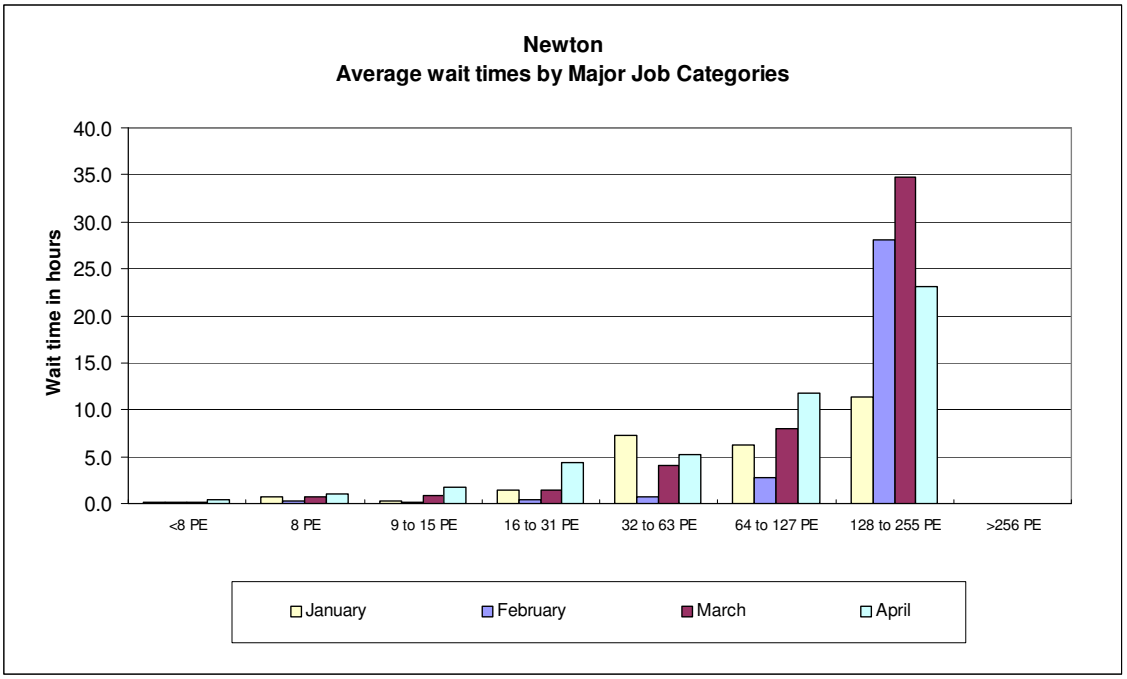
The above graph shows the number of jobs of the major sizes run in the period 1st to 30th April 2004.

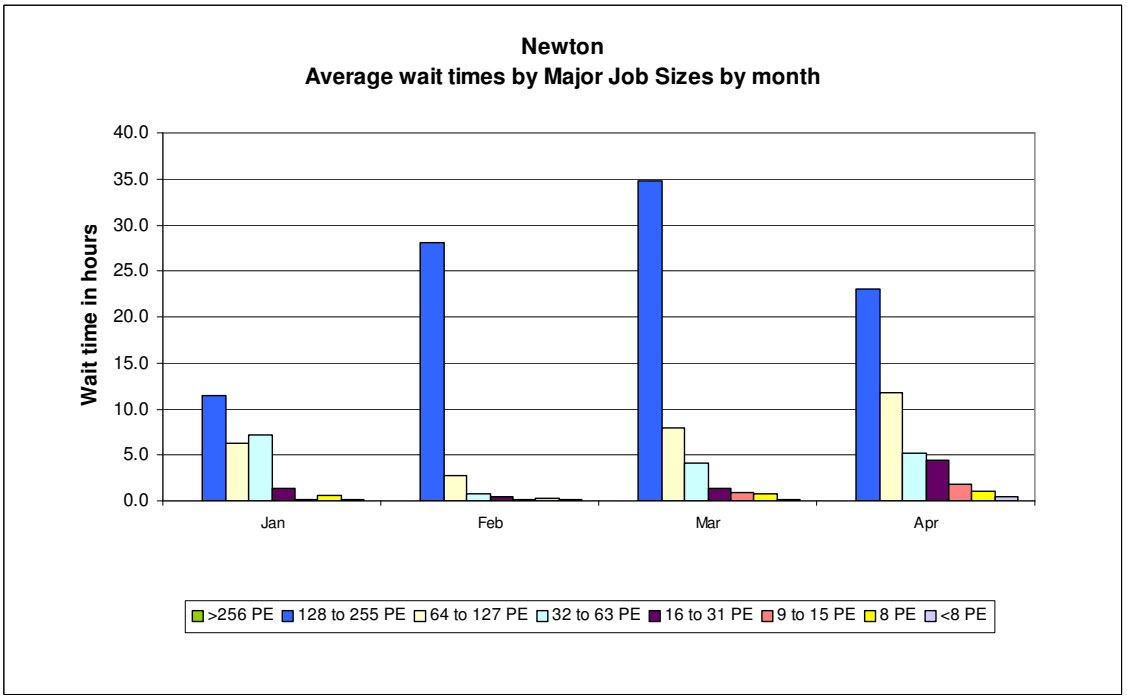
Job statistics for Green:



The above graph shows the number of jobs of the major sizes run in the period 1st to 30th April 2004.

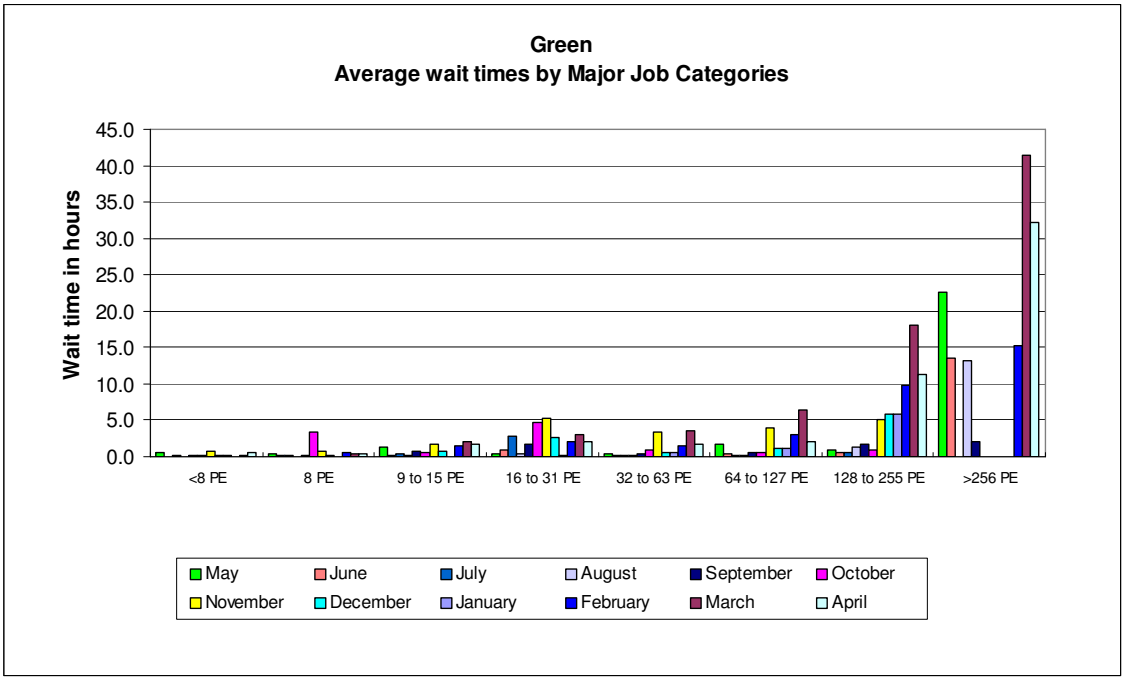
The next graph shows the wait times in hours on Newton for the major categories of jobs, larger jobs requesting tiling across multiple nodes having to wait the longest times.

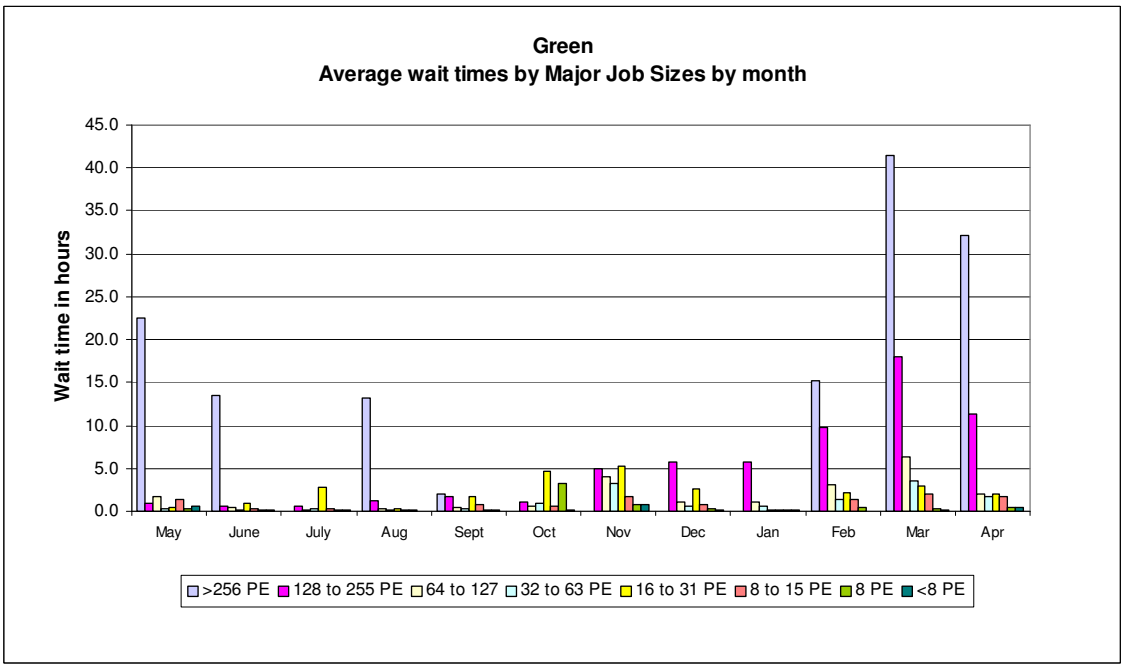




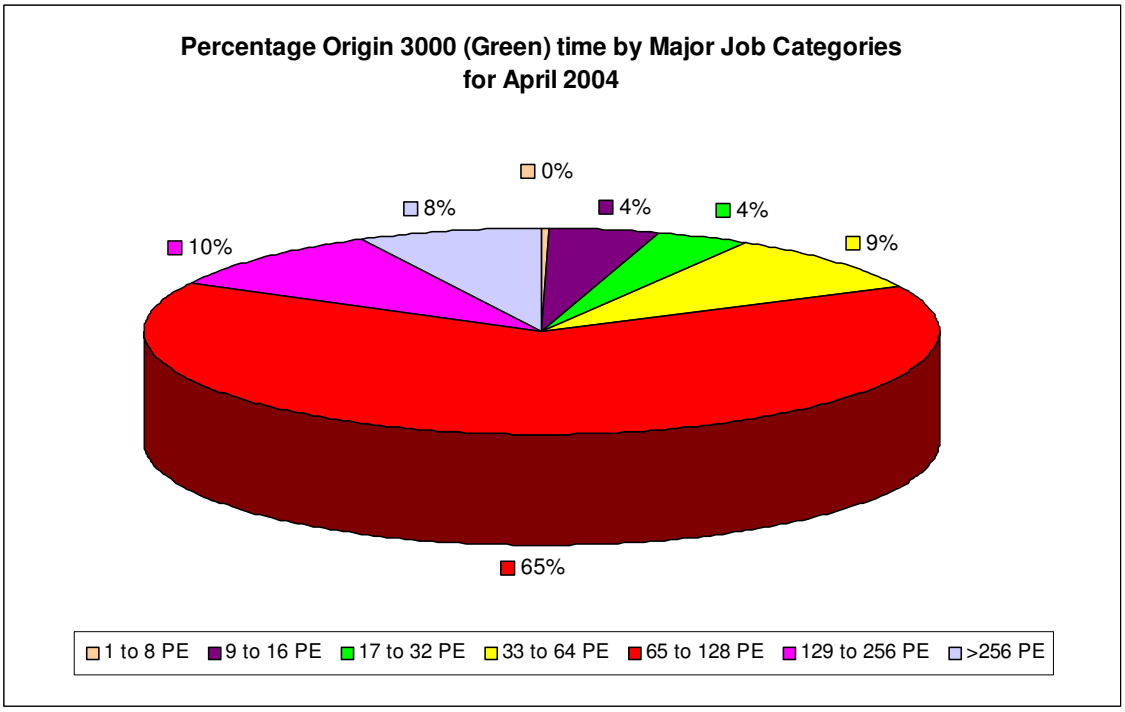
The chart above shows the average wait time trend on Newton so far this year.

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

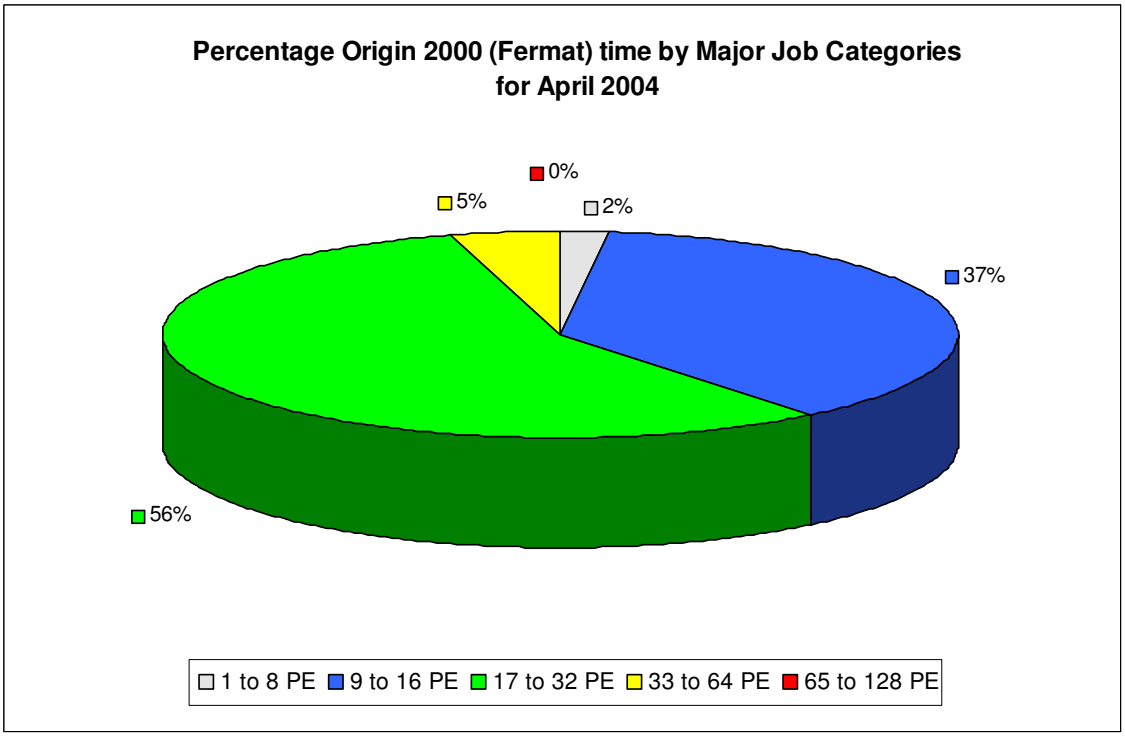




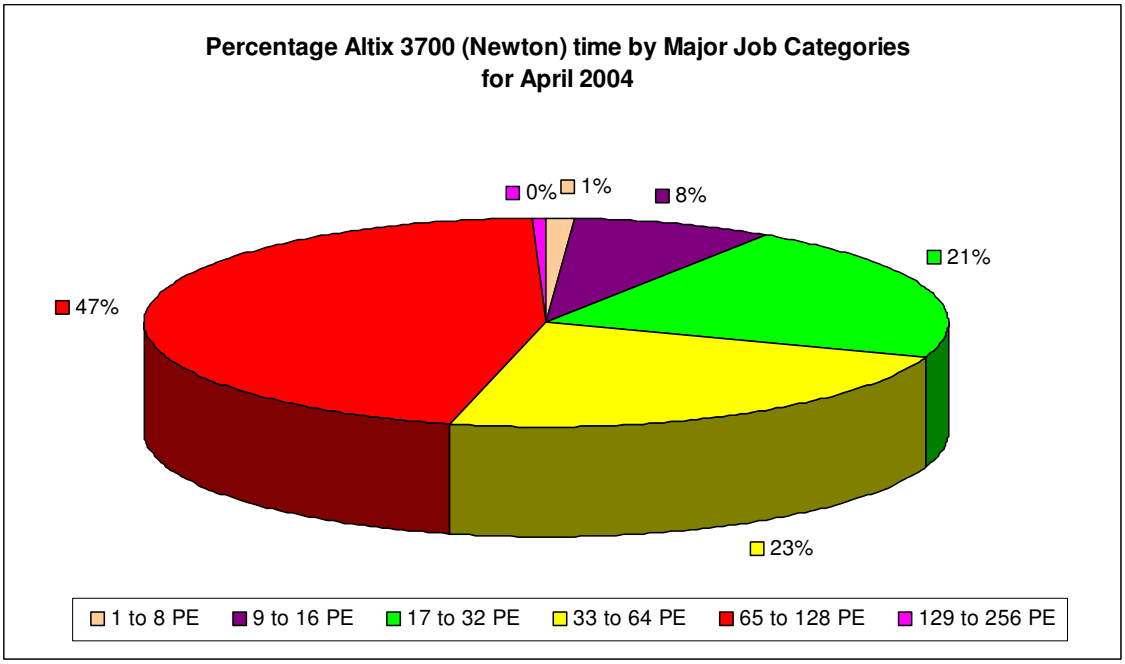
The chart above shows the average wait time trend on Green for the last 12 month period.



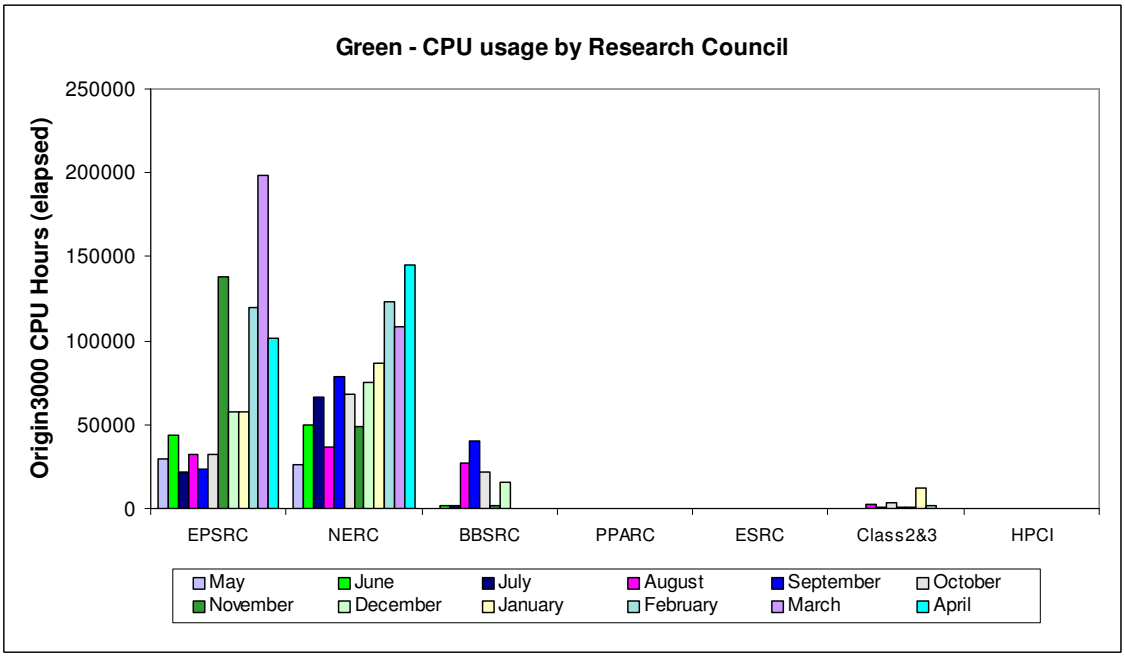
The greatest percentage of the workload on Green in April was in the 65 to 128 PE range, at 65%.



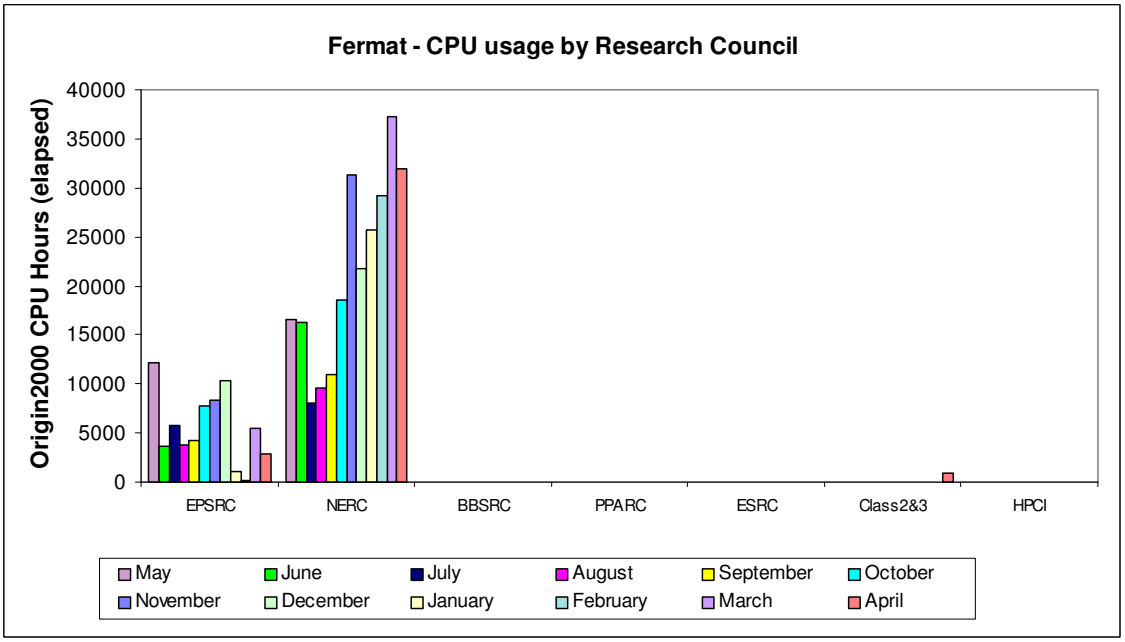
The workload on Fermat for April was greatest in the 17 to 32 PE range.



April saw a good spread of work on the Altix system Newton, with the highest concentration being in the 65 to 128 PE range.

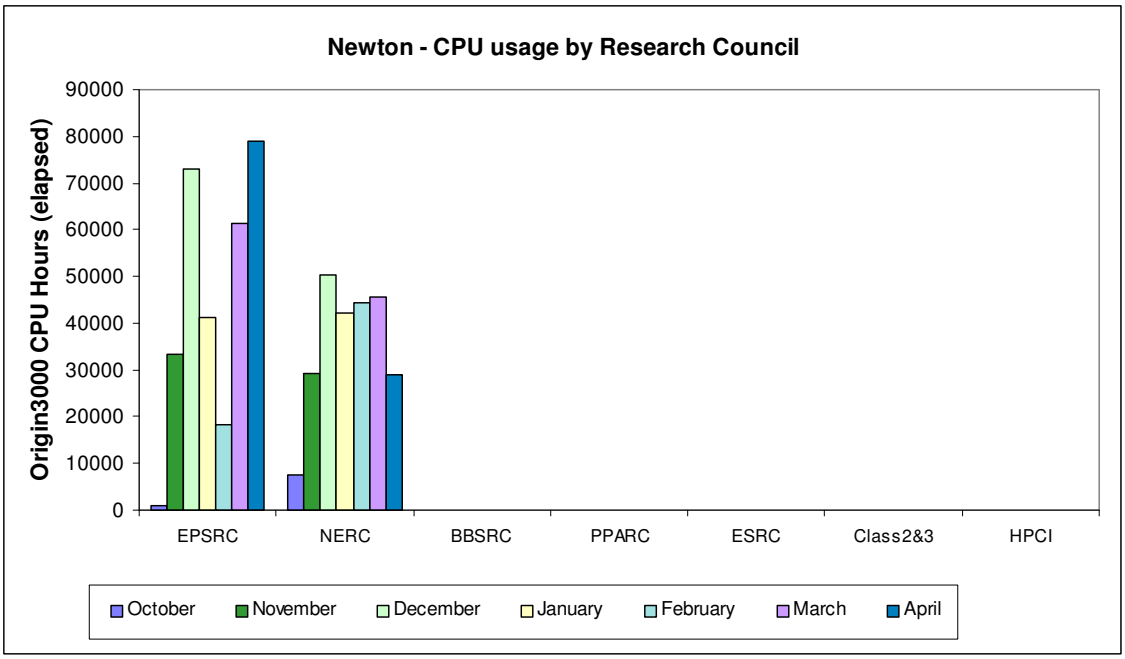


The above chart shows Green CPU usage by Research Council during the past 12 months of service.



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

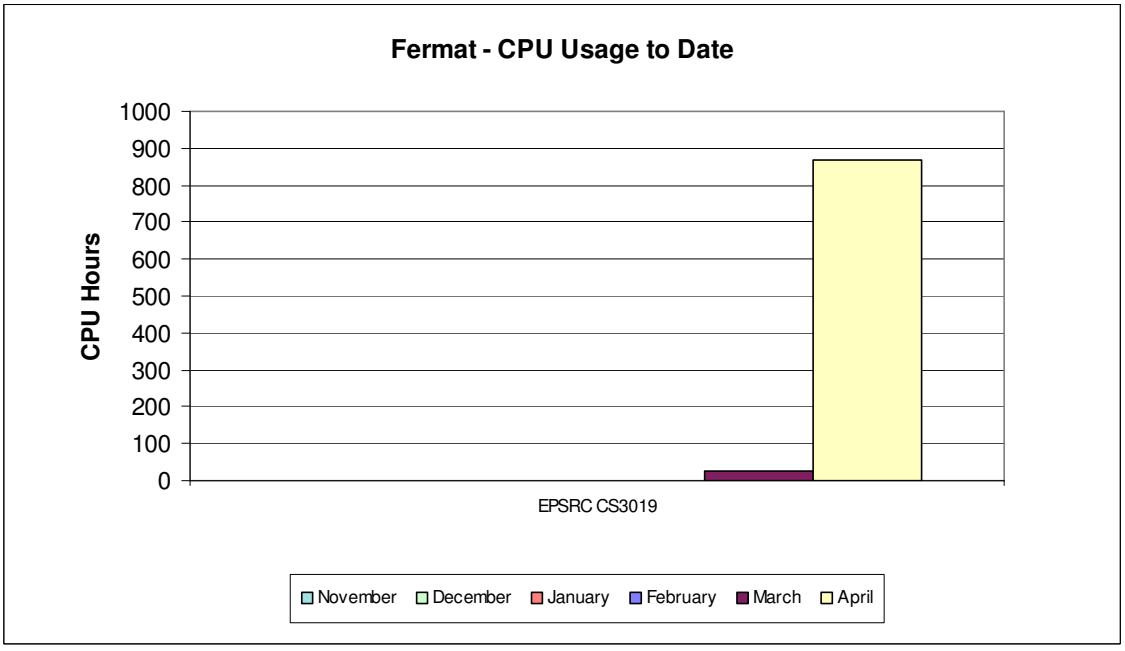
The following chart shows CPU usage to date of the Altix 3700 Newton.



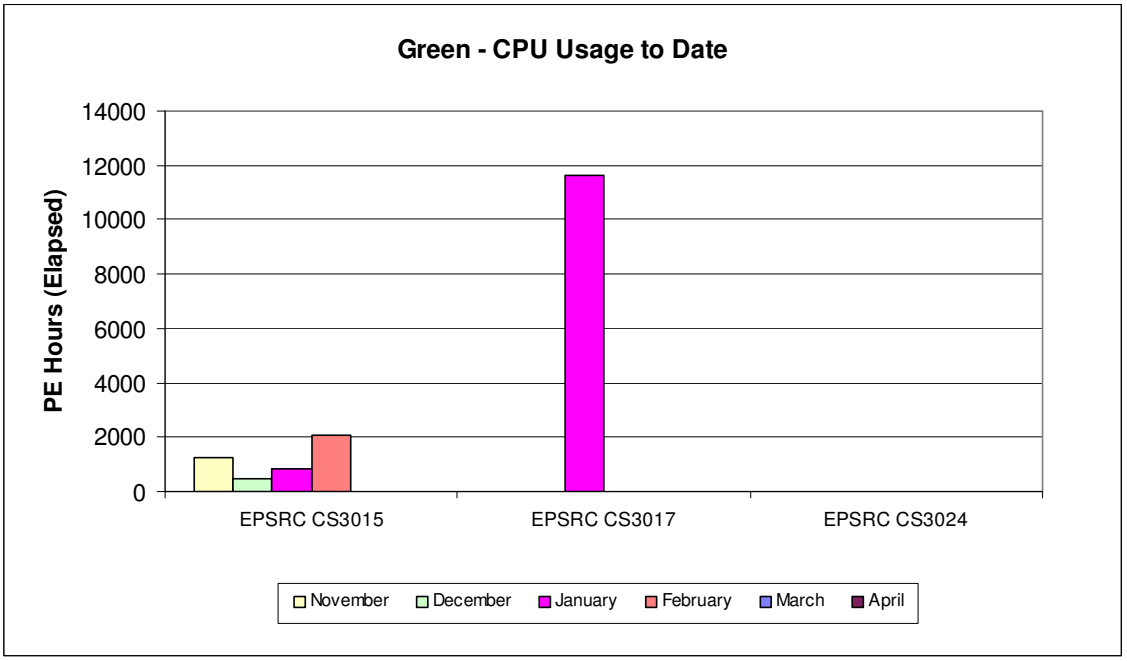
4.7 Class 2 & 3 Usage Charts

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.

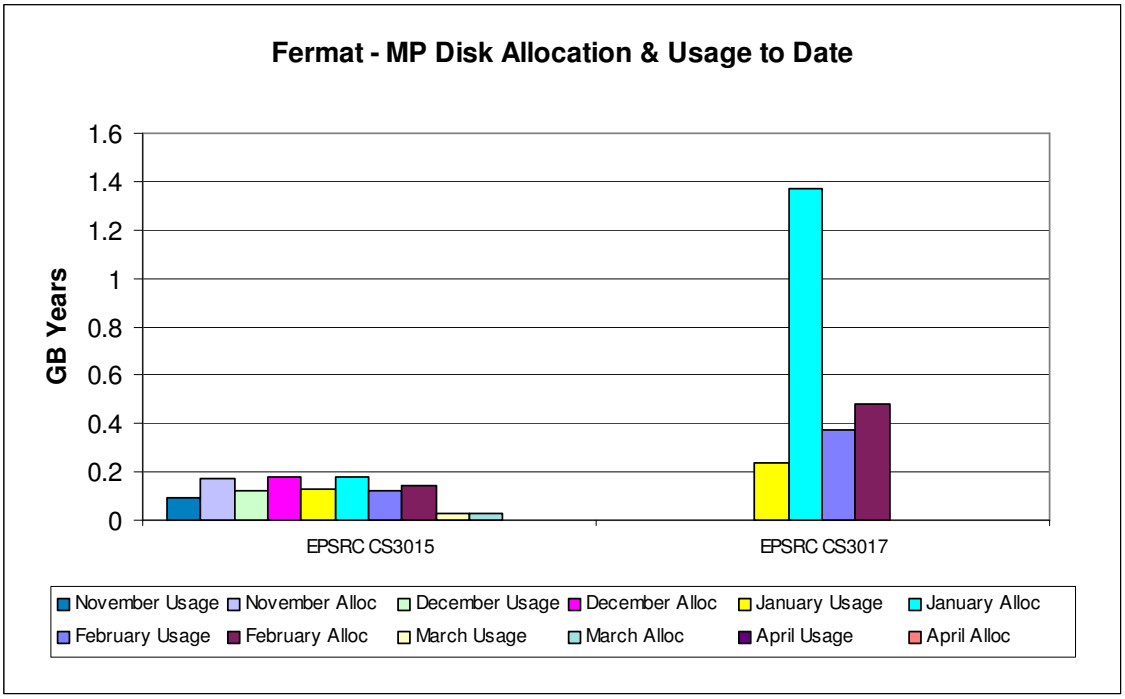
There is currently no CPU usage of the Newton system by class 2 and class 3 users.



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.

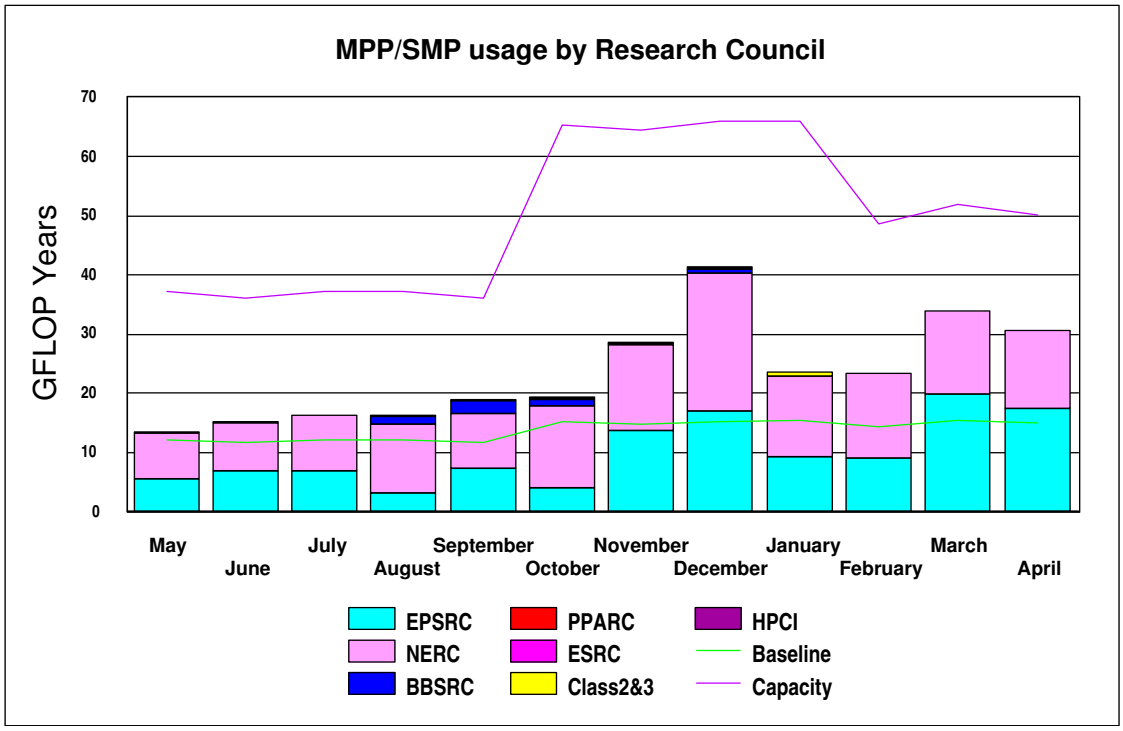


The above chart shows the most significant disk allocations on the Fermat system for class 2 and class 3 users. There is currently no HSM usage by class 2 and class 3 users.

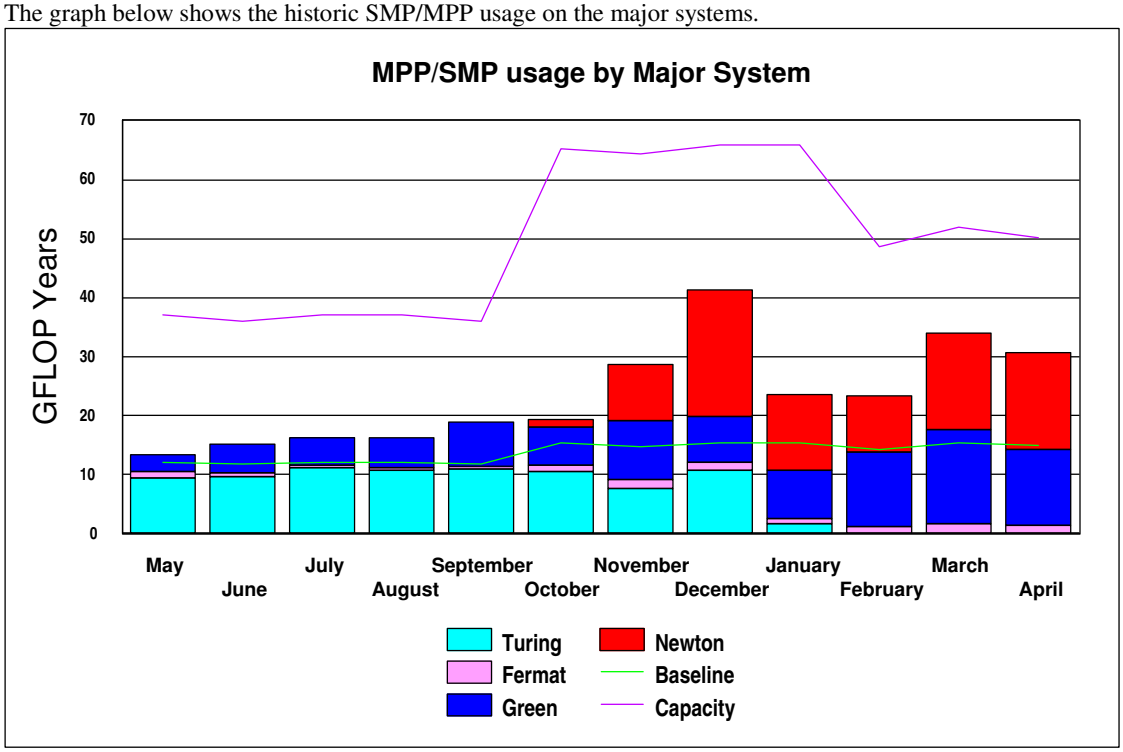
4.9 Charts of Historical Usage

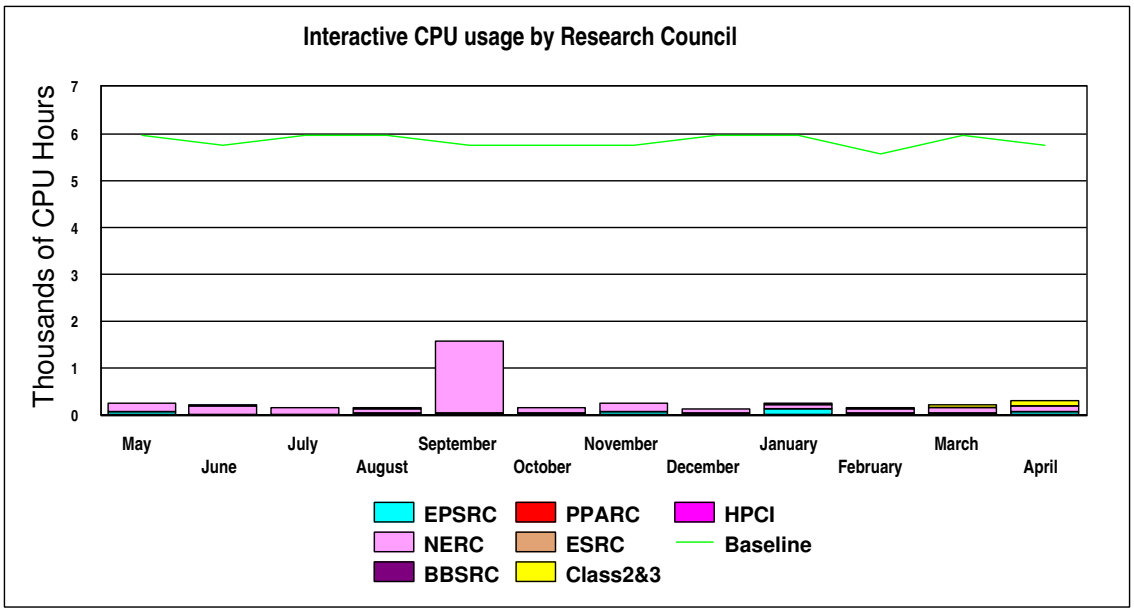
In all the Usage Charts, the baseline varies dependant on the number of days in each month, within a 365-day year.

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 Altix system Newton and subsequent fall following the removal of the T3E system Turing early in January.



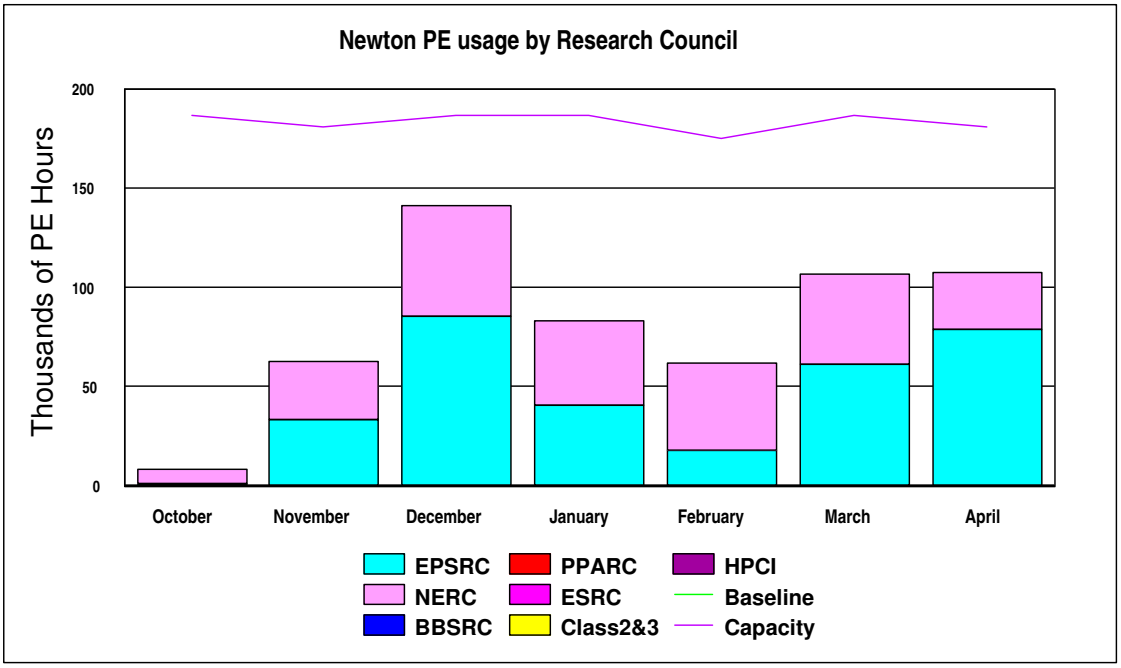
The graph below shows the historic SMP/MPP usage on the major systems.



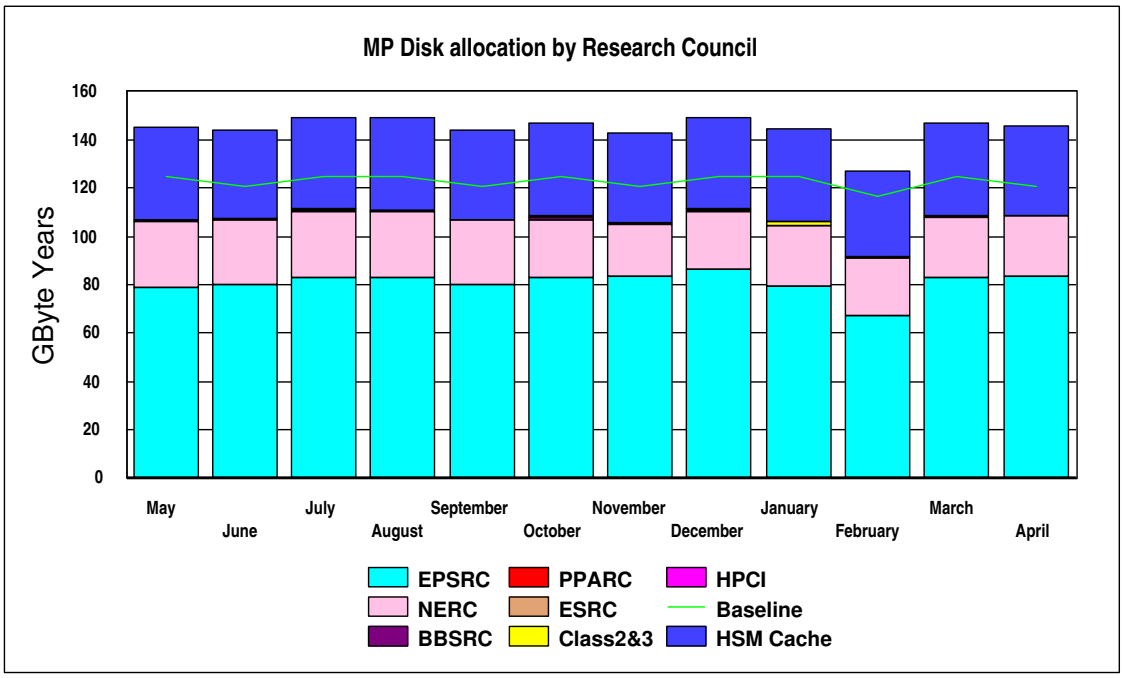


The above graph shows the historic interactive usage of the Origin 300 system (Wren). Eight of the higher speed 500Mhz CPUs in Wren deliver the baseline capacity equivalent to that which was previously available on the Origin 3000 system (Fermat) for interactive usage.

The graph below details the historic usage by Research Council of the Altix 3700 system (Newton), introduced into the service in October 2003.

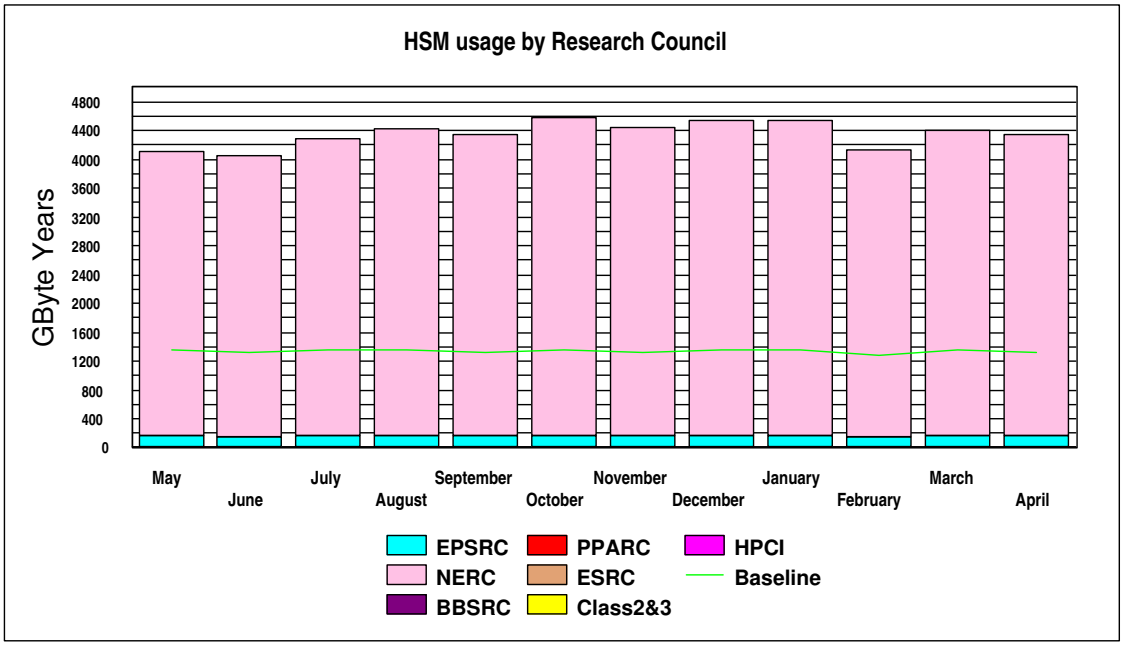


The next series of graphs illustrates the usage of the disk and HSM resources of the system.



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

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

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 April.

Service Tokens Refunded: April 2004 Usage							
System	Consortia						Total
	cse085	cse086					
Green 256+ PEs							0
Green 384+ PEs							0
Newton 128+ PEs	98.82						98.82
Newton 192+ PEs							0
Total Tokens							**98.82**

6. Service Status, Issues and Plans

6.1 Status

The service utilisation in April exceeded baseline.

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

6.2 Issues

Reliability issues were encountered during April, with all CSAR systems affected to some extent. Considerable effort has been put into ascertaining the root cause of the problems, and work to identify all issues is still ongoing. The majority of problems encountered have been subsequently identified as operating system bugs, mainly relating to CXFS and the SAN, and patches to rectify these bugs are currently in development.

6.3 Plans

Both the Propack operating system of the Altix and the Irix operating system of the Origins are to be upgraded to a newer release in June, which is calculated to add to the reliability measures currently being undertaken as a result of the problems experienced during April.

7. Conclusion

April 2004 saw the overall CPARS rating at Green with the baseline being exceeded by 106%.

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 April 2004

Appendix 2 contains the Percentage shares by Consortium for April 2004

Appendix 3 contains the Percentage shares by Research Council for April 2004

Appendix 4 contains the Training, Applications and Optimisation support figures to the end of April 2004

Appendix 5 contains a breakdown of resource usage by Consortia to the end of April 2004.

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 April 2004 can be found at the URL below

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

Appendix 2

Percentage CPU time per consortia for Green in April 2004

Consortia	% Machine Time
CSE086	14.46
CSE053	6.24
CSE063	3.49
CSE064	7.74
CSE085	6.34
CSE071	0.10
CSE066	2.75
CSE075	0.00
CSN001	20.04
CSN003	15.03
CSN006	12.90
CSN015	10.90
CS3024	0.01

Percentage CPU time per consortia for Newton in April 2004

Consortia	% Machine Time
CSEdl1	6.19
CSE086	5.91
CSE050	6.24
CSE053	6.34
CSE072	0.00
CSE085	5.99
CSE066	0.00
CSE076	42.49
CSN001	0.06
CSN003	22.74
CSN006	3.91
CSEHPCX	0.01

Percentage CPU time per consortia for Fermat in April 2004

Consortia	% Machine Time
CSE055	7.81
CSE086	0.12
CSE053	0.00
CSE063	0.00
CSE085	0.00
CSE077	0.09
CSE066	0.00
CSN001	28.02
CSN003	59.26
CSN015	2.27
CS3019	2.44

Percentage CPU time per consortia for Wren in April 2004

Consortia	% Machine Time
CSE055	0.00
CSE086	14.96
CSE053	0.64
CSE063	0.37
CSE064	0.53
CSE085	1.47
CSE077	0.05
CSE082	0.18
CSE066	2.47
CSE075	0.44
CSE076	0.00
CSN001	16.27
CSN003	17.63
CSN006	3.81
CSN015	5.52
CS3019	31.78

Percentage Medium Performance disc allocation by Consortia in April 2004

Consortia	%Allocation
CSE084	1.51
CSE086	10.59
CSE098	0.23
CSE040	0.38
CSE050	1.58
CSE053	0.53
CSE064	0.09
CSE085	8.32
CSE082	7.56
CSE071	0.15
CSE066	0.04
CSE075	44.18
CSE076	0.60
HPCI Daresbury	0.04
HPCI Edinburgh	0.07
CSN001	11.35
CSN003	3.40
CSN006	3.07
CSN015	2.65
CSN052	2.36

Percentage usage of HSM by Consortium for April 2004

Consortium	% Usage
CSE086	0.03
CSE063	0.71
CSE064	0.30
CSE085	2.47
CSE082	0.00
CSE071	0.01
CSE075	0.38
CSN001	24.43
CSN003	66.04
CSN006	0.01
CSN015	3.28
CSN036	2.32
CSN044	0.02

Appendix 3

Percentage CPU usage on Green by Research Council for April 2004

Research Council	% Usage
EPSRC	41.13
HPCI	0.00
NERC	58.87
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage CPU usage on Newton by Research Council for April 2004

Research Council	% Usage
EPSRC	73.29
HPCI	0.00
NERC	26.71
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage PE usage on Fermat by Research Council for April 2004

Research Council	% Usage
EPSRC	10.45
HPCI	0.00
NERC	89.55
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage CPU usage on Wren by Research Council for April 2004

Research Council	% Usage
EPSRC	56.76
HPCI	0.00
NERC	43.24
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage MP Disc allocated by Research Council for April 2004

Research Council	% Allocated
EPSRC	77.04
HPCI	0.11
NERC	22.74
BBSRC	0.00
ESRC	0.00
PPARC	0.00

Percentage Disc allocated as SAN HV by Research Council for April 2004

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

Percentage HSM usage by Research Council for April 2004

Research Council	% usage
EPSRC	3.90
HPCI	0.00
NERC	96.10
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	
cse053	Leschziner, M (Prof)	Coupling RANS Near-Wall Turbulence Models with Large Eddy Simulation Strategies	Mike Pettipher	15	4	7			7	8	
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
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	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	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	
cse117	Theodoropoulos K (Dr)	Modelling of Microreactors: An Integrated Multi-Scale Approach									
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	30
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
csn043	Haines			20						36	
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
csn059	Watson, A J (Prof)	Circulation, overflow & deep connection in the Nordic seas		45						4	
csb006	Sansom, M (Prof)	DFT calculations for ion channels and transport proteins	Neil Stringfellow								
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)										
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								
cs3024	Fernando, T (Prof)	Collosion Detection	Jo Leng	10							
cs3025	Welbourne, Stephen	Modelling Recovery after Damage in Single Word Reading									
cs3026	Smith, Lorna	HPCx/CSAR collaboration									
cs4001	White, P										
cs4002	Cooper, A (Miss)										

The following table shows resource utilisation by Consortia to the end of April 2004.

cs3019 Bengough
Last Trade: Thu Apr 1 12:39:18 2004
 cs3019 used 0.4 of 7.6 Hour Newton CPU (0.1 of 1.2 G.S.T), 5.6%
 cs3019 used 187.5 of 360.1 Hour Wren CPU (9.3 of 17.8 G.S.T), 52.1%
 cs3019 used 897.8 of 10618.7 Hour SMP CPU (34.9 of 412.6 G.S.T), 8.5%
 cs3019 used 0.0 of 3.0 GByteYear MP Disk (0.0 of 7.1 G.S.T), 0.0%
 cs3019 used 0.0 of 2.0 PersonDay Support (0.0 of 60.6 G.S.T), 0.0%
project cs3019 has used 44.2 of 499.3 Generic Service Tokens, 8.9%

---

cs3022 Clint
Last Trade: Sat Jan 3 17:03:02 2004
 cs3022 used 14032.4 of 14032.4 PEHour MPP PE CPU (339.3 of 339.3 G.S.T), 100.0%
 cs3022 used 0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T)
 cs3022 used 0.0 of 459.8 Hour Wren CPU (0.0 of 22.8 G.S.T), 0.0%
 cs3022 used 0.0 of 1.2 GByteYear MP Disk SAN (0.0 of 2.9 G.S.T), 0.0%
 cs3022 used 2.5 of 3574.0 Hour Green CPU (0.1 of 186.7 G.S.T), 0.1%
project cs3022 has used 339.4 of 551.7 Generic Service Tokens, 61.5%

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cs3023 Bryce
Last Trade: Tue Jan 6 14:21:18 2004
 cs3023 used 0.0 of 3151.3 Hour Newton CPU (0.0 of 482.4 G.S.T), 0.0%
 cs3023 used 0.0 of 1.0 GByteYear MP Disk SAN (0.0 of 2.4 G.S.T), 0.0%
 cs3023 used 0.0 of 2.0 GbyteYear HV Disk SAN /v (0.0 of 2.4 G.S.T), 0.0%
project cs3023 has used 0.0 of 487.2 Generic Service Tokens, 0.0%

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cs3024 - Fernando
Last Trade: Thu Apr 8 11:22:38 2004
 cs3024 used 0.0 of 796.9 Hour Newton CPU (0.0 of 122.0 G.S.T), 0.0%
 cs3024 used 0.0 of 19.7 Hour Wren CPU (0.0 of 1.0 G.S.T), 0.1%
 cs3024 used 0.0 of 1.0 GByteYear MP Disk SAN (0.0 of 2.4 G.S.T), 0.0%
 cs3024 used 0.0 of 0.6 Hour SMP CPU (0.0 of 0.0 G.S.T), 0.0%
 cs3024 used 20.6 of 1351.1 Hour Green CPU (1.1 of 70.6 G.S.T), 1.5%
 cs3024 used 0.0 of 10.0 PersonDay Support (0.0 of 304.0 G.S.T), 0.0%
project cs3024 has used 1.1 of 500.0 Generic Service Tokens, 0.2%

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csb006 43/B19843 Sansom
Last Trade: re-enabled
 csb006 used 0.0 of 0.0 PEHour MPP PE CPU (0.0 of 0.0 G.S.T)
 csb006 used 0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T)
 csb006 used 38.6 of 4356.6 Hour Newton CPU (5.9 of 667.0 G.S.T), 0.9%
 csb006 used 0.1 of 2000.0 Hour Wren CPU (0.0 of 99.1 G.S.T), 0.0%
 csb006 used 0.0 of 0.0 GByteYear HP Disk SAN - /d (0.0 of 0.0 G.S.T)
 csb006 used 0.2 of 40.5 GByteYear MP Disk SAN (0.5 of 96.4 G.S.T), 0.5%
 csb006 used 0.0 of 1.0 Hour SMP CPU (0.0 of 0.0 G.S.T), 0.2%
 csb006 used 0.0 of 60000.0 Hour Green CPU (0.0 of 3135.1 G.S.T), 0.0%
project csb006 has used 6.4 of 3997.6 Generic Service Tokens, 0.2%

---

cse050 GR/N/38152 Bradley
Last Trade: re-enabled
 cse050 used 1097.8 of 1059.3 PEHour MPP PE CPU (26.5 of 25.6 G.S.T), 103.6%
 cse050 used 0.4 of 0.1 GByteYear HP Disk (2.6 of 0.6 G.S.T), 407.9%
 cse050 used 15694.5 of 16375.2 Hour Newton CPU (2402.7 of 2506.9 G.S.T), 95.8%
 cse050 used 0.0 of 78.4 Hour Wren CPU (0.0 of 3.9 G.S.T), 0.0%
 cse050 used 0.3 of 1200.0 Hour SMP CPU (0.0 of 46.6 G.S.T), 0.0%
 cse050 used 5.0 of 18.2 GByteYear MP Disk (11.9 of 43.2 G.S.T), 27.5%
 cse050 used 0.0 of 4.5 GByteYear HSM/Tape (0.0 of 2.8 G.S.T), 0.0%
 cse050 used 0.0 of 20.0 PersonDay Support (0.0 of 606.1 G.S.T), 0.0%
 cse050 used 0.0 of 10.0 Day Training (0.0 of 108.7 G.S.T), 0.0%
project cse050 has used 2443.8 of 3344.5 Generic Service Tokens, 73.1%

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cse055 GR/N66810 Staunton
Last Trade: Wed Dec 10 10:21:59 2003
 cse055 used 8840.4 of 8840.4 PEHour MPP PE CPU (213.7 of 213.7 G.S.T), 100.0%
 cse055 used 2.5 of 2.7 GByteYear HP Disk (14.8 of 15.9 G.S.T), 93.1%
 cse055 used 0.1 of 24.4 Hour Wren CPU (0.0 of 1.2 G.S.T), 0.4%
 cse055 used 0.0 of 0.1 GByteYear MP Disk SAN (0.0 of 0.3 G.S.T), 0.0%
 cse055 used 3657.3 of 9680.1 Hour SMP CPU (142.1 of 376.1 G.S.T), 37.8%
 cse055 used 0.0 of 0.7 GByteYear MP Disk (0.0 of 1.6 G.S.T), 0.0%
 cse055 used 0.0 of 5.0 PersonDay Support (0.0 of 151.5 G.S.T), 0.0%
 cse055 used 0.0 of 10.0 Day Training (0.0 of 108.7 G.S.T), 0.0%
project cse055 has used 370.7 of 869.1 Generic Service Tokens, 42.7%

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cse060 GR/R17058 Robb
Last Trade: re-enabled
 cse060 used 113625.7 of 113625.7 PEHour MPP PE CPU (2747.3 of 2747.3 G.S.T), 100.0%
 cse060 used 0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T)
 cse060 used 0.3 of 48.8 Hour Wren CPU (0.0 of 2.4 G.S.T), 0.5%
 cse060 used 0.0 of 2.6 GByteYear MP Disk SAN (0.0 of 6.2 G.S.T), 0.0%
 cse060 used 14254.4 of 14307.1 Hour Green CPU (744.8 of 747.6 G.S.T), 99.6%
 cse060 used 0.0 of 7.0 PersonDay Support (0.0 of 212.1 G.S.T), 0.0%
 cse060 used 1.0 of 10.0 Day Training (10.9 of 108.7 G.S.T), 10.0%
project cse060 has used 3503.0 of 3824.3 Generic Service Tokens, 91.6%

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cse063 GR/R46151 Sandham
Last Trade: Tue Dec 16 10:10:22 2003
 cse063 used 187813.1 of 187821.7 PEHour MPP PE CPU (4541.1 of 4541.3 G.S.T), 100.0%
 cse063 used 21.3 of 25.0 GByteYear HP Disk (126.5 of 148.8 G.S.T), 85.0%
 cse063 used 30.1 of 108.4 Hour Wren CPU (1.5 of 5.4 G.S.T), 27.8%
 cse063 used 168.1 of 62.9 Hour SMP CPU (6.5 of 2.4 G.S.T), 267.4%
 cse063 used 0.0 of 50.0 GByteYear MP Disk (0.0 of 119.0 G.S.T), 0.0%
 cse063 used 335.0 of 525.0 GByteYear HSM/Tape (211.3 of 331.2 G.S.T), 63.8%
 cse063 used 110306.3 of 124633.0 Hour Green CPU (5763.7 of 6512.3 G.S.T), 88.5%
 cse063 used 0.0 of 5.0 PersonDay Support (0.0 of 151.5 G.S.T), 0.0%
 cse063 used 0.0 of 0.0 Day Training (0.0 of 0.0 G.S.T)
project cse063 has used 10650.7 of 11812.0 Generic Service Tokens, 90.2%

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cse064 GR/R43570 Leschziner
Last Trade: Wed Feb 4 11:28:18 2004

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 cse064 used 56736.5 of 56736.5 PEHour MPP PE CPU ( 1371.8 of 1371.8 G.S.T), 100.0%
 cse064 used 0.6 of 0.5 GByteYear HP Disk ( 3.3 of 3.2 G.S.T), 103.2%
 cse064 used 20.5 of 13412.3 Hour Newton CPU ( 3.1 of 2053.3 G.S.T), 0.2%
 cse064 used 41.0 of 78.4 Hour Wren CPU ( 2.0 of 3.9 G.S.T), 52.3%
 cse064 used 0.0 of 14.5 GByteYear HP Disk SAN - /d ( 0.0 of 53.3 G.S.T), 0.0%
 cse064 used 12193.7 of 16267.0 Hour SMP CPU ( 473.7 of 632.0 G.S.T), 75.0%
 cse064 used 1.4 of 23.0 GByteYear MP Disk ( 3.3 of 54.8 G.S.T), 6.0%
 cse064 used 71.7 of 250.4 GByteYear HSM/Tape ( 45.2 of 158.0 G.S.T), 28.6%
 cse064 used 83558.1 of 110279.8 Hour Green CPU ( 4366.1 of 5762.3 G.S.T), 75.8%
 cse064 used 0.0 of 10.0 PersonDay Support ( 0.0 of 303.0 G.S.T), 0.0%
 cse064 used 2.0 of 8.0 Day Training ( 21.7 of 87.0 G.S.T), 25.0%
project cse064 has used 6290.4 of 10482.7 Generic Service Tokens, 60.0%

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cse066 GR/R30907 Coveney
Last Trade: Wed Jan 14 15:10:44 2004
 cse066 used 72794.8 of 72794.8 PEHour MPP PE CPU ( 1760.1 of 1760.1 G.S.T), 100.0%
 cse066 used 23.3 of 28.4 GByteYear HP Disk ( 138.5 of 168.8 G.S.T), 82.0%
 cse066 used 2.2 of 5982.7 Hour Newton CPU ( 0.3 of 915.9 G.S.T), 0.0%
 cse066 used 8.9 of 78.4 Hour Wren CPU ( 0.4 of 3.9 G.S.T), 11.4%
 cse066 used 0.0 of 50.1 GByteYear MP Disk SAN ( 0.0 of 119.4 G.S.T), 0.0%
 cse066 used 2389.2 of 2450.4 Hour SMP CPU ( 92.8 of 95.2 G.S.T), 97.5%
 cse066 used 17.5 of 28.0 GByteYear MP Disk ( 41.8 of 66.8 G.S.T), 62.5%
 cse066 used 26854.7 of 71168.9 Hour Green CPU ( 1403.2 of 3718.7 G.S.T), 37.7%
 cse066 used 0.0 of 15.0 PersonDay Support ( 0.0 of 454.5 G.S.T), 0.0%
 cse066 used 3.0 of 6.0 Day Training ( 32.6 of 65.2 G.S.T), 50.0%
project cse066 has used 3469.8 of 7368.6 Generic Service Tokens, 47.1%

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cse071 GR/R23657 Iacovides
Last Trade: Thu Apr 8 13:49:10 2004
 cse071 used 0.0 of 5075.6 Hour Newton CPU ( 0.0 of 777.0 G.S.T), 0.0%
 cse071 used 1.7 of 223.3 Hour Wren CPU ( 0.1 of 11.1 G.S.T), 0.7%
 cse071 used 0.8 of 13.6 GByteYear MP Disk SAN ( 1.9 of 32.5 G.S.T), 5.9%
 cse071 used 5.7 of 22708.5 Hour SMP CPU ( 0.2 of 882.3 G.S.T), 0.0%
 cse071 used 0.3 of 11.3 GByteYear HSM/Tape ( 0.2 of 7.1 G.S.T), 2.5%
 cse071 used 3135.9 of 46991.9 Hour Green CPU ( 163.9 of 2455.4 G.S.T), 6.7%
 cse071 used 0.5 of 5.0 PersonDay Support ( 15.2 of 151.5 G.S.T), 10.0%
 cse071 used 2.0 of 6.0 Day Training ( 21.7 of 65.2 G.S.T), 33.3%
project cse071 has used 203.1 of 4382.1 Generic Service Tokens, 4.6%

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cse072 GR/R66692 Karlin
Last Trade: Tue Apr 27 14:30:50 2004
 cse072 used 41583.1 of 41583.1 PEHour MPP PE CPU ( 1005.4 of 1005.4 G.S.T), 100.0%
 cse072 used 0.9 of 0.8 GByteYear HP Disk ( 5.3 of 4.5 G.S.T), 118.1%
 cse072 used 131.7 of 20478.9 Hour Newton CPU ( 20.2 of 3135.2 G.S.T), 0.6%
 cse072 used 0.0 of 15.7 Hour Wren CPU ( 0.0 of 0.8 G.S.T), 0.0%
 cse072 used 0.0 of 4.6 GByteYear MP Disk SAN ( 0.0 of 10.9 G.S.T), 0.0%
 cse072 used 0.0 of 12.0 Hour SMP CPU ( 0.0 of 0.5 G.S.T), 0.0%
 cse072 used 0.0 of 4.0 GByteYear MP Disk ( 0.0 of 9.5 G.S.T), 0.0%
 cse072 used 0.0 of 0.0 GByteYear HSM/Tape ( 0.0 of 0.0 G.S.T)
 cse072 used 0.0 of 18.0 PersonDay Support ( 0.0 of 545.5 G.S.T), 0.0%
 cse072 used 7.0 of 9.0 Day Training ( 76.1 of 97.8 G.S.T), 77.8%
project cse072 has used 1107.0 of 4810.1 Generic Service Tokens, 23.0%

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cse074 GR/R66197 Luo
Last Trade: Thu Dec 18 10:23:19 2003
 cse074 used 0.0 of 0.0 PEHour MPP PE CPU (0.0 of 0.0 G.S.T)
 cse074 used 0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T)
 cse074 used 0.0 of 2660.8 Hour Newton CPU (0.0 of 407.3 G.S.T), 0.0%
 cse074 used 0.0 of 600.0 Hour SMP CPU (0.0 of 23.3 G.S.T), 0.0%
 cse074 used 0.0 of 9.0 GByteYear MP Disk (0.0 of 21.4 G.S.T), 0.0%
project cse074 has used 0.0 of 452.1 Generic Service Tokens, 0.0%

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cse075 GR/R67699 Coveney
Last Trade: re-enabled
 cse075 used 8401.8 of 8401.8 PEHour MPP PE CPU (203.1 of 203.1 G.S.T), 100.0%
 cse075 used 76.3 of 76.3 GByteYear HP Disk (454.2 of 454.2 G.S.T), 100.0%
 cse075 used 0.0 of 21088.4 Hour Newton CPU (0.0 of 3228.5 G.S.T), 0.0%
 cse075 used 63.0 of 263.6 Hour Wren CPU (3.1 of 13.1 G.S.T), 23.9%
 cse075 used 40.3 of 350.5 GByteYear MP Disk SAN (95.9 of 834.6 G.S.T), 11.5%
 cse075 used 7524.7 of 31500.0 Hour SMP CPU (292.3 of 1223.8 G.S.T), 23.9%
 cse075 used 740.0 of 1013.5 GByteYear MP Disk (1762.0 of 2413.1 G.S.T), 73.0%
 cse075 used 389.4 of 1959.4 GByteYear HSM/Tape (245.7 of 1236.2 G.S.T), 19.9%
 cse075 used 139681.5 of 471540.5 Hour Green CPU (7298.6 of 24639.0 G.S.T), 29.6%
 cse075 used 0.0 of 34.0 PersonDay Support (0.0 of 1030.3 G.S.T), 0.0%
 cse075 used 5.0 of 14.0 Day Training (54.3 of 152.2 G.S.T), 35.7%
project cse075 has used 10409.4 of 35428.0 Generic Service Tokens, 29.4%

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cse076 GR/R66975 Briddon
Last Trade: Tue Jan 6 08:37:11 2004
 cse076 used 9437.9 of 4161.1 PEHour MPP PE CPU (228.2 of 100.6 G.S.T), 226.8%
 cse076 used 1.9 of 1.3 GByteYear HP Disk (11.3 of 8.0 G.S.T), 140.6%
 cse076 used 165981.3 of 388618.2 Hour Newton CPU (25410.5 of 59494.5 G.S.T), 42.7%
 cse076 used 102.4 of 504.6 Hour Wren CPU (5.1 of 25.0 G.S.T), 20.3%
 cse076 used 268169.5 of 267888.9 Hour SMP CPU (10418.8 of 10407.9 G.S.T), 100.1%
 cse076 used 12.9 of 23.2 GByteYear MP Disk (30.7 of 55.2 G.S.T), 55.6%
 cse076 used 254717.4 of 259907.5 Hour Green CPU (13309.5 of 13580.7 G.S.T), 98.0%
 cse076 used 11.0 of 20.0 PersonDay Support (333.3 of 606.1 G.S.T), 55.0%
 cse076 used 0.0 of 0.0 Day Training (0.0 of 0.0 G.S.T)
project cse076 has used 49747.4 of 84278.0 Generic Service Tokens, 59.0%

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cse076a
Last Trade: never
 cse076a used 26750.2 of 43073.5 Hour Newton CPU (4095.2 of 6594.2 G.S.T), 62.1%
subproject cse076a has used 4095.2 of 6594.2 Generic Service Tokens, 62.1%

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cse077 GR/R69792 Kronenburg
Last Trade: Thu Apr 8 11:25:40 2004
 cse077 used 0.0 of 0.0 PEHour MPP PE CPU (0.0 of 0.0 G.S.T)
 cse077 used 0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T)
 cse077 used 0.0 of 47380.6 Hour Newton CPU (0.0 of 7253.6 G.S.T), 0.0%
 cse077 used 0.2 of 30.0 Hour Wren CPU (0.0 of 1.5 G.S.T), 0.6%
 cse077 used 0.0 of 25.0 GByteYear MP Disk SAN (0.0 of 59.5 G.S.T), 0.0%
 cse077 used 31.1 of 33.6 Hour SMP CPU (1.2 of 1.3 G.S.T), 92.5%
 cse077 used 0.0 of 47645.8 Hour Green CPU (0.0 of 2489.6 G.S.T), 0.0%

cse077 used 0.0 of 2.0 Day Training (0.0 of 21.7 G.S.T), 0.0%
project cse077 has used 1.2 of 9827.3 Generic Service Tokens, 0.0%

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cse082 GR/R79654 Barakos
Last Trade: re-enabled
cse082 used 10.5 of 15.7 Hour Wren CPU (0.5 of 0.8 G.S.T), 66.9%
cse082 used 9174.1 of 9264.7 Hour SMP CPU (356.4 of 359.9 G.S.T), 99.0%
cse082 used 97.0 of 15.5 GByteYear MP Disk (230.9 of 36.8 G.S.T), 627.1%
cse082 used 0.6 of 28.7 GByteYear HSM/Tape (0.4 of 18.1 G.S.T), 2.1%
cse082 used 1446.5 of 1379.8 Hour Green CPU (75.6 of 72.1 G.S.T), 104.8%
cse082 used 0.0 of 5.0 PersonDay Support (0.0 of 151.5 G.S.T), 0.0%
cse082 used 0.0 of 1.0 Day Training (0.0 of 10.9 G.S.T), 0.0%
project cse082 has used 663.8 of 650.2 Generic Service Tokens, 102.1%

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cse084 GR/R47066 Needs
Last Trade: re-enabled
cse084 used 312334.7 of 306225.8 PEHour MPP PE CPU (7551.9 of 7404.1 G.S.T), 102.0%
cse084 used 27.1 of 270.0 GByteYear HP Disk (161.3 of 1607.1 G.S.T), 10.0%
cse084 used 190.6 of 672.1 Hour Wren CPU (9.4 of 33.3 G.S.T), 28.4%
cse084 used 5516.5 of 14384.3 Hour SMP CPU (214.3 of 558.9 G.S.T), 38.4%
cse084 used 44.5 of 60.6 GByteYear MP Disk (105.9 of 144.3 G.S.T), 73.4%
cse084 used 80487.5 of 89153.1 Hour Green CPU (4205.6 of 4658.4 G.S.T), 90.3%
cse084 used 0.0 of 7.0 PersonDay Support (0.0 of 212.1 G.S.T), 0.0%
cse084 used 0.0 of 6.0 Day Training (0.0 of 65.2 G.S.T), 0.0%
project cse084 has used 12248.4 of 14683.6 Generic Service Tokens, 83.4%

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cse085 GR/R64957 Sandham
Last Trade: re-enabled
cse085 used 1082577.4 of 1082710.0 PEHour MPP PE CPU (26175.3 of 26178.5 G.S.T), 100.0%
cse085 used 330.0 of 321.0 GByteYear HP Disk (1964.4 of 1910.7 G.S.T), 102.8%
cse085 used 46467.2 of 81139.1 Hour Newton CPU (7113.8 of 12421.8 G.S.T), 57.3%
cse085 used 73.9 of 78.4 Hour Wren CPU (3.7 of 3.9 G.S.T), 94.2%
cse085 used 6192.7 of 7979.9 Hour SMP CPU (240.6 of 310.0 G.S.T), 77.6%
cse085 used 275.8 of 750.0 GByteYear MP Disk (656.6 of 1785.7 G.S.T), 36.8%
cse085 used 2611.2 of 3205.1 GByteYear HSM/Tape (1647.5 of 2022.1 G.S.T), 81.5%
cse085 used 531001.6 of 598624.8 Hour Green CPU (27745.9 of 31279.4 G.S.T), 88.7%
cse085 used 2.0 of 2.0 PersonDay Support (60.6 of 60.6 G.S.T), 100.0%
cse085 used 8.0 of 8.0 Day Training (87.0 of 87.0 G.S.T), 100.0%
project cse085 has used 65695.3 of 76059.8 Generic Service Tokens, 86.4%

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cse086 GR/R83118 Taylor
Last Trade: re-enabled
cse086 used 884647.5 of 884647.5 PEHour MPP PE CPU (21389.6 of 21389.6 G.S.T), 100.0%
cse086 used 132.7 of 132.7 GByteYear HP Disk (789.9 of 790.0 G.S.T), 100.0%
cse086 used 13823.2 of 56910.3 Hour Newton CPU (2116.2 of 8712.5 G.S.T), 24.3%
cse086 used 788.1 of 3262.8 Hour Wren CPU (39.0 of 161.7 G.S.T), 24.2%
cse086 used 0.0 of 12.9 GByteYear HP Disk SAN - /d (0.0 of 47.6 G.S.T), 0.0%
cse086 used 0.0 of 46.6 GbyteYear HV Disk SAN /v (0.0 of 55.5 G.S.T), 0.0%
cse086 used 18894.3 of 31906.3 Hour SMP CPU (734.1 of 1239.6 G.S.T), 59.2%
cse086 used 212.4 of 497.0 GByteYear MP Disk (505.7 of 1183.3 G.S.T), 42.7%
cse086 used 32.4 of 3750.0 GByteYear HSM/Tape (20.4 of 2365.9 G.S.T), 0.9%
cse086 used 244980.3 of 427900.0 Hour Green CPU (12800.7 of 22358.7 G.S.T), 57.3%

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 cse086 used 5.0 of 35.0 PersonDay Support ( 151.5 of 1060.6 G.S.T), 14.3%
 cse086 used 0.0 of 116.0 Day Training ( 0.0 of 1260.9 G.S.T), 0.0%
project cse086 has used 38547.3 of 60626.0 Generic Service Tokens, 63.6%

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cse086a MP1
Last Trade: never
 cse086a used 721660.7 of 750000.0 PEHour MPP PE CPU ( 17448.8 of 18134.0 G.S.T), 96.2%
 cse086a used 8.5 of 10.0 GByteYear HP Disk ( 50.6 of 59.5 G.S.T), 85.0%
 cse086a used 4940.9 of 22000.0 Hour Newton CPU ( 756.4 of 3368.0 G.S.T), 22.5%
 cse086a used 40.9 of 200.0 Hour Wren CPU ( 2.0 of 9.9 G.S.T), 20.4%
 cse086a used 0.0 of 50.0 Hour SMP CPU ( 0.0 of 1.9 G.S.T), 0.0%
 cse086a used 22.4 of 40.0 GByteYear MP Disk ( 53.3 of 95.2 G.S.T), 56.0%
 cse086a used 0.0 of 1000.0 GByteYear HSM/Tape ( 0.0 of 630.9 G.S.T), 0.0%
 cse086a used 25887.0 of 30000.0 Hour Green CPU ( 1352.7 of 1567.6 G.S.T), 86.3%
subproject cse086a has used 19663.8 of 23867.2 Generic Service Tokens, 82.4%

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cse086b MP2
Last Trade: never
 cse086b used 48449.5 of 56000.0 PEHour MPP PE CPU ( 1171.4 of 1354.0 G.S.T), 86.5%
 cse086b used 37.6 of 50.0 GByteYear HP Disk ( 223.8 of 297.6 G.S.T), 75.2%
 cse086b used 1565.4 of 15000.0 Hour Newton CPU ( 239.6 of 2296.4 G.S.T), 10.4%
 cse086b used 238.8 of 500.0 Hour Wren CPU ( 11.8 of 24.8 G.S.T), 47.8%
 cse086b used 8653.8 of 15000.0 Hour SMP CPU ( 336.2 of 582.8 G.S.T), 57.7%
 cse086b used 33.7 of 40.0 GByteYear MP Disk ( 80.2 of 95.2 G.S.T), 84.2%
 cse086b used 127029.1 of 150000.0 Hour Green CPU ( 6637.5 of 7837.8 G.S.T), 84.7%
subproject cse086b has used 8700.7 of 12488.6 Generic Service Tokens, 69.7%

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cse086d MP4
Last Trade: never
 cse086d used 0.1 of 0.1 GByteYear HP Disk ( 0.5 of 0.6 G.S.T), 87.4%
 cse086d used 0.1 of 0.1 GByteYear MP Disk ( 0.2 of 0.2 G.S.T), 102.6%
subproject cse086d has used 0.8 of 0.8 Generic Service Tokens, 91.7%

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cse086e MP5
Last Trade: never
 cse086e used 48.8 of 500.0 PEHour MPP PE CPU ( 1.2 of 12.1 G.S.T), 9.8%
 cse086e used 1.8 of 2.0 GByteYear HP Disk ( 10.5 of 11.9 G.S.T), 88.1%
 cse086e used 0.0 of 10000.0 Hour Newton CPU ( 0.0 of 1530.9 G.S.T), 0.0%
 cse086e used 405.3 of 1500.0 Hour Wren CPU ( 20.1 of 74.3 G.S.T), 27.0%
 cse086e used 0.0 of 5.0 GbyteYear HV Disk SAN /v ( 0.0 of 6.0 G.S.T), 0.0%
 cse086e used 6894.0 of 10000.0 Hour SMP CPU ( 267.8 of 388.5 G.S.T), 68.9%
 cse086e used 14.6 of 20.0 GByteYear MP Disk ( 34.7 of 47.6 G.S.T), 72.9%
 cse086e used 87677.6 of 120000.0 Hour Green CPU ( 4581.3 of 6270.2 G.S.T), 73.1%
subproject cse086e has used 4915.7 of 8341.6 Generic Service Tokens, 58.9%

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cse086f EC1
Last Trade: never
 cse086f used 71.1 of 5000.0 PEHour MPP PE CPU ( 1.7 of 120.9 G.S.T), 1.4%
 cse086f used 3.8 of 5.0 GByteYear HP Disk ( 22.8 of 29.8 G.S.T), 76.6%
 cse086f used 0.8 of 200.0 Hour Wren CPU ( 0.0 of 9.9 G.S.T), 0.4%
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 cse086f used 4.8 of 50.0 Hour SMP CPU ( 0.2 of 1.9 G.S.T), 9.6%
 cse086f used 24.5 of 30.0 GByteYear MP Disk ( 58.3 of 71.4 G.S.T), 81.6%
 cse086f used 32.4 of 40.0 GByteYear HSM/Tape ( 20.4 of 25.2 G.S.T), 81.0%
 cse086f used 0.0 of 10000.0 Hour Green CPU ( 0.0 of 522.5 G.S.T), 0.0%
subproject cse086f has used 103.5 of 781.7 Generic Service Tokens, 13.2%

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cse086g EC2
Last Trade: never
 cse086g used 577.1 of 5000.0 PEHour MPP PE CPU ( 14.0 of 120.9 G.S.T), 11.5%
 cse086g used 43.5 of 50.0 GByteYear HP Disk ( 258.9 of 297.6 G.S.T), 87.0%
 cse086g used 101.8 of 200.0 Hour Wren CPU ( 5.0 of 9.9 G.S.T), 50.9%
 cse086g used 780.1 of 1000.0 Hour SMP CPU ( 30.3 of 38.9 G.S.T), 78.0%
 cse086g used 83.1 of 100.0 GByteYear MP Disk ( 197.7 of 238.1 G.S.T), 83.1%
 cse086g used 0.0 of 50.0 GByteYear HSM/Tape ( 0.0 of 31.5 G.S.T), 0.0%
 cse086g used 2999.9 of 10000.0 Hour Green CPU ( 156.8 of 522.5 G.S.T), 30.0%
subproject cse086g has used 662.7 of 1259.4 Generic Service Tokens, 52.6%

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cse086h EC3
Last Trade: never
 cse086h used 46335.1 of 50000.0 PEHour MPP PE CPU ( 1120.3 of 1208.9 G.S.T), 92.7%
 cse086h used 7.0 of 10.0 GByteYear HP Disk ( 41.5 of 59.5 G.S.T), 69.7%
 cse086h used 0.0 of 200.0 Hour Wren CPU ( 0.0 of 9.9 G.S.T), 0.0%
 cse086h used 219.9 of 250.0 Hour SMP CPU ( 8.5 of 9.7 G.S.T), 87.9%
 cse086h used 15.0 of 20.0 GByteYear MP Disk ( 35.7 of 47.6 G.S.T), 74.9%
 cse086h used 0.0 of 10000.0 Hour Green CPU ( 0.0 of 522.5 G.S.T), 0.0%
subproject cse086h has used 1206.0 of 1858.2 Generic Service Tokens, 64.9%

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cse086i EC4
Last Trade: never
 cse086i used 0.1 of 0.1 GByteYear HP Disk ( 0.5 of 0.6 G.S.T), 86.8%
 cse086i used 0.1 of 0.1 GByteYear MP Disk ( 0.2 of 0.2 G.S.T), 102.6%
subproject cse086i has used 0.8 of 0.8 Generic Service Tokens, 91.3%

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cse086j BEC1
Last Trade: never
 cse086j used 67505.3 of 70000.0 PEHour MPP PE CPU ( 1632.2 of 1692.5 G.S.T), 96.4%
 cse086j used 1.7 of 3.0 GByteYear HP Disk ( 9.8 of 17.9 G.S.T), 55.1%
 cse086j used 7317.0 of 9000.0 Hour Newton CPU ( 1120.2 of 1377.8 G.S.T), 81.3%
 cse086j used 0.0 of 200.0 Hour Wren CPU ( 0.0 of 9.9 G.S.T), 0.0%
 cse086j used 0.0 of 0.1 Hour SMP CPU ( 0.0 of 0.0 G.S.T), 0.2%
 cse086j used 0.4 of 5.0 GByteYear MP Disk ( 0.9 of 11.9 G.S.T), 7.9%
 cse086j used 0.0 of 1000.0 Hour Green CPU ( 0.0 of 52.3 G.S.T), 0.0%
subproject cse086j has used 2763.2 of 3162.3 Generic Service Tokens, 87.4%

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cse086k BEC2
Last Trade: never
 cse086k used 0.1 of 0.1 GByteYear HP Disk ( 0.5 of 0.6 G.S.T), 86.8%
 cse086k used 0.5 of 200.0 Hour Wren CPU ( 0.0 of 9.9 G.S.T), 0.2%
 cse086k used 2341.7 of 5000.0 Hour SMP CPU ( 91.0 of 194.3 G.S.T), 46.8%
 cse086k used 16.8 of 20.0 GByteYear MP Disk ( 40.0 of 47.6 G.S.T), 83.9%
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 cse086k used 1385.0 of 20000.0 Hour Green CPU ( 72.4 of 1045.0 G.S.T), 6.9%
subproject cse086k has used 203.9 of 1297.4 Generic Service Tokens, 15.7%

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cse089 GR/R85556 Wiercigroch
Last Trade: re-enabled
 cse089 used 0.0 of 0.0 PEHour MPP PE CPU ( 0.0 of 0.0 G.S.T), 100.0%
 cse089 used 0.0 of 0.0 GByteYear HP Disk ( 0.0 of 0.0 G.S.T)
 cse089 used 0.0 of 1952.1 Hour Wren CPU ( 0.0 of 96.7 G.S.T), 0.0%
 cse089 used 0.0 of 44.0 GByteYear HP Disk SAN - /d ( 0.0 of 162.4 G.S.T), 0.0%
 cse089 used 0.0 of 0.0 Hour SMP CPU ( 0.0 of 0.0 G.S.T), 86.3%
 cse089 used 0.0 of 2083.0 Hour Green CPU ( 0.0 of 108.8 G.S.T), 0.0%
 cse089 used 0.0 of 15.0 PersonDay Support ( 0.0 of 454.6 G.S.T), 0.0%
 cse089 used 0.0 of 7.0 Day Training ( 0.0 of 76.1 G.S.T), 0.0%
project cse089 has used 0.0 of 898.6 Generic Service Tokens, 0.0%

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cse098 GR/S20062 De Souza
Last Trade: re-enabled
 cse098 used 0.0 of 0.0 PEHour MPP PE CPU ( 0.0 of 0.0 G.S.T), 100.0%
 cse098 used 0.0 of 0.0 GByteYear HP Disk ( 0.0 of 0.0 G.S.T)
 cse098 used 0.0 of 10.0 Hour Wren CPU ( 0.0 of 0.5 G.S.T), 0.4%
 cse098 used 0.1 of 3975.4 Hour SMP CPU ( 0.0 of 154.5 G.S.T), 0.0%
 cse098 used 2.7 of 60.0 GByteYear MP Disk ( 6.4 of 142.9 G.S.T), 4.5%
 cse098 used 0.0 of 100.0 GByteYear HSM/Tape ( 0.0 of 63.1 G.S.T), 0.0%
 cse098 used 4964.9 of 162589.8 Hour Green CPU ( 259.4 of 8495.7 G.S.T), 3.1%
 cse098 used 0.0 of 5.0 PersonDay Support ( 0.0 of 151.5 G.S.T), 0.0%
 cse098 used 0.0 of 5.0 Day Training ( 0.0 of 54.3 G.S.T), 0.0%
project cse098 has used 265.8 of 9062.4 Generic Service Tokens, 2.9%

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cse106 GR/S42712 Augarde
Last Trade: Wed Nov 5 15:06:00 2003
 cse106 used 0.0 of 2500.0 Hour Wren CPU ( 0.0 of 123.9 G.S.T), 0.0%
 cse106 used 0.0 of 37.4 GByteYear MP Disk SAN ( 0.0 of 89.2 G.S.T), 0.0%
 cse106 used 0.0 of 50000.0 Hour Green CPU ( 0.0 of 2612.6 G.S.T), 0.0%
 cse106 used 0.0 of 25.0 PersonDay Support ( 0.0 of 757.6 G.S.T), 0.0%
 cse106 used 0.0 of 10.0 Day Training ( 0.0 of 108.7 G.S.T), 0.0%
project cse106 has used 0.0 of 3691.9 Generic Service Tokens, 0.0%

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cse108 GR/S43498 Holden
Last Trade: Wed Nov 5 15:55:15 2003
 cse108 used 0.0 of 700.0 Hour Wren CPU ( 0.0 of 34.7 G.S.T), 0.0%
 cse108 used 0.0 of 832.1 GByteYear MP Disk SAN ( 0.0 of 1981.3 G.S.T), 0.0%
 cse108 used 0.0 of 40000.0 Hour Green CPU ( 0.0 of 2090.1 G.S.T), 0.0%
 cse108 used 0.0 of 10.0 PersonDay Support ( 0.0 of 303.0 G.S.T), 0.0%
 cse108 used 0.0 of 6.0 Day Training ( 0.0 of 65.2 G.S.T), 0.0%
project cse108 has used 0.0 of 4474.3 Generic Service Tokens, 0.0%

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cse110 GR/S43214 Leach
Last Trade: Wed Nov 5 16:16:25 2003
 cse110 used 0.0 of 6000.0 Hour Wren CPU ( 0.0 of 297.3 G.S.T), 0.0%
 cse110 used 0.0 of 67.6 GByteYear HP Disk SAN - /d ( 0.0 of 249.4 G.S.T), 0.0%
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cse110 used 0.0 of 20.0 GByteYear MP Disk SAN (0.0 of 47.6 G.S.T), 0.0%
cse110 used 0.0 of 42000.0 Hour Green CPU (0.0 of 2194.6 G.S.T), 0.0%
cse110 used 0.0 of 30.0 PersonDay Support (0.0 of 909.1 G.S.T), 0.0%
cse110 used 0.0 of 25.0 Day Training (0.0 of 271.7 G.S.T), 0.0%
project cse110 has used 0.0 of 3969.7 Generic Service Tokens, 0.0%

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cse116 GR/S46567 John
Last Trade: Thu Nov 6 10:47:31 2003
cse116 used 0.0 of 558.1 Hour Wren CPU (0.0 of 27.7 G.S.T), 0.0%
cse116 used 0.0 of 2.0 GByteYear MP Disk SAN (0.0 of 4.8 G.S.T), 0.0%
cse116 used 0.0 of 2.0 GByteYear HSM/Tape (0.0 of 1.3 G.S.T), 0.0%
cse116 used 0.0 of 5950.0 Hour Green CPU (0.0 of 310.9 G.S.T), 0.0%
cse116 used 0.0 of 16.0 PersonDay Support (0.0 of 484.8 G.S.T), 0.0%
cse116 used 0.0 of 8.0 Day Training (0.0 of 87.0 G.S.T), 0.0%
project cse116 has used 0.0 of 916.4 Generic Service Tokens, 0.0%

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csedl1 - Castep port to Altix
Last Trade: re-enabled
csedl1 used 18592.1 of 49578.0 Hour Newton CPU (2846.3 of 7590.0 G.S.T), 37.5%
csedl1 used 0.6 of 500.0 Hour Wren CPU (0.0 of 24.8 G.S.T), 0.1%
csedl1 used 3.7 of 69.2 GByteYear MP Disk SAN (8.9 of 164.8 G.S.T), 5.4%
csedl1 used 0.0 of 125.0 GByteYear HSM/Tape (0.0 of 78.9 G.S.T), 0.0%
csedl1 used 6.0 of 6.0 Day Training (65.2 of 65.3 G.S.T), 99.9%
project csedl1 has used 2920.4 of 7923.8 Generic Service Tokens, 36.9%

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csedl1a Computational Cemistry
Last Trade: never
csedl1a used 0.0 of 10000.0 Hour Newton CPU (0.0 of 1530.9 G.S.T), 0.0%
csedl1a used 0.0 of 150.0 Hour Wren CPU (0.0 of 7.4 G.S.T), 0.0%
csedl1a used 0.0 of 19.5 GByteYear MP Disk SAN (0.0 of 46.4 G.S.T), 0.0%
csedl1a used 0.0 of 37.0 GByteYear HSM/Tape (0.0 of 23.3 G.S.T), 0.0%
subproject csedl1a has used 0.0 of 1608.1 Generic Service Tokens, 0.0%

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csedl1b Molecular Simulation
Last Trade: never
csedl1b used 0.0 of 4993.0 Hour Newton CPU (0.0 of 764.4 G.S.T), 0.0%
csedl1b used 0.0 of 50.0 Hour Wren CPU (0.0 of 2.5 G.S.T), 0.0%
csedl1b used 0.3 of 7.5 GByteYear MP Disk SAN (0.8 of 17.9 G.S.T), 4.5%
csedl1b used 0.0 of 13.0 GByteYear HSM/Tape (0.0 of 8.2 G.S.T), 0.0%
subproject csedl1b has used 0.8 of 792.9 Generic Service Tokens, 0.1%

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csedl1c Materials
Last Trade: never
csedl1c used 17400.3 of 19000.0 Hour Newton CPU (2663.8 of 2908.8 G.S.T), 91.6%
csedl1c used 0.5 of 100.0 Hour Wren CPU (0.0 of 5.0 G.S.T), 0.5%
csedl1c used 1.9 of 15.0 GByteYear MP Disk SAN (4.5 of 35.7 G.S.T), 12.7%
csedl1c used 0.0 of 25.0 GByteYear HSM/Tape (0.0 of 15.8 G.S.T), 0.0%
subproject csedl1c has used 2668.4 of 2965.2 Generic Service Tokens, 90.0%

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csedl1d - Band Theory
Last Trade: never
 csedl1d used 0.0 of 5000.0 Hour Newton CPU (0.0 of 765.5 G.S.T), 0.0%
 csedl1d used 0.0 of 50.0 Hour Wren CPU (0.0 of 2.5 G.S.T), 0.0%
 csedl1d used 0.0 of 7.5 GByteYear MP Disk SAN (0.0 of 17.9 G.S.T), 0.0%
 csedl1d used 0.0 of 13.0 GByteYear HSM/Tape (0.0 of 8.2 G.S.T), 0.0%
subproject csedl1d has used 0.0 of 794.0 Generic Service Tokens, 0.0%

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csedl1e High End Computing
Last Trade: never
 csedl1e used 0.0 of 10000.0 Hour Newton CPU (0.0 of 1530.9 G.S.T), 0.0%
 csedl1e used 0.1 of 150.0 Hour Wren CPU (0.0 of 7.4 G.S.T), 0.0%
 csedl1e used 1.5 of 19.5 GByteYear MP Disk SAN (3.5 of 46.4 G.S.T), 7.6%
 csedl1e used 0.0 of 37.0 GByteYear HSM/Tape (0.0 of 23.3 G.S.T), 0.0%
subproject csedl1e has used 3.5 of 1608.1 Generic Service Tokens, 0.2%

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csehpcx - benchmarking
Last Trade: Mon Dec 22 17:17:41 2003
 csehpcx used 11200.6 of 11200.4 PEHour MPP PE CPU (270.8 of 270.8 G.S.T), 100.0%
 csehpcx used 16.1 of 15.6 GByteYear HP Disk (95.9 of 92.8 G.S.T), 103.3%
 csehpcx used 3384.9 of 11615.0 Hour Newton CPU (518.2 of 1778.2 G.S.T), 29.1%
 csehpcx used 1.0 of 1464.1 Hour Wren CPU (0.1 of 72.5 G.S.T), 0.1%
 csehpcx used 16.9 of 1867.0 Hour SMP CPU (0.7 of 72.5 G.S.T), 0.9%
 csehpcx used 8.1 of 61.9 GByteYear MP Disk (19.2 of 147.3 G.S.T), 13.0%
 csehpcx used 22414.5 of 46273.2 Hour Green CPU (1171.2 of 2417.9 G.S.T), 48.4%
project csehpcx has used 2076.0 of 4852.0 Generic Service Tokens, 42.8%

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csn001 Webb & GST/02/2846 Killworth & T/S/2001/00187 New
Last Trade: Wed Apr 7 10:08:53 2004
 csn001 used 403672.6 of 403672.5 PEHour MPP PE CPU (9760.3 of 9760.3 G.S.T), 100.0%
 csn001 used 307.2 of 306.0 GByteYear HP Disk (1828.6 of 1821.4 G.S.T), 100.4%
 csn001 used 1400.1 of 3266.0 Hour Newton CPU (214.3 of 500.0 G.S.T), 42.9%
 csn001 used 410.0 of 723.0 Hour Wren CPU (20.3 of 35.8 G.S.T), 56.7%
 csn001 used 210444.2 of 269662.1 Hour SMP CPU (8176.1 of 10476.8 G.S.T), 78.0%
 csn001 used 524.9 of 1322.2 GByteYear MP Disk (1249.7 of 3148.0 G.S.T), 39.7%
 csn001 used 30055.1 of 35179.9 GByteYear HSM/Tape (18962.2 of 22195.5 G.S.T), 85.4%
 csn001 used 944708.4 of 1035270.8 Hour Green CPU (49363.0 of 54095.0 G.S.T), 91.3%
 csn001 used 61.0 of 61.5 PersonDay Support (1848.5 of 1863.6 G.S.T), 99.2%
 csn001 used 3.0 of 5.3 Day Training (32.6 of 57.5 G.S.T), 56.7%
project csn001 has used 91455.6 of 103954.0 Generic Service Tokens, 88.0%

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csn003 UGAMP O'Neill
Last Trade: re-enabled
 csn003 used 7500413.8 of 7426919.8 PEHour MPP PE CPU (181350.4 of 179573.4 G.S.T), 101.0%
 csn003 used 113.5 of 113.5 GByteYear HP Disk (675.6 of 675.6 G.S.T), 100.0%
 csn003 used 217940.1 of 478600.9 Hour Newton CPU (33365.0 of 73270.2 G.S.T), 45.5%
 csn003 used 2784.0 of 6045.2 Hour Wren CPU (137.9 of 299.5 G.S.T), 46.1%
 csn003 used 411.7 of 740.6 GbyteYear HV Disk SAN /v (490.7 of 882.8 G.S.T), 55.6%
 csn003 used 161011.0 of 239545.9 Hour SMP CPU (6255.5 of 9306.7 G.S.T), 67.2%
 csn003 used 110.3 of 373.8 GByteYear MP Disk (262.5 of 889.9 G.S.T), 29.5%
 csn003 used 84753.9 of 116324.4 GByteYear HSM/Tape (53472.5 of 73390.8 G.S.T), 72.9%

csn003 used 528477.7 of 775994.1 Hour Green CPU (27614.0 of 40547.3 G.S.T), 68.1%
csn003 used 4.0 of 9.3 PersonDay Support (121.2 of 280.4 G.S.T), 43.2%
csn003 used 30.0 of 34.0 Day Training (326.1 of 369.9 G.S.T), 88.2%
project csn003 has used 304071.4 of 379486.4 Generic Service Tokens, 80.1%

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csn006 GR9/3550 Price
Last Trade: Fri Apr 30 15:00:17 2004
csn006 used 1618734.3 of 1618734.0 PEHour MPP PE CPU (39138.9 of 39138.9 G.S.T), 100.0%
csn006 used 191.1 of 192.2 GByteYear HP Disk (1137.6 of 1144.3 G.S.T), 99.4%
csn006 used 15634.5 of 159047.2 Hour Newton CPU (2393.5 of 24348.9 G.S.T), 9.8%
csn006 used 623.2 of 78.4 Hour Wren CPU (30.9 of 3.9 G.S.T), 794.7%
csn006 used 72188.0 of 340287.6 Hour SMP CPU (2804.6 of 13220.7 G.S.T), 21.2%
csn006 used 69.3 of 169.5 GByteYear MP Disk (164.9 of 403.6 G.S.T), 40.9%
csn006 used 12.0 of 20.3 GByteYear HSM/Tape (7.6 of 12.8 G.S.T), 59.3%
csn006 used 566836.3 of 1009032.8 Hour Green CPU (29618.4 of 52724.0 G.S.T), 56.2%
project csn006 has used 75296.5 of 130997.1 Generic Service Tokens, 57.5%

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csn015 Proctor
Last Trade: Fri Apr 23 17:07:46 2004
csn015 used 257682.2 of 257682.2 PEHour MPP PE CPU (6230.4 of 6230.4 G.S.T), 100.0%
csn015 used 6.8 of 6.8 GByteYear HP Disk (40.4 of 40.4 G.S.T), 100.0%
csn015 used 0.0 of 47454.2 Hour Newton CPU (0.0 of 7264.9 G.S.T), 0.0%
csn015 used 192.6 of 381.3 Hour Wren CPU (9.5 of 18.9 G.S.T), 50.5%
csn015 used 1545.2 of 66776.8 Hour SMP CPU (60.0 of 2594.4 G.S.T), 2.3%
csn015 used 78.1 of 99.3 GByteYear MP Disk (186.1 of 236.4 G.S.T), 78.7%
csn015 used 4256.1 of 5042.3 GByteYear HSM/Tape (2685.2 of 3181.3 G.S.T), 84.4%
csn015 used 363399.5 of 517174.7 Hour Green CPU (18988.4 of 27023.4 G.S.T), 70.3%
csn015 used 2.0 of 22.0 PersonDay Support (60.6 of 667.2 G.S.T), 9.1%
csn015 used 3.0 of 13.0 Day Training (32.6 of 141.3 G.S.T), 23.1%
project csn015 has used 28293.4 of 47398.6 Generic Service Tokens, 59.7%

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csn044 Earth Observation
Last Trade: Wed Aug 28 11:09:50 2002
csn044 used 9948.9 of 13857.9 PEHour MPP PE CPU (240.6 of 335.1 G.S.T), 71.8%
csn044 used 0.0 of 5.0 GByteYear HP Disk (0.0 of 30.0 G.S.T), 0.0%
csn044 used 0.0 of 28.4 Hour Wren CPU (0.0 of 1.4 G.S.T), 0.0%
csn044 used 0.2 of 73.9 Hour SMP CPU (0.0 of 2.9 G.S.T), 0.3%
csn044 used 0.0 of 5.0 GByteYear MP Disk (0.0 of 11.9 G.S.T), 0.0%
csn044 used 16.2 of 53.8 GByteYear HSM/Tape (10.2 of 33.9 G.S.T), 30.1%
project csn044 has used 250.8 of 415.2 Generic Service Tokens, 60.4%

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csn052 GST/02/2658 Mackay
Last Trade: Tue Mar 2 13:33:53 2004
csn052 used 3.6 of 5.9 PEHour MPP PE CPU (0.1 of 0.1 G.S.T), 61.4%
csn052 used 1.6 of 2.0 GByteYear HP Disk (9.8 of 11.9 G.S.T), 82.3%
csn052 used 5.0 of 9.0 Hour Wren CPU (0.2 of 0.4 G.S.T), 54.9%
csn052 used 0.0 of 1.0 GByteYear HP Disk SAN - /d (0.0 of 3.7 G.S.T), 0.0%
csn052 used 0.0 of 0.0 GByteYear MP Disk SAN (0.0 of 0.0 G.S.T), 0.0%
csn052 used 1.3 of 1.9 Hour SMP CPU (0.1 of 0.1 G.S.T), 71.0%
csn052 used 29.9 of 28.3 GByteYear MP Disk (71.2 of 67.4 G.S.T), 105.6%
csn052 used 0.0 of 3.7 GByteYear HSM/Tape (0.0 of 2.3 G.S.T), 0.0%
csn052 used 13966.8 of 16044.3 Hour Green CPU (729.8 of 838.3 G.S.T), 87.1%

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 csn052 used 5.0 of 5.0 Day Training ( 54.3 of 54.3 G.S.T), 100.0%
project csn052 has used 865.5 of 978.7 Generic Service Tokens, 88.4%

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csp007 PPA/G/O/2002/00004 Hibbert
Last Trade: Thu Apr 22 14:12:25 2004
 csp007 used 36870.0 of 36870.0 PEHour MPP PE CPU ( 891.5 of 891.5 G.S.T), 100.0%
 csp007 used 0.0 of 0.0 GByteYear HP Disk ( 0.0 of 0.0 G.S.T)
 csp007 used 22.1 of 600.0 Hour Wren CPU ( 1.1 of 29.7 G.S.T), 3.7%
 csp007 used 0.0 of 60.0 GByteYear HP Disk SAN - /d ( 0.0 of 221.4 G.S.T), 0.0%
 csp007 used 0.0 of 17963.6 Hour SMP CPU ( 0.0 of 697.9 G.S.T), 0.0%
 csp007 used 0.0 of 50.0 GByteYear MP Disk ( 0.0 of 119.0 G.S.T), 0.0%
project csp007 has used 892.6 of 1959.6 Generic Service Tokens, 45.5%
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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)		