DIN CEN ISO/TS 24315-3:2025-12 (E)

Intelligent transport systems - Management of electronic traffic regulations (METR) - Part 3: System of systems requirements and architecture (SoSR) (ISO/TS 24315-3:2025); English version CEN ISO/TS 24315-3:2025

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Abbreviated terms **1**

5 Overview **2**
5.1 METR purpose 2
5.2 METR scope 3
5.3 Management of electronic traffic regulations (METR) overview 3
5.3.1 Functional view 3
5.3.2 Physical view 4
5.4 Assumptions and dependencies 8
5.4.1 Assumptions 8
5.4.2 Dependencies 9
5.5 Traceability conventions 9
5.6 Naming conventions 11
5.7 Traceability and conformance 11

6 System of systems requirements **11**
6.1 General 11
6.2 Input requirements 12
6.2.1 Information flow: legal rules 12
6.2.2 Information flow: coordination 12
6.2.3 Information flow: discrepancy information 13
6.2.4 Information flow: traffic control devices (TCD) status 14
6.3 Output requirements 15
6.3.1 Information flow: audit information 15
6.3.2 Information flow: coordination 16
6.3.3 Information flow: information 16
6.3.4 Information flow: information for adaptation 18
6.4 Functional requirements 20
6.4.1 Verification of METR rules 20
6.4.2 METR information storage requirements 20
6.5 Applicable intelligent transport system (ITS) station unit requirements 21
6.5.1 Support services 21
6.5.2 Timeliness 23
6.5.3 Filtering 23
6.5.4 Open specification 23
6.5.5 Backwards compatibility 24
6.5.6 Forward compatibility 24
6.5.7 Language neutral 24
6.6 Information requirements 24
6.6.1 General 24
6.6.2 Feature catalogue 24
6.6.3 METR information 24
6.6.4 Information content 25

6.6.5 Information meta-data ... 26
6.6.6 Observable transport rule attributes ... 26
6.6.7 Additional transport rule attributes ... 27
6.6.8 Auditing attributes ... 28
6.7 Efficient exchange constraint ... 28

7 Actor responsibilities ... 28
7.1 Rule maker responsibilities ... 28
7.1.1 Maintain rules ... 28
7.1.2 Define location accurately ... 28
7.2 User responsibilities ... 28
7.2.1 Acquire rules before travelling ... 28
7.2.2 Identify necessary rule criteria ... 28
7.2.3 Obtain necessary supporting data ... 28
7.2.4 Process rules ... 29
7.2.5 Identify discrepancies ... 29
7.2.6 Mapping ... 29
7.2.7 Determine user's location ... 29
7.2.8 Determine environmental conditions ... 29
7.3 Implementer responsibilities ... 29
7.4 Auditor responsibilities ... 29

8 System-level reference architecture ... 29
8.1 Overview ... 29
8.2 Physical view ... 30
8.2.1 Mapping to functional view ... 30
8.2.2 Centralized information distribution service package ... 31
8.2.3 Localized information distribution ... 36
8.2.4 Discrepancy management ... 40
8.2.5 Auditing service package ... 44
8.2.6 Service registration and discovery ... 46
8.2.7 Security enrolment and credentials management ... 47
8.2.8 Core authorization ... 48
8.2.9 System monitoring ... 49
8.2.10 Physical objects ... 50
8.2.11 Information flows ... 52
8.2.12 Cybersecurity overview ... 58
8.3 Enterprise view ... 59
8.3.1 Overview ... 59
8.3.2 Enterprise objects ... 63
8.3.3 Agreements and expectation definitions ... 70
8.3.4 Role definitions ... 73
8.3.5 Resources ... 73

9 Variables ... 74
9.1 General ... 74
9.2 catalogueUpdateInterval ... 74
9.3 criteriaLatencyTime ... 74
9.4 distributionResponseTime ... 74
9.5 informationRefreshDuration ... 74
9.6 metrRecoveryTime ... 74
9.7 metrResponseTime ... 75
9.8 metrUpdateCycle ... 75
9.9 metrUpTimePercent ... 75
9.10 provisionLatency ... 75
9.11 subscriptionRefreshTime ... 75
9.12 translationUpdateInterval ... 75

Annex A (informative) **Conformance ... 76**

Annex B (normative) **Diagram conventions ... 78**

Annex C (informative) **Possible deployments of role-based architecture ... 83**

Bibliography ... 93