CSAR Service - Management Report

July 2002

This report documents the quality of the CSAR service during the month of July 2002.

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 July 2002. The information, in particular, covers the availability and usage of the following three main CSAR Service High Performance Computing (HPC) systems:

- Cray T3E-1200E/776 (Turing)
- SGI Origin2000/128 (Fermat)
- SGI Origin3000/512 (Green)

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

July has seen the workload of the three primary systems at variable levels.

The percentage of Turing CPU capacity used by jobs larger than 64 PEs was 87%.

July also saw the percentage of Green CPU capacity used by jobs larger than 64 PEs at 56%.

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

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

Table 1

Table 2 gives actual performance information for the period of July 1st to 31st inclusive.

Overall, the CPARS Performance Achievement in July was satisfactory (see Table 3); i.e. Green measured against the CPARS performance targets. The Fujitsu availability figures are included in Table 2, but not Table 3 as they have zero weighting in CPARS terms.

CSAR Service - Service Quality Report - Actual Performance Achievement

	2001/2											
Service Quality Measure	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July
HPC Services Availability												
Availability in Core Time (% of time)	98.49%	98.49%	98.60%	98.60%	100.00%	99.86%	99.73%	99.70%	96.17%	96.08%	97.66%	99.2%
Availability out of Core Time (% of time)	100%	99.40	99.50%	99.50%	98.49%	99.89%	99.85%	99.97%	97.75%	99.90%	99%	100%
Number of Failures in month	2	2	2	2	4	2	1	2	2	1	4	0
Mean Time between failures in 52 week rolling period (hours)	398	365	365	365	337	350	324	313	302	324	313	365
Fujitsu Service Availability												
Availability in Core Time (% of time)	100%	100%	100%	100%	100%	100%	100%	100%	96.89%	100%	100%	100%
Availability out of Core Time (% of time)	100%	100%	100%	100%	100%	100%	100%	100%	98.92%	100%	100%	100%
Help Desk												
Non In-depth Queries - Max Time to resolve 50% of all queries	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Non In-depth Queries - Max Time to resolve 95% of all queries	<1	<1	<1	<1	<1	<1	<2	<1	<1	<2	<5	<2
Administrative Queries - Max Time to resolve 95% of all queries	<2	<1	<1	<0.5	<2	<0.5	<1	<2	<2	<3	<5	<2
Help Desk Telephone - % of calls answered within 2 minutes	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Others												
Normal Media Exchange Requests - average response time	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
New User Registration Time (working days)	0	0	0	0	0	0	0	0	0	0	0	0
Management Report Delivery Times (working days)	10	10	10	10	10	10	10	10	10	10	10	10
System Maintenance - no. of sessions taken per system in the mon	2	2	2	2	2	2	2	2	2	2	2	2

Table 2

Notes:

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

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

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

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

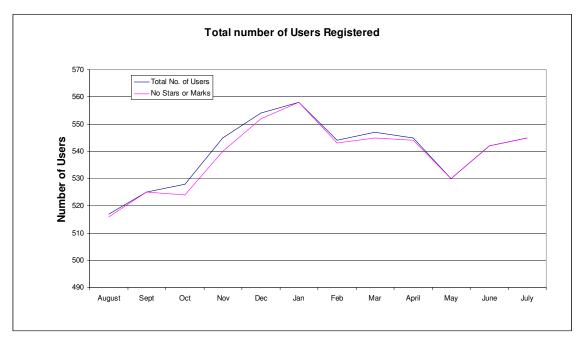
	2001/2						01/2					
Service Quality Measure	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July
HPC Services Availability												
Availability in Core Time (% of time)	0.039	0.039	0.039	0.039	-0.058	-0.039	-0.039	-0.039	0.078	0.078	0.078	0
Availability out of Core Time (% of time)	-0.047	0	-0.039	-0.039	0.000	-0.047	-0.047	-0.047	0.039	-0.047	0.000	-0.047
Number of Failures in month	0	0	0	0	0.008	0	-0.008	0	0	-0.008	0.000	-0.009
Mean Time between failures in 52 week rolling period (hours)	0	0	0	0	0	0	0	0	0	0	0	0
Help Desk												
Non In-depth Queries - Max Time to resolve 50% of all queries	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019	-0.019
Non In-depth Queries - Max Time to resolve 95% of all queries	-0.016	-0.016	-0.016	-0.016	-0.016	-0.016	0	-0.016	-0.016	0	0.031	0
Administrative Queries - Max Time to resolve 95% of all queries	0	-0.016	-0.016	-0.019	0	-0.019	-0.016	0	0	0.016	0.031	0
Help Desk Telephone - % of calls answered within 2 minutes	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004
Others												
Normal Media Exchange Requests - average response time	0	-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 mon	0	0	0	0	0	0	0	0	0	0	0	0

Monthly Total & overall Service Quality Rating for each period: -0.03 -0.02 -0.04 -0.04 -0.05 -0.08 -0.08 -0.08 -0.07 0.03 0.00 0.05 -0.05

Table 3

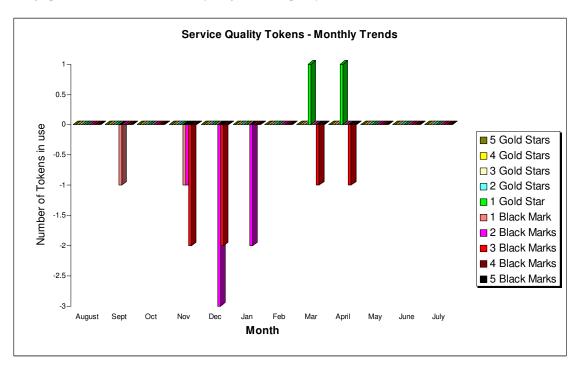
2.2 Service Quality Tokens

The position at the end of July 2002 is that none of the 545 users had awarded either black marks or gold stars to the service.



The graph above shows the total number of registered users on the CSAR Service and the number of users holding a neutral view of the service.

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



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

2.3 Throughput Target against Baseline

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

The Baseline Target for throughput was fully achieved this month due to plenty of work over the period. The actual usage figure was 188.5% of Baseline capacity.

Job Throughput Against Baseline CSAR Service Provision

Period: 1st to 31st July 2002

		Actual % Utilisation c/w
		Baseline during Period
	(GFLOP Years)	
(GFLOP Years)		
12.19	22.98	188.5%
Baseline	Job Time Demands	Job Demand above
Capacity for	in Period	110% of Baseline during
Period		Period (Yes/No)?
(GFLOP Years)		
12.19	21.8	Yes
	Number of Jobs at	Number of Jobs at least
		4 days old at end
		Period is not zero
	ena Penda	(Yes/No)?
		(Tes/NO)?
	2	Yes
	Minimum Job Time	Minimum Job Time
		Demand above 90% of
		Baseline during Period
	Period	(Yes/No)?
	76%	No
Number of	Average % of time	Average % of time each
standard Job		queue contained jobs in
Queues (ianorina	contained iobs in	the Period is > 97%?
priorities)	the Period	
,		
	Baseline Capacity for Period (GFLOP Years) 12.19 Number of standard Job Queues (ignoring	Capacity for Period (GFLOP Years) Period (GFLOP Years) 12.19 22.98 Baseline Capacity for Period (GFLOP Years) Job Time Demands in Period 12.19 21.8 Number of Jobs at least 4 days old at end Period Period 2 Minimum Job Time Demands as % of Baseline during Period 2 Number of standard Job Queues (ignoring) Average % of time each queue contained jobs in

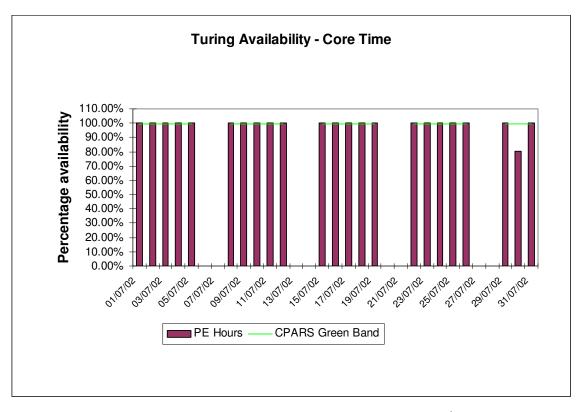
3. System Availability

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

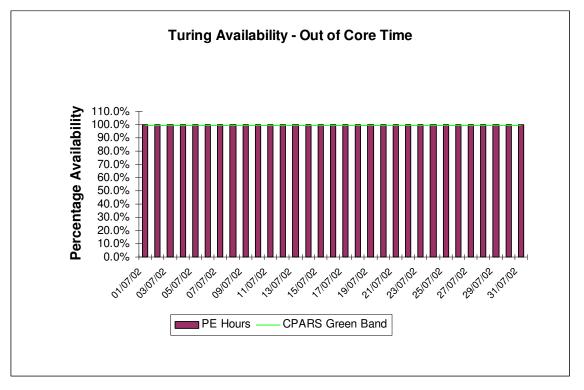
3.1 Cray T3E-1200E System (Turing)

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

Turing availability for July:



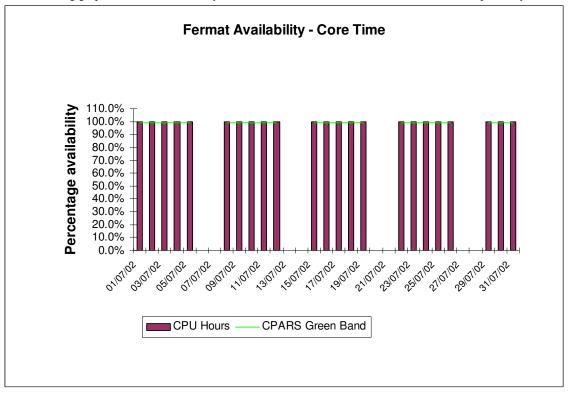
Availability of Turing in core time during July was good with just one outage on the 30th due to faulty hardware.



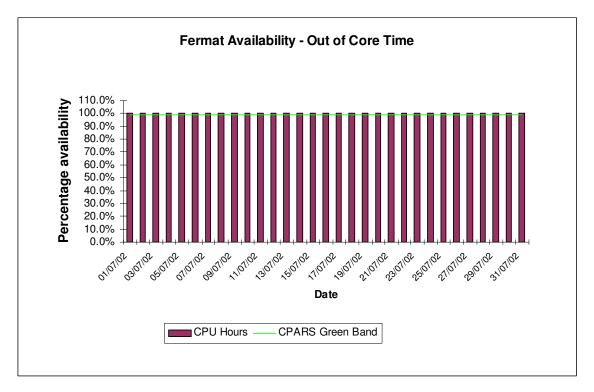
Availability of Turing out of core time during July was excellent with no outages.

3.2 SGI Origin2000 System (Fermat)

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



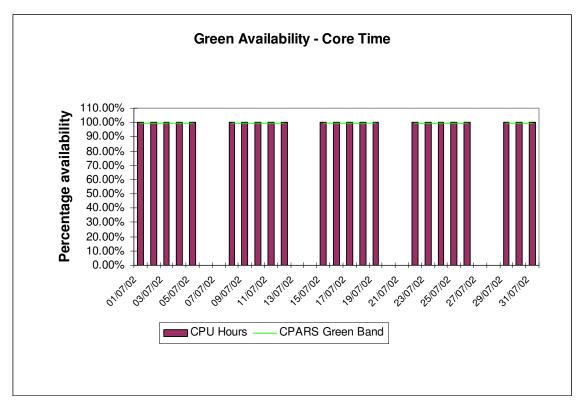
Availability of Fermat in core time during July was excellent, with no outages .



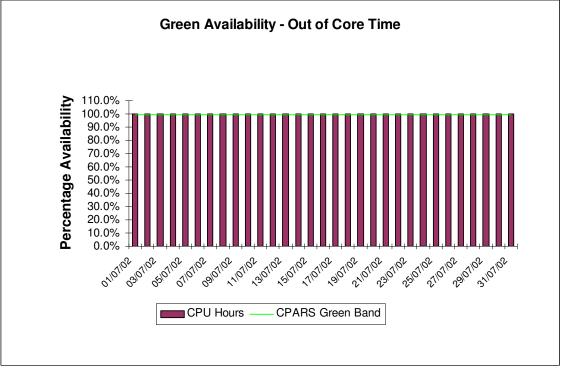
Availability of Fermat out of core time during July was excellent, with no outages.

3.3 SGI Origin3000 System (Green)

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



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



Availability of Green out of core time during July was excellent, with no 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 July 1st to 31st, is provided by Project/User Group, totalled by Research Council and overall. This covers:

CPU usage	Turing: 536,104 PE Hours	Fermat (Batch): 41,962 Hours
•	Fermat (Interactive): 344 CPU	J Hours
•	Green: 160,922 Hours	
 Fujitsu CPU usage 	Fuji: 2,070 CPU Hours	
User Disk allocation	Turing: 82.52 GB Years	Fermat: 83.48 GB Years
• HSM/tape usage	2,954.45 GB Years	

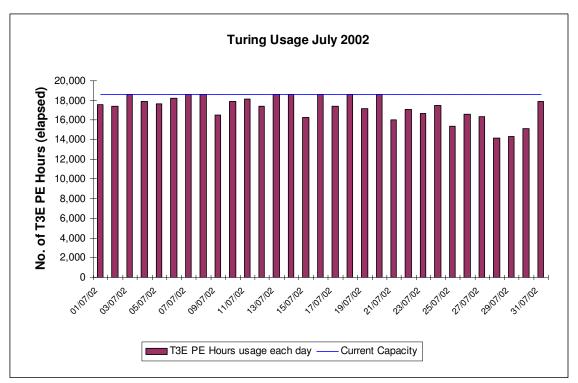
In addition, the following graphs are provided to illustrate usage per month, historically:

- MPP/SMP (T3E/Origin) Usage by month, showing usage each month of CPU (GFLOP-Years as per NPB), split by Research Council and by system. The Baseline and the overall Capacity are shown by overlaid horizontal lines.
- SMP (Origin) Usage by month, showing usage each month in CPU Hours, split by Research Council and giving the equivalent GFLOP-Years as per NPB. The Baseline Capacity is shown by an overlaid horizontal line.
- c) High Performance Disk (T3E) allocated for User Data by month, showing the allocated space each month in GBytes, split by Research Council. The Baseline Capacity (1 Terabyte) is shown by an overlaid horizontal line.
- d) Medium Performance Disk (Origin) allocated for User Data by month, showing the allocated space each month in GBytes, split by Research Council. The Baseline Capacity (1.5 Terabytes) is shown by an overlaid horizontal line.
- e) HSM/Tape Usage (T3E) by month, showing the volumes held each in GBytes, split by Research Council. The Baseline Capacity (16 Terabytes) available will be shown by an overlaid horizontal line.

4.1 Cray T3E-1200E System (Turing)

The following graph shows the usage of Turing during each day of July 2002. Note that there is some variance on a day-to-day basis as the accounts record job times, and thus CPU usage figures, at the time of job completion which could be the second actual day for large jobs. At present, there is a 24 hour limit on jobs so that they are check-pointed, and computational time lost due to any failure is well managed. Higher limits can be set for individual jobs on request.

Turing usage for July:



The above usage graph for the Turing system shows that the overall workload was variable.

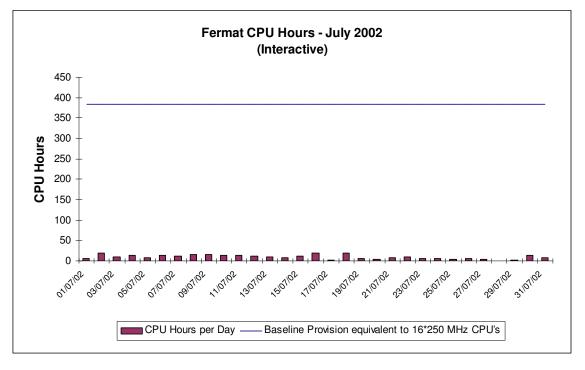
The graph also indicates the workload reached 100% of maximum theoretical capacity some parts of the month.

Fine tuning of the CfS scheduling system will continue to ensure minimal wasting of PE resource, in order to fit in a number of different sized jobs (e.g. 32, 64, 128, 256) thus facilitating maximised job throughput.

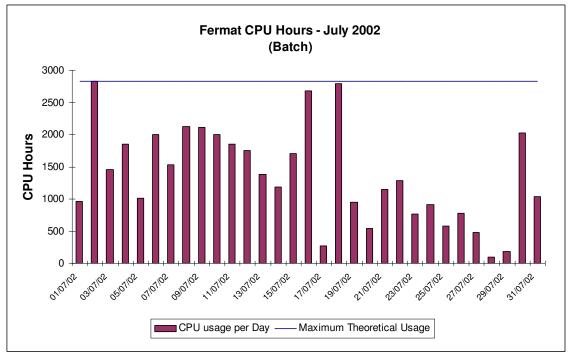
In particular, Turing will continue to start large jobs above 256 PEs, including 512 PEs, when they are queued subject to the overall workload.

4.2 SGI Origin2000 System (Fermat)

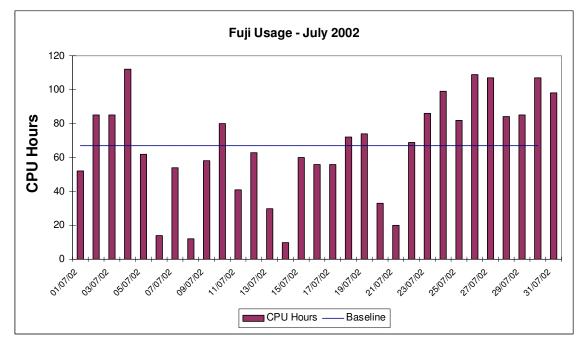
The usage of the Origin system was low. The groups most heavily using the Fermat system are CSE006 (Briddon), CSN006 (Price), CSN015 (Proctor) and HPCI Daresbury.



The graph above shows the interactive usage of the Origin 2000 (Fermat).

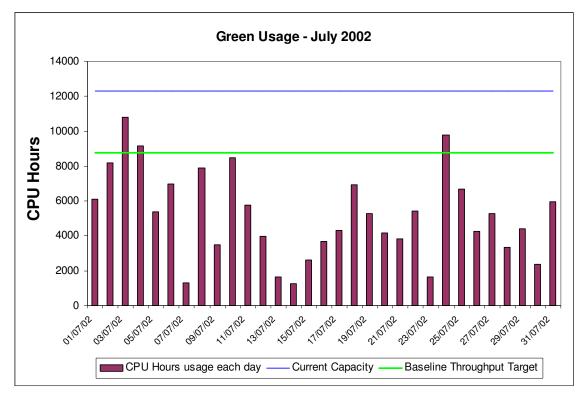


The above graph to a different scale shows the variable batch utilisation of the Origin 128.



4.3 Fujitsu VPP 300/8 System (Fuji)

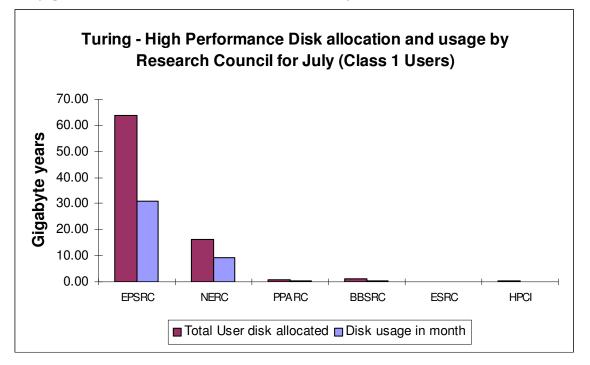
Fuji utilisation was again variable over the month with the overall position resulting in usage below baseline.



4.4 SGI Origin3000 System (Green)

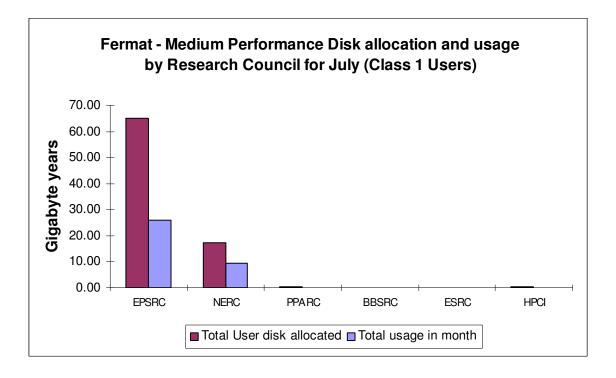
The above graph shows the utilisation of Green for the month of July, which saw the system running with a varied load.

4.5 Disk/HSM Usage Charts

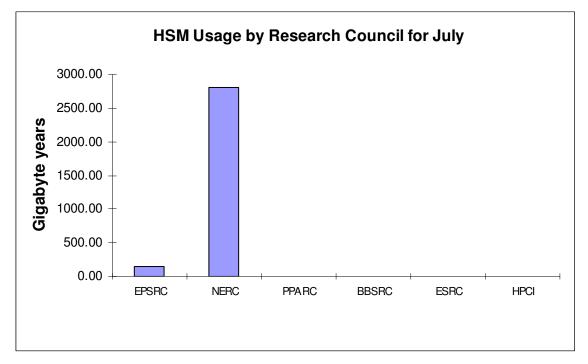


The graphs below show current disk and HSM allocations and usage.

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



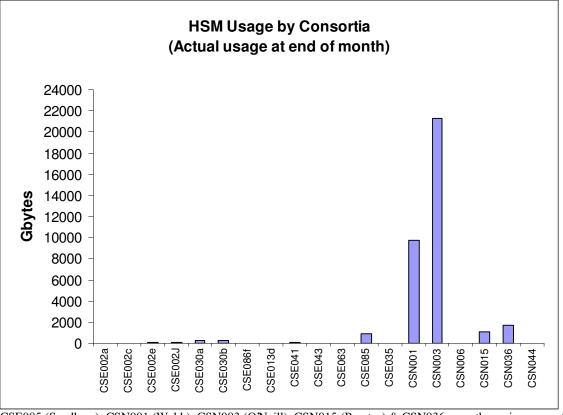
The above graph shows the disk allocations against usage on average of the disk on Fermat.



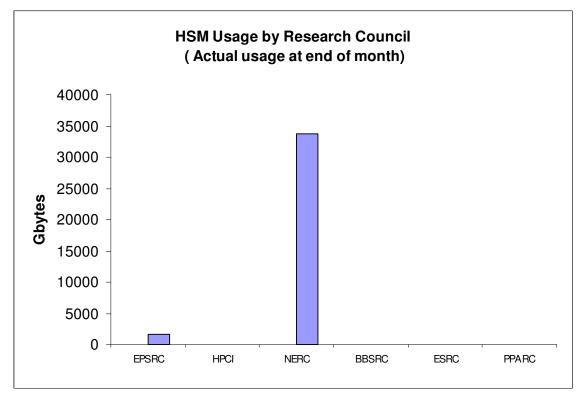
The above graph shows the total usage of the HSM facility by Research Council.

CfS

The next two graphs give actual usage of HSM by Consortia and by Research Council.

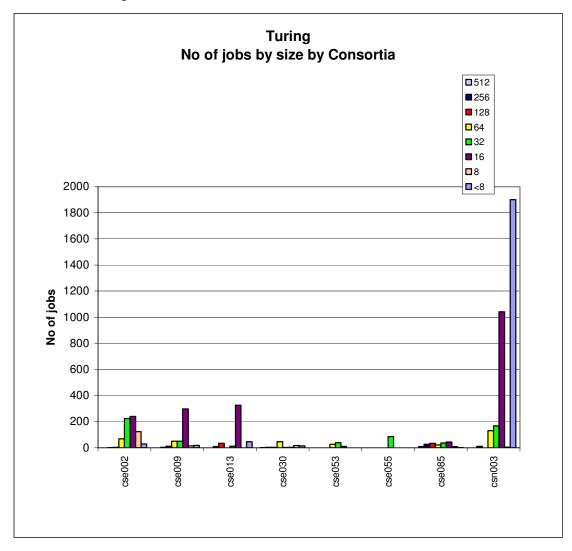


CSE085 (Sandham), CSN001 (Webb), CSN003 (O'Neill), CSN015 (Proctor) & CSN036 were the major users of HSM resource.

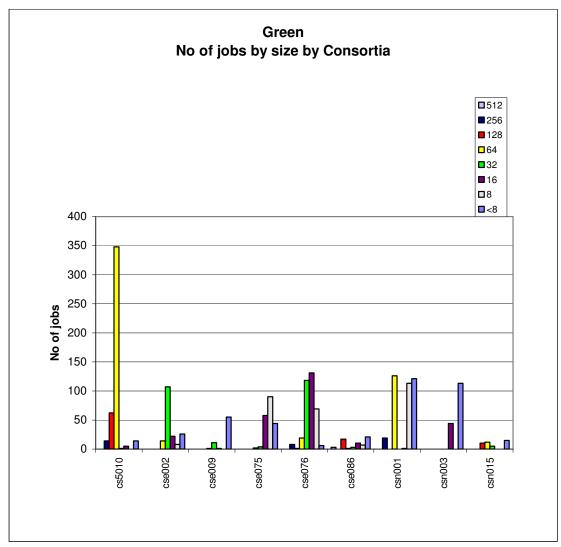


4.6 **Processor Usage and Job Statistics Charts**

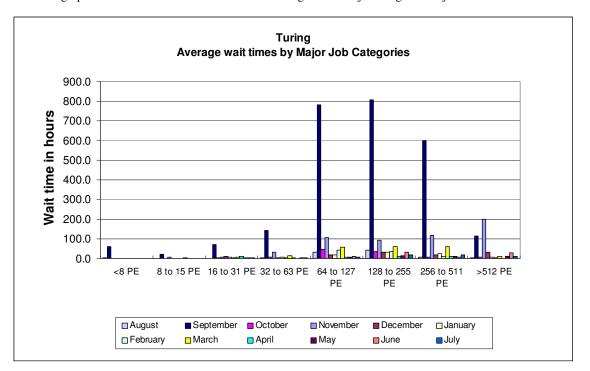
Job statistics for Turing:



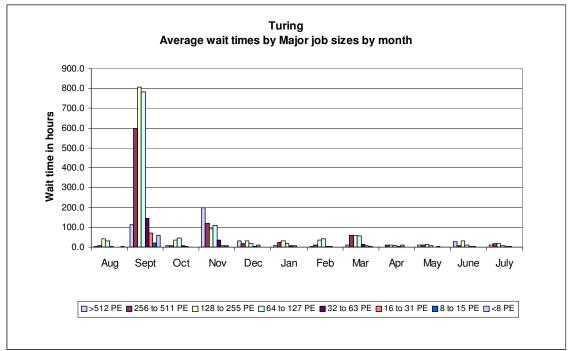
The above graph shows the number of jobs of the major sizes run in the period 1st to 31st July 2002.



The above graph shows the number of jobs of the major sizes run in the period 1st to 31st July 2002.

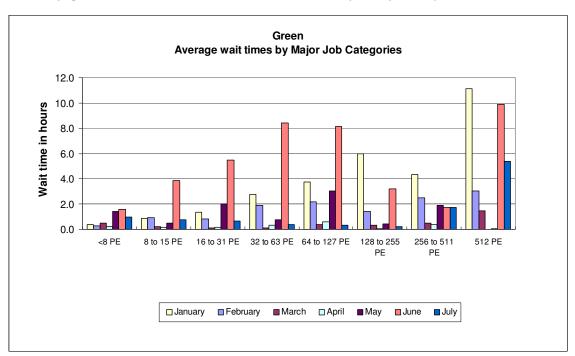


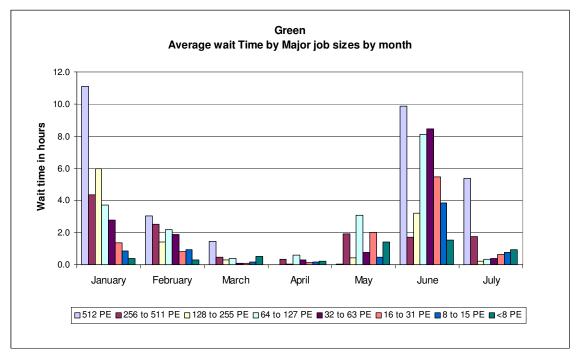
The next graph shows the wait times in minutes on Turing for the major categories of jobs.



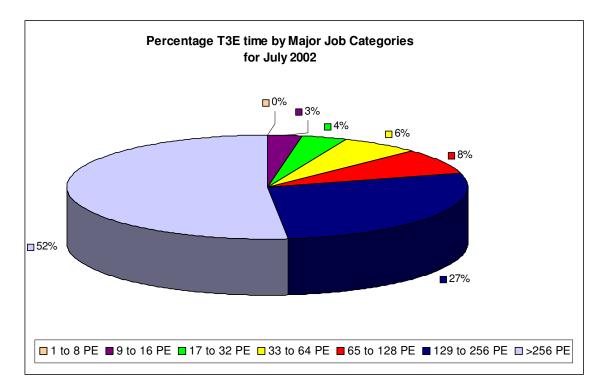
The chart above shows the average wait time trend on Turing over the last 12 months. Wait times for all jobs have continued to stay low now that Green is in full production usage as a 512 PE machine.

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

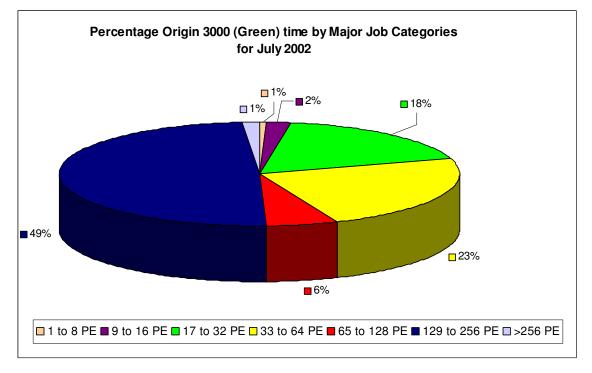




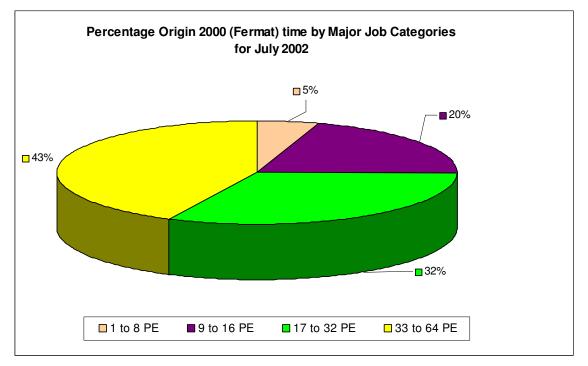
The chart above shows the average wait time trend on Green for July.



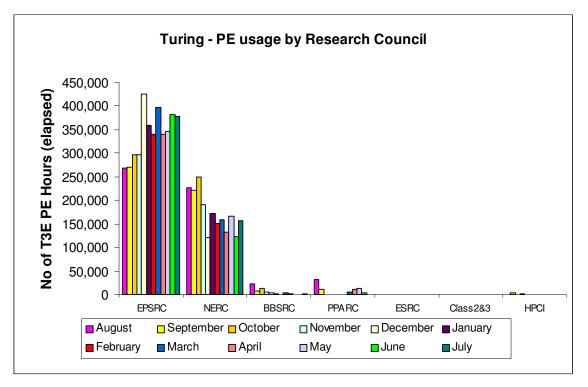
The largest proportion of the workload on Turing, 87%, was greater than 64 PEs in size.



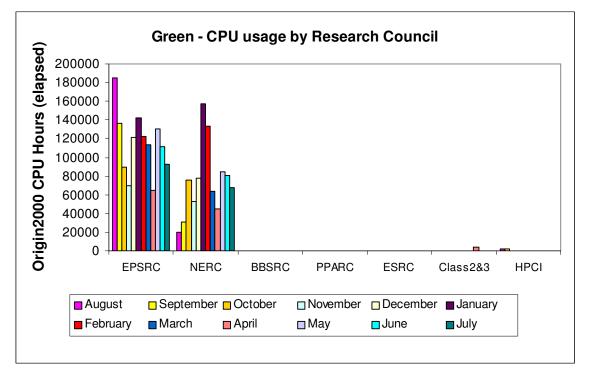
The major allocation of the workload on Green, 56%, was greater than 64 PEs in size.

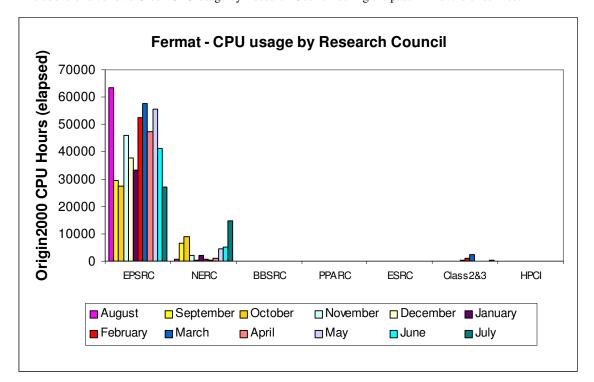


The spread of work across Fermat for July was reasonably varied



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





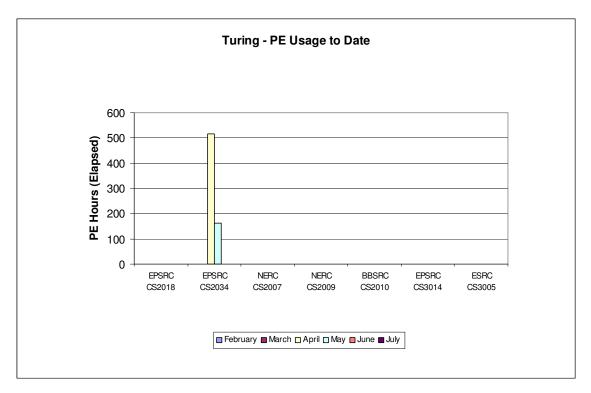
The above chart shows Green CPU usage by Research Council during the past 12 months of service.

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

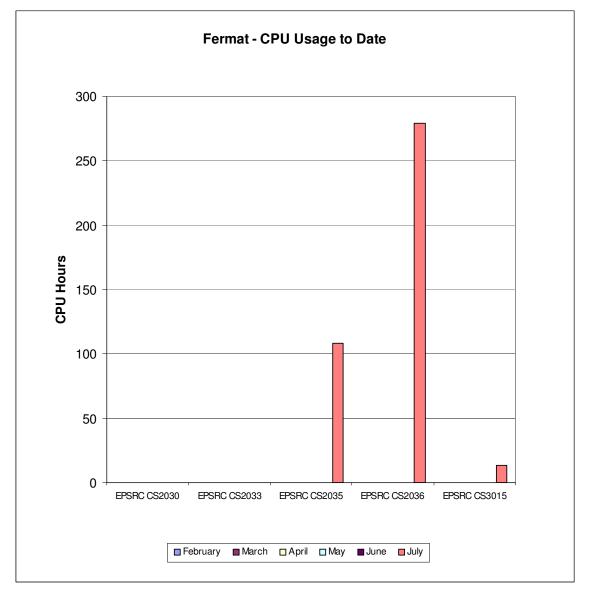
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4.7 Class 2 & 3 Usage Charts

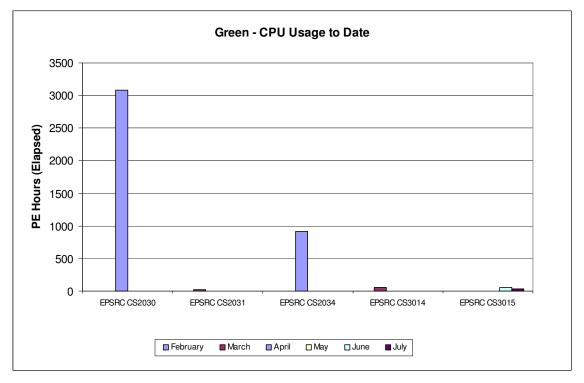
The next series of charts show the usage of the system by the class 2 & class 3 users. The usage is shown by project and identifies the Research Council of the individual projects.



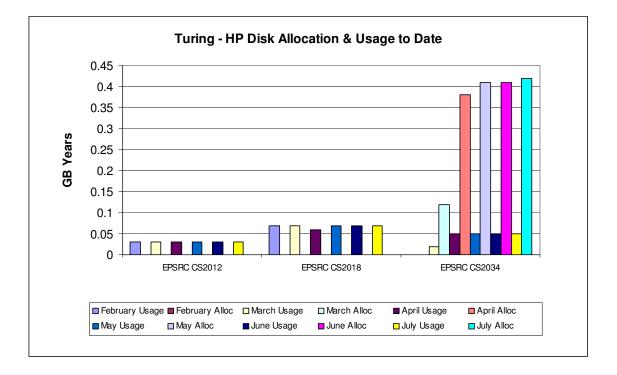
The above chart shows the most significant PE usage of the Turing system by class 2 and class 3 users.



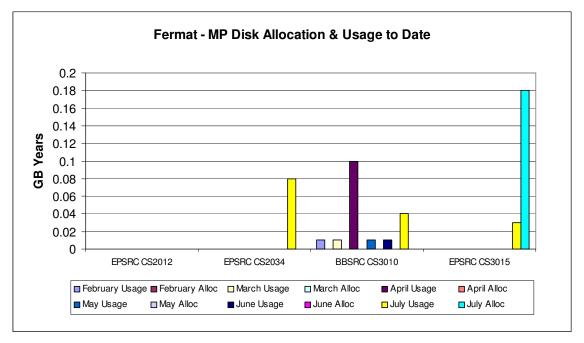
The above chart shows the CPU usage of the Fermat system by class 2 and class 3 users.



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



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

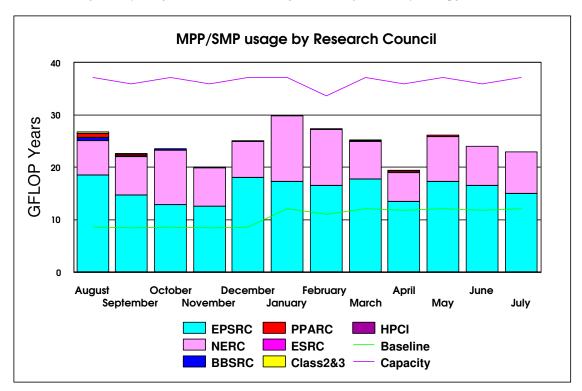


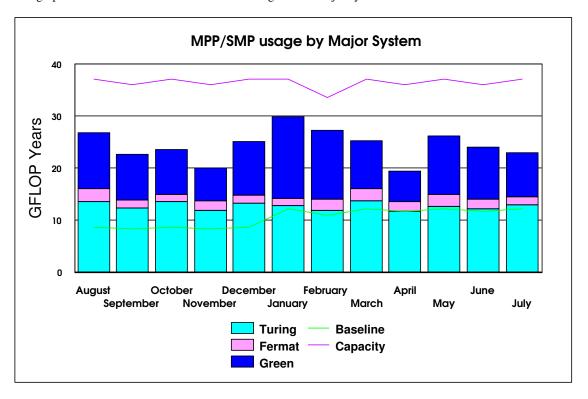
The above chart shows the most significant disk allocations on the Fermat system for class 2 and class 3 users. There is currently no HSM usage by class 2 and class 3 users.

4.8 Charts of Historical Usage

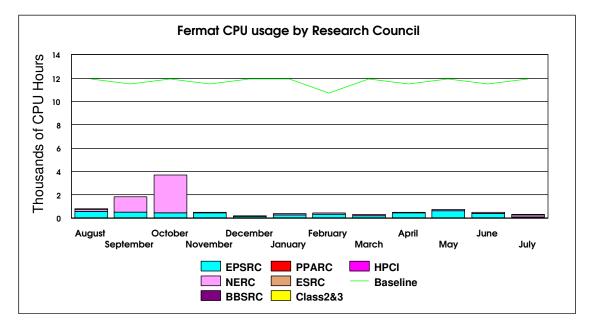
In all the Usage Charts, the baseline varies dependant on the number of days in each month, within a 365-day year.

The graph below shows the GFLOP Year utilisation on Turing and Fermat by Research Council for the previous 12 months; usage in July being reduced due to the outage for the major Green system upgrade.

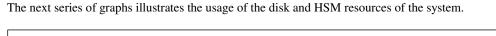


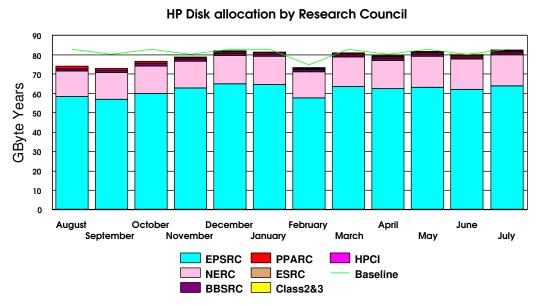


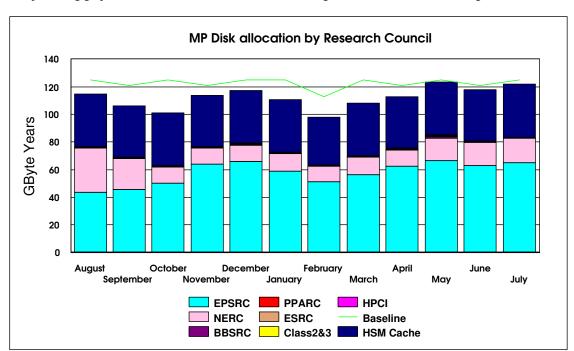
The graph below shows the historic SMP/MPP usage on the major systems.



The above graph shows the historic interactive usage of the 'Baseline' Fermat system (equivalent to 16@250Mhz CPUs)



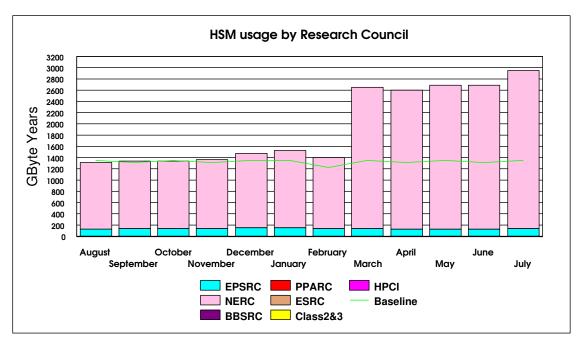




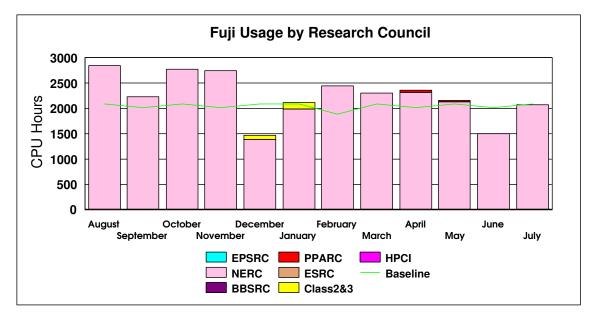
The preceding graph illustrates the historic allocation of the High Performance Disk on Turing.

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

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



The next chart shows the historic usage of the Fuji system.



The Fujitsu system usage was at baseline this month.

4.8 Guest System Usage Charts

There is currently no Guest System usage.

5. Service Status, Issues and Plans

5.1 Status

The service was not fully utilised in July.

During the month, 87% of the jobs run on Turing were larger than 64 PEs in size, and 56% of the jobs run on Green were also larger than 64 PEs in size.

5.2 Issues

The migration of data from the Redwoods continues.

5.3 Plans

The installation of the SAN is now within its stabilising period, with the plan to go live at the end of the month well within sight.

6. Conclusion

July 2002 saw the overall CPARS rating at Green with the baseline being exceeded by 88.5%.

The largest proportion of the workload, on the major systems (Turing & Green), continues to be of the larger job sizes. The largest shift in this area was in the range of 128 and above, although the larger jobs were run on Turing.

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

Appendix 1 contains the accounts for July 2002

Appendix 2 contains the Percentage shares by Consortium for July 2002

Appendix 3 contains the Percentage shares by Research Council for July 2002

Appendix 4 contains the Training, Applications and Optimisation support figures to the end of July 2002

Appendix 5 contains a breakdown of resource usage by Consortia to the end of July 2002.

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

The summary accounts for the month of July 2002 can be found at the URL below

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

Dercentage DE time per con	for Turing in July 2002	Percentare CPII time nor concertin for For	nat in July 2002
Percentage PE time per consortia Consortia	a tor Turing in July 2002 <u>% Machine Time</u>	Percentage CPU time per consortia for Ferr Consortia	mat in July 2002 <u>% Machine Time</u>
CSE002	<u>% wacnine Time</u> 9.24	CSE002	3.89
CSE002	9.24	CSE002	0.00
CSE003 CSE021	0.00	CSE003 CSE021	
			0.00
CSE023	0.00	CSE023	0.00
CSE025	0.00	CSE025	0.00
CSE030	5.09	CSE030	0.00
CSE055	0.20	CSE055	0.00
CSE057	0.00	CSE057	0.00
CSE084	0.00	CSE084	0.00
CSE086	8.04	CSE086	0.31
CSE004	0.00	CSE004	0.00
CSE013	11.64	CSE013	1.09
CSE014	0.00	CSE014	0.00
CSE016	0.00	CSE016	0.00
CSE027	0.00	CSE027	0.00
CSE040	0.00	CSE040	0.00
CSE041	0.00	CSE041	0.18
CSE043	8.36	CSE043	0.00
CSE052	0.89	CSE052	0.00
CSE053	0.35	CSE052	0.00
CSE056	0.00	CSE053	0.00
CSE063	0.00	CSE056 CSE063	0.00
CSE064	0.23	CSE063	
CSE064 CSE085			0.00
	12.41	CSE085	0.00
CSE008	0.00	CSE008	0.00
CSE009	12.13	CSE009	0.02
CSE024	0.00	CSE024	0.00
CSE033	0.00	CSE033	0.00
CSE035	0.66	CSE035	0.00
CSE020	0.00	CSE020	0.00
CSE066	0.00	CSE066	0.00
CSE075	0.00	CSE075	1.05
CSE076	0.00	CSE076	57.47
CSE034	0.00	CSE034	0.00
CSE036	0.00	CSE036	0.00
CS3016	0.00	CS3016	0.08
HPCI Southampton	0.00	HPCI Southampton	0.00
HPCI Daresbury	0.00	HPCI Daresbury	0.00
HPCI Edinburgh	0.02	HPCI Edinburgh	0.00
UKHEC	0.00	UKHEC	0.00
CSN001	0.00	CSN001	32.91
CSN003	24.38	CSN003	1.24
CSN005	0.00	CSN005	0.00
CSN005	0.30	CSN005	
			0.01
CSN007	0.00	CSN007	0.00
CSN010	0.00	CSN010	0.00
CSN012	0.00	CSN012	0.00
CSN015	3.74	CSN015	0.00
CSN017	0.00	CSN017	0.02
CSN036	0.16	CSN036	0.78
CSN044	0.58	CSN044	0.00
CSB001	0.00	CSB001	0.00
CSB002	0.24	CSB002	0.00
CSP004	0.02	CSP004	0.00
CS2018	0.00	CS2018	0.00
CS2033	0.00	CS2033	0.00
CS2034	0.00	CS2034	0.00
CS2035	0.00	CS2035	0.26
CS2036	0.00	CS2036	0.66
CS3001	0.00	CS3001	0.00
CS3002	0.00	CS3002	0.00
CS3005	0.00	CS3005	0.00
CS3010	0.00	CS3010	0.00
CS3015	0.00	CS3015	0.03
1			

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<u>Consortia</u>	<u>% Machine Time</u>
SE002	17.73
E003	0.00
SE030	2.77
SE084	0.00
SE086	7.75
SE004	0.34
CSE013	0.99
SE085	2.00
SE009	0.65
SE075	2.16
SE076	23.34
SN001	35.87
SN003	2.02
SN006	1.53
SN015	2.83
SN017	0.00
S3015	0.02

Percentage disc allocation by Consortia for Turing in July 2002		Percentage disc allocati	on by Consortia for Fermat in July 2002
Consortia	%Allocation	Consortia	%Allocation
SE002	23.50	CSE002	8.41
SE003	0.93	CSE003	0.34
SE021	0.00	CSE021	0.00
SE023	0.00	CSE023	0.00
SE025	0.00	CSE025	0.00
SE030	20.47	CSE030	40.63
SE055	0.10	CSE055	0.00
SE057		CSE055	
	0.04		0.00
E084	1.24	CSE084	2.04
SE086	5.11	CSE086	10.17
SE004	0.00	CSE004	0.00
SE013	1.30	CSE013	0.50
SE014	0.00	CSE014	0.00
SE016	0.00	CSE016	0.00
SE027	0.00	CSE027	0.00
SE040	0.02	CSE040	0.50
SE040	0.05	CSE040	0.10
SE043	0.05	CSE043	0.11
SE052	0.30	CSE052	0.00
SE053	0.10	CSE053	0.10
SE056	0.00	CSE056	0.10
SE063	1.03	CSE063	0.00
SE064	0.02	CSE064	0.00
SE085	15.44	CSE085	11.19
SE008	0.00	CSE008	0.00
SE009	5.50	CSE009	2.04
SE024	0.00	CSE024	0.00
SE033	0.00	CSE033	0.00
SE035	0.71	CSE035	0.00
SE019	0.00	CSE019	0.00
E020	0.00	CSE020	0.00
E066	0.28	CSE066	0.13
E075	0.00	CSE075	1.02
E076	0.11	CSE076	0.56
E034	0.00	CSE034	0.00
E036	0.02	CSE036	0.01
CI Southampton	0.00	HPCI Southampton	0.00
CI Daresbury	0.10	HPCI Daresbury	0.05
CI Edinburgh	0.10	HPCI Edinburgh	0.10
HEC	0.10	UKHEC	0.10
N001	10.29	CSN001	15.26
N003	2.98	CSN003	1.52
N005	0.00	CSN005	0.00
N006	5.15	CSN006	2.04
N007	0.00	CSN007	0.00
N010	0.00	CSN010	0.00
N012	0.00	CSN012	0.00
SN015	0.21	CSN015	1.02
SN017	0.01	CSN017	0.10
N036	1.03	CSN036	1.02
B001	0.05	CSB001	0.00
B002	1.33	CSB002	0.10
P004	0.71	CSP004	0.50
2018	0.00	CS2018	0.00
2031	0.00	CS2031	0.00
2034	0.51	CS2034	0.00
3001	0.00	CS3001	0.00
S3002	0.00	CS3002	0.00
S3005	0.00	CS3005	0.00
	0.00	CS3010	0.00
\$3010			

Percentage usage of HSM by Consortium for July 2002						
Concertium	9/ Lloogo					
Consortium	% Usage					
CSE002	0.35					
CSE003	0.00					
CSE030	1.40					
CSE086	0.05					
CSE013	0.03					
CSE041	0.30					
CSE043	0.01					
CSE063	0.05					
CSE085	2.54					
CSE035	0.02					
CSN001	27.44					
CSN003	60.03					
CSN006	0.01					
CSN015	2.97					
CSN036	4.75					
CSN044	0.02					

Issue 1.0

Appendix 3

Percentage PE usage	on Turing by Research Council	for July 2002	Percentage CPU usage on Fermat by Research Council for July 2002					
Research Council	<u>% Usage</u>		Research Council	<u>% Usage</u>				
EPSRC	70.55		EPSRC	64.96				
HPCI	0.02		HPCI	0.08				
NERC	29.17		NERC	34.96				
BBSRC	0.24		BBSRC	0.00				
ESRC	0.00		ESRC	0.00				
PPARC	0.02		PPARC	0.00				

Percentage CPU usa	ge on Green by Research Counc	il for July 2002
Research Council	<u>% Usage</u>	
EPSRC	57.75	
HPCI	0.00	
NERC	42.25	
BBSRC	0.00	
ESRC	0.00	
PPARC	0.00	

Percentage Disc allo	ercentage Disc allocated on Turing by Research Council for July 2002			Percentage Disc allocated on Fermat by Research Council for July 2002					
Research Council	% Allocated		Research Council	% Allocated					
EPSRC	77.91		EPSRC	78.19					
HPCI	0.30		HPCI	0.25					
NERC	19.67		NERC	20.96					
BBSRC	1.39		BBSRC	0.11					
ESRC	0.00		ESRC	0.00					
PPARC	0.71		PPARC	0.50					

Percentage HSM usa	ge by Research Council for July	2002
Research Council	<u>% usage</u>	
EPSRC	4.75	
HPCI	0	
NERC	95.22	
BBSRC	0	
ESRC	0	
PPARC	0	

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

Code	PI	Subject	Liaison Officer	Support Bought	Application Support for July 2002	Total Application Support from July 2000	Optimisation Support for July 2002	Total Optimisation Support from July 2000	Total Support Used	Training Bought	Training Used
Cse002	Dr Phil Lindan	Support for the UKCP	Stephen Pickles	446.7		12.25			144.25	74	3
Cse003	Prof. Ken Taylor	HPC Consortiums 98- 2000	Martyn Foster	25.27		6		15.5	24.5	10	6
Cse004	Dr Neil Sandham	UK Turbulence	Keith Taylor							2	2
Cse006	Dr Patrick Briddon	Covalently Bonded Materials	Kevin Roy	4				4	4		
Cse007	Dr Matthew Foulkes	Quantum Many Body Theory	Martyn Foster	4					1	2	2
Cse008	Dr Mark Vincent (Hillier)	Model Chemical Reactivity	Robin Pinning								
Cse009	Dr Ben Slater (Catlow)	HPC in Materials Chemistry	Stephen Pickles	275.5		6		3	9	26.5	
Cse010	Dr John Williams	Free Surface Flows	Dan Kidger	15.95					15.95	0	
Cse011	Dr John Williams	Open Channel Flood Plains	Dan Kidger	2.18					2.18	1	
Cse013	Prof Michael Leschziner	Complex Engineering Flows	Keith Taylor	9						57.5	4
Cse014	Dr Cassiano de Oliverira (Goddard)	Probs in Nuclear Safety	Dan Kidger	3							
Cse016	Dr Stewart Cant	Turbulent Combustion	Keith Taylor								
Cse017	Dr Kai Luo	Large Eddy Simulation and Modelling of Buoyant Plumes and Smoke Spread in Enclosures	-	2.44						5	
Cse018	Dr Stewart Cant	Turbulent Flames	Keith Taylor								
Cse019	Dr Jason Lander (Berzins)	ROPA	Kevin Roy								
Cse020	Dr Marek Szularz	Symmetric Eigenproblem	Kevin Roy								
Cse021	Dr Julie Staunton	Magentisim	John Brooke	0.2						1.04	1
Cse022	Mr Niall Branley (Jones)	Turbulent Flames	Keith Taylor								
Cse023	Allen	Liquid Crystalline Materials	Robin Pinning								
Cse024	Dr Robert Allan (Tennyson)	ChemReact 98-2000	Ben Jesson	24						300	-
Cse025	Dr Niels Rene Walet(Bishop)	Nuclear Theory Progamme	Martyn Foster							2	1.5
Cse026	Dr Maureen Neal	Molecular Dynamics									
Cse027	Dr M Imregun	Excitation Mechanisims		-							
Cse028	Prof. P.W. Bearman	Bridge Design									
Cse029	Dr David Aspley (Leschziner)	Validation of Turbulence Models	Keith Taylor								

											135uc 1
Cse030	Prof M Cates (VIPAR)	HPC for Complex Fluids	Robin Pinning	103		21		5	51	31	7
Cse033	Dr M Imregun	Turbomachinery core compressor		-	1						
Cse034	Dr Paul Durham	R&D of liner/non- linear systems	Kevin Roy		1						
Cse035	Dr Stephen Jenkins	Ab Initio Simulations			1						
Cse036	Prof Iain Duff	R&D of linear/non-			1						
Cse040	Dr Ken	linear systems	Keith		1						
Cse041	Badcock Dr M Imregun	Flutter and Noise	Taylor Keith	60	J]	/ [] 				5	
Cse043	Dr J J R	Generation Numerical	Taylor Kevin Roy	2				2	2	4	4
	Williams	Simulation of flow over a rough bed									
Cse051	Prof B. L. Gyorffy	Ab initio calculations of magnetic anisodropies in Fe	-	-						-	-
Cse052	Miss Francesca Di Mare (Heyes)	Heat Transfer in Gas Turbine Combustors	-	10						25	-
Cse053	Prof M. A. Leschziner	Coupling Rans Near-Wall Turbulence Models with Large Eddy Simulation Strategies	-	15						8	-
Cse055	Dr Julia Staunton	Ab-initio theory of magnetic antiotropy in transition metal ferromagnets	-	5						10	-
Cse056	Dr Mehmet Imregun	Aerothermoelasticity modelling of air riding seals for large gas turbines	-	5						10	-
Cse064	Dr Anne Dejoan									8	2
Cse066	Dr Keir Novik	Novel clay-polymer nanocomposites using diversity- discovery methods: synthesis, processing and testing	-	21						6	3
Cse076	Dr Patrick Briddon	Covalently bonded materials	Adrian Tate	20				11	11		
Cse085	Prof Neil Sandham									6	3
Csn00 1	Mrs Beverly de Cuevas (Webb)	HPCI Global Ocean Consortium	Dan Kidger	36.22		1	12	38	41	20	3
Csn00 2	Dr Mark Vincent (Hillier)	Pollutant Sorption on Mineral Surf	Robin Pinning								
Csn00 3	Dr Lois Steenman- Clark (O'Neill)	UGAMP	Dan Kidger							4	4
Csn00 5	Dr Huw Davies	Constraining Earth Mantle	Fumie Costen	27					27	6	6
Csn00 6	Dr John Brodholt (Price)	Density Functional Methods	Stephen Pickles								
Csn00 7	Dr John Brodholt (Price)	Density Functional Methods	Stephen Pickles								
Csn00 8	Hulton	Sub-Glacial Process	Michael Bane								
Csn00 9	Dr Roger Proctor		Michael Bane								
Csn01 0	Dr Jason Lander (Mobbs)	Flow over Complex terrain	Kevin Roy	2					-	5	-
		Exchange of									

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Csn01 2	Prof Tennyson	fuji user	Ben Jesson						
Csn01 3	Dr L Steenman- Clark (Voke)	Large-Eddy Simulation Extended by Extreme Value Theory for the Prediction of Dispersion, Concentration Threshold Boundaries and Field Connectivity	-						
Csn01 4	Prof Llewellyn- Jones	A new Data Assimilation Scheme to optimise the information on the surface-atmosphere interface from satellite observations of Top-of-the Atmosphere Brightness Temperature	-	-				-	
Csn01 5	Dr Roger Proctor	Atlantic Margin Metocean Project	-	20	2		2	10	3
Csn01 7	Dr Antony Payne	Stability of the Antarctic Ice Sheet	-	16				18	2
Csn03 6	Prof Keith Haines	Assimilation of Altimeter, Radiometer and in situ data into the OCCAM Model. Analysis of water properties and transports.	-	2				5	-
Csb00 1	Dr David Houldershaw (Goodfellow)	Macromolecular Interactions	Robin/Fum ie	6	1.5		3.5	4	2
Csb00 2	Dr Adrian Mulholland (Danson)	Stability of Enzymes at high temp	Robin Pinning						
Csb00 3	Dr John Carling (Williams)	Anguilliform Swimming						3	-
Csp00 2	Dr Sandra Chapman	Nonlinear process in solar system and astrophysical plasmas	-	2				8	4
Csp00 3	Prof Andrew Lyne	Computing Resources for Precision timing of Millisecond Pulsars	Stephen Pickles	11.79	10		11	12	12
Csp00 4	Prof K L Bell	A Programme for Atomic Physics for Astrophysics at Queen's University, Belfast (2001 - 2005)		7				8	
Css001	Dr I J Turton	Human Systems Modelling	John Brooke					20	
Css002	Dr Robert Crouchley	Dropout in panel surveys	John Brooke					2.5	2
Hpcid	Dr Robert Allan		Keith Taylor					1	1
Hpcie	Dr David Henty		Stephen Pickles						
Hpcis	Dr Denis Nicole		Dan Kidger						
ukhec	Ms K Jaffri		-					2	2
Cs200 1	Dr Sudhir Jain	3D Ising Spin Glass	Stephen Pickles					10	-
Cs200 2	Dr Ingrid Stairs (Lyne)	Millisecond Pulsars	John Brooke	0.25			0.25	0	-
Cs200 4	Dr A. Paul Watkins	Internal Combustion Engine	Keith Taylor						
Cs200 6	Prof. Walter Temmerman	Superconductivity & Magmetisim	Mike Pettipher						

s200	Choularton	Precipitation in the Mountains								1	1
Cs200	Dr Matthew Genge	Extraterrestrial Mineral Surfaces	Robin Pinning	7.91]			7.91		
8 Cs200 9	Dr Roger Proctor	Atlantic Margin Metocean Project	Michael Bane	1	1]		1			/ [
Cs201 0	Dr Christopher Dempsey	Helical membrane- lytic peptides	Duic		1	1]			
Cs201 1	Dr D Drikakis	Transition & Turbulence in Physiological Flows								-	
Cs201 2	Prof Ning Qin	Monotone Integrated Large Eddy Simulation		1		1				1.5	1.:
Cs201 4	Dr Vladimir Karlin	Dynamics of intrinsically unstable premixed flames				1				2	2
Cs201 5	Mr Pablo Tejera-Cuesta	Nonlinear Methods in Aerodynamics	Keith Taylor	1	1					3	1.
Cs201 6	Dr Jim Miles	Investigation of Scaline Properties of Hierarchical Micromagnetic Models	-	2						-	
Cs201 7	Mr Markus Eisenbach	Ab initio calculations of magnetic anisotropies in Fe inclusions in Cu	-	-						-	
Cs201 8	Mr Maxim Chichkine	Study of defect clusters in silicon for sub-micron technologies	-	-						-	
Cs201 9	Dr Guy H Grant	Theoretical studies of flavoproteins	-	-						-	-
Cs202 0	Prof John Barker	Predicting the applicability of Aquifer Storage Recovery (ASR) in the UK	-	1						-	-
Cs202 1	Dr A R Mount	A Computational Study of the Luminescence of Substituted Indoles	-	-						6	1
Cs202 2	Dr Philippa Browning	Numerical simulation of forced magnetic reconnection	-	-						3	2
Cs202 3	Prof W Ewen Smith	The use of DFT methods for the accurate prediction of the Ramen spectrum of large molecules	-	-						-	-
Cs202 4	Prof J G Doyle	Modelling of late- type stellar chromospheres	-	-						-	
Cs202 6	Dr R J Greenall	Molecular dynamics simulations of AT- tract DNA	-	-						1	-
Cs202 7	Dr Anthony Kay	Mathematical Model of the Circulation of Lake Baikal	-	6						4	-
Cs202 8	Dr James F Annett	Numerical Tests of Disorder Effects in D-Wave Superconductors	-	2						2	-
Cs202 9	Prof B L Gyorffy	Ab-initio calculations of unconventional electronic, magnetic and lattice properties of magnitudes	-	-						-	-
Cs203 0	Prof G J Morgan	Spin Diffusion in Magnetic Multilayers	-	-						1	1
Cs300 1	Mr John Andrew Staveley	Helical Coherent Structures		6.8					0	10.45	3
Cs300 2	Dr Keir Novik	Simulations of DNA oligomers		1—	1	1	1	1		2	2

Cs300 3	Dr Eric Chambers	Band III peptide fragments							
Cs300 4	Prof Nick Avis	Computational Steering and Interactive Virtual Environments	Jo Leng	19				12	1
Cs300 5	Mr Behrouz Zarei	Simulation of Queuing Networks	John Brooke	10				5	3
Cs300 6	Mr F Li	Quantifying Room Acoustic Quality	-	4				5	1
Cs300 7	Emma Finch	Development ofa 3D Crustal Lattice Solid Model	-	37	7	5	12	5	-
Cs300 8	Dr B J Alsberg	Development of a 3D QSAR method based on quantum topological descriptors	-	3			-	13	-
Cs300 9	Dr D Flower	Epitope Prediction Methods based on molecular dynamics simulation	-	2			-	3	-
Cs301 0	Dr K Kemsley	Investigation of electromyographic recordings of muscle activity during chewing, and of relationships with perceived flavour and texture, in model and real food systems	-	4			-	8	1
Cs301 2	Prof Jim Austin	Evaluation of binary neural networks on a vector parallel processor	-	5		3	3	3	2
Cs301 3	Prof Rasmita Raval	Structure and function of Chiral Bioarrays: A fundamental approach to proteomic devices	-	2			-	-	-
Cs301 4	Dr John Brooke	Enabling UK Academic Grid Application Development and Testing	-	2			-	-	-
Cs301 5	Dr Damian Hampshire	Flux-Pinning in High-Field Superconductors	-	2			-	5	-
Cs301 6	Dr Owne Petchey	Functional Diversity for ecosystem processes	-	2			-	-	-

The following table shows resource utilisation by Consortia to the end of July 2002.

cs2034 De Souza Last Trade: Thu Apr 18 09:01:15 2002 Usage: 680.0 of 1264.9 PEHour MPP PE CPU (16.4 of 30.6 G.S.T), 53.8% 1.4 of 0.1 GByteYear HP Disk (10.6 of 0.9 G.S.T), 1241.3% 0.0 of 0.1 Hour SMP CPU (0.0 of 0.0 G.S.T), 5.1%	
0.0 of 4.8 GByteYear MP Disk (0.0 of 20.6 G.S.T), 0.0% 916.9 of 916.9 Hour Green CPU (47.9 of 47.9 G.S.T), 100.0% Total usage for project cs2034 75.0 of 100.0 Generic Service Tokens, 75.0% 	
Last Trade: Wed Jun 12 17:31:57 2002 Usage: 0.0 of 300.0 PEHour MPP PE CPU (0.0 of 7.3 G.S.T), 0.0% 0.0 of 1.5 GByteYear HP Disk (0.0 of 11.6 G.S.T), 0.0%	
108.1 of 500.0 Hour SMP CPU (4.2 of 19.4 G.S.T), 21.6% 0.0 of 3.5 GByteYear MP Disk (0.0 of 15.0 G.S.T), 0.0% 0.0 of 361.6 Hour Green CPU (0.0 of 18.9 G.S.T), 0.0% 0.0 of 1.0 PersonDay Support (0.0 of 27.8 G.S.T), 0.0% Total usage for project cs2035 4.2 of 100.0 Generic Service Tokens, 4.2%	
cs2036 Hayhurst Last Trade: Mon Jun 24 11:12:45 2002 Usage: 278.9 of 2463.2 Hour SMP CPU (10.8 of 95.7 G.S.T), 11.3% 0.0 of 1.0 GByteYear MP Disk (0.0 of 4.3 G.S.T), 0.0% Total usage for project cs2036 10.8 of 100.0 Generic Service Tokens, 10.8%	
cs3015 Hampshire Last Trade: Mon Jul 8 09:42:49 2002 Usage: 14.3 of 948.8 Hour SMP CPU (0.6 of 36.9 G.S.T), 1.5% 0.4 of 2.0 GByteYear MP Disk (1.8 of 8.6 G.S.T), 20.8% 88.4 of 6596.1 Hour Green CPU (4.6 of 344.7 G.S.T), 1.3% 0.0 of 2.0 PersonDay Support (0.0 of 55.6 G.S.T), 0.0% 0.0 of 5.0 Day Training (0.0 of 53.8 G.S.T), 0.0% Total usage for project cs3015 7.0 of 499.4 Generic Service Tokens, 1.4%	
cs3016 Petchey Last Trade: Fri May 10 15:21:41 2002 Usage: 33.6 of 10020.1 Hour SMP CPU (1.3 of 389.3 G.S.T), 0.3% 0.0 of 0.5 GByteYear MP Disk (0.0 of 2.1 G.S.T), 0.0% 0.0 of 2.0 PersonDay Support (0.0 of 55.6 G.S.T), 0.0% Total usage for project cs3016 1.3 of 447.0 Generic Service Tokens, 0.3%	

csb001 27/B13508 Goodfellow Last Trade: re-enabled Usage: 148619.6 of 250989.4 PEHour MPP PE CPU (3593.4 of 6068.6 G.S.T), 59.2% 7.8 of 48.1 GByteYear HP Disk (60.6 of 372.5 G.S.T), 16.3% 0.4 of 1.2 Hour SMP CPU (0.0 of 0.0 G.S.T), 28.3% 6.1 of 13.7 GByteYear MP Disk (26.3 of 58.9 G.S.T), 44.7% 0.0 of 115.0 GByteYear HSM/Tape (0.0 of 71.7 G.S.T), 0.0% 2454.8 of 12444.9 Hour Green CPU (128.3 of 650.3 G.S.T), 19.7% 3.5 of 6.0 PersonDay Support (97.2 of 166.7 G.S.T), 58.3% 2.0 of 4.0 Day Training (21.5 of 43.2 G.S.T), 49.8% Total usage for project csb001 3927.3 of 7431.8 Generic Service Tokens, 52.8%
csb002 86/B10059 Danson Last Trade: Fri Jul 5 17:30:27 2002 Usage: 86533.4 of 89670.6 PEHour MPP PE CPU (2092.3 of 2168.1 G.S.T), 96.5% 39.3 of 40.8 GByteYear HP Disk (304.2 of 315.7 G.S.T), 96.3% 0.0 of 0.0 Hour SMP CPU (0.0 of 0.0 G.S.T) 3.0 of 3.0 GByteYear MP Disk (12.7 of 13.0 G.S.T), 97.3% Total usage for project csb002 2409.1 of 2496.8 Generic Service Tokens, 96.5%
CSE001 - Admin users Last Trade: Fri Oct 8 15:16:30 1999 Usage: 0.0 of 12.4 PEHour MPP PE CPU (0.0 of 0.3 G.S.T), 0.0% 0.1 of 0.1 GByteYear HP Disk (0.5 of 0.7 G.S.T), 67.2% Total usage for project cse001 0.5 of 1.0 Generic Service Tokens, 47.0%
cse002 GR/N02337 Bird Last Trade: Tue Jul 30 14:18:47 2002 Usage: 2717355.6 of 3273810.1 PEHour MPP PE CPU (65702.2 of 79156.5 G.S.T), 83.0% 631.8 of 1322.0 GByteYear HP Disk (4891.4 of 10235.4 G.S.T), 47.8% 82933.8 of 105105.2 Hour SMP CPU (3222.1 of 4083.5 G.S.T), 78.9% 237.9 of 1222.0 GByteYear MP Disk (1020.7 of 5242.0 G.S.T), 78.9% 306.4 of 414.5 GByteYear MP Disk (1020.7 of 5242.0 G.S.T), 73.9% 173767.5 of 202941.0 Hour Green CPU (9079.7 of 10604.1 G.S.T), 85.6% 144.2 of 152.8 PersonDay Support (4006.9 of 4243.1 G.S.T), 94.4% 3.0 of 9.0 Day Training (32.3 of 96.8 G.S.T), 33.3% Total usage for project cse002 88146.4 of 113919.7 Generic Service Tokens, 77.4%
cse002 Daresbury Last Trade: never Usage: 363550.6 of 580480.0 PEHour MPP PE CPU (8790.2 of 14035.3 G.S.T), 62.6% 115.3 of 200.0 GByteYear HP Disk (892.8 of 1548.5 G.S.T), 57.7% 8422.9 of 8550.0 Hour SMP CPU (327.2 of 332.2 G.S.T), 98.5% 29.2 of 48.9 GByteYear MP Disk (125.3 of 209.8 G.S.T), 59.7% 67.5 of 106.0 GByteYear HSM/Tape (42.1 of 66.1 G.S.T), 63.7% 2952.2 of 4000.0 Hour Green CPU (154.3 of 209.0 G.S.T), 73.8% Total usage for subproject cse002a 10331.9 of 16400.8 Generic Service Tokens, 63.0%

cse002 Belfast Last Trade: never Usage: 317769.8 of 343170.0 PEHour MPP PE CPU (7683.3 of 8297.4 G.S.T), 92.6% 72.6 of 75.0 GByteYear HP Disk (562.3 of 580.7 G.S.T), 96.8% 19555.1 of 20446.0 Hour SMP CPU (759.7 of 794.4 G.S.T), 95.6% 6.4 of 44.9 GByteYear MP Disk (27.3 of 192.6 G.S.T), 14.2% 0.0 of 3.0 GByteYear HSM/Tape (0.0 of 1.8 G.S.T), 0.0% Total usage for subproject cse002b 9032.6 of 9866.9 Generic Service Tokens, 91.5% cse002 Cambridge - Matsci Last Trade: never Usage: 353833.5 of 351396.0 PEHour MPP PE CPU (8555.2 of 8496.3 G.S.T), 100.7% 43.4 of 54.4 GByteYear HP Disk (335.7 of 421.2 G.S.T), 79.7% 0.0 of 2500.0 Hour SMP CPU (0.0 of 97.1 G.S.T), 0.0% 21.7 of 50.4 GByteYear MP Disk (93.0 of 216.2 G.S.T), 43.0% 9.3 of 52.0 GByteYear HSM/Tape (5.8 of 32.4 G.S.T), 18.0% Total usage for subproject cse002c 8989.7 of 9263.2 Generic Service Tokens, 97.0% cse002 Cambridge - Physics Last Trade: never Usage: 66868.3 of 85020.0 PEHour MPP PE CPU (1616.8 of 2055.7 G.S.T), 78.7% 8.9 of 26.7 GByteYear HP Disk (69.1 of 206.7 G.S.T), 33.4% 11207.0 of 15938.0 Hour SMP CPU (435.4 of 619.2 G.S.T), 70.3% 13.8 of 27.7 GByteYear MP Disk (59.0 of 118.8 G.S.T), 49.6% 0.0 of 27.0 GBvteYear HSM/Tape (0.0 of 16.8 G.S.T), 0.0% 0.0 of 0.5 Hour Green CPU (0.0 of 0.0 G.S.T), 0.0% Total usage for subproject cse002d 2180.3 of 3017.3 Generic Service Tokens, 72.3% cse002 Bath Last Trade: never Usage: 455233.5 of 462619.0 PEHour MPP PE CPU (11007.0 of 11185.5 G.S.T), 98.4% 127.2 of 145.0 GByteYear HP Disk (984.9 of 1122.6 G.S.T), 87.7% 0.0 of 2500.0 Hour SMP CPU (0.0 of 97.1 G.S.T), 0.0% 29.9 of 50.5 GByteYear MP Disk (128.1 of 216.6 G.S.T), 59.1% 81.3 of 75.0 GByteYear HSM/Tape (50.7 of 46.8 G.S.T), 108.5% Total usage for subproject cse002e 12170.7 of 12668.7 Generic Service Tokens, 96.1% cse002 UCL Last Trade: never Usage: 84029.4 of 229733.0 PEHour MPP PE CPU (2031.7 of 5554.6 G.S.T), 36.6% 22.2 of 59.1 GByteYear HP Disk (172.0 of 457.6 G.S.T), 37.6% 2671.4 of 3450.0 Hour SMP CPU (103.8 of 134.0 G.S.T), 77.4% 20.9 of 54.6 GByteYear MP Disk (89.7 of 234.2 G.S.T), 38.3% 0.0 of 3.3 GByteYear HSM/Tape (0.0 of 2.0 G.S.T), 0.0% 32052.4 of 29998.0 Hour Green CPU (1674.8 of 1567.5 G.S.T), 106.8% Total usage for subproject cse002f 4072.0 of 7950.0 Generic Service Tokens, 51.2%

cse002 Oxford - pcl Last Trade: never Usage: 120274.9 of 157112.0 PEHour MPP PE CPU (2908.1 of 3798.8 G.S.T), 76.6% 10.5 of 32.8 GByteYear HP Disk (81.5 of 253.9 G.S.T), 32.1% 1904.0 of 1875.0 Hour SMP CPU (74.0 of 72.8 G.S.T), 101.5% 20.3 of 30.8 GByteYear MP Disk (87.1 of 132.1 G.S.T), 66.0% 0.0 of 2.2 GByteYear HSM/Tape (0.0 of 1.4 G.S.T), 0.0% 4594.7 of 16195.0 Hour Green CPU (240.1 of 846.2 G.S.T), 28.4% Total usage for subproject cse002g 3390.8 of 5105.3 Generic Service Tokens, 66.4%
cse002 Edinburgh Last Trade: never Usage: 312282.8 of 304793.0 PEHour MPP PE CPU (7550.6 of 7369.5 G.S.T), 102.5% 38.5 of 51.0 GByteYear HP Disk (298.4 of 394.9 G.S.T), 75.6% 0.0 of 2800.0 Hour SMP CPU (0.0 of 108.8 G.S.T), 0.0% 11.2 of 46.5 GByteYear MP Disk (48.0 of 199.5 G.S.T), 24.1% 0.0 of 2.8 GByteYear HSM/Tape (0.0 of 1.8 G.S.T), 0.0% Total usage for subproject cse002i 7897.0 of 8074.4 Generic Service Tokens, 97.8%
cse002 Kent (UKC) Last Trade: never Usage: 221395.9 of 219888.0 PEHour MPP PE CPU (5353.1 of 5316.6 G.S.T), 100.7% 64.8 of 100.0 GByteYear HP Disk (501.9 of 774.2 G.S.T), 64.8% 0.0 of 2350.0 Hour SMP CPU (0.0 of 91.3 G.S.T), 0.0% 11.1 of 33.6 GByteYear MP Disk (47.8 of 144.1 G.S.T), 33.1% 27.9 of 100.0 GByteYear HSM/Tape (17.4 of 62.3 G.S.T), 27.9% 109990.4 of 127604.0 Hour Green CPU (5747.2 of 6667.6 G.S.T), 86.2% Total usage for subproject cse002j 11667.3 of 13056.2 Generic Service Tokens, 89.4%
cse002 Durham Last Trade: never Usage: 51675.4 of 90000.0 PEHour MPP PE CPU (1249.4 of 2176.1 G.S.T), 57.4% 15.9 of 45.0 GByteYear HP Disk (122.8 of 348.4 G.S.T), 35.3% 0.0 of 3000.0 Hour SMP CPU (0.0 of 116.6 G.S.T), 0.0% 8.9 of 45.0 GByteYear MP Disk (38.3 of 193.0 G.S.T), 19.8% Total usage for subproject cse002k 1410.5 of 2834.1 Generic Service Tokens, 49.8%
cse002 York Last Trade: never Usage: 0.0 of 50000.0 PEHour MPP PE CPU (0.0 of 1208.9 G.S.T), 0.0% 1.8 of 5.0 GByteYear HP Disk (13.6 of 38.7 G.S.T), 35.2% 0.0 of 2500.0 Hour SMP CPU (0.0 of 97.1 G.S.T), 0.0% 14.1 of 30.0 GByteYear MP Disk (60.6 of 128.7 G.S.T), 47.1% Total usage for subproject cse002l 74.3 of 1473.5 Generic Service Tokens, 5.0%

cse009 GR/20607 Catlow Last Trade: re-enabled Usage: 1367978.6 of 1846749.2 PEHour MPP PE CPU (33076.0 of 44652.0 G.S.T), 74.1% 163.3 of 712.2 GByteYear HP Disk (1264.6 of 5514.0 G.S.T), 22.9% 25241.0 of 49491.7 Hour SMP CPU (980.7 of 1922.8 G.S.T), 51.0% 20.9 of 646.7 GByteYear MP Disk (89.8 of 2774.2 G.S.T), 3.2% 0.0 of 714.9 GBvteYear HSM/Tape (0.0 of 445.7 G.S.T), 0.0% 81014.1 of 191719.6 Hour Green CPU (4233.2 of 10017.7 G.S.T), 42.3% 9.0 of 25.5 PersonDay Support (250.0 of 708.3 G.S.T), 35.3% 0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0% Total usage for project cse009 39894.2 of 66142.4 Generic Service Tokens, 60.3% cse013 GR/M50539 Leschziner Last Trade: re-enabled Usage: 1264320.7 of 4737760.0 PEHour MPP PE CPU (30569.7 of 114553.0 G.S.T), 26.7% 27.7 of 195.8 GByteYear HP Disk (214.3 of 1516.3 G.S.T), 14.1% 14144.0 of 29364.5 Hour SMP CPU (549.5 of 1140.9 G.S.T), 48.2% 11.0 of 308.0 GByteYear MP Disk (47.4 of 1321.2 G.S.T), 3.6% 26.0 of 504.0 GByteYear HSM/Tape (16.2 of 314.2 G.S.T), 5.2% 12063.2 of 27763.9 Hour Green CPU (630.3 of 1450.7 G.S.T), 43.4% 0.0 of 9.0 PersonDay Support (0.0 of 250.0 G.S.T), 0.0% 4.0 of 57.5 Day Training (43.0 of 618.3 G.S.T), 7.0% Total usage for project cse013 32070.5 of 121164.6 Generic Service Tokens, 26.5% cse013 - ICL Last Trade: never Usage: 104084.3 of 200000.0 PEHour MPP PE CPU (2516.6 of 4835.7 G.S.T), 52.0% 1.5 of 2.0 GByteYear HP Disk (11.6 of 15.5 G.S.T), 75.2% 366.3 of 500.0 Hour SMP CPU (14.2 of 19.4 G.S.T), 73.3% 0.1 of 5.0 GByteYear MP Disk (0.4 of 21.4 G.S.T), 2.0% 0.0 of 2.0 GByteYear HSM/Tape (0.0 of 1.2 G.S.T), 0.0% Total usage for subproject cse013a 2542.9 of 4893.3 Generic Service Tokens, 52.0% cse013 - Loughborough Last Trade: never Usage: 591846.4 of 700000.0 PEHour MPP PE CPU (14310.1 of 16925.1 G.S.T), 84.5% 6.2 of 8.0 GByteYear HP Disk (48.2 of 61.9 G.S.T), 77.9% 8277.4 of 12000.0 Hour SMP CPU (321.6 of 466.2 G.S.T). 69.0% 1.8 of 15.0 GByteYear MP Disk (7.9 of 64.3 G.S.T), 12.3% 0.0 of 5.0 GByteYear HSM/Tape (0.0 of 3.1 G.S.T), 0.0% 4449.5 of 7000.0 Hour Green CPU (232.5 of 365.8 G.S.T), 63.6% Total usage for subproject cse013b 14920.3 of 17886.5 Generic Service Tokens, 83.4%

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cse013 - Surrey Last Trade: never Usage: 39749.8 of 80000.0 PEHour MPP PE CPU (961.1 of 1934.3 G.S.T), 49.7% 5.1 of 8.0 GByteYear HP Disk (39.3 of 61.9 G.S.T), 63.5% 22.9 of 1800.0 Hour SMP CPU (0.9 of 69.9 G.S.T), 1.3% 1.0 of 15.0 GByteYear MP Disk (4.5 of 64.3 G.S.T), 7.0% 0.0 of 5.0 GByteYear HSM/Tape (0.0 of 3.1 G.S.T), 0.0% 1055.0 of 4700.0 Hour Green CPU (55.1 of 245.6 G.S.T), 22.4% Total usage for subproject cse013c 1061.0 of 2379.2 Generic Service Tokens, 44.6%
cse013 - QMW Last Trade: never Usage: 528640.3 of 600000.0 PEHour MPP PE CPU (12781.8 of 14507.2 G.S.T), 88.1% 8.9 of 10.0 GByteYear HP Disk (69.2 of 77.4 G.S.T), 89.3% 1144.0 of 1800.0 Hour SMP CPU (44.4 of 69.9 G.S.T), 63.6% 2.8 of 15.0 GByteYear MP Disk (12.1 of 64.3 G.S.T), 18.9% 26.0 of 30.0 GByteYear HSM/Tape (16.2 of 18.7 G.S.T), 86.8% Total usage for subproject cse013d 12923.8 of 14737.6 Generic Service Tokens, 87.7%
cse030 GR/M56234 Cates Last Trade: Mon Jul 29 10:41:21 2002 Usage: 302608.6 of 372167.4 PEHour MPP PE CPU (7316.7 of 8998.5 G.S.T), 81.3% 385.8 of 490.2 GByteYear HP Disk (2987.3 of 3795.4 G.S.T), 78.7% 14153.2 of 26763.1 Hour SMP CPU (549.9 of 1039.8 G.S.T), 52.9% 478.1 of 695.7 GByteYear MP Disk (2050.8 of 2984.1 G.S.T), 68.7% 576.5 of 903.5 GByteYear HSM/Tape (359.4 of 563.3 G.S.T), 63.8% 37351.3 of 70852.1 Hour Green CPU (1951.7 of 3702.2 G.S.T), 52.7% 51.0 of 58.0 PersonDay Support (1416.7 of 1611.1 G.S.T), 87.9% 7.0 of 9.0 Day Training (75.3 of 96.8 G.S.T), 77.8% Total usage for project cse030 16707.6 of 22791.2 Generic Service Tokens, 73.3%
cse030 Edinburgh Last Trade: never Usage: 101027.7 of 147480.0 PEHour MPP PE CPU (2442.7 of 3565.9 G.S.T), 68.5% 190.5 of 234.4 GByteYear HP Disk (1474.9 of 1814.7 G.S.T), 81.3% 2920.1 of 6000.0 Hour SMP CPU (113.5 of 233.1 G.S.T), 48.7% 91.6 of 120.0 GByteYear MP Disk (392.8 of 514.8 G.S.T), 76.3% 390.8 of 576.3 GByteYear HSM/Tape (243.6 of 359.3 G.S.T), 67.8% 0.0 of 15000.0 Hour Green CPU (0.0 of 783.8 G.S.T), 0.0% Total usage for subproject cse030a 4667.5 of 7271.5 Generic Service Tokens, 64.2%

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cse030 QMW Last Trade: never Usage: 171932.5 of 181480.0 PEHour MPP PE CPU (4157.1 of 4388.0 G.S.T), 94.7% 169.5 of 215.0 GByteYear HP Disk (1312.5 of 1664.6 G.S.T), 78.8% 1649.8 of 8700.0 Hour SMP CPU (64.1 of 338.0 G.S.T), 19.0% 360.8 of 486.0 GByteYear MP Disk (1547.7 of 2084.8 G.S.T), 74.2% 138.5 of 280.0 GByteYear HSM/Tape (86.3 of 174.6 G.S.T), 49.5% 0.0 of 32000.0 Hour Green CPU (0.0 of 1672.1 G.S.T), 0.0% Total usage for subproject cse030b 7167.7 of 10322.0 Generic Service Tokens, 69.4%	
cse030 Oxford Last Trade: never Usage: 18310.7 of 18310.7 PEHour MPP PE CPU (442.7 of 442.7 G.S.T), 100.0% 1.1 of 5.0 GByteYear HP Disk (8.6 of 38.7 G.S.T), 22.2% 0.0 of 1000.0 Hour SMP CPU (0.0 of 38.9 G.S.T), 0.0% 6.8 of 15.0 GByteYear MP Disk (29.3 of 64.3 G.S.T), 45.5% 0.0 of 0.0 GByteYear MSM/Tape (0.0 of 0.0 G.S.T) 0.0 of 5000.0 Hour Green CPU (0.0 of 261.3 G.S.T), 0.0% Total usage for subproject cse030c 480.6 of 845.9 Generic Service Tokens, 56.8%	
cse030 Bristol Last Trade: never Usage: 0.0 of 1000.0 PEHour MPP PE CPU (0.0 of 24.2 G.S.T), 0.0% 10.4 of 12.0 GByteYear HP Disk (80.5 of 92.9 G.S.T), 86.6% 0.0 of 500.0 Hour SMP CPU (0.0 of 19.4 G.S.T), 0.0% 11.5 of 20.0 GByteYear MP Disk (49.3 of 85.8 G.S.T), 57.5% 0.0 of 0.0 GByteYear HSM/Tape (0.0 of 0.0 G.S.T) Total usage for subproject cse030d 129.8 of 222.3 Generic Service Tokens, 58.4%	
cse030 Leeds Last Trade: never Usage: 0.0 of 0.0 PEHour MPP PE CPU (0.0 of 0.0 G.S.T) 0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T) 0.0 of 0.0 Hour SMP CPU (0.0 of 0.0 G.S.T) 0.0 of 0.0 GByteYear MP Disk (0.0 of 0.0 G.S.T) 0.0 of 0.0 GByteYear MP Disk (0.0 of 0.0 G.S.T) Total usage for subproject cse030e 0.0 of 0.0 Generic Service Tokens, 0.0%	
cse030 Cambridge Last Trade: never Usage: 0.0 of 0.0 PEHour MPP PE CPU (0.0 of 0.0 G.S.T) 0.0 of 0.0 GByteYear HP Disk (0.0 of 0.0 G.S.T) 0.0 of 1000.0 Hour SMP CPU (0.0 of 38.9 G.S.T), 0.0% 0.0 of 8.0 GByteYear MP Disk (0.0 of 34.3 G.S.T), 0.0% 0.0 of 0.0 GByteYear HSM/Tape (0.0 of 0.0 G.S.T) 0.0 of 5000.0 Hour Green CPU (0.0 of 261.3 G.S.T), 0.0% Total usage for subproject cse030f 0.0 of 334.4 Generic Service Tokens, 0.0%	

cse030 Sheffield Hallam Last Trade: never Usage: 8896.1 of 15896.7 PEHour MPP PE CPU (215.1 of 384.4 G.S.T), 56.0% 3.0 of 12.5 GByteYear HP Disk (23.1 of 96.8 G.S.T), 23.9% 0.0 of 1800.0 Hour SMP CPU (0.0 of 69.9 G.S.T), 0.0% 2.5 of 15.0 GByteYear MP Disk (10.8 of 64.3 G.S.T), 16.7% 0.0 of 0.0 GByteYear HSM/Tape (0.0 of 0.0 G.S.T) 0.0 of 2500.0 Hour Green CPU (0.0 of 130.6 G.S.T), 0.0% Total usage for subproject cse030g 248.9 of 746.0 Generic Service Tokens, 33.4%
cse035 GR/M76720 King Last Trade: Fri Feb 2 16:20:49 2001 Usage: 418580.3 of 425689.3 PEHour MPP PE CPU (10120.7 of 10292.6 G.S.T), 98.3% 17.9 of 18.0 GByteYear HP Disk (138.3 of 139.4 G.S.T), 99.3% 0.0 of 0.3 Hour SMP CPU (0.0 of 0.0 G.S.T), 6.0% 0.0 of 0.6 GByteYear MP Disk (0.1 of 2.4 G.S.T), 2.3% 14.4 of 26.0 GByteYear HSM/Tape (9.0 of 16.2 G.S.T), 55.3% Total usage for project cse035 10268.1 of 10450.6 Generic Service Tokens, 98.3%
cse036 GR/M78502 Duff Last Trade: re-enabled Usage: 11.6 of 617.1 PEHour MPP PE CPU (0.3 of 14.9 G.S.T), 1.9% 0.6 of 3.0 GByteYear HP Disk (4.4 of 23.2 G.S.T), 18.9% 84.5 of 399.9 Hour SMP CPU (3.3 of 15.5 G.S.T), 21.1% 0.3 of 3.0 GByteYear MP Disk (1.4 of 12.9 G.S.T), 11.0% Total usage for project cse036 9.4 of 66.6 Generic Service Tokens, 14.1%
cse040 GR/M84350 Badcock Last Trade: re-enabled Usage: 12.7 of 5000.0 PEHour MPP PE CPU (0.3 of 120.9 G.S.T), 0.3% 0.1 of 6.0 GByteYear HP Disk (0.5 of 46.5 G.S.T), 1.0% 1.2 of 6.8 GByteYear MP Disk (5.3 of 29.3 G.S.T), 18.0% 0.0 of 2.5 PersonDay Support (0.0 of 68.2 G.S.T), 0.0% 0.0 of 6.3 Day Training (0.0 of 68.1 G.S.T), 0.0% Total usage for project cse040 6.1 of 333.0 Generic Service Tokens, 1.8%
cse041 GR/M84879 Imregun Last Trade: re-enabled Usage: 588.6 of 12981.4 PEHour MPP PE CPU (14.2 of 313.9 G.S.T), 4.5% 1.0 of 119.7 GByteYear HP Disk (8.0 of 926.6 G.S.T), 0.9% 1251.7 of 4531.4 Hour SMP CPU (48.6 of 176.1 G.S.T), 27.6% 0.7 of 123.5 GByteYear MP Disk (2.9 of 529.6 G.S.T), 0.5% 76.2 of 230.3 GByteYear HSM/Tape (47.5 of 143.6 G.S.T), 33.1% 0.0 of 60.0 PersonDay Support (0.0 of 1666.7 G.S.T), 0.0% 0.0 of 5.0 Day Training (0.0 of 53.8 G.S.T), 0.0% Total usage for project cse041 121.3 of 3810.1 Generic Service Tokens, 3.2%

cse043 GR/M85241 Williams Last Trade: re-enabled Usage: 137997.7 of 150010.0 PEHour MPP PE CPU (3336.6 of 3627.0 G.S.T), 92.0% 1.3 of 10.0 GByteYear HP Disk (10.3 of 77.4 G.S.T), 13.2% 0.0 of 6.2 Hour SMP CPU (0.0 of 0.2 G.S.T), 0.2% 1.9 of 4.8 GByteYear MP Disk (8.2 of 20.8 G.S.T), 39.2% 0.5 of 28.8 GByteYear HSM/Tape (0.3 of 17.9 G.S.T), 1.8% 2.0 of 2.0 PersonDay Support (55.6 of 55.6 G.S.T), 100.0% 4.0 of 4.0 Day Training (43.0 of 43.0 G.S.T), 100.1% Total usage for project cse043 3453.9 of 3841.9 Generic Service Tokens, 89.9%
cse050 GR/N/38152 Bradley Last Trade: Fri Jul 27 09:18:59 2001 Usage: 0.0 of 104742.3 PEHour MPP PE CPU (0.0 of 2532.5 G.S.T), 0.0% 0.0 of 11.0 GByteYear HP Disk (0.0 of 85.2 G.S.T), 0.0% 0.0 of 1300.0 Hour SMP CPU (0.0 of 50.5 G.S.T), 0.0% 0.0 of 4.5 GByteYear HSM/Tape (0.0 of 2.8 G.S.T), 0.0% 0.0 of 20.0 PersonDay Support (0.0 of 555.6 G.S.T), 0.0% 0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0% Total usage for project cse050 0.0 of 3334.1 Generic Service Tokens, 0.0%
cse052 GR/N17683 Hayes Last Trade: Thu Jul 11 14:48:48 2002 Usage: 213094.6 of 286423.0 PEHour MPP PE CPU (5152.4 of 6925.3 G.S.T), 74.4% 3.2 of 9.1 GByteYear HP Disk (24.6 of 70.8 G.S.T), 34.7% 0.0 of 600.0 Hour SMP CPU (0.0 of 23.3 G.S.T), 0.0% 0.0 of 8.5 GByteYear MP Disk (0.0 of 36.5 G.S.T), 0.0% 0.0 of 3.0 GByteYear HSM/Tape (0.0 of 1.9 G.S.T), 0.0% 0.0 of 10.0 PersonDay Support (0.0 of 277.8 G.S.T), 0.0% 0.0 of 25.0 Day Training (0.0 of 268.8 G.S.T), 0.0% Total usage for project cse052 5176.9 of 7604.4 Generic Service Tokens, 68.1%
cse053 GR/R04225 Leschziner Last Trade: Mon Oct 15 12:52:06 2001 Usage: 20321.7 of 319557.6 PEHour MPP PE CPU (491.4 of 7726.5 G.S.T), 6.4% 1.1 of 115.0 GByteYear HP Disk (8.3 of 890.4 G.S.T), 0.9% 73.9 of 14000.0 Hour SMP CPU (2.9 of 543.9 G.S.T), 0.5% 0.7 of 85.0 GByteYear MP Disk (2.9 of 364.6 G.S.T), 0.8% 0.0 of 100.0 GByteYear HSM/Tape (0.0 of 62.3 G.S.T), 0.0% 608.9 of 1850.9 Hour Green CPU (31.8 of 96.7 G.S.T), 32.9% 0.0 of 15.0 PersonDay Support (0.0 of 416.7 G.S.T), 0.0% 0.0 of 8.0 Day Training (0.0 of 86.0 G.S.T), 0.0% Total usage for project cse053 537.2 of 10187.1 Generic Service Tokens, 5.3%

cse055 GR/N66810 Staunton Last Trade: Mon Aug 6 09:05:54 2001 Usage: 8840.4 of 24604.0 PEHour MPP PE CPU (213.7 of 594.9 G.S.T), 35.9% 1.1 of 2.5 GByteYear HP Disk (8.2 of 19.4 G.S.T), 42.4% 0.0 of 3.1 Hour SMP CPU (0.0 of 0.1 G.S.T), 0.0% 0.0 of 5.0 PersonDay Support (0.0 of 138.9 G.S.T), 0.0% 0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0% Total usage for project cse055 222.0 of 860.8 Generic Service Tokens, 25.8% cse056 GR/N24773 Imregun Last Trade: Thu May 23 16:11:57 2002 Usage: 0.0 of 100.2 PEHour MPP PE CPU (0.0 of 2.4 G.S.T), 0.0% 0.0 of 40.0 GByteYear HP Disk (0.0 of 309.6 G.S.T), 0.0% 346.7 of 33774.1 Hour SMP CPU (13.5 of 1312.2 G.S.T), 1.0% 0.3 of 2.7 GByteYear MP Disk (1.3 of 11.7 G.S.T), 10.8% 0.0 of 5.0 PersonDay Support (0.0 of 138.9 G.S.T), 0.0% 0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0% Total usage for project cse056 14.7 of 1882.4 Generic Service Tokens, 0.8% cse057 GR/R23909 Krushelnick Last Trade: Fri Sep 7 11:39:20 2001 Usage: 2310.0 of 86751.6 PEHour MPP PE CPU (55.9 of 2097.5 G.S.T). 2.7% 0.4 of 30.0 GByteYear HP Disk (3.0 of 232.3 G.S.T), 1.3% 1.7 of 62.2 Hour SMP CPU (0.1 of 2.4 G.S.T), 2.7% 0.5 of 462.7 Hour Green CPU (0.0 of 24.2 G.S.T), 0.1% 0.0 of 20.0 PersonDay Support (0.0 of 555.6 G.S.T), 0.0% 0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0% Total usage for project cse057 58.9 of 3019.5 Generic Service Tokens, 2.0% cse063 GR/R46151 Sandham Last Trade: Tue Dec 11 09:17:13 2001 Usage: 13513.4 of 404163.7 PEHour MPP PE CPU (326.7 of 9772.2 G.S.T), 3.3% 6.9 of 100.0 GByteYear HP Disk (53.7 of 774.2 G.S.T), 6.9% 0.4 of 0.6 Hour SMP CPU (0.0 of 0.0 G.S.T), 57.5% 0.0 of 50.0 GByteYear MP Disk (0.0 of 214.5 G.S.T), 0.0% 1.5 of 525.0 GByteYear HSM/Tape (0.9 of 327.3 G.S.T), 0.3% 0.0 of 30.0 PersonDay Support (0.0 of 833.3 G.S.T), 0.0% 0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0% Total usage for project cse063 381.3 of 12029.1 Generic Service Tokens, 3.2% cse064 GR/R43570 Leschziner Last Trade: Mon Jan 21 16:36:28 2002 Usage: 3339.8 of 165039.1 PEHour MPP PE CPU (80.8 of 3990.4 G.S.T), 2.0% 0.1 of 35.0 GByteYear HP Disk (1.1 of 271.0 G.S.T), 0.4% 5.6 of 22000.0 Hour SMP CPU (0.2 of 854.7 G.S.T), 0.0% 0.0 of 33.0 GByteYear MP Disk (0.0 of 141.6 G.S.T), 0.0% 0.0 of 4.0 GByteYear HSM/Tape (0.0 of 2.5 G.S.T), 0.0% 0.0 of 10.0 PersonDay Support (0.0 of 277.8 G.S.T), 0.0% 2.0 of 8.0 Day Training (21.5 of 86.0 G.S.T), 25.0% Total usage for project cse064 103.6 of 5624.0 Generic Service Tokens, 1.8% cse066 GR/R30907 Coveney Last Trade: Mon Sep 3 10:18:08 2001 Usage: 48350.4 of 87981.1 PEHour MPP PE CPU (1169.1 of 2127.3 G.S.T), 55.0% 6.5 of 90.0 GByteYear HP Disk (50.1 of 696.8 G.S.T), 7.2% 2329.5 of 15000.0 Hour SMP CPU (90.5 of 582.8 G.S.T), 15.5% 7.8 of 18.0 GByteYear MP Disk (33.4 of 77.4 G.S.T), 43.2% 10557.3 of 64652.8 Hour Green CPU (551.6 of 3378.2 G.S.T), 16.3% 0.0 of 21.0 PersonDay Support (0.0 of 583.3 G.S.T), 0.0% 3.0 of 6.0 Day Training (32.3 of 64.5 G.S.T), 50.0% Total usage for project cse066 1927.0 of 7510.4 Generic Service Tokens, 25.7% cse071 GR/R23657 lacovides Last Trade: Fri Oct 5 16:21:54 2001 Usage: 0.0 of 3729.7 Hour VPP CPU (0.0 of 4094.1 G.S.T), 0.0% 0.0 of 20.0 GByteYear Fuji Disk (0.0 of 85.8 G.S.T), 0.0% 0.0 of 5.0 PersonDay Support (0.0 of 138.9 G.S.T), 0.0% 0.0 of 6.0 Day Training (0.0 of 64.5 G.S.T), 0.0% Total usage for project cse071 0.0 of 4383.3 Generic Service Tokens, 0.0% cse072 GR/R66692 Karlin Last Trade: Fri Feb 8 16:42:38 2002 Usage: 0.0 of 160329.2 PEHour MPP PE CPU (0.0 of 3876.6 G.S.T), 0.0% 0.0 of 3.0 GByteYear HP Disk (0.0 of 23.2 G.S.T), 0.0% 0.0 of 183.0 Hour SMP CPU (0.0 of 7.1 G.S.T), 0.0% 0.0 of 24.0 GByteYear MP Disk (0.0 of 103.0 G.S.T), 0.0% 0.0 of 84.0 GByteYear HSM/Tape (0.0 of 52.4 G.S.T), 0.0% 0.0 of 120.0 Hour VPP CPU (0.0 of 131.7 G.S.T), 0.0% 0.0 of 1.0 GByteYear Fuji Disk (0.0 of 4.3 G.S.T), 0.0% 0.0 of 18.0 PersonDay Support (0.0 of 500.0 G.S.T), 0.0% 0.0 of 9.0 Day Training (0.0 of 96.8 G.S.T). 0.0% Total usage for project cse072 0.0 of 4795.0 Generic Service Tokens, 0.0%

cse074 GR/R66197 Luo Last Trade: Wed Jan 2 15:22:45 2002 Usage: 0.0 of 15370.1 PEHour MPP PE CPU (0.0 of 371.6 G.S.T), 0.0% 0.0 of 6.0 GByteYear HP Disk (0.0 of 46.5 G.S.T), 0.0% 0.0 of 600.0 Hour SMP CPU (0.0 of 23.3 G.S.T), 0.0% 0.0 of 9.0 GByteYear MP Disk (0.0 of 38.6 G.S.T), 0.0% Total usage for project cse074 0.0 of 480.0 Generic Service Tokens, 0.0% cse075 GR/R59540 Coveney Last Trade: Tue May 21 10:59:31 2002 Usage: 0.0 of 421953.5 PEHour MPP PE CPU (0.0 of 10202.3 G.S.T), 0.0% 0.1 of 217.0 GByteYear HP Disk (0.9 of 1679.9 G.S.T), 0.1% 467.0 of 9999.8 Hour SMP CPU (18.1 of 388.5 G.S.T), 4.7% 3.4 of 150.0 GByteYear MP Disk (14.6 of 643.4 G.S.T), 2.3% 3765.6 of 300000.0 Hour Green CPU (196.8 of 15675.6 G.S.T), 1.3% 0.0 of 34.0 PersonDay Support (0.0 of 944.4 G.S.T), 0.0% 0.0 of 14.0 Day Training (0.0 of 150.5 G.S.T), 0.0% Total usage for project cse075 230.3 of 29684.7 Generic Service Tokens, 0.8% cse076 GR/R66975 Briddon Last Trade: re-enabled Usage: 8151.5 of 4161.1 PEHour MPP PE CPU (197.1 of 100.6 G.S.T), 195.9% 0.5 of 1.3 GByteYear HP Disk (3.6 of 10.5 G.S.T), 34.3% 241045.1 of 257593.3 Hour SMP CPU (9365.0 of 10007.9 G.S.T), 93.6% 2.9 of 27.2 GBvteYear MP Disk (12.4 of 116.6 G.S.T). 10.6% 213515.1 of 260197.5 Hour Green CPU (11156.6 of 13595.9 G.S.T), 82.1% 11.0 of 20.0 PersonDay Support (305.6 of 555.6 G.S.T), 55.0% Total usage for project cse076 21040.2 of 24387.0 Generic Service Tokens, 86.3% cse084 GR/R47066 Needs Last Trade: Mon May 20 12:41:44 2002 Usage: 133314.8 of 306225.8 PEHour MPP PE CPU (3223.4 of 7404.1 G.S.T), 43.5% 9.9 of 270.0 GByteYear HP Disk (76.6 of 2090.4 G.S.T), 3.7% 3453.3 of 14484.3 Hour SMP CPU (134.2 of 562.7 G.S.T), 23.8% 9.5 of 75.6 GByteYear MP Disk (40.6 of 324.4 G.S.T), 12.5% 60419.0 of 78955.4 Hour Green CPU (3157.0 of 4125.6 G.S.T), 76.5% 0.0 of 19.0 PersonDay Support (0.0 of 527.8 G.S.T), 0.0% 0.0 of 10.0 Day Training (0.0 of 107.5 G.S.T), 0.0% Total usage for project cse084 6631.8 of 15142.6 Generic Service Tokens, 43.8%

cse085 GR/R64957 Sandham Last Trade: Tue Dec 11 09:51:37 2001 Usage: 211267.3 of 1388400.0 PEHour MPP PE CPU (5108.2 of 33569.7 G.S.T), 15.2% 115.1 of 650.0 GByteYear HP Disk (891.1 of 5032.5 G.S.T), 17.7% 1963.9 of 4045.2 Hour SMP CPU (76.3 of 157.2 G.S.T), 48.5% 83.2 of 750.0 GByteYear MP Disk (356.8 of 3217.2 G.S.T), 11.1% 654.3 of 1375.0 GByteYear HSM/Tape (407.9 of 857.2 G.S.T), 47.6% 100315.6 of 655628.0 Hour Green CPU (5241.7 of 34257.9 G.S.T), 15.3% 0.0 of 257.1 Hour VPP_CPU (0.0 of 282.3 G.S.T), 0.0% 0.0 of 0.6 GByteYear Fuji Disk (0.0 of 2.4 G.S.T), 0.0% 0.0 of 15.0 PersonDay Support (0.0 of 416.7 G.S.T), 0.0% 3.0 of 6.0 Day Training (32.3 of 64.5 G.S.T), 50.0% Total usage for project cse085 12114.2 of 77857.7 Generic Service Tokens, 15.6% cse086 GR/R83118 Taylor Last Trade: re-enabled Usage: 183748.6 of 330317.8 PEHour MPP PE CPU (4442.8 of 7986.7 G.S.T), 55.6% 13.8 of 34.4 GByteYear HP Disk (106.8 of 266.5 G.S.T), 40.1% 1625.7 of 6724.6 Hour SMP CPU (63.2 of 261.3 G.S.T), 24.2% 31.8 of 497.0 GByteYear MP Disk (136.5 of 2132.0 G.S.T), 6.4% 3.0 of 3750.0 GByteYear HSM/Tape (1.9 of 2337.9 G.S.T), 0.1% 50562.1 of 859900.0 Hour Green CPU (2642.0 of 44931.5 G.S.T), 5.9% 0.0 of 35.0 PersonDay Support (0.0 of 972.2 G.S.T), 0.0% 0.0 of 116.0 Day Training (0.0 of 1247.3 G.S.T), 0.0% Total usage for project cse086 7393.1 of 60135.4 Generic Service Tokens, 12.3% cse086a MP1 Last Trade: never Usage: 126923.9 of 175000.0 PEHour MPP PE CPU (3068.9 of 4231.3 G.S.T), 72.5% 1.3 of 4.0 GByteYear HP Disk (10.3 of 31.0 G.S.T), 33.3% 0.0 of 100.0 Hour SMP CPU (0.0 of 3.9 G.S.T), 0.0% 2.8 of 5.0 GByteYear MP Disk (11.9 of 21.4 G.S.T), 55.6% 0.0 of 10000.0 Hour Green CPU (0.0 of 522.5 G.S.T), 0.0% Total usage for subproject cse086a 3091.1 of 4810.1 Generic Service Tokens, 64.3% cse086b MP2 Last Trade: never Usage: 227.9 of 20000.0 PEHour MPP PE CPU (5.5 of 483.6 G.S.T), 1.1% 3.3 of 5.0 GByteYear HP Disk (25.4 of 38.7 G.S.T), 65.5% 24.3 of 100.0 Hour SMP CPU (0.9 of 3.9 G.S.T), 24.3% 2.1 of 5.0 GBvteYear MP Disk (9.1 of 21.4 G.S.T), 42.5% 49639.8 of 50000.0 Hour Green CPU (2593.8 of 2612.6 G.S.T), 99.3% Total usage for subproject cse086b 2634.7 of 3160.2 Generic Service Tokens, 83.4%

cse086d MP4 Last Trade: never Usage: 0.0 of 0.1 GByteYear HP Disk (0.1 of 0.8 G.S.T), 16.3% 0.0 of 0.1 GByteYear MP Disk (0.1 of 0.4 G.S.T), 15.7% Total usage for subproject cse086d 0.2 of 1.2 Generic Service Tokens, 16.1%
cse086e MP5 Last Trade: never Usage: 48.8 of 20000.0 PEHour MPP PE CPU (1.2 of 483.6 G.S.T), 0.2% 0.3 of 5.0 GByteYear HP Disk (2.5 of 38.7 G.S.T), 6.6% 393.7 of 1500.0 Hour SMP CPU (15.3 of 58.3 G.S.T), 26.2% 3.3 of 5.0 GByteYear MP Disk (14.3 of 21.4 G.S.T), 66.8% 545.6 of 10000.0 Hour Green CPU (28.5 of 522.5 G.S.T), 5.5% Total usage for subproject cse086e 61.9 of 1124.5 Generic Service Tokens, 5.5%
cse086f EC1 Last Trade: never Usage: 1.2 of 20000.0 PEHour MPP PE CPU (0.0 of 483.6 G.S.T), 0.0% 0.6 of 5.0 GByteYear HP Disk (4.5 of 38.7 G.S.T), 11.7% 3.4 of 700.0 Hour SMP CPU (0.1 of 27.2 G.S.T), 0.5% 3.5 of 5.0 GByteYear MP Disk (15.0 of 21.4 G.S.T), 69.7% 3.0 of 40.0 GByteYear HSM/Tape (1.9 of 24.9 G.S.T), 7.6% 0.0 of 10000.0 Hour Green CPU (0.0 of 522.5 G.S.T), 0.0% Total usage for subproject cse086f 21.5 of 1118.4 Generic Service Tokens, 1.9%
cse086g EC2 Last Trade: never Usage: 9.3 of 15000.0 PEHour MPP PE CPU (0.2 of 362.7 G.S.T), 0.1% 0.7 of 5.0 GByteYear HP Disk (5.1 of 38.7 G.S.T), 13.2% 10.1 of 2000.0 Hour SMP CPU (0.4 of 77.7 G.S.T), 0.5% 9.6 of 10.0 GByteYear MP Disk (41.3 of 42.9 G.S.T), 96.2% 376.7 of 10000.0 Hour Green CPU (19.7 of 522.5 G.S.T), 3.8% Total usage for subproject cse086g 66.6 of 1044.5 Generic Service Tokens, 6.4%
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% 1.2 of 5.0 GByteYear HP Disk (9.6 of 38.7 G.S.T), 24.8% 219.9 of 250.0 Hour SMP CPU (8.5 of 9.7 G.S.T), 87.9% 6.7 of 10.0 GByteYear MP Disk (28.9 of 42.9 G.S.T), 67.5% 0.0 of 10000.0 Hour Green CPU (0.0 of 522.5 G.S.T), 0.0% Total usage for subproject cse086h 1167.4 of 1822.8 Generic Service Tokens, 64.0%

cse086i EC4 Last Trade: never Usage: 0.0 of 0.1 GByteYear HP Disk (0.1 of 0.8 G.S.T), 15.7% 0.0 of 0.1 GByteYear MP Disk (0.1 of 0.4 G.S.T), 15.7% Total usage for subproject cse086i 0.2 of 1.2 Generic Service Tokens, 15.7%
cse086j BEC1 Last Trade: never Usage: 10202.5 of 15000.0 PEHour MPP PE CPU (246.7 of 362.7 G.S.T), 68.0% 0.2 of 3.0 GByteYear HP Disk (1.7 of 23.2 G.S.T), 7.4% 0.0 of 0.1 Hour SMP CPU (0.0 of 0.0 G.S.T), 0.2% 0.0 of 5.0 GByteYear MP Disk (0.2 of 21.4 G.S.T), 0.9% 0.0 of 1000.0 Hour Green CPU (0.0 of 52.3 G.S.T), 0.0% Total usage for subproject cse086j 248.6 of 459.6 Generic Service Tokens, 54.1%
cse086k BEC2 Last Trade: never Usage: 0.0 of 0.1 GByteYear HP Disk (0.1 of 0.8 G.S.T), 15.7% 974.3 of 2000.0 Hour SMP CPU (37.9 of 77.7 G.S.T), 48.7% 3.2 of 5.0 GByteYear MP Disk (13.5 of 21.4 G.S.T), 63.0% Total usage for subproject cse086k 51.5 of 99.9 Generic Service Tokens, 51.5%
cse089 GR/R85556 Wiercigroch Last Trade: Mon Jul 1 14:02:36 2002 Usage: 0.0 of 8242.8 PEHour MPP PE CPU (0.0 of 199.3 G.S.T), 0.0% 0.0 of 45.1 GByteYear HP Disk (0.0 of 348.8 G.S.T), 0.0% 0.0 of 15.0 PersonDay Support (0.0 of 416.7 G.S.T), 0.0% 0.0 of 7.0 Day Training (0.0 of 75.3 G.S.T), 0.0% Total usage for project cse089 0.0 of 1040.1 Generic Service Tokens, 0.0%
csehpcx - benchmarking Last Trade: Fri Jun 7 14:46:11 2002 Usage: 2615.3 of 200743.4 PEHour MPP PE CPU (63.2 of 4853.7 G.S.T), 1.3% 1.8 of 18.9 GByteYear HP Disk (13.8 of 146.3 G.S.T), 9.4% Total usage for project csehpcx 77.0 of 5000.0 Generic Service Tokens, 1.5%

csn001 Webb & GST/02/2846 Killworth & T/S/2001/00187 New Last Trade: Fri Jun 21 10:06:46 2002 Usage: 403659.9 of 450058.5 PEHour MPP PE CPU (9760.0 of 10881.8 G.S.T), 89.7% 263.7 of 420.3 GByteYear HP Disk (2041.9 of 3253.8 G.S.T), 62.8% 54005.4 of 65706.0 Hour SMP CPU (2098.2 of 2552.8 G.S.T), 82.2% 262.3 of 702.2 GByteYear MP Disk (1125.1 of 3012.0 G.S.T), 37.4% 9582.3 of 15221.7 GByteYear HSM/Tape (5974.0 of 9489.8 G.S.T), 63.0% 576475.5 of 753681.3 Hour Green CPU (30122.0 of 39381.4 G.S.T), 76.5% 621.6 of 838.8 Hour VPP_CPU (682.3 of 920.8 G.S.T), 74.1% 2.4 of 6.3 GByteYear Fuji Disk (10.5 of 27.1 G.S.T), 38.7% 41.0 of 44.0 PersonDay Support (1138.9 of 1221.2 G.S.T), 93.3% 3.0 of 15.3 Day Training (32.3 of 164.4 G.S.T), 19.6% Total usage for project csn001 52985.2 of 70905.2 Generic Service Tokens, 74.7% csn003 UGAMP O'Neill Last Trade: re-enabled Usage: 3461817.3 of 3860564.3 PEHour MPP PE CPU (83702.3 of 93343.5 G.S.T), 89.7% 69.8 of 113.9 GByteYear HP Disk (540.7 of 881.6 G.S.T), 61.3% 18758.8 of 23508.7 Hour SMP CPU (728.8 of 913.3 G.S.T), 79.8% 61.0 of 93.8 GByteYear MP Disk (261.6 of 402.3 G.S.T), 65.0% 30196.9 of 31555.2 GByteYear HSM/Tape (18826.0 of 19672.8 G.S.T), 95.7% 75211.0 of 262133.3 Hour Green CPU (3929.9 of 13697.0 G.S.T), 28.7% 67583.8 of 88908.6 Hour VPP CPU (74186.4 of 97594.5 G.S.T), 76.0% 341.4 of 442.9 GBvteYear Fuii Disk (1464.5 of 1900.0 G.S.T), 77.1% 0.0 of 3.0 Hour Compag EV67 CPU (0.0 of 1.1 G.S.T), 0.0% 0.0 of 1.7 GByteYear Compag Disk (0.0 of 7.1 G.S.T), 0.0% 0.0 of 0.0 PersonDay Support (0.0 of 0.0 G.S.T) 4.0 of 4.0 Day Training (43.0 of 43.0 G.S.T), 100.0% Total usage for project csn003 183683.3 of 228456.2 Generic Service Tokens, 80.4% csn006 GR9/3550 Price Last Trade: Wed May 15 10:02:01 2002 Usage: 1493810.8 of 1674524.0 PEHour MPP PE CPU (36118.4 of 40487.8 G.S.T), 89.2% 119.5 of 192.2 GByteYear HP Disk (925.0 of 1488.4 G.S.T), 62.2% 70305.4 of 72226.1 Hour SMP CPU (2731.5 of 2806.1 G.S.T), 97.3% 23.9 of 85.5 GByteYear MP Disk (102.6 of 366.8 G.S.T), 28.0% 2.0 of 20.3 GByteYear HSM/Tape (1.3 of 12.6 G.S.T), 10.1% 173708.8 of 369394.9 Hour Green CPU (9076.6 of 19301.6 G.S.T), 47.0% Total usage for project csn006 48955.5 of 64463.4 Generic Service Tokens, 75.9% csn012 NER/A/S/2000/01315 Tennyson Last Trade: re-enabled Usage: 0.0 of 1.2 GByteYear MP Disk (0.0 of 5.0 G.S.T), 0.3% 4395.6 of 4850.7 Hour VPP CPU (4825.0 of 5324.6 G.S.T), 90.6% 8.5 of 9.3 GByteYear Fuji Disk (36.5 of 40.0 G.S.T), 91.3% Total usage for project csn012 4861.6 of 5369.6 Generic Service Tokens, 90.5%

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csn013 GR3/12954 Voke Last Trade: re-enabled Usage: 925.3 of 1711.2 Hour VPP CPU (1015.7 of 1878.4 G.S.T), 54.1% 0.0 of 2.3 GByteYear Fuji Disk (0.0 of 9.9 G.S.T), 0.0% Total usage for project csn013 1015.7 of 1888.3 Generic Service Tokens, 53.8% csn014 GST/02/2785 Llewellyn-Jones Last Trade: re-enabled Usage: 0.0 of 658.3 PEHour MPP PE CPU (0.0 of 15.9 G.S.T), 0.0% 0.0 of 15.0 GByteYear HP Disk (0.0 of 116.1 G.S.T), 0.0% 0.0 of 12.9 Hour SMP CPU (0.0 of 0.5 G.S.T), 0.0% 0.0 of 5.0 GByteYear MP Disk (0.0 of 21.4 G.S.T), 0.0% Total usage for project csn014 0.0 of 154.0 Generic Service Tokens, 0.0% csn015 Proctor Last Trade: Fri May 17 12:17:47 2002 Usage: 246697.1 of 472776.0 PEHour MPP PE CPU (5964.8 of 11431.1 G.S.T), 52.2% 3.4 of 5.0 GByteYear HP Disk (26.0 of 38.7 G.S.T), 67.3% 693.9 of 1662.0 Hour SMP CPU (27.0 of 64.6 G.S.T), 41.8% 43.6 of 99.3 GByteYear MP Disk (187.1 of 425.8 G.S.T), 43.9% 1896.9 of 2450.1 GBvteYear HSM/Tape (1182.6 of 1527.5 G.S.T), 77.4% 96782.9 of 240788.5 Hour Green CPU (5057.1 of 12581.7 G.S.T), 40.2% 0.0 of 3451.8 Hour VPP CPU (0.0 of 3789.0 G.S.T), 0.0% 0.0 of 4.9 GByteYear Fuji Disk (0.0 of 21.0 G.S.T), 0.0% 2.0 of 10.0 PersonDay Support (55.6 of 277.8 G.S.T), 20.0% 3.0 of 7.0 Day Training (32.3 of 75.3 G.S.T), 42.9% Total usage for project csn015 12532.5 of 30232.5 Generic Service Tokens, 41.5% csn017 Payne GR3/12917 Last Trade: re-enabled Usage: 435.9 of 435.9 PEHour MPP PE CPU (10.5 of 10.5 G.S.T), 100.0% 0.3 of 0.2 GByteYear HP Disk (2.1 of 1.8 G.S.T), 114.9% 1478.2 of 2237.4 Hour SMP CPU (57.4 of 86.9 G.S.T), 66.1% 1.7 of 13.6 GByteYear MP Disk (7.3 of 58.4 G.S.T), 12.4% 201.7 of 2126.6 Hour Green CPU (10.5 of 111.1 G.S.T), 9.5% 0.0 of 16.0 PersonDay Support (0.0 of 444.4 G.S.T), 0.0% 2.0 of 18.0 Day Training (21.5 of 193.5 G.S.T), 11.1% Total usage for project csn017 109.3 of 906.7 Generic Service Tokens, 12.1%

csn036 NER/T/S/1999/00110 Haines Last Trade: Wed Jul 17 14:37:15 2002 Usage: 860.0 of 40737.1 PEHour MPP PE CPU (20.8 of 985.0 G.S.T), 2.1% 2.8 of 60.0 GByteYear HP Disk (21.4 of 464.5 G.S.T), 4.6% 419.3 of 25293.4 Hour SMP CPU (16.3 of 982.7 G.S.T), 1.7% 2.4 of 60.0 GByteYear MP Disk (10.1 of 257.4 G.S.T), 3.9% 371.1 of 990.9 GByteYear HSM/Tape (231.4 of 617.7 G.S.T), 37.5% 0.0 of 18509.3 Hour Green CPU (0.0 of 967.1 G.S.T), 0.0% 0.0 of 2.0 PersonDay Support (0.0 of 55.6 G.S.T), 0.0% 0.0 of 5.0 Day Training (0.0 of 53.8 G.S.T), 0.0% Total usage for project csn036 299.9 of 4383.8 Generic Service Tokens, 6.8%
csn044 Earth Observation Last Trade: Fri May 17 14:41:41 2002 Usage: 3144.6 of 8271.7 PEHour MPP PE CPU (76.0 of 200.0 G.S.T), 38.0% 0.0 of 5.0 GByteYear HP Disk (0.0 of 39.0 G.S.T), 0.0% 0.2 of 2173.9 Hour SMP CPU (0.0 of 84.5 G.S.T), 0.0% 0.0 of 5.0 GByteYear MP Disk (0.0 of 21.5 G.S.T), 0.0% 1.7 of 53.8 GByteYear HSM/Tape (1.1 of 33.5 G.S.T), 3.2% 0.0 of 91.1 Hour VPP_CPU (0.0 of 100.0 G.S.T), 0.0% 0.0 of 5.0 GByteYear Fuji Disk (0.0 of 21.5 G.S.T), 0.0% Total usage for project csn044 77.1 of 500.0 Generic Service Tokens, 15.4%
csp004 PPA/G/0/2000/00024 Bell Last Trade: Thu Mar 29 12:49:04 2001 Usage: 40726.6 of 86221.7 PEHour MPP PE CPU (984.7 of 2084.7 G.S.T), 47.2% 8.0 of 47.0 GByteYear HP Disk (62.1 of 363.9 G.S.T), 17.1% 36.7 of 4274.0 Hour SMP CPU (1.4 of 166.1 G.S.T), 0.9% 5.7 of 24.0 GByteYear MP Disk (24.5 of 103.0 G.S.T), 23.8% 0.0 of 7.0 PersonDay Support (0.0 of 194.4 G.S.T), 0.0% 0.0 of 8.0 Day Training (0.0 of 86.0 G.S.T), 0.0% Total usage for project csp004 1072.8 of 2998.1 Generic Service Tokens, 35.8%
csp006 PPA/G/S/2001/00050 Browning Last Trade: Fri Feb 15 17:02:18 2002 Usage: 65.8 of 800.0 Hour VPP_CPU (72.2 of 878.2 G.S.T), 8.2% 0.0 of 20.0 GByteYear Fuji Disk (0.0 of 85.8 G.S.T), 0.0% 0.0 of 12.0 Day Training (0.0 of 129.0 G.S.T), 0.0% Total usage for project csp006 72.2 of 1093.0 Generic Service Tokens, 6.6%
HPCI Daresbury Last Trade: re-enabled Usage: 34673.1 of 34482.9 PEHour MPP PE CPU (838.4 of 833.8 G.S.T), 100.6% 3.7 of 3.8 GByteYear HP Disk (28.4 of 29.6 G.S.T), 95.9% 4061.9 of 4120.4 Hour SMP CPU (157.8 of 160.1 G.S.T), 98.6% 1.8 of 1.7 GByteYear MP Disk (7.5 of 7.2 G.S.T), 104.4% 10817.5 of 10497.3 Hour Green CPU (565.2 of 548.5 G.S.T), 103.1% 1.0 of 1.0 Day Training (10.8 of 10.8 G.S.T), 99.7% Total usage for project hpcid 1608.0 of 1589.9 Generic Service Tokens, 101.1%

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HPCI Edinburgh Last Trade: Wed Jul 11 12:09:29 2001 Usage: 1591.2 of 4070.6 PEHour MPP PE CPU (38.5 of 98.4 G.S.T), 39.1% 3.6 of 4.7 GByteYear HP Disk (28.2 of 36.6 G.S.T), 77.1% 698.4 of 770.8 Hour SMP CPU (27.1 of 29.9 G.S.T), 90.6% 2.5 of 2.8 GByteYear MP Disk (10.9 of 12.0 G.S.T), 90.8% 1728.7 of 1739.8 Hour Green CPU (90.3 of 90.9 G.S.T), 99.4% Total usage for project hpcie 195.1 of 267.9 Generic Service Tokens, 72.8% **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 (245.7 of 244.8 G.S.T), 100.4% 37.8 of 1074.0 Hour SMP CPU (1.5 of 41.7 G.S.T), 3.5% 3.1 of 3.0 GByteYear MP Disk (13.4 of 12.8 G.S.T), 104.6% Total usage for project hpcis 278.4 of 440.2 Generic Service Tokens, 63.2% ukhec Last Trade: Thu Oct 18 17:45:15 2001

Usage:

Usage: 69.5 of 10000.0 PEHour MPP PE CPU (1.7 of 241.8 G.S.T), 0.7% 0.4 of 10.0 GByteYear HP Disk (2.7 of 77.4 G.S.T), 3.5% 0.0 of 10000.0 Hour SMP CPU (0.0 of 388.5 G.S.T), 0.0% 0.4 of 10.0 GByteYear MP Disk (1.5 of 42.9 G.S.T), 3.5% 0.0 of 5302.4 Hour Green CPU (0.0 of 277.1 G.S.T), 0.0% 0.0 of 750.0 Hour VPP_CPU (0.0 of 823.3 G.S.T), 0.0% 0.4 of 3.0 GByteYear Fuji Disk (1.5 of 12.9 G.S.T), 11.7% 2.0 of 2.0 Day Training (21.5 of 21.6 G.S.T), 99.7% Total usage for project ukhec 28.9 of 1885.4 Generic Service Tokens, 1.5%

Appendix 6

Code	PI	Subject	Subject Area
Cae002		Support for the LIKOD	Dhusias
	Dr Nicolas Harrison (Gillan)	Support for the UKCP	Physics
	Prof. Ken Taylor	HPC Consortiums 98- 2000	Physics
	Dr Neil Sandham	UK Turbulence	Engineering
	Dr Patrick Briddon	Covalently Bonded Materials	Materials
	Dr Matthew Foulkes	Quantum Many Body Theory	Physics
	Dr Mark Vincent (Hillier)	Model Chemical Reactivity	Chemistry
	Dr Ben Slater (Catlow)	HPC in Materials Chemistry	Chemistry
	Dr John Williams	Free Surface Flows	Engineering
	Dr John Williams	Open Channel Flood Plains	Engineering
	Dr David Aspley (Leschziner)	Complex Engineering Flows	Engineering
	Dr Cassiano de Oliverira (Goddard)	Probs in Nuclear Safety	Engineering
	Dr Stewart Cant	Turbulent Combustion	Engineering
	Dr Stewart Cant	Turbulent Flames	Engineering
Cse019	Dr Jason Lander (Berzins)	ROPA	Information Technology
Cse020	Dr Marek Szularz	Symmetric Eigenproblem	Information Technology
Cse021	Dr Julie Staunton	Magentisim	Physics
Cse022	Mr Niall Branley (Jones)	Turbulent Flames	Engineering
Cse023	Allen	Liquid Crystalline Materials	Robin Pinning
Cse024	Dr Robert Allan (Tennyson)	ChemReact 98-2000	Chemistry
Cse025	Dr Niels Rene Walet (Bishop)	Nuclear Theory Progamme	Physics
Cse026	Dr Maureen Neal	J90 move	
Cse027	Dr M Imregun	J90 move	
Cse028	Prof. P.W. Bearman	J90 move	
Cse029	Dr David Aspley (Leschziner)	J90 move	Engineering
Cse030	Prof M Cates	HPC for Complex Fluids	Physics
Cse031	Brebbia	J90 move	
Cse033	Dr M Imregun	Tubomachinery core compressor	Chemistry
Cse034	Dr Paul Durham	R&D of liner/non-linear systems	Mathematics
Csn001	Mrs Beverly de Cuevas (Webb)	HPCI Global Ocean Consortium	
Csn002	Dr Mark Vincent (Hillier)	Pollutant Sorption on Mineral Surf	
Csn003	Dr Lois Steenman-Clark (O'Neill)	UGAMP	
Csn005	Dr Huw Davies	Constraining Earth Mantle	
Csn006	Dr John Brodholt (Price)	Density Functional Methods	
Csn007	Dr John Brodholt (Price)	Density Functional Methods	
Csn008	Hulton	Sub-Glacial Process	
Csn009	Dr Roger Proctor		
Csn010	Dr Jason Lander (Mobbs)	Flow over Complex terrain	
Csn011	Dr Ed Dicks (Thorpe)	J90 move	
Csb001	Dr David Houldershaw (Goodfellow)	Macromolecular Interactions	
Csb002	Dr Adrian Mulholland (Danson)	Stability of Enzymes at high temp	
Csb003	Dr John Carling (Williams)	J90 move	
Css001	Dr Stan Openhaw	Human Systems Modelling	
Css002	Dr Robert Crouchley	Dropout in panel surveys	
	Dr Robert Allan		
	Dr David Henty	1	
Hpcis	Dr Denis Nicole	1	
	Dr Sudhir Jain	3D Ising Spin Glass	1
	Dr Ingrid Stairs (Lyne)	Millisecond Pulsars	
	Mr Tom Coulthard	Holocene Sediment Fluxes	1 1
	Dr A. Paul Watkins	Internal Combustion Engine	1 1
	Mr Sean Walsh	Arabidopsis Genome	
		· · ·	+
Cs2005	Prof. Walter Temmerman	Superconductivity & Magmetisim	
Cs2005 Cs2006	Prof. Walter Temmerman Choularton	Superconductivity & Magmetisim Precipitation in the Mountains	-
Cs2005 Cs2006 Cs2007	Prof. Walter Temmerman Choularton Dr Matthew Genge	Superconductivity & Magmetisim Precipitation in the Mountains Extraterrestrial Mineral Surfaces	