Transitioning a network from 500 chip Z-stick to a 700/800 chip Z-sticks.

The upgrade process between sticks can be a hassle or worse as the NVM backup/restore process using the Silabs tools are incompatible between 500, 700 and 800 controllers and Zwave SDKs.

From Scratch

One option, particularly for small networks, is to start (or mostly start) from scratch. Some tips for that approach are

1) Backup the 500 Z-stick using the Silabs PC Controller (or use the older Aeotec Backup tool if not on SDK 6). Note the names of your existing things and what channels are linked to what item. I used the API explorer to create a text file for reference.
2) Unlink all items from the thing channels. It is a time saver is to reuse existing items with the new controller and not have to change rules, label cards, etc.
3) Using the 500 Z-stick "exclude devices" on the controller UI page remove all devices from the Zstick. Follow the exclusion protocol for the slave devices found in the manual or on the UI page for that device. Lastly delete the controller UI page.
4) Stop the ZWave binding via bundle:stop in Karaf and exchange the 500 Zstick for the 700/800.
5) Restart the ZWave binding and from Inbox, Zwave, use the "Bridge" to create a new Controller thing. The 700 port is typically /dev/ttyUSB0 versus the 500 port of /dev/ttyACM0. If it doesn't show "Online" in a minute, try a restart of OH.
6) Using the Inbox, Zwave, Scan readd your devices. Then relink the channels to the existing items per your reference text file from step 1. Check using <openhab:links orphan list> to make sure everything was linked.

My old 500 was the Aeotec model with the include/exclude button. If you have that device you can save time at each slave device by changing the order of the steps to 1, 2, 4, 5, 3, and 6. That way, while at the device you can exclude via the button and include via OH Scan before moving on. There will be some cleanup of the UI and the ZWave XML folder regardless.

Port Existing Network

Option 1

Found (and used once) this YouTube video. Migrate 500/700 Z-Wave Controllers to the ZST39 800 Series Controller - YouTube Also scan the comment section. I tried once and it took most of the morning.

Option 2

This was modified from another post on the Hubitat site for what I experienced with OH. It temporarily requires a spare controller (500 chip ok).

1) Again backup OH and the 500 Z-stick before starting. Make a note of the security if you have locks, etc. Backup is slightly more important with this method because reverting is going to be easier since the devices will not be excluded. I did revert back to the 500 Z-stick a time or two.
2) Controller A is the 700 controller you want in the end and Controller B is the transition device. Plug both controllers into a PC and two separate instances of the Silabs PC Controller, each on a separate COM port.
3) Join each controller to your OH system (one at a time) by using Inbox, Zwave, Scan and pressing "Classic Learn" on the Silabs tool. Both will be secondary controllers at this point.

4) Press “Shift” on Controller A and “Learn” on controller B. Controller B will be a RealPrimary at its current node given to it by your OH system.
5) Stop the ZWave binding via bundle:stop in Karaf. To be safe I removed the Z-stick as well.
6) Preset Reset on Controller A to wipe all the information from the device.
7) Using Controller B select Node 1 and press isFailed, then press Replace failed
8) Immediately press “Learn” on Controller A. Controller A will now be Node 1 and will have the SUC and SIS designations. The Hubitat process suggests pressing Shift on Controller B and Learn on Controller A to make Controller A “RealPrimary”. My understanding it is not possible to place an SIS controller in “Learn” mode, so the switch of “RealPrimary” will not (and did not) work.
9) Backup controller A using the Silabs tool, then put Controller A back into the OH server.
10) Restart the ZWave binding and modify the Controller UI page port to /dev/ttyUSB0 from /dev/ttyACM0. Hopefully it will show online, but if not, restart OH.
11) You can clean up the transition nodes using the Silabs tool (check isFailed, RemoveFailed).