

(a) HW1 Q6 Summary, external paper [Alfares08a]

(b) Al-Fares, Mohammad, Alexander Loukissas, and Amin Vahdat. "A scalable, commodity data center network architecture." Proceedings of the ACM SIGCOMM Conference, Vol. 38. No. 4. ACM, 2008.

(c) <http://ccr.sigcomm.org/online/files/p63-alfares.pdf>

(d) This paper gives us a new way to architect and interconnect commodity switches to get a better performance, without changing to the end host network interface, OS and applications.

(e) The most amazing part of this paper is that it gives us a simple prototype using forward algo and NetFPGA to improve the performance.

(f) Analyze old methods - Raise new ideas - Run experiments - Evaluate the result. This paper first introduces us the old ways and old topology, then it gives us their ideas and finally implement their ideas.

(g) The words in the article are quite clear actually. If the author could provide more details about the implementation, which is quite concise in this paper, it could be better.

(h) This paper uses fat-tree to build the topology. Could we use the ideas in the paper to other topology?

(i) This paper talks about an issue about the power consuming. Is there a way to solve the problem, or is it possible for us to reuse the heat generated by the switches?

(j) You know there are many kinds of networking topologies, like fat-tree, mesh network or ring network. I really wonder can we use the new two-level lookup, or new routing algorithm in other kinds of network?

(k) This paper is important and quite interesting. It gives us some idea about how to utilize our bandwidth with current elements, and without more costs.

(l) This paper is very similar to A scalable and flexible data center network [Greenberg09a]. Both of them are talking about the architecture of the data center network.

(m) Talking more about the limitations like other papers.

(n) Finding the issue about the previous approach, and giving a new way to address that.

(o) It gives us new idea about saving money and get more bandwidth on data center network.

(p) How to get more bandwidth and better performance, without generating too much heat and consuming too much power.