

General Update

- SPR
 - domain setup
 - SNAPS
 - [Developing capture code for voltage stream design \(hashpipe\)](#)
- ATA signal chain verification
 - Power drop investigation ISM 902-928MHz
 - Called PG&E nothing new yet!
 - Further work in localization
 - [Transmitter frequency sweep at +10dBm 920 – 200MHz](#)
- Observation
 - [Pulsar observation at low frequency](#)
- ATA integration into GNU Radio (Ellie)
 - [Setting up server and installing software](#)
 - [Testing control of ATA antennas and building GNU Radio control blocks](#)

Antonio Feed update

- 3C – replacement of pyramid with new tip-link and modified, preconditioned coaxial wiring.
 - [Inner feed assembly, LNA module \(Minex\)](#)
 - Installation into feed base
 - [Firmware 5.4](#)
 - Initial testing / installation on antenna/ TSYS
- 4J – replacement of base plate and pyramid with new tip-link and modified, preconditioned coaxial wiring.
 - [Inner feed assembly, LNA module \(Minex\)](#)
 - [Replace base plate](#)
 - [Firmware 5.4](#)
 - Tuning Cryocooler
 - Installation into feed base
 - Initial testing / installation on antenna/ TSYS
- 1K – replacement of base plate and pyramid with new tip-link. Installation revised wiring harness.
 - [Inner feed assembly, Link-Tip \(Minex\)](#)
 - [Replace base plate](#)
 - Tuning Cryocooler
 - [New wiring harness \(3x\)](#)

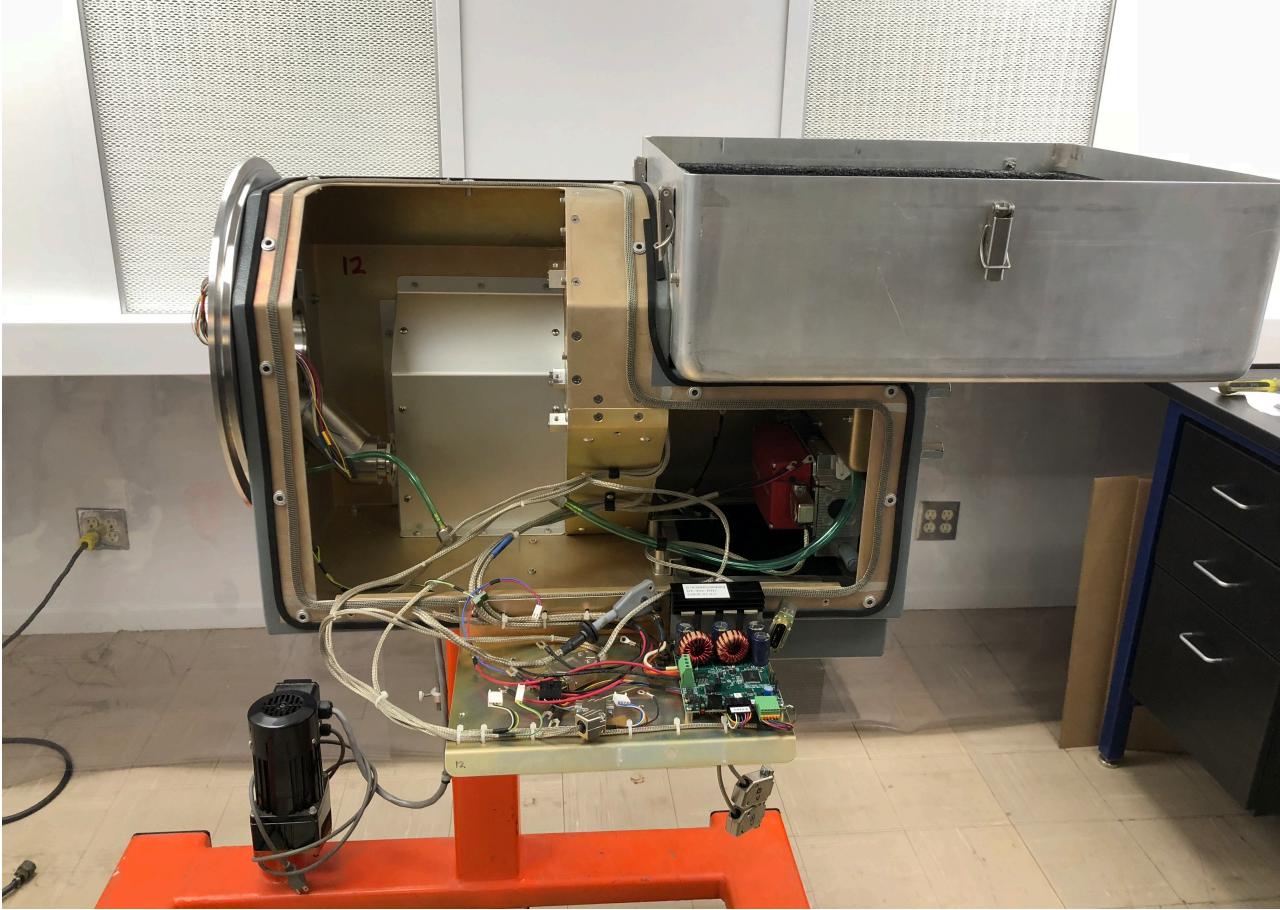
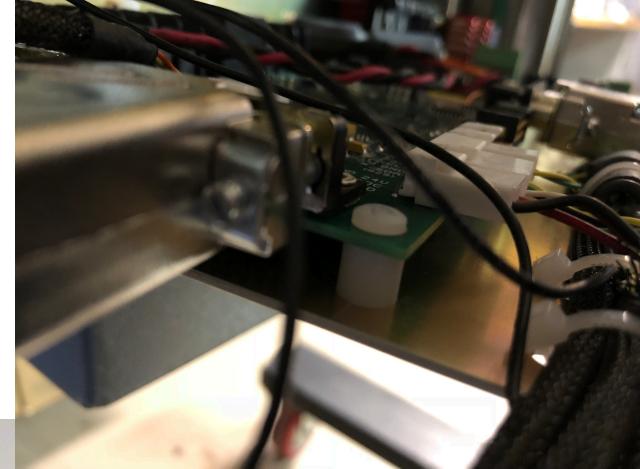
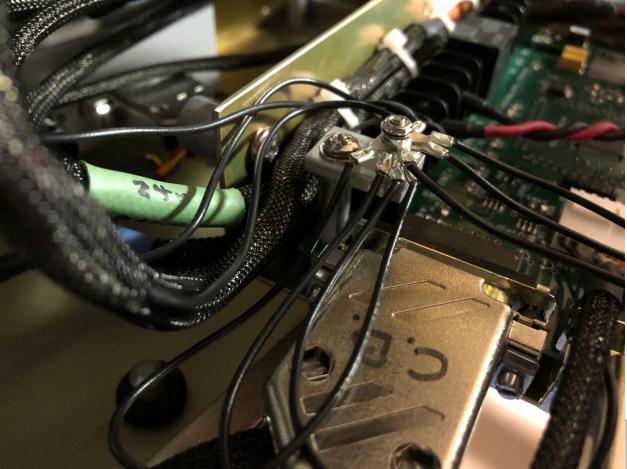
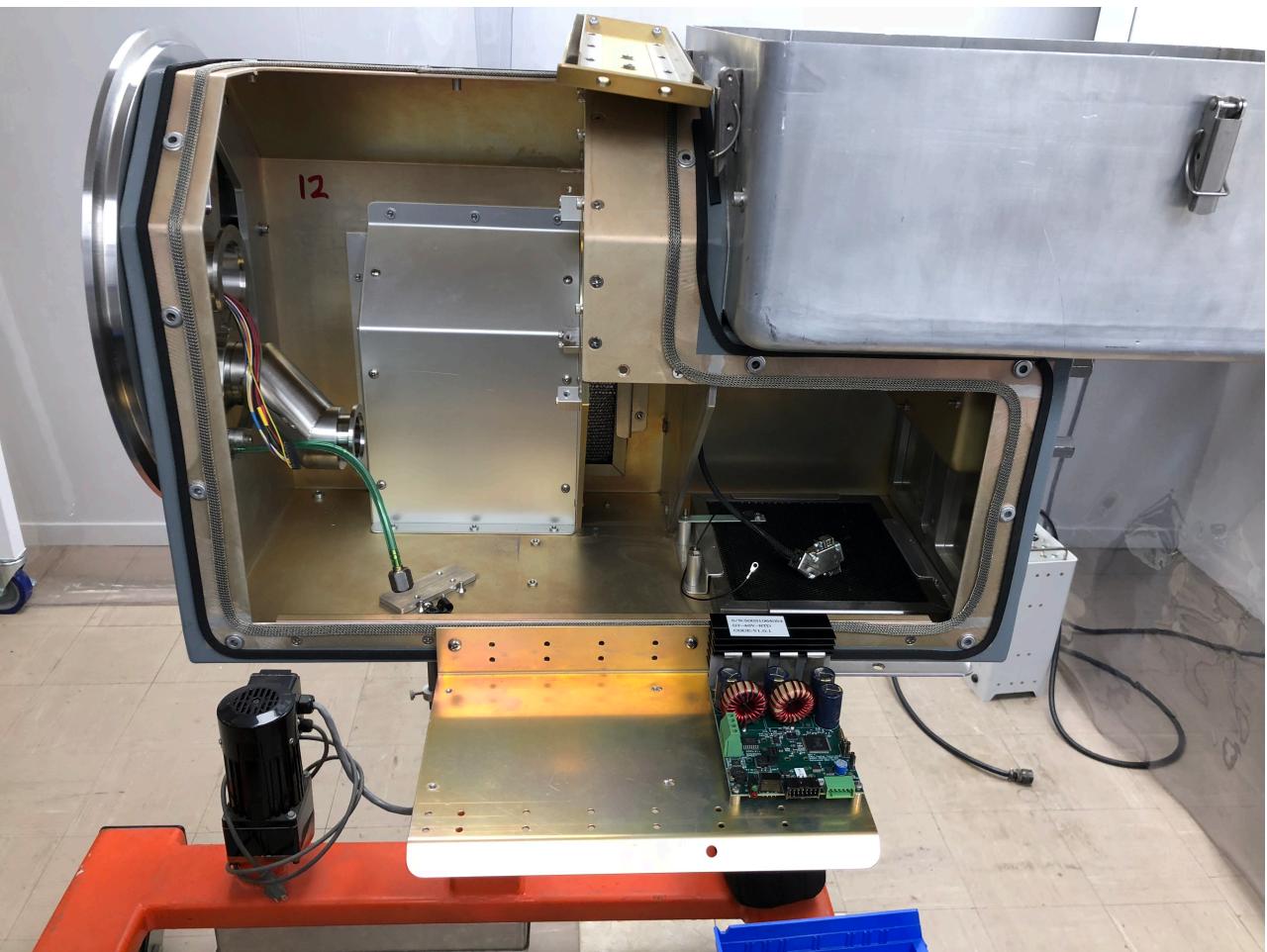
Wiring Harness

- Went through documentation and worked on 3 new sets.
- 4x new control boards
- 3x CB to Turbo Pump
- 3x CB to Diaphragm Pump
- 3x CB to cryo B.
- 3x 24V and 48V supply
- 3x RS232 to PAX
- 3x Temp sensor
- 4x Accelerometer
- 1x Fan
- **2x Cryo supply (done today)**
- **3x Dewar wire set (done today)**



1K Refurbishment

- Feed base plate replaced
- Wire harness update almost ready
- Isolating standoffs missing
- Common ground pin missing



Parts Ready for transport to Minex

- Log-Periodic feeds 4J and 1K
- Two old base plates
- Gold Plated parts ready by Tuesday
- Wil drive to Minex next Wednesday / Thursday
- Minex works on LNA module for 3C and will do tip assembly 1K



Summary Retrofit

- 7x new wiring harnesses (4 in feeds)
- 5x removed bellows (4 in feeds)
- 3x tuned damper (2 still to tune)
- 1x tip-link R03 (10 spare)
- 1x gold plated (2 in production)
- 0x revised LNA module (1 in production)
- New feed firmware (1 applied in field)

Next Steps Retrofit

- 4x more wiring harnesses (total 11)
- 6x more base plates in 2-3 packs (total 11)
- tuning damper as necessary (get dummy feed from Minex)
- 20-40x tip-link R03, from SSL
- 5x gold plated TBD after more tests (total 8)
- 3x revised LNA module (1 in production)
- 1x feed assembly with existing LNA module

Item	Designed	Prototype	Verified
Improved wiring harness to reduce self generated RFI	Done	Done	Done
Tip-Link R03	Done	Done	Done
Tuned Cryo-Cooler damper to reduce vibrations	NA	Done	Done
Improved thermal link to reduce vibration transmission into the feed	Done	Done	Done
Improved titanium standoffs to reduce vibration transmission into the feed	Done	TBD	
Improved Rexolite standoffs to reduce movements within the feed structure	Done	TBD	
Improved coaxial wiring which reduces center conductor retraction	Done	In Progress	
Revised feed control firmware 5.0	Done	Done	Done

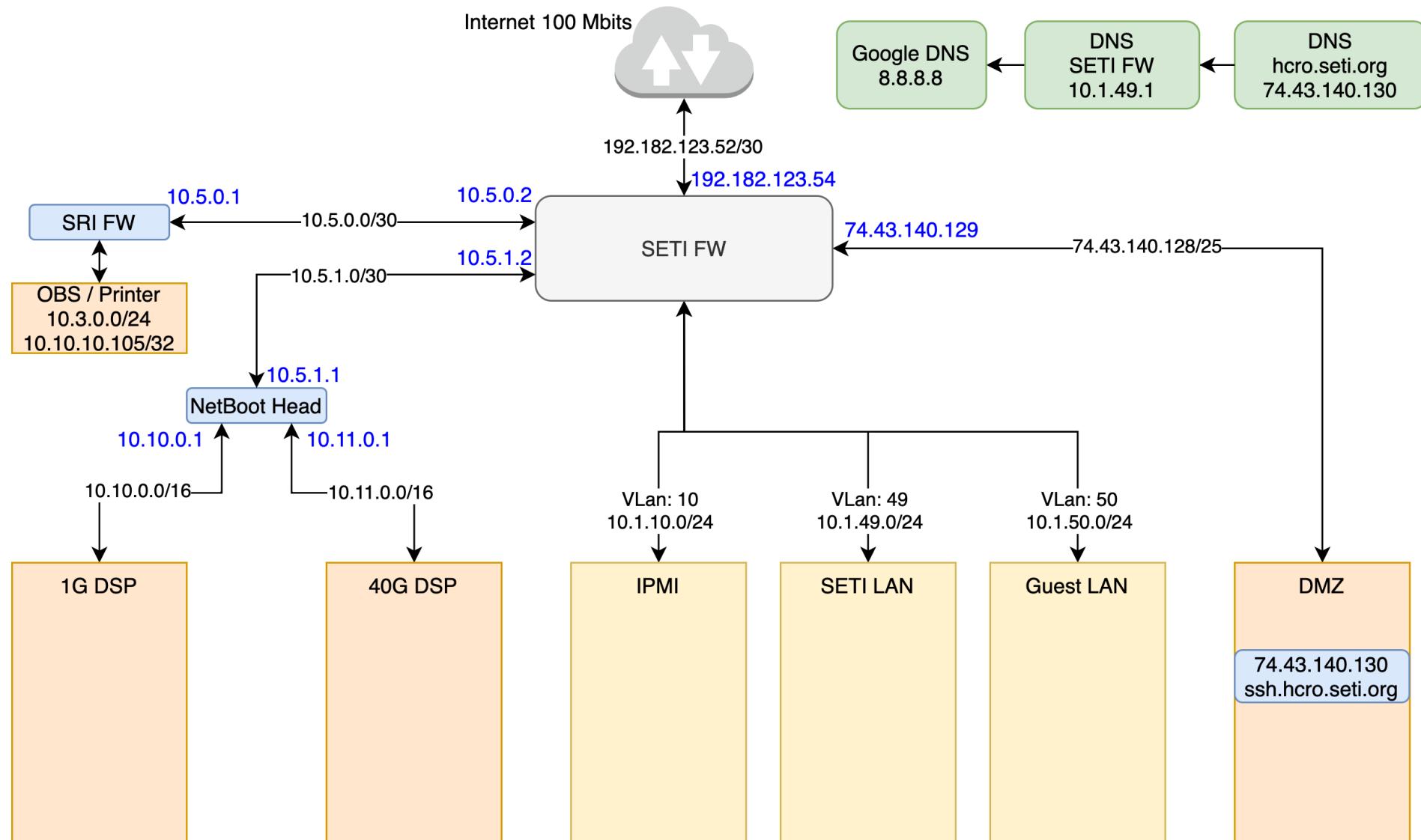
Update

Network changes:

- DNS implemented
- Network range changed
- Integrated 40G NIC into 100 TB storage

ToDo:

- Setup compute node to analyze data
- Implementing of VLans and updating of switch configuration



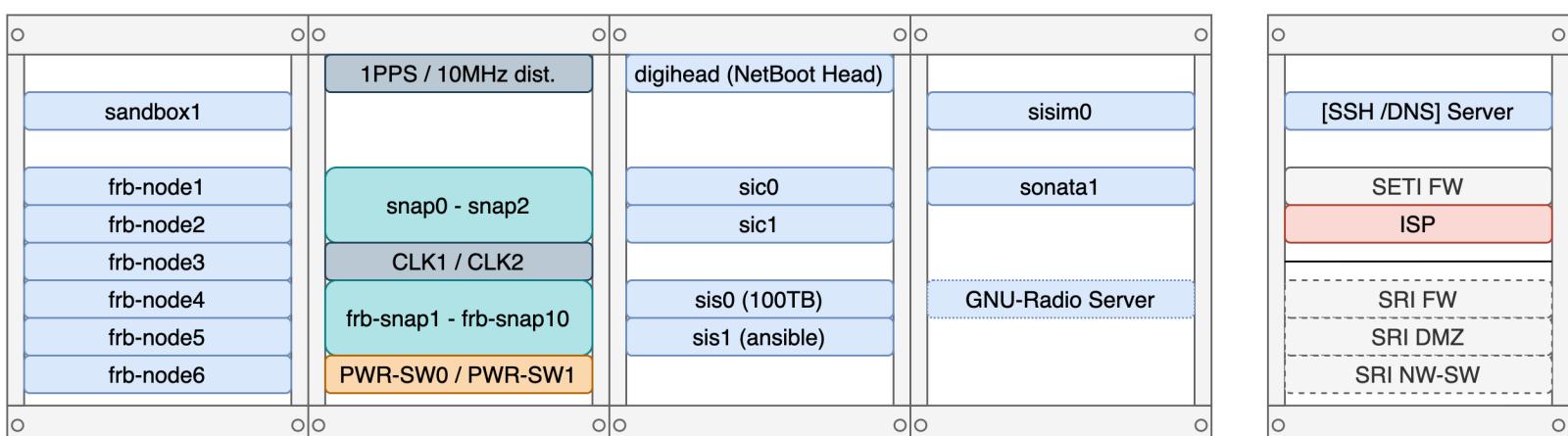
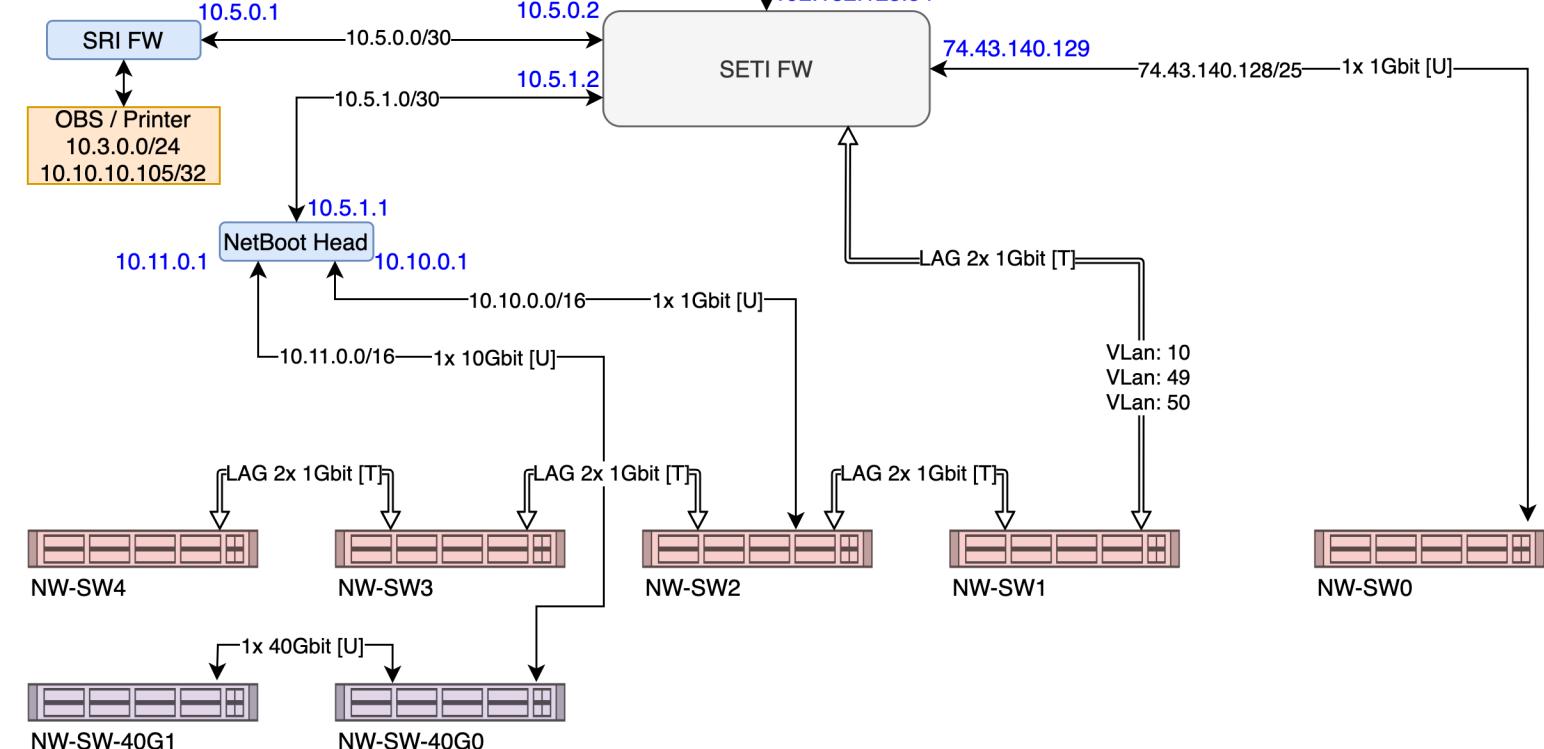
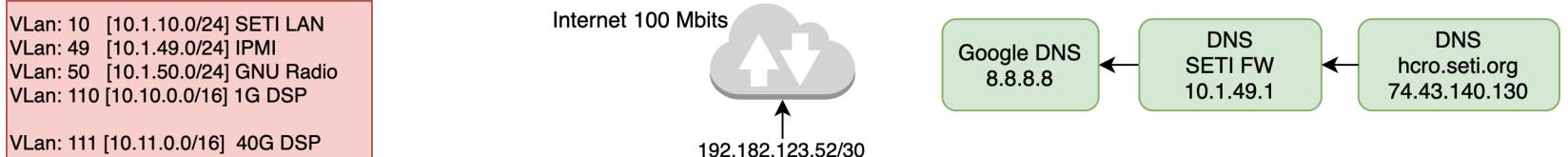
Update

Network changes:

- DNS implemented
- Network range changed
- **LAG 2x 1Gbit implemented**
- **VLANs implemented**
- **Setup SIC1 to analyze data**

To Do:

- Setup IPMI
- Setup DNS domain
(`hcro.seti.org`)



Student Projects and Internships:

Name	Type	Duration (dd/mm/yyyy)	Description	Status
Olivia Durrett	Internship	15/06/2020 to TBC	Astronomical observations and data analysis of pulsars and FRBs	
Sarah Schoultz	Internship	01/07/2020 to 15/10/2020	Outreach, update of posters at ATA, local RFI monitoring	
Daniel Allspach	REU SETI	07/06/2020 to 15/08/2020	Astronomical observations and data analysis of pulsars and FRBs	
Ellie White	REU Berkeley	08/06/2020 to 14/08/2020	GNU Radio Enabled Capabilities for RFI Monitoring and Beamforming	
Hellen Peng	URAP Berkeley	24/02/2020 to 01/05/2020	Software development to control digital step attenuator for IF power leveling	Finished