

An Introduction to OpenMP

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Abstract

OpenMP is the industry standard technology for writing explicitly parallel programs for shared memory computers. OpenMP is easy to use with most of the constructs consisting of simple compiler directives. These directives create threads, split work between them, and manage how data is shared.

In this tutorial, I will provide a comprehensive introduction to OpenMP. We will discuss the origins of OpenMP, the programming model behind it, and the basic syntax of the language. While we assume the students know Fortran or C in a Unix environment, we do not require any background in parallel programming.

Finally, at this point, I can't predict how the content of the tutorial will be divided between advanced and introductory material. I will determine this at the beginning of the tutorial based on the backgrounds of the students. My goal is to make the experience valuable regardless of the parallel computing experience of the students.