

Abstract

With the IA-64 architecture Intel and Hewlett Packard have developed one of the very few new processor architectures of the 1990s. They evolved the VLIW concept, so that the inherent instruction level parallelism increases instruction throughput. Understanding the details of the architecture is the main goal of the first part of this thesis. The second part deals with the analysis and optimization of various examples on an SGI Altix system. Finally, the thesis will present a "check list" for application developers to obtain good performance.