Flow Compression

draft-minaburo-schc-flow-compression-00

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Context

• SCHC compress packets not flows
• Flows has dependency information among packets
• Updating some TV during the flow lifetime is needed
SCHC Process

- SCHC performs packet independently of each other
  - No context update
  - No memory
  - Header fields with a changing behaviour are not optimally compressed

- SCHC needs a high knowledge to define Rules
SCHC flow compression

• Flows are defined by:
  – A sequence of packets with common properties
  – Depending information among packets to keep control
    • Changing values of these fields in each packet of the flow
      – Ex: Sequence Number, Timestamp, flow label

• To optimize the compression
  – Access Control draft helps in updating the TV evolution
  – Use the Yang-model management to optimize compression of the changing fields
  – Keep reference values
  – Add an Action
  – Create a new type of Rules called Derived Rules
Action: Derivable

- Action. Indication in the Rule to perform some operations
  - Derivable:
    - Same Field Descriptors than the based-Rules
    - Use of MSB and boundaries to reuse Derived Rules
    - Keep values updated
    - Keep reference values
    - Rule Manager: decides to create, delete or update a derived Rule
    - At the end of a flow compression all the derived Rules are deleted
Action: Derivable

Rule in the SoR
Action: Derivable
Keeps: Reference values

Action: Derivable
Create New Rule (if needed)
Keeps: new Reference values

Last Packet
Delete Derivable Rules

Rule 100A:D
Flow

Rule 101D
Flow

Rule 102D
Flow

Rule 103D
Flow

Rule in the SoR
Action: Derivable
Keeps: Reference values

Next Packets
Action: Derivable
Create New Rule (if needed)
Keeps: New Reference values

Last Packet
Delete Derivable Rules
Comment

• Questions?