DARPI “Dynamic ARP Inspection" Core on the specified network interface

- Delete the current IP entries from the ARP cache (possible entries poisoned) (POLICY: CLEAN)
- Read the I/O ARP packets from the network traffic
  - Check the type of the ARP packet read
  - Check the I/O bound direction of the ARP request packet read (sent by us or sent to us)
    - If the ARP request packet is a gratuitous ARP request packet:
      - Add the <IP, TIME> entry in the DARPI cache with the destination IP address of the ARP request packet and the current local time
      - Send an ARP reply to source IP (with MAC broadcast) address of the ARP packet (in the next ARP packet read, follow the outbound ARP reply)
      - Check if the source IP address of the ARP request packet exists in the DARPI cache
      - Send a probe ARP reply to source IP (with MAC broadcast) address of the ARP packet (in the next ARP packet read, follow the outbound ARP reply)
    - Check if the source IP address of the ARP reply packet exists in the DARPI cache
      - Delete the IP entry from the ARP cache of the source IP address of the ARP packet (POLICY: DENY)
      - Overwrite the IP entry in the ARP cache of the source IP address of the ARP reply packet with the same source <IP, MAC> addresses (POLICY: ALLOW)
      - Delete the <IP, TIME> entries expired from the DARPI cache
        (difftime(current local time, TIME) >= DARPI timeout of the DARPI cache)
    - Delete the IP entry from the ARP cache (possible entries poisoned) (POLICY: DENY)
    - Restore the operating system the sending of the ARP replies in response to received ARP requests for all local addresses
  - Check if the ARP reply packet is a gratuitous ARP reply packet
    - Delete the first or the only <IP, TIME> entry not expired from the DARPI cache of the source IP address of the ARP reply packet
    - Overwrite the IP entry in the ARP cache of the source IP address of the ARP reply packet with the same source <IP, MAC> addresses (POLICY: ALLOW)
      - Delete the <IP, TIME> entries from the DARPI cache

- Disable in the operating system the sending of the ARP replies in response to unsolicited and gratuitous ARP requests and replies

- Restore in the operating system the sending of the ARP replies in response to received ARP requests for all local addresses

- Disable in the operating system the creation of the new IP entries in the ARP cache triggered by the unsolicited and gratuitous ARP requests and replies

- Send an ARP reply to source IP (with MAC broadcast) address of the ARP packet (in the next ARP packet read, follow the outbound ARP reply)
- Send an ARP request to source IP (with MAC broadcast) address of the ARP packet (in the next ARP packet read, follow the outbound ARP request)