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

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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](https://rockwellautomation.custhelp.com/app/answers/detail/a_id/29904)
(//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](https://rockwellautomation.custhelp.com/app/answers/detail/a_id/52041) (//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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