
Core Routing Modules

draft-ietf-netmod-routing-cfg-04

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Main Changes since -02

- Module *iana-afi-safi* moved to `draft-ietf-netmod-iana-if-type`;
- Router instances are no more strictly separated (implementations should set the rules);
- Assignment of interfaces to router instances needn't be disjoint (implementations may impose restrictions);
- Route filters are now global;
- For symmetry, `allow-all-route-filter` was added;
- No forwarding table (but see `active-route` method);
- Method `get-route` removed;
- New method `active-route` (FIB query);
- New method `route-count`;

- For all RPC methods, specifications of negative responses were added;
- Optional leaf `router-id` was added (dotted quad);
- Recommended names for the mandatory main routing tables: `main-ipv4-unicast` and `main-ipv4-unicast`;
- Interactions with *ietf-interfaces* and *ietf-ip* were clarified;
- Route attribute `last-modified (date-and-time)` was changed to `age (seconds)`, in accord with IP-FORWARD-MIB;
- The alternative decrementing behavior for timers (`preferred-lifetime` and `valid-lifetime`) in IPv6 prefix advertisements [RFC 4861] was removed – it is problematic and nobody seems to use it.

Main Data Tree

```
+--rw routing
  |--rw router [name]
  |   |--rw name
  |   |--rw router-id?
  |   |--rw description?
  |   |--rw enabled?
  |   |--rw interfaces
  |   |   |--rw interface [name]
  |   |   |   ...
  |   |--rw routing-protocols
  |   |   |--rw routing-protocol [name]
  |   |   |   ...
  |   |--rw routing-tables
  |   |   |--rw routing-table [name]
  |   |   |   ...
  |--rw route-filters
  |   ...
```

Route Attributes

```
+--ro route
  +--ro outgoing-interface?
  +--ro source-protocol
  +--ro age
  +--ro v4ur:dest-prefix? ← only present in IPv4 tables
  +--ro v4ur:next-hop? ←
  +--ro v6ur:dest-prefix? ← only present in IPv6 tables
  +--ro v6ur:next-hop? ←
```

New attributes (metrics, tags etc.) should be augmented directly into route so that all route attributes are nicely encapsulated and can be easily passed between routing tables and to route filters.

Conclusions

WGLC ended on 30 July, no significant problems were discovered so far.

Minor updates of the modules, corrections and clarifications in the text based on the reviews by Yi Yang and Martin Björklund.

Thursday, 9am: Presentation at Routing Area Open Meeting