

Network Working Group  
Internet-Draft  
Intended status: Experimental  
Expires: June 15, 2014

B. Venkatachalapathy  
K. Patel  
Cisco Systems  
R. Raszuk  
P. Hiremath  
NTT I3  
December 12, 2013

Enhanced Route Refresh Implementation Report  
draft-ietf-idr-enhanced-refresh-00

## Abstract

This document provides an implementation report for Enhanced Route refresh as defined in [draft-ietf-idr-bgp-enhanced-route-refresh](#). The editor did not verify the accuracy of the information provided by respondents or by any alternative means. The respondents are experts with the implementations they reported on, and their responses are considered authoritative for the implementations for which their responses represent.

## Requirements Language

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 [RFC 2119](#) [[RFC2119](#)].

## Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <http://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on June 15, 2014.

## Copyright Notice

Internet-Draft [draft-ietf-idr-enhanced-refresh-impl-00.txt](#) December 2013

Copyright (c) 2013 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<http://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

## Table of Contents

<a href="#">1.</a>	Introduction . . . . .	<a href="#">2</a>
<a href="#">2.</a>	Implementation Forms . . . . .	<a href="#">3</a>
<a href="#">2.1.</a>	Support for Enhanced Route Refresh Capability . . . . .	<a href="#">3</a>
<a href="#">2.2.</a>	Support for Route Refresh Message Subtypes . . . . .	<a href="#">3</a>
<a href="#">2.3.</a>	Enhanced Route Refresh Operations . . . . .	<a href="#">3</a>
<a href="#">2.4.</a>	Interoperable Implementations . . . . .	<a href="#">4</a>
<a href="#">3.</a>	IANA Considerations . . . . .	<a href="#">4</a>
<a href="#">4.</a>	Security considerations . . . . .	<a href="#">4</a>
<a href="#">5.</a>	Acknowledgements . . . . .	<a href="#">4</a>
<a href="#">6.</a>	References . . . . .	<a href="#">4</a>
<a href="#">6.1.</a>	Normative References . . . . .	<a href="#">4</a>
<a href="#">6.2.</a>	Informative References . . . . .	<a href="#">4</a>
	Authors' Addresses . . . . .	<a href="#">5</a>

## [1.](#) Introduction

It is sometimes necessary to perform routing consistency validations such as checking for possible missing withdraws between BGP speakers [[RFC4271](#)]. Currently such validations typically involve off-line, manual operations which can be tedious and time consuming. BGP Enhanced Route Refresh enhances the existing BGP route refresh mechanism to provide for the demarcation of the beginning and the ending of a route refresh (which refers to the complete re-advertisement of the Adj-RIB-Out to a peer, subject to routing policies). BGP Enhanced Route refresh can be used to facilitate on-line, non-disruptive consistency validation of BGP routing updates.

This document provides an implementation report for BGP Enhanced

Route Refresh as defined in  
[\[I-D.ietf-idr-bgp-enhanced-route-refresh\]](#).

The editor did not verify the accuracy of the information provided by respondents or by any alternative means. The respondents are experts

Venkatachalapathy, et al. Expires June 15, 2014

[Page 2]

---

Internet-Draft [draft-ietf-idr-enhanced-refresh-impl-00.txt](#) December 2013

with the implementations they reported on, and their responses are considered authoritative for the implementations for which their responses represent.

## [2.](#) Implementation Forms

Contact and implementation information for person filling out this form:

Name: Keyur Patel, Email: keyupate@cisco.com, Vendor: Cisco Systems, Inc. Release: IOS

Name: Balaji Venkatachalapathy, Email: bvenkata@cisco.com, Vendor: Cisco Systems, Inc. Release: IOS

Name: Robert Raszuk, Email: robert@raszuk.net, Vendor: NTT I3. Release: APGW Automation

Name: Prashant Hiremath, Email: prashant@ntti3.com, Vendor: NTT I3. Release: APGW Automation

### [2.1.](#) Support for Enhanced Route Refresh Capability

Does the implementation support Sec.2.1.  
[\[I-D.ietf-idr-bgp-enhanced-route-refresh\]](#) Support for Enhanced Route Refresh Capability?

Cisco: YES

NTT I3: YES

### [2.2.](#) Support for Route Refresh Message Subtypes

Does the implementation support Sec.2.2.  
[\[I-D.ietf-idr-bgp-enhanced-route-refresh\]](#) Subtypes for Route-Refresh message?

Cisco: YES

NTT I3: YES

### [2.3.](#) Enhanced Route Refresh Operations

Does the implementation support Sec.3.

[\[I-D.ietf-idr-bgp-enhanced-route-refresh\]](#) procedures for starting a route refresh?

Cisco: YES

NTT I3: YES

Does the implementation support Sec.3.

[\[I-D.ietf-idr-bgp-enhanced-route-refresh\]](#) procedures for examining route refresh message subtypes and take appropriate actions?

Cisco: YES

NTT I3: YES

### [2.4.](#) Interoperable Implementations

List other implementations that you have tested interoperability of Diverse Path

Cisco IOS

NTT I3

## [3.](#) IANA Considerations

This document makes no request of IANA.

Note to RFC Editor: this section may be removed on publication as an RFC.

## [4.](#) Security considerations

No new security issues are introduced to the BGP protocol by this

specification.

## [5.](#) Acknowledgements

## [6.](#) References

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

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC4223] Savola, P., "Reclassification of [RFC 1863](#) to Historic", [RFC 4223](#), October 2005.
- [RFC4271] Rekhter, Y., Li, T., and S. Hares, "A Border Gateway Protocol 4 (BGP-4)", [RFC 4271](#), January 2006.

### [6.2.](#) Informative References

Venkatachalapathy, et al. Expires June 15, 2014

[Page 4]

---

Internet-Draft [draft-ietf-idr-enhanced-refresh-impl-00.txt](#) December 2013

[I-D.ietf-idr-bgp-enhanced-route-refresh]  
Patel, K., Chen, E., and B. Venkatachalapathy, "Enhanced Route Refresh Capability for BGP-4", [draft-ietf-idr-bgp-enhanced-route-refresh-04](#) (work in progress), June 2013.

### Authors' Addresses

Balaji Venkatachalapathy  
Cisco Systems  
170 West Tasman Drive  
San Jose, CA 95134  
US

Email: [bvenkata@cisco.com](mailto:bvenkata@cisco.com)

Keyur Patel  
Cisco Systems  
170 West Tasman Drive  
San Jose, CA 95134  
US

Email: keyupate@cisco.com

Robert Raszuk  
NTT I3  
101 S. Ellsworth Ave  
San Mateo, CA 94401  
USA

Email: robert@raszuk.net

Prashant P. Hiremath  
NTT I3  
101 S. Ellsworth Ave  
San Mateo, CA 94401  
USA

Email: prashant@ntti3.com