



# TRAINING

v2023.2.0 | May 2023

**User Manual**



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# Chapter 1.

## EXTERNAL RESOURCES

### Forum

- ▶ [DevTalk Nsight Compute Forum](#)

### Blogs

- ▶ Check the current list of [blog posts](#)

### Videos

- ▶ Check the current list of [training videos](#)

### Code Examples

- ▶ Have a look at our coding examples on [GitHub](#)

# Chapter 2.

## USAGE EXAMPLES

### 2.1. Filter Options

Note that examples will use the term *workload* to refer to either kernels, graphs, ranges or cmdlists unless stated otherwise.

1. Profile first two workloads

`--launch-count 2`

2. Profile first two workloads launched on device with device ID 1

Device 0

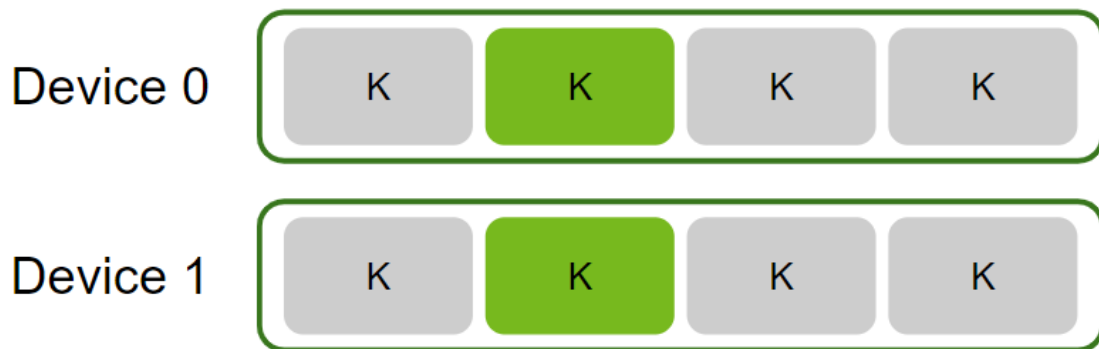


Device 1



`--device 1 --launch-count 2`

3. Profile 2nd workload on each gpu



```
--launch-skip 1 --launch-count 1 --filter-mode per-gpu
```

4. Skip first 2 workloads of each launch configuration before profiling

```
--launch-skip 2 --filter-mode per-launch-config
```

5. Profile "Bar" kernel



```
--kernel-name Bar
```

6. Profile kernels which have "Bar" in function name



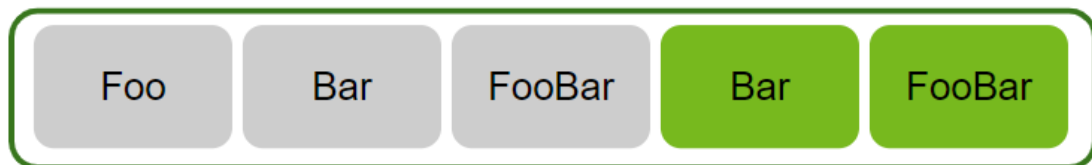
```
--kernel-name regex:Bar
```

7. Profile only 2nd invocation of kernel "Foo"



```
--kernel-id ::Foo:2
```

8. Profile only 2nd invocation of all kernels which have "Bar" in name



```
--kernel-id ::regex:Bar:2
```

9. Skip first 2 workloads before matching "Foo" or "Bar" in kernel names

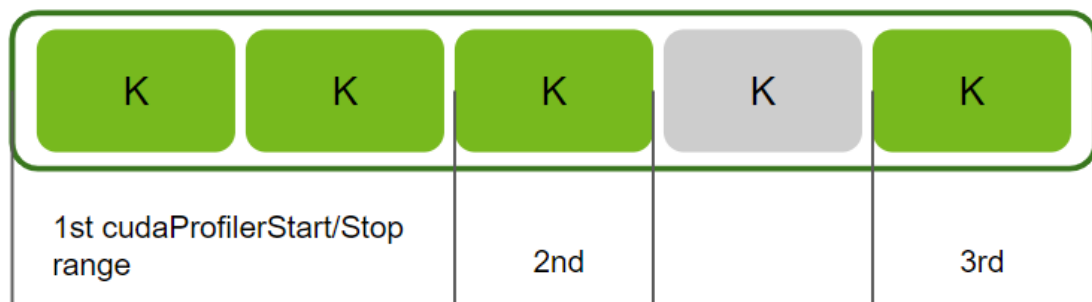


```
--launch-skip-before-match 2 --kernel-name regex:"Foo|Bar"
```

10. Profile all 7th kernel invocations with mangled name "\_FooBar" on CUDA context ID 1 and stream ID 2

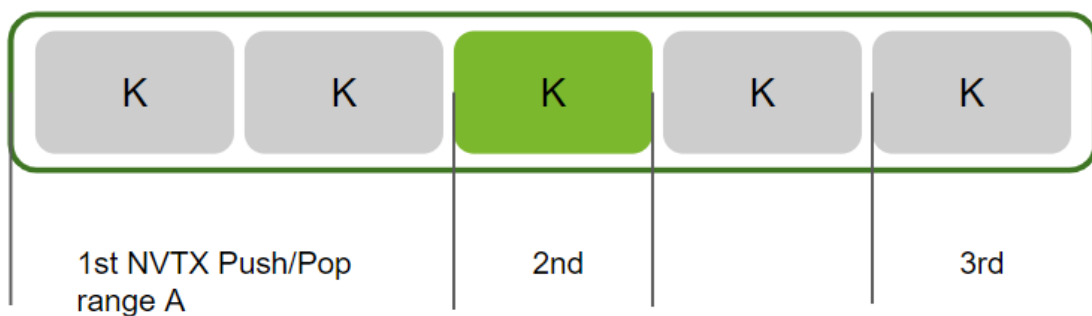
```
--kernel-id 1:2:_Foobar:7 --kernel-name-base mangled
```

11. Profile all workloads launched in first 3 cu(da)ProfilerStart/Stop APIs created ranges



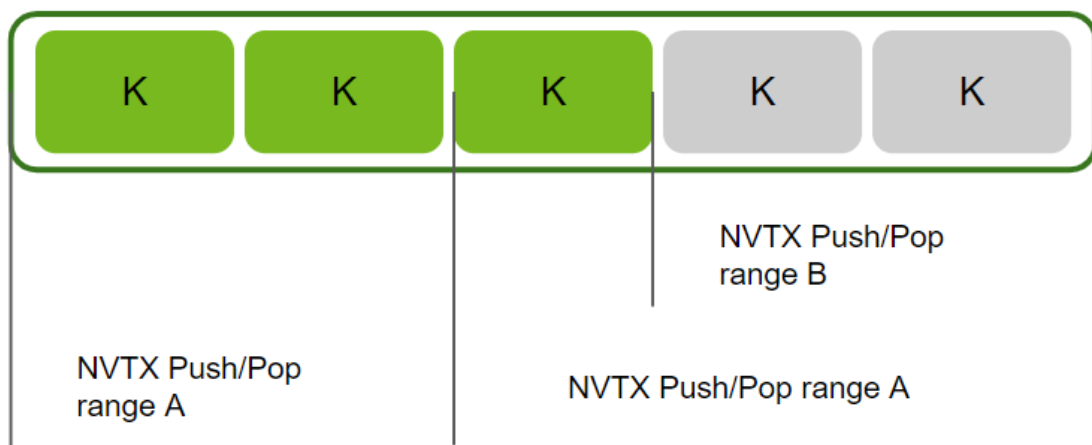
```
--range-filter :[1-3]:
```

12. Profile all workloads launched in 2nd NVTX Push/Pop range A



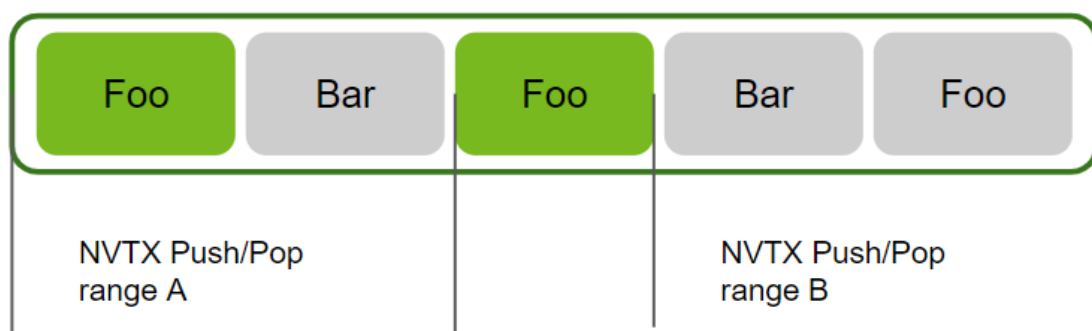
```
--range-filters ::2 --nvtx --nvtx-include A/
```

13. Profile all workloads launched in NVTX Push/Pop range A except the ones in NVTX Push/Pop range B



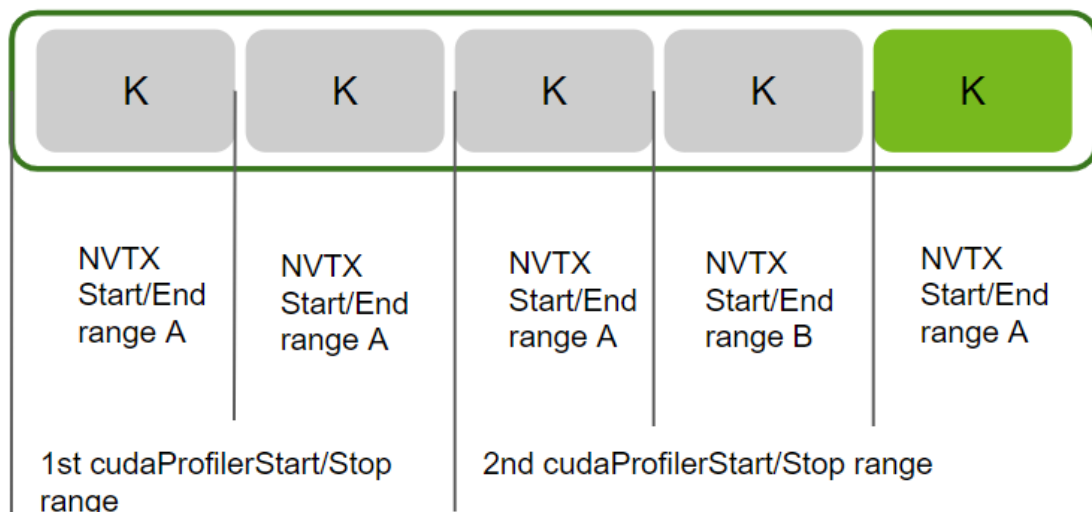
```
--nvtx --nvtx-include A/ --nvtx-exclude B/
```

14. Profile all "Foo" kernels except those launched in NVTX Push/Pop range B



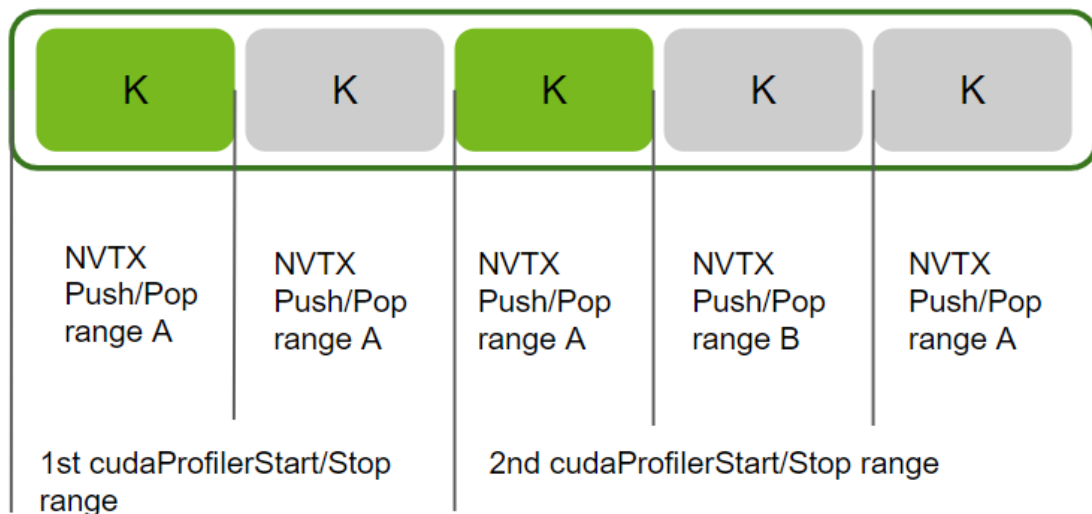
```
--nvtx --nvtx-exclude B/ --kernel-name Foo
```

15. Profile all workloads launched in 2nd NVTX Start/End range A inside 2nd cu(da)ProfilerStart/Stop APIs created range



```
--range-filter yes:2:2 --nvtx --nvtx-include A
```

16. Profile all workloads launched in 1st NVTX Push/Pop range A inside both 1st and 2nd cu(da)ProfilerStart/Stop APIs created range



```
--range-filter yes:[1-2]:1 --nvtx --nvtx-include A/
```

17. Profile all workloads launched in 1st cu(da)ProfilerStart/Stop APIs created range with 2nd NVTX push/pop range A and domain D

```
--range-filter no:1:2 --nvtx --nvtx-include D@A/
```



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