Haas Networking Observations

- **Initial Setup:**
    - These instructions have only been tested on a Haas Mill running NGC configured in a peer to peer network i.e.; and Ethernet cable between the PC and CNC.
    - *Step 1:* Connect the PC to the CNC with an Ethernet cable (doesn't need to crossed) the NIC on the PC handles that. The Ethernet port is located on the right-side panel of the mill.
    - *Step 2:* Settings for CNC:
        - Navigate to *Network* Settings Menu.
        - Select the *Wired Connection* Tab.
        - *Wired Network Enable*: On
        - *Obtain Address Automatically*: Off
        - *IP Address*: 150.100.100.10
        - *Subnet Mask*: 255.255.0.0
        - *Default Gateway*: 0.0.0.0
        - *DNS Server*: N/A
        - Press *F4* to Apply Settings
    - *Step 3:* Settings for PC (Window 10):
        - Long Navigation: *Settings* -> *Network & Internet* -> *Change Adapter Options* -> Right Click *Ethernet* -> *Properties* -> Select *IPv4* from List -> *Properties.*
        - *Use the following IP address*: Checked
        - *IP address*: 150.100.100.1
        - *Subnet mask*: 255.255.0.0

- *Default gateway*: N/A
- *Use the following DNS server addresses*: Checked
- *Preferred DNS server*: N/A
- *Alternate DNS server*: N/A
- Press *F4* to Apply Settings

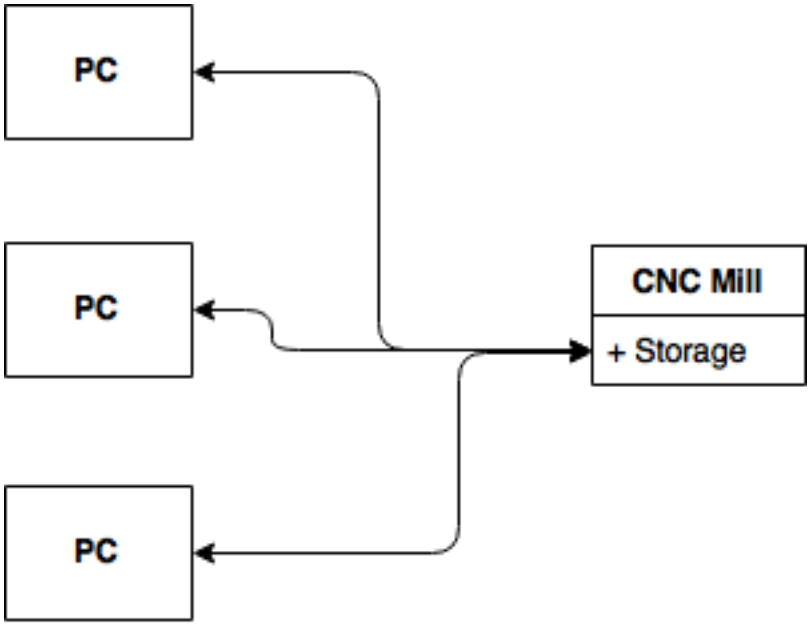
- At this point they should be connected to each other which can be checked by pinging the IP of the CNC through the CMD on PC. This step is optional.
- *Step 4:* Setting for CNC (Local Net Share):
  - Navigate to *Network* Settings Menu.
  - Select the *Net Share* Tab.
  - *CNC Network Name*: HaasCNC1140384
  - *Domain/Workgroup Name*: BIDC-MACHINES
  - *Local Net Share Enable*: On
  - *Local Net Share Security*: On
  - *Local User Name*: haas
  - *Local Password*: xxxx
  - Press *F4* to Apply Settings
- *Step 5:* Setting for CNC (Remote Net Share):
  - Navigate to *Network* Settings Menu.
  - Select the *Net Share* Tab.
  - *CNC Network Name:* HaasCNC1140384
  - *Domain/Workgroup Name:* BIDC-MACHINES
  - *Remote Net Share Enable*: On
  - *Remote Server Name*: 150.100.100.1

- *Remote Share Path*: TestShare
- *Remote User Name*: N/A
- *Remote Password*: xxxx
- Press *F4* to Apply Settings

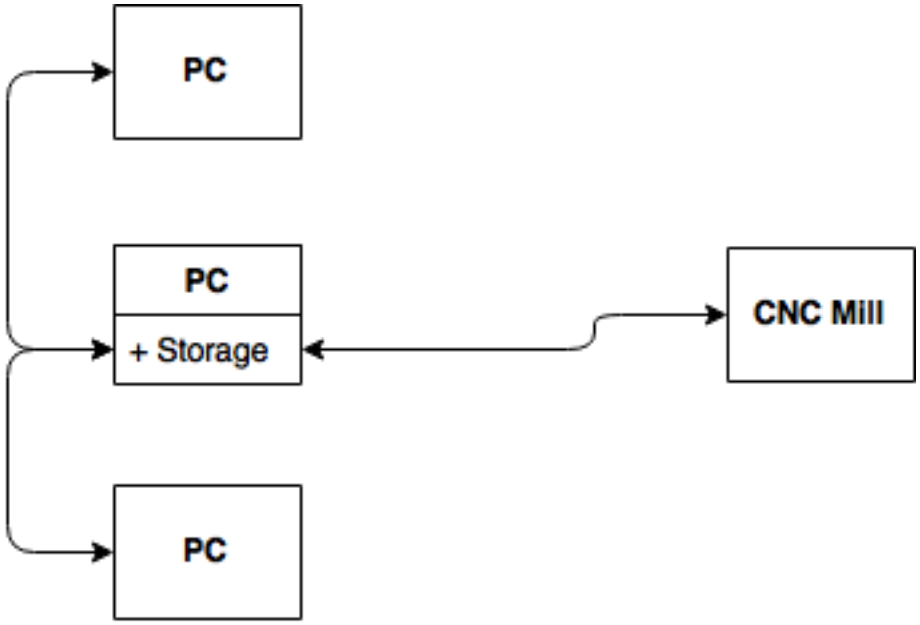
- *Step 6:* Setting for PC (Local Net Share):
  - Start *Run.*
  - *Open:* \\150.100.100.10
  - Hit *OK.*
  - User: haas
  - Password: xxxx
  - Hit *OK.*
- *Step 7:* Setting for PC (Remote Net Share):
  - Navigation: *Settings -> Network & Internet -> Sharing Options*
  - Select *General or Public*.
  - *Turn on network discovery*: Checked
  - *Turn on file and printer sharing*: Checked
  - Select *All Networks.*
  - *Turn off password protected sharing:* Checked
  - *Apply* Settings
  - Create a file called *TestShare* in the *Documents* folder of the PC.
  - Right Click and select *Properties* for *TestShare.*
  - Select *Sharing* Tab.
  - Select *Advanced Sharing…*

- *Share this folder*: Checked
- Select *Permissions.*
- *Full Control*: Checked
- *Change*: Checked
- *Read*: Checked
- Hit *Okay.*
- Select *Share* from the *Properties* Window.
- Select *Everyone* from drop down.
- Hit *Add.*
- Select *Read/Write* from drop down.
- Hit *Share*.

- **Configurations:**
  - *Local Net Share Only:* The storage inside the CNC Controller is visible on the network and files can be transferred to that CNC.



- *Remote Net Share Only:* The storage inside a PC is visible on the network and on the Mill. Files run from the storage directly can stall if connection breaks.



- *Hybrid Net Share:* Client send files to a server which loads them onto the CNC Mill and removes them as needed. Like PaperCut.