

Internet Engineering Task Force

RFC for IPV6 IPID Sequence number field

Tuesday July 25, 2011



TODAY'S AGENDA



- IPID FIELD IN IPV4
- IPID FIELD IN IPV6 – CURRENT STATE
- RECOMMENDATION FOR IPID FIELD IN IPV6
- RELATED CONCLUSIONS



- **IPID: Internet Protocol Identification. Provides a unique identifying number for a given IP Session.**
- Sometimes called Datagram number.
- **USAGE/VALUE**
- Enable Fragmentation.
- Packet sequencing at end points.
- Logically associate packets across complex network situations.
- Of particular value in multi-tier configurations or applications whose transactions span multiple platforms to process a transaction. (e.g. Web Server – Application Server – DB Server)

IPIID FIELD IN IPV6 – CURRENT STATE



- **IMPLEMENTED IN FRAGMENTATION HEADER EXTENSION (TYPE 44).**
 - **LOCATION:**
 - 32 bit field at offset 4 in FHE.
 - **ISSUES:**
 - Only used if Fragmentation required.
 - 32 bit field wraps in 28 seconds at 1.2 gbps ?????.
 - IPIID not always available to facilitate network diagnostics. *****

RECOMMENDATION FOR IPID FIELD IN IPV6



- **IMPLEMENT IN EXTENDED FRAGMENT/DIAGNOSTIC HEADER EXTENSION (TYPE 143).**
- **LOCATION:**
- 64 bit field at offset 32 in EFDHE.
- **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 IPV6 Header Extension. 143 is proposed.
- New Header Extension could be used for other diagnostic or security purposes as deemed appropriate.

RELATED CONCLUSIONS



- **Move that the IETF adopt changes to IPV6 as recommended in the Draft RFC.**
- **BIE could provide testing and other support to assure that all aspects of the recommendation are functioning properly and that all related objectives are effectively achieved.**
- **Other ??????**