Diameter Policy Groups

draft-bertz-dime-policygroups-03

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Motivation - External Drivers

- The number of policy enforcement partitions, e.g. VRFs, SDN Switch Tables, etc. is limited

- Operators want to provide more virtual 'operators', e.g. MVNO, which require more partitions for these tenants

- Operators and equipment providers want to support multi-tenancy

- Our current way of representing policy is not optimal for these conditions

Motivation - Current Policy Framework Limitations

- Requires engineering and provisioning to be optimal

- Best 'on the fly optimization' (dynamic optimization) is Filter-ID, e.g. integer values.

  - Really applies to pre-provisioned or at the link level, e.g PDP <=> PEP

- Can't really optimize dynamically and representation is not optimal

Policy Grouping

- Optimization of representing membership relations between and Authorized Client and the Policies that apply to them

  - Uses Set relations represented as bit sets

  - Adds 64 bits to be used for matching as a form of metadata, i.e. not related to the packet ~ similar to OpenFlow METADATA field

- Current methods

  - Added policy group identities (which must be engineered and provisioned)

  - Use a list of identities (which must be provisioned)

  - Send the whole policy structure

Relationship Model
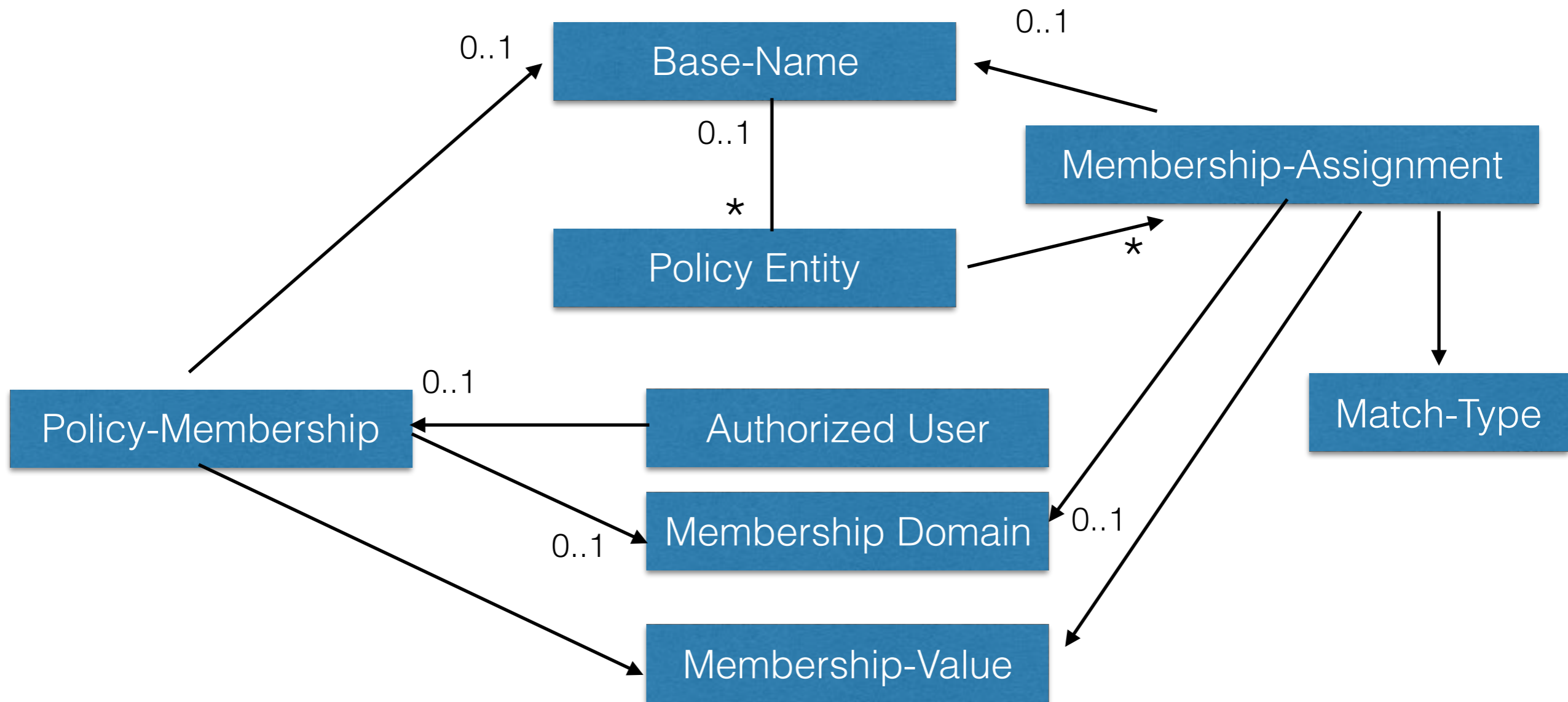
Result

- More compact representation for relationships between and Authorized User and Policy Entity

- Can support some tricky use cases

  - Default filters ('any any') with differing QoS Treatments can be in the same IPv6 Source-Destination RIB/FIB or SDN Switch (using membership test to filter instead)

  - Any common filter with different treatment actions can rely on the

Changes since 00

- Added Relationship model

- Added Mark Bales as co-author

Next Steps

- Feedback from group

  - Would like to see more

- Accept this as WG item at/prior to IETF 99?