1756-ENBT or 1768-ENBT interrupted communications to a remote device could cause degraded bridge performance.

620043 | Date Created: 09/05/2014 | Last Updated: 09/11/2015
Access Level: Everyone

Affected Hardware/Firmware Revisions

1756-ENBT firmware 6.002, 6.004, 6.005 & 6.006
1768-ENBT firmware 4.004

Anomaly Description

On a loss of communications exceeding 30 seconds, any and all other communications can be lost for up to two minutes.

NOTE: Intermittent communication losses will not lead to the overall communications loss.
NOTE: The duration of a communication loss must exceed 30 seconds.
NOTE: Normal 1756-ENBT / 1768-ENBT bridge operation will return when TCP connections to the device(s) that stopped communicating time out.

Other symptoms associated with this anomaly:

- Safety IO module connections may timeout during the interruption but recover on their own reporting 16#0203 followed by 16#0204 communication errors during the interruption.
- Standard IO module connections are not likely to timeout because of higher timeout values than Safety IO but performance is affected. Input data to processor will be delayed / lost during the interruption so output data although sent at expected frequency could be considered stale; although operating within CIP specification.
- Message instructions to devices that experience no IO connection issue will error during the interruption.
- RSLogix5000 online connection becomes non-responsive and may timeout during the interruption.
- Red X reported in RSLinx RSWho browse of a device whose IO connection shows no error during the interruption.
- HMI communications may appear non-responsive during the interruption.
- Bridge webpage becomes non-responsive.

Solution

Anomaly Correction (for the 1768-ENBT)

Firmware revision 4.005 was released to correct this issue with the 1768-ENBT module.

Application WorkAround

1. Implement a GSV instruction to monitor each Ethernet connection that can possibly be unconnected and or powered off for longer than 30 seconds. (click on the following link for an example)
   Using the GSV instruction in Logix controllers to keep track of Ethernet connections (//rockwellautomation.custhelp.com/app/answers/detail/a_id/29904)
2. Setup a timer and use a SSV to inhibit the modules connection prior to the 30 second time period. (click on the following link for an example)
   Programmatically Inhibiting an I/O module with RSLogix5000 (//rockwellautomation.custhelp.com/app/answers/detail/a_id/52041)
3. Periodically re-check to see if the connection comes back via another timer or some discrete input condition.

NOTE: GSV should be targeted to the Ethernet adapter versus the individual module connections.
NOTE: In the event that a portion of a 1734-AENT(R) chassis is powered down (for example by powering down a 1734-EP24DC bus extender to only power down a portion of a 1734-AENT(R) chassis) the anomaly will not occur because the 1734 adapter will respond to the FWD Opens intended for the powered down modules whether they are PointGuard or standard.
NOTE: The above work around will not work if a 1791ES Safety product is the target device.

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