

# OSPF Data API

Ever wanted to play with the OSPF link data yourself but didn't want to take the time to build an OSPF node or parse the output from `bird`? Look no further than the OSPF JSON API:

```
> curl http://api.andrew.mesh/api/v1/ospf/linkdb
{"areas": {"0.0.0.0": {"routers": ... }}}
```

## Data Available

The full state of the entire OSPF network on the mesh is available via this endpoint. The format is as follows:

```
{
  "areas": {
    "0.0.0.0": {
      "routers": {
        "<router_id>": {
          "links": {
            "router": [
              {"id": "<other router id>", "metric": <integer link cost>},
              {"id": "<other router id>", "metric": <integer link cost>, "via": "<another router id>"},
              ...
            ],
            "external": [
              {"id": "<external CIDR>", "metric": <integer link cost>},
              ...
            ],
            "stubnet": [
              {"id": "<stubnet CIDR>", "metric": <integer link cost>},
              ...
            ],
            "network": [
              {"id": "<network CIDR>", "metric": <integer link cost>},
              {"id": "<network CIDR>", "metric2": <integer link cost>},
              ...
            ]
          }
        }
      }
    }
  }
}
```

```

    },
    ...
  },
  "networks": {
    "<network CDIR>": {
      "dr": "<router id>",
      "routers": [
        "<router id>",
        ...
      ]
    },
    ...
  },
  ...
},
}
},
"updated": <integer epoch timestamp>
}

```

For each router, you can see the OSPF links it is advertising, and which type of link they are. Some links have a `metric2` value instead of a `metric` value. This represents a semantically meaningful difference in that router's configuration and the OSPF behavior for that node, but one that is beyond the scope of this document to explain.

## Update Frequency

The server refreshes the JSON data blob once per minute, see the `updated` field in the top-level JSON object to confirm data freshness.

## Authentication

None. This data is publicly available to any OSPF node, so no authentication is needed when accessing from the mesh private IP space.

## Source Code?

[GitHub Link!](#)

## Contact

The OSPF data API is maintained by Andrew Dickinson. Reach out to @Andrew Dickinson on slack for questions and comments. I'd love to see what you build.

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Revision #5  
Created 29 April 2023 02:18:28 by Guest  
Updated 13 December 2023 01:15:49 by Guest