ARCHER User Survey

2017

1. Document Information and Version History

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Status	Release
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Reviewer(s)	Alan Simpson, Andy Turner

Version	Date	Comments, Changes, Status	Authors, contributors, reviewers
0.1	2018-03-08	Initial draft	Anne Whiting
0.2	2018-04-02	Reviewed	Alan Simpson
0.3	2018-04/03	Updated post review	Anne Whiting
0.4	2018-04-04	Reviewed	Andy Turner
0.5	2018-04-04	Updated post review	Anne Whiting
0.6	2018-04-04	Updated structure description	Andy Turner
1.0	2018-04-04	Version for EPSRC	Anne Whiting, Alan Simpson

Structure of this paper

Section 2 provides a description of the survey, its questions, the scoring and how it was constructed.
Section 3 is an Executive Summary describing the main findings from the survey.
Section 4 gives some highlights of the comments provided by responders to the survey.
Section 5 provides an analysis of the responses received, comparisons to previous years and graphical distributions of the scores.
Section 6 lists the comments received in full and unedited form by question together with the ID of the anonymous respondent.

2. Description of the Survey

The ARCHER User Survey closed on 21 February 2018. 164 responses were received from ARCHER users. The survey asked for ratings (on a scale of 1 to 5) with the following questions:

1. Please rate your overall experience of the ARCHER Service (required) [Very Unsatisfied (1) – Very Satisfied (5)]
2. Has the ARCHER hardware configuration met the requirements of your research? (required) [Not met any requirements (1) – Exceeded requirements (5)]
3. Has the software on ARCHER met the requirements of your research? (required) [Not met any requirements (1) – Exceeded requirements (5)]
4. If you have used the ARCHER helpdesk, please rate your experience [Very Unsatisfied (1) – Very Satisfied (5)]
5. If you have used the ARCHER documentation, did it provide the information you required? [Did not provide the information I required (1) – Provided all the information I required and more (5)]
6. If you have used the ARCHER website, please rate the quality of the content and ease of navigation [Very poor (1) – Excellent (5)]
7. Please rate your experience of any ARCHER Training you have used (either online or face-to-face)? [Very Unsatisfied (1) – Very Satisfied (5)]
8. If you have attended any ARCHER webinars or virtual tutorials, did you find the session worthwhile? [A complete waste of time (1) – Extremely interesting and useful (5)]
9. If you have attended any ARCHER online training material (e.g. Online Driving Test, screencasts), how useful did you find the material? [Of no use (1) – Extremely useful (5)]

Only the first three questions were compulsory for all survey respondents, but 98% of respondents also provided feedback to some of the optional questions. Users were also provided with the opportunity to offer comments or suggestions under all of the above headings, and provided with space for any other comments or suggestions at the end of the survey. These questions are the same as those in the Annual Survey in 2016 and 2015 and a superset of those in the Annual Survey in 2014 to allow comparison between different periods. As previously, user feedback received will be reviewed to identify opportunities for improvement.

The survey was constructed using Google Forms and embedded directly into the ARCHER website.

3. Executive Summary

The results of the 2017 annual ARCHER User Survey have been analysed. 164 responses were received with the mean results shown below (scores 1 representing "Very Unsatisfied" and 5 representing "Very Satisfied"):

Service Aspect	2014 Mean Score (out of 5)	2015 Mean Score (out of 5)	2016 Mean Score (out of 5)	2017 Mean Score (out of 5)
Overall Satisfaction	4.4	4.3	4.3	4.4
Hardware	4.1	4.1	4.2	4.3
Software	4.0	4.0	4.2	4.1
Helpdesk	4.5	4.5	4.5	4.6
Documentation	4.1	4.1	4.2	4.2
Website	4.1	4.2	4.2	4.2
Training	4.1	4.1	4.2	4.1
Webinars	3.6	3.9	3.9	4.2
Online training	-	4.0	4.1	4.2

As can be seen, users have generally provided very positive feedback for the service and the most significant improvement is in the score for webinars. Many users provided suggestions and comments on all aspects of the service. The nature of some of these comments suggests a potential lack of awareness of the opportunity to test different HPC architectures through the national Tier2 HPC services. More work may be needed to publicise Tier2 access opportunities.

4. Selected Quotes

The following quotes reflect the tone of the majority of responders to the survey with regard to the ARCHER service:

"I greatly appreciate the work and effort that goes in to keeping ARCHER running. Thank you!"
"It's really help to my research!"
"An excellent service that should be expanded"
"Lots of help for 1st time users, easy to understand"
"Thank you for providing and maintaining this HPC facility that is very useful to researchers"

Quotes on the helpdesk (which also reflect on the centralised CSE team) echo the particularly high ratings for this aspect of the service:

"Rapid response to questions and a high level of technical knowledge."
"Always quick with good advice and detailed explanation"
"The helpdesk is very responsive and helpful, better than any of the HPCs I have used."
"Very prompt and helpful replies"
"Very good service, very responsive"
"Quick and helpful responses every time"

There were a number of favourable comments on the provision of the KNL service:

"It was great to have access, on top of ARCHER itself, to the KNLs. This helped a lot to test MPI + OpenMP for several codes"

"Providing access to the KNL testbed was an excellent idea. It is a pity Intel is discontinuing this product. Could ARCHER provide access to more testbeds for a range of architectures? It was really well set up compared to other UK KNL services I have used."
"I'd encourage more test/experimental hardware like the small Knights Landing facility, being a good way to provide wide access to the UK HPC community, though appreciate the staff time implications."
"My main comment is that the service is very well managed, and was very reliable this year and as mentioned before, having access to KNL nodes is a bonus."

5. Ratings

All questions asked responders to rate their satisfaction with each particular aspect of the survey on a scale of 1 to 5 with 1 representing "Very Unsatisfied" and 5 representing "Very Satisfied". Table summarises the ratings for each aspect and reveals the all aspects of the ARCHER Service are rated highly by users. The number of responses was 164, similar to the number in 2016. Table 2 shows the responses to the 2016 survey, Table 3 from 2015 and Table 4 those for 2014 for comparison purposes.

Service Aspect	Total Responses	Mean Score (out of 5)	Median Score (out of 5)
Overall Satisfaction	164	4.4	4
Hardware	164	4.3	4
Software	164	4.1	4
Helpdesk	132	4.6	5
Documentation	156	4.2	4
Website	161	4.2	4
Training	98	4.1	4
Webinars	65	4.2	4
Online training	74	4.2	4

Table 1: Summary of scores for different aspects of the ARCHER Service 2017

Service Aspect	Total Responses	Mean Score (out of 5)	Median Score (out of 5)
Overall Satisfaction	161	4.3	4
Hardware	161	4.2	4
Software	161	4.2	4
Helpdesk	136	4.5	5
Documentation	152	4.2	4
Website	155	4.2	4
Training	94	4.2	4
Webinars	64	3.9	4
Online training	70	4.1	4

Table 2: Summary of scores for different aspects of the ARCHER Service 2016

Service Aspect	Total Responses	Mean Score (out of 5)	Median Score (out of 5)
Overall Satisfaction	230	4.3	4
Hardware	230	4.1	4
Software	230	4.0	4
Helpdesk	198	4.5	5
Documentation	215	4.1	4
Website	221	4.2	4
Training	147	4.1	4
Webinars	102	3.9	4
Online training	104	4.0	4

Table 3: Summary of scores for different aspects of the ARCHER Service 2015

Service Aspect	Total Responses	Mean Score (out of 5)	Median Score (out of 5)
Overall Satisfaction	153	4.4	4
Hardware	153	4.1	4
Software	153	4.0	4
Helpdesk	129	4.5	5
Documentation	142	4.1	4
Website	144	4.1	4
Training	81	4.1	4
Webinars	41	3.6	4
Online training	-	-	-

Table 4: Summary of scores for different aspects of the ARCHER Service 2014

Table 5 shows a comparison of mean scores for the different questions across Annual Surveys since the service began. This comparison shows that the mean ratings for different aspects of the service are slightly higher in general for 2017 than the mean ratings in previous years. All aspects of the ARCHER service continue to receive very high satisfaction ratings from the users. The mean rating for webinars has increased by 0.3 from 3.9 in 2016 and 2015 to 4.2 in 2017 perhaps showing the increase maturity of the technology or user acceptance of it. The Helpdesk continues to stand out as the highest rated aspect of the service in both surveys with an extremely high mean score. This is testament to the hard work of all service partners (SP, CSE and Cray) in ensuring that responses to the users through the helpdesk are timely, accurate, useful and polite.

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Online training	-	4.0	4.1	4.2

Table 5: Comparison of mean scores from 2014, 2015, 2016 and 2017 User Surveys for different aspects of the ARCHER Service

As can be seen from Figure 1, the overall satisfaction with the ARCHER service is extremely high with no responders rating the service below 3 on a 1-5 scale from “Very Unsatisfied” to “Very Satisfied.” The mean rating is 4.4, up from 4.3 in 2016. The median rating is unchanged at 4.

Figure 1: Distribution of scores for overall satisfaction with the ARCHER service (164 responses in total).

For the hardware and software (Figure 2 and Figure 3 respectively), the overall satisfaction with the service is high, with only 1 user rating the hardware below 3 and 3 users rating the software below 3. There were no ratings of 1 (“Very Unsatisfactory”) for the hardware or software on ARCHER this year. The mean rating for hardware is 4.3 (median is 4) and the mean rating for the software is 4.1 (median is 4).

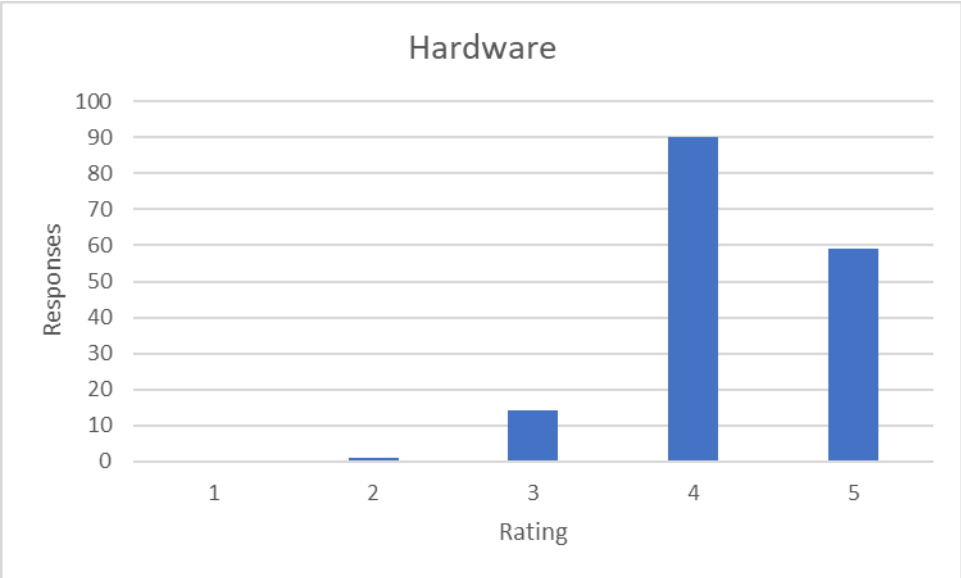

Figure 2: Distribution of scores for satisfaction with the ARCHER hardware (164 responses in total).

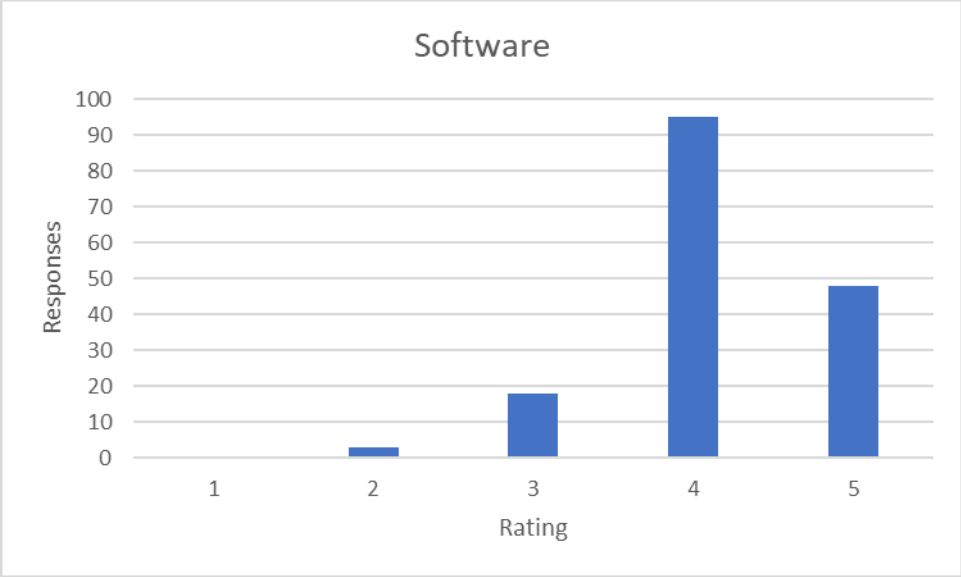

Figure 3: Distribution of scores for satisfaction with the ARCHER software (164 responses in total).

The satisfaction ratings for the ARCHER Helpdesk showed a single response with a score under 3 and a mean rating of 4.6 (median is 5) with the mean up 0.1 from the 2016 Annual Survey. Of the 132 responses, 84 (62%) gave a score of 5 ("Excellent"). No users gave a score of less than 2 and there were no comments for the one instance of a score of 2.

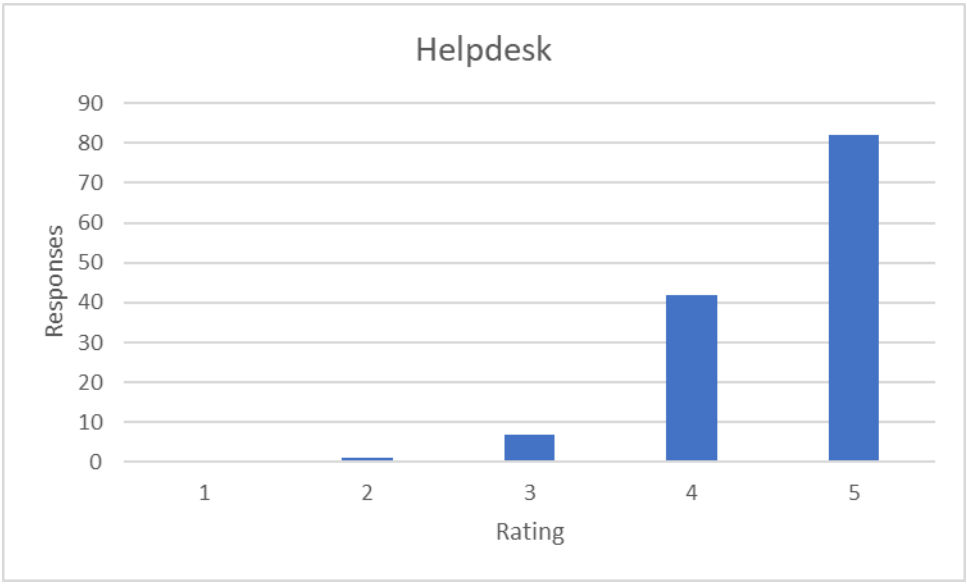

Figure 4: Distribution of scores for satisfaction with the ARCHER helpdesk (132 responses in total).

ARCHER documentation (Figure 5, mean = 4.2, median 4) and website (Figure 6, mean = 4.2, median 4) show the same high level of overall satisfaction as that shown for the overall service, as well as having high respondent rates. The 2 users who gave a score of 1 or 2 have provided their email addresses and they will be contacted to ask for further details.

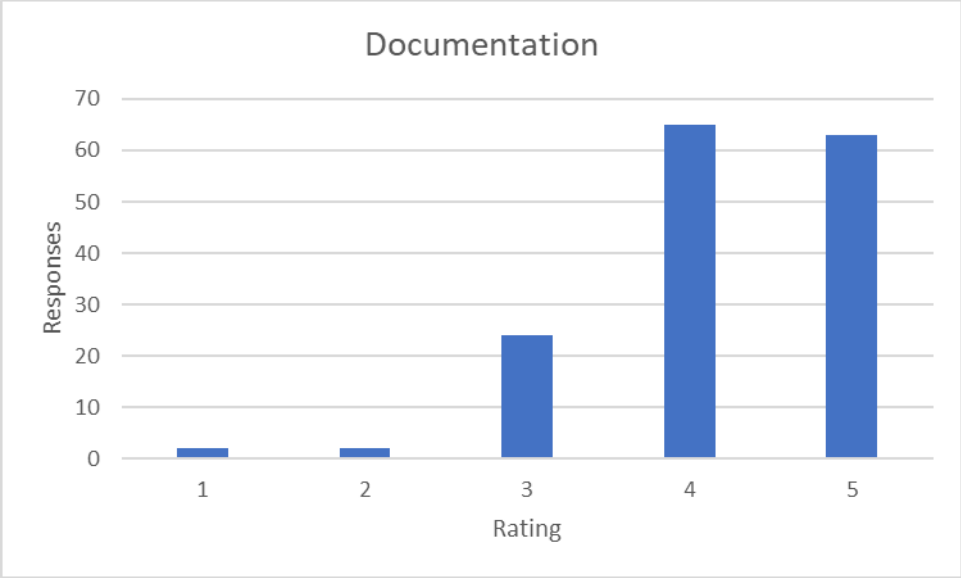

Figure 5: Distribution of scores for satisfaction with the ARCHER documentation (156 responses in total).

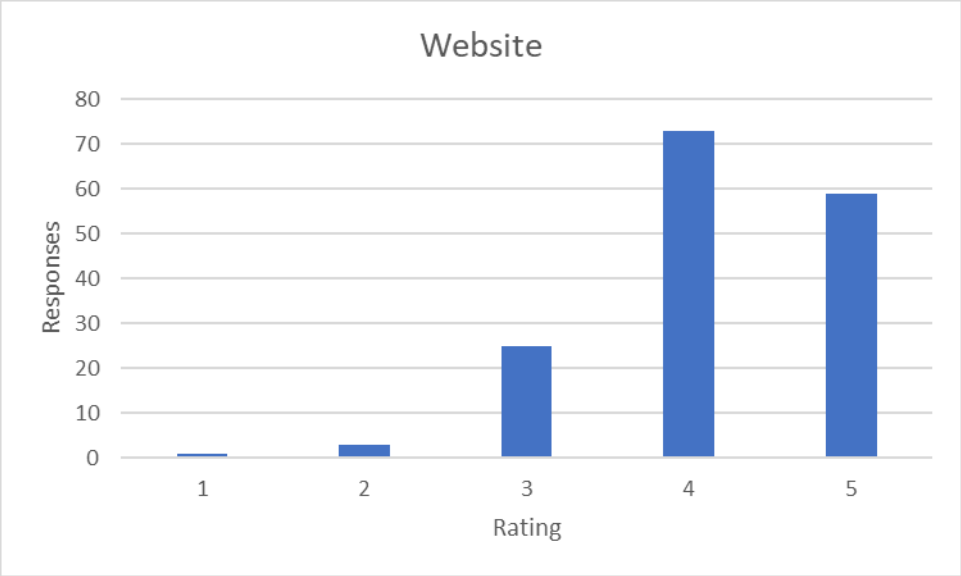

Figure 6: Distribution of scores for satisfaction with the ARCHER website (161 responses in total).

The results for ARCHER training (Figure 7, mean = 4.1, median = 4) are high and consistent with the course survey results presented in the CSE Service quarterly reports. There are no comments from users with scores of 3 and under and a number of responders have scored for training with a comment that they had not attended any training.

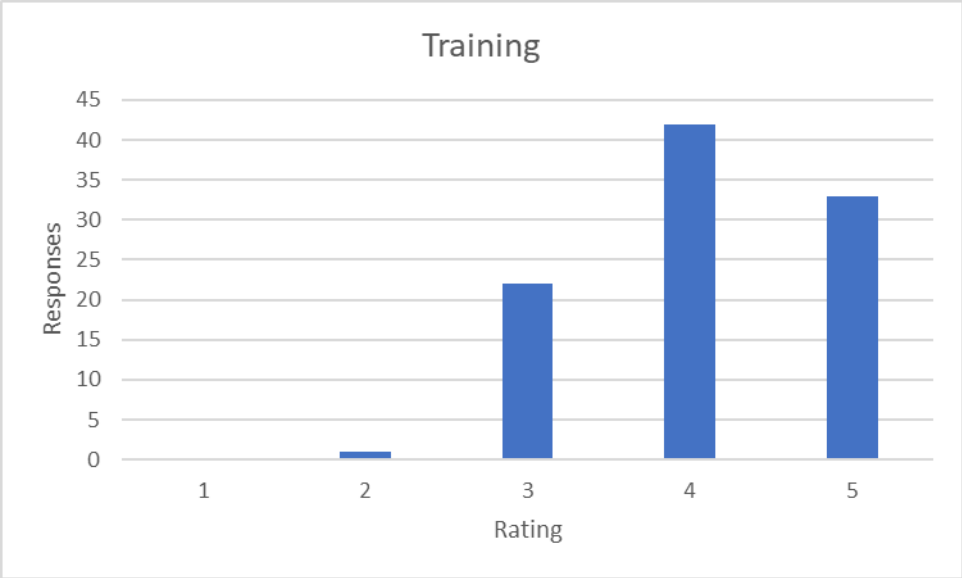

Figure 7: Distribution of scores for satisfaction with the ARCHER training (98 responses in total).

The webinars and online training have a lower respondent rate (possibly due to the fact that they are of interest to a subset of ARCHER users) but show a high satisfaction rating (Figures 8 and 9, mean = 4.2, median = 4 for both). The mean rating for webinars has increased significantly from 3.9 to 4.2 since 2016.

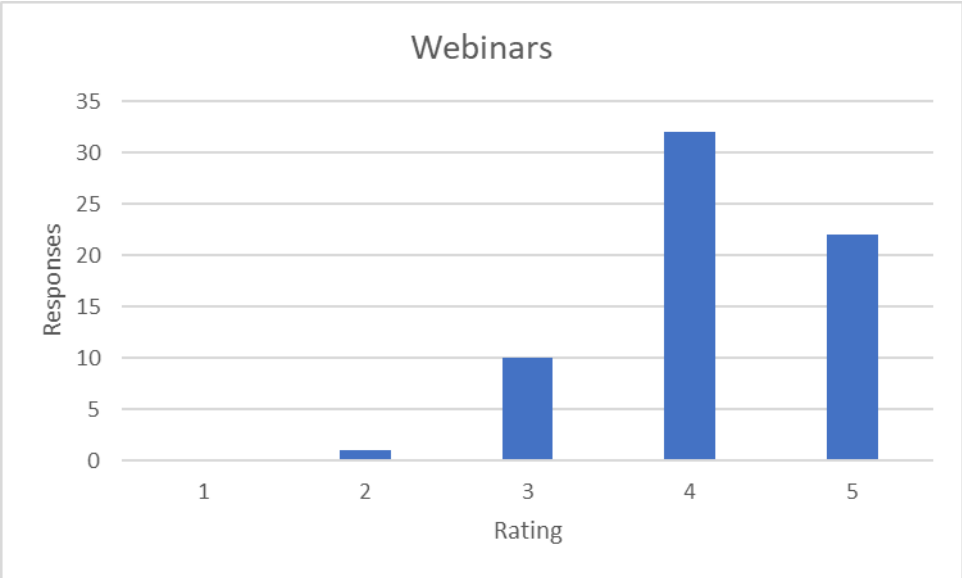

Figure 8: Distribution of scores for satisfaction with the ARCHER webinars (65 responses in total).

Figure 9: Distribution of scores for satisfaction with the ARCHER Online Training (74 responses in total).

6. List of Comments

The comments shown are all the comments received for each question in an unedited form. The number shown in brackets at the end of each comment represents the ID of the anonymous respondent.

Hardware

- In my research I could take advantage of nodes with a GPU in addition to CPUs (e.g. 1 GPU on 5 CPUs - but this of course is dependent on what gives best performance for the type of job you run). (17)
- The I/O performance could be better (18)
- I am very satisfied with the archer hardware. (19)
- GPUs would be good! (23)
- Would like to have GPU resources (31)
- It was great to have access, on top of ARCHER itself, to the KNLs. This helped a lot to test MPI + OpenMP for several codes (34)
- Include GPUs (35)
- Very good, it is the standard we use to benchmark everything else with (40)
- Make it easier to run longer jobs, even at lowered priority if necessary (41)
- No problems; the relatively conventional hardware makes porting and running code on Archer straightforward. (42)
- Some jobs, which are exactly the same and run at the same time, take twice as long as other jobs. (47)
- Maybe some GPUs would be helpful? (50)
- ARCHER is too small. ARCHER2 needs to be at least 5 times larger (with possibly KNL hardware) (63)
- Disk and file systems need a serious improvement (65)
- Excellent parallel efficiency (80)
- It is quite long-in-the-tooth now, and I find I need more and more cores to do much of my research. We really need a larger national facility. (83)
- Need more - queue times and loading are high (84)
- I/O performance is rather poor compared to other HPC systems requiring us to rethink our data handling. Not sure what it stems from, though. (87)
- Higher memory bandwidth (114)
- The RAM on the standard nodes is not enough to run high level GW calculations. For normal calculations of standard system sizes they are very well suited. (117)
- A larger system would be helpful, but high performance interconnect is great (119)
- would be interesting to see, access and re-compile and test performance of my models with Intel Xeon Phi™ Processors if /when available on ARCHER (123)
- The only problem we had using ARCHER was the occurrence of a maintenance window in the middle of the production run. This meant more kAUs had to be purchased as my jobs were killed and not restartable. (129)
- If possible use same nodes/compilation/storage for compute and post processing to reduce user burden and duplication of data (130)
- Providing access to the KNL testbed was an excellent idea. It is a pity Intel is discontinuing this product. Could ARCHER provide access to more testbeds for a range of architectures? It was really well set up compared to other UK KNL services I have used. (146)
- Next gen needs better NUMA configuration so that all cores on a node can be used well by shared memory parallelism. Current hardware has very poor inter-node communication meaning that moving from 8->16 threads in e.g matmul actually produces a slowdown (152)
- Works for me, I know no more than that though. (155)
- capacity starts to be a problem (158)
- MPI distribution was super easy, so at least the interface is excellent. The number of compute nodes is fantastic, as has been their availability for distributed use (159)

- I'd encourage more test/experimental hardware like the small Knights Landing facility, being a good way to provide wide access to the UK HPC community, though appreciate the staff time implications. (164)

Software

- needed to use JASMIN VM for the analysis of the results as certain softwares are not installed on ARCHER (16)
- Possibly more frequent updates of the most recent versions of software packages (e.g. gromacs) would make the service even better. (17)
- I just do the simulation. (19)
- Cray packages are good, others less so. (20)
- Great support for CP2K in terms of optimization and libraries (40)
- User's ARCHER time should be compensated if the job failed due to software error, such as MPI hang-up etc. (41)
- more training on parallel profiling tools! (50)
- This is not criticism; rather it is a comment to help ARCHER run smoother for users. I've had jobs complete with wildly differing performance results. This could be due to dead jobs running on nodes. (54)
- Electronic structure packages (which we use) are not as regularly updated as possible: often minor or major new versions appear without being available on Archer. However Helpdesk tickets about this are always addressed quickly. (55)
- I use the CRYSTAL program on Archer, and the rapid upgrade to version 17 was appreciated. (66)
- It's been very helpful to have the compilation guide on the website for different packages. (82)
- Great to have parallel debuggers and profilers. (83)
- a newer version of ASE and mpi4py would be useful (98)
- Good set of scientific packages available, sane compiler and python options for putting together custom stuff (102)
- Make access to licensed software easier (e.g. CASTEP for UK academics) (114)
- Very good (119)
- Good availability of apps and compilers (120)
- would be useful to set up a MatLab software with a licence for small parallel simulations (one of few nodes or even for a single processor) to work with small post-processing and small pre-processing jobs related to input and output data manipulations. That could substantially reduce the massive data traffic to/from external (users machines) (123)
- Any needs have been promptly met (128)
- The job submission/queuing system was unusual and needed >40 hours of testing to configure correctly. (129)
- Would be easier to directly post process from login nodes e.g. Paraview. Profiling MPI code following step by step instructions failed to execute at runtime. Did not pursue problem as it is quite laborious and time consuming in the first place. Maybe scripts could help? (130)
- Loading python3 together with recent numpy and matplotlib packages is unintuitive (133)
- OpenMPI with Java support Enabled would have been very useful (135)
- Again, I can do everything I want to do. (155)
- I'm impressed with the number of versions of gcc available (159)
- I'd like to have the Intel tuning tools as well as CrayPAT for Knights Landing. I have the Intel tools locally, though not the hardware, and they seem to provide more information for tuning multithreaded code. (164)

Helpdesk

- The reaction time on requests was good (18)
- Very quick responses (40)
- Very prompt and helpful replies (42)

- Very good service, very responsive (63)
- Quick and helpful responses every time (71)
- Introduce disk quotas to stop people abusing the home directorsy (75)
- Fast turnaround (82)
- Always quick with good advice and detailed explanation (98)
- In my experience, the helpdesk is extremely competent and helpful. However, debugging technical issues that need helpdesk involvement takes very long (a one/two-day turnaround for each possible fix is great performance from the helpdesk, but can introduce very long delays to research projects). In my specific case, it would have helped to have more information available to my group, for example the disk reads/writes caused by a particular job. (101)
- The service has generally been very responsive and helpful when I have made queries. (109)
- The helpdesk is very responsive and helpful, better than any of the HPCs I have used. (113)
- Replies were received promptly and my query was always answered in a professional and helpful manner. (117)
- Helpdesk is quick to respond (120)
- The ARCHER helpdesk is very prompt and supportive. Thank you! (121)
- Rapid response to questions and a high level of technical knowledge. (129)
- Very helpful thanks. (130)
- I troubleshooted python problems with support@, and their help was incredibly thorough and quick. However, I also had an interaction with support@ that was redirected to helpdesk@ and responded to by @epcc, which offered no help, asked orthogonal questions with no explanation, repeatedly linked irrelevant documentation with no effort to understand my problem, and actually gave technically incorrect advice, demonstrating poor understanding of ARCHER itself! (159)
- Incredibly fast and efficient. Thanks! (16)
- They respond very quickly with the precise answer and are very keen to help.(161)

Documentation

- The examples, for example of submission scripts, were very helpful (42)
- It is quite messy (44)
- Parallel profiling tools can be a bit difficult (50)
- Could the documentation on specific software packages include benchmark and scaling tests? To give any (prospective) user an idea of how useful the combination of Archer and package-X is. (55)
- Very complete documentation (63)
- All clear! (75)
- Sometimes hard to navigate but very complete. (82)
- Examples of using aprun for hybrid OpenMP-MPI jobs, particularly what the settings for process placement, memory allocation etc. are and do. E.g. "aprun -ss" vs "aprun -cc depth" (83)
- Docs are broken into too many guides with somewhat overlapping material. Quick start guide, ARCHER user guide, ARCHER best practices guide,... Some of these could be easily consolidated. (86)
- Sometimes difficult to find stuff, but otherwise all good. (87)
- Sometimes hard to find details of (say) compiler options, libraries to link etc (88)
- Excellent documentation for VASP. (89)
- The documentation is very detailed and informative. (109)
- Would be nice to have some information on how to use Octave in gui mode, don't even know if it is possible to use it like that (112)
- Very good (119)
- User Guide and Best Practice Guides are particularly helpful and informative (120)
- Docs were comprehensive. (129)
- Some help on common MPI errors/output might help. MPI is hard to debug, and output cryptic. I'm sure there may be a lot of similar problems for users. (130)
- More accessible information on good practice. (131)
- Better information and instructions on available (parallel) debugging and profiling software. (152)
- Have always been able to look things up, but maybe I don't require the depth that some people do. (155)
- The documentation lacked critical instructions on creating conda environments on the work direc, advice on activating conda environments on the compute nodes, ensuring python libraries were installed to the work environment, unloading an interfering default module, and passing a necessary additional flag to aprun. This has since been addressed by excellent help from the support team. The current documentation on job arrays remains lacking. It should clarify that the walltime is collective across jobs in the array. It should clarify that the submission script itself is re-executed entirely on the launcher nodes (so that the aprun itself is repeated). It should mention the (very restrictive) job array size, etc. (159)
- It took me a while to work out how to do some KNL-specific things, like controlling NUMA placement, in the Cray environment. (164)

Website

- Iirc, it took some time to find out how to create an account (14)
- Good interface & nice tools for project management (18)
- Clear and easy to navigate with good tutorials (40)
- Report generation is quite slow for some reason. (41)
- Well organised (42)
- It is a bit messy, although most info is there, it takes time to find what you are looking for (43)
- I miss easy access to logos or other PR photos that are useful to include in presentations. (55)
- Since you have left and right empty columns, it would be good put the calendar with the archer maintenance, so it is easy to find. Also, a small widget with the actual status (so if there are outage, etc users can be easily informed) (65)

- Sometimes it's easier to use Google to find a particular page than to navigate to it.(82)
- Missing a 'search' button on front page. Can sometimes be hard to find things.(84)
- It's good, but it doesn't seem to have a search button? (87)
- Two possible areas where the site could be improved: (1) rendering on small screens/mobile devices (currently the full desktop site is shown); (2) internal search engine (it can be difficult to find specific information in the documentation). (109)
- There must be easier ways to reset the password. (115)
- Very good, thanks. (130)
- For the different reports that may be generated, the descriptions and interface are not overly clear. (133)
- I do struggle each time I have a new user to register on the project and have to find them the instructions to follow on the web. (146)
- the useful search bar disappeared, some of the information regarding module and updates are a bit scattered between news and maintenance (158)

Training

- Only watched the introduction video (17)
- very detail (19)
- Face-to-face training is good to meet and discuss in detail. (20)
- MPI course was excellent (38)
- Very useful (49)
- The courses I attended were quite general. It would be nice to see some 'advanced' versions of these courses. (82)
- It would be good if at the end of the course or workshop you provided participants with model solutions to practicals, which is not always the case. (87)
- Webinars are nice for large topics, text on web is also good when unable to watch/listen. (130)

Webinars

- good enough (19)
- Haven't attended due to time restrictions, but they look very useful. (42)
- took me a while to find them, esp the one for new users of Archer (71)
- Video conference quality is sometimes poor, though I appreciate it is in general hard to ensure good quality broadcasts (122)
- specially debugging tool sessions (Allinea software training and other occasions) (123)
- Are the slides/edited transcripts available? (130)
- Topic was useful, but the audio sometimes had problems. (161)
- The few webinars I have attended worked surprisingly well (164)

Online Training Material

- Try to enhance the visibility of these courses? As I'm not aware of their existence (41)
- I find the archive of past course materials useful, but following screencasts a bit slow. (45)
- Generally useful. (82)
- would be good to notify users with appearance of the new entrances (by e-mail) (123)
- I learnt a lot from the Driving Test, on my road to becoming a full user. (155)

Other Comments

- Make file-transfers between different accounts of the same user easier (18)
- It's really help to my research! (19)
- Several of the ARCHER "policy" restrictions seem almost deliberately designed to frustrate my workflow. Particularly auto log/out, disabling of "screen", which require a reset of session context which is wasteful and time consuming, particularly for an academic who has just a few minutes to return to a research problem each day. Inability to share large files, executables and data with other ARCHER users is also wasteful and time consuming, and means that collaborative research requires them to be copied offsite and back on simply to reach a different ARCHER account. (22)
- ARCHER is great in general. It would be nice to be able to easily check WHEN my kAU budget expires. Currently the only way I can find out is by emailing people. It would help with planning runs, etc. (24)
- My main comment is that the service is very well managed, and was very reliable this year and as mentioned before, having access to KNL nodes is a bonus. (34)
- Staggering of Consortium period end dates to avoid backlog, but this may not be something ARCHER itself can do (40)
- More nodes, please! (49)
- Thank you for all your hard work! (61)
- The UK should have at least 2 or 3 HPC systems so that we can compete with the US, France, Germany, Japan and China. At the moment, we have to rely on PRACE/INCITE projects if we want to do word-class simulations... (63)
- The ability to request longer walltime limits (beyond 48 hrs) may be useful for certain projects. (81)
- I'm very pleased with the ARCHER Service overall, and the eCSE programme in particular. (83)
- Please consider the following two policy changes: 1. Do not make users get a new account for every allocation they have. Keep the workspace filesystem structure, but allow me to access from a single username. At many other facilities, jobs are charged to different allocations through an additional variable in the job script. In the past, I have had three active allocations, all requiring duplicate setup, software compilation, passwords. So inconvenient and so fixable! 2. Please increase the default workspace quota. 250 GB is woefully inadequate for a system with multiple PB of storage and only about half of it used. The jobs I run make many TB of data and every time I want to run something, I have to contact the helpdesk to get a temporary quota increase. The helpdesk is usually quite responsive after quota has been increased in the past, but it is an extra step that impedes productivity. (86)
- The queue times have been much more reasonable this year. Thanks for sorting that out! (95)
- Thank you for providing and maintaining this HPC facility that is very useful to researchers. (100)
- I find the ARCHER service very useful, and would like to send extra praise to the helpdesk, who are always helpful and quick to respond (106)
- The service is excellent and essential for my research. I believe it is a critical resource to keep the UK competitive in several research areas. (107)
- Many thanks for a generally excellent service. (109)
- The login node process speed could be improved. (113)
- I greatly appreciate the work and effort that goes in to keeping ARCHER running. Thank you! (117)
- An excellent service that should be expanded (119)
- it would be good to establish some limited crontab options available for users, e.g. for downloading or transfer data, or even to run regular parallel job submission sequences (123)
- I am fully satisfactory with the ARCHER service. (125)
- The lack of red-tape, attractive and uncomplicated commercial terms were the main reasons for choosing ARCHER. (129)
- Allocation periods are required but constrictive. It introduces a lot of pressure. Some more flexibility would be helpful to postpone as well as bring forward AUs. (130)
- Lots of help for 1st time users, easy to understand (141)

- I could not answer some of these questions truthfully because I didn't use the resource (eg Driving test), so entered the response 3. The newsletter sent via email is very useful by the way ... (146)
- Get some GPUs! :) (159)
- Since I only use ARCHER from time to time, I keep tripping over not having my home directory mounted on the compute nodes, specifically the KNL nodes. This is different from any other HPC facilities I use. (164)