CS 6480: Class discussion summary
HA 4.b

José Monterroso

School of Computing, University of Utah

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Discussion summary

- *Summary:* We first discussed how this paper was an IEEE communication magazine article. What I failed to understand was that this paper would cover things at a higher level, and not include many citations. We then discussed how NFV implements network functions through software virtualization techniques and runs them on commodity hardware. This is great because if you are a service provider you are not locked in, and have flexibility to get the best pieces together. We then slightly touched on 3GPP, and IETF, and how they create and propose standards for engineering. We then went into to some details about performance and how software is competing with non-native hardware, and how with virtualization you have other tenets and big overheads. When it comes to manageability we need to worry about service chaining. We also brought up the point that general purpose hardware does not have the same reliability as a dedicated piece of hardware, therefore, we need to make the software more reliable. Lastly, we discussed how orchestration, and shared resources for VNFs brings up security concerns.

- *Strengths and weaknesses:* The consensus for this paper was a bit split. We discussed how the paper did a great job of explaining NFV. We also noted that the abstract and introduction were really good sections that layout the contents of the paper fairly well. Lastly, we considered the Use Cases section to be good because it provided real world examples of NFV. On the topic of sections, the Related Works section was poorly made and resembled more of a Background section. Another weakness that was brought up was that there really wasn't any good analysis of NFV. Finally, we discussed that the authors of the paper drop a lot of big concepts/words and didn't go much in depth. We felt this was a weakness because we didn't know what the word meant and why it's important with regards to NFV.

- *Connection with other work:* This paper didn't really connect with any other papers we have discussed. One slight connection that I can see is the use of virtualization in NFV, which is done in cloud computing and for microservices. Another small connection is how NFV needs orchestration tools just like how Docker needs orchestration for larger complex multi-container systems.

- *Future work:* Future work that was brought up dealt with looking into the Linux New API (NAPI) and Intel's Data Plane Development Kit (DPDK) for clustered VNF instances. I also wasn't really aware of how important service chaining is, so I believe this would be a good area to look into.