NSIGHT DEVELOPER TOOLS
NSIGHT PRODUCT FAMILY

Standalone Performance Tools

Nsight Systems - System-wide application algorithm tuning
Nsight Compute - Debug CUDA API and optimize CUDA kernels
Nsight Graphics - Debug/optimize specific graphics apps

IDE Plugins

Nsight Eclipse Edition/Visual Studio - editor, debugger, some perf analysis
NSIGHT SYSTEMS
System Profiling Tool

System-wide application algorithm tuning
  Multi-process tree support

Locate optimization opportunities
  Visualize millions of events on a fast GUI timeline
  Or gaps of unused CPU and GPU time

Balance your workload across multiple CPUs and GPUs
  CPU algorithms, utilization, and thread state
  GPU streams, kernels, memory transfers, etc

Multi-platform: Linux, Windows, Mac OS X (host only)
NSIGHT COMPUTE
Next-Gen Kernel Profiling Tool

Key Features:

- Interactive CUDA API debugging and kernel profiling
- Fast Data Collection
- Improved Workflow (diffing results)
- Fully Customizable (programmable UI/Rules)
- Command Line, Standalone, IDE Integration

OS: Linux, Windows, Mac OS X (host only)

GPUs: Volta, Turing
USING NSIGHT SYSTEMS
COLLECT A PROFILE WITH NSIGHT SYSTEMS

$ nsys profile --stats=true ./myapp.exe

Generated file: report.qdrep

Import for viewing into the Nsight Systems UI

The Nsight Systems UI can also be used for interactive system profiling
USING NSIGHT COMPUTE
KERNEL PROFILES WITH NSIGHT COMPUTE

$ nv-nsight-cu-cli -k mykernel ./myapp.exe

(Without the -k option, Nsight Compute will profile everything and take a long time!)

The Nsight Compute UI can also be used for interactive kernel profiling
NSIGHT COMPUTE UI