CSAR Service - Management Report

January 1999

This report documents the quality of the CSAR service during the month of January 1999.

A more comprehensive report will be provided quarterly, which will additionally cover wider aspects of the Service such as information on Training, Application Support and Value-Added services. The first quarterly report will be published in April 1999, as agreed by the CfS Management Board.

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

1. Introduction

This month has again seen a large volume of work through the system, with a wide spread of job sizes ranging from 1PE to 512PE jobs. The reliability of the system has improved this month resulting in only one period of unscheduled down time. This month has also seen more movement of Quality Tokens, which is covered in more detail in section 2.2 of this document.

This document gives information on Service Quality and on actual usage of the CSAR Service during the reporting period of January 1999. The information, in particular, covers the availability and usage of the following two main CSAR Service High Performance Computing (HPC) systems:

- Cray T3E-1200E/576 (Turing)
- SGi Origin2000/16 (Fermat).

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

2. Service Quality

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

2.1 CPARS

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

CSAR Service - Service Quality Report - Performance Targets

Service Quality Measure	Performance Targets					
	White	Blue	Green	Yellow	Orange	Red
HPC Services Availability						
Availability in Core Time (% of time)	> 99.9%	> 99.5%	> 99.2%	> 98.5%	> 95%	95% or less
Availability out of Core Time (% of time)	> 99.8%	> 99.5%	> 99.2%	> 98.5%	> 95%	95% or less
Number of Failures in month	0	1	2 to 3	4	5	> 5
Mean Time between failures in 52 week rolling period (hours)	>750	>500	>300	>200	>150	otherwise
Help Desk						
Non In-depth Queries - Maximum Time to resolve 50% of all queries (working days)	< 1/4	< 1/2	< 1	< 2	< 4	4 or more
Non In-depth Queries - Maximum Time to resolve 95% of all queries (working days)	< 1/2	< 1	< 2	< 3	< 5	5 or more
Administrative Queries - Maximum Time to resolve 95% of all queries (working days)	< 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 in month (working days)	< 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 scheduled 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 January 1st to 31st inclusive. Overall, the CPARS Performance Achievement was green (see Table 3), i.e. satisfactory.

CSAR Service - Service Quality Report - Actual Performance Achievement

Service Quality Measure	1998		1999						
	Nov.	Dec.	Jan	Feb	March	April	May	June	July
HPC Services Availability									
Availability in Core Time (% of time)	99.99%	97.20%	99.70%						
Availability out of Core Time (% of time)	98.53%	98.41%	100%						
Number of Failures in month	2	5	1						
Mean Time between failures in 52 week rolling period (hours)	400	174.1	231						
Help Desk									
Non In-depth Queries - Maximum Time to resolve 50% of all queries (working days)	1	<0.25	<0.25						
Non In-depth Queries - Maximum Time to resolve 95% of all queries (working days)	4	5	<1						
Administrative Queries - Maximum Time to resolve 95% of all queries (working days)	2	<1	<1						
Help Desk Telephone - % of calls answered within 2 minutes	100%	100%	100%						
Others									
Normal Media Exchange Requests - average response time in month (working days)	0.5	0	<0.5						
New User Registration Time (working days)	2	0	<2						
Management Report Delivery Times (working days)	10	10	10						
System Maintenance - no. of scheduled sessions taken per system in the month	4	1	2						

Table 2

Notes:

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

[Turing availability x 122 / (122 + 3.5)] + [Fermat availability x 3.5 / (122 + 3.5)]

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

CSAR Service - Service Quality Report - Service Credits

Service Quality Measure	1998		1999						
	Nov.	Dec.	Jan	Feb	March	April	May	June	July
HPC Services Availability									
Availability in Core Time (% of time)	-0.058	0.078	-0.039						
Availability out of Core Time (% of time)	0.000	0.039	-0.047						
Number of Failures in month	0.000	0.016	-0.008						
Mean Time between failures in 52 week rolling period (hours)	0.000	0.016	0.008						
Help Desk									
Non In-depth Queries - Maximum Time to resolve 50% of all queries (working days)	0.000	-0.019	-0.019						
Non In-depth Queries - Maximum Time to resolve 95% of all queries (working days)	0.031	0.046	-0.016						
Administrative Queries - Maximum Time to resolve 95% of all queries (working days)	0.000	-0.016	-0.016						
Help Desk Telephone - % of calls answered within 2 minutes	-0.004	-0.004	-0.004						
Others									
Normal Media Exchange Requests - average response time in month (working days)	-0.002	0.000	-0.002						
New User Registration Time (working days)	0.000	0.000	0						
Management Report Delivery Times (working days)	0.000	0.000	0						
System Maintenance - no. of scheduled sessions taken per system in the month	0.006	-0.003	0.000						
Monthly Total & overall Service Quality Rating for each period:	-0.01	0.08	-0.07	0.00	0.00	0.00	0.00	0.00	0.00

Table 3

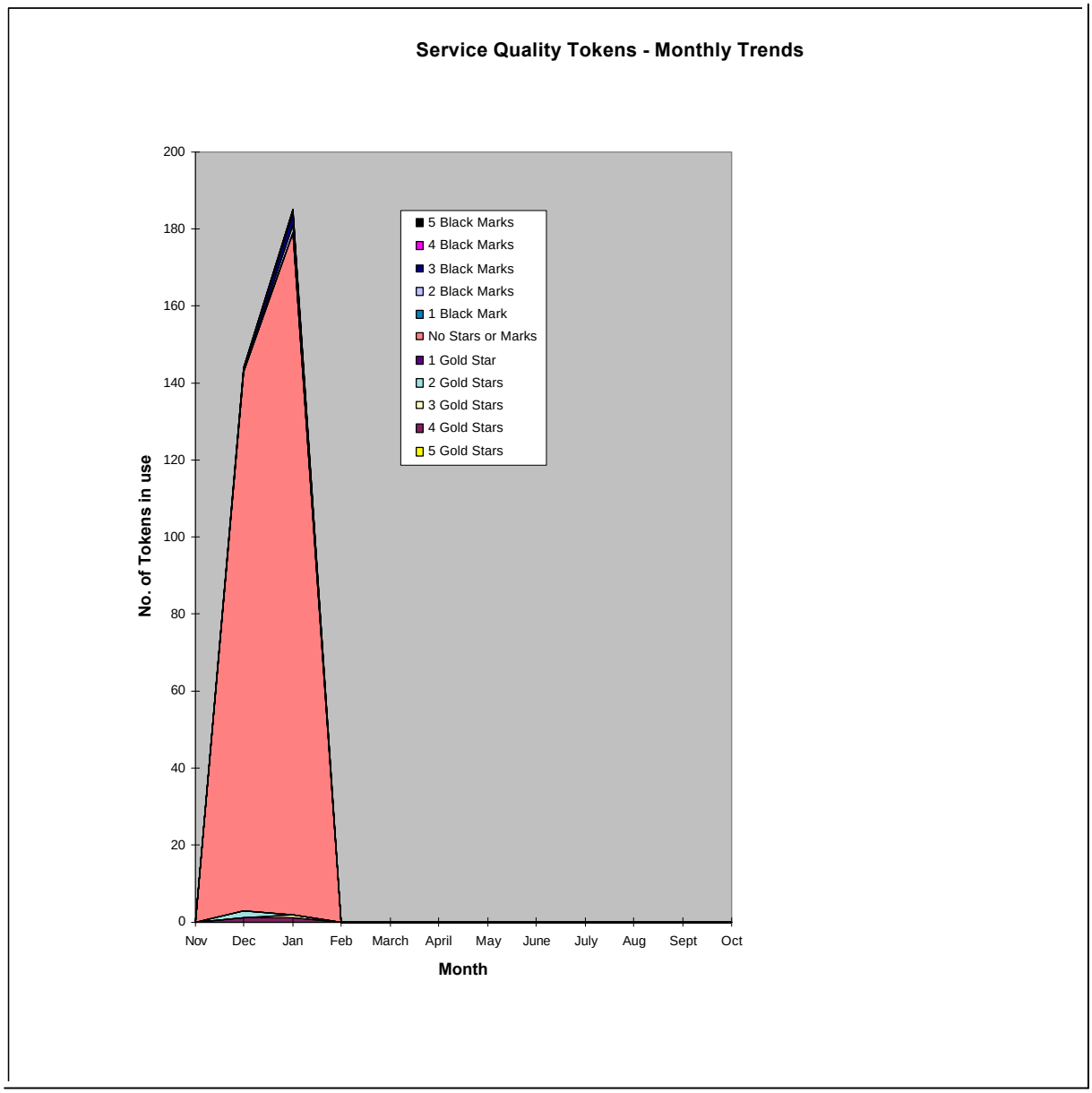
2.2 Service Quality Tokens

The current position at the end of January 1999 is that eight of the 185 registered users of the CSAR Service had used Service Quality Tokens. See below:

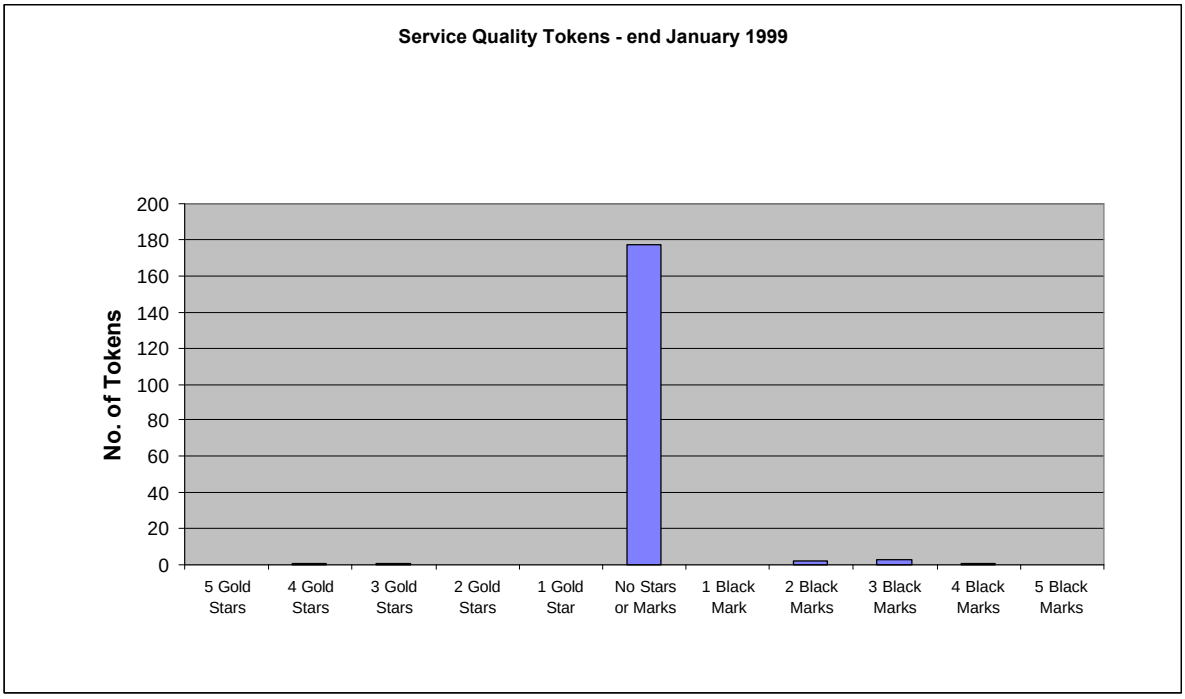
Service Quality Tokens

	Position as at end of each month											
	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct
5 Gold Stars	0	0	0									
4 Gold Stars	0	1	1									
3 Gold Stars	0	0	1									
2 Gold Stars	0	2	0									
1 Gold Star	0	0	0									
No Stars or Marks	0	140	177									
1 Black Mark	0	0	0									
2 Black Marks	0	0	2									
3 Black Marks	0	1	3									
4 Black Marks	0	0	1									
5 Black Marks	0	0	0									
Total No. of Users	40	144	185									

The area graph below illustrates the monthly usage trend of quality token usage:



In the form of a bar chart, the current statistics are:



The status of Stendahl Tokens at the end of the month shows a different picture from last month, in that more black marks have been awarded to the system. The black marks have been awarded for two distinct reasons, the first being the lack of a Sub-Consortia facility within the service, the second being the speed of the CSAR web server.

On the first issue, a specification for the implementation of a Sub-Consortia facility has been circulated to the Chairman of the User Steering Group and members of EPSRC for final approval prior to implementation.

The second issue will be addressed by the implementation of a new Server for the Manchester Help Desk, which is currently going through its final tests prior to installation into the live service.

2.3 Throughput Target against Baseline

This month again saw the baseline achieved, and over the course of the month the Baseline Capacity Level of the T3E MPP was exceeded on average by 7%, equal to 0.676 GFLOP-Years of PE usage.

Job Throughput Against Baseline CSAR Service Provision

Period: 1st to 31st January 1999

	Baseline Capacity for Period (T3E PE Hours)	Actual Usage in Period (T3E PE Hours)	Actual % Utilisation c/w Baseline during Period
1. Has CfS failed to deliver Baseline MPP Computing Capacity for EPSRC?	361,804	389,757	**107.73%**
	Baseline Capacity for Period (T3E PE Hours)	**Job Time Demands in Period**	**Job Demand above 110% of Baseline during Period (Yes/No)?**
2. Have Users submitted work demanding > 110% of the Baseline during period?	361,804	396,079	No
		Number of Jobs at least 4 days old at end Period	**Number of Jobs at least 4 days old at end Period is not zero (Yes/No)?**
3. Are there User Jobs oustanding at the end of the period over 4 days old?		0	No
		Minimum Job Time Demands as % of Baseline during Period	**Minimum Job Time Demand above 90% of Baseline during Period (Yes/No)?**
4. Have Users submitted work demands dropped below 90% of the Baseline during period?		76%	No
	Number of standard Job Queues (ignoring priorities)	**Average % of time each queue contained jobs in the Period**	**Average % of time each queue contained jobs in the Period is > 97%?**
5. Majority of Job Queues contained runnable jobs from Users for more than 97% during period?	4	86.7%	No

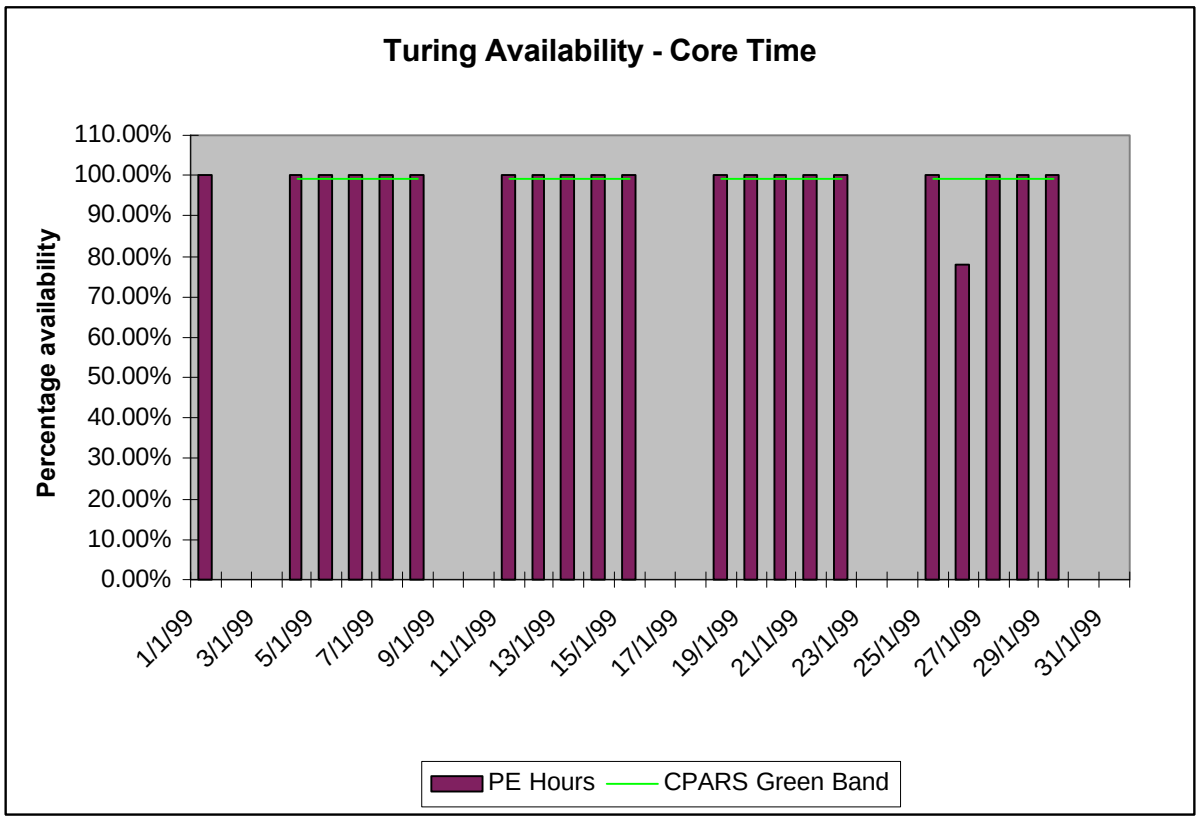
2. System Availability

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

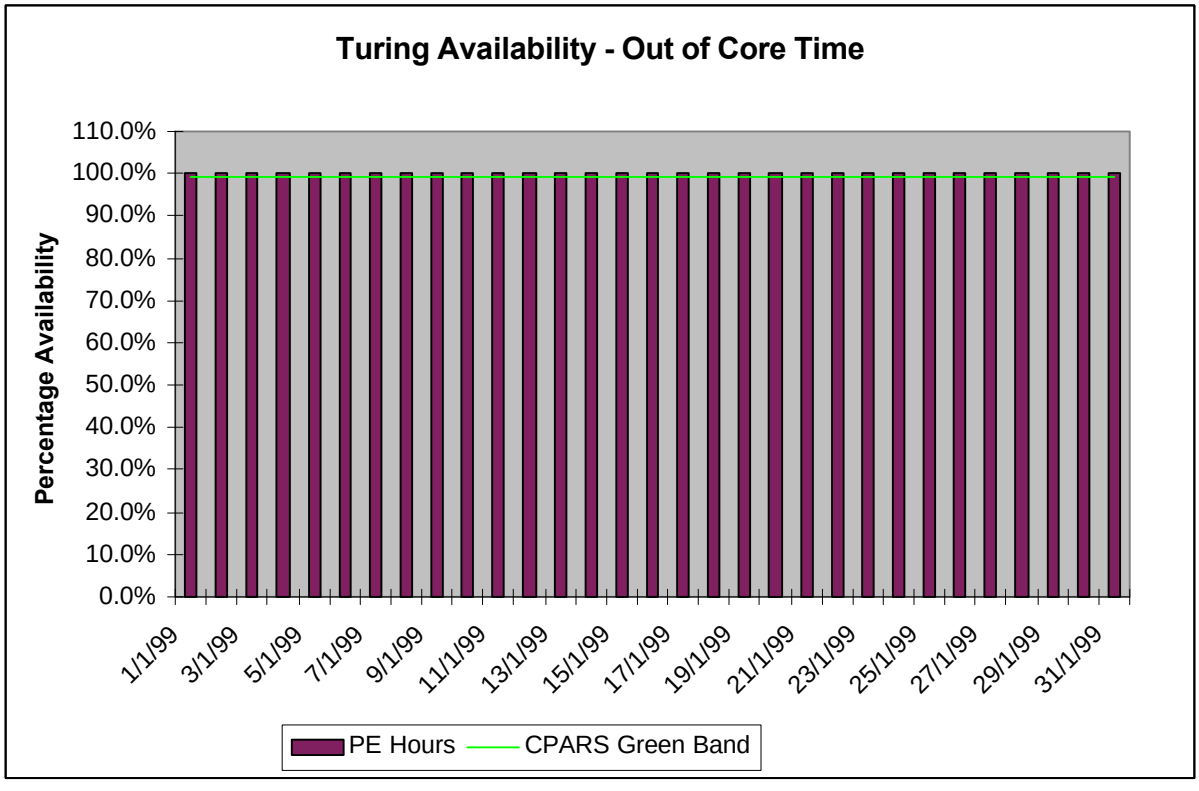
3.1 Cray T3E-1200E System (Turing)

The following graphs show the availability of Turing both in core time and out of core time respectively during the period of 1st to 31st January. There was unplanned unavailability in core time during the 21st January when one of the PE's failed resulting in a down time of 2.5 hours during core time.

Turing availability for January:



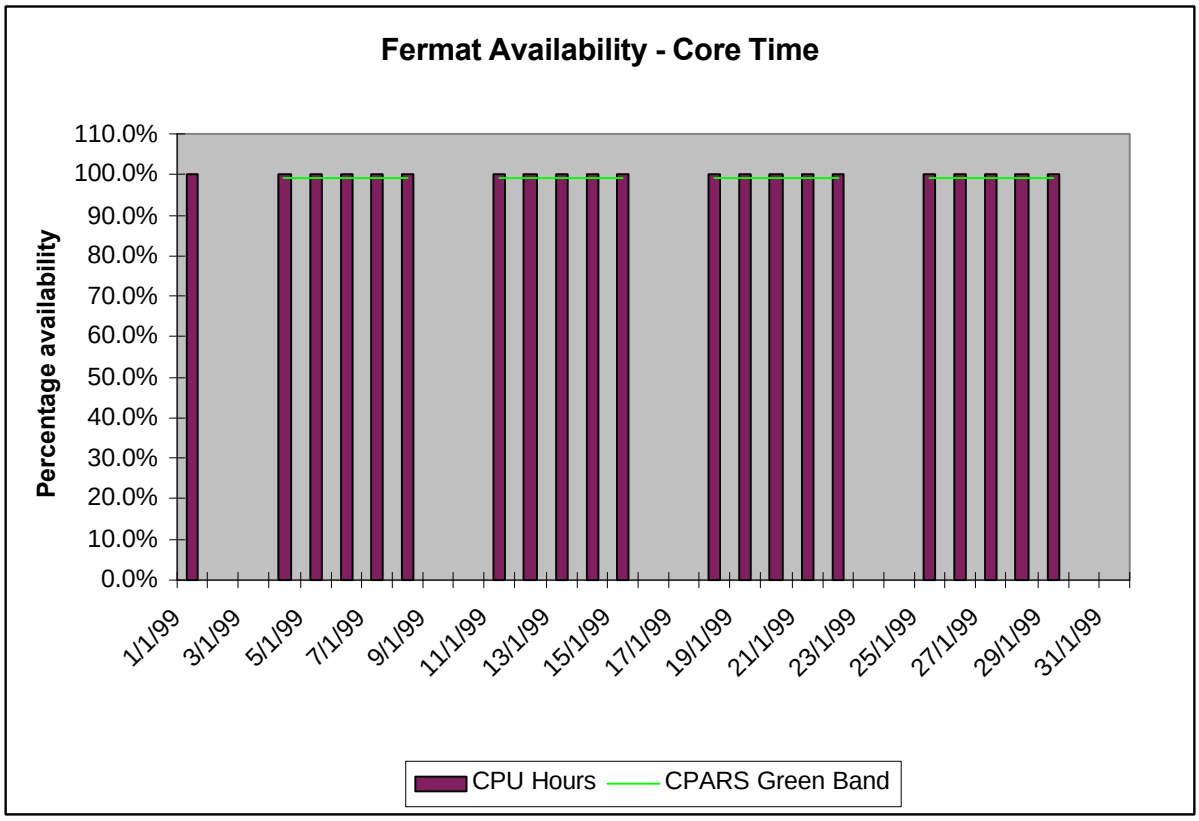
Availability of Turing in core time during January was good for the majority of the month with only one period of down time due to a PE failure.



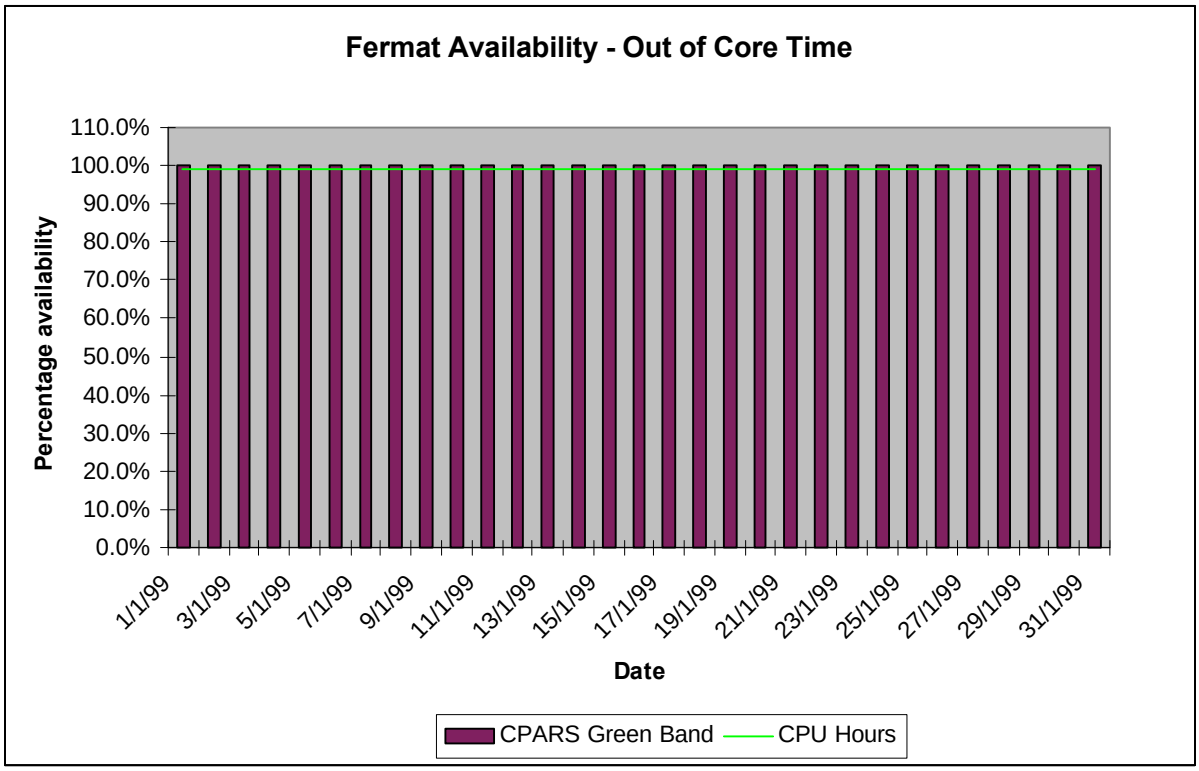
Availability of Turing out of core time during January was excellent.

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 January was excellent.



Availability of Fermat out of core time during January was excellent.

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 January 1st to 31st is provided by Project/User Group, totalled by Research Council and overall. This covers:

• CPU usage	Turing: 389,757 PE Hours	Fermet: 5,230 CPU Hours
• User Disk allocation	Turing: 49.90 GB Years	Fermat: 28.25 GB Years
• HSM/tape usage	89.49 GB Years	

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

a) MPP (T3E) Usage by month, showing usage each month of CPU (T3E PE Elapsed Hours), split by Research Council and giving the equivalent GFLOP-Years as per NPB. The Baseline Capacity (103 GFLOP-Years) is shown by an overlaid horizontal line.

b) SMP (Origin) Usage by month, showing usage each month in CPU Hours, split by Research Council and giving the equivalent GFLOP-Years as per NPB. The Baseline Capacity (3.5 GFLOP-Years) 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.

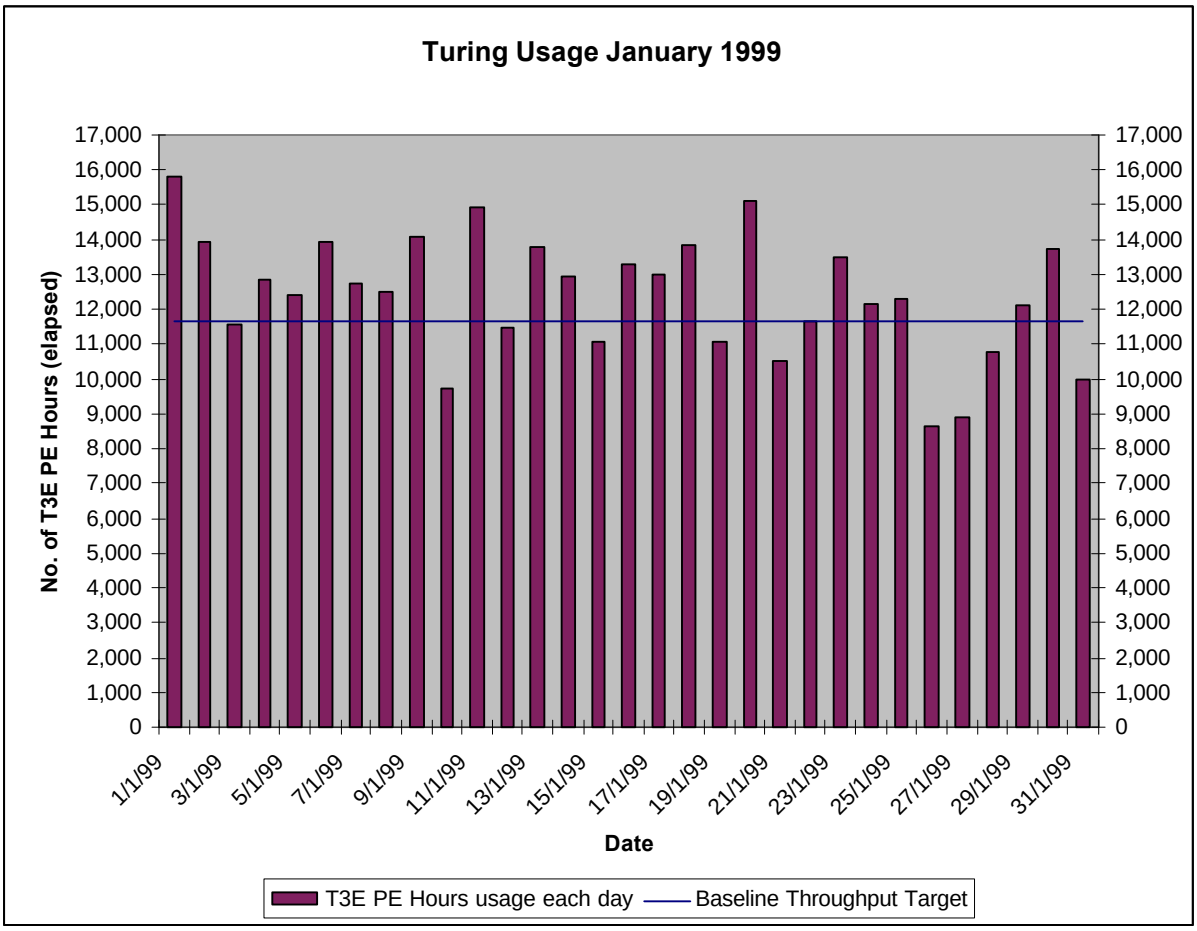
d) Medium Performance Disk (Origin) allocated for User Data by month, showing the allocated space each month in GBytes, split by Research Council. The Baseline Capacity (1.5 Terabytes) is shown by an overlaid horizontal line.

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 January 1999. 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 12 hour limit on jobs, so that they are check-pointed, and computational time lost due to any failure is well managed.

Turing usage for January:

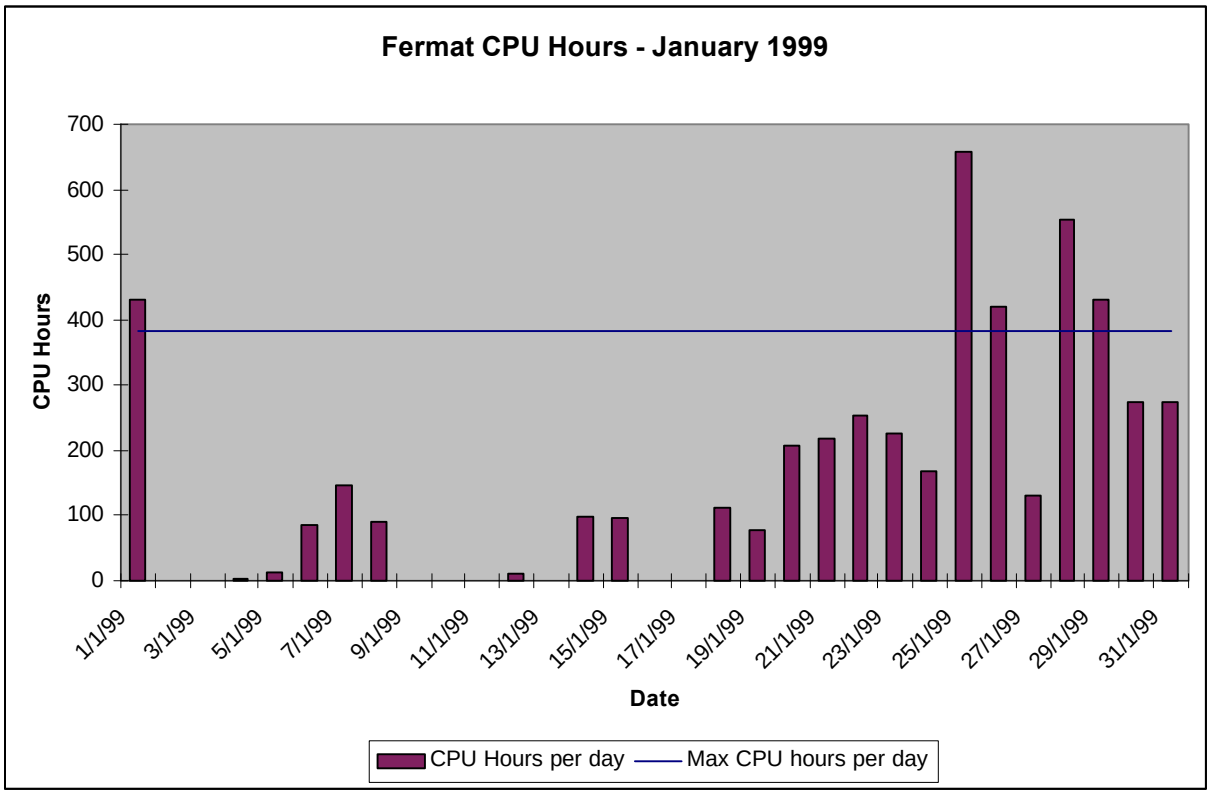


Turing has been fully loaded for virtually the whole month with a variety of job sizes. This has resulted in good throughput despite suffering one (pro rata) break this month. When fully loaded the Baseline Throughput requirement, on average (24 x 103 x 576 /122 PE Hours each day), is being bettered.

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.

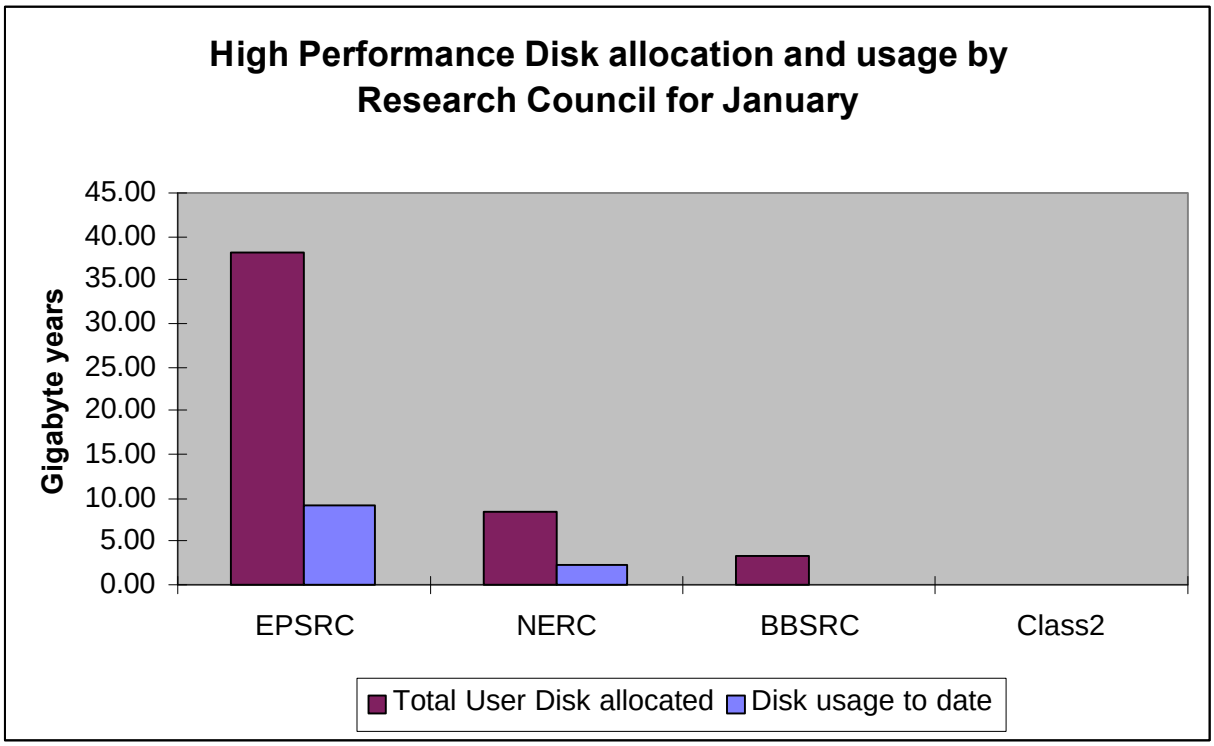
4.2 SGi Origin2000 System (Fermat)

The usage of the Origin system was good for the month with the daily usage of the system averaging 41.7% of theoretical maximum. This figure does not show that on some days CPU time is running at 99.9% of available time. The groups most heavily using the Fermat system are CSE002 and CSE009.

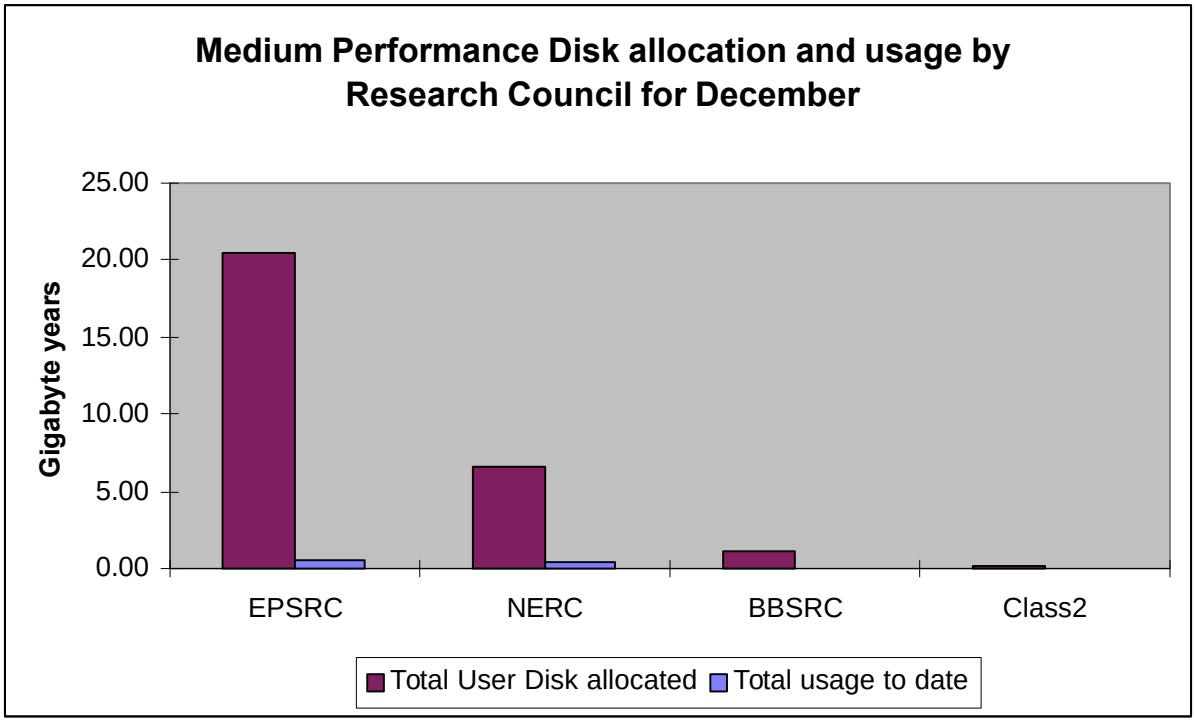


4.3 Disk/HSM Usage Charts

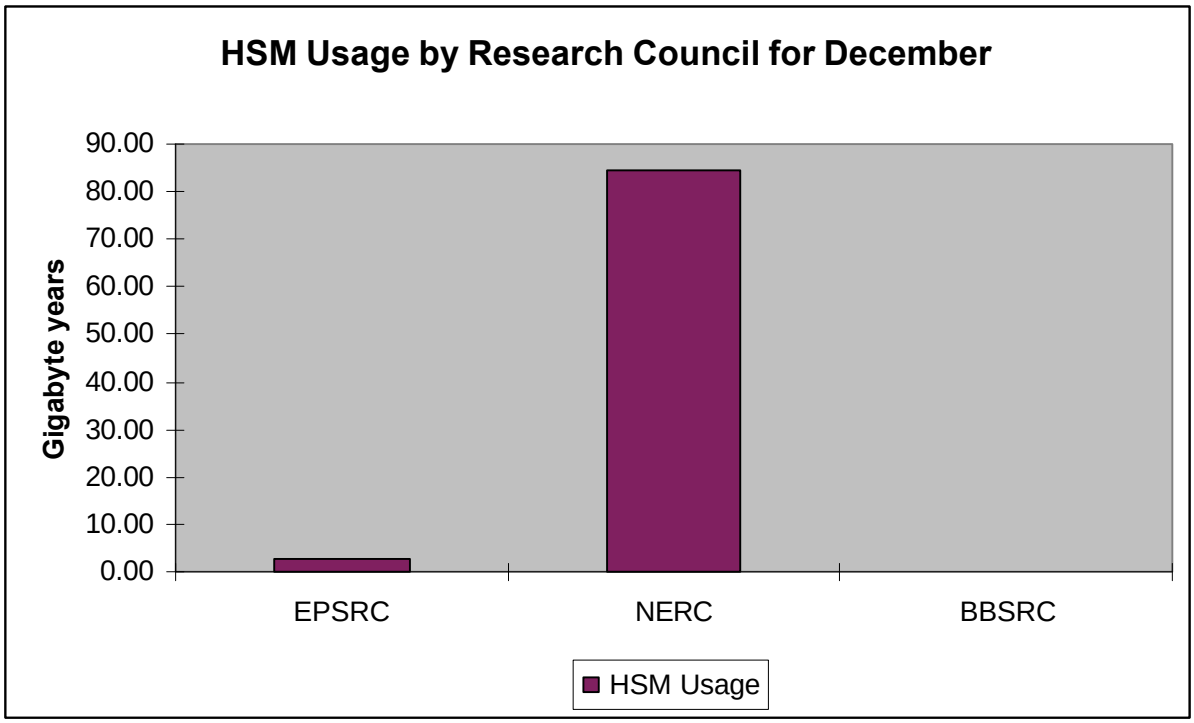
The graphs below show current disk and HSM allocations and usage.



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

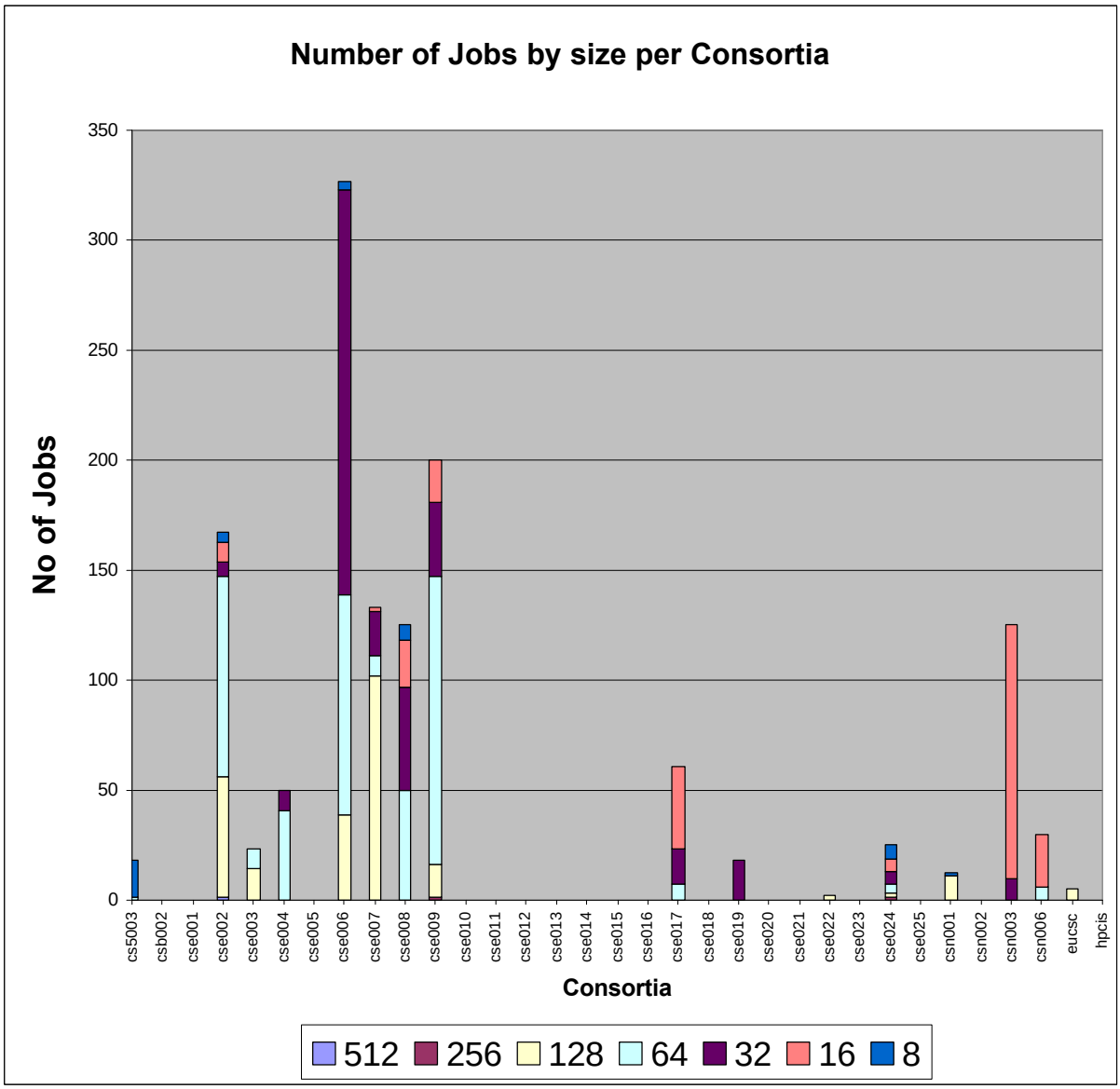


The above graph shows the disk allocations against usage of the disk on Fermat.



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

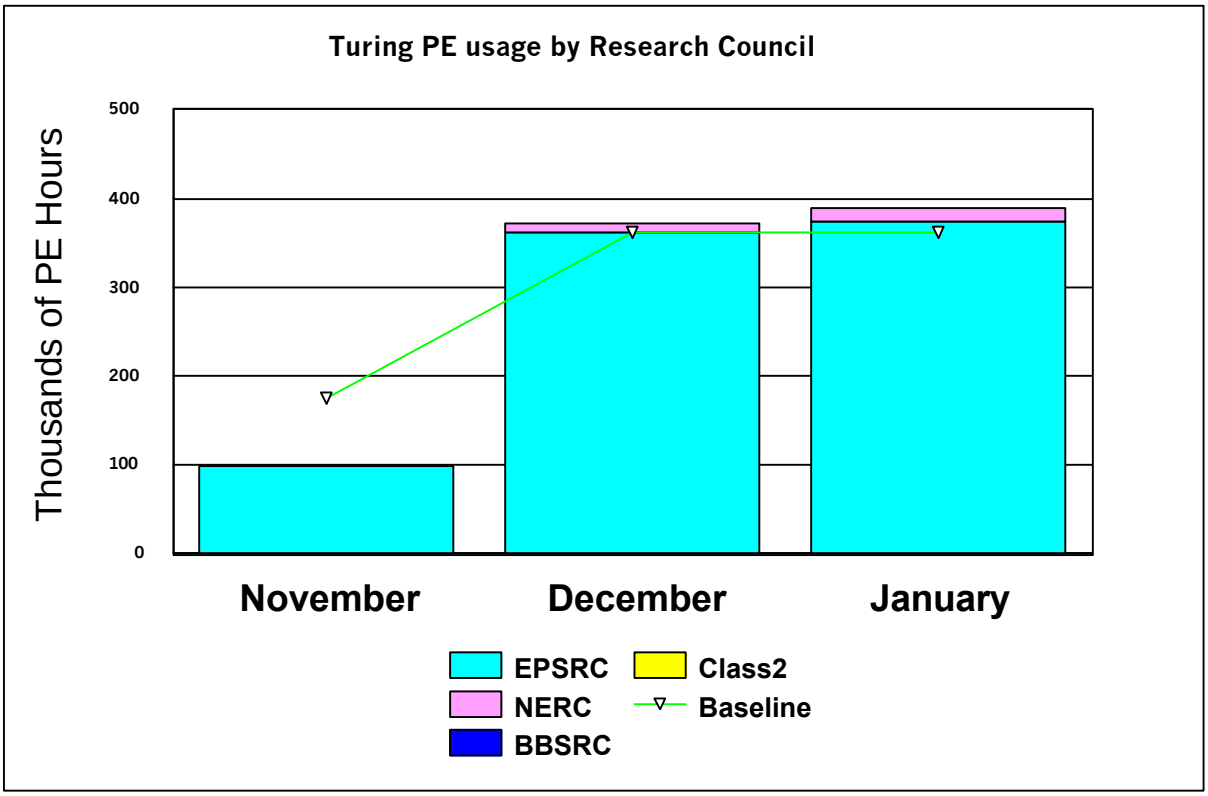
Job statistics for Turing:



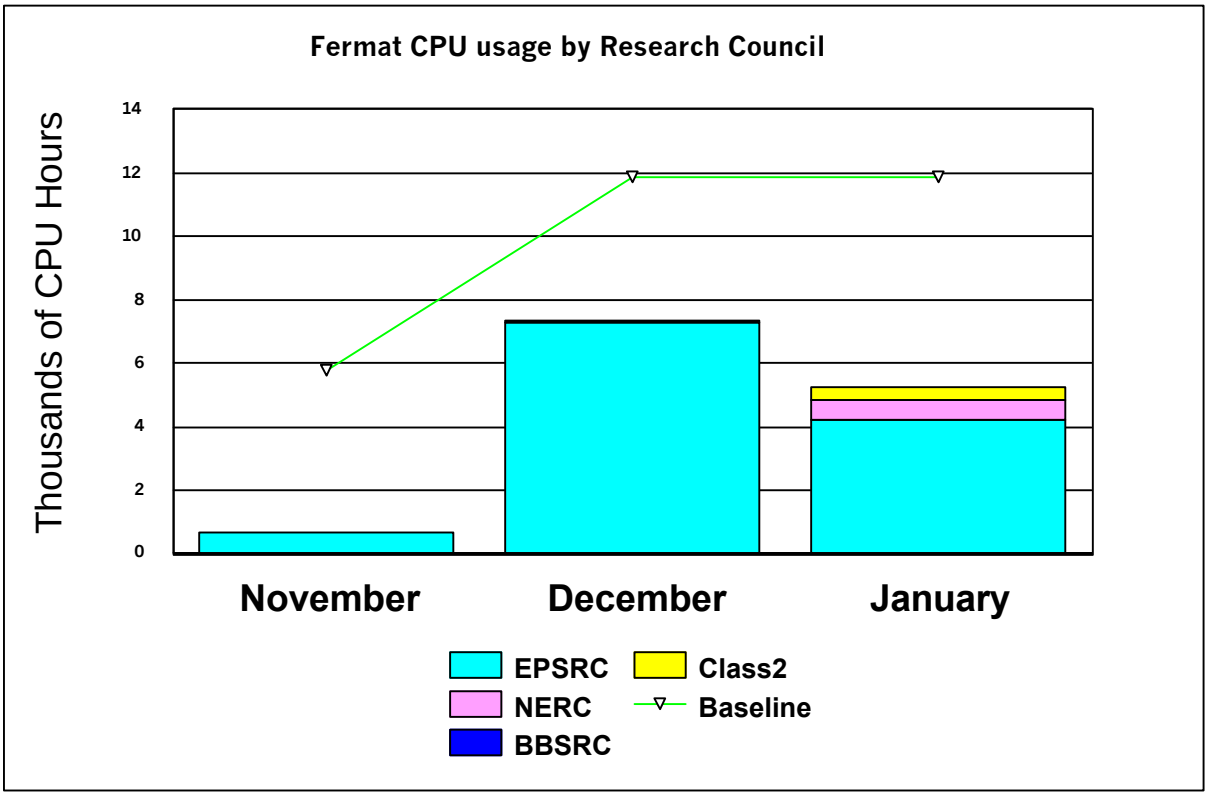
The above graph shows the number of jobs of the major sizes run in the period 1st to the 31st of January 1999.

4.4 Historical Usage Charts

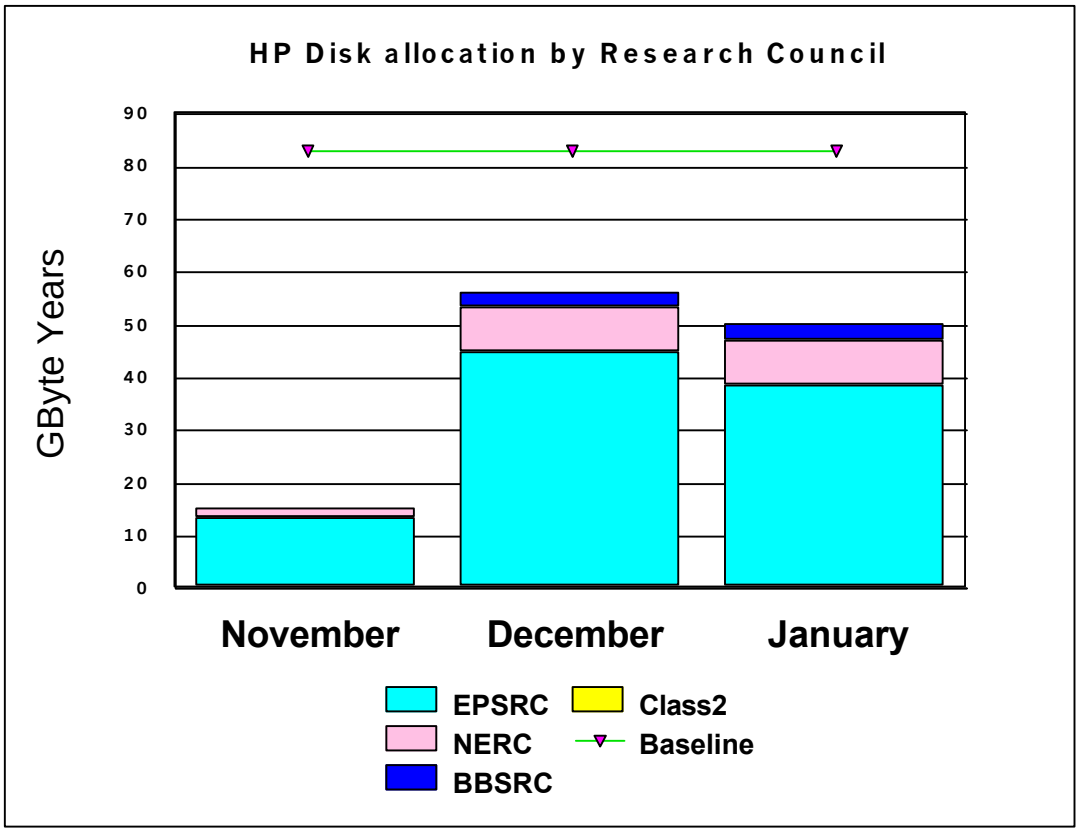
The graph below shows the PE hours utilisation on Turing by Research Council from November.
The reduced Baseline in November 1998 represents half a month.



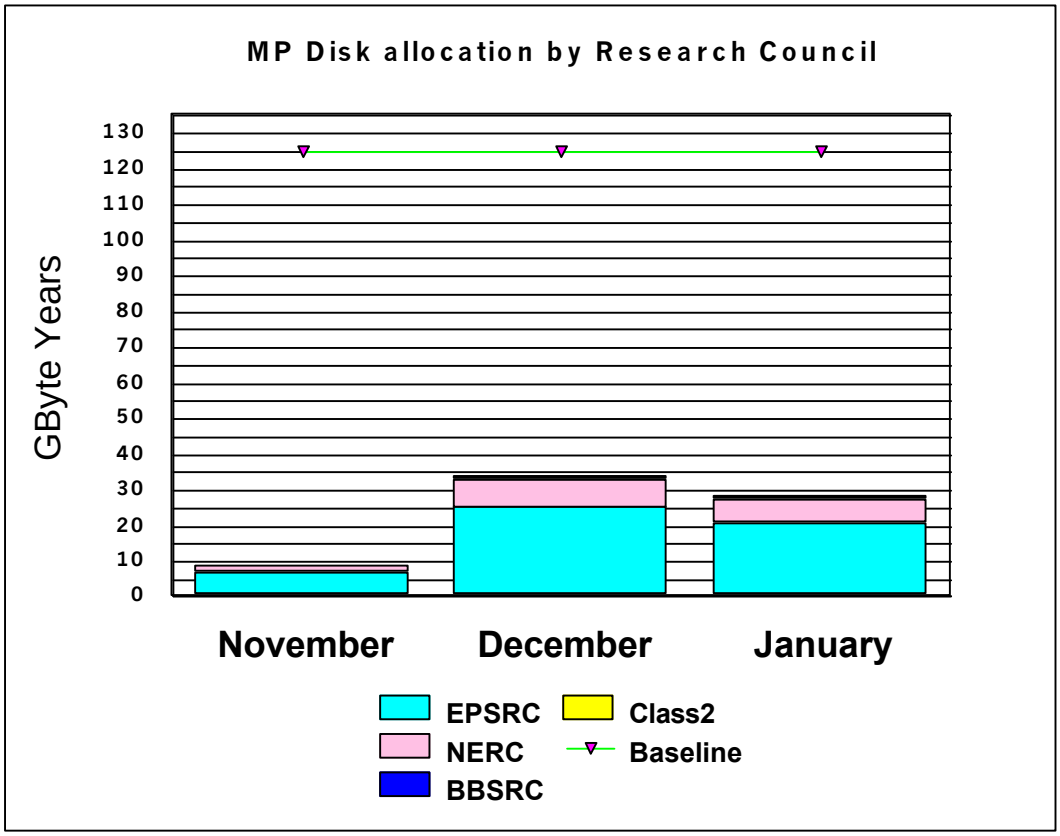
The graph below shows the historic CPU usage on Fermat by Research Council from November.
The reduced capacity in November 1998 represents half a month.



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

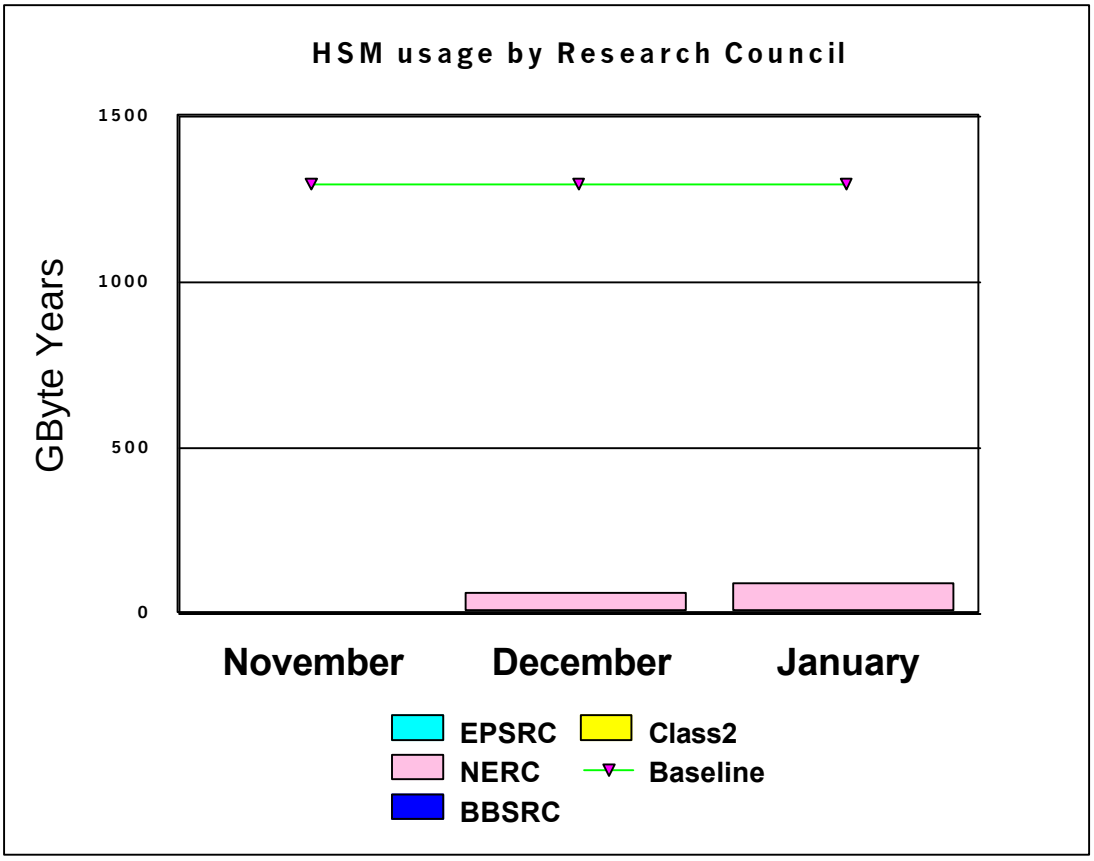


The preceding graph illustrates the historic allocation of the High Performance Disk on Turing.



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

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



5. Service Status, Issues and Plans

5.1 Status

The system reliability has improved this month with only one system break on Turing, due to a PE failure. Fermat has been very reliable this month with no incidents recorded, therefore maintaining 100% availability throughout the month. The problem in December with the XLV software on Fermat has been resolved by the upgrading of the operating system to IRIX 6.5.2 at SGI's suggestion.

5.2 Issues

The changes made in December, to the scheduling policy of jobs on Turing, is still working well with larger jobs being run effectively on the system. The important issues currently outstanding are the implementation of a management tool to control resource at a Sub-Consortia level, and faster access to the Manchester web pages. These issues are in hand with a specification having been draw up and presented to the Chairman of the User Steering group, amongst others prior to implementation. The web page issue is being addressed by the introduction of a new web server currently under final test.

5.3 Plans

The proposed introduction of Sub-Consortia is being progressed with a specification having been sent out for approval to the Chairman of the User Steering Group.

A specification for enhancements to the Capacity Planning facilities has been agreed and re-development work is underway.

6. Conclusion

January 1999 was overall a good month for the Service with only one unscheduled break in service. 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 January 1999

Appendix 2 contains the Percentage shares by Consortium for January 1999

Appendix 3 contains the Percentage shares by Research Council for January 1999

CfS Supercomputer Service

Usage report for Research Council Projects

From Friday 1-Jan-99 to Sunday 31-Jan-99

Account		CPU Usage (Hours) Inter	Priority	Normal	Low	Total	Storage (GB-Years) D-Usage	D-Allocn	HSM
CSE001 Admin users	turing	0.00	-	-	-	0.00	0.00	0.01	-
	fermat	-	-	-	-	-	0.00	-	-
Total for Subject EPSRC Administration	turing	0.00	-	-	-	0.00	0.00	0.01	-
	fermat	-	-	-	-	-	0.00	-	-
CSE002 gr/m01753 Gillan	turing	45.62	3770.52	93176.43	24745.97	121738	3.55	5.97	-
	fermat	2780.03	-	-	-	2780.03	0.21	8.55	0.67
CSE003 gr/m01784 Taylor	turing	83.24	0.01	36399.46	-	36482.72	0.72	3.07	-
	fermat	368.38	-	-	-	368.38	0.01	3.07	-
CSE007 gr m05348 Foulkes	turing	18.86	1834.52	53309.82	-	55163.20	0.16	0.31	-
	fermat	0.17	-	-	-	0.17	0.00	0.31	-
cse021 GR/L95427 Staunton	turing	0.10	-	0.00	-	0.10	0.00	0.09	-
	fermat	-	-	-	-	-	0.00	0.09	-
Total for Subject Physics	turing	147.82	5605.06	182885	24745.97	213384	4.43	9.44	-
	fermat	3148.58	-	-	-	3148.58	0.23	12.01	0.67
CSE006 gr/m05201 Briddon	turing	136.42	293.52	53803.86	-	54233.79	0.09	3.07	-
	fermat	-	-	-	-	-	0.00	0.01	-
Total for Subject Materials	turing	136.42	293.52	53803.86	-	54233.79	0.09	3.07	-
	fermat	-	-	-	-	-	0.00	0.01	-
CSE004 gr/m08424 Sandham	turing	8.39	-	20011.13	-	20019.52	1.90	3.07	-
	fermat	1.95	-	-	-	1.95	0.20	3.07	2.04
CSE010 gr/l04108 Williams	turing	0.00	-	-	-	0.00	0.00	0.09	-
	fermat	-	-	-	-	-	0.00	0.09	-
CSE011 gr/k52317 Williams	turing	0.02	-	-	-	0.02	1.37	3.51	-
	fermat	-	-	-	-	-	0.00	0.09	-
cse013 gr/k43902 Leschzine	turing	-	-	-	-	-	0.00	0.88	-
	fermat	-	-	-	-	-	0.00	0.88	-
CSE016 GR/K96519 Cant	turing	-	-	-	-	-	0.00	0.00	-
	fermat	-	-	-	-	-	0.00	0.00	-
cse017 GR/L58699 Luo	turing	66.75	-	8478.15	-	8544.90	0.12	0.22	-
	fermat	0.18	-	-	-	0.18	0.02	0.13	0.10
cse018 GR/L68353 Cant	turing	-	-	-	-	-	0.00	0.00	-
	fermat	-	-	-	-	-	0.00	0.00	-
cse022 GR/L98527 Jones	turing	0.07	-	9.35	-	9.42	0.03	0.88	-
	fermat	-	-	-	-	-	0.00	-	-
Total for Subject Engineering	turing	75.23	-	28498.63	-	28573.86	3.43	8.64	-
	fermat	2.13	-	-	-	2.13	0.22	4.25	2.14
CSE008 GR/M07624 Hillier	turing	11.99	4285.38	42383.83	-	46681.20	0.01	1.39	-
	fermat	2.20	-	-	-	2.20	0.00	0.05	-
CSE009 gr/m07441 Catlow	turing	313.29	-	30435.61	-	30748.90	1.06	7.01	-
	fermat	1060.75	-	-	-	1060.75	0.01	0.88	-
cse024 GR/M44453 Tennyson	turing	1.50	84.00	516.58	-	602.08	0.05	3.07	-
	fermat	-	-	-	-	-	0.00	3.07	-

CfS Supercomputer Service

Account		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
		---------- CPU Usage (Hours) ----------					--- Storage (GB-Years) ---		
Total for Subject Chemistry	turing	326.77	4369.38	73336.03	-	78032.18	1.12	11.47	-
	fermat	1062.95	-	-	-	1062.95	0.01	3.99	-
CSE019 cr/l73104 Berzins	turing	5.28	-	7.50	-	12.78	0.03	0.09	-
	fermat	2.25	-	-	-	2.25	0.00	0.09	-
Total for Subject Information Technology	turing	5.28	-	7.50	-	12.78	0.03	0.09	-
	fermat	2.25	-	-	-	2.25	0.00	0.09	-
HPCI Southampton	turing	5.31	-	0.06	-	5.38	0.12	5.26	-
	fermat	16.33	-	-	-	16.33	0.04	0.09	-
HPCI Daresbury	turing	0.00	-	-	-	0.00	0.02	0.09	-
	fermat	-	-	-	-	-	0.00	0.09	-
HPCI Edinburgh	turing	0.00	-	-	-	0.00	0.00	0.09	-
	fermat	-	-	-	-	-	0.00	-	-
Total for Subject unspecified subject	turing	5.32	-	0.06	-	5.38	0.15	5.44	-
	fermat	16.33	-	-	-	16.33	0.04	0.18	-
Total for Council EPSRC	turing	696.84	10267.96	338531	24745.97	374242	9.25	38.15	-
	fermat	4232.25	-	-	-	4232.25	0.50	20.53	2.81
csn001 SOC Core Strategic	turing	12.93	-	13617.91	-	13630.84	1.57	4.38	-
	fermat	612.68	-	-	-	612.68	0.17	4.38	18.96
csn002 gr3.10789 Hillier	turing	0.00	-	-	-	0.00	0.00	0.03	-
	fermat	-	-	-	-	-	-	0.03	-
badc	turing	-	-	-	-	-	-	-	-
	fermat	6.47	-	-	-	6.47	0.18	-	59.69
csn003 UGAMP O'Neill	turing	1.45	0.00	1162.75	-	1164.20	0.22	0.61	-
	fermat	0.60	-	-	-	0.60	0.00	0.61	6.14
csn005 GR9/2909 Davies	turing	0.82	-	472.47	-	473.29	0.01	0.61	-
	fermat	-	-	-	-	-	0.00	0.61	-
csn006 GR9/3550 Price	turing	3.45	-	219.06	-	222.51	0.00	2.37	-
	fermat	-	-	-	-	-	0.00	0.96	-
csn007 GST/02/1454 Price	turing	-	-	-	-	-	0.00	0.46	-
	fermat	-	-	-	-	-	0.00	0.00	-
Total for Council NERC	turing	18.65	0.00	15472.19	-	15490.85	1.80	8.46	-
	fermat	619.75	-	-	-	619.75	0.36	6.60	84.78
CSB001 27/B07117 Goodfello	turing	-	-	-	-	-	0.00	1.05	-
	fermat	-	-	-	-	-	0.00	1.05	-
CSB002 86/B10059 Danson	turing	0.03	-	24.41	-	24.44	0.01	2.19	-
	fermat	-	-	-	-	-	0.00	-	-
Total for Council BBSRC	turing	0.03	-	24.41	-	24.44	0.01	3.24	-
	fermat	-	-	-	-	-	0.00	1.05	-
cs2001 CompApps3D Jain	turing	0.00	-	-	-	0.00	0.00	0.04	-
	fermat	-	-	-	-	-	0.00	-	-
cs2003 GST/02/0760 Coultha	turing	-	-	-	-	-	-	-	-
	fermat	377.98	-	-	-	377.98	0.00	0.07	-

CfS Supercomputer Service

Account		CPU Usage (Hours) Inter Priority	Normal	Low	Total	Storage (GB-Years) D-Usage	D-Allocn	HSM
Total for Council Class 2	turing	0.00	-	-	0.00	0.00	0.04	-
	fermat	377.98	-	-	377.98	0.00	0.07	-
euukcp	turing	0.05	-	-	0.05	1.13	-	-
	fermat	-	-	-	-	-	-	-
eugamp	turing	-	-	-	-	0.05	-	-
	fermat	-	-	-	-	-	-	-
euqub	turing	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	-	-	-
euocam	turing	-	-	-	-	0.14	-	-
	fermat	-	-	-	-	-	-	-
euqmw	turing	0.00	-	-	0.00	2.94	-	-
	fermat	-	-	-	-	-	-	-
euhpci	turing	0.01	-	-	0.01	0.19	-	-
	fermat	-	-	-	-	-	-	-
euston	turing	-	-	-	-	0.03	-	-
	fermat	-	-	-	-	-	-	-
eural	turing	0.00	-	-	0.00	1.98	-	-
	fermat	-	-	-	-	-	-	-
eubbk	turing	-	-	-	-	0.09	-	-
	fermat	-	-	-	-	-	-	-
earlyu	turing	-	-	-	-	-	-	-
	fermat	0.25	-	-	0.25	0.12	-	1.90
dummy	turing	-	-	-	-	0.00	-	-
	fermat	-	-	-	-	0.00	-	-
Total for Subject eu accounts	turing	0.05	-	-	0.05	6.55	-	-
	fermat	0.25	-	-	0.25	0.12	-	1.90
Total for Council Research	turing	0.05	-	-	0.05	6.55	-	-
	fermat	0.25	-	-	0.25	0.12	-	1.90

CfS Supercomputer Service

Usage report for All Research Councils

From Friday 1-Jan-99 to Sunday 31-Jan-99

Account			CPU Usage (Hours)				Storage (GB-Years)		
		Inter	Priority	Normal	Low	Total	D-Usage	D-Allocn	HSM
Total Research Councils	turing	715.58	10267.96	354028	24745.97	389757	17.60	49.90	-
	fermat	5230.23	-	-	-	5230.23	0.98	28.25	89.49

Appendix 2

Percentage PE time per consortia for Turing in January 1999

Consortia	% Machine Time
CSE002	31.23
CSE003	9.36
CSE007	14.15
CSE021	0
CSE006	13.91
CSE004	5.14
CSE010	0
CSE011	0
CSE013	0
CSE016	0
CSE017	2.19
CSE018	0
CSE022	0.002
CSE008	11.98
CSE009	7.89
CSE024	0.15
CSE019	0.003
HPCI Southampton	0.001
HPCI Daresbury	0
HPCI Edinburgh	0
CSN001	3.50
CSN002	0
BADC	0
CSN003	0.30
CSN005	0.12
CSN006	0.06
CSN007	0
CSB001	0
CSB002	0.006
CS2001	0
CS2003	0

Percentage CPU time per consortia for Fermat in January 1999

Consortia	% Machine Time
CSE002	53.15
CSE003	7.04
CSE007	0.003
CSE021	0
CSE006	0
CSE004	0.037
CSE010	0
CSE011	0
CSE013	0
CSE016	0
CSE017	0.003
CSE018	0
CSE022	0
CSE008	0.04
CSE009	20.28
CSE024	0
CSE019	0.04
HPCI Southampton	0.31
HPCI Daresbury	0
HPCI Edinburgh	0
CSN001	11.71
CSN002	0
BADC	0.12
CSN003	0.013
CSN005	0
CSN006	0
CSN007	0
CSB001	0
CSB002	0
CS2001	0
CS2003	7.23

Percentage disc allocation by Consortia for Turing in January 1999

Consortia	%Allocation
CSE002	11.96
CSE003	6.15
CSE007	0.62
CSE021	0.18
CSE006	6.15
CSE004	6.15
CSE010	0.18
CSE011	7.03
CSE013	1.76
CSE016	0
CSE017	0.44
CSE018	0
CSE022	1.76
CSE008	2.79
CSE009	14.05
CSE024	6.15
CSE019	0.18
HPCI Southampton	10.54
HPCI Daresbury	0.18
HPCI Edinburgh	0.18
CSN001	8.78
CSN002	0.06
BADC	0
CSN003	1.22
CSN005	1.22
CSN006	4.75
CSN007	0.92
CSB001	2.10
CSB002	4.39
CS2001	0.08
CS2003	0

Percentage disc allocation by Consortia for Fermat in January 1999

Consortia	%Allocation
CSE002	30.27
CSE003	10.87
CSE007	1.10
CSE021	0.32
CSE006	0.04
CSE004	10.87
CSE010	0.32
CSE011	0.32
CSE013	3.12
CSE016	0
CSE017	0.46
CSE018	0
CSE022	0
CSE008	0.18
CSE009	3.12
CSE024	10.87
CSE019	0.32
HPCI Southampton	0.32
HPCI Daresbury	0.32
HPCI Edinburgh	0
CSN001	15.50
CSN002	0.11
BADC	0.00
CSN003	2.16
CSN005	2.16
CSN006	3.40
CSN007	0
CSB001	3.72
CSB002	0
CS2001	0
CS2003	0.25

Appendix 2

Percentage usage of HSM by Consortium for January 1999

Consortium	% Usage
CSE002	0.75
CSE003	0
CSE007	0
CSE021	0
CSE006	0
CSE004	2.28
CSE010	0
CSE011	0
CSE013	0
CSE016	0
CSE017	0.11
CSE018	0
CSE022	0
CSE008	0
CSE009	0
CSE024	0
CSE019	0
HPCI Southampton	0
HPCI Daresbury	0
HPCI Edinburgh	0
CSN001	21.19
CSN002	0
BADC	66.70
CSN003	6.86
CSN005	0
CSN006	0
CSN007	0
CSB001	0
CSB002	0
CS2001	0
CS2003	0

Appendix 3

Percentage CPU usage on Fermat by Reserch Council for January 1999	
Research Coucil	**% Usage**
EPSRC	96.02
HPCI	0.001
NERC	3.97
BBSRC	0.006
Class2	0

Percentage CPU usage on Fermat by Reserch Council for January 1999	
Research Coucil	**% Usage**
EPSRC	80.61
HPCI	0.31
NERC	11.85
BBSRC	0
Class2	7.23

Percentage Disc allocated on Turing by Research Council for January 1999	
Research Council	**% Allocated**
EPSRC	65.55
HPCI	10.90
NERC	16.95
BBSRC	6.49
Class2	0.08

Percentage Disc allocated on Fermat by Research Council for January 1999	
Research Council	**% Allocated**
EPSRC	72.04
HPCI	0.64
NERC	23.36
BBSRC	3.72
Class2	0.25

Percentage HSM usage by Research Council for January 1999	
Research Council	**% usage**
EPSRC	3.14
HPCI	0
NERC	94.74
BBSRC	0
Class2	0