Euroserver: Green Computing Node for European micro-servers

Description

Data-centres form the central brains and store for the Information Society and are a key resource for innovation and leadership. The key challenge has recently moved from just delivering the required performance, to include consuming reduced energy and lowering cost of ownership. Together, these create an inflection point that provides a big opportunity for Europe, which holds a leading position in energy efficient computing and market prominent positions in embedded systems.

EUROSERVER is an ambitious and holistic project aimed to arm Europe with leading technology for conquering the new markets of cloud computing:

1. Capitalise on the European strength in embedded and low power computing to provide an innovative combined architecture-and-technology integration platform that enables the reuse of highly-integrated, high-performance, energy-efficient component subsystems in a micro-server solution suitable across both cloud data-centres and embedded application workload.
2. Perform a combined architecture-technology exploration that creates the hardware and the software for micro-server based computing in support of cloud-based and embedded applications.
3. Evidence this architecture in a data-centre grade low-power physical micro-server prototype solution utilizing advanced ARM IP, industry leading FD-SOI fabrication technology, and state of the art 2.5D device integration technologies and prove the advantages of these European technologies as the enabler of next generation, low-cost, power-efficient, high-density compute.

The EUROSERVER consortium brings together world-class leaders in their own fields and creates the critical-mass required to deliver "More than Moore" solutions. A unique differentiator of EUROSERVER is its broad access to the required industrial technologies and specialised academic support. The potential impact of EUROSERVER is therefore very high to competitively accelerate and improve the delivery of energy-efficient computing worldwide.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación