

Projects on the Intel SCC (Single Chip Cloud Computer)

Jan-Arne Sobania
Operating Systems and Middleware Group
Hasso-Plattner-Institut

The Single-Chip Cloud Computer (SCC) is an experimental many-core system created for research purposes by Intel Labs. It contains 48 standard x86 processor cores - the highest number of Intel Architecture cores that have ever been integrated onto a single silicon die - and features technologies like an on-chip mesh network that are expected to scale to hundreds of cores and beyond.

Due to changes in the interconnect and memory interface, the novel architecture - while still consisting of well-known processors - does not support running today's off-the-shelf operating systems and applications as-is. This talk gives an overview of research projects from the Operating Systems and Middleware group at HPI that target the SCC, and presents techniques that allow both commercial and research software to take advantage of the new processor design.