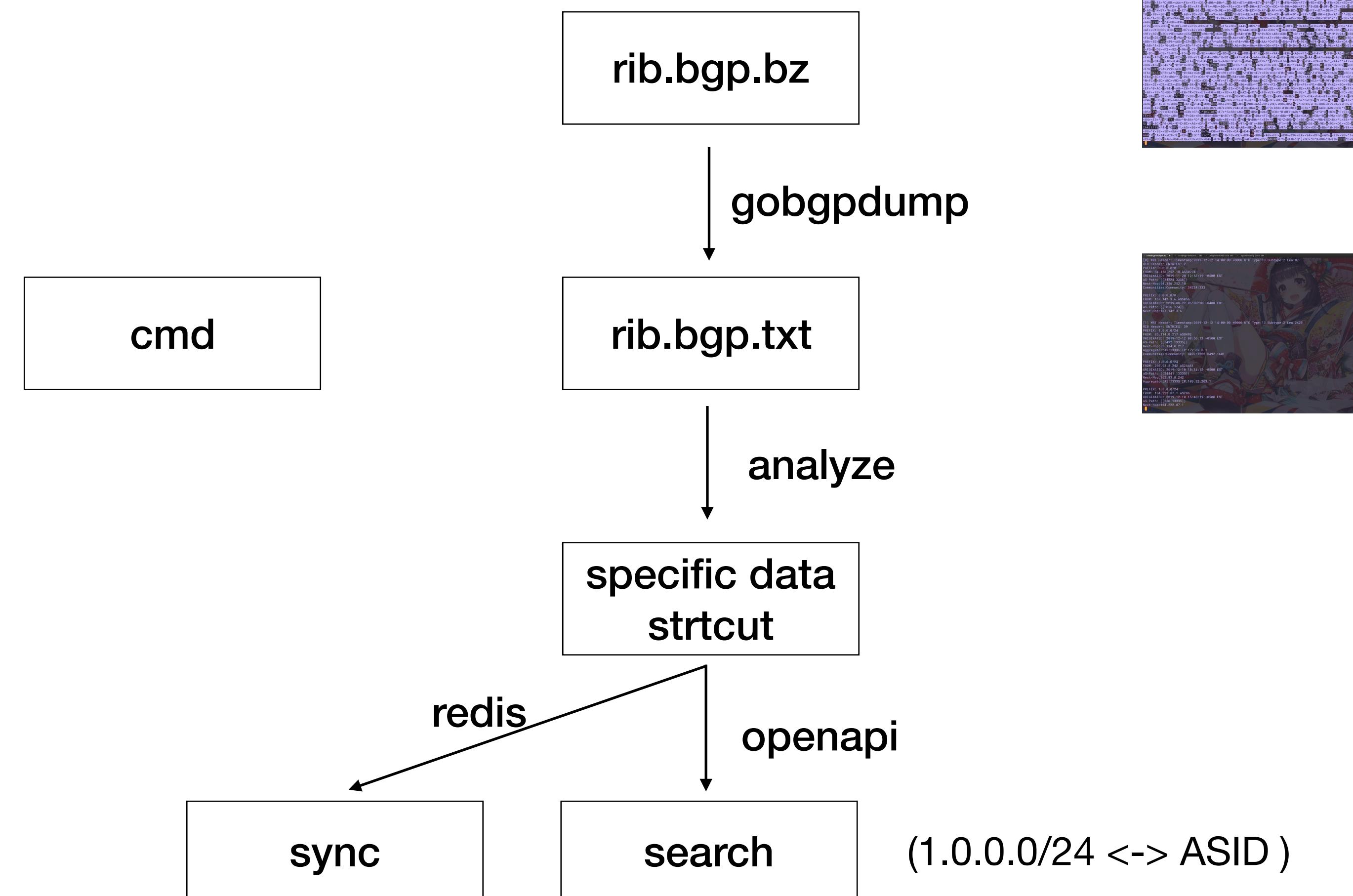
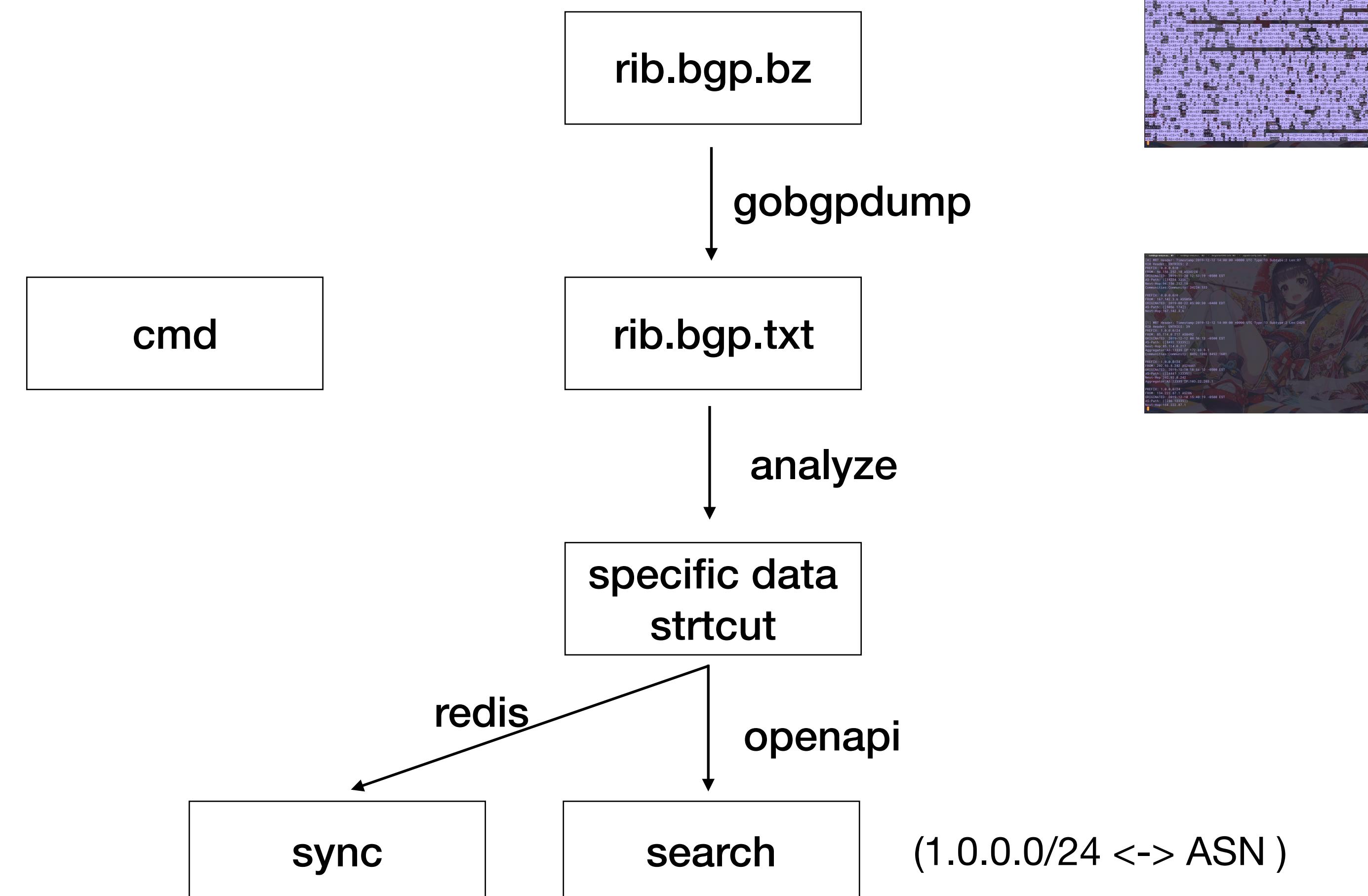


Architecture



Architecture



x root@bgp-analyze.au... #1 x root@bgp-analyze.a... #2 x ..feng/smartDNS (zsh) #3 x ..eguard-config (zsh) #4

[0] MRT Header: Timestamp:2019-12-12 14:00:00 +0000 UTC Type:13 Subtype:2 Len:87

RIB Header: ENTRIES: 2

PREFIX: 0.0.0.0/0

FROM: 94.156.252.18 AS34224

ORIGINATED: 2019-11-28 12:53:19 -0500 EST

AS-Path: ([34224 3356])

Next-Hop:94.156.252.18

Communities:Community: 34224:333

PREFIX: 0.0.0.0/0

FROM: 167.142.3.6 AS5056

ORIGINATED: 2019-08-22 05:00:30 -0400 EDT

AS-Path: ([5056 174])

Next-Hop:167.142.3.6

[1] MRT Header: Timestamp:2019-12-12 14:00:00 +0000 UTC Type:13 Subtype:2 Len:2429

RIB Header: ENTRIES: 39

PREFIX: 1.0.0.0/24

FROM: 85.114.0.217 AS8492

ORIGINATED: 2019-12-12 08:56:13 -0500 EST

AS-Path: ([8492 13335])

Next-Hop:85.114.0.217

Aggregator:AS:13335 IP:172.69.8.1

Communities:Community: 8492:1202 8492:1601

PREFIX: 1.0.0.0/24

FROM: 202.93.8.242 AS24441

ORIGINATED: 2019-12-10 18:44:12 -0500 EST

AS-Path: ([24441 13335])

Next-Hop:202.93.8.242

Aggregator:AS:13335 IP:103.22.203.1

PREFIX: 1.0.0.0/24

FROM: 134.222.87.1 AS286

ORIGINATED: 2019-12-10 15:40:19 -0500 EST

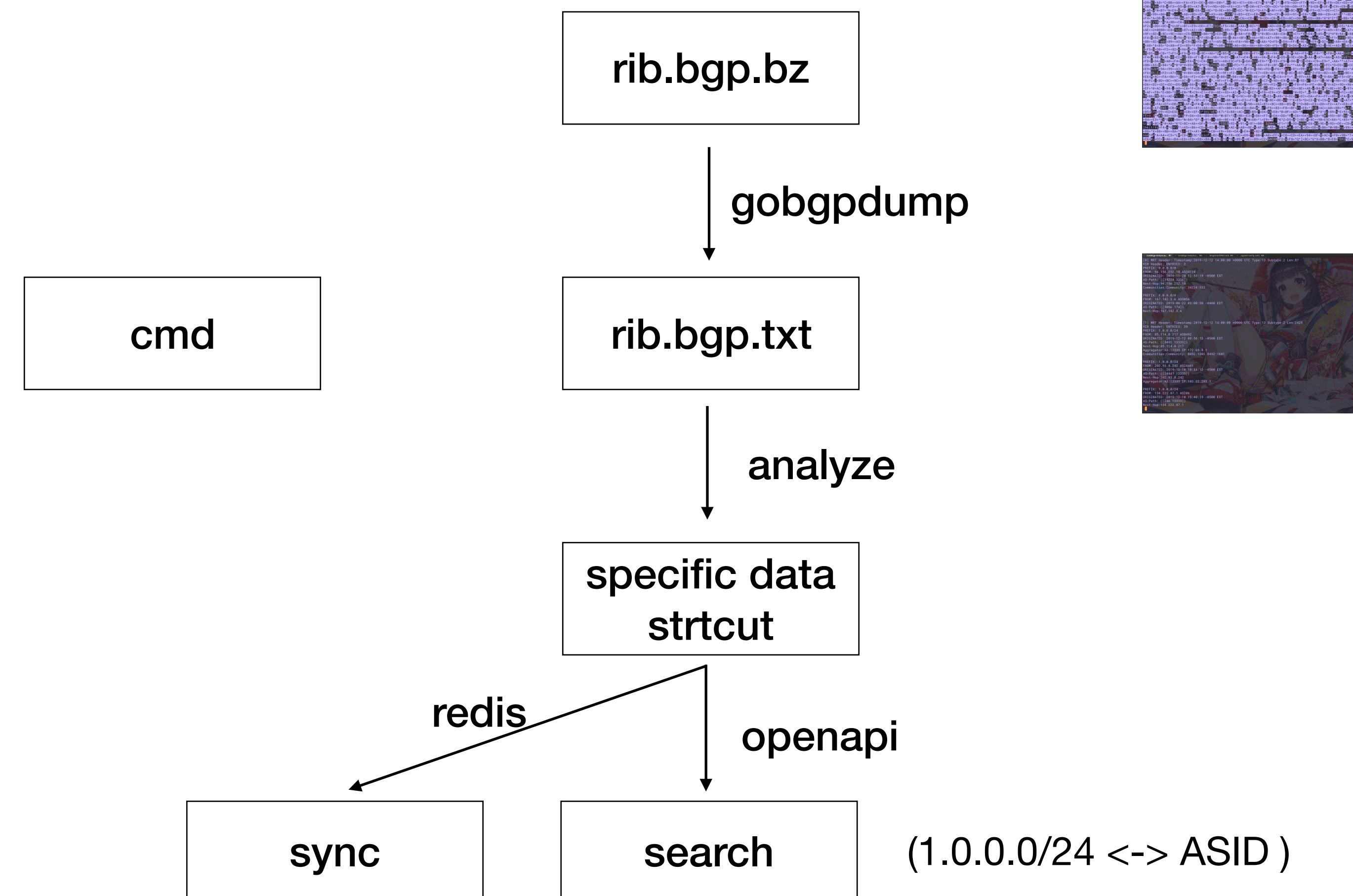
AS-Path: ([286 13335])

Next-Hop:134.222.87.1

:

DokiPikazo

Architecture

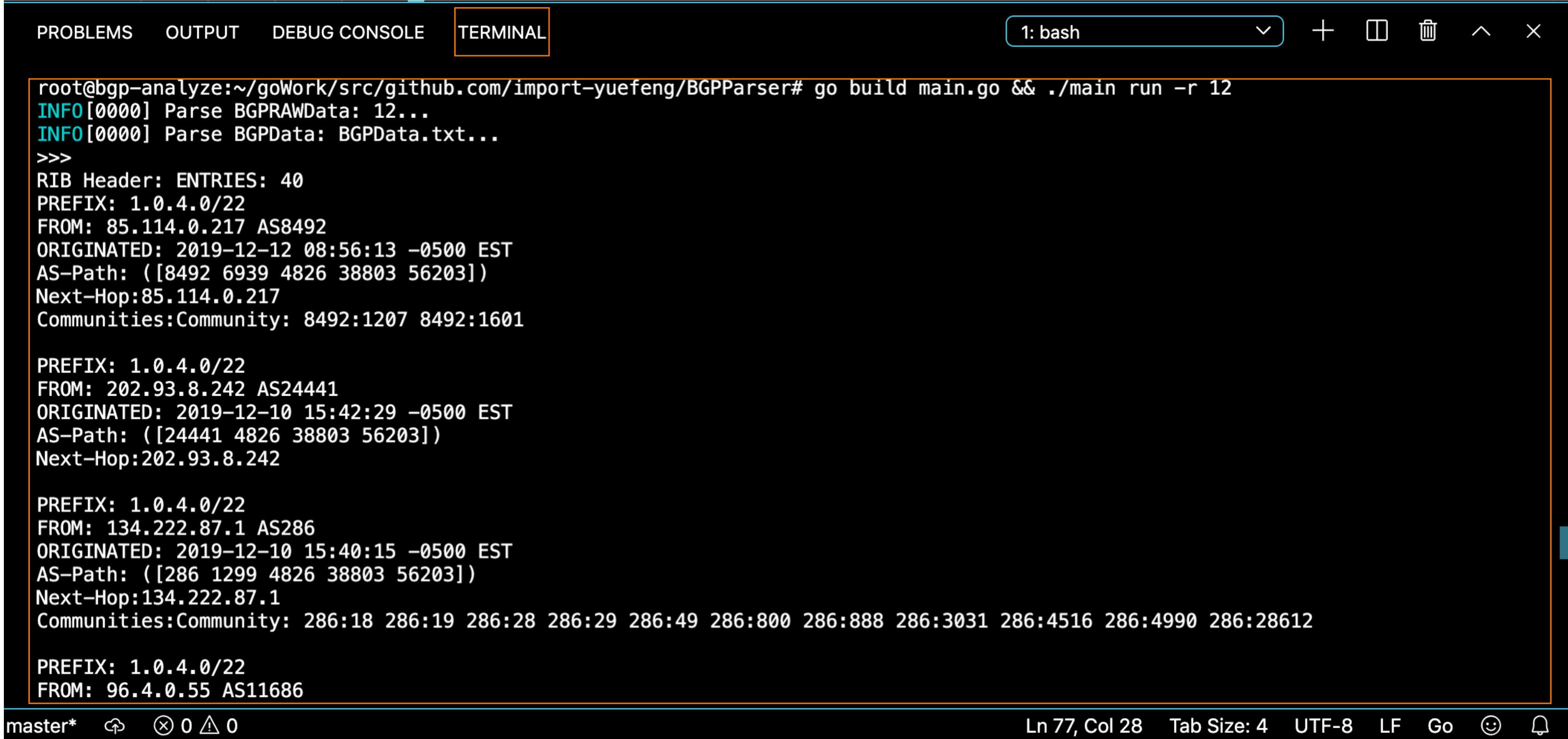


Tree

```
root@bgp-analyze:~/goWork/src/github.com/import-yuefeng/BGPParser# tree
.
├── BGPData.txt
├── cmd
│   ├── add.go
│   ├── init.go
│   ├── root.go
│   └── run.go
└── gobgpdump
    ├── config.go
    ├── format.go
    ├── gobgpdump.go
    ├── go.mod
    ├── go.sum
    ├── LICENSE
    ├── Makefile
    ├── README.md
    └── util.go
LICENSE
main
main.go
README.md
rib.20191212.1400.bz2
rib.20191212.1400.txt

2 directories, 20 files
root@bgp-analyze:~/goWork/src/github.com/import-yuefeng/BGPParser#
```

Runtime



PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

1: bash

```
root@bgp-analyze:~/goWork/src/github.com/import-yuefeng/BGPParser# go build main.go && ./main run -r 12
INFO[0000] Parse BGPRAWData: 12...
INFO[0000] Parse BGPData: BGPData.txt...
>>>
RIB Header: ENTRIES: 40
PREFIX: 1.0.4.0/22
FROM: 85.114.0.217 AS8492
ORIGINATED: 2019-12-12 08:56:13 -0500 EST
AS-Path: ([8492 6939 4826 38803 56203])
Next-Hop:85.114.0.217
Communities:Community: 8492:1207 8492:1601

PREFIX: 1.0.4.0/22
FROM: 202.93.8.242 AS24441
ORIGINATED: 2019-12-10 15:42:29 -0500 EST
AS-Path: ([24441 4826 38803 56203])
Next-Hop:202.93.8.242

PREFIX: 1.0.4.0/22
FROM: 134.222.87.1 AS286
ORIGINATED: 2019-12-10 15:40:15 -0500 EST
AS-Path: ([286 1299 4826 38803 56203])
Next-Hop:134.222.87.1
Communities:Community: 286:18 286:19 286:28 286:29 286:49 286:800 286:888 286:3031 286:4516 286:4990 286:28612

PREFIX: 1.0.4.0/22
FROM: 96.4.0.55 AS11686
```

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[PROBLEMS](#)[OUTPUT](#)[DEBUG CONSOLE](#)[TERMINAL](#)

```
root@bgp-analyze:~/goWork/src/github.com/import-yuefeng/BGPParser# go
INFO[000] Parse BGPRAWData: 12...
INFO[000] Parse BGPData: BGPData.txt...
>>>
RIB Header: ENTRIES: 40
PREFIX: 1.0.4.0/22
FROM: 85.114.0.217 AS8492
ORIGINATED: 2019-12-12 08:56:13 -0500 EST
AS-Path: ([8492 6939 4826 38803 56203])
Next-Hop: 85.114.0.217
Communities: Community: 8492:1207 8492:1601

PREFIX: 1.0.4.0/22
FROM: 202.93.8.242 AS24441
ORIGINATED: 2019-12-10 15:42:29 -0500 EST
AS-Path: ([24441 4826 38803 56203])
Next-Hop: 202.93.8.242
```

BGP data struct

PREFIX: 1.0.4.0/22

FROM: 202.93.8.242

ORIGINATED: 2019-12-10

AS-Path: ([24441 4826 38803 56203])

Next-Hop: 202.93.8.242

BGP data struct

1. PREFIX: 1.0.4.0/22
FROM: 202.93.8.242
ORIGINATED: 2019-12-10
AS-Path: ([24441 4826 38803 56203])
Next-Hop: 202.93.8.242
-

2. PREFIX: 1.0.4.0/22
FROM: 85.114.0.217
ORIGINATED: 2019-12-10
AS-Path: ([8492 38803 56203])
Next-Hop: 85.114.0.217

PREFIX: 1.0.4.0/22
1. FROM: 202.93.8.242
ORIGINATED: 2019-12-10
AS-Path: ([24441 4826 38803 56203])
Next-Hop: 202.93.8.242

PREFIX: 1.0.4.0/22
2. FROM: 85.114.0.217
ORIGINATED: 2019-12-10
AS-Path: ([8492 38803 56203])
Next-Hop: 85.114.0.217

- 如果 源AS 和 这段IP的所有可能的ASPATH 都完全相同，则聚合在一起。即 (source ASN, ASPATH[])相同

PREFIX: 1.0.4.0/22
1. FROM: 202.93.8.242
ORIGINATED: 2019-12-10
AS-Path: ([24441 4826 38803 56203])
Next-Hop: 202.93.8.242

PREFIX: 1.0.4.0/22
2. FROM: 85.114.0.217
ORIGINATED: 2019-12-10
AS-Path: ([8492 38803 56203])
Next-Hop: 85.114.0.217

- 对于 anycast 地址，所有 source ASN[] 都相同，并且每个 source ASN 对应的 AS PATH 集合也相同，则聚合在一起。即 (source ASN[], AS PATH[]) 相同

PREFIX: 1.0.4.0/22
1. FROM: 202.93.8.242
ORIGINATED: 2019-12-10
AS-Path: ([24441 4826 38803 56203])
Next-Hop: 202.93.8.242

PREFIX: 1.0.4.0/22
FROM: 85.114.0.217
2. ORIGINATED: 2019-12-10
AS-Path: ([8492 38803 56203])
Next-Hop: 85.114.0.217

- 同时分析来自不同AS的BGP数据，
当且仅当来自所有AS的BGP数据都
满足上面两点时，才聚合在一起，
反之则拆成多个更小的集合