

# **Flow Selection Techniques**

draft-peluso-flowselection-tech-02.txt

Lorenzo Peluso, Tanja Zseby,  
Salvatore D'Antonio, Maurizio Molina

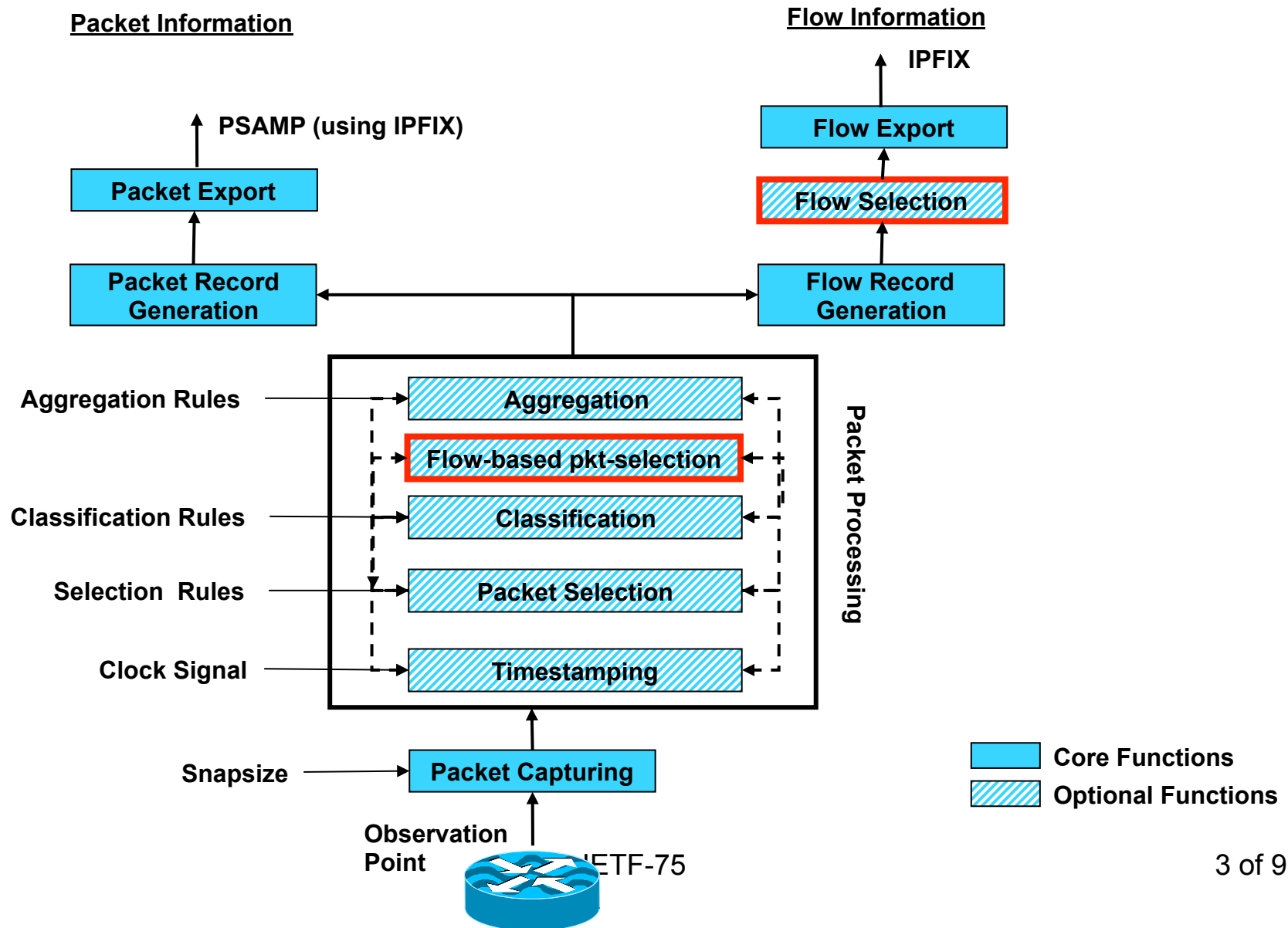
IETF-75 , July 2009

# Motivation

---

- Resource control
  - Traffic highly dynamic
  - Number of flows hard to predict
  - Resources limited
- Selection objectives
  - Limit resource consumption
  - Select only flows of interest (e.g. only large flows)
- An Example: PlanetLab Europe
  - Federated Testbed for Internet research
  - Multiple users sharing measurement device
  - Resource control by selection techniques

# Flow Selection vs. Packet Selection



# Content

---

- Terminology
- Position of the Flow Selection Process
- Description of **Flow Selection Techniques**
- Information Model for **Configuration** of Flow Selection Techniques
- Information model for **Reporting** of Flow Selection Information
- Implementation requirements

# Position of the Flow Selection Process

---

- Always *after* classification
- Flow-state dependent packet selection
  - Record only a subset of flows by selecting packets
  - Taking the class the packets belong to into account
  - e.g. sample & hold: selection of packets based on flow record status
- During flow recording
  - Record only a subset of flows
  - e.g. based on available memory
- At flow export
  - Export only a subset of flow records
  - e.g. due to transport resource limits
- At collector

# Flow Selection Techniques

---

- Based on flow record content
  - All reported flow characteristics
  - e.g. flow size, flow start time, etc.
- Based on flow record arrival time or sequence
  - Arrival times at collection process
  - Sequence in which flows arrive
- Based on external events
  - Exhaustion of resources
  - E.g., number of entries in flow cache

# Relation to IPFIX Mediator Drafts

---

- Flow Selection
  - No modification of records
  - But selection of a subset of flow records
- Can be seen as an example for a mediation function (like anonymization)

# How to proceed?

---

- PSAMP situation
  - PSAMP closed
  - PSAMP topics (MIB etc.) moved to IPFIX
- Is flow selection of interest as working group item for the IPFIX group?



Thank You