CSEE4119 Project 2 Preliminary Stage Report
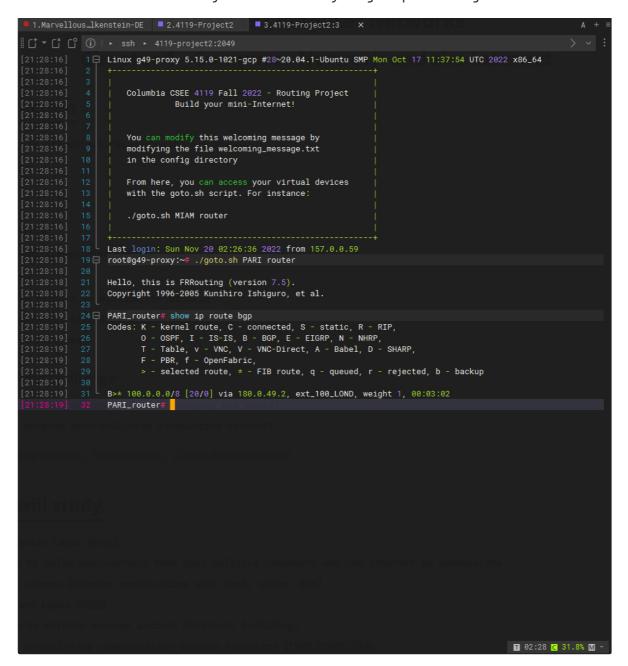
Tong Wu, tw2906

Task - Establish cross-AS link to AS100

Task - Configure eBGP sessions with AS100


```
[21:35:47]    1  Linux g49-proxy 5.15.0-1021-gcp #28~20.04.1-Ubuntu SMP Mon Oct 17 11:37:54 UTC 2022 x86_64
[21:35:47]    2  +-----------------------------------------------------+
[21:35:47]    3  |                                                     |
[21:35:47]    4  |    Columbia CSEE 4119 Fall 2022 - Routing Project   |
[21:35:47]    5  |              Build your mini-Internet!              |
[21:35:47]    6  |                                                     |
[21:35:47]    7  |                                                     |
[21:35:47]    8  |    You can modify this welcoming message by         |
[21:35:47]    9  |    modifying the file welcoming_message.txt         |
[21:35:47]   10  |    in the config directory                          |
[21:35:47]   11  |                                                     |
[21:35:47]   12  |    From here, you can access your virtual devices   |
[21:35:47]   13  |    with the goto.sh script. For instance:           |
[21:35:47]   14  |                                                     |
[21:35:47]   15  |    ./goto.sh MIAM router                            |
[21:35:47]   16  |                                                     |
[21:35:47]   17  +-----------------------------------------------------+
[21:35:47]   18  Last login: Sun Nov 20 02:35:39 2022 from 157.0.0.59
[21:35:48]   19  root@g49-proxy:~# ./goto.sh PARI router
[21:35:48]   20
[21:35:48]   21  Hello, this is FRRouting (version 7.5).
[21:35:48]   22  Copyright 1996-2005 Kunihiro Ishiguro, et al.
[21:35:48]   23
[21:35:49]   24  PARI_router# show ip bgp summary
[21:35:49]   25
[21:35:49]   26  IPv4 Unicast Summary:
[21:35:49]   27  BGP router identifier 180.0.49.1, local AS number 49 vrf-id 0
[21:35:49]   28  BGP table version 2
[21:35:49]   29  RIB entries 3, using 576 bytes of memory
[21:35:49]   30  Peers 1, using 21 KiB of memory
[21:35:49]   31
[21:35:49]   32  Neighbor        V         AS   MsgRcvd   MsgSent   TblVer  InQ OutQ  Up/Down State/PfxRcd   PfxSnt
[21:35:49]   33  180.0.49.2      4        100        14        15        0    0    0 00:10:38           1        2
[21:35:49]   34
[21:35:49]   35  Total number of neighbors 1
[21:35:49]   36  PARI_router#
```

```
                         ssh    4119-project2:2049
[21:28:16]    1 Linux g49-proxy 5.15.0-1021-gcp #28~20.04.1-Ubuntu SMP Mon Oct 17 11:37:54 UTC 2022 x86_64
[21:28:16]    2 +--------------------------------------------------+
[21:28:16]    3 |                                                  |
[21:28:16]    4 |     Columbia CSEE 4119 Fall 2022 - Routing Project |
[21:28:16]    5 |              Build your mini-Internet!           |
[21:28:16]    6 |                                                  |
[21:28:16]    7 |                                                  |
[21:28:16]    8 |     You can modify this welcoming message by     |
[21:28:16]    9 |     modifying the file welcoming_message.txt     |
[21:28:16]   10 |     in the config directory                      |
[21:28:16]   11 |                                                  |
[21:28:16]   12 |     From here, you can access your virtual devices |
[21:28:16]   13 |     with the goto.sh script. For instance:       |
[21:28:16]   14 |                                                  |
[21:28:16]   15 |     ./goto.sh MIAM router                        |
[21:28:16]   16 |                                                  |
[21:28:16]   17 +--------------------------------------------------+
[21:28:16]   18 Last login: Sun Nov 20 02:26:36 2022 from 157.0.0.59
[21:28:18]   19 root@g49-proxy:~# ./goto.sh PARI router
[21:28:18]   20
[21:28:18]   21 Hello, this is FRRouting (version 7.5).
[21:28:18]   22 Copyright 1996-2005 Kunihiro Ishiguro, et al.
[21:28:18]   23
[21:28:19]   24 PARI_router# show ip route bgp
[21:28:19]   25 Codes: K - kernel route, C - connected, S - static, R - RIP,
[21:28:19]   26        O - OSPF, I - IS-IS, B - BGP, E - EIGRP, N - NHRP,
[21:28:19]   27        T - Table, v - VNC, V - VNC-Direct, A - Babel, D - SHARP,
[21:28:19]   28        F - PBR, f - OpenFabric,
[21:28:19]   29        > - selected route, * - FIB route, q - queued, r - rejected, b - backup
[21:28:19]   30
[21:28:19]   31 B>* 100.0.0.0/8 [20/0] via 180.0.49.2, ext_100_LOND, weight 1, 00:03:02
[21:28:19]   32 PARI_router#
                                                                        T 02:28  C 31.8% M -
```

Task - Advertise prefix to AS100