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Cache Management in High Performance Computing



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Objective

High performance Computing(HPC) is the technical term used for solving the large problems with the help of high end systems. Because of the technological advancements in the architectures of System Processors, chips with Dual, Quad cores have been deployed and released in the market. Cache is the memory built in to these processor chips which needs to improves the system performance. Cache management in multi core systems is really a challenging task, as one needs to address issues like level of cache sharing in multi core architecture, cost in embedding dedicated cache for each cores, cost in maintaining the coherency among the cache contents against the performance factor in overall computing.

Publication :

1. Subrahmanya Bhat B and Dr. K.R Kamath, Cache Hierarchy In Modern Processors And Its Impact On Computing, _ International Journal of Management, IT and Engineering (IJMIE), Volume 5, Issue 7, pp. 248-253, (July 2015), ISSN: 2249-0558, I.F. 5. 299.
- 2.Subrahmanya Bhat and Dr. K. R Kamath, Snoopy Protocol for Cache Coherency in Multi Core Systems for High Performance Computation, International Journal of Management, Volume 6, Issue 1, PP. 459-463 (January 2016) ISSN: 2249-0558.
- 3.Subrahmanya Bhat & Dr. K. R. Kamath, Directory Based Cache Coherency Protocol In Multi-Core System For High Performance Computation,International Journal of Current Research and Modern Education (IJCRME) Volume I, Issue I, pp. 257-261, (May 2016), ISSN : 2455 – 5428.
- 4.Subrahmanya Bhat & Dr. K. R. Kamath, Effective Learning With Usage of Simulators – A Case of Nctuns Simulator In Computer Networks, International journal of Scientific Research and Modern Education, Volume I, Issue I, pp. 415-420 (June 2016) ISSN-2455 – 5630.

5. Subrahmanya Bhat & K. R. Kamath, Directory Organizations in Cache Coherency Systems for High Performance Computation, International Journal of Current Research and Modern Education (IJCRME), Volume I, Issue I, p.p 868-871, (August,2016), ISSN (Online): 2455 – 5428

Working Papers:

1. Optimization Approaches in Directory based Cache Coherency Systems for High Performance Computation.
2. Directory Based Cache Coherency, organization, Operations and Challenges in Implementation-study.
3. Effect of “Locality of Reference” in Directory Organization towards improving Cache Coherency implementation.