Subcodes for BGP Finite State Machine Error

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Abstract

This document defines several subcodes for BGP Finite State Machine Error that could provide more information to help network operators in diagnosing BGP FSM issues and correlating network events.

Status of this Memo

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This document defines several subcodes for BGP [RFC4271] Finite State Machine Error that could provide more information to help network operators in diagnosing BGP FSM issues and correlating network events. This information is also helpful to developers in lab situations.

2. Definition of Finite State Machine Error Subcodes

This document defines following subcodes for BGP Finite State Machine Error:

0 - Unspecific Error
1 - Receive Unexpected Message in OpenSent State
2 - Receive Unexpected Message in OpenConfirm State
3 - Receive Unexpected Message in Established State

3. Usage of FSM Error Subcodes

If a BGP speaker receives an unexpected message (KEEPALIVE/UPDATE/ROUTE-REFRESH message) on a session in OpenSent state, it MUST send to the neighbor a Notification message with the Error Code Finite State Machine Error and the Error Subcode "Receive Unexpected Message in OpenSent State". The Data field is a 1-octet unsigned integer which indicates type of the unexpected message.

If a BGP speaker receives an unexpected message (OPEN/UPDATE/ROUTE-REFRESH message) on a session in OpenConfirm state, it MUST send to the neighbor a Notification message with the Error Code Finite State Machine Error and the Error Subcode "Receive Unexpected Message in OpenConfirm State". The Data field is a 1-octet unsigned integer which indicates type of the unexpected message.

If a BGP speaker receives an unexpected message (OPEN message) on a session in Established state, it MUST send to the neighbor a Notification message with the Error Code Finite State Machine Error and the Error Subcode "Receive Unexpected Message in Established State". The Data field is a 1-octet unsigned integer which indicates type of the unexpected message.

4. Security Considerations

This document does not change the security properties of BGP.

5. IANA Considerations

IANA is requested to make the following allocations from registries under its control.

This document defines Error Subcodes 0 - 3 for BGP Finite State Machine Error.

0 - Unspecific Error
1 - Receive Unexpected Message in OpenSent State
2 - Receive Unexpected Message in OpenConfirm State
3 - Receive Unexpected Message in Established State

6. Contributors

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8. References

8.1. Normative References


8.2. Informative References

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