



# EP Analytics' Performance Analysis Tools for Intel's® Xeon Phi™

Port, analyze, optimize and prepare your HPC applications for Knights Landing

## Key Features



- Simple, intuitive view of performance hotspots
- Operates directly on production executable to gather detailed analytics
- Drill down into function and loop hotspots with a single click
- Customized reports for specific performance enhancing features of KNL
- Comment-style development advice displayed prominently in source code view

## Focused optimization advice – vectorization



- A more accurate assessment of vector units utilization (compared to hardware counters)
- Automatic identification of code-patterns that impede vectorization and mitigation strategies
- Customized compile-time optimizations for applications that can deliver up to 1.4X improvement in performance

## Focused optimization advice – concurrency



- Detailed performance-model driven guidance on the selection of concurrency parameters (e.g., thread count & pinning)
- Fine-grained guidance at loop-level

## Focused optimization advice – data placement



- In-depth analysis of data access patterns and locality to guide data placement on near and far memory
- Performance sensitivity to different configurations of near memory on KNL (e.g., 4<sup>th</sup> level cache versus explicitly managed memory)

