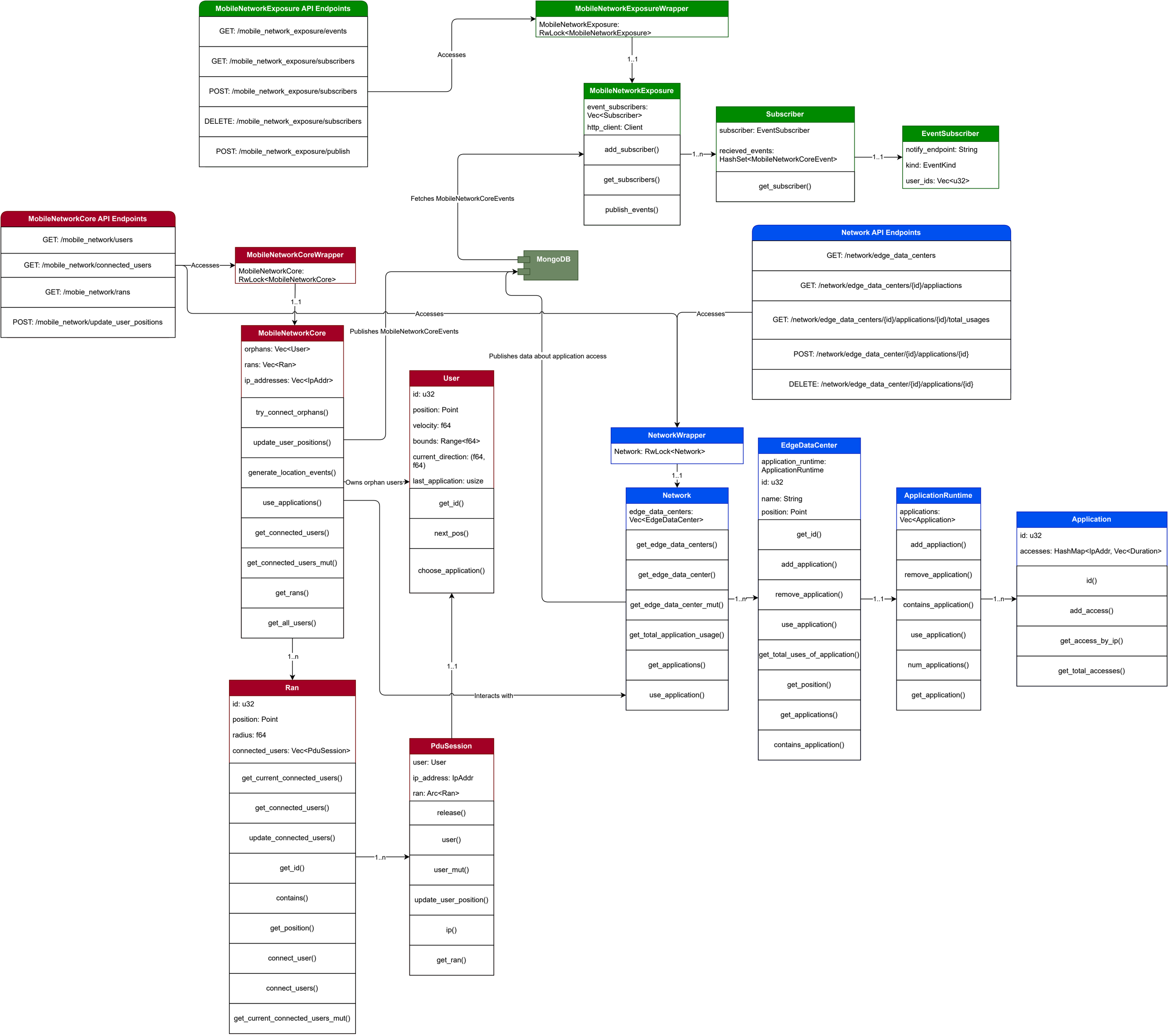
MobileNetworkExposure API Endpoints
GET: /mobile_network_exposure/events
GET: /mobile_network_exposure/subscribers
POST: /mobile_network_exposure/subscribers
DELETE: /mobile_network_exposure/subscribers
POST: /mobile_network_exposure/publish
Accesses
MobileNetworkExposureWrapper
MobileNetworkExposure: RwLock<MobileNetworkExposure>
1..1
MobileNetworkExposure
event_subscribers: Vec<Subscriber>
http_client: Client
add_subscriber()
get_subscribers()
publish_events()
1..n
Subscriber
subscriber: EventSubscriber
recieved_events: HashSet<MobileNetworkCoreEvent>
get_subscriber()
1..1
EventSubscriber
notify_endpoint: String
kind: EventKind
user_ids: Vec<u32>
Fetches MobileNetworkCoreEvents
MobileNetworkCore API Endpoints
GET: /mobile_network/users
GET: /mobile_network/connected_users
GET: /mobie_network/rans
POST: /mobile_network/update_user_positions
Accesses
MobileNetworkCoreWrapper
MobileNetworkCore: RwLock<MobileNetworkCore>
1..1
MongoDB
Accesses
Accesses
Network API Endpoints
GET: /network/edge_data_centers
GET: /network/edge_data_centers/{id}/appliactions
GET: /network/edge_data_centers/{id}/applications/{id}/total_usages
POST: /network/edge_data_center/{id}/applications/{id}
DELETE: /network/edge_data_center/{id}/applications/{id}
MobileNetworkCore
orphans: Vec<User>
rans: Vec<Ran>
ip_addresses: Vec<IpAddr>
try_connect_orphans()
update_user_positions()
generate_location_events()
use_applications()
get_connected_users()
get_connected_users_mut()
get_rans()
get_all_users()
Publishes MobileNetworkCoreEvents
Publishes data about application access
User
id: u32
position: Point
velocity: f64
bounds: Range<f64>
current_direction: (f64, f64)
last_application: usize
get_id()
next_pos()
choose_application()
Owns orphan users
NetworkWrapper
Network: RwLock<Network>
1..1
Network
edge_data_centers: Vec<EdgeDataCenter>
get_edge_data_centers()
get_edge_data_center()
get_edge_data_center_mut()
get_total_application_usage()
get_applications()
use_application()
1..n
EdgeDataCenter
application_runtime: ApplicationRuntime
id: u32
name: String
position: Point
get_id()
add_application()
remove_application()
use_application()
get_total_uses_of_application()
get_position()
get_applications()
contains_application()
1..1
ApplicationRuntime
applications: Vec<Application>
add_appliaction()
remove_application()
contains_application()
use_application()
num_applications()
get_application()
1..n
Application
id: u32
accesses: HashMap<IpAddr, Vec<Duration>
id()
add_access()
get_access_by_ip()
get_total_accesses()
1..n
Ran
id: u32
position: Point
radius: f64
connected_users: Vec<PduSession>
get_current_connected_users()
get_connected_users()
update_connected_users()
get_id()
contains()
get_position()
connect_user()
connect_users()
get_current_connected_users_mut()
1..n
PduSession
user: User
ip_address: IpAddr
ran: Arc<Ran>
release()
user()
user_mut()
update_user_position()
ip()
get_ran()
1..1
Interacts with