Open Command and Control (OpenC2) Language Specification Version 1.0

Working Draft 01

27 October 2017

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Abstract:

Cyberattacks are increasingly sophisticated, less expensive to execute, dynamic and automated. The provision of cyberdefense via statically configured products operating in isolation is no longer tenable. Standardized interfaces, protocols and data models will facilitate the integration of the functional blocks within a system or enterprise. Open Command and Control (OpenC2) is a concise and extensible language to enable the command and control of cyber defense components, subsystems and/or systems in a manner that is agnostic of the underlying products, technologies, transport mechanisms or other aspects of the implementation. It should be understood that a language such as OpenC2 is necessary but insufficient to enable coordinated cyber response. Other aspects of coordinated cyber response such as sensing, analytics, and selecting appropriate courses of action are beyond the scope of OpenC2.

Status:

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# Introduction

[All text is normative unless otherwise labeled]

## IPR Policy

This Working Draft is being developed under the [Non-Assertion](https://www.oasis-open.org/policies-guidelines/ipr#Non-Assertion-Mode) Mode of the [OASIS IPR Policy](https://www.oasis-open.org/policies-guidelines/ipr), the mode chosen when the Technical Committee was established. For information on whether any patents have been disclosed that may be essential to implementing this specification, and any offers of patent licensing terms, please refer to the Intellectual Property Rights section of the TC’s web page (<https://www.oasis-open.org/committees/openc2/ipr.php>).

## Terminology

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 [[RFC2119](#RFC2119)] and [[RFC8174](#RFC8174)].

## Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<http://www.rfc-editor.org/info/rfc2119>>.

**[****RFC8174]** Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<http://www.rfc-editor.org/info/rfc8174>>.

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For example:

**[OpenDoc-1.2]** *Open Document Format for Office Applications (OpenDocument) Version 1.2*. Edited by Patrick Durusau and Michael Brauer. 19 January 2011. OASIS Committee Specification Draft 07. <http://docs.oasis-open.org/office/v1.2/csd07/OpenDocument-v1.2-csd07.html>. Latest version: <http://docs.oasis-open.org/office/v1.2/OpenDocument-v1.2.html>.

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# Section Title

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## Level 2 section title

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### Level 3 section title

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#### Level 4 section title

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##### Levels 5

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###### Level 6

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1. Acknowledgments

(**Note:** A Work Product approved by the TC must include a list of people who participated in the development of the Work Product. This is generally done by collecting the list of names in this appendix. This list shall be initially compiled by the Chair, and any Member of the TC may add or remove their names from the list by request.

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The following individuals have participated in the creation of this specification and are gratefully acknowledged:

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1. Example Title

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* 1. Subsidiary section

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1. Revision History

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| --- | --- | --- | --- |
| **Revision** | **Date** | **Editor** | **Changes Made** |
| [Rev number] | [Rev Date] | [Modified By] | [Summary of Changes] |