**Permanent Denial of Service Attack**

**Description 1**

Also known loosely as “phlashing” in some circles, permanent denial of service (PDoS) is an attack that damages a system so badly that it requires replacement or reinstallation of hardware. [1] [2]

**Description 2**

A PDOS attack damages a system so badly that it requires replacement or reinstallation of hardware. Unlike the infamous distributed denial-of-service (DDOS) attack -- which is used to sabotage a service or Website or as a cover for malware delivery -- PDOS is pure hardware sabotage.

We aren't seeing the PDOS attack as a way to mask another attack, such as malware insertion, but as a logical and highly destructive extension of the DDOS criminal extortion tactics seen in use today, says Rich Smith, head of research for offensive technologies & threats at HP Systems Security Lab.

Smith says a PDOS attack would result in a costly recovery for the victim, since it would mean installing new hardware. At the same time, it would cost the attacker much less than a DDOS attack. DDOS attacks require investment from an attacker for the duration of the extortion -- meaning the renting of botnets, for example, he says. [3]

**Description 3**

 PDOS will be discussed which targets the firmware update mechanisms of embedded devices, such abuses of flash update mechanisms to cause PDOS conditions have been named Phlash attacks (cuz every attack needs a 'ph' right!). Phlash attacks targeting both the flash update mechanisms of devices, and the structuring of the binary firmwares themselves will be discussed in a generic way. [4]

**Reference**

**[1] https://security.radware.com/ddos-threats-attacks/brickerbot-pdos-permanent-denial-of-service/ (referenced by cert)**

**[2] https://ics-cert.us-cert.gov/alerts/ICS-ALERT-17-102-01A**

**[3]https://web.archive.org/web/20081208002732/http://www.darkreading.com/security/management/showArticle.jhtml?articleID=211201088**

**[4]https://web.archive.org/web/20090201173324/http://eusecwest.com/speakers.html#PhlashDance**