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Hostname Capability for BGP  
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## Abstract

In this document, we introduce a new BGP capability that allows the advertisement of a BGP speaker's hostname.

## Status of This Memo

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## [1.](#) Introduction

BGP is increasingly used inside the data center. Due to the sheer scale of devices involved, simplifying troubleshooting BGP would be very useful. One simple way to ease the troubleshooting is to display the hostname of the speaker in addition to the speaker's IP address. This document defines a new BGP capability that allows the exchange of a speaker's FQDN.

## [2.](#) Specification of Requirements

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [[RFC2119](#)].

## [3.](#) FQDN Capability

The FQDN Capability is a new BGP capability [[RFC5492](#)]. The Capability Code for this capability is specified in the IANA Considerations section of this document. The Capability Length field of this capability is variable. The Capability Value field consists of the following:

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

Hostname Length:

The number of characters in the Hostname

Hostname:

The hostname encoded via UTF-8

Domain Name Length:

The number of characters in the Domain Name

Domain Name:

The domain name encoded via UTF-8

Walton & Dutt

Expires January 7, 2016

[Page 2]

---

Internet-Draft

Hostname Capability for BGP

July 2015

#### [4.](#) Operation

The FQDN Capability SHOULD only be used for displaying the hostname and/or domain name of a speaker in order to make troubleshooting easier. The hostname and domain name used are assumed to be extracted from the hostname and domain name set on the device. While there are other ways to potentially obtain the same information, having standard BGP show commands use the hostname makes the use of this option quite powerful.

#### [5.](#) IANA Considerations

IANA has assigned capability number TBD for the FQDN Capability described in this document. This registration is in the BGP Capability Codes registry.

#### [6.](#) Security Considerations

This document introduces no new security concerns to BGP or other specifications referenced in this document.

#### [7.](#) References

##### [7.1.](#) Normative References

- [RFC5492] Scudder, J. and R. Chandra, "Capabilities Advertisement with BGP-4", [RFC 5492](#), February 2009.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

##### [7.2.](#) Implementation References

- [quagga] Dutt, D., "Quagga - BGP FQDN Capability", May 2015, <<https://github.com/CumulusNetworks/quagga/commit/45d4b165b9d01c0e98082e7d1e90a3b1a60b1085>>.

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Walton & Dutt

Expires January 7, 2016

[Page 3]

---

Internet-Draft

Hostname Capability for BGP

July 2015

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