

“Guidelines for Considering Operations & Management in IETF Specifications”

RFC 5706 bis

draft-opsarea-rfc5706bis

Joe Clarke, Adrian Farrel, Samier Barguil, Carlos Pignataro, Ran Chen, Benoit Claise

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RFC5706bis: Context & Goal

- RFC5706 was published in 2009 with a good discussion of operations and management considerations, however:
 - After +15 years, some **content is stale**: a **refresh is needed** to clean-up many discussions
 - **Targets several audiences** with, sometimes, **distinct perspectives**, e.g., Protocol Designers vs OPS Reviewers
 - **Need a better scope** (Protocol Designers/WGs/ADs for Charters)
 - **Offload review templates/discussion**
 - **Guidance is lost in the mass of technology background** material
 - Review the flow with a **focus on the guidance clarity**
 - Help authors identify **key considerations** to discuss/document
 - Challenge: Find the **right balance between providing clear guidance** while **avoiding rigidity**
- OPS-DIR reviews are good, but come too late in the process, at a point where nobody wants to change a document

Rational: Don't Delay Thinking ...

... about how to deploy and operate your protocol

A core principle of this document is to encourage early-on discussions rather than mandating any specific solution.

Protocol Designers should avoid deferring operations and manageability to a later phase of the development of the specification.

Helper

This document
provides an overview of
key questions to think
about
See the appendix

A.1. Documentation Requirements

- * Does the specification include an "Operational Considerations" section? ([Section 3.1](#))
- * Is this section placed immediately before the Security Considerations section? ([Section 3.3](#))[¶]
- * If there are no new considerations, does the section include the appropriate boilerplate with explanation? ([Section 3.2](#))

A.2. Operational Fit

- * How does this protocol operate "out of the box"? ([Section 4.1](#))
 - What are the default values, modes, timers, and states? ([Section 4.1](#))
 - What is the rationale for chosen default values, especially if they affect operations or are expected to change over time? ([Section 4.1](#))
- * What is the migration path for existing deployments? ([Section 4.2](#))
 - How will deployments transition from older versions or technologies? ([Section 4.2](#))
 - Does the protocol require infrastructure changes, and how can these be introduced? ([Section 4.2](#))
- * What are the requirements or dependencies on other protocols and functional components? ([Section 4.3](#))
- * What is the impact on network operation? ([Section 4.4](#))
 - What are the scaling implications and interactions with other protocols? ([Section 4.4](#))
 - What are the impacts on traffic patterns or performance (e.g., delay, jitter)? ([Section 4.4](#))

WGs Decide

A WG may decide that its protocol does not need interoperable operational and management or a standardized Data Model, but this should be a deliberate and documented decision, not the result of omission.

But ... Document the Decision Rationale

It would be helpful to reviewers, those who may update or write extensions to the protocol in the future, and those deploying the protocol, to know the rationale for the decisions on the protocol's manageability at the time of its design.

Not a Hurdle!

It provides a framework for WGs to ensure that operational considerations are an integral part of the protocol design process, and its use should not be misinterpreted as imposing new hurdles on work in other areas.

No Mandatory Format, Solution, Content, etc.

It does not
impose a specific management or operational solution, imply that a
formal Data Model is needed, or imply that using a specific
management protocol is mandatory.

.. not require to develop solutions to accommodate identified
operational considerations within the document that specifies a New
Protocol or Protocol Extension itself.

Extensions Should Not Be Delayed Because ...

... of missing operations in base specifications

It is not the intention that a protocol specification document should be held up waiting for operations and management solutions to be developed.

Network Working Group
Internet-Draft
Obsoletes: 5706 (if approved)
Updates: 2360 (if approved)
Intended status: Best Current Practice
Expires: 3 September 2026

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Guidelines for Considering Operations and Management in IETF
Specifications
draft-ietf-opsawg-rfc5706bis-03

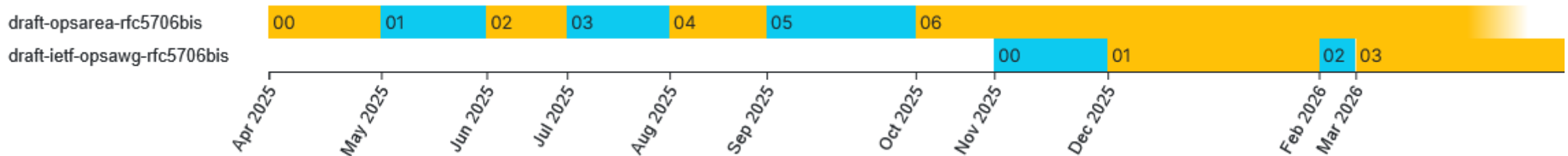
Abstract

New Protocols and Protocol Extensions are best designed with due consideration of the functionality needed to operate and manage them. Retrofitting operations and management considerations is suboptimal. The purpose of this document is to provide guidance to authors and reviewers on what operational and management aspects should be addressed when writing documents in the IETF Stream that define New Protocols or Protocol Extensions.

This document obsoletes RFC 5706, replacing it completely and updating it with new operational and management techniques and mechanisms. It also updates RFC 2360 to obsolete mandatory MIB creation. Finally, it introduces a requirement to include an "Operational Considerations" section in new RFCs in the IETF Stream that define New Protocols or Protocol Extensions or describe their use (including relevant YANG Models), while providing an escape clause if no new considerations are identified.

Progress

- The authors meet on a weekly basis
- <https://github.com/IETF-OPSAWG-WG/draft-opsarea-rfc5706bis>
- Multiple new revisions



- FROM AD sponsored To OPSAWG
 - Document adopted after IETF 124
 - Since Joe and Benoit (OPSAWG co-chairs) are authors, Alvaro Retana, as routing area expert is the document shepherd

Much (Directorate) Feedback

Reviews

SECDIR Early review by Jacqueline McCall	! Has issues
RTGDIR Early review (of -01) by Dhruv Dhody	! Has issues
OPSDIR Early review (of -01) by Tina Tsou	i Has nits
TSVART Early review (of -01) by Lars Eggert	× Not ready
GENART Early review (of -01) by Joel Halpern	Almost ready
ARTART Early review (of -01) by Harald Alvestrand	Ready w/issues
YANGDOCTORS Early review (of -01) by Martin Björklund	Ready w/nits
DNSDIR Early review (of -01) by Johan Stenstam	Ready w/nits
IOTDIR Early review (of -01) by Dave Thaler	! On the right track
PERFMETRDIR Early review (of -01) by Greg Mirsky	! Has issues
INTDIR Early Review due 2026-02-20	Incomplete

- Most issues addressed
 - <https://github.com/IETF-OPSAWG-WG/draft-opsarea-rfc5706bis/>
 - Generally supportive
- Comment about the “compulsory” aspect

Operational Consideration Section: This Draft Has a Positive Effect Already!

IESG Telechat of 19/02/2026 (Coverage Ratio of 57,14%)	Area	Track	OPS Cons
draft-ietf-stir-certificates-ocsp	ART	PS	No
draft-ietf-teep-protocol	SEC	PS	Yes
draft-ietf-mailmaint-imap-uidbatches	ART	PS	Yes
draft-ietf-netconf-yang-library-augmentedby	OPS	PS	Yes
draft-ietf-dnssd-multi-qtypes	INT	PS	No
draft-ietf-rats-eat-measured-component	SEC	PS	No
draft-ietf-pquip-hbs-state	SEC	INFO	Yes

Operational Consideration Section: This Draft Has a Positive Effect Already!

IESG Telechat of 05/03/2026 (Coverage Ratio of 71,43%)	Area	Track	OPS Cons
draft-ietf-ace-oscore-gm-admin	SEC	PS	Yes
draft-ietf-ippm-asymmetrical-pkts	OPS	PS	Yes
draft-ietf-pim-updt-ipv6-dyn-mcast-addr-grp-id	RTG	PS	Yes
draft-ietf-bess-evpn-unequal-lb	RTG	PS	Yes
draft-ietf-lsr-ospf-ls-link-infinity	RTG	PS	Yes
draft-ietf-pce-circuit-style-pcep-extensions	RTG	PS	Yes
draft-ietf-pce-sr-bidir-path	RTG	PS	Yes
draft-ietf-httpapi-digest-fields-problem-types	WIT	PS	No
draft-ietf-lamps-macaddress-on	SEC	PS	No
draft-ietf-spice-glue-id	SEC	PS	No
draft-ietf-radext-radiusdtls-bis	SEC	PS	No(*)
draft-ietf-ntp-roughtime	INT	EXP	Yes
draft-ietf-ippm-qoo	OPS	INFO	Yes
draft-ietf-spring-cs-sr-policy	RTG	INFO	Yes

Important observation: A good mix of different Area and Track

Next Steps & Feedback

- Will discuss this WG document in the OPSAWG later this week
- The authors busy incorporating the last directorate reviews
 - <https://github.com/IETF-OPSAWG-WG/draft-opsarea-rfc5706bis/issues>
- Will be soon ready for WGLC
- Any question?

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Most Important Changes since IETF 124 (rev 0 to 3)

- “a requirement to include an “Operational Considerations” section in new RFCs in the IETF Stream that define New Protocols or Protocol Extensions or describe their use (including relevant YANG Models), while providing an escape clause if no new considerations are identified.”
- “It is not the intention that a protocol specification document should be held up waiting for operations and management solutions to be developed.”
 - “A core principle of this document is to encourage early-on discussions rather than mandating any specific solution”

Most Important Changes since IETF 124 (rev 0 to 3)

- This document updates RFC 2360 (Guide for Internet Standards Writers), which still speaks about MIB module
 - Deprecate “a MIB must be defined within the standard or in a companion document”
- SecOPS specific considerations pushed into [draft-parsons-opsawg-security-operations-00](#) (Security Operations Fundamentals and Guidance)
- This I-D might be perceived to provide instructions to reviewers
 - Guidance for OPS Dir is moved out to the Wiki

<https://author-tools.ietf.org/iddiff?url1=draft-ietf-opsawg-rfc5706bis-00&url2=draft-ietf-opsawg-rfc5706bis-03&difftype=--html>

Most Important Changes since IETF 124 (rev 0 to 3)

This appendix provides a concise checklist of key questions that Protocol Designers should address in the "Operational Considerations" section of their specifications. Each item references the relevant section of this document for detailed guidance.

[Appendix A. Operational Considerations Checklist](#)

- [A.1. Documentation Requirements](#)
- [A.2. Operational Fit](#)
- [A.3. Management Information](#)
- [A.4. Fault Management](#)
- [A.5. Configuration Management](#)
- [A.6. Performance Management](#)
- [A.7. Security Management](#)

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What Shall We Worry About?

- Forces check-box documentation on authors
 - Except that there is a requirement to include a section, there is no requirement on what text to write
 - However (!)
 - Authors need to be encouraged to think about Operational Considerations
 - There is a need to suggest what topics need to be considered
 - This document is guidance to authors
 - We want to help people write better RFCs to make protocols a success
- Small protocol extensions will get held up with larger discussions