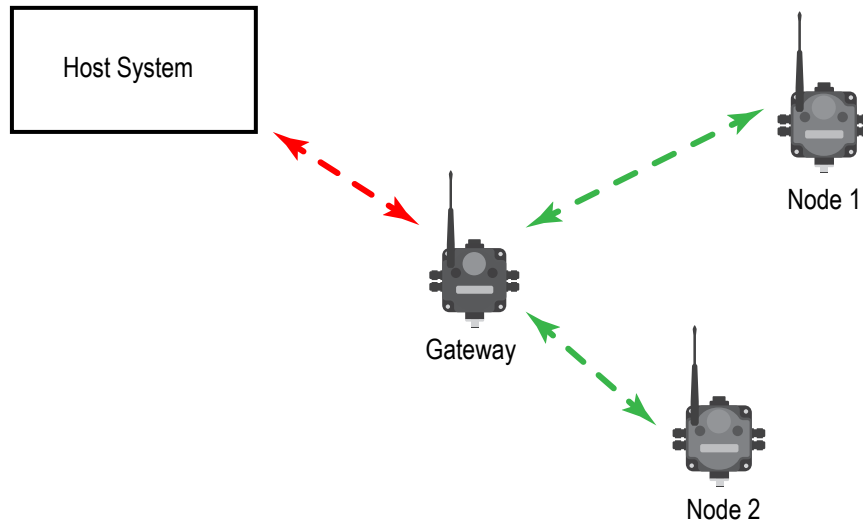**BANNER** ®
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Host Link Failure

A **Host Link Failure** occurs when the defined timeout period, typically about four seconds, elapses with no communication between the host system (or Modbus master device) and the DX80 Gateway.
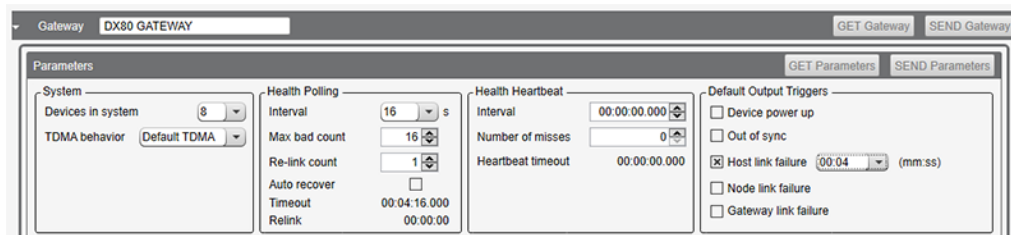

The Gateway places an error code in its I/O 8 register and sends a message to all relevant Nodes within the system to set outputs to the user-defined default states. Each Node has an enable flag for a host link failure condition. If a Node's 'host link failure' flag is not set, the outputs on the Node are not affected.

In the example shown, a host link failure between the host system and Gateway result in the outputs of Node 1 and Node 2 sent to the defined conditions if both Nodes have the host link failure enabled. When the host link failure is enabled, you should disable the automatic recovery. The host system should restart the system after the error condition is corrected.

Enable Host Link Failure

The Host Link Failure flag is disabled as a factory default condition. To enable this condition, follow these steps.

1. On the User Configuration Tool software (UCT), go to the **Configuration** > **Device Configuration** screen.
2. Click on the arrow next to the Gateway's parameters.
   The Gateway's parameters display.
3. Select **Host link failure**.

4. From the drop-down list, select a timeout time (mm:ss).

   When connecting using a DXM Wireless Controller, Banner recommends at least a 4 second timeout.

5. On the **Configuration** > **Device Configuration** screen, disable **Auto recover** if it is selected.

   When Auto-Recover Mode is enabled, the Gateway detects an error condition and resets the error when the radio link is operational. With the Host Link Failure condition enabled, disable Auto recover mode. It is now up to the host system to clear error conditions in the wireless system. The Gateway will still determine when a radio link error exists, but the host system must determine when it is safe to clear the error condition and write the outputs back to an operational state.

In a host system, the outputs are controlled by the host; there is no internal mapping. When error conditions occur in the wireless system, it is up to the host to recognize the error conditions, to recognize when the system is functioning correctly, and correct the output states.

Gateway to Node radio communication failures are shown in Modbus register 8 of each device. To clear an error for a device, write the Gateway's Modbus register 15 to 0x04nn; where nn is the Node number.

When Host Link Failure mode is enabled, the host must recognize individual Gateway to Node radio issues using Modbus register 8 of each Node.