BGPMux README

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1 Overview

This document is a work-in-progress; it describes the setup for the BGP session multiplexer, a mechanism for configuring downstream client BGP sessions on virtual networks given upstream BGP connectivity. The following sections show an example configuration and a figure depicting the setup.

The current version of the BGP session multiplexer supports only control-plane operation. We are in the process of developing mechanisms for multiplexing data-plane connectivity between each virtual network and the corresponding upstream link.

2 Current PSG VINI Deployment

A trial of the BGP Mux is running on two VINI nodes:

- `vini1.psg.vini-veritas.net`, in Ashburn, VA
- `vini2.psg.vini-veritas.net`, in Seattle, WA

Currently, there is no "data plane" for the BGP Mux. That is, there is no way to send data traffic out of these nodes as egress. Data plane functions are planned for late Summer 2009.

If you wish to receive a feed from either BGP Mux, please send a note to `dtunnel@gtnoise.net`. The system requirements are a running version of Quagga at your own site (or an equivalent BGP-speaking router). You will receive a transparent feed of all upstream connectivity seen from the BGP routers. Currently, this will be most useful for monitoring (i.e., if you wish to have a real-time feed of the upstream connectivity seen from these VINI nodes).
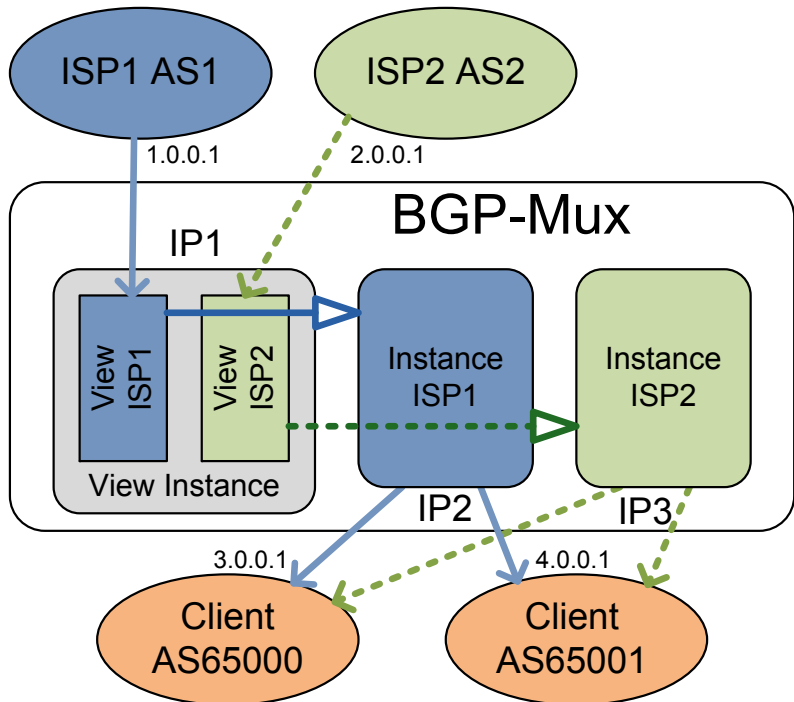
3 Configuration

3.1 Configuring Your Own BGP Mux

The following configuration shows a Quagga configuration for the BGP session multiplexer with two upstream BGP sessions, as also shown in Figure 1. Our implementation of the BGP Mux has been tested with Quagga version 0.98.6, which is available from `http://www.quagga.net/`. This is the version of the BGP Mux that is running on the PSG VINI deployment, described below.

```
Current configuration:
!
hostname <hostname>
password <password>
log stdout
!
bgp multiple-instance
!
router bgp 64512 view Verio
 bgp router-id 147.28.7.21
 network 168.62.16.0/21
 neighbor 147.28.0.4 remote-as 3130
```

Figure 1: BGP-Mux

```
 neighbor 147.28.0.4 description PSG0 - Verio
 neighbor 147.28.0.4 route-map BLOCK out
!
router bgp 64512 view ATT
 bgp router-id 147.28.0.212
 network 168.62.16.0/21
 neighbor 147.28.0.1 remote-as 3130
!
ip prefix-list OWN seq 5 permit 168.62.16.0/21
!
route-map BLOCK permit 5
 match ip address prefix-list OWN
!
route-map BLOCK deny 10
!
route-map CLIENT-IN deny 10
!
line vty
!
end
```

3.2   Connecting to the PSG BGP Mux

To connect to the PSG BGP Mux, simply establish a standard BGP session with our Mux. We will configure you as a downstream client. From you, we will need:

- The IP address of your BGP-speaking router

- Your AS number

Please send this information to `dtunnel@gtnoise.net`.