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Link Fault Pass-Through (LFPT)

■ What is Link Fault Pass-Through (LFPT)?

- Normally, when a connection is lost between two devices, one device will continue to transmit packets while waiting for a response from the other device. This results in a loss of data because the device thinks there is still a viable link to send data through. Link Fault Pass-Through (LFPT) was developed as a method of forcing a “link down” between two connections in the event of a link failure. This drastically reduces the amount of data loss within the network. Network administrators are also immediately notified of the lost connection so that they may correct the problem in a timely manner.

■ Why is it important to my network?

- For mission critical operations, even a small amount of data loss is not acceptable; therefore, LFPT is necessary to help monitor the network while at the same time prevent data loss.

■ How is LFPT implemented into my network?

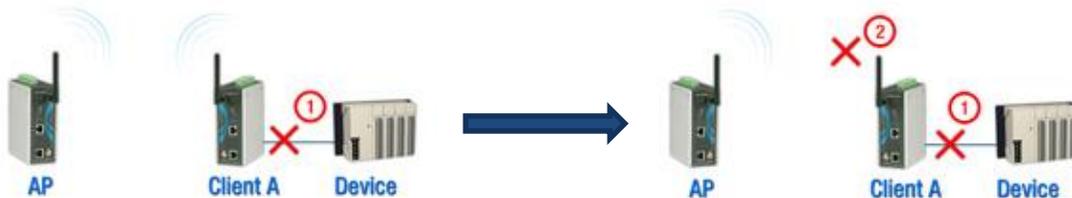
- In the past, LFPT was an option only available on media converters. Nowadays, Moxa has managed to implement LFPT into their entire line of AWKs, which are their industrial IEEE 802.11a/b/g/n wireless AP/bridge/clients. This improvement in technology no longer restricts LFPT to only wired connections between media converters. LFPT in wireless devices allows for a more stable and easy to manage network.

■ Different types of Link Fault Pass-Through Functions

- Because Moxa's line of AWKs operate wirelessly, there are two modes of "Link Down" that can be established for the AWKs. Media converters will only have the Ethernet Link Down mode as they do not operate wirelessly.

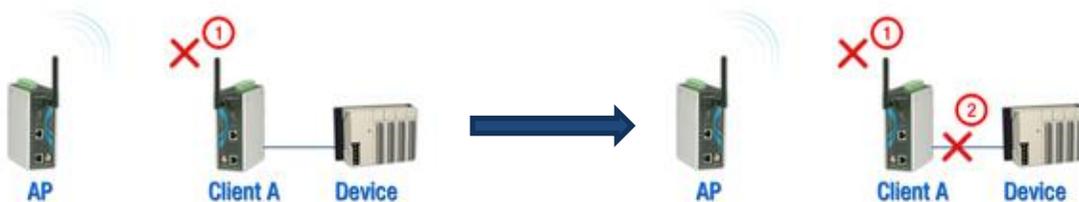
Ethernet Link Down Mode

- As seen in the diagram below, if a faulty connection is detected between the wireless AWK and a device, the AWK will automatically disable the wireless connection to the AP so that data loss is minimized.



Wireless Link Down Mode

- Wireless Link Down mode acts similarly to Ethernet Link Down mode, but instead disables the wired Ethernet connection in the event that wireless connection to the AP is lost.



Where can I find this technology?

- Moxa, a world-class leader in industrial automation, offers LFPT technology on their full line of industrial wireless LAN (AWKs) and media converters (IMCs). Quantum Automation is an authorized distributor for Moxa and can help you find the right product for your needs.

Examples of applications that may require LFPT

- Security systems, hospitals, theme parks, manufacturing and distribution plants, defense systems, communication and power industries, etc.

Conclusion:

For especially time-sensitive operations and networks, LFPT is a necessary function that not only minimizes data loss, but also acts as a means of alerting network administrators so that they may quickly address and correct any faults in the network.

Question:

Give an example of a previous application that you have been involved in that could have used Link Fault Pass-Through technology.

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*All following diagrams are courtesy of Moxa