

# Parallel Computer Systems, Fall 2022

## Instructions for Databar Exercise 2: Performance Counters

September 9, 2022

### 1 Introduction

In this databar exercise, you will use performance counters to diagnose performance bottlenecks. You will use the HPC computing facilities at DTU.

You will report on this exercise as part of the first report. You will there write at most one page about your experiences and findings. NB: You will write more in the first report than the outcome of this exercise.

You also need to use the report template pointed to by the `course_documentation.pdf` document.

**Read through this document in entirety before starting working on the exercises!**

### 2 Learning objectives

During this assignment you will be working towards the following learning objectives:

- Carry out empirical performance evaluations.
- You can write down in text and in your own words definitions or explanations of the following concepts: performance analysis; performance models; performance tools.

### 3 Reports and rules

DTU has a zero tolerance policy on cheating and plagiarism. This also extends to the reports and indeed all your work. For example, to copy text passages from someone else without clearly and properly citing your source is considered plagiarism. You are assumed to stay informed of and follow DTU's rules.

## 4 Reference material

Before carrying out the exercise read chapters 2 in Hager&Wellein.

## 5 Working with performance counters

Log on to the HPC machines using the guide at [http://www.cc.dtu.dk/?page\\_id=2501](http://www.cc.dtu.dk/?page_id=2501). The guide refers to the machines as the "LSF 10 Cluster". ThinLinc is probably the easiest way to access the machines from Windows. Remember to perform the last step of the guide and execute the `linuxsh` command.

We will use a lab from Grinnell College: <https://curtsinger.cs.grinnell.edu/teaching/2016F/CSC211/labs/lab11.html>

All the commands mentioned in the instructions work on the DTU HPC machines. Follow the lab to the end.

### 5.1 Reporting

You report your work in the first mandatory report with up to one page. You only need to document the aspects mentioned under "Your Task" for part A and part B.

## 6 License

This text is under CC BY-SA 3.0 license.