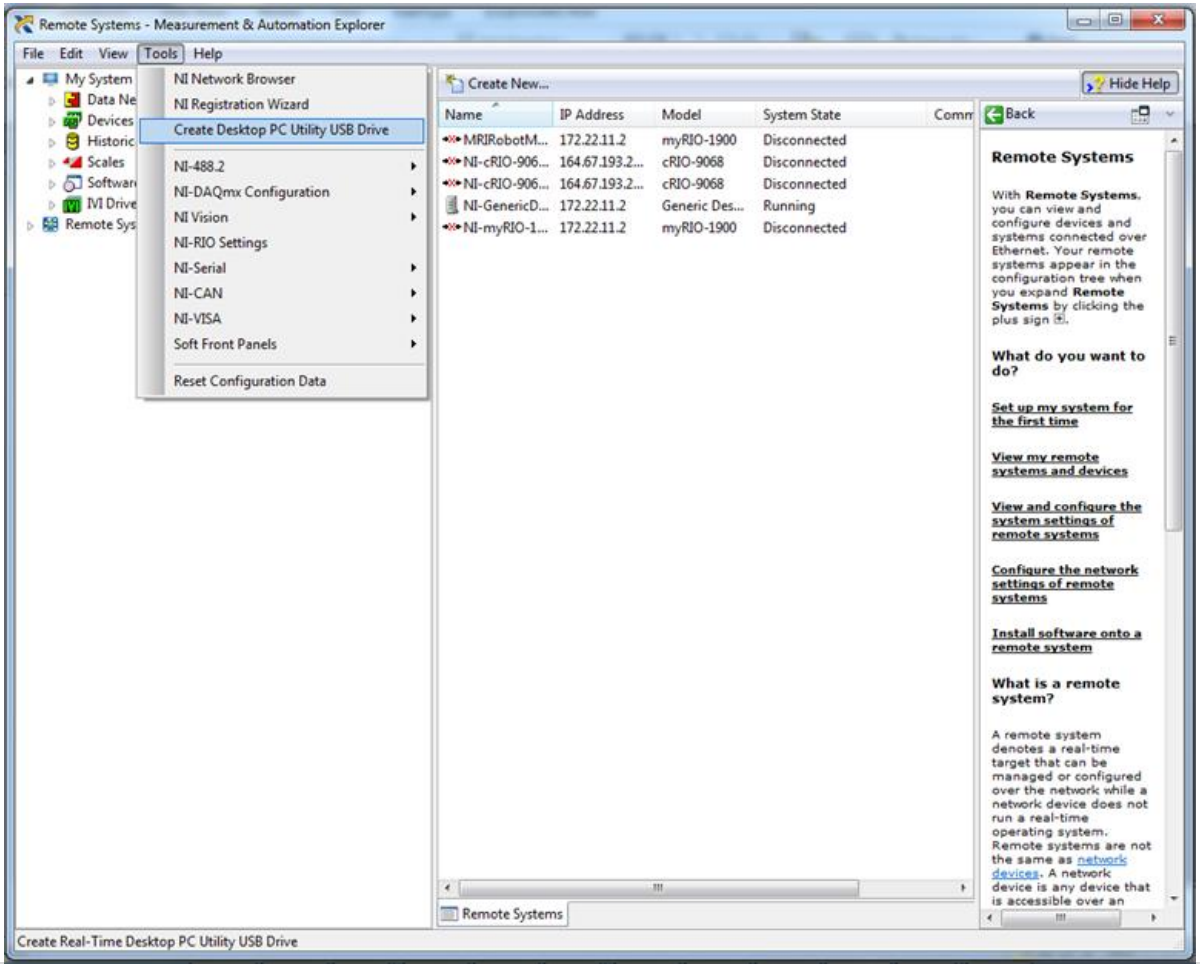
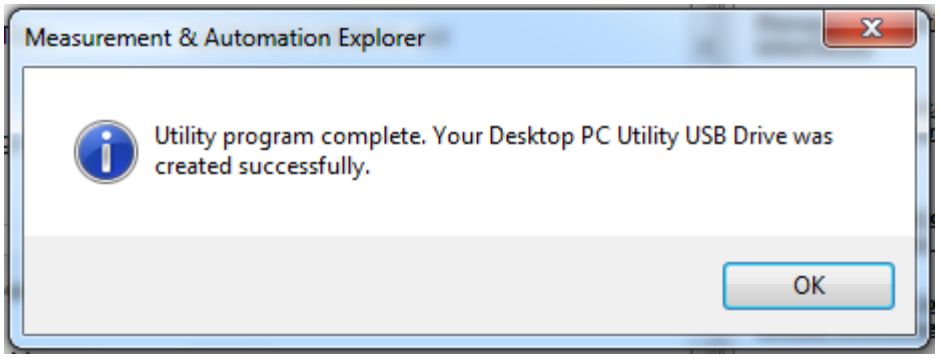
Create USB Utility

- Prepare an USB and connect it to your host computer
- Open NI Measurement & Automation Explorer (MAX) >> Tools >> Create Desktop PC Utility USB Drive
- Click ''Yes'' when prompted ''Do you want to use this utility''



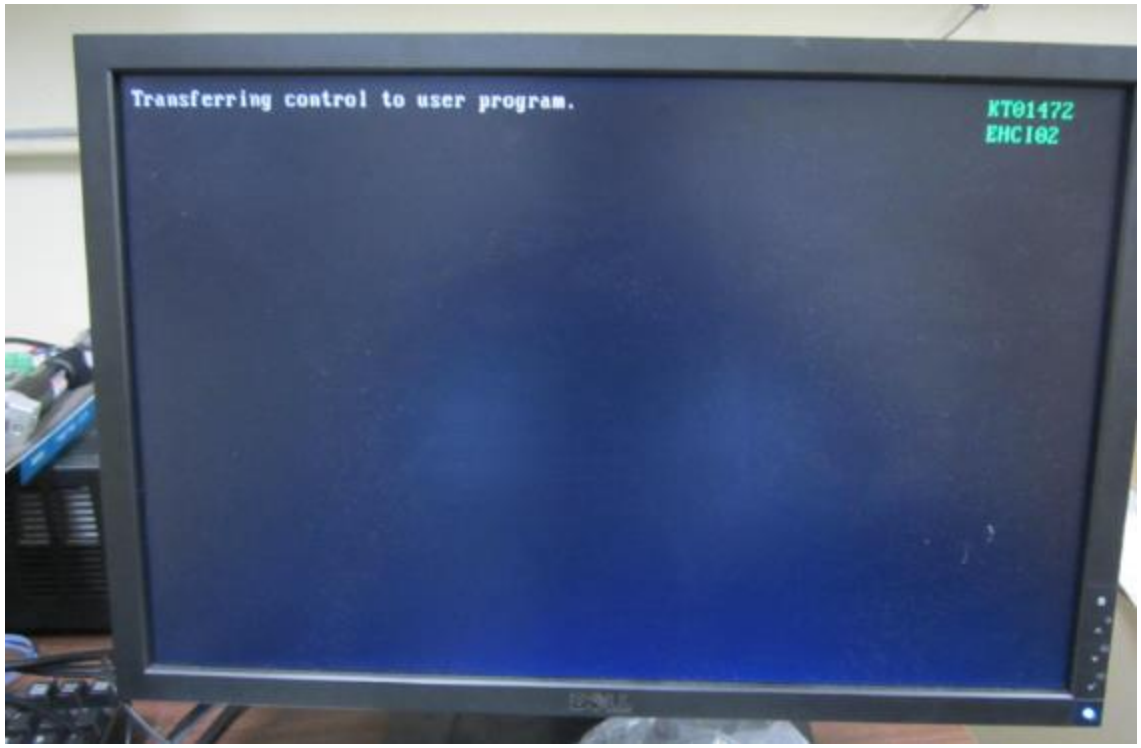
Create USB Utility

- Choose the version that is compatible with the program, namely, it should be LabVIEW 2013 or higher
- Format your USB when being asked. Once the process finished, click OK when prompted.



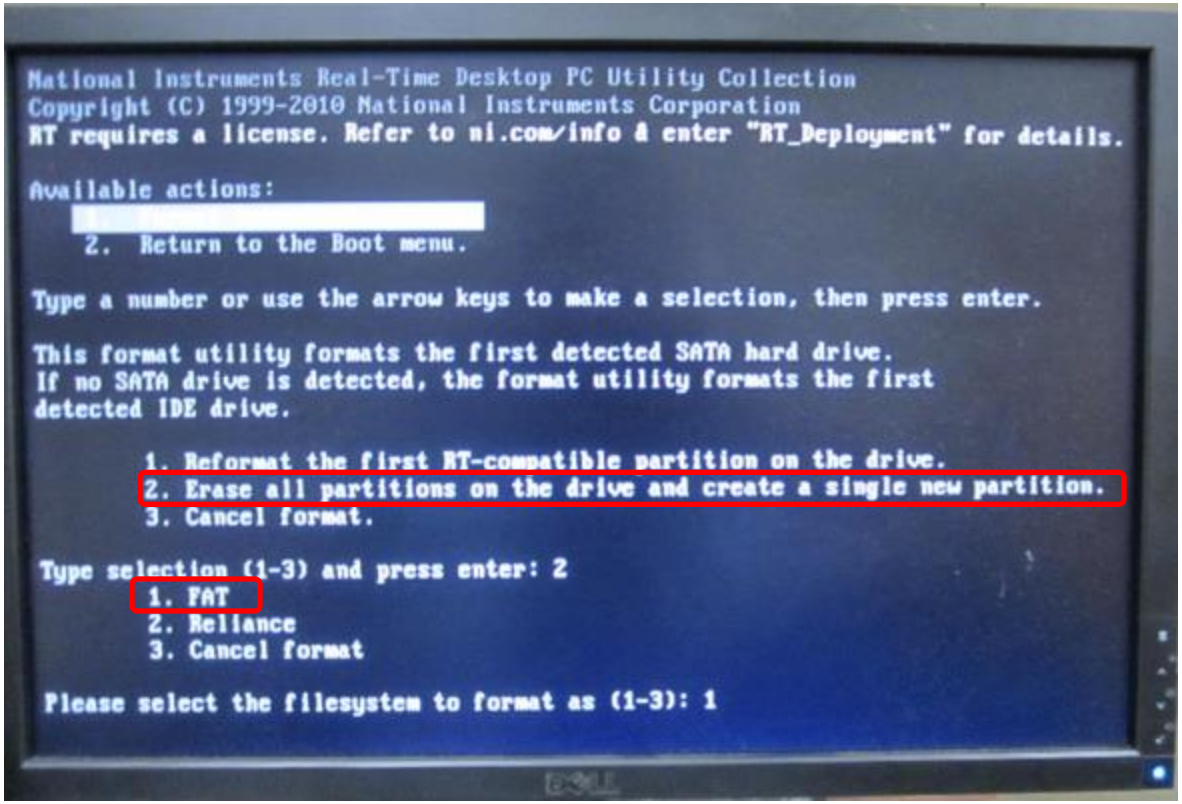
Boot Target PC Using USB

- Choose boot options and boot the target PC using the USB you just created
- A window like below should show up



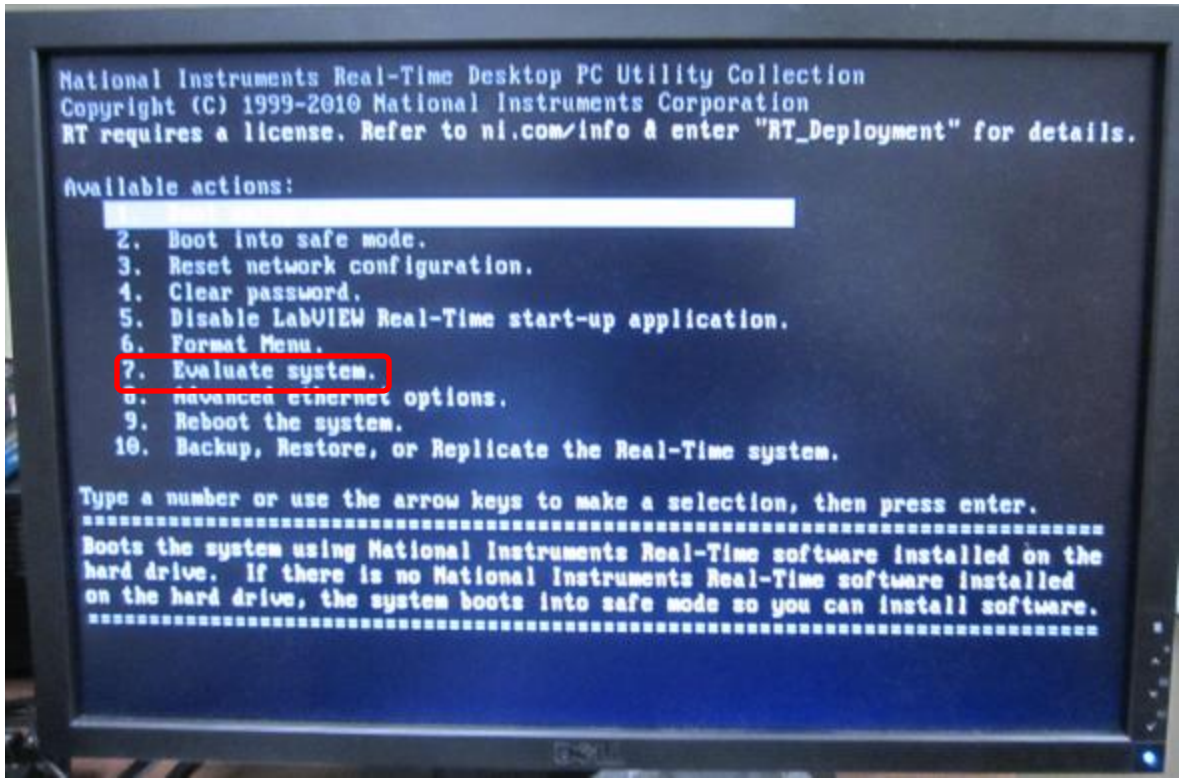
Boot Target PC Using USB

- Creating a FAT32 partition on your real-time PC, or formatting the entire drive as FAT32



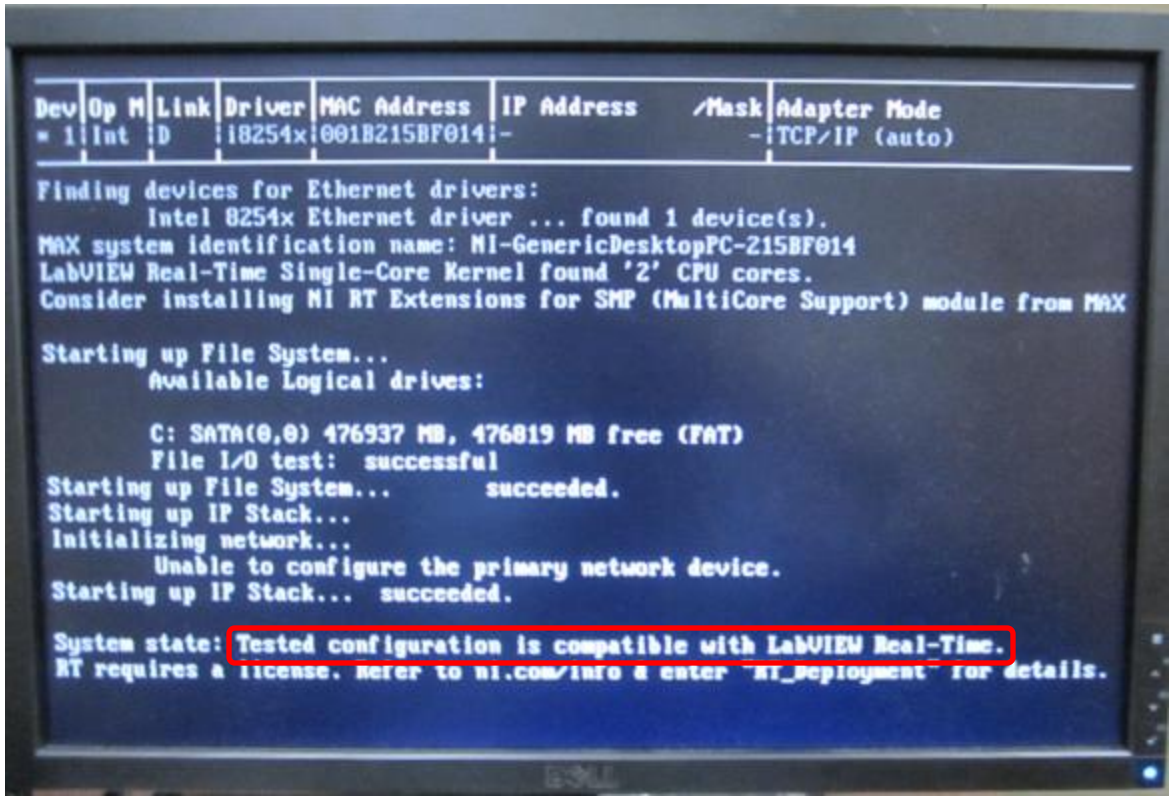
Boot Target PC Using USB

- Again boot from the USB
- This time there will be more options, choose ‘‘Evaluate system’’ to test hardware compatibility on the target computer



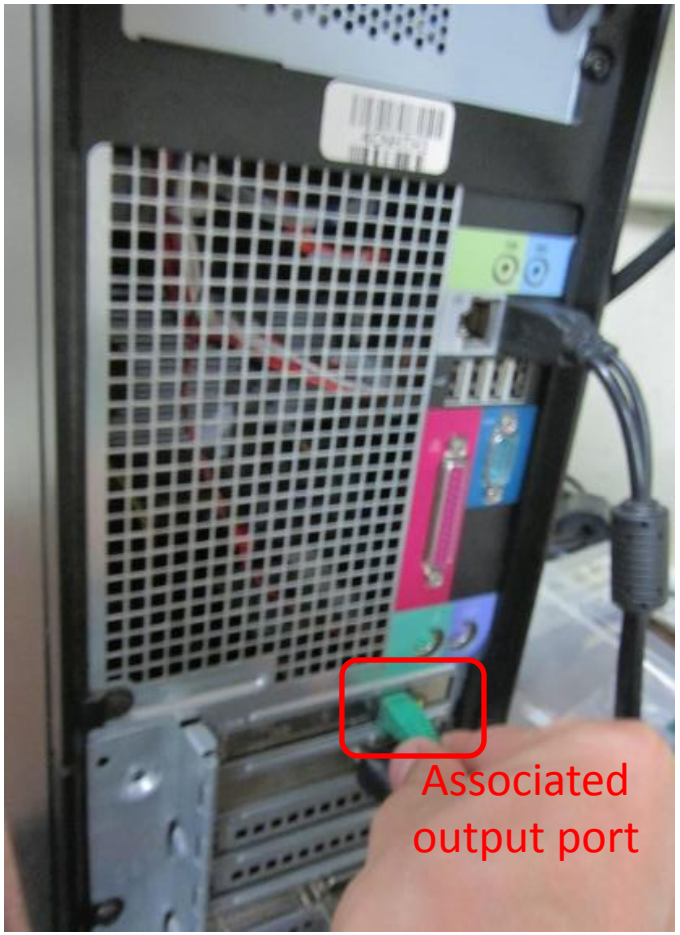
Boot Target PC Using USB

- If hardware meets the requirements, you should see ''Tested configuration is compatible with LABVIEW Real-Time''
- The most common incompatibility is ethernet chipset. We recommend the following: https://www.amazon.com/Intel-PWLA8391GT-1000-Network-Adapter/dp/B00030DEQE



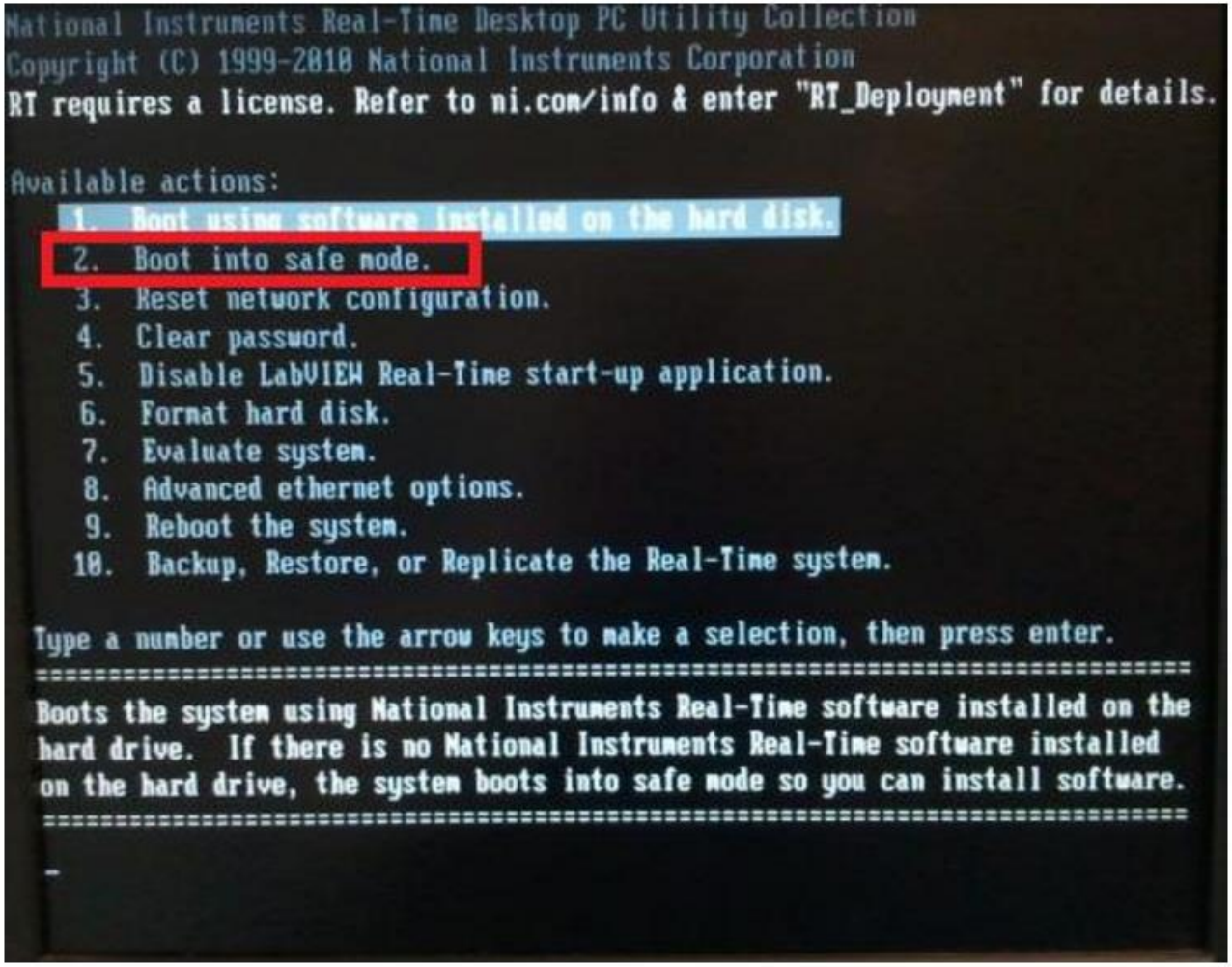
Boot Target PC Using USB

- Shut down the target computer and connect the ethernet cable from your host to the target computer:



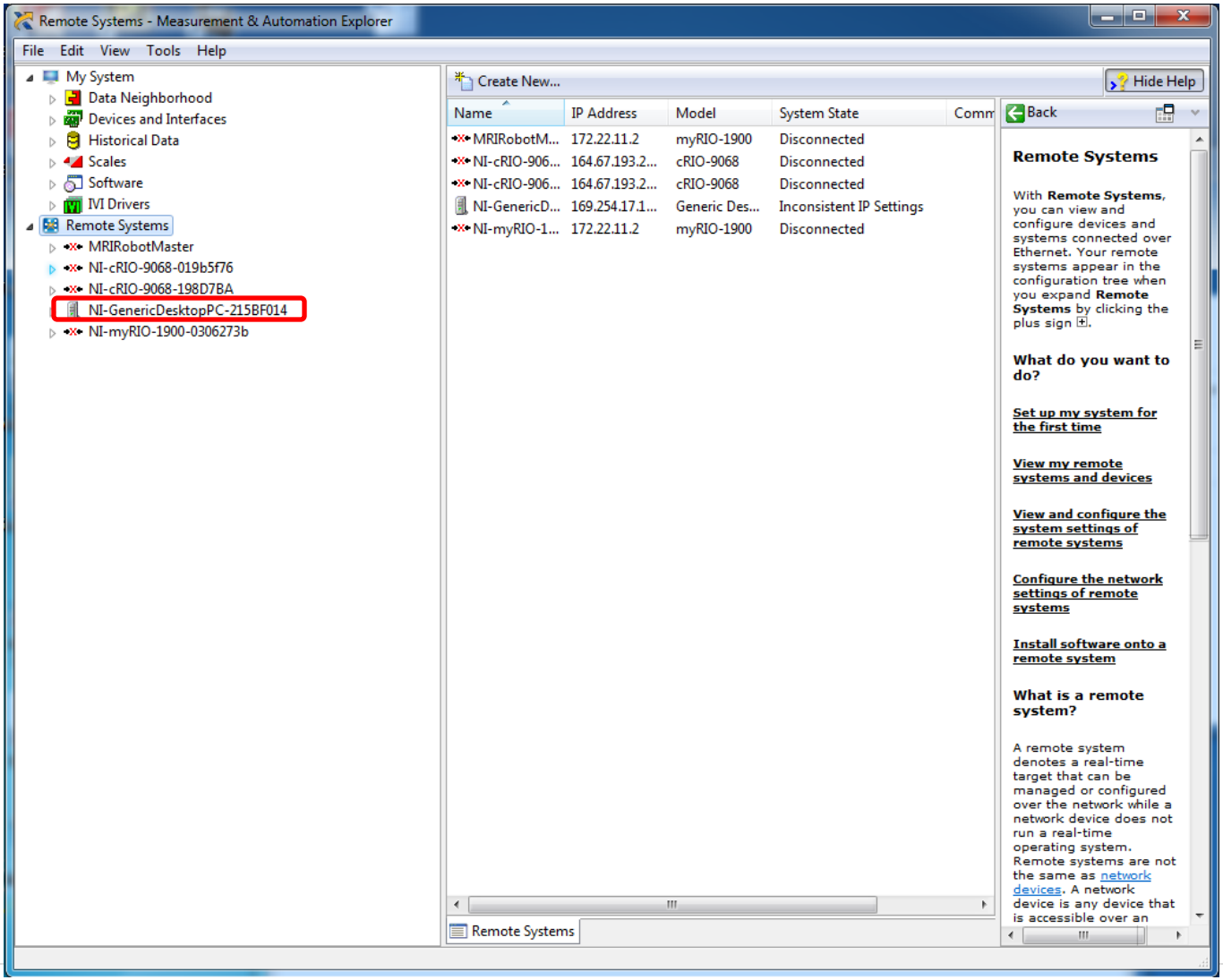
Configure a Desktop PC as a Real-Time Target

- Reboot the target computer using USB drive, this time choose ''Boot into safe mode''



Configure a Desktop PC as a Real-Time Target

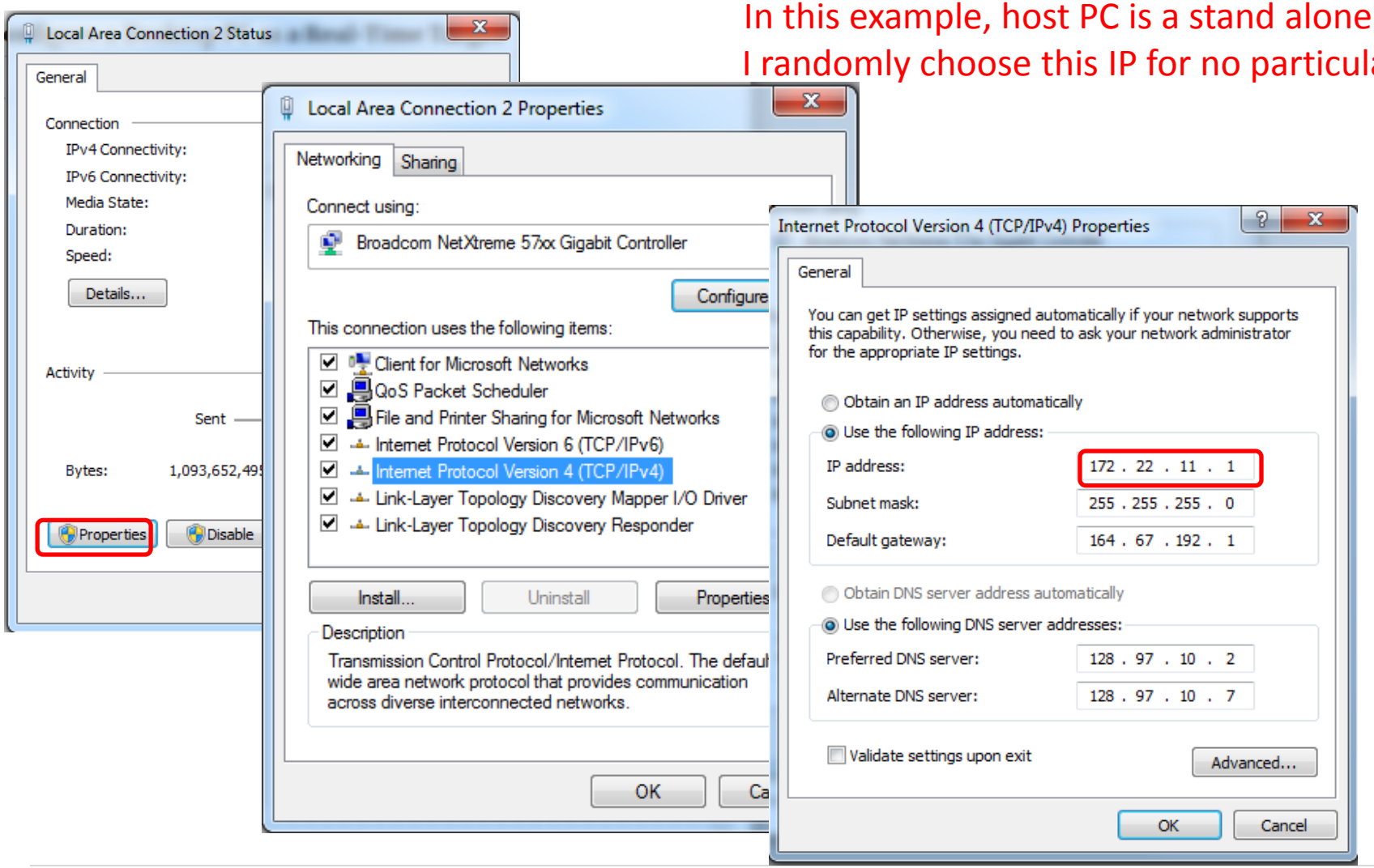
- Open NI MAX on your host computer, you should be able to see your target computer under Remote Systems



Configure a Desktop PC as a Real-Time Target

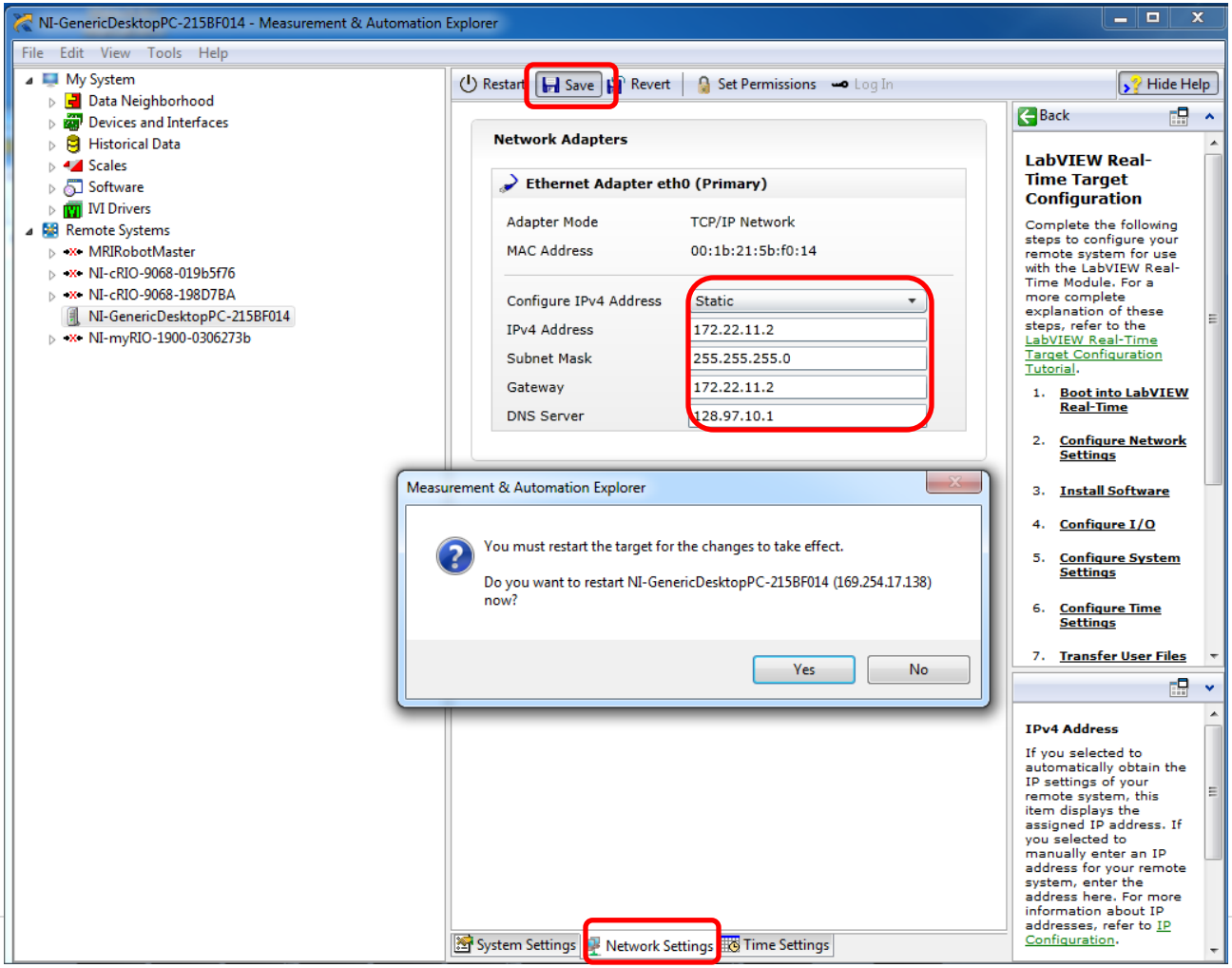
- If host computer is a stand alone PC, create an IP address for it. If not, use the appropriate designated IP.

In this example, host PC is a stand alone machine,
I randomly choose this IP for no particular reason.



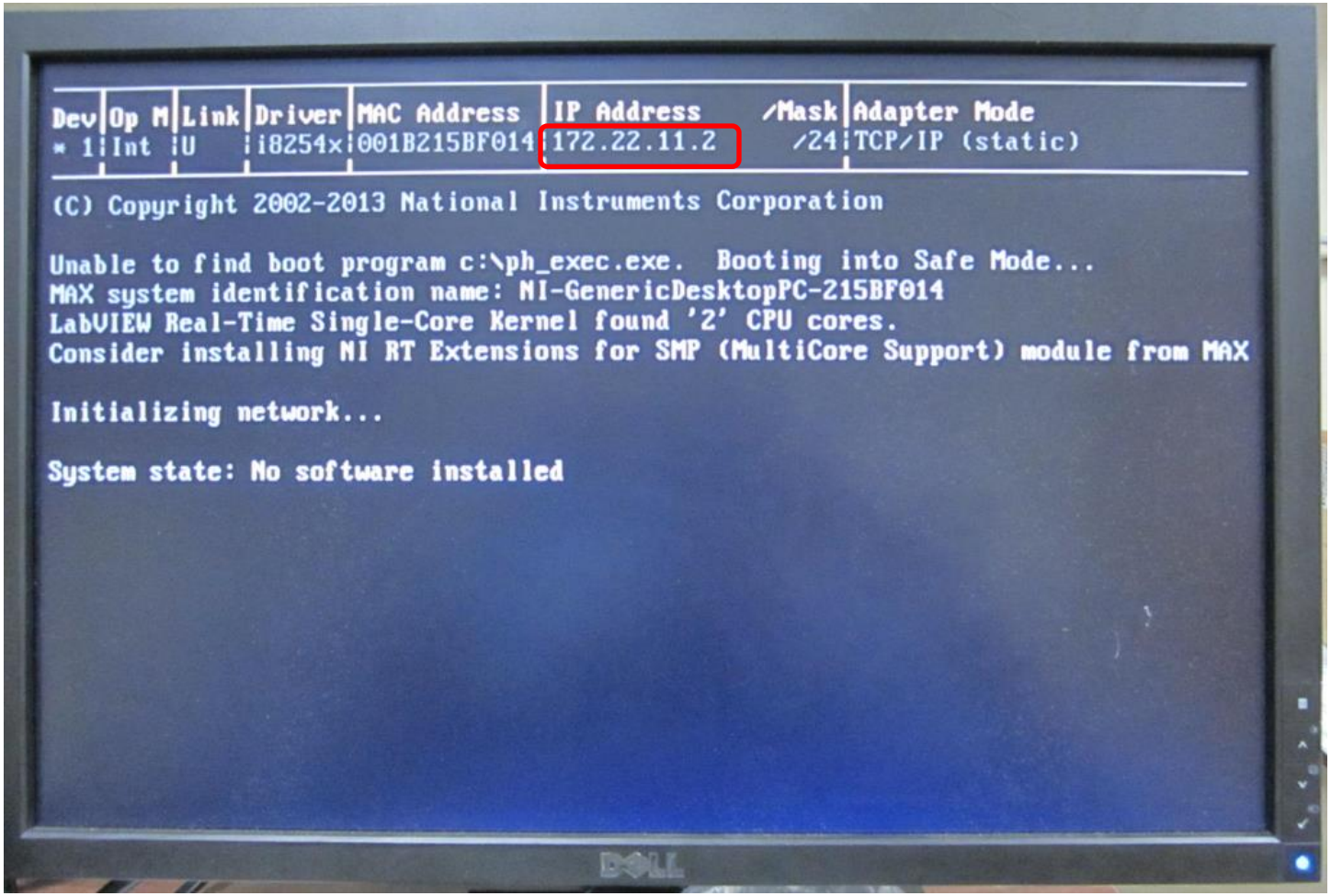
Configure a Desktop PC as a Real-Time Target

- Click ‘’Network Settings’’ Tap, and choose ‘’Static’’ IP address.
- Now set up IP address for the target, one main thing is to make sure they are in the same subnet. Namely, the first 2 entries should be the same. In this example, they are both under 172.22.xxx.xxx. And then save it.



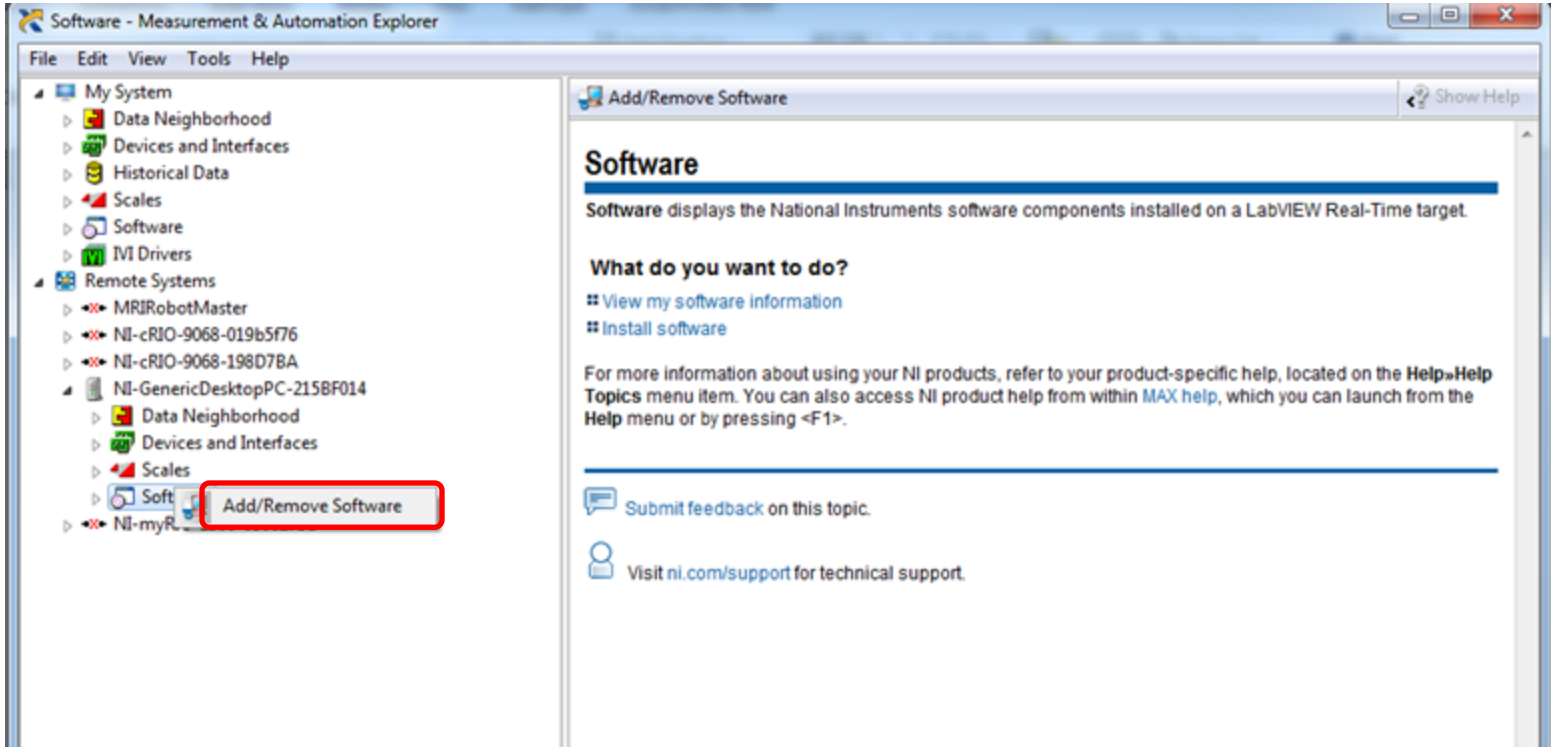
Configure a Desktop PC as a Real-Time Target

- If everything is running correctly, you should see the IP address being assigned to the target computer on the monitor as follows:



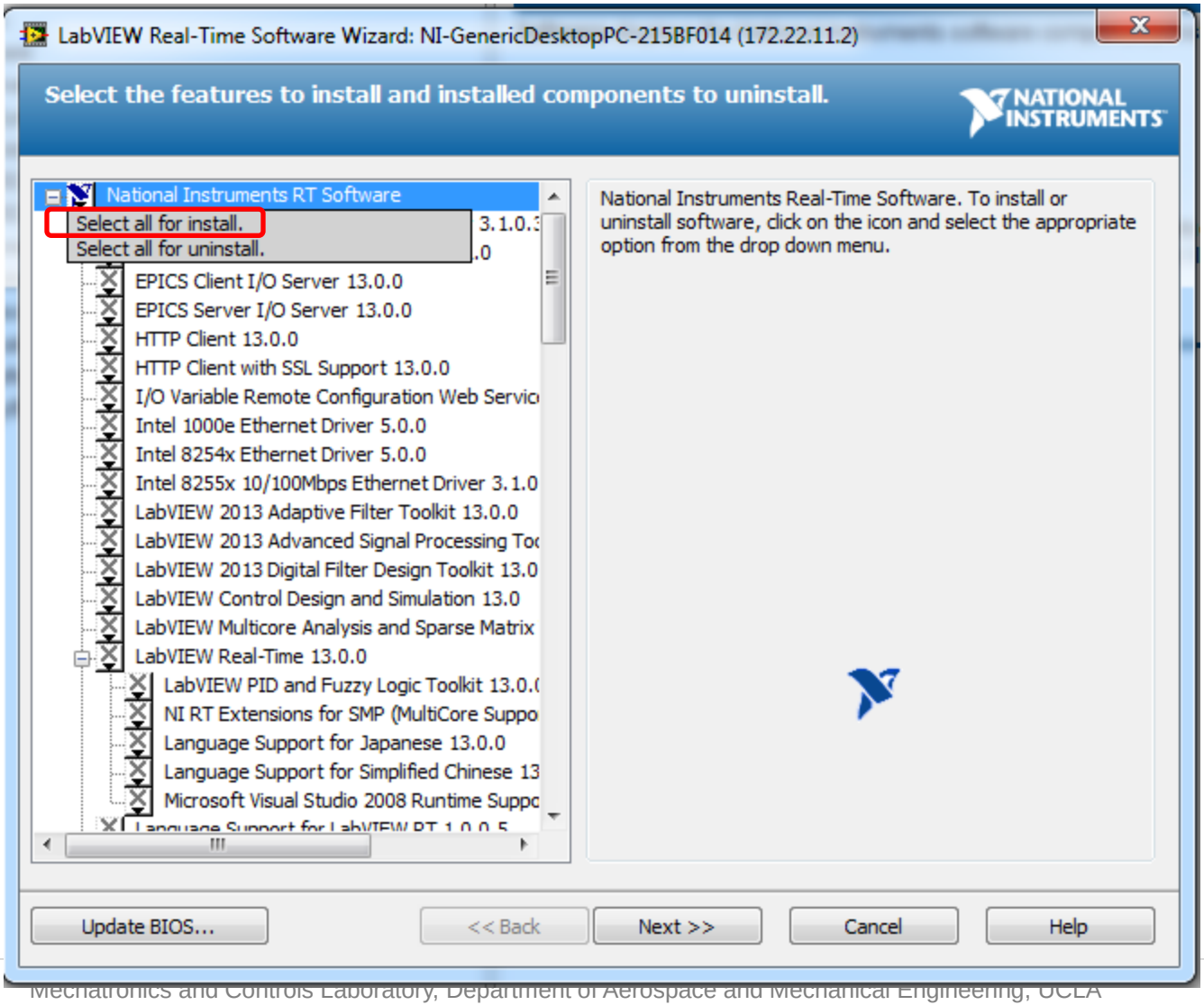
Configure a Desktop PC as a Real-Time Target

- Also, you should see more options under your target computer in NI MAX. Right click ''Software'' and choose ''Add/Remove Software''.



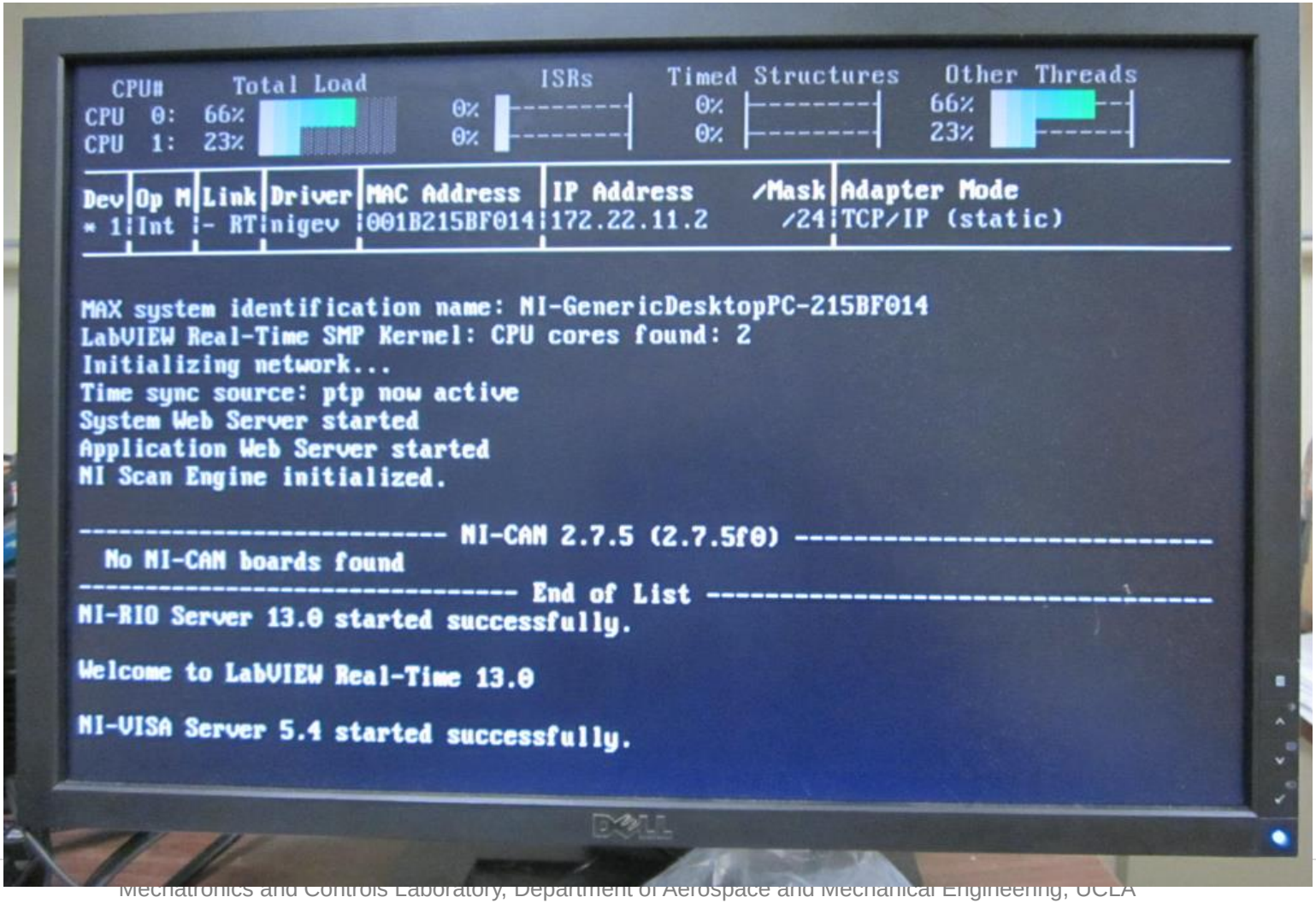
Configure a Desktop PC as a Real-Time Target

- Right click at the top level and choose ‘‘Select all for install’’.



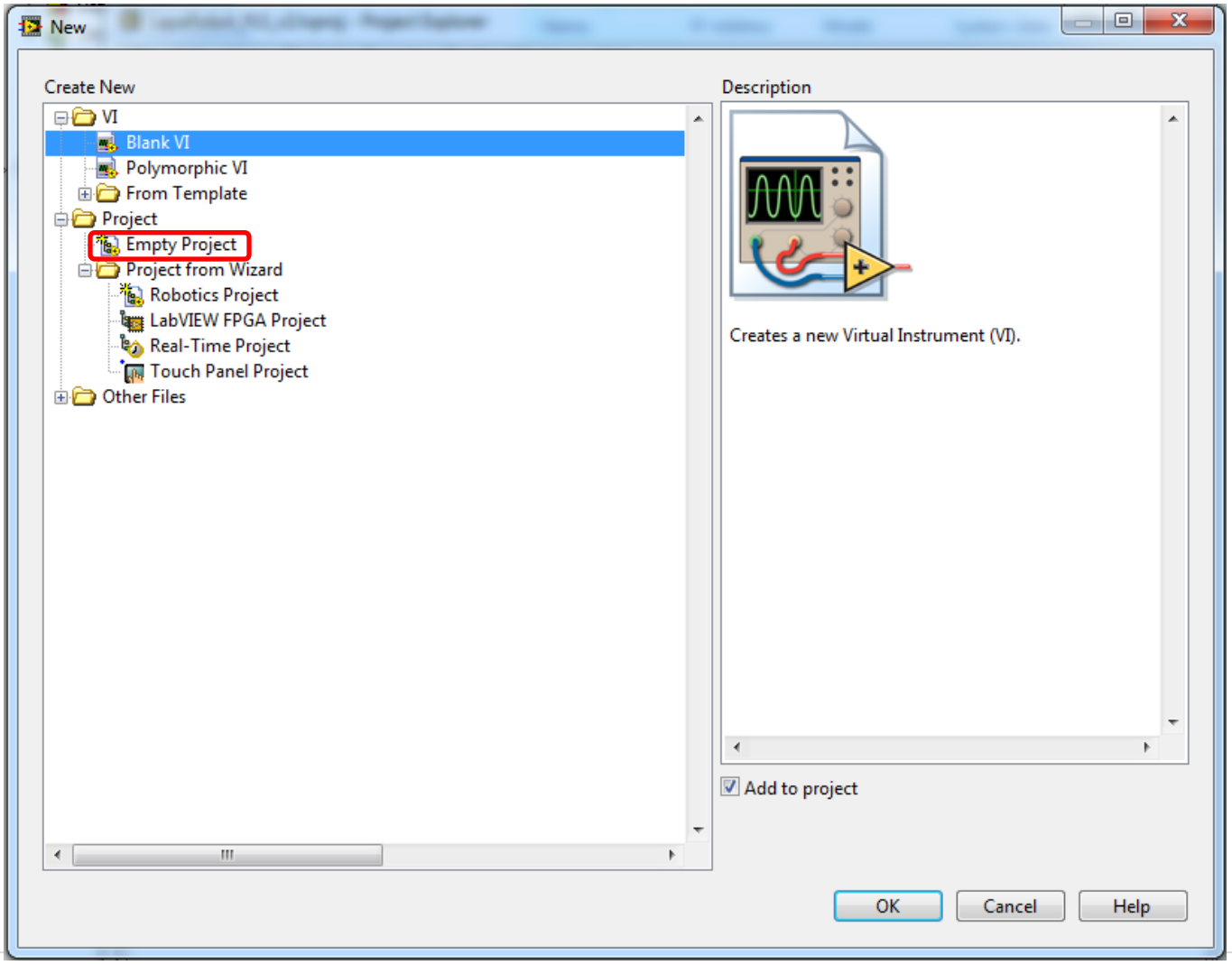
Configure a Desktop PC as a Real-Time Target

- Once finished, you should able to see the change on the target side, wherein all the software is installed and functioning properly.



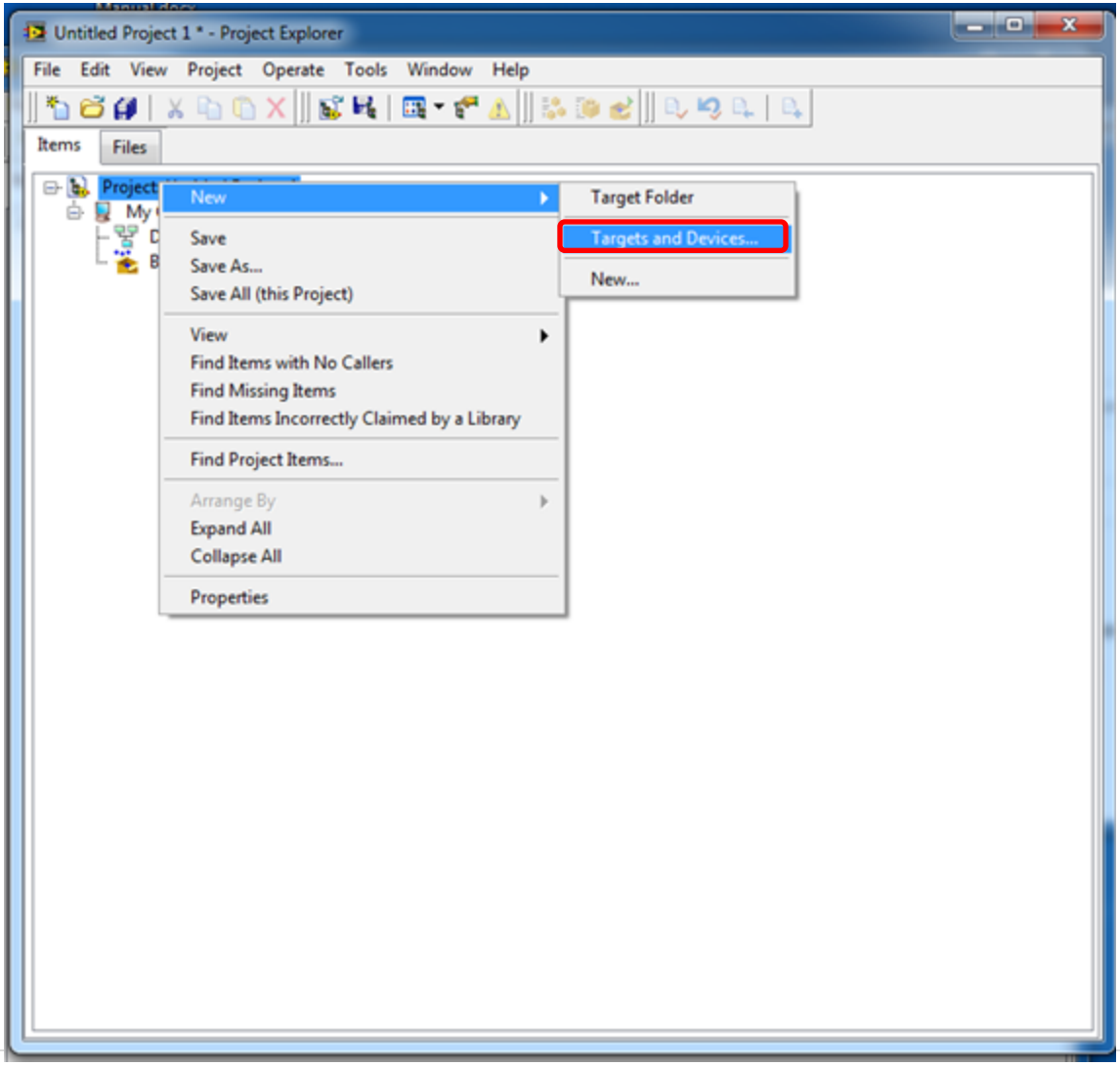
Test Real-Time Target under Host PC

- Open LabVIEW, create a new project



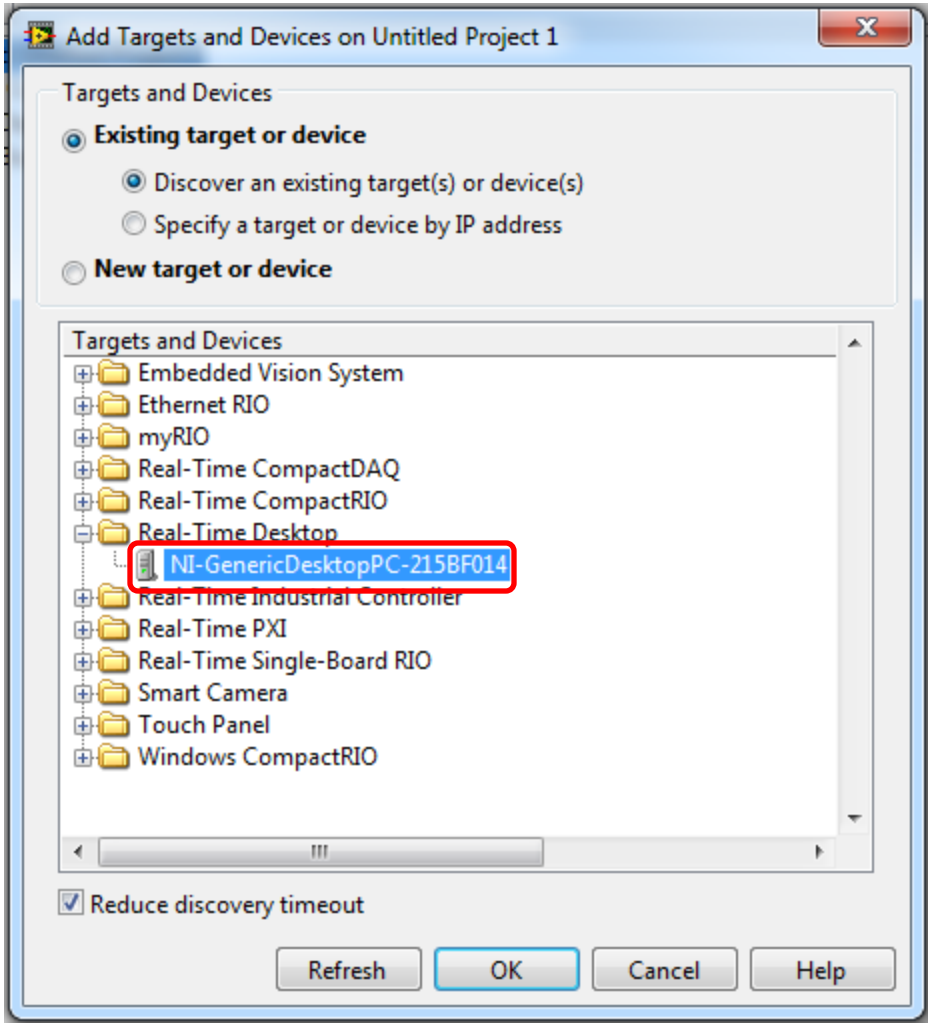
Test Real-Time Target under Host PC

- Right-click the project, under ''New'' select ''Targets and Devices''



Test Real-Time Target under Host PC

- Select your target PC under ''Real-Time Desktop''



Test Real-Time Target under Host PC

- Right-click the target you just created, select ''Connect''. If it's properly set up, a green light bulb should light up on the bottom right corner