Call Control Profile (CCP)

Bluetooth® **Implementation Conformance Statement (ICS) Proforma**

- **Revision:** CCP.ICS.p3
- **Revision Date:** 2025-07-08
- **Prepared By:** Generic Audio Working Group
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Contents

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   Roles

Table 1: Role Requirements

Item	Version	Reference	Status
1	Call Control Server	[1] 3	C.1
2	Call Control Client	[1] 4	C.1

C.1:   Mandatory to support at least one.

2.2   Transports

Table 2: Transport Requirements

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

C.1:   Excluded for this Profile IF CORE 41/2 "LE Core Configuration".
C.2:   Excluded for this Profile IF CORE 41/1 "BR/EDR Core Configuration".
C.3:   Mandatory to support at least one.

2.3   Call Control Server role

Table 3: Call Control Server, X.Y Versions

Prerequisite: CCP 1/1 "Call Control Server"

Item	Version	Reference	Status
1	CCP v1.0	[1]	M

Table 4: Call Control Server, X.Y.Z Versions

Table number reserved but not yet in use

2.3.1   Server profile feature

Table 5: Server Features

Prerequisite: CCP 1/1 "Call Control Server"

Item	Service	Reference	Status	Inter-Layer Dependency
1	Telephone Bearer Service	[1] 3	O	[3] TBS 0b/1
2	Generic Telephone Bearer Service	[1] 3	M	[3] TBS 0b/2
3	LE Extended Advertising	[1] 6.1.1.1	M	[4] LL 9/41

2.3.2 GAP requirements

Table 6: GAP Requirements – Call Control Server Role

Prerequisite: CCP 1/1 "Call Control Server"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE security mode 1	[1] 5.1	C.1	[2] GAP 25/1 OR GAP 35/1
2	Bondable mode (LE)	[1] 5.1.2	C.1	[2] GAP 24/2 OR GAP 34/2
3	Bondable mode (BR/EDR)	[1] 5.1.2	C.2	[2] GAP 1/7
4	Unauthenticated Pairing (LE security mode 1 level 2) with LE Secure Connections Pairing only	[1] 5.1.2	C.7	[2] GAP 25/11 OR GAP 35/11
5	Authenticated Pairing (LE security mode 1 level 3) with LE Secure Connections Pairing only	[1] 5.1.2	C.7	[2] GAP 25/12 OR GAP 35/12
6	LE security mode 1 level 4	[1] 5.1.2	C.7	[2] GAP 25/9 OR GAP 35/9
7	Minimum 128 Bit entropy key (LE)	[1] 5.1	C.3	[2] GAP 25/13 OR GAP 35/13
8	Derivation of LE LTK from BR/EDR Link Key	[1] 5.1	C.9	[2] GAP 41/2b OR GAP 43/2b
9	Security mode 4, level 2	[1] 5.2	C.5	[2] GAP 2/7c
10	128-bit encryption key size capable (BR/EDR)	[1] 5.2	C.5	[2] GAP 2/13
11	Derivation of BR/EDR Link Key from LE LTK	[1] 5.2	C.8	[2] GAP 41/2a OR GAP 43/2a
12	BR/EDR Secure Connections	[1] 5.2	C.8	N/A
13	LE Secure Connections	[1] 5.1	C.9	[2] GAP 27b/5 OR GAP 37b/5
14	Out of Band (LE)	[1] 5.1	C.9	[2] GAP 27b/9 OR GAP 37b/9
15	Out-of-Band (BR/EDR)	[1] 5.2	C.8	[2] GAP 2/14

C.1:   Mandatory IF CCP 2/2 "Profile supported over LE", otherwise not defined.

C.2:   Optional IF CCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

C.3:   Mandatory IF CCP 6/4 "Unauthenticated Pairing (LE security mode 1 level 2) with LE Secure Connections Pairing only" OR CCP 6/5 "Authenticated Pairing (LE security mode 1 level 3) with LE Secure Connections Pairing only", otherwise not defined.

C.4:   No longer used.

C.5:   Mandatory IF CCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

C.6:   No longer used.

C.7:   Mandatory to support at least one IF CCP 2/2 "Profile supported over LE", otherwise not defined.

C.8:   Mandatory to support at least one IF CCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

C.9:   Mandatory to support at least one IF CCP 2/2 "Profile supported over LE", otherwise not defined.

<div align="center">**Table 7: No longer used**</div>

2.4   Call Control Client role

<div align="center">**Table 8: Call Control Client, X.Y Versions**</div>

Prerequisite: CCP 1/2 "Call Control Client"

Item	Version	Reference	Status
1	CCP v1.0	[1]	M

<div align="center">**Table 9: Call Control Client, X.Y.Z Versions**</div>

<div align="center">**Table number reserved but not yet in use**</div>

2.4.1   Services Support - Call Control Client role

<div align="center">**Table 10: Call Control Server Support**</div>

Prerequisite: CCP 1/2 "Call Control Client"

Item	Service	Reference	Status
1	Discover Telephone Bearer Service	[1] 4	C.1
2	Discover Generic Telephone Bearer Service	[1] 4	C.1

C.1:   Mandatory to support at least one.

2.4.1.1   Telephone Bearer Service Support

<div align="center">**Table 11: Telephone Bearer Service Characteristic Support by Client**</div>

Prerequisite: CCP 10/1 "Discover Telephone Bearer Service"

Item	Characteristic	Reference	Status
1	Bearer Provider Name Characteristic	[1] 4.4.1	O
2	Bearer UCI Characteristic	[1] 4.4.2	O
3	Bearer Technology Characteristic	[1] 4.4.3	O
4	Bearer URI Schemes Supported List Characteristic	[1] 4.4.4	O
5	Bearer Signal Strength Characteristic	[1] 4.4.5	O
6	Bearer Signal Strength Reporting Interval Characteristic	[1] 4.4.6	C.1
7	Bearer List Current Calls Characteristic	[1] 4.4.8	O
8	Content Control ID Characteristic	[1] 4.4.9	O
9	Status Flags Characteristic	[1] 4.4.11	O
10	Incoming Call Target Bearer URI Characteristic	[1] 4.4.10	O
11	Call State Characteristic	[1] 4.4.12	M
12	Call Control Point Characteristic	[1] 4.4.13	O
13	Call Control Point Optional Opcodes Characteristic	[1] 4.4.14	O
14	Termination Reason Characteristic	[1] 4.5.1	O
15	Incoming Call Characteristic	[1] 4.4.15	O

Item	Characteristic	Reference	Status
16	Call Friendly Name Characteristic	[1] 4.4.16	O

C.1:   Mandatory IF CCP 11/5 "Bearer Signal Strength Characteristic", otherwise Excluded.

Table 12: Telephone Bearer Service Procedure Requirements

Prerequisite: CCP 10/1 "Discover Telephone Bearer Service"

Item	Procedure	Reference	Status
1	Read Bearer Provider Name	[1] 4.4.1	O
2	Read Bearer UCI	[1] 4.4.2	O
3	Read Bearer Technology	[1] 4.4.3	O
4	Read Bearer URI Schemes Supported List	[1] 4.4.4	O
5	Read Bearer Signal Strength	[1] 4.4.5	O
6	Read Bearer Signal Strength Reporting Interval	[1] 4.4.6	O
7	Set Bearer Signal Strength Reporting Interval	[1] 4.4.7	O
8	Read Bearer List Current Calls	[1] 4.4.8	O
9	Read Content Control ID	[1] 4.4.9	O
10	Read Status Flags	[1] 4.4.11	O
11	Read Incoming Call Target Bearer URI	[1] 4.4.10	O
12	Read Call State	[1] 4.4.12	M
13	Answer Incoming Call	[1] 4.4.13.1	O
14	Terminate Call	[1] 4.4.13.2	O
15	Move Call To Local Hold	[1] 4.4.13.3	O
16	Move Locally Held Call To Active Call	[1] 4.4.13.4	O
17	Move Locally Held Call To Remotely Held	[1] 4.4.13.5	O
18	Originate Call	[1] 4.4.13.6	O
19	Join Calls	[1] 4.4.13.7	O
20	Read Call Control Point Optional Opcodes	[1] 4.4.14	O
21	Read Incoming Call	[1] 4.4.15	O
22	Read Call Friendly Name	[1] 4.4.16	O

2.4.1.2   Generic Telephone Bearer Server

Table 13: Generic Telephone Bearer Service Characteristic Support by Client

Prerequisite: CCP 10/2 "Discover Generic Telephone Bearer Service"

Item	Feature	Reference	Status
1	Bearer Provider Name Characteristic	[1] 4.4.1	O
2	Bearer UCI Characteristic	[1] 4.4.2	O
3	Bearer Technology Characteristic	[1] 4.4.3	O
4	Bearer URI Schemes Supported List Characteristic	[1] 4.4.4	O
5	Bearer Signal Strength Characteristic	[1] 4.4.5	O

Item	Feature	Reference	Status
6	Bearer Signal Strength Reporting Interval Characteristic	[1] 4.4.6	C.1
7	Bearer List Current Calls Characteristic	[1] 4.4.8	O
8	Content Control ID Characteristic	[1] 4.4.9	O
9	Status Flags Characteristic	[1] 4.4.11	O
10	Incoming Call Target Bearer URI Characteristic	[1] 4.4.10	O
11	Call State Characteristic	[1] 4.4.12	M
12	Call Control Point Characteristic	[1] 4.4.13	O
13	Call Control Point Optional Opcodes Characteristic	[1] 4.4.14	O
14	Termination Reason Characteristic	[1] 4.5.1	O
15	Incoming Call Characteristic	[1] 4.4.15	O
16	Call Friendly Name Characteristic	[1] 4.4.16	O

C.1:   Mandatory IF CCP 13/5 "Bearer Signal Strength Characteristic", otherwise Excluded.

Table 14: Generic Telephone Bearer Service Procedure Requirements

Prerequisite: CCP 10/2 "Discover Generic Telephone Bearer Service"

Item	Procedure	Reference	Status
1	Read Bearer Provider Name	[1] 4.4.1	O
2	Read Bearer UCI	[1] 4.4.2	O
3	Read Bearer Technology	[1] 4.4.3	O
4	Read Bearer URI Schemes Supported List	[1] 4.4.4	O
5	Read Bearer Signal Strength	[1] 4.4.5	O
6	Read Bearer Signal Strength Reporting Interval	[1] 4.4.6	O
7	Set Bearer Signal Strength Reporting Interval	[1] 4.4.7	O
8	Read Bearer List Current Calls	[1] 4.4.8	O
9	Read Content Control ID	[1] 4.4.9	O
10	Read Status Flags	[1] 4.4.11	O
11	Read Incoming Call Target Bearer URI	[1] 4.4.10	O
12	Read Call State	[1] 4.4.12	M
13	Answer Incoming Call	[1] 4.4.13.1	O
14	Terminate Call	[1] 4.4.13.2	O
15	Move Call To Local Hold	[1] 4.4.13.3	O
16	Move Locally Held Call To Active Call	[1] 4.4.13.4	O
17	Move Locally Held Call To Remotely Held	[1] 4.4.13.5	O
18	Originate Call	[1] 4.4.13.6	O
19	Join Calls	[1] 4.4.13.7	O
20	Read Call Control Point Optional Opcodes	[1] 4.4.14	O
21	Read Incoming Call	[1] 4.4.15	O
22	Read Call Friendly Name	[1] 4.4.16	O

2.4.2 GAP requirements

Table 15: GAP Requirements – Call Control Client Role

Prerequisite: CCP 1/2 "Call Control Client"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Bondable mode (BR/EDR)	[1] 5.2	C.1	[2] GAP 1/7
2	LE security mode 1	[1] 5.2	C.2	[2] GAP 25/1 OR GAP 35/1
3	Bondable mode (LE)	[1] 5.2	C.2	[2] GAP 24/2 OR GAP 34/2
4	Bonding procedure	[1] 5.2	C.2	[2] GAP 24/3 OR GAP 34/3
5	Unauthenticated Pairing (LE security mode 1 level 2) with LE Secure Connections Pairing only	[1] 5.1.1	O	[2] GAP 25/11 OR GAP 35/11
6	Authenticated Pairing (LE security mode 1 level 3) with LE Secure Connections Pairing only	[1] 5.1.1	O	[2] GAP 25/12 OR GAP 35/12
7	LE security mode 1 level 4	[1] 5.1.1	O	[2] GAP 25/9 OR GAP 35/9
8	Minimum 128 Bit entropy key (LE)	[1] 5.1	C.4	[2] GAP 25/13 OR GAP 35/13
9	Derivation of LE LTK from BR/EDR Link Key	[1] 5.1	C.8	[2] GAP 41/2b OR GAP 43/2b
10	Security mode 4, level 2	[1] 5.2	C.3	[2] GAP 2/7c
11	128-bit encryption key size capable (BR/EDR)	[1] 5.2	C.3	[2] GAP 2/13
12	Derivation of BR/EDR Link Key from LE LTK	[1] 5.2	C.7	[2] GAP 41/2a OR GAP 43/2a
13	BR/EDR Secure Connections	[1] 5.2	C.7	N/A
14	LE Secure Connections	[1] 5.1	C.8	[2] GAP 27b/5 OR GAP 37b/5
15	Out of Band (LE)	[1] 5.1	C.8	[2] GAP 27b/9 OR GAP 37b/9
16	Out-of-Band (BR/EDR)	[1] 5.2	C.7	[2] GAP 2/14

C.1: Optional IF CCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

C.2: Mandatory IF CCP 2/2 "Profile supported over LE", otherwise not defined.

C.3: Mandatory IF CCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

C.4: Mandatory IF CCP 15/5 "Unauthenticated Pairing (LE security mode 1 level 2) with LE Secure Connections Pairing only" OR CCP 15/6 "Authenticated Pairing (LE security mode 1 level 3) with LE Secure Connections Pairing only", otherwise not defined.

C.5–C.6: No longer used.

C.7: Mandatory to support at least one IF CCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

C.8: Mandatory to support at least one IF CCP 2/2 "Profile supported over LE", otherwise not defined.

Table 16: No longer used

2.4.3   GATT requirements

Table 17: GATT Requirements

Prerequisite: CCP 1/2 "Call Control Client"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	GATT Client over BR/EDR	[1] 4.1	C.1	[5] GATT 1a/2
2	GATT Client over LE	[1] 4.1	C.2	[5] GATT 1a/1
3	Discover All Primary Services	[1] 4.1	C.3	[5] GATT 3/2
4	Discover Primary Services by Service UUID	[1] 4.1	C.3	[5] GATT 3/3
5	Find Included Services	[1] 4.1	O	[5] GATT 3/4
6	Discover All Characteristics of a Service	[1] 4.1	C.4	[5] GATT 3/5
7	Discover Characteristics by UUID	[1] 4.1	C.4	[5] GATT 3/6
8	Discover All Characteristic Descriptors	[1] 4.1	M	[5] GATT 3/7
9	Single Notification	[1] 4.1	M	[5] GATT 3/17
10	Read Characteristic Value	[1] 4.1	M	[5] GATT 3/8
11	Read Long Characteristic Values	[1] 4.1	M	[5] GATT 3/10
12	Write Characteristic Value	[1] 4.1	C.5	[5] GATT 3/14
13	Write without Response	[1] 4.1	C.5	[5] GATT 3/12
14	Read Characteristic Descriptors	[1] 4.1	M	[5] GATT 3/19
15	Write Characteristic Descriptors	[1] 4.1	M	[5] GATT 3/21

C.1:   Mandatory IF CCP 2/1 "Profile supported over BR/EDR", otherwise not defined.

C.2:   Mandatory IF CCP 2/2 "Profile supported over LE", otherwise not defined.

C.3:   Mandatory to support at least one.

C.4:   Mandatory to support at least one.

C.5:   Mandatory to support at least one.

3 References

[1]   Call Control Profile Specification, Version 1.0

[2]   ICS Proforma for Generic Access Profile (GAP)

[3]   ICS Proforma for Telephone Bearer Service (TBS)

[4]   ICS Proforma for Link Layer (LL)

[5]   ICS Proforma for Generic Attribute Profile (GATT)

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	p0	2021-03-16	Approved by BTI on 2021-02-15. CCP v1.0 adopted by the BoD on 2021-03-09. Prepared for publication.
	p1r00–r02	2021-04-16 – 2021-05-30	TSE 16755 (rating 1): Updated the inter-layer dependencies in GAP Tables 6 and 15. Consistency checker fixes.
1	p1	2021-07-13	Approved by BTI on 2021-06-01. Prepared for TCRL 2021-1 publication.
	p1ed2r00	2022-01-25	TSE 18187 (rating 1): Updated Link Layer inter-layer dependency item in Table 5 to align with updates made in the LL ICS. Made template-related fixes, including aligning the copyright page with v2 of the DNMD.
	p1 edition 2	2022-01-27	Approved by BTI on 2022-01-27. Prepared for edition 2 publication.
	p1ed3r00	2023-02-14	TSE 22634 (rating 1): Updated ILD references to Security Manager 8/1 to SM 8a/1 (for Central role) or SM 8b/1 (for Peripheral role) in Tables 7 and 16. Updated references. Editorials to align the document with the latest ICS template.
	p1 edition 3	2023-03-15	Approved by BTI on 2023-03-13. Prepared for edition 3 publication.
	p2r00–r04	2023-10-04 – 2023-11-28	TSE 23344 (rating 2): To resolve GAP/SM ILDs: Removed the item for SM ICS from the References section and updated cross-refs throughout the doc. Updated "or" to "OR" in ILDs throughout the doc. In Table 6, added items 6/12–6/15 and updated conditionals and statuses accordingly. Removed SM requirements heading and deleted Table 7. Updated service names of 10/1 and 10/2 and related prerequisites for Tables 11–14. In Table 15, added items 15/13–15/16 and updated conditionals and statuses accordingly. Removed SM requirements heading and deleted Table 16. TSE 24107 (rating 1): Replaced GTBS reference in 5/2 and updated TBS reference in 5/1.
2	p2	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.
	p3r00–r02	2025-02-19 – 2025-05-15	TSE 26835 (rating 2): Added Table 17. Updated the References section. Applied the current ICS template. TSE 27365 (rating 1): Updated the Status value for CCP 2/1 and CCP 2/2. In Table 2, added conditions C.1 and C.2 and renumbered C.1 as C.3.
3	p3	2025-07-08	Approved by BTI on 2025-05-30. Prepared for TCRL pkg100 publication.

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