IOAM Deployment

draft-brockners-opsawg-ioam-deployment-02

IETF 110 - IPPM WG, March 8th, 2021
Scope

Document IOAM deployment, tying all the different IOAM related specifications together.

IOAM Data Fields

YANG/Operations

Data Export

IOAM Encapsulations
- IPv6

IOAM Encapsulations (contd.)
- Protocols which use Ethertype for next protocol (e.g GRE)
- NSH
- Geneve
- Segment Routing for IPv6
- VXLAN
Overview

Document focuses on IOAM deployment, detailing how the different components relate to each other; as such not a new framework but BCP.

IOAM Deployment: Domains And Nodes

Types of IOAM
- Per-hop Tracing IOAM
- Proof of Transit IOAM
- Edge to Edge IOAM
- Direct Export IOAM

IOAM Manageability

Security Considerations

IOAM Data Export

IOAM Deployment Considerations
- IOAM Namespaces
- IOAM Layering
- IOAM Trace Option Types
- Traffic-sets That IOAM Is Applied To
- IOAM Loopback Mode
- IOAM Active Mode
- Brown Field Deployments: IOAM Unaware Nodes

IOAM Encapsulations
- IPv6
- NSH
- GRE
- Geneve
- Segment Routing
- Segment Routing for IPv6
- VXLAN-GPE
Discussion & Next Steps

• Discussion
  • Document started in OPSAWG, though with IPPM covering “all things IOAM”, IPPM is the natural place to progress the work
  • draft-ietf-ippm-ioam-data-12 includes an informational reference, following last call comments and request from Shawn Emery (Security Area Directorate)

• Todo
  • Next revision is to evolve the security section: Discuss mitigating against eavesdropping, DoS/DDoS, and time synchronization attacks

• WG adoption?