Mitigation Strategies for Stuxnet - SCADAhacker

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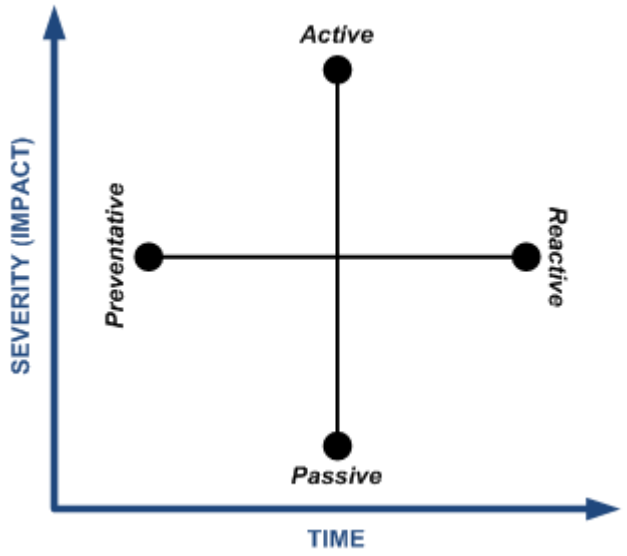
There are a lot of experts, some with and some without any relevant control systems experience, who are today offering advice regarding how to handle Stuxnet and Stuxnet-like attacks. One thing is pretty much agreed to by all: while no single solution will block an attack like Stuxnet, a comprehensive solution of countermeasures including process and policy can significantly reduce the negative consequences that result from such an attack.

Knowing this in advance means that any mitigation strategy needs to be based on a solid defense-in-depth strategy that utilizes multiple, independent layers of protection. The members of the CSFI Stuxnet Project agree that while it will always be possible to find flaws in any one solution it should be increasingly difficult to find and exploit flaws in a comprehensive solution that depends on multiple protective measures.

The concept proposed breaks the situation down into two distinct phases: ***Prevention*** and ***Reaction***. The first set of countermeasures should be **preventative** in nature, and designed to minimize the likelihood that a control system could be infected by such an attack. The second, and equally important, set of countermeasures should be **reactive** in nature, and designed to minimize any negative consequences to the control system should the system be compromised. Each of these sets of countermeasures should also possess both **passive** and **active** components that utilize direct and indirect methods in responding to the event. These countermeasures are then implemented in real-time based on the impact of the attack and the duration of the attack (which correlates into the likelihood of greater damage or negative consequences).

The figure below illustrates this concept:



Let us explore this concept more as countermeasures are applied. This list is meant to be used as guidance to possible countermeasures which could be deployed and should not be interpreted as a list which all items are required for every installation.

Source: https://scadahacker.com/resources/stuxnet-mitigation.html