Enabler Test Specification for SUPL V2.0

Candidate Version 2.0 – 18 Aug 2009

Open Mobile Alliance

OMA-ETS-SUPL-V2_0-20090818-C

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1. Scope

This document describes in detail available test cases for SUPL V2.0, OMA-ERP-SUPL-V2_0.

URL:http://www.openmobilealliance.org/

The test cases are split in two categories, conformance and interoperability test cases.

The conformance test cases are aimed to verify the adherence to normative requirements described in the technical specifications.

The interoperability test cases are aimed to verify that implementations of the specifications work satisfactory.

If either conformance or interoperability tests do not exists at the creation of the test specification this part should be marked not available.

2. References

2.1 Normative References

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997, URL:http://www.ietf.org/rfc/rfc2119.txt

[IOPPROC] "OMA Interoperability Policy and Process", Version 1.8, Open Mobile Alliance™, OMA-ORG-IOP_Process-V1_8, URL:http://www.openmobilealliance.org/

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997, URL:http://www.ietf.org/rfc/rfc2119.txt

[RFC2234] "Augmented BNF for Syntax Specifications: ABNF". D. Crocker, Ed., P. Overell. November 1997, URL:http://www.ietf.org/rfc/rfc2234.txt

[ERELD] "Enabler Release Document for SUPL", Version 2.0, Open Mobile Alliance™, OMA-ERELD-SUPL-V2_0, URL:http://www.openmobilealliance.org/

[OMA-RLP] "Inter-Location Server Interface Specification", Version 1.0, Open Mobile Alliance™, OMA-TS-RLP-Spec-V1.0, URL:http://www.openmobilealliance.org/

[TLS] "Transport Layer Security (TLS) Version 1.0", IETF RFC 2246, Jan 1999

URL:http://www.ietf.org/rfc/rfc2446.txt

[WAP] "Wireless Application Protocol", Version 2.0, Open Mobile Alliance™, Aug 2002, URL: http://www.openmobilealliance.org/tech/affiliates/wap/technical_wap2_0-20020813.zip

[WAP PAP] "WAP Push Access Protocol", Open Mobile Alliance™, Apr 2001, URL: http://www.openmobilealliance.org/tech/affiliates/wap/wap-247-pap-20010429-a.pdf

[WAP POTAP] "WAP Push Over The Air Protocol", Open Mobile Alliance™, Apr 2001 URL: http://www.openmobilealliance.org/tech/affiliates/wap/wap-235-pushota-20010425-a.pdf

[WAP PUSH] "WAP Push Message", Open Mobile Alliance™, Mar 2001, URL: http://www.openmobilealliance.org/tech/affiliates/wap/wap-251-pushmessage-20010322-a.pdf

[GBA] 3GPP TS 33.220 v6.2.0 "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Generic Authentication Architecture (GAA); Generic bootstrapping architecture (Release 6) "3GPP TS 33.220 v6.2.0. URL: http://www.3gpp.org/ftp/Specs/html-info/33220.htm

[GAA] 3GPP TS 33.222 v6.1.0 "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Generic Authentication Function; Access to Network Application Functions using Hypertext Transfer Protocol over Transport Layer Security (HTTPS); (Release 6)". URL: http://www.3gpp.org/ftp/Specs/html-info/33222.htm

[TLS-AES] "Advanced Encryption Standard (AES) Ciphersuites for Transport Layer Security (TLS)", IETF RFC 3268, June 2002. URL: http://www.ietf.org/rfc/rfc3268.txt

[OMA-ULP] "UserPlane for Location Protocol", Version 2.0, Open Mobile Alliance™, OMA-TS-ULP-Spec-V2.0, URL:http://www.openmobilealliance.org/

[OMA-ILP] "Internal Location Protocol", Version 2.0, Open Mobile Alliance™, OMA-TS-ILP-Spec-V2.0, URL:http://www.openmobilealliance.org/

2.2 Informative References

[OMADICT] "Dictionary for OMA Specifications", Version 2.7, Open Mobile Alliance™, OMA-ORG-Dictionary-V2_7, URL:http://www.openmobilealliance.org/

3. Terminology and Conventions

3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope”, are normative, unless they are explicitly indicated to be informative.

The following numbering scheme is used:

xxx-y.z-con-number where:

xxx	Name of enabler, e.g. MMS or Browsing
y.z	Version of enabler release, e.g. 1.2 or 1.2.1
’con’	Indicating this test is a conformance test case
number	Leap number for the test case

Or

xxx-y.z-int-number where:

xxx	Name of enabler, e.g. MMS or Browsing
y.z	Version of enabler release, e.g. 1.2 or 1.2.1
’int’	Indicating this test is a interoperability test case
number	Leap number for the test case

3.2 Definitions

MLS application	An application which requests and consumes the location information
Network Initiated SUPL Services	Network Initiated SUPL Services are services which originate from within the SUPL network as opposed to the SET. For these services, the SUPL Agent resides in the Network.
Non-Proxy Mode	The SPC system will have direct communication with the SET.
Proxy Mode	The SPC system will not have direct communication with the SET. In this environment the SLC system will act as a proxy between the SET and the SPC.
SET Initiated SUPL Services	SET Initiated SUPL Services are services which originate from the SET. For these services, the SUPL Agent resides within the SET.
SUPL Agent	Service access point which accesses the network resources to obtain location information.
SUPL Enabled Terminal (SET)	A device that is capable of communicating with a SUPL network. Examples of this could be a UE in UMTS, a MS in GSM or IS-95, or a PC over an IP-based transport.
SUPL Location Centre (SLC)	Coordinates the operations of SUPL in the network and interacts with the SUPL Enabled Terminal (SET) over User Plane bearer.
SUPL Location Platform (SLP)	Entity responsible for SUPL Service Management and Position Determination. SLP contains the SLC and SPC Functions.
SUPL Positioning Centre (SPC)	Entity in the SUPL network responsible for all messages and procedures required for position calculation and for the delivery of assistance data.

3.3 Abbreviations

ACA	Alternative Client authentication
AFLT	Advanced Forward Link Trilateration
A-GPS	Assisted GPS
CID	Cell ID
CI	Cell Identity (3GPP)
ECID	Enhanced Cell ID

EOTD	Enhanced Observed Time Difference
E-SLP	Emergency SLP
FFS	For Further Study
FQDN	Fully Qualified Domain Name
GANSS	Galileo and Additional Navigation Satellite Systems
GMLC	Gateway Mobile Location Centre
GMT	Greenwich Mean Time
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
H-SLP	Home SLP
IMSI	International Mobile Subscriber Identity
IP	Internet Protocol
LAC	Location Area Code (3GPP)
LCS	Location Services
MAC	Message Authentication Code
MCC	Mobile Country Code (3GPP)
MLC	Mobile Location Centre
MLP	Mobile Location Protocol
MLS	Mobile Location Services
MNC	Mobile Network Code (3GPP)
MNO	Mobile Network Operator
MSID	Mobile Station Identifier
NID	Network ID (C.S0022-A V1.0)
NMR	Network Measurement Report
OMA	Open Mobile Alliance
OTDOA	Observed Time Difference of Arrival
PAP	WAP Push Access Protocol
PPG	Push Proxy Gateway
QoP	Quality of Position
RLP	Roaming Location Protocol
RRC	Radio Resource Control
RRLP	Radio Resource LCS Protocol
R-SLP	Requesting SLP
RNC	Radio Network Controller
SET	SUPL Enabled Terminal
SIM	Subscriber Identity Module
SIP	Session Initiation Protocol
SLC	SUPL Location Centre
SLIA	Standard Location Immediate Answer
SLIR	Standard Location Immediate Request
SLP	SUPL Location Platform
SMLC	Serving Mobile Location Centre
SMS	Short Message Service

SMSC	Short Message Service Centre
SPC	SUPL Positioning Centre
SPCF	SUPL Position Calculation Function
SPF	SUPL Privacy Function
SRLIA	Standard Roaming Location Immediate Answer
SRLIR	Standard Roaming Location Immediate Request
SRRF	SUPL Reference Retrieval Function
SSF	SUPL Security Function
SSMF	SUPL Service Management Function
TBD	To Be Developed
TLS	Transport Layer Security
UE	User Equipment
ULP	Userplane Location Protocol
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
V-SLP	Visited SLP
V-SPC	Visited SPC
WAP	Wireless Application Protocol

4. Introduction

The purpose of this document is to provide test cases for SUPL Enabler Release 2.0.

The implementation of some features is optional for the Clients and/or the Servers in the SUPL Enabler. The tests associated with these optional features are marked as "(Includes Optional Features)" in the test specification.

4.1 Running Test Cases

Some Test Cases are made up of multiple Tests (e.g. Test 1, Test 2, …….). These Tests are independent of each other and are only grouped together for convenience. These Tests may or may not all be relevant to a particular SET or SLP and applicabilities are given separately for each Test.

Some Test Cases are made up of multiple Cases (e.g. Case 1, Case 2, …….). These Cases are all part of the one Test Case and should all be run as part of the Test Case. In particular, to pass the complete Test Case the SET or SLP must pass every Case.

5. SUPL Client Conformance Test Cases

This table lists test cases for features in SUPL 2.0 that have not changed since SUPL 1.0. Therefore the same test cases have been re-used from [SUPL 1.0 ETS], except that the formatting of the Test Procedure has been modified in accordance with the format used in this document, the Specification References and SCRs have been updated for SUPL 2.0 and, clearly, SUPL 2.0 protocol (Version numbers etc.) will be used when the Test Cases are run.

SUPL 1.0 Test Case	**Equivalent SUPL 2.0 Test Case**
SUPL-1.0-con-002 - Correct Session ID	SUPL-2.0-con-004 - Correct Session ID
SUPL-1.0-con-003 - Invalid SET Session ID.	SUPL-2.0-con-005 - Invalid SET Session ID
SUPL-1.0-con-004 - Missing or invalid SLP Session ID	SUPL-2.0-con-006 - Missing or invalid SLP Session ID
SUPL-1.0-con-010 - WAP Push and, or MT SMS support	SUPL-2.0-con-000 – SUPL INIT delivery – Test 1: OMA Push, Test 2: MT SMS
SUPL-1.0-con-013 - Incorrect WAP Push message content	SUPL-2.0-con-001 - Incorrect OMA Push message content
SUPL-1.0-con-014 - Incorrect MT SMS message content	SUPL-2.0-con-002 - Incorrect MT SMS message content
SUPL-1.0-con-023 – Alternative H-SLP Addresses	SUPL-2.0-con-007 – Alternative H-SLP Addresses
SUPL-1.0-con-024 – Optional Ciphering Suite	SUPL-2.0-con-008 – Optional Ciphering Suites – Test 1 TSL_RSA_WITH_3DES_EDE_CBC_SHA
SUPL-1.0-con-270 - No notification & no verification	SUPL-2.0-con-020 - No notification & no verification
SUPL-1.0-con-271 - Notification only	SUPL-2.0-con-021 - Notification only
SUPL-1.0-con-272 - Notification and verification (Allowed on no answer). User accepts	SUPL-2.0-con-022 - Notification and verification. Case 1 Allowed on no answer. User accepts. (See note)
SUPL-1.0-con-273 - Notification and verification (Allowed on no answer). User rejects	SUPL-2.0-con-022 - Notification and verification. Case 2 - Allowed on no answer. User rejects. (See note)
SUPL-1.0-con-274 - Notification and verification (Allowed on no answer). No response	SUPL-2.0-con-022 - Notification and verification. Case 3 - Allowed on no answer. No response. (See note)
SUPL-1.0-con-275 - Notification and verification (Denied on no answer). User accepts	SUPL-2.0-con-022 - Notification and verification. Case 4 - Denied on no answer. User accepts. (See note)
SUPL-1.0-con-276 - Notification and verification (Denied on no answer). User rejects	SUPL-2.0-con-022 - Notification and verification. Case 5 - Denied on no answer. User rejects. (See note)
SUPL-1.0-con-277 - Notification and verification (Denied on no answer). No response	SUPL-2.0-con-022 - Notification and verification. Case 6 - Denied on no answer. No response. (See note)
SUPL-1.0-con-278 - Privacy override	SUPL-2.0-con-023 - Privacy override (See note)
SUPL-1.0-con-279 – Requestor ID and Client Name	SUPL-2.0-con-024 – Requestor ID and Client Name (See note)
SUPL-1.0-con-030 – 1 - Common Positioning method	SUPL-2.0-con-030 - Positioning method – Test 1 A-GPS SET assisted
SUPL-1.0-con-030 – 2 - Common Positioning method	SUPL-2.0-con-030 - Positioning method – Test 2 A-GPS SET based
SUPL-1.0-con-030 – 3 - Common Positioning method	SUPL-2.0-con-030 - Positioning method – Test 3 Autonomous GPS
SUPL-1.0-con-030 – 6 - Common Positioning method	SUPL-2.0-con-030 - Positioning method – Test 5 Cell ID
SUPL-1.0-con-031 – 3 – Preferred or fallback Positioning method	SUPL-2.0-con-030 - Positioning method – Test 11 A-GPS Preferred methods
SUPL-1.0-con-033-1 - No Position. Test 1: Basic functionality	SUPL-2.0-con-031 – No Position
SUPL-1.0-con-062 - Unexpected data value.	To be written
SUPL-1.0-con-063 - Unexpected message	To be written
SUPL-1.0-con-066 - Timeout UT2 - non Cell ID	SUPL-2.0-con-070 - Timeout UT2 – Test 1

SUPL-1.0-con-067 - Timeout UT2 - Cell ID.	SUPL-2.0-con-070 - Timeout UT2 – Test 3
SUPL-1.0-con-068 - Timeout UT3	SUPL-2.0-con-071 - Timeout UT3 – Test 1
SUPL-1.0-con-102 - Correct Session ID.	SUPL-2.0-con-100 - Correct Session ID.
SUPL-1.0-con-103 - Invalid SET Session ID.	SUPL-2.0-con-101 - Invalid SET Session ID.
SUPL-1.0-con-104 - Invalid SLP Session ID.	SUPL-2.0-con-102 – Invalid SLP Session ID.
SUPL-1.0-con-130 – 1 - Common Positioning method (non Cell ID methods)	SUPL-2.0-con-110 - Positioning method – Test 1 A-GPS SET assisted
SUPL-1.0-con-130 – 2 - Common Positioning method (non Cell ID methods	SUPL-2.0-con-110 - Positioning method – Test 2 A-GPS SET based
SUPL-1.0-con-130 – 3 - Common Positioning method (non Cell ID methods	SUPL-2.0-con-110 - Positioning method – Test 3 Autonomous GPS
SUPL-1.0-con-131 – 2 - Common Positioning method (Cell ID methods	SUPL-2.0-con-110 - Positioning method – Test 5 Cell ID
SUPL-1.0-con-031 – 3 – Preferred or fallback Positioning method	SUPL-2.0-con-030 - Positioning method – Test 11 A-GPS Preferred methods
SUPL-1.0-con-381 - Previous position stored in SLP meets QoP	To be written
SUPL-1.0-con-165 - Timeout UT1	SUPL-2.0-con-140 - Timeout UT1
SUPL-1.0-con-166 - Timeout UT2 - non Cell ID	SUPL-2.0-con-141 - Timeout UT2
SUPL-1.0-con-168 - Timeout UT3	SUPL-2.0-con-142 - Timeout UT3

Note: The Pass-Criteria has been modified slightly for consistency

5.1 Client Conformance: Network Initiated

5.1.1 Common Part of ULP Message, Basic Functionality and Cross Version Compatibility

5.1.1.1 SUPL-2.0-con-000 – SUPL INIT delivery [Includes optional features].

Test Case Id	SUPL-2.0-con-000
Test Object	Client
Test Case Description	To test SET correctly supports SUPL INIT delivery using OMA Push and, if supported, MT SMS and, or SIP Push
Specification Reference	ULP TS 8
SCR Reference	ULP-PIN-C-004-M, ULP-PIN-C-005-M, ULP-PIN-C-006-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 2: ics_MT_SMS Test 3: ics_SIP_Push Note that it is assumed that the SET supports GSM/WCDMA/TD-SCDMA/LTE and therefore support of OMA Push is mandatory and support of other methods is optional.

Test Procedure	Test 1: OMA Push Test 2: MT SMS [Includes optional features] Test 3: SIP Push [Includes optional features] 1. Start a NI Location Session 2. Send SUPL INIT using: Test 1: OMA Push Access Protocol with: o Case 1: ▪ content type set to 0X03020312 ▪ x-application-id-field set to 0X90 o Case 2: ▪ content type set to application/vnd.omaloc-supl-init ▪ x-application-id-field set to x-oma-aplication:ulp.ua. Test 2: MT SMS Test 3: SIP Push 3. Ensure the Location Session completes successfully.
Pass-Criteria	Test 1, Case 1, Case 2, Test 2 and Test 3: 1. At step 3 in each case and in each test the Location Session shall complete successfully.

5.1.1.2 SUPL-2.0-con-001 – Incorrect OMA Push message content

Test Case Id	SUPL-2.0-con-001
Test Object	Client
Test Case Description	To test SET correctly rejects incorrect OMA Push message content
Specification Reference	ULP TS 8
SCR Reference	ULP-PIN-C-004-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Note that it is assumed that the SET supports GSM/WCDMA/TD-SCDMA/LTE and therefore support of OMA Push is mandatory

Test Procedure	1. Start a NI Location Session 2. Send SUPL INIT using: OMA Push Access Protocol with: o Case 1: ▪ content type set to some other value than 0X03020312 ▪ x-application-id-field set to 0X90 o Case 2: ▪ content type set to 0X03020312 ▪ x-application-id-field set to some other value than 0X90 o Case 3: ▪ content type set to some other value than application/vnd.omaloc-supl-init ▪ x-application-id-field set to x-oma-aplication:ulp.ua. o Case 4: ▪ content type set to application/vnd.omaloc-supl-init ▪ x-application-id-field set to some other value than ulp.ua. 3. The SET does not respond.
Pass-Criteria	1. At step 3 in each case the SET shall not respond

5.1.1.3 SUPL-2.0-con-002 – Incorrect MT SMS message content [Includes optional features].

Test Case Id	SUPL-2.0-con-002
Test Object	Client
Test Case Description	To test SET correctly rejects incorrect MT SMS message content
Specification Reference	ULP TS 8
SCR Reference	ULP-PIN-C-005-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_MT_SMS Note that it is assumed that the SET supports GSM/WCDMA/TD-SCDMA/LTE and therefore support of MT SMS is optional.
Test Procedure	1. Start a NI Location Session 2. Send SUPL INIT using: MT SMS with: ▪ The port number set to some other value than oma-ulp 7275/ udp OMA User Plane Location Protocol 3. The SET does not respond.

Pass-Criteria	1. At step 3 the SET shall not respond

5.1.1.4 SUPL-2.0-con-003 – Incorrect SIP Push message content [Includes optional features].

Test Case Id	SUPL-2.0-con-003
Test Object	Client
Test Case Description	To test SET correctly rejects incorrect SIP Push message content
Specification Reference	ULP TS 8
SCR Reference	ULP-PIN-C-006-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_SIP_Push
Test Procedure	1. Start a NI Location Session 2. Send SUPL INIT using: SIP Push with: o Case 1: ▪ Application Resource Identifier in Accept-Contact header set to some other value than ulp.ua o Case 2: ▪ Content-Type header set to some other value than application/vnd.omaloc-supl-init 3. The SET does not respond.
Pass-Criteria	1. At step 3 in both cases the SET shall not respond

5.1.1.5 SUPL-2.0-con-004 - Correct Session ID

Test Case Id	SUPL-2.0-con-004
Test Object	Client
Test Case Description	To test SET correctly actions Session ID
Specification Reference	ULP TS 9, 10
SCR Reference	
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:
Test Procedure	1. Case 1, Case 2 and Case 3: Start a NI Location Session 2. Send SUPL INIT with: SLP Session ID set to a valid value with:

	○ SLP ID using the Parameter type: ▪ Case 1: IPAddress, IPv4 ▪ Case 2: IPAddress, IPv6 ▪ Case 3: FQDN 3. The SET sends SUPL POS INIT with: Correct full Session ID 4. The Location Session completes successfully
Pass-Criteria	1. At step 3 in each case the SET shall respond with SUPL POS INIT with: Correct full Session ID

5.1.1.6 SUPL-2.0-con-005 - Invalid SET Session ID

Test Case Id	SUPL-2.0-con-005
Test Object	Client
Test Case Description	To test SET correctly rejects an invalid SET Session ID
Specification Reference	ULP TS 9, 10
SCR Reference	
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:
Test Procedure	1. Case 1: Start a NI Location Session 2. Send SUPL INIT with: Session ID with: ○ A plausible SET Session ID 3. The SET sends SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID 4. Between Cases, in order to return to a "known state" for the next Case, the Conformance Test Tool ends the Location Session and releases the secure IP connection. 5. Case 2 and Case 3: Start a NI Location Session 6. Send SUPL INIT with: Positioning Method set to: ○ Any method supported by the SET that requires a SUPL POS session (e.g. A-GPS SET Assisted) 7. The SET sends SUPL POS INIT 8. Send SUPL POS with: Case 2: In SET Session ID set: ○ Session ID to an invalid value (i.e. set Session ID to a different value from that received from the SET) Case 3: In SET Session ID set: ○ SET ID to an invalid value (i.e. set SET ID to a different value or a different parameter type from

	that received from the SET) 9. The SET responds with SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID. Note that between Cases, in order to return to a "known state" for the next Case, the Conformance Test Tool ends the Location Session and releases the secure IP connection.
Pass-Criteria	1. At step 3, and at step 9 in both cases, the SET shall respond with SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID.

5.1.1.7 SUPL-2.0-con-006 - Missing or invalid SLP Session ID

Test Case Id	SUPL-2.0-con-006
Test Object	Client
Test Case Description	To test SET correctly rejects a missing or invalid SLP Session ID
Specification Reference	ULP TS 9, 10
SCR Reference	
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:
Test Procedure	1. Case 1: Start a NI Location Session 2. Send SUPL INIT with: Session ID with: o No SLP Session ID 3. The SET sends SUPL END with: The invalid Session ID (i.e. an empty Session ID) in the SUPL END Common Part Status Code set to invalidSessionID 4. Between Cases, in order to return to a "known state" for the next Case, the Conformance Test Tool ends the Location Session and releases the secure IP connection. 5. Case 2 and Case 3: Start a NI Location Session 6. Send SUPL INIT with: Positioning Method set to: o Any method supported by the SET that requires a SUPL POS session (e.g. A-GPS SET Assisted) 7. The SET sends SUPL POS INIT 8. Send SUPL POS with: Case 2: In SLP Session ID set: o Session ID to an invalid value (i.e. set Session ID to a different value from that used in the SUPL INIT message)

	Case 3: In SLP Session ID set: o SLP ID to an invalid value (i.e. set SET ID to a different value or a different parameter type from that used in the SUPL INIT message) 9. The SET responds with SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID. Note that between Cases, in order to return to a "known state" for the next Case, the Conformance Test Tool ends the Location Session and releases the secure IP connection.
Pass-Criteria	1. At step 3, and at step 9 in both cases, the SET shall respond with SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID.

5.1.1.8 SUPL-2.0-con-007 - Alternative H-SLP Addresses [Includes optional features]

Test Case Id	SUPL-2.0-con-007
Test Object	Client
Test Case Description	To test SET correctly generates and uses the correct H-SLP address
Specification Reference	ULP TS 6.2
SCR Reference	
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 2: ics_HSLP_stored_in_SET AND ics_PSK_TLS
Test Procedure	Test 1: H-SLP address stored on UICC Test 2: H-SLP address stored on SET [Includes optional features] Test 3: Auto configuration of H-SLP address Test 4: Auto configuration of H-SLP address following authentication failure: Test 5: Clearing of old H-SLP address following change of IMSI: Test 1: H-SLP address stored on UICC: 1. Ensure there is an H-SLP address stored on the UICC Test 2: H-SLP address stored on SET [Includes optional features]: 2. Ensure there is no H-SLP address stored on the UICC, and ensure there is an H-SLP address stored on the SET Test 3: Auto configuration of H-SLP address: 3. Ensure there is no H-SLP address stored on either the UICC or on the SET Test 4: Auto configuration of H-SLP address following authentication failure: 4. Ensure there is an H-SLP address stored on either the UICC or on the

	SET Test 5: Clearing of old H-SLP address following change of IMSI: 5. Ensure there is no H-SLP address stored on the SET Tests 1, 2 and 3: 6. Start a NI Location Session. 7. The SET establishes a secure IP connection using: Test 1: The H-SLP address provisioned in the UICC Test 2: PSK-TLS and using the H-SLP address provisioned on the SET Test 3: The H-SLP address generated from the IMSI stored on the UICC 8. The Location Session completes successfully. Test 4: 9. Start a NI Location Session. 10. The SET attempts to establish a secure IP connection 11. Send an invalid server certificate to the SET resulting in an authentication failure. 12. The SET establishes a secure IP connection using: The H-SLP address generated from the IMSI stored in the UICC 13. The Location Session completes successfully. Test 5: 14. Start a NI Location Session. 15. The SET establishes a secure IP connection 16. Record the H-SLP address used. 17. The Location Session completes successfully. 18. Power down the SET 19. Insert a new UICC into the SET with a different MNC and, or MCC. If the H-SLP address is stored in the UICC, then the new UICC must have a different H-SLP address from the original one. 20. Start a NI Location Session. 21. The SET establishes a secure IP connection using: The H-SLP address stored on the new UICC or generated from the new IMSI stored in the UICC 22. The Location Session completes successfully.

Pass-Criteria	Test 1, 2 and 3: 1. At step 7 the SET shall establish a secure IP connection using: Test 1: The H-SLP address provisioned in the UICC Test 2: PSK-TLS and using the H-SLP address provisioned on the SET Test 3: The H-SLP address generated from the IMSI stored on the UICC 2. At step 8 the Location Session shall complete successfully. Test 4: 3. At step 12 the SET shall establish a secure IP connection using: The H-SLP address generated from the IMSI stored in the UICC 4. At step 13 the Location Session shall complete successfully. Test 5: 5. At step 21 the SET shall establish a secure IP connection using: The H-SLP address stored on the new UICC or generated from the new IMSI stored in the UICC 6. At step 22 the Location Session shall complete successfully.

5.1.1.9 SUPL-2.0-con-008 - Optional Ciphering Suites [Includes optional features]

Test Case Id	SUPL-2.0-con-008
Test Object	Client
Test Case Description	To test SET correctly uses optional ciphering suites
Specification Reference	ULP TS 6.3
SCR Reference	
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_TLS_add_cipher Test 2: ics_PSKTLS_add_cipher

Test Procedure	Test 1: TLS_RSA_WITH_3DES_EDE_CBC_SHA Test 2: TLS_PSK_WITH_3DES_EDE_CBC_SHA 1. Configure the Conformance Test Tool to use: Test 1: TLS_RSA_WITH_3DES_EDE_CBC_SHA Test 2: TLS_PSK_WITH_3DES_EDE_CBC_SHA 2. Start a NI Location Session. 3. The SET establishes a secure IP connection using : Test 1: TLS_RSA_WITH_3DES_EDE_CBC_SHA Test 2: TLS_PSK_WITH_3DES_EDE_CBC_SHA 4. The Location Session completes successfully.
Pass-Criteria	Test 1 and 2: 1. At step 3 the SET shall establish a secure IP connection using: Test 1: TLS_RSA_WITH_3DES_EDE_CBC_SHA Test 2: TLS_PSK_WITH_3DES_EDE_CBC_SHA 2. At step 4 the Location Session shall complete successfully.

5.1.1.10 SUPL-2.0-con-009 – Basic Level SUPL INIT protection

To be written

5.1.1.11 SUPL-2.0-con-010 - Compatible Versions

Test Case Id	SUPL-2.0-con-010
Test Object	Client
Test Case Description	To test SET correctly accepts compatible Version numbers in SUPL messages
Specification Reference	ULP TS 7,9,10
SCR Reference	ULP-PRO-C-007-O, ULP-PRO-C-008-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 4: ics_support_SUPLV1.0
Test Procedure	Test 1: Support for higher versions of SUPL 2.X.X Test 2: Support for lower versions of SUPL 2.X.X. Test 3: Correct support with SLP supporting SUPL V3.0 and V2.0 Test 4: Correct support with SLP supporting SUPL V1.0 only. SUPL V1.0 supported by SET [Includes optional features] Test 1: Support for higher versions of SUPL 2.X.X 1. Start a NI Location Session 2. In the Common Part of all messages set:

	Version to: o Maj set to 2 o Min set to a higher number than that supported by the SET o Serv ind set to a higher number than that supported by the SET 3. In SUPL INIT: Do not use Minimum Major version 4. The SET sends SUPL POS INIT (proxy mode) or SUPL AUTH REQ (non-proxy mode) with: In the Common Part, Version set to: o Maj set to 2 o Min set to 0 or correct version supported by the SET o Serv ind set to 0 or correct version supported by the SET 5. The Location Session completes successfully. Test 2: Support for lower versions of SUPL 2.X.X. Only applicable if there exists SUPL V2.X where X>0 6. Repeat Test 1, with following change at step 2: In the Common Part of all messages set: Version to: o Maj set to 2 o Min set to a lower number than the maximum supported by the SET o Serv ind set to a lower number than the maximum supported by the SET Test 3: Correct support with SLP supporting SUPL V3.0 and V2.0 7. Start a NI Location Session 8. In the Common Part of all messages set: Version to: o Maj set to 3 o Min set to 0 o Serv ind set to 0 9. In SUPL INIT set: Positioning Method to any method supported by the SET that requires a SUPL POS session Minimum Major version to 2 10. The SET sends SUPL POS INIT (proxy mode) or SUPL AUTH REQ (non-proxy mode) with: In the Common Part, Version set to: o Maj set to 2 o Min set to 0 or correct version supported by the SET o Serv ind set to 0 or correct version supported by the SET 11. The Location Session completes successfully using SUPL 2.0

	protocol. Test 4: Correct support with SLP supporting SUPL V1.0 only. SUPL V1.0 supported by SET [Includes optional features] 12. Start a NI Location Session 13. In the Common Part of all messages set: Version to: o Maj set to 1 o Min set to 0 o Serv ind set to 0 14. In SUPL INIT set: Positioning Method to any method supported by the SET that requires the use of SUPL POS 15. The SET sends SUPL POS INIT (proxy mode) or SUPL AUTH REQ (non-proxy mode) with: In the Common Part, Version set to: o Maj set to 1 o Min set to 0 or correct version supported by the SET o Serv ind set to 0 or correct version supported by the SET 16. The Location Session completes successfully using SUPL 1.0 protocol.
Pass-Criteria	Test 1 and 2: 1. At step 4 the SET shall respond with SUPL POS INIT (proxy mode) or SUPL AUTH REQ (non-proxy mode) with Version set to: o Maj set to 2 o Min set to 0 or correct version supported by the SET o Serv ind set to 0 or correct version supported by the SET Test 3: 2. At step 10 the SET shall respond with SUPL POS INIT (proxy mode) or SUPL AUTH REQ (non-proxy mode) with Version set to: o Maj set to 2 o Min set to 0 or correct version supported by the SET o Serv ind set to 0 or correct version supported by the SET 3. At step 11 the Location Session shall complete successfully using SUPL 2.0 protocol. Test 4: 4. At step 15 the SET shall respond with SUPL POS INIT (proxy mode) or SUPL AUTH REQ (non-proxy mode) with Version set to: o Maj set to 1 o Min set to 0 or correct version supported by the SET o Serv ind set to 0 or correct version supported by the

	SET 5. At step 16 the Location Session shall complete successfully using SUPL 1.0 protocol

5.1.1.12 SUPL-2.0-con-011 - Unsupported Versions.

Test Case Id	SUPL-2.0-con-011
Test Object	Client
Test Case Description	To test SET correctly rejects unsupported Version number in SUPL messages
Specification Reference	ULP TS 7,9,10
SCR Reference	ULP-PRO-C-007-O, ULP-PRO-C-008-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 2: NOT ics_support_SUPLV1.0

Test Procedure	Test 1: Higher Version not supported Test 2: Lower Version not supported. SUPL V1.0 not supported by SET [Includes optional features] Test 1: Higher Version not supported 1. Start a NI Location Session 2. In the Common Part of all messages set: Version to: o Maj set to a higher value than that supported by the SET o Min set to 0 o Serv ind set to 0 3. In SUPL INIT o Do not use Minimum Major version 4. The SET sends SUPL END with: o Status Code set to versionNotSupported o A correctly calculated Ver parameter. 5. The Location Session ends and the SET releases the secure IP connection. Test 2: Lower Version not supported. SUPL V1.0 not supported by SET [Includes optional features] 6. Start a NI Location Session 7. In the Common Part of all messages set: Version to: o Maj set to 1 o Min set to 0 o Serv ind set to 0 8. The SET responds with SUPL END with: o Status Code set to versionNotSupported o A correctly calculated Ver parameter. 9. The Location Session ends and the SET releases the secure IP connection
Pass-Criteria	Test 1 and 2: 1. At step 4 and 9 the SET shall respond with SUPL END with: o Status Code set to versionNotSupported o A correctly calculated Ver parameter. 2. At step 5 and 9 the SET shall release the secure IP connection.

5.1.2 Notification and verification

5.1.2.1 SUPL-2.0-con-020 - No notification & no verification

Test Case Id	SUPL-2.0-con-020
Test Object	Client
Test Case Description	To test SET correctly actions No notification & no verification
Specification Reference	ULP TS 5.1

SCR Reference	ULP-PRO-C-024-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:
Test Procedure	Repeat Test Procedure for the following Cases: Case 1: Notification not set Case 2: Notification set to No notification & no verification. 1. Start a NI Location Session 2. In SUPL INIT: Case 1: Do not set Notification Case 2: Set Notification to No notification & no verification. In both cases do not set Notification Mode 3. The SET sends SUPL POS INIT 4. The Location Session completes successfully. 5. There is no indication or notification of the Location Session to the User on the SET
Pass-Criteria	Case 1 and Case 2: 1. At step 4 the Location Session shall complete successfully 2. At step 5 there shall be no indication or notification of the Location Session to the User on the SET

5.1.2.2 SUPL-2.0-con-021 - Notification only

Test Case Id	SUPL-2.0-con-021
Test Object	Client
Test Case Description	To test SET correctly actions Notification only
Specification Reference	ULP TS 5.1
SCR Reference	ULP-PRO-C-024-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:

Test Procedure	1. Start a NI Location Session 2. In SUPL INIT set: Notification to Notification only Do not set Encoding type Do not set RequestorID Do not set ClientName Do not set Notification Mode 3. The SET sends SUPL POS INIT 4. The Location Session completes successfully. 5. There is some form of indication or notification of the Location Session to the User on the SET
Pass-Criteria	1. At step 4 the Location Session shall complete successfully 2. At step 5 there shall be some form of notification of the Location Session to the User on the SET.

5.1.2.3 SUPL-2.0-con-022 - Notification and verification

Test Case Id	SUPL-2.0-con-022
Test Object	Client
Test Case Description	To test SET correctly actions Notification and verification
Specification Reference	ULP TS 5.1
SCR Reference	ULP-PRO-C-024-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ixit_verification_timeout
Test Procedure	Repeat Test Procedure for the following Cases: Case 1: Notification and verification: Allowed on no answer. User accepts. Case 2: Notification and verification: Allowed on no answer. User denies. Case 3: Notification and verification: Allowed on no answer. No response. Case 4: Notification and verification: Denied on no answer. User accepts. Case 5: Notification and verification: Denied on no answer. User denies. Case 6: Notification and verification: Denied on no answer. No response. 1. Start a NI Location Session 2. In SUPL INIT set: Notification to: o Cases 1 to 3: Notification and verification (Allowed on no answer) o Cases 4 to 6: Notification and verification (Denied on no answer) Do not set Encoding type Do not set RequestorID Do not set ClientName Do not set Notification Mode

	3. The SET sends SUPL POS INIT 4. There is a Location attempt prompt on the SET Cases 1 and 4: User accepts. 5. The user accepts the Location attempt prompt before the internal SET timer expires (value is dependant on ixit_verification_timeout) 6. The Location Session completes successfully. Cases 2 and 5: User rejects. 7. The user rejects the Location attempt prompt before the internal SET timer expires (value is dependant on ixit_verification_timeout) 8. The SET sends SUPL END with: Status Code set to consentDeniedByUser A correctly calculated Ver parameter. 9. The Location Session ends and the SET releases the secure IP connection. Case 3: No response. 10. The user performs no action to the Location attempt prompt and the internal SET timer expires (value is dependant on ixit_verification_timeout) 11. The Location Session completes successfully. Case 6. No response. 12. The user performs no action to the Location attempt prompt and the internal SET timer expires (value is dependant on ixit_verification_timeout) 13. The SET sends SUPL END with: Status Code set to consentDeniedByUser A correctly calculated Ver parameter. 14. The Location Session ends and the SET releases the secure IP connection.
Pass-Criteria	All Cases: 1. At step 4 there shall be a Location attempt prompt on the SET Case 1, Case 4: 2. At step 6 the Location Session shall complete successfully Case 3: 3. At step 11 the Location Session shall complete successfully Case 2, Case 5: 4. At step 8 the SET shall respond with SUPL END with: Status Code set to consentDeniedByUser A correctly calculated Ver parameter. 5. At step 9 the SET shall release the secure IP connection. Case 6: 6. At step 13 the SET shall respond with SUPL END with: Status Code set to consentDeniedByUser

	A correctly calculated Ver parameter. 7. At step 14 the SET shall release the secure IP connection.

5.1.2.4 SUPL-2.0-con-023 - Privacy override

Test Case Id	SUPL-2.0-con-023
Test Object	Client
Test Case Description	To test SET correctly actions Privacy override
Specification Reference	ULP TS 5.1
SCR Reference	ULP-PRO-C-024-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:
Test Procedure	1. Start a NI Location Session 2. In SUPL INIT: Set Notification to Privacy override Do not set Notification Mode 3. The SET sends SUPL POS INIT 4. The Location Session completes successfully. 5. There is no indication or notification of the Location Session to the User on the SET. There shall be no trace of the Location Session in log files etc. on the SET.
Pass-Criteria	1. At step 4 the Location Session shall complete successfully 2. At step 5 there shall be no indication or notification of the Location Session to the User on the SET 3. At step 5 there shall be no record or indication of the Location Session in any SET log files or other debug information (implementation specific)

5.1.2.5 SUPL-2.0-con-024 – Requestor ID and Client Name

Test Case Id	SUPL-2.0-con-024
Test Object	Client
Test Case Description	To test SET correctly displays or uses Requestor ID and Client Name
Specification Reference	ULP TS 5.1
SCR Reference	ULP-PRO-C-024-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:

Test Procedure	Repeat Test Procedure for the following Cases: Case 1: Encoding type ucs2 Case 2: Encoding type gsm-default Case 3: Encoding type UTF-8 1. Start a NI Location Session 2. In SUPL INIT: Set Notification to Notification only Set Encoding type to: o Case 1: ucs2 o Case 2: gsm-default o Case 3: UTF-8 Set RequestorType to the first value in the table below Set RequestorID to some suitable string, with the string being the maximum possible length up to 50 Octets Set ClientName to the first value in the table below Set ClientName to some suitable string, with the string being the maximum possible length up to 50 Octets Do not set Notification Mode 3. The SET sends SUPL POS INIT 4. The SET displays or uses the Requestor ID and the Client Name set in step 2 5. The Location Session completes successfully. 6. Repeat step 1 to step 5 with: RequestorType set to the next value in the table below. ClientNameType set to the next value in the table below. 7. Repeat step 6 for all remaining values in the table below.
Pass-Criteria	All Cases: 1. At step 4 the SET shall correctly display or use: Requestor ID set in step 2 Client Name set in step 2 2. At step 5 the Location Session shall complete successfully.

Value #	Requestor Types and Client Name Types
Value 1	Logical name
Value 2	MSISDN
Value 3	E-mail address
Value 4	URL
Value 5	SIP URL
Value 6	IMS public identity
Value 7	MIN
Value 8	MDN

Table 1: Requestor Types and Client Name Types

5.1.2.6 SUPL-2.0-con-025 - Notification and verification based on current location [Includes optional features]

Test Case Id	SUPL-2.0-con-025
Test Object	Client
Test Case Description	To test SET correctly actions Notification and verification based on current location
Specification Reference	ULP TS 5.1.12, 5.1.16.4, 8, 9
SCR Reference	ULP-PRO-C-029-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_notification_currentLocation ixit: ixit_verification_timeout

Test Procedure	Test 1: User accepts the verification Test 2: User denies the verification Note that this test case only covers two conditions for Notification and Verification. It is assumed that the other conditions are fully tested in the Notification and Verification test cases. Test 1: User accepts the verification 1. Start a NI Location Session 2. In SUPL INIT set: Positioning Method to any method supported by the SET that requires a SUPL POS session Notification Mode to Notification/Verification based on location Do not use Notification 3. The SUPL POS session completes 4. Send SUPL NOTIFY with: Notification set to Notification and verification (Allowed on no answer) Do not use Encoding type, RequestorID and ClientName 5. The user accepts the Location attempt prompt before the internal SET timer expires (value is implementation specific, defined by ixit_verification_timeout) 6. The SET sends SUPL NOTIFY RESPONSE with: Notification Response set to allowed 7. Send SUPL END 8. The SET releases the secure IP connection. Test 2: User denies the verification 9. Start a NI Location Session 10. In SUPL INIT set: Positioning Method to any method supported by the SET that requires a SUPL POS session Notification Mode to Notification/Verification based on location Do not use Notification 11. The SUPL POS session completes 12.Send SUPL NOTIFY with: Notification set to Notification and verification (Denied on no answer) Do not use Encoding type, RequestorID and ClientName 13. The user denies the Location attempt prompt before the internal SET timer expires (value is implementation specific defined by ixit_verification_timeout) 14. The SET sends SUPL NOTIFY RESPONSE with: Notification Response set to not allowed 15. Send SUPL END with: status code set to consentDeniedByUser 16. The SET releases the secure IP connection.

Pass-Criteria	Test 1: 1. At step 4 there shall be a Location attempt prompt on the SET 2. At step 6 the SET shall send SUPL NOTIFY RESPONSE with: Notification Response set to allowed 3. At step 8 the SET shall release the secure IP connection. Test 2: 4. At step 12 there shall be a Location attempt prompt on the SET 5. At step 14 the SET shall send SUPL NOTIFY RESPONSE with: Notification Response set to not allowed 6. At step 16 the SET shall release the secure IP connection.

5.1.3 Single sessions

5.1.3.1 SUPL-2.0-con-030 - Positioning method [Includes optional features].

Test Case Id	SUPL-2.0-con-030
Test Object	Client
Test Case Description	To test SET correctly actions single session Positioning method
Specification Reference	ULP TS 5.1.1, 8, 9
SCR Reference	ULP-PRO-C-007-O, ULP-PRO-C-011-M, ULP-PRO-C-012-O, ULP-PRO-C-013-O, ULP-PRO-C-014-O, ULP-PRO-C-015-O, ULP-PRO-C-016-O, ULP-PRO-C-018-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_AGPSSETassisted_Network_initiated Test 2: ics_AGPSSETbased_Network_initiated Test 3: ics_autonomousGPS_Network_initiated Test 4: ics_eCID Test 5: NOT ics_eCID_Network_initiated Test 6: ics_AGANSSSETassisted_Galileo_Network_initiated Test 7: ics_AGANSSSETassisted_GLONASS_Network_initiated Test 8: ics_AGANSSSETbased_Galileo_Network_initiated Test 9: ics_AGANSSSETbased_GLONASS_Network_initiated Test 10: ics_autonomousGANSS_Network_initiated Test 11: ics_AGPSSETassisted_Network_initiated AND ics_AGPSSETbased_Network_initiated Test 12: (ics_AGANSSSETassisted_Galileo_Network_initiated AND ics_AGANSSSETbased_Galileo_Network_initiated) OR (ics_AGANSSSETassisted_GLONASS_Network_initiated AND ics_AGANSSSETbased_GLONASS_Network_initiated) Test 10, Test 12: ixit_gANSS
Test Procedure	Test 1: A-GPS SET assisted [Includes optional features] Test 2: A-GPS SET based [Includes optional features]

	Test 3: Autonomous GPS [Includes optional features] Test 4: Enhanced Cell ID [Includes optional features] Test 5: Cell ID Test 6: A-GANSS SET assisted –Galileo [Includes optional features] Test 7: A-GANSS SET assisted –GLONASS [Includes optional features] Test 8: A-GANSS SET based –Galileo [Includes optional features] Test 9: A-GANSS SET based –GLONASS [Includes optional features] Test 10: Autonomous GANSS [Includes optional features] Test 11: A-GPS Preferred methods [Includes optional features] Test 12: A-GANSS Preferred methods [Includes optional features] Note that these test cases only test a single GNSS at one time. Testing of support for multiple simultaneous GNSSs is for further study. 1. All tests: start a NI Location Session 2. In SUPL INIT set: Positioning Method to the value specified in the table below GNSS Positioning Technology to the value specified in the table below 3. The SET sends SUPL POS INIT with: SET capabilities parameter consistent with the Positioning technologies supported by the SET as declared in the ics Test 4 only: Location ID, Cell info, the following parameters: NMR and/or TA if testing using GSM, Measured Results List if testing using WCDMA. 4. Test 4 and Test 5: send SUPL END 5. All tests except Test 4 and Test 5: a SUPL POS session takes place and completes successfully using the Positioning Method defined by the test case. Test 3 and Test 10: no Assistance Data is sent. Test 10: one of Galileo or GLONASS can be used depending on the technology supported by the SET and declared in ixit_gANSS. Test 11, Case 1: A-GPS SET assisted is used. Test 11, Case 2: A-GPS SET based is used. Test 12, Case 1: A-GANSS SET assisted is used, Test 11, Case 2: A-GANSS SET based is used, where in both cases the GANSS used can be one of Galileo or GLONASS depending on the technology supported by the SET and declared in ixit_gANSS. 6. All tests except Test 4 and Test 5: send SUPL END 7. All tests: the SET releases the secure IP connection. Note: Repeat for all Positioning technologies supported by the SET as declared in the ics
Pass-Criteria	All tests: 1. At step 3 the SET shall respond with SUPL POS INIT with: SET capabilities parameter consistent with the Positioning technologies supported by the SET as declared in the ics Test 4: 2. At step 3 the SET shall respond with SUPL POS INIT with: Location ID, Cell info, the following parameters: NMR and/or TA if testing using GSM, Measured Results List if testing using WCDMA. All tests except Test 4 and Test 5:

	3. At step 5 a SUPL POS session shall take place and shall complete successfully using the Positioning Method defined by the test case. Test 10: one of Galileo or GLONASS can be used depending on the technology supported by the SET and declared in ixit_gANSS. Test 11, Case 1: A-GPS SET assisted shall be used. Test 11, Case 2: A-GPS SET based shall be used. Test 12, Case 1: A-GANSS SET assisted shall be used, Test 11, Case 2: A-GANSS SET based shall be used, where in both cases the GANSS used can be one of Galileo or GLONASS depending on the technology supported by the SET and declared in ixit_gANSS.

Test #	Value of Positioning Method	Value of GNSS Positioning Technology
Test 1	A-GPS SET assisted only	Not set
Test 2	A-GPS SET based only	Not set
Test 3	Autonomous GPS	Not set
Test 4	Enhanced Cell / sector	Not set
Test 5	Enhanced Cell / sector	Not set
Test 6	A-GNSS SET assisted only	Galileo
Test 7	A-GNSS SET assisted only	GLONASS
Test 8	A-GNSS SET based only	Galileo
Test 9	A-GNSS SET based only	GLONASS
Test 10	Autonomous GNSS	Not set
Test 11	Case 1: A-GPS SET assisted preferred (A-GPS SET based is the fallback mode) Case 2: A-GPS SET based preferred (A-GPS SET assisted is the fallback mode)	Not set
Test 12	Case 1: A-GNSS SET assisted preferred (A-GANSS SET based is the fallback mode) Case 2: A-GNSS SET based preferred (A-GANSS SET assisted is the fallback mode)	Galileo or GLONASS

Table 2: Positioning Method and GNSS Positioning Technology

5.1.3.2 SUPL-2.0-con-031 – No Position

Test Case Id	SUPL-2.0-con-031
Test Object	Client
Test Case Description	To test SET correctly responds if No Position is signalled by the SLP.
Specification Reference	ULP TS 5.1, 8, 9
SCR Reference	ULP-PRO-C-026-M
Tool	SUPL Client Conformance Test Tool

Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:
Test Procedure	Note that this test case only covers basic functionality for Notification and Verification. It is assumed that the other Notification and Verification conditions are fully tested in the Notification and Verification test cases. 1. Start a NI Location Session 2. In SUPL INIT set: Positioning Method to No Position Notification to Notification only 3. The SET sends SUPL END with: Correctly calculated Ver parameter No Status Code 4. There is some form of indication or notification of the Location Session to the User on the SET 5. The Location Session ends and the SET releases the secure IP connection
Pass-Criteria	1. At step 3 the SET shall respond with SUPL END with: Correctly calculated Ver parameter No Status Code 2. At step 4 there shall be some form of notification of the Location Session to the User on the SET. 3. At step 5 the SET shall release the secure IP connection

5.1.3.3 SUPL-2.0-con-032 – Session Info Query

To be written

5.1.3.4 SUPL-2.0-con-033 – Emergency Services Location Requests

Test Case Id	SUPL-2.0-con-033
Test Object	Client
Test Case Description	To test SET correctly actions Emergency Services Location Requests
Specification Reference	ULP TS 5.1.15, 8, 9
SCR Reference	ULP-PRO-C-034-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ixit: ixit_emergency_call_required
Test Procedure	Case 1: E-SLP address sent in SUPL INIT Case 2: Use of provisioned H-SLP address Case 3: Use of default E-SLP address.

	1. If required (determined by ixit_emergency_call_required) set up an emergency call from the SET. Note that this step is outside the scope of SUPL and SUPL testing, but may be required. 2. Start a NI Emergency Services Location Session 3. In SUPL INIT set: Positioning Method to Enhanced Cell / sector Notification to: ▪ Notification type: No notification & no verification ▪ Set: Emergency Call Location o E-SLP address to: ▪ Case 1: SLP Address type set to FQDN with a suitable FQDN value that is different from the H-SLP address used for other testing Case 2 and Case 3: E-SLP address not set 4. The SET sends a DNS Query to resolve the FQDN of the SLP Case 1: Query includes the E-SLP FQDN used in step 3 (Case 1) Case 2: Query includes the normal H-SLP FQDN provisioned in the SET, or may not be sent if the SET has previously resolved the normal H-SLP FQDN. Case 3: Query includes the Default E-SLP FQDN ("e-slp.mnc<MNC>.mcc<MCC>.pub.3gppnetwork.org" where MCC and MNC correspond to the network being simulated). In this case the SET must not be provisioned with an H-SLP address in the UICC. 5. Send a DNS response to the SET 6. The SET establishes a secure session with the SLP and sends SUPL POS INIT. 7. Send SUPL END 8. The SET releases the secure IP connection. 9. If an emergency call was set up in step 1, release the emergency call. 10. Repeat for all Cases.
Pass-Criteria	1. At step 4 the SET shall send a DNS Query to resolve the FQDN of the SLP Case 1: Query shall include the E-SLP FQDN used in step 3 (Case 1) Case 2: If sent, Query shall include the normal H-SLP FQDN provisioned in the SET, or may not be sent. Case 3: Query shall include the Default E-SLP FQDN ("e-slp.mnc<MNC>.mcc<MCC>.pub.3gppnetwork.org" where MCC and MNC correspond to the network being simulated). 2. At step 6 the SET shall establish a secure session with the SLP and send SUPL POS INIT.

5.1.3.5 SUPL-2.0-con-034 – Emergency Services Location Request – Interaction with normal SUPL session

Test Case Id	SUPL-2.0-con-034
Test Object	Client
Test Case Description	To test SET correctly actions an Emergency Services Location Request when a normal SUPL session is also active

Specification Reference	ULP TS 6.1.5
SCR Reference	ULP-PRO-C-034-M
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ixit: ixit_emergency_call_required ixit_verification_timeout
Test Procedure	Case 1: Normal SUPL session already in progress before Emergency SUPL session Case 2: Normal SUPL session attempted during Emergency SUPL session Case 1: Normal SUPL session already in progress before Emergency SUPL session 1. Start a normal NI Location Session 2. In SUPL INIT set: Positioning Method to Enhanced Cell / sector Notification to: ▪ Notification type: Notification and verification, Allowed on no answer 3. The SET displays the Notification and prompts the User for Verification 4. (Do not respond to the Verification prompt.) 5. If required (determined by ixit_emergency_call_required) set up an emergency call from the SET. Note that this step is outside the scope of SUPL and SUPL testing, but may be required. Editor's note: It is not clear if this will always be possible from the GUI of the SET – for further consideration. 6. Immediately start a NI Emergency Services Location Session 7. In SUPL INIT set: In Session ID, a different SLP Session ID from that used in step 1. Positioning Method to Enhanced Cell / sector Notification to: ▪ Notification type: No notification & no verification ▪ Set: Emergency Call Location E-SLP address to: ▪ Not set (equivalent to using the H-SLP address) 8. The SET aborts the normal SUPL session initiated in step 1 and the Notification display and the Verification prompt are removed 9. The SET sends SUPL POS INIT in response to the Emergency Services session with: In Session ID, SLP Session ID from step 7. 10. Send SUPL END with: In Session ID use SLP Session ID from step 7 11. The SET releases the secure IP connection. 12. If an emergency call was set up in step 5, release the emergency call.

	13. After step 11 (or step 12 if used) wait for a length of time equivalent to the Verification timeout in the SET, determined by ixit_verification_timeout, plus two seconds and monitor any SUPL messages sent by the SET. 14. Perform Case 2. Case 2: Normal SUPL session attempted during Emergency SUPL session 15. If required (determined by ixit_emergency_call_required) set up an emergency call from the SET. Note that this step is outside the scope of SUPL and SUPL testing, but may be required. 16. Start a NI Emergency Services Location Session 17. In SUPL INIT set: Positioning Method to Enhanced Cell / sector Notification to: ▪ Notification type: Notification and verification, Allowed on no answer ▪ Set: Emergency Call Location E-SLP address to: ▪ Not set (equivalent to using the H-SLP address) 18. The SET displays the Notification and prompts the User for Verification 19. (Do not respond to the Verification prompt.) 20. Immediately start a normal NI Location Session 21. In SUPL INIT set: In Session ID, a different SLP Session ID from that used in step 17. Positioning Method to Enhanced Cell / sector Notification to: ▪ Notification type: No notification & no verification 22. (The SET ignores the SUPL INIT sent in step 21.) 23. Accept the Verification prompt from step 18. 24. The SET sends SUPL POS INIT in response to the Emergency Services session with: In Session ID, SLP Session ID from step 17. 25. Send SUPL END with: In Session ID , use SLP Session ID from step 17 26. The SET releases the secure IP connection. 27. If an emergency call was set up in step 15, release the emergency call. 28. After step 26 (or step 27 if used) wait for a length of time equivalent to the Verification timeout in the SET, determined by ixit_verification_timeout, plus two seconds and monitor any SUPL messages sent by the SET.
Pass-Criteria	Case 1. 1. At step 8 the SET shall remove the Notification display and the Verification prompt. 2. From step 6 until the end of step 13 there shall be no SUPL messages sent by the SET with: In Session ID, the SLP Session ID used in step 1. 3. At step 9 the SET shall send SUPL POS INIT with: In Session ID, the SLP Session ID from step 7.

	Case 2. 4. At step 24 the SET shall send SUPL POS INIT with: In Session ID, the SLP Session ID from step 17. 5. From step 21 until the end of step 28 there shall be no SUPL messages sent by the SET with: In Session ID, the SLP Session ID used in step 21.

5.1.3.6 SUPL-2.0-con-035 – Retrieval of historical positions [Includes optional features].

Test Case Id	SUPL-2.0-con-035
Test Object	Client
Test Case Description	To test SET correctly actions Retrieval of historical positions
Specification Reference	ULP TS 5.1.13, 8, 9, 10
SCR Reference	ULP-PRO-C-035-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_historic_reporting
Test Procedure	Case 1: Position estimates only Case 2: Enhanced cell/sector measurements only Case 3: Both position estimates and enhanced cell/sector measurements 1. Ensure the SET has performed and stored at least one SET-based location session and at least one cell/sector measurement at some time before this test is initiated. If necessary perform one SET-based location session using default parameters and a SET-based positioning method such as A-GPS. If necessary perform one cell/sector measurement using default parameters and ECID as the positioning method. The conditions under which these measurements are stored is outside the scope of SUPL. 2. Start a Retrieval of historic positions session. 3. In SUPL INIT set: Positioning Method to Historical Data Retrieval Historic Reporting, Allowed Reporting Type to: o Case 1: Position estimates only o Case 2: Enhanced cell/sector measurements only o Case 3: Both position estimates and enhanced cell/sector measurements 4. The SET sends SUPL REPORT with: From 1 to 1024 sets of Report Data with: o Case 1: Position Data only, with a Timestamp and a Position Estimate o Case 2: ▪ Multiple Location Ids only, with one or more sets of Location ID and Serving Cell Flag ▪ Timestamp

	○ Case 3: Either: ▪ Both Position Data, with a Timestamp and a Position Estimate, and Multiple Location Ids, with one or more sets of Location ID and Serving Cell Flag Or: ▪ Result Code set to No Position and no measurement if the SET has deleted all data during the running of Case 1 and Case 2. This behaviour is outside the scope of SUPL. ▪ Timestamp Ver: correctly calculated More Components not set 5. The SET releases the secure IP connection. 6. Repeat for all Cases.
Pass-Criteria	1. At step 4 the SET shall send SUPL REPORT with: From 1 to 1024 sets of Report Data with: ○ Case 1: Position Data only, with a Timestamp and a Position Estimate ○ Case 2: ▪ Multiple Location Ids only, with one or more sets of Location ID and Serving Cell Flag ▪ Timestamp ○ Case 3: Either: ▪ Both Position Data, with a Timestamp and a Position Estimate, and Multiple Location Ids, with one or more sets of Location ID and Serving Cell Flag Or: ▪ Result Code set to No Position and no measurement if the SET has deleted all data during the running of Case 1 and Case 2. ▪ Timestamp Ver: correctly calculated More Components not set 2. At step 5 the SET shall release the secure IP connection.

5.1.4 Triggered Services: Periodic Triggers

5.1.4.1 SUPL-2.0-con-040 Real Time reporting [Includes optional features]

Test Case Id	SUPL-2.0-con-040
Test Object	Client
Test Case Description	To test SET correctly performs Real Time Periodic reporting
Specification Reference	ULP TS 5.1.7
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-046-O,,
Tool	SUPL Client Conformance Test Tool

Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_real_time AND ics_periodic_Network_initiated AND ics_AGPSSETassisted_Network_initiated Test 2: ics_real_time AND ics_periodic_Network_initiated AND ics_AGPSSETbased_Network_initiated
Test Procedure	Test 1: A-GPS SET assisted Test 2: A-GPS SET based Test 1: A-GPS SET assisted: 1. Start a NI Periodic Location Session 2. In SUPL INIT set: Positioning Method to A-GPS SET assisted Trigger Type set to Periodic 3. The SET responds with SUPL TRIGGERED START with: The details of the Reporting Capability parameter consistent with the known reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters are consistent with the known reporting capabilities supported by the SET. 4. Send SUPL TRIGGERED RESPONSE with: Trigger Params set to Periodic Params with: o Number of Fixes: 50 o Interval Between Fixes: 60 or equal to "minimum interval between fixes" received in Reporting Capability if greater than 60 o Start Time: 30 [Editors note: these values are just place-holders, we may wish to change these values after further study] Do not set Reporting Mode (this is equivalent to Real Time reporting) Note that the SET may release the secure connection at this point. 5. After approximately 30 seconds (set by Start Time) the SET responds with SUPL POS INIT and a SUPL POS session takes place 6. The SUPL POS Session completes successfully 7. Send SUPL REPORT with no parameters. Note that the SET may release the secure connection at this point. 8. After approximately 60 seconds (set by Interval Between Fixes) the SET responds with SUPL POS INIT and a SUPL POS session takes place 9. The SUPL POS Session completes successfully 10. Send SUPL REPORT with no parameters.

	Note that the SET may release the secure connection at this point. 11. Steps 8 through 10 are repeated until the remaining number of fixes (the total number is set by Number of Fixes) have been received. 12. Send SUPL END Test 2: A-GPS SET based: 13. Start a NI Periodic Location Session 14. In SUPL INIT set: Positioning Method to A-GPS SET based Trigger Type set to Periodic 15. The SET responds with SUPL TRIGGERED START with: The details of the Reporting Capability parameter consistent with the known reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters are consistent with the known reporting capabilities supported by the SET. 16. Send SUPL TRIGGERED RESPONSE with: Trigger Params set to Periodic Params with: o Number of Fixes: 50 o Interval Between Fixes: 60 or equal to "minimum interval between fixes" received in Reporting Capability if greater than 60 o Start Time: 30 [Editors note: these values are just place-holders, we may wish to change these values after further study] Do not send the Reporting Mode parameter (this is equivalent to Real Time reporting) Note that the SET may release the secure connection at this point. 17. At any time during the following part of the test when the SET is required to make a position estimate, if the SET requires Assistance Data, then: The SET responds with SUPL POS INIT A SUPL POS session takes place and completes successfully Send SUPL REPORT with no parameters. In this case this procedure replaces the procedure detailed in the relevant step below. 18. After approximately 30 seconds (set by Start Time): The SET sends SUPL REPORT with the position estimate Note that the SET may release the secure connection at this point. 19. After approximately 60 seconds (set by Interval Between Fixes): The SET sends SUPL REPORT with the position estimate. Note that the SET may release the secure connection at this point. 20. Stepss 19 is repeated until theremaining number of fixes (the total number is set by Number of Fixes) have been received. 21. Send SUPL END

Pass-Criteria	Test 1 and 2: 1. At step 3 and step 15: The details of the Reporting Capability parameter shall be consistent with the known Reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters shall be consistent with the known reporting capabilities supported by the SET. Test 1: 2. At step 6 and 9 the SUPL POS Session shall complete successfully the requested number of times. Test 2: 3. At step 18 and 19 the SET shall send SUPL REPORT with the position estimate the requested number of times. If step 17 occurs, then the position estimate shall be sent in the SUPL POS session instead.

5.1.4.2 SUPL-2.0-con-041 Basic Quasi Real Time reporting [Includes optional features]

Test Case Id	SUPL-2.0-con-041
Test Object	Client
Test Case Description	To test SET correctly performs basic Quasi Real Time Periodic reporting
Specification Reference	ULP TS 5.1.7
SCR Reference	ULP-PRO-C-032-O,, ULP-PRO-C-047-O,,
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_quasi_real_time AND ics_periodic_Network_initiated AND ics_AGPSSETassisted_Network_initiatedAND ics_SETbased_in_quasi_real_time Test 2: ics_quasi_real_time AND ics_periodic_Network_initiated AND ics_AGPSSETbased_Network_initiated
Test Procedure	Test 1: A-GPS SET assisted Test 2: A-GPS SET based Test 1: A-GPS SET assisted Note that this test depends on the SET using either Autonomous GPS or SET based A-GPS during the period that it is out of contact with the SLP. In this case the SET must receive or have received current Assistance Data before step 11. [Editor's note: the method for providing this Assistance Data may need to be specified after further study]

	1. Start a NI Periodic Location Session 3. The SET responds with SUPL TRIGGERED START with: The details of the Reporting Capability parameter are consistent with the known reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters are consistent with the known reporting capabilities supported by the SET. 4. Send SUPL TRIGGERED RESPONSE with: Trigger Params set to Periodic Params with: o Number of Fixes: 15 o Interval Between Fixes: 60 or equal to "minimum interval between fixes" received in Reporting Capability if greater than 60 o Start Time: 30 [Editors note: these values are just place-holders, we may wish to change these values after further study] Reporting Mode set to: o Rep Mode to Quasi real time o Batch Report Type with: ▪ Position set to true ▪ Other values set to false Note that the SET may release the secure connection at this point. 5. After approximately 30 seconds (set by Start Time) the SET responds with SUPL POS INIT and a SUPL POS session takes place 6. The SUPL POS Session completes successfully 7. Send SUPL REPORT with no parameters. Note that the SET may release the secure connection at this point. 8. After approximately 60 seconds (set by Interval Between Fixes) the SET responds with SUPL POS INIT and a SUPL POS session takes place 9. The SUPL POS Session completes successfully 10. Send SUPL REPORT with no parameters. Note that the SET may release the secure connection at this point. 11. Simulate a loss of communication with the H-SLP (Conformance Test Tool) such that the SET will detect a loss of lower layer communication with the SLP by, for example, heavily attenuating the RF signal to the SET. 12. Wait for a time equivalent to 10 intervals between fixes (set by Interval Between Fixes) and then simulate re-established communication with the H-SLP (Conformance Test Tool) by, for example, restoring the RF signal to the SET. 13. The SET sends SUPL REPORT with the stored position estimates. Note that this step depends on the SET having used either Autonomous GPS or SET based A-GPS in which case the SET must have received current Assistance Data before step 11. [Editor's note: the method for providing this Assistance Data may need to be specified after further study] 14. At approximately the next 60 second interval (set by Interval Between Fixes) the SET responds with SUPL POS INIT and a SUPL

	POS session takes place 15. The SUPL POS Session completes successfully 16. Send SUPL REPORT with no parameters. 17. Steps 14 through 16 are repeated until the remaining number of SUPL POS sessions (the total number is set by Number of Fixes) have been completed. 18. Send SUPL END Test 2: A-GPS SET based: 19. Start a NI Periodic Location Session 20. In SUPL INIT set: Positioning Method to A-GPS SET based Trigger Type set to Periodic 21. The SET responds with SUPL TRIGGERED START with: The details of the Reporting Capability parameter consistent with the known reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters are consistent with the known reporting capabilities supported by the SET. 22. Send SUPL TRIGGERED RESPONSE with: Trigger Params set to Periodic Params with values as follows: o Number of Fixes: 15 o Interval Between Fixes: 60 or equal to "minimum interval between fixes" received in Reporting Capability if greater than 60 o Start Time: 30 [Editors note: these values are just place-holders, we may wish to change these values after further study] Reporting Mode set to: o Rep Mode to Quasi real time o Batch Report Typewith: ▪ Position set to true ▪ Other values set to false Note that the SET may release the secure connection at this point. 23. At any time during the following part of the test when the SET is required to make a position estimate, if the SET requires Assistance Data, then: The SET responds with SUPL POS INIT A SUPL POS session takes place and completes successfully Send SUPL REPORT with no parameters. In this case this procedure replaces the procedure detailed in the relevant step below. 24. After approximately 30 seconds (set by Start Time): The SET sends SUPL REPORT with the position estimate Note that the SET may release the secure connection at this point. 25. After approximately 60 seconds (set by Interval Between Fixes):

	The SET sends SUPL REPORT with the position estimate. Note that the SET may release the secure connection at this point. 26. Simulate a loss of communication with the H-SLP (Conformance Test Tool) such that the SET will detect a loss of lower layer communication with the SLP by, for example, heavily attenuating the RF signal to the SET. 27. Wait for a time equivalent to 10 intervals between fixes (set by Interval Between Fixes) and then simulate re-established communication with the H-SLP (Conformance Test Tool) by, for example, restoring the RF signal to the SET. 28. The SET sends SUPL REPORT with the stored position estimates. Note that this step depends on the SET having used either Autonomous GPS or SET based A-GPS which assumes the SET had current Assistance Data 29. At approximately the next 60 second interval (set by Interval Between Fixes): The SET sends SUPL REPORT with the position estimate. Note that the SET may release the secure connection at this point. 30. Step 29 is repeated until the remaining number of fixes (the total number is set by Number of Fixes) have been received. 31. Send SUPL END
Pass-Criteria	Test 1 and 2: 1. At step 3 and step 21: The details of the Reporting Capability parameter shall be consistent with the known Reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters shall be consistent with the known reporting capabilities supported by the SET. Test 1: 2. At step 6 and 9 the SUPL POS Session shall complete successfully. 3. At step 13 the SET shall send SUPL REPORT with the stored position estimates. 4. At step 15 the SUPL POS Session shall complete successfully 5. At step 17 the SUPL POS Session shall complete successfully the remaining number of times (the total number is set by Number of Fixes). Test 2: 6. At step 24 and 25 the SET shall send SUPL REPORT with the position estimate. If step 23 occurs, then the position estimate shall be sent in the SUPL POS session instead. 7 At step 28 the SET shall send SUPL REPORT with the stored position estimates. 8. At step 31 the SET shall send SUPL REPORT with the position estimate. If step 23 occurs, then the position estimate shall be sent in the SUPL POS session instead. 9. At step 30 the remaining number of fixes shall be received (the total number is set by Number of Fixes).

5.1.4.3 SUPL-2.0-con-042 Basic Batch reporting [Includes optional features]

Test Case Id	SUPL-2.0-con-042
Test Object	Client
Test Case Description	To test SET correctly performs basic Batch Periodic reporting
Specification Reference	ULP TS 5.1.7
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-048-O,,
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_batch AND ics_periodic_Network_initiated AND ics_AGPSSETassisted_Network_initiated Test 2: ics_batch AND ics_periodic_Network_initiated AND ics_AGPSSETbased_Network_initiated
Test Procedure	Test 1: A-GPS SET assisted Test 2: A-GPS SET based Test 1: A-GPS SET assisted, Case #1: 1. Start a NI Periodic Location Session 2. In SUPL INIT set: Positioning Method to A-GPS SET assisted Trigger Type set to Periodic 3. The SET responds with SUPL TRIGGERED START with: The details of the Reporting Capability parameter consistent with the known reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters are consistent with the known reporting capabilities supported by the SET. 4. Send SUPL TRIGGERED RESPONSE with: The parameters set according to the table below for Case #1 Note that the SET may release the secure connection at this point. 5. After approximately 30 seconds (set by Start Time) the SET responds with SUPL POS INIT and a SUPL POS session takes place 6. The SUPL POS Session completes successfully 7. Send SUPL REPORT with a realistic position estimate Note that the SET may release the secure connection at this point. 8. After approximately 60 seconds (set by Interval Between Fixes) the SET responds with SUPL POS INIT and a SUPL POS session takes place 9. The SUPL POS Session completes successfully 10. Send SUPL REPORT with a realistic position estimate (Note that for convenience of checking the Pass Criteria, it may be useful to make each position estimate slightly different)

	Note that the SET may release the secure connection at this point. 11. Steps 8 through 10 are repeated until the 8th SUPL POS session and SUPL REPORT (set by Batch Reporting Conditions) is completed 12. The SET sends a SUPL REPORT with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. In the first SUPL REPORT there are 8 stored positions. 13. Steps 11 through 12 are repeated a further 5 times so that the final possible fully populated SUPL REPORT is received (set by the Number of Fixes and the Batch Reporting Conditions). Each SUPL REPORT contains all the stored positions since the previous SUPL REPORT and each contains 8 stored positions 14. Steps 8 through 10 are repeated until the remaining number of SUPL POS Sessions have been completed (the total number is set by the Number of Fixes) 15. The SET sends a SUPL REPORT with: Report Data List containing the remaining 4 stored positions correctly listed in the Position Data fields of the Report Data fields 16. Send SUPL END Test 1: A-GPS SET assisted, Case #2: 17. Repeat steps 1 through 10, but at step 4 send SUPL TRIGGERED RESPONSE with: The parameters set according to the table below for Case #2. 18. Steps 8 through 10 are repeated until the end of step 21 19. Approximately 5 minutes after step 4 occurred, the SET sends a SUPL REPORT with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. In the first SUPL REPORT there are 5 stored positions. 20. At approximately 5 minute interval thereafter, the SET sends a SUPL REPORT with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. The SUPL REPORT contains all the stored positions since the previous SUPL REPORT and contains 5 stored positions 21. Step 20 is repeated a further 8 times so that the final possible fully populated SUPL REPORT is received (set by the Number of Fixes and the Batch Reporting Conditions). 21. Steps 8 through 10 are repeated so that the remaining number of SUPL POS Sessions have been completed (the total number is set by the Number of Fixes) 22. The SET sends a SUPL REPORT with: Report Data List containing the remaining 2 stored positions correctly listed in the Position Data fields of the Report Data fields. 23. Send SUPL END Test 1: A-GPS SET assisted, Case #3: 24. Repeat steps 1 through 10, but at step 4 send SUPL TRIGGERED RESPONSE with:

	The parameters set according to the table below for Case #3. 25. Steps 8 through 10 are repeated until the remaining number of SUPL POS sessions (the total number is set by Number of Fixes) have been completed. 26. The SET sends a SUPL REPORT with: Report Data List containing all the 52 stored positions correctly listed in the Position Data fields of the Report Data fields. 27. Send SUPL END Test 2: A-GPS SET based, Case #1: 28. Start a NI Periodic Location Session 29. In SUPL INIT set: Positioning Method to A-GPS SET based Trigger Type set to Periodic 30. The SET responds with SUPL TRIGGERED START with: The details of the Reporting Capability parameter consistent with the known reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then ensure the details of the Services Supported and the Reporting Capabilities parameters are consistent with the known reporting capabilities supported by the SET. 31. Send SUPL TRIGGERED RESPONSE with: The parameters set according to the table below for Case #1 Note that the SET may release the secure connection at this point. Note that at any time during the following procedure when the SET is required to make a position estimate, if the SET requires Assistance Data: The SET responds with SUPL POS INIT A SUPL POS session takes place Send SUPL REPORT with no parameters. 32. After approximately 30 seconds (set by Start Time) the SET makes a position estimate 33. After approximately 60 seconds (set by Interval Between Fixes) the SET makes a position estimate 34. Step 33 is repeated until the 8th position estimate (set by Batch Reporting Conditions) is completed 35. The SET sends a SUPL REPORT with a Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. In the first SUPL REPORT there are 8 stored positions. 36. Steps 34 through 35 are repeated a further 5 times so that the final possible fully populated SUPL REPORT is received (set by the Number of Fixes and the Batch Reporting Conditions). Each SUPL REPORT contains all the stored positions since the previous SUPL REPORT. 37. Step 33 is repeated until the remaining number of position estimates have been completed (the total number is set by the Number of Fixes) 38. The SET sends a SUPL REPORT with: Report Data List containing the remaining 4 stored positions correctly listed in the Position Data fields of the Report Data fields. 39. Send SUPL END

	Test 2: A-GPS SET based, Case #2: 40. Repeat steps 28 through 34 but at step 31send SUPL TRIGGERED RESPONSE with: The parameters set according to the table below for Case #2. 41. Step 33 is repeated until the end of step 44 42. Approximately 5 minutes after step 31 occurred, the SET sends a SUPL REPORT with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. In the first SUPL REPORT there are 5 stored positions. 43. At approximately 5 minute interval thereafter, the SET sends a SUPL REPORT with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. The SUPL REPORT contains all the stored positions since the previous SUPL REPORT and contains 5 stored positions 44. Step 43 is repeated a further 8 times so that the final possible fully populated SUPL REPORT is received (set by the Number of Fixes and the Batch Reporting Conditions). 45. Step 33 is repeated so that the remaining number of position estimates have been completed (the total number is set by the Number of Fixes) 46. The SET sends a SUPL REPORT with: Report Data List containing the remaining 2 stored positions correctly listed in the Position Data fields of the Report Data fields. 47. Send SUPL END Test 2: A-GPS SET based, Case #3: 48. Repeat steps 28 through 34 but at step 31 send SUPL TRIGGERED RESPONSE with: The parameters set according to the table below for Case #3. 49. Step 33 is repeated until the remaining number of position estimates (the total number is set by Number of Fixes) have been completed. 50. The SET sends a SUPL REPORT with: Report Data List containing all the 52 stored positions correctly listed in the Position Data fields of the Report Data fields. 51. Send SUPL END
Pass-Criteria	Test 1, all Cases: 1. At step 3: The details of the Reporting Capability parameter shall be consistent with the known Reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters shall be consistent with the known reporting capabilities supported by the SET. 2. At steps 6 and 9 the SUPL POS session shall complete successfully Test 1, Case #1: 3. At step 12 the SET shall send a SUPL REPORT with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. Each

	SUPL REPORT shall contain all the stored positions since the previous SUPL REPORT. In the first SUPL REPORT there are 9 stored positions. The subsequent 5 SUPL REPORTs each contains 8 stored positions 4. At step 15 the SET shall send a SUPL REPORT with: Report Data List containing the remaining stored 3 positions correctly listed in the Position Data fields of the Report Data fields. Test 1, Case #2: 5. At step 19 the SET shall send a SUPL REPORT with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. In the first SUPL REPORT there are 5 stored positions. 6. At step 20 the SET shall send SUPL REPORT 9 times with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. The SUPL REPORT contains all the stored positions since the previous SUPL REPORT and contains 5 stored positions 7. At step 22 the SET shall send a SUPL REPORT with: Report Data List containing the remaining 2 stored positions correctly listed in the Position Data fields of the Report Data fields. Test 1, Case #3: 8. At step 26 the SET shall send a SUPL REPORT with: Report Data List containing all the 52 stored positions correctly listed in the Position Data fields of the Report Data fields. Test 2,all Cases: 9. At step 30: The details of the Reporting Capability parameter shall be consistent with the known Reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters shall be consistent with the known reporting capabilities supported by the SET. Test 2, Case #1: 10. At step 35the SET shall send a SUPL REPORT with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. Note that each SUPL REPORT shall contain all the stored positions since the previous SUPL REPORT. In the first SUPL REPORT there are 9 stored positions. The subsequent 5 SUPL REPORTs each contains 8 stored positions 11. At step 38 the SET shall send a SUPL REPORT with: Report Data List containing the remaining 3 stored positions correctly listed in the Position Data fields of the Report Data fields. Test 2, Case #2: 12. At step 42 the SET shall send a SUPL REPORT with: Report Data List containing all the stored positions correctly

	listed in the Position Data fields of the Report Data fields. In the first SUPL REPORT there are 5 stored positions. 13. At step 43 the SET shall send SUPL REPORT 9 times with: Report Data List containing all the stored positions correctly listed in the Position Data fields of the Report Data fields. The SUPL REPORT contains all the stored positions since the previous SUPL REPORT and contains 5 stored positions 14. At step 46 the SET shall send a SUPL REPORT with: Report Data List containing the remaining 2 stored positions correctly listed in the Position Data fields of the Report Data fields. Test 2, Case #3: 15. At step 50 the SET shall send a SUPL REPORT with: Report Data List containing all the 52 stored positions correctly listed in the Position Data fields of the Report Data fields.

Parameter	**Value**
Trigger Params	Periodic Params, with values as follows: Number of Fixes: 52 Interval Between Fixes: 60 or equal to "minimum interval between fixes" received in Reporting Capability if greater than 60 Start Time: 30 [Editors note: these values are just place-holders, we may wish to change these values after further study]
Reporting Mode	Batch reporting
Batch Reporting Conditions	Case #1: Sending of a batch report after every 8fixes/measurements Case #2: Sending of a batch report after every 5 minutes Case #3: Sending of only one batch report at the end of the session [Editors note: these values are place-holders and may need revision if the values above are changed.
Batch Report Type	Position set to true Other values set to false

Table 3: SUPL TRIGGERED RESPONSE parameters

5.1.5 Triggered Services: Area Event Triggers

5.1.6 Triggered Services: Other Scenarios

5.1.6.1 SUPL-2.0-con-060- Network Capabilities change [Includes optional features].

Test Case Id	SUPL-2.0-con-060
Test Object	Client
Test Case Description	To test SET correctly actions Network Capabilities change for Area Event triggered session
Specification Reference	ULP TS 5.1.14, 8, 9, 10
SCR Reference	ULP-PRO-C-033-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_event_Network_initiated OR ics_event_SET_initiated
Test Procedure	1. Start a NI Area Event Triggered Location Session or a SI Area Event Triggered Location Session in the case that Network Initiated Area Event Triggered Location Session is not supported in the SET. 2. The first trigger event occurs and completes. 3. Force a handover from the current cellular serving cell to a target cell for which the MNC is not in the downloaded Area Id lists in Area Event Params in Trigger Params in SUPL TRIGGERED RESPONSE used in step 1. 4. The SET sends SUPL TRIGGERED START with: Cause Code set to Serving Network not in Area Id list 5. Send SUPL TRIGGERED RESPONSE with: MNC in the Area Id lists in Area Event Params in Trigger Params set to the value from the target cell (network). 6. The triggered session continues 7. After the first trigger for the continued session has occurred and the associated session has completed the Triggered Location Session can be allowed to continue, or send SUPL TRIGGERED STOP to terminate the session
Pass-Criteria	1. At step 4 the SET shall send SUPL TRIGGERED START with: Cause Code set to Serving Network not in Area Id list 2. At step 6 the triggered session shall continue successfully

5.1.6.2 SUPL-2.0-con-061 – Network cancels Triggered Location Request [Includes optional features].

Note: Only the case of the Network cancelling a Triggered Location session is given. The case of the SET cancelling a Triggered Location session is considered trivial and is therefore not tested

Test Case Id	SUPL-2.0-con-061
Test Object	Client
Test Case Description	To test SET correctly actions when the Network cancels a Triggered Location Request
Specification Reference	ULP TS 5.1.17, 8, 9, 10
SCR Reference	ULP-MES-C-011-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_periodic_Network_initiated OR ics_periodic_SET_initiated OR ics_event_Network_initiated OR ics_event_SET_initiated
Test Procedure	1. Start a NI Periodic Triggered Location Session, or a NI AreaEvent Triggered Location session if Periodic Location sessions are not supported in the SETor in the case that Network Initiated Periodic or Area Event Triggered Location Sessions are not supported in the SET start a SI Periodic Triggered Location Session, or a SI Area Event Triggered Location session if Periodic Location sessions are not supported in the SET,. 2. After the first trigger has occurred and the associated session has completed send SUPL TRIGGERED STOP with no parameters 3. The SET sends SUPL END 4. The Triggered Location Session ends and the SET releases the secure IP connection.
Pass-Criteria	1. At step 3 the SET shall respond with SUPL END 2. At step 4 the SET shall release the secure IP connection.

5.1.6.3 SUPL-2.0-con-062 – V-SLP to V-SLP Handover [Includes optional features].

Test Case Id	SUPL-2.0-con-062
Test Object	Client
Test Case Description	To test SET correctly actions V-SLP to V-SLP Handover
Specification Reference	ULP TS 5.1.11, 8, 9, 10
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-033-O,
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_periodic_Network_initiated OR ics_event_Network_initiated OR ics_periodic_SET_initiated OR ics_event_SET_initiated
Test Procedure	Note: This test case is applicable to all SETs that support any location method that at some point causes the SET to send a SUPL POS INIT to the SLP, and that supports any triggered service. This test case has been written for a Periodic Triggered, SET assisted mode Location Session. The case

	where Periodic Location sessions or a SET assisted mode is not supported in the SET is FFS 1. Start a NI Periodic Triggered Location Session, or a SI Periodic Triggered Location Session if NI Periodic Location sessions are not supported in the SET. 2.In SUPL INIT and/or SUPL TRIGGERED RESPONSE set: Positioning Method to any SET assisted method that is supported by the SET 3. After the first trigger has occurred and the associated session has completed the SET sends SUPL POS INIT to initiate the second triggered positioning session 4. Send SUPL END with: Status Code set to No SUPL Coverage 5. The SET sends SUPL TRIGGERED START with: Session ID set to the same as that sent in SUPL END in step 3 including both SET Session ID and SLP Session ID Cause Code set to No SUPL Coverage 6. Send SUPL TRIGGERED RESPONSE with the same or similar parameters to those used in step 1. 7. The triggered session continues 8. After the first trigger for the continued session has occurred and the associated session has completed the Triggered Location Session can be allowed to continue, or send SUPL TRIGGERED STOP to terminate the session
Pass-Criteria	1. At step 5 the SET shall send SUPL TRIGGERED START with: Session ID set to the same as that sent in SUPL END in step 3 including both SET Session ID and SLP Session ID Cause Code set to No SUPL Coverage 2. At step 7 the triggered session shall continue successfully

5.1.7 Error Conditions

5.1.7.1 SUPL-2.0-con-065 – Unexpected data value

To be written

5.1.7.2 SUPL-2.0-con-065 – Unexpected message

5.1.7.3

To be written

5.1.8 Timer expiration

5.1.8.1 SUPL-2.0-con-070 - Timeout UT2 [Includes optional features]

Test Case Id	SUPL-2.0-con-070
Test Object	Client
Test Case Description	To test SET correctly actions timer UT2

Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-007-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_AGPSSETassisted_Network_initiated OR ics_AGPSSETbased_Network_initiated OR [others FFS] (Any positioning method requiring a SUPL POS session) Test 2: (ics_AGPSSETassisted_Network_initiated OR ics_AGPSSETbased_Network_initiated OR [others FFS]) AND (ics_periodic_Network_initiated OR ics_event_Network_initiated) Test 4: ics_periodic_Network_initiated OR ics_event_Network_initiated ixit: ixit_timer_UT2
Test Procedure	Test 1: SUPL POS session (Immediate session) [Includes optional features] Test 2: SUPL POS session (Triggered session) [Includes optional features] Test 3: No SUPL POS session (Immediate session) Test 4: No SUPL POS session (Triggered session) [Includes optional features] Test 1: SUPL POS session (Immediate session) [Includes optional features] 1. Start a NI Location Session 2. In SUPL INIT set: Positioning Method to any method that requires a SUPL POS session that is supported by the SET 3. The SET sends SUPL POS INIT 4. Do not respond 5. After timer UT2 expires (depending on ixit_timer_UT2) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 6. The Location Session ends and the SET releases the secure IP connection. Test 2: SUPL POS session (Triggered session) [Includes optional features] Note: This test case is applicable to SETs that support any location method that requires a SUPL POS session and that supports any triggered service. This test case has been written for a Periodic Triggered, SET assisted mode Location Session. The case where Periodic Location sessions or a SET assisted mode is not supported in the SET is FFS

	7. Start a NI Periodic Triggered Location Session 8. In SUPL INIT and SUPL TRIGGERED RESPONSE set: Positioning Method to any SET assisted method that requires a SUPL POS session that is supported by the SET 9. When the first periodic trigger occurs the SET sends SUPL POS INIT 10. Do not respond 11. (After timer UT2 expires (depending on ixit_timer_UT2) the SET will abandon the SUPL POS session) Note that the SET may release the secure connection at this time. 12. When the second periodictrigger occurs the SET sends SUPL POS INIT 13. A SUPL POS session takes place 14. Send SUPL REPORT 15. The Triggered Location Session can be allowed to continue, or send SUPL TRIGGERED STOP to terminate the session Test 3: No SUPL POS session (Immediate session) 16. Start a NI Location Session 17. In SUPL INIT set: Positioning Method to Enhanced Cell/sector 18. The SET sends SUPL POS INIT 19. Do not respond 20. After timer UT2 expires (depending on ixit_timer_UT2) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 21. The Location Session ends and the SET releases the secure IP connection. Test 4: No SUPL POS session (Triggered session) [Includes optional features] Note: This test case is applicable to SETs that support any triggered service. This test case has been written for a Periodic Triggered Location Session. The case where Periodic Location sessions is not supported in the SET is FFS 22. Start a NI Periodic Triggered Location Session 23. In SUPL INIT and SUPL TRIGGERED RESPONSE set: Positioning Method to Enhanced Cell/sector 24. When the first periodic trigger occurs the SET sends SUPL POS INIT 25. Do not respond 26. (After timer UT2 expires (depending on ixit_timer_UT2) the SET will abandon the individual location session) Note that the SET may release the secure connection at this time. 27. When the second periodic trigger occurs the SET sends SUPL POS INIT 28. Send SUPL REPORT

	29. The Triggered Location Session can be allowed to continue, or send SUPL TRIGGERED STOP to terminate the session
Pass-Criteria	Test 1 and Test 3: 1. At step 5 and step 20 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 6 and step 21 the SET shall release the secure IP connection. Test 2 and Test 4: 1. At step 12 and step 27 the SET shall send SUPL POS INIT

5.1.8.2 SUPL-2.0-con-071 - Timeout UT3 [Includes optional features]

Test Case Id	SUPL-2.0-con-071
Test Object	Client
Test Case Description	To test SET correctly actions timer UT3
Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-007-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_AGPSSETassisted_Network_initiated OR ics_AGPSSETbased_Network_initiated OR [others FFS] (Any positioning method requiring a SUPL POS session) Test 2: (ics_AGPSSETassisted_Network_initiated OR ics_AGPSSETbased_Network_initiated OR [others FFS]) AND (ics_periodic_Network_initiated OR ics_event_Network_initiated) ixit: ixit_timer_UT3

Test Procedure	Test 1: Immediate session Test 2: Triggered session Test 1: Immediate session 1. Start a NI Location Session 2. In SUPL INIT set: Positioning Method to any method that requires a SUPL POS session that is supported by the SET 3. The SET sends SUPL POS INIT 4. A SUPL POS session takes place 5. After the SET sends the final SUPL POS do not respond 6. After timer UT3 expires (depending on ixit_timer_UT3) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 7. The Location Session ends and the SET releases the secure IP connection. Test 2: Triggered session Note: This test case is applicable to SETs that support any location method that requires a SUPL POS session and that supports any triggered service. This test case has been written for a Periodic Triggered, SET assisted mode Location Session. The case where Periodic Location sessions or a SET assisted mode is not supported in the SET is FFS 8. Start a NI Periodic Triggered Location Session 9. In SUPL INIT and SUPL TRIGGERED RESPONSE set: Positioning Method to any SET assisted method that requires a SUPL POS session that is supported by the SET 10. When the first periodic trigger occurs the SET sends SUPL POS INIT 11. A SUPL POS session takes place 12. After the SET sends the final SUPL POS do not respond 13. (After timer UT3 expires (depending on ixit_timer_UT3) the SET will continue to the next trigger in the session) Note that the SET may release the secure connection at this time. 14. When the second periodic trigger occurs the SET sends SUPL POS INIT 15. A SUPL POS session takes place 16. Send SUPL REPORT 17. The Triggered Location Session can be allowed to continue, or send SUPL TRIGGERED STOP to terminate the session

Pass-Criteria	Test 1: 1. At step 6 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 7 the SET shall release the secure IP connection. Test 2: 1. At step 14 the SET shall send SUPL POS INIT

5.1.8.3 SUPL-2.0-con-072 - Timeout UT5 [Includes optional features]

Test Case Id	SUPL-2.0-con-072
Test Object	Client
Test Case Description	To test SET correctly actions timer UT5
Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-007-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_notification_currentLocation ixit: ixit_verification_timeout ixit_timer_UT5
Test Procedure	1. Start a NI Location Session with Notification/Verification based on current location 2. In SUPL INIT set: Positioning Method to any method supported by the SET that requires a SUPL POS session Notification Mode to Notification/Verification based on location Do not use Notification 3. The SUPL POS session completes 4. Send SUPL NOTIFY with: Notification set to Notification and verification (Allowed on no answer) Do not use Encoding type, RequestorID and ClientName 5. The user accepts the Location attempt prompt before the internal SET timer expires (defined by ixit_verification_timeout) 6. The SET sends SUPL NOTIFY RESPONSE with: Notification Response set to allowed 7. Do not respond 8. After timer UT5 expires (depending on ixit_timer_UT5) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified,

	systemFailure or posMethodFailure. 9. The Location Session ends and the SET releases the secure IP connection.
Pass-Criteria	1. At step 8 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 9 the SET shall release the secure IP connection.

5.1.8.4 SUPL-2.0-con-073 - Timeout UT7 [Includes optional features].

Test Case Id	SUPL-2.0-con-073
Test Object	Client
Test Case Description	To test SET correctly actions timer UT7
Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-007-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_periodic_Network_initiated OR ics_event_Network_initiated ixit: ixit_timer_UT7
Test Procedure	1. Start a NI Periodic Triggered Location Session, or a NI Area Event Triggered Location session if Periodic Location sessions are not supported in the SET. 2. Allow the first trigger to occur (either periodic or area event) and the first location session to complete 3. From the SET stop the Triggered Location Session 4. The SET sends SUPL TRIGGERED STOP 5 Do not respond 6. After timer UT7 expires (depending on ixit_timer_UT7) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 7. The Triggered Location Session ends and the SET releases the secure IP connection.
Pass-Criteria	1. At step 6 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 7 the SET shall release the secure IP connection.

5.1.8.5 SUPL-2.0-con-074 - Timeout UT8 [Includes optional features]

Test Case Id	SUPL-2.0-con-074
Test Object	Client
Test Case Description	To test SET correctly actions timer UT8

Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-007-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_periodic_Network_initiated ixit: ixit_timer_UT8
Test Procedure	1. Start a NI Periodic Triggered Location Session [Editor's note: in the "default" Periodic session we need to make sure the total session is as short as possible] 2. Allow all the triggers to occur 3. The SET sends the final SUPL REPORT[Editor's note: we may need to give guidance on how to tell the last SUPL REPORT has been sent] 4 Do not respond 5. After timer UT8 expires (depending on ixit_timer_UT8) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 6. The Triggered Location Session ends and the SET releases the secure IP connection.
Pass-Criteria	1. At step 5 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 6 the SET shall release the secure IP connection.

5.2 Client Conformance: SET Initiated

5.2.1 Common Part of ULP Message, Basic Functionality and Cross Version Compatibility

5.2.1.1 SUPL-2.0-con-100 – Correct Session ID

Test Case Id	SUPL-2.0-con-100
Test Object	Client
Test Case Description	To test SET correctly actions Session ID
Specification Reference	ULP TS 9, 10
SCR Reference	
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case

Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:
Test Procedure	1. Case 1, Case 2 and Case3 : Start a SI Location Session 2. The SET sends SUPL START 3. Send SUPL RESPONSE with: SLP Session ID set to a valid value with: o SLP ID using the Parameter type: ▪ Case 1: IPAddress, IPv4 ▪ Case 2: IPAddress, IPv6 ▪ Case 3: FQDN 4. The SET sends SUPL POS INIT with: Correct full Session ID 5. The Location Session completes successfully
Pass-Criteria	1. At step 4 in each case the SET shall respond with SUPL POS INIT with: Correct full Session ID

5.2.1.2 SUPL-2.0-con-101 – Invalid SET Session ID

Test Case Id	SUPL-2.0-con-101
Test Object	Client
Test Case Description	To test SET correctly rejects an invalid SET Session ID
Specification Reference	ULP TS 9, 10
SCR Reference	
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:

Test Procedure	1. Case 1 and Case 2: Start a SI Location Session 2. The SET sends SUPL START 3. Send SUPL RESPONSE with: Case 1: In SET Session ID set: o Session ID to an invalid value (i.e. set Session ID to a different value from that received from the SET) Case 2: In SET Session ID set: o SET ID to an invalid value (i.e. set SET ID to a different value or a different parameter type from that received from the SET) 4. The SET responds with SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID. Note that between Cases, in order to return to a "known state" for the next Case, the Conformance Test Tool ends the Location Session and releases the secure IP connection.
Pass-Criteria	1. At step 4 in both cases, the SET shall respond with SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID.

5.2.1.3 SUPL-2.0-con-102 – Invalid SLP Session ID

Test Case Id	SUPL-2.0-con-102
Test Object	Client
Test Case Description	To test SET correctly rejects an invalid SLP Session ID
Specification Reference	ULP TS 9, 10
SCR Reference	
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:

Test Procedure	1. Case 1 and Case 2: Start a SI Location Session 2. The SET sends SUPL START 3. Send SUPL RESPONSE with: Positioning Method set to: o Any method supported by the SET that requires a SUPL POS session (e.g. A-GPS SET Assisted) 4. The SET sends SUPL POS INIT 5. Send SUPL POS with: Case 1: In SLP Session ID set: o Session ID to an invalid value (i.e. set Session ID to a different value from that used in the SUPL RESPONSE message) Case 2: In SLP Session ID set: o SLP ID to an invalid value (i.e. set SET ID to a different value or a different parameter type from that used in the SUPL RESPONSE message) 6. The SET responds with SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID. Note that between Cases, in order to return to a "known state" for the next Case, the Conformance Test Tool ends the Location Session and releases the secure IP connection.
Pass-Criteria	1. At step 6 in both cases, the SET shall respond with SUPL END with: The invalid Session ID in the SUPL END Common Part Status Code set to invalidSessionID.

5.2.1.4 SUPL-2.0-con-103 – Compatible versions

Test Case Id	SUPL-2.0-con-103
Test Object	Client
Test Case Description	To test SET correctly accepts compatible Version numbers in SUPL messages
Specification Reference	ULP TS 7,9,10
SCR Reference	ULP-PRO-C-009-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: o Applicability:

Test Procedure	Test 1: Support for higher versions of SUPL 2.X.X Test 2: Support for lower versions of SUPL 2.X.X Test 1: Support for higher versions of SUPL 2.X.X 1. Start a SI Location Session 2. In the Common Part of all messages set: Version to: o Maj set to 2 o Min set to a higher value than that supported by the SET o Serv ind set to a higher value than that supported by the SET 3. The SET sends SUPL START 4. Send SUPL RESPONSE with Version set as in step 2. 5. The SET sends SUPL POS INIT with: In the Common Part, Version set to: o Maj set to 2 o Min set to 0 or correct version supported by the SET o Serv ind set to 0 or correct version supported by the SET 6. The Location Session completes successfully. Test 2: Support for lower versions of SUPL 2.X.X. Only applicable if there exists SUPL V2.X where X>0 7. Repeat Test 1 with following change at step 2: In the Common Part of all messages set: Version to: o Maj set to 2 o Min set to a lower values than the maximum value supported by the SET o Serv ind set to a lower values than the maximum value supported by the SET
Pass-Criteria	Test 1 and 2: 1. 1. At step 5 the SET shall respond with SUPL POS INIT with: In the Common Part, Version set to: o Maj set to 2 o Min set to 0 or correct version supported by the SET o Serv ind set to 0 or correct version supported by the SET

5.2.2 Single sessions

5.2.2.1 SUPL-2.0-con-110 - Positioning method [Includes optional features].

Test Case Id	SUPL-2.0-con-110
Test Object	Client

Test Case Description	To test SET correctly actions single session Positioning method
Specification Reference	ULP TS 5.2.1, 8, 9
SCR Reference	ULP-PRO-C-009-O, ULP-PRO-C-011-M, ULP-PRO-C-012-O, ULP-PRO-C-013-O, ULP-PRO-C-014-O, ULP-PRO-C-015-O, ULP-PRO-C-016-O, ULP-PRO-C-018-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_AGPSSETassisted_SET_initiated Test 2: ics_AGPSSETbased_SET_initiated Test 3: ics_autonomousGPS_SET_initiated Test 4: ics_eCID_SET_initiated Test 5: NOT ics_eCID_SET_initiated Test 6: ics_AGANSSSETassisted_Galileo_SET_initiated Test 7: ics_AGANSSSETassisted_GLONASS_SET_initiated Test 8: ics_AGANSSSETbased_Galileo_SET_initiated Test 9: ics_AGANSSSETbased_GLONASS_SET_initiated Test 10: ics_autonomousGANSS_SET_initiated Test 11: ics_AGPSSETassisted_SET_initiated AND ics_AGPSSETbased_SET_initiated Test 12: (ics_AGANSSSETassisted_Galileo_SET_initiated AND ics_AGANSSSETbased_Galileo_SET_initiated) OR (ics_AGANSSSETassisted_GLONASS_SET_initiated AND ics_AGANSSSETbased_GLONASS_SET_initiated) ixit: Test 10, Test 12: ixit_gANSS
Test Procedure	Test 1: A-GPS SET assisted [Includes optional features] Test 2: A-GPS SET based [Includes optional features] Test 3: Autonomous GPS [Includes optional features] Test 4: Enhanced Cell ID [Includes optional features] Test 5: Cell ID Test 6: A-GANSS SET assisted –Galileo [Includes optional features] Test 7: A-GANSS SET assisted –GLONASS [Includes optional features] Test 8: A-GANSS SET based –Galileo [Includes optional features] Test 9: A-GANSS SET based –GLONASS [Includes optional features] Test 10: Autonomous GANSS [Includes optional features] Test 11: A-GPS Preferred methods [Includes optional features] Test 12: A-GANSS Preferred methods [Includes optional features] Note that these test cases only test a single GNSS at one time. Testing of support for multiple simultaneous GNSSs is for further study. 1. All tests: start a SI Location Session

	2. The SET sends SUPL START with: SET capabilities parameter consistent with the Positioning technologies supported by the SET as declared in the ics 3. Send SUPL RESPONSE with: Positioning Method set to the value specified in the table below GNSS Positioning Technology set to the value specified in the table below 4. The SET sends SUPL POS INIT with: SET capabilities parameter consistent with the Positioning technologies supported by the SET as declared in the ics Test 4 only: Location ID, Cell info, the following parameters: NMR and/or TA if testing using GSM, Measured Results List if testing using WCDMA. 5. Test 4 and Test 5: send SUPL END with: Position set to a realistic position for the SET. 6. All tests except Test 4 and Test 5: a SUPL POS session takes place and completes successfully using the Positioning Method defined by the test case. Test 3 and Test 10: no Assistance Data is sent. Test 10: one of Galileo or GLONASS can be used depending on the technology supported by the SET and declared in ixit_gANSS. Test 11, Case 1: A-GPS SET assisted is used. Test 11, Case 2: A-GPS SET based is used. Test 12, Case 1: A-GANSS SET assisted is used, Test 11, Case 2: A-GANSS SET based is used, where in both cases the GANSS used can be one of Galileo or GLONASS depending on the technology supported by the SET and declared in ixit_gANSS. 7. Test 2, Test 3, Test 8, Test 9, Test 10, Test 11 Case 2 and Test 12 Case 2: send SUPL END 8. Test 1, Test 6, Test 7, Test 11 Case 1 and Test 12 Case 1: send SUPL END with: Position set to a realistic position for the SET. 9. All tests: the SET releases the secure IP connection. Note: Repeat for all Positioning technologies supported by the SET as declared in the ics
Pass-Criteria	All tests: 1. At step 2 the SET shall send SUPL START with: SET capabilities parameter consistent with the Positioning technologies supported by the SET as declared in the ics 2. At step 2 the SET shall send SUPL POS INIT with: SET capabilities parameter consistent with the Positioning technologies supported by the SET as declared in the ics Test 4 only: Location ID, Cell info, the following parameters: NMR and/or TA if testing using GSM, Measured Results List if testing using WCDMA. All tests except Test 4 and Test 5: 3. At step 6 a SUPL POS session shall take place and shall complete successfully using the Positioning Method defined by the test case. Test 10: one of Galileo or GLONASS can be used depending on the technology supported by the SET and declared in ixit_gANSS. Test 11, Case 1: A-GPS SET assisted shall be used. Test 11, Case 2: A-GPS SET based shall be used. Test 12, Case 1: A-GANSS SET assisted shall be used, Test 11, Case 2: A-GANSS SET based shall be used, where in both cases the GANSS used can be one of Galileo or GLONASS depending on the technology supported by

	the SET and declared in ixit_gANSS.

Test #	Value of Positioning Method	Value of GNSS Positioning Technology
Test 1	A-GPS SET assisted only	Not set
Test 2	A-GPS SET based only	Not set
Test 3	Autonomous GPS	Not set
Test 4	Enhanced Cell / sector	Not set
Test 5	Enhanced Cell / sector	Not set
Test 6	A-GNSS SET assisted only	Galileo
Test 7	A-GNSS SET assisted only	GLONASS
Test 8	A-GNSS SET based only	Galileo
Test 9	A-GNSS SET based only	GLONASS
Test 10	Autonomous GNSS	Not set
Test 11	Case 1: A-GPS SET assisted preferred (A-GPS SET based is the fallback mode) Case 2: A-GPS SET based preferred (A-GPS SET assisted is the fallback mode)	Not set
Test 12	Case 1: A-GNSS SET assisted preferred (A-GANSS SET based is the fallback mode) Case 2: A-GNSS SET based preferred (A-GANSS SET assisted is the fallback mode)	Galileo or GLONASS

Table 4: Positioning Method and GNSS Positioning Technology

5.2.2.2 SUPL-2.0-con-111 - SET Initiated Location Request of another SET [Includes optional features]

Test Case Id	SUPL-2.0-con-111
Test Object	Client
Test Case Description	To test SET correctly supports SET Initiated Location Request of another SET
Specification Reference	ULP TS 5.2.7
SCR Reference	ULP-PRO-C-038-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:

	ics_silr_another_SET ixit: ixit_timer_UT9
Test Procedure	1. Start a SI Location Request of another SET 2. The SET sends SUPL SET INIT 3 Wait for approximately 90% of timer UT9 (depending on ixit_timer_UT9). During this time the SET does not release the secure IP connection 4. Send SUPL END with: Position set to some suitable value. 5. The Session ends and the SET releases the secure IP connection. 6. The SET displays the received position
Pass-Criteria	1. At step 3 the SET shall not release the secure IP connection 2. At step 5 the SET shall release the secure IP connection. 3. At step 6 the SET shall display the received position

5.2.2.3 SUPL-2.0-con-112 - Previous position stored in SLP meets QoP

5.2.2.4 SUPL-2.0-con-113 - Transfer Location to Third Party [Includes optional features].

Note that this test case only tests Transfer Location to Third Party in the case of A-GPS SET based positioning method. In the case of all other positioning methods, Transfer Location to Third Party is considered trivial and is not tested.

Test Case Id	SUPL-2.0-con-113
Test Object	Client
Test Case Description	To test SET correctly actions Transfer Location to Third Party
Specification Reference	ULP TS 5.2.15, 8.1.6.2
SCR Reference	ULP-PRO-C-040-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: ics_transfer_thirdParty AND ics_AGPSSETbased_SET_initiated
Test Procedure	1. Start a SI Location Session 2. The SET sends SUPL START with: SET capabilities parameter consistent with the Positioning technologies supported by the SET as declared in the ics Third Party ID in Third Party set to a valid value 3. Send SUPL RESPONSE with: Positioning Method set to A-GPS SET based only 4. The SET sends SUPL POS INIT 6. A SUPL POS session takes place and completes successfully using:

	Either in the case of RRLP: Measure Position Request / Measure Position Response messages Or in the case of RRC: Measurement Control / Measurement Response messages 7. The SET returns its position in either Measure Position Response (RRLP) or Measurement Response (RRC) 8. Send SUPL END
Pass-Criteria	1. At step 2 the SET shall send SUPL START with: SET capabilities parameter consistent with the Positioning technologies supported by the SET as declared in the ics Third Party ID in Third Party set to a valid value 2. At step 6 a SUPL POS session shall take place and shall complete successfully using: Either in the case of RRLP: Measure Position Request / Measure Position Response messages Or in the case of RRC: Measurement Control / Measurement Response messages 3. At step 7 the SET shall return its position in either Measure Position Response (RRLP) or Measurement Response (RRC)

5.2.3 Triggered Services: Periodic Triggers

5.2.3.1 SUPL-2.0-con-120 Periodic reporting [Includes optional features]

Test Case Id	SUPL-2.0-con-120
Test Object	Client
Test Case Description	To test SET correctly performs Periodic reporting
Specification Reference	ULP TS 5.1.7
SCR Reference	ULP-PRO-C-032-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_periodic_SET_initiated AND ics_AGPSSETassisted_SET_initiated Test 2: ics_periodic_SET_initiated AND ics_AGPSSETbased_SET_initiated
Test Procedure	Test 1: A-GPS SET assisted Test 2: A-GPS SET based Test 1: A-GPS SET assisted: 1. Start a SI Periodic Location Session with the following values set in the application running on the SET or otherwise: Number of Fixes: 50 Interval Between Fixes: 60 seconds or equal to the minimum interval between fixes supported by the SET if greater than 60

	seconds Start Time: 30 seconds [Editors note: these values are just place-holders, we may wish to change these values after further study] 2. The SET sends SUPL TRIGGERED START with: Trigger Type set to Periodic Details of the Reporting Capability parameter consistent with the known reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters are consistent with the known reporting capabilities supported by the SET. 3. Send SUPL TRIGGERED RESPONSE with: Positioning Method set to A-GPS SET assisted.. Note that the SET may release the secure connection at this point. 4. After approximately 30 seconds (set by Start Time) the SET responds with SUPL POS INIT and a SUPL POS session takes place 5. The SUPL POS Session completes successfully 6. Send SUPL REPORT with a realistic position estimate Note that the SET may release the secure connection at this point. 7. The SET displays the received position estimate 8. After approximately 60 seconds (set by Interval Between Fixes) the SET responds with SUPL POS INIT and a SUPL POS session takes place 9. The SUPL POS Session completes successfully 10. Send SUPL REPORT with a realistic position estimate Note that the SET may release the secure connection at this point. 11. The SET displays the received position estimate 12. Repeat steps 8 through 11 until the remaining number of fixes (set by Number of Fixes) have been sent and displayed. 13. The SET sends SUPL END Test 2: A-GPS SET based: 14. Start a SI Periodic Location Session with the following values set in the application running on the SET or otherwise: Number of Fixes: 50 Interval Between Fixes: 60 seconds or equal to theminimum interval between fixes supported by the SET if greater than 60 seconds Start Time: 30 seconds [Editors note: these values are just place-holders, we may wish to change these values after further study] 15. The SET sends SUPL TRIGGERED START with: Trigger Type set to Periodic The details of the Reporting Capability parameter consistent with the known reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters are consistent with

	the known reporting capabilities supported by the SET. 16. Send SUPL TRIGGERED RESPONSE with: Positioning Method set to A-GPS SET based.. Note that the SET may release the secure connection at this point. Note that at any time during the following procedure when the SET is required to make a position estimate, if the SET requires Assistance Data: The SET responds with SUPL POS INIT A SUPL POS session takes place Send SUPL REPORT with no parameters. 17. After approximately 30 seconds (set by Start Time) the SET makes a position estimate 18. The SET displays the calculated position estimate 19. After approximately 60 seconds (set by Interval Between Fixes) the SET makes a position estimate 20. The SET displays the calculated position estimate 21. Steps 19 and 20 are repeated until the remaining number of fixes (set by Number of Fixes) have been displayed. 22. The SET sends SUPL END
Pass-Criteria	1. At step 2 and step 15: The Trigger Type shall be set to Periodic The details of the Reporting Capability parameter shall be consistent with the known Reporting capabilities supported by the SET. If the SET sends the Services Capabilities parameter in the SET Capabilities then the details of the Services Supported and the Reporting Capabilities parameters shall be consistent with the known reporting capabilities supported by the SET. Test 1: 2. At step 5 and step 9 the SUPL POS Session shall complete successfully 3. At step 7 and step 11 the SET shall display the received position estimate the requested number of times 4. At step 13 the SET shall send SUPL END Test 2: 5. At step 18 and step 20 the SET shall display the position estimate the requested number of times 6. At step 22 the SET shall send SUPL END

5.2.4 Triggered Services: Area Event Triggers

5.2.5 Timer expiration

5.2.5.1 SUPL-2.0-con-140 - Timeout UT1

Test Case Id	SUPL-2.0-con-140
Test Object	Client

Test Case Description	To test SET correctly actions timer UT1
Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-009-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 2: ics_periodic_SET_initiated OR ics_event_SET_initiated ixit: ixit_timer_UT1
Test Procedure	Test 1: Immediate session Test 2: Triggered session [Includes Optional Features] Test 1: Immediate session 1. Start a SI Location Session. 2. The SET sends SUPL START 3. Do not respond 4. After timer UT1 expires (depending on ixit_timer_UT1) the SET sends SUPL END with Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 5. The Location Session ends and the SET releases the secure IP connection. Test 2: Triggered session [Includes Optional Features] 6. Start a SI Periodic Triggered Location Session, or a SI Area Event Triggered Location session if Periodic Location sessions are not supported in the SET. 7. The SET sends SUPL TRIGGERED START 8. Do not respond 9. After timer UT1 expires (depending on ixit_timer_UT1) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 10. The Location Session ends and the SET releases the secure IP connection.
Pass-Criteria	1. At step 4 and step 9 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 5 and step 10 the SET shall release the secure IP connection.

5.2.5.2 SUPL-2.0-con-141 - Timeout UT2

Test Case Id	SUPL-2.0-con-141
Test Object	Client

Test Case Description	To test SET correctly actions timer UT2
Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-009-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_AGPSSETassisted_SET_initiated OR ics_AGPSSETbased_SET_initiated OR [others FFS] (Any positioning method requiring a SUPL POS session) Test 2: (ics_AGPSSETassisted_SET_initiated OR ics_AGPSSETbased_SET_initiated OR [others FFS]) AND (ics_periodic_SET_initiated OR ics_event_SET_initiated) Test 4: ics_periodic_SET_initiated OR ics_event_SET_initiated ixit: ixit_timer_UT2
Test Procedure	Test 1: SUPL POS session (Immediate session) [Includes optional features] Test 2: SUPL POS session (Triggered session) [Includes optional features] Test 3: No SUPL POS session (Immediate session) Test 4: No SUPL POS session (Triggered session) [Includes optional features] Test 1: SUPL POS session (Immediate session) [Includes optional features] 1. Start a SI Location Session 2. The SET sends SUPL START 3. Send SUPL RESPONSE with: Positioning Method set to any method that requires a SUPL POS session that is supported by the SET 4. The SET sends SUPL POS INIT 5. Do not respond 6. After timer UT2 expires (depending on ixit_timer_UT2) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 7. The Location Session ends and the SET releases the secure IP connection. Test 2: SUPL POS session (Triggered session) [Includes optional features] Note: This test case is applicable to SETs that support any location method that requires a SUPL POS session and that supports any triggered service. This test case has been written for a Periodic Triggered, SET assisted mode Location Session. The case where Periodic Location sessions or a SET assisted mode is not supported in

	the SET is FFS 8. Start a SI Periodic Triggered Location Session 9. The SET sends SUPL TRIGGERED START 10. Send SUPL TRIGGERED RESPONSE with: Positioning Method set to any SET assisted method that requires a SUPL POS session that is supported by the SET 11. When the first periodic trigger occurs the SET sends SUPL POS INIT 12. Do not respond 13. (After timer UT2 expires (depending on ixit_timer_UT2) the SET will abandon the SUPL POS session) Note that the SET may release the secure connection at this time. 14. When the second periodic trigger occurs the SET sends SUPL POS INIT 15. A SUPL POS session takes place 16. Send SUPL REPORT 17. The Triggered Location Session can be allowed to continue, or send SUPL TRIGGERED STOP to terminate the session Test 3: No SUPL POS session (Immediate session) 18. Start a SI Location Session 19. The SET sends SUPL START 20. Send SUPL RESPONSE with: Positioning Method set to Enhanced Cell/sector 21. The SET sends SUPL POS INIT 22. Do not respond 23. After timer UT2 expires (depending on ixit_timer_UT2) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 24. The Location Session ends and the SET releases the secure IP connection. Test 4: No SUPL POS session (Triggered session) [Includes optional features] Note: This test case is applicable to SETs that support any triggered service. This test case has been written for a Periodic Triggered Location Session. The case where Periodic Location sessions is not supported in the SET is FFS 25. Start a SI Periodic Triggered Location Session 26. The SET sends SUPL TRIGGERED START 27. Send SUPL TRIGGERED RESPONSE with: Positioning Method set to Enhanced Cell/sector 28. When the first periodic trigger occurs the SET sends SUPL POS INIT 29. Do not respond 30. (After timer UT2 expires (depending on ixit_timer_UT2) the SET will abandon the individual location session) 31. When the second periodic trigger occurs the SET sends SUPL POS

	INIT 32. Send SUPL REPORT 33. The Triggered Location Session can be allowed to continue, or send SUPL TRIGGERED STOP to terminate the session
Pass-Criteria	Test 1 and Test 3: 1. At step 6 and step 23 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 7 and step 24 the SET shall release the secure IP connection. Test 2 and Test 4: 3. At step 14 and step 31 the SET shall send SUPL POS INIT

5.2.5.3 SUPL-2.0-con-142 - Timeout UT3 [Includes optional features]

Test Case Id	SUPL-2.0-con-142
Test Object	Client
Test Case Description	To test SET correctly actions timer UT3
Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-009-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: Test 1: ics_AGPSSETassisted_SET_initiated OR ics_AGPSSETbased_SET_initiated OR [others FFS] (Any positioning method requiring a SUPL POS session) Test 2: (ics_AGPSSETassisted_SET_initiated OR ics_AGPSSETbased_SET_initiated OR [others FFS]) AND (ics_periodic_SET_initiated OR ics_event_SET_initiated) ixit: ixit_timer_UT3
Test Procedure	Test 1: Immediate session Test 2: Triggered session Test 1: Immediate session 1. Start a SI Location Session 2. The SET sends SUPL START 3. Send SUPL RESPONSE with: Positioning Method set to any method that requires a SUPL POS session that is supported by the SET 4. The SET sends SUPL POS INIT

	5. A SUPL POS session takes place 6. After the SET sends the final SUPL POS do not respond 7. After timer UT3 expires (depending on ixit_timer_UT3) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 8. The Location Session ends and the SET releases the secure IP connection. Test 2: Triggered session Note: This test case is applicable to SETs that support any location method that requires a SUPL POS session and that supports any triggered service. This test case has been written for a Periodic Triggered, SET assisted mode Location Session. The case where Periodic Location sessions or a SET assisted mode is not supported in the SET is FFS 9. Start a SI Periodic Triggered Location Session 10. The SET sends SUPL TRIGGERED START 11. Send SUPL TRIGGERED RESPONSE with: Positioning Method set to any SET assisted method that requires a SUPL POS session that is supported by the SET 12. When the first periodic trigger occurs the SET sends SUPL POS INIT 13. A SUPL POS session takes place 14. After the SET sends the final SUPL POS do not respond 15. (After timer UT3 expires (depending on ixit_timer_UT3) the SET will continue to the next trigger in the session) Note that the SET may release the secure connection at this time. 16. When the second periodic trigger occurs the SET sends SUPL POS INIT 17. A SUPL POS session takes place 18. Send SUPL REPORT 19. The Triggered Location Session can be allowed to continue, or send SUPL TRIGGERED STOP to terminate the session
Pass-Criteria	Test 1: 1. At step 7 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 8 the SET shall release the secure IP connection. Test 2: 3. At step 16 the SET shall send SUPL POS INIT

5.2.5.4 SUPL-2.0-con-143- Timeout UT7 [Includes optional features]

Note: If Test Case SUPL-2.0-con-073 - Timeout UT7 (Network Initiated) is run, then this test case is not required as it tests the same feature. This test case is only included in case Network Initiated Triggered sessions are not supported, but SET Initiated Triggered sessions are supported

Test Case Id	SUPL-2.0-con-143

Test Object	Client
Test Case Description	To test SET correctly actions timer UT7
Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-009-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability: (ics_periodic_SET_initiated OR ics_event_SET_initiated) AND NOT (ics_periodic_Network_initiated OR ics_event_Network_initiated) ixit: ixit_timer_UT7
Test Procedure	1. Start a SI Periodic Triggered Location Session, or a SI Area Event Triggered Location session if Periodic Location sessions are not supported in the SET. 2. Allow the first trigger to occur (either periodic or area event) and the first location session to complete 3. From the SET stop the Triggered Location Session 4. The SET sends SUPL TRIGGERED STOP 5 Do not respond 6. After timer UT7 expires (depending on ixit_timer_UT7) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 7. The Triggered Location Session ends and the SET releases the secure IP connection.
Pass-Criteria	1. At step 6 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 7 the SET shall release the secure IP connection.

5.2.5.5 SUPL-2.0-con-144 - Timeout UT9 [Includes optional features].

Test Case Id	SUPL-2.0-con-144
Test Object	Client
Test Case Description	To test SET correctly actions timer UT9
Specification Reference	ULP TS Appendix D
SCR Reference	ULP-PRO-C-009-O
Tool	SUPL Client Conformance Test Tool
Test code	Validated test code for this test case
Preconditions	State: Continuation of / Can be tested at the same time as: Prerequisite for this test: Applicability:

	ics_silr_another_SET ixit: ixit_timer_UT9
Test Procedure	1. Start a SI Location Request of another SET 2. The SET sends SUPL SET INIT 3 Do not respond 4. After timer UT9 expires (depending on ixit_timer_UT9) the SET sends SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 5. The Session ends and the SET releases the secure IP connection.
Pass-Criteria	1. At step 4 the SET shall respond with SUPL END with: Status Code not sent or set to any of: unspecified, systemFailure or posMethodFailure. 2. At step 5 the SET shall release the secure IP connection.

6. SUPL Server Conformance Test Cases

6.1 SUPL Server Conformance: Network Initiated

None

6.2 SUPL Server Conformance: SET Initiated

None

7. SUPL Interoperability Test Cases

7.1 SUPL Interoperability: Network Initiated

The following Network Initiated SUPL 1.0 test cases from [SUPL 1.0 ETS] test features that have not changed since SUPL 1.0. Where indicated these test cases (and features) have been tested sufficiently in various TestFests and therefore these test cases do not require retesting for SUPL 2.0. In addition most of the features indicated will be tested implicitly in some of the new test cases for SUPL 2.0. Where the test cases have not been run during SUPL 1.0 TestFests, they may be considered for SUPL 2.0 testing

SUPL 2.0 ETR reference	SUPL 1.0 Test Case	Tested in SUPL 1.0 TestFests
NB1: Basic Network Initiated flows – Proxy mode NB2: Basic Network Initiated flows – Non-Proxy mode NPP: Negotiation of Positioning method, Proxy mode and Protocol	SUPL-1.0-int-000 - Cell ID	Yes
	SUPL-1.0-int-200 - SET-assisted A-GPS	Yes
	SUPL-1.0-int-201 - SET-based A-GPS	Yes
	SUPL-1.0-int-202 - Autonomous GPS	Yes
	SUPL-1.0-int-203 - AFLT	No
	SUPL-1.0-int-204 - Enhanced Cell ID	No
	SUPL-1.0-int-205 - E-OTD	No
	SUPL-1.0-int-206 – OTDOA	No
ACA: Alternative Client Authentication (ACA) Mechanisms - ACA Procedures	SUPL-1.0-int-010 - Alternative authentication model for GSM/WCDMA	Yes
QOP: QoP ALT: Altitude	SUPL-1.0-int-210 - Horizontal accuracy	Yes
	SUPL-1.0-int-211 - Response time	Yes
	SUPL-1.0-int-212 - Vertical accuracy (Altitude), Best Effort	Yes
	SUPL-1.0-int-213 - Vertical accuracy (Altitude), Assured	Yes
	SUPL-1.0-int-214 – Horizontal Accuracy, Best Effort	Yes
	SUPL-1.0-int-215 - Horizontal Accuracy, Assured	Yes
	SUPL-1.0-int-217- Max location age, current position returned	Yes
	SUPL-1.0-int-220 - Position fulfils requested QoP	Yes
	SUPL-1.0-int-221 - Position does not fulfil requested QoP	Yes
VEL: Velocity	SUPL-1.0-int-240 - SET-based A-GPS	Yes
	SUPL-1.0-int-241 - SET-assisted A-GPS	Yes
NB: Notification and Verification	SUPL-1.0-int-250 - Notification only	Yes
	SUPL-1.0-int-251 - Notification and Verification Allowed on No Answer, SET User Answers and Accepts	Yes
	SUPL-1.0-int-252 - Notification and Verification Allowed on No Answer, SET User answers and Rejects	Yes
	SUPL-1.0-int-253 - Notification and Verification Allowed on No Answer, SET User does not answer, which means Accept	Yes
	SUPL-1.0-int-254 - Notification and Verification Denied on No Answer, SET User answers and Accepts	Yes

	SUPL-1.0-int-255 - Notification and Verification Denied on No Answer, SET User answers and Rejects	Yes
	SUPL-1.0-int-256 - Notification and Verification Denied on No Answer, SET User does not answer, which means Reject	Yes
	SUPL-1.0-int-257 - Privacy Override	Yes
	SUPL-1.0-int-258 - Requestor Id	Yes
	SUPL-1.0-int-259 - Client Name	Yes

7.1.1 SUPL-2.0-int-001 - SET-assisted A-GANSS [Includes optional features]

Test Case Id	SUPL-2.0-int-001
Test Object	H-SLP and SET
Test Case Description	To test SET-assisted A-GANSS positioning method when SET is not roaming.
Specification Reference	TS-ULP 5.1.1, TS-ULP 9, AD 5.3.2.1, AD 5.3.2.2, AD 5.3.2.3
SCR Reference	ULP-PRO-S-017-O, ULP-PRO-C-015-O
ETR Reference	NPP - Negotiation of Positioning method, Proxy mode and Protocol NB1 – Basic Network Initiated Flows – Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • GNSS-simulator State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • The H-SLP is configured to use the SET-assisted GANSS positioning method. The GANSS or GANSSs to be used depend on the SET capabilities and the available GANSS signals. • The H-SLP is configured to indicate no notification and no verification to the SET user. Note this test case is intended to test GANSS systems e.g. Galileo, SBAS, Modemized GPS, QZSS, GLONASS and not GPS Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The network resident MLS application requests the current position of the SET 2. The H-SLP initiates a location session with the SET. 3. The H-SLP and the SET complete a secure positioning session using the selected positioning method or methods 4. The H-SLP returns position and timestamp to the SUPL Agent, which in turn returns position and timestamp to the network resident MLS application.

Pass-Criteria	1. Check that correct positioning method is used and that relevant signalling between H-SLP and SET is sent over a secure IP connection. 2. Check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated.

7.1.2 SUPL-2.0-int-002 - SET-based A-GANSS [Includes optional features]

Test Case Id	SUPL-2.0-int-002
Test Object	H-SLP and SET
Test Case Description	To test SET-assisted A-GANSS positioning method when SET is not roaming.
Specification Reference	TS-ULP 5.1.1, TS-ULP 9, AD 5.3.2.1, AD 5.3.2.2, AD 5.3.2.3
SCR Reference	ULP-PRO-S-018-O, ULP-PRO-C-016-O
ETR Reference	NPP - Negotiation of Positioning method, Proxy mode and Protocol NB1 – Basic Network Initiated Flows – Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • GNSS-simulator State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • The H-SLP is configured to use the SET-based GANSS positioning method. The GANSS or GANSSs to be used depend on the SET capabilities and the available GANSS signals. • The H-SLP is configured to indicate no notification and no verification to the SET user. Note this test case is intended to test GANSS systems e.g. Galileo, SBAS, Modemized GPS, QZSS, GLONASS and not GPS • Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The network resident MLS application requests the current position of the SET 2. The H-SLP initiates a location session with the SET. 3. The H-SLP and the SET complete a secure positioning session using the selected positioning method or methods 4. The H-SLP returns position and timestamp to the SUPL Agent, which in turn returns position and timestamp to the network resident MLS application.
Pass-Criteria	1. Check that correct positioning method is used and that relevant signalling between H-SLP and SET is sent over a secure IP connection. 2. Check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated.

7.1.3 SUPL-2.0-int-003 - Autonomous GANSS [Includes optional features]

Test Case Id	SUPL-2.0-int-003
Test Object	H-SLP and SET
Test Case Description	To test Autonomous GANSS positioning method when SET is not roaming.
Specification Reference	TS-ULP 5.1.1, TS-ULP 9, AD 5.3.2.1, AD 5.3.2.2, AD 5.3.2.3
SCR Reference	ULP-PRO-S-016-O, ULP-PRO-C-014-O
ETR Reference	NPP - Negotiation of Positioning method, Proxy mode and Protocol NB1 – Basic Network Initiated Flows – Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • GNSS-simulator State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation. • The H-SLP is configured to use the Autonomous GANSS positioning method. The GANSS or GANSSs to be used depend on the SET capabilities and the available GANSS signals. • The H-SLP is configured to indicate no notification and no verification to the SET user. Note this test case is intended to test GANSS systems e.g. Galileo, SBAS, Modemized GPS, QZSS, GLONASS and not A-GPS • Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The network resident MLS application requests the current position of the SET 2. The H-SLP initiates a location session with the SET. 3. The H-SLP and the SET complete a secure positioning session using the selected positioning method or methods and including a SUPL POS session with no Assistance Data 4. The H-SLP returns position and timestamp to the SUPL Agent, which in turn returns position and timestamp to the network resident MLS application.
Pass-Criteria	1. Check that correct positioning method is used and that relevant signalling between H-SLP and SET is sent over a secure IP connection. This shall include a SUPL POS session with no Assistance Data. 2. Check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated.

7.1.4 SUPL-2.0-int-004 Emergency Services: Successful Case

Test Case Id	SUPL-2.0-int-004

Test Object	E-SLP and SET
Test Case Description	To test Network Initiated Emergency Services Proxy-Mode in case emergency services location request
Specification Reference	TS-ULP 5.1.15.1
SCR Reference	ULP-PRO-S-036-M, ULP-PRO-C-034-M
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	• Equipment for GSM/WCDMA implementations: o 1 MLS Client, 1 SET, 1 E-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • Equipment for CDMA implementations: o 1 MLS Client, 1 SET, 1 E-SLP, Home PLMN with CDMA access network. • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to the tester. o E-SLP has access to cell data from the Home PLMN. o SET and E-SLP support the same mode of operation: Proxy Mode • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o None
Test Procedure	1. The network resident MLS application requests the current position of the SET and the SUPL Agent issues a MLP-ELIR request containing the following optional parameter to the E-SLP: • The loc_type parameter is set to "CURRENT " 2. The E-SLP returns position and timestamp in MLP-ELIA to the SUPL Agent, which in turn returns position and timestamp to the network resident MLS application.
Pass-Criteria	1. Check that correct positioning method is used and that relevant signalling between E-SLP and SET is sent over a secure IP connection. 2. At step 2, check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated.

7.1.5 SUPL-2.0-int-005 Emergency Services: Non-emergency request comes when there is ongoing Emergency session

Test Case Id	SUPL-2.0-int-005
Test Object	E-SLP and SET
Test Case Description	To test Emergency Service in case non-emergency request comes when there is ongoing Emergency session
Specification Reference	TS-ULP 6.1.5
SCR Reference	ULP-PRO-S-036-M, ULP-PRO-C-034-M

Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	• Equipment for GSM/WCDMA implementations: o 1 MLS Client, 1 SET, 1 E-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • Equipment for CDMA implementations: o 1 MLS Client, 1 SET, 1 E-SLP, Home PLMN with CDMA access network. • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to the tester. o E-SLP has access to cell data from the Home PLMN. o SET and E-SLP support the same mode of operation: Proxy Mode. • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o None
Test Procedure	1. The network resident MLS application requests the current position of the SET and the SUPL Agent issues a MLP-ELIR request containing the following optional parameter to the E-SLP: • The loc_type parameter is set to "CURRENT " 2. Before the emergency positioning is finished, the network resident MLS application requests the current position of the same SET and the SUPL Agent issues a MLP-SLIR request containing the following optional parameter to the H-SLP: • The loc_type parameter is set to "CURRENT " 3. The E-SLP returns position and timestamp in MLP-ELIA to the SUPL Agent, which in turn returns position and timestamp to the network resident MLS application. 4. The H-SLP returns no position but error response in MLP-SLIA to the SUPL Agent, which in turn returns error response to the network resident MLS application.
Pass-Criteria	1. At step 3, check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated. 2. At step 2 and 4, check the SUPL Init for non-emergency request is discarded by SET and SET doesn't respond any ULP message when there is ongoing Emergency session.

7.1.6 SUPL-2.0-int-006 Emergency Services: Emergency request comes when there is ongoing non-emergency session

Test Case Id	SUPL-2.0-int-006
Test Object	E-SLP and SET
Test Case Description	To test Emergency Service in case Emergency Request comes when there is ongoing non-emergency session

Specification Reference	TS-ULP 6.1.5
SCR Reference	ULP-PRO-S-036-M, ULP-PRO-C-034-M
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	• Equipment for GSM/WCDMA implementations: o 1 MLS Client, 1 SET, 1 E-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • Equipment for CDMA implementations: o 1 MLS Client, 1 SET, 1 E-SLP, Home PLMN with CDMA access network. • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to the tester. o E-SLP has access to cell data from the Home PLMN. o SET and E-SLP support the same mode of operation: Proxy Mode. • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o None
Test Procedure	1. The network resident MLS application requests the current position of the SET and the SUPL Agent issues a MLP-SLIR request containing the following optional parameter to the H-SLP: • The loc_type parameter is set to "CURRENT " 2. Before the Non-Emergency positioning is finished, the network resident MLS application requests the current position of the same SET and the SUPL Agent issues a MLP-ELIR request containing the following optional parameter to the E-SLP: • The loc_type parameter is set to "CURRENT " 3. The E-SLP returns position and timestamp in MLP-ELIA to the SUPL Agent, which in turn returns position and timestamp to the network resident MLS application. 4. The H-SLP returns no position but error response in MLP-SLIA to the SUPL Agent, which in turn returns error response to the network resident MLS application.
Pass-Criteria	1. At step 3, check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated. 2. At step 4, check the processes for ongoing non-emergency request are aborted by SET when Emergency Request comes.

7.1.7 SUPL-2.0-int-007 - Periodic Triggers (Real time reporting) [Includes optional features]

Test Case Id	SUPL-2.0-int-007
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test network initiated Periodic triggered services with real time reporting.

Specification Reference	TS-ULP 5.1.7
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-046-O , , ULP-PRO-S-034-O, ULP-PRO-S-048-O
ETR Reference	NPT1 - Network Initiated– Triggered Services: Periodic Triggers Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to the tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • The H-SLP is configured to use the Enhanced Cell ID positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The network resident MLS application requests periodic location of the SET with real time reporting and a reasonable number of fixes and intervals between fixes 2. The H-SLP initiates the periodic trigger session with the SET using the SUPL INIT message. 3. Each time the periodic trigger in the SET indicates that a position fix has to be performed the SET initiates a secure session with the H-SLP. 4. The H-SLP and the SET complete a secure positioning session using the selected positioning method. 5. The H-SLP returns the position to the SUPL Agent, which in turn returns the position to the network resident MLS application.
Pass-Criteria	1. For all the SUPL sessions check that correct positioning method is used and that relevant signaling between H-SLP and SET is sent over a secure IP connection. 2. For all the positioning sessions, check that the returned position is acceptable and that the current position of the SET has been received. 3. Check the number of sessions is correct and the interval between the sessions is acceptable

7.1.8 SUPL-2.0-int-008 - Periodic Triggers (Quasi Real time reporting) [Includes optional features]

Test Case Id	SUPL-2.0-int-008
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test network initiated Periodic triggered services with quasi real time reporting.
Specification Reference	TS-ULP 5.1.7
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-047-O, ULP-PRO-S-034-O, ULP-PRO-S-049-O

ETR Reference	NPT1 - Network Initiated– Triggered Services: Periodic Triggers Proxy Mode
Tool	Protocol analyzer to monitor signaling between SET and SLP. If a protocol analyzer is not available, log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • GNSS simulator State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to the tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation. • The H-SLP is configured to use the A-GPS SET Based positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The network resident MLS application requests periodic location of the SET with quasi real time reporting and a reasonable number of fixes and intervals between fixes. 2. The H-SLP initiates the periodic trigger session with the SET using the SUPL INIT message. 3. The SET and the H-SLP follow the standard call flow procedure used for periodic trigger SUPL sessions. 4. After a reasonable number of periodic fixes (and well before the end of the triggered session is reached) were determined and reported to the H-SLP, the SET's connection to the H-SLP is artificially interrupted. 5. While the connection to the H-SLP is interrupted, the SET continues to determine its position periodically and – since real time reporting of the determined positions is not possible – stores the position results in internal memory. This condition remains in place for the duration of a few times the interval between fixes. 6. The connection between the SET and the H-SLP is restored. 7. When the next interval for determining and reporting a position is reached, the SET determines its position and reports the position together with the buffered position results (i.e. the position results which could not be reported to the H-SLP due to lack of connectivity) in one batch to the H-SLP. The H-SLP reports the position results to the MLS application. 8. The SET and the H-SLP continue their triggered periodic session. 9. The connection between the SET and the H-SLP may be artificially interrupted a few more times. In this case steps 5 to 8 are repeated accordingly. 10. The H-SLP and the SET complete the triggered periodic SUPL session.

Pass-Criteria	1. Check that the correct positioning method is used throughout the triggered periodic SUPL session and that ULP message exchange between the H-SLP and the SET takes place over a secure IP connection. 2. For all reported positions, check that the returned positions are acceptable and that the positions of the SET have been received correctly by the H-SLP (and the MLS Application). 3. Check that all reported "missed" position fixes (i.e. position results which the SET was unable to report to the H-SLP in real time and which were stored in internal memory of the SET) are reported correctly. 4. Check that the SET and the H-SLP terminate the triggered SUPL session successfully.

7.1.9 SUPL-2.0-int-009 - Periodic Triggers (Batch reporting) [Includes optional features]

Test Case Id	SUPL-2.0-int-009
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test network initiated Periodic triggered services with batch reporting.
Specification Reference	TS-ULP 5.1.7
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-048-O , , ULP-PRO-S-034-O, ULP-PRO-S-050-O
ETR Reference	NPT1 - Network Initiated– Triggered Services: Periodic Triggers Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to the tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • The H-SLP is configured to use the Enhanced Cell ID positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None

Test Procedure	1. The network resident MLS application requests periodic location of the SET with batch reporting and a reasonable number of fixes, intervals between fixes and batch reporting conditions 2. The H-SLP initiates the periodic trigger session with the SET using the SUPL INIT message. 3. Each time the periodic trigger in the SET indicates that a position fix has to be performed the SET initiates a secure session with the H-SLP. 4. The H-SLP and the SET complete a secure positioning session using the selected positioning method. 5. Each time, or when, the batch reporting conditions are fulfilled; the SET initiates a secure session with the H-SLP and sends the stored positions in SUPL REPORT. 6. The H-SLP returns the reported positions to the SUPL Agent, which in turn returns the positions to the network resident MLS application.
Pass-Criteria	1. For all the SUPL sessions check that correct positioning method is used and that relevant signaling between H-SLP and SET is sent over a secure IP connection. 2. For all the positioning results, check that the returned position is acceptable and that the current position of the SET has been received. 3. Check the number of sessions is correct, the interval between the sessions is acceptable and the batch reporting conditions are acceptable.

7.1.10 SUPL-2.0-int-013 - Area Event Trigger [Includes optional features]

Test Case Id	SUPL-2.0-int-013
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test network initiated area event triggered services.
Specification Reference	TS-ULP 5.1.8
SCR Reference	ULP-PRO-S-035-O, ULP-PRO-C-033-O
ETR Reference	NET1 - Network Initiated– Triggered Services: Event Triggers Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • The H-SLP is configured to use the Enhanced Cell ID positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None

Test Procedure	1. The network resident MLS application requests the area event triggered service with conditions that can easily be realised in the test network, e.g. "Inside" or "Outside". The trigger resides in the SET and the SET makes the decision if an area event occurred based on continuously repeated position determinations. 2. The SUPL Agent issues a MLP-TLRR message to the H-SLP. 3. The H-SLP initiates the event trigger session with the SET using the SUPL INIT message. 4. The H-SLP and the SET complete a secure positioning session using the selected positioning method 5. The SET compares the calculated position estimate with the area event and determines that the trigger condition has been met. 6. The SET sends the position estimate to the H-SLP in SUPL REPORT. 7. The H-SLP returns the position to the SUPL Agent, which in turn returns the position to the network resident MLS application.
Pass-Criteria	1. Check that correct trigger type is used and that relevant signalling between H-SLP and SET is sent over a secure IP connection. 2. Check that the area event trigger condition has been met correctly and check that the returned position is acceptable

7.1.11 SUPL-2.0-int-014 - Retrieval of Historical Positions [Includes optional features

Test Case Id	SUPL-2.0-int-014
Test Object	H-SLP (Server) and SET (Client)
Test Case Description	To test retrieval of historical positions.
Specification Reference	TS-ULP 5.1.13
SCR Reference	ULP-PRO-C-035-O, ULP-PRO-S-037-O
ETR Reference	HP - Retrieval of Historical Positions and/or Enhanced Cell Sector Measurements
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home • PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • Small amount of Historical data collected
Test Procedure	1. The network resident MLS application requests small amount of historical positions of the SET and the SUPL Agent issues a MLP HLIR request to the H-SLP 2. The H-SLP initiates the retrieval of historical positions with the SET using the SUPL INIT message. 3. The H-SLP returns historic positions in MLP HLIA to the SUPL Agent, which in turn returns historic positions to the network resident MLS application.

Pass-Criteria	1. The SUPL INIT message contains "posmethod=historical data retrieval" 2. Check that the returned historical data is acceptable and is consistent with the amount of data requested

7.1.12 SUPL-2.0-int-015 - Cancellation of Triggered Session by the Network [Includes optional features]

Note that this test case can be run with either a Network Initiated session or a SET Initiated session

Test Case Id	SUPL-2.0-int-015
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test successful cancellation of an ongoing triggered session by the Network
Specification Reference	TS-ULP 5.1.17.2
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-033-O, ULP-PRO-S-034-O, ULP-PRO-S-035-O
ETR Reference	NCT - Network cancels the triggered location request,
Tool	Protocol analyzer to monitor signaling between SET and SLP. If a protocol analyzer is not available, log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to the tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation. • The H-SLP is configured to use the Enhanced Cell ID positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None

Test Procedure	Case 1 - Network cancels the ongoing triggered session (SET can be reached): 1. The SET and the H-SLP are engaged in a triggered SUPL session. 2. The H-SLP receives a triggered session cancellation request message from the MLS client. 3. The H-SLP initiates the cancellation of the triggered session with the SET by sending a SUPL TRIGGERED STOP message. 4. The SET responds with a SUPL END message and the triggered session ends. 5. The H-SLP informs the MLS client that the triggered session has been successfully cancelled. Case 2 – Network cancels the ongoing triggered session (SET cannot be reached): 6. The SET and the H-SLP are engaged in a triggered SUPL session. 7. Ensure the H-SLP cannot reach the SET by, for example, blocking the cellular signal 8. The H-SLP receives a triggered session cancellation request message from the MLS client. 9. The H-SLP initiates the cancellation of the triggered session with the SET by sending a SUPL TRIGGERED STOP message. 10. The SET is not reachable and therefore does not respond to the SUPL TRIGGERED STOP message. 11. After an adequate amount of time has passed, the SET continues the triggered SUPL session by sending a SUPL POS INIT message. 12. The H-SLP sends a SUPL END message with cause code “session stopped” to the SET and the triggered session is stopped.
Pass-Criteria	1. Check that a triggered SUPL session is in progress. 2. Check that the SET and the H-SLP terminate the triggered SUPL session successfully.

7.1.13 SUPL-2.0-int-016 - Cancellation of Triggered Session by the SET [Includes optional features]

Note that this test cases can be run with either a Network Initiated session or a SET Initiated session

Test Case Id	SUPL-2.0-int-016
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test successful cancellation of an ongoing triggered session by the SET.
Specification Reference	TS-ULP 5.1.17.3
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-033-O, ULP-PRO-S-034-O, ULP-PRO-S-035-O
ETR Reference	SCT - SET cancels the triggered location request
Tool	Protocol analyzer to monitor signaling between SET and SLP. If a protocol analyzer is not available, log files in SLP and SET can be used instead.
Test code	-

Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to the tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation. • The H-SLP is configured to use the Enhanced Cell ID positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The SET and the H-SLP are engaged in a triggered SUPL session. 2. The SET initiates the cancellation of the triggered session with the H-SLP by sending a SUPL TRIGGERED STOP message. 3. The H-SLP responds with a SUPL END message and the triggered session ends.
Pass-Criteria	1. Check that a triggered SUPL session is in progress. 2. Check that the SET and the H-SLP terminate the triggered SUPL session successfully.

7.1.14 SUPL-2.0-int-017 – V-SLP to V-SLP handover [Includes optional features]

Test Case Id	SUPL-2.0-int-017
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test V-SLP to V-SLP handover
Specification Reference	TS-ULP 5.1.11 and 5.2.12
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-C-046-O, ULP-PRO-S-034-O, ULP-PRO-S-048-O
ETR Reference	HR1 - V-SLP to V-SLP Handover - Proxy mode
Tool	Protocol analyzer to monitor signaling between SET and SLP. If a protocol analyzer is not available, log files in SLP and SET can be used instead.
Test code	-

Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, V-SLP1, V-SLP2, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the Home PLMN via one or more radio cells (cell set1) which are associated with the V-SLP 1 (i.e. roaming with H-SLP where SUPL coverage is provided by V-SLP1). • SET is idle. • There are one or more radio cells (cell set2) which are associated with V-SLP2 (i.e. roaming with H-SLP where SUPL coverage is provided by V-SLP2). • SET and H-SLP support the Proxy mode of operation. • The H-SLP is configured to use the A-GPS SET Assisted positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • Two (non overlapping) sets of radio cells (i.e. cell set1 and cell set2) associated with two separate V-SLPs: V-SLP1 and V-SLP2. • SET must be able to SUPL roam from V-SLP1 SUPL coverage to V-SLP2 SUPL coverage.
Test Procedure	5. The network resident MLS application requests periodic location of the SET with real time reporting. 6. The H-SLP initiates the periodic trigger session with the SET using the SUPL INIT message. 7. The SET and the H-SLP follow the standard call flow procedures to establish and maintain a periodic SUPL session while roaming with H-SLP with V-SLP1. 8. After a reasonable number of periodic fixes (and well before the end of the triggered session is reached) the SET roams from cell set1 to cell set2 (i.e. the SET 'SUPL roams' from V-SLP1 to V-SLP2). 9. When after roaming from cell set1 to cell set2 the SET sends its first SUPL POS INIT message to the H-SLP, the H-SLP responds with SUPL END with status code 'no SUPL coverage'. 10. The SET sends a SUPL TRIGGERED START message with cause code 'no SUPL coverage'. 11. The H-SLP sends a SUPL TRIGGERED RESPONSE message. 12. The SET and the H-SLP continue their triggered periodic session (on cell set2 i.e. roaming with H-SLP with V-SLP2). 13. The H-SLP and the SET complete the triggered periodic SUPL session.
Pass-Criteria	1. At step 5 the H-SLP shall respond with SUPL END with status code 'no SUPL coverage'. 2. At step 6 the SET shall respond with SUPL TRIGGERED START with cause code 'no SUPL coverage'. 3. At step 8 the SET and the H-SLP continue their triggered periodic session

7.1.15 SUPL-2.0-int-018 – Capabilities Change [Includes optional features]

Note that this test case can be run with either a Network Initiated session or a SET Initiated session

Test Case Id	SUPL-2.0-int-018
Test Object	H-SLP (Server) and SET (Client)

Test Case Description	To test Network Change for Area Event Triggered Scenarios, when the network changes from e.g. GSM to WCDMA.
Specification Reference	TS-ULP 5.1.14
SCR Reference	ULP-PRO-C-046-O, ULP-PRO-S-048-O
ETR Reference	CAT - Network / SET Capabilities Change for Area Event Triggered Scenarios
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET supporting both e.g. GSM and WCDMA, 1 H-SLP, 1 PPG, 1 SMS-C, Home • PLMN with both GSM and WCDMA access network. State: • SET is attached to the home GSM PLMN. • SET is monitoring serving network identity. • The SET's position is known. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation Continuation of / Can be tested at the same time as: • An Area Event session Prerequisite for this test: • An Area Event session is ongoing and area id lists are based on e.g. GSM network
Test Procedure	1. The SET monitors serving network identity . Network changes from e.g. GSM to WCDMA. 2. When the SET detects that the serving network is not part of any downloaded area lists the SET attaches itself to the network. 3. The SET then sends a SUPL TRIGGERED START message to request new event trigger parameters. 4. The H-SLP sends SUPL TRIGGERED RESPONSE message to the SET. 5. Area event session continues
Pass-Criteria	1. The SUPL TRIGGERED START message contains at least session-id, SET capabilities, Location ID (lid) and cause for re-sending the SUPL TRIGGERED START message. The SET capabilities include the supported positioning methods (e.g. SET Assisted A-GPS, SET-Based A-GPS) and associated positioning protocols (e.g. RRLP, RRC, TIA-801) 2. SUPL TRIGGERED RESPONSE message includes session-id, the positioning method to be used for the area event triggered session and area event trigger parameters. It may also contain the area ids of the specified area based on the e.g. WCDMA network for the area event triggered session. 3. Area event session does not discontinue because of capabilities has changed

7.1.16 SUPL-2.0-int-020 - Session Info Query [Includes optional features]

Test Case Id	SUPL-2.0-int-020
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test successful session info query
Specification Reference	TS-ULP 5.1.18
SCR Reference	ULP-PRO-C-049-O, ULP-PRO-S-051-O

ETR Reference	N/A
Tool	Protocol analyzer to monitor signaling between SET and SLP. If a protocol analyzer is not available, log files in SLP and SET can be used instead.
Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET has at least one session – not including the session info query session itself - active (preferably more than one session is active at the SET and preferably the active sessions are triggered SUPL sessions). • SET and H-SLP support the Proxy mode of operation. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The H-SLP initiates a session info query session with the SET by sending a SUPL INIT message with posmethod "sessioninfoquery" to the SET. 2. The SET replies with a SUPL RESPONSE message containing a list of all SUPL sessions the SET deems active. The session info query session ends.
Pass-Criteria	1. Check that in step 2 the H-SLP receives a list of session ids which are active at the time of sending the SUPL REPORT message. 2. Check that after sending of the SUPL REPORT message both the SET and the H-SLP release the secure connection.

7.1.17 SUPL-2.0-int-021 - Notification based on Location [Includes optional features]

Test Case Id	SUPL-2.0-int-021
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test successful Notification based on Location
Specification Reference	TS-ULP 5.1.12
SCR Reference	ULP-PRO-C-029-O, ULP-PRO-S-031-O
ETR Reference	N1 - Notification/Verification based on current location. Proxy mode
Tool	Protocol analyzer to monitor signaling between SET and SLP. If a protocol analyzer is not available, log files in SLP and SET can be used instead.
Test code	-

Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle • The SET's position is known • H-SLP has access to cell data from the Home PLMN • SET and H-SLP support proxy mode of operation. • The H-SLP and SET are configured to use the Cell ID positioning method • The H-SLP is configured for notification based on current location and therefore includes the Notification Mode element in the SUPL INIT message and does not include the notification element in the SUPL INIT message • The H-SLP is configured to set the notification element in the SUPL NOTIFY message to "notification and verification, allowed on no answer" Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. Set up the conditions in the H-SLP such that the H-SLP deems the SET to be in a location which requires the selected notification/verification procedure i.e. notification/verification is invoked (i.e. SUPL NOTIFY is sent). 2. The network resident MLS application requests the current position of the SET and the SUPL Agent issues an MLP-SLIR request with loc_type parameter set to "CURRENT" 3. The H-SLP and the SET successfully execute the call flow (including the selected notification/verification procedure) and the H-SLP returns position and timestamp in MLP-SLIA to the SUPL Agent. 4. Set up the conditions in the H-SLP such that the H-SLP deems the SET not to be in a location which requires the selected notification/verification procedure i.e. notification/verification is not invoked (i.e. SUPL NOTIFY is not sent and a SUPL END message is sent instead) 5. The network resident MLS application requests the current position of the SET and the SUPL Agent issues an MLP-SLIR request with loc_type parameter set to "CURRENT" 6. The H-SLP and the SET successfully execute the call flow (without invoking the notification/verification procedure) and the H-SLP returns position and timestamp in MLP-SLIA to the SUPL Agent.
Pass-Criteria	1. Check that the correct positioning method is used and that relevant signalling between H-SLP and SET is sent over a secure IP connection 2. Check that the "silent" position determination was performed successfully 3. Check that the selected notification/verification procedures in step 3 and 5 are executed properly 4. Check that the H-SLP sends the position result to the requesting MLS client in line with SET user consent or objection.

7.2 SUPL Interoperability: SET Initiated

The following SET Initiated SUPL 1.0 test cases from [SUPL 1.0 ETS] test features that have not changed since SUPL 1.0. Where indicated these test cases (and features) have been tested sufficiently in various TestFests and therefore these test cases do not require retesting for SUPL 2.0. In addition most of the features indicated will be tested implicitly in some of the new test cases for SUPL 2.0. Where the test cases have not been run during SUPL 1.0 TestFests, they may be considered for SUPL 2.0 testing

SUPL 2.0 ETR reference	SUPL 1.0 Test Case	Tested in SUPL 1.0 TestFests
SB1 Basic SET Initiated flows – Proxy mode SB2 Basic SET Initiated flows – Non-Proxy mode NPP: Negotiation of Positioning method, Proxy mode and Protocol	SUPL-1.0-int-500 - Cell ID	Yes
	SUPL-1.0-int-600 - SET-assisted A-GPS	Yes
	SUPL-1.0-int-601 - SET-based A-GPS	Yes
	SUPL-1.0-int-602 - Autonomous GPS	No
	SUPL-1.0-int-603 - AFLT	No
	SUPL-1.0-int-604 - Enhanced Cell ID	No
	SUPL-1.0-int-605 - E-OTD	No
	SUPL-1.0-int-606 – OTDOA	No
ACA: Alternative Client Authentication (ACA) Mechanisms - ACA Procedures	SUPL-1.0-int-510 - Alternative authentication model for GSM/WCDMA	Yes
QOP: QoP ALT: Altitude	SUPL-1.0-int-610 - Horizontal accuracy	Yes
	SUPL-1.0-int-611 - Response time	Yes
	SUPL-1.0-int-612 - Vertical accuracy (Altitude)	Yes
	SUPL-1.0-int-613 - Max location age, previously computed position returned	Yes
	SUPL-1.0-int-614 - Max location age, current position returned	Yes
VEL: Velocity	SUPL-1.0-int-630 - SET-assisted A-GPS	Yes

7.2.1 SUPL-2.0-int-100 - SET-assisted A-GANSS [Includes optional features]

Test Case Id	SUPL-2.0-int-100
Test Object	H-SLP and SET
Test Case Description	To test SET-assisted A-GANSS positioning method when SET is not roaming.
ETR Reference	NPP - Negotiation of Positioning method, Proxy mode and Protocol SB1 – Basic SET Initiated Flows – Proxy Mode
Specification Reference	TS-ULP 5.2.1, TS-ULP 9, AD 5.3.2.1, AD 5.3.2.2, AD 5.3.2.3
SCR Reference	ULP-PRO-S-017-O, ULP-PRO-C-015-O
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-

Preconditions	• Equipment for GSM/WCDMA implementations: o 1 SET, 1 H-SLP, Home PLMN with either GSM or WCDMA access network, or both, GNSS-simulator • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to tester. o H-SLP has access to cell data from the Home PLMN. o SET and H-SLP support the same mode of operation: Proxy. o The H-SLP is configured to use the SET-assisted GANSS positioning method. The GANSS or GANSSs to be used depend on the SET capabilities and the available GANSS signals. Note this test case is intended to test GANSS systems e.g. Galileo, SBAS, Modemized GPS, QZSS, GLONASS and not GPS • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o None
Test Procedure	1. The SET resident MLS application requests its current position. 2. The SET initiates a secure session with the H-SLP. 3. The H-SLP and the SET complete a secure positioning session using the selected positioning method or methods. 4. The H-SLP returns position and timestamp to the SUPL Agent, which in turn returns position and timestamp to the SET resident MLS application.
Pass-Criteria	1. Check that correct positioning method is used and that all signalling between H-SLP and SET is sent over a secure IP connection. 2. Check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated.

7.2.2 SUPL-2.0-int-101 - SET-based A-GANSS [Includes optional features]

Test Case Id	SUPL-2.0-int-101
Test Object	H-SLP and SET
Test Case Description	To test SET-based A-GANSS positioning method when SET is not roaming.
Specification Reference	TS-ULP 5.2.1, TS-ULP 9, AD 5.3.2.1, AD 5.3.2.2, AD 5.3.2.3
SCR Reference	ULP-PRO-S-018-O, ULP-PRO-C-016-O
ETR Reference	NPP - Negotiation of Positioning method, Proxy mode and Protocol SB1 – Basic SET Initiated Flows – Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-

Preconditions	• Equipment for GSM/WCDMA implementations: o 1 SET, 1 H-SLP, Home PLMN with either GSM or WCDMA access network, or both. o GNSS-simulator • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to tester. o H-SLP has access to cell data from the Home PLMN. o SET and H-SLP support the same mode of operation: Proxy. o The H-SLP is configured to use the SET-based GANSS positioning method. The GANSS or GANSSs to be used depend on the SET capabilities and the available GANSS signals. Note this test case is intended to test GANSS systems e.g. Galileo, SBAS, Modemized GPS, QZSS, GLONASS and not GPS • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o None
Test Procedure	1. The SET resident MLS application requests its current position 2. The SET initiates a secure session with the H-SLP. 3. The H-SLP and the SET complete a secure positioning session using the selected positioning method or methods. 4. The SUPL Agent returns position and timestamp to the SET resident MLS application.
Pass-Criteria	1. Check that correct positioning method is used and that all signalling between H-SLP and SET is sent over a secure IP connection. 2. Check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated.

7.2.3 SUPL-2.0-int-102 - Autonomous GANSS [Includes optional features]

Test Case Id	SUPL-2.0-int-102
Test Object	H-SLP and SET
Test Case Description	To test Autonomous GANSS positioning method when SET is not roaming.
Specification Reference	TS-ULP 5.2.1, TS-ULP 9, AD 5.3.2.1, AD 5.3.2.2, AD 5.3.2.3
SCR Reference	ULP-PRO-S-016-O, ULP-PRO-C-014-O
ETR Reference	NPP - Negotiation of Positioning method, Proxy mode and Protocol SB1 – Basic SET Initiated Flows – Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-

Preconditions	• Equipment for GSM/WCDMA implementations:
	  • 1 SET, 1 H-SLP, Home PLMN with either GSM or WCDMA access network, or both, GNSS-simulator
	• State:
	  o SET is attached to the home PLMN.
	  o SET is idle.
	  o The SET's position is known to tester.
	  o H-SLP has access to cell data from the Home PLMN.
	  o SET and H-SLP support the same mode of operation: Proxy.
	  o The H-SLP is configured to use the Autonomous GANSS positioning method. The GANSS or GANSSs to be used depend on the SET capabilities and the available GANSS signals.
	Note this test case is intended to test GANSS systems e.g. Galileo, SBAS, Modemized GPS, QZSS, GLONASS and not GPS
	• Continuation of / Can be tested at the same time as:
	  o None
	• Prerequisite for this test:
	  o The SET supports other positioning methods than just Autonomous GANSS. In the case the SET only supports Autonomous GANSS this test case is not applicable since the SET calculates its own position without connecting to the H-SLP.

Test Procedure	1. The SET resident MLS application requests its current position 2. The SET initiates a secure session with the H-SLP. 3. The H-SLP and the SET complete a secure positioning session using the selected positioning method or methods including a SUPL POS session with no Assistance Data. 4. The SUPL Agent returns position and timestamp to the SET resident MLS application.
Pass-Criteria	1. Check that correct positioning method is used and that all signalling between H-SLP and SET is sent over a secure IP connection. This shall include a SUPL POS session with no Assistance Data. 2. Check that the returned position is acceptable and that the timestamp indicates that the current position of the SET has been calculated.

7.2.4 SUPL-2.0-int-103- Transfer to third party [Includes optional features]

Test Case Id	SUPL-2.0-int-103-Transfer to third party [Includes optional features]
Test Object	H-SLP (Server) and SET (Client)
Test Case Description	To test SET-initiated Location Request of Transfer Location to Third Party
Specification Reference	TS-ULP 5.2.15
SCR Reference	ULP-PRO-C-040-O, ULP-PRO-S-042-O
ETR Reference	STT - SET-Initiated Location Request of Transfer Location to Third Party
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.

Test code	-
Preconditions	Equipment for GSM/WCDMA implementations: • 1 UE, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to the tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • SET is not roaming Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The SUPL Agent on SET initiates a SET Initiated location request with Transfer to third party (i.e. the UE). The SET takes required action establishing or resuming a secure connection. 2. The SUPL Agent on SET uses the default address provisioned by the Home Network to establish a secure connection to the H-SLP and sends a SUPL START message to start a positioning session with the H-SLP. The Third Party ID (i.e. the ID of UE) is contained in the SUPL START message. 2. The H-SLP and the SET collaborate to determine the position of the SET and the H-SLP obtains the result of the position determination. 3. The H-SLP sends a SUPL END message to SET to stop the session. 4. Check the H-SLP attempts to transfer the position result to the correct third party address. (This can be done by checking the debug log in the H-SLP).
Pass-Criteria	1. The SUPL START message contains session ID, Third Party ID. 2. Check that the returned position estimate is acceptable

7.2.5 SUPL-2.0-int-110 – Periodic Triggers [Includes optional features]

Test Case Id	SUPL-2.0-int-110
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test SET initiated Periodic triggered services.
Specification Reference	TS-ULP 5.1.7
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-S-034-O
ETR Reference	SPT1 - SET Initiated– Triggered Services: Periodic Triggers Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-

Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to the tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • The H-SLP and/or SET are configured to use the Enhanced Cell ID positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The SET resident MLS application requests its periodic location with a reasonable number of fixes and intervals between fixes 2. The SUPL Agent issues a SUPL TRIGGERED START message to the H-SLP. The SUPL TRIGGERED START message shall contain trigger_type=periodic and appropriate trigger_params. 3. Each time the periodic trigger in the SET indicates that a position fix has to be performed the SET initiates a secure session with the H-SLP. 4. The H-SLP and the SET complete a secure positioning session using the selected positioning method. 5. The H-SLP returns position in SUPL REPORT to the SUPL Agent, which in turn returns position to the SET resident MLS application.
Pass-Criteria	1. For all the SUPL sessions check that correct positioning method is used and that relevant signalling between H-SLP and SET is sent over a secure IP connection. 2. For all the positioning sessions, check that the returned position is acceptable and that the current position of the SET has been received. 3. Check the number of sessions is correct and the interval between the sessions is acceptable

7.2.6 SUPL-2.0-int-111 – Periodic transfer to third party [Includes optional features]

Test Case Id	SUPL-2.0-int-111-Periodic Transfer to third party [Includes optional features]
Test Object	H-SLP (Server) and SET (Client)
Test Case Description	To test SET-initiated Periodic Location Request with Transfer to Third Party
Specification Reference	TS-ULP 5.2.14.1
SCR Reference	ULP-PRO-C-032-O, ULP-PRO-S-034-O, ULP-PRO-C-040-O, ULP-PRO-S-042-O
ETR Reference	STP - SET-Initiated Periodic Location Request with Transfer to Third Party
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-

Preconditions	Equipment for GSM/WCDMA implementations: • 1 UE, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to the tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • SET is not roaming Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The SUPL Agent on SET initiates a SET Initiated location periodic request with Transfer to third party (i.e. the UE) with a reasonable number of fixes and intervals between fixes. The SET takes required action establishing or resuming a secure connection. 2. The SUPL Agent on SET uses the default address provisioned by the Home Network to establish a secure connection to the H-SLP and sends a SUPL TRIGGERED START message to start a periodic trigger positioning session with the H-SLP. The Third Party ID (i.e. the ID of UE) is contained in the SUPL TRIGGERED START message. 3. Each time the periodic trigger in the SET indicates that a position fix has to be performed the SET initiates a secure session with the H-SLP. 4. The H-SLP and the SET complete a secure positioning session using the selected positioning method. 5. Check the H-SLP attempts to transfer the position results to the correct third party address. (This can be done by checking the debug log in the H-SLP).
Pass-Criteria	1. The SUPL TRIGGERED START message contains session ID, Third Party ID. 2. Check that the returned position estimates are acceptable

7.2.7 SUPL-2.0-int-112 – Area Event Triggers [Includes optional features]

Test Case Id	SUPL-2.0-int-112
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test SET initiated area event triggered services.
Specification Reference	TS-ULP 5.2.9
SCR Reference	ULP-PRO-S-035-O, ULP-PRO-C-033-O
ETR Reference	SET1 - SET Initiated– Triggered Services: Event Triggers Proxy Mode
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-

Preconditions	Equipment for GSM/WCDMA implementations: • 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SET is attached to the home PLMN. • SET is idle. • The SET's position is known to tester. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • The H-SLP is configured to use the Enhanced Cell ID positioning method. • The H-SLP is configured to indicate no notification and no verification to the SET user. Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The SET resident MLS application requests an area event triggered service with conditions that can easily be realised in the test network, e.g. "Inside" or "Outside". 2. The SET initiates a secure session with the H-SLP and issues a SUPL TRIGGERED START message to the H-SLP. 3. The SET determines that the trigger condition has been met. 4. The SET initiates a secure session and the H-SLP and the SET complete a secure positioning session using the selected positioning method 5. The H-SLP returns the position in SUPL REPORT to the SUPL Agent, which in turn returns the position to the SET resident MLS application.
Pass-Criteria	1. Check that correct trigger type is used and that relevant signaling between H-SLP and SET is sent over a secure IP connection. 2. Check that the area event trigger condition has been met correctly and check that the returned position is acceptable

7.2.8 SUPL-2.0-int-120 – Location of another SET [Includes optional features]

Test Case Id	SUPL-2.0-int-120 – Location of another SET [Includes optional features]
Test Object	H-SLP (Server) and SET (Client)
Test Case Description	To test SET-initiated location request of another SET.
Specification Reference	TS-ULP 5.2.7
SCR Reference	ULP-PRO-C-038-O, ULP-PRO-S-040-O ULP-MES-S-014-O, ULP-MES-C-014-O
ETR Reference	SAS - SET-Initiated Location Request of another SET
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-

Preconditions	Equipment for GSM/WCDMA implementations: • 2 SETs, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. State: • SETs are attached to the same home PLMN. SETs have the same H-SLP. • SETs are idle. • The SET2's position is known. • H-SLP has access to cell data from the Home PLMN. • SET and H-SLP support the Proxy mode of operation • SETs are not roaming Continuation of / Can be tested at the same time as: • None Prerequisite for this test: • None
Test Procedure	1. The SUPL Agent on SET1 receives a request for position of Target SET2. The SET1 takes required action establishing or resuming a secure connection. 2. The SUPL Agent on SET1 uses the default address provisioned by the Home Network to establish a secure connection to the H-SLP and sends a SUPL SET INIT message to start a positioning session of the Target SET2. The Target SETid is the identity of the Target SET2 that will be used by the SLP to identify the home network (H-SLP) of SET2. 3. The H-SLP determines the location of SET2. 4. The H-SLP sends a SUPL END message containing the position estimate to the SET1. The SET1 sends the position estimate back to the SUPL Agent.
Pass-Criteria	1. The SUPL SET INIT message contains session ID, Target SETid. It MAY also contain the desired QoP. 2. Check that the returned position estimate is acceptable

7.3 Cross version Compatibility

7.3.1 SUPL-2.0-int-200 Cross version Compatibility: H-SLP V2.0 and SET V2.0

Note that this test case tests a feature that is tested inherently in most other Interoperability test cases, however this test case is used as part of the minimum entry criteria for TestFests and is therefore included here.

Test Case Id	SUPL-2.0-int-200
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test ULP version Negotiation function in case H-SLP supports ULP 2.0 and SET supports ULP2.0 version
Specification Reference	TS-ULP 7
SCR Reference	ULP-PRO-S-027-M , ULP-PRO-C-025-M
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-

Preconditions	• Equipment for GSM/WCDMA implementations: o 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • Equipment for CDMA implementations: o 1 MLS Client, 1 SET, 1 H-SLP, Home PLMN with CDMA access network. • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to the tester. o H-SLP has access to cell data from the Home PLMN. o SET and H-SLP support the same mode of operation: Proxy or Non-Proxy. • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o Both SLP and SET support ULP2.0.
Test Procedure	Test 1: 1. The network resident MLS application requests the position of the SET and the SUPL Agent issues a MLP-SLRR request to H-SLP. 2. H-SLP send the SUPL INIT (version = 2.0, minimum = 2) or (version = 2.0, minimum = 1) to SET. (Note 1) 3. SET responds with SUPL POS INIT and the Location Session completes successfully. Test 2: 4. SET send the SUPL START (version = 2.0) to H-SLP. 5. H-SLP response with SUPL RESPONSE to SET and the location session completes successfully. Note 1: If SLP supports both ULP2.0 and 1.0, SUPL INIT (version = 2.0, minimum = 1) will be sent, if SLP supports only ULP2.0, SUPL INIT (version = 2.0, minimum = 2.0) will be sent.
Pass-Criteria	1. At step 3 the SET shall respond with SUPL POS INIT with the correct version number (2.0) supported by the SET. 2. At step 5 the H-SLP shall respond with SUPL RESPONSE with the correct version number (2.0) supported by the H-SLP.

7.3.2 SUPL-2.0-int-201 Cross version Compatibility: H-SLP V2.0 and SET V1.0

Test Case Id	SUPL-2.0-int-201
Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test ULP version Negotiation function in case H-SLP supports ULP 2.0 only and SET supports ULP1.0 version
Specification Reference	TS-ULP 7
SCR Reference	ULP-PRO-S-027-M , ULP-PRO-C-025-M
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	• Equipment for GSM/WCDMA implementations: o 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • Equipment for CDMA implementations: o 1 MLS Client, 1 SET, 1 H-SLP, Home PLMN with CDMA access network. • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to the tester. o H-SLP has access to cell data from the Home PLMN. o SET and H-SLP support the same mode of operation: Proxy or Non-Proxy. • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o H-SLP supports ULP 2.0 only and SET supports ULP 1.0
Test Procedure	Test 1: 1. The network resident MLS application requests the position of the SET and the SUPL Agent issues a MLP-SLRR request to H-SLP. 2. H-SLP send the SUPL INIT (version = 2.0, minimum = 2) to SET. 3. SET responds with SUPL END (version = 1.0 and status code = versionNotSupported) and the location session fails. Test 2: 4. SET send the SUPL START (version = 1.0) to H-SLP. 5. H-SLP response with SUPL END (version = 2.0 and status code = versionNotSupported) to SET and the location session fails.
Pass-Criteria	1. At step 3 the SET shall respond with SUPL END with the correct version number (1.0) supported by the SET. 2. At step 5 the H-SLP shall respond with SUPL END with the correct version number (2.0) supported by the H-SLP.

7.3.3 SUPL-2.0-int-202 Cross version Compatibility: H-SLP V2.0 and V1.0 and SET V1.0

Test Case Id	SUPL-2.0-int-202

Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test ULP version Negotiation function in case H-SLP supports both ULP 2.0 and ULP1.0 , SET supports ULP1.0 version
Specification Reference	TS-ULP 7
SCR Reference	ULP-PRO-S-027-M , ULP-PRO-C-025-M
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	• Equipment for GSM/WCDMA implementations: o 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • Equipment for CDMA implementations: o 1 MLS Client, 1 SET, 1 H-SLP, Home PLMN with CDMA access network. • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to the tester. o H-SLP has access to cell data from the Home PLMN. o SET and H-SLP support the same mode of operation: Proxy or Non-Proxy. • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o H-SLP supports ULP 2.0 and ULP1.0 and SET supports ULP 1.0
Test Procedure	Test 1: 1. The network resident MLS application requests the position of the SET and the SUPL Agent issues a MLP-SLIR request to H-SLP. 2. H-SLP send the SUPL INIT (version = 2.0, minimum = 1) to SET. 3. SET responds with SUPL END (version = 1.0) 4. H-SLP send the SUPL INIT (version = 1.0) to SET and the location session completes successfully. Test 2: 5. SET send the SUPL START (version = 1.0) to H-SLP. 6. H-SLP response with SUPL RESPONSE (version = 1.0) to SET and the location session completes successfully.
Pass-Criteria	1. At step 3 the SET shall respond with SUPL END with the correct version number (1.0) supported by the SET. 2. At step 4 the H-SLP shall send the SUPL INIT with the correct version number (1.0). 3. At step 6 the H-SLP shall respond with SUPL RESPONSE with the correct version number (1.0).

7.3.4 SUPL-2.0-int-203 Cross version Compatibility: H-SLP V1.0 and SET V 2.0

Test Case Id	SUPL-2.0-int-203

Test Object	Client (SET) and Server (H-SLP)
Test Case Description	To test ULP version Negotiation function in case H-SLP supports ULP 1.0 only , SET supports ULP2.0 version
Specification Reference	TS-ULP 7
SCR Reference	ULP-PRO-S-027-M , ULP-PRO-C-025-M
Tool	Protocol analyser to monitor signalling between SET and SLP. If a protocol analyser is not available log files in SLP and SET can be used instead.
Test code	-
Preconditions	• Equipment for GSM/WCDMA implementations: o 1 MLS Client, 1 SET, 1 H-SLP, 1 PPG, 1 SMS-C, Home PLMN with either GSM or WCDMA access network, or both. • Equipment for CDMA implementations: o 1 MLS Client, 1 SET, 1 H-SLP, Home PLMN with CDMA access network. • State: o SET is attached to the home PLMN. o SET is idle. o The SET's position is known to the tester. o H-SLP has access to cell data from the Home PLMN. o SET and H-SLP support the same mode of operation: Proxy or Non-Proxy. • Continuation of / Can be tested at the same time as: o None • Prerequisite for this test: o H-SLP supports ULP 1.0 only and SET supports ULP 2.0
Test Procedure	Test 1: 1. The network resident MLS application requests the position of the SET and the SUPL Agent issues a MLP-SLIR request to H-SLP. 2. H-SLP send the SUPL INIT (version = 1.0) to SET. 3. SET responds with SUPL END (version = 2.0 and status code = versionNotSupported) and the location session fails. Test 2: 4. SET send the SUPL START (version = 2.0) to H-SLP. 5. H-SLP responds with SUPL END (version = 1.0 and status code = versionNotSupported) and the location session fails.
Pass-Criteria	4. At step 3 the SET shall respond with SUPL END with the correct version number (2.0) supported by the SET 5. At step 5 the H-SLP shall respond with SUPL END with the correct version number (1.0) supported by the H-SLP.

Appendix A. Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version

A.2 Draft/Candidate Version 2.0 History

Document Identifier	Date	Sections	Description
Draft Versions OMA-ETS-SUPL-V2_0	24 Jun 2008	All	Initial empty draft
	19 Nov 2008	5, App B	CR incorporated: OMA-IOP-MEC-2008-0198
	06 Jan 2009	5, App B	CR incorporated: OMA-IOP-MEC-2008-0208
	15 Jan 2009	5, App B	CR incorporated: OMA-IOP-MEC-2008-0241R01 OMA-IOP-MEC-2008-0242R01
	17 Feb 2009		CRs incorporated: OMA-IOP-MEC-2009-0009 OMA-IOP-MEC-2009-0010
	26 Feb 2009	All	CR incorporated: OMA-IOP-MEC-2009-0024 OMA-IOP-MEC-2009-0023R01 OMA-IOP-MEC-2009-0027 OMA-IOP-MEC-2009-0028
	19 Mar 2009	All	CRs incorporated: OMA-IOP-MEC-2009-0035 OMA-IOP-MEC-2009-0036
	26 Mar 2009	App C,	CRs incorporated: OMA-IOP-MEC-2009-0022R02 OMA-IOP-MEC-2009-0025R02 OMA-IOP-MEC-2009-0031R01 OMA-IOO-MEC-2009-0032R01 OMA-IOP-MEC-2009-0033R01 OMA-IOP-MEC-2009-0034R02 OMA-IOP-MEC-2009-0038R02 OMA-IOP-MEC-2009-0039R01
	08 Apr 2009	5	Incorporated CR: OMA-IOP-MEC-2009-0049
	05 May 2009		Incorporated CRs: OMA-IOP-MEC-2009-0061 OMA-IOP-MEC-2009-0063R01 OMA-IOP-MEC-2009-0065 OMA-IOP-MEC-2009-0067 OMA-IOP-MEC-2009-0068 OMA-IOP-MEC-2009-0070 OMA-IOP-MEC-2009-0071
	15 May 2009	7.3 5	Incorporated CR: OMA-IOP-MEC-2009-0080 OMA-IOP-MEC-2009-0081
	29 May 2009	5.1.4, App B	Incorporated CR: OMA-IOP-MEC-2009-0051R01 OMA-IOP-MEC-2009-0053R01 OMA-IOP-MEC-2009-0060R01 OMA-IOP-MEC-2009-0062R02 OMA-IOP-MEC-2009-0087R01 OMA-IOP-MEC-2009-0089R01

Document Identifier	Date	Sections	Description
	03 Jun 2009	7.1	Incorporated CRs: OMA-IOP-MEC-2009-0088R03 OMA-IOP-MEC-2009-0091R02
	04 June 2009		Incorporated CR: OMA-IOP-MEC-0052R02
	08 Jun 2009	5, 7	Incorporated CR: OMA-IOP-MEC-2009-0085R01
	25 Jun 2009	5, 7, App B	Incorporated CR: OMA-IOP-MEC-2009-0098 OMA-IOP-MEC-2009-0104R01 OMA-IOP-MEC-2009-0105 OMA-IOP-MEC-2009-0107 OMA-IOP-MEC-2009-0109R01 OMA-IOP-MEC-2009-0110 OMA-IOP-MEC-2009-0111 OMA-IOP-MEC-2009-0113 OMA-IOP-MEC-2009-0115 OMA-IOP-MEC-2009-0116
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	15 Jul 2009	All	Editorial clean-up
	23 Jul 2009	5, 7	Incorporated CR: OMA-IOP-MEC-2009-0119 OMA-IOP-MEC-2009-0123 OMA-IOP-MEC-2009-0125R02
Candidate Versions OMA-ETS-SUPL-V2_0	18 Aug 2009	n/a	TP approval: OMA-TP-2009-0347-INP_SUPL_2.0_ETS_for_Candidate_approval

Appendix B. Conformance Test Case applicability

B.1 Introduction

This section shall help implementers of the SUPL 2.0 Enabler to select appropriate Conformance test cases that are applicable to the features implemented.

This appendix lists all test cases testing only mandatory features, ICS (Implementation Conformance Specification). IXIT (Implementation eXtra Information) and a mapping from ICS/IXIT to applicable test cases as defined by the Open Mobile Alliance.

B.2 Test Cases testing only mandatory features

These Conformance test cases are independent from any applicability, are testing only mandatory SCRs and SHALL be run with every implementation.

Test Case
SUPL-2.0-con-000 -1 – SUPL INIT delivery. Test1: OMA Push
SUPL-2.0-con-001 - Incorrect OMA Push message content
SUPL-2.0-con-004 - Correct Session ID
SUPL-2.0-con-005 - Invalid SET Session ID
SUPL-2.0-con-006 - Missing or invalid SLP Session ID
SUPL-2.0-con-007-1, -3, -4, -5 – Alternative H-SLP Addresses
SUPL-2.0-con-010-1, -2, -3 Compatible Versions
SUPL-2.0-con-011-1 Unsupported Versions
SUPL-2.0-con-020 - No notification & no verification
SUPL-2.0-con-021 - Notification only
SUPL-2.0-con-022 - Notification and verification
SUPL-2.0-con-023 - Privacy override
SUPL-2.0-con-024 – Requestor ID and Client Name
SUPL-2.0-con-031 - No Position
SUPL-2.0-con-033 – Emergency Services Location Requests
SUPL-2.0-con-034 – Emergency Services Location Request – Interaction with normal SUPL session
SUPL-2.0-con-070 -3 - Timeout UT2 (NI) No SUPL POS session (Immediate session)
SUPL-2.0-con-100 – Correct Session ID
SUPL-2.0-con-101 - Invalid SET Session ID
SUPL-2.0-con-102 - Invalid SLP Session ID
SUPL-2.0-con-103-1, -2 - Compatible Versions
SUPL-2.0-con-140 -1 - Timeout UT1 Immediate session
SUPL-2.0-con-141 -3 - Timeout UT2 (SI) No SUPL POS session (Immediate session)

B.3 Applicability

B.3.1 Client ICS

ICS	*Description*	SCR Reference(s)	Supported *(yes/no)*
ics_MT_SMS	MT SMS supported	ULP-PIN-C-005-M	
ics_SIP_Push	SIP Push supported	ULP-PIN-C-	

		006-O	
ics_PSK_TLS	PSK-TLS with GBA supported	ULP-PRO-C-004-O, ULP-PRO-C-037-O	
ics_HSLP_stored_in_SET	H-SLP address stored in SET		
ics_TLS_add_cipher	TLS additional cipher suite supported		
ics_PSKTLS_add_cipher	PSK-TLS additional cipher suite supported		
ics_support_SUPLV1.0	SUPL V1.0 supported		
ics_transfer_thirdParty	Transfer Location to Third Party supported	ULP-PRO-C-040-O	
ics_notification_currentLocation	Notification based on current location supported	ULP-PRO-C-029-O	
ics_real_time	Real time reporting supported	ULP-PRO-C-046-O	
ics_quasi_real_time	Quasi real time reporting supported	ULP-PRO-C-047-O	
ics_periodic_Network_initiated	Periodic trigger in Network initiated call flows supported	ULP-PRO-C-032-O	
ics_periodic_SET_initiated	Periodic trigger in SET initiated call flows supported	ULP-PRO-C-032-O	
ics_SETbased_in_quasi_real_time	SET based positioning in quasi real time reporting supported	-	
ics_AGPSSETassisted_Network_initiated	A-GPS SET assisted mode in Network initiated call flows supported	ULP-PRO-C-012-O	
ics_AGPSSETassisted_SET_initiated	A-GPS SET assisted mode in SET initiated call flows supported	ULP-PRO-C-012-O	
ics_AGPSSETbased_Network_initiated	A-GPS SET based mode in Network initiated call flows supported	ULP-PRO-C-013-O	
ics_AGPSSETbased_SET_initiated	A-GPS SET based mode in SET initiated call flows supported	ULP-PRO-C-013-O	
ics_autonomousGPS_Network_initiated	Autonomous GPS mode in Network initiated call flows supported	ULP-PRO-C-014-O	
ics_autonomousGPS_SET_initiated	Autonomous GPS mode in SET initiated call flows supported	ULP-PRO-C-014-O	
ics_eCID_Network_initiated	Enhanced Cell ID mode in Network initiated call flows supported	ULP-PRO-C-018-O	
ics_eCID_SET_initiated	Enhanced Cell ID mode in SET initiated call flows supported	ULP-PRO-C-018-O	
ics_AGANSSSETassisted_Galileo_Network_initiated	A-Galileo SET assisted mode in Network initiated call flows supported	ULP-PRO-C-015-O	
ics_AGANSSSETassisted_Galileo_SET_initiated	A- Galileo SET assisted mode in SET initiated call flows supported	ULP-PRO-C-015-O	

ics_AGANSSSETassisted_GLONASS_Network_initiated	A- GLONASS SET assisted mode in Network initiated call flows supported	ULP-PRO-C-015-O	
ics_AGANSSSETassisted_GLONASS_SET_initiated	A- GLONASS SET assisted mode in SET initiated call flows supported	ULP-PRO-C-015-O	
ics_AGANSSSETbased_Galileo_Network_initiated	A- Galileo SET based mode in Network initiated call flows supported	ULP-PRO-C-016-O	
ics_AGANSSSETbased_Galileo_SET_initiated	A- Galileo SET based mode in SET initiated call flows supported	ULP-PRO-C-016-O	
ics_AGANSSSETbased_GLONASS_Network_initiated	A- GLONASS SET based mode in Network initiated call flows supported	ULP-PRO-C-016-O	
ics_AGANSSSETbased_GLONASS_SET_initiated	A- GLONASS SET based mode in SET initiated call flows supported	ULP-PRO-C-016-O	
ics_autonomousGANSS_Network_initiated	Autonomous GANSS mode in Network initiated call flows supported	ULP-PRO-C-014-O	
ics_autonomousGANSS_SET_initiated	Autonomous GANSS mode in SET initiated call flows supported	ULP-PRO-C-014-O	
ics_event_Network_initiated	Area Event Triggered Service in Network initiated call flows supported	ULP-PRO-C-033-O	
ics_event_SET_initiated	Area Event Triggered Service in SET initiated call flows supported	ULP-PRO-C-033-O	
ics_silr_another_SET	SET Initiated Location Request of another SET supported	ULP-PRO-C-038-O	
ics_historic_reporting	Retrieval of historical positions and/or enhanced cell/sector measurements supported	ULP-PRO-C-035-O	

B.3.2 Client IXIT

IXIT *Description*	**Unit** **<(Range of values)>**	**Value**
ixit_verification_timeout Value of Verification timeout	seconds (30 to 50. Recommended value: 40)	
ixit_timer_UT1 Value of Timer UT1	seconds (10 to 20)	
ixit_timer_UT2 Value of Timer UT2	seconds (10 to 20)	
ixit_timer_UT3 Value of Timer UT3	seconds (8 to 20)	
ixit_timer_UT5 Value of Timer UT5	seconds (8 to 20)	
ixit_timer_UT7 Value of Timer UT7	seconds (8 to 20)	
ixit_timer_UT8 Value of Timer UT8	seconds (8 to 20)	

ixit_timer_UT9	Value of Timer UT9	seconds (50 to 120)	
ixit_gANSS	GANSS technology supported	-(Galileo, GLONASS, both)	
ixit_emergency_call_required	Emergency call required to be in progress for an Emergency Services Location Request	- (Yes/No)	

B.3.3 Server ICS

ICS	*Description*	**SCR Reference(s)**	**Supported** *(yes/no)*

B.3.4 Server IXIT

IXIT	*Description*	**Unit** **<(Range of values)>**	**Value**

B.4 ICS to test case mapping

According to the ICS described above the applicable test cases can be derived from the following table.

Applicability	Test Cases
ics_MT_SMS	SUPL-2.0-con-000 – SUPL INIT delivery – Test 2 : MT SMS SUPL-2.0-con-002 – Incorrect MT SMS message content
ics_SIP_Push	SUPL-2.0-con-000 – SUPL INIT delivery – Test 2 : MT SMS SUPL-2.0-con-003 – Incorrect SIP Push message content
ics_HSLP_stored_in_SET AND ics_PSK_TLS.	SUPL-2.0-con-007-2 Alternative H-SLP Addresses
ics_TLS_add_cipher	SUPL-2.0-con-008-1 Optional Ciphering Suites
ics_PSKTLS_add_cipher	SUPL-2.0-con-008-2 Optional Ciphering Suites
ics_support_SUPLV1.0	SUPL-2.0-con-010-4 Compatible Versions
NOT ics_support_SUPLV1.0	SUPL-2.0-con-011-2 Unsupported Versions
ics_ notification_currentLocation	SUPL-2.0-con-025 Notification and verification based on current location. Test 1: User accepts the verification SUPL-2.0-con-025 Notification and verification based on current location. Test 2: User denies the verification SUPL-2.0-con-072 - Timeout UT5

ics_transfer_thirdParty AND ics_AGPSSETbased_SET_initiated	SUPL-2.0-con-113 - Transfer Location to Third Party
ics_AGPSSETassisted_Network_initiated	SUPL-2.0-con-030 -1 - Positioning method A-GPS SET assisted
ics_AGPSSETassisted_SET_initiated	SUPL-2.0-con-110 -1 - Positioning method A-GPS SET assisted
ics_AGPSSETbased_Network_initiated	SUPL-2.0-con-030 -2 - Positioning method A-GPS SET based
ics_AGPSSETbased_SET_initiated	SUPL-2.0-con-110 -2 - Positioning method A-GPS SET based
ics_autonomousGPS_Network_initiated	SUPL-2.0-con-030 -3 - Positioning method Autonomous GPS
ics_autonomousGPS_SET_initiated	SUPL-2.0-con-110 -3 - Positioning method Autonomous GPS
ics_eCID_Network_initiated	SUPL-2.0-con-030 -4 - Positioning method Enhanced Cell ID
ics_eCID_SET_initiated	SUPL-2.0-con-110 -4 - Positioning method Enhanced Cell ID
NOT ics_eCID_Network_initiated	SUPL-2.0-con-030 -5 - Positioning method Cell ID
NOT ics_eCID_SET_initiated	SUPL-2.0-con-110 -5 - Positioning method Cell ID
ics_AGANSSSETassisted_Galileo_Network_initiated	SUPL-2.0-con-030 -6 - Positioning method A-GANSS SET assisted –Galileo
ics_AGANSSSETassisted_Galileo_SET_initiated	SUPL-2.0-con-110 -6 - Positioning method A-GANSS SET assisted –Galileo
ics_AGANSSSETassisted_GLONASS_Network_initiated	SUPL-2.0-con-030 -7 - Positioning method A-GANSS SET assisted – GLONASS
ics_AGANSSSETassisted_GLONASS_SET_initiated	SUPL-2.0-con-110 -7 - Positioning method A-GANSS SET assisted – GLONASS
ics_AGANSSSETbased_Galileo_Network_initiated	SUPL-2.0-con-030 -8 - Positioning method A-GANSS SET based –Galileo
ics_AGANSSSETbased_Galileo_SET_initiated	SUPL-2.0-con-110 -8 - Positioning method A-GANSS SET based –Galileo
ics_AGANSSSETbased_GLONASS_Network_initiated	SUPL-2.0-con-030 -9 - Positioning method A-GANSS SET based –GLONASS
ics_AGANSSSETbased_GLONASS_SET_initiated	SUPL-2.0-con-110 -9 - Positioning method A-GANSS SET based –GLONASS
ics_autonomousGANSS_Network_initiated	SUPL-2.0-con-030 -10 - Positioning method Autonomous GANSS
ics_autonomousGANSS_SET_initiated	SUPL-2.0-con-110 -10 - Positioning method Autonomous GANSS
ics_AGPSSETassisted_Network_initiated AND ics_AGPSSETbased_Network	SUPL-2.0-con-030 - Positioning method - 11 - Positioning method: A-GPS Preferred methods

_initiated	
ics_AGPSSETassisted_SET_initiated AND ics_AGPSSETbased_SET_initiated	SUPL-2.0-con-110 - Positioning method - 11 - Positioning method: A-GPS Preferred methods
(ics_AGANSSSETassisted_Galileo_Network_initiated AND ics_AGANSSSETbased_Galileo_Network_initiated) OR (ics_AGANSSSETassisted_GLONASS_Network_initiated AND ics_AGANSSSETbased_GLONASS_Network_initiated)	SUPL-2.0-con-030 - Positioning method - 12 - Positioning method: A-GANSS Preferred methods
(ics_AGANSSSETassisted_Galileo_SET_initiated AND ics_AGANSSSETbased_Galileo_SET_initiated) OR (ics_AGANSSSETassisted_GLONASS_SET_initiated AND ics_AGANSSSETbased_GLONASS_SET_initiated)	SUPL-2.0-con-110 - Positioning method - 12 - Positioning method: A-GANSS Preferred methods
ics_real_time AND ics_periodic_Network_initiated AND ics_AGPSSETassisted_Network_initiated	SUPL-2.0-con-040-1 Real Time reporting
ics_real_time AND ics_periodic_Network_initiated AND ics_AGPSSETbased_Network_initiated	SUPL-2.0-con-040-2 Real Time reporting
ics_quasi_real_time AND ics_periodic_Network_initiated AND ics_SETbased_in_quasi_real_time AND ics_AGPSSETassisted_Network_initiated	SUPL-2.0-con-041-1 Basic Quasi Real Time reporting
ics_quasi_real_time AND ics_periodic_Network_initiated AND ics_AGPSSETbased_Network_initiated	SUPL-2.0-con-041-2 Basic Quasi Real Time reporting
ics_batch AND ics_periodic_Network_initiated AND ics_AGPSSETassisted_Network_initiated	SUPL-2.0-con-042-1 Basic Batch reporting
ics_batch AND ics_periodic_Network_initiated AND ics_AGPSSETbased_Network_initiated	SUPL-2.0-con-042-2 Basic Batch reporting

ics_periodic_SET_initiated AND ics_AGPSSETassisted_SET_initiated	SUPL-2.0-con-120-1 Periodic reporting
ics_periodic_SET_initiated AND ics_AGPSSETbased_SET_initiated	SUPL-2.0-con-120-2 Periodic reporting
ics_AGPSSETassisted_Network_initiated OR ics_AGPSSETbased_Network_initiated OR ics_autonomousGPS_Network_initiated OR [others FFS] (Any positioning method requiring a SUPL POS session)	SUPL-2.0-con-070 -1- Timeout UT2 SUPL POS session (Immediate session) SUPL-2.0-con-071 - Timeout UT3 Immediate session
ics_AGPSSETassisted_SET_initiated OR ics_AGPSSETbased_SET_initiated OR [others FFS] (Any positioning method requiring a SUPL POS session)	SUPL-2.0-con-141 -1 - Timeout UT2 SUPL POS session (Immediate session) SUPL-2.0-con-142 - Timeout UT3 Immediate session
(ics_AGPSSETassisted_Network_initiated OR ics_AGPSSETbased_Network_initiated OR [others FFS]) AND (ics_periodic_Network_initiated OR ics_event_Network_initiated)	SUPL-2.0-con-070 -2 - Timeout UT2 SUPL POS session (Triggered session) SUPL-2.0-con-071 - Timeout UT3 Triggered session
(ics_AGPSSETassisted_SET_initiated OR ics_AGPSSETbased_SET_initiated OR [others FFS]) AND (ics_periodic_SET_initiated OR ics_event_SET_initiated)	SUPL-2.0-con-141 -2 - Timeout UT2 SUPL POS session (Triggered session) SUPL-2.0-con-142 - Timeout UT3 Triggered session
ics_periodic_Network_initiated OR ics_event_Network_initiated	SUPL-2.0-con-070 -4 - Timeout UT2 No SUPL POS session (Triggered session) SUPL-2.0-con-073 - Timeout UT7
ics_periodic_Network_initiated OR ics_periodic_SET_initiated OR ics_event_Network_initiated OR ics_event_SET_initiated	SUPL-2.0-con-061 – Network cancels Triggered Location Request
ics_periodic_SET_initiated OR ics_event_SET_initiated	SUPL-2.0-con-140 -2 - Timeout UT1 Triggered session SUPL-2.0-con-141 -4 - Timeout UT2 No SUPL POS session (Triggered session)
ics_event_Network_initiated	SUPL-2.0-con-060 – Network Capabilities change

OR ics_event_SET_initiated	
(ics_periodic_SET_initiated OR ics_event_SET_initiated) AND NOT (ics_periodic_Network_initiated OR ics_event_Network_initiated)	SUPL-2.0-con-143 - Timeout UT7
ics_periodic_Network_initiated	SUPL-2.0-con-074 - Timeout UT8
ics_silr_another_SET	SUPL-2.0-con-144 - Timeout UT9 SUPL-2.0-con-111 - SET Initiated Location Request of another SET
ics_historic_reporting	SUPL-2.0-con-035 – Retrieval of historical positions
ics_periodic_Network_initiated OR ics_event_Network_initiated OR ics_periodic_SET_initiated OR ics_event_SET_initiated	SUPL-2.0-con-062 – V-SLP to V-SLP Handover

Appendix C. ULP default message content for Client conformance testing

C.1 Introduction

This section defines the default message content that shall be used during Client conformance testing.

The values specified below shall be used unless overridden in the Test Procedure of a test case.

In the case of SUPL messages sent from the SLP (Conformance Test Tool) to the SET-under test, the values that shall be used for the mandatory parameters are given below. Optional information elements are normally set to "Omit".

In the case of SUPL messages sent from the SET-under-test to the SLP (Conformance Test Tool), optionalparameters are generally marked as "Not checked or not present". Mandatory parameters have the value that must be checked by the Conformance Test Tool or are marked as "Not checked" meaning that any value is acceptable.

In some cases the message content is dependant on the context. In these cases the values is marked "Conditional" and in the Comment column the dependency is explained.

Common Part

The common part contains parameters that are present in all ULP messages.

C.1.1 SLP to SET

Parameter	Value	Comment
Message Length	Correctly calculated	
Version	2.0.0	
Session ID	Correctly formulated. In the case of the initial SLP Session ID, any value may be used	
Message Payload	Any	One of the messages defined in the following sections

Table 5: Common Part for all ULP Messages

C.1.2 SET to SLP

Parameter	Value	Comment
Message Length	Not checked	
Version	2.0.0	
Session ID	Not checked	
Message Payload	Any	One of the messages defined in the following sections

Table 6: Common Part for all ULP Messages

C.2 SUPL INIT

SUPL INIT is the initial message from the H-SLP (or E-SLP) to the SET in Network initiated cases.

Parameter	Value	Comment
Positioning Method	eCID	
Notification	Omit	
SLP Address	Omit	
QoP	Omit	
SLP Mode	Proxy mode	

MAC	Omit	For SUPL 2.0
Key Identity	Omit	
Notification Mode	Omit	
Supported Network Information	Omit	
Trigger Type	Omit	
E-SLP Address	Omit	
Historic Reporting	Omit	
Protection Level	Omit	
GNSS Positioning Technology	Omit	
Minimum Major Version	Omit	

Table 7: SUPL_INIT Message

C.3 SUPL SET INIT

The SUPL SET INIT message is the initial message where a SET can initiate location request to another target SET.

Parameter	Value	Comment
Target SET ID	Not checked	
QoP	Not checked or not present	

Table 8: SUPL_SET_INIT Message

C.4 SUPL START

SUPL START is the initial message from the SET to the SLP.

Parameter	Value	Comment
SET capabilities	According to ICS/ declared for the SET-under-test …	
Location ID	Not checked	
QoP	Not checked or not present	
Multiple Location IDs	Not checked or not present	
Third Party	Not checked or not present	
Position	Not checked or not present	

Table 9: SUPL START Message

C.5 SUPL RESPONSE

SUPL RESPONSE is the response to a SUPL START message.

Parameter	Value	Comment
Positioning Method	eCID	
SLP Address	Omit	
SET Auth key	Omit	For SUPL 2.0
Key Identity 4	Omit	For SUPL 2.0
SPC_SET_Key	Omit	
SPC-TID	Omit	
SPC_SET_Key_lifetime	Omit	
Supported Network Information	Omit	
Initial Approximate Position	Omit	

GNSS Positioning Technology	Omit	

Table 10: SUPL RESPONSE Message

C.6 SUPL POS INIT

SUPL POS INIT is the message following the SUPL INIT message in Network initiated cases or the SUPL RESPONSE message in SET initiated cases

Parameter	Value	Comment
SET Capabilities	According to ICS/ declared for the SET-under-test …	
Requested Assistance Data	Not checked or not present	
Location ID	Not checked	
Position	Not checked or not present	
SUPLPOS	Not checked or not present	
Ver	In Network initiated mode the hash of the SUPL INIT message, otherwise not present	
Multiple Location IDs	Not checked or not present	
UTRAN GPS Reference Time Result	Not checked or not present	
UTRAN GANSS Reference Time Result	Not checked or not present	

Table 11: SUPL POS INIT Message

C.7 SUPL POS

SUPL POS is the message that wraps the underlying TIA-801, RRLP or RRC element and may contain additional information such as velocity, UTRAN GPS/GANSS Reference Time Assistance or UTRAN GPS/GANSS Reference Time Result.

C.7.1 SLP to SET

Parameter	Value	Comment
Positioning Payload	The underlying TIA-801, RRLP, RRC or LTE element	FFS – we may wish to define RRLP messages
Velocity	Omit	
UTRAN GPS Reference Time Assistance	Omit	
UTRAN GPS Reference Time Result	Omit	
UTRAN GANSS Reference Time Assistance	Omit	
UTRAN GANSS Reference Time Result	Omit	

Table 12: SUPL POS Message

C.7.2 SET to SLP

Parameter	Value	Comment
Positioning Payload	Not checked	The underlying TIA-801, RRLP or RRC element.
Velocity	Not checked or not present	
UTRAN GPS Reference Time Assistance	Not present	

UTRAN GPS Reference Time Result	Not checked or not present	
UTRAN GANSS Reference Time Assistance	Not present	
UTRAN GANSS Reference Time Result	Not checked or not present	

Table 13: SUPL POS Message

C.8 SUPL END

SUPL END is the message that ends the SUPL procedure, normally or abnormally.

C.8.1 SLP to SET

Parameter	Value	Comment
Position	n the case that a position needs to be sent to the SET, otherwise omit	
>Timestamp	Time when position fix was calculated	
>Position Estimate		
>>Sign of latitude	north	
>>Latitude	2064427	
>>Longitude	5292209	
Status Code	Omit	
Ver	Omit	
SET Capabilities	Omit	

Table 14: SUPL END Message

C.8.2 SET to SLP

Parameter	Value	Comment
Position	Not checked or not present	
Status Code	Not checked or not present	
Ver	C	Need to be sent when SUPL END message is sent as a direct response to SUPL INIT. Otherwise not present.
SET Capabilities	According to ICS declared for the SET-under-test … or not present	

Table 15: SUPL END Message

C.9 SUPL AUTH REQ

Not currently used for conformance testing.

C.10 SUPL AUTH RESP

Not currently used for conformance testing.

C.11 SUPL TRIGGERED START

SUPL TRIGGERED START is the initial message from the SET to the H-SLP for establishing a triggered session or for requesting new trigger parameters during an ongoing Area event triggered session.

C.11.1 Network initiated sessions

C.11.1.1 Periodic Trigger

Parameter	Value	Comment
SET capabilities	According to ICS declared for the SET-under-test / …	
Location ID	Not checked	
Ver	Not checked	Hash of the SUPL INIT message which triggered this SUPL TRIGGERED START message (not in other cases) in Network initiated proxy mode.
QoP	Not checked or not present	
Multiple Location IDs	Not checked or not present	
Third Party	Not present	
Trigger Type	Not present	
Trigger Params	Not present	
Position	Not checked or not present	
Reporting Capability	According to ICS declared for the SET-under-test …	
Cause Code	Not present	

Table 16: SUPL TRIGGERED START Message

C.11.1.2 Event Trigger

Parameter	Value	Comment
SET capabilities	According to ICS declared for the SET-under-test …	
Location ID	Not checked	
Ver	Not checked	Hash of the SUPL INIT message which triggered this SUPL TRIGGERED START message (not in other cases) in Network initiated proxy mode. FFS.
QoP	Not checked or not present	
Multiple Location IDs	Not checked or not present	
Third Party	Not present	
Trigger Type	Not present	
Trigger Params	Not present	
Position	Not checked or not present	
Reporting Capability	Not present	
Cause Code	Not checked	

Table 17: SUPL TRIGGERED START Message

C.11.2 SET initiated sessions

C.11.2.1 Periodic Trigger

Parameter	Value	Comment
SET capabilities	According to ICS declared for the SET-under-test/ …	

Location ID	Not checked	
Ver	Not present	
QoP	Not checked or not present	
Multiple Location IDs	Not checked or not present	
Third Party	C	Only for SET Initiated location requests with transfer to Third Party.
>Third Party ID	Not checked	
Trigger Type	Periodic	
Trigger Params	Not checked	
Position	Not checked or not present	
Reporting Capability	According to ICS declared for the SET-under-test/ …	
Cause Code	Not present	

Table 18: SUPL TRIGGERED START Message

C.11.2.2 Area Event Trigger

Parameter	Value	Comment
SET capabilities	According to ICS declared for the SET-under-test / …	
Location ID	Not checked	
Ver	Not present	
QoP	Not checked or not present	
Multiple Location IDs	Not checked or not present	
Third Party	C	Only for SET Initiated location requests with transfer to Third Party.
>Third Party ID	Not checked	
Trigger Type	Area event	
Trigger Params	Not checked	
Position	Not checked or not present	
Reporting Capability	Not present	
Cause Code	Not checked	

Table 19: SUPL TRIGGERED START Message

C.12 SUPL TRIGGERED RESPONSE

SUPL TRIGGERED RESPONSE is the response to a SUPL TRIGGERED START message from the SLP to the SET

C.12.1 Network initiated sessions

C.12.1.1 Periodic Trigger

Parameter	Value	Comment
Positioning Method	eCID	
Trigger Params	Periodic Params	
>Number of fixes	3	FFS
>Interval Between Fixes	30 (see comment)	FFS If the minimum interval between fixes received from the SET in SUPL TRIGGERED START is greater than 30, use this value.

>Start Time	30	FFS
SLP Address	Omit	
Supported Network Information	Omit	
Reporting Mode	Omit	This implies real time reporting
SPC_SET_Key	Omit	
SPC-TID	Omit	
SPC_SET_Key_lifetime	Omit	
GNSS Positioning Technology	Omit	

Table 20: SUPL TRIGGERED RESPONSE Message

C.12.1.2 Area Event Trigger

Parameter	Value	Comment
Positioning Method	eCID	
Trigger Params	Area Event Params	
>Area Event Type	FFS	
>Location estimate	FFS	
>Repeated reporting	Omit FFS	
>Start Time	Omit FFS	
>Stop Time	Omit FFS	
>Geographic Target Area List	Omit FFS	
>Area Id Lists	FFS	
SLP Address	Omit	
Supported Network Information	Omit	
Reporting Mode	Omit	
SPC_SET_Key	Omit	
SPC-TID	Omit	
SPC_SET_Key_lifetime	Omit	
GNSS Positioning Technology	Omit	

Table 21: SUPL TRIGGERED RESPONSE Message

C.12.2 SET initiated sessions

C.12.2.1 Periodic Trigger

Parameter	Value	Comment
Positioning Method	eCID	
Trigger Params	Omit	
SLP Address	Omit	
Supported Network Information	Omit	

Reporting Mode	Omit	This implies real time reporting
SPC_SET_Key	Omit	
SPC-TID	Omit	
SPC_SET_Key_lifetime	Omit	
GNSS Positioning Technology	Omit	

Table 22: SUPL TRIGGERED RESPONSE Message

C.12.2.2 Area Event Trigger

Parameter	Value	Comment
Positioning Method	eCID	
Trigger Params	Omit	
SLP Address	Omit	
Supported Network Information	Omit	
Reporting Mode	Omit	
SPC_SET_Key	1. Omit	
SPC-TID	2. Omit	
SPC_SET_Key_lifetime	3. Omit	
GNSS Positioning Technology	4. Omit	

Table 23: SUPL TRIGGERED RESPONSE Message

C.13 SUPL TRIGGERED STOP

SUPL TRIGGERED STOP is used by the SLP or the SET to cancel a triggered session.

C.13.1 SLP to SET

Parameter	Value	Comment
Status Code	Omit	

Table 24: SUPL TRIGGERED STOP Message

C.13.2 SET to SLP

Parameter	Value	Comment
Status Code	Not checked or not present	

Table 25: SUPL TRIGGERED STOP Message

C.14 SUPL NOTIFY

SUPL NOTIFY is the message from the SLP to the SET in Network initiated cases.

Parameter	Value	Comment
Notification	No notification & no verification	

Table 26: SUPL NOTIFY Message

C.15 SUPL NOTIFY RESPONSE

SUPL NOTIFY RESPONSE is the response to a SUPL NOTIFY message.

Parameter	Value	Comment
Notification Response	Not checked or not present	

Table 27: SUPL NOTIFY RESPONSE Message

C.16 SUPL REPORT - FFS

The SUPL REPORT message is used in the following instances:

(1) For triggered applications, the SUPL REPORT message is used by the SLP to indicate the end of a positioning procedure (SUPL POS session) to the SET. In this case the SUPL REPORT message may or may not contain a calculated position.

Parameter	Value	Comment
SessionList	Omit	
SET capabilities	Omit	
ReportDataList	Omit	
>Report Data	Omit	
>>Position Data	Omit	A calculated position and the respective positioning mode used (optional).
>>Multiple Location Ids	FFS	Multiple Location Ids.
>>Result Code	Omit	
>>Time Stamp	C	Only used if Position Data is not present.
Ver	Omit	
More Components	Omit	

Table 28: SUPL REPORT Message

(2) For triggered applications, the SUPL REPORT message may be used to send one or more position result(s) (calculated by the SET) and/or enhanced cell/sector measurement(s) from the SET to the SLP. A result code may optionally be sent to indicate an error condition (e.g. no position available).

Parameter	Value	Comment
SessionList	Omit	
SET capabilities	Omit	
ReportDataList		
>Report Data	Not checked	
>>Position Data	Not checked	A calculated position and the respective positioning mode used (optional).
>>Multiple Location Ids	FFS	Multiple Location Ids.
>>Result Code	Not checked or not present	
>>Time Stamp	C	Only used if Position Data is not present.
Ver	Omit	

More Components	Omit	

Table 29: SUPL REPORT Message

(3) As an intermediate report within a continuing batch reporting session, the SUPL REPORT message is used as in triggered applications, but the message should only contain the position result(s). This allows the SET to dynamically manage it's memory by managing the amount of data stored in SET.

Parameter	Value	Comment
SessionList	Not present	
SET capabilities	Not present	
ReportDataList		
>Report Data	Not checked	
>>Position Data	Not checked	A calculated position and the respective positioning mode used (optional).
>>Multiple Location Ids	FFS	Multiple Location Ids.
>>Result Code	Not checked	
>>Time Stamp	C	Only used if Position Data is not present.
Ver	C	Only if the SUPL REPORT message is sent in response to a SUPL INT message.
More Components	C	This parameter is used if the report data to be sent needs to be segmented into multiple SUPL REPORT messages.

Table 30: SUPL REPORT Message

(4) For single fix notification/verification based on current location, the SUPL REPORT message is used in non-proxy mode to indicate the end of the positioning procedure (SUPL POS) session) to the SET. In this case the SUPL REPORT message may or may not contain a calculated position.

Not currently used for conformance testing.

(5) SUPL REPORT is used by the SET in response to a session info query from the H-SLP. In this case the SUPL REPORT message contains a list of session-ids of all active SUPL sessions. The SUPL REPORT message MAY also include the SET Capabilities.

Parameter	Value	Comment
SessionList	Not checked	FFS
SET capabilities	According to ICS declared for the SET-under-test or not present	FFS
ReportDataList	Not present	
>Report Data	Not present	
>>Position Data	Not present	
>>Multiple Location Ids	Not present	
>>Result Code	Not present	
>>Time Stamp	Not present	

Ver	The correctly calculated hash of the SUPL INIT message	
More Components	Not present	

Table 31: SUPL REPORT Message