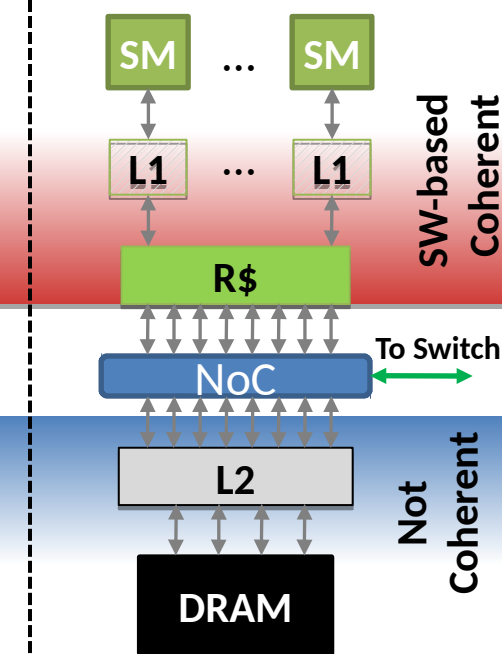
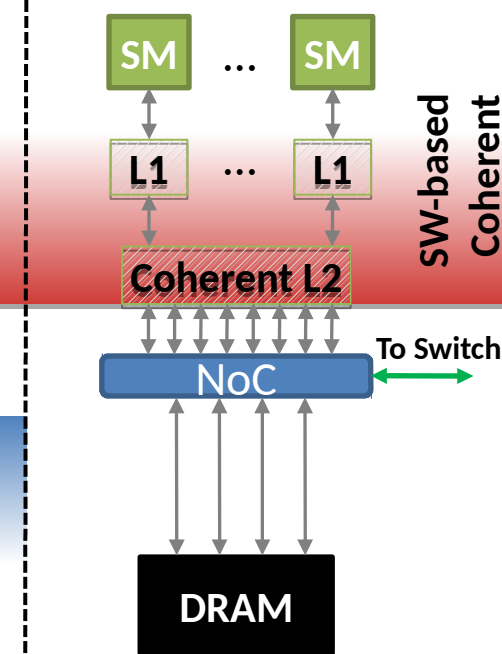


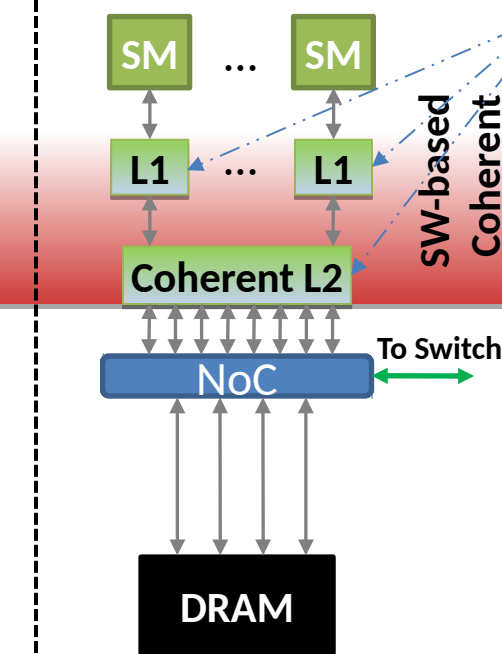
(a) Mem-Side Local
Only L2



(b) Static R\$



(c) Shared Coherent
L1+L2



(d) NUMA-Aware L1+L2

Cache Partitioning Algorithm

- 0) Allocate $\frac{1}{2}$ ways for local and $\frac{1}{2}$ for remote data
- 1) Estimate incoming inter-GPU BW and monitor local outgoing DRAM BW
- 2) If inter-GPU BW is saturated and DRAM BW not
 - *RemoteWays++* and *LocalWays--*
- 3) If DRAM BW is saturated and inter-GPU BW not
 - *RemoteWays--* and *LocalWays++*
- 4) If both are saturated
 - *Equalize allocated ways (++ and --)*
- 5) None of them is saturated
 - *Do nothing*
- 6) Go back to 1) after *SampleTime* cycles