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**Cyber Security (CYBER);
Mapping of specific requirements of standardisation request
for RED articles 3(3)(d), 3(3)(e) and 3(3)(f) to
IEC 62443-4-2 requirements and to ETSI EN 303 645 provisions**

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Contents

Intellectual Property Rights	4
Foreword.....	4
Modal verbs terminology.....	4
Introduction	4
1 Scope	5
2 References	5
2.1 Normative references	5
2.2 Informative references.....	5
3 Definition of terms, symbols and abbreviations.....	6
3.1 Terms.....	6
3.2 Symbols.....	6
3.3 Abbreviations	6
4 Methodology	6
4.1 Mapping of IEC 62443-4-2 requirements	6
4.2 Mapping of ETSI EN 303 645 provisions.....	7
4.3 Mapping notations.....	7
5 Mapping results and resulting transition requirements	8
5.1 Mapping results based on IEC 62443-4-2 requirements	8
5.2 Mapping results based on ETSI EN 303 645 provisions.....	11
5.3 Transition requirements based on mapping results	13
History	14

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Cyber Security (CYBER).

Modal verbs terminology

In the present document **"shall"**, **"shall not"**, **"should"**, **"should not"**, **"may"**, **"need not"**, **"will"**, **"will not"**, **"can"** and **"cannot"** are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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Introduction

According to the standardisation request [i.5], harmonised standards (hENs) are to be developed for the articles 3(3)(d), 3(3)(e) and 3(3)(f) of the Radio Equipment Directive (RED) [i.1]. Due to the adoption of the delegated act [i.2], the essential requirements given in the RED articles 3(3)(d), (e) and (f) will come into force on the 1st of August 2024.

It is understood that requirements from IEC 62443-4-2 [i.4] and the provisions from ETSI EN 303 645 [i.3] address many products that fall under the scope of the RED articles 3(3)(d), 3(3)(e) and 3(3)(f). The ETSI EN 303 645 [i.3] goes even beyond the scope of the RED [i.1] as the ETSI EN 303 645 [i.3] does not only cover product-related requirements, but also process-related requirements addressing the manufacturer.

The present document shows the mapping of specific requirements of the standardisation request for the RED articles 3(3)(d), 3(3)(e) and 3(3)(f) to IEC 62443-4-2 [i.4] requirements and to ETSI EN 303 645 [i.3] provisions. This could be useful, e.g. for industry stakeholders to be prepared for and implement the transition from product conformity with IEC 62443-4-2 [i.4] and/or ETSI EN 303 645 [i.3] to product conformity with future requirements in the hENs for the RED articles 3(3)(d), 3(3)(e) and 3(3)(f). In addition, the mapping results could be referenced for work on the hENs for the RED articles 3(3)(d), 3(3)(e) and 3(3)(f).

1 Scope

The present document provides mapping tables to show which security requirements and provisions from the IEC 62443-4-2 [i.4] and the ETSI EN 303 645 [i.3], respectively, cover the specific requirements from the standardisation request for the RED articles 3(3)(d), 3(3)(e) and 3(3)(f) and are therefore relevant to fulfil the essential requirements given by the RED articles 3(3)(d), 3(3)(e) and 3(3)(f). In addition, so-called transition requirements are provided which help and are to be considered for implementing the transition from product conformity based on provisions from ETSI EN 303 645 [i.3] and/or requirements from IEC 62443-4-2 [i.4] to product conformity based on the RED delegated regulation [i.2].

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference>.

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Not applicable.

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NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] [Directive 2014/53/EU](#) of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.
- [i.2] [Commission Delegated Regulation \(EU\) 2022/30](#) of 29 October 2021 supplementing Directive 2014/53/EU of the European Parliament and of the Council with regard to the application of the essential requirements referred to in Article 3(3), points (d), (e) and (f), of that Directive.
- [i.3] ETSI EN 303 645 (V2.1.1): "CYBER; Cyber Security for Consumer Internet of Things: Baseline Requirements".
- [i.4] IEC 62443-4-2:2019: "Security for industrial automation and control systems - Part 4-2: Technical security requirements for IACS components".
- [i.5] [C\(2022\)5637 - M/585](#): "Commission Implementing Decision of 5.8.2022 on a standardisation request to the European Committee for Standardisation and the European Committee for Electrotechnical Standardisation as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council and Commission Delegated Regulation (EU) 2022/30".

3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the terms given in [i.1], [i.2], [i.3], [i.4], [i.5] and the following apply:

process-related requirement: requirement that is addressed to the process around the product functionality

EXAMPLE: If a standard requires that a product manufacturer provides a publicly available vulnerability disclosure policy, this would be a process-related requirement.

product-related requirement: requirement that is only addressed to the product with its functionality

EXAMPLE: If a standard requires that a product provides authentication and access control mechanisms, this would be a product-related requirement.

transition requirement: requirement that specifies which requirements/provisions of an existing standard/existing standards are to be considered in order to help to perform the transition from being compliant with these requirements/provisions to being compliant with requirements of another standard/other standards

EXAMPLE: If a standard requires that a manufacturer does not consider process-related requirements, but rather product-related requirements from existing cybersecurity standards with the intention to meet the requirements of the upcoming hENs for the RED articles 3(3)(d), (e) and (f), this would be a transition requirement.

3.2 Symbols

Void.

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

EN	European Standard
hEN	harmonised European Standard
IEC	International Electrotechnical Commission
RE	Requirement Enhancement
RED	Radio Equipment Directive

4 Methodology

4.1 Mapping of IEC 62443-4-2 requirements

- In the present document a rough mapping table and a detailed mapping table is provided to map the requirements of the IEC 62443-4-2 [i.4] to the specific requirements of the standardisation request [i.5].
- The detailed mapping table is the one that maps every single specific requirement of the standardisation request [i.5] to the requirements of the IEC 62443-4-2 [i.4]. In the mapping, the values "relevant", "partly relevant" or "not relevant" are assigned to each requirement. More precisely, "relevant" denotes that the provision (partly) meets the specific requirement of the standardisation request [i.5] (with some editorial adaptations); "partly relevant" denotes that the provision has to be technically reworded but would then (partly) meet one specific requirement of the standardisation request [i.5]; "not relevant" denotes that the provision cannot be used to (partly) meet one specific requirement of the standardisation request [i.5].

- In the rough mapping table, the assignments are the same, but the meaning differs as the mapping includes the consideration of multiple specific requirements. More precisely, in the rough mapping, "relevant" denotes that the provision (partly) meets one specific requirement of the standardisation request [i.5] (with some editorial adaptations); "partly relevant" denotes that the provision has to be technically reworded but would then (partly) meet one specific requirement of the standardisation request [i.5]; "not relevant" denotes that the provision cannot be used to (partly) meet one specific requirement of the standardisation request [i.5]. Therefore, it is enough to show whether a certain provision covers one certain specific requirement to conclude that this certain provision is relevant, partly relevant or not relevant for the corresponding essential requirement given in RED article 3(3)(d), 3(3)(e) or 3(3)(f).

4.2 Mapping of ETSI EN 303 645 provisions

- To perform the mapping of the ETSI EN 303 645 [i.3] provisions the same mapping methodology as described in clause 4.1 is used. Hence, the mappings result in a rough mapping table, which shows the relevance of the provisions to the essential requirements in the RED articles 3(3)(d), (e) and (f), as well as a detailed mapping table, which shows the relevance of the provisions to each specific requirement of the standardisation request [i.5].

4.3 Mapping notations

In the present document a rough mapping table and a detailed mapping table are provided for both mappings (mapping with IEC 62443-4-2 [i.4] and ETSI EN 303 645 [i.3]), respectively, which results in four different mapping tables - two rough mappings and two detailed mappings. Three different mapping assignments are used in each mapping table. The description of the mapping assignments differs depending on whether the mapping is a rough or a detailed mapping which is described as follows.

The following notations are used for the **rough mapping** (Relevant? Y-Yes, N-No, P-Partly relevant):

- | | |
|---|---|
| Y | the requirement as written covers at least one specific requirement from the RED article. |
| P | the requirement after modification covers at least one specific requirement from the RED article. |
| N | the requirement does not cover any specific requirements from the RED article. |

The following notations are used for the **detailed mapping** (Relevant? Y-Yes, N-No, P-Partly relevant):

- | | |
|---|--|
| Y | the requirement as written covers the specific requirement from the RED article. |
| P | the requirement after modification covers the specific requirement from the RED article. |
| N | the requirement does not cover the specific requirement from the RED article. |

5 Mapping results and resulting transition requirements

5.1 Mapping results based on IEC 62443-4-2 requirements

Table 1: "Rough Mapping" - Mapping the essential requirements of the RED articles 3(3)(d), (e) and (f) to the requirements of the IEC 62443-4-2 [i.4] based on the specific requirements of the standardisation request [i.5]

IEC 62443-4-2 [i.4] Requirement	3(3)(d)	RED article 3(3)(e)	3(3)(f)
1 Identification and authentication control			
1.1 + RE1 + RE2	P	P	P
1.2 + RE1			
1.3			
1.4			
1.5 + RE1			
1.6 + RE1			
1.7 + RE1 + RE2	Y	Y	Y
1.8			
1.9 + RE1			
1.10			
1.11			
1.12			
1.13 + RE1	P	P	P
1.14 + RE1			
2 Use control			
2.1 + RE1 + RE2 + RE3 + RE4	P	P	P
2.2	Y	Y	Y
2.3	N	N	N
2.4 + RE1	Y	Y	Y
2.5	P	P	P
2.6	Y	Y	Y
2.7	P	P	P
2.8			
2.9 + RE1			
2.10			
2.11 + RE1 + RE2			
2.12 + RE1			
2.13 + RE1			
3 System integrity			
3.1 + RE1	P	Y	Y
3.2 + RE1	P	P	P
3.3 + RE1			
3.4 + RE1 + RE2			
3.5	Y	Y	Y
3.6			
3.7			
3.8	P	P	P
3.9 + RE1			
3.10 + RE1			
3.11 + RE1	Y	Y	Y
3.12	P	P	P
3.13			
3.14 + RE1			
4 Data confidentiality			
4.1	P	P	P
4.2 + RE1 + RE2	P	Y	Y
4.3	P	P	P

IEC 62443-4-2 [i.4] Requirement	3(3)(d)	RED article 3(3)(e)	3(3)(f)
5 Restricted data flow			
5.1	P	P	P
5.2 + RE1 + RE2 + RE3	Y	Y	Y
5.3			
6 Timely response to events			
6.1 + RE1	P	P	P
6.2			
7 Resource availability			
7.1 + RE1	Y	Y	Y
7.2			
7.3 + RE1	P	P	P
7.4			
7.5	N	N	N
7.6 + RE1	P	P	P
7.7	Y	Y	Y
7.8	N	N	N

Table 2: "Detailed Mapping" - Mapping the specific requirements of the standardisation request [i.5] to the requirements of the IEC 62443-4-2 [i.4]

Foundational Requirement / Component Requirement		Article 3(3)(d)						Article 3(3)(e)								Article 3(3)(f)					
		1	2	3	4	5	6	1	2	3	4	5	6	7	8	1	2	3	4	5	6
1 Identification and Authentication Control	CR 1.1																				
	RE 1	N	P		N	P	P			N				P		P		N		P	
	RE 2																				
	CR 1.2	N	P		N	P	P			N				P		P		N		P	
	RE 1																				
	CR 1.3	N	P		N	P	P			N				P		P		N		P	
	CR 1.4	N	P		N	P	P			N				P		P		N		P	
	CR 1.5	N	P		N	P	P			N				P		P		N		P	
	RE 1																				
	CR 1.6	N	P		N	P	P			N				Y	P	P	Y	N		Y	
	RE 1																				
	CR 1.7	N	P		N	P	P			N				N	P	P		N		P	
	RE 1																				
	RE 2																				
	CR 1.8	N	Y		N	Y	P	Y		N				N	Y	P	Y	N		Y	
	CR 1.9	N	Y		N	Y	P	Y		N				N	Y	P	Y	N		Y	
	RE 1																				
	CR 1.10	N	Y		N	Y	Y			N				Y		Y		N		Y	
	CR 1.11	N	Y		N	Y	P	Y		N				Y		Y		N		Y	
	CR 1.12	N	Y		N	Y	P	Y		N				Y		Y		N		Y	
	CR 1.13	N	P		N	P	P			N				P		P		N		P	
	RE 1																				
	CR 1.14	N	P		N	P	P			N				P		P		N		P	
	RE 1																				
2 Use Control	CR 2.1																				
	RE 1																				
	RE 2	N	P		N	P	P			N				P		P		N		P	
	RE 3																				
	RE 4																				
	CR 2.2	N	P	Y	N	Y	Y			N				Y		Y		N		Y	
	CR 2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CR 2.4																				
	RE 1	N	P	Y	N	Y	Y			N				Y		Y		N		Y	
	CR 2.5	N	P		N	P	P			N				P		P		N		P	
	CR 2.6	N	P	Y	N	Y	Y			N				Y		Y		N		Y	
	CR 2.7	N	P		N	P	P			N				P		P		N		P	
	CR 2.8	N	P		N	P	P			N				P		P		N		P	
	CR 2.9																				
	RE 1	N	P		N	P	P			N				P		P		N		P	
	CR 2.10	N	P		N	P	P			N				P		P		N		P	
	CR 2.11																				
	RE 1	N	P		N	P	P			N				P		P		N		P	
	RE 2																				

Foundational Requirement / Component Requirement		Article 3(3)(d)						Article 3(3)(e)								Article 3(3)(f)					
		1	2	3	4	5	6	1	2	3	4	5	6	7	8	1	2	3	4	5	6
	CR 2.12 RE 1	N		P		N	P	P		N			P			P		N		P	
	CR 2.13 RE 1		N	P		N	P	P		N			P			P		N		P	
3 System Integrity	CR 3.1 RE 1		P		N		P	Y	P	N	P		N		P	Y	P	N	P	N	P
	CR 3.2 RE 1		P		N		P	P		N			N	P		P		N		N	P
	CR 3.3 RE 1	N	P		N		P	P		N					P	P		N			P
	CR 3.4 RE 1	N	P		N		P	P		N					P	P		N			P
	CR 3.4 RE 2																				
	CR 3.5	N	P		N		P	P		N	P		N		P	P		N	P	N	P
	CR 3.6	N	Y		N		P	Y	Y	N	P		N		Y	Y		N	P	N	Y
	CR 3.7	N	P		N		P	P		N					P	P		N			P
	CR 3.8	N	P		N		P	N	P		N				P	N	P		N		P
	CR 3.9 RE 1		N				P		N				P	N	P		N				P
	CR 3.10 RE 1	N		N		P	P	N		N	Y		N		P		N		Y	N	P
	CR 3.11 RE 1		N				P	Y	Y				N	P		Y	Y		N		Y
	CR 3.12	N	P		N		P	P		N					P	P		N			P
	CR 3.13	N	P		N		P	P		N					P	P		N			P
	CR 3.14 RE 1	N	P	N		N	P	P		N					P	P		N			P
4 Data Confidentiality	CR 4.1	N	P		N		P	P		N			P			P		N		P	
	CR 4.2 RE 1		N		N		P	Y	P		N				P	Y	P		N		P
	CR 4.2 RE 2		N		N		P														
	CR 4.3	N	P		N		P	P		N	P		N		P	P		N	P	N	P
5 Restricted Data Flow	CR 5.1	N	P		N		P	P		N					P	P		N			P
	CR 5.2 RE 1		Y	P		N	Y	Y	P		N				Y	Y	P		N		Y
	CR 5.2 RE 2																				
	CR 5.2 RE 3																				
	CR 5.3		Y		N		Y	Y		N					Y	Y		N			Y
6 Timely response to events	CR 6.1 RE 1	P	N	P		N	P	P		N			P	N	P	P		N			P
	CR 6.2	P		N			P	P		N			P	N	P	P		N			P
7 Resource availability	CR 7.1 RE 1	N	Y		N		Y	Y		N					Y	Y		N			Y
	CR 7.2	N	P		N		P			N					P			N			P
	CR 7.3 RE 1		N				P	P		N					P	P		N			P
	CR 7.4	N	P		N		P	P		N					P	P		N			P
	CR 7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CR 7.6 RE 1	P			N				N				P	N			N			P	N
	CR 7.7	N	Y		N		Y	Y		N					Y	Y		N			Y
	CR 7.8				N					N								N			