

# BGP Configuration Model for Service Provider Networks

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draft-idr-shaikh-bgp-model-00



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IETF 91  
IDR WG

# Data models based on operator requirements

- Goal: Dynamic, programmable network infrastructure with declarative, model-driven configuration and management
  - lack of *vendor-neutral data models* is a significant impediment
  - need a common set of building blocks on which to build (e.g., BGP !)
- “OpenConfig” an informal group of large network operators
  - includes carriers, cable operators, and online service providers
  - covers broad set of use cases, requirements, vendor experience
  - primary output is model code, documentation, and hopefully tooling
- Model content driven by real usage
  - operators examining our own configurations and operational parameters
  - including items that are widely available in major implementations
  - (see the draft for more description of model development)

# BGP model coverage

- BGP base protocol configuration
    - hierarchical configuration: global, peer groups, neighbors, AFI/SAFI
    - route selection, timers, route reflector, logging, etc.
  - Policy
    - general condition-action framework
    - support for often-used BGP attributes (matching, setting)
    - policy chaining and subroutines
  - Multiprotocol
    - AFI/SAFI specific configuration
  - Operational state
    - important monitoring variables
- focus of current draft revision -- still under active development
- largely placeholders in current draft -- will be fleshed out in code repo and subsequent draft revisions

# Relation to IETF and other modeling work

- OpenConfig will continue its operator-driven development approach
- Publish model documents in relevant IETF working groups
  - some may overlap with ongoing modeling work -- expect these to merge over time
  - others may propose revisions to current standard models
  - some will be new models not addressed elsewhere
- Snapshots of model code published in the NETMOD YANG model repo for public review and consumption (thanks Tom Nadeau !)
- Active engagement with vendors to drive native support for the models

# Next steps

## Roadmap

- additional protocol models (e.g., MPLS), device model, common service-related models (L3VPN, VRF)
- model framework -- using collection of models in a coherent way

## How to participate

- Google group mailing list for discussion (OpenConfig)
  - please join if interested ([netopenconfig@googlegroups.com](mailto:netopenconfig@googlegroups.com))
  - see the OpenConfig FAQ post for more info
- model snapshots available at <https://github.com/YangModels/yang>
  - in experimental/openconfig