StateMapper
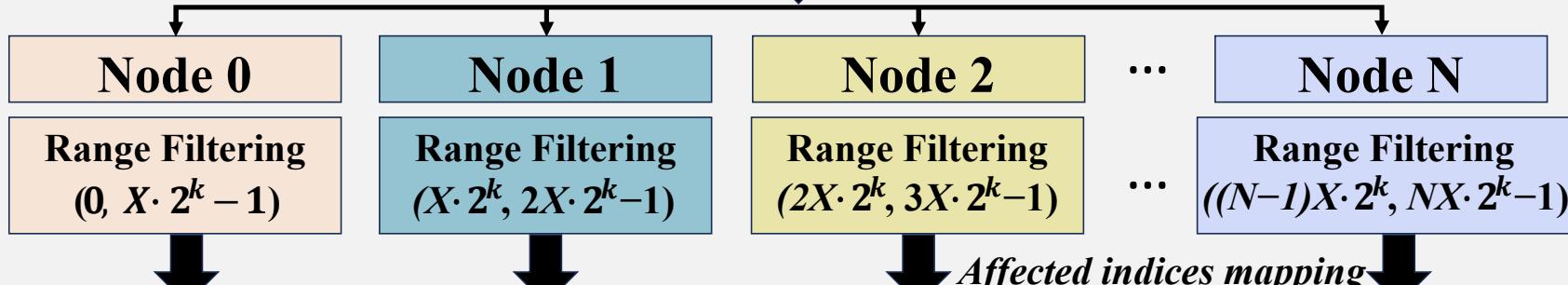
Statespace Structure

# of Qubits	Global Index	Node ID	Node offset	GPU ID	Global GPU ID	GPU offset
36	0	0	0	0	0	0
36	34359738368	0	0	3	3	25769804160
36	N	N	N	N	N	N

Transfer state information to all nodes

Node 0

Range Filtering $(0, X \cdot 2^k - 1)$

Node 1

Range Filtering $(X \cdot 2^k, 2X \cdot 2^k - 1)$

Node 2

Range Filtering $(2X \cdot 2^k, 3X \cdot 2^k - 1)$

$\cdots$

Node N

Range Filtering $((N-1)X \cdot 2^k, NX \cdot 2^k - 1)$

Affected indices mapping

Node 0

Affected *Affected*

| sv_0 | sv_2 | sv_3 | $\cdots$ | sv_{m1} | sv_{m2} | sv_{m3} | $\cdots$ |

Area of Node 0

Node 1

Affected *Affected* *Affected*

| sv_{o1} | sv_{o2} | sv_{o3} | sv_{o4} | sv_{o5} | sv_{o6} | $\cdots$ |

Area of Node 1

Node 2

Affected *Affected*

| sv_{p1} | sv_{p2} | sv_{p3} | $\cdots$ | sv_{v1} | sv_{v2} | sv_{v3} | $\cdots$ |

Area of Node 2

Node N

Affected *Affected*

| sv_{w1} | sv_{w2} | sv_{w3} | $\cdots$ | sv_{y1} | $\cdots$ | sv_n |

Area of Node N