

Introduction to OpenMP

Overview

Who am I?

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- Senior researcher at EPCC
- EPCC is the UK's national supercomputer centre
 - a self-funding Institute at The University of Edinburgh
- Interests in parallel algorithms, parallel programming models, benchmarking, novel uses of HPC
- EPCC's representative on the OpenMP ARB

Overview

- Shared Memory Concepts
- OpenMP Fundamentals
- Parallel Regions
- Parallel loops
- Synchronisation



- UK National Supercomputer Service, managed by EPSRC
 - housed, operated and supported by EPCC
 - hardware Supplied by Cray
- Training provided by the ARCHER Computational Science and Engineering (CSE) support team
 - 72 days per year at various locations round the UK
 - free to all academics

Access to ARCHER

- Guest accounts for duration of course
 - can be used in the evenings while the course is running
- Accounts will be closed immediately after the course
 - all files etc will be deleted
- Take copies of all your work before course ends!
- Course materials (slides, exercises etc) available from course web page
 - archived on ARCHER web pages for future reference

Reusing this material



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Logging on to ARCHER

You will have been given a guest account ID – referred to generically here as guestXX - and a password.

These credentials can be used to access ARCHER using

```
ssh -X guestXX@login.archer.ac.uk
```

or with the SSH client of your choice (-X ensures that graphics are routed back to your desktop).

Practical exercises source code

To download the source code for the practical exercises, **make sure you are in your work directory on ARCHER**, then use the following command :

```
cp /home/z01/shared/UKOMP.tar .
```

To submit a batch job use:

```
qsub -q R5312780 <batchfile>
```