Developer Series: Troubleshooting Niagara Applications

June 17, 2021

Q&A

1. **Is there a cheat sheet of these tips and tricks that we could download and refer to when we need it?**

   That's a great idea and something we will consider adding to the developer documentation in the future.

2. **How long does Data Recovery service retain the data if controller is offline?**

   All data will be retained indefinitely on the device until power is restored and the Niagara Station is restarted.

3. **Does the TRANSIENT flag also exclude a property from Data Recovery?**

   Yes. The TRANSIENT flag also excludes property slot changes from the Data Recovery Service. Unlike the NON_CRITICAL flag, the TRANSENT flag also excludes property slot changes from being written to the BOG file. If you do not want a slot written to either the BOG file or the Data Recovery Service, use the TRANSIENT flag. If you want a slot written to the BOG file, but not the Data Recovery Service, use the NON_CRITICAL flag.

4. **Is the non-critical flag able to be set through the program service if we needed to edit multiple?**

   Yes, however the NON_CRITICAL flag is best applied on a case by case basis. Applying the NON_CRITICAL flag to the entire Niagara Station database is effectively disabling the service, which is discouraged. Once you have identified problem slots, the program service is certainly an option for deploying the appropriate flag.

5. **Back in the AX days, I could run a local station in combination with the Niagara plug-in for Eclipse to debug & step through my code inside my IDE. Can YourKit step through code? Is there any way to do something similar in N4 today, rather than relying on logs, managers and console writes?**

   I don't believe that YourKit has the ability to step through code, but we do regularly use IntelliJ IDEA's built in debugger to step through code. You should still be able to step through code using Eclipse as well. YourKit will display plenty of stack information in the Memory Allocation and Thread tabs for you to locate any line of code of interest.

6. **How far back are these tools available? e.g. 4.7**

   The Developer Security Manager was introduced in Niagara 4.9. Most of the managers and logs are available in Niagara versions all the way back to Niagara AX 3.0. The Data Recovery Service, and manager, is available in all versions of Niagara 4 and 3.8 as well.

7. Are there tools to track a BACnet network error?

You can set the BACnet logs to the FINE or FINEST level – this will give you additional information about how the errors are being received and handled by Niagara. Additionally, you may be able to make use of the Wireshark application to monitor BACnet traffic directly.

8. Can I access the spy if the station is unresponsive?

No. The spy pages are HTML pages served up by the station's web server, so if the station isn't running or in unresponsive, you'll have to rely on tools available through the platform.