ETSI GR MEC-DEC 042 V3.1.1 (2022-11)

Multi-access Edge Computing (MEC); Guidelines on Interoperability testing

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ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

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Foreword

This Group Report (GR) has been produced by ETSI Industry Specification Group (ISG) Multi-access Edge Computing (MEC).

Modal verbs terminology

In the present document "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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1 Scope

The present document defines guidelines with the purpose of supporting the MEC Interoperability testing. It contains:

- conventions summarizing all pro formas and common rules for conduction Interoperability testing activities like done at the ETSI Plugtests™ events;
- the overall architecture describing the network including controllers, interfaces and applications;
- the configurations (CFG) summarizing the valid configurations derived from the overall architecture. A valid configuration is a specific subset of the overall architecture to which a given group of test descriptions applies used during test sessions;
- the Test Summary listing all test objectives. A Test Description (TD) will be developed for each test objective;
- the Test Descriptions (TDs) compiling all the information required to execute a test. They describe all the steps required to achieve a test objective;
- the Interoperability Feature Statement (IFS) identifying the features which a Function Under Test (FUT) supports, including those which are optional and those which are conditional on the support of other features. The IFS are used to select applicable TDs for each test session.

2 References

2.1 Normative references

Normative references are not applicable in the present document.

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ETSI GS MEC 001 (V2.1.1) (01-2019): "Multi-access Edge Computing (MEC); Terminology".

[i.2] ETSI GS MEC 010-2 (V2.1.1) (11-2019): "Multi-access Edge Computing (MEC); Application lifecycle, rules and requirements management".

[i.3] ETSI GR MEC-DEC 025 (V2.1.1) (06-2019): "Multi-access Edge Computing (MEC); MEC Testing Framework".

[i.4] ETSI GS MEC 011 (V2.2.1) (12-2020): "Multi-access Edge Computing (MEC); Edge Platform Application Enablement".

[i.5] ETSI GS MEC 013 (V2.2.1) (01-2022): "Multi-access Edge Computing (MEC); Location API".

[i.6] ETSI GS MEC 012 (V3.0.0) (05-2021): "Multi-access Edge Computing (MEC); Radio Network Information API".

[i.7] ETSI GS MEC 028 (V2.3.1) (05-2022): "Multi-access Edge Computing (MEC); WLAN Access Information API".

[i.8] ETSI GS MEC 030 (V2.2.1) (06-2022): "Multi-access Edge Computing (MEC); V2X Information API".

[i.9] ETSI GS MEC 015 (V2.1.1) (06-2020): "Multi-access Edge Computing (MEC); Traffic Management APIs".

3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the terms given in ETSI GS MEC 001 [i.1] apply.

3.2 Symbols

Void.

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

AP	Access Point
authN/Z	Authentication/Authorization
BSS	Basic Service Set
BSSID	Basic Service Set Identifier
BW	BandWidth
BWM	BandWidth Management
BWMS	BandWidth Management Service
DNS	Domain Name System
eNB	eNodeB
FUT	Function Under Test
IFS	Interoperability Feature Statement
IOP	InterOPerability
KVM	Kernel-based Virtual Machine
MBMS	Multimedia Broadcast Multicast Service
MEAO	MEC Application Orchestrator
MEO	MEC Orchestrator
MEPM	MEC Platform Manager
MTS	Multi-access Traffic Steering
NFV	Network Functions Virtualisation
NFVI	Network Functions Virtualisation Infrastructure
NSD	Network Scenario Descriptor
OBSS	Overlapping Basic Service Set
OSS	Operation Support Systems
PLMN	Public Land Mobile Network
QCI	QoS Class Identifier
QoS	Quality of Service
RAB	Radio Access Bearer
RNI	Radio Network Information
RNIS	Radio Network Information Service
RSSI	Receive Signal Strength Indicator
STA	Station
SUT	System Under Test
TD	Test Description
TM	Traffic Management
UE	User Equipment
V2X	Vehicle-to-everything
VIM	Virtual Infrastructure Manager

VIS	V2X Information Service
VNF	Virtual Network Function
VNFD	Virtual Network Function Descriptor
VNFM	Virtual Network Functions Manager
WAI	WLAN Access Information
WAIS	WLAN Access Information Service
WAN	Wireless Access Network
WLAN	Wireless Local Area Network

4 Test Structure

4.1 Conventions

The Tests Ids of this Test Plan have been created as per the following naming convention:

TEST ID = TD_<ROOT>_<GROUP>_<OPERATION>

Where <ROOT> is "MEC".

4.2 Test Description pro forma

Test Descriptions compile all the information required to execute a test. They describe all the steps required to achieve a test objective. The following information is provided with each Test Description:

- Identifier: A unique identifier is assigned to each Test Description. The usage of a well-defined naming convention allowing to put the TD into context (Functional Group, Feature, etc.) is recommended.
- Test Objective: Description of the objective of the TD (what).
- Configuration: Reference to the applicable configuration(s).
- References: References to the base specification(s) which describe the feature being tested.
- Applicability: List of items in the IFS that need to be supported by the FUTs in order to be able to execute the test.
- Pre-test conditions: Specific conditions that need to be met by the FUT prior to start executing the test sequence. It can include information about configuration, and/or initial state of the FUT.
- Test Sequence: Detailed description of the steps that are to be followed in order to achieve the stated test purpose. These steps are specified in a clear and unambiguous way but without placing unreasonable restrictions on how the step is performed. Clarity and precision are important to ensure that the step can be followed exactly. The lack of restrictions is necessary to ensure that the test can apply to a range of different types of implementation.

Table 4.2-1: Test Description pro forma

Interoperability Test Description			
Identifier	Unique test description ID: TD_AB_XXX_00. Follows the naming convention as per clause 4.1		
Test Purpose	A concise summary of the test reflecting its purpose and allowing readers to easily distinguish this test from any other test in the present document		
Configuration	Reference to the applicable configuration(s)		
References	List of references to the base specification clause(s), use case(s), requirement(s), etc. which are either used in the test or define the functionality being tested		
Applicability	List of features and capabilities in the IFS which are required to be supported by the FUTs in order to execute this test		
Pre-test conditions	List of test specific pre-conditions that need to be met by the FUT including information about configuration, i.e. precise description of the initial state of the FUTs prior to start executing the test sequence		
Test Sequence	**Step**	**Type**	**Description**
	1	***<Request>***	*Step description*
	2		
	3		
	4		
	5		
	6		
IOP Verdict			

The Steps in the Test Sequence can be of different type, depending on their purpose:

- A stimulus corresponds to an event that triggers a specific action on a FUT, like sending a message for instance.
- A configure corresponds to an action to modify the FUT or SUT configuration.
- An IOP check consists of observing that one FUT behaves as described in the standard: i.e. resource creation, update, deletion, etc. For each IOP check in the Test Sequence, a result can be recorded.
- The overall IOP Verdict will be considered OK if all the IOP checks in the sequence are OK.

4.3 Interoperability Feature Statement (IFS)

The Interoperable Feature Statement (IFS) identifies the standardized features of a FUT. These features can be mandatory, optional or conditional (depending on other features), and depend on the role played by the FUT. The IFS can also be used as a pro forma by a vendor to identify the features that its FUT will support when interoperating with corresponding features from other vendors. Annex A of the present document defines the IFS.

5 Architecture

The generic Interoperability Test Architecture follows recommendations contained in ETSI GR MEC-DEC 025 [i.3].

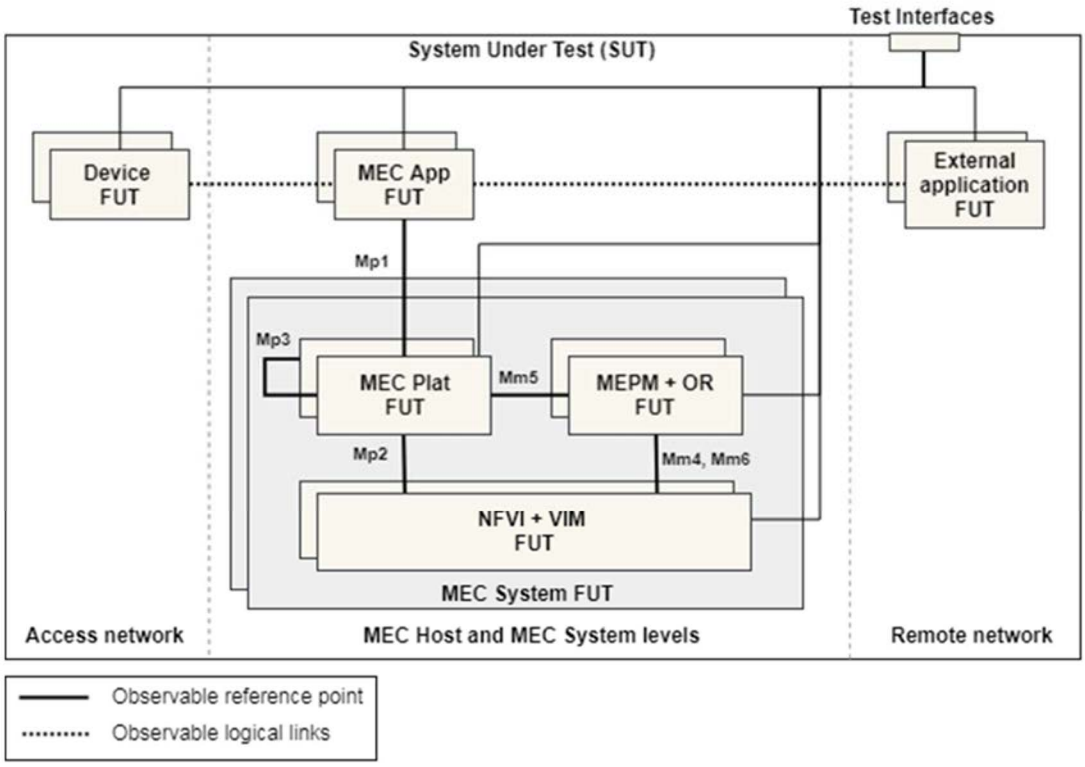

Figure 5-1: Generic Interoperability testing architecture as reported in ETSI GR MEC-DEC 025 [i.3]

6 Configurations

6.1 SUT_MEC_BASIC

The SUT_MEC_BASIC test configuration includes a single MEC application along with a MEC platform. In this configuration, the term "MEC Platform" is used to indicate any of the following components: MEC platform, MEC orchestrator or MEC platform manager. The providers of other components of the MEC system such as MEO or MEPM are out of scope. The MEC application runs - together with the MEC Platform - on the MEC host or the NFVI.

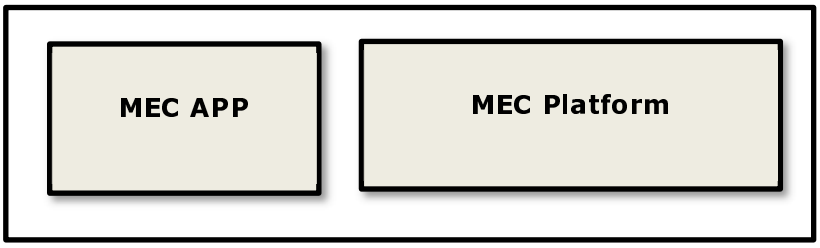

Figure 6.1-1: SUT_MEC_BASIC test configuration

6.2 SUT_MEC_SERVICES_SINGLE_APP

The SUT_MEC_SERVICES_SINGLE_APP test configuration is similar to the configuration SUT_MEC_BASIC, with a difference on the integration between the two elements. In this configuration, one (1) MEC application runs with in the MEC Host alongside the MEC platform. The configuration focuses on the capabilities around MEC Services such as the capability of applications and the platform to provide and register. The service is registered and available for discovery through the service registry in the MEC platform.

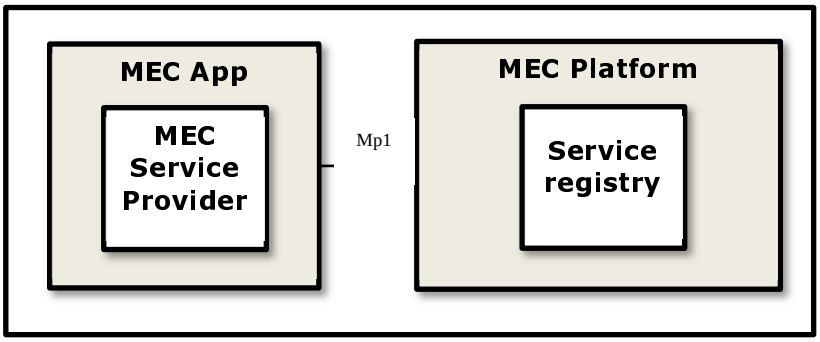

Figure 6.2-1: SUT_MEC_SERVICES_SINGLE_APP test configuration

6.3 SUT_MEC_SERVICES_MULTI_APP

The SUT_MEC_SERVICES_MULTI_APP configuration is similar to the configuration SUT_MEC_SERVICES_SINGLE_APP, with a difference on the integration between both elements. In this configuration, two (2) MEC applications run together alongside the MEC Platform. The configuration focuses on the capabilities around MEC Services such as the capability of applications and the platform to provide, discover or consume MEC services.

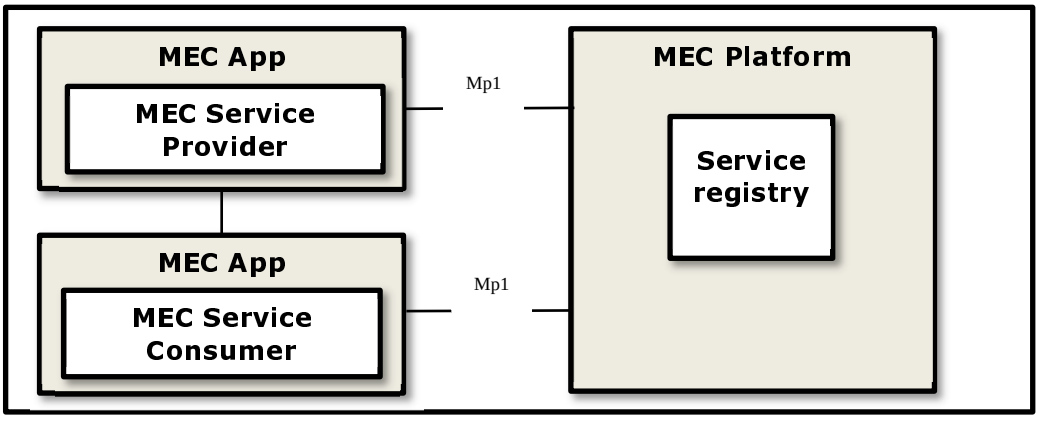

Figure 6.3-1: SUT_MEC_SERVICES_MULTI_APP test configuration

6.4 SUT_MEC_NFVI

The SUT_MEC_NFVI configuration, the MEC platform and the MEC application(s) are hosted and executed by a third party NFV Infrastructure. The focus is on interoperability of virtualization technologies and VIM APIs in a multivendor scenario.

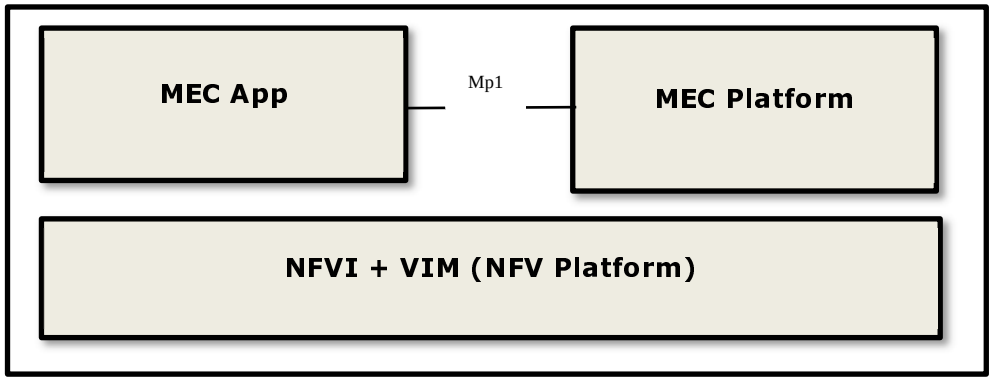

Figure 6.4-1: SUT_MEC_NFVI test configuration

6.5 SUT_MEC_MANO

The SUT_MEC_MANO focuses on the MEC-in-NFV scenario. In this scenario the MEC application(s) and the MEC platform are packaged as VNFs and are managed by a third-party MANO platform in an NFV infrastructure. The availability of other components of the MEC system (such as MEAO, MEPM and specific VNFM) is out of scope.

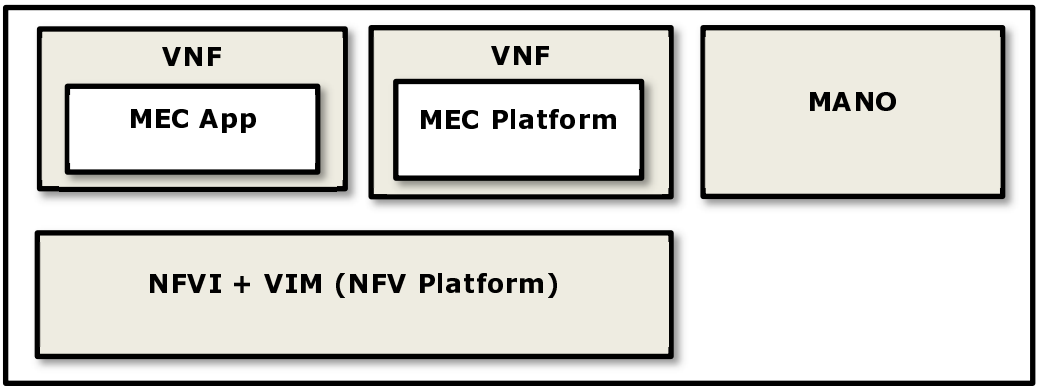

Figure 6.5-1: SUT_MEC_MANO test configuration

7 Test Summary

7.1 Test group 1 - MEC Application lifecycle

7.1.1 Applicable configurations

The configurations applicable to the test group 1 are:

- SUT_MEC_BASIC
- SUT_MEC_SERVICES_SINGLE_APP
- SUT_MEC_NFVI
- SUT_MEC_MANO

7.1.2 List of objectives

Table 7.1.2-1: Test Objectives for Group 1 - MEC Application lifecycle

Test ID	Objective
TD_MEC_APP_ONBOARD	Verify that a MEC application can be successfully onboarded in a MEC System.
TD_MEC_APP_START	Verify that a MEC application can be successfully started in a MEC Host.
TD_MEC_APP_STOP	Verify that a MEC application running in a MEC Host can be stopped.
TD_MEC_APP_STATUS	Verify that the status of a MEC application running in a MEC Host can be queried.
TD_MEC_APP_CHANGE	Verify that the status of a MEC application running in a MEC Host may be changed.

7.2 Test group 2 - MEC Services

7.2.1 Applicable configurations

The configurations applicable to the Services tests are:

- SUT_MEC_SERVICES_SINGLE_APP
- SUT_MEC_SERVICES_MULTI_APP

7.2.2 List of objectives

Table 7.2.2-1: Test objectives for Group 2 - MEC Services

Test ID	Objective
TD_MEC_SVC_QUERY	Verify that a MEC App successfully retrieves the list of available services from the MEC Platform.
TD_MEC_SVC_REGISTER	Verify that a MEC App successfully registers a new service in the MEC Platform Service Registry.
TD_MEC_SVC_UPDATE	Verify that a MEC App successfully updates an existing service in the MEC Platform Service Registry.
TD_MEC_SVC_DEREGISTER	Verify that a MEC App successfully deregisters a service existing in the MEC Platform Service Registry.
TD_MEC_SVC_CONSUME	Verify that a MEC App successfully consumes a service exposed by a different MEC App and registered in the MEC Platform Service Registry.
TD_MEC_SVC_TRANSPORTS	Verify that a MEC App successfully queries the list of available transports from the MEC Platform.
TD_MEC_SVC_QUERYTIME	Verify that a MEC App successfully queries the time information from the MEC Platform.

7.3 Test group 3 - MEC Traffic

7.3.1 Applicable configurations

The configurations applicable to the Network tests are:

- SUT_MEC_BASIC
- SUT_MEC_SERVICES_SINGLE_APP
- SUT_MEC_NFVI
- SUT_MEC_MANO

7.3.2 List of objectives

Table 7.3.2-1: Test Objectives for Group 3 - Traffic and DNS rules

Test ID	Objective
TD_MEC_NTW_ACTIVATE	Verify that a MEC application successfully requests a rule to be activated in the MEC Platform.
TD_MEC_NTW_UPDATE	Verify that a MEC application successfully requests an update to an existing rule in the MEC Platform.
TD_MEC_NTW_DEACTIVATE	Verify that a MEC application successfully requests a rule to be deactivated in the MEC Platform.
TD_MEC_NTW_DNS_ACTIVATE	Verify that a MEC application successfully requests a DNS rule to be activated in the MEC Platform.
TD_MEC_NTW_DNS_DEACTIVATE	Verify that a MEC application successfully requests a DNS rule to be deactivated in the MEC Platform.

7.4 Test group 4 - MEC Location API

7.4.1 Applicable configurations

The configurations applicable to the Network tests are:

- SUT_MEC_SERVICES_SINGLE_APP
- SUT_MEC_SERVICES_MULTI_APP

7.4.2 List of objectives

Table 7.4.2-1: Test Objectives for Group 4 - MEC Location API

Test ID	Objective
TD_MEC_LOC_UE_LKP_1	Verify that the service consumer can successfully retrieve the location information of a specific UE
TD_MEC_LOC_UE_LKP_2	Verify that the service consumer can successfully retrieve the location information of a group of UEs
TD_MEC_LOC_UE_INF_LKP_1	Verify that the service consumer can successfully look up UE information in a particular location
TD_MEC_LOC_UE_INF_LKP_2	Verify that the service consumer can successfully look up UE information of a group of UEs in a particular location
TD_MEC_LOC_UE_SUB_1	Verify that the service consumer can create a subscription to receive notifications about location information changes of a specific UE or a group of UEs
TD_MEC_LOC_UE_SUB_2	Verify that the service consumer can cancel a UE Location subscription
TD_MEC_LOC_INF_SUB_1	Verify that the service consumer can create a subscription to receive notifications of UE information updates for the list of UEs in a particular location
TD_MEC_LOC_INF_SUB_2	Verify that the service consumer can cancel a UE Information subscription
TD_MEC_LOC_RNL	Verify that the service consumer can make a location enquiry about the radio nodes currently associated with the MEC host
TD_MEC_LOC_TRACK_1	Verify that the service consumer can create a subscription to receive notifications of UE information updates for a specified UE
TD_MEC_LOC_TRACK_2	Verify that the service consumer can cancel a UE Tracking subscription
TD_MEC_LOC_DIST_1	Verify that the service consumer can obtain the current distance between 2 UEs
TD_MEC_LOC_DIST_2	Verify that the service consumer can obtain the current distance between a UE and a geographical location
TD_MEC_LOC_DIST_SUB_1	Verify that the service consumer can create a subscription to receive notifications about distance changes between 2 UEs
TD_MEC_LOC_DIST_SUB_2	Verify that the service consumer can create a subscription to receive notifications about distance changes between a UE and a geographical location
TD_MEC_LOC_DIST_SUB_3	Verify that the service consumer can cancel a UE distance subscription
TD_MEC_LOC_AREA_SUB_1	Verify that the service consumer can create a subscription to receive notifications about UE entering a geographical area
TD_MEC_LOC_AREA_SUB_2	Verify that the service consumer can create a subscription to receive notifications about UE leaving a geographical area
TD_MEC_LOC_AREA_SUB_3	Verify that the service consumer can cancel a UE Area subscription

7.5 Test group 5 - MEC RNI API

7.5.1 Applicable configurations

The configurations applicable to the Network tests are:

- SUT_MEC_SERVICES_SINGLE_APP
- SUT_MEC_SERVICES_MULTI_APP

7.5.2 List of objectives

Table 7.5.2-1: Test Objectives for Group 5 - MEC RNI API

Test ID	Objective
TD_MEC_RNIS_RAB	Verify that the service consumer can successfully retrieve the Radio Access Bearer information from the cells associated to it.
TD_MEC_RNIS_PLMN	Verify that the service consumer can successfully retrieve the cell level Public Land Mobile Network (PLMN) information related to specific MEC application instance(s).
TD_MEC_RNIS_S1BEARER	Verify that the service consumer can successfully retrieve S1-U Bearer information related to specific UE(s).
TD_MEC_RNIS_LAYER2	Verify that the service consumer can successfully retrieve Layer 2 measurements information.
TD_MEC_RNIS_SUB_01 (#01 to #09)	Verify that the service consumer can create a subscription on RNI event notifications.
TD_MEC_RNIS_SUB_02 (#01 to #09)	Verify that the service consumer can update a subscription to receive RNI event notifications.
TD_MEC_RNIS_SUB_03 (#01 to #09)	Verify that the service consumer can unsubscribe from RNI event notifications.
TD_MEC_RNIS_SUB_04 (#01 to #09)	Verify that the subscription is cancelled at the expiry deadline.
TD_MEC_RNI_SUB_05	Verify that the service consumer can query subscription information.
TD_MEC_RNI_SUB_06 (#01 to #09)	Verify that the service consumer can receive a RNI event notification, based on event.

7.6 Test group 6 - MEC WAI API

7.6.1 Applicable configurations

The configurations applicable to the Network tests are:

- SUT_MEC_SERVICES_SINGLE_APP
- SUT_MEC_SERVICES_MULTI_APP

7.6.2 List of objectives

Table 7.6.2-1: Test Objectives for Group 6- MEC WAI API

Test ID	Objective
TD_MEC_WAI_AP_01	Verify that the service consumer can successfully retrieve information on the existing Access Points
TD_MEC_WAI_AP_02 (#1 to #14)	Verify that the service consumer can successfully retrieve information on existing Access Points, controlled with an attribute-based filter expression and attribute-selectors
TD_MEC_WAI_STA_01	Verify that the service consumer can successfully retrieve information on the existing stations
TD_MEC_WAI_STA_02 (#1 to #18)	Verify that the service consumer can successfully retrieve information on existing Stations, controlled with an attribute-based filter expression and attribute-selectors
TD_MEC_WAI_SUB_01 (#1 to #3)	Verify that the service consumer can create a subscription to WAI event notifications
TD_MEC_WAI_SUB _02 (#1 to #3)	Verify that the service consumer can update a subscription to WAI event notifications
TD_MEC_WAI_SUB_03 (#1 to #3)	Verify that the service consumer can unsubscribe from WLAN event notifications
TD_MEC_WAI_SUB_04 (#1 to #3)	Verify that the subscription is cancelled at the expiry deadline
TD_MEC_WAI_SUB_05	Verify that the service consumer can query subscription information
TD_MEC_WAI_SUB_06 (#1 to #3)	Verify that the service consumer can receive a WLAN event notification, based on event
TD_MEC_WAI_SUB_07 (#1 to #3)	Verify that the service consumer can receive a WLAN event notification once every x seconds
TD_MEC_WAI_MEA_01	Verify that the service consumer can create a Measurement Configuration
TD_MEC_WAI_MEA_02	Verify that the service consumer can update an existing Measurement Configuration
TD_MEC_WAI_MEA_03	Verify that the service consumer can delete Measurement Configuration

7.7 Test group 7 - MEC VIS API

7.7.1 Applicable configurations

The configurations applicable to the Network tests are:

- SUT_MEC_SERVICES_SINGLE_APP
- SUT_MEC_SERVICES_MULTI_APP

7.7.2 List of objectives

Table 7.7.2-1: Test Objectives for Group 7- MEC VIS API

Test ID	Objective
TD_MEC_VIS_UU_UNI	Verify that the service consumer can successfully retrieve provisioning information for V2X communication over Uu unicast for a particular location
TD_MEC_VIS_UU_MBMS	Verify that the service consumer can successfully retrieve provisioning information for V2X communication over Uu MBMS for a particular location
TD_MEC_VIS_PC5	Verify that the service consumer can successfully retrieve provisioning information for V2X communication over PC5 for a particular location
TD_MEC_VIS_QoS	Verify that the service consumer can successfully request to receive the predicted QoS correspondent to potential routes of a vehicular UE
TD_MEC_VIS_SUB_01 (#01 to #4)	Verify that the service consumer can create a subscription to receive notifications on corresponding V2X information events
TD_MEC_VIS_SUB_02 (#01 to #4)	Verify that the service consumer can update a subscription to receive V2X Information event notifications
TD_MEC_VIS_SUB_03 (#01 to #4)	Verify that the service consumer can unsubscribe from VIS event notifications
TD_MEC_VIS_SUB_04 (#01 to #4)	Verify that the VIS subscription is cancelled at the expiry deadline
TD_MEC_VIS_SUB_05	Verify that the service consumer can query subscription information
TD_MEC_VIS_SUB_06 (#01 to #3)	Verify that the service consumer can receive V2X event notifications
TD_MEC_VIS_SUB_07	Verify that the service consumer can publish V2X messages that will be notified to subscribed service consumers

7.8 Test group 8 - MEC TM API

7.8.1 Applicable configurations

The configurations applicable to the Network tests are:

- SUT_MEC_SERVICES_SINGLE_APP
- SUT_MEC_SERVICES_MULTI_APP

7.8.2 List of objectives

Table 7.8.2-1: Test Objectives for Group 8 - MEC TM API

Test ID	Objective
TD_MEC_TM_BWM_01	Verify that a MEC App can create a register to the BWMS with the requested bandwidth requirements
TD_MEC_TM_BWM_02	Verify that a MEC App can create a unregister from the BWMS
TD_MEC_TM_BWM_03	Verify that a MEC App can update its requested bandwidth requirements on the BWMS
TD_MEC_TM_BWM_04	Verify that a MEC App can retrieve information about a list of bandwidth allocation resources
TD_MEC_TM_BWM_05	Verify that a MEC App can retrieve its configured bandwidth allocation from the BWMS
TD_MEC_TM_MTS_01	Verify that a MEC App can retrieve the available MTS service information from the MTS service
TD_MEC_TM_MTS_02	Verify that a MEC App can register to the MTS service
TD_MEC_TM_MTS_03	Verify that a MEC App can unregister from the MTS service
TD_MEC_TM_MTS_04	Verify that a MEC App can update its requested requirements on the MTS service
TD_MEC_TM_MTS_05	Verify that a MEC App can retrieve its configured MTS session from the MTS service

8 Test Descriptions MEC

8.0 Pre-conditions

8.0.1 Security

- The security pre-condition also assumes that the originator has the appropriate AuthN/Z rights to perform all the requests mentioned as a stimulus in the test sequence.
- It is also assumed that the originator and the receiver of the requests may have successfully established a security association between each other. This may involve the exchange of key and the establishment of a security connection.

8.0.2 Existence of resource

Existence of resource means the resource been addressed and has already been created.

8.1 Test group 1- MEC Application Lifecycle Management

8.1.1 Onboard an application

Interoperability Test Description			
Identifier	TD_MEC_APP_ONBOARD		
Test Objective	Verify that a MEC application can be successfully onboarded in a MEC System.		
Configuration	SUT_MEC_BASIC SUR_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI		
References	ETSI GS MEC 010-2 [i.2], "Onboarding Application Package" (clause 5.2.2)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV		
Pre-test conditions	MEC Platform running MEC application descriptor available (AppD as defined in [i.2]) MEC application image available by the MEC Platform OSS (real or simulated) connected to the MEC platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	OSS platform sends an on-board application package request to the MEC system (or to MEO if present).
	2	Response	MEC Platform acknowledges the application package on-boarding to the OSS.
	3	IOP Check	Verify that the MEC application has been onboarded successfully in the MEC system.
IOP Verdict			

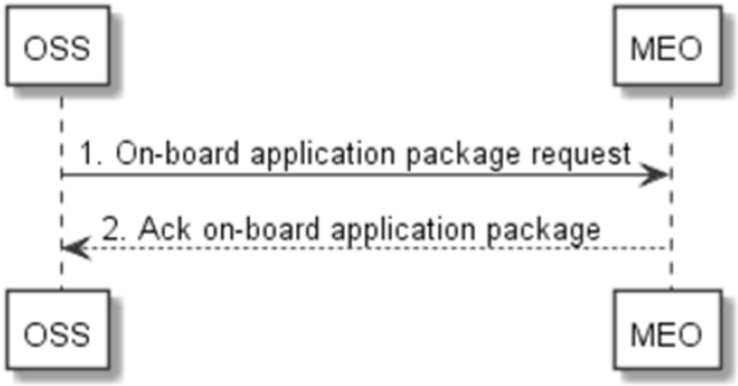

Figure 8.1.1-1: On-board application package flow

8.1.2 Start an application instance

Interoperability Test Description			
Identifier	TD_MEC_APP_START		
Test Objective	Verify that a MEC application can be started in a MEC Platform.		
Configuration	SUT_MEC_BASIC SUR_MEC_SERVICES_SINGLE_APP SUT_MEC_MANO		
References	ETSI GS MEC 010-2 [i.2] "Application Instantiation Operation" (clause 5.3.1)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV		
Pre-test conditions	MEC Platform running MEC application onboarded in MEC Platform (or MEO) OSS (real or simulated) connected to the MEC platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	OSS platform sends a start instance request to the MEC Platform (or MEO).
	2	Response	MEC platform sends an instantiate application response to the OSS with the result of the instantiation operation.
	3	IOP Check	Show that the MEC application has been started successfully.
	4	IOP Check	Verify that the MEC platform sends the right configuration to the MEC application instance.
IOP Verdict			

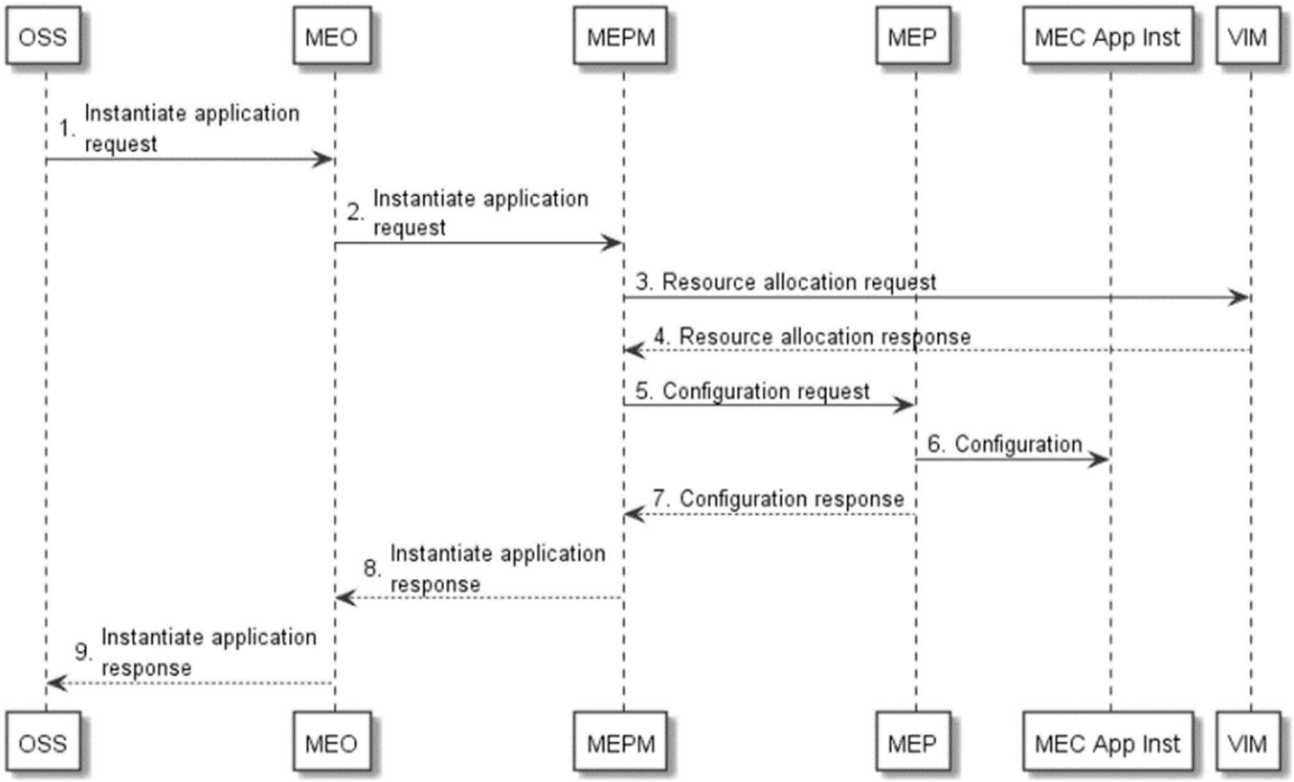

Figure 8.1.2-1: Instantiation of a MEC App flow

NOTE: In the Context of the Plugtests, MEO, MEPM and MEP may be bundled therefore their exchanges will not be performed in the tests.

8.1.3 Stop an application instance

Interoperability Test Description			
Identifier	TD_MEC_APP_STOP		
Test Objective	Verify that a MEC application can be stopped in a MEC Platform		
Configuration	SUT_MEC_BASIC SUR_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI SUT_MEC_MANO		
References	ETSI GS MEC 010-2 [i.2], "Application instance terminate operation" (clause 5.3.2)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV		
Pre-test conditions	MEC Platform running MEC application instance running in MEC Platform (or MEO) OSS (real or simulated) connected to the MEC platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	OSS platform sends a termination request for a specific instance to the MEC Platform. This request includes the instance id.
	2	Response	The MEC Platform sends a terminate application instance response to the OSS.
	3	IOP Check	Show that the MEC application has been stopped successfully.
	4	IOP Check	Verify that a terminate app instance message is sent to the MEC application instance.
IOP Verdict			

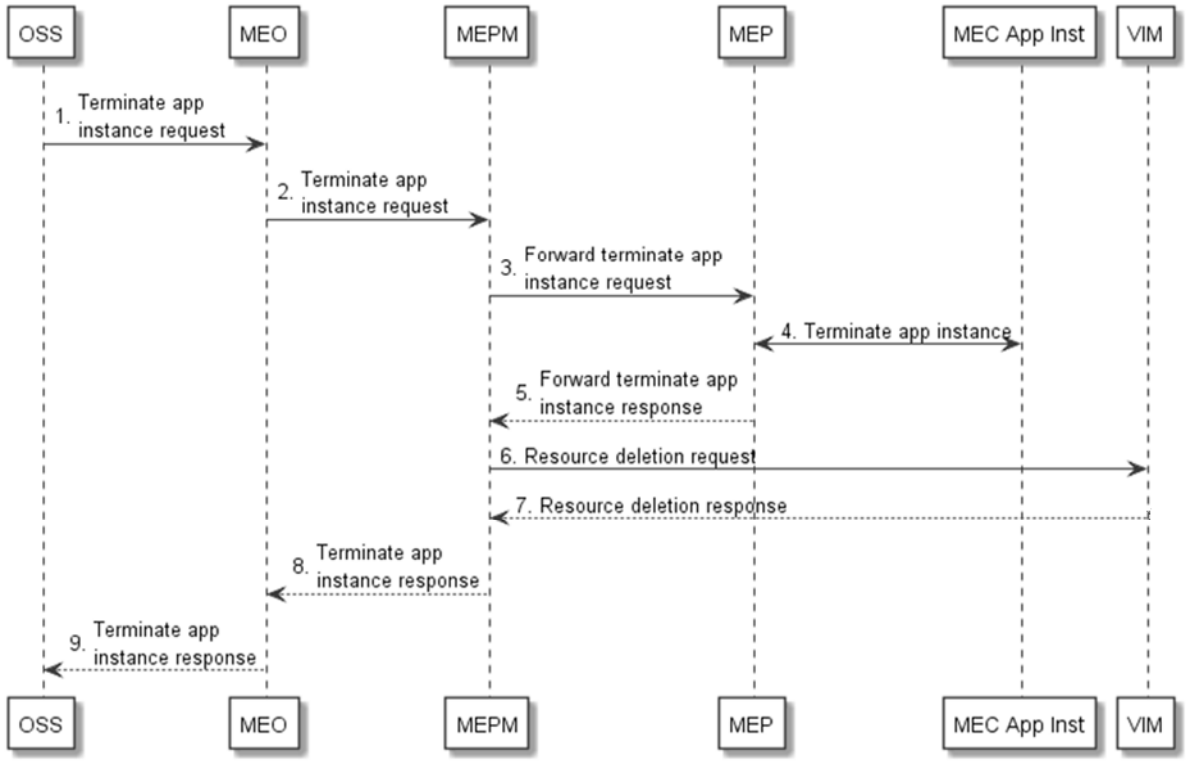

Figure 8.1.3-1: Instance Termination information flow

8.1.4 Retrieve application instance status

Interoperability Test Description			
Identifier	TD_MEC_APP_STATUS		
Test Objective	Verify the status of a MEC Application running in a MEC Platform is reported successfully.		
Configuration	SUT_MEC_BASIC SUR_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI SUT_MEC_MANO		
References	ETSI GS MEC 010-2 [i.2], "Query application instance information operation" (clause 6.3.1.5)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV		
Pre-test conditions	MEC Platform running MEC application instance running in MEC Platform (or MEO) OSS (real or simulated) connected to the MEC platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	OSS platform sends a status request for a specific instance to the MEC Platform. This request includes the instance id.
	2	Response	The MEC Platform (or MEO) replies back to OSS with the status of the instance.
	3	IOP Check	Show the status of the MEC application instance. Since the MEC application instance was running before, it should report back that it is running.
IOP Verdict			

8.1.5 Change application instance status

Interoperability Test Description			
Identifier	TD_MEC_APP_CHANGE		
Test Objective	Verify that a request made to the MEC platform to change the state of a specific instance will result in the instance changing status.		
Configuration	SUT_MEC_BASIC SUR_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI SUT_MEC_MANO		
References	ETSI GS MEC 010-2 [i.2], "Change application instance operational state operation" (clause 6.3.1.4)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV		
Pre-test conditions	MEC Platform running MEC application instance running in MEC Platform (or MEO) OSS (real or simulated) connected to the MEC platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	OSS platform sends a status change request for a specific MEC application running in a MEC platform. This is done through sending the instance id with the request.
	2	Response	The MEC Platform, after changing the MEC application instance status, is replying back to the OSS with the operation outcome.
	3	IOP Check	Show that the MEC application's status has changed according to the request made.
IOP Verdict			

8.2 Test group 2 - MEC Services

8.2.1 Query existing services

Interoperability Test Description			
Identifier	TD_MEC_SVC_QUERY		
Test Objective	Verify that MEC application can successfully query which service are available in a MEC platform.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 011 [i.4], "Service availability Query" (clause 5.2.5)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DISCOVER		
Pre-test conditions	MEC Platform running MEC application instance running At least one (1) MEC application service registered in the MEC platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC application instance to request the available service through a service availability query, to the MEC platform.
	2	Response	MEC Platform respond back with a list of available services in the MEC platform.
	3	IOP Check	Show that the MEC application instance received the list of available services in the MEC platform.
IOP Verdict			

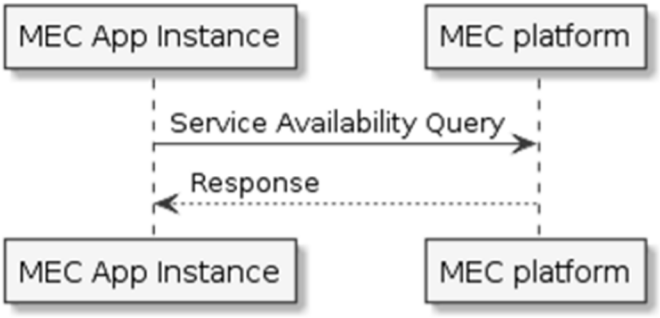

Figure 8.2.1-1: Service availability query flow

8.2.2 Register a new service

Interoperability Test Description			
Identifier	TD_MEC_SVC_REGISTER		
Test Objective	Verify a MEC service produced by a MEC application can be successfully registered in a MEC Platform		
Configuration	SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 011 [i.4], "Service registration" (clause 5.2.4)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DISCOVER, IFS_MEC_APP_PROD		
Pre-test conditions	MEC Platform running MEC application instance providing a MEC service MEC Application instance registered to receive service notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance to send a new service registration message to the MEC platform.
	2	Response	The MEC platform respond back with a successful registration.
	3	IOP Check	Show that the MEC application instance registered the MEC service successfully.
	4	IOP Check	Verify a notification is sent about the new service to the MEC application instance.
IOP Verdict			

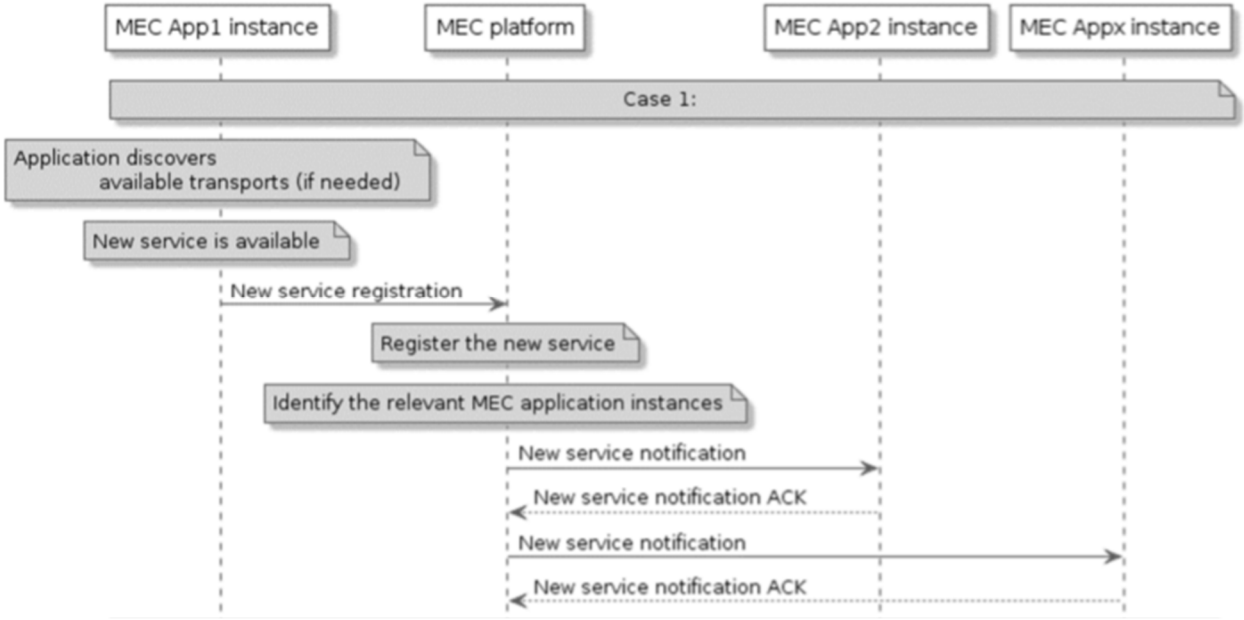

Figure 8.2.2-1: New service registration flow

8.2.3 Update an existing service

Interoperability Test Description			
Identifier	TD_MEC_SVC_UPDATE		
Test Objective	Verify an existing MEC service in a MEC platform can be updated successfully.		
Configuration	SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 011 [i.4] "Service availability update" (clause 5.2.4)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DISCOVER, IFS_MEC_APP_PROD		
Pre-test conditions	MEC Platform running MEC application instance providing a MEC service MEC Application instance registered to receive service notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC service sends a service availability update message to the MEC platform to change its availability.
	2	Response	The MEC platform responds back with a notification change.
	3	IOP Check	Show that the MEC service availability has changed in the MEC platform.
	4	IOP Check	Verify a notification is sent about the availability change to the MEC application instance.
IOP Verdict			

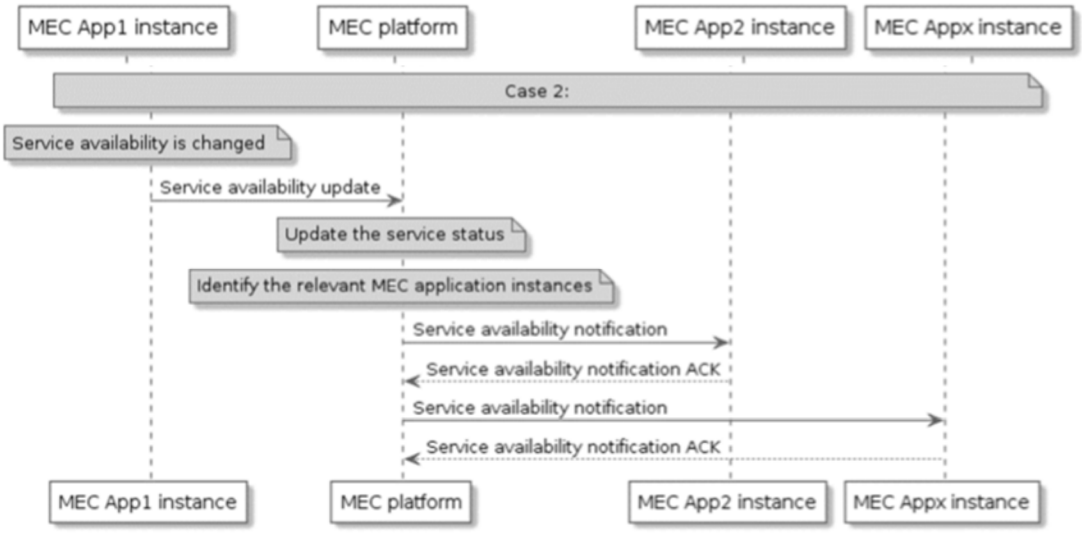

Figure 8.2.3-1: Service availability update flow

8.2.4 Deregister a service

Interoperability Test Description			
Identifier	TD_MEC_SVC_DEREGISTER		
Test Objective	Verify a MEC service produced by a MEC application instance can be successfully deregistered from a MEC Platform		
Configuration	SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 011 [i.4], "Service deregistration" (clause 5.2.11)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DISCOVER, IFS_MEC_APP_PROD		
Pre-test conditions	MEC Platform running MEC application instance providing a MEC service MEC Application instance registered to receive service notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a request to the MEC platform to deregister the MEC service it provides.
	2	Response	The MEC platform deregisters the MEC service and returns a service deregistration acknowledgement.
	3	IOP Check	Show that the MEC service is no longer registered in the MEC platform.
	4	IOP Check	Verify a notification is sent about the availability change to the MEC application instance.
IOP Verdict			

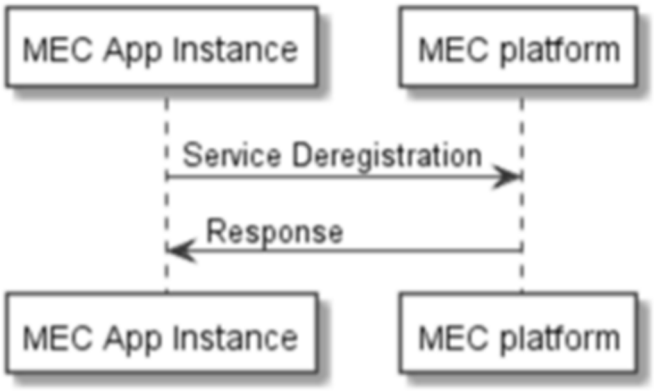

Figure 8.2.4-1: MEC service deregistration flow

8.2.5 Consume a service

Interoperability Test Description			
Identifier	TD_MEC_SVC_CONSUME		
Test Objective	Verify that a MEC service can be consumed by another MEC application.		
Configuration	SUT_MEC_SERVICES_MULTI_APP		
References			
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DISCOVER, IFS_MEC_APP_PROD, IFS_MEC_APP_CONS		
Pre-test conditions	MEC Platform running MEC service is available (either by the MEC platform or a MEC application) (MEC service provider) MEC service consumer has already discovered the service endpoint MEC application instance consuming the MEC service (MEC service consumer)		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance (MEC service consumer) request for the service.
	2	Response	The MEC service provider provides such service as requested.
	3	IOP Check	Show that the MEC service is provided, and consumed by the respective component.
IOP Verdict			

8.2.6 Query time service

Interoperability Test Description			
Identifier	TD_MEC_SVC_TIMEQUERY		
Test Objective	Verify that a MEC App can successfully query the time information from the MEC Platform.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References			
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DISCOVER, IFS_MEC_APP_PROD, IFS_MEC_APP_CONS		
Pre-test conditions	MEC Platform running Time service is available through the MEC Platform MEC application is running in MEC Platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance (MEC service consumer) request for the time from the MEC platform.
	2	Response	The MEC platform provides accurate time based on location/format.
	3	IOP Check	Show that the MEC application received the time properly.
IOP Verdict			

8.2.7 Transport information query

Interoperability Test Description			
Identifier	TD_MEC_SVC_TRANSPORTS		
Test Objective	Verify that a MEC App successfully queries the list of available transports from the MEC Platform.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References			
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DISCOVER, IFS_MEC_APP_PROD, IFS_MEC_APP_CONS		
Pre-test conditions	MEC Platform running Transport information is available through the MEC Platform MEC application instance is up and running		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC application instance sends a request to query the information about transports provided by the platform.
	2	Response	MEC platform responds with the message body containing the list of available transports information.
	3	IOP Check	Check that the MEC application received the transports information properly.
IOP Verdict			

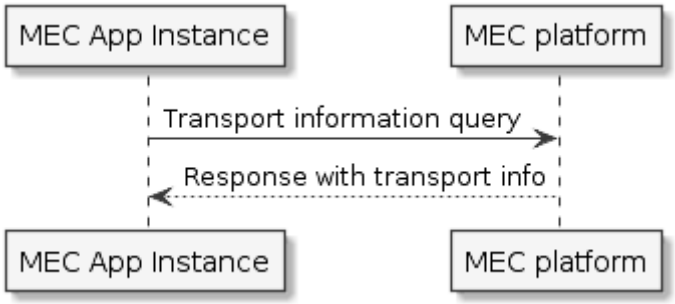

Figure 8.2.7-1: Transport information query flow

8.3 Test group 3 - MEC Traffic

8.3.1 Traffic rule activation

Interoperability Test Description			
Identifier	TD_MEC_NTW_ACTIVATE		
Test Objective	Verify a MEC application can activate a traffic rule in the MEC platform successfully		
Configuration	SUT_MEC_BASIC SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI SUT_MEC_MANO		
References	ETSI GS MEC 011 [i.4], "Traffic rule activation" (clause 5.2.7)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_TRAFFIC, IFS_MEC_PLAT_TRAFFIC		
Pre-test conditions	MEC Platform running MEC application instance running		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a traffic rule activation request to MEC platform.
	2	Response	The MEC platform sends a response to the MEC application instance to indicate the results of the operation.
	3	IOP Check	The traffic rule was activated successfully in the MEC platform. The selected traffic type coming in the MEC platform is steered accordingly.
IOP Verdict			

Figure 8.3.1-1: Traffic rule activation flow

8.3.2 Traffic rule update

Interoperability Test Description			
Identifier	TD_MEC_NTW_UPDATE		
Test Objective	Verify a MEC application can update a traffic rule in the MEC platform successfully		
Configuration	SUT_MEC_BASIC SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI SUT_MEC_MANO		
References	ETSI GS MEC 011 [i.4], "Traffic rule update" (clause 5.2.7)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_TRAFFIC, IFS_MEC_PLAT_TRAFFIC		
Pre-test conditions	MEC Platform running MEC application instance running A traffic rule applied in the MEC platform, impacted specific set of traffic		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a traffic rule update request to MEC platform.
	2	Response	The MEC platform sends a response to the MEC application instance to indicate the results of the operation.
	3	IOP Check	The traffic rule was updated successfully in the MEC platform. The initially impacted traffic is now affected differently based on the requested update.
IOP Verdict			

Figure 8.3.2-1: Traffic rule update flow

8.3.3 Traffic rule deactivation

Interoperability Test Description			
Identifier	TD_MEC_NTW_DEACTIVATE		
Test Objective	Verify a MEC application can deactivate a traffic rule in the MEC platform successfully		
Configuration	SUT_MEC_BASIC SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI SUT_MEC_MANO		
References	ETSI GS MEC 011 [i.4], "Traffic rule update" (clause 5.2.7)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_TRAFFIC, IFS_MEC_PLAT_TRAFFIC		
Pre-test conditions	MEC Platform running MEC application instance running A traffic rule applied in the MEC platform, impacted a specific set of traffic		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a traffic rule deactivate request to MEC platform.
	2	Response	The MEC platform sends a response to the MEC application instance to indicate the results of the operation.
	3	IOP Check	The traffic rule was deactivated successfully in the MEC platform. The initially impacted traffic is no longer affected by the traffic rule.
IOP Verdict			

Figure 8.3.3-1: Traffic rule deactivation flow

8.3.4 DNS rule activation

Interoperability Test Description			
Identifier	TD_MEC_NTW_DNS_ACTIVATE		
Test Objective	Verify a MEC application can activate a DNS rule in the MEC platform successfully		
Configuration	SUT_MEC_BASIC SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI SUT_MEC_MANO		
References	ETSI GS MEC 011 [i.4], "DNS rule activation" (clause 5.2.8)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DNS, IFS_MEC_PLAT_DNS		
Pre-test conditions	MEC Platform running MEC application instance running		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a DNS rule activation request to MEC platform.
	2	Response	The MEC platform sends a response to the MEC application instance to indicate the results of the DNS rule activation.
	3	IOP Check	The DNS rule activation was successful and the MEC platform routes DNS request accordingly.
IOP Verdict			

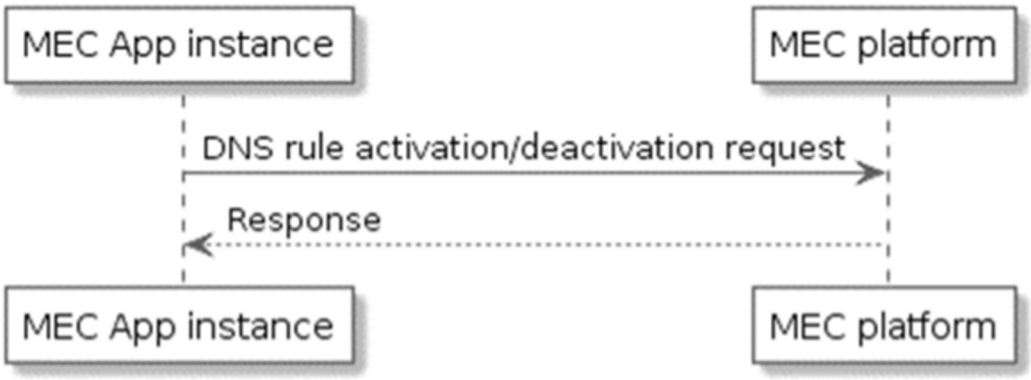

Figure 8.3.4-1: DNS rule activation flow

8.3.5 DNS rule deactivation

Interoperability Test Description			
Identifier	TD_MEC_NTW_DNS_DEACTIVATE		
Test Objective	Verify a MEC application can deactivate a DNS rule in the MEC platform successfully		
Configuration	SUT_MEC_BASIC SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_NFVI SUT_MEC_MANO		
References	ETSI GS MEC 011 [i.4], "DNS rule activation" (clause 5.2.8)		
Applicability	IFS_MEC_APP_APPD, IFS_MEC_PLAT_SRV, IFS_MEC_APP_DNS, IFS_MEC_PLAT_DNS		
Pre-test conditions	MEC Platform running MEC application instance running A DNS rule activated in the MEC platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a DNS rule deactivation request to MEC platform.
	2	Response	The MEC platform sends a response to the MEC application instance to indicate the results of the DNS rule deactivation.
	3	IOP Check	The DNS rule deactivation was successful and the MEC platform does not route DNS request anymore.
IOP Verdict			

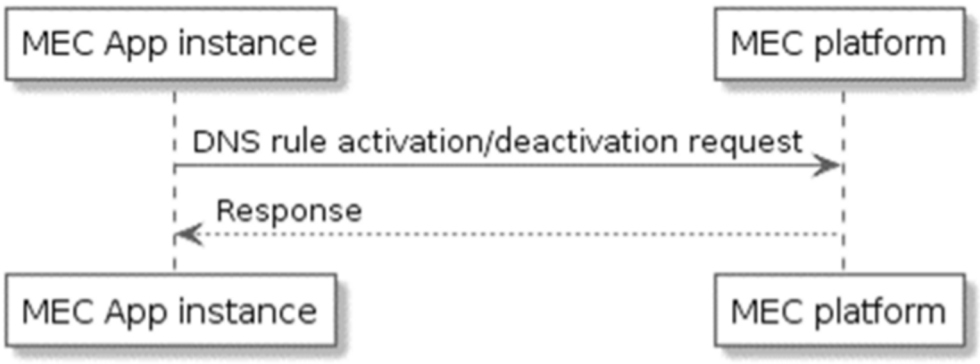

Figure 8.3.5-1: DNS rule deactivation flow

8.4 Test group 4 - MEC-013

8.4.1 UE Location Lookup

Interoperability Test Description			
Identifier	TD_MEC_LOC_UE_LKP_1		
Test Objective	Verify that the service consumer can successfully retrieve the location information of a specific UE		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Location Lookup" (clause 5.3.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE location information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location Service to retrieve the UE Information for a particular area.
	2	Response	The Location Service returns a response containing the UE information related to the specified location area.
	3	IOP Check	Check that the service consumer received the correct requested information.
	4	Stimulus	The service consumer sends a request to the Location Service to retrieve the Access Point Info corresponding to the zone and Access Point identifiers received previously.
	5	Response	The Location Service returns a response containing the UE information related to the specified location area.
	6	IOP Check	Check that the service consumer received the correct requested information.
IOP Verdict			

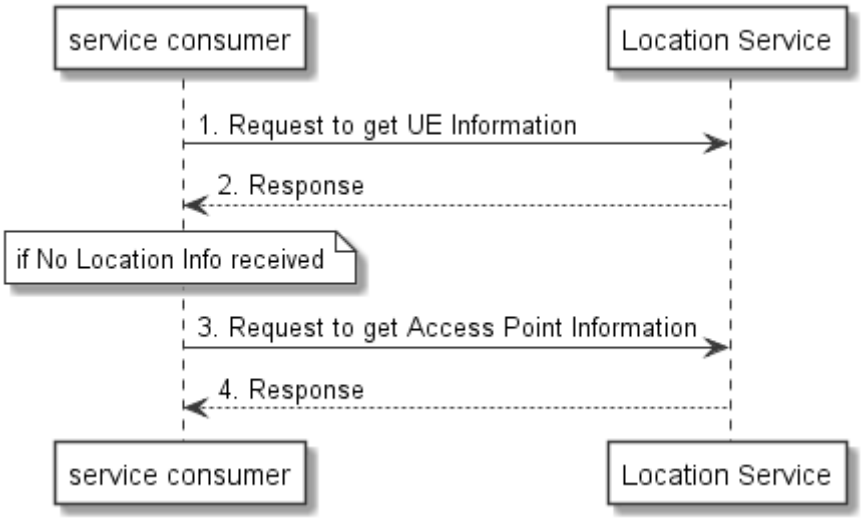

Figure 8.4.1-1: Flow of UE location lookup

Interoperability Test Description			
Identifier	TD_MEC_LOC_UE_LKP_2		
Test Objective	Verify that the service consumer can successfully retrieve the location information of a group of UEs		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 011 [i.4], "UE Location Lookup" (clause 5.3.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UEs information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location Service to retrieve the Information of a group of UEs for a particular area.
	2	Response	The Location Service returns a response containing the information of the group of UEs related to the specified location area.
	3	IOP Check	Check that the service consumer received the correct requested information.
	4	Stimulus	The service consumer sends a request to the Location Service to retrieve the Access Point Info corresponding the zone and Access Point identifiers received previously.
	5	Response	The Location Service returns a response containing the information of the group of UEs related to the specified location area.
	6	IOP Check	Check that the service consumer received the correct requested information.
IOP Verdict			

8.4.2 UE Information Lookup

Interoperability Test Description			
Identifier	TD_MEC_LOC_UE_INF_LKP_1		
Test Objective	Verify that service consumer can successfully look up UE information in a particular location		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Information Lookup" (clause 5.3.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location Service to retrieve the UE Information for a particular area.
	2	Response	The Location Service returns a response containing the UE information related to the specified location area.
	3	IOP Check	Check that the service consumer received the correct requested information.
	4		Repeat steps 1 to 3 with service consumer sending request including one or more query parameters specifying the sub-region of interest, the Access Point identifier and requirements on reporting timeliness and accuracy.
IOP Verdict			

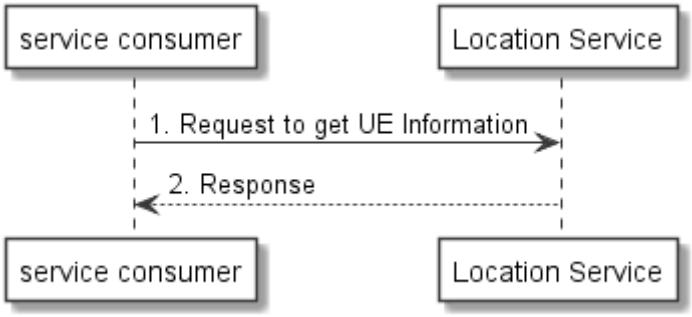

Figure 8.4.2-1: Flow of UE Information Lookup

Interoperability Test Description			
Identifier	TD_MEC_LOC_UE_INF_LKP_2		
Test Objective	Verify that service consumer can successfully look up UE information of a group of UEs in a particular location.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Information Lookup" (clause 5.3.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UEs information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location Service to retrieve the UE Information of a group of UEs for a particular area.
	2	Response	The Location Service returns a response containing the UE information related to the specified location area.
	3	IOP Check	Check that the service consumer received the correct requested UE information of the group of UEs.
	4		Repeat steps 1 to 3 with service consumer sending request including one or more query parameters specifying the sub-region of interest, the Access Point identifier and requirements on reporting timeliness and accuracy.
IOP Verdict			

8.4.3 UE Location Subscribe

Interoperability Test Description			
Identifier	TD_MEC_LOC_UE_SUB_1		
Test Objective	Verify that MEC application can create a subscription to receive notifications about location information changes of a specific UE or a group of UEs		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Location Lookup" (clause 5.3.4)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE location available from the Location service.		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to subscribe to UE location notification.
	2	Response	The Location Service returns a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to UE location notification.
	4	Stimulus	Update the UE location information in the location service.
	5	IOP Check	Check that the Location service sends a UE Location notification message to the callbackURL destination.
	6	Response	Service consumer sends a response to the Location service to indicate the notification has been received.
	7	IOP Check	Check the information received in the notification is correct.
IOP Verdict			

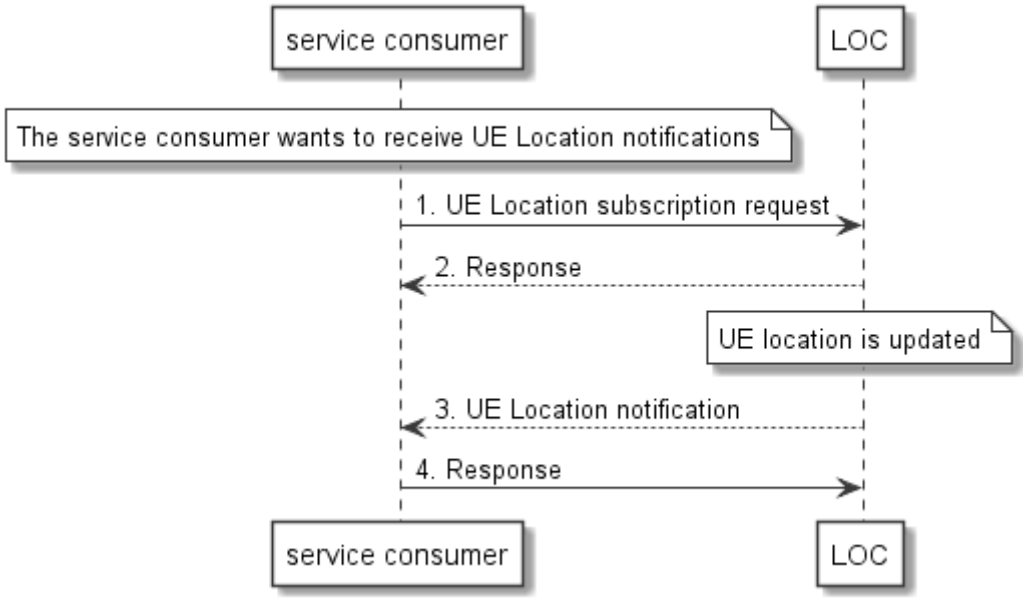

Figure 8.4.3-1: Flow of UE Location Subscription and Notification

Interoperability Test Description			
Identifier	TD_MEC_LOC_UE_SUB_2		
Test Objective	Verify that MEC application can cancel a UE Location subscription		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "Subscribe Cancellation" (clause 5.3.6)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE Location available from the Location service • The service consumer has subscribed to UE location notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to unsubscribe to UE location notification.
	2	Response	The Location Service returns a response to indicate the subscription is cancelled.
	3	IOP Check	Check that the service consumer un-subscribed to UE location notification successfully.
	4	Stimulus	Update the UE location in the location service.
	5	IOP Check	Check that the Location Service does not notify the service consumer of the UE location change.
IOP Verdict			

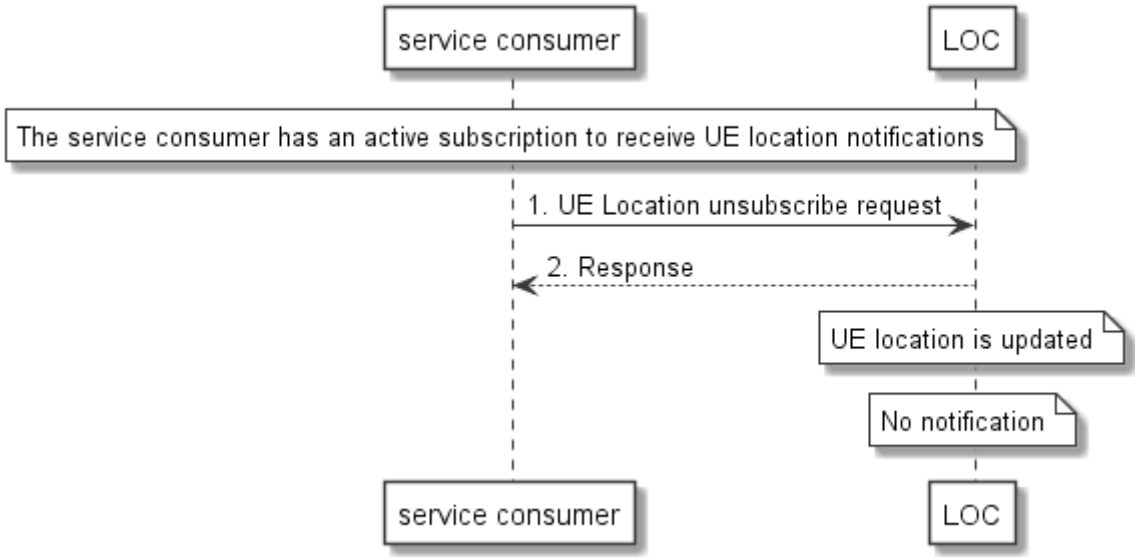

Figure 8.4.3-2: Flow of Location unsubscribe

8.4.4 UE Information Subscribe

Interoperability Test Description			
Identifier	TD_MEC_LOC_INF_SUB_1		
Test Objective	Verify that MEC application can create a subscription to receive notifications of UE information updates for the list of UEs in a particular location		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Information Subscribe" (clause 5.3.5)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to subscribe to UE information notification for a particular area.
	2	Response	The Location Service returns a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to UE information notification.
	4	Stimulus	Update the UE location information in the location service.
	5	IOP Check	Check that the Location service sends a UE information notification message to the callbackURL destination.
	6	Response	Service consumer sends a response to the Location service to indicate the notification has been received.
	7	IOP Check	Check the information received in the notification is correct.
IOP Verdict			

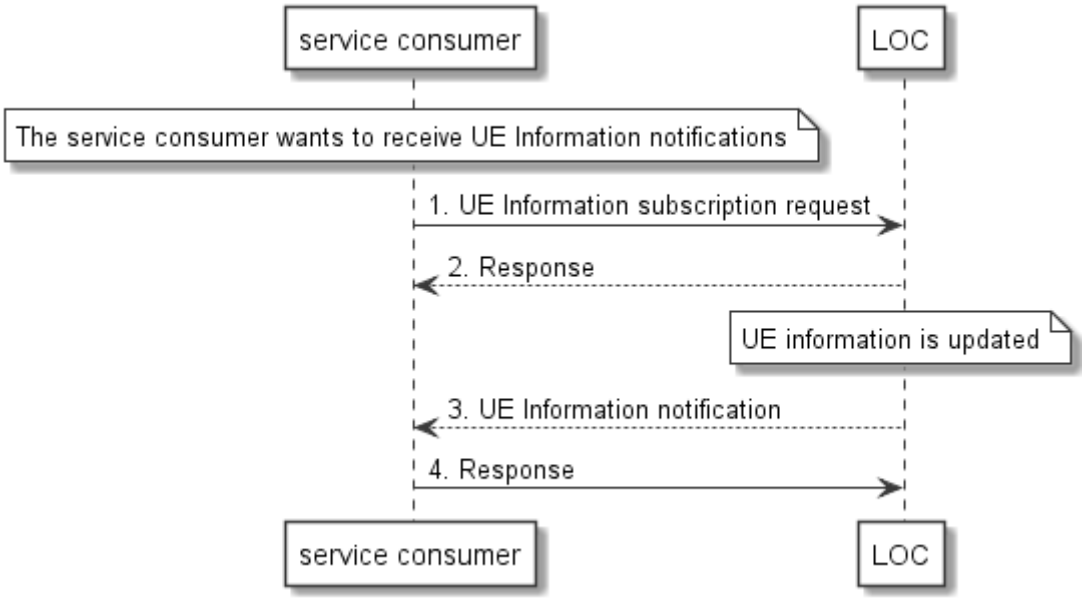

Figure 8.4.4-1: Flow of UE Information Subscription and Notification

Interoperability Test Description			
Identifier	TD_MEC_LOC_INF_SUB_2		
Test Objective	Verify that MEC application can cancel a UE Information subscription		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "Subscribe Cancellation" (clause 5.3.6)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE Information available from the Location service • The service consumer has subscribed to UE information notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to unsubscribe to UE information notification.
	2	Response	The Location Service returns a response to indicate the subscription is cancelled.
	3	IOP Check	Check that the service consumer un-subscribed to UE information notification successfully.
	4	Stimulus	Update the UE information in the location service.
	5	IOP Check	Check that the Location Service does not notify the service consumer of the UE information change.
IOP Verdict			

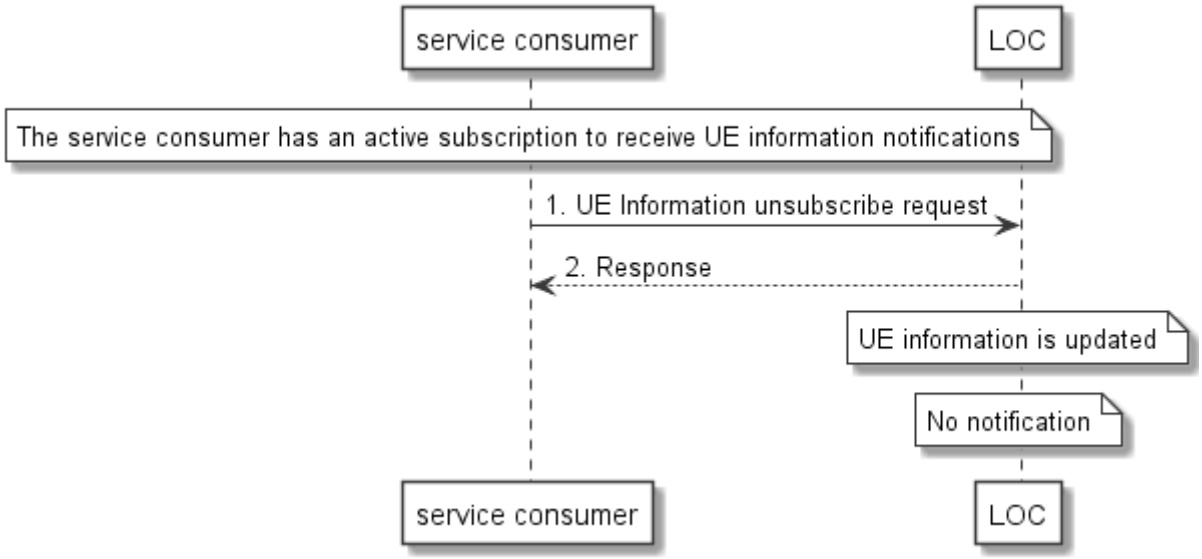

Figure 8.4.4-2: Flow of UE information Subscribe Cancellation

8.4.5 Radio Node Location Lookup

Interoperability Test Description			
Identifier	TD_MEC_LOC_RNL		
Test Objective	Verify that MEC application can make a location enquiry about the radio nodes currently associated with the MEC host		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "Radio Node Location Lookup" (clause 5.3.7)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • Radio Node Location Information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to enquiry about the radio nodes associated with the MEC host.
	2	Response	The Location Service returns a response with the requested information.
	3	IOP Check	Check that the service consumer received the list of radio nodes currently associated with the MEC host and the location of each radio node.
IOP Verdict			

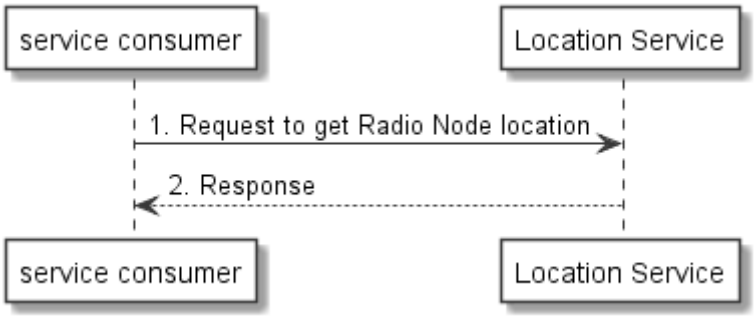

Figure 8.4.5-1: Radio Node Location Lookup

8.4.6 UE Tracking Subscribe

Interoperability Test Description			
Identifier	TD_MEC_LOC_TRACK		
Test Objective	Verify that the service consumer can create a subscription to receive notifications of UE information updates for a specified UE.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Tracking Subscribe" (clause 5.3.8)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to subscribe to UE Tracking.
	2	Response	The Location Service returns a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed to UE tracking notifications successfully.
	4	Stimulus	Update the UE Information of the specified in the location service (e.g. the UE handing over between cells).
	5	IOP Check	Check that the Location service sends a UE Tracking notification message to the callbackURL destination.
	6	Response	Service consumer sends a response to the Location service to indicate the notification has been received.
	7	IOP Check	Check the information received in the notification is correct.
IOP Verdict			

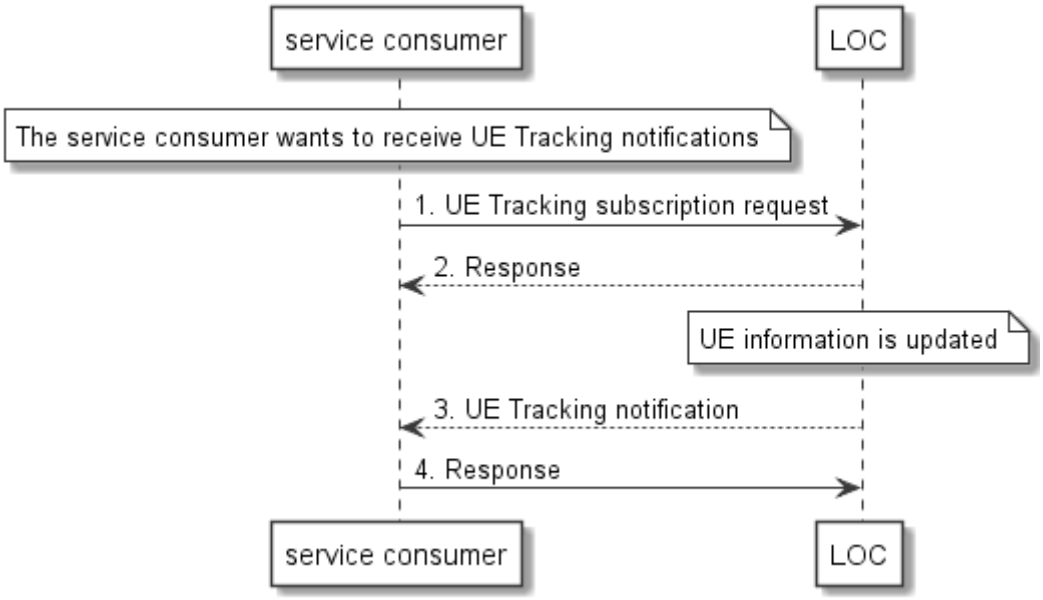

Figure 8.4.6-1: Flow of UE Tracking Subscribe and Notification

Interoperability Test Description			
Identifier	TD_MEC_LOC_TRACK_2		
Test Objective	Verify that the service consumer can cancel a UE Tracking subscription		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "Subscribe Cancellation" (clause 5.3.6)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE Information available from the Location service • The service consumer has subscribed to UE information notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to unsubscribe to UE Tracking notification.
	2	Response	The Location Service returns a response to indicate the subscription is cancelled.
	3	IOP Check	Check that the service consumer un-subscribed to UE Tracking notification successfully.
	4	Stimulus	Update the UE information in the location service.
	5	IOP Check	Check that the Location Service does not notify the service consumer of the UE information change.
IOP Verdict			

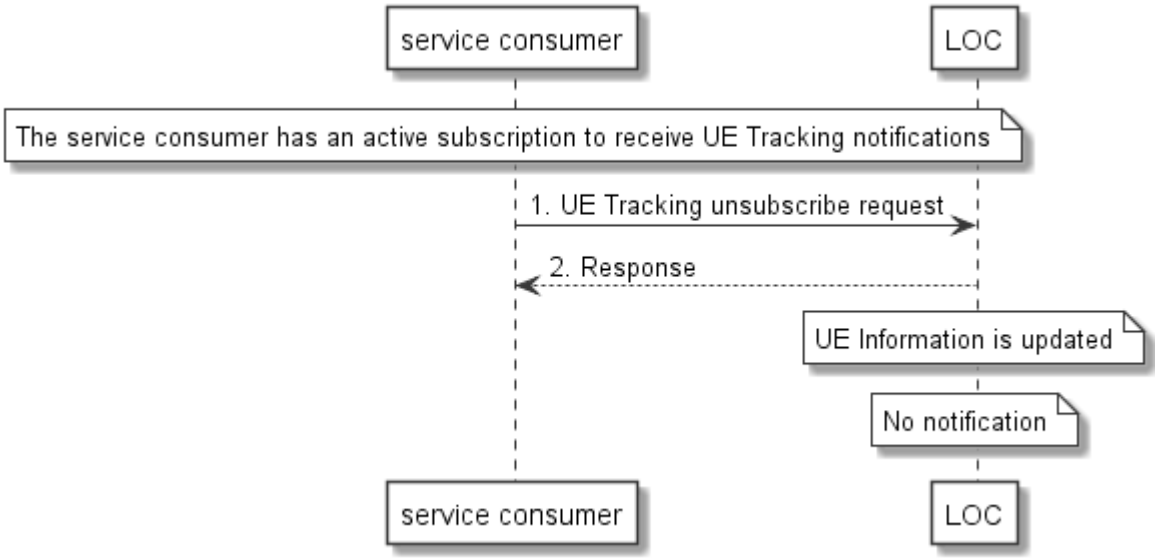

Figure 8.4.6-2: Flow of UE Tracking un-subscribe

8.4.7 UE Distance Lookup

Interoperability Test Description			
Identifier	TD_MEC_LOC_DIST_1		
Test Objective	Verify that service consumer can obtain the current distance between 2 UEs		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Distance Lookup" (clause 5.3.9)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UEs information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to lookup the current distance between 2 UEs.
	2	Response	The Location Service returns a response with the requested information.
	3	IOP Check	Check that the service consumer received the correct distance value between the 2 UEs.
IOP Verdict			

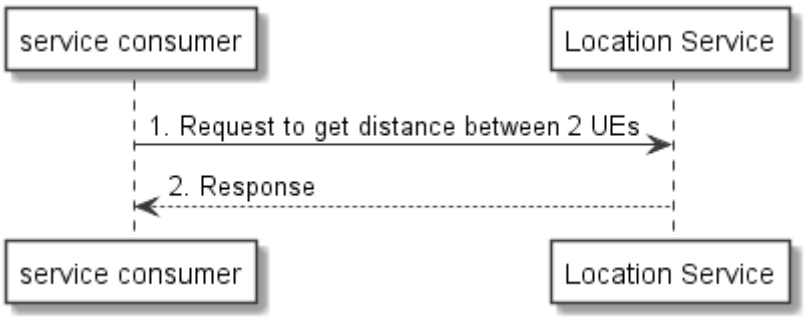

Figure 8.4.7-1: Flow of UE Distance Lookup between 2 UEs

Interoperability Test Description			
Identifier	TD_MEC_LOC_DIST_2		
Test Objective	Verify that the service consumer can obtain the current distance between a UE and a geographical location		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Distance Lookup" (clause 5.3.9)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE information available from the Location service • Geographical location information available in the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to lookup the current distance between a UE and a geographical location.
	2	Response	The Location Service returns a response with the requested information.
	3	IOP Check	Check that the service consumer received the correct distance value between the UE and the geographical location provided.
IOP Verdict			

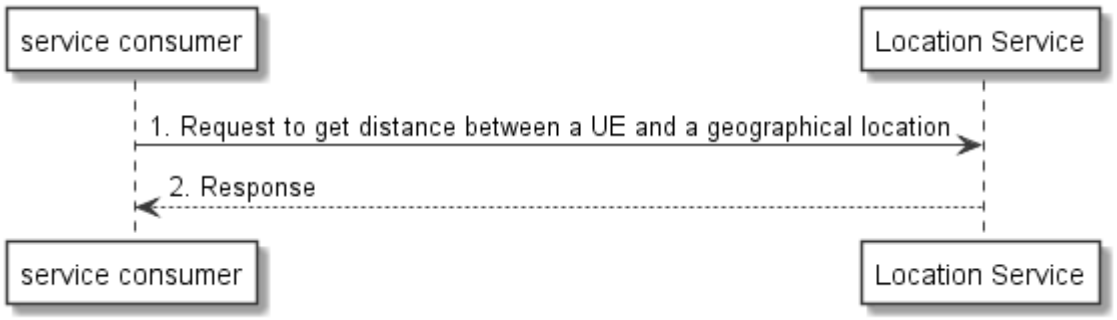

Figure 8.4.7-2: Flow of UE Distance Lookup between a UE and a geographical location

8.4.8 UE Distance Subscribe

Interoperability Test Description			
Identifier	TD_MEC_LOC_DIST_SUB_1		
Test Objective	Verify that the service consumer can create a subscription to receive notifications about distance changes between 2 UEs		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Distance Subscribe" (clause 5.3.10)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UEs information available from the Location service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to subscribe to UE distance notification about distance changes between 2 UEs.
	2	Response	The Location Service returns a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to UE distance notification.
	4	Stimulus	Update the UE location information of one or both UEs in the location service.
	5	IOP Check	Check that the Location service sends a UE distance notification message to the callbackURL destination.
	6	Response	Service consumer sends a response to the Location service to indicate the notification has been received.
	7	IOP Check	Check that the service consumer received the correct distance value between the 2 UEs.
	8		Repeat steps 1 to 7 with different values of the accuracy and the minimum interval between notifications.
IOP Verdict			

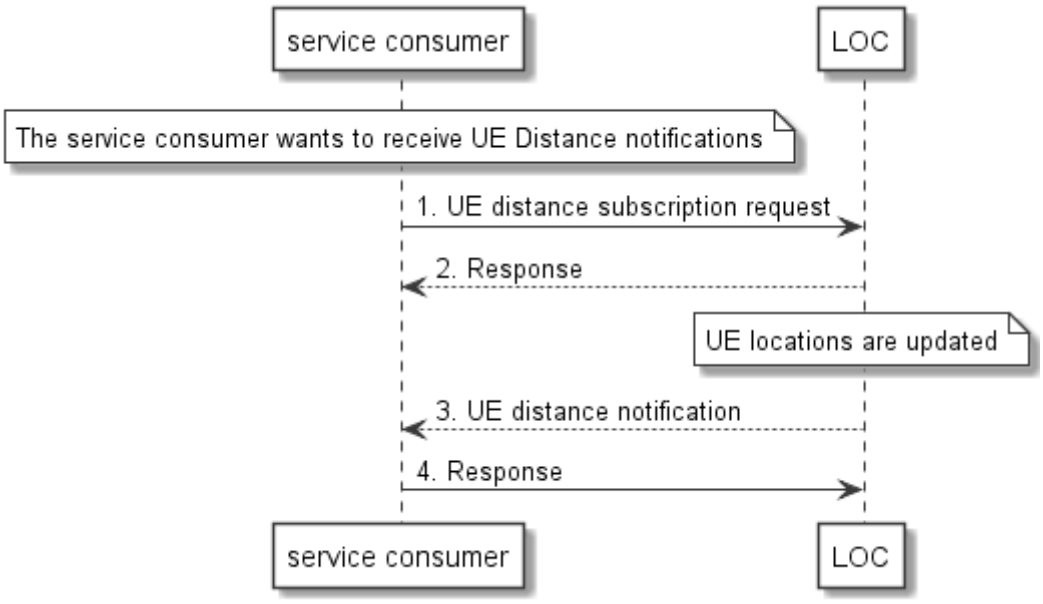

Figure 8.4.8-1: Flow of UE Distance Subscribe

Interoperability Test Description			
Identifier	TD_MEC_LOC_DIST_SUB_2		
Test Objective	Verify that the service consumer can create a subscription to receive notifications about distance changes between a UE and a geographical location		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Distance Subscribe" (clause 5.3.10)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE information available from the Location service • Geographical location information available in the Location service.		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to subscribe to UE distance notification about distance changes between a UE and a geographical location.
	2	Response	The Location Service returns a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to UE distance notification.
	4	Stimulus	Update the UE location information of the UE in the location service.
	5	IOP Check	Check that the Location service sends a UE distance notification message to the callbackURL destination.
	6	Response	Service consumer sends a response to the Location service to indicate the notification has been received.
	7	IOP Check	Check that the MEC application instance received the correct distance value between the UE and the geographical location provided.
	8		Repeat steps 1 to 7 with different values of the accuracy and the minimum interval between notifications.
IOP Verdict			

Interoperability Test Description			
Identifier	TD_MEC_LOC_DIST_SUB_3		
Test Objective	Verify that the service consumer can cancel a UE distance subscription		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "Subscribe Cancellation" (clause 5.3.6)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UEs information available from the Location service • The service consumer has subscribed to UE distance notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to unsubscribe to UE distance notification.
	2	Response	The Location Service returns a response to indicate the subscription is cancelled.
	3	IOP Check	Check that the service consumer un-subscribed to UE distance notification successfully.
	4	Stimulus	Update the UE location information of one or both UEs in the location service.
	5	IOP Check	Check that the Location Service does not send notification of the UE distance change.
IOP Verdict			

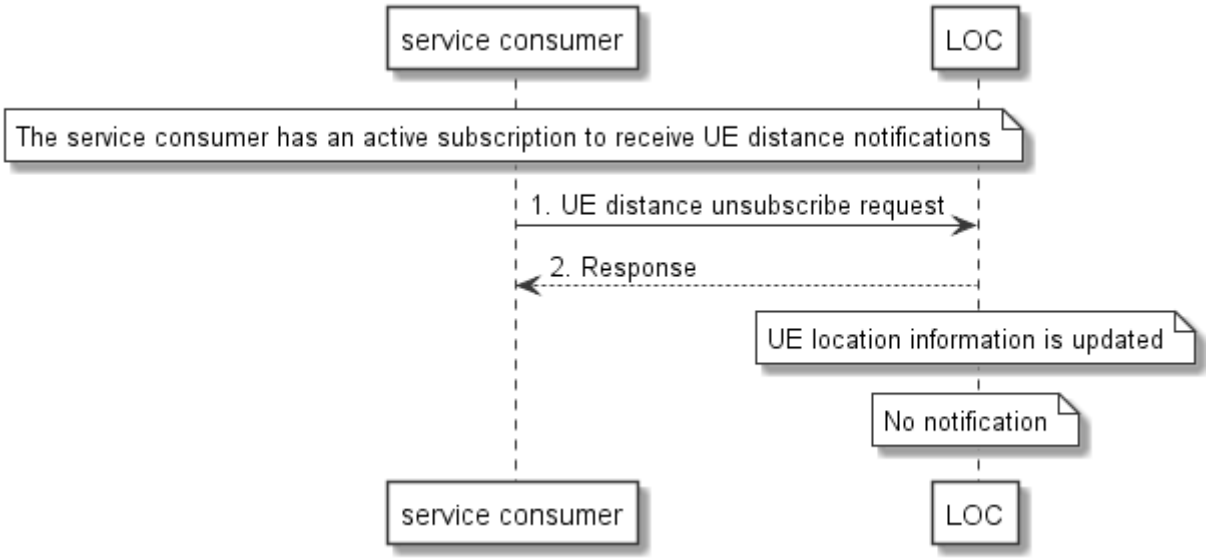

Figure 8.4.8-2: Flow of UE Distance unsubscribe

8.4.9 UE Area Subscribe

Interoperability Test Description			
Identifier	TD_MEC_LOC_AREA_SUB_1		
Test Objective	Verify that the service consumer can create a subscription to receive notifications about UE entering a geographical area.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Area Subscribe" (clause 5.3.11)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE information available from the Location service • a UE not present in the specific area of the test		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to subscribe to UE Area notification when entering the area.
	2	Response	The Location Service returns a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to UE Area notification.
	4	Stimulus	Update the UE location information of the UE in the location service, to reflect it is entering in the Area.
	5	IOP Check	Check that the Location service sends a UE Area notification message to the callbackURL destination.
	6	Response	Service consumer sends a response to the Location service to indicate the notification has been received.
	7	IOP Check	Check that the service consumer received the correct Area information.
	8	Stimulus	Update the UE location information of the UE but keeping it in the specified area.
	9	IOP Check	Check that the Location Service does not send notification of any UE Area change.
IOP Verdict			

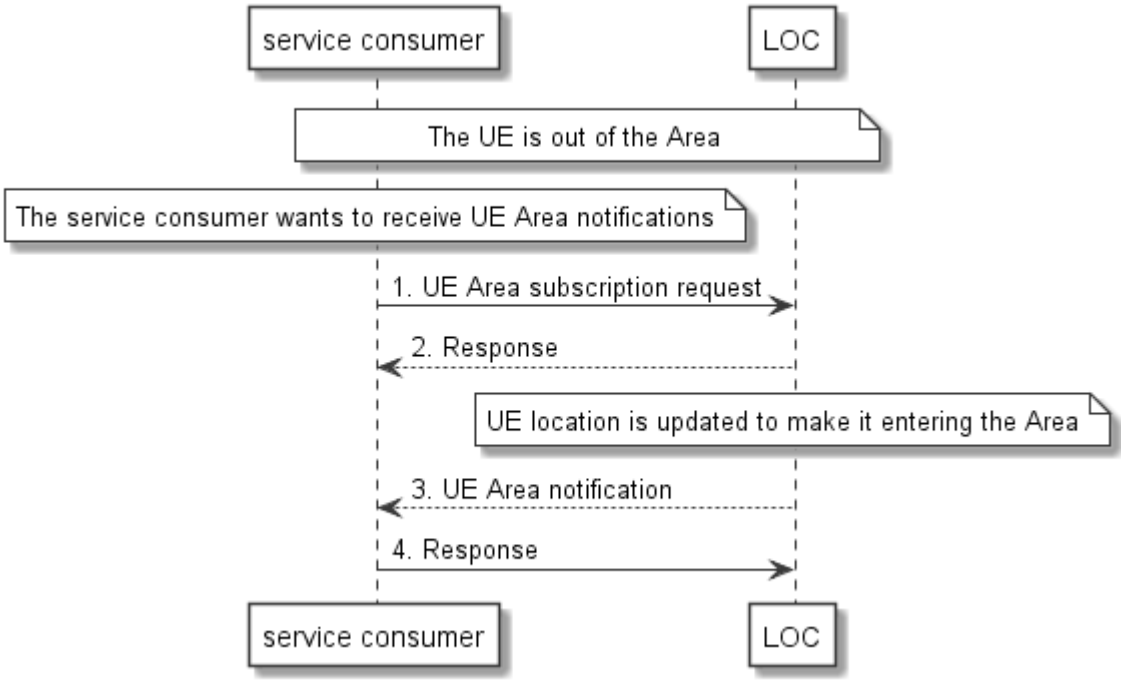

Figure 8.4.9-1: Flow of UE Area Subscribe (UE entering area)

Interoperability Test Description			
Identifier	TD_MEC_LOC_AREA_SUB_2		
Test Objective	Verify that the service consumer can create a subscription to receive notifications about UE leaving a geographical area.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "UE Area Subscribe" (clause 5.3.11)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE information available from the Location service • a UE present in the specific area of the test		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to subscribe to UE Area notification when leaving the area.
	2	Response	The Location Service returns a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to UE Area notification.
	4	Stimulus	Update the UE location information of the UE in the location service, to reflect it is leaving in the Area.
	5	IOP Check	Check that the Location service sends a UE Area notification message to the callbackURL destination.
	6	Response	Service consumer sends a response to the Location service to indicate the notification has been received.
	7	IOP Check	Check that the service consumer received the correct Area information.
	8	Stimulus	Update the UE location information of the UE but keeping it out of the specified area.
	9	IOP Check	Check that the Location Service does not send notification of any UE Area change.
IOP Verdict			

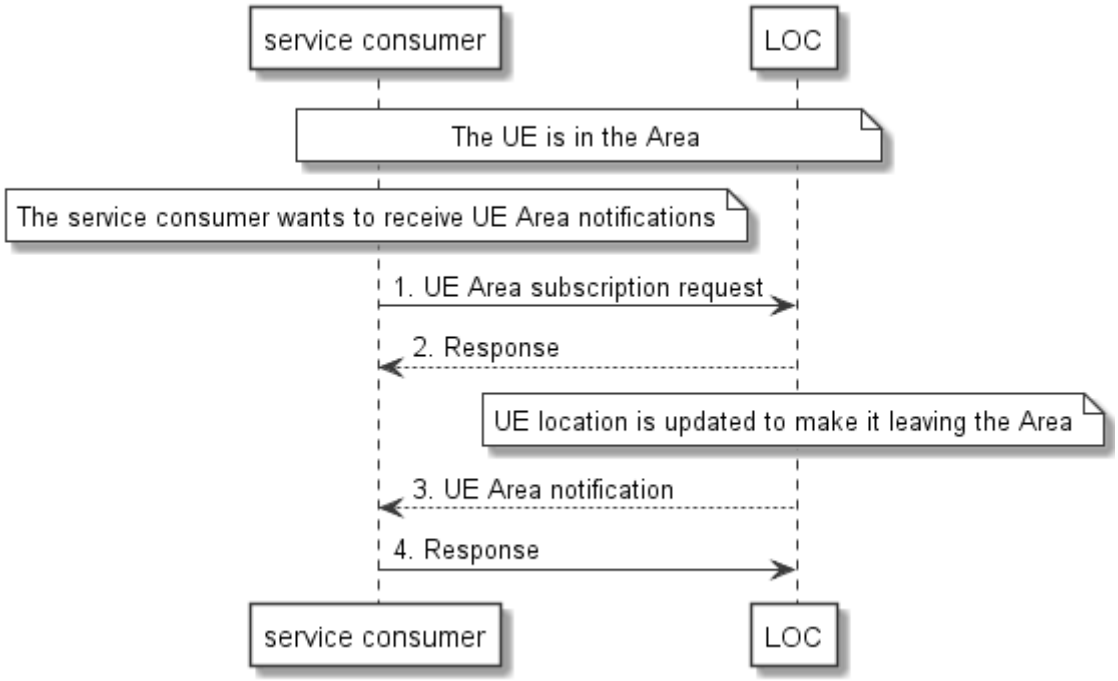

Figure 8.4.9-2: Flow of UE Area Subscribe (UE leaving area)

Interoperability Test Description			
Identifier	TD_MEC_LOC_AREA_SUB_3		
Test Objective	Verify that the service consumer can cancel an UE Area subscription		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 013 [i.5], "Subscribe Cancellation" (clause 5.3.6)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_LOC		
Pre-test conditions	• MEC Platform running • MEC application instance up and running • At least one MEC-013 Location service registered in the MEC platform • UE Location available from the Location service • The service consumer has subscribed to UE area notification • Subscription set to notify on entering a specified area • a UE not present in the specific area of the test		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the Location service to unsubscribe to UE Area notification.
	2	Response	The Location Service returns a response to indicate the subscription is cancelled.
	3	IOP Check	Check that the service consumer un-subscribed to UE distance notification successfully.
	4	Stimulus	Update the UE location in the location service to reflect the UE is entering the area.
	5	IOP Check	Check that the Location Service does not send notification of the UE Area change.
IOP Verdict			

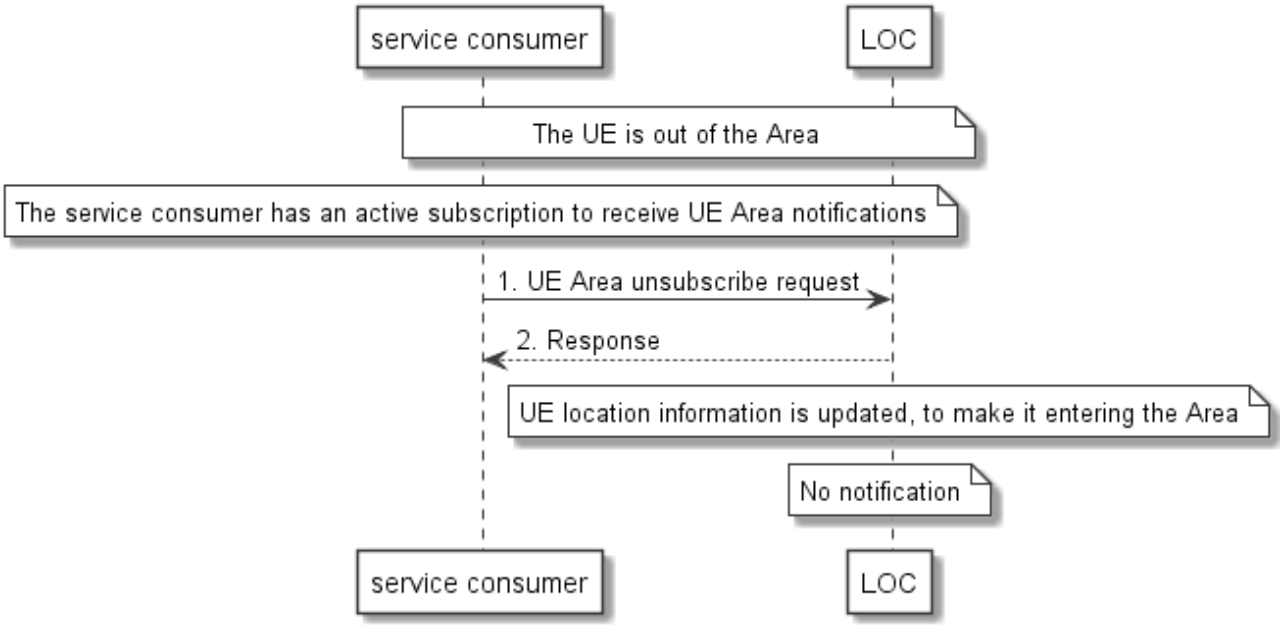

Figure 8.4.9-3: Flow of UE Area unsubscribe

8.5 Test group 5 - MEC-012

8.5.1 RAB information

Interoperability Test Description			
Identifier	TD_MEC_RNIS_RAB		
Test Objective	Verify that the service consumer can successfully retrieve the Radio Access Bearer information from the cells associated to it.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Sending a request for RAB information" (clause 5.2.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • Radio Network Information Service (RNIS) provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • RAB information available from the RNI service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the RNIS to retrieve Radio Access Bearer information.
	2	Response	The RNIS returns a response containing the Radio Access Bearer information.
	3	IOP Check	Check that the service consumer received the requested RAB information on users in the cells. The response contains information on users in the cells such as the identifiers of the cells, the identifiers associated to UEs in the cells and information on their E-RABs, consisting of the QCI and QoS information.
IOP Verdict			

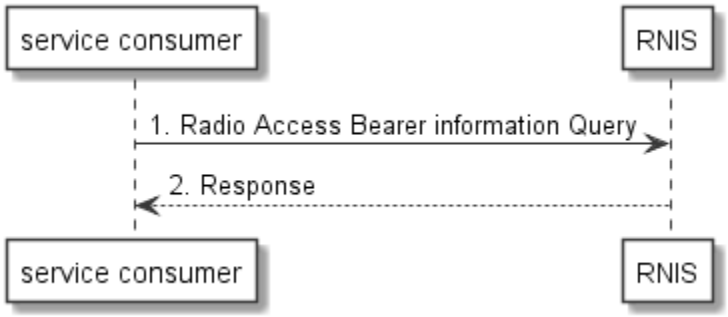

Figure 8.5.1-1: Flow of service consumer requesting Radio Access Bearer information

8.5.2 PLMN information

Interoperability Test Description			
Identifier	TD_MEC_RNIS_PLMN		
Test Objective	Verify that the service consumer can successfully retrieve the cell level Public Land Mobile Network (PLMN) information related to specific MEC application instance(s).		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Sending a request for PLMN information" (clause 5.2.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • RNIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • Cell level PLMN information available from the RNIS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the RNIS to retrieve the PLMN information.
	2	Response	The RNIS returns a response containing the list of PLMN Info associated with the requested MEC application instance(s).
	3	IOP Check	Check that the service consumer received the requested information on the underlying Mobile Network that the MEC application is associated to.
IOP Verdict			

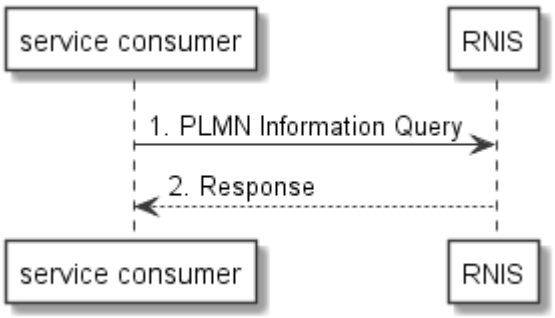

Figure 8.5.2-1: Flow of service consumer requesting PLMN information

8.5.3 S1 bearer information

Interoperability Test Description			
Identifier	TD_MEC_RNIS_S1BEARER		
Test Objective	Verify that the service consumer can successfully retrieve S1-U Bearer information related to specific UE(s).		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Sending a request for PLMN information" (clause 5.2.4)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • RNIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • Cell level PLMN information available from the RNIS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the RNIS to retrieve the S1 bearer information.
	2	Response	The RNIS returns a response containing the S1 bearer information.
	3	IOP Check	Check that the service consumer received the S1 Bearer information related to UE(s).
IOP Verdict			

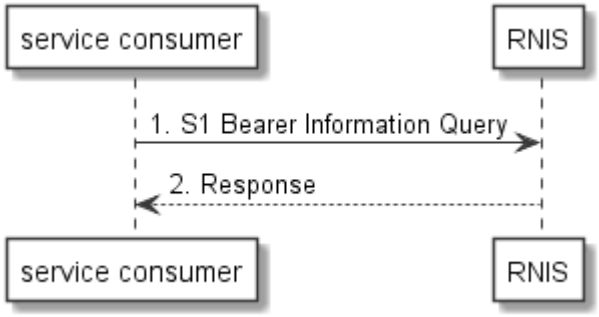

Figure 8.5.3-1: Flow of service consumer requesting S1 bearer information

8.5.4 Layer 2 measurements information

Interoperability Test Description			
Identifier	TD_MEC_RNIS_LAYER2		
Test Objective	Verify that the service consumer can successfully retrieve Layer 2 measurements information.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Sending a request for PLMN information" (clause 5.2.4)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service Consumer is a MEC application or a MEC platform • RNIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • Cell level PLMN information available from the RNIS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	Service consumer sends a request to the RNIS to retrieve the Layer 2 measurements information.
	2	Response	RNIS returns a response containing the Layer 2 measurement information.
	3	IOP Check	Check that the service consumer received the Layer 2 measurement information from one or more eNBs that are associated with the requested MEC application instance. The response contains information of the Layer 2 measurements performed by the eNBs and/or the UEs.
IOP Verdict			

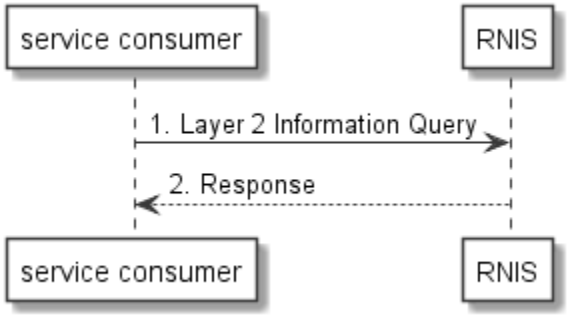

Figure 8.5.4-1: Flow of service consumer requesting Layer 2 measurements information

8.5.5 Subscription and notification (generic tests)

Interoperability Test Description			
Identifier	TD_MEC_RNIS_SUB_01		
Test Objective	Verify that the service consumer can create a subscription and receive corresponding RNI event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Subscribing to RNI event notifications" (clause 5.2.5.1)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • RNIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • RNI available from the RNIS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the RNIS to create a subscription to the RNI event {Subscription}.
	2	Response	The RNIS sends a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to RNI event notification.
IOP Verdict			

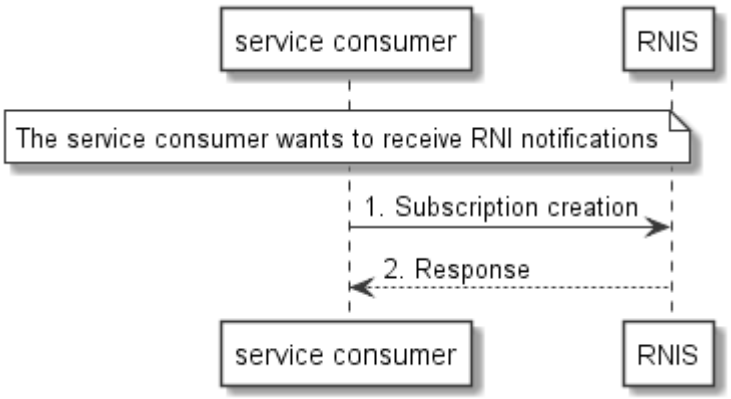

Figure 8.5.5-1: Flow of subscribing to the RNI event notifications tests

Table 8.5.5-1: Permutation table for subscription and notification tests

Notification Event	Identifier TD_MEC_RNIS_	{Subscription}	Reference	IOP Verdict
Cell changes	SUB_01#01	CellChangeSubscription	[i.6], clause 5.2.5.1	
Radio Access Bearer establishment	SUB_01#02	RabEstSubscription	[i.6], clause 5.2.5.1	
Radio Access Bearer modification	SUB_01#03	RabModSubscription	[i.6], clause 5.2.5.1	
Radio Access Bearer release	SUB_01#04	RabRelSubscription	[i.6], clause 5.2.5.1	
UE measurement reports	SUB_01#05	MeasRepUeSubscription	[i.6], clause 5.2.5.1	
UE timing advance	SUB_01#06	MeasTaSubscription	[i.6], clause 5.2.5.1	
carrier aggregation reconfiguration	SUB_01#07	CaReconfSubscription	[i.6], clause 5.2.5.1	
S1 bearer	SUB_01#08	S1BearerSubscription	[i.6], clause 5.2.5.1	
5G UE measurement reports	SUB_01#09	NrMeasRepUeSubscription	[i.6], clause 5.2.5.1	

Interoperability Test Description			
Identifier	TD_MEC_RNIS_SUB_02		
Test Objective	Verify that the service consumer can update a subscription to receive RNI event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Updating subscription for RNI event notifications" (clause 5.2.5.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • RNIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • RNI information available from the RNIS • The service consumer has an active subscription for a {Subscription} RNI event notification.		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the RNIS to update the existing the subscription corresponding to the {Subscription} RNI event notification.
	2	Response	The RNIS returns a response indicating the subscription has been updated.
	3	IOP Check	Check that the subscription is successfully updated.
IOP Verdict			

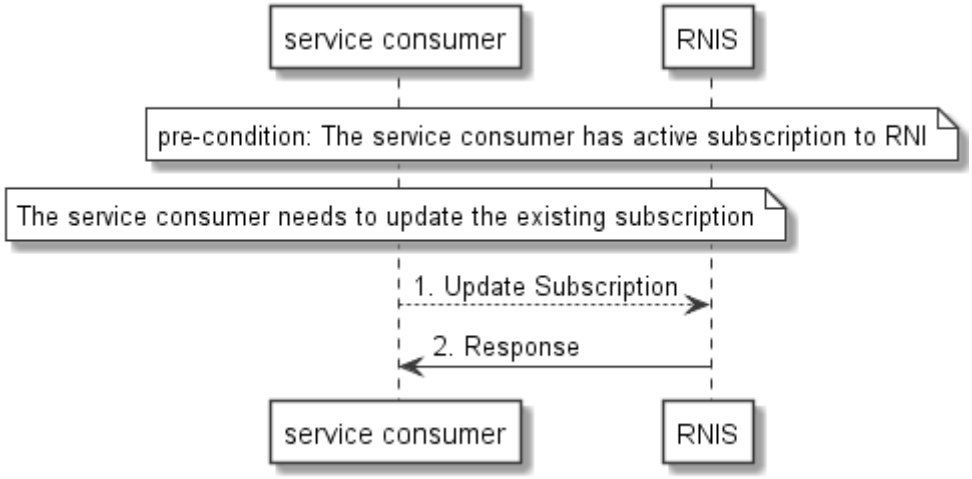

Figure 8.5.5-2: Flow of updating subscription tests

Table 8.5.5-2: Permutation table for updating subscription tests

Notification Event	Identifier TD_MEC_RNIS_	{Subscription}	Reference	IOP Verdict
Cell changes	SUB_02#01	CellChangeSubscription	[i.6], clause 5.2.5.3	
Radio Access Bearer establishment	SUB_02#02	RabEstSubscription	[i.6], clause 5.2.5.3	
Radio Access Bearer modification	SUB_02#03	RabModSubscription	[i.6], clause 5.2.5.3	
Radio Access Bearer release	SUB_02#04	RabRelSubscription	[i.6], clause 5.2.5.3	
UE measurement reports	SUB_02#05	MeasRepUeSubscription	[i.6], clause 5.2.5.3	
UE timing advance	SUB_02#06	MeasTaSubscription	[i.6], clause 5.2.5.3	
carrier aggregation reconfiguration	SUB_02#07	CaReconfSubscription	[i.6], clause 5.2.5.3	
S1 bearer	SUB_02#08	S1BearerSubscription	[i.6], clause 5.2.5.3	
5G UE measurement reports	SUB_02#09	NrMeasRepUeSubscription	[i.6], clause 5.2.5.3	

Interoperability Test Description			
Identifier	TD_MEC_RNIS_SUB_03		
Test Objective	Verify that the service consumer can unsubscribe from RNI event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Unsubscribing from RNI event notifications" (clause 5.2.5.4)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • RNIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • RNI available from the RNIS • The service consumer has an active subscription for a {Subscription} RNI event notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to delete the existing subscription, corresponding to the RNI event {Subscription}.
	2	Response	The RNIS sends a response indicating the subscription has been deleted.
	3	IOP Check	Check that the subscription is successfully removed.
	4	Stimulus	Update the RNI associated to {Subscription} in the RNIS.
	5	IOP Check	Check that the RNIS does not notify the service consumer of the RNI information change.
IOP Verdict			

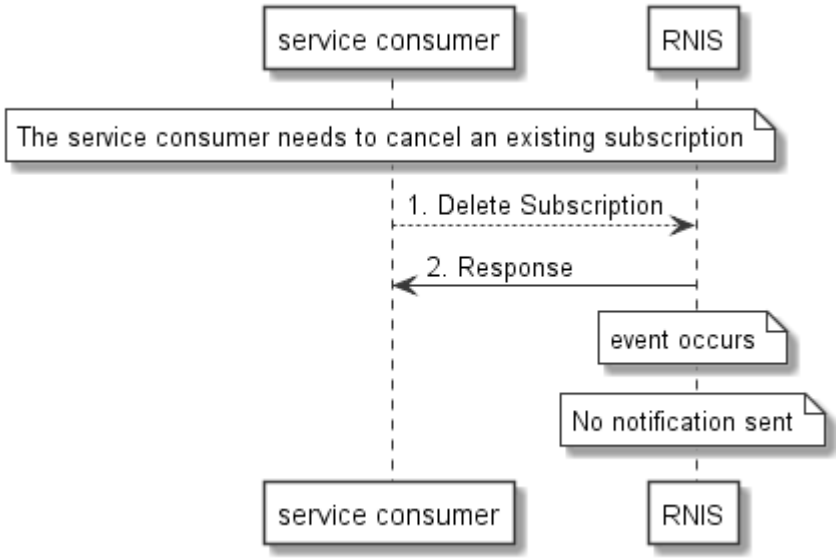

Figure 8.5.5-3: Flow of unsubscribing tests

Table 8.5.5-3: Permutation table for unsubscribing tests

Notification Event	Identifier TD_MEC_RNIS_	{Subscription}	Reference	IOP Verdict
Cell changes	SUB_03#01	CellChangeSubscription	[i.6], clause 5.2.5.4	
Radio Access Bearer establishment	SUB_03#02	RabEstSubscription	[i.6], clause 5.2.5.4	
Radio Access Bearer modification	SUB_03#03	RabModSubscription	[i.6], clause 5.2.5.4	
Radio Access Bearer release	SUB_03#04	RabRelSubscription	[i.6], clause 5.2.5.4	
UE measurement reports	SUB_03#05	MeasRepUeSubscription	[i.6], clause 5.2.5.4	
UE timing advance	SUB_03#06	MeasTaSubscription	[i.6], clause 5.2.5.4	
carrier aggregation reconfiguration	SUB_03#07	CaReconfSubscription	[i.6], clause 5.2.5.4	
S1 bearer	SUB_03#08	S1BearerSubscription	[i.6], clause 5.2.5.4	
5G UE measurement reports	SUB_03#09	NrMeasRepUeSubscription	[i.6], clause 5.2.5.4	

Interoperability Test Description			
Identifier	TD_MEC_RNIS_SUB_04		
Test Objective	Verify that the subscription is cancelled at the expiry deadline.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	[i.6], "Subscribing to RNI event notifications" (clause 5.2.5.1)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • RNIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • RNI available from the RNIS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the RNIS to create a subscription corresponding to the RNI event {Subscription}. The expiry Deadline is set at few minutes.
	2	Response	RNIS sends a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully.
	4		Wait until the expiryDeadline is approaching.
	5	IOP Check	Check that just prior the expiry, the RNIS sends a notification message to the callbackURL destination, related to the expiry deadline.
	6	Response	Service consumer sends a response to the RNIS, acknowledging the notification has been received.
	7		Wait until the expiry Deadline is over.
	8	IOP Check	Check that the subscription is deleted in the RNIS.
	9	Stimulus	Update the RNI associated to {Subscription} in the RNIS.
	10	IOP Check	Check that the RNIS does not notify the service consumer of the RNI change.
IOP Verdict			

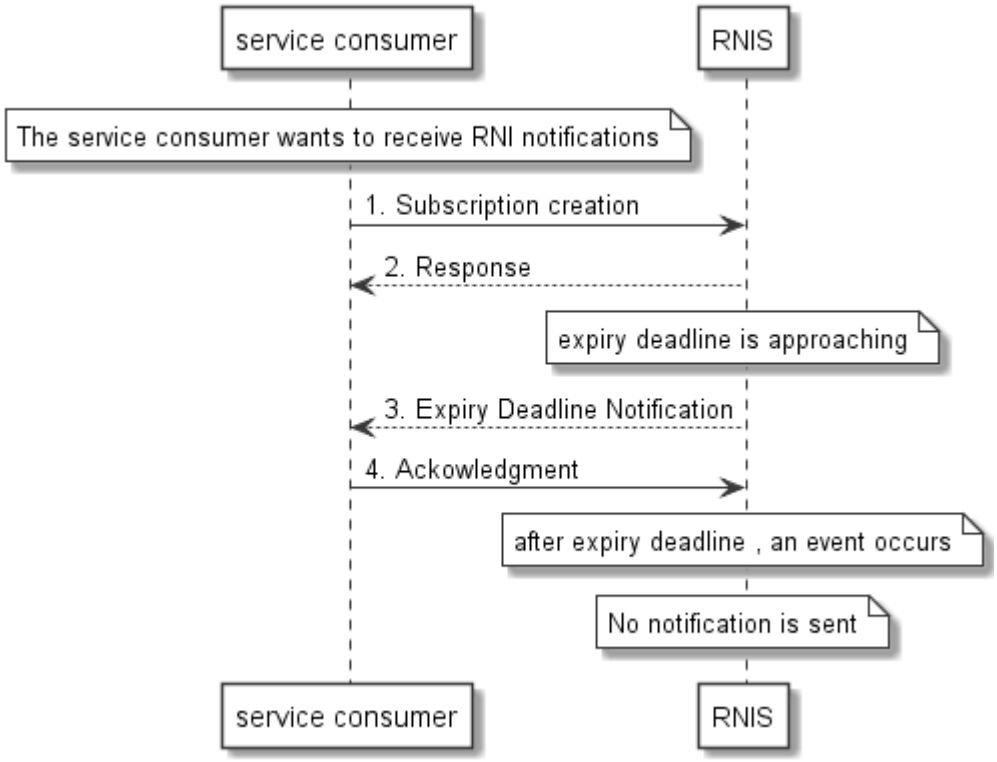

Figure 8.5.5-4: Flow of Receiving notification on expiry of RNI event subscription tests

Table 8.5.5-4: Permutation table for Receiving notification on expiry of RNI event subscription

Notification Event	Identifier	{Subscription}	Reference	IOP Verdict
Cell changes	SUB_04#01	CellChangeSubscription	[i.6], clause 5.2.5.2	
Radio Access Bearer establishment	SUB_04#02	RabEstSubscription	[i.6], clause 5.2.5.2	
Radio Access Bearer modification	SUB_04#03	RabModSubscription	[i.6], clause 5.2.5.2	
Radio Access Bearer release	SUB_04#04	RabRelSubscription	[i.6], clause 5.2.5.2	
UE measurement reports	SUB_04#05	MeasRepUeSubscription	[i.6], clause 5.2.5.2	
UE timing advance	SUB_04#06	MeasTaSubscription	[i.6], clause 5.2.5.2	
carrier aggregation reconfiguration	SUB_04#07	CaReconfSubscription	[i.6], clause 5.2.5.2	
S1 bearer	SUB_04#08	S1BearerSubscription	[i.6], clause 5.2.5.2	
5G UE measurement reports	SUB_04#09	NrMeasRepUeSubscription	[i.6], clause 5.2.5.2	

Interoperability Test Description			
Identifier	TD_MEC_RNI_SUB_05		
Test Objective	Verify that the service consumer can query subscription information		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Resource: subscriptions" (clauses 7.6 & 7.8)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • RNIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • RNI information available from the RNIS • The service consumer has an active subscriptions for: – Cell changes – Radio Access Bearer establishment – Radio Access Bearer modification – Radio Access Bearer release – UE measurement reports – UE timing advance – carrier aggregation reconfiguration – S1 bearer – 5G UE measurement reports		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to RNIS to query the subscription information.
	2	Response	The RNIS service returns a response containing the RNIS event subscriptions information.
	3	IOP Check	Check that the subscription information is received and is correct.
	4	Stimulus	Repeat steps 1 to 3 using each time, a dedicated filter criteria for each active subscription type.
IOP Verdict			

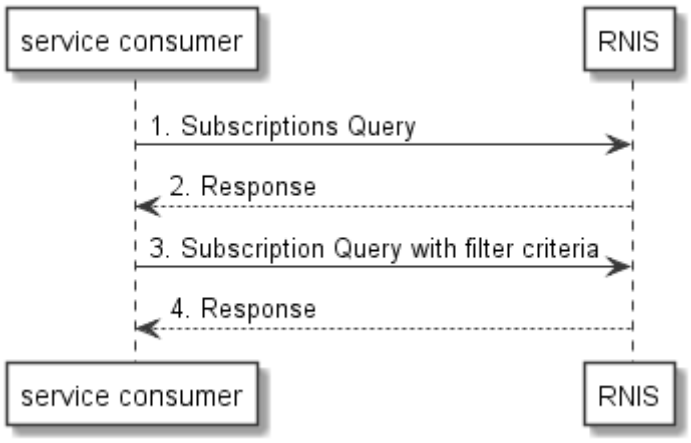

Figure 8.5.5-5: Flow of service consumer querying subscription information

Interoperability Test Description			
Identifier	TD_MEC_RNI_SUB_06		
Test Objective	Verify that the service consumer can receive a RNI event notification, based on event		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 012 [i.6], "Receiving RNI event notification" (clause 5.2.5)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_RNI, IFS_MEC_APP_RNI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • RNI provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-012 RNI service registered in the MEC platform • RNI available from the RNI Service • The service consumer has an active subscription for a {Subscription} RNI event notification, based on event trigger		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	Update the RNI associated with the subscription {Subscription}.
	2	IOP Check	Check that the RNI sends a notification message to the callbackURL destination, defined by the service consumer in the event subscription.
	3	Response	Service consumer sends a response to the RNIS to indicate the notification has been received.
	4	IOP Check	Check the {Notification} information received in the notification is correct.
	5		Repeat steps 1 to 4 several times.
IOP Verdict			

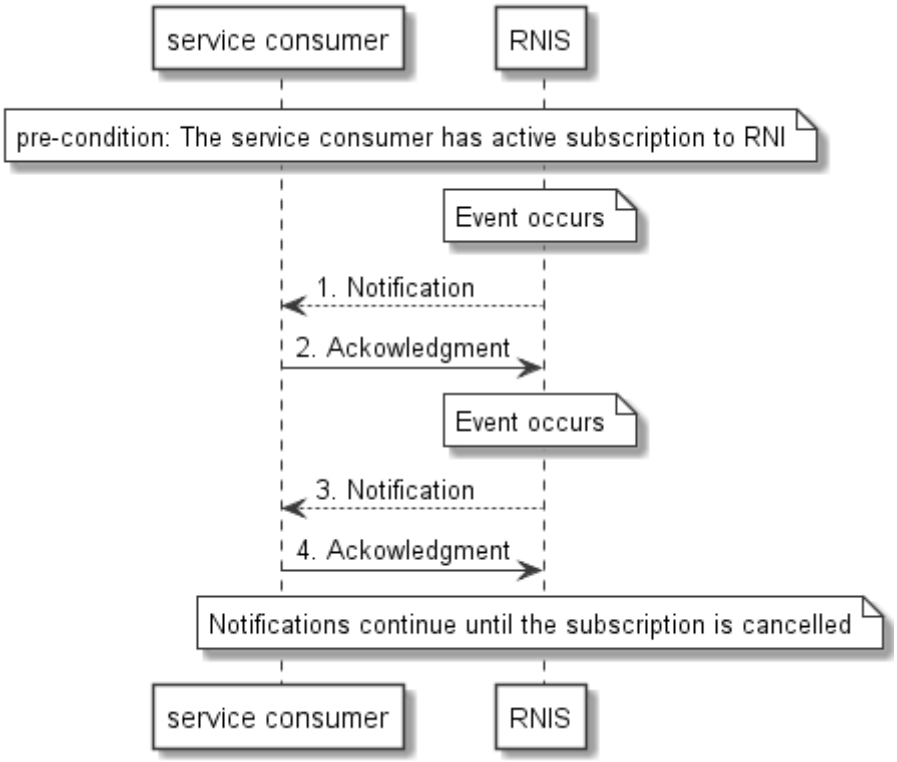

Figure 8.5.5-6: Flow of subscribing to the RNI event notifications tests

Table 8.5.5-5: Permutation table for subscription and notification tests

Notification Event	Identifier TD_MEC_RNI	{Subscription}	{Notification}	Reference	IOP Verdict
Cell changes	SUB_06#01	CellChangeSubscription	CellChangeNotification	[i.6], clause 5.2.6	
Radio Access Bearer establishment	SUB_06#02	RabEstSubscription	RabEstNotification	[i.6], clause 5.2.7	
Radio Access Bearer modification	SUB_06#03	RabModSubscription	RabModNotification	[i.6], clause 5.2.8	
Radio Access Bearer release	SUB_06#04	RabRelSubscription	RabRelNotification	[i.6], clause 5.2.9	
UE measurement reports	SUB_06#05	MeasRepUeSubscription	MeasRepUeNotification	[i.6], clause 5.2.10	
UE timing advance	SUB_06#06	MeasTaSubscription	MeasTaNotification	[i.6], clause 5.2.11	
carrier aggregation reconfiguration	SUB_06#07	CaReconfSubscription	CaReConfNotification	[i.6], clause 5.2.12	
S1 bearer	SUB_01#08	S1BearerSubscription	S1BearerNotification	[i.6], clause 5.2.13	
5G UE measurement reports	SUB_01#09	NrMeasRepUeSubscription	NrMeasRepUeNotification	[i.6], clause 5.2.14	

8.6 Test group 6 - MEC-028

8.6.1 Access Point information

Interoperability Test Description			
Identifier	TD_MEC_WAI_AP_01		
Test Objective	Verify that the service consumer can successfully retrieve information on the existing Access Points		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Sending a query for Access Point information" (clause 5.2.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WLAN Access Information (WAI) provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WLAN AP information available from the WAI service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to retrieve WLAN AP information.
	2	Response	The WAIS returns a response containing the AP information.
	3	IOP Check	Check that the service consumer received the requested information about the Access Points of the WLAN access network.
IOP Verdict			

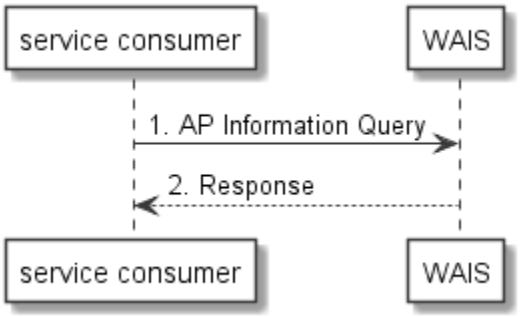

Figure 8.6.1-1: Flow of service consumer requesting Access Point information

Interoperability Test Description			
Identifier	TD_MEC_WAI_AP_02		
Test Objective	Verify that the service consumer can successfully retrieve information on existing Access Points, controlled with an attribute-based filter expression and attribute-selectors		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Sending a query for Access Point information" (clause 5.2.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WLAN Access Information (WAI) provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WLAN AP information available from the WAI service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to retrieve a specific WLAN AP information, by defining attribute-based filter expression and attribute-selectors.
	2	Response	The WAIS returns a response containing the requested AP information.
	3	IOP Check	Check that the service consumer received the requested information about the Access Points of the WLAN access network, filtered as requested.
IOP Verdict			

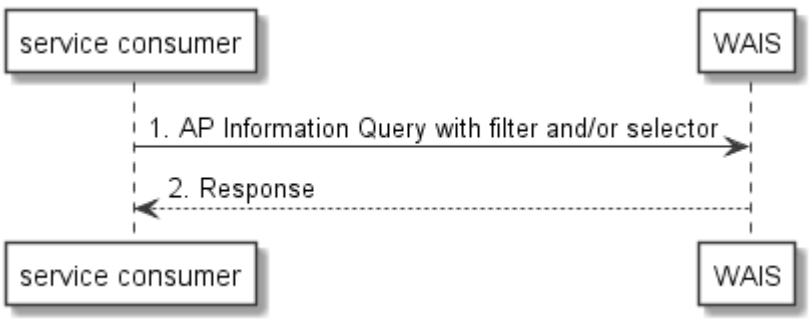

Figure 8.6.1-2: Flow of service consumer requesting Access Point information with filter and attribute-selector

Table 8.6.1-1: Permutation table for query with filter and attribute selector

Query	Test Identifier TD_MEC_WAI_	Expression Filter and attribute-selector	Reference	IOP Verdict
Specific Access Point	AP_02#01	filter=(eq,apId,ap_identifier)	[i.7], clause 5.2.2.2	
list of Access Points	AP_02#02	fields=apId	[i.7], clause 5.2.2.2	
WLAN capabilities	AP_02#03	fields=apId,wlanCap	[i.7], clause 5.2.2.3	
WLAN capabilities for a specific AP	AP_02#04	filter=(eq,apId,ap_identifier)&fields=apId, wlanCap	[i.7], clause 5.2.2.3	
BSS Load	AP_02#05	fields=apId,bssLoad	[i.7], clause 5.2.2.4	
BSS Load for a specific AP	AP_02#06	filter=(eq,apId,ap_identifier)&fields=apId, bssLoad	[i.7], clause 5.2.2.4	
BSS Load with extBssLoad	AP_02#07	fields=apId, bssLoad,extBssLoad	[i.7], clause 5.2.2.4	
BSS Load with extBssLoad for a specific AP	AP_02#08	filter=(eq,apId,ap_identifier)&fields=apId, bssLoad,extBssLoad	[i.7], clause 5.2.2.4	
WAN metrics	AP_02#09	fields=apId, wanMetrics	[i.7], clause 5.2.2.5	
WAN metrics for a specific AP	AP_02#10	filter=(eq,apId,ap_identifier)&fields=apId, wanMetrics	[i.7], clause 5.2.2.5	
AP Location	AP_02#11	fields=apId, apLocation	[i.7], clause 5.2.2.6	
AP Locationfor a specific AP	AP_02#12	filter=(eq,apId,ap_identifier)&fields=apId, apLocation	[i.7], clause 5.2.2.6	
OBSS Load	AP_02#13	fields=apId, obssLoad	[i.7], clause 5.2.2.8	
OBSS Load for a specific AP	AP_02#14	filter=(eq,apId,ap_identifier)&fields=apId, obssLoad	[i.7], clause 5.2.2.8	
NOTE: The variable ap_identifier is a string representing the Access Point identifier that is to be filtered.				

8.6.2 Station information

Interoperability Test Description			
Identifier	TD_MEC_WAI_STA_01		
Test Objective	Verify that the service consumer can successfully retrieve information on the existing stations		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Sending a query for Station information" (clause 5.2.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WLAN Access Information (WAI) provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WLAN Station information available from the WAI service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to WAIS to retrieve WLAN Station information.
	2	Response	The WAIS returns a response containing the Station information.
	3	IOP Check	Check that the service consumer received the requested information about the stations of the WLAN access network.
IOP Verdict			

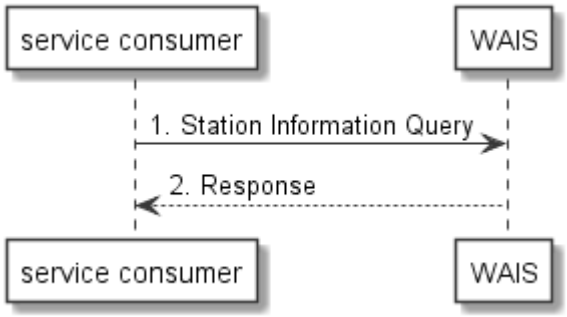

Figure 8.6.2-1: Flow of service consumer requesting Station information

Interoperability Test Description			
Identifier	TD_MEC_WAI_STA_02		
Test Objective	Verify that the service consumer can successfully retrieve information on existing Stations, controlled with an attribute-based filter expression and attribute-selectors		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Sending a query for Station information" (clause 5.2.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WLAN Access Information (WAI) provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WLAN Station information available from the WAI service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to retrieve a specific WLAN Station information, by defining attribute-based filter expression and attribute-selectors.
	2	Response	The WAIS returns a response containing the requested Station information.
	3	IOP Check	Check that the service consumer received the requested information about the Stations of the WLAN access network, filtered as requested.
IOP Verdict			

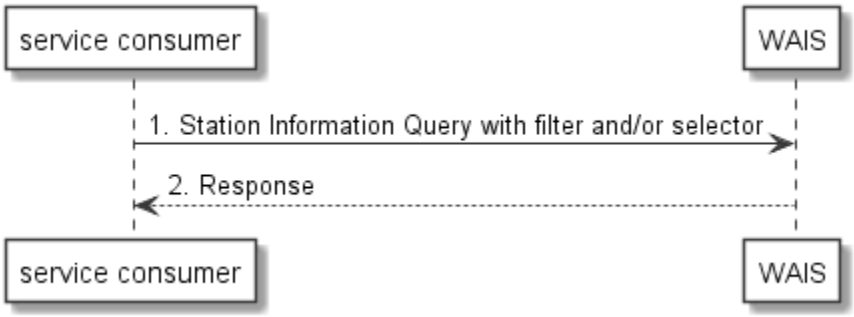

Figure 8.6.2-2: Flow of service consumer requesting Station information with filter and attribute-selector

Table 8.6.2-1: Permutation table for query with filter and attribute selector

Query	Test Identifier TD_MEC_WAI_	Expression Filter and attribute-selector	Reference	IOP Verdict
Specific station	STA_02#01	filter=(eq,staId,sta_identifier)	[i.7], clause 5.2.3	
list of stations	STA_02#02	fields=staId	[i.7], clause 5.2.3.2	
Information about the Access Points that the stations are associated	STA_02#03	fields=staId,apAssociated	[i.7], clause 5.2.3.2	
channel used by station	STA_02#04	fields=staId,channel	[i.7], clause 5.2.3.3	
RSSI of station(s)	STA_02#05	fields=staId,rssi	[i.7], clause 5.2.3.3	
RSSI of stations under specific AP	STA_02#06	filter=(eq,apAssociated,ap_identifier)&fields =staId,rssi	[i.7], clause 5.2.3.4	
Station data rates	STA_02#07	fields=staId,staDataRate	[i.7], clause 5.2.3.5	
Station data rates under a specific AP	STA_02#08	filter=(eq,apAssociated,ap_identifier)&fields =staId,staDataRate	[i.7], clause 5.2.3.5	
Station data rates for specific station	STA_02#09	filter=(eq,staId,sta_identifier)&fields=staId,st aDataRate	[i.7], clause 5.2.3.5	
Station statistics	STA_02#10	fields=staId,staStatistics	[i.7], clause 5.2.3.6	
Station statistics under a specific AP	STA_02#11	filter=(eq,apAssociated,ap_identifier)&fields =staId,staStatistics	[i.7], clause 5.2.3.6	
Station statistics for specific station	STA_02#12	filter=(eq,staId,sta_identifier)&fields=staId,st aStatistics	[i.7], clause 5.2.3.6	
Neighbor report	STA_02#13	fields= staId,neighborReport	[i.7], clause 5.2.3.7	
Neighbor report under specific AP	STA_02#14	filter=(eq,apAssociated,ap_identifier)&fields = staId,neighborReport	[i.7], clause 5.2.3.7	
Neighbor report for a specific station	STA_02#15	filter=(eq,staId,sta_identifier)&fields= staId,neighborReport	[i.7], clause 5.2.3.7	
Channel load	STA_02#16	fields= staId,channelLoad	[i.7], clause 5.2.3.8	
Channel load under specific AP	STA_02#17	filter=(eq,apAssociated,ap_identifier)&fields = staId, channelLoad	[i.7], clause 5.2.3.8	
Channel load for a specific station	STA_02#18	filter=(eq,staId,sta_identifier)&fields= staId, channelLoad	[i.7], clause 5.2.3.8	
NOTE 1: The variable ap_identifier is a string representing the Access Point identifier that is to be filtered. NOTE 2: The variable sta_identifier is a string representing the Station identifier that is to be filtered.				

8.6.3 Subscription and notification

Interoperability Test Description			
Identifier	TD_MEC_WAI_SUB_01		
Test Objective	Verify that the service consumer can create a subscription to WAI event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Subscribing to WLAN event notifications" (clause 5.2.4.1)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAI provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI available from the WAI Service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to create a subscription. The message body contains the {Subscription} data structure that defines the subscribed event, the filtering criteria and the address where the service consumer wishes to receive the WLAN event notifications. The subscription is configured to trigger a notification based on event.
	2	Response	The WAI Service sends a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to WLAN event notification.
	4		Repeat steps 1 to 3 by creating a subscription triggering notification every x seconds.
IOP Verdict			

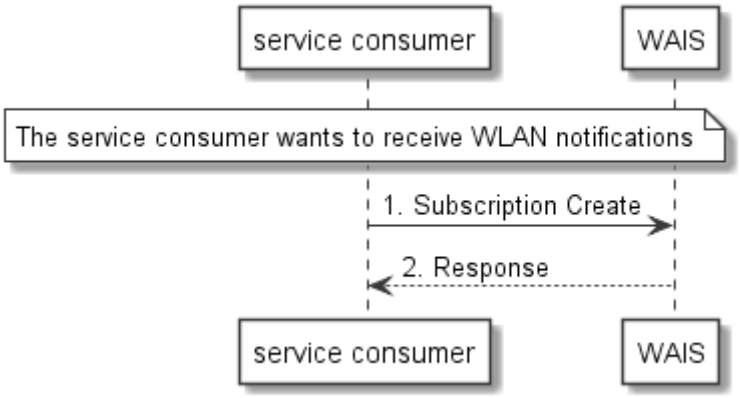

Figure 8.6.3-1: Flow of subscribing to the WLAN event notifications tests

Table 8.6.3-1: Permutation table for subscription and notification tests

Notification Event	Identifier TD_MEC_WAI_	{Subscription}	{Notification}	Reference	IOP Verdict
Station data rates	SUB_01#01	StaDataRatesSubscription	StaDataRatesNotification	[i.7], clause 5.2.4.1	
Associated stations	SUB_01#02	AssocStaSubscription	AssocStaNotification	[i.7], clause 5.2.4.1	
Measurement report	SUB_01#03	MeasurementReportSubscription	MeasurementReportNotification	[i.7], clause 5.2.4.1	

Interoperability Test Description			
Identifier	TD_MEC_WAI_SUB_02		
Test Objective	Verify that the service consumer can update a subscription to WAI event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Updating subscription for WLAN event notifications" (clause 5.2.4.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI information available from the WAI service • The service consumer has an active subscription for a {Subscription} WAI event notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to update the subscription resource corresponding to the {Subscription} WAI event notification.
	2	Response	WAI service returns a response indicating the subscription has been updated.
	3	IOP Check	Check that the subscription is updated.
IOP Verdict			

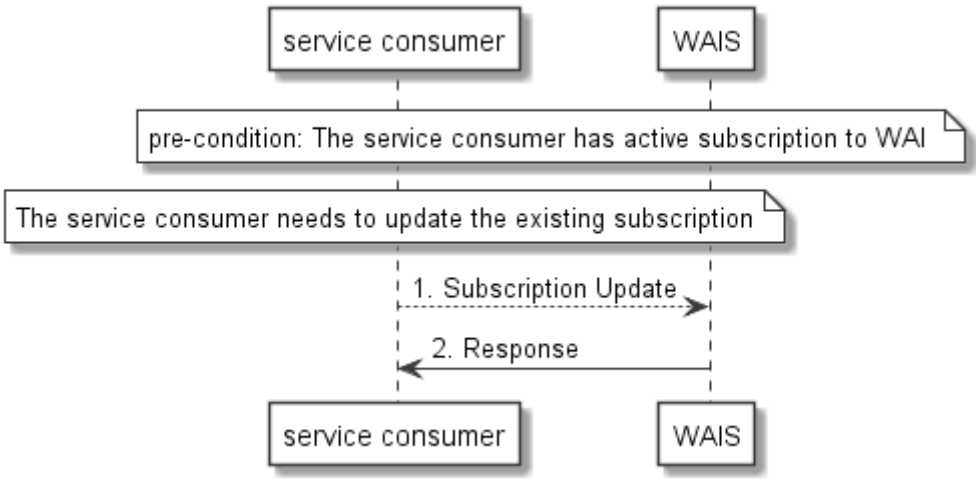

Figure 8.6.3-2: Flow of updating subscription tests

Table 8.6.3-2: Permutation table for updating subscription tests

Notification Event	Identifier TD_MEC_WAI_	{Subscription}	{Notification}	Reference	IOP Verdict
Station data rates	SUB_02#01	StaDataRatesSubscription	StaDataRatesNotification	[i.7], clause 5.2.4.3	
Associated stations	SUB_02#02	AssocStaSubscription	AssocStaNotification	[i.7], clause 5.2.4.3	
Measurement report	SUB_02#03	MeasurementReportSubscription	MeasurementReportNotification	[i.7], clause 5.2.4.3	

Interoperability Test Description			
Identifier	TD_MEC_WAI_SUB_03		
Test Objective	Verify that the service consumer can unsubscribe from WLAN event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Unsubscribing from WLAN event notifications" (clause 5.2.4.4)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI available from the WAIS • The service consumer has an active subscription for a {Subscription} WLAN event notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to delete the existing subscription, corresponding to the WLAN event {Subscription}.
	2	Response	WAI Service sends a response indicating the subscription has been deleted.
	3	IOP Check	Check that the subscription is removed.
	4	Stimulus	Update the WAI associated to {Subscription} in the WAIS.
	5	IOP Check	Check that the WAIS does not notify the service consumer of the WAI information change.
IOP Verdict			

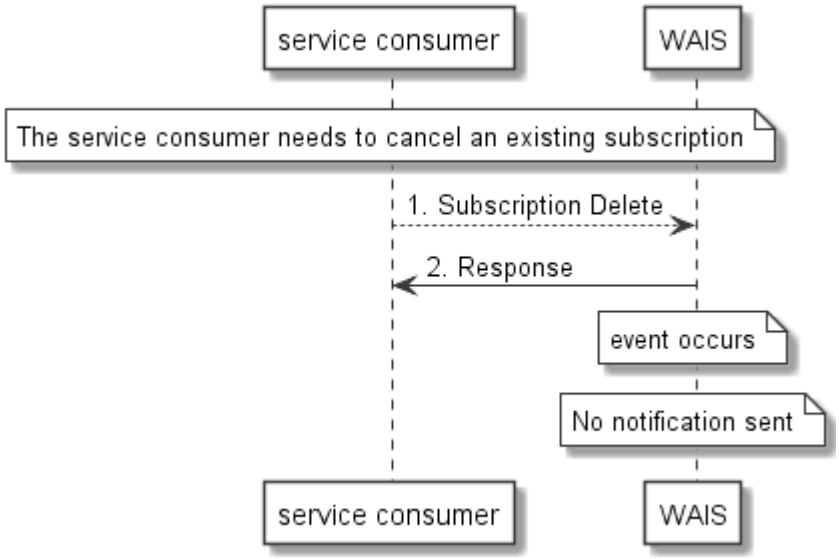

Figure 8.6.3-3: Flow of unsubscribing tests

Table 8.6.3-3: Permutation table for unsubscribing tests

Notification Event	Identifier TD_MEC_WAI_	{Subscription}	{Notification}	Reference	IOP Verdict
Station data rates	SUB_03#01	StaDataRatesSubscription	StaDataRatesNotification	[i.7], clause 5.2.4.4	
Associated stations	SUB_03#02	AssocStaSubscription	AssocStaNotification	[i.7], clause 5.2.4.4	
Measurement report	SUB_03#03	MeasurementReportSubscription	MeasurementReportNotification	[i.7], clause 5.2.4.4	

Interoperability Test Description			
Identifier	TD_MEC_WAI_SUB_04		
Test Objective	Verify that the WAI subscription is cancelled at the expiry deadline.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Receiving notification on expiry of WLAN event subscription" (clause 5.2.4.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAIS service registered in the MEC platform • WAI available from the WAIS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to create a subscription corresponding to the WLAN event {Subscription}. The expiryDeadline is set at few minutes.
	2	Response	The WAI Service sends a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully.
	4		Wait until the expiryDeadline is approaching.
	5	IOP Check	Check that just at the expiry, the WAIS sends a notification message to the callbackURL destination, defined by the service consumer in the event subscription {Subscription}.
	6	Response	Service consumer sends a response to the WAIS acknowledging the notification has been received.
	7		Wait until the expiryDeadline is over.
	8	IOP Check	Check that the subscription is deleted in the WAIS.
	9	Stimulus	Update the WAI associated to {Subscription} in the WAIS.
	10	IOP Check	Check that the WAIS does not notify the service consumer of the WLAN change.
IOP Verdict			

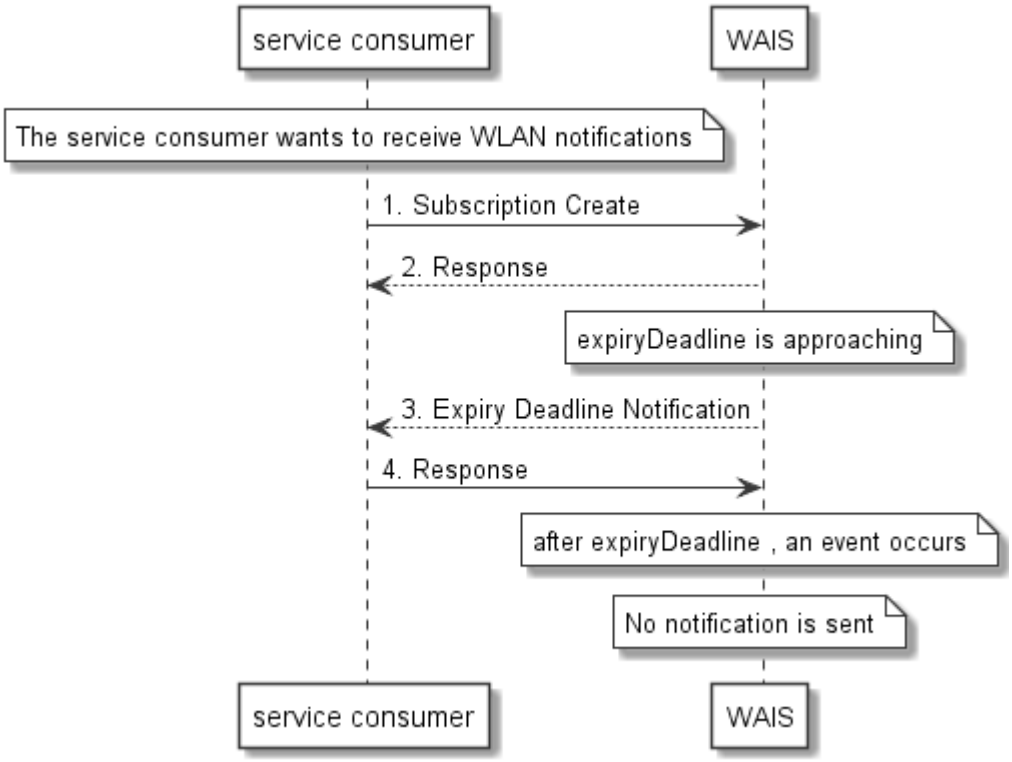

Figure 8.6.3-4: Flow of Receiving notification on expiry of WLAN event subscription tests

Table 8.6.3-4: Permutation table for Receiving notification on expiry of WLAN event subscription

Notification Event	Identifier TD_MEC_WAI_	{Subscription}	{Notification}	Reference	IOP Verdict
Station data rates	SUB_04#01	StaDataRatesSubscription	StaDataRatesNotification	[i.7], clause 5.2.4.2	
Associated stations	SUB_04#02	AssocStaSubscription	AssocStaNotification	[i.7], clause 5.2.4.2	
Measurement report	SUB_04#03	MeasurementReportSubscription	MeasurementReportNotification	[i.7], clause 5.2.4.2	

Interoperability Test Description			
Identifier	TD_MEC_WAI_SUB_05		
Test Objective	Verify that the service consumer can query subscription information		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Resource: subscriptions" (clauses 7.5.3.1 & 7.6.3.1)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI information available from the WAI service • The service consumer has several active subscriptions for assoc_sta, sta_data_rate, measure_report		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to WAIS to query the subscription information.
	2	Response	WAI service returns a response containing the WAI event subscriptions information.
	3	IOP Check	Check that the subscription information are received and are correct.
	4	Stimulus	Repeat steps 1 to 3 using each time, a dedicated filter criteria for assoc_sta, sta_data_rate, measure_report.
IOP Verdict			

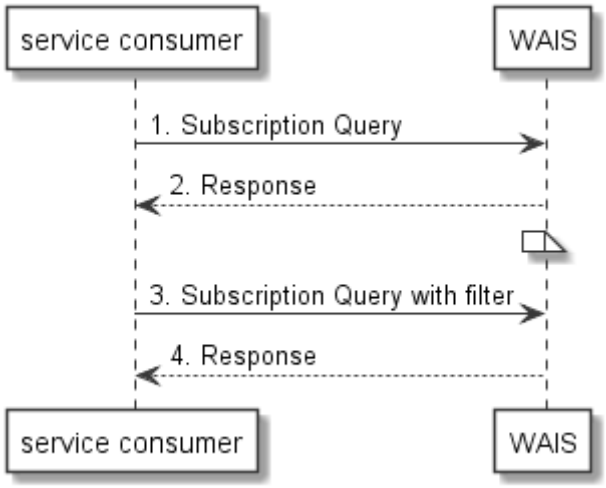

Figure 8.6.3-5: Flow of service consumer querying subscription information

Interoperability Test Description			
Identifier	TD_MEC_WAI_SUB_06		
Test Objective	Verify that the service consumer can receive a WLAN event notification, based on event		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Receiving WLAN event notifications about station data rates" (clause 5.2.5)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAI provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI available from the WAI Service • The service consumer has an active subscription for a {Subscription} WLAN event notification, based on event trigger		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	Update the WAI associated with the subscription {Subscription}.
	2	IOP Check	Check that the WAI service sends a notification message to the callbackURL destination, defined by the service consumer in the event subscription. The message body contains the {Notification} data structure.
	3	Response	Service consumer sends a response to the WAI service to indicate the notification has been received.
	4	IOP Check	Check the information received in the notification are correct.
IOP Verdict			

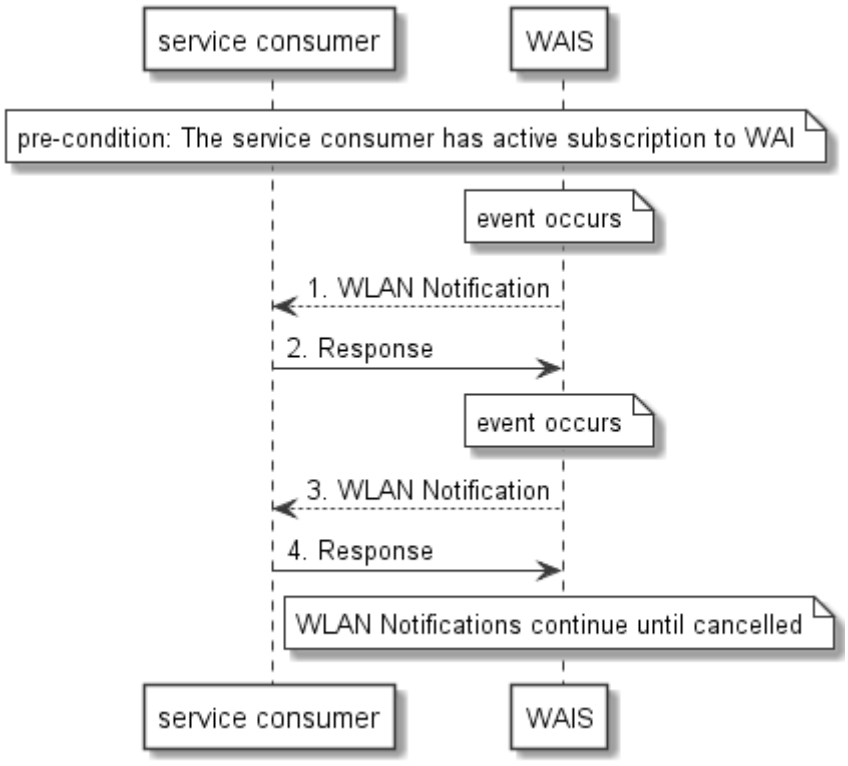

Figure 8.6.3-6: Flow of subscribing to the WLAN event notifications tests

Table 8.6.3-5: Permutation table for subscription and notification tests

Notification Event	Identifier TD_MEC_WAI	{Subscription}	{Notification}	Reference	IOP Verdict
Station data rates	SUB_06#01	StaDataRatesSubscription	StaDataRatesNotification	[i.7], clause 5.2.5	
Associated stations	SUB_06#02	AssocStaSubscription	AssocStaNotification	[i.7], clause 5.2.6	
Measurement report	SUB_06#03	MeasurementReportSubscription	MeasurementReportNotification	[i.7], clause 5.2.4.1	

Interoperability Test Description			
Identifier	TD_MEC_WAI_SUB_07		
Test Objective	Verify that the service consumer can receive a WLAN event notification once every x seconds		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Receiving WLAN event notifications about station data rates" (clause 5.2.5)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAI provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI available from the WAI Service • The service consumer has an active subscription for a {Subscription} WLAN event notification, once every x seconds		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	Update the WAI associated with the subscription {Subscription}.
	2	IOP Check	Check that the WAI service sends a notification message to the callbackURL destination, defined by the service consumer in the event subscription. The message body contains the {Notification} data structure.
	3	Response	Service consumer sends a response to the WAI service to indicate the notification has been received.
	4	IOP Check	Check the information received in the notification are correct.
	5		Wait x seconds.
	6		Check that the WAI service sends a notification message to the callbackURL destination, defined by the service consumer in the event subscription. The message body contains the {Notification} data structure.
	7		Repeat steps 5 to 6 several times.
IOP Verdict			

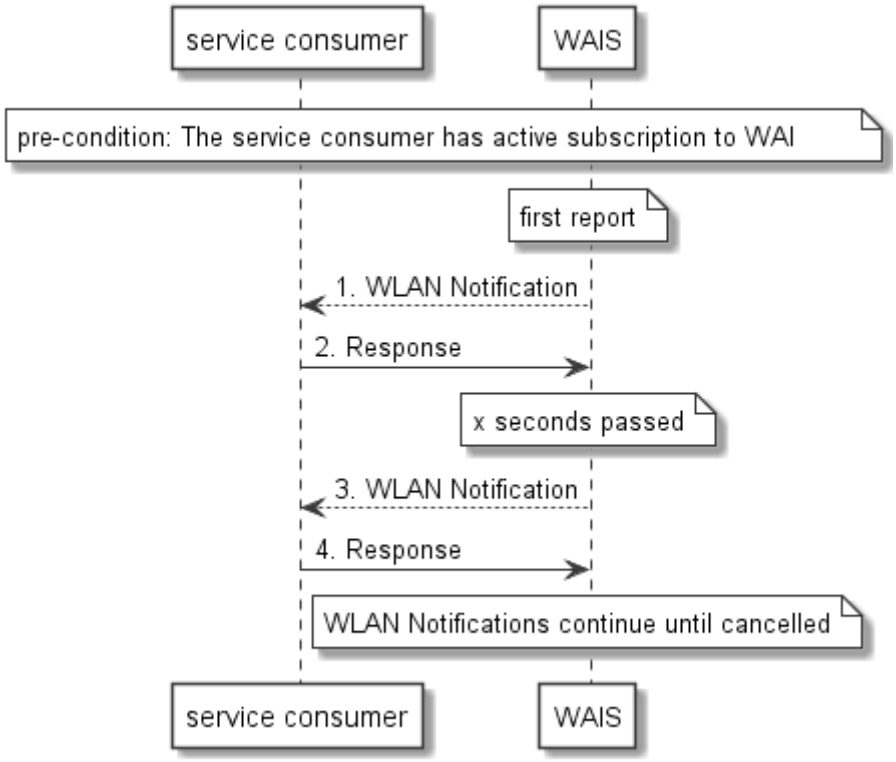

Figure 8.6.3-7: Flow of subscribing to the WLAN event notifications tests, once every x seconds

Table 8.6.3-6: Permutation table for subscription and notification tests

Notification Event	Identifier TD_MEC_WAI	{Subscription}	{Notification}	Reference	IOP Verdict
Station data rates	SUB_07#01	StaDataRatesSubscription	StaDataRatesNotification	[i.7], clause 5.2.5	
Associated stations	SUB_07#02	AssocStaSubscription	AssocStaNotification	[i.7], clause 5.2.6	
Measurement report	SUB_07#03	MeasurementReportSubscription	MeasurementReportNotification	[i.7], clause 5.2.4.1	

8.6.4 Measurement Configuration

Interoperability Test Description			
Identifier	TD_MEC_WAI_MEA_01		
Test Objective	Verify that the service consumer can create a Measurement Configuration		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Creating a Measurement configuration" (clause 5.2.7.1)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAI provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI available from the WAI Service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to create a WAI measurement configuration.
	2	Response	The WAI Service sends a response indicating the measurement configuration has been created.
	3	IOP Check	Check that the service consumer successfully created a measurement Config in the WAIS.
	4	Stimulus	The service consumer sends a request to query information on the measurement configuration created previously.
	5	Response	The WAIS returns a response containing the measurement Config information.
	6	IOP Check	Check that the measurement configuration information is correct.
IOP Verdict			

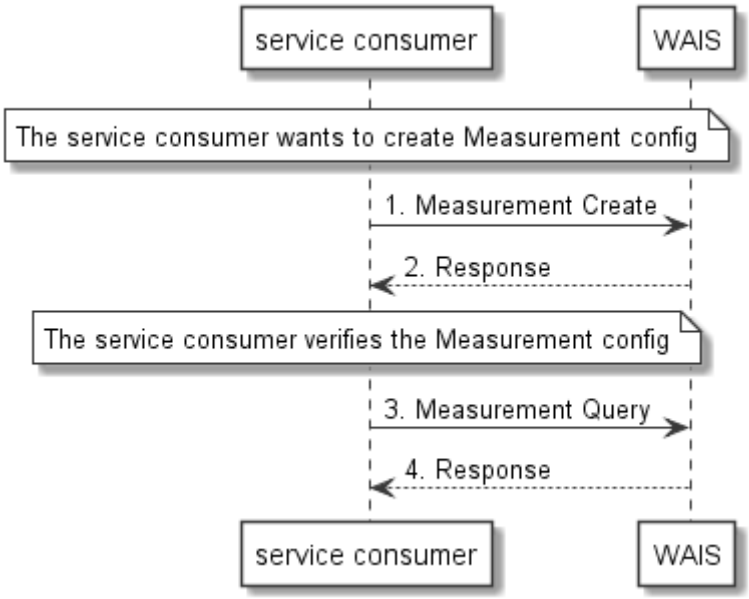

Figure 8.6.4-1: Flow of service consumer creating a WLAN measurement configuration

Interoperability Test Description			
Identifier	TD_MEC_WAI_MEA_02		
Test Objective	Verify that the service consumer can update an existing Measurement Configuration		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Updating a Measurement Configuration" (clause 5.2.7.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAI provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI available from the WAI Service • The service consumer has an active Measurement Configuration created in the WAI Service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to update an existing measurement configuration.
	2	Response	The WAI Service sends a response indicating the measurement configuration has been updated.
	3	IOP Check	Check that the service consumer successfully updated the measurement Config in the WAIS.
	4	Stimulus	The service consumer sends a request to query information on the measurement configuration updated previously.
	5	Response	The WAIS returns a response containing the measurement Config information.
	6	IOP Check	Check that the measurement configuration information is correct.
IOP Verdict			

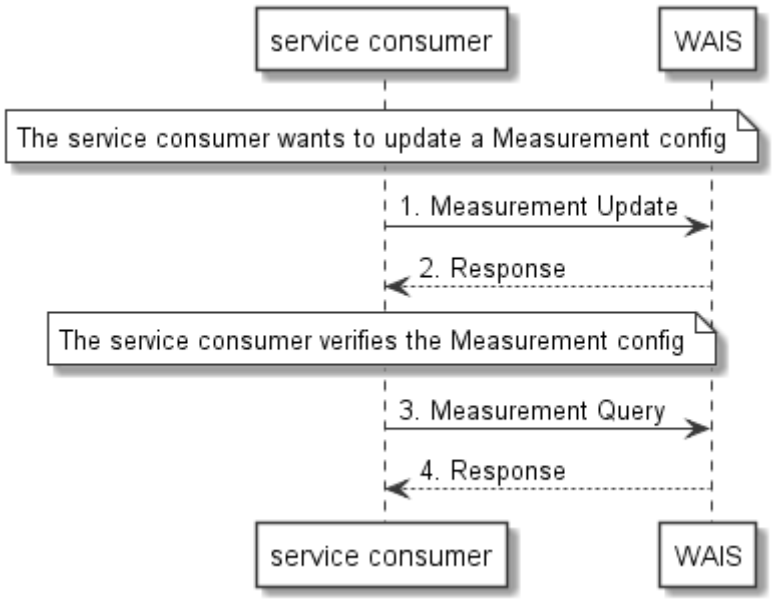

Figure 8.6.4-2: Flow of service consumer updating a WLAN measurement configuration

Interoperability Test Description			
Identifier	TD_MEC_WAI_MEA_03		
Test Objective	Verify that the service consumer can delete Measurement Configuration		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 028 [i.7], "Updating a Measurement Configuration" (clause 5.2.7.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_WAI, IFS_MEC_APP_WAI		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • WAI provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-028 WAI service registered in the MEC platform • WAI available from the WAI Service • The service consumer has an active Measurement Configuration created in the WAI Service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the WAIS to delete an existing measurement configuration.
	2	Response	The WAI Service sends a response indicating the measurement configuration has been deleted.
	3	IOP Check	Check that the service consumer successfully deleted the measurement Config in the WAIS.
	4	Stimulus	The service consumer sends a request to query information on the measurement configuration previously deleted.
	5	Response	The WAIS returns a response indication the measurement Config does not exist.
IOP Verdict			

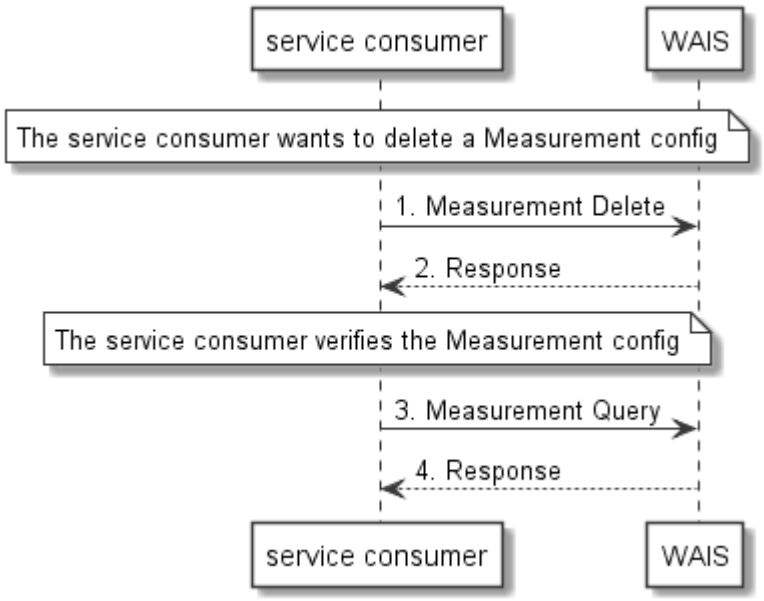

Figure 8.6.4-3: Flow of deletion of a Measurement Configuration

8.7 Test group 7 - MEC-030

8.7.1 Provisioning information for V2X communication over Uu unicast

Interoperability Test Description			
Identifier	TD_MEC_VIS_UU_UNI		
Test Objective	Verify that the service consumer can successfully retrieve provisioning information for V2X communication over Uu unicast for a particular location		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Sending a request for provisioning information for V2X communication over Uu unicast" (clause 5.5.1)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • V2X Information Service provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information Service registered in the MEC platform • Uu unicast provisioning information available from the VIS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the VIS to retrieve Uu unicast provisioning information for a particular location. The request contains the location information (e.g. the serving cell ID or the geographical area information of the UE) as an input parameter.
	2	Response	The VIS returns a response containing the Uu Unicast Provisioning Information.
	3	IOP Check	Check that the service consumer received the requested provisioning information for V2X communication over Uu unicast for a particular location.
IOP Verdict			

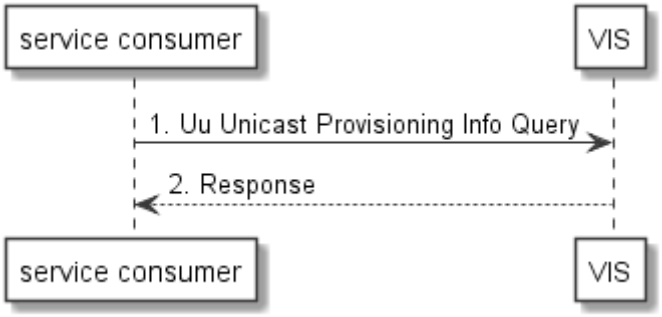

Figure 8.7.1-1: Flow of service consumer requesting the Uu unicast provisioning information

8.7.2 Provisioning information for V2X communication over Uu MBMS

Interoperability Test Description			
Identifier	TD_MEC_VIS_UU_MBMS		
Test Objective	Verify that the service consumer can successfully retrieve provisioning information for V2X communication over Uu MBMS for a particular location		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Sending a request for provisioning information for V2X communication over Uu MBMS" (clause 5.5.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information Service registered in the MEC platform • VIS information available from the VIS service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the VIS to retrieve the Uu MBMS provisioning information for a particular location. The request contains the location information (e.g. the serving cell ID or the geographical area information of the UE) as an input parameter.
	2	Response	The VIS returns a response containing the Uu Mbms Provisioning Information.
	3	IOP Check	Check that the service consumer received the requested provisioning information for V2X communication over Uu MBMS for a particular location.
IOP Verdict			

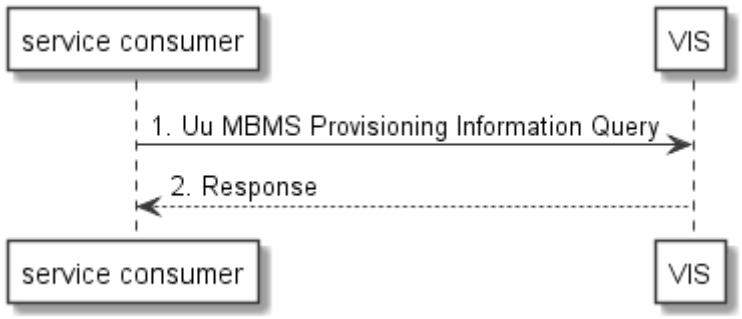

Figure 8.7.2-1: Flow of service consumer requesting the Uu MBMS provisioning information

8.7.3 Provisioning information for V2X communication over PC5

Interoperability Test Description			
Identifier	TD_MEC_VIS_PC5		
Test Objective	Verify that the service consumer can successfully retrieve provisioning information for V2X communication over PC5 for a particular location		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Sending a request for provisioning information for V2X communication over PC5" (clause 5.5.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information Service registered in the MEC platform • VIS information available from the VIS service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the VIS to retrieve the PC5 provisioning information for a particular location. The request contains the location information (e.g. the serving cell ID or the geographical area information of the UE) as an input parameter.
	2	Response	The VIS returns a response containing the Pc5 Provisioning Info.
	3	IOP Check	Check that the service consumer received the requested information for V2X communication over PC5 for a particular location.
IOP Verdict			

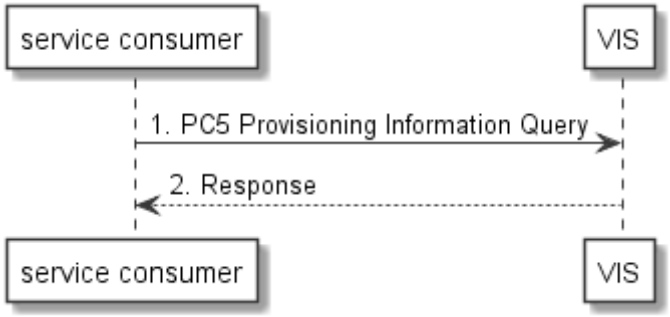

Figure 8.7.3-1: Flow of service consumer requesting the PC5 provisioning information

8.7.4 Journey-specific QoS predictions

Interoperability Test Description			
Identifier	TD_MEC_VIS_QoS		
Test Objective	Verify that the service consumer can successfully request to receive the predicted QoS correspondent to potential routes of a vehicular UE.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Sending a request for journey-specific QoS predictions" (clause 5.5.5)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information Service registered in the MEC platform • VIS information available from the VIS service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the VIS to retrieve the predicted QoS for a vehicular UE with potential routes.
	2	Response	The VIS returns a response containing the Predicted QoS.
	3	IOP Check	Check that the service consumer received the requested information about the predicted QoS corresponding to potential routes of a vehicular UE.
IOP Verdict			

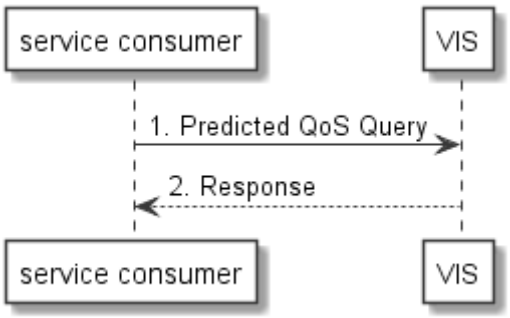

Figure 8.7.4-1: Flow of a V2X application requesting the predicted QoS of a UE with potential routes

8.7.5 Subscription and notification

Interoperability Test Description			
Identifier	TD_MEC_VIS_SUB_01		
Test Objective	Verify that the service consumer can create a subscription to receive notifications on corresponding V2X information events		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Subscribing to event notifications (clause 5.5.6.1)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information Service registered in the MEC platform • V2X Information available from the VIS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the VIS to create a subscription to certain specific V2X information event. The message body contains the {Subscription} data structure that defines the subscribed event, the filtering criteria and the address where the service consumer wishes to receive the V2X information event notifications.
	2	Response	VIS sends a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully to V2X information event notification.
IOP Verdict			

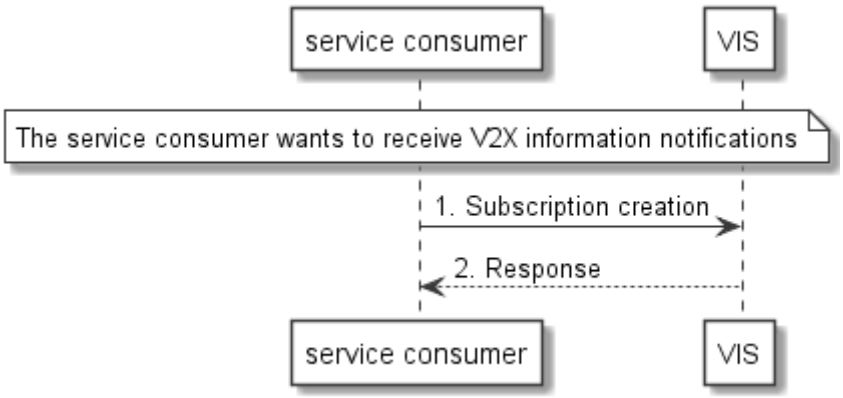

Figure 8.7.5-1: Flow of subscribing to the V2X information event notifications

Table 8.7.5-1: Permutation table for subscription and notification tests

Notification Event	Identifier TD_MEC_VIS_	{Subscription}	Reference	IOP Verdict
V2X communication over Uu unicast	SUB_01#01	ProvChgUuUniSubscription	[i.8], clauses 5.5.6 and 7.9.3.4	
V2X communication over Uu MBMS	SUB_01#02	ProvChgUuMbmsSubscription	[i.8], clauses 5.5.6 and 7.9.3.4	
V2X communication over PC5	SUB_01#03	ProvChgPc5Subscription	[i.8], clauses 5.5.6 and 7.9.3.4	
V2X message	SUB_01#04	V2xMsgSubscription	[i.8], clauses 5.5.6 & 7.9.3.4	

Interoperability Test Description			
Identifier	TD_MEC_VIS_SUB_02		
Test Objective	Verify that the service consumer can update a subscription to receive V2X Information event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Updating subscription for V2X information event notifications" (clause 5.5.6.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information service registered in the MEC platform • V2X information available from the VIS service • The service consumer has an active subscription for a {Subscription} VIS event notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the VIS to update the subscription corresponding to the {Subscription} VIS event notification.
	2	Response	The VIS returns a response indicating the subscription has been updated.
	3	IOP Check	Check that the subscription is successfully updated.
IOP Verdict			

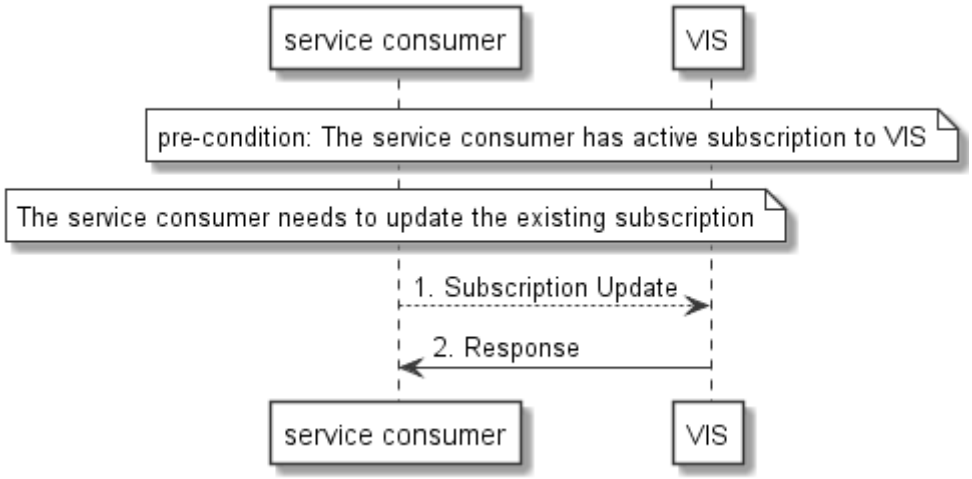

Figure 8.7.5-2: Flow of service consumer updating subscription for V2X information event notifications

Table 8.7.5-2: Permutation table for updating subscription tests

Notification Event	Identifier TD_MEC_VIS_	{Subscription}	Reference	IOP Verdict
V2X communication over Uu unicast	SUB_02#01	ProvChgUuUniSubscription	[i.8], clauses 5.5.6.3 & 7.10.3.2	
V2X communication over Uu MBMS	SUB_02#02	ProvChgUuMbmsSubscription	[i.8], clauses 5.5.6.3 & 7.10.3.2	
V2X communication over PC5	SUB_02#03	ProvChgPc5Subscription	[i.8], clauses 5.5.6.3 & 7.10.3.2	
V2X message	SUB_02#04	V2xMsgSubscription	[i.8], clauses 5.5.6.3 & 7.10.3.2	

Interoperability Test Description			
Identifier	TD_MEC_VIS_SUB_03		
Test Objective	Verify that the service consumer can unsubscribe from VIS event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Unsubscribing from V2X information event notifications" (clause 5.5.6.4)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information service registered in the MEC platform • V2X information available from the VIS service • The service consumer has an active subscription for a {Subscription} VIS event notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to delete an existing subscription, corresponding to the VIS event {Subscription}.
	2	Response	VIS sends a response indicating the subscription has been deleted.
	3	IOP Check	Check that the subscription is successfully removed.
	4	Stimulus	Update the VIS associated to {Subscription} in the VIS.
	5	IOP Check	Check that the VIS does not notify the service consumer of the V2X information change.
IOP Verdict			

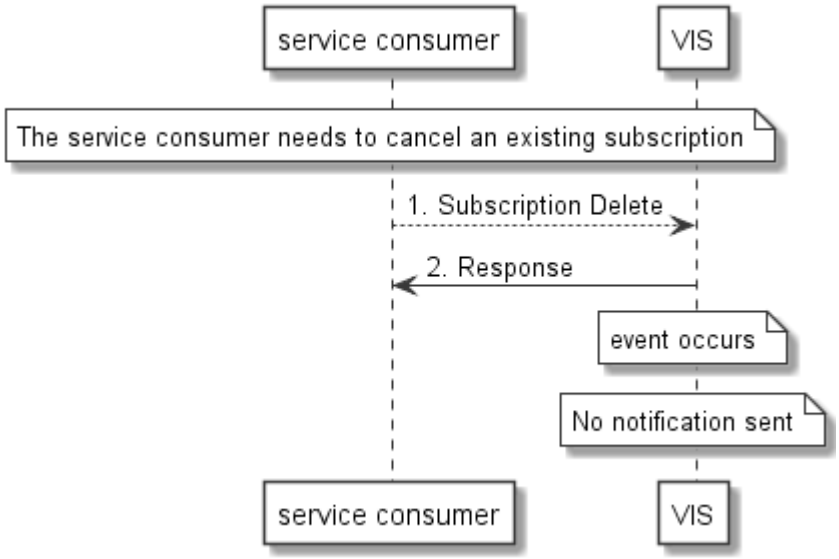

Figure 8.7.5-3: Flow of unsubscribing tests

Table 8.7.5-3: Permutation table for unsubscribing tests

Notification Event	Identifier TD_MEC_VIS_	{Subscription}	Reference	IOP Verdict
V2X communication over Uu unicast	SUB_03#01	ProvChgUuUniSubscription	[i.8], clauses 5.5.6.4 & 7.10.3.5	
V2X communication over Uu MBMS	SUB_03#02	ProvChgUuMbmsSubscription	[i.8], clauses 5.5.6.4 & 7.10.3.5	
V2X communication over PC5	SUB_03#03	ProvChgPc5Subscription	[i.8], clauses 5.5.6.4 & 7.10.3.5	
V2X message	SUB_03#04	V2xMsgSubscription	[i.8], clauses 5.5.6.4 & 7.10.3.5	

Interoperability Test Description			
Identifier	TD_MEC_VIS_SUB_04		
Test Objective	Verify that the VIS subscription is cancelled at the expiry deadline.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Receiving notification on expiry of V2X information event subscription" (clause 5.5.6.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information service registered in the MEC platform • V2X information available from the VIS service • The service consumer has an active subscription for a {Subscription} VIS event notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to the VIS to create a subscription corresponding to the V2X Information event {Subscription}. The expiryDeadline is set at few minutes.
	2	Response	The VIS Service sends a response indicating the subscription has been created.
	3	IOP Check	Check that the service consumer subscribed successfully.
	4		Wait until the expiryDeadline is approaching.
	5	IOP Check	Check that just at the expiry, the VIS sends a notification message to the callbackURL destination, defined by the service consumer in the event subscription {Subscription}.
	6	Response	Service consumer sends a response to the VIS acknowledging the notification has been received.
	7		Wait until the expiry Deadline is over.
	8	IOP Check	Check that the subscription is deleted in the VIS.
	9	Stimulus	Update the V2X Information associated to {Subscription} in the VIS.
	10	IOP Check	Check that the VIS does not notify the service consumer of the change.
IOP Verdict			

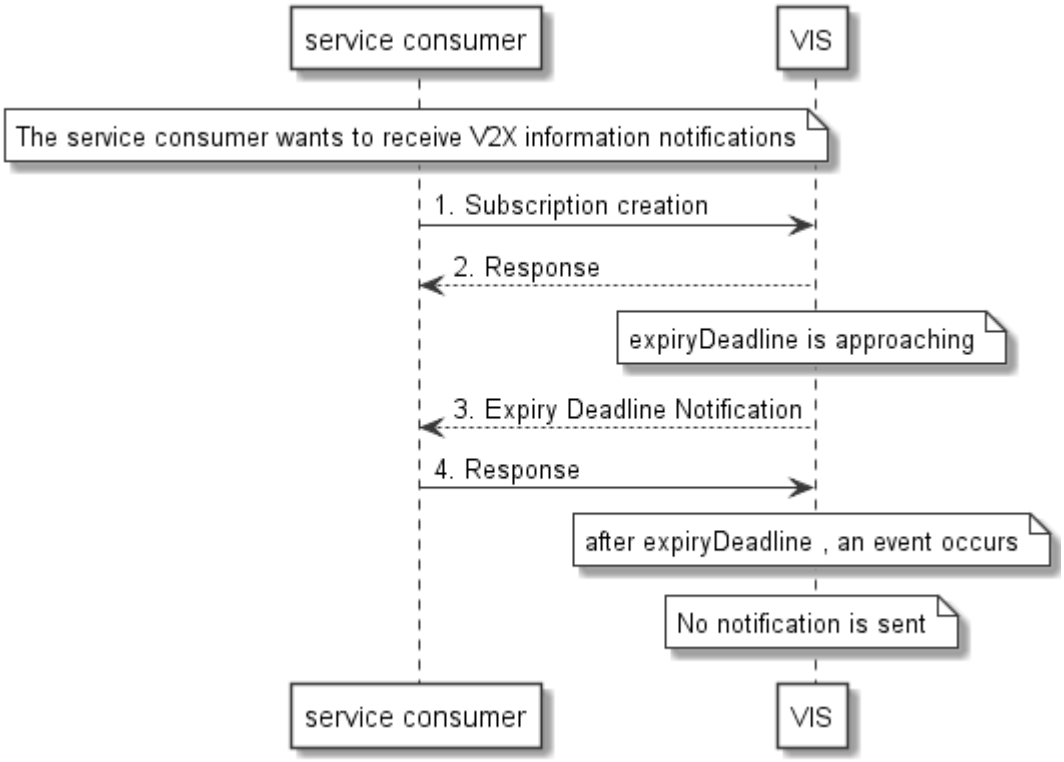

Figure 8.7.5-4: Flow of VIS sending a notification on expiry of the subscription

Table 8.7.5-4: Permutation table for Receiving notification on expiry of VIS event subscription

Notification Event	Identifier TD_MEC_VIS_	{Subscription}	Reference	IOP Verdict
V2X communication over Uu unicast	SUB_04#01	ProvChgUuUniSubscription	[i.8], clause 5.5.6.2	
V2X communication over Uu MBMS	SUB_04#02	ProvChgUuMbmsSubscription	[i.8], clause 5.5.6.2	
V2X communication over PC5	SUB_04#03	ProvChgPc5Subscription	[i.8], clause 5.5.6.2	
V2X message	SUB_04#04	V2xMsgSubscription	[i.8], clause 5.5.6.2	

Interoperability Test Description			
Identifier	TD_MEC_VIS_SUB_05		
Test Objective	Verify that the service consumer can query subscription information		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "Resource: subscriptions" (clause 7.9)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X Information service registered in the MEC platform • V2X information available from the VIS • The service consumer has several active subscriptions for: – provisioning information change for V2X communication over Uu unicast – provisioning information change for V2X communication over Uu MBMS – provisioning information change for V2X communication over PC5 – V2X interoperability message		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer sends a request to VIS to query the all the subscription information.
	2	Response	The VIS returns a response containing all the existing V2X event subscriptions information.
	3	IOP Check	Check that the subscription information is received and is correct.
	4	Stimulus	Repeat steps 1 to 3 using each time, a dedicated filter criteria for prov_chg_uu_uni, prov_chg_uu_mbms, prov_chg_pc5 and v2x_msg.
IOP Verdict			

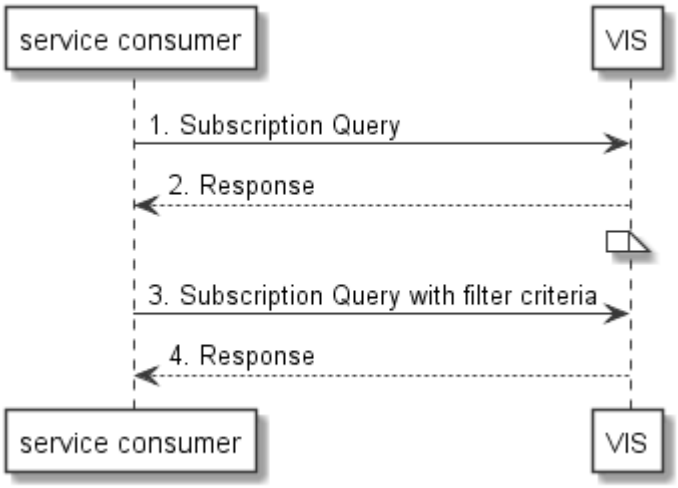

Figure 8.7.5-5: Flow of service consumer querying subscription information

Interoperability Test Description			
Identifier	TD_MEC_VIS_SUB_06		
Test Objective	Verify that the service consumer can receive V2X event notifications		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], clauses 5.5.7, 5.5.8 & 5.5.9		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X information service registered in the MEC platform • V2X information available from the VIS • The service consumer has an active subscription for a {Subscription} V2X information event notification		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	Update the V2X Information associated with the subscription {Subscription}.
	2	IOP Check	Check that the VIS sends a notification message to the callbackURL destination, defined by the service consumer in the event subscription. The message body contains the {Notification} data structure.
	3	Response	Service consumer sends a response to the VIS to indicate the notification has been received.
	4	IOP Check	Check the information received in the notification is correct.
IOP Verdict			

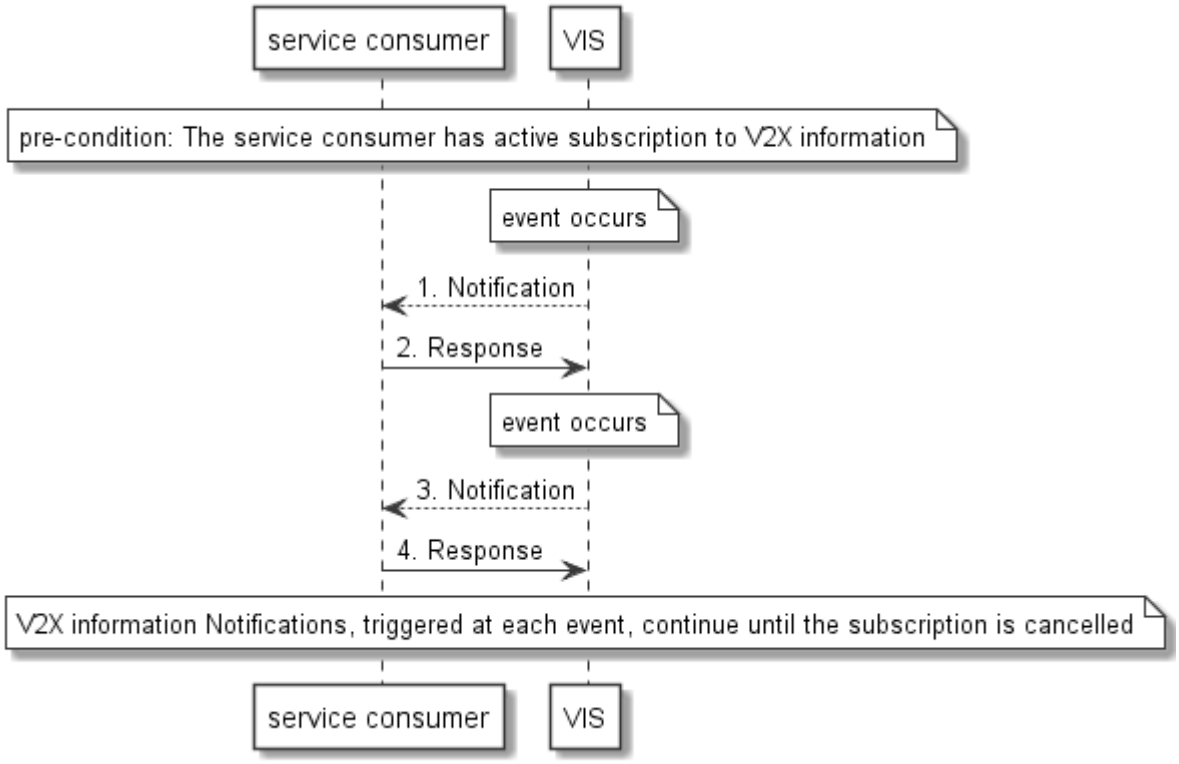

Figure 8.7.5-6: Flow of receiving to the V2X event notifications

Table 8.7.5-5: Permutation table for subscription and notification tests

Notification Event	Identifier TD_MEC_VIS_	{Subscription}	{Notification}	Reference	IOP Verdict
V2X communication over Uu unicast	SUB_06#01	ProvChgUuUniSubscription	ProvChgUuUniNotification	[i.8], clause 5.5.7	
V2X communication over Uu MBMS	SUB_06#02	ProvChgUuMbmsSubscription	ProvChgUuMbmsNotification	[i.8], clause 5.5.8	
V2X communication over PC5	SUB_06#03	ProvChgPc5Subscription	ProvChgPc5Notification	[i.8], clause 5.5.9	

Interoperability Test Description			
Identifier	TD_MEC_VIS_SUB_07		
Test Objective	Verify that the service consumer can publish V2X messages that will be notified to subscribed service consumers		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 030 [i.8], "V2X message publication" (clause 5.5.10.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_VIS, IFS_MEC_APP_VIS		
Pre-test conditions	• The service consumer is a MEC application or a MEC platform • VIS provider is a MEC application or a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-030 V2X information service registered in the MEC platform • V2X information available from the VIS • Service consumer SC2 has created an active subscription to receive V2X message information event notifications • Service consumer SC1 has V2X messages to publish		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The service consumer SC1 sends a request to the VIS to publish a V2X message.
	2	Response	The VIS returns a response to indicate the publish request has been received.
	3	IOP Check	Check that the VIS sends a notification message to the registered service consumer SC2.
	4	Response	Service consumer SC2 sends a response to the VIS to indicate the notification has been received.
	5	IOP Check	Check the published message received by the subscribed service consumer SC2 is correct.
IOP Verdict			

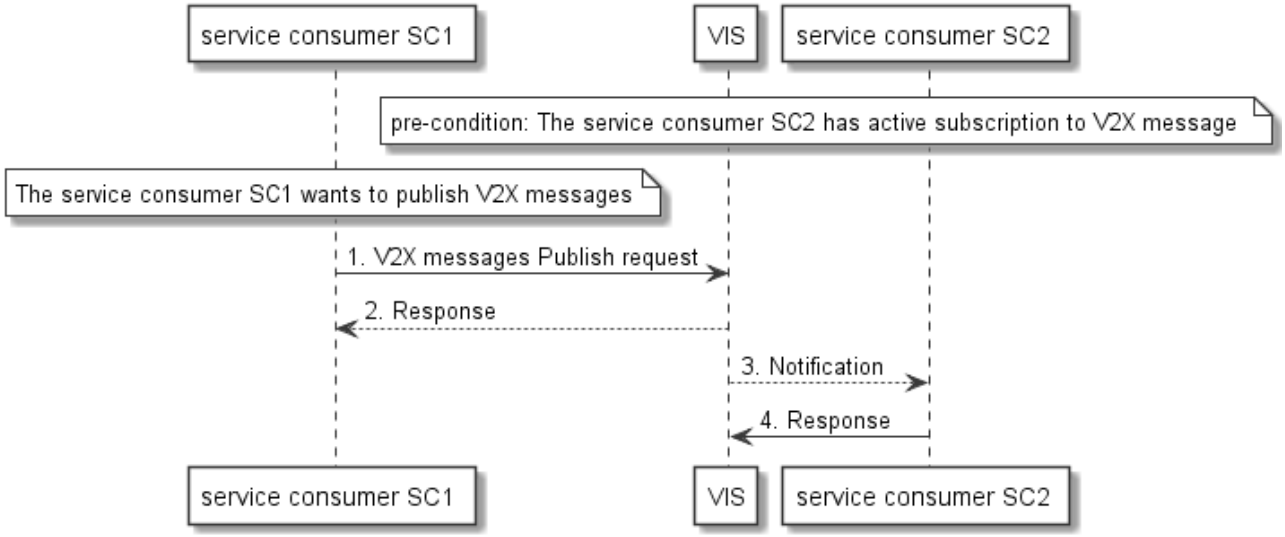

Figure 8.7.5-7: Flow of V2X message publication and notifications

8.8 Test group 8 - MEC-015

8.8.1 Register to Bandwidth Management Service

Interoperability Test Description			
Identifier	TD_MEC_TM_BWM_01		
Test Objective	Verify that a MEC App can create a register to the BWMS with the requested bandwidth requirements		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Register to Bandwidth Management Service (clause 6.2.2)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_BWM, IFS_MEC_APP_BWM		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a request to register to the BWMS with the requested bandwidth requirements (bandwidth size/priority).
	2	Response	The BWM sends a response indicating the registration has been performed.
	3	IOP Check	Check that the MEC App successfully registered to the BWMS with the requested bandwidth requirements.
IOP Verdict			

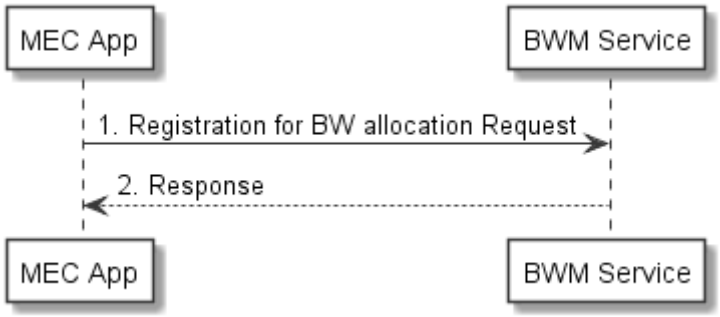

Figure 8.8.1-1: Flow of MEC Application registration to BWMS

8.8.2 Unregister from Bandwidth Management Service

Interoperability Test Description			
Identifier	TD_MEC_TM_BWM_02		
Test Objective	Verify that a MEC App can create a unregister from the BWMS		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Unregister from Bandwidth Management Service" (clause 6.2.3)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_BWM, IFS_MEC_APP_BWM		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • The MEC App has an active registration for BW allocation in the BWMS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a request to unregister to the BWMS.
	2	Response	The BWM sends a response indicating the registration has been removed.
	3	IOP Check	Check that the MEC App successfully unregistered from the BWMS.
IOP Verdict			

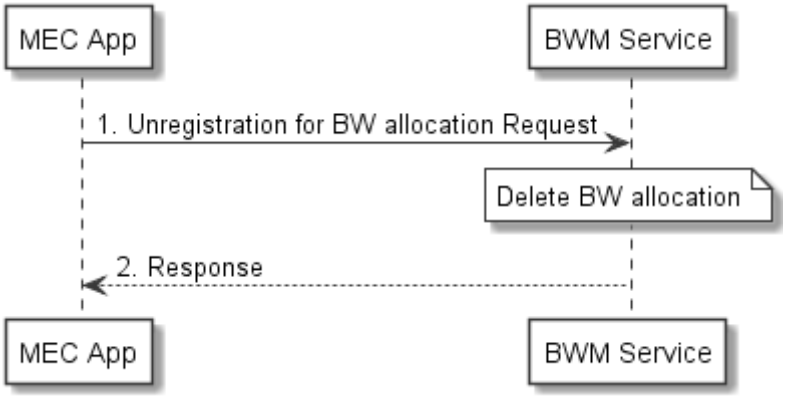

Figure 8.8.2-1: Flow of MEC Application unregistering BW allocation from BWMS

8.8.3 Update requested bandwidth requirements on BWM Service

Interoperability Test Description			
Identifier	TD_MEC_TM_BWM_03		
Test Objective	Verify that a MEC App can update its requested bandwidth requirements on the BWMS.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Update requested bandwidth requirements on BWM Service" (clause 6.2.4)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_BWM, IFS_MEC_APP_BWM		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • The MEC App has an active registration for BW allocation in the BWMS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	The MEC application instance sends a request to update a specific bandwidth allocation on the BWMS.
	2	Response	The BWM sends a response indicating the update has been performed.
	3	IOP Check	Check that the MEC App successfully updated the bandwidth allocation on the BWMS.
IOP Verdict			

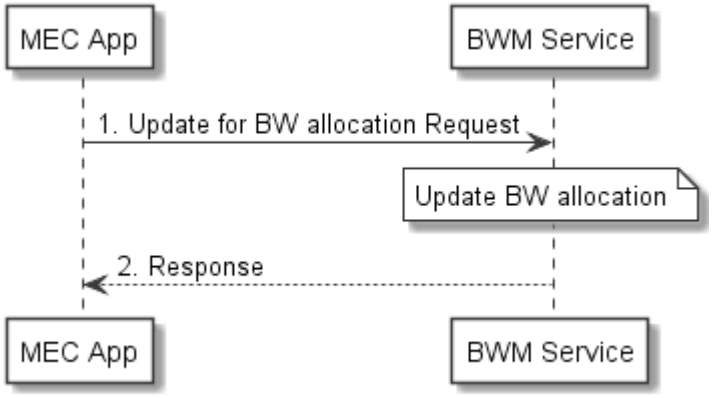

Figure 8.8.3-1: Flow of MEC application updating its requested bandwidth requirements on BWMS

8.8.4 Get the list of bandwidth allocation resources from BWM Service

Interoperability Test Description			
Identifier	TD_MEC_TM_BWM_04		
Test Objective	Verify that a MEC App can retrieve information about a list of bandwidth allocations resources from the BWMS		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Resource: a list of bandwidth Allocations" (clause 8.4)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_BWM, IFS_MEC_APP_BWM		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • Several active registrations for BW allocation are created in the BWMS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC Application instance sends a request to get the list of bandwidth allocations on the BWMS.
	2	Response	The BWM sends a response with the BW allocations list.
	3	IOP Check	Check that the MEC App successfully retrieved the correct BW allocation list from the BWMS.
IOP Verdict			

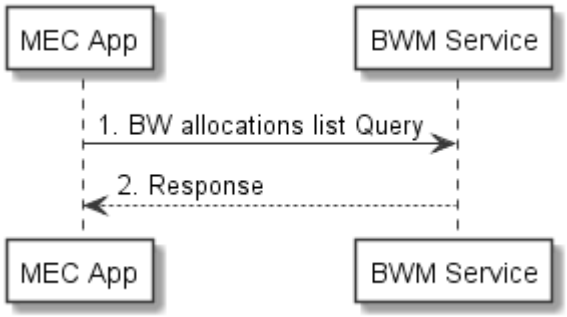

Figure 8.8.4-1: Flow of MEC Application getting bandwidth allocation list from BWMS

8.8.5 Get configured bandwidth allocation from BWM Service

Interoperability Test Description			
Identifier	TD_MEC_TM_BWM_05		
Test Objective	Verify that a MEC App can retrieve its configured bandwidth allocation from the BWMS.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Get configured bandwidth allocation from BWM Service" (clause 6.2.5)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_BWM, IFS_MEC_APP_BWM		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • The MEC App has an active registration for BW allocation in the BWMS		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC Application instance sends a request to get its configured bandwidth allocation on the BWMS
	2	Response	The BWM sends a response with the BW allocation details
	3	IOP Check	Check that the MEC App successfully retrieved the correct the BW allocation details from the BWMS
IOP Verdict			

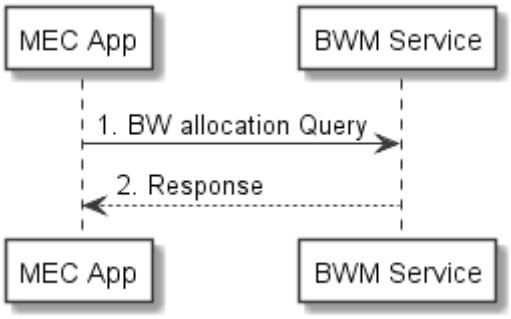

Figure 8.8.5-1: Flow of MEC Application getting its configured bandwidth allocation from BWMS

8.8.6 Get MTS service Info from the MTS Service

Interoperability Test Description			
Identifier	TD_MEC_TM_MTS_01		
Test Objective	Verify that a MEC App can retrieve the available MTS service information from the MTS service.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Get MTS service Info from the MTS Service" (clause 6.2.6)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_MTS, IFS_MEC_APP_MTS		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • MTS service information available from the MTS service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC Application instance sends a request to get the available MTS service information.
	2	Response	The MTS service sends a response with the available MTS service information.
	3	IOP Check	Check that the MEC App successfully retrieved the correct MTS service information from the MTS service.
IOP Verdict			

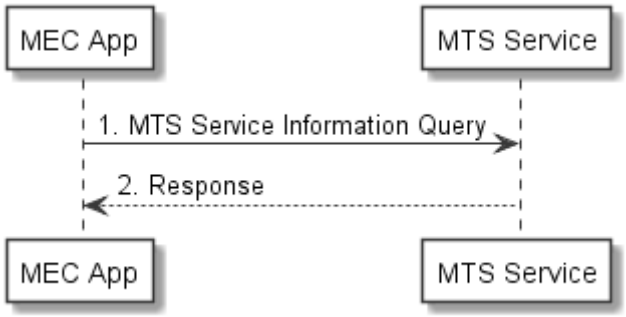

Figure 8.8.6-1: Flow of MEC Application getting the MTS service info

8.8.7 Register to the MTS service

Interoperability Test Description			
Identifier	TD_MEC_TM_MTS_02		
Test Objective	Verify that a MEC App can register to the MTS service.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Register to the MTS service" (clause 6.2.7)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_MTS, IFS_MEC_APP_MTS		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • MTS service information available from the MTS service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC Application instance sends a request to register to the MTS service with the requested requirements.
	2	Response	The MTS service sends a response with the requested requirements.
	3	IOP Check	Check that the MEC App successfully retrieved the correct MTS service information from the MTS service.
IOP Verdict			

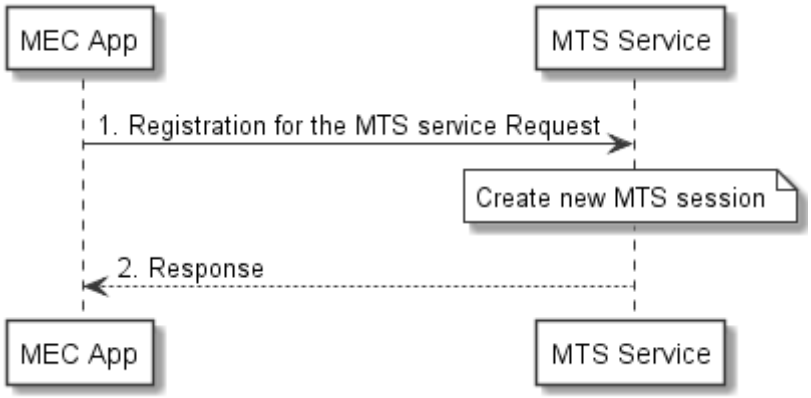

Figure 8.8.7-1: Flow of MEC Application registration to the MTS service

8.8.8 Unregister from the MTS service

Interoperability Test Description			
Identifier	TD_MEC_TM_MTS_03		
Test Objective	Verify that a MEC App can unregister from the MTS service.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	[i.9], "Unregister from the MTS service" (clause 6.2.8)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_MTS, IFS_MEC_APP_MTS		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • MTS service information available from the MTS service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC Application instance sends a request to unregister from the MTS service.
	2	Response	The MTS service sends a response indicating the registration has been removed.
	3	IOP Check	Check that the MEC App successfully unregistered from the MTS service.
IOP Verdict			

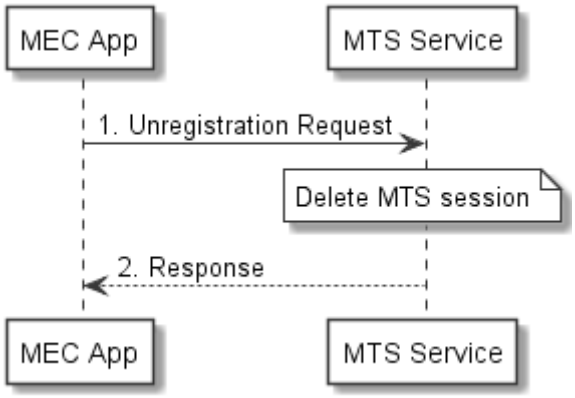

Figure 8.8.8-1: Flow of MEC Application unregistering MTS session from the MTS service

8.8.9 Update requested requirements on the MTS service

Interoperability Test Description			
Identifier	TD_MEC_TM_MTS_04		
Test Objective	Verify that a MEC App can update its requested requirements on the MTS service.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Update requested requirements on the MTS service" (clause 6.2.9)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_MTS, IFS_MEC_APP_MTS		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • MTS service information available from the MTS service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC Application instance sends a request to update a specific MTS session on the MTS service.
	2	Response	The MTS service sends a response.
	3	IOP Check	Check that the MEC Application instance has successfully updated its requested requirements on the MTS service.
IOP Verdict			

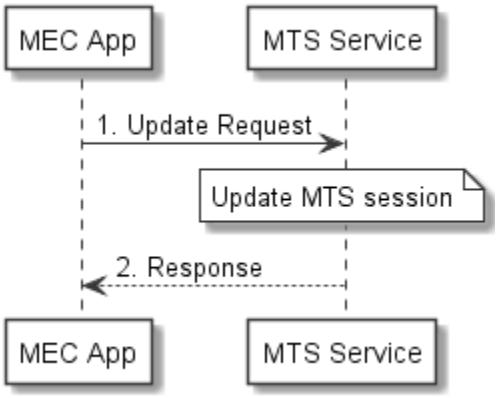

Figure 8.8.9-1: Flow of MEC application updating its requested requirements on the MTS service

8.8.10 Get configured MTS session from the MTS service

Interoperability Test Description			
Identifier	TD_MEC_TM_MTS_05		
Test Objective	Verify that a MEC App can retrieve its configured MTS session from the MTS service.		
Configuration	SUT_MEC_SERVICES_SINGLE_APP SUT_MEC_SERVICES_MULTI_APP		
References	ETSI GS MEC 015 [i.9], "Get configured MTS session from the MTS service" (clause 6.2.10)		
Applicability	IFS_MEC_APP_CONS, IFS_MEC_PLAT_SRV, IFS_MEC_PLAT_MTS, IFS_MEC_APP_MTS		
Pre-test conditions	• The service consumer is a MEC application • TM provider is a MEC platform • MEC Platform running • MEC application instance up and running • At least one MEC-015 TM service registered in the MEC platform • MTS service information available from the MTS service		
Test Sequence	**Step**	**Type**	**Description**
	1	Stimulus	MEC Application instance sends a request to get its configured MTS session information on the MTS service.
	2	Response	The MTS service sends a response with the MTS session details.
	3	IOP Check	Check that the MEC Application instance has successfully retrieved the correct MTS session details from the MTS service.
IOP Verdict			

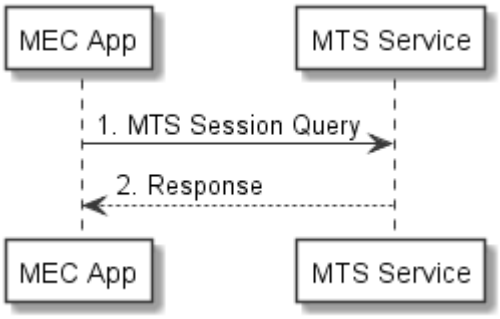

Figure 8.8.10-1: Flow of MEC Application getting its configured MTS session info from the MTS service

Annex A:
Interoperability Feature Statement

A.1 Entities

Table A.1-1: Entities

Item	Which entity do you support?	Status	Support
1	MEC App	Available	Optional
2	MEC Platform	Available	Optional
3	NFV Platform (NFVI + VIM)	Available	Optional
4	MANO	Available	Optional

A.2 MEC App

Table A.2-1: MEC App Features

Item	Feature	ID	Status	Support
1	App Descriptor	IFS_MEC_APP_APPD	Available	Mandatory
2	MEC Service API consumer	IFS_MEC_APP_CONS	Available	Optional
3	MEC Service API producer	IFS_MEC_APP_PROD	Available	Optional
4	Packaged as VNF	IFS_MEC_APP_VNF	Available	Optional
5	Able to discover services through Service Enablement API over Mp1	IFS_MEC_APP_DISCOVER	Available	Optional
6	Able to request traffic rules support	IFS_MEC_APP_TRAFFIC	Available	Optional
7	Able to request DNS rules support	IFS_MEC_APP_DNS	Available	Optional
8	Support of MEC-013 Location API	IFS_MEC_APP_LOC	Available	Optional
9	Support of MEC-012 Radio Network Information API	IFS_MEC_APP_RNI	Available	Optional
10	Support of MEC-028 WLAN Access Information API	IFS_MEC_APP_WAI	Available	Optional
11	Support of MEC-030 V2X Information Service API	IFS_MEC_APP_VIS	Available	Optional
12	Support of MEC-015 Bandwidth Management Service API	IFS_MEC_APP_BWM	Available	Optional
13	Support of MEC-015 Multi-access Traffic Steering Service API	IFS_MEC_APP_MTS	Available	Optional

A.3 MEC Platform

Table A.3-1: MEC Platform Features

Item	Feature	ID	Status	Support
1	Implements Service Enablement API	IFS_MEC_PLAT_SRV	Available	Optional
2	Implements Traffic Rules feature of Application Enablement API	IFS_MEC_PLAT_TRAFFIC	Available	Optional
3	Implements DNS Rules feature of Application Enablement API	IFS_MEC_PLAT_DNS	Available	Optional
4	Implement MEC-013 Location service	IFS_MEC_PLAT_LOC	Available	Optional
5	Implement MEC-012 Radio Network Information API	IFS_MEC_PLAT_RNI	Available	Optional
6	Implement MEC-028 WLAN Access Information API	IFS_MEC_PLAT_WAI	Available	Optional
7	Implement MEC-030 V2X Information Service API	IFS_MEC_PLAT_VIS	Available	Optional
8	Support of MEC-015 Bandwidth Management Service API	IFS_MEC_PLAT_BWM	Available	Optional
9	Support of MEC-015 Multi-access Traffic Steering Service API	IFS_MEC_PLAT_MTS	Available	Optional

A.4 NFV Platform

None.

A.5 MANO

None.

Annex B:
FUT Specific Information Pro forma

B.0 Introduction

B.0.1 The right to copy

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the application form for testing so that it can be used for its intended purposes and may further publish the completed application form.

In this annex each vendor can list any specific implementation-dependent details, which may be necessary to correctly implement the test procedures.

B.1 MEC App

Column1	Description	Value
App descriptor		
NSD or VNFD		

B.2 MEC Platform

Column1	Description	Value
Platform Service Enablement API endpoint		

B.3 NFV Platform

Column1	Description	Value
Virtualization technologies	E.g. (KVM, VMWare, Docker, Linux Container, …)	
Image format		
VIM API exposed		

B.4 MANO

None.

Annex C:
Change History

Date	Version	Information about changes
10-09-2021	V3.0.1	Initial draft
29-11-2021	V3.0.2	MECDECODE(21)000096r1_MEC-DEC_042_Transport__information_query MECDECODE(21)000095_MEC-DEC_042_Location_API_tests_descriptions
07-02-2022	V3.0.3	MECDECODE(22)000007r1_MEC-DEC042 RNI API test descriptions
03-05-2022	V3.0.4	MECDECODE(22)000034r1_MECDEC-042-_WAI_API_Test_Desciptions
18-05-2022	V3.0.5	MECDECODE(22)000035r01_MECDEC-042_VIS_API_test_descriptions MECDECODE(22)000038_MECDEC-042_RNI_Tests_updates
24-06-2022	V3.0.6	MECDECODE(22)000043_MECDEC-042_VIS_Tests_update MECDECODE(22)000047_MECDEC-042_TM_Test_Descriptions MECDECODE(22)000048_MECDEC-042_WAI_Tests_update
22-07-2022	V3.0.7	MECDECODE(22)000061r1_MECDEC-042_LOC_Tests_update
22-09-2022	V3.0.8	Final draft similar to Stable draft V3.0.7, further MEC#31 decision to move MEC-DEC42 to Final.
21-10-2022	V3.0.9	Editorial changes

History

Document history		
V3.1.1	November 2022	Publication