Weekly Summary: During this report period, we coordinated with some Boeing engineers to help us debug our hardware issues, and worked on writing some software that will be useful once our hardware is fully functional. The team also got access to some of the Xilinx FPGAs that are in Durham 310, as we were able to find some very good resources regarding Xen on those platforms.

Past week accomplishments: We continued our work in trying to get the Xen environment working on the Pine64 board. Our efforts this week were focused on characterizing the issue we have with getting Xen to work on the RockPro64. After presenting our debugging findings to our Boeing client, we were advised to schedule a time to troubleshoot with one of the Boeing engineers. Our plan is to hopefully resolve the issues we have with Xen on the RockPro64 in the coming week. Dr. Zambreno has informed us that he has several Xilinx ZCU106 boards, which have officially documented Xen support. We are pursuing this option in tandem with troubleshooting the RockPro64 in the hope that we will have a functioning hardware platform relatively soon.

Pending issues:
- Debug issues running Xen toolstack on RockPro
- Experiment with Perf tools on hardware
- Build Xen for Xilinx ZCU106
- More research on resource contention points and mitigation methods
- Build/test interference generators and base test cases

Individual contributions:

NAME	Individual Contributions	Hours this week	HOURS cumulative
Alexander Bashara	Research Cache interference channel, worked on backup FPGA platform	7	58
Joseph Dicklin	Finalized I/O interference plans/began interference software testing	7	54
Hankel Haldin	Experiment with board, troubleshoot xl issues	6	56
Anthony Manschula	Cachegrind testing, image building	6	59

Plans for the upcoming week:

- Work on fixing issues with Xen framework on our Linux image
- Polish base test cases
- Schedule a time to troubleshoot RockPro64 Xen issues with Boeing engineer
- Continue research on interference channels
- Expand on interference mitigation techniques
- Continue efforts to build Xen for Xilinx Ultrascale+ MPSoC

Summary of weekly advisor meeting: On 4/5 we met with our Boeing advisors. They gave us feedback related to our interference channel research, as well as told us that they want to set up a time to help us debug our RockPro64 Xen issues. We also presented the idea of a Xilinx FPGA based backup system and they said they would be very interested in that solution.