PCEI API Document

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Introduction

The PCEI API Document includes a list of APIs which are included in the PCEI Enabler interfaces with telco side and public cloud/third party cloud sides. As the architecture page is shown, all APIs from P1 to P8 interfaces will be eventually included. Currently, in this release, we first focus on the P2' interfaces, the MNO core network function APIs. We transplant some of the ETSI MEC APIs and re-encapsulates thems. The following example is a location service related API. It is RESTFUL and all interactions are fulfilled through HTTP/HTTPS request and reply.

In the future, we will add more MNO function APIs into it. Also for other interfaces from P1 to P8.

Location API

1. UE Location Lookup

   GET<>

   (

   Used to get a list of identifiers for zones authorized for use by the application.

) zonelist

   GET<zoneId>

   (

   Used to get the status of a zone

)status

   GET <interestRealm>

   (

   Used to retrieve a set of access points matching specific realm in the request

)zoneId, accessPointList

   GET<zoneId, accessPointId>

   (

   Used to get the status of an Access point status

)status

   GET<zoneId, accessPointId>

   (

   Users currently using a zone may be retrieved for a specific access point in the request

)userIdList

   GET<zoneId>

   (

   Users currently using a zone may be retrieved

)userIdList

   2. subscription API

GETSUB<zonalTrafficSubscription>

(

This operation is used for retrieving all active subscriptions to zonal traffic change notifications

) notificationSubscriptionList

POSTSUB<zonalTrafficSubscription>

(

This operation is used for creating a new subscription to zonal traffic change notification

)

GETSUB<subscriptionId, zonalTrafficSubscription>

(

This operation is used to retrieve an individual subscription to zonal traffic change notification

)

PUTSUB<zonalTrafficSubscription, subscriptionId>

(

This operation is used for updating an individual subscription to zonal traffic change notification

)

DELETESUB<subscriptionId>

(

This operation is used for canceling a subscription and stopping corresponding notifications

)

GETSUB<userTrackingSubscription>

(

This operation is used for retrieving all active subscriptions to user tracking change notifications

)notificationSubscriptionList

POSTSUB<zonalTrafficSubscription, userTrackingSubscription>

(

This operation is used for creating a new subscription to user tracking change notification

)

GETSUB<userTrackingSubscription, subscriptionId>

(

This operation is used for retrieving an individual subscription to user tracking change notification

)

PUTSUB<subscriptionId, userTrackingSubscription>

(

This operation is used for updating an individual subscription to user tracking change notification

)

DELETESUB<subscriptionId, userTrackingSubscription>

(

This operation is used for retrieving an individual subscription to user tracking change notification

)

GETSUB<zoneStatusSubscription>

(

This operation is used for retrieve all subscriptions to zone status change notification

)notificationSubscriptionList

POSTSUB<zoneStatusSubscription>

(

This operation is used for creating a new subscription to zone status change notification

)

GETSUB<zoneStatusSubscription, subscriptionId>

(

This operation is used for retrieving an individual subscription to zone status change notification

)

PUTSUB<zoneStatusSubscription, subscriptionId>

(

This operation is used for updating an individual subscription to zone status change notification

)

DELETESUB<subscriptionId, zoneStatusSubscription>

(

This operation is used for canceling a subscription and stopping corresponding notifications

)

Example Call Flow

PCEI Facilitated Location Service using OMA Zonal Presence API or ETSI MEC Location API

Assumptions:

- MNO provides a Location Service (LS) compliant with OMA Zonal Presence API (OMA-TS-REST_NetAPI_ZonalPresence)
- A Public Cloud Edge (PCE) instance is associated with a Zone (collection of Access Points such as small cells) provided by an MNO
- A 3rd-Party Edge (3PE) instance is associated with a Zone (collection of Access Points such as small cells) provided by an MNO
- An application/workload in the PCE requires Location Information (e.g. coordinates of the Access Point) for the UE/subscriber
- An application/workload in the 3PE requires Location Information (e.g. coordinates of the Access Point) for the UE/subscriber
- PCEI Enabler facilitates Zonal Presence API Request/Response routing between PCE and the MNO LS and between the 3PE and the MNO LS

The example use case diagram is shown below:
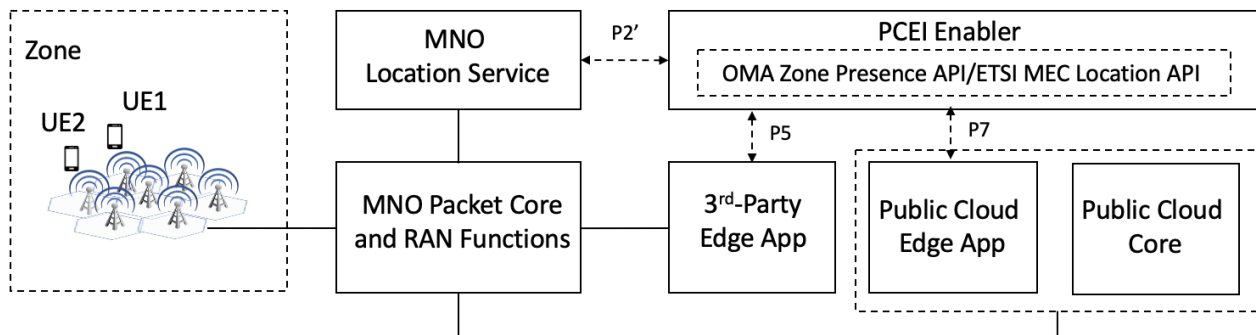
The example call flow sequence is shown below:

PCEI Facilitated Location Service Call Flow

PCE App | **3PE App** | **PCEI Enabler** | **MNO Location Service**

P7: GET: Location Request for UE1 (ACR1)

Determine MNO for UE1 (based on ACR/IP address)

P2': GET: Location Request for UE1 (ACR1)

P2': Response: UE1 Location (Access Point Lat/Lon)

P7: Response: UE1 Location (Access Point Lat/Lon)

P5: GET: Location Request for UE2 (ACR2)

Determine MNO for UE2 (based on ACR/IP address)

P2': GET: Location Request for UE2 (ACR2)

P2': Response: UE2 Location (Access Point Lat/Lon)

P5: Response: UE2 Location (Access Point Lat/Lon)

PCE – Public Cloud Edge
3PE – 3rd-Party Edge
PCEI – Public Cloud Edge Interface
UE – User Equipment
ACR – Anonymous Customer Record