# Common Ancestor
# Objective Function and Parent Set
# DAG Metric Container Extension

draft-ietf-roll-nsa-extension-08

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# Version -08 : updates since -04 (1)

Changes addressing feedback from Dominique, Rahul, Fabrice, Pascal, and Diego (thank you so much!)

- Lots of editorial work

  - Typos

  - Sentences rephrased for clarification

  - Added extra definitions in terminology

  - Reordered sections

    1. The 3 CA policies (Strict, Medium, Relaxed) + examples

    2. CA OF that uses policies

    3. PS NSA DIO extension

# Version -08 : updates since -04 (2)

- CA OF and policies
  - 3 CA OFs → 1 CA OF with 3 (or more) policies
  - 3 OCPs → 1 OCP for 1 OF, same for all policies
  - Explained restrictiveness order of policies
    - Strict > Medium > Relaxed
    - Described as allowing control of trade-off between
      - Energy-consumption
      - Reliability
  - Explained that policies used are local to the node → nodes can use different policies

# Version -08 : updates since -04 (3)

- Parent Set (PS) TLV in NSA object in DIO DAGMC
  - More details about format
    - IPv6 stored as 128bit addresses
    - One after the other, no separator
    - Address count from field size
    - Order of entries in decreasing order of preference
    - Number of reported parents left to implementation

# Version -08 : updates since -04 (4)

- Use of NSA in DIO DAGMC
  - Changed usage of NSA as constraint → NSA as metric
    - Previously: as constraint requires corresponding metric
    - C=0 (Metric)
    - R=1 (Recorded because Aggregated makes no sense)
    - P=1 (Partial because each node only gets the PS of it's neighbors, not of all the nodes up to the root)
  - Highlight that NSA metric is disregarded for the purposes of rank calculation

# Version -08 : updates since -04 (5)

- Security Considerations
    - PS contains addresses of neighbors' parents
    - Issues
        1. Privacy / Network discovery
        - Interceptor can see one hop beyond own neighborhood
        2. Rerouting
        - Malicious DIO sender can reroute neighbors (but already possible with fake ranks)

# Road Forward

- Addressed all issues
- WGLC?