

# Hostname Capability for BGP

draft-walton-bgp-hostname-capability-01

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# BGP Hostname Capability

- Advertise the normal hostname of the node to peers via an optional capability
- UTF-8
- Used for display/troubleshooting purposes only
- Knob will be used to turn on/off the display

# BGP Hostname Capability

```
+-----+
|  Hostname Length (1 octet)  |
+-----+
|  Hostname (variable)       |
+-----+
|  Domain Name Length (1 octet) |
+-----+
|  Domain Name (variable)     |
+-----+
```

# Motivation

- BGP speakers in the data center peer to physical interfaces and not loopbacks
  - There is no IGP
  - BGP peer to everyone that is directly connected
- This means you can't memorize “10.0.0.1 is spine-1, 10.0.0.2 is spine-2, etc”
  - Peer via /30s or link-local addresses so these are unique everywhere
  - Every speaker is peering to a different set of addresses

# Motivation

- Knowing the hostname maybe useful outside of DC too
  - No longer need to memorize which loopback is which speaker

# Simple Example - Before

```
leaf-11# show ip bgp summ
```

```
[snip]
```

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	PfxRcd
fe80::202:ff:fe00:5	4	65200	14878	14875	0	0	0	12:18:34	7
fe80::202:ff:fe00:9	4	65200	14880	14876	0	0	0	12:18:27	7
fe80::202:ff:fe00:B	4	65001	14879	14877	0	0	0	12:18:19	2
fe80::202:ff:fe00:E	4	65002	14881	14879	0	0	0	12:18:12	2

```
Total number of neighbors 4
```

```
leaf-11#
```

# Simple Example - After

```
leaf-11# show ip bgp summ
```

```
[snip]
```

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	PfxRcd
<b>spine-1</b>	4	65200	14878	14875	0	0	0	12:18:34	7
<b>spine-2</b>	4	65200	14880	14876	0	0	0	12:18:27	7
<b>tor-11</b>	4	65001	14879	14877	0	0	0	12:18:19	2
<b>tor-12</b>	4	65002	14881	14879	0	0	0	12:18:12	2

```
Total number of neighbors 4
```

```
leaf-11#
```

# Next Version

- Will require draft-ietf-idr-ext-opt-param-03
- Will provide guidance on
  - Output when peering to the same speaker multiple times
  - Output when two speakers use the same name