Sevarebench Measurement Results MP-Slice Scalable Search

Various Measurements

April 1, 2023

Nodes: idex meld tinyman yieldly (Intel 6312U(2.4GHz) 512GiB 25Gbits)

Function: 0

Protocols: 1 2 ... 6 Datatypes: 256 512 Inputs: 40960 Preprocessing: 0 SplitRoles: 0 1 2 Pack Bool: 0

Optimized Sharing: 1

ryBuffer: 0

SSL: 0

Threads: 1 2 4 ... 10 txBuffer: 0

Summary file: resultsMP-Slice/2023-04/01_02-45-57/Eslice-run-summary.dat

Total Experiment runtime: 1h27min31sec Experiment run status: completed Latex built date: 23.04.01 09:01 Experiment Networking Information Speedtest Info measured speed between nodes 1 and 2 Threads: 1 total sender speed: 24.7 Gbits/sec total receiver speed: 24.7 Gbits/sec Threads: 10 total sender speed: 24.83 Gbits/sec total receiver speed: 24.81 Gbits/sec measured speed between nodes 1 and 3 Threads: 1 total sender speed: 24.8 Gbits/sec total receiver speed: 24.8 Gbits/sec Threads: 10 total sender speed: 24.83 Gbits/sec total receiver speed: 24.81 Gbits/sec measured speed between nodes 2 and 3 Threads: 1 total sender speed: 24.8 Gbits/sec total receiver speed: 24.8 Gbits/sec Threads: 10 total sender speed: 24.80 Gbits/sec total receiver speed: 24.78 Gbits/sec measured speed between nodes 1 and 4 Threads: 1 total sender speed: 24.8 Gbits/sec total receiver speed: 24.8 Gbits/sec Threads: 10 total sender speed: 24.83 Gbits/sec total receiver speed: 24.81 Gbits/sec measured speed between nodes 2 and 4 Threads: 1 total sender speed: 24.8 Gbits/sec

total receiver speed: 24.8 Gbits/sec

total sender speed: 24.84 Gbits/sec

Threads: 10

4□ → 4□ → 4 □ → 1 □ → 9 Q (~)

total receiver speed: 24.81 Gbits/sec measured speed between nodes 3 and 4 Threads: 1

total sender speed: 24.8 Gbits/sec total receiver speed: 24.8 Gbits/sec Threads: 10

total sender speed: 24.83 Gbits/sec total receiver speed: 24.80 Gbits/sec

Latency Info

Node idex statistics

- 10.10.117.3 ping statistics -
- rtt min/avg/max/mdev = 0.159/0.269/0.502/0.127 ms — 10.10.117.4 ping statistics —
- rtt min/avg/max/mdev = 0.185/0.294/0.496/0.105 ms - 10.10.117.5 ping statistics -
- rtt min/avg/max/mdev = 0.252/0.291/0.320/0.029 ms
- Node meld statistics
- 10.10.117.4 ping statistics -
- rtt min/avg/max/mdev = 0.192/0.266/0.456/0.096 ms
- 10.10.117.5 ping statistics —
- rtt min/avg/max/mdev = 0.122/0.271/0.479/0.120 ms - 10.10.117.2 ping statistics -
- rtt min/avg/max/mdev = 0.206/0.249/0.285/0.035 ms
- Node tinyman statistics
- 10.10.117.5 ping statistics -
- rtt min/avg/max/mdev = 0.210/0.266/0.359/0.050 ms
- 10.10.117.2 ping statistics -
- rtt min/avg/max/mdev = 0.214/0.253/0.272/0.021 ms
- 10.10.117.3 ping statistics —
- rtt min/avg/max/mdev = 0.257/0.280/0.303/0.017 ms Node yieldly statistics
- 10.10.117.2 ping statistics —
- rtt min/avg/max/mdev = 0.133/0.261/0.457/0.107 ms
- 10.10.117.3 ping statistics -
- rtt min/avg/max/mdev = 0.145/0.260/0.310/0.059 ms
- 10.10.117.4 ping statistics —
- rtt min/avg/max/mdev = 0.235/0.276/0.307/0.023 ms

Outline I

manipulations

ThreadsFixed Input: 40960 -d d512 (AVX512) pre0split0pack0opt1ssl0fun0
ThreadsFixed Input: 40960 -d d512 (AVX512) pre0split1pack0opt1ssl0fun0
ThreadsFixed Input: 40960 -d d512 (AVX512) pre0split2pack0opt1ssl0fun0
txBufferFixed Input: 40960 -d d512 (AVX512) pre0split1pack0opt1ssl0fun0
txBufferFixed Input: 40960 -d d512 (AVX512) pre0split1pack0opt1ssl0fun0
txBufferFixed Input: 40960 -d d512 (AVX512) pre0split1pack0opt1ssl0fun0
txBufferFixed Input: 40960 -d d512 (AVX512) pre0split2pack0opt1ssl0fun0
txBufferFixed Input: 40960 -d d512 (AVX512) pre0split1pack0opt1ssl0fun0
txBufferFixed Input: 40960 -d d512 (AVX512) pre0split2pack0opt1ssl0fun0
Datatype Fixed Input: 40960 all (all) pre0split1pack0opt1ssl0fun0
Datatype Fixed Input: 40960 all (all) pre0split1pack0opt1ssl0fun0
Datatype Fixed Input: 40960 all (all) pre0split1pack0opt1ssl0fun0
Datatype Fixed Input: 40960 all (all) pre0split2pack0opt1ssl0fun0

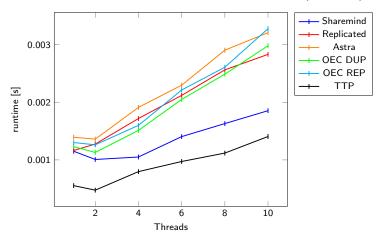
input

Input Size Protocol -s 1 (Sharemind) pre0split0pack0opt1ssl0fun0 Input Size Protocol -s 1 (Sharemind) pre0split1pack0opt1ssl0fun0 Input Size Protocol -s 1 (Sharemind) pre0split2pack0opt1ssl0fun0 Input Size Protocol -s 2 (Replicated) pre0split0pack0opt1ssl0fun0 Input Size Protocol -s 2 (Replicated) pre0split1pack0opt1ssl0fun0 Input Size Protocol -s 2 (Replicated) pre0split2pack0opt1ssl0fun0 Input Size Protocol -s 3 (Astra) pre0split0pack0opt1ssl0fun0 Input Size Protocol -s 3 (Astra) pre0split1pack0opt1ssl0fun0 Input Size Protocol -s 3 (Astra) pre0split2pack0opt1ssl0fun0 Input Size Protocol -s 4 (OEC DUP) pre0split0pack0opt1ssl0fun0 Input Size Protocol -s 4 (OEC DUP) pre0split1pack0opt1ssl0fun0 Input Size Protocol -s 4 (OEC DUP) pre0split2pack0opt1ssl0fun0 Input Size Protocol -s 5 (OEC REP) pre0split0pack0opt1ssl0fun0 Input Size Protocol -s 5 (OEC REP) pre0split1pack0opt1ssl0fun0 Input Size Protocol -s 5 (OEC REP) pre0split2pack0opt1ssl0fun0 Input Size Protocol -s 6 (TTP) pre0split0pack0opt1ssl0fun0 Input Size Protocol -s 6 (TTP) pre0split1pack0opt1ssl0fun0 Input Size Protocol -s 6 (TTP) pre0split2pack0opt1ssl0fun0 Input Size Datatype -d d256 (AVX) pre0split0pack0opt1ssl0fun0 Input Size Datatype -d d256 (AVX) pre0split1pack0opt1ssl0fun0

Outline II

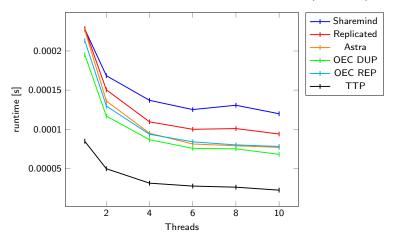
Input Size Datatype -d d256 (AVX) pre0split2pack0opt1ssl0fun0 Input Size Datatype -d d512 (AVX512) pre0split0pack0opt1ssl0fun0 Input Size Datatype -d d512 (AVX512) pre0split1pack0opt1ssl0fun0 Input Size Datatype -d d512 (AVX512) pre0split2pack0opt1ssl0fun0

MP-Slice Runtimes ThreadsFixed Input: 40960 -d d512 (AVX512)



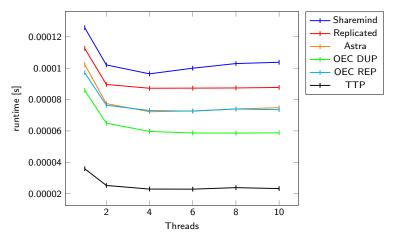
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: Threads runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes ThreadsFixed Input: 40960 -d d512 (AVX512)



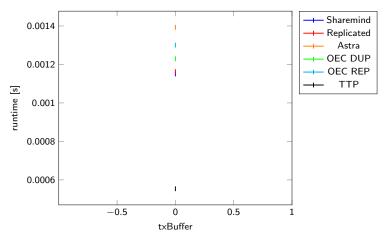
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: Threads runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes ThreadsFixed Input: 40960 -d d512 (AVX512)



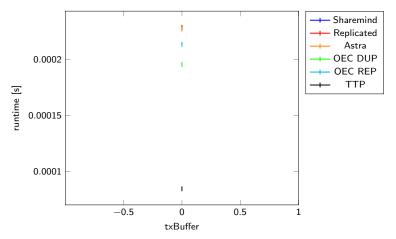
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: Threads runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes txBufferFixed Input: 40960 -d d512 (AVX512)



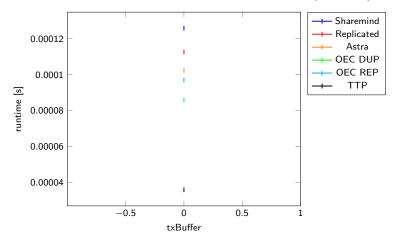
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: txBuffer runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes txBufferFixed Input: 40960 -d d512 (AVX512)



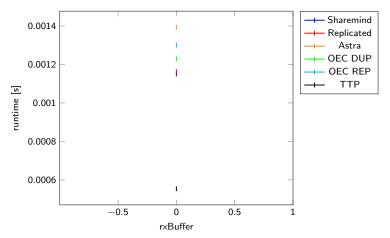
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: txBuffer runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes txBufferFixed Input: 40960 -d d512 (AVX512)



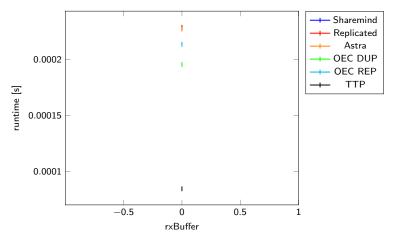
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: txBuffer runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes rxBufferFixed Input: 40960 -d d512 (AVX512)



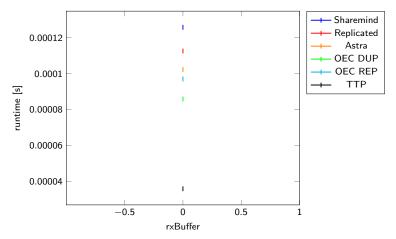
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: rxBuffer runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes rxBufferFixed Input: 40960 -d d512 (AVX512)



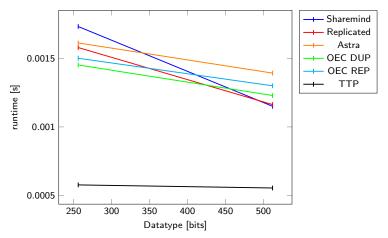
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: rxBuffer runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
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MP-Slice Runtimes rxBufferFixed Input: 40960 -d d512 (AVX512)



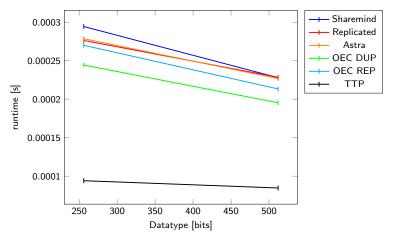
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 -d d512 (AVX512)
- Metric: rxBuffer runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Datatype Fixed Input: 40960 all (all)



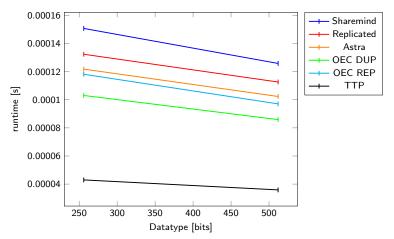
- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 all (all)
- Metric: Datatype runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Datatype Fixed Input: 40960 all (all)



- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 all (all)
- Metric: Datatype runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

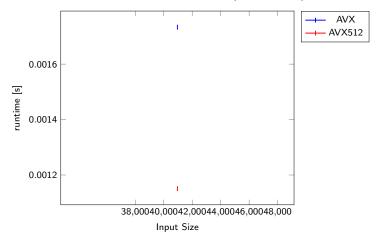
MP-Slice Runtimes Datatype Fixed Input: 40960 all (all)



- Ref.Problem: Scalable Search
- Library: MP-Slice Fixed Input: 40960 all (all)
- Metric: Datatype runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

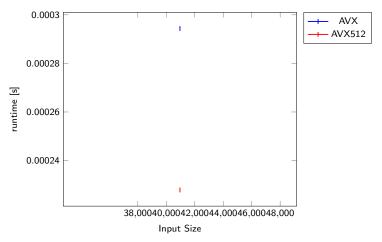


MP-Slice Runtimes Input Size Protocol -s 1 (Sharemind)



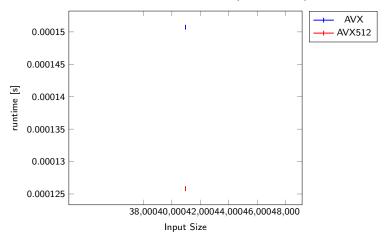
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 1 (Sharemind)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 1 (Sharemind)



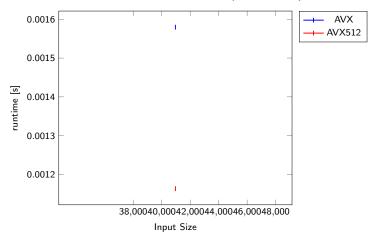
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 1 (Sharemind)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 1 (Sharemind)



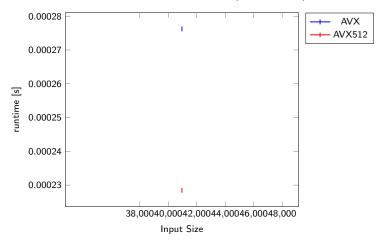
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 1 (Sharemind)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 2 (Replicated)



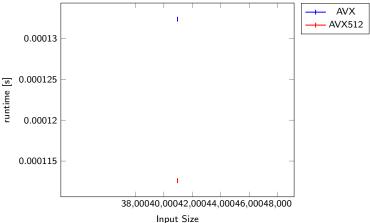
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 2 (Replicated)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 2 (Replicated)



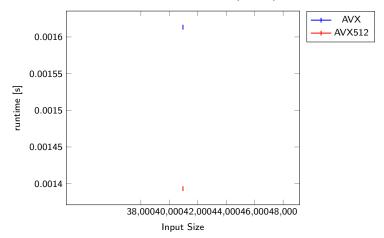
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 2 (Replicated)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 2 (Replicated)



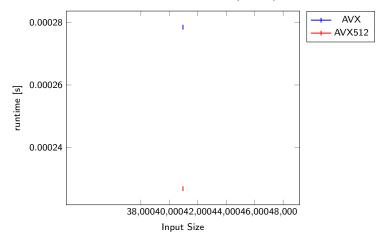
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 2 (Replicated)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 3 (Astra)



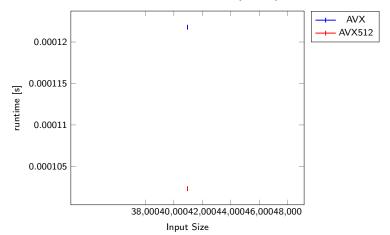
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 3 (Astra)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 3 (Astra)



- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 3 (Astra)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

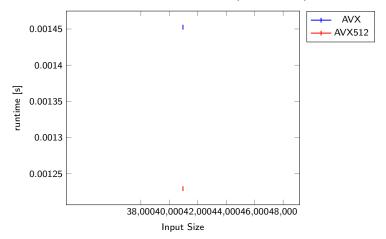
MP-Slice Runtimes Input Size Protocol -s 3 (Astra)



- Ref.Problem: Scalable Search

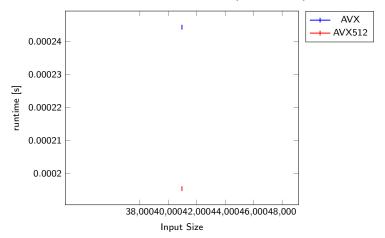
- Library: MP-Slice Protocol -s 3 (Astra)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 4 (OEC DUP)



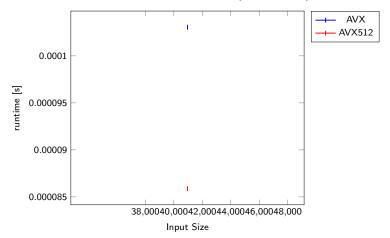
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 4 (OEC DUP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 4 (OEC DUP)



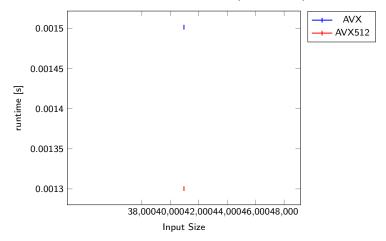
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 4 (OEC DUP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 4 (OEC DUP)



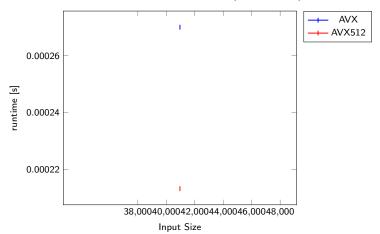
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 4 (OEC DUP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 5 (OEC REP)



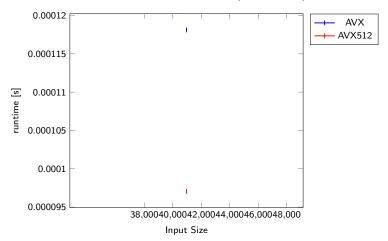
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 5 (OEC REP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 5 (OEC REP)



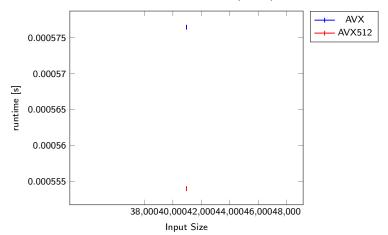
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 5 (OEC REP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 5 (OEC REP)



- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 5 (OEC REP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

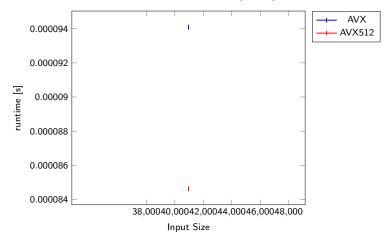
MP-Slice Runtimes Input Size Protocol -s 6 (TTP)



Ref.Problem: Scalable Search

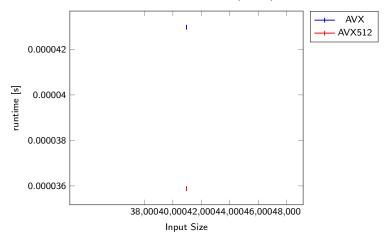
- Library: MP-Slice Protocol -s 6 (TTP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 6 (TTP)



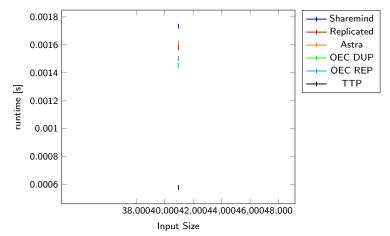
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 6 (TTP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Protocol -s 6 (TTP)



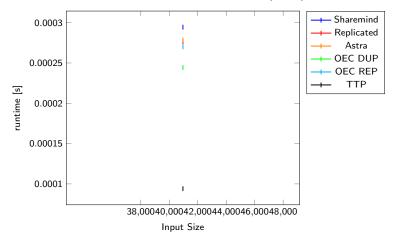
- Ref.Problem: Scalable Search
- Library: MP-Slice Protocol -s 6 (TTP)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Datatype -d d256 (AVX)



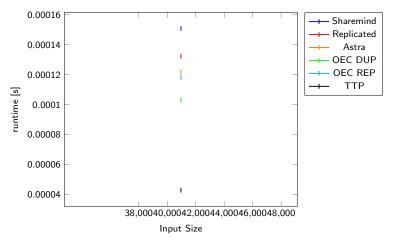
- Ref.Problem: Scalable Search
- Library: MP-Slice Datatype -d d256 (AVX)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Datatype -d d256 (AVX)



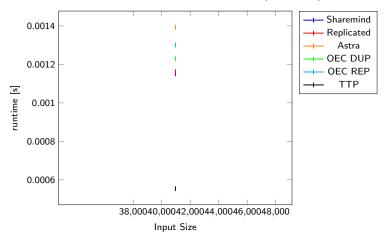
- Ref.Problem: Scalable Search
- Library: MP-Slice Datatype -d d256 (AVX)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Datatype -d d256 (AVX)



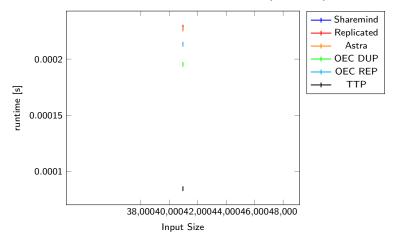
- Ref.Problem: Scalable Search
- Library: MP-Slice Datatype -d d256 (AVX)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Datatype -d d512 (AVX512)



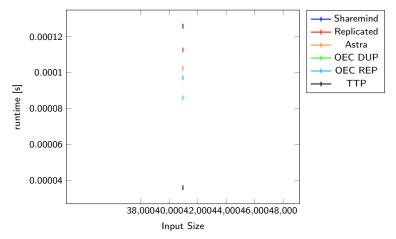
- Ref.Problem: Scalable Search
- Library: MP-Slice Datatype -d d512 (AVX512)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 0, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Datatype -d d512 (AVX512)



- Ref.Problem: Scalable Search
- Library: MP-Slice Datatype -d d512 (AVX512)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 1, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits

MP-Slice Runtimes Input Size Datatype -d d512 (AVX512)



- Ref.Problem: Scalable Search
- Library: MP-Slice Datatype -d d512 (AVX512)
- Metric: Input Size runtime
- Switches: Preprocessing: 0, Split Roles: 2, Pack Bool: 0, Optimize Sharing: 1, SSL: 0, Function: 0
- Specs: idex Intel 6312U(2.4GHz) 512GiB 25Gbits