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Route\_BtoA also supports the generation of machine-readable output. This mode generates output that is easily parsed by awk or Perl scripts for statistics calculations. Note that “-m” mode does not preserve information about packet boundaries. The format for each line of the machine-readable output for BGP4 and BGP4+ packets is:

**Protocol | Time | Type | PeerIP | PeerAS | Prefix | <update dependant information>**

Where **protocol** is BGP, or BGP4. The **time** is number of seconds since epoch when the packet was recorded. The **type** is A for announcement, or W for withdrawal. **PeerIP** and **PeerAS** are the IP address and AS number of the BGP peer from which we received the update. **Prefix** is the route prefix described in the update.

For BGP announcements, update-dependant information contains:

**ASPATH | Origin | NextHop | Local\_Pref | MED | Community**

Where **ASPATH** is the autonomous system path of the update. **Origin** is IGP, EGP, or Unknown. And **local\_pref**, **MED** and **Community** are as the names imply. Below is an example of route\_btoa machine output of MRTd-collected BGP packets:

```
BGP | 884831400 | A | 4.0.0.10 | 1 | 140.249.0.0/16 | 1 | IGP | 192.41.177.2 | 0 | 1546
BGP | 884831401 | A | 144.228.107.1 | 1239 | 205.113.0.0/16 | 1239 | 6453
      5769 | IGP | 192.41.177.241 | 0 | 91
BGP | 884831402 | W | 204.70.7.53 | 3561 | 198.163.111.0/24
BGP | 884831402 | W | 204.70.7.53 | 3561 | 199.212.219.0/24
BGP | 884831402 | W | 204.70.7.53 | 3561 | 199.235.123.0/24
BGP | 884831402 | W | 204.70.7.53 | 3561 | 204.112.101.0/24
BGP | 884831402 | W | 204.70.7.53 | 3561 | 204.112.232.0/24
BGP | 884831402 | W | 204.70.7.53 | 3561 | 205.189.8.0/24
BGP | 884831402 | W | 204.70.7.53 | 3561 | 205.211.8.0/24
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