ISO/IEC 14543-5-8:2017-08 (E)

Information technology - Home electronic systems (HES) architecture - Part 5-8: Intelligent grouping and resource sharing for HES Class 2 and Class 3 - Remote access core protocol

Contents

Page

FOREWORD 4
INTRODUCTION 5
1 Scope 7
2 Normative references 7
3 Terms, definitions and abbreviated terms 8
3.1 Terms and definitions 8
3.2 Abbreviated terms 10
4 Conformance 11
5 IGRS RA overview 11
6 IGRS RA service functional flow 11
7 Registration management 13
7.1 User or device registration flow 13
7.2 User registration management 14
7.3 Device registration management 14
7.4 Registration response status code 15
8 Login 15
8.1 User or device login flow 15
8.2 User connection 16
8.3 Messages for user connection ID binding 16
8.4 Device connection 17
8.5 Messages for device connection ID binding 17
9 Device access rights configuration 18
9.1 Overview 18
9.2 Messages for device access rights configuration request 18
9.3 Messages for device access rights configuration response 19
10 User and device relationship management 20
10.1 Overview 20
10.2 Relationship management mechanism 23
10.3 Relationship establishment 24
10.3.1 Messages for relationship establishment request 24
10.3.2 Relationship establishment request procedure for IRSP 24
10.3.3 Target accepts or rejects relationship establishment request 25
10.3.4 IRSP processes relationship establishment acceptance message from target 26
10.4 Releasing relationship 27
10.5 Device verification code management 28
10.5.1 Device verification code management initiated by IGRS RA user 28
10.5.2 Device verification code management initiated by IGRS RA device 29
11 Message exchange 30

11.1 Overview 30
11.2 User or device ↔ User or device message exchange that needs response 30
11.3 User or device ↔ User or device message exchange that does not need response 31
11.4 User or device ↔ IRSP message exchange 32
11.5 IGRS RA server pushes message to user or device 32
11.6 IGRS RA NAT traversal 33
11.7 Message exchange mode 34
11.7.1 Overview 34
11.7.2 Message exchange of “point-to-point” and “point-to- multiple-point” 35
11.7.3 Message exchange of “instant transmission” and “offline storage” 35
12 Logout 35
13 User and device discovery and online status management 36
14 Security 38
Bibliography 39

Figure 1 – Typical flow of IGRS RA service 12
Figure 2 – IGRS RA user or device registration flow 13
Figure 3 – IGRS RA User or Device Login Flow 16
Figure 4 – Flow of relationship establishment request which needs approval from target 20
Figure 5 – Flow of relationship establishment request which does not need approval from target 20
Figure 6 – IGRS RA Relationships 22
Figure 7 – Flow of relationship releasing 27
Figure 8 – Flow of message exchange between user or device and user or device that needs response 30
Figure 9 – Flow of message exchange between user or device and user or device that does not need response 31
Figure 10 – Flow of message exchange between user or device and IRSP 32
Figure 11 – IRSP pushes message to user or device 33
Figure 12 – IGRS RA NAT traversal mechanism 34
Figure 13 – Point-to-point message exchange in IGRS RA system 35
Figure 14 – IGRS RA user or device offline flow 36
Figure 15 – User and device discovery mechanisms in IGRS RA system 37
Figure 16 – Non-uniqueness of user addressing 38

Table 1 – Registration response status code and the contents in the registration response messages 15
Table 2 – Rules of IRSP processing target relationship establishment acceptance response messages 26