

User Data Service (UDS)

Bluetooth® Implementation Conformance Statement (ICS) Proforma

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1 General principles

1.1 Implementation Under Test (IUT) identification

Using the Bluetooth SIG qualification tool, the implementer is expected to declare details about what will be implemented.

1.2 Enforcement of inter-layer dependencies

This ICS includes one or more tables with inter-layer dependencies (ILDs). ILDs are used for specification requirements that are dependent on other supporting specifications. ILDs can refer to an individual ICS item in a separate layer (individual ILD), or it can refer to the full layer (full-layer ILD).

ILDs residing in an X2Core layer will be enforced from the Bluetooth SIG qualification tool in the following conditions, depending on where the referred ILD is residing:

Referred ILD resides in	Individual ILD	Full-layer ILD
Controller layer	Core-Complete configuration, or Referred layer is supported	N/A
Lower HCI layer	HCI is supported	N/A
Upper HCI layer	Core-Host configuration, or UHCI is supported	N/A
Host layer	Core-Host configuration, or Core-Complete configuration, or Referred layer is supported	N/A
X2Core layer	Core-Host configuration, or Core-Complete configuration, or Referred layer is supported	Core-Host configuration, or Core-Complete configuration

Table 1.1: Enforcement of an ILD within the Bluetooth SIG qualification tool

2 ICS declarations

2.1 Versions

Table 0: X.Y Versions

Item	Version	Reference	Status
1	UDS v1.0**	[1] UDS 1.0	Deprecated 2023-02-01. Withdrawn 2024-02-01.
2	UDS v1.1	[3] UDS 1.1	M

Table 1: X.Y.Z Versions

Item	Version	Reference	Status
1	UDS v1.1.1	[5] UDS 1.1.1	C.1

C.1: Optional IF UDS 0/2 “UDS v1.1”, otherwise Excluded.

2.2 Transports

Table 2: Transport Requirements

Item	Transport	Reference	Status
1	Service supported over BR/EDR	[1] 1.5	C.1, C.3
2	Service supported over LE	[1] 1.5	C.2, C.3

C.1: Excluded for this Service IF CORE 41/2 “LE Core Configuration”.

C.2: Excluded for this Service IF CORE 41/1 “BR/EDR Core Configuration”.

C.3: Mandatory to support at least one.

2.3 Service requirements

Table 3: Feature Requirements

Item	Feature	Reference	Status
1	Multiple Clients Support	[1] 1.5.1	O
2	UDS Characteristics exceeding min. default ATT_MTU (e.g. utf8-based characteristic)	[1] 3.1.1	O
3	Local Update of UDS Characteristic Values	[1] 3	O
4	List All Users Procedure	[3] 3.4.2.4	O
5	Delete Users Procedure	[3] 3.4.2.5	O
6	Expose User Names Feature	[3] 3.5.1.2	C.2

C.1: No longer used.

C.2: Excluded IF NOT UDS 3/4 “List All Users Procedure”, otherwise Optional.

** Deprecated versions may not appear in the Bluetooth SIG qualification tool after the deprecation date.
TCRLs published after this date will not allow the use of deprecated versions.

Table 4: Service Requirements

Item	Service	Reference	Status
1	Database Change Increment Characteristic	[1] 3.2	M
2	User Index Characteristic	[1] 3.3	M
3	User Control Point Characteristic	[1] 3.4	M
4	First Name Characteristic	[1] 3.1	O
5	Last Name Characteristic	[1] 3.1	O
6	Email Address Characteristic	[1] 3.1	O
7	Age Characteristic	[1] 3.1	O
8	Gender Characteristic	[1] 3.1	O
9	Weight Characteristic	[1] 3.1	O
10	Height Characteristic	[1] 3.1	O
11	VO2 Max Characteristic	[1] 3.1	O
12	Heart Rate Max Characteristic	[1] 3.1	O
13	Resting Heart Rate Characteristic	[1] 3.1	O
14	Maximum Recommended Heart Rate Characteristic	[1] 3.1	O
15	Aerobic Threshold Characteristic	[1] 3.1	O
16	Anaerobic Threshold Characteristic	[1] 3.1	O
17	Sport Type for Aerobic and Anaerobic Thresholds Characteristic	[1] 3.1	O
18	Date of Threshold Assessment Characteristic	[1] 3.1	O
19	Waist Circumference Characteristic	[1] 3.1	O
20	Hip Circumference Characteristic	[1] 3.1	O
21	Fat Burn Heart Rate Lower Limit Characteristic	[1] 3.1	O
22	Fat Burn Heart Rate Upper Limit Characteristic	[1] 3.1	O
23	Aerobic Heart Rate Lower Limit Characteristic	[1] 3.1	O
24	Aerobic Heart Rate Upper Limit Characteristic	[1] 3.1	O
25	Anaerobic Heart Rate Lower Limit Characteristic	[1] 3.1	O
26	Anaerobic Heart Rate Upper Limit Characteristic	[1] 3.1	O
27	Five Zone Heart Rate Limits Characteristic	[1] 3.1	O
28	Three Zone Heart Rate Limits Characteristic	[1] 3.1	O
29	Two Zone Heart Rate Limits Characteristic	[1] 3.1	O
30	Date of Birth Characteristic	[1] 3.1	O
31	Language Characteristic	[1] 3.1	O
32	Registered User Characteristic	[3] 3.5	C.1
33	Preferred Units	[4]	O
34	High Resolution Height	[4]	O
35	Middle Name	[4]	O
36	Stride Length	[4]	O
37	Handedness	[4]	O
38	Device Wearing Position	[4]	O
39	Four Zone Heart Rate Limits	[4]	O

Item	Service	Reference	Status
40	High Intensity Exercise Threshold	[4]	O
41	Activity Goal	[4]	O
42	Sedentary Interval Notification	[4]	O
43	Caloric Intake	[4]	O

C.1: Mandatory IF UDS 3/4 “List All Users Procedure”, otherwise Optional.

2.4 GATT requirements

Table 5: GATT Requirements

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No longer used	N/A	N/A	N/A
1a	GATT Server over BR/EDR	[1] 1.4	C.3	[2] GATT 1a/4
1b	GATT Server over LE	[1] 1.4	C.4	[2] GATT 1a/3
2	Write Characteristic Value	[1] 1.4	M	[2] GATT 4/14
3	Write Long Characteristic Values	[1] 1.4	C.1	[2] GATT 4/15
4	Read Long Characteristic Values	[1] 1.4	C.1	[2] GATT 4/10
5	Single Notification	[1] 1.4	C.2	[2] GATT 4/17
6	Indications	[1] 1.4	M	[2] GATT 4/18
7	Read Characteristic Descriptors	[1] 1.4	M	[2] GATT 4/19
8	Write Characteristic Descriptors	[1] 1.4	M	[2] GATT 4/21

C.1: Mandatory IF UDS 3/2 “UDS Characteristics exceeding min. default ATT_MTU (e.g. utf8-based characteristic)”, otherwise not defined.

C.2: Mandatory IF UDS 3/3 “Local Update of UDS Characteristic Values”, otherwise not defined.

C.3: Mandatory IF UDS 2/1 “Service supported over BR/EDR”, otherwise not defined.

C.4: Mandatory IF UDS 2/2 “Service supported over LE”, otherwise not defined.

2.5 SDP requirements

Table 6: SDP Requirements

Prerequisite: UDS 2/1 “Service supported over BR/EDR”

Item	Capability	Reference	Status
1	SDP record present for UDS	[1] 4	M
2–3	No longer used	N/A	N/A

3 References

- [1] User Data Service Specification, Version 1.0 or later
- [2] ICS Proforma for Generic Attribute Profile (GATT)
- [3] User Data Service Specification, Version 1.1 or later
- [4] GATT Specification Supplement, Version 1.0 or later
- [5] User Data Service Specification, Version 1.1.1

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2014-06-10	Adopted by Bluetooth SIG Board of Directors.
	1.0.1r00	2017-10-08	TSE 9953 (rating 1): Updated ICS template. Removed Global Statement of Conformance section to align with current template.
1	1.0.1	2018-06-27	Approved by BTI. Prepared for TCRL 2018-1 publication.
	1.0.2r00	2019-04-25	TSE 11188 (rating 4): Updated Table 3, item 1 from “Multiuser” to “Multiple Clients” to align with test renaming.
2	1.0.2r01	2019-06-17	Incorporated BTI review feedback and performed template changes and minor editorial fixes.
	1.1.0r00–r03	2019-07-12 – 2019-09-30	Incorporated UDS 1.1 CR to account for new features specified in the User Data Service 1.1 Specification. Modified and/or added new rows to Table 0, Table 3, and Table 4; added a new reference for UDS V1.1. Renamed Item 2 in Table 3 as per BTI comment. Updated references [2] and [6]. TSE 12755 (rating 2): Removal of Table 1 (Core Specification Versions).
	1.1.0r03	2019-10-06	Approved by BTI.
	1.1.0	2019-10-15	UDS 1.1 specification adopted by the Board of Directors.
3	1.1.0	2019-10-22	Prepared for publication.
	p4r00–r01	2020-11-25 – 2020-11-26	TSE 13105 (rating 4): Added new items 33–43 to Table 4 and added GATT Specification Supplement to the References list. Made many template-related editorials, including adding Publication Number column and setting previous v1.1.0 to p3, removing Support column from all tables, updating logo in footer. Consistency checker fixes and minor editorials.
4	p4	2020-12-22	Approved by BTI on 2020-12-02. Prepared for TCRL 2020-1 publication.
	p4ed2 r00–r01	2021-03-29 – 2021-04-14	TSE 16017 (rating 1): Updated Table 0 with deprecation and withdrawal information. Editorials to align with latest template.
	p4 edition 2	2021-05-25	Approved by BTI on 2021-05-06. Prepared for edition 2 publication.
	p5r00	2021-10-18	TSE 17687 (rating 1): Updated for the latest deprecation and withdrawal dates, and other consistency checker editorials. Performed template-related fixes. Updated copyright page to align with v2 of the DNMD.
5	p5	2022-01-25	Approved by BTI on 2022-01-06. Prepared for TCRL 2021-2 publication.

Publication Number	Revision Number	Date	Comments
	p5ed2r00	2022-02-18	TSE 18375 (rating 1): Updated “is/not supported” language in conditionals globally to align with new conventions.
	p5, edition 2	2022-03-07	Approved by BTI on 2022-03-07. Prepared for edition 2 publication.
	p6r00–r01	2022-03-15 – 2022-05-04	TSE 18726 (rating 1): Editorials to align the document with the latest ICS template in anticipation of a future .Z release. Performed additional template-related formatting fixes.
6	p6	2022-06-28	Approved by BTI on 2022-05-31. Prepared for TCRL 2022-1 publication.
	p7r00–r02	2023-08-30 – 2023-09-20	TSE 23682 (rating 2): In Table 0, marked UDS v1.0 as deprecated and deleted C.1 and C.2. Updated C.1 in Table 2. In Table 3, marked C.1 as no longer used. Resolved GATT and SDP inter-layer dependencies with updates to Tables 5 and 6, including the addition of C.3 and C.4 to Table 5. Updated the references list. Deleted draft revision history comments prior to p0. Editorials to align the document with the latest ICS template.
7	p7	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.
	p7ed2r00	2025-07-11	TSE 27338 (rating 1): Updated the Status for UDS 2/1 and UDS 2/2, added conditions C.1 and C.2, and renumbered the previous C.1 as C.3. Updated the Capability in UDS 5/5.
	p7 edition 2	2025-08-05	Approved by BTI on 2025-08-05. Prepared for edition 2 publication.

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