SOSOA – Self-Organizing Service Oriented Architectures

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Hardware Topology

IBM P755

- 4x 8-core 3.3 GHz POWER7 processors
- 256 KB L2 cache (per core)
- 4 MB L3 cache (per core)
- 128 GB of 1066 MHz DDR3

- Efficient data-sharing using high-level caches (L2-L3)

- More communication across different memory nodes

- Scalability on single CPU (4 cores)

- Scalability on 4 CPUs (16 cores)

Middleware Architecture

- Multi-stage architecture of the JOpera process execution engine for Web service composition

References

- A Multicore-aware Runtime Architecture for Scalable Service Composition, Daniele Bonetta, Achille Peternier, Cesare Pautasso, Walter Binder, IEEE Asia-Pacific Services Computing Conference (APSCC 2010), Hangzhou, China, 2010
- Towards Scalable Service Composition on Multicore, Daniele Bonetta, Achille Peternier, Cesare Pautasso, Walter Binder, IFIP Workshop on Semantic Web & Web Semantics (SWWS 2010), Crete, Greece, 2010

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