

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Power systems management and associated information exchange – Data and communications security –
Part 3: Communication network and system security – Profiles including TCP/IP**

**Gestion des systèmes de puissance et échanges d’informations associés –
Sécurité des communications et des données –
Partie 3: Sécurité des réseaux et des systèmes de communication – Profils
comprenant TCP/IP**





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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
1.1 Scope.....	8
1.2 Intended audience.....	8
2 Normative references.....	9
3 Terms, definitions and abbreviated terms.....	9
3.1 Terms and definitions.....	9
3.2 Abbreviated terms.....	10
4 Security issues addressed by this document.....	10
4.1 General.....	10
4.2 Security threats countered.....	11
4.3 Attack methods countered.....	11
4.4 Handling of security events.....	12
5 Overview of differences in TLS versions.....	12
5.1 General.....	12
5.2 Main differences between TLSv1.2 and TLSv1.3.....	12
5.3 Cipher suite naming.....	13
5.4 Backward compatibility.....	14
5.5 Extensions.....	14
6 Generic requirements.....	15
6.1 General.....	15
6.2 Signalling of supported TLS versions.....	15
6.3 Usage of non-encrypting cipher suites.....	16
6.4 Certificate support.....	17
6.4.1 Support of multiple trust anchors.....	17
6.4.2 Certificate size.....	17
6.4.3 Certificate exchange.....	17
6.4.4 Public-key certificate validation.....	18
6.5 Co-existence with non-secure protocol traffic.....	21
7 Requirements specific to TLSv1.2.....	21
7.1 General.....	21
7.2 Supported cipher suites.....	21
7.3 Disallowed cipher suites.....	22
7.4 Key exchange.....	22
7.4.1 General.....	22
7.4.2 Key exchange mechanisms.....	22
7.4.3 Cryptographic algorithms.....	22
7.4.4 Session resumption.....	24
7.4.5 Session renegotiation.....	25
7.5 Support of extensions.....	26
7.5.1 General.....	26
7.5.2 TLS session renegotiation extension.....	26
7.5.3 Signalling of client supported CA certificates via Trusted CA.....	27
7.5.4 Signalling of supported signature algorithms.....	27
7.5.5 Stapping of OCSP response messages.....	28

7.5.6	Signalling of intended target TLS server via Server Name Indication	29
7.5.7	Support of encryption before authentication	29
8	Requirements specific to TLSv1.3.....	30
8.1	General.....	30
8.2	Supported cipher suites	30
8.3	Key exchange	30
8.3.1	General	30
8.3.2	Handshake modes	31
8.3.3	Diffie-Hellman Groups	32
8.3.4	Signature algorithms.....	32
8.4	Session key update (post-handshake message).....	33
8.5	New session ticket (post-handshake message)	34
8.6	Session resumption	34
8.7	Certificate validation	34
8.8	Support of extensions	35
8.8.1	General	35
8.8.2	Signalling of supported TLS versions.....	35
8.8.3	Cookie	35
8.8.4	Signalling of supported signature algorithms.....	35
8.8.5	Signalling of supported groups	36
8.8.6	Signalling of key share	36
8.8.7	Signalling of intended target TLS server via Server Name Indication	36
8.8.8	Signalling of supported certificate authorities.....	37
8.8.9	Support of PSK based key agreement	37
8.8.10	Stapling of OCSP response messages.....	37
8.8.11	Signalling of early data	38
9	Optional security measure support.....	38
10	Conformance	38
10.1	General.....	38
10.2	Notation	38
10.3	Conformance to selected TLS versions	38
10.4	Conformance to certificate handling	39
10.5	Conformance to TLSv1.2 specifics	39
10.5.1	Conformance to selected cipher suites	39
10.5.2	Conformance to cryptographic algorithm support	40
10.5.3	Conformance to TLSv1.2 session management features.....	40
10.5.4	Conformance to selected TLSv1.2 extensions.....	41
10.6	Conformance to TLSv1.3 specifics	41
10.6.1	Conformance to selected TLSv1.3 cipher suites.....	41
10.6.2	Conformance to selected TLSv1.3 session management features.....	42
10.6.3	Conformance to selected TLSv1.3 extensions.....	44
10.6.4	Conformance to selected TLSv1.3 post-handshake messages	44
Annex A (informative)	Security Events	46
A.1	Security event logs	46
A.2	Mapping of TLS events related to the TLS handshake.....	46
A.3	Mapping of TLS events related to the certificate handling	48
Bibliography	49

Figure 1 – Definition of cipher suites according to TLSv1.2 (RFC 5246)..... 14

Figure 2 – Definition of cipher suites according to TLSv1.3 (RFC 8446)..... 14

Table 1 – Support of cipher suites for TLSv1.2..... 21

Table 2 – Support of cipher suites for TLSv1.3..... 30

Table 3 – Support of PSK-based handshake modes for TLSv1.3..... 31

Table 4 – Support of Diffie Hellman Groups for TLSv1.3 32

Table 5 – Supported signature algorithms for the handshake in TLSv1.3 32

Table 6 – Supported signature algorithms for the certificates in TLSv1.3 33

Table 7 – Conformance to TLS versions 38

Table 8 – Conformance to certificate support..... 39

Table 9 – Conformance to TLSv1.2 usable cipher suites 40

Table 10 – Conformance to cryptographic algorithm support..... 40

Table 11 – Conformance to TLSv1.2 session management features..... 41

Table 12 – Conformance to TLSv1.2 handshake extensions 41

Table 13 – Conformance to TLSv1.3 cipher suites 42

Table 14 – Conformance to handshake modes of TLSv1.3..... 42

Table 15 –Conformance to early data feature (0-RTT) of TLSv1.3..... 42

Table 16 – Conformance to supported Diffie Hellman Groups in TLSv1.3..... 43

Table 17 – Conformance to supported signature algorithms for the handshake in
 TLSv1.3 43

Table 18 – Conformance to supported signature algorithms for the certificates in
 TLSv1.3 44

Table 19 – Conformance to TLSv1.3 extensions 44

Table 20 – Conformance to post-handshake messages of TLSv1.3..... 45

Table A.1 – Security event logs related to TLS handshake defined in IEC 62351-3:—
 (Ed.2) mapped to IEC 62351-14..... 46

Table A.2 – Security event logs related to certificate validation defined in IEC 62351-3
 Ed.2 mapped to IEC 62351-14 48

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**POWER SYSTEMS MANAGEMENT AND ASSOCIATED INFORMATION
EXCHANGE – DATA AND COMMUNICATIONS SECURITY –****Part 3: Communication network and system security –
Profiles including TCP/IP**

FOREWORD

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IEC 62351-3 has been prepared by IEC technical committee 57: Power systems management and associated information exchange. It is an International Standard.

This second edition cancels and replaces the first edition published in 2014, Amendment 1:2018 and Amendment 2:2020. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Inclusion of the TLSv1.2 related parameter required in IEC 62351-3 Ed.1.2 to be specified by the referencing standard. This comprises the following parameter:
 - Mandatory TLSv1.2 cipher suites to be supported.
 - Specification of session resumption parameters.
 - Specification of session renegotiation parameters.

- Revocation handling using CRL and OCSP.
 - Handling of security events.
- b) Inclusion of a TLSv1.3 profile to be applicable for the power system domain in a similar way as for TLSv1.2 session.

The text of this International Standard is based on the following documents:

Draft	Report on voting
57/2578/FDIS	57/2593/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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INTRODUCTION

This edition of IEC 62351-3 is a self-contained document profiling the usage of TLS for to secure power system communication. It is recommended to refer to this edition of this document rather than any previous edition, because this edition updates the utilized cryptographic algorithms (ciphersuites), provides enhanced functionality, and covers different TLS versions. In contrast to previous editions, this document specifies all necessary TLS specific settings and does not require the referencing standard to define specific settings for TLS.

Note that the recommendation to use this edition, potentially also with older referencing standards, requires technical support by implementations of the TLS settings specified in this edition of the document.