

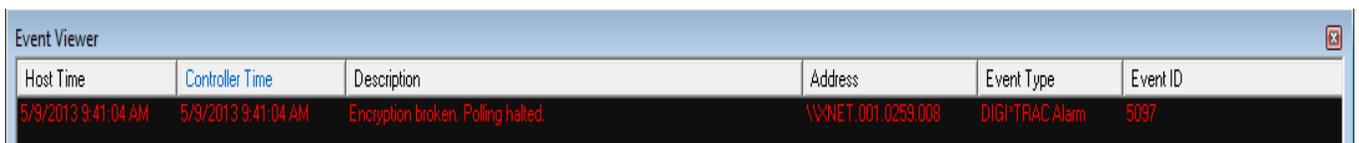
Tech Tips

Topic: How to Reset Encryption Keys in Velocity and the SNIB2

Product: Velocity and SNIB2

Explanation: Velocity when communicating with a SNIB2 communicates using AES-Rijndael asymmetric 128-bit data encryption. Initial communications is established using default keys known to both the SNIB2 and Velocity. Once communication is established both sides turn their keys and continue to communicate using the newly created keys. These keys change every time Velocity logs on to the controller after establishing the initial communications with the last known good keys. If at any time the communication path between Velocity and the SNIB2 is broken they will both remember the last known good keys and use them to establish communications once the network failure is corrected.

In situations where the encryption keys break between Velocity and the SNIB2 a message will be generated in the Event Viewer stating "Encryption broken Polling halted". Only when this message is generated means that the communications failure is due to the encryption keys. There could be other network related reasons to have communications failure but they should not be interpreted as encryption key related unless the below message is generated.



Host Time	Controller Time	Description	Address	Event Type	Event ID
5/9/2013 9:41:04 AM	5/9/2013 9:41:04 AM	Encryption broken, Polling halted.	\\XNET.001.0259.008	DIGI*TRAC Alarm	5097

This means that either the SNIB2 or the Velocity keys changed. The two typical reasons for this is that the Reset Encryption Key switch on the SNIB2 was left in the ON position which will default the keys every time the controller reboots or the Reset encryption check box was checked within the Velocity Port Properties.

At this point in order to re-establish communications is to get both the hardware and the software back to their default keys.

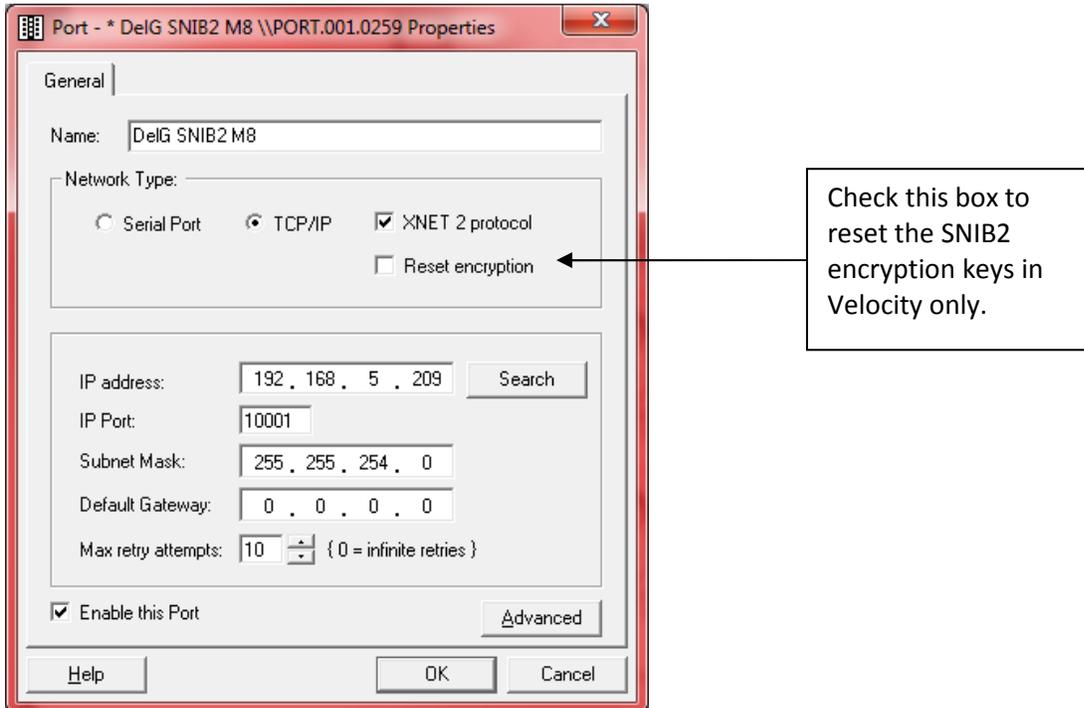
Resetting the Encryption keys on the SNIB2 to default

In order to reset the keys on the SNIB2 you will need to physically set dipswitch 1 (S1) on switch bank 2 (SW2) to the **ON** position (*this is to the right or towards the inside of the board*). Once the switch is ON you will need to cycle power to the Controller. Once the controller begins to power up you can set S1 back to the **OFF** position (*this is to the left or towards the outside of the board*) to prevent the keys to default upon other controller reboots. An indication that the SNIB2 has been defaulted to its default encryption keys is the alternate blinking of the P1 LEDs.

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Resetting the Encryption keys on Velocity to default

In order to reset the keys on the software side you will need to go into the properties of the port having the issue and check the box labeled “Reset encryption” and then click the OK button. This will reset the local encryption files back to default and attempt to re-establish communications with the SNIB2.



Note: *If a controller drops offline, it is a common misconception that by checking the ‘Reset Encryption’ box, it will bring it back online. This is **FALSE** and actually causes the encryption to break, thus producing the Event Viewer message seen above. This checkbox should only be checked after you receive the message indicating the encryption key is broken.*