### **BGP-4 Requirement Satisfaction Report**

Status of this Memo

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#### Introduction

The purpose of this memo is to document how the requirements for advancing a routing protocol to Full Standard have been satisfied by Border Gateway Protocol version 4 (BGP-4) (and create needless busywork). This report provides a roadmap to all information necessary to move BGP-4 to Standard. This is the first of two final reports on the BGP protocol. As required by the Internet Activities Board (IAB) and the Internet Engineering Steering Group (IESG), the second report will present additional knowledge and understanding gained in the time when the protocol was mada a Draft standard and when it was submitted for Standard.

The remaining sections of this memo document how BGP satisfies General Requirements specified in <u>Section 3.0</u>, as well as Requirements for Standard specified in <u>Section 6.0</u> of the "Internet Routing Protocol Standardization Criteria" document [1].

Please send comments to bgp@ans.net.

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#### Documentation

BGP is an inter-autonomous system routing protocol designed for TCP/IP internets.

Version 4 of the BGP protocol (BGP-4) specification has been submitted as [2].

The MIB specification for BGP-4 has been submitted as [3].

The applicability document for BGP-4 has been submitted as [4].

Implementation experience, operational experience, compatibility, migration and testing issues are documented in  $[\underline{5}]$ ,  $[\underline{6}]$ , and  $[\underline{7}]$ .

### **Implementations**

There are multiple independently written interoperable implementations of BGP-4 currently available. This section gives a brief overview of the implementations that are currently used in the operational Internet. They are:

- cisco Systems, Inc.
- gated consortium
- 3COM
- Bay Networks (Wellfleet)
- Proteon
- Rainbow-Bridge
- Telebit (DK)

### Acknowledgments

The BGP protocol has been developed by the IDR (formerly BGP) Working Group of the Internet Engineering Task Force. The group would like to express deepest thanks to Yakov Rekhter and Sue Hares, co-chairs of the IDR working group. I'd also like to explicitly thank Yakov Rekhter for the review of this document as well as constructive and valuable comments.

This report is in part based on the initial work of Peter Lothberg (Ebone), Andrew Partan (Alternet), Sean Doran (Sprint), Tony Bates (MCI), and several others. Details of their work were presented at the Twenti-fifth and Twenti-seventh IETF meetings and are available from the IETF proceedings.

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### References

# [1] <u>RFC1264</u>

Hinden, R., "Internet Routing Protocol Standardization Criteria", October 1991.

### [2] draft-ietf-idr-bgp4-02.txt

Rekhter, Y., and Li, T., "A Border Gateway Protocol 4 (BGP-4)", January 1996.

# [3] RFC1657

S. Willis, J. Burruss, J. Chu, "Definitions of Managed Objects for the Fourth Version of the Border Gateway Protocol (BGP-4) using SMIv2", July 1994.

# [4] RFC1772

Rekhter, Y., and P. Gross, Editors, "Application of the Border Gateway Protocol in the Internet", March 1995.

### [5] <u>RFC1773</u>

Traina P., "Experience with the BGP-4 protocol", March 1995.

### [6] <u>RFC1774</u>

Traina P., "BGP-4 Protocol Analysis", March 1995.

### [7] <u>RFC1656</u>

Traina P., "BGP-4 Implementation Expereience", July 1994.