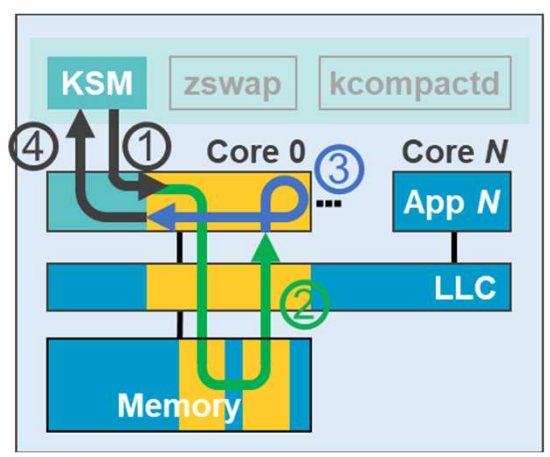


Solution: Offloading to CXL Type-2 FPGA

No Offload (CPU only)

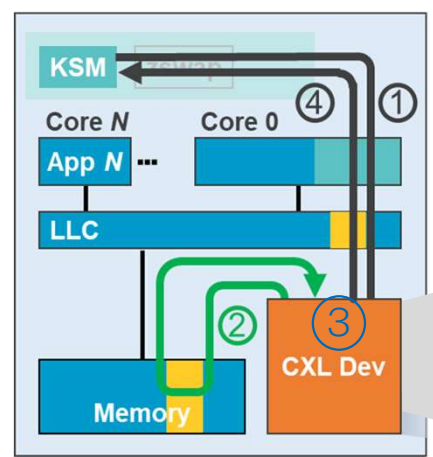


— CXL.io request
— CXL.cache request

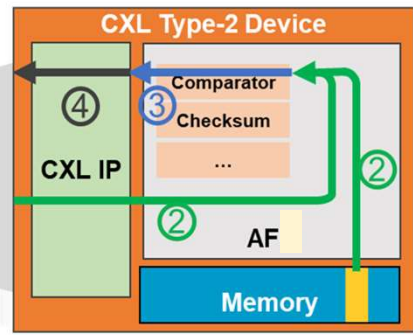
ksm without offloading

```
...  
cand_page = next page in ksm pass  
for page in stable tree do  
  if memcmp_pages (cand_page, page):  
    then merge (cand_page, page)  
...
```

Offload to CXL Type-2 Device (FPGA)



Intel® Agilex® 7 FPGA



AF = Accelerator Function (RTL block)

ksm with offloading to CXL Type-2 Device

```
...  
cand_page = next page in ksm pass  
for page in stable tree do  
  if memcmp_pages (cand_page, page):  
    if CXL_cmp_pages (cand_page, page):  
      then merge (cand_page, page)  
...
```

```
CXL_cmp_pages (cand_page, page):  
  cxl_add_0 = cand_page  
  cxl_add_1 = page  
  cxl_func_type = COMPARE  
  sleep(n)  
  result = cxl_result
```