

# Internet Engineering Task Force

## RFC for IPv6 IP Identification (IPID) Field

draft-elkins-6man-ipv6-diagnostic-header-00.txt

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Mike Ackermann: BCBS Michigan ([mackermann@bcbsm.com](mailto:mackermann@bcbsm.com))

Nalini Elkins: Inside Products, Inc. ([Nalini.elkins@insidestack.com](mailto:Nalini.elkins@insidestack.com))



# TODAY'S AGENDA



- IPID FIELD IN IPv4
- IPID FIELD IN IPv6 – CURRENT STATE
- RECOMMENDATION FOR IPID FIELD IN IPv6



- **IPID: Internet Protocol Identification.** Provides a unique identifying number for a given IP packet within a flow.
  - Sometimes called Datagram number.
- **Stated Usage**
  - Enable Fragmentation.
- **De Facto Usage**
  - Logically associate packets across complex network situations.
  - Of particular value in matching traces taken at multiple points

# IPIID FIELD IN IPv6 – CURRENT STATE



- **Implemented in Fragment Extension Header (Type 44).**
  - **Location:**
    - 32 bit field at offset 4 in FEH.
  - **Issues:**
    - Only used if Fragmentation required.
    - Is a 32 bit field large enough?
    - IPIID not always available to facilitate network diagnostics. \*\*\*\*\*

# RECOMMENDATION FOR IPID FIELD IN IPv6



- **Implement in Destination Options Extension Header (Type 60).**
- **New Option Type:**
  - 32 or 64 bit field at offset 8 in DOH. (Options Field).
- **Details:**
  - Header sent by implementations upon request.
  - If sent in Diagnostic Mode, header **MUST** be ignored by receiver (intended for packet trace systems only).
  - New DOH Option is proposed.
  - Future: Additional Options could be added for other diagnostic or security purposes as deemed appropriate.