Requirements for Manageability Sections in Routing Area Drafts

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Abstract

It has often been the case that manageability considerations have been retrofitted to protocols. This is sub-optimal.

Similarly, new protocols or protocol extensions are frequently designed without due consideration of manageability requirements.

This document specifies the requirement for all new Routing Area Internet-Drafts to include an "Manageability Considerations" section, and gives guidance on what that section should contain.
"SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119].

1. Introduction

When new protocols or protocol extensions are developed within the Routing Area, it is often the case that not enough consideration is given to the manageability of the protocols or to the way in which they will be operated in the network. The result is that manageability considerations are only understood once the protocols have been implemented and sometimes not until after they have been deployed.

The resultant attempts to retrofit manageability mechanisms are not always easy or architecturally pleasant. Further, it is possible that certain protocol designs make manageability particularly hard to achieve.

Recognising that manageability is fundamental to the utility and success of protocols designed within the IETF, and that simply defining a MIB module does not necessarily provide adequate manageability, this document defines requirements for the inclusion of Manageability Considerations sections in all Internet-Drafts produced within the Routing Area. Meeting these requirements will ensure that proper consideration is given to the support of manageability at all stages of the protocol development process from Requirements and Architecture, through Specification and Applicability.

The remainder of this document describes what subsections are needed within a Manageability Considerations section, and gives advice and guidance about what information should be contained in those subsections.

2. Presence and Placement of Manageability Considerations Sections

2.1. Null Manageability Considerations Sections

In the event that there are no manageability requirements for the protocol specified in an Internet-Draft, the draft MUST still contain a Manageability Considerations section. The presence of this section indicates to the reader and to the reviewer that due consideration has been given to manageability, and that there are no (or no new) requirements.

In this case, the section MUST contain a simple statement such as "There are no new manageability requirements introduced by this document," and MUST briefly explain why that is the case with a summary of manageability mechanisms that already exist.

2.2. Mandatory Subsections

If the Manageability Considerations section is not null, it MUST contain at least the following subsections. Guidance on the content of these subsections can be found in section 3 of this document.

- Information and data models, e.g. MIB module
- Management Information Base Modules and Objects
- Liveness Detection and Monitoring
- Verifying Correct Operation
- Requirements on Other Protocols and Functional Components
- Impact on Network Operation

In the event that one or more of these subsections is not relevant, it MUST still be present, and SHOULD contain a simple statement explaining why the subsection is not relevant.

2.3. Optional Subsections

The list of subsections above is not intended to be prescriptively limiting. Other subsections can and should be added according to the requirements of each individual Internet-Draft.

2.4. Placement of Manageability Considerations Sections

The Manageability Considerations Section SHOULD be placed immediately before the IANA Considerations section at the end of the body of the draft.

3. Guidance on the Content of Subsections

THIS SECTION IS UNDER DEVELOPMENT.
SUBSTANTIAL TEXT REMAINS TO BE WRITTEN.
THE SUBSECTIONS COULD USEFULLY GIVE EXAMPLES

3.x Information and Data Models

Reference and brief description of information and data models, including, but not necessarily limited to MIB modules or other modules developed specifically for the functions specified in the document.

3.y Requirements on Other Protocols and Functional Components

Here the requirements that the new protocol puts on other protocols and functional components, as well as requirements from other protocols that has been considered in desining the new protocol

3.z Other considerations

Anything that is not covered above, but is needed to understand the manageability situation.

4. Manageability Considerations

This document defines the Manageability Considerations sections for inclusion in all Routing Area Internet-Drafts. As such, the whole document is relevant to manageability.

5. IANA Considerations

This document does not introduce any new codepoints or name spaces for registration with IANA.

Routing Area Internet-Drafts SHOULD NOT introduce new codepoints or name spaces for IANA registration within the Manageability
Considerations section.

6. Security Considerations

This document is informational and describes the format and content of future Internet-Drafts. As such it introduces no new security concerns.

However, there is a clear overlap between security, operations and management. The manageability aspects of security SHOULD be covered within the mandatory Security Considerations of each Routing Area Internet-Draft. New security consideration introduced by the Manageability Considerations section should be covered in that section.

7. Acknowledgements

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9. Normative References


10. Informational References


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