

IP Flow Anonymisation Support

draft-boschi-ipfix-anon-04

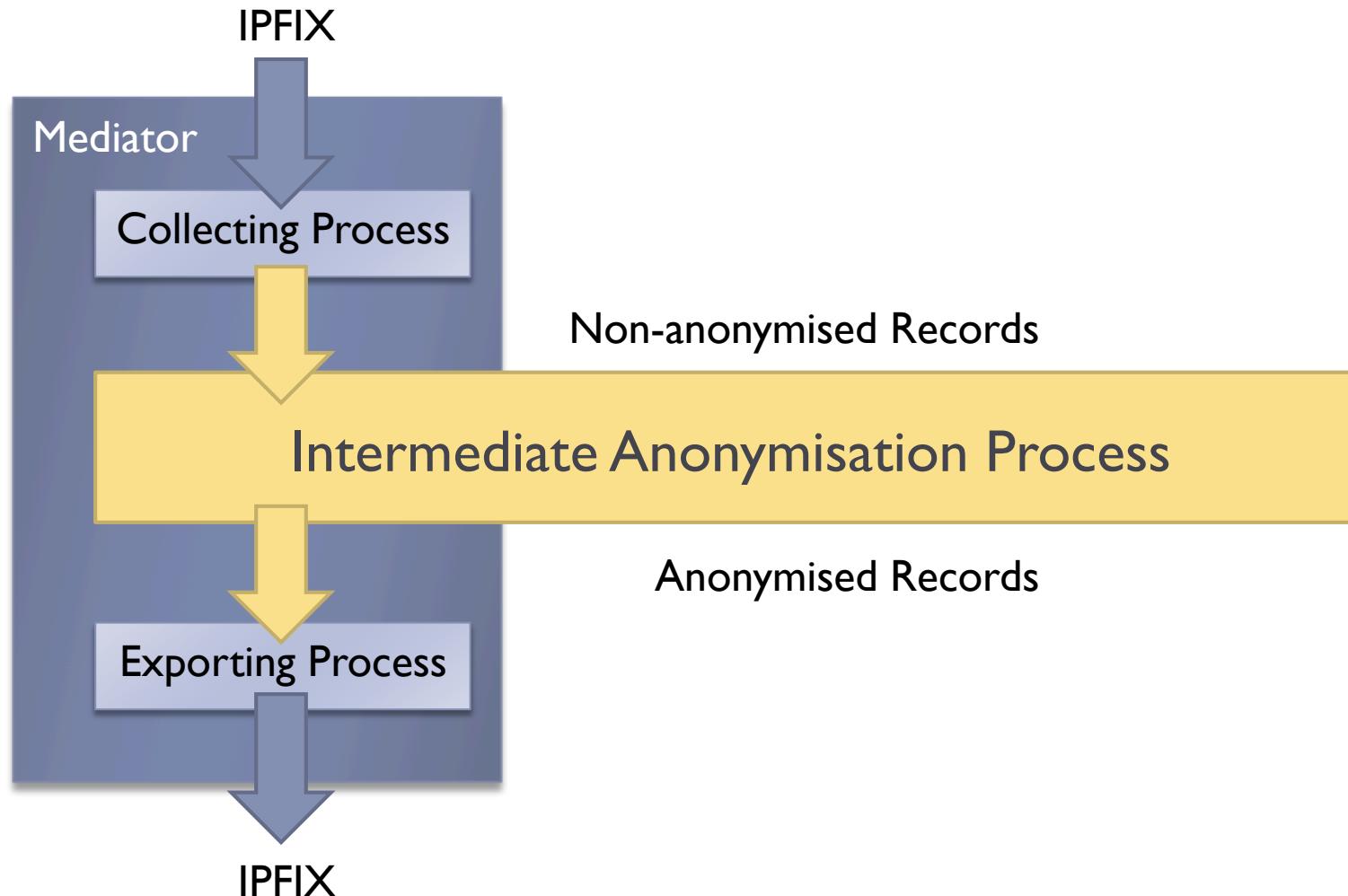
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Background: Anonymisation and IPFIX

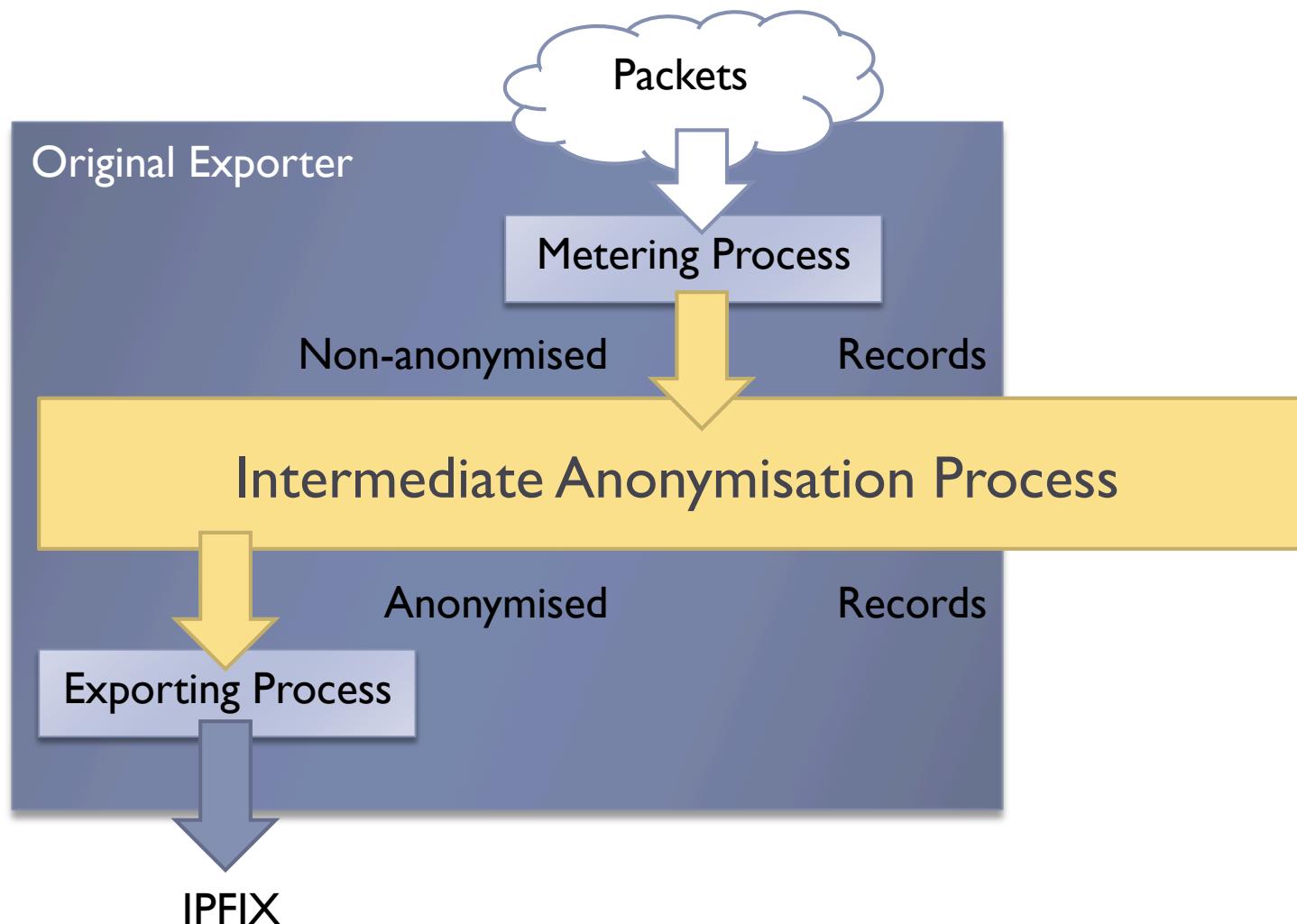
- ▶ Support for anonymisation is one of the requirements for IPFIX
 - ▶ RFC3917
- ▶ Mediation function for IPFIX Mediators
 - ▶ See section 5.6 of Mediation Problem Statement
 - ▶ [draft-ietf-ipfix-mediators-problem-statement-04](https://datatracker.ietf.org/doc/draft-ietf-ipfix-mediators-problem-statement-04)
- ▶ Requirement for IPFIX Files
 - ▶ Specification of the IPFIX File Format
 - ▶ [draft-ietf-ipfix-file-04.txt](https://datatracker.ietf.org/doc/draft-ietf-ipfix-file-04.txt)



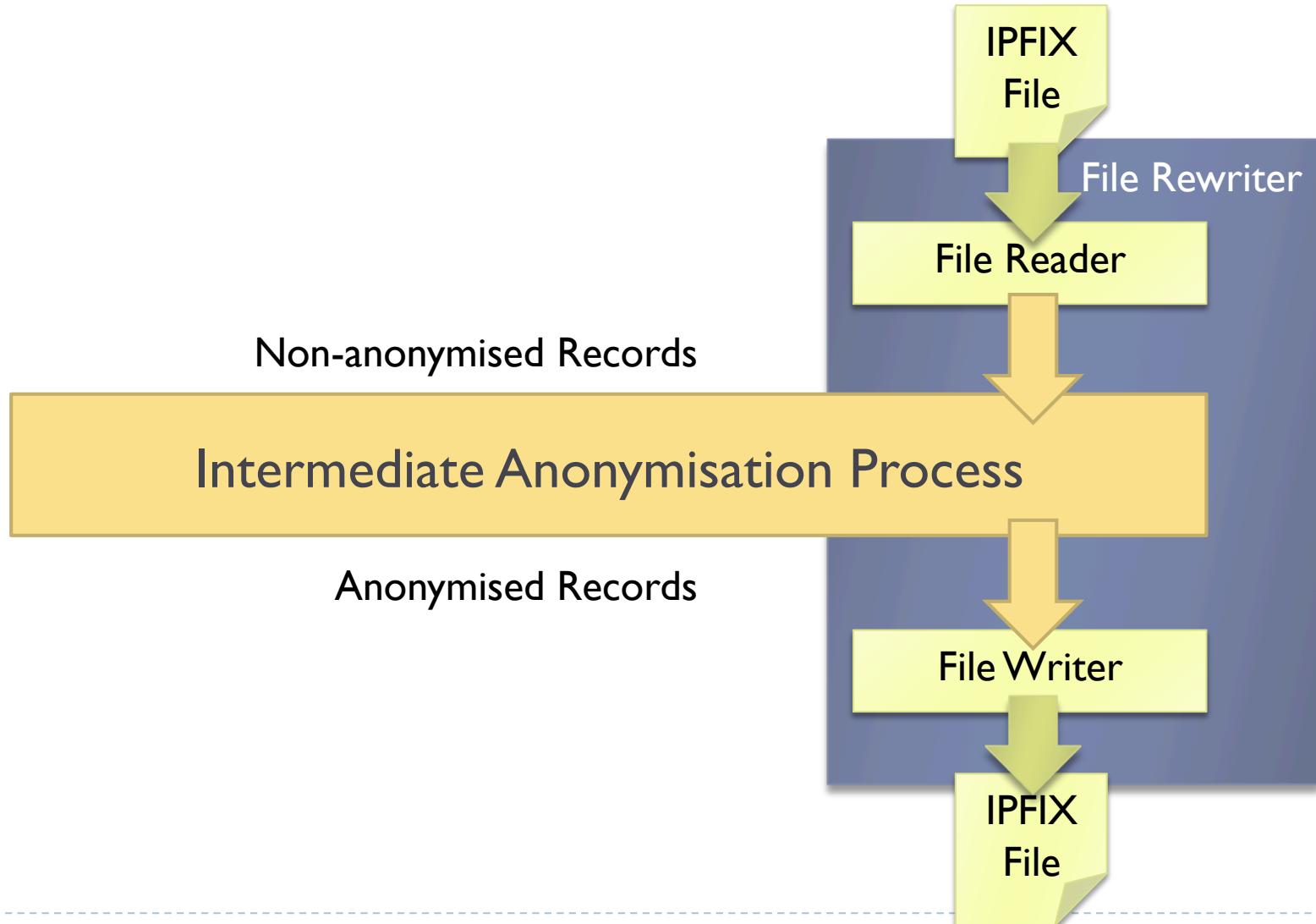
Anonymising Mediator



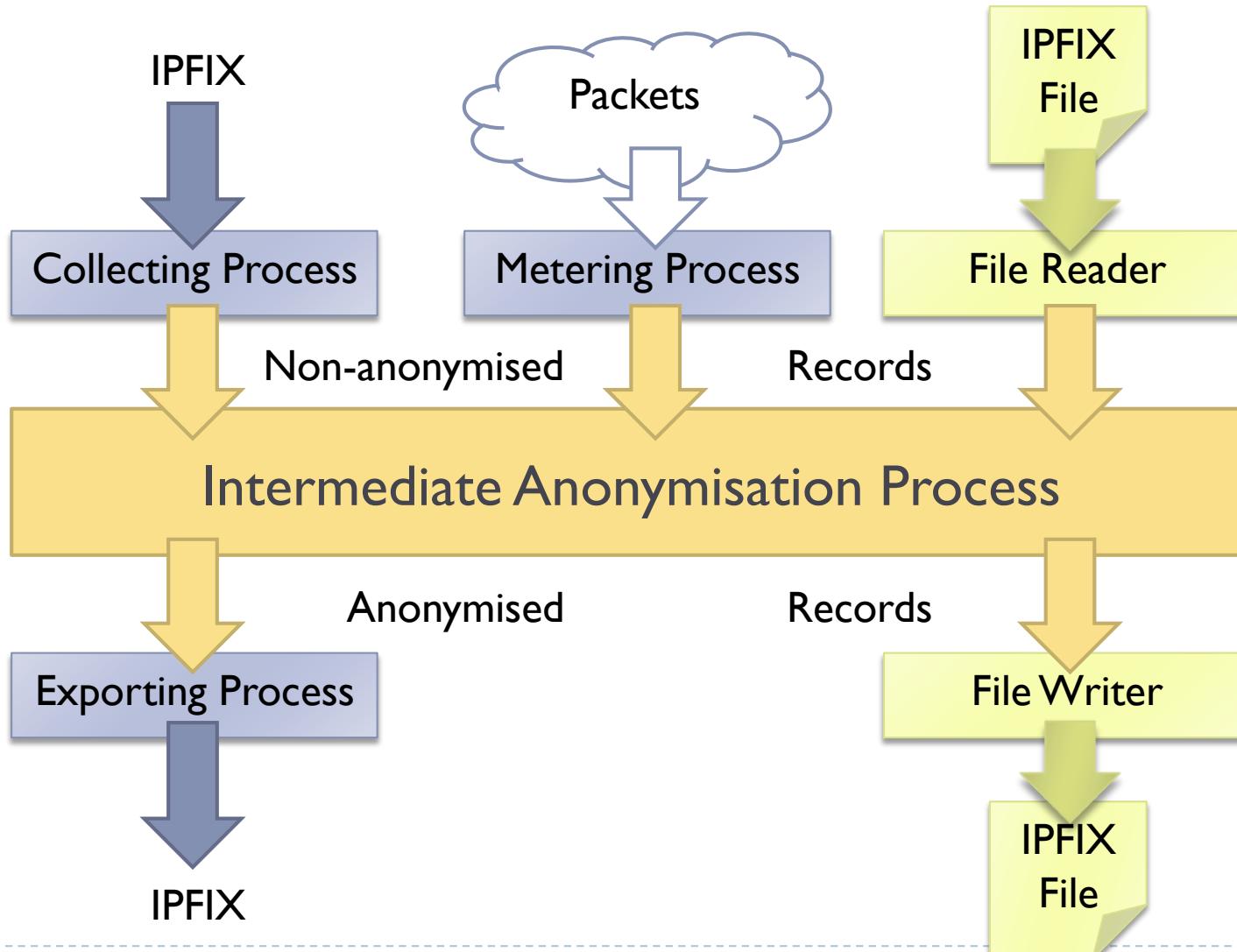
Anonymisation on Original Exporter



Anonymisation of Files



Anonymisation Data Paths



-anon-04 contents (1-4)

▶ I. Introduction

- ▶ the usual front matter



▶ I.3 Anonymisation within the IPFIX Architecture

▶ 2.Terminology

- ▶ incorporates IPFIX terminology by reference
- ▶ may need additional anonymisation-specific terms [TODO]

▶ 3.Categorization

- ▶ defines broad categories (countability, reversibility) for anonymisation techniques in terms of *properties of the resulting information*.

▶ 4.Anonymisation

- ▶ defines general anonymisation techniques for flow data by type of IE: IP/Hardware address, timestamp, counter, etc.



▶ 4.2 Hardware Address Anonymisation



-anon-04 contents (5-6)

- ▶ 5. Parameters for the Description of Anonymisation Techniques
 - ▶ defines parameters for configuring anonymisation
- ▶ 6. Anonymisation Export Support in IPFIX
 - ▶ defines anonymisation metadata export based on Options, three IEs:
 - **anonymisationTechnique** describes techniques in terms of properties of resulting information, as defined in Categorization, section 3.
 - **anonymisationStability** describes temporal comparability of values of a given field
 - **informationElementIndex** allows binding to specific instances of IEs within a template
 - ▶ expanded 6.2.2. **anonymisationTechnique** to include applicability and recommended uses for each technique by anonymised IE type.



-anon-04 contents (7-10)

- ▶ **7. Applying Anonymisation Techniques to IPFIX Export and Storage**
 - ▶ defines how processes are arranged for anonymisation
 - ▶ defines guidelines for exporting anonymised data using IPFIX
 - i.e., avoidance of header and options data information leakage
 - ▶ significantly expanded 7.1 Arrangement of Processes in IPFIX Anonymisation for tighter binding to evolving mediator framework.
 - ▶ added 7.2.1 on appropriate use of IEs for anonymised data
 - ▶ black marker anon → simply don't export the IE
 - ▶ don't use over-precision timestamps for precision degradation
 - ▶ ensure techniques and IEs are compatible (see 6.2.2)
- ▶ **8. Examples**
 - ▶ [TODO]
- ▶ **9. Security Considerations**
 - ▶ [TODO]
- ▶ **10. IANA Considerations**
 - ▶ added content



WG Item?

- ▶ Most items in the current charter are almost done
 - ▶ Time to pick new items
- ▶ Anonymisation is part of the existing charter
 - ▶ Within the mediators work
- ▶ The work is mature
 - ▶ Incorporates feedback from the IPFIX WG
 - ▶ Ongoing implementation
- ▶ Proposed status: experimental