CSAR Service - Management Report

June 2006

This report documents the quality of the CSAR service during the final month of the service..

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 June 2006. The information, in particular, covers the availability and usage of the main CSAR Service High Performance Computing (HPC) systems:

- SGI Altix3700/512 (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.

This is the final month of the CSAR service for computational work. The CSAR Service ceased operation on Friday 30 June 2006 at the end of its current contract. For projects that run beyond this date, the Research Councils are responsible for providing access to alternative resources. All users who currently have accounts on the CSAR systems are responsible for transferring their data elsewhere. For further details refer to the "Closure of the CSAR Service" page on the CSAR website at <u>http://www.csar.cfs.ac.uk/user_information/service_end/</u>.

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

<u>Table 1</u> 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

			Performan	ce 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

<u>Table 2</u> gives actual performance information for the period of June 1^{st} to 30^{th} inclusive. Overall, the CPARS Performance Achievement in June was acceptable (see Table 3); i.e. Green measured against the CPARS performance targets.

Sep .04% 97.8 .04% 96.8 5 6 0078 629 0.25 <0.2 <1 <2	% 98.50% % 99.63% 1 596	Nov 98.33% 99.12% 4 461 <0.5	Dec 96.99% 99.3% 4 379 <0.25	Jan 99.25% 99.40% 2 353	Feb 94.82% 99.79% 2 330 <0.25	Mar 98.53% 98.46% 7 260 <0.25	April 99.47% 99.43% 2 244 <0.25	May 88.47% 95.04% 4 217 <0.25	June 96.53% 99.32% 3 203
96.83 5 6 078 622 0.25 <0.2 <1 <2	99.63% 1 596	99.12% 4 461 <0.5	99.3% 4 379 <0.25	99.40% 2 353	99.79% 2 330	98.46% 7 260	99.43% 2 244	95.04% 4 217	99.32% 3 203
96.83 5 6 078 622 0.25 <0.2	99.63% 1 596	99.12% 4 461 <0.5	99.3% 4 379 <0.25	99.40% 2 353	99.79% 2 330	98.46% 7 260	99.43% 2 244	95.04% 4 217	99.32% 3 203
5 6 078 622 0.25 <0.2 <1 <2	1 596 5 <0.25	4 461 <0.5	4 379 <0.25	2 353	2 330	7 260	2 244	4 217	3 203
078 623 0.25 <0.2 <1 <2	5 <0.25	461 <0.5	379 <0.25	353	330	260	244	217	203
0.25 <0.2 <1 <2	5 <0.25	<0.5	<0.25						
<1 <2				<0.5	<0.25	<0.25	-0.25	<0.25	
<1 <2				<0.5	<0.25	< 0.25	-0.25	<0.25	
	<3	~5					<0.20	~u.2J	<0.25
		2	<2	<2	<3	<3	<1	5>	<1
.0.5 <0.	<0.5	<2	<1	<3	<5	<2	<0.5	<2	<0.5
00% 100	6 100%	100%	100%	100%	100%	100%	100%	100%	100%
.0.5 <0.	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
0 0	0	0	0	0	0	0	0	0	0
10 10	10	10	10	10	10	10	10	10	10
		0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0

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)] + [Newton availability x 343/(40+23+343)] + [Newton availability x 343/(40+23+343)] + [Newton availability x 343/(40+23+343)] + [Newton availability x 343/

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

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<u>Table 3</u> gives Service Credit values for the month of June. 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

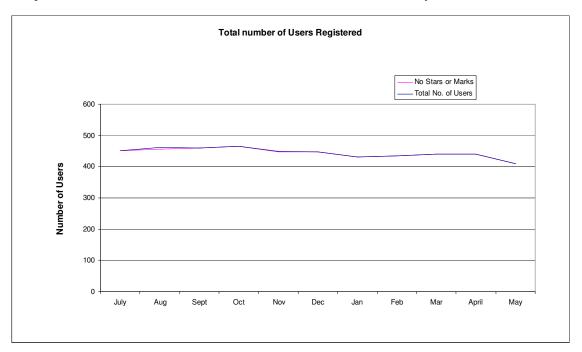
									2005/6			
Service Quality Measure	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June
HPC Services Availability												
Availability in Core Time (% of time)	0.039	0.039	0.078	0.039	0.078	0.078	0	0.115	0.039	0	0.115	0.078
Availability out of Core Time (% of time)	0	0	0.039	-0.039	0.000	0	0	-0.039	0.039	0	0.039	0
Number of Failures in month	0.008	0.0156	0.023	-0.008	0.008	0.008	0	0	0.023	0	0.008	0
Mean Time between failures in 52 week rolling period (hours)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	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	-0.016	-0.019	-0.016	-0.019	-0.019	-0.019	-0.019	-0.019
Non In-depth Queries - Max Time to resolve 95% of all queries	0	-0.016	0	0.016	0.031	0	0	0.016	0.016	-0.016	0.046	-0.016
Administrative Queries - Max Time to resolve 95% of all queries	0.046	-0.019	-0.019	-0.019	0	-0.016	0.016	0.031	0	-0.019	0	-0.019
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:	0.02	-0.01	0.04	-0.03	0.04	0.01	-0.01	0.04	0.04	-0.04	0.08	0.00

Table 3

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

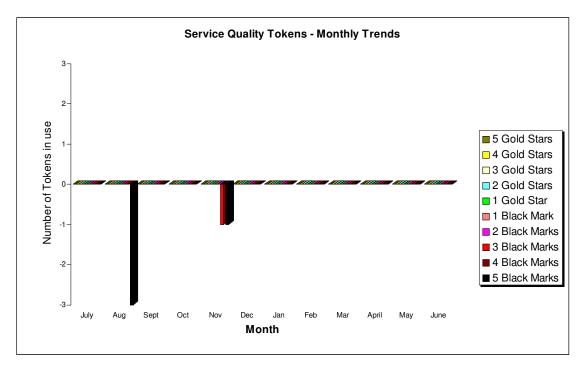
2.2 Service Quality Tokens

The position at the end of June 2006 is that none of the 409 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 marks allocated to the service.

2.3 Throughput Target against Baseline

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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 390.7% of Baseline capacity.

Job Throughput Against Baseline CSAR Service Provision

Period: 1st to 30th June 2006

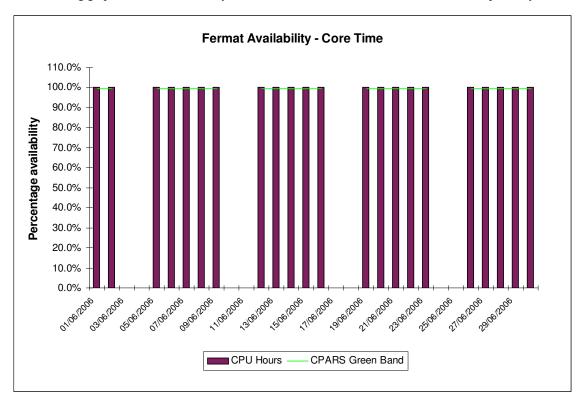
	Baseline	Actual Usage in	Actual % Utilisation c/w
	Capacity for	Period	Baseline during Period
	Period	(GFLOP Years)	_
	(GFLOP Years)	· ,	
1. Has CfS failed to deliver Baseline MPP Computing Capacity for EPSRC?	14.88	58.12	390.7%
	Baseline	Job Time Demands	Job Demand above
	Capacity for	in Period	110% of Baseline during
	Period		Period (Yes/No)?
	(GFLOP Years)		renou (reanto).
	(di LOF Teals)		
2. Have Users submitted work demanding > 110% of the Baseline during period?	14.88	59.2	Yes
			Number of Jobs at least
		least 4 days old at	4 days old at end
		end Period	Period is not zero
			(Yes/No)?
3. Are there User Jobs oustanding at the end of the period over 4 days old?		5	Yes
		Minimum Job Time	Minimum Job Time
		Demands as % of	Demand above 90% of
		Baseline during	Baseline during Period
		Period	(Yes/No)?
4. Have Users submitted work demands above 90% of the Baseline during period?		93%	No
4. Have users submitted work demands above 50% of the baseline during period:		3378	NO
	Number of	Average % of time	Average % of time each
	standard Job		queue contained jobs in
	Queues (ignoring	contained jobs in	the Period is > 97%?
	priorities)	the Period	
	priorities)	ale i enou	
5. Majority of Job Queues contained jobs from Users for more than 97% during period?	4	91%	No
or majority of oce decides contained jobs norm esters for more than or /8 during period :	Ŧ	5170	110

3. System Availability

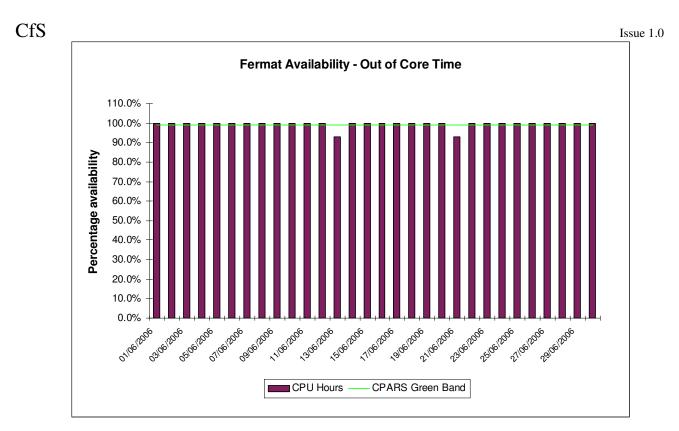
Service availability each reporting period is calculated as a percentage of actual availability time over theoretical maximum time, after accounting for planned breaks in service for preventative maintenance.

3.1 SGI Origin2000 System (Fermat)

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



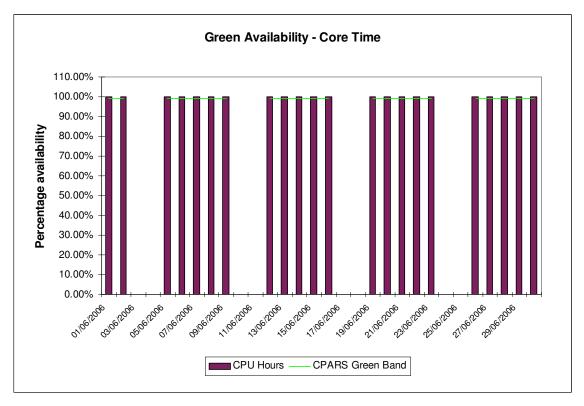
Availability of Fermat in core time during June was excellent with no outages.



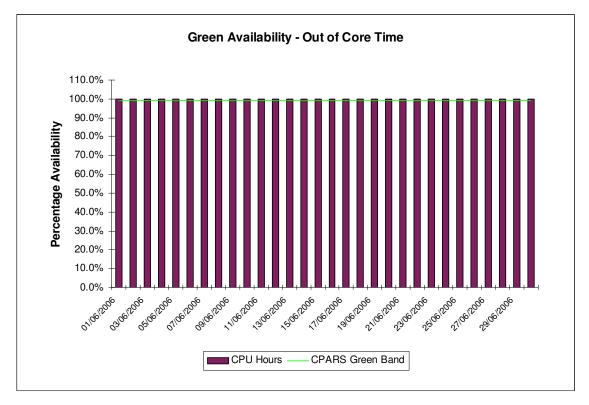
Availability of Fermat out of core time during June was good with two short outages.

3.2 SGI Origin3000 System (Green)

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



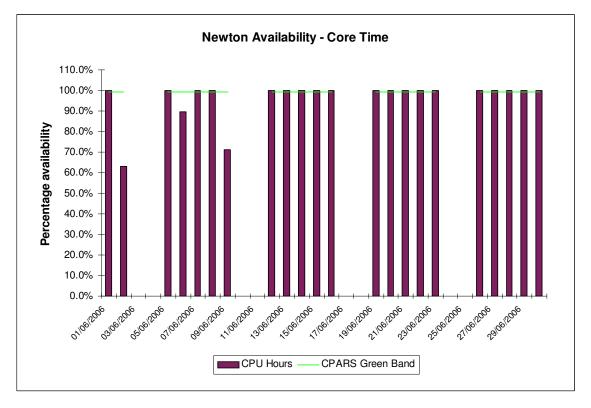
Availability of Green in core time during June was excellent with no outages.



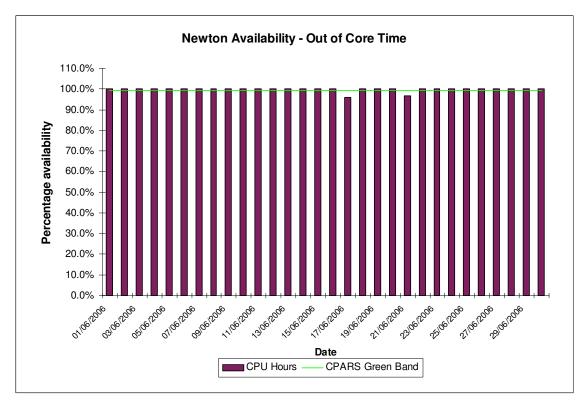
Availability of Green out of core time during June was excellent with no outages.

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 during core time was acceptable. The three outages were due to CXFS timeout issues, which have been addressed.



Availability of Newton out of core time was good, with two brief 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 June 1st to 30th is provided by Project/User Group, totalled by Research Council and overall. This covers:

• CPU usage	Newton:	297,224 CPU Hours
	Green:	233,866 CPU Hours
	Fermat:	12,540.56 CPU Hours
	Wren (Batch):	0 CPU Hours
	Wren (Interactive):	442.45 CPU Hours
 User Disk allocation 	Medium Performance:	79.67 GB Years
	SAN HV:	41.1 GB Years
 HSM/tape usage 		4,450.95 GB Years

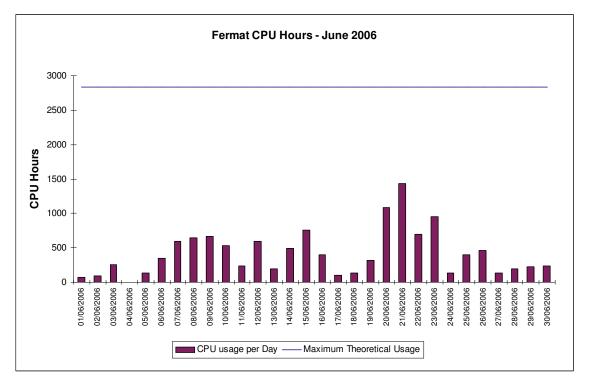
Note that for this final month of the CSAR service, the accounts include the processing of consortia jobs queued before end June 30th 2006.

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

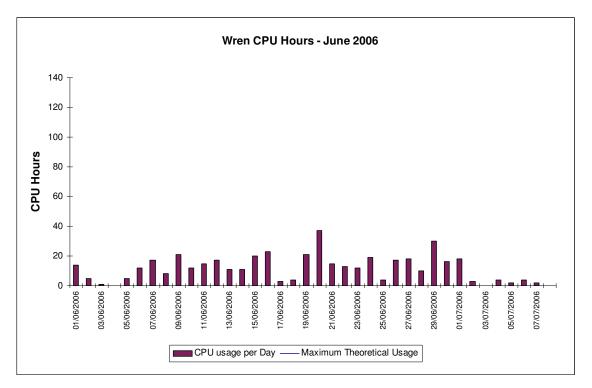
- a) SMP (Altix/Origin) Usage by month, showing usage each month of CPU (GFLOP-Years as per NPB), split by Research Council and by system. Overlaid horizontal lines show the overall Capacities.
- SMP (Origin) Usage by month, showing usage each month in CPU Hours, split by Research Council and giving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

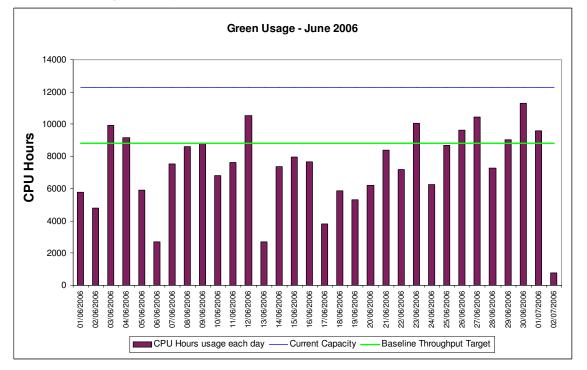
Utilisation of the Origin2000 was relatively light this month, with CSN003 (Steenman-Clark) being the major group using this system.



4.2 SGI Origin300 System (Wren)



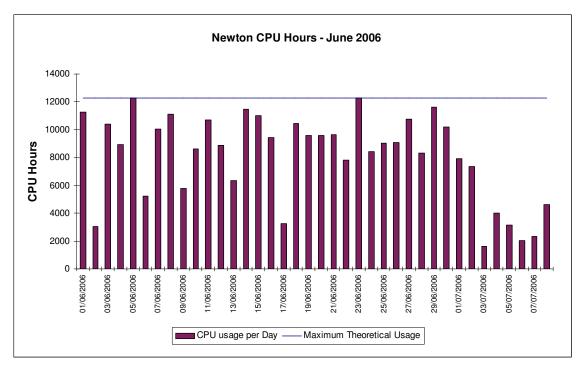
4.3 SGI Origin3000 System (Green)



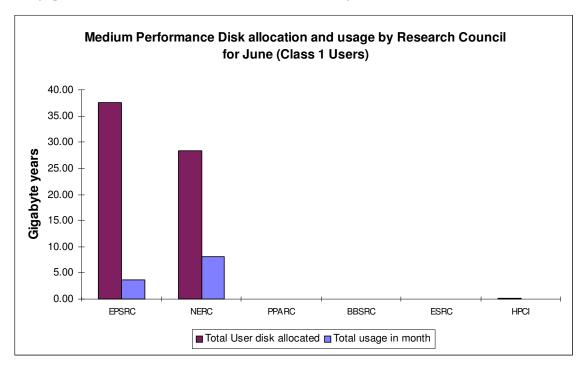
The above graph shows the utilisation of Green for June, which was below Baseline.

4.4 SGI Altix3700 System (Newton)

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



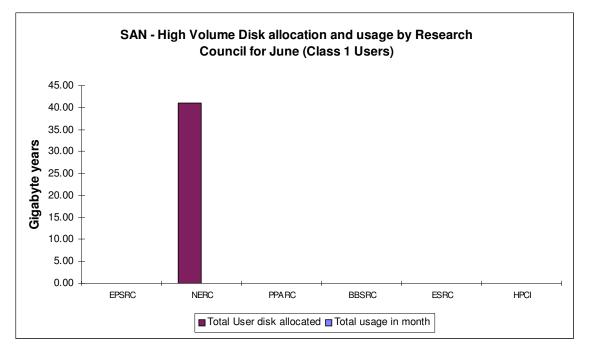
4.5 Disk/HSM Usage Chart

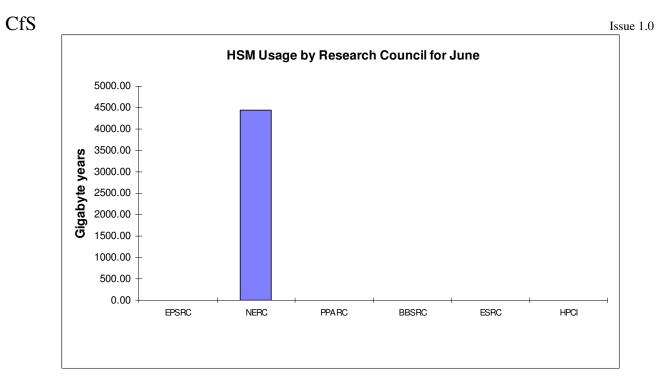


The graphs below show current disk and HSM allocations and usage.

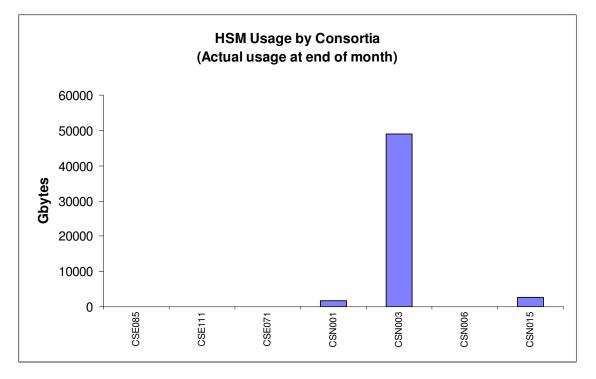
Shown above is the disk allocation against usage on average of the Medium Performance (MP) disk.

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.

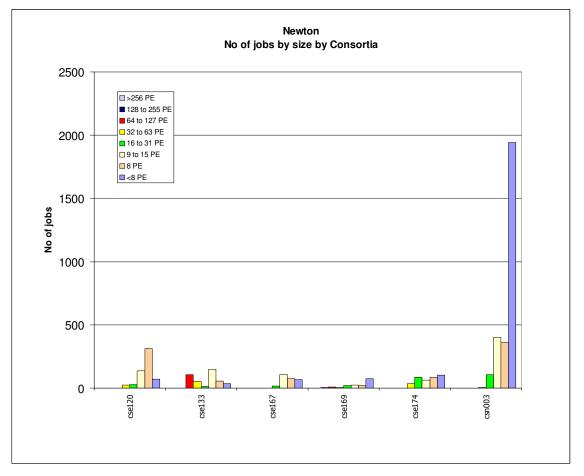


The next graph gives actual usage of HSM by Consortia.

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

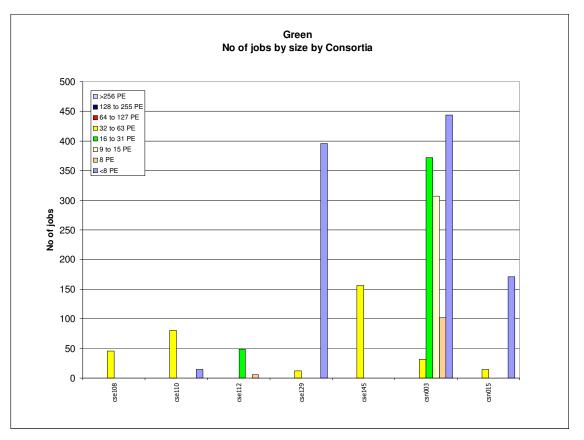
4.6 **Processor Usage and Job Statistics Charts**

Job statistics for Newton:



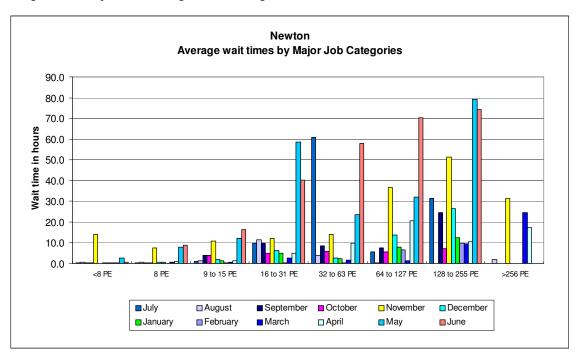
The above graph shows the number of jobs of the major sizes run during June.

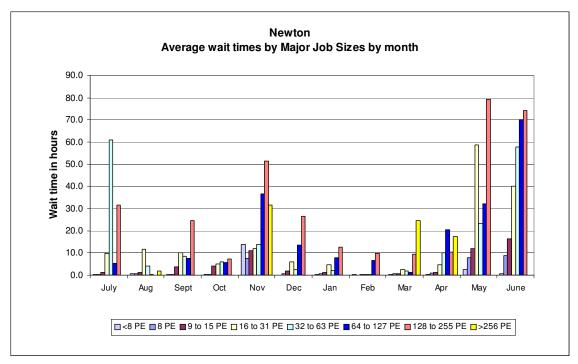
Job statistics for Green:



The above graph shows the number of jobs of the major sizes run on Green during June.

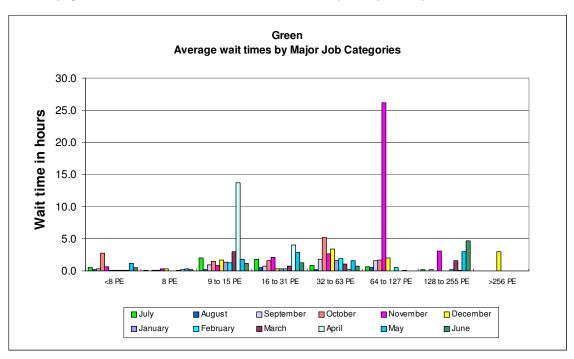
The next graph shows the wait times in hours on Newton for the major categories of jobs, larger jobs requesting tiling across multiple nodes having to wait the longest times.

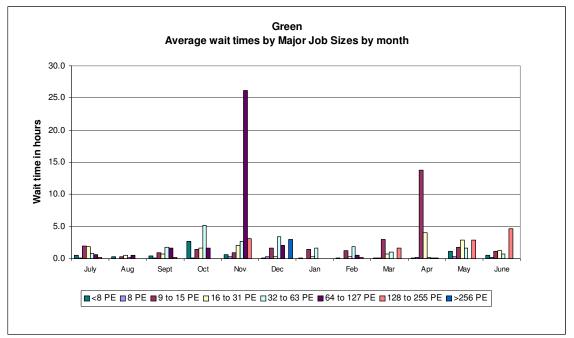




The chart above shows the average wait time trend on Newton so far this year.

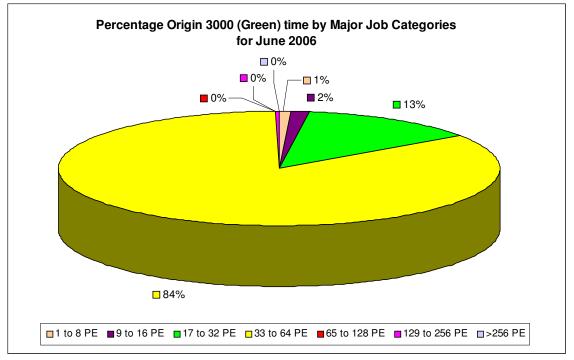
The next graph shows the wait times in hours on Green for the major categories of jobs:



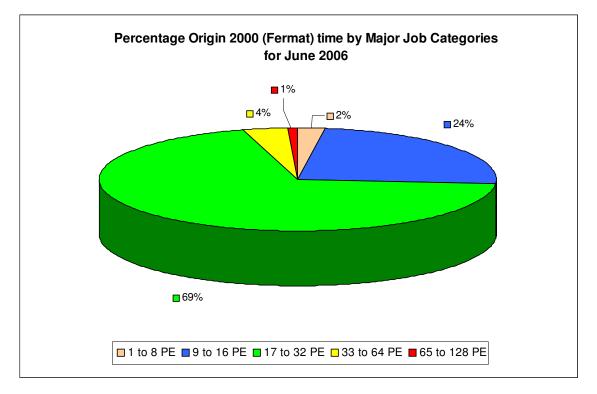


The chart above shows the average wait time trend on Green for the last 12 month period.



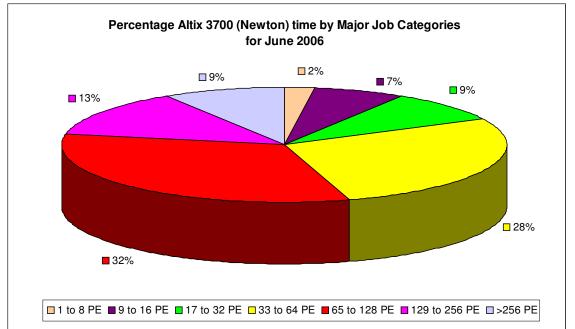


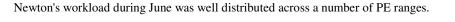
During June the majority of work on Green was in the 33 to 64 PE range.

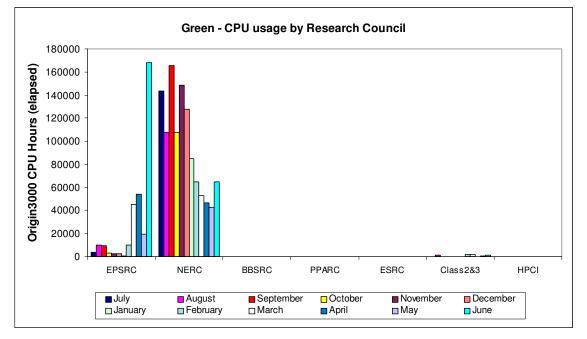


Fermat's workload was concentrated mainly in the 17 to 32 PE range during June.



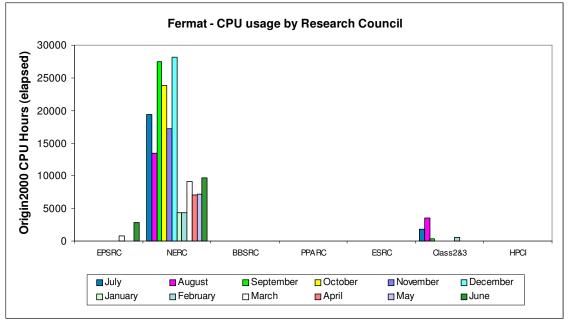




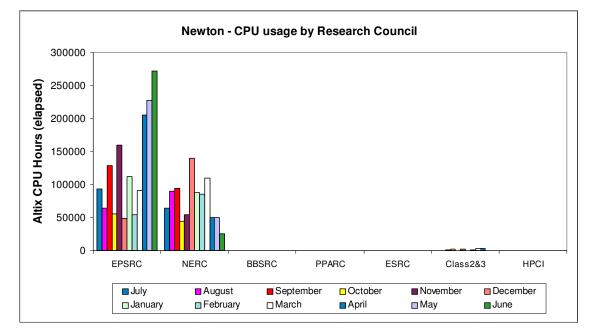


The above chart shows Green CPU usage by Research Council during the past 12 months of service.





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



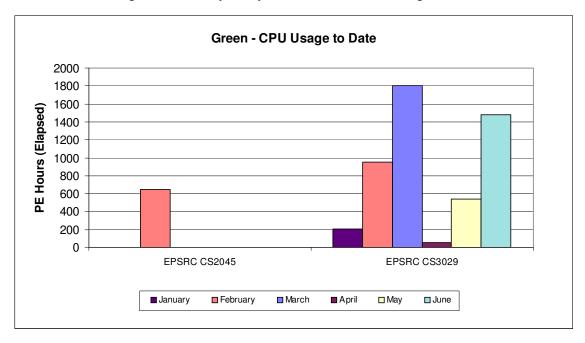
The following chart shows CPU usage to date of the Altix 3700 Newton.

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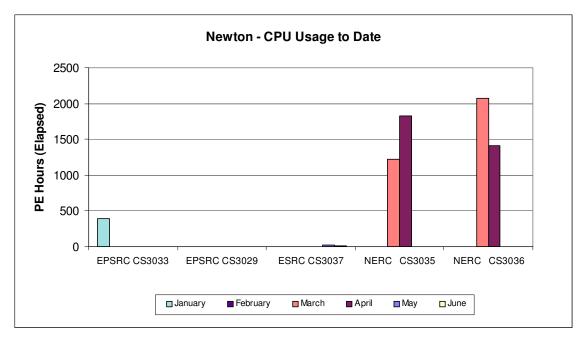
4.7 Class 2 & 3 Usage Charts

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 was no CPU usage of the Fermat system by class 2 and class 3 users during the last 6 months.



This chart details the CPU usage of Green by class 2 and class 3 users.

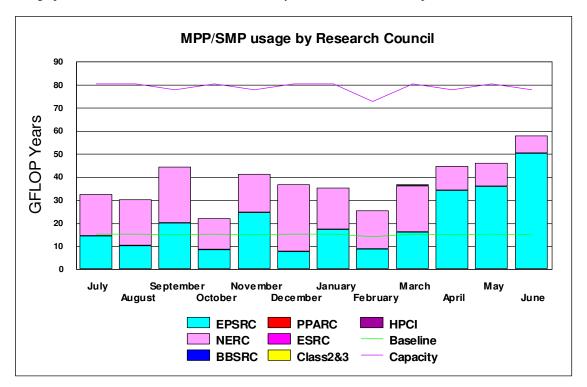


The above chart shows Newton usage by class 2 and class 3 users.

There is currently no MP disk or HSM usage by class 2 and class 3 users.

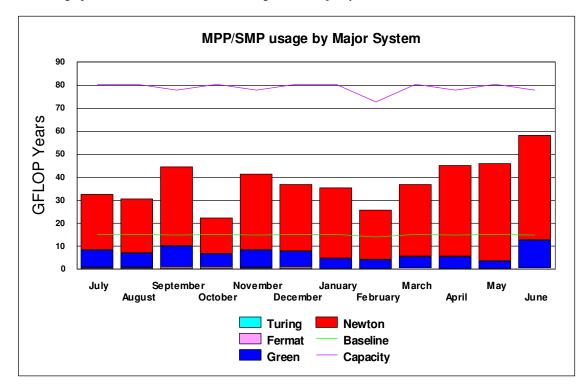
4.9 Charts of Historical Usage

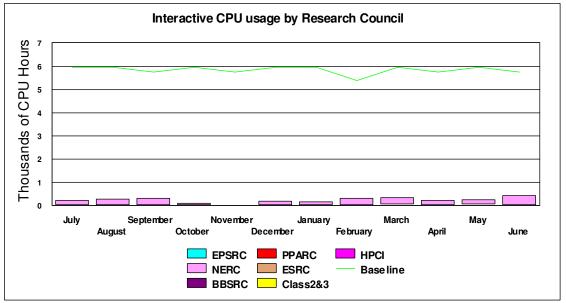
In all the Usage Charts, the baseline varies dependant upon the number of days in each month, within a 365-day year.



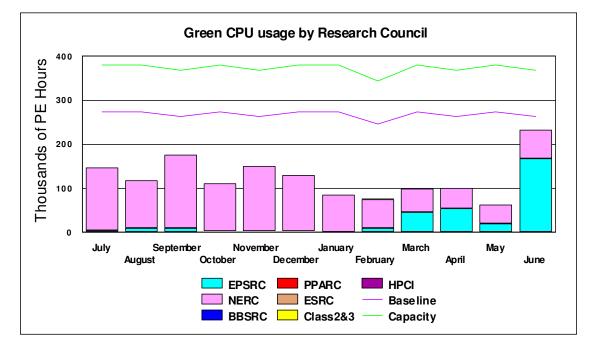
The graph below shows the GFLOP Year utilisation by Research Council for the previous 12 months.

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



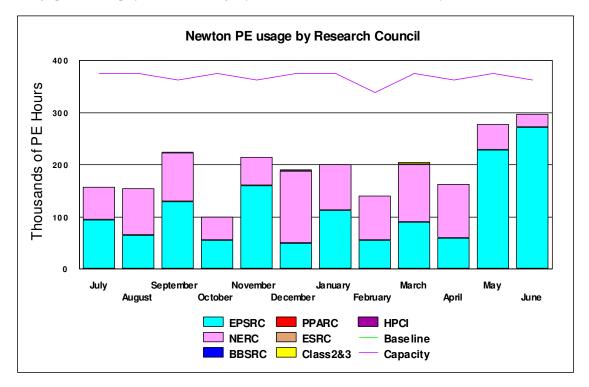


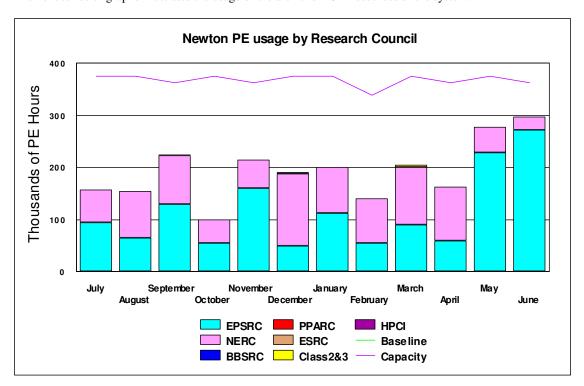
The above graph shows the historic interactive usage of the Origin 300 system (Wren). Eight of the higher speed 500Mhz CPUs in Wren deliver the baseline capacity equivalent to that which was previously available on the Origin 3000 system (Fermat) for interactive usage.



The following graph details the historic usage by Research council of the Origin 3000 system (Green).

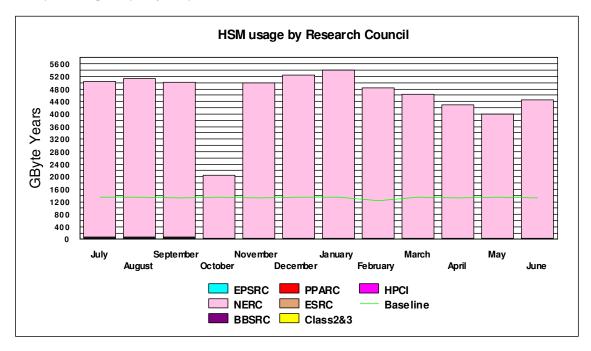
The graph below displays the historic usage by Research Council of the Altix 3700 system (Newton).





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 by 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 June 2003 it was announced that discounts for capability jobs available on all CSAR systems had been approved to include the SGI Origin 3000 system (Green) and the 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.

Due to the closure of the CSAR service on June 30th, there are no capability incentive discounts for this month.

6.1 Status

6.

The service utilisation exceeded baseline for June.

There was a balanced spread of work across all major systems.

6.2 Issues

There are no issues to report for June.

6.3 Plans

The CSAR Service ceased operation on Friday 30 June 2006 at the end of its current contract. For projects that run beyond this date, the Research Councils are responsible for providing access to alternative resources. All users who currently have accounts on the CSAR systems are responsible for transferring their data elsewhere. For further details refer to the "Closure of the CSAR Service" page on the CSAR website at http://www.csar.cfs.ac.uk/user information/service end/.

7. Conclusion

June 2006 saw the overall CPARS rating at Green with the baseline being exceeded by 290%.

This is the final month of the CSAR service for computational work.

Appendix 1 contains the accounts for June 2006

Appendix 2 contains the Percentage shares by Consortium for June 2006

Appendix 3 contains the Percentage shares by Research Council for June 2006

Appendix 4 contains the Training, Applications and Optimisation support figures to the end of June 2006

Appendix 5 contains a breakdown of resource usage by Consortia to the end of June 2006.

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

The summary accounts for the month of June 2006 can be found at the URL below

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

Percentage CPU time per consortia fo	r Green in June 2006	Percentage CPU time per consortia f	Percentage CPU time per consortia for Newton in June 2006				
Consortia	% Machine Time	Consortia	% Machine Time				
CSE145	54.53	CSEdl1	0.00				
SE111	0.45	CSE145	2.47				
SE112	0.47	CSE120	20.19				
SE129	3.88	CSE139	0.57				
SE137	3.92	CSE169	2.13				
SE115	0.04	CSE174	23.38				
SE108	0.56	CSE133	29.66				
SE110	7.91	CSE167	5.12				
SN003	26.74	CSE152	1.05				
SN015	0.87	CSE171	5.87				
CS3029	0.63	CSN003	7.44				
		CSN006	1.11				
		CS3037	0.00				
Percentage CPU time per consortia f		Percentage CPU time per consortia fo					
Consortia	% Machine Time	Consortia	% Machine Time				
consortia CSE174	% Machine Time 22.69	Consortia CSE145	% Machine Time 9.49				
SSE174 SSN003	% <u>Machine Time</u> 22.69 77.31	Consortia CSE145 CSE111	% Machine Time 9.49 0.02				
sensortia SE174 SN003 SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE112	<u>% Machine Time</u> 9.49 0.02 1.42				
<u>consortia</u> :SE174 :SN003 :SN006	% <u>Machine Time</u> 22.69 77.31	Consortia CSE145 CSE111 CSE112 CSE129	<u>% Machine Time</u> 9.49 0.02 1.42 0.35				
<u>consortia</u> :SE174 :SN003 :SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE112 CSE129 CSE129 CSE137	% Machine Time 9.49 0.02 1.42 0.35 0.68 0.68				
<u>consortia</u> :SE174 :SN003 :SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE112 CSE129 CSE137 CSE174	<u>% Machine Time</u> 9.49 0.02 1.42 0.35 0.68 1.67				
<u>consortia</u> :SE174 :SN003 :SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE112 CSE129 CSE137 CSE174 CSE174 CSE133	% Machine Time 9.49 0.02 1.42 0.35 0.68 1.67 0.32 0.32				
<u>consortia</u> :SE174 :SN003 :SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE112 CSE129 CSE137 CSE174 CSE133 CSE131	% Machine Time 9.49 0.02 1.42 0.35 0.68 1.67 0.32 0.01				
<u>consortia</u> :SE174 :SN003 :SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE112 CSE129 CSE137 CSE174 CSE133 CSE131 CSE131 CSE127	% Machine Time 9.49 0.02 1.42 0.35 0.68 1.67 0.32 0.01 0.19				
<u>consortia</u> :SE174 :SN003 :SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE112 CSE129 CSE137 CSE137 CSE137 CSE133 CSE131 CSE127 CSE110	% Machine Time 9.49 0.02 1.42 0.35 0.68 1.67 0.32 0.019 0.33				
onsortia SE174 SN003 SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE122 CSE137 CSE174 CSE133 CSE131 CSE127 CSE121 CSE121	% Machine Time 9.49 0.02 1.42 0.35 0.66 1.67 0.32 0.01 0.19				
sensortia SE174 SN003 SN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE122 CSE137 CSE174 CSE133 CSE131 CSE127 CSE110 CSE100 CSN001 CSN003	% Machine Time 9.49 0.02 1.42 0.35 0.68 1.67 0.32 0.01 0.19 88.16				
Consortia SSE174 SSN003 SSN006	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE12 CSE137 CSE137 CSE133 CSE131 CSE127 CSE100 CSE100 CSE300	% Machine Time 9.49 0.02 1.42 0.35 0.68 1.67 0.32 0.01 0.19 88.16 0.15				
Percentage CPU time per consortia 1 <u>Consortia</u> SSE174 SSN003 SSN006 SSN015	% <u>Machine Time</u> 22.69 77.31 0.00	Consortia CSE145 CSE111 CSE122 CSE137 CSE174 CSE133 CSE131 CSE127 CSE110 CSE100 CSN001 CSN003	% Machine Time 9.49 0.02 1.42 0.35 0.68 1.67 0.32 0.01 0.19 88.16				

<u>Consortia</u>	%Allocation	%Allocation		
CSEdI1	1.95			
CSE086	14.45			
CSE149	1.03			
CSE120	1.08			
CSE112	1.03			
CSE129	0.20			
CSE137	1.13			
CSE139	0.20			
CSE140	0.20			
CSE174	0.83			
CSE071	0.20			
CSE133	0.20			
CSE167	0.10			
CSE075	39.15			
CSE131	1.03			
CSE171	0.15			
CSE110	0.09			
HPCI Daresbury	0.05			
HPCI Edinburgh	0.10			
CSN001	20.64			
CSN003	4.64			
CSN006	6.19			
CSN015	4.13			
CSEHPCX	1.03			

Percentage usage of HSM by Consortium for June 2006							
Consortium	% Usage						
CSE085	0.02						
CSE111	0.01						
CSE071	0.01						
CSN001	3.22						
CSN003	91.76						
CSN006	0.01						
CSN015	4.97						

Percentage CPU usa	ge on Green by Research Council	or June 2006	Percentage CPU usad	e on Newton by Research Cou
Research Council	<u>% Usage</u>		Research Council	<u>% Usage</u>
EPSRC	72.40		EPSRC	91.45
HPCI	0.00		HPCI	0.00
NERC	27.60		NERC	8.55
BBSRC	0.00		BBSRC	0.00
ESRC	0.00		ESRC	0.00
PPARC	0.00		PPARC	0.00
	I		L	
Percentage PE usage	e on Fermat by Research Council	or June 2006	Percentage CPU usage	ge on Wren by Research Counc
Research Council	<u>% Usage</u>		Research Council	<u>% Usage</u>
EPSRC	22.69		EPSRC	5.20
HPCI	0.00		HPCI	0.00
NERC	77.31		NERC	94.80
BBSRC	0.00		BBSRC	0.00
ESRC	0.00		ESRC	0.00
PPARC	0.00		PPARC	0.00

Percentage MP Disc allo	cated by Research Council for	une 2006	Percentage Disc allocated as SAN HV by Research Council for Ju					
Research Council	% Allocated		EPSRC	0.00				
EPSRC	65.26		HPCI	0.00				
HPCI	0.15		NERC	100.00				
NERC	35.60		BBSRC	0.00				
BBSRC	0.00		ESRC	0.00				
ESRC	0.00		PPARC	0.00				
PPARC	0.00		PPARC	0.00				

Percentage HSM usage by Research Council for June 2006									
Research Council	<u>% usage</u>								
EPSRC	0.05								
HPCI	0.00								
NERC	99.95								
BBSRC	0.00								
ESRC	0.00								
PPARC	0.00								

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
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		1	1.5	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	Kevin Roy	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.	Jon Gibson							2	
cse082	Barakos, G (Dr)	CFD Study of Three- Dimensional Dynamic Shelf	Keith Taylor	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- 2005	Kevin Roy	35				5	5	116	
cse089	Wiercigroch, M (Dr)	Nonlinear Dynamics & Rock Contact Fracture Mechanics in Modelling of Vibration Enhanced Drilling	Jon Gibson	15						7	

											1550
cse098	De Souza M M (Dr)	Indium interactionsin silicon for ULSI technologies	Andrew Jones	5						5	
cse106	Augarde (Dr)	Parametric Studies of multiple tunnels		25						10	2
cse108	Holden, AV (Prof)	Large-scale parallelisation of electro-physiological & mechanical cardiac virtual tissues		10						6	3
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	4
cse111	Avital, Eldad (Dr)	A numerical study of three dimensional wakes generated by free surface piecing circular cylinders									
cse112	Chemyshenko, S I (Prof)	Master-mode analysis of the genesis of organised structures in turbulent flows									
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									
cse118	Gavaghan, David (Dr)	EPSRC e-Science pilot in Integrative Biology									
cse127	Silvester, D (Prof)	Efficient Parallel 'Black-Box' Preconditioners for Finite element Problems		20						5	4
csn001	Webb, D J (Dr)	OCCAM	Zoe Chaplin	70.5		1		58	61	20	3
csn003	O'Neill, A (Prof)	UGAMP	Zoe Chaplin	9.25				8.25	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				J			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	Neil Stringfellow								

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	1			1	1	1	1	1	1	1	1
		transport proteins									
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.	Neil Stringfellow	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				J	J					
cs4002	Cooper, A (Miss)	<u></u>									

The following table shows resource utilisation by Consortia to the end of June 2006.

cs2045 Shrira	
Last Trade: Wed Feb 1 14:47:21 2006	
Usage:	
0.2 of 20.0 Hour Wren CPU (0.0 of 1.0 G.S.T), 1.2%	
0.0 of 0.0 GByteYear HP Disk SAN - /d (0.1 of 0.1 G.S.T), 50.2%	
0.0 of 0.9 GByteYear MP Disk SAN (0.0 of 2.2 G.S.T), 0.0%	
646.2 of 1850.0 Hour Green CPU (33.8 of 96.7 G.S.T), 34.9%	
Total usage for project cs2045 33.8 of 100.0 Generic Service Tokens, 33.8%	
2052 1	
cs2052 Houseman	
Last Trade: Thu May 12 15:12:56 2005	
Usage:	
0.0 of 625.8 Hour Newton CPU (0.0 of 95.8 G.S.T), 0.0%	
0.0 of 10.1 Hour Wren CPU (0.0 of 0.5 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 1.5 GByteYear MP Disk SAN (0.0 of 3.7 G.S.T), 0.0%	
Total usage for project cs2052 0.0 of 100.0 Generic Service Tokens, 0.0%	
cs3026 - Smith (EPCC)	
Last Trade: Wed Jun 2 08:28:44 2004	
Usage:	
288.4 of 3200.6 Hour Newton CPU (44.1 of 490.0 G.S.T), 9.0%	
0.0 of 0.3 Hour Wren CPU (0.0 of 0.0 G.S.T), 8.3%	
0.0 of 4.2 GByteYear MP Disk SAN (0.0 of 10.0 G.S.T), 0.0%	
Total usage for project cs3026 44.1 of 500.0 Generic Service Tokens, 8.8%	
cs3029 - Zhang	
Last Trade: Mon Jun 19 13:41:45 2006	
Usage:	
-	
0.7 of 0.7 Hour Newton CPU (0.1 of 0.1 G.S.T), 100.0%	
2.0 of 49.9 Hour Wren CPU (0.1 of 2.5 G.S.T), 4.0%	
0.0 of 12.5 GByteYear MP Disk SAN (0.0 of 29.8 G.S.T), 0.0%	
6622.8 of 8325.9 Hour Green CPU (346.1 of 435.0 G.S.T), 79.5%	
0.0 of 3.0 Day Training (0.0 of 40.5 G.S.T), 0.0%	
Total usage for project cs3029 346.3 of 507.9 Generic Service Tokens, 68.2%	
Total usage for project cs5029 540.5 of 507.9 Generic Service Tokens, 08.270	
cs3030 - Euston	
Last Trade: Wed Nov 2 16:18:12 2005	
Usage:	
2549.1 of 2628.2 Hour Newton CPU (390.2 of 402.4 G.S.T), 97.0%	
0.3 of 9.3 Hour Wren CPU (0.0 of 0.5 G.S.T), 3.2%	
0.0 of 10.0 GByteYear MP Disk SAN (0.0 of 23.8 G.S.T), 0.0%	
0.0 of 2.0 PersonDay Support (0.0 of 80.0 G.S.T), 0.0%	
0.0 of 1.0 Day Training (0.0 of 13.5 G.S.T), 0.0%	
Total usage for project cs3030 390.3 of 520.1 Generic Service Tokens, 75.0%	
cs3031 - Young	
Last Trade: Tue Aug 23 15:44:56 2005	
Usage:	
0.0 of 2358.1 Hour Newton CPU (0.0 of 361.0 G.S.T), 0.0%	
0.0 01 2550.1 Hour Newton Cr 0 (0.0 01 501.0 0.5.1), 0.0 /0	

0.0 of 403.7 Hour Wren CPU (0.0 of 20.0 G.S.T), 0.0%	
0.0 of 50.0 GByteYear MP Disk SAN (0.0 of 119.0 G.S.T), 0.0%	
Total usage for project cs3031 0.0 of 500.0 Generic Service Tokens, 0.0%	
cs3032 - Rayfield	
Last Trade: Fri Aug 19 17:42:52 2005	
Usage:	
0.0 of 2358.1 Hour Newton CPU (0.0 of 361.0 G.S.T), 0.0%	
0.0 of 403.7 Hour Wren CPU (0.0 of 20.0 G.S.T), 0.0%	
0.0 of 50.0 GByteYear MP Disk SAN (0.0 of 119.0 G.S.T), 0.0%	
Total usage for project cs3032 0.0 of 500.0 Generic Service Tokens, 0.0%	
cs3034 - Ghassemlooy	
Last Trade: Wed Nov 16 11:43:31 2005	
Usage:	
0.0 of 500.0 Hour Newton CPU (0.0 of 76.5 G.S.T), 0.0%	
0.0 of 100.0 Hour Wren CPU (0.0 of 5.0 G.S.T), 0.0%	
0.0 of 2.1 GByteYear MP Disk SAN (0.0 of 5.0 G.S.T), 0.0%	
0.0 of 7290.0 Hour Green CPU (0.0 of 380.9 G.S.T), 0.0%	
1.0 of 3.0 Day Training (13.5 of 40.5 G.S.T), 33.3%	
Total usage for project cs3034 13.5 of 507.9 Generic Service Tokens, 2.7%	
cs3035 - Cresswell Lost Trade: Thu Apr 20 15:50:22 2006	
Last Trade: Thu Apr 20 15:59:23 2006	
Usage: 3046.6 of 3991.1 Hour Newton CPU (466.4 of 611.0 G.S.T), 76.3%	
0.0 of 403.7 Hour Wren CPU (0.0 of 20.0 G.S.T), 0.0%	
0.0 of 50.0 GByteYear MP Disk SAN (0.0 of 119.0 G.S.T), 0.0%	
Total usage for project cs3035 466.4 of 750.0 Generic Service Tokens, 62.2%	
cs3036 - Rigby	
Last Trade: Fri Aug 12 15:45:29 2005	
Usage:	
3483.2 of 2358.1 Hour Newton CPU (533.2 of 361.0 G.S.T), 147.7%	
0.2 of 403.7 Hour Wren CPU (0.0 of 20.0 G.S.T), 0.1%	
0.0 of 50.0 GByteYear MP Disk SAN (0.0 of 119.0 G.S.T), 0.0%	
Total usage for project cs3036 533.3 of 500.0 Generic Service Tokens, 106.7%	
cs3038 - Reader Last Trade: Fri Apr 7 17:35:08 2006	
Usage:	
0.0 of 3110.0 Hour Newton CPU (0.0 of 476.1 G.S.T), 0.0%	
0.0 of 5.0 GByteYear MP Disk SAN (0.0 of 12.0 G.S.T), 0.0%	
0.0 of 10.0 GbyteYear HV Disk SAN (0.0 of 12.0 G.S.T), 0.0%	
Total usage for project cs3038 0.0 of 500.0 Generic Service Tokens, 0.0%	
rour usage for project essons of or solve denene service rokens, 0.0%	
CSE001 - Admin users	
CSE001 - Admin users Last Trade: Fri Oct. 8 15:16:30 1999	
Last Trade: Fri Oct 8 15:16:30 1999	
Last Trade: Fri Oct 8 15:16:30 1999 Usage:	
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%	
Last Trade: Fri Oct 8 15:16:30 1999 Usage:	

cse071 GR/R23657 Iacovides
Last Trade: Thu Jul 15 10:25:10 2004
Usage:
14155.3 of 15314.9 Hour Newton CPU (2167.1 of 2344.6 G.S.T), 92.4%
3.9 of 223.3 Hour Wren CPU (0.2 of 11.1 G.S.T), 1.8%
5.0 of 13.6 GByteYear MP Disk SAN (12.0 of 32.5 G.S.T), 36.9%
677.9 of 22708.5 Hour SMP CPU (26.3 of 882.3 G.S.T), 3.0%
10.0 of 11.3 GByteYear HSM/Tape (6.3 of 7.1 G.S.T), 88.2%
3246.7 of 16991.9 Hour Green CPU (169.6 of 887.9 G.S.T), 19.1% 1.5 of 5.0 PersonDay Support (60.0 of 200.0 G.S.T), 30.0%
4.0 of 6.0 Day Training (54.1 of 81.1 G.S.T), 66.7%
Total usage for project cse071 2495.6 of 4446.5 Generic Service Tokens, 56.1%
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%
8.5 of 10.0 GByteYear HP Disk (50.6 of 59.5 G.S.T), 85.0%
326996.2 of 326228.5 Hour Newton CPU (50060.7 of 49943.1 G.S.T), 100.2%
87.7 of 210.0 Hour Wren CPU (4.3 of 10.4 G.S.T), 41.7%
0.0 of 50.0 Hour SMP CPU (0.0 of 1.9 G.S.T), 0.0%
163.2 of 150.0 GByteYear MP Disk (388.7 of 357.1 G.S.T), 108.8%
0.0 of 1000.0 GByteYear HSM/Tape (0.0 of 630.9 G.S.T), 0.0%
26162.4 of 30000.0 Hour Green CPU (1367.0 of 1567.6 G.S.T), 87.2% Total usage for subproject cse086a 69320.1 of 70704.7 Generic Service Tokens, 98.0%
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%
37.6 of 50.0 GByteYear HP Disk (223.8 of 297.6 G.S.T), 75.2%
39575.0 of 39575.0 Hour Newton CPU (6058.6 of 6058.6 G.S.T), 100.0%
339.7 of 500.0 Hour Wren CPU (16.8 of 24.8 G.S.T), 67.9% 16665.4 of 20000.0 Hour SMP CPU (647.5 of 777.0 G.S.T), 83.3%
42.5 of 60.0 GByteYear MP Disk (101.1 of 142.9 G.S.T), 70.8%
61.8 of 1000.0 GByteYear HSM/Tape (39.0 of 630.9 G.S.T), 6.2%
334345.3 of 350000.0 Hour Green CPU (17470.2 of 18288.2 G.S.T), 95.5%
2.0 of 2.0 PersonDay Support (80.0 of 80.0 G.S.T), 100.0%
Total usage for subproject cse086b 25808.5 of 27654.1 Generic Service Tokens, 93.3%
cse086d MP4
Last Trade: never
Usage:
0.1 of 0.1 GByteYear HP Disk (0.5 of 0.6 G.S.T), 87.4%
0.2 of 0.1 GByteYear MP Disk (0.5 of 0.2 G.S.T), 210.1%
Total usage for subproject cse086d 1.0 of 0.8 Generic Service Tokens, 122.5%
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%
1.8 of 2.0 GByteYear HP Disk (10.5 of 11.9 G.S.T), 88.1%
0.0 of 0.0 Hour Newton CPU (0.0 of 0.0 G.S.T)
469.5 of 1500.0 Hour Wren CPU (23.3 of 74.3 G.S.T), 31.3%
0.0 of 5.0 GbyteYear HV Disk SAN /v (0.0 of 6.0 G.S.T), 0.0%
7362.0 of 10000.0 Hour SMP CPU (286.0 of 388.5 G.S.T), 73.6%

57.8 of 50.0 GByteYear MP Disk (137.6 of 119.0 G.S.T), 115.6%	
143889.2 of 150000.0 Hour Green CPU (7518.5 of 7837.8 G.S.T), 95.9%	
Total usage for subproject cse086e 7977.1 of 8449.6 Generic Service Tokens, 94.4%	
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 (22.8 of 29.8 G.S.T), 76.6%	
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%	
50.5 of 50.0 GByteYear MP Disk (120.2 of 119.0 G.S.T), 101.0%	
63.6 of 100.0 GByteYear HSM/Tape (40.1 of 63.1 G.S.T), 63.6%	
0.0 of 10000.0 Hour Green CPU (0.0 of 522.5 G.S.T), 0.0%	
Total usage for subproject cse086f 185.1 of 867.2 Generic Service Tokens, 21.3%	
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%	
43.5 of 50.0 GByteYear HP Disk (258.9 of 297.6 G.S.T), 87.0%	
179.6 of 200.0 Hour Wren CPU (8.9 of 9.9 G.S.T), 89.8% 1433 4 of 1800 0 Hour SMP CPU (55.7 of 69.9 G.S.T), 79.6%	
1433.4 of 1800.0 Hour SMP CPU (55.7 of 69.9 G.S.T), 79.6% 151.3 of 160.0 GByteYear MP Disk (360.3 of 381.0 G.S.T), 94.6%	
0.0 of 50.0 GByte Year HSM/Tape (0.0 of 31.5 G.S.T), 0.0%	
4037.6 of 10000.0 Hour Green CPU (211.0 of 522.5 G.S.T), 40.4%	
Total usage for subproject cse086g 908.7 of 1433.4 Generic Service Tokens, 63.4%	
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%	
7.0 of 10.0 GByte Year HP Disk (41.5 of 59.5 G.S.T), 69.7%	
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%	
15.1 of 20.0 GByteYear MP Disk (36.0 of 47.6 G.S.T), 75.7%	
0.0 of 0.0 Hour Green CPU (0.0 of 0.0 G.S.T)	
Total usage for subproject cse086h 1206.4 of 1335.7 Generic Service Tokens, 90.3%	
cse086i EC4	
Last Trade: never	
Usage:	
0.1 of 0.1 GByteYear HP Disk (0.5 of 0.6 G.S.T), 86.8%	
0.2 of 0.1 GByteYear MP Disk (0.5 of 0.2 G.S.T), 210.1%	
Total usage for subproject cse086i 1.0 of 0.8 Generic Service Tokens, 122.0%	
cse086j BEC1	
Last Trade: never	
Usage: (7505.2 of 70000.0 DELLour MDD DE CDU (1622.2 of 1602.5 C S T) 06.40	
67505.3 of 70000.0 PEHour MPP PE CPU (1632.2 of 1692.5 G.S.T), 96.4%	
1.7 of 3.0 GByteYear HP Disk (9.8 of 17.9 G.S.T), 55.1% 7317.0 of 7317.0 Hour Newton CPU (1120.2 of 1120.2 G.S.T), 100.0%	
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%	
0.8 of 5.0 GByteYear MP Disk (2.0 of 11.9 G.S.T), 16.6%	

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0.0 of 1000.0 Hour Green CPU (0.0 of 52.3 G.S.T), 0.0% Total usage for subproject cse086j 2764.2 of 2904.6 Generic Service Tokens, 95.2%	
cse086k BEC2	
Last Trade: never	
Usage:	
0.1 of 0.1 GByteYear HP Disk (0.5 of 0.6 G.S.T), 86.8%	
0.6 of 200.0 Hour Wren CPU (0.0 of 9.9 G.S.T), 0.3%	
2341.7 of 4000.0 Hour SMP CPU (91.0 of 155.4 G.S.T), 58.5%	
32.0 of 35.0 GByteYear MP Disk (76.1 of 83.3 G.S.T), 91.3%	
1385.0 of 10000.0 Hour Green CPU (72.4 of 522.5 G.S.T), 13.8%	
Total usage for subproject cse086k 240.0 of 771.8 Generic Service Tokens, 31.1%	
cse108 GR/S43498 Holden	
Last Trade: Sun Mar 26 22:10:40 2006	
Usage:	
14.7 of 680.0 Hour Wren CPU (0.7 of 33.7 G.S.T), 2.2%	
0.0 of 854.1 GByteYear MP Disk SAN (0.0 of 2033.5 G.S.T), 0.0%	
7139.5 of 38600.0 Hour Green CPU (373.1 of 2016.9 G.S.T), 18.5%	
0.0 of 10.0 PersonDay Support (0.0 of 400.0 G.S.T), 0.0% 7.0 of 8.0 Day Training (94.6 of 108.3 G.S.T), 87.3%	
Total usage for project cse108 468.4 of 4592.5 Generic Service Tokens, 10.2%	
cse110 GR/S43214 Leach	
Last Trade: Wed Nov 5 16:16:25 2003	
Usage:	
36.7 of 6000.0 Hour Wren CPU (1.8 of 297.3 G.S.T), 0.6%	
0.0 of 67.6 GByteYear HP Disk SAN - /d (0.0 of 249.4 G.S.T), 0.0%	
0.5 of 20.0 GByteYear MP Disk SAN (1.3 of 47.6 G.S.T), 2.7% 17710.6 of 42000.0 Hour Green CPU (925.4 of 2194.6 G.S.T), 42.2%	
5.0 of 30.0 PersonDay Support (200.0 of 1200.0 G.S.T), 16.7%	
5.0 of 25.0 Day Training (67.6 of 337.8 G.S.T), 20.0%	
Total usage for project cse110 1196.1 of 4326.7 Generic Service Tokens, 27.6%	
cse111 GR/S46239 Avital Last Trade: Fri Apr 16 14:41:37 2004	
Usage:	
36.2 of 800.1 Hour Wren CPU (1.8 of 39.6 G.S.T), 4.5%	
0.0 of 272.3 GByteYear MP Disk SAN (0.0 of 648.4 G.S.T), 0.0%	
0.0 of 56.3 Gbyte Year HV Disk SAN /v (0.0 of 67.1 G.S.T), 0.0%	
763.4 of 849.9 Hour SMP CPU (29.7 of 33.0 G.S.T), 89.8%	
1.2 of 84.6 GByteYear HSM/Tape (0.8 of 53.4 G.S.T), 1.5%	
87934.9 of 94500.0 Hour Green CPU (4594.8 of 4937.8 G.S.T), 93.1%	
0.0 of 5.0 PersonDay Support (0.0 of 201.3 G.S.T), 0.0%	
1.0 of 6.0 Day Training (13.5 of 81.4 G.S.T), 16.6%	
Total usage for project cse111 4640.5 of 6062.0 Generic Service Tokens, 76.6%	
cse112 GR/S67029 Chernyshenko	
Last Trade: Wed Jun 14 08:51:58 2006	
Usage:	
16.1 of 819.5 Hour Wren CPU (0.8 of 40.6 G.S.T), 2.0%	
8.6 of 300.0 GByteYear MP Disk SAN (20.5 of 714.3 G.S.T), 2.9%	
33901.2 of 159988.5 Hour Green CPU (1771.4 of 8359.7 G.S.T), 21.2%	
0.0 of 15.5 PersonDay Support (0.0 of 619.1 G.S.T), 0.0%	
0.0 of 5.0 Day Training (0.0 of 67.8 G.S.T), 0.0%	

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Total usage for project cse112 1792.7 of 9801.4 Generic Service Tokens, 18.3%
cse115 GR/S67142 de Leeuw Last Trade: Thu Mar 10 13:58:21 2005 Usage: 1.9 of 20.2 Hour Wren CPU (0.1 of 1.0 G.S.T), 9.6% 0.0 of 12.0 GByte Year MP Disk SAN (0.0 of 28.6 G.S.T), 0.0% 7874.1 of 56331.4 Hour Green CPU (411.4 of 2943.4 G.S.T), 14.0% Total usage for project cse115 411.5 of 2973.0 Generic Service Tokens, 13.8%
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 4.8 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 640.0 G.S.T), 0.0% 0.0 of 8.0 Day Training (0.0 of 108.1 G.S.T), 0.0% Total usage for project cse116 0.0 of 1092.7 Generic Service Tokens, 0.0%
cse117 GR/S79398/1 Theodoropoulos Last Trade: Thu Apr 1 11:47:27 2004 Usage: 0.0 of 4000.1 Hour Wren CPU (0.0 of 198.2 G.S.T), 0.0% 0.0 of 26.5 GByte Year MP Disk SAN (0.0 of 63.1 G.S.T), 0.0% 0.0 of 11499.9 Hour SMP CPU (0.0 of 446.8 G.S.T), 0.0% 0.0 of 15500.1 Hour Green CPU (0.0 of 809.9 G.S.T), 0.0% Total usage for project cse117 0.0 of 1518.0 Generic Service Tokens, 0.0%
cse118 GR/S72023 Gavaghan Last Trade: Wed Apr 28 14:12:37 2004 Usage: 12097.8 of 150000.0 Hour Newton CPU (1852.1 of 22963.9 G.S.T), 8.1% 0.0 of 40.4 Hour Wren CPU (0.0 of 2.0 G.S.T), 0.0% 1.2 of 184.2 GByteYear MP Disk SAN (3.0 of 438.5 G.S.T), 0.7% 0.0 of 22.0 PersonDay Support (0.0 of 880.0 G.S.T), 0.0% 0.0 of 11.0 Day Training (0.0 of 148.6 G.S.T), 0.0% Total usage for project cse118 1855.1 of 24433.0 Generic Service Tokens, 7.6%
cse120 Harding Last Trade: Thu Nov 11 09:23:00 2004 Usage: 130764.2 of 553999.0 Hour Newton CPU (20019.0 of 84813.1 G.S.T), 23.6% 0.1 of 3.1 Hour Wren CPU (0.0 of 0.2 G.S.T), 2.4% 13.3 of 100.0 GByteYear MP Disk SAN (31.8 of 238.0 G.S.T), 13.3% 0.0 of 10.0 Day Training (0.0 of 135.2 G.S.T), 0.0% Total usage for project cse120 20050.8 of 85186.5 Generic Service Tokens, 23.5%
cse121 GR/S80080 Shluger Last Trade: re-enabled Usage: 301521.6 of 301285.3 Hour Newton CPU (46160.7 of 46124.5 G.S.T), 100.1% 0.0 of 20.2 Hour Wren CPU (0.0 of 1.0 G.S.T), 0.0%

0.0 of 10.1 GByteYear MP Disk SAN (0.0 of 24.0 G.S.T), 0.0% 0.0 of 10.1 PersonDay Support (0.0 of 403.8 G.S.T), 0.0%	
0.0 of 0.1 Day Training (0.0 of 1.6 G.S.T), 0.0%	
Total usage for project cse121 46160.7 of 46554.9 Generic Service Tokens, 99.2%	
cse126 GR/T18608/01 Ziebart	
Last Trade: Mon Apr 24 13:30:33 2006	
Usage:	
8995.9 of 13816.2 Hour Newton CPU (1377.2 of 2115.2 G.S.T), 65.1%	
0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0%	
0.0 of 20.0 GByteYear MP Disk SAN (0.0 of 47.6 G.S.T), 0.0%	
0.0 of 4818.7 Hour Green CPU (0.0 of 251.8 G.S.T), 0.0% 0.0 of 60.0 PersonDay Support (0.0 of 2400.0 G.S.T), 0.0%	
0.0 of 15.0 Day Training (0.0 of 202.7 G.S.T), 0.0%	
Total usage for project cse126 1377.2 of 5037.1 Generic Service Tokens, 27.3%	
cse127 - EP/C00528 Silvester	
Last Trade: Thu Sep 30 10:21:57 2004	
Usage:	
0.0 of 4000.0 Hour Newton CPU (0.0 of 612.4 G.S.T), 0.0%	
12.3 of 400.0 Hour Wren CPU (0.6 of 19.8 G.S.T), 3.1% 0.0 of 62.0 GByteYear MP Disk SAN (0.0 of 147.6 G.S.T), 0.0%	
0.0 of 20000.0 Hour Green CPU (0.0 of 1045.0 G.S.T), 0.0%	
0.0 of 20.0 PersonDay Support (0.0 of 800.0 G.S.T), 0.0%	
5.0 of 5.0 Day Training (67.6 of 67.6 G.S.T), 100.0%	
Total usage for project cse127 68.2 of 2692.4 Generic Service Tokens, 2.5%	
cse129 - GR/T18615 Pitts	
Last Trade: Tue Jun 13 15:52:20 2006	
Usage:	
2.0 of 26960.0 Hour Newton CPU (0.3 of 4127.4 G.S.T), 0.0%	
17.6 of 600.1 Hour Wren CPU (0.9 of 29.7 G.S.T), 2.9%	
0.0 of 0.8 GByteYear HP Disk SAN - /d (0.0 of 3.1 G.S.T), 0.0%	
1.2 of 198.2 GByteYear MP Disk SAN (2.8 of 471.9 G.S.T), 0.6% 0.0 of 25.0 GbyteYear HV Disk SAN /v (0.0 of 29.8 G.S.T), 0.0%	
0.0 of 0.0 GByteYear MP Disk (0.0 of 0.0 G.S.T)	
11766.5 of 37500.0 Hour Green CPU (614.8 of 1959.5 G.S.T), 31.4%	
5.5 of 54.0 PersonDay Support (220.0 of 2160.0 G.S.T), 10.2%	
0.0 of 20.0 Day Training (0.0 of 270.3 G.S.T), 0.0%	
Total usage for project cse129 838.7 of 9051.6 Generic Service Tokens, 9.3%	
cse131 - GR/T18455 Bull	
Last Trade: Mon Mar 6 15:04:48 2006	
Usage: 22530.9 of 25664.5 Hour Newton CPU (3449.3 of 3929.0 G.S.T), 87.8%	
1.1 of 399.0 Hour Wren CPU (0.1 of 19.8 G.S.T), 0.3%	
9.3 of 200.3 GByteYear MP Disk SAN (22.2 of 477.0 G.S.T), 4.6%	
0.0 of 389.5 Gbyte Year HV Disk SAN /v (0.0 of 464.2 G.S.T), 0.0%	
0.3 of 1.3 Hour SMP CPU (0.0 of 0.0 G.S.T), 24.3%	
0.0 of 100.0 GByteYear HSM/Tape (0.0 of 63.1 G.S.T), 0.0%	
5913.4 of 12914.4 Hour Green CPU (309.0 of 674.8 G.S.T), 45.8%	
0.0 of 10.0 PersonDay Support (0.0 of 400.6 G.S.T), 0.0%	
0.0 of 10.0 Day Training (0.0 of 135.5 G.S.T), 0.0%	
Total usage for project cse131 3780.5 of 6164.2 Generic Service Tokens, 61.3%	

cse132 GR/T04465 Clarke
Last Trade: Mon Feb 13 15:42:38 2006
Usage:
5.3 of 32694.0 Hour Newton CPU (0.8 of 5005.2 G.S.T), 0.0%
0.0 of 140.1 Hour Wren CPU (0.0 of 6.9 G.S.T), 0.0%
0.0 of 100.1 GByteYear MP Disk SAN (0.0 of 238.3 G.S.T), 0.0%
0.0 of 110.0 GByteYear HSM/Tape (0.0 of 69.4 G.S.T), 0.0%
0.0 of 10000.0 Hour Green CPU (0.0 of 522.5 G.S.T), 0.0%
0.0 of 1.9 PersonDay Support (0.0 of 77.6 G.S.T), 0.0%
Total usage for project cse132 0.8 of 5920.0 Generic Service Tokens, 0.0%
cse133 GR/S13422 Catlow
Last Trade: re-enabled
Usage:
449213.5 of 603163.5 Hour Newton CPU (68771.2 of 92339.8 G.S.T), 74.5%
0.1 of 8.0 Hour Wren CPU (0.0 of 0.4 G.S.T), 1.0%
2.8 of 20.0 GByte Year MP Disk SAN (6.6 of 47.6 G.S.T), 13.8%
Total usage for project cse133 68777.8 of 92387.8 Generic Service Tokens, 74.4%
Total usage for project cse155 08777.8 of 92587.8 Generic Service Tokens, 74.4%
cse135 GR/T18622 Ingram
Last Trade: Thu Mar 23 15:03:51 2006
Usage:
0.0 of 373994.5 Hour Newton CPU (0.0 of 57255.7 G.S.T), 0.0%
0.0 of 10.1 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0%
0.0 of 20.1 GByte Year HP Disk SAN - /d (0.0 of 74.0 G.S.T), 0.0%
100.0 of 159.5 PersonDay Support (4000.0 of 6380.4 G.S.T), 62.7%
0.0 of 5.0 Day Training (0.0 of 67.6 G.S.T), 0.0%
Total usage for project cse135 4000.0 of 63778.2 Generic Service Tokens, 6.3%
cse137 - GR/T28126 Leschziner Last Trade: re-enabled Usage: 11.0 of 948.6 Hour Wren CPU (0.5 of 47.0 G.S.T), 1.2% 8.6 of 200.3 GByteYear MP Disk SAN (20.4 of 477.0 G.S.T), 4.3% 0.0 of 625.1 GbyteYear HV Disk SAN /v (0.0 of 745.0 G.S.T), 0.0% 0.0 of 1049.3 GByteYear HSM/Tape (0.0 of 662.0 G.S.T), 0.0% 26028.8 of 266298.2 Hour Green CPU (1360.1 of 13914.6 G.S.T), 9.8% 0.0 of 47.0 PersonDay Support (0.0 of 1880.0 G.S.T), 0.0% 0.0 of 22.0 Day Training (0.0 of 297.3 G.S.T), 0.0% Total usage for project cse137 1381.1 of 18022.9 Generic Service Tokens, 7.7%
cse139 GR/S71552 McDougall
Last Trade: Tue Aug 3 10:44:04 2004
Usage:
38250.3 of 89000.0 Hour Newton CPU (5855.8 of 13625.2 G.S.T), 43.0%
0.2 of 500.0 Hour Wren CPU (0.0 of 24.8 G.S.T), 0.0%
3.0 of 157.0 GByteYear MP Disk SAN (7.2 of 373.8 G.S.T), 1.9%
0.0 of 105.0 GByteYear HSM/Tape (0.0 of 66.2 G.S.T), 0.0%
48.2 of 15000.0 Hour Green CPU (2.5 of 783.8 G.S.T), 0.3%
0.0 of 34.0 PersonDay Support (0.0 of 1360.0 G.S.T), 0.0%
•••• ••• •••••••••••••••••••••••••••••
0.0 of 16.0 Day Training (0.0 of 216.2 G.S.T), 0.0% Total usage for project cse139 5865.5 of 16450.0 Generic Service Tokens, 35.7%
0.0 of 16.0 Day Training (0.0 of 216.2 G.S.T), 0.0%
0.0 of 16.0 Day Training (0.0 of 216.2 G.S.T), 0.0% Total usage for project cse139 5865.5 of 16450.0 Generic Service Tokens, 35.7%
0.0 of 16.0 Day Training (0.0 of 216.2 G.S.T), 0.0% Total usage for project cse139 5865.5 of 16450.0 Generic Service Tokens, 35.7%

Usage:	
868.7 of 24792.9 Hour Newton CPU (133.0 of 3795.6 G.S.T), 3.5%	
0.0 of 3007.4 Hour Wren CPU (0.0 of 149.0 G.S.T), 0.0%	
0.0 of 27.5 GByte Year HP Disk SAN - /d (0.0 of 101.5 G.S.T), 0.0%	
0.4 of 107.7 GByteYear MP Disk SAN (1.0 of 256.5 G.S.T), 0.4%	
0.0 of 55.0 GbyteYear HV Disk SAN /v (0.0 of 65.5 G.S.T), 0.0%	
0.0 of 2991.8 Hour SMP CPU (0.0 of 116.2 G.S.T), 0.0%	
0.4 of 12.9 GByteYear MP Disk (1.0 of 30.7 G.S.T), 3.2%	
0.0 of 229.8 GByteYear HSM/Tape (0.0 of 145.0 G.S.T), 0.0%	
0.0 of 2994.6 Hour Green CPU (0.0 of 156.5 G.S.T), 0.0%	
0.0 of 36.0 PersonDay Support (0.0 of 1440.0 G.S.T), 0.0%	
0.0 of 12.0 Day Training (0.0 of 162.2 G.S.T), 0.0%	
Total usage for project cse140 134.9 of 6418.7 Generic Service Tokens, 2.1%	
cse145 EP/C006739/1 Finnis	
Last Trade: Fri Jun 2 11:29:21 2006	
Usage:	
c .	
5080.9 of 1008916.3 Hour Newton CPU (777.8 of 154457.5 G.S.T), 0.5%	
0.6 of 8.1 Hour Wren CPU (0.0 of 0.4 G.S.T), 7.0%	
0.0 of 5.0 GByteYear HP Disk SAN - /d (0.0 of 18.4 G.S.T), 0.0%	
0.0 of 65.9 GByteYear MP Disk SAN (0.0 of 156.8 G.S.T), 0.0%	
0.0 of 0.0 GbyteYear HV Disk SAN /v (0.0 of 0.0 G.S.T)	
125223.9 of 149570.6 Hour Green CPU (6543.2 of 7815.4 G.S.T), 83.7%	
0.0 of 0.0 PersonDay Support (0.0 of 0.0 G.S.T)	
Total usage for project cse145 7321.1 of 162448.5 Generic Service Tokens, 4.5%	
	·
cse145a	
Last Trade: never	
Usage: 0.0 of 1000.0 Hour Newton CPU (0.0 of 152.1 C.S.T.) 0.0%	
0.0 of 1000.0 Hour Newton CPU (0.0 of 153.1 G.S.T), 0.0%	
0.0 of 10.0 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0%	
0.0 of 200.0 GByteYear HP Disk SAN - /d (0.0 of 738.0 G.S.T), 0.0%	
0.0 of 100.0 GByteYear MP Disk SAN (0.0 of 238.1 G.S.T), 0.0%	
Total usage for subproject cse145a 0.0 of 1129.7 Generic Service Tokens, 0.0%	
cse146 - Roemer	
Last Trade: Wed Oct 5 14:14:03 2005	
Usage:	
0.0 of 649.9 Hour Wren CPU (0.0 of 32.2 G.S.T), 0.0%	
0.0 of 37.5 GByteYear MP Disk SAN (0.0 of 89.3 G.S.T), 0.0%	
0.0 of 1300.1 Hour SMP CPU (0.0 of 50.5 G.S.T), 0.0%	
0.0 of 7506.9 Hour Green CPU (0.0 of 392.2 G.S.T), 0.0%	
0.0 of 7.0 PersonDay Support (0.0 of 280.0 G.S.T), 0.0%	
Total usage for project cse146 0.0 of 844.2 Generic Service Tokens, 0.0%	
cse149 - Gillan	
Last Trade: re-enabled	
Usage:	
3711.7 of 292421.9 Hour Newton CPU (568.2 of 44767.6 G.S.T), 1.3%	
1.7 of 5.0 GByteYear MP Disk SAN (4.0 of 11.9 G.S.T), 33.4%	
Total usage for project cse149 572.2 of 44779.5 Generic Service Tokens, 1.3%	
cse152 - Coveney	
Last Trade: Fri Apr 1 15:23:26 2005	
Usage:	
Usugu.	

3167.2 of 6496.1 Hour Newton CPU (484.9 of 994.5 G.S.T), 48.8% 0.0 of 10.1 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0% 0.0 of 19.9 GByteYear MP Disk SAN (0.0 of 47.5 G.S.T), 0.0% Total usage for project cse152 484.9 of 1122.5 Generic Service Tokens, 43.2%
0.0 of 19.9 GByte Year MP Disk SAN (0.0 of 47.5 G.S.T), 0.0% 0.0 of 2.0 PersonDay Support (0.0 of 80.0 G.S.T), 0.0% Total usage for project cse152 484.9 of 1122.5 Generic Service Tokens, 43.2%
0.0 of 2.0 PersonDay Support (0.0 of 80.0 G.S.T), 0.0% Total usage for project cse152 484.9 of 1122.5 Generic Service Tokens, 43.2% cse161 - Coveney Last Trade: Thu Mar 30 09:39:27 2006 Usage: 0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0% cse166 - Hicks Last Trade: Thu Mar 23 14:03:37 2006 Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
Total usage for project cse152 484.9 of 1122.5 Generic Service Tokens, 43.2% cse161 - Coveney Last Trade: Thu Mar 30 09:39:27 2006 Usage: 0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0% cse166 - Hicks Last Trade: Thu Mar 23 14:03:37 2006 Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
Total usage for project cse152 484.9 of 1122.5 Generic Service Tokens, 43.2% cse161 - Coveney Last Trade: Thu Mar 30 09:39:27 2006 Usage: 0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0% cse166 - Hicks Last Trade: Thu Mar 23 14:03:37 2006 Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
cse161 - Coveney Last Trade: Thu Mar 30 09:39:27 2006 Usage: 0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0% cse166 - Hicks Last Trade: Thu Mar 23 14:03:37 2006 Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
Last Trade: Thu Mar 30 09:39:27 2006 Usage: 0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
Last Trade: Thu Mar 30 09:39:27 2006 Usage: 0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
Last Trade: Thu Mar 30 09:39:27 2006 Usage: 0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
Usage: 0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
0.0 of 44000.0 Hour Newton CPU (0.0 of 6736.1 G.S.T), 0.0% 0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
0.0 of 3370.0 GByteYear MP Disk SAN (0.0 of 8023.8 G.S.T), 0.0% 0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
0.0 of 8269.5 GByteYear HSM/Tape (0.0 of 5217.3 G.S.T), 0.0% 0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
0.0 of 8.0 PersonDay Support (0.0 of 320.0 G.S.T), 0.0% Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
Total usage for project cse161 0.0 of 20297.2 Generic Service Tokens, 0.0%
cse166 - Hicks Last Trade: Thu Mar 23 14:03:37 2006 Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
Last Trade: Thu Mar 23 14:03:37 2006 Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
Last Trade: Thu Mar 23 14:03:37 2006 Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
Last Trade: Thu Mar 23 14:03:37 2006 Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
Usage: 0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
0.0 of 79134.4 Hour Newton CPU (0.0 of 12114.9 G.S.T), 0.0% 0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
0.0 of 400.0 Hour Wren CPU (0.0 of 19.8 G.S.T), 0.0% 0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
0.0 of 160.0 GByteYear MP Disk SAN (0.0 of 381.0 G.S.T), 0.0%
0.0 of 83000.0 Hour Green CPU (0.0 of 4330.9 G.S.1), 0.0%
0.0 of 28.0 PersonDay Support (0.0 of 1120.0 G.S.T), 0.0%
0.0 of 10.0 Day Training (0.0 of 135.1 G.S.T), 0.0%
Total usage for project cse166 0.0 of 18107.7 Generic Service Tokens, 0.0%
cse167 - Guo
Last Trade: Tue Jan 17 13:14:15 2006
Usage: 22250 % of 447500 1 Hour Nouton CDU (2574 % of 6850% 0 C S T) 5 20
23350.8 of 447500.1 Hour Newton CPU (3574.8 of 68508.9 G.S.T), 5.2%
0.0 of 8000.0 Hour Wren CPU (0.0 of 396.4 G.S.T), 0.0%
0.3 of 400.0 GByteYear MP Disk SAN (0.8 of 952.4 G.S.T), 0.1%
0.0 of 400.0 GByteYear HSM/Tape (0.0 of 252.4 G.S.T), 0.0%
Total usage for project cse167 3575.6 of 70110.0 Generic Service Tokens, 5.1%
cse169 - Mummery
Last Trade: Wed Mar 1 18:10:50 2006
Usage:
3211.5 of 65000.0 Hour Newton CPU (491.7 of 9951.0 G.S.T), 4.9%
0.0 of 4000.1 Hour Wren CPU (0.0 of 198.2 G.S.T), 0.0%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0% Total usage for project cse169 891.7 of 16548.0 Generic Service Tokens, 5.4%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0% Total usage for project cse169 891.7 of 16548.0 Generic Service Tokens, 5.4%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0% Total usage for project cse169 891.7 of 16548.0 Generic Service Tokens, 5.4%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0% Total usage for project cse169 891.7 of 16548.0 Generic Service Tokens, 5.4%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0% Total usage for project cse169 891.7 of 16548.0 Generic Service Tokens, 5.4% cse171 - Coveney Last Trade: re-enabled Usage: 82518.4 of 104753.2 Hour Newton CPU (12632.9 of 16036.9 G.S.T), 78.8%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0% Total usage for project cse169 891.7 of 16548.0 Generic Service Tokens, 5.4% cse171 - Coveney Last Trade: re-enabled Usage: 82518.4 of 104753.2 Hour Newton CPU (12632.9 of 16036.9 G.S.T), 78.8% 0.0 of 20.2 Hour Wren CPU (0.0 of 1.0 G.S.T), 0.2%
0.0 of 200.0 GByteYear MP Disk SAN (0.0 of 476.2 G.S.T), 0.0% 0.0 of 800.0 Hour SMP CPU (0.0 of 31.1 G.S.T), 0.0% 0.0 of 998.4 GByteYear HSM/Tape (0.0 of 629.9 G.S.T), 0.0% 0.0 of 69999.9 Hour Green CPU (0.0 of 3657.6 G.S.T), 0.0% 10.0 of 34.0 PersonDay Support (400.0 of 1360.0 G.S.T), 29.4% 0.0 of 18.1 Day Training (0.0 of 244.0 G.S.T), 0.0% Total usage for project cse169 891.7 of 16548.0 Generic Service Tokens, 5.4% cse171 - Coveney Last Trade: re-enabled Usage: 82518.4 of 104753.2 Hour Newton CPU (12632.9 of 16036.9 G.S.T), 78.8%

0.0 of 4.0 PersonDay Support (0.0 of 160.0 G.S.T), 0.0% Total usage for project cse171 12635.3 of 17489.9 Generic Service Tokens, 72.2%	
cse174 Coleman	
Last Trade: Mon Jun 26 10:43:14 2006 Usage:	
328879.1 of 800538.5 Hour Newton CPU (50348.9 of 122556.4 G.S.T), 41.1%	
23.0 of 121.1 Hour Wren CPU (1.1 of 6.0 G.S.T), 19.0% 0.3 of 980.0 GByteYear HP Disk SAN - /d (1.0 of 3616.2 G.S.T), 0.0%	
2.1 of 31.0 GByteYear MP Disk SAN (5.0 of 73.8 G.S.T), 6.8%	
2845.5 of 5319.6 Hour SMP CPU (110.6 of 206.7 G.S.T), 53.5% 0.0 of 5500.0 GByteYear HSM/Tape (0.0 of 3470.0 G.S.T), 0.0%	
0.0 of 15.0 PersonDay Support (0.0 of 600.0 G.S.T), 0.0%	
0.0 of 6.0 Day Training (0.0 of 81.1 G.S.T), 0.0% Total usage for project cse174 50466.6 of 130610.2 Generic Service Tokens, 38.6%	
csedl1 - Castep port to Altix	
Last Trade: re-enabled Usage:	
157459.0 of 167659.9 Hour Newton CPU (24105.8 of 25667.5 G.S.T), 93.9%	
59.3 of 500.0 Hour Wren CPU (2.9 of 24.8 G.S.T), 11.9% 1.3 of 0.3 GByteYear HP Disk SAN - /d (4.7 of 1.2 G.S.T), 390.7%	
35.2 of 68.7 GByteYear MP Disk SAN (83.7 of 163.6 G.S.T), 51.2%	
3376.4 of 3941.8 Hour SMP CPU (131.2 of 153.1 G.S.T), 85.7% 0.0 of 125.0 GByteYear HSM/Tape (0.0 of 78.9 G.S.T), 0.0%	
9460.0 of 14440.4 Hour Green CPU (494.3 of 754.5 G.S.T), 65.5%	
9.0 of 9.1 Day Training (121.6 of 122.3 G.S.T), 99.4% Total usage for project csedl1 24944.2 of 26965.9 Generic Service Tokens, 92.5%	
csedl1a Computational Cemistry Last Trade: never Usage: 5544.8 of 17374.4 Hour Newton CPU (848.9 of 2659.9 G.S.T), 31.9% 0.0 of 150.0 Hour Wren CPU (0.0 of 7.4 G.S.T), 0.0% 12.7 of 19.5 GByteYear MP Disk SAN (30.3 of 46.4 G.S.T), 65.3%	
0.0 of 37.0 GByteYear HSM/Tape (0.0 of 23.3 G.S.T), 0.0% Total usage for subproject csedl1a 879.2 of 2737.1 Generic Service Tokens, 32.1%	
csedl1b Molecular Simulation Last Trade: never	
Usage:	
2024.0 of 9000.0 Hour Newton CPU (309.9 of 1377.8 G.S.T), 22.5% 0.0 of 50.0 Hour Wren CPU (0.0 of 2.5 G.S.T), 0.0%	
1.3 of 5.0 GByteYear MP Disk SAN (3.2 of 11.9 G.S.T), 26.9%	
0.0 of 13.0 GByteYear HSM/Tape (0.0 of 8.2 G.S.T), 0.0% Total usage for subproject csedl1b 313.1 of 1400.4 Generic Service Tokens, 22.4%	
csedl1c Materials	
Last Trade: never Usage:	
39702.6 of 53989.9 Hour Newton CPU (6078.2 of 8265.4 G.S.T), 73.5% 7.5 of 100.0 Hour Wren CPU (0.4 of 5.0 G.S.T), 7.5%	
8.3 of 15.0 GByteYear MP Disk SAN (19.8 of 35.7 G.S.T), 55.4%	
0.0 of 25.0 GByteYear HSM/Tape (0.0 of 15.8 G.S.T), 0.0% Total usage for subproject csedl1c 6098.3 of 8321.9 Generic Service Tokens, 73.3%	

csedl1d - Band Theory Last Trade: never Usage: 68066.6 of 45007.1 Hour Newton CPU (10420.5 of 6890.3 G.S.T), 151.2% 0.0 of 50.0 Hour Wren CPU (0.0 of 2.5 G.S.T), 0.1% 1.4 of 7.5 GByteYear MP Disk SAN (3.3 of 17.9 G.S.T), 18.6% 0.0 of 13.0 GByteYear HSM/Tape (0.0 of 8.2 G.S.T), 0.0% Total usage for subproject csedl1d 10423.8 of 6918.8 Generic Service Tokens, 150.7%
csedl1e High End Computing Last Trade: never Usage: 31743.2 of 32221.3 Hour Newton CPU (4859.7 of 4932.8 G.S.T), 98.5% 51.8 of 100.0 Hour Wren CPU (2.6 of 5.0 G.S.T), 51.8% 11.4 of 15.0 GByteYear MP Disk SAN (27.1 of 35.7 G.S.T), 75.8% 3376.4 of 3900.0 Hour SMP CPU (131.2 of 151.5 G.S.T), 86.6% 0.0 of 37.0 GByteYear HSM/Tape (0.0 of 23.3 G.S.T), 0.0% 9460.0 of 10648.0 Hour Green CPU (494.3 of 556.4 G.S.T), 88.8% Total usage for subproject csedl1e 5514.8 of 5704.7 Generic Service Tokens, 96.7%
csedl1g - Engineering Last Trade: never Usage: 7196.9 of 8000.0 Hour Newton CPU (1101.8 of 1224.7 G.S.T), 90.0% 0.0 of 49.0 Hour Wren CPU (0.0 of 2.4 G.S.T), 0.0% 0.0 of 7.2 GByteYear MP Disk SAN (0.0 of 17.1 G.S.T), 0.0% 0.0 of 4000.0 Hour Green CPU (0.0 of 209.0 G.S.T), 0.0% Total usage for subproject csedl1g 1101.8 of 1453.3 Generic Service Tokens, 75.8%
csehpcx - benchmarking Last Trade: Tue Jan 3 09:32:40 2006 Usage: 11200.6 of 11200.4 PEHour MPP PE CPU (270.8 of 270.8 G.S.T), 100.0% 16.1 of 15.6 GByteYear HP Disk (95.9 of 92.8 G.S.T), 103.3% 14353.0 of 15405.7 Hour Newton CPU (2197.3 of 2358.5 G.S.T), 93.2% 51.7 of 477.7 Hour Wren CPU (2.6 of 23.7 G.S.T), 10.8% 2.6 of 0.4 GByteYear HP Disk SAN - /d (9.7 of 1.4 G.S.T), 679.4% 1760.7 of 1356.9 Hour SMP CPU (68.4 of 52.7 G.S.T), 129.8% 27.5 of 61.3 GByteYear MP Disk (65.4 of 145.9 G.S.T), 44.9% 37568.8 of 36481.7 Hour Green CPU (1963.0 of 1906.2 G.S.T), 103.0% Total usage for project csehpcx 4673.2 of 4852.0 Generic Service Tokens, 96.3%
csn001 Webb & GST/02/2846 Killworth & T/S/2001/00187 New Last Trade: Thu Jun 22 10:29:03 2006 Usage: 403672.6 of 403672.5 PEHour MPP PE CPU (9760.3 of 9760.3 G.S.T), 100.0% 307.2 of 306.0 GByteYear HP Disk (1828.6 of 1821.4 G.S.T), 100.4% 71637.5 of 71637.5 Hour Newton CPU (10967.2 of 10967.2 G.S.T), 100.0% 1789.8 of 1795.0 Hour Wren CPU (88.7 of 88.9 G.S.T), 99.7% 246636.2 of 246636.2 Hour SMP CPU (9582.2 of 9582.2 G.S.T), 100.0% 863.5 of 893.6 GByteYear MP Disk (2056.0 of 2127.5 G.S.T), 96.6% 57561.1 of 57855.2 GByteYear HSM/Tape (36316.2 of 36501.7 G.S.T), 99.5% 1199072.2 of 1199072.2 Hour Green CPU (62654.0 of 62654.0 G.S.T), 100.0% 61.0 of 61.0 PersonDay Support (2440.0 of 2440.0 G.S.T), 100.0%

3.0 of 3.0 Day Training (40.5 of 40.5 G.S.T), 100.0% Total usage for project csn001 135733.6 of 135983.8 Generic Service Tokens, 99.8% csn003 UGAMP O'Neill Last Trade: Tue Jun 27 10:28:16 2006 Usage: 7500413.8 of 7500414.8 PEHour MPP PE CPU (181350.4 of 181350.4 G.S.T), 100.0% 113.5 of 113.5 GByteYear HP Disk (675.6 of 675.6 G.S.T), 100.0% 1799005.2 of 1798148.4 Hour Newton CPU (275414.1 of 275283.0 G.S.T), 100.0% 6460.6 of 6429.2 Hour Wren CPU (320.1 of 318.5 G.S.T), 100.5% 1390.3 of 1505.2 GbyteYear HV Disk SAN /v (1657.1 of 1794.0 G.S.T), 92.4% 588721.6 of 588488.8 Hour SMP CPU (22872.7 of 22863.7 G.S.T), 100.0% 207.8 of 273.8 GByteYear MP Disk (494.7 of 651.9 G.S.T), 75.9% 169648.2 of 169847.5 GByteYear HSM/Tape (107033.6 of 107159.3 G.S.T), 99.9% 2183796.6 of 2178892.3 Hour Green CPU (114107.9 of 113851.6 G.S.T), 100.2% 16.0 of 16.0 PersonDay Support (640.0 of 640.0 G.S.T), 100.0% 34.0 of 34.0 Day Training (459.5 of 459.5 G.S.T), 100.0% Total usage for project csn003 705025.7 of 705047.4 Generic Service Tokens, 100.0% csn006 GR9/3550 Price Last Trade: Thu May 18 16:15:28 2006 Usage: 1618734.3 of 1624099.4 PEHour MPP PE CPU (39138.9 of 39268.6 G.S.T), 99.7% 191.1 of 192.2 GByteYear HP Disk (1137.6 of 1144.3 G.S.T), 99.4% 473256.1 of 478930.3 Hour Newton CPU (72451.9 of 73320.6 G.S.T), 98.8% 710.9 of 2096.8 Hour Wren CPU (35.2 of 103.9 G.S.T), 33.9% 87314.1 of 87287.6 Hour SMP CPU (3392.3 of 3391.3 G.S.T), 100.0% 199.3 of 169.5 GByteYear MP Disk (474.5 of 403.6 G.S.T), 117.6% 24.5 of 20.3 GByteYear HSM/Tape (15.5 of 12.8 G.S.T), 121.1% 1472135.8 of 1478470.0 Hour Green CPU (76922.1 of 77253.1 G.S.T), 99.6% Total usage for project csn006 193568.1 of 194898.2 Generic Service Tokens, 99.3% csn015 Proctor Last Trade: re-enabled Usage: 257682.2 of 257682.2 PEHour MPP PE CPU (6230.4 of 6230.4 G.S.T), 100.0% 6.8 of 6.8 GBvteYear HP Disk (40.4 of 40.4 G.S.T), 100.0% 0.0 of 204.2 Hour Newton CPU (0.0 of 31.3 G.S.T), 0.0% 707.8 of 20565.3 Hour Wren CPU (35.1 of 1018.9 G.S.T), 3.4% 3184.9 of 6776.8 Hour SMP CPU (123.7 of 263.3 G.S.T), 47.0% 159.8 of 599.3 GByteYear MP Disk (380.5 of 1426.8 G.S.T), 26.7% 8867.7 of 8972.8 GByteYear HSM/Tape (5594.8 of 5661.1 G.S.T), 98.8% 1049112.8 of 1182721.1 Hour Green CPU (54818.3 of 61799.6 G.S.T), 88.7% 19.0 of 20.9 PersonDay Support (760.0 of 836.7 G.S.T), 90.8% 9.0 of 9.2 Day Training (121.6 of 123.8 G.S.T), 98.2% Total usage for project csn015 68104.9 of 77432.3 Generic Service Tokens, 88.0% csn043 NER/T/S/2001/01159 Haines Last Trade: Mon Jan 12 10:47:00 2004 Usage: 0.0 of 10.0 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0% 0.0 of 288.0 GByteYear MP Disk SAN (0.0 of 685.7 G.S.T), 0.0% 0.0 of 25544.0 Hour SMP CPU (0.0 of 992.4 G.S.T), 0.0% 0.0 of 19200.0 Hour Green CPU (0.0 of 1003.2 G.S.T), 0.0% 0.0 of 20.0 PersonDay Support (0.0 of 800.0 G.S.T), 0.0% 0.0 of 36.0 Day Training (0.0 of 486.5 G.S.T), 0.0%

Total usage for project csn043 0.0 of 3968.4 Generic Service Tokens, 0.0%
csn050 NER/T/S/2002/00450 Challenor
Last Trade: Thu Jan 8 16:12:46 2004
Usage:
0.0 of 32773.8 Hour Newton CPU (0.0 of 5017.4 G.S.T), 0.0%
0.0 of 10.0 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0% 0.0 of 100.0 GByteYear MP Disk SAN (0.0 of 238.1 G.S.T), 0.0%
0.0 of 100.0 GByte Year HSM/Tape (0.0 of 63.1 G.S.T), 0.0%
Total usage for project csn050 0.0 of 5319.1 Generic Service Tokens, 0.0%
csn056 NER/T/S/2002/00441 Hoskins - Merged
Last Trade: re-enabled
Usage:
0.0 of 5722.8 Hour Newton CPU (0.0 of 876.1 G.S.T), 0.0%
0.0 of 10.0 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0% 0.0 of 27.0 GByteYear MP Disk SAN (0.0 of 64.3 G.S.T), 0.0%
0.0 of 56.0 GByteYear HSM/Tape (0.0 of 35.3 G.S.T), 0.0%
0.0 of 0.0 Hour Green CPU (0.0 of 0.0 G.S.T)
Total usage for project csn056 0.0 of 976.2 Generic Service Tokens, 0.0%
osp057 NED/T/S/2002/00/1/2 Guilvardi Margad
csn057 NER/T/S/2002/00442 Guilyardi - Merged Last Trade: re-enabled
Usage:
0.0 of 19123.2 Hour Newton CPU (0.0 of 2927.6 G.S.T), 0.0%
0.0 of 10.0 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0%
0.0 of 14.0 GByteYear MP Disk SAN (0.0 of 33.3 G.S.T), 0.0%
0.0 of 115.0 GByteYear HSM/Tape (0.0 of 72.6 G.S.T), 0.0% 0.0 of 55000.0 Hour Green CPU (0.0 of 2873.9 G.S.T), 0.0%
Total usage for project csn057 0.0 of 5907.9 Generic Service Tokens, 0.0%
csn058 NER/T/S/2002/00443 Tudhope - Merged
Last Trade: re-enabled
Usage:
0.0 of 7338.0 Hour Newton CPU (0.0 of 1123.4 G.S.T), 0.0%
0.0 of 9.3 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0%
0.0 of 6.0 GByteYear MP Disk SAN (0.0 of 14.3 G.S.T), 0.0% 0.0 of 105.0 GByteYear HSM/Tape (0.0 of 66.2 G.S.T), 0.0%
0.0 of 52500.0 Hour Green CPU (0.0 of 2743.2 G.S.T), 0.0%
Total usage for project csn058 0.0 of 3947.6 Generic Service Tokens, 0.0%
csn059 NER/T/S/2002/00446 Watson
Last Trade: Mon Jan 12 16:41:49 2004 Usage:
0.0 of 9.5 Hour Wren CPU (0.0 of 0.5 G.S.T), 0.0%
0.0 of 755.0 GByteYear MP Disk SAN (0.0 of 1797.6 G.S.T), 0.0%
0.0 of 3775.0 GByteYear HSM/Tape (0.0 of 2381.7 G.S.T), 0.0%
0.0 of 246288.7 Hour Green CPU (0.0 of 12869.1 G.S.T), 0.0%
0.0 of 45.0 PersonDay Support (0.0 of 1800.0 G.S.T), 0.0% 0.0 of 4.0 Day Training (0.0 of 54.1 G.S.T), 0.0%
Total usage for project csn059 0.0 of 18902.9 Generic Service Tokens, 0.0%
csnadm
Last Trade: Mon Feb 23 14:12:27 2004

Usage:
0.0 of 961.1 Hour Wren CPU (0.0 of 47.6 G.S.T), 0.0%
0.0 of 1.0 GByteYear MP Disk SAN (0.0 of 2.4 G.S.T), 0.0%
Total usage for project csnadm 0.0 of 50.0 Generic Service Tokens, 0.0%
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 GByte Year HP Disk (30.3 of 22.7 G.S.T), 133.4%
12.6 of 0.0 Hour Wren CPU (0.6 of 0.0 G.S.T), 3204979.9%
4062.9 of 4120.4 Hour SMP CPU (157.8 of 160.1 G.S.T), 98.6%
3.7 of 1.7 GByteYear MP Disk (8.9 of 4.0 G.S.T), 220.9%
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 (13.5 of 13.6 G.S.T), 99.7%
Total usage for project hpcid 1615.0 of 1582.6 Generic Service Tokens, 102.0%
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 GByte Year HP Disk (30.2 of 28.1 G.S.T), 107.4%
698.4 of 770.8 Hour SMP CPU (27.1 of 29.9 G.S.T), 90.6%
6.5 of 2.8 GByteYear MP Disk (15.4 of 6.7 G.S.T), 230.5%
1728.7 of 1739.8 Hour Green CPU (90.3 of 90.9 G.S.T), 99.4%
Total usage for project hpcie 205.6 of 254.1 Generic Service Tokens, 80.9%
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 GByte Year MP Disk (7.4 of 7.1 G.S.T), 104.6%
Total usage for project hpcis 215.6 of 377.9 Generic Service Tokens, 57.1%

D t i	DIN		
Project	PI Name	Subject	Discipline/Department
cse002	Wander, A (Dr)	Support for the UKCP	Physics
cse002	Dundas, D (Dr)	HPC Consortiums 98-2000	I Hysics
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)		

CfS

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	П
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 2002-2005	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)		
	Avital		
cse091			
cse091 cse092	Allen		
	Allen Williams, J (Dr)		

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 Mechanic
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 Engineerir
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	ļl	
csn040	Slingo	ļl	
csn041	Lawrence]]	
csn042	Gray, SL (Dr)	Transport & Mixing in Fronts	

	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	Meteorology
csn057	Guilyardi, E (Dr)	circulation Role of salinity in ocean circulation and climate response to greenhouse	Atmospheric Modelling
csn058	Tudhope, A (Dr)	gas forcing. Improving ability to predict rapid changes in the el nino southern	Atmospheric Modelling
		oscillation climatic phenomenon	
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	<u> </u>	
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)		
	Mallinger, F (Dr)		
cs2011	Mallinger, F (Dr) Qin, N (Prof)		
cs2011 cs2012		 	
cs2011 cs2012 cs2014	Qin, N (Prof)	 	
cs2011 cs2012 cs2014 cs2015	Qin, N (Prof) Karlin, V (Dr)	 	
cs2011 cs2012 cs2014 cs2015 cs2016	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr)		
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr)		
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr)		
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr)		
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr)		
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031 cs2032	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess		
cs2011	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr)		Physics Aerospace Engineering
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2018 cs2019 cs2011 cs2012 cs2013 cs2031 cs2032 cs2034 cs2035	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr) Chichkine, M (Mr)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity	Aerospace Engineering
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031 cs2032 cs2034 cs2035 cs2036	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr) Chichkine, M (Mr) Barakos, G (Dr)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity Flows	Aerospace Engineering Mechanical Aerospace & Manufacturin
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031 cs2032 cs2033 cs2034 cs2035 cs2036 cs2037	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr) Chichkine, M (Mr) Barakos, G (Dr) Farid, Vakili-Tahami (Mr)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity Flows MPI Evaluation	Aerospace Engineering Mechanical Aerospace & Manufacturin
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031 cs2032 cs2034 cs2035 cs2036 cs2037 cs2038	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr) Chichkine, M (Mr) Barakos, G (Dr) Farid, Vakili-Tahami (Mr) Domene, Carmen (Dr)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity Flows MPI Evaluation Ab initio molecular dynamics of ion in membrane proteins Computational Bioelectromagnetic Modeling of Human Cellular	Aerospace Engineering Mechanical Aerospace & Manufacturin Engineering
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031 cs2032 cs2034	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr) Chichkine, M (Mr) Barakos, G (Dr) Farid, Vakili-Tahami (Mr) Domene, Carmen (Dr) Excell, P (Prof)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity Flows MPI Evaluation Ab initio molecular dynamics of ion in membrane proteins Computational Bioelectromagnetic Modeling of Human Cellular Processes for Mobile Phone Safety Research	Aerospace Engineering Mechanical Aerospace & Manufacturi Engineering Informatics
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031 cs2032 cs2034 cs2035 cs2036 cs2037 cs2038 cs2039	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr) Chichkine, M (Mr) Barakos, G (Dr) Farid, Vakili-Tahami (Mr) Domene, Carmen (Dr) Excell, P (Prof) Carlborg (Dr)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity Flows MPI Evaluation Ab initio molecular dynamics of ion in membrane proteins Computational Bioelectromagnetic Modeling of Human Cellular Processes for Mobile Phone Safety Research Genetic Analysis of Complex Traits Impulse radio propogation in a dense multipath & shadowed	Aerospace Engineering Mechanical Aerospace & Manufacturin Engineering Informatics Genetics & Biometry Computer Science
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031 cs2032 cs2034 cs2035 cs2036 cs2037 cs2038 cs2039 cs2040	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr) Chichkine, M (Mr) Barakos, G (Dr) Farid, Vakili-Tahami (Mr) Domene, Carmen (Dr) Excell, P (Prof) Carlborg (Dr) Costen, F (Mrs)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity Flows MPI Evaluation Ab initio molecular dynamics of ion in membrane proteins Computational Bioelectromagnetic Modeling of Human Cellular Processes for Mobile Phone Safety Research Genetic Analysis of Complex Traits Impulse radio propogation in a dense multipath & shadowed environment for ultra-wideband communication systems	Aerospace Engineering Mechanical Aerospace & Manufacturin Engineering Informatics Genetics & Biometry Computer Science Mechanical Aerospace & Manufacturin
cs2011 cs2012 cs2014 cs2015 cs2016 cs2017 cs2028 cs2030 cs2031 cs2032 cs2033 cs2036 cs2037 cs2038 cs2039 cs2040 cs2041	Qin, N (Prof) Karlin, V (Dr) Tejera Cuesta, P (Mr) Miles, JJ (Dr) Eisenbach, M (Mr) Annett (dr) McKenna, K (Mr) Ess Jain, R (Dr) Chichkine, M (Mr) Barakos, G (Dr) Farid, Vakili-Tahami (Mr) Domene, Carmen (Dr) Excell, P (Prof) Carlborg (Dr) Costen, F (Mrs) Filippone, A (Dr)	Detached Eddy Simulation of Aerodynamics & Aerocautics of Cavity Flows MPI Evaluation Ab initio molecular dynamics of ion in membrane proteins Computational Bioelectromagnetic Modeling of Human Cellular Processes for Mobile Phone Safety Research Genetic Analysis of Complex Traits Impulse radio propogation in a dense multipath & shadowed environment for ultra-wideband communication systems Numerical Study of the 3D obstructed shear-driven cavity flow. A temporally continuous high-resolution record of global sea level	Aerospace Engineering Mechanical Aerospace & Manufacturin Engineering Informatics Genetics & Biometry Computer Science Mechanical Aerospace & Manufacturin Engineering

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)		