The CRAC "dirty" internal network is a LAN without DHCP. Nodes are connected to the same switch and Kept separated from the UCC network.

Infrastructure tasks:

1. Assign IP addresses to computers and devices that will be part of the CRAC network.
   1. Assign static IP addresses according to a standard scheme via network configuration.
2. Ensure communication over network.
   1. Ping computers and devices
   2. Try SSH via PUTTy or native
   3. Try SCP via PUTTy or native
3. Implement PTP synchronization.
   1. Set PTPd grandmaster
   2. Configure PTP clients in W10
   3. Test synchronization

Programming tasks:

Knowledge of Python is required. Test code and jupyter notebooks are available.

1. Make some test data.
   1. Create files with defined naming containing data vectors or matrices
   2. Create metadata files (contain data about the data files, e.g. size, type, date, etc.)
2. SSH/SCP via Paramiko.
   1. Write code for simple connection
   2. Write script to connect and extract test data files from a defined folder
3. HDF creation with h5py or pyhdf.
   1. Create a structured HDF for testing
   2. Write script to incorporate test data files to structured HDF (e.g. /CRAC-Date/Instrument/datafile) with metadata