Up/Downgrading SVI FF firmware between different Manufacturer Ids

# Background

As BH changes SVI FF Manufacturer Id from 004745 to 445644, FF “common software download” will not work. That’s because of device file header incompatibility and loss of previous Manufacturer Id during activation.

This document outlines steps to recover the transition during activation. The 004745 builds are changesets up to C85111. That includes released Rev.2. Higher changesets are 445644.

# Prerequisites

Setup needed:

1. NI FBUS-USB adapter and accompanying drivers and software
2. Installed SVI FF Communications DTM build v4.0.1023 or later. It can be found in in <https://bakerhughes.ent.box.com/folder/71423764041>
3. DTM host such as ValVue3 or PACTware

# Procedure

1. Make sure NI Configurator is **not** running. NI Dialog may be running but is useless for the task
2. Start DTM host
3. Make sure Comm. DTM is correctly loaded
4. Unload any device DTM if loaded. That’s because of possible confusion caused by automatic device tag change
5. In Live List, download new firmware from a chosen file as you would normally do
6. When download completes, click Activate as you would normally do
7. At this point, the Update dialog will show “Activation failed” in 15-30 seconds. Close the dialog.
8. In Live List, a “new” device will appear, on a temporary address. Assign the address of the device you are updating
9. Done! The device will come up with all default settings in FFP CPU and everything preserved in APP CPU
10. You can start NI Configurator, device DTM, etc.

# Troubleshooting

1. *Device comes up with non-default block or device tag(s)*Probably, a running software volunteered a change. Close that software. Using NI Dialog, write RB.RESTART=169. The device will reinitialize and may need to have its node address set again
2. *RB comes in OOS mode, probably with block error indicating memory loss*This is normal and expected because memory in FFP was ineed lost. Power-cycle the device or write RB.RESTART=Processor
3. *Can’t write some TB parameters, and some parameters read as senseless zeros*Write correct TB.ADVANCED which may have been lost. If you have Smarts Assistant 3.22.7 or later, you can do so easily on FFDev page.