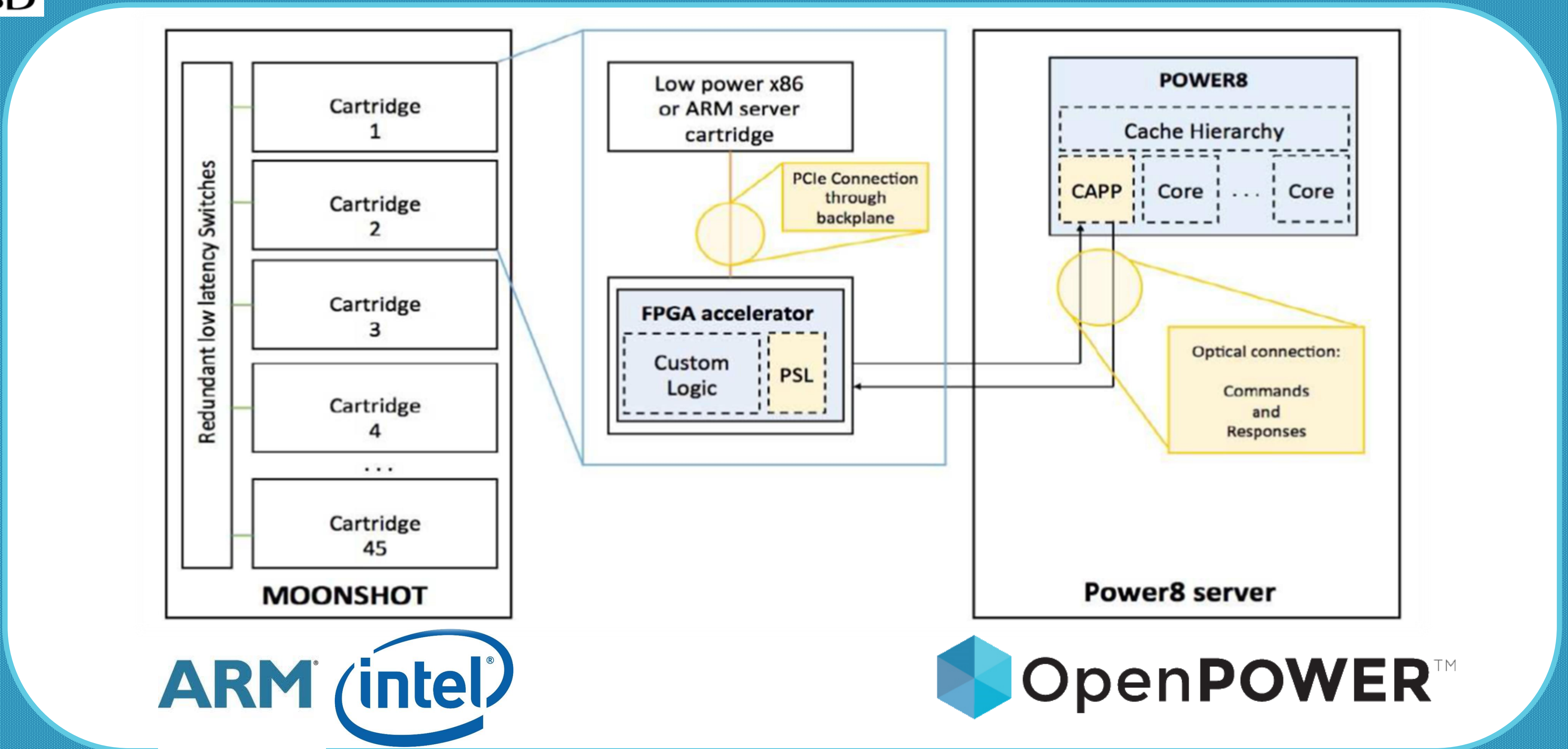


# Container Migration in a Heterogeneous Data Center



## Heterogeneous-ISA Data Center

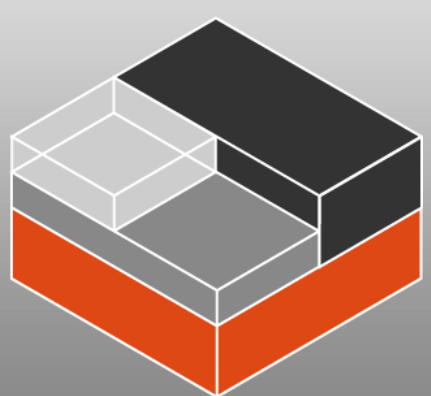


### OPERA EU project

- Joint work between Nallatech, IBM and HP
- Building a heterogeneous data center prototype to improve energy efficiency
- Using CAPI to share memory between different general-purpose processors
- Custom CAPI adaptor with FPGA is required to connect POWER to processors that don't support CAPI natively in hardware

### Post-Copy Container Migration

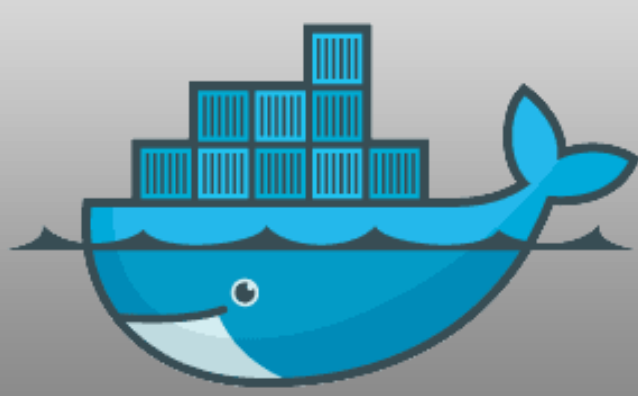
#### Container Management



LXC



OpenVZ



Docker

#### Container Migration



CRIU

#### Benefits

- Allows live migration of containers between hosts with different ISAs
- Nearly zero downtime
- Guaranteed convergence (bounded migration time)
- Patches have been submitted to the CRIU project (used by LXC, OpenVZ and Docker)



Visit our website for more information  
<http://www.operaproject.eu/>  
 Or contact: Joel Nider (joeln@il.ibm.com)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 688386

